### Detailed Specs Prepared for:

# Cherokee Nation Wilma P. Mankiller Clinic Stilwell, Oklahoma

### Presented by:

Interior Logistics 1316 E. 35<sup>th</sup> Pl. Tulsa, OK 74105 (918) 382-9120



### Flammable Liquid Safety Cabinet, 30 Gal., 1 Shelf, Sliding Self Close, Yellow









### **Model Number:**

1930X

### **UPC Code:**

048441691227

### **Description:**

Eagle's 30 Gallon, sliding self-close, Flammable Liquid Safety Cabinet is constructed of 18-gauge (1 mm) steel. The sides, top, bottom, and doors are double-walled with a 1-1/2 in (3.8 cm) air space between walls. Includes two vents, each have 2 in (5.1 cm) threaded fittings and a fire baffle and cap. Cabinets have a high gloss powder coat finish with red trilingual warning, plus grounding attachment, 3-point latch system, and 2-in (5.1 cm) raised, leakproof door sill. Each shelf is adjustable on 3 in (7.6 cm) centers, supported by 4 brackets, with a 350 lbs (159 kg) safe allowable load. Cabinets are FM-Approved and meet NFPA Code 30 and OSHA requirements.

### **Capacity:**

30 gal. (113.6 L)

Color:

Yellow

**Door Style:** 

Bi-Fold

**Inside Dimensions:** 

39.5" W x 14.6" D x 39.5" H (100.3 x 37 x 100.3 cm)

Lock:

True

**Number of Shelves:** 

1

**Shelf Depth:** 

14" (35.6 cm)

**Shelf Model Number:** 

29937

**Uniform Fire Code:** 

True

**Dimensions** 

Width:

43" (109.2 cm)

Depth:

18" (45.7 cm)

Height:

44" (111.8 cm)

Weight:

246 lbs. (111.6 kg)

SOURCE: https://store.interstateproducts.com/products/Standard Flammable Cabinets/Eagle-3010-Safety-Cabinets-30gal



### Profit from the Eagle Advantage®

### **Specification Sheet**

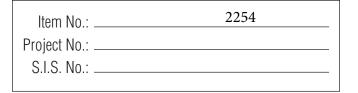
### **Short Form Specifications**

Eagle (Chrome / EagleBrite®) Dolly Truck, model \_\_\_\_\_\_. Constructed of four wire shelves with patented Quadtruss® design, aluminum truck dolly with wraparound bumper, four numbered posts, and 5" casters. Shipped knocked down.

1	200

### **Options / Accessories**

- Ledges
- Dividers
- Shelf markers



### **Dolly Trucks**

MODELS:	C	
<i>□ DT1836- *</i>	□ <mark>DT2136- *</mark> □ D12148- *	□ DT2436- *
□ DT1848- *	□ D12148- *	□ DT2448- *
DT1860- *	□ DT2160- *	□ DT2460- *

### **Design and Construction Features**

- Four shelves with patented QuadTruss® design, making shelves up to 25% stronger and provides a retaining ledge for increased storage stability and product retention.
- Four posts numbered on vertical one-inch increments to help ensure fast and level assembly — shelving can be adjusted up and down every inch for optimum cart configuration.
- Open wire construction promotes higher visibility by allowing light to pass through the shelves, permits greater air circulation which helps reduce dust and contamination build up, and increases the effectiveness of fire suppression systems.
- Fast assembly without tools. Numerically calibrated grooved posts, tapered high-temperature-resistant plastic split sleeves and shelf collars combine to make shelving assembly a simple two-step exercise:
  - 1) Snap the split sleeves onto the posts at the location of your choice:
- 2) Slide the collars of the shelf over the split sleeves. A positive lock between the shelf and the split sleeves is created without the use of any tools, becoming stronger as additional weight is added to the shelving.
- Aluminum truck dolly with wraparound bumper.
- Four designated 5" x 1¼" (127 x 32mm) casters.
- Overall height is 69" (1753mm).
- Shipped knocked-down.

### **EAGLE GROUP**

100 Industrial Boulevard, Clayton, DE 19938-8903 USA Phone: 302-653-3000 • Fax: 302-653-2065

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EG01.08 Rev. 09/08

<sup>\*</sup> See chart on back for complete model numbers.



2254	
	2254

### **Dolly Trucks**

		shelf dimensions -					-	nension					
Eaglebrite® model #	chrome model #	in.	dth mm	len in.	gth mm	wid in.	th mm	len	gth mm	wei	ight kg	caster	wheel tread
DT1836-ZS	DT1836-CS	18″	457	36″	914	23¾″	603	40%″	1038	72	32.7	type swivel	resilient
DT1836-ZSP	DT1836-CSP	18″	457	36″	914	23¾″	603	40%	1038	72	32.7	swivel	poly
DT1836-ZSB	DT1836-CSB	18″	457	36″	914	23¾″	603	40%″	1038	72	32.7	swivel/brake	resilient
DT1836-ZSBP	DT1836-CSBP	18″	457	36″	914	23¾"	603	40¾″	1038	72	32.7	swivel/brake	poly
DT1848-ZS	DT1848-CS	18″	457	48″	1219	23¾"	603	52%"	1343	86	39.0	swivel	resilient
DT1848-ZSP	DT1848-CSP	18″	457	48″	1219	23¾″	603	52%″	1343	86	39.0	swivel	poly
DT1848-ZSB	DT1848-CSB	18″	457	48″	1219	23¾″	603	52%"	1343	86	39.0	swivel/brake	resilient
DT1848-ZSBP	DT1848-CSBP	18″	457	48″	1219	23¾″	603	52%"	1343	86	39.0	swivel/brake	poly
DT1860-ZS DT1860-ZSP	DT1860-CS DT1860-CSP	18″ 18″	457 457	60″ 60″	1524 1524	23¾″ 23¾″	603 603	64¾″ 64¾″	1648 1648	100	45.4 45.4	swivel swivel	resilient poly
DT1860-ZSB	DT1860-CSB	18″	457	60″	1524	23¾″	603	647/8	1648	100	45.4	swivel/brake	resilient
DT1860-ZSBP	DT1860-CSBP	18″	457	60″	1524	23¾″	603	64%″	1648	100	45.4	swivel/brake	poly
DT2136-ZS	DT2136-CS	21″	533	36″	914	26¾″	680	40¾″	1038	82	37.2	swivel	resilient
DT2136-ZSP	DT2136-CSP	21″	533	36″	914	26¾"	680	40%″	1038	82	37.2	swivel	poly
DT2136-ZSB	DT2136-CSB	21″	533	36″	914	26¾"	680	407/8″	1038	82	37.2	swivel/brake	resilient
DT2136-ZSBP	DT2136-CSBP	21″	533	36″	914	26¾″	680	40%″	1038	82	37.2	swivel/brake	poly
LOCATIONS:													esilient
DEPTTITLE	RMTIT	LE		AR	CH RMI	NO			E	QNO		QTY	poly esilient
ADMINISTRAT	TION STORAG	ìΕ		01-	16-04			2254				3	poly
BEHAVIORAL	HEALTH STORAG	ŝΕ		01-	-08-13			2254				4	esilient
COMMUNITY	SPACES STORAG	E, KIT	CHEN	01-	05-02				2254			2	poly esilient
DENTAL	STORAG	•		02-17-29			2254				2	poly	
DENTAL	STORAG	ŝΕ		02-17-34			2254				6	esilient	
DENTAL	STORAG	ŝΕ		02-17-38				2254				1	poly esilient
DENTAL	STORAG	iΕ		02-17-46			2254				3	poly	
EVS: HOUSEKI	EEPING BIO-HAZ	ZARD		01-04-01			2254				1	esilient	
EVS: HOUSEKI	EEPING EVS CLC	SET		01-	-04-02				2	2254		2	poly esilient
EVS: HOUSEK	EEPING EVS BUI	K STC	RAGE	01-	-04-03				2	2254		2	poly
PHYSICAL THE	PHYSICAL THERAPY STORAGE, PT				07-10				2	254		1	esilient
PRIMARY CARE STORAGE, CLEAN				01-	09-14				2	254		6	poly esilient
PUBLIC FACILITIES STORAGE				01-	01-00-09			2254				2	poly
PUBLIC HEALT	TH STORAG	iΕ, PH	N	01-	13-10				2	254		4	
PUBLIC HEALT	TH STORAG	iΕ, PH	N	01-	13-11				2	254		2	
SPECIALTY CA	RE STORAG	iΕ		01-	12-04				2	254		5	
WIC	STORAG	ε, WI	С	01-	11-05				2	254		6	╛

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### **Specification Sheet**

### **Short Form Specifications**

Four or five chrome shelves and one 18 gauge solid stainless shelf, 21" or 24" width by 48" or 60" length. 63"-tall grooved chrome post is 1"-diameter, adjustable on 1" centers. Three tote box slide assemblies. Optional wire shelf dividers, shelf markers, tote boxes with snap-on card holders and back/end enclosure panels. Dolly base of chrome-plated steel with 6" swivel plate casters, two with brake.



ECDS Series







### **Options / Accessories**

- □ Dividers
- ☐ Tote boxes
- ☐ Tote slides
- ☐ Additional shelf markers
- Cart covers

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# Item No.: 2254a Project No.: CNH WPM STILWELL S.I.S. No.:

## Exchange Carts— ECDS, ECES, and ECT Series

#### MODELS:

□ ECDS21\* □ ECES21\* □ ECT\* □ ECTS\*

\* For complete model numbers, see charts on back page.

### **ECDS Series**

- Five chrome-plated wire shelves.
- · One stainless steel solid shelf.
- Chrome-plated 63" (1600mm) posts.
- Chrome dolly frame with wraparound bumper.
- 6" (152mm) polyurethane casters, two with brake.
- · One slide assembly.
- Two tote boxes 6" (152mm) deep with box dividers.
- Two or three shelf dividers.
- Six plastic shelf markers.

### **ECES Series**

- · Five chrome-plated wire shelves.
- One stainless steel solid shelf.
- Chrome-plated 63" (1600mm) posts.
- Chrome dolly frame with wraparound bumper.
- 6" (152mm) polyurethane casters, two with brake.
- · One slide assembly.
- Two tote boxes 6" (152mm) deep with box dividers.
- Two or three shelf dividers.
- Six plastic shelf markers.

### **ECT Series**

- Four chrome-plated wire shelves.
- Choice of chrome-plated wire or stainless steel solid fifth shelf.
- Chrome-plated 63" (1600mm) posts.
- One slide assembly.
- Two tote boxes 6" (152mm)-deep with box dividers.
- 5" (127mm) resilient stem casters, two with brake.
- Six plastic shelf markers.

EG05.09B Rev. 02/09



Item No.:	2254a
	CNH WPM STILWELL
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### Exchange Carts—ECDS, ECES, and ECT Series

### **Design and Construction Features**

- Versatile Eagle offers exchange carts with various shelving configurations, caster styles, accessory packages, and in various sizes to meet all requirements for supply exchange in any healthcare environment.
- Adaptable exchange carts can be readily altered to meet changes in use for supply, volume and packaging requirements; by adding or removing accessories a multitude of combinations can be made to customize an exchange cart for a specific use.
- Open-wire construction promotes higher visibility by allowing light to pass through the shelves, permits greater air circulation which helps reduce dust and contamination build up, and increases the effectiveness of fire-suppression systems.
- Posts are numbered on vertical one-inch increments to help ensure fast and level assembly; shelving can be adjusted up and down every inch for optimum cart configuration.
- Assembly numerically calibrated grooved posts, tapered high-temperature-resistant plastic split sleeves and shelf collars combine to make shelving assembly a simple two-step exercise: 1) Snap the split sleeves onto the posts at the location of your choice; 2) Slide the shelf collars over the split sleeves. A positive lock between the shelf and the split sleeves is created without the use of any tools, becoming stronger as additional weight is added to the shelving.
- Finish all components are chrome plated.

### System Benefits

 More-accurate inventory control inventory of exchange carts can be strictly monitored allowing for quick and efficient control of usage.

• Improved handling and flexibility - carts are handled only once between stocking and patient distribution, thus eliminating par level inventory taking and retrieval of needed supplies; changes in patient requirements can be instantly responded to with adjustments in type and quantity of supplies.

	shelf width		shelf length		height		weight		number of tote	number of shelf
model #	in.	mm	in.	mm	in.	mm	lbs.	kg	boxes	dividers
ECDS2148C	21″	533	48″	1219	70″	1778	185	83.9	2	2
LOCATION	S:									
DEPT TITLI	E		RM1	TITLE		ARC	H RM	NO	EQNO	QTY
DENTAL			STO	RAGE		02-2	L7-34		2254a	2
DENTAL			STO	RAGE		02-2	17-38		2254a	1
PRIMARY (	CARE		STO	RAGE,	CLEAN	01-0	9-14		2254a	2
PUBLIC HE	ALTH		STO	RAGE,	PHN	01-1	3-10		2254a	2
PUBLIC HE	ALTH		STO	RAGE,	PHN	01-1	3-11		2254a	1
SPECIALTY	CARE	<u> </u>	STO	RAGE		01-1	2-04		2254a	2

LUI SUIIUS		elf idth		nelf ngth	he	ight	we	ight	# of tote		
model #	in.	mm	in.	mm	in.	mm	lbs.	kg	boxes	shelves	
ECT2160C	21"	533	<mark>60″</mark>	1524	<mark>69″</mark>	1753	166	75.3	2	5-wire	
ECTS2160C	21″	533	60"	1524	69"	1753	191	86.6	2	4-wire, 1-solid	< <optional bottom="" shelf<="" solid="" th=""></optional>
ECT2460C	24"	610	60″	1524	69″	1753	181	82.1	2	5-wire	
ECTS2460C	24"	610	60″	1524	69"	1753	206	93.4	2	4-wire, 1-solid	

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### **Specification Sheet**

### **Short Form Specifications**

Four or five chrome shelves and one 18 gauge solid stainless shelf, 21" or 24" width by 48" or 60" length. 63"-tall grooved chrome post is 1"-diameter, adjustable on 1" centers. Three tote box slide assemblies. Optional wire shelf dividers, shelf markers, tote boxes with snap-on card holders and back/end enclosure panels. Dolly base of chrome-plated steel with









ECD7/ECE7 Series

### **Options / Accessories**

- □ Dividers
- ☐ Tote boxes
- ☐ Tote slides
- ☐ Additional shelf markers
- □ Cart covers

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Item No.:	2254b
Proiect No.:	CNH-WPM-STILWELL
S.I.S. No.:	
23	

### Exchange Carts— ECDT, ECET, ECD7, and ECE7 Series

IV	n	n	FI	2

□ ECDT*	□ ECET*	□ <i>ECD7</i> *
<b>□</b> ECDTS*	□ ECETS*	□ ECE7*

\* For complete model numbers, see charts on back page.

### **ECDT Series**

- Four chrome-plated wire shelves.
- Choice of chrome-plated wire or stainless steel solid fifth shelf.
- Chrome-plated 63" (1600mm) posts.
- Chrome dolly frame with wraparound bumper.
- 6" (152mm) polyurethane casters, two with brake.
- Three slide assemblies.
- Six tote boxes with box dividers.
- . Three shelf dividers.
- Six plastic shelf markers.

### **ECET Series**

- Four chrome-plated wire shelves.
- Choice of chrome-plated wire or stainless steel solid fifth shelf.
- Chrome-plated 63" (1600mm) posts.
- Side and back enclosure panels.
- · Chrome dolly frame with wraparound bumper.
- 6" (152mm) polyurethane casters two with brake.
- Three slide assemblies.
- · Six tote boxes with box dividers.
- 12 plastic shelf markers.

### **ECD7/ECE7 Series**

- Four chrome-plated wire shelves.
- Choice of chrome-plated wire or stainless steel solid fifth shelf.
- Chrome-plated 63" (1600mm) posts.
- Models #ECD72460C and ECD7S2460C come with three shelf dividers.
- Models #ECE72460C and ECE7S2460C come with side and back enclosure panels.
- Chrome dolly frame with wraparound bumper.
- 8" (203mm) polyurethane casters, two with brake.
- Three slide assemblies.
- Seven tote boxes with snap-on card holders and box dividers.
- 12 plastic shelf markers.

EG05.09C Rev. 02/09



Item No.:	2254B
Project No ·	CNH-WPM STILWELL
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### Exchange Carts—ECDT, ECET, ECD7, and ECE7 Series

### **Design and Construction Features**

- Versatile Eagle offers exchange carts with various shelving configurations, caster styles, accessory packages, and in various sizes to meet all requirements for supply exchange in any healthcare environment.
- Adaptable exchange carts can be readily altered to meet changes in use for supply, volume and packaging requirements; by adding or removing accessories a multitude of combinations can be made to customize an exchange cart for a specific use.
- Open-wire construction promotes higher visibility by allowing light to pass through the shelves, permits greater air circulation which helps reduce dust and contamination build up, and increases the effectiveness of fire-suppression systems.
- Posts are numbered on vertical one-inch increments to help ensure fast and level assembly; shelving can be adjusted up and down every inch for optimum cart configuration.
- Assembly numerically calibrated grooved posts, tapered high-temperature-resistant plastic split sleeves and shelf collars combine to make shelving assembly a simple two-step exercise: 1) Snap the split sleeves onto the posts at the location of your choice; 2) Slide the shelf collars over the split sleeves. A positive lock between the shelf and the split sleeves is created without the use of any tools, becoming stronger as additional weight is added to the shelving.
- Finish all components are chrome plated.

### **System Benefits**

 More-accurate inventory control inventory of exchange carts can be strictly monitored allowing for quick and efficient control of usage.

 Improved handling and flexibility - carts are handled only once between stocking and patient distribution, thus eliminating par level inventory taking and retrieval of needed supplies; changes in patient requirements can be instantly responded to with adjustments in type and quantity of supplies.

### **ECDT Series**

		leit		neit					tote	tote	tote	
	wi	dth	ler	ngth	hei	ght	we	ight	boxes	boxes	boxes	
model #	in.	mm	in.	mm	in.	mm	lbs.	kg	3" (76mm)	6" (152mm)	9" (229mm)	shelves
ECDT2160C	21"	533	60″	1524	70″	1778	231	104.7	1	4	1	<mark>5-wire</mark>
ECDTS2160C	21″	533	60″	1524	70″	1778	241	109.3	1	4	1	4-wire, 1-solid << optional solid
ECDT2460C	24"	610	60″	1524	70″	1778	246	111.6	1	4	1	5-wire shelf
ECDTS2460C	24"	610	60"	1524	70"	1778	256	116.1	1	4	1	4-wire, 1-solid

### LOCATIONS:

**DEPTTITLE RMTITLE ARCH RMNO EQNO** QTY **DENTAL STORAGE** 02-17-34 2254b 2 **STORAGE** 02-17-46 DENTAL 2254b 1

### **ECD7/ECE7 Series**

		elf dth		elf gth	hei	ght	we	ight	tote boxes	tote boxes		
model #	in.	mm	in.	mm	in.	mm	lbs.	kg	3" (76mm)	6" (152mm)	shelves	other
ECD72460C	24"	610	60″	1524	72″	1829	226	102.5	2	5	5-wire	shelf dividers
ECD7S2460C	24"	610	60"	1524	72"	1829	236	107.0	2	5	4-wire, 1-solid	shelf dividers
ECE72460C	24"	610	60″	1524	72″	1829	250	113.4	2	5	5-wire	enclosure panels
ECE7S2460C	24"	610	60″	1524	72"	1829	260	117.9	2	5	4-wire, 1-solid	enclosure panels

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Rev. 02/09

Roam carts are lightweight and easy to maneuver. The FlexCell design and system of interior components adapt to the specific supply and procedure storage needs of departments throughout a healthcare facility.

The Roam 2 cart comes with two lockable tempered glass doors, two interior compartments, and in a Soft White powder-coated paint finish.









#### **Materials and Finishes**

Base and top structure: **Powder-coated steel**Corner extrusions: **Clear anodized aluminum** 

Corner bumpers and corner trim: Thermoplastic polymer (ABS plastic)

FlexCell panels: Thermoplastic polymer (ABS plastic)

Hinges: Steel

Door pulls: Dull chrome-plated steel

Push handles: Stainless steel

Glass doors: Clear anodized aluminum and tempered glass

Casters: Nylon and steel

### **Dimensions** (nominal)

Exterior: 37.5"w x 28.75"d x 75.25"h Interior: 31.75"w x 23.75"d x 64.25"h

Weight: 193 lbs

Interior Configuration: 50 FlexCells, 25 per compartment

### **Options**

- · With or without center column
- Electronic or keyed lock
- 5" sloped top
- Interior and side-mounted exterior accessories
- · Five paint colors and range of laminates





Solaire Medical | P.O. Box 2808 | Grand Rapids, Michigan 49501 888-435-2256 phone | 616-743-5944 fax | solairemedical.com



Profit from the Eagle Advantage®

### **Specification Sheet**

### **Short Form Specifications**

Eagle RediPak® (EAGLEBrite® Zinc, Chrome, Valu-Master® Gray Epoxy, Valu-Gard® Green Epoxy, EAGLEgard® Green Epoxy) Wire Shelving Unit, model \_\_\_\_\_\_. Patented QuadTruss® design wire shelves, two-piece post assemblies, and tapered split sleeves packaged in one complete box.



four-shelf unit

### **Options / Accessories**

- Dividers
- Ledges

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Item No.:	2256b
Project No.:	CNH WPM STILWELL EXPANSION

### RediPak® Wire Shelving Units

MODELS:	
<b>□</b> 1836 <u>*</u> 63	<b>□</b> 2436 <u>*</u> 63
<b>□</b> 1836 <u>*</u> 63-5	<b>□</b> 2436 <u>*</u> 63-5
<b>□</b> 1836 <u>*</u> 74	<b>□</b> 2436 <u>*</u> 74
<b>□</b> 1836 <u>*</u> 74-5	<b>□</b> 2436 <u>*</u> 74-5
<b>□</b> 1848 <u>*</u> 63	<b>□</b> 2448 <u>*</u> 63
<b>□</b> 1848 <u>*</u> 63-5	<i>□ 2448*63-</i> 5
<b>□</b> 1848 <u>*</u> 74	<b>□</b> 2448 <u>*</u> 74
<b>□</b> 1848 <u>*</u> 74-5	<b>□</b> 2448 <u>*</u> 74-5
<b>□</b> 1860 <u>*</u> 63	<b>□</b> 2460 <u>*</u> 63
<b>□</b> 1860 <u>*</u> 63-5	<b>□</b> 2460 <u>*</u> 63-5
<b>□</b> 1860 <u>*</u> 74	<b>□</b> 2460 <u>*</u> 74
<b>□</b> 1860 <u>*</u> 74-5	<b>□</b> 2460 <u>*</u> 74-5

### **Design and Construction Features**

- Patented QuadTruss® design (patent #5,390,803) makes shelves up to 25% stronger and provides a retaining ledge for increased stability and product retention.
- Available in 18" and 24" (457 and 610mm) widths and 36", 48" and 60" (914, 1219 and 1524mm) lengths.
- Complete shelving unit in one box.
- The combination of numerically-calibrated posts, tapered split sleeves, and shelf collars makes assembling these units a simple, three-step exercise:
  - 1) assemble two-piece post by threading top half onto bolt in lower half;
  - 2) snap split sleeves onto post over number of your choice;
- 3) and slide shelf collar over split sleeves.
- A positive lock between shelf and post is created without the use of any tools.
- Shelving units may be adjusted or completely changed just as easily
- Offered in five finishes: EAGLEbrite® zinc, chrome, Valu-Master® gray epoxy, Valu-Gard® green epoxy, and EAGLEgard® green epoxy.





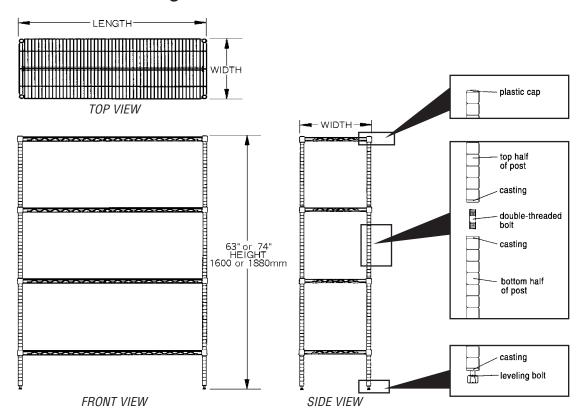
EG01.26 Rev. 09/08

<sup>\*</sup> See charts on back for complete model numbers.



Item No.:	
Project No.:	
S.I.S. No.:	

### RediPak® Wire Shelving Units



**4-Shelf Units** Includes four wire shelves and four two-piece posts.

model #         in.         mm         in.         mm         lbs.           1836Z63         1836C63         1836VG3         1836VG3         1836E63         1836Z74         1836C74         1836VG4         1836VG74         1836E74         186         18         457         36°         914         52           1848Z63         1848C63         1848VG3         1848C63         1848E63         1848C74         1848C74         1848VG74         1848VG74         1848E74         18         457         48°         1219         64	
1836Z63       1836C63       1836V63       1836VG63       1836E63       1836Z74       1836C74       1836V74       1836VG74       1836E74       1836E74       1836VG74       1836VG74       1836E74       1836E74       1836VG74       1836VG74       1836E74       1836VG74       1836VG74       1836VG74       1836VG74       1836VG74       1836VG74       1836VG74       1836VG74       1848VG74       1848VG74 <td>veight</td>	veight
<b>1848Z63 1848C63 1848V63 1848VG63 1848E63 1848Z74 1848C74 1848V74 1848VG74 1848E74</b> 18" 457 48" 1219 64	s. kg
	23.6
1860Z63 1860C63 1860V63 1860VG63 1860E63 1860E63 1860Z74 1860C74 1860V74 1860VG74 1860E74 18" 457 60" 1524 84	4 29.0
	34 38.1
<b>2436Z63 2436C63 2436V63 2436V63 2436E63 2436Z74 2436C74 2436V74 2436V74 2436E74 24</b> 610 36 914 68	8.08
2448Z63 2448C63 2448V63 2448VG63 2448E63 2448Z74 2448C74 2448V74 2448VG74 2448E74 24" 610 48" 1219 80	36.3
<b>2460Z63 2460C63 2460V63 2460VG63 2460E63 2460Z74 2460C74 2460V74 2460VG74 2460E74 2460E74</b> 24 610 60 1524 100	0 45.4

LOCATIONS:											
DEPTTITLE RMTITLE		ARCH RMNO	O EQNO	QTY		ı					
EVS: HOUSEKEEPII	NG EVS CLOSET	01-04-02	2256b	1	EAGLEgard <sup>®</sup>	wic	dth	len	qth	wei	aht
EVS: HOUSEKEEPII	NG EVS BULK STOR	AGE 01-04-03	2256b		model #	in.	mm	in.	mm	lbs.	kg
1030 <u>∠03-3 1030</u> ∪03-3 1030 √03-3	1030 VG03-3 1030E03-3	10302/4-3 10306/4-3	1030774-3	10307014-3	1836E74-5	18″	457	36″	914	61	27.7
1848Z63-5 1848C63-5 1848V63-5	1848VG63-5 1848E63-5	1848Z74-5 1848C74-5	1848V74-5	1848VG74-5	1848E74-5	18″	457	48"	1219	76	34.5
1860Z63-5 1860C63-5 1860V63-5	1860VG63-5 1860E63-5	1860Z74-5 1860C74-5	1860V74-5	1860VG74-5	1860E74-5	18″	457	60″	1524	101	45.8
2436Z63-5 2436C63-5 2436V63-5	2436VG63-5 2436E63-5	2436Z74-5 2436C74-5	2436V74-5	2436VG74-5	2436E74-5	24"	610	36″	914	81	36.7
2448Z63-5 2448C63-5 2448V63-5	2448VG63-5 2448E63-5	2448Z74-5 2448C74-5	2448V74-5	2448VG74-5	2448E74-5	24"	610	48"	1219	96	43.6
2460Z63-5 2460C63-5 2460V63-5	2460VG63-5 2460E63-5	2460Z74-5 2460C74-5	2460V74-5	2460VG74-5	2460E74-5	24"	610	60"	1524	121	54.9

### **EAGLE GROUP**

100 Industrial Boulevard, Clayton, DE 19938-8903 USA

Phone: 302-653-3000 • Fax: 302-653-2065

www.eaglegrp.com

Foodservice Division: Phone 800-441-8440 MHC/Retail Display Divisions: Phone 800-637-5100

Printed in U.S.A. ©2008 by Eagle Group

Rev. 09/08

### 2256c FACILITIES MAINTENANCE STORAGE

note: if prefer units on casters weight capacity reduces significantly



### **4 SHELF STARTER UNIT**

LOCATION:

DEPTTITLERMTITLEARCH RMNO EQNOQTYFACILITIES MAINTENANCEFACILITIES MAINTENANCE01-03-012256c20

Maximize storage in large office closets.

- Shelves adjust in 1" increments.
- Assemble in minutes. No tools required. •
- Reduce dust and dirt accumulation.
  - NSF certified.

MODEL	DIMENSIONS	SHELF	PRICE	WT.	
NO.	WxDxH	CAP. (LBS.)	1	3+	(LBS.)
H-					
6761-	60 x 30 x 86"	650	\$329	\$318	125
86					

### **DIMENSIONS:**

- Outside:
- Width: Subtract 1/4" from dimensions in the chart.
- Depth: Same as listed in the chart.
- Usable Loading Area (Due to Posts):

### **MATERIAL:**

• Chrome-plated carbon steel

### **CAPACITY:**

- Shelf capacity listed in the chart is:
- The capacity for each shelf without casters.
- Based on evenly distributed loads.
- Total Starter Unit with Additional Shelves: 4,800 lbs
- Total Add-on Unit: 3,000 lbs

- Width & Depth: Subtract 2 3/4" from outside dimensions.
- Posts (Single Piece Construction): 1"
   Diameter
- Shelf Thickness: 1 1/4"

### **USAGE:**

• For hand-loading only. (Not for use with forklifts.)

### **CASTERS: (Sold Separately)**

- Dimensions: 5 x 1 1/4"
- Add 5 3/4" to the height of the unit.
- Capacity: 1,000 lbs per kit (250 lbs per caster)
- NSF Certified (National Sanitary Foundation)

#### **SOURCE:**

https://www.uline.com/Product/Detail/H-6761-86/Industrial-Wire-Shelving/Chrome-Wire-Shelving-Unit-60-x-30-x-86

Owner's Guide Guía del Usuario Mode d'emploi

## munchkin.

**Premium Diaper Pail** Powered by Arm & Hammer™

Cesto de Pañales Premium Con el Poder de Arm & Hammer™

Seau à Couches de Qualité Supérieure avec Désodorisant Arm & Hammer™



KEEP FOR FUTURE REFERENCE

GUARDE PARA FUTURA REFERENCIA

À CONSERVER POUR CONSULTATION FUTURE

### **GETTING STARTED**

Thank you for choosing Munchkin!

Your premium diaper pail features the odor-fighting power of Arm & Hammer<sup>™</sup> baking soda, as well as self-sealing technology that prevents odors from seeping out.

This pail has been designed to accommodate Arm & Hammer™ Snap, Seal & Toss™ bags, as well as refill rings from Arm & Hammer<sup>™</sup>, Nursery Fresh®, Up & Up® and Comforts for Baby<sup>™</sup>.

Enjoy keeping your nursery smelling fresh! Simply install the lavender scent baking soda PUCK<sup>TM</sup>, as well as starter ring or Snap, Seal & Toss™ bag, to get started.

**WARNING:** Clean and inspect before use. This is not a toy; for adult use only.

### **INSTALLING THE PUCK**



Mount the Arm & Hammer™ PUCK™ into the bracket on the underside of the lid.



Turn clockwise to lock into position.



Turn counter-clockwise to remove.



Replace the puck every 60 to 90 days for maximum odor protection.

### **INSTALLING THE REFILL**





- 1. OPEN THE FRONT DOOR: Press the button on the silver inner lid and swing the front door open from the left side.
- 2. THEN LIFT THE SILVER INNER LID: Press the release button just beneath the inner lid and lift it up.

How to Install / How to Use

#### FOR DIAPER PAIL REFILL RINGS







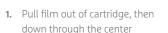




TO REMOVE THE BAG WHEN FULL: Open the front door and slide the top of the bag through the cutter located beneath the inner lid. Tie a knot to close the bag and discard.

Pull the remaining material down and tie a knot at the bottom to create another bag. At least 3 inches should rest on the floor of the pail.

For best results, empty the diaper pail regularly and keep clean.



2. Tie a knot at the end to create a bag and feed it through the sealing flaps.

opening of the refill ring.

- 3. Place the ring inside the opening with the tabs lined up with the grooves, so that the ring locks into place.
- 4. Pull the bag all the way down with at least 3 inches resting on the bottom.



#### FOR SNAP, SEAL & TOSS BAGS





TO REMOVE THE BAG WHEN FULL: Open the front door and lift the inner lid. Snap the plastic ring closed and push it down through the sealing flaps. Then remove and replace with a new bag.

- 1. Feed the bottom of the bag through the sealing flaps and pull down tightly.
- 2. Push down to snap the ring under the locking tabs in all 4 locations.



### **USING THE DIAPER PAIL**





- 1. Open the lid. Roll the used diaper tightly and push it through the bag's seal into the pail.
- 2. Close the lid. The opening will twist automatically to seal in odors.

Your diaper pail accepts refill rings from Arm & Hammer™, Nursery Fresh®, Up & Up® and Comforts for Baby™. These refill rings are convenient, long-lasting and also fit ALL Diaper Genie® Elite, Essentials & "Mini" Pails.\*

NOTE: Diaper Genie®-brand refill rings do not fit Munchkin diaper pails.

\*These refills are guaranteed to fit all Diaper Genie® pails excluding Diaper Genie® Twistaway<sup>TM</sup> system. If you are not satisfied with the fit of this refill, call **1-800-344-2229** or visit www.munchkin.com to learn how to receive a refund.

### TO ORDER REFILLS, VISIT: www.munchkin.com



Arm & Hammer™ PUCK™



Diaper Pail Refill Ring



Snap, Seal & Toss™ Bag

SPANISH ESPAÑOL ESPAGNOL

## 1000 Lb Capacity, (3) 21 x 49 Inch Shelves, Handler Ergonomic Handle

**D** elakesidehealthcare.com/product/1000-lb-capacity-3-21-x-49-inch-shelves-handler-ergonomic-handle

SKU: 4959

August 28, 2019



### **Expand**

Lakeside invented and perfected the stainless steel utility cart so you can rest assured that our carts are your best bet for durability and will be reliable for years to come!

MADE IN THE USA

### Specifications

PRODUCT INFORMATION					
Capacity (lbs) 1000					
Material Stainless Steel					
Ergonomic Design Ergonomically Engineered					
Frame Type Formed Angle					
Shelf Size (WxL) (in)	21 x 49				
Number of Shelves	3				
Overall Size (WxLxH) (in) 22 3/4 x 55 x 49 3/8					
Shelf Clearance (in) 11.375					
Caster Size (in) 5					
Caster Type All swivel					
SHIPPING DIMENSIONS					

Weight	150 lbs	68.04 kgs
	22.75 × 55 × 4	9.375 in 57.79 x 139.7 x 125.41
Dimensions		cm

### Description

Ideal for receiving dock and store room uses, loading and moving supplies, transporting equipment and continuous hauling of heavy loads over uneven floor and outdoor surfaces. Rugged "U" shaped frame with angled stainless steel for added strength. Vertical ergonomic handle provides comfortable, natural grip. Four swivel casters provide easy maneuvering in tight spaces. All joints are continuous heliarc welded. Shelves are 14 gauge stainless steel with reinforced edges. Stainless steel construction resists staining and rusting. Front leg bumpers protect walls and furniture. Easy to clean and sanitize, just wipe down or steam clean.

### 2603

### **TECH WORKBENCH**



### TechWorks - 72"W Fully Loaded Typical

TechWorks technology furniture includes benches, organizer frames and accessories that can be configured in any number of ways to meet different tasks and keep pace with evolving technologies.

- 72"W X 30"D Table w/Lam
- 72"W x 48"H Upper Frame
- 48"W x 18"D Lam, Fixed Shelf
- Retractable Keyboard/Mouse Platform
- Full Base Shelf 72"W x 23"D
- 24"W x 3"H Part Bin Panels
- 24"W Lockable Storage Bin
- 48"W 15amp Power Strip
- 72"W Task Light (48"H Frames)
- 24"W x 24"H Pegboard
- 72"W Wire Cable Basket
- 24"W x 24"H Whiteboard

SOURCE: <a href="https://www.mayline.com/product-detail.php?id=P1088">https://www.mayline.com/product-detail.php?id=P1088</a>

### 2609

### JANITORIAL CLOSET ORGANIZER



### **RUBBERMAID COMMERCIAL**

### 34" CLOSET ORGANIZER / TOOL HOLDER KIT, GRAY: SKU: FG199300GRAY

Helps increase productivity and efficiency through better tool storage and access

- S-hooks holds 5/8" to 1 1/4" (16 cm to 32 cm) handle diameters
- Deep double hooks afford easy accessibility
- Clip holder for work notes and instructions

### **SPECIFICATIONS**

	U.S.	Metric
Product Length	34.00 in	86.36 cm
Product Width	3.25 in	8.26 cm
Product Height	4.25 in	10.80 cm
Product Weight	10.30 lb	
UPC	00086876127898	
Case Pack Quantity	4	
UCC	10086876127895	
Packaging Length		86.36 cm
Packaging Width		8.26 cm
Packaging Height		10.80 cm
Color	Gray	
Material Type	Various	

 $\label{lem:mfg} \begin{tabular}{ll} MFG SOURCE: $\underline{$https://www.rubbermaidcommercial.com/cleaning/cleaning-accessories/closet-organizertool-holder-kits/?sku=FG199300GRAY$ \end{tabular}$ 

PURCHASE SOURCE: <a href="https://www.globalindustrial.com/p/janitorial-maintenance/cleaning-supplies/tools/rubbermaid-18-w-closet-organizer-tool-holder">https://www.globalindustrial.com/p/janitorial-maintenance/cleaning-supplies/tools/rubbermaid-18-w-closet-organizer-tool-holder</a>

## 2810 FOR USE IN BEHAVIORAL HEALTH-CHILD SPILLS



### BLACK & DECKER HAND HELD WET/DRY VAC

### **Product Specs**

BATTERY TYPE Lithium-Ion

**CHARGE DURATION** 10 hrs

**CHARGER** Wall Charging Base

**DUSTBOWL CAPACITY** 13 oz.

SUCTION POWER 13 AW

WEIGHT 1.4 lbs

**USES** Quick pick-ups of wet

messes + spills.

Quick pick-ups of dirt

+ debris.

INCLUDES (1) HNVC215BW52

hand vacuum

(1) Wall Mountable

**Base Charger** 

(1) Push-In Squeegee

SOURCE: <a href="https://www.walmart.com/ip/Black-and-Decker-HNV215BW52-Compact-Cordless-Lithium-Wet-Dry-Hand-Vacuum/54297056">https://www.walmart.com/ip/Black-and-Decker-HNV215BW52-Compact-Cordless-Lithium-Wet-Dry-Hand-Vacuum/54297056</a>

### 3005

### **LINEN CART WITH COVER FOR EVS RM #01-04-05**



### Nexel® Galvanized Steel Linen Cart with Nylon Cover, 4 Shelves, 60"L x 24"W x 69"H

This versatile and economical linen cart is ideal for use in medical facilities or industrial facilities. Linen cart with blue nylon cover protects linens from airborne dust and dirt. Linen cart rolls easily on 5" all swivel casters (2 with brakes). 1 Year Limited Warranty.

#### **Linen Cart Features:**

- Four durable, corrosion-resistant 60" x 24" solid galvanized 18-gauge steel shelves
- Clear epoxy coated shelves are adjustable in 1" increments
- Each shelf holds up to 400 lbs of evenly distributed weight
- Four 5" swivel casters (2 with brakes) make for easy maneuverability
- Casters are rated for a maximum total weight of 1,200 lbs per unit (300 lbs each)
- Easy assembly without tools
- Overall dimensions: 60"L x 24"W x 69"H (with casters)

### **Nylon Cover Features:**

- Made of water resistant 400 Denier blue nylon
- Cover with reinforced corners and double stitching for maximum durability
- Includes two 8-1/2" x 11" document pockets
- Hook and loop closures provide easy accessibility

### **Product Specifications**

- BRANDNexel®
- MANUFACTURERS PART NUMBER436934
- LENGTH INCHES60
- WIDTH INCHES24
- HEIGHT INCHES
- ASSEMBLYUnassembled
- CAPACITY LBS400
- COLOR FINISHGalvanized
- CONSTRUCTIONSolid Galvanized Steel

- **DESCRIPTION**Linen Cart with Cover
- INCLUDESLinen Cart and Nylon Cover
- PACKAGE QUANTITY1
- SHELF QUANTITY4
- SHELF TYPESolid Galvanized Steel
- TYPELinen Service Cart
- WHEEL DIAMETER INCHES
- WHEEL TYPEPolyurethane Swivel, 2 with Brakes
- LIMITED WARRANTY1 Year

SOURCE: <a href="https://www.globalindustrial.com/p/material-handling/service-carts/medical-supply-service-carts/nexel-174-galvanized-steel-linen-cart-with-nylon-cover-4-shelves-60-l-x-24-w-x-69-h">https://www.globalindustrial.com/p/material-handling/service-carts/medical-supply-service-carts/nexel-174-galvanized-steel-linen-cart-with-nylon-cover-4-shelves-60-l-x-24-w-x-69-h</a>

### 3005a

### **LINEN CART FOR PT STORAGE RM #01-07-10**



### Nexel® Chrome Wire Linen Cart with Nylon Cover, 4 Shelves, 36"L x 18"W x 69"H

This versatile and heavy-duty linen cart is ideal for use in doctor's office, exam rooms, clinics, hospitals and more. Linen cart with blue nylon cover protects linens from airborne dust and dirt. Linen cart rolls easily on 5" all swivel casters (2 with brakes). 1 Year Limited Warranty.

#### **Linen Cart Features:**

- Four durable, corrosion-resistant 36" x 18" wire shelves
- Chrome finished shelves are adjustable in 1" increments
- NSF certified
- Each shelf holds up to 600 lbs of evenly distributed weight
- Four 5" swivel casters (2 with brakes) make for easy maneuverability
- Casters are rated for a maximum total weight of 1,200 lbs per unit (300 lbs each)
- Easy assembly without tools
- Overall dimensions: 36"L x 18"W x 69"H (with casters)

### **Nylon Cover Features:**

- Made of water resistant 400 Denier blue nylon
- Cover with reinforced corners and double stitching for maximum durability
- Includes two 8-1/2" x 11" document pockets
- Hook and loop closures provide easy accessibility

#### **Product Specifications**

- **BRAND**Nexel®
- MANUFACTURERS PART NUMBER436913
- LENGTH INCHES36
- WIDTH INCHES18
- HEIGHT INCHES
  69
- ASSEMBLYUnassembled
- CAPACITY LBS600
- COLOR FINISHChrome
- CONSTRUCTIONChrome Plated Steel

- DESCRIPTIONLinen Cart with Cover
- INCLUDESLinen Cart and Nylon Cover
- PACKAGE QUANTITY1
- SHELF QUANTITY4
- **SHELF TYPE**Wire
- TYPELinen Service Cart
- WHEEL DIAMETER INCHES5
- WHEEL TYPEPolyurethane Swivel, 2 with Brakes
- LIMITED WARRANTY1 Year

SOURCE: <a href="https://www.globalindustrial.com/p/material-handling/service-carts/medical-supply-service-carts/nexel-174-chrome-wire-linen-cart-with-nylon-cover-4-shelves-36-l-x-18-w-x-69-h">https://www.globalindustrial.com/p/material-handling/service-carts/medical-supply-service-carts/nexel-174-chrome-wire-linen-cart-with-nylon-cover-4-shelves-36-l-x-18-w-x-69-h</a>

### **EQUIPMENT #3016**

### LINEN HAMPER, STAINLESS STEP ON, SPACE SAVER



### Blickman 2301SS Triangular Space-Saver Hamper, Stainless Steel, 18"D x 32"H

Blickman 2301SS Triangular Space-Saver Hamper offers hands-free operation with a convenient non-slip pedal. All stainless steel construction. Bumper guards on the stainless steel lid and legs protect equipment and walls. Solid shelf on bottom provides extra stability with heavy loads. This hamper rolls effortlessly on three, 3" hard rubber swivel casters. Stainless steel lid with pin-drop, pneumatic top for quiet operation. Optional nylon hamper bag is available (model# B2224897).

### **Product Specifications**

- **BRAND**Blickman
- MANUFACTURERS PART NUMBER 096230100P
- LENGTH INCHES18
- WIDTH INCHES18
- **HEIGHT INCHES**32
- ASSEMBLYUnassembled
- COLOR FINISHStainless Steel
- CONSTRUCTIONStainless Steel
- PACKAGE QUANTITY1
- STYLEFoot Operated Hamper
- TYPETriangular Space-Saver Hamper
- WEIGHT LBS25

SOURCE: <a href="https://www.globalindustrial.com/p/material-handling/service-carts/medical-hampers/2301ss-triangular-space-saver-hamper-stainless-steel-18d-x-32h">https://www.globalindustrial.com/p/material-handling/service-carts/medical-hampers/2301ss-triangular-space-saver-hamper-stainless-steel-18d-x-32h</a>

### 3017

### **ROUND LAUNDRY CART**



### Forbes Laundry Cart 1100 Cloth 33"H x 24-3/4" Dia

Forbes Laundry Cart has a 1" round superstructure finished with a silver powder-epoxy paint.

### Features:

- 1" reinforced square steel tube base
- 7 bushel size H.D. cloth bag in black
- 4" all swivel gray wheels

### **Product Specifications**

- LENGTH INCHES24-3/4
- WIDTH INCHES24-3/4
- HEIGHT INCHES33
- CAPACITY LBS2000
- COLOR FINISHBlack
- CAPACITY BUSHEL7BRANDForbes Industries
- CONSTRUCTIONStainless Steel / Canvas
- MANUFACTURERS PART NUMBER1100
- PACKAGE QUANTITY1
- WEIGHT LBS34
- BUMPER COLORWhite
- **DIAMETER INCHES**24-3/4
- WHEEL QTY.4
- LIMITED WARRANTY1 Year

SOURCE: <a href="https://www.globalindustrial.com/p/janitorial-maintenance/cleaning-carts/laundry-hamper-carts/fbs-laundry-cart-1100-cloth-33h-x-24-3-4-dia">https://www.globalindustrial.com/p/janitorial-maintenance/cleaning-carts/laundry-hamper-carts/fbs-laundry-cart-1100-cloth-33h-x-24-3-4-dia</a>



## E-SERIES HIGH PERFORMANCE 20-POUND CAPACITY WASHER-EXTRACTOR

Designed to drive down gas, water and electrical costs while improving productivity, Continental E-Series High-Performance Washer-Extractors deliver high-speed extract, an easy-to-install freestanding design, unmatched durability and the ultimate in programmability!

### INNOVATIVE TECHNOLOGY

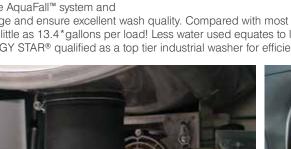
### CONTINENTAL'S MOST FLEXIBLE CONTROL EVER

The highly flexible Logi Pro Control offers 25 individually modifiable programs—each with up to 11 baths including multiple pre-wash, wash and rinse cycles. Variables within each bath—including wash temperature, six water levels, cycle times, rotation and G-force extract speeds—can be individually programmed for maximum efficiency given the load type. E-Series Washers can also be programmed for automatic chemical injection—ensuring a consistent clean with every wash and eliminating the possibility of chemical overuse and resulting damage to fabric.

### STINGY ON WATER

E-Series technology allows for superior wash quality using considerably less water than most toploads on the market. A sump-less design, exclusive AquaFall™ system and

a highly programmable control combine to slash water usage and ensure excellent wash quality. Compared with most top-load washers, which consume 31-40 gallons of water per load, E-Series uses as little as 13.4\*gallons per load! Less water used equates to less water heated and additional savings in gas and electricity. No wonder it's ENERGY STAR® qualified as a top tier industrial washer for efficiency!



LOGI PRO

Sumpless Design







#### SMALLER MACHINE - GREATER OUTPUT

E-Series Washers fit into the same space as most top-load washers, yet offer 40% greater capacity. Larger loads equate to increased productivity. E-Series Washers use the same power requirements as top-load washers and as a result are an easy replacement for these less efficient models.



E-Series Washers use up to 57 percent less water per load! This translates into significant savings of water usage and water-heating costs. The high-speed extract of E-Series' further reduces utility costs by decreasing the gas or electricity used to dry a load.

### Ton-Load Washer Hard-Mount Washer 4.5 cu ft 4.5 cu ft 4.5 cu ft 20 lbs Capacity Floor Space Required 30,677 BTUs 31.5 gal 28.2 gal 32,138 BTUs 13.4 gal 🕒 🥞 20,816 BTUs Gas Usage Water Usage

### THE BOTTOM LINE—BOOSTED PRODUCTIVITY

How can E-Series Washers produce more laundry per hour when compared to larger, lower-performance machines? The answer lies in wash and dry throughput. E-Series Washers reach much higher extraction speeds—resulting in greater moisture removal, shortened dry time and boosted productivity. E-Series Washers move soiled laundry through the wash and dry process faster. This boosts productivity, reduces labor costs and extends linen life by minimizing exposure to dryer heat and tumbling.

\* Models Used in Comparison: Continental JWT820 top-load washer; Continental L1018 3-phase hard-mount washer; Continental EH020 1-phase E-Series Washer

### UNIQUE DESIGN

### HIGH-SPEED EXTRACT & FREESTANDING DESIGN

A 20-pound capacity washer, E-Series features a freestanding design that allows for extraction speeds of up to 300 G-force, about 200 G-force more than most top-load washers and 100-150 G-force more than most similarly sized hard-mount washers. The super-speed extract removes more water from each load—slashing dry time and resulting gas consumption by up to 50%! Production, in turn, is significantly enhanced using less labor and utilities. And, unlike hard-mount machines that must be bolted to concrete foundations, the freestanding design of E-Series Washers allows them to be easily installed and moved—using the same footprint as most top-load washers. To further facilitate easy installation, E-Series Washers use single-phase power which is easily available at most on-premise locations.



### PROVEN CONSTRUCTION, DURABILITY & LONGEVITY

E-Series Washers feature inner and outer drums of durable AISI-304 stainless steel, oversized bearings and bearing housings and a quality sealing system. They are engineered using as few welds as possible to attain unmatched strength. The oversized door, which allows for easy loading and unloading, is equipped with heavy-duty, bolt-style door hinges to withstand the rigors of constant use.

### EASE OF MAINTENANCE

Nearly all components are accessible via the front or top cover of the washer, which is easily removed without interfering with detergent dispensers. Bearings are lubricated for a lifetime, the poly-v belt needn't be tightened, and bearings and seals are easily replaced without removing the washer drum. Everything about E-Series mandates ease of maintenance and component accessibility. Choose from standard gravity drain, or optional pump drain.







### **ENERGY STAR QUALIFIED**

Continental E-Series Washers offer unrivaled efficiency for on-premise laundries looking for a small-load commercial washer-extractor. E-Series Washers boast a superior 2.21 MEF (Modified Energy Factor) and 5.03 WCF (water consumption factor); use just 13.4 gallons of water per load; and offer high-speed extract for shortened dry times and improved productivity. Energy Star qualified, E-Series Washers often qualify for local utility rebates.





### BACKED BY A COMMERCIAL WARRANTY

Engineered to withstand the rigors of constant use, E-Series Washers offer an industry-leading commercial warranty.



## E-SERIES HIGH PERFORMANCE 25-POUND CAPACITY DRYING TUMBLER

Equipped with an oversized door, dryer window and cylinder light, E-Series Drying Tumblers are not only easy to use, they are incredibly efficient! With up to 25 pounds of capacity and gas or electric heat, E-Series Dryers are the right choice for any on-premise laundry with small load requirements. Loaded with industrial-grade features that ensure durability and simplify maintenance, E-Series Dryers are built to last.

### COMPACT DRYING TUMBLER

### INDUSTRIAL-GRADE EFFICIENCY AND DURABILITY

Featuring AISI-304 stainless steel top, front and side panels, the E-Series Drying Tumbler echos the efficiency and durability of the E-Series Washer-Extractor. The robust 7.0 cu. ft. cylinder and 1/3 HP motor are a perfect match in capacity and power to the E-Series Washer. In addition, E-Series Dryers boast efficient axial airflow that maximizes water removal. Laundry dries faster—resulting in a significant savings in labor and utility costs.

#### **ERGONOMIC DESIGN**

Utilizing a sensible ergonomic design with an oversized door, cylinder light, unique dryer window, and optional elevation base, the E-Series Dryer makes loading and unloading a snap. The large door—with a left or right swing—features heavy-duty hinges to withstand the rigors of constant use.



#### FLEXIBLE CONTROL

The dryer control, which mirrors the look of the E-Series Washer control, offers four temperature settings including high, medium, low and delicate. It couldn't be simpler to operate thanks to easy-to-understand icons that show operating instructions and a digital display that illuminates machine cycle status.

### EASY TO INSTALL, SERVICE & MAINTAIN

E-Series Dryers share the same dimensions and utility connections as most home-style dryers, and as a result, are an smart replacement for

these less efficient models. Designed for minimal maintenance and simplified serviceability, the drying tumbler features a lint filter that's easy to reach and clean, but doesn't get in the way of users. When service is necessary, most components are accessible from the front—eliminating the need to move the machine. The motor, blower, heating element, gas valve and thermostats are serviceable through a lower front panel without having to disconnect the door switch.

#### **GAS OR ELECTRIC**

Underwriters Laboratories (UL) and CSA International listed, E-Series Dryers are available in gas or electric heat.







### BACKED BY A COMMERCIAL WARRANTY

Constructed for longevity in the most demanding environments, E-Series Drying Tumblers are backed by an industry-leading commercial warranty.



# ADVANCED ENGINEERING FOR UNRIVALVED EFFICIENCY

### **ELECTRIC UNIT**

	EH020
Capacity lbs (kg)	20 (8)
Cylinder Diameter inch (mm)	21.1 (536)
Cylinder Depth inch (mm)	13.8 (351)
Cylinder Volume cu ft (dm³)	2.8 (79.2)
Net Weight Ibs (kg)	279 (127)
Crated Weight Ibs (kg)	301 (137)
Machine Width inch (mm)	27 (685)
Machine Depth inch (mm)	27.6 (700)
Machine Height inch (mm)	42.5 (1080)
Door Opening inch (mm)	12.7 (322)
Floor to Door inch (mm)	15.4 (390)
Shipping Dimensions inch (mm) (WxDxH)	28.3 x 29.1 x 47.7 (720 x 740 x 1212)
Control Options	Logi Pro
Washing Speeds rpm	50
Spin Speeds rpm	50/100/580/690/780/970
G-force	0.75/3/101/143/183/300
Modified Energy Factor (MEF)*	2.21
Water Consumption Factor (WCF)*	5.03
Drain Diameter inch (mm) pump gravity	1 (25.4) 2 (51)
Water Inlets inch (mm)	3/4 (19)
Recommended Water Pressure PSI (bar)	30-60 (2-4)
Water Flow gal/min (I/min)	8 (30)
Motor Power kW	0.8

Capacity Ibs (kg)	up to 25 (10)			
Cylinder Volume cu ft (dm³)	7 (199)			
Net Weight Ibs (kg) Electric / Gas	150 (68) / 155 (70)			
Crated Weight Ibs (kg) Electric / Gas	160 (73) / 165 (75)			
Machine Width inch (mm)	26.88 (683)			
Machine Depth inch (mm)	28 (711)			
Machine Height inch (mm)	44.34 (1126)			
Door Opening inch (mm)	20.5 (521)			
Shipping Dimensions inch (mm) (WxDxH)	29.5 x 30.5 x 45 (749 x 775 x 1143)			
Exhaust Diameter inch (mm)	4 (102)			
Exhaust Air Flow cfm (m³/h)	220 (374)			
Cylinder Motor Power Hp	1/3			
Gas Heating BTU/h (Kcal/h)	25,000 (6300)			
Gas Inlet Diameter inch	3/8 NPT			

---





<sup>\*</sup> Modified Energy Factor (MEF) measured in cubic feet per kilowatt-hour per cycle. Water Consumption Factor (WCF) measured in gallons per cycle per cylinder cubic feet. MEF and WCF statistics are according to Department of Energy (DOE) testing standards report by Intertek, an independent testing laboratory.

KFE/NFG

GENERAL

ONNECTIONS

<sup>\*\*</sup> Product specifications and details are subject to change without notice. For the most current and complete technical specifications, architectural line drawings and warranty information, please visit www.continentalgirbau.com. E-Series Washer-Extractors are available in 20- to 255-pound capacities.

### CONTINENTAL GIRBAU INC. & GIRBAU GROUP

Continental Girbau Inc. (Continental) was established in 1995 as the North American subsidiary of the commercial laundry equipment manufacturer, Girbau Group, headquartered in Vic, Spain. Family owned, Girbau employs more than 600 people throughout its corporate headquarters in Vic and 14 subsidiaries throughout the world. It markets its industrial and commercial laundry products to more than 90 countries worldwide.

#### THE TOTAL LAUNDRY SOLUTION

Continental delivers the total laundry solution to vended, on-premise and industrial laundries throughout North America. As the provider of highly-efficient batch tunnel washers, washer-extractors, drying tumblers, feeders, ironers, folders and related machinery, Continental serves the complete laundry production and efficiency needs of virtually any application. Proven durable and reliable, Continental laundry systems are engineered for unrivaled productivity, efficiency and ease of use.



Continental's mantra – "Our Mission: Your Success" – reflects the company's commitment to its distributors and customers. We offer robust laundry systems backed by unrivaled customer care.















### **WARRANTY**

Backed by an industry-leading ContinentalCare™ warranty E-Series Washer-Extractors and Drying Tumblers are built to last.



### SIZING & CONFIGURATION

Every laundry operation is unique, with a distinctive set of production and efficiency goals. Uniquely, E-Series Washer-Extractors and Drying Tumblers offer the flexibility and programmability to meet any need—boosting production and lowering labor, water and energy usage. Continental's team of experts work closely with facilities to properly size equipment for improved laundry room efficiency and productivity.

### **FINANCING**

Financing allows you to retain full ownership of your business and its assets while helping to preserve your cash, liquidity and revolving lines of credit for emergency use, working capital and other investments. Through CustomSelect™ Financing, Continental Girbau offers flexible financing and competitive fixed rates to all qualifying applicants.

### **ENVIRONMENTALLY FRIENDLY**

Continental laundry products meet rigorous environmental and safety standards established by the International Organization for Standardization (ISO). Ever focused on laundry efficiency, Continental Girbau is a member of the U.S. Green Building Council (USGBC), a 501(c)(3) nonprofit that developed the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.





### **DISTRIBUTED BY:**





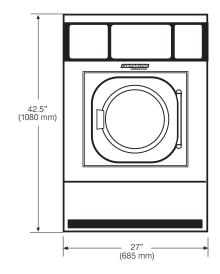
PRODUCT SPECIFICATIONS

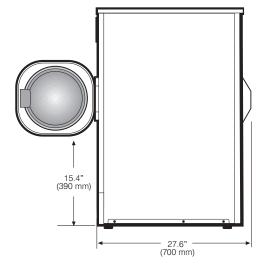
### **EH020**

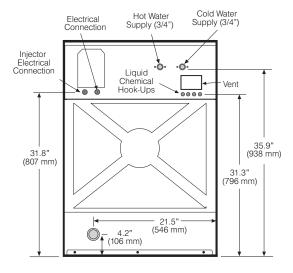
### ON-PREMISE E-SERIES SOFT-MOUNT WASHER-EXTRACTOR

PRODUCT SPECS	
Capacity <i>lbs</i>	20
Cylinder Diameter <i>inch</i>	21.1
Cylinder Depth inch	13.8
Cylinder Volume cu ft	2.8
Net Weight Ibs	249
Crated Weight <i>lbs</i>	271
Machine Dimensions <i>inch</i> WxDxH	27 x 27.6 x 42.5
Door Opening inch	12.7
Floor to Door inch	15.4
Shipping Dimensions <i>inch</i> WxDxH	28.3 × 29.1 × 47.7
Washing Speed rpm	50
Spin Speed rpm	50/100/400/600/800/970
G-force	0.75/3/49/108/192/300
Static Force Transmitted <i>Ibs</i>	340
Dynamic Force Transmitted <i>lbs</i>	115
Frequency of Dynamic Force Hz	16.2
Available Voltages/Wire Conductor/An Hot Water (standard) Hot Water (standard)	120/60/1, 3-prong cord, 15 208-240/60/1, 2W+G, 5
Electric Auxiliary Heat (optional) Electric Auxiliary Heat (optional)	208-240/60/1, 2W+G, 20 208-240/60/3, 3W+G, 20
Modified Energy Factor (MEF)	2.21
Water Consumption Factor (WCF)	5.03
Drain Diameter <i>inch</i> Pump Drain Gravity Drain	1 2
Water Inlets inch	3/4
Recommended Water Pressure PSI	30-60
Water Flow gal/min	8
Total Power <i>kW</i>	0.8
Electrical Heating Power (optional) kW	4.3

<sup>\*</sup> Specifications subject to change without notice or obligation. Contact Continental Girbau at (800) 256-1073 for dimensions not shown or for clarification.









<sup>\*</sup> Modified Energy Factor (MEF) measured in cubic feet per kilowatt-hour per cycle. Water Consumption Factor (WCF) measured in gallons per cycle per cubic feet. MEF and WCF statistics are according to DOE test results report by Intertek, an independent testing laboratory, dated February 27, 2007.









## **Operating Instructions Manual for** LOGI CONTROL LOGI PRO CONTROL

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EN LOGI **LOGIPRO** control

Model	From serial no.
High speed	
HS-6008	2,080,884
HS-6013	2,110,200
HS-6017	2,120,320
HS-6023	2,140,001
HS-6024	2,390,001
EH020	1,430,001
EH030	1,460,021
EH040	1,470,060
EH055	1,490,001
EH060	2,400,001
Medium speed	
RMS610	2,021,494
RMS/RMG613	2,330,000
RMS/RMG617	2,340,000
RMS/RMG623	2,350,000
RMS/RMG628	2,410,001
REM025	1,371,423
REM/RMG033	2,360,000
REM/RMG040	2,370,000
REM/RMG055	2,380,000
REM/RMG070	2,420,001

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#### IMPORTANT SAFETY INSTRUCTIONS

**WARNING**: To reduce the risk of fire, electric shock or injury to persons when using the machine, follow basic precautions, including the following:

- 1. **READ** all instructions before using the machine, and **KEEP** them in a prominent location for customer use.
- Do not wash articles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, dry cleaning solvents, and other flammable or explosive substances as they GIVE OFF VAPOURS that could ignite or explode.
- 3. **DO NOT ADD** gasoline, dry-cleaning solvents, or other flammable or explosive substances to the wash water. These substances give off vapours that could ignite or explode.
- 4. Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. HYDROGEN GAS IS EXPLOSIVE. If the hot water system has not been used for such a period, before using the washing machine, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. As the gas is flammable, do not smoke or use an open flame during this time.
- 5. Do not allow children to play on or in the washer. **CLOSE SUPERVISION** of children is necessary when the washer is used near children.
- 6. Before the washer is removed from service or discarded, **REMOVE** the door.
- 7. DO NOT TRY TO OPEN THE WASHER'S DOOR if the drum is moving.
- 8. Do not install or store the washer where it will be exposed to the **WEATHER**.
- 9. **DO NOT TAMPER** with controls.
- 10. **DO NOT REPAIR OR REPLACE** any part of the washer or attempt any servicing, unless this is specifically recommended in the user instructions or in published user-repair instructions that you understand and have the skills to carry out.
- 11. **DO NOT REMOVE** any safety device **OR MODIFY OR MANIPULATE** any component or part of the machine. **DO NOT INSTALL** any extra elements inside the machine.
- 12. Any part of the machine that is replaced may affect its operation and the user's safety. For this reason, **USE ONLY THE MANUFACTURER'S ORIGINAL SPARE PARTS**. Failure to comply with this warning can cause serious accidents, malfunctions and the loss of the machine's guarantee and certifications.
- 13. Failure to comply with or observe the legislation and regulations covering health, safety and prevention of risks in the workplace applicable in the country where the machine has been installed, or actions contrary to common sense, **MAY CAUSE** personal injury or even death to the user.
- 14. The machine should only be used for those purposes established by the manufacturer and following the instructions for use set out in the instruction manuals. Any use not specified in the manuals may lead to additional risks. Pay special attention to information headed DANGER, WARNING and PRECAUTION.
- 15. The room where the machine is located **MUST** comply with the environmental conditions (air venting, temperature, humidity, etc.) specified in the technical specifications table. NEVER INSTALL THE MACHINE IN ENVIRONMENTS where it will be splashed with water or where there is a very high level of humidity in the atmosphere.
- 16. Clearly mark out danger areas and **PREVENT** public access to them when the machine is operating. Do not expose yourself to drainage areas or to vapour, condensation, combustion gas or ventilation outlets.
- 17. All machines working at temperatures present a fire risk. Take **EXTREME** care: **CLEAN** the machine of inflammable materials: lint, fluff, soot, etc. on a regular basis. **KEEP** the environment free of combustible materials and **PLACE** suitable extinguishers near the machine in easily accessible places.

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- 6
- 18. All installations required for the proper operation of the machine **MUST** be carried out by a duly accredited Registered Installation Contractors (see Note 3), in compliance with the legal regulations applicable in the country of use.
- 19. The machine **MUST** be commissioned by the Authorised Technical Service in the presence of the Customer Technical Service (see Notes 2 and 4) or a responsible person appointed by the customer.
- 20. This machine **MUST BE USED** by personnel who are properly trained in how to use it (see Note 1).
- 21. **NEVER** START THE MACHINE, OR USE IT, IF THE FOLLOWING ARE ABSENT, INCORRECTLY POSITIONED OR MALFUNCTIONING:
  - · COVERS (GUARDS) AND PROTECTIVE DEVICES
  - SAFETY DEVICES
  - CONTROL ELEMENTS
- 22. **DO NOT USE** the machine if you notice any abnormal noise or smell or if you suspect that the machine is faulty or defective.
- 23. The inspections required by the regulations applicable to the country where the machine is being used must be carried out. It is advisable to request an overall, detailed service of the machine by the Authorised Technical Service every year (see Note 2).

## 24. 🔼

#### **WARNING!!**

#### INSPECTION, MAINTENANCE OR REPAIR OPERATIONS

Before carrying out any action on the machine:

- Close and mechanically lock the manual fluid supply valves.
- Check that the bath has **COMPLETELY** drained, that no part of the machine is at a high temperature and that no circuits or containers are under pressure.
- Check that all the machine's moving parts are halted or in their rest position. Securely fix all the machine's moving parts that could cause an accident.

To reduce the risk of electric shock:

- COMPLETELY disconnect the machine from the mains power supply and take steps to prevent accidental reconnection. TURNING OFF THE ON SWITCH OR PRESSING THE STOP KEY IS NOT ENOUGH.
- Disconnect the electrical connection of any circuit external to the machine; for example external dosing equipment, central vending units, linen feeders or folders, etc. The electrical connection for these circuits is independent of the machine's electrical connection.
- To prevent the risk of electrical discharge caused by residual voltage, wait at least five minutes before removing any guard or cover from the machine.

Failure to follow these warnings may cause a serious accident.

- 25. **CONTACT** the Installation Contractors or the Authorised Technical Service (see Notes 3 and 2) in the event of any doubt, anomaly or problem.
- 26. It is advisable to copy and enlarge the **SAFETY INSTRUCTIONS** and place them in a visible place in the laundry.
- 27. THE MANUFACTURER ACCEPTS NO RESPONSIBILITY IF THESE SAFETY INSTRUCTIONS AND ALL THE INFORMATION IN THE CORRESPONDING MANUALS ARE NOT FOLLOWED.

SAVE THESE INSTRUCTIONS.



#### SYMBOLS USED IN MACHINE LABELLING



#### **Electrical risk**

Protective guard for elements carrying an electric current.



#### High temperature risk

Handle with caution. Use adequate protection.



#### Mechanical risk

Protective guard for moving parts.



#### Risk of inhaling harmful or irritant vapours

Keep the doors/covers closed. Use adequate protection.



Flame risk (only on some machines) Protective guard for flame.



#### Risk of falling

Use proper access and safety methods.



Access prohibited



Refer to instruction manual/booklet

## SYMBOLS USED IN THIS MANUAL



Symbol used to highlight a possible HAZARD, WARNING or NOTE.



This symbol is used to emphasise a particular explanation.

#### TRANSLATION OF THE ORIGINAL MANUAL

#### NOTES:

- (1) Trained personnel refers to those who have read and understood the Instruction Manual, who have been trained by the Authorised Technical Service or by a representative of the customer present at the start-up who is familiar with the operation of the machine and is authorised to use it.
- (2) Authorised Technical Service (ATS) is one that has been recognised under contract and properly trained by the manufacturer.
- (3) Registered Installation Contractors are those officially approved by the government of the country the machine is to be installed.
- Customer Technical Service (CTS) is one that has been authorised by the customer and which has sufficient basic technical knowledge to correctly interpret and carry out the actions attributed to it in this manual. The manufacturer strongly recommends that the customer should have its own technical service, particularly in laundries with large-scale machinery installations.

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## IMPORTANT INSTRUCTIONS FOR USE AND PRESERVATION

- INTENDED USE OF THE MACHINE AND INAPPROPRIATE USE. This machine is designed and intended solely for processing fabrics washed in a water bath or that have been previously treated in these conditions. Any use other than this is contraindicated without written authorisation from the manufacturer.
- 2. Maximum output, performance, reliability and durability are achieved when the machine is installed, used and maintained correctly, and if a comprehensive and detailed service is carried out annually by the Authorised Technical Service.
- 3. The machine's **MATERIALS** that are in direct contact with the chemical products involved in treating the linen are detailed in the manual.
- 4. The user must consult the supplier of the chemical products USED THROUGHOUT THE WHOLE LINEN TREATMENT PROCESS regarding the risks associated with its products and their combination. It must be confirmed that the products are not flammable, ARE MUTUALLY COMPATIBLE, and that they will not cause oxidisation or deterioration of the machine or any injury to the people using them. It should be noted that, under certain conditions of use, hypochlorite (bleach) generates chlorine gas. Chlorine is a corrosive, oxidising substance which, at high concentrations and temperatures, damages stainless steel and elastomers. This same effect can also be caused by other strongly oxidising agents, including ozone.
- 5. FOLLOW the treatment recommendations for each fabric indicated by its manufacturer. THE MANUFACTURER OF THE MACHINE accepts no responsibility for damage caused by inappropriate treatment of a fabric.
- 6. Periodically **CLEAN** the outside of the machine to prevent damage to its metal parts. This will improve safety and extend its life. To clean the machine, use water and detergent. Rinse with a damp cloth and then dry off. To remove accumulated lint, use a suitable vacuum cleaner. **Water jet or pressurised steam cleaning is prohibited.**
- 7. **NEVER** use aggressive products to clean the machine or the premises. There are products on the market that give off highly corrosive vapours.
- 8. If the machine is left idle for long periods of time, it must be thoroughly **PROTECTED** from humidity and temperature variations.
- 9. Faults arising from improper machine operation may **VOID THE WARRANTY**.
- 10. When asking for information on your machine, **MENTION** the model and serial number. This information can be found on the specification nameplate incorporated into the machine.

With every machine, the manufacturer provides all the necessary technical information and documents required for its use. **KEEP IT IN GOOD CONDITION**.

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9



1. INTRODUCTION AND APPLICATION

This manual contains the OPERATION, PROGRAMMING and ADVANCED USE MODE instructions for washing machines with LOGI CONTROL and **LOGI PRO CONTROL** systems.

Most of the contents in this manual are common for both controls. However, the information on PROGRAMMING and ADVANCED USE MODE is specific for each control. See the Contents section.

#### **Application**

This manual applies to the following models:

#### LOGI CONTROL.

Applicable to HS-6, EH models with software version 25 or higher Applicable to RMS and REM models (except REM025) with software version 01 or higher.

#### **LOGI PRO**

Applicable to HS-6008, RMS610, RMG, EH020, REM025 and RMG models with software version 01 or higher.

#### 2. DESCRIPTION

Washer extractor designed to wash or treat fabric in a water bath.

#### 2.1. Intended use of the machine and inappropriate use

This machine has been made and designed for treating textile materials in a water bath. These textile materials must be free of flammable or explosive products. Unless approved by the manufacturer in writing, it is not considered appropriate for any other use.

Under-loading as well as overloading is not recommended. Always endeavour to match the capacity of the machine.

It is not advisable to insert bags full of laundry. Where necessary, load the machine up to its set limit.

It is not recommended to spin carpeting, canvas or waterproof fabrics.

#### 2.2. Construction characteristics

- **HIGH SPEED MODELS (HS / EH).** Washing machines capable of spinning at a speed higher than 350G (280G in model HS-6008/EH020) without needing to be bolted down. The design of its suspension system cushions up to 95% of the vibrations produced during the spin cycle.
- MEDIUM SPEED MODELS (RMS/REM/RMG). Hard-mount construction. They have to be bolted down to the floor.
  - Approximate spin speed: 125G, 150G, on models RMS, REM.
  - Spin speed: 200G on models RMG.
- Stainless steel **inner and outer drum.** The openings in the drum blades promote the uniform distribution of bath water and improve the yield of the washer both during the wash and the rinse cycles.
- The drum rotation is produced by an asynchronous AC motor controlled by an inverter.
- The hot and cold water connections have a safety mechanism to prevent contaminating by back-flowing into the general drinking water system.
- Large capacity drain valve. (Option for pump drainage in models HS-6008/EH020).
- Water inlets and all product dispensers made using a common collector with an anti-siphon mechanism.
- Option for heating the bath using electric heaters or steam injection.

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#### 2.3. Protection, safety and control elements

- **Fixed guards**: Covers. These prevent access to dangerous points or moving parts. Protect from accidental machine spattering.
- Moving guards:
  - Dispenser cover.
  - Door with interlock microswitch, door lock and delayed opening.
- Overflow. When the bath level is exceeded due to solenoid valve failure, the bath is drained through the drain outlet.
- Thermal fuse to protect the electric heaters.
- **Emergency stop**: a red button on a yellow background, located at the front of the machine. Stops the machine from operating and opens the drain valve (applicable in models with a load equal to or exceeding 13 kg / 30 lb.)
- **Electric circuit safety measures:** To protect the electric circuit against external malfunctions and prevent any malfunctioning from causing harm to the operator.
- Sound alarm: Among other functions, the acoustic signal warns of possible alarms.
- **Unbalance microswitch**. (Only in high speed models). Additional electromechanical safety to protect against unbalance of drum load during the spin cycle.

#### 2.4. Safety functions

- Bath level control. Allows selecting different bath levels during the wash cycle and controls the overflow safety and minim level of connection to the heating system and door opening.
- **Temperature control.** Allows selecting the bath temperature during the wash cycle and controls the bath insufficient temperature and overheat safeties.
- Unbalance control. Repositioning of the washer's load if the inverter power control detects unbalance.
- Door opening safety. Allows the opening of the door in safety conditions.
- Safety measures against entrapment. To reduce the risk of a child becoming trapped inside a washing machine while playing, or to help in freeing them during the first moments of launching a program, the running sequence of a wash cycle is as follows:
  - After giving the start order, a 30-second security time is started during which the drum rotation and the water inlet operate at short impulses and door remains released. Further information in Sections: Freeing a trapped person (Chapter 9) and Stopping methods (Chapter 4)

#### 2.5. Characteristics of the controls

- Operation of the washer controlled by microprocessor.
- Operation of the washer adaptable to the possibilities of the installation and the needs of the user.
- Great versatility in individually modifying the content of each program. Further information in specific sections of the advanced use mode.
- Temperature control achieved by the hot and cold water mixer in accordance with the programmed temperature and the activation of the heating system. Precision of +/- 2 °C (+/- 3,5 °F).
- Level control achieved using an electronic pressure transmitter.
- Series communication between the washer microprocessor and the inverter's control of the motor.
- Multiple controls that assure the safe use of the washer.

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#### 3. MODES OF USE

LOGI CONTROL and LOGI PRO CONTROL present TWO MODES OF USE.

#### **PROGRAM EXECUTION MODE**

Covers the functions or interventions aimed at:

- Selecting and executing the various wash programs.
- Programming the delayed start of a program.
- Accessing information about the different functions that the washing machine is executing.
- Making small specific modifications to the program being executed.

Information regarding this intervention mode: Chapter 4 of this manual.

#### **ADVANCED USE MODE**

Covers the functions or interventions aimed at:

- Modifying or displaying the content of the washing programs.
- Consult the software version for the washer and the contents of the different program meters.
- Modifying the general operating parameters.
- Modifying the access code for Advanced use mode.
- Setting the time of the system clock (optional).
- LOGI CONTROL models. Information regarding this intervention mode: Chapter 5 and 6.
- LOGI PRO CONTROL models. Information regarding this intervention mode: Chapter 7 and 8.



### 4. PROGRAM EXECUTION MODE

## 4.1. LOGI CONTROL control panel

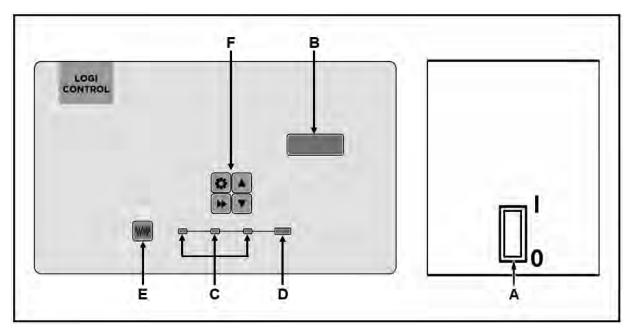


Fig. 4.1

CONTROL PANEL										
Α		ON switch								
В		Display								
С		LEDs indicating the phase of the program in progress								
D		LED indicating end of cycle								
E	START STOP	Starting and stopping a program								
	94	Access to the ADVANCED USE MODE								
	*	Start program delay (option)								
_	Modification of the program in progress									
F	•	Salaction and mayamant kays								
	V	Selection and movement keys								



## 4.2. LOGI PRO CONTROL control panel

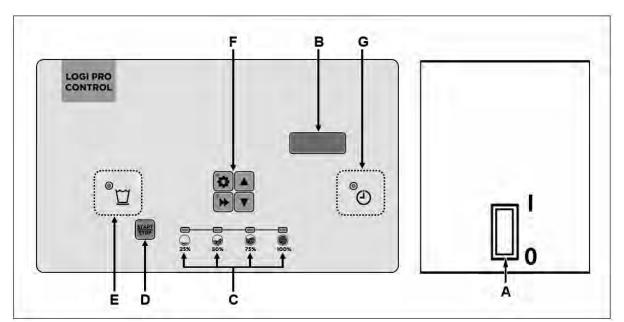


Fig. 4.2

	CONTROL PANEL							
Α	ON switch							
В		Display						
С		Load selection indicator LEDs						
D	START STOP	tarting and stopping a program						
	(°44)	Access to the ADVANCED USE MODE						
	•	Start program delay (option)						
E	••	Modification of the program in progress						
_	<b>A</b>	Selection and movement keys						
	•	Selection and movement keys						
F		Rinse hold function activated						
G	1	Start delayed program						



#### 4.3. Stop modes

#### 4.3.1. End of cycle

The acoustic warning and the *End* report on the display inform the user that the program has finished and that the door lock is released.

#### 4.3.2. Interrupting a program

A. START Key. This key interrupts a washing program. STOP appears on the display. Once the safety delay

has finished, the acoustic warning and the *End* report on the display inform the user that the program has finished and that the door lock is released.

#### **B.** Emergency stop

(Except on models with a load of less than 13 kg / 30 lb)

Pressing the **EMERGENCY** switch once interrupts the washer operation and opens the drain valve. The corresponding alarm report appears on the display.

After a delay of approximately 3 minutes, the door is released.

To resume the wash cycle, release the switch and press the



To cancel the wash cycle, release the switch and press the



key TWICE.

#### C. Other stopping methods include:

- Disconnecting the ON/OFF switch
- Disconnecting the SWITCH DISCONNECTOR
- Disconnecting the EXTERNAL AUTOMATIC SWITCH

We do not recommend these stop methods, except in an emergency. In these cases, as long as the door remains closed, the machine will understand that there has been a power failure. When the power is switched back on, the machine will resume the program in progress.



When a washing program is interrupted by electrical power failure, disconnecting the switches described in this section, or activating the Emergency Stop, the door lock mechanism stops being controlled by the microprocessor and the opening of the door is thermally delayed. In these circumstances, it is normal to have a washer delay or inactive time of about 3 minutes.

**Never disconnect these switches to rescue a person trapped** inside the washing machine. See information with regard to this in Chapter 9.

**D.** <u>Interruption of the power supply</u>. The operation of the washing machine is interrupted: the drain valve opens and after a delay of approximately 3 minutes, the door is released.

If the door remains closed when the power supply is re-established, the wash cycle is resumed.

If the door is open, the wash cycle is cancelled.



On machines with pumped drain, the disconnection of the external automatic switch or the ON switch does not allow the bath to drain.

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#### 4.4. Unbalance control

Before starting the spin, the washing machine's electronic control checks the correct distribution of the load. If it detects that the load is not well distributed and that can cause an excessive unbalance during the spin, the linen will be repositioned.

If there is still unbalance during the final phase spin, the washer can end the washing cycle at a reduced spin speed.

Unbalance control with a micro-switch (HS/EH models only). It is only activated in cases of extreme unbalance.



To improve the efficiency of the washer's spin, it is advisable to:

- · Load the washer up to its nominal value.
- · Load the washer with homogeneous loads.

#### 4.5. Loading the washing machine

Group the fabrics to be washed into homogeneous loads, attempting wherever possible to reach the nominal value of the load. Empty all pockets, fasten buttons, close zippers and remove accessories that are not machine-washable. Mixing whites with other colours is not recommended.

Open the door and load the machine.

Washer load recommendations according to the type of fabric to be washed:

- Cotton fabrics: nominal load
- Synthetic fabrics: between 80% & 90% of nominal load
- Delicate fabrics: between 35% & 50% of nominal load

Do not overload the machine; the door must be able to close easily.

Whilst the door is open, the display reads *door* indicating that the door must be closed in order for the program to begin.

#### Health and safety instructions for loading and unloading the washer

Installing washing machines on raised bases or pedestals, in accordance with the instructions set out in the corresponding installation manuals, aids in loading and unloading the machine by avoiding the need to adopt awkward positions.

Use linen collecting and transporting containers that are of a suitable height for the washer size. Consult the dimensions of the washers set out in the corresponding installation manual.

Take care not to overload the machine. Overloading the washer leads to excessive strain when processing the linen.

Certain chemical products that are used in the washing process are toxic. Handle them with care and wear appropriate protection.

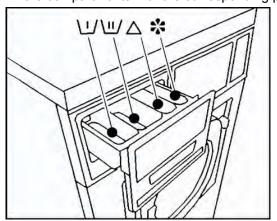
Follow the legislation and regulations for Health and Safety in the Workplace in force in the country where the machine has been installed.

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#### 4.6. Using the dispenser

Fill the compartments with the corresponding products, according to these symbols:



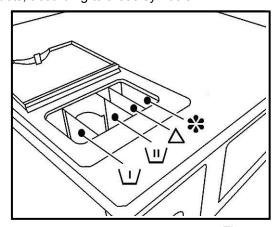


Fig. 4.3

Fig. 4.4

Symbols used in the dispenser (Fig. 4.3, 4.4).

	LOGI CONTROL	LOGI PRO CONTROL			
L	Powdered detergent for pre-wash	Dispensing compartment 1 (powder)			
\11/	Powdered detergent for wash	Dispensing compartment 2 (powder)			
Δ	Liquid bleach (chlorine, bleach, etc.)	Dispensing compartment 3 (liquid)			
88	Liquid softener / neutraliser	Dispensing compartment 4 (liquid)			



IN ORDER TO OPERATE CORRECTLY AND TO PREVENT POSSIBLE DAMAGE AND SPLASHING, THE DISPENSER DRAWER MUST ALWAYS REMAIN CLOSED, EXCEPT WHEN ADDING PRODUCTS.



#### SUDS CONTROL

The mechanical action of front-loading washing machines improves the quality of the wash but encourages the creation of suds.

Remember that a suds bath always reduces the efficiency of your wash. ALWAYS USE CONTROLLED SUDS DETERGENT.

Models with a capacity lower than 13 kg (30 lb) incorporate a group of programmes (SP-I) for a superior rinse efficiency.

Oversudsing causes an increase in the pressure inside the machine and decreases the efficiency of the sealing systems.

Repeated washing with a large amount of suds considerably reduces the life of seals and bearings. THIS CIRCUMSTANCE IS NOT COVERED BY THE MACHINE'S WARRANTY.



#### 4.7. Starting a program

#### LOGI CONTROL

- Close the door of the washing machine. The **door** report on the display will change to **Pr-\*** (last executed program). (If **Pr** does not appear on the display, repeat the door closing operation).
- Select the desired program with the program selection keys. The selected program number will be shown on the display. (To find out the initial content of each program, see Section 5.3.: Content of the washing programs).
- Place the washing products in the dispenser and close the cover.
- After pressing the START ; key, the temperature value will appear for the washing phase.
- The ▲/▼ keys enable the temperature of the program selected to be modified. (This option can be disabled in the **Mod** menu (see Section 6.7).
- Press the START key again to confirm the temperature selected and start the washing program.
- Door lock. After giving the start order, a 30-second security time is started during which the drum rotation and the water inlet operate at short impulses and door remains released. At the end of this time, the locking mechanism closes and the wash cycle begins.
- While the program is running, and depending on the configuration of parameter dt in the Mod, menu, the
  display will show the various functions being executed by the washing machine or the time remaining for the
  program (see Section 6.7)
- Once the program has finished, the door will remain locked until the end of program LED indicator comes on and the turn and the *End* report appears on the display.
- If the washing temperature has been modified at the start of the program, once the program has finished the temperature returns to the programmed value.



#### DOOR FITTED WITH SAFETY LOCK

#### Never attempt to open the door if:

- · the program has not finished.
- the drum has not come to a complete halt.
- the bath has not been completely evacuated.

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#### LOGI PRO CONTROL

- Close the door of the washing machine. The door report on the display will change to Pr-\* (last executed program). If **Pr** does not appear on the display, repeat the door closing operation).
- Select the desired program with the program selection keys. The selected program number will be shown on the display. (To find out the initial content of each program, see Section 7.3.: Content of the washing programs).
- Place the washing products in the dispenser and close it.
- key will cause the LOAd report to be shown on the display. The load selection LEDs Pressing the light up.
- The [▲]/[▼] keys allow the user to modify the machine's load selection. The load selection LEDs switch on or off depending on the load selected. (This option can be disabled in the Mod menu (see Section 8.7).
- Press the START key again to confirm the load selected and start the washing program.
- Door lock. After giving the start order, a 30-second security time is started during which the drum rotation and the water inlet operate at short impulses and door remains released. At the end of this time, the locking mechanism closes and the wash cycle begins.
- While the program is running, and depending on the configuration of parameter dt in the Mod, menu, the display will show the various functions being executed by the washing machine or the time remaining for the program (see Section 8.7)
- Once the program has finished, the door will remain locked until **End** appears on the display.
- Once the program has finished, the load selection returns to the maximum value.



#### DOOR FITTED WITH SAFETY LOCK

#### Never attempt to open the door if:

- the program has not finished.
- the drum has not come to a complete halt.
- the bath has not been completely evacuated.

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#### 4.8. Modifying a program in progress

#### 4.8.1. Program acceleration

You can modify the duration of a program whilst it is in progress.

- Press the key to activate the option. The display will flash.
- Pressing the A key repeatedly increases the rotation times minute by minute. The duration of the spin cycle cannot be increased.
- Pressing the vertex key repeatedly decreases the rotation or spin times.
- **Moving on to the subsequent phase.** Moving on from one phase to the next is delayed. Press the  $\lceil \mathbf{v} \rceil$ until the end of the phase and wait a few moments until the first operation of the next phase appears. Continue pressing the ▼ key.
- After a few seconds without pressing any key the display will remain fixed and the modification option is deactivated.

**Important:** (UK only) The duration of the bath filling phase in Program 3 cannot be altered.

#### 4.8.2. Crease-guard stop

A function exclusive to LOGI CONTROL

Once the washing program has started, you can program the drum rotation to stop before the final spin, with the objective of avoiding creases.

To activate this function once the washing cycle has started, press the key for a few seconds. The message **rh-0** will appear on the display. Press the key. The display message will change to **rh-1**. The crease-guard Stop function has been activated.

Before the final spin, the drum rotation will be interrupted and the PUSH/ STAR message will appear on the display. To resume the program, press the

#### 4.9. DELAY option

The **DELAY** option allows you to program the start time of a program depending on the needs of the user. For example: to use two-rate electricity, to rationalise electricity consumption, to adjust the laundry production system, etc.

To use the DELAY option (start program delay) it is essential that the washing machine has the clock installed that allows operating in real time. If this option is not incorporated originally, it can be easily installed. Contact your dealer.

Before the first use, and each time there is a time change, verify and/or adjust the time on the clock. (See ADVANCED USE MODE) Sections 6.9 and 8.9.

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#### 4.9.1. Delaying a program

- Load the washing machine and close the door.
- Place washing products in the dispenser compartment.
- Select the program to be used and press the key. The **dLY** report will appear on the display.
- To cancel de **dLY** option, press the START key.
- When *dLY* is displayed, press the key. The current time will appear on the screen, in *hh.mm* format (hours, minutes, using a 24-hour clock).
- The minutes are shown flashing. They can be modified using the ▲/ ▼ keys.
- Press the button to validate the minutes and start to modify the hours.
- The hours are shown flashing. They can be modified using the ▲/▼ keys.
- Once you have chosen the desired start time, press
   START STOP
   The start time and the selected program will be displayed alternatively.
- To cancel the delay of a program, select and hold START button, for five seconds.

#### 4.10. Consultations during a program

Certain washer operating parameters can be consulted while a program is running.

#### **LOGI CONTROL**

Sequence of parameters that can be consulted and how they are shown on the display:

dt-0						
consultable parameter	display					
Percentage of load detected	**					
percentage of water consumption and dosing used	%**					

dt-1						
consultable parameter	display					
Percentage of load detected	**					
percentage of water consumption and dosing used	%**					

**Note 1.** These parameters can only be consulted if the **JL** function has been activated on the MOD menu (Section 6.7)

The parameters can be consulted by pressing the key successively while the program is running.

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#### **LOGI PRO CONTROL**

Sequence of parameters that can be consulted and how they are shown on the display: The parameters that can be consulted vary slightly depending on the dt parameter selected in the Mod menu (Section 8.7).

dt-0	
consultable parameter	display
program running	P-**
remaining program time	t-**
Bath temperature	C-**
percentage of water consumption and dosing used	%-**

dt-1	
consultable parameter	display
program running	P-**
phase running (see Note 1)	Ph**
Bath temperature	C-**
percentage of water consumption and dosing used	%-**

Note 1. The numbering of the phase running refers to the program tables in Section 8.4.

The parameters can be consulted by pressing the **\( \bigsim \)** key successively while the program is running.



## LOGI CONTROL. SPECIFIC INFORMATION

#### 5. LOGI CONTROL. WASH PROGRAMS

The washer offers the possibility of selecting from among eight different wash programs for different kinds of garment and soiling.

Depending on the AREA OF USE defined in the washing machine SETUP, the original content of the programs varies.

The original content of the programs is defined as indicated in the charts in Section 5.3.

The content of the programs may be modified; see Chapter 6: ADVANCED USE mode.

#### 5.1. Main reports that appear on the display

REPORT	MEANING
Pr-*	Program selected. Machine ready to wash
C-** F***	Water temperature in degrees Celsius or Fahrenheit
rt-*	Rotation time left
C-**	Cooling temperature
Et-*	Spin time remaining
End	End of program. Door unlocked
door	Washer with door open





## 5.2. Interpretation of the program tables

SYMBOL	OPTION	DESCRIPTION				
		Estimated program time				
<b>O</b>		Minimum program time based on a machine with hot water supply and without				
	**	heating. Time in minutes.				
Ph		Phase number				
FII	**	The phase indicated with a grey background belongs to the wash phase.				
		Bath level				
L	1	Low level				
<b>-</b>	2	Medium level				
	3	High level (units with pumped drain, levels 2 and 3 are the same)				
C/F		Temperature of the bath				
C/F	**	Value in degrees Celsius or Fahrenheit				
		<u>Dosings</u>				
	0	No dosing				
d	1	Pre-wash dosing				
l a	2	Wash dosing				
	3	Bleach dosing				
	4	Softener / neutraliser dosing				
		<u>Drum rotation sequence</u>				
r	1	Vigorous sequence rotation: 25 seconds ON / 5 seconds stop				
•	2	Normal rotation sequence: 15 seconds ON / 15 seconds stop				
	3	Light rotation sequence: 5 seconds ON / 25 seconds stop				
rt		Rotation time				
1 (	**	Value in minutes				
		Gradual cool down				
С	0	Option not available				
	1	Option available				
_		Program stop in final rinse (rinse hold)				
rh	0	Option not available				
	1	Option available				
		Bath drain				
	0	Access to the next phase without draining in the bath				
E	1	Drain + wash speed				
<u> </u>	2	Drain + positioning speed				
	4	Drain + medium spin speed				
	6	Drain + high spin speed				
		Spin time				
Et	**	Value in minutes				
		Non programmable function in the phase				





# 5.3. Original content of the washing programs5.3.1. General application. HS, RMS models

Pr - ′	Pr - 1. Extra HEAVY SOIL								
Ph	L	С	d	r	rt	С	rh	Е	Et
1	2	20	1	1	2			0	
2	2	40	0	1	6			1	
3	2	40	1	1	6			3	3
4	1	80	2	1	12	0		2	2
5	2	40	3	1	6			1	
6	3		0	1	2			3	
7	3		0	1	2			1	
8	2	0	4	1	4		0	6	7

Pr - 2	Pr - 2. HEAVY SOIL – WHITE									
Ph	L	С	d	r	rt	С	rh	Е	Et	
1	2	20	0	1	2			1		
2	2	30	1	1	6			3	3	
3	1	60	2	1	10	0		2	2	
4	2	40	3	1	6			1		
5	3		0	1	2			3	3	
6	3		0	1	2			1		
7	2	0	4	1	4		0	6	7	

Pr - 3	3. <b>W</b> ні	TE						<b>少 51</b>	MIN
Ph	L	С	d	r	rt	С	rh	Е	Et
1	2	40	1	1	6			3	3
2	1	50	2	1	8	0		2	2
3	2	30	3	1	6			1	
4	3		0	1	2			3	3
5	3		0	1	2			1	
6	2	0	4	1	4		0	6	7

Pr - 4	1. Ligi	HT SOII	L <b>- W</b> H	lite®				37	MIN
Ph	L	С	d	r	rt	С	rh	Е	Et
1	1	40	2	1	6	1		0	
2	2	30	3	1	6			1	
3	3		0	1	2			3	3
4	3		0	1	2			1	
5	2	0	4	1	4		0	6	7

Pr -	5. HEA	VY SO	IL – C	OLOR				51 MIN	
Ph	L	O	d	r	rt	С	rh	Е	Et
1	2	0	0	1	4			1	
2	2	40	1	1	6			3	3
3	1	50	2	1	10	0		2	2
4	3	0	0	1	2			3	3
5	3		0	1	2			1	
6	2	0	4	1	4		0	6	7

Pr - 6	6. Med	DIUM S	OIL - (	Color			① 40 MIN			
Ph	L	С	d	r	rt	С	rh	Е	Et	
1	2	30	1	2	4			2	2	
2	1	40	2	1	8	0		2	2	
3	3		0	2	2			3	3	
4	3		0	2	2			1		
5	2	0	4	2	4		0	6	7	

Pr - 7	7. SYN	THETIC	s					<b>少 30</b>	MIN
Ph	L	С	d	r	rt	С	rh	Е	Et
1	1	40	2	2	6	0		2	2
2	3		0	2	2			3	3
3	3		0	2	2			1	
4	2	0	4	2	4		0	6	6

Pr - 8	3. DEL	ICATE	S AND	WOOL				① 3·	① 31 MIN	
Ph	L	С	d	r	rt	С	rh	Е	Et	
1	3	0	1	3	4			1		
2	3	30	2	3	8	1		1		
3	3		0	3	2			1		
4	3		0	3	2			1		
5	3	0	4	3	4		0	2	2	





## 5.3.2. USA/Canada application. EH020 model: SP-0

Pr - 1	1. Ехт	RA HE	AVY S	OIL - W	/HITE			<b>①</b> 22	MIN
Ph	٦	F	С	rh	ш	Et			
1	1	90	2	1	7	0		1	
2	1	32	3	2	2			1	
3	2	32	4	2	2		0	6	6

Pr - 2	2. HEA	VY SO	IL - W	HITE				<b>ٿ 19</b> ا	MIN
Ph	٦	L F d r rt c rh E							
1	1	90	2	1	4	0		1	
2	1	32	3	2	2			1	
3	2	32	4	2	2		0	6	6

Pr - 3	3. MEC	DIUM S	OIL - V	VHITE				<b>①</b> 19	MIN
Ph	L	rh	Е	Et					
1	1	82	2	1	4	0		1	
2	1	32	3	2	2			1	
3	2	32	4	2	2		0	6	6

Pr - 4	t. Ligi	HT SOII	L - WH	IITE				<b>ٿ 19</b> ا	MIN
Ph	L	F	С	rh	Е	Et			
1	1	68	2	1	4	1		1	
2	1	32	3	2	2			1	
3	2	32	4	2	2		0	6	6

Pr -	5. HEA	VY SO	IL - CC	LOR				<b>少 20</b>	MIN
Ph	L	F	d	r	rt	С	rh	Е	Et
1	1	90	2	1	6	0		1	
2	1	32	0	2	1			1	
3	2	32	4	2	2		0	6	6

Pr - 6	6. ME	DIUM S	OIL - C	OLOR				<b>ت 18</b> ا	MIN
Ph	L	F	С	rh	Е	Et			
1	1	90	2	1	4	0		1	
2	1	32	0	2	1			1	
3	2	32	4	2	2		0	6	6

Pr - 7	7. SYN	THETI	cs					<b>少 18</b>	MIN	
Ph L F d r rt c rh E Et										
1	1	82	2	2	4	0		1		
2	1	32	0	2	1			1		
3	2	32	4	2	2		0	6	6	

Pr - 8	3. <b>W</b> o	OL ANI	DELI	CATES				<b>ئ 15</b> ا	MIN
Ph	L	F	С	rh	Е	Et			
1	2	68	2	2	4	1		1	
2	1	32	0	3	1			1	
3	2	32	4	3	2		0	4	3





## 5.3.3. USA/Canada application. EH020 model: SP-I; EH, REM: other models except REM025

Pr - ′	1. Ехт	RA HE	AVY S	OIL - W	/HITE			① 49	MIN
Ph	L	F	d	r	rt	С	rh	Е	Et
1	2	104	1	1	6			3	2
2	2	176	2	1	12	0		1	
3	2	140	3	1	6			3	2
4	3		0	1	1			1	
5	2		0	1	2			1	
6	2	32	4	1	2		0	6	6

Pr - 2	2. HEA	VY SO	IL - W	HITE				ው 42 ו	MIN
Ph	٦	F	d	r	rt	С	rh	ш	Et
1	2	104	1	1	3			3	2
2	2	150	2	1	8	0		1	
3	2	140	3	1	5			3	2
4	3		0	1	2			1	
5	3		0	1	2			1	
6	2	32	4	1	3		0	6	6

Pr - 3	3. MEC	DIUM S	OIL - V	VHITE				少 37 MIN		
Ph	L	F	d	r	rt	С	rh	Е	Et	
1	2	140	2	1	10	0		1		
2	2	140	3	1	5			3	2	
3	3		0	1	2			1		
4	3		0	1	2			1		
5	2	32	4	1	2		0	6	6	

Pr - 4	4. Ligi	HT SOII	L <b>- W</b> H	IITE				<b>ئ 28</b>	MIN		
Ph	Ph L F d r rt c rh E Et										
1	1	140	2	1	6	1		1			
2	2	140	3	1	4			3	2		
3	3		0	1	2			1			
4	2	32	4	1	2		0	6	6		

Pr - 5	5. HEA	VY SO	IL - CC	LOR				① 42 MIN		
Ph	L	F	d	r	rt	С	rh	Е	Et	
1	2	104	1	1	4		- 1	3	2	
2	2	140	2	1	10	0		1		
3	2	70	0	1	2			3	2	
4	3		0	1	2			1		
5	3		0	1	2			1		
6	2	32	4	1	3		0	6	6	

Pr - 6	6. ME	DIUM S	OIL - C	OLOR	1			ூ 36 ப	MIN
Ph	L	F	d	r	rt	С	rh	Е	Et
1	2	86	1	1	4			3	2
2	1	104	2	1	8	0		1	
3	2	70	0	1	2			3	2
4	3		0	1	2			1	
5	2	32	4	1	3		0	6	6

Pr - 7	7. SYN	THETI	cs					<sup>(1)</sup> 29	MIN	
Ph L F d r rt c rh E										
1	2	104	2	1	8	0		1		
2	2	70	0	1	2			3	2	
3	3		0	1	2			1		
4	2	32	4	1	3		0	6	6	

Pr - 8	3. <b>W</b> o	OL ANI	D DELI	CATE	S			① <b>27</b>	MIN
Ph	L	F	d	r	rt	С	rh	Е	Et
1	2	86	2	2	8	1		2	2
2	3		0	2	2			1	
3	3			2	2			1	
4	2	32	4	3	2		0	5	4





#### 5.3.4. United Kingdom application. HS, RMS models

Pr –	1. HE	ALTHC	ARE SI	LUICE			① 43 MIN				
Ph	٦	C	đ	r	rt	С	rh	ш	Et		
1	2	0	0	1	2		-	1			
2	2	0	1	1	2		-	1			
3	1	67	2	1	11	0	-	2	2		
4	2	0	3	1	3		-	1			
5	3	0	0	2	2			1			
6	3	0	4	1	4		0	6	7		

Pr - 2	2. HEA	VY SO	IL				① 37 MIN				
Ph	٦	С	đ	r	rt	С	rh	ш	Et		
1	2	0	1	1	3			3	3		
2	1	55	2	1	6	0		2	2		
3	2	0	3	1	2			3	3		
4	3	0	0	1	2			1			
5	2	0	4	2	3			6	7		

Pr - 3	<b>Pr - 3. ECO. 60 e<sup>w</sup></b> ③ 32 MIN												
Ph	٦	C	d	r	rt	С	rh	ш	Et				
1	3	60	2	1	10			2	2				
2	4	0	0	1	3	0		1	1				
3	4	0	4	1	3			6	9				

	Pr - 4. LIGHT SOIL ② 32 MIN												
	Ph	٦	C	d	r	rt	С	rh	ш	Et			
	1	1	40	2	1	6	0		1				
	2	2	0	3	2	4			3	3			
1	3	3	0	0	1	2			1				
I	4	2	0	4	1	4			6	7			

F	<b>Pr - 5. Color</b>												
	Ph	٦	C	d	r	rt	С	rh	Е	Et			
	1	2	0	0	2	4			1				
	2	2	0	1	2	6		-	3	3			
	3	1	40	2	1	7	0		2	2			
	4	3	0	0	2	2		-	3	3			
	5	3	0	0	2	2		-	1				
	6	2	0	4	2	4		0	6	7			

PR -	<b>PR - 6. ECO EXPRESS 40°C</b>											
Ph	L	С	d	r	rt	С	rh	Е	Et			
1	1	40	2	1	6			2	2			
2	2	0	0	2	3	0		3	3			
3	2	0	4	2	4			6	7			

Pr - 7	<b>Pr - 7. Synthetics</b> ② 29 MIN												
Ph	L	С	d	r	rt	С	rh	Е	Et				
1	1	40	2	2	5	0		2	2				
2	3	0	0	2	2			3	3				
3	3	0	0	2	2			1					
4	2	0	4	2	4		0	6	6				

Pr - 8	Pr - 8. WOOL AND DELICATES											
Ph	٦	C	d	r	rt	С	rh	ш	Et			
1	3	0	1	3	3		1	1				
2	2	30	2	2	8	1		1				
3	3	0	0	3	3			1				
4	3	0	0	3	2			1				
5	3	0	4	3	4		0	4	3			

<sup>\*</sup> **Pr-3. ECO. 60 e<sup>w</sup>:** Special program in accordance with WTL certification. \* **Pr-3. ECO. 60 e<sup>w</sup>:** Cannot be modified. Neither can the phase be sped up while water is entering. Water inputs occur with the drum stationary, as does heating.



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#### 6. LOGI CONTROL. ADVANCED USE MODE

There is an ADVANCED USE mode: This mode includes five different menus by means of which each user can personalise the operation of the washing machine.

#### 6.1. ADVANCED MODE menus

MENU	PURPOSE
Pro	Modification of the program contents
INFO	Information menu
Mod	Modification of the operation parameters
Ncod	Modifying of the access code
HOUR	Adjustment of the system time (option)

#### 6.2. Access to ADVANCED MODE

Connect the washer and open the door. The display will show door.

Hold down the key until the display shows *Cod*.

Enter the access code into the menus by pressing the sequence of eight keys of the code without interruption. In basic configuration (when the machine is delivered) the code for accessing ADVANCED mode is: **12341234**.

#### Numerical correspondence of each key

KEY	CORRESPONDENCE
	1
<b>A</b>	2
••	3
▼	4

If the sequence entered is correct, the display will show *Pro*, corresponding to the first menu.

The ▲/▼ keys allow the selection of ADVANCED MODE menus. The menu selected is shown on the display following its keyword. To enter the menu, press the key when displaying it.

If you wish to skip the ADVANCED mode, press **START/STOP** and machine will return to the programs execution mode.

#### 6.3. Modifying the contents of programs. Menu Pro

In its original configuration, the washing machine has eight wash programs with content adapted to a wide range of usage. However, the content of each program can be modified to be adapted to the specific needs of different situations.

Modifications will always be carried out within the limits marked by PROGRAMMING VECTORS (see Section 6.5.1) which include the possible programmable parameters and the maximum and minimum values of certain options.

The master program is composed of nine phases. At the start of each phase, a parameter of the value **Ph-Y** / **Ph-N** (executable phase **YES** / executable phase **NO**) will allow the user to determine whether the accessed phase should either be executed or omitted.

Once the phase is defined as to be executed, proceed to the display and modification (if desired) of the parameters or values of the phase.

Note: (UK setting only) Program 3 cannot be modified.

 ${\mathfrak P}$  56 min



## 6.4. Initial program content

### 6.4.1. General application HS, RMS models

Pr -	1. E	XTRA		T	66 N	ΛIN				
Ph	Ph	١	С	d	r	rt	С	rh	ш	Et
1	Υ	2	20	1	1	2			0	
2	Υ	2	40	0	1	6			1	
3	Υ	2	40	1	1	6			3	3
4	Υ	1	80	2	1	12	0		2	2
5	Υ	2	40	3	1	6			1	
6	Z	3		0	1	2			1	
7	Υ	3		0	1	2			3	3
8	Υ	3		0	1	2			1	
9	Υ	2	0	4	1	4		0	6	7

Ph	Ph	L	С	d	r	rt	С	rh	Е	Et
1	Ν	2	20	0	1	4			1	
2	Υ	2	20	0	1	2			1	
3	Υ	2	30	1	1	6			3	3
4	Υ	1	60	2	1	10	0		2	2
5	Υ	2	40	3	1	6			1	
6	Ν	3		0	1	2			1	
7	Υ	3		0	1	2			3	3
8	Υ	3		0	1	2			1	
9	Υ	2	0	4	1	4		0	6	7
		•							•	
D.:	4 1 .			Œ	27.					

Pr - 2. HEAVY SOIL - WHITE

Pr -	<b>Pr - 3. WHITE</b>												
Ph	Ph	٦	С	d	r	rt	С	rh	Е	Et			
1	Z	2	30	0	1	4			1				
2	Ζ	2	0	0	1	2			1				
3	Υ	2	40	1	1	6			3	3			
4	Υ	1	50	2	1	8	0		2	2			
5	Υ	2	30	3	1	6			1				
6	Ν	3		0	1	2			1				
7	Υ	3		0	1	2			3	3			
8	Υ	3		0	1	2			1				
9	Υ	2	0	4	1	4		0	6	7			

Pr -	Pr - 4. LIGHT SOIL - WHITE												
Ph	Ph	٦	С	d	r	rt	С	rh	Е	Et			
1	Ν	2	30	0	1	4			1				
2	Ν	2	0	0	1	2			1				
3	Ν	2	30	1	1	6			3	3			
4	Υ	1	40	2	1	6	1		0				
5	Υ	2	30	3	1	6			1				
6	Ν	3		0	1	2			1				
7	Υ	3		0	1	2			3	3			
8	Υ	3		0	1	2			1				
9	Υ	2	0	4	1	4		0	6	7			

Pr -	5. H	EAVY	SOIL	– Co	LOR			T	51 N	ΛIN
Ph	Ph	٦	С	d	r	rt	С	rh	Е	Et
1	Z	2	40	0	1	4			1	
2	Υ	2	0	0	1	4			1	
3	Υ	2	40	1	1	6			3	3
4	Υ	1	50	2	1	10	0		2	2
5	Ν	3	0	0	1	2			1	
6	Ζ	3		0	1	2			1	
7	Υ	3		0	1	2			3	3
8	Υ	3		0	1	2			1	
9	Υ	2	0	4	1	4		0	6	7

Pr -	6. M	EDIUI	M SOI	L – C	OLOF	₹		Ţ	40 n	ΛIN
Ph	Ph	۲	С	d	r	rt	С	rh	ш	Et
1	Z	2	30	0	2	4			1	
2	Z	2	0	0	2	2			1	
3	Υ	2	30	1	2	4			2	2
4	Υ	1	40	2	1	8	0		2	2
5	Z	3	0	0	2	2			1	
6	Ν	3		0	2	2			1	
7	Υ	3		0	2	2			3	3
8	Υ	3		0	2	2			1	
9	Υ	2	0	4	2	4		0	6	7

Pr -	7. S	YNTH	ETICS	;				T	30 N	ΛIN
Ph	Ph	L	С	d	r	rt	С	rh	Е	Et
1	Z	3	30	0	2	4			1	
2	Ζ	3	0	0	2	2			1	
3	Ν	2	40	1	2	4			2	2
4	Υ	1	40	2	2	6	0		2	2
5	Ζ	3	0	0	2	2			1	
6	Ν	3		0	2	2			1	
7	Υ	3		0	2	2			3	3
8	Υ	3		0	2	2			1	
9	Υ	2	0	4	2	4		0	6	6

1 N 3 0 0 3 4 1 2 N 3 0 0 3 2 1 3 Y 3 0 1 3 4 1 4 Y 3 30 2 3 8 1 1	Pr -	- 8. D	Pr -	ELICA	ATES	AND V	VOOL			Ţ	31 N	ΛIN
2 N 3 0 0 3 2 1 3 Y 3 0 1 3 4 1 4 Y 3 30 2 3 8 1 1	Ph	Ph	Ph	L	С	d	r	rt	С	rh	Е	Et
3 Y 3 0 1 3 4 1 4 Y 3 30 2 3 8 1 1	1	N	1	3	0	0	3	4			1	
4 Y 3 30 2 3 8 1 1	2	N	2	3	0	0	3	2			1	
	3	Υ	3	3	0	1	3	4			1	
	4	Y	4	3	30	2	3	8	1		1	
5 N 3 0 0 3 2 1 1	5	N	5	3	0	0	3	2			1	
6 N 3 0 3 2 1	6	N	6	3		0	3	2			1	
7 Y 3 0 3 2 1	7	Υ	7	3		0	3	2			1	
8 Y 3 0 3 2 1	8	Y	8	3		0	3	2			1	
9 Y 3 0 4 3 4 0 2 2	9	Y	9	3	0	4	3	4		0	2	2

### 6.4.2. USA/Canada application. EH020 model: SP-0

Pr -	1. E	XTRA	HEAV	/ SOI	L - W	/HITE		Ţ	22 N	ΛIN
Ph	Ph	Ш	F	đ	r	rt	С	rh	Ш	Et
1	Z	2	104	1	1	4			1	
2	Ζ	2	32	0	1	2			1	
3	Ν	2	104	1	1	6			3	3
4	Υ	1	90	2	1	7	0		1	
5	Υ	1	32	3	2	2			1	
6	Ν	3		0	1	1			1	
7	Ν	3		0	1	1			1	
8	Ν	3		0	2	1			1	
9	Υ	2	32	4	2	2		0	6	6

Pr -	2. H	EAV	SOIL -	- W	HITE			T	19 N	ΛIN
Ph	Ph	L	F	đ	r	rt	С	rh	Е	Et
1	Z	2	104	0	1	4			1	
2	Ζ	2	32	0	1	2			1	
3	Ν	2	104	1	1	6			3	3
4	Υ	1	90	2	1	4	0		1	
5	Υ	1	32	3	2	2			1	
6	Ν	3		0	1	1			1	
7	Ν	3		0	1	1			1	
8	Ζ	3		0	1	1			1	
9	Υ	2	32	4	2	2		0	6	6

Pr -	3. M	EDIU	M SOIL	–W	HITE			Ţ	ำ 19 เ	ΛIN
Ph	Ph	Ь	F	d	r	rt	С	rh	Е	Et
1	Z	2	86	0	1	4			1	
2	Z	2	32	0	1	2			1	
3	Z	2	104	1	1	6			3	3
4	Υ	1	82	2	1	4	0		1	
5	Υ	1	32	3	2	2			1	
6	Z	3	-	0	1	1			1	
7	Z	3	-	0	1	1			1	
8	Z	3		0	1	1			1	
9	Υ	2	32	4	2	2		0	6	6

Pr -	4. Lı	GHT	SOIL -	WHI	TE			① 19 MIN  rh E Et  1  3 3  1  1  1  1  1		
Ph	Ph	L	F	d	r	rt	С	rh	Е	Et
1	Z	2	86	0	1	4			1	
2	Ν	2	32	0	1	2			1	
3	Ν	2	86	1	1	6			3	3
4	Υ	1	68	2	1	4	1		1	
5	Υ	1	32	3	2	2			1	
6	Ν	3		0	1	1			1	
7	Z	3		0	1	1			1	
8	Ν	3		0	1	1			1	
9	Υ	2	32	4	2	2		0	6	6

Pr -	5. H	EAV	/ SOIL -	- Co	LOR			Ţ	20 n	ΛIN
Ph	Ph	L	F	d	r	rt	С	rh	Е	Et
1	Ζ	2	104	0	2	4			1	
2	Ν	2	32	0	2	4			1	
3	Ν	2	104	1	2	6			3	3
4	Υ	1	90	2	1	6	0		1	
5	Υ	1	32	0	2	1			1	
6	Ν	3		0	2	1			1	
7	Ν	3		0	2	1			1	
8	Ν	3		0	2	1			1	
9	Υ	2	32	4	2	2		0	6	6

Pr -	6. M	EDIUI	VI SOIL	- C	OLOF	₹		T	18 N	1IN
Ph	Ph	۲	F	a	r	rt	С	rh	ш	Εt
1	Ν	2	86	0	2	4			1	
2	N	2	32	0	2	2			1	
3	N	2	104	1	2	4			2	2
4	Υ	1	90	2	1	4	0		1	
5	Υ	1	32	0	2	1			1	
6	N	3		0	2	1			1	
7	Ν	3		0	2	1			1	
8	N	3		0	2	1			1	
9	Υ	2	32	4	2	2		0	6	6

Pr -	7. S	YNTH	IETICS					T	18 N	ΛIN
Ph	Ph	L	F	d	r	rt	С	rh	Е	Et
1	Ν	3	32	0	2	4			1	
2	Ν	3	32	0	2	2			1	
3	Ζ	2	32	1	2	4			2	2
4	Υ	1	82	2	2	4	0		1	
5	Υ	1	32	0	2	1			1	
6	Ζ	3		0	2	1			1	
7	Ν	3		0	2	1			1	
8	Ν	3		0	2	1			1	
9	Υ	2	32	4	2	2		0	6	6

Pr -	8. W	OOL	AND D	ELIC	ATES			Ţ	15 N	ΛIN
Ph	Ph	٦	F	d	r	rt	С	rh	ш	Et
1	Z	3	32	0	3	4			1	
2	Z	3	32	0	3	2			1	
3	Z	3	32	1	3	4			1	
4	Υ	2	68	2	2	4	1		1	
5	Υ	1	32	0	3	1			1	
6	Ν	3		0	3	1			1	
7	Ν	3		0	3	1			1	
8	Ν	3		0	3	1			1	
9	Υ	2	32	4	3	2		0	4	3

### 6.4.3. USA/Canada application. EH020 model: SP-I; EH, REM: other models except REM025

Pr -	1. E	XTRA	HEAV	Y SOI	L - W	/HITE			<b>少 49</b>	MIN
Ph	Ph	Ш	F	đ	r	rt	С	rh	Ш	Et
1	Z	2	104	1	1	4			1	
2	Ζ	2	32	0	1	2			1	
3	Υ	2	104	1	1	6			3	2
4	Υ	2	176	2	1	12	0		1	
5	Υ	2	140	3	1	6			3	2
6	Ν	3		0	1	1			1	
7	Υ	3		0	1	2			1	
8	Υ	3		0	1	2			1	
9	Υ	2	32	4	1	2		0	6	6

Pr -	2. H	EAV	SOIL -	-W	HITE			Ţ	42 N	ΛIN
Ph	Ph	Ш	F	a	r	rt	С	rh	ш	Et
1	N	2	104	0	1	4			1	
2	Ν	2	32	0	1	2			1	
3	Υ	2	104	1	1	3			3	2
4	Υ	2	150	2	1	8	0		1	
5	Υ	2	140	ფ	1	5			3	2
6	N	3		0	1	1			1	
7	Υ	3		0	1	2			1	
8	Υ	3		0	1	2			1	
9	Υ	2	32	4	1	3		0	6	6

Pr -	3. M	EDIU	M SOIL	– W	HITE			Ţ	37 n	ΛIN
Ph	Ph	Ь	F	d	r	rt	С	rh	Е	Et
1	Ν	2	86	0	1	4			1	
2	Ζ	2	32	0	1	2			1	
3	Ν	2	86	1	1	6			3	3
4	Υ	2	140	2	1	10	0		1	
5	Υ	2	140	3	1	5			3	2
6	Ν	3		0	1	1			1	
7	Υ	3		0	1	2			1	
8	Υ	3		0	1	2			1	
9	Υ	2	32	4	1	2		0	6	6

Pr -	4. Lı	GHT	SOIL -	WHI	TE			Ţ	28 n	ΛIN
Ph	Ph	L	F	d	r	rt	С	rh	Е	Et
1	Ν	2	86	0	1	4			1	
2	Ν	2	32	0	1	2			1	
3	N	2	86	1	1	6			3	3
4	Υ	2	140	2	1	6	0		1	
5	Υ	2	140	3	1	4			3	2
6	N	3		0	1	1			1	
7	N	3		0	1	1			1	
8	Υ	3		0	1	2			1	
9	Υ	2	32	4	1	2		0	6	6

Pr -	5. H	EAV	Y SOIL -	- Co	LOR			Ţ	42 N	ΛIN
Ph	Ph	L	F	d	r	rt	С	rh	Е	Et
1	Ν	2	104	0	2	4			1	
2	Ν	2	32	0	2	4			1	
3	Υ	2	104	1	1	4			3	2
4	Υ	2	140	2	1	10	0		1	
5	Υ	2	70	0	1	2			3	2
6	Ν	3		0	2	1			1	
7	Υ	3		0	1	2			1	
8	Υ	3		0	1	2			1	
9	Υ	2	32	4	1	3		0	6	6

Pr -	6. M	EDIUI	VI SOIL	- C	OLOF	₹		Ţ	36 N	ΛIN
Ph	Ph	۲	F	a	r	rt	С	rh	ш	Ĕ
1	Z	2	86	0	2	4			1	
2	Ν	2	32	0	2	2			1	
3	Υ	2	86	1	1	4			3	2
4	Υ	2	104	2	1	8	0		1	
5	Υ	2	70	0	1	2			3	2
6	Z	3		0	2	1			1	
7	Ν	3		0	2	1			1	
8	Υ	3		0	1	2			1	
9	Υ	2	32	4	1	3		0	6	6

Pr -	7. S	YNTH	IETICS					(P	29 N	ΛIN
Ph	Ph	L	F	d	r	rt	С	rh	Е	Et
1	Ν	3	32	0	2	4			1	
2	Ν	3	32	0	2	2			1	
3	Z	2	32	1	2	4			2	2
4	Υ	2	104	2	1	8	0		1	
5	Υ	2	68	0	1	2			3	2
6	Z	3		0	2	1			1	
7	Ν	3		0	2	1			1	
8	Υ	3		0	1	2			1	
9	Υ	2	32	4	1	3		0	6	6

Pr -	8. W	OOL	AND D	ELIC	ATES			Ţ	27 N	ΛIN
Ph	Ph	۲	F	a	r	rt	С	rh	ш	Et
1	Ζ	3	32	0	3	4			1	
2	Ν	3	32	0	3	2			1	
3	Ν	3	32	1	3	4			1	
4	Υ	2	86	2	2	8	1		2	2
5	Ν	2	32	0	2	2			1	
6	Z	3		0	2	1			1	
7	Υ	3		0	2	2			1	
8	Υ	3		0	2	2			1	
9	Υ	2	32	4	2	3		0	5	4



### 6.4.4. United Kingdom application. HS, MS, RMS models

Pr -	1. H	EALT	HCAR	E SLL	JICE			Ţ	43 n	ΛIN
Ph	Ph	L	С	d	r	rt	С	rh	Е	Et
1	Ν	2	40	1	1	4			1	
2	Υ	2	0	0	1	2			1	
3	Υ	2	0	1	1	2			1	
4	Υ	1	67	2	1	11	0		2	2
5	Υ	2	0	3	1	3			1	
6	Υ	3	0	0	2	2			1	
7	Ζ	3		0	1	2			1	
8	Ν	3		0	1	2			1	
9	Υ	3	0	4	1	4		0	6	7

Pr -	2. H	EAVY	SOIL					Ţ	37 N	ΛIN
Ph	Ph	٦	С	d	r	rt	С	rh	Е	Et
1	Ζ	2	40	0	1	4			1	
2	Ν	2	0	0	1	2			1	
3	Υ	2	0	1	1	3			3	3
4	Υ	1	55	2	1	6	0		2	2
5	Υ	2	0	3	1	2	0		3	3
6	Υ	3	0	0	1	2			1	
7	Ν	3		0	1	2			1	
8	Ν	3		0	1	2			1	
9	Υ	2	0	4	2	3			6	7

Pr -	3. E	CO. (	60 e <sup>v</sup>	I				Ţ	32 N	ΛIN
Ph	Ph	٦	С	d	r	rt	С	rh	Е	Et
1	Z	2	30	0	1	4			1	
2	Z	2	0	0	1	2			1	
3	Ζ	2	40	1	1	6			3	3
4	Υ	3	60	2	1	10			2	2
5	Υ	4	0	0	1	3	0		1	1
6	Ζ	3		0	1	2			1	
7	Ν	3		0	1	2			1	
8	Ν	3		0	1	2			1	
9	Υ	4	0	4	1	3			6	9

Pr -	4. Lı	GHT S	SOIL					Ţ	32 N	ΛIN
Ph	Ph	٦	С	d	r	rt	С	rh	Е	Et
1	Ν	2	30	0	1	4			1	
2	Ν	2	0	0	1	2			1	
3	Ν	2	30	1	1	6			3	3
4	Υ	1	40	2	1	6	0		1	
5	Υ	2	0	3	2	4			3	3
6	Υ	3	0	0	1	2			1	
7	Z	3		0	1	2			1	
8	Ν	3		0	1	2			1	
9	Υ	2	0	4	1	4			6	7

Pr -	<b>Pr - 5. COLOR</b> ② 48 MIN								ΛIN	
Ph	Ph	L	С	d	r	rt	С	rh	Е	Et
1	Ν	2	40	0	2	4			1	
2	Υ	2	0	0	2	4			1	
3	Υ	2	0	1	2	6			3	3
4	Υ	1	40	2	1	7	0		2	2
5	Υ	3	0	0	2	2			3	3
6	Ν	3		0	2	2			1	
7	Z	3		0	2	2			1	
8	Υ	3	0	0	2	2			1	
9	Υ	2	0	4	2	4		0	6	7

Pr - 6. ECO EXPRESS 40°C									② 28 MIN	
Ph	Ph	۲	С	d	r	rt	С	rh	ш	Et
1	Z	2	30	0	2	4			1	
2	Z	2	0	0	2	2			1	
3	Z	2	40	1	2	4			2	2
4	Υ	1	40	2	1	6			2	2
5	Υ	2	0	0	2	3	0		3	3
6	Z	3		0	2	2			1	
7	Ν	3		0	2	2			1	
8	Ν	3		0	2	2			1	
9	Υ	2	0	4	2	4			6	7

Pr - 7. SYNTHETICS							Ф 29 міі			
Ph	Ph	L	C	d	r	rt	С	rh	Е	Et
1	Z	3	30	0	2	4			1	
2	Ζ	3	0	0	2	2			1	
3	Ζ	2	40	1	2	4			2	2
4	Υ	1	40	2	2	5	0		2	2
5	Υ	3	0	0	2	2			3	3
6	Ζ	3		0	2	2			1	
7	Ν	3		0	2	2			1	
8	Υ	3	0	0	2	2			1	
9	Υ	2	0	4	2	4		0	6	6

Pr -	Pr - 8. Wool and delicates									ΛIN
Ph	Ph	L	С	d	r	rt	С	rh	Е	Et
1	Ν	3	0	0	3	4			1	
2	Z	3	0	0	3	2			1	
3	Υ	3	0	1	3	3			1	
4	Υ	2	30	2	2	8	1		1	
5	Υ	3	0	0	3	3			1	
6	Ζ	3		0	3	2			1	
7	Ν	3		0	3	2			1	
8	Υ	3	0	0	3	2			1	
9	Υ	3	0	4	3	4		0	4	3

<sup>\*</sup> **Pr-3. ECO. 60 e<sup>w</sup>:** Special program in accordance with WTL certification.



## 6.5. Modifying a program

### 6.5.1. Programming vectors

See the definition of the functions and values programmable in each phase in the following sections.

PHASE	EXECUTION	LEVEL	TEMP.	DISP.	ROTATION	ROTATION TIME	COOL DOWN	PAUSE	EXTRACT	EXTRACT TIME
	Ph	L	C/F	d	r	rt	С	rh	E	Et
1	Y/N	14	0 90 32 194	0, 14	13	112	n.p.	n.p.	0 / 1	n.p.
2	Y/N	14	0 90 32 194	0, 14	13	112	n.p.	n.p.	0 / 1	n.p.
3	Y/N	14	0 90 32 194	0, 14	13	112	n.p.	n.p.	03	n.p. 24
4	Y	14	0 90 32 194	0, 14	13	120	0 / 1	n.p.	02	n.p. 24
5	Y/N	14	0 60 32 140	0, 14	13	112	n.p.	n.p.	13	n.p. 24
6	Y/N	14	n.p.	0, 14	13	112	n.p.	n.p.	13	n.p. 24
7	Y/N	14	n.p.	0, 14	13	112	n.p.	n.p.	13	n.p. 24
8	Y/N	14	n.p.	0, 14	13	112	n.p.	n.p.	1	n.p.
9	Y	14	0 60 32 140	0, 14	13	112	n.p.	0 / 1	16	n.p. 29

Note: (UK setting only). Program 3 cannot be modified.

### 6.5.2. Definition of phases

PHASES	DEFINITION
1, 2, 3	Soaking and pre-washes. Optional execution phase.
4	Washing. Obligatory execution phase.
5	First Rinse. Optional execution phase.
6 - 8	Second, third and fourth rinses. Optional execution phase.
9	Final Rinse. Obligatory execution phase.



### 6.5.3. Definition of programmable functions and values for each phase

FUNCTION	CONCEPT		OPTIONS
Ph	Phase execution	Ph-Y	Phase can be executed
PII	Priase execution	Ph-N	Phase cannot be executed
		L-1	Low level
		L-2	Medium level
L	Bath level	L-3	High level (level not programmable in machines with pump drain or valve closed without current)
		L-4	Extra high level (level not programmable in machines with pump drain or valve closed without current)
	T	0/**	Programmable range in degrees Celsius
C/F	Temperature of the bath	32 / ***	Programmable range in degrees Fahrenheit
	butti	n.p	Not possible to program temperature in phase
		d-0	Phase without dosing
		d-1	Dosing via pre-wash compartment Pre-wash external dosing signal
d	Dosings	d-2	Dosing via wash compartment Wash external dosing signal
		d-3	Dosing via whitening compartment Whitening external dosing signal
		d-4	Dosing via softener or neutraliser compartment Softener or neutraliser external dosing signal
		r-1	Vigorous rotation sequence: 25 sec. ON - 5 sec. OFF
r	Rotation sequence	r-2	Normal rotation sequence: 15 sec. ON - 15 sec. OFF
		r-3	Light rotation sequence: 25 sec. ON - 5 sec. OFF
rt	Rotation time	112	Programmable range in soak, pre-wash and rinse phases
71	(in minutes)	120	Programmable range in the wash phase
		0	Without gradual cool-down
С	Gradual cool down	1	Gradual cool-down in wash phase
		n.p	Option not programmable
		0	Without stop in final rinse
rh	Program stop in final rinse	1	Stop in final rinse
	TITISC	n.p	Option not programmable
		0	Access to the next phase without draining in the bath
		1	Drain + wash speed
		2	Drain + positioning speed
E	Bath drain	3	Drain + low extract speed
		4	Drain + medium spin speed
		5	Drain + medium/high extract speed
		6	Drain + high spin speed
Et	Extract time	**	Time in minutes.

#### 6.5.4. Program modification sequence

Access the ADVANCED USE MODE (Section 6.2). The display shows *Pro*.

Press the key to access the PROGRAMMING menu.

The display shows *Pr-1*. Program 1 is ready for modification. The ▲/▼ keys allow the user to select another program. Press the 🎏 key to access the modification of the displayed program.

The display shows  $\overline{Pr-1}$ . Phase 1 is ready for modification. The  $\triangle/\nabla$  keys allow the user to select another phase. Press the  $(\bigcirc)$  key to start modifying the values of the selected phase.

When the number of the phase is displayed (at the start of phase), the **START/STOP** key is used to finalise the program modification.

Once a program modification has been finalised, the display will show the **Pr-\*** report (modified program). Pressing the **START/STOP** key allows the user to access the higher level of the menu. Pressing twice consecutively allows the user to exit the ADVANCED USE MODE.

**Note:** (UK setting only) Program 3 cannot be modified.

#### Activation of the phase

Allows the user to program the execution of the selected phase.

Once the desired phase to be modified has been selected, press the key. The display shows *Ph-\**.

OPTIONS	MEANING
Ph-Y	The phase to be executed is available
Ph-N	The phase to be executed is unavailable

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### **Bath level**

Bath level allows the selection of the bath level inside the washer.

OPTIONS	MEANING
L-1	Low level
L-2	Medium level
L-3	High level
L-4	Extra high level

For safety reasons, options **L-3** and **L-4** are not programmable in machines with a pump drain or a valve closed without current.

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

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#### Temperature of the bath

This allows the user to modify the water temperature in the phases in which this function is available. In other phases, it is not possible to program the water temperature.

OPTIONS	MEANING
	Programmable range in soak, pre-wash and wash phases C-**: degrees Celsius F***: degrees Fahrenheit
	Programmable range in the pre-wash and last rinse phase C-**: degrees Celsius F***: degrees Fahrenheit

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### **Dosings**

This allows the dosing of each phase to be selected.

OPTIONS	MEANING
d-0	Without dosing
d-1	Dosing via pre-wash compartment Pre-wash external dosing signal Programmable in the soak and pre-wash phases (Ph 13)
d-2	Dosing via wash compartment Wash external dosing signal Programmable only in the wash phase (Ph 4)
d-3	Dosing via whitening compartment Whitening external dosing signal Programmable in the 1 to 4 rinse phases (Ph 58)
d-4	Dosing via softener or neutraliser compartment Softener or neutraliser external dosing signal Programmable only in the last rinse phase (Ph 9)

The external dosing signals are simultaneously activated with the water inlets through the dispenser.

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### **Rotation sequence**

The mechanical action of the washing machine with regard to the laundry is different according to the selected ON/OFF sequence.

Time **ON**: drum rotating Time **OFF**: drum stopped

OPTIONS	MEANING
r-1	Vigorous sequence rotation:  ON: 25 sec. OFF: 5 sec.
r-2	Normal rotation sequence ON: 15 sec. OFF: 15 sec.
r-3	Light rotation sequence ON: 5 sec. OFF: 25 sec.

The ▲key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.





#### **Rotation time**

Rotation time programmed in the phase. Time in minutes.

This time is started once the programmed temperature and level are reached.

OPTIONS	MEANING
1 12	Programmable range in the soak, pre-wash and rinse phases
1 20	Programmable range in the wash phase

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Gradual cool down

The gradual cooling down of the water is achieved by adding cold water until a temperature of 45 °C (113 °F) is reached.

This function will appear only in the wash phase if the programmed temperature is over 50 °C (122 °F).

OPTIONS	MEANING	
c-0	Gradual cool-down deactivated	
c-1	Gradual cool-down activated	

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Rinse hold

All the functions of the washing machine stop, maintaining the water inside, with a light rotation of the drum at 15 minute intervals. This is only programmable in the final phase of the program.

This function is designed to prevent the laundry from remaining for a long time inside the drum, once the final spin is finished, thus preventing the appearance of creases.

OPTIONS	MEANING
rh-0	Rinse hold OFF
rh-1	Rinse hold ON

The ▲key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Bath drain

The draining of the water from the washing machine is achieved by activating of the drain system and a drum rotation speed.

Option E-1 implies an unchangeable time value. The duration of options E-2 – E-6 is programmable within a determined range.

OPTIONS	MEANING
E-0	Access to the next phase without draining in the bath
E-1	Drain + wash speed
E-2	Drain + positioning speed
E-3	Drain + low extract speed
E-4	Drain + medium extract speed
E-5	Drain + medium/high extract speed
E-6	Drain + high extract speed Only programmable in the final phase of the program

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R.P.M. (G FORCE) FOLLOWING MACHINE MODEL				
OPTIONS	RMS610	RMS613/17 REM033/040	RMS623 REM055	RMS628 REM070
E-1	50	47	44	42
E-2	100	100	100	86
E-3	410	300	300	342
E-4	500	400	400	433
E-5	580	500	500	530
E-6	600(108)	600(125)	600(140)	592(150)

R.P.M. (G FORCE) FOLLOWING MACHINE MODEL					
OPTIONS	HS-6008 EH020	HS-6013 EH030	HS-6017 EH040	HS-6023 EH055	HS-6024 EH060
E-1	50	48	45	43	42
E-2	100	100	100	87	86
E-3	400	400	375	330	350
E-4	600	600	570	525	550
E-5	800	800	750	725	725
E-6	970(283)	1000(351)	950(354)	920(350)	966(400)

The  $\blacktriangle/\blacktriangledown$  keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Spin time

Extract time programmed in the phase. Time in minutes.

OPTIONS	MEANING
n.p.	Draining time E-1 not programmable
2 4	Programmable range not in final phase of the program
2 9	Programmable range in final phase of the program

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the displayed selection and ends the phase programming.

The display will show the following phase.

When finalising the programming of the last phase of the program, display shows *Pr-\** (modified program)



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#### 6.6. Information menu. INFO menu

PARAMETERS	MEANING		
LOGI	Type of control		
****	Washer model		
EP	Coffware version		
****	Software version		
Pr	Number of total cycles executed		
Pr-*	Number of cycles executed individually by each program		
SUD	Number of times the anti-suds function has been activated		

Access the ADVANCED USE MODE. Section 6.2. The display shows Pro.

Press the ▲ key. The display shows *INFO*.

Press the key to sequentially access the listing of the different parameters and the values for the corresponding counters.

Once the last option is listed, press the key. The display shows *INFO*.

The ▲/▼ keys allow the user to access to other menus.

To exit the ADVANCED USE MODE press the START/STOP key.





## 6.7. Modifying the operating parameters. Mod menu

The **Mod** menu allows the user to modify the operation parameters of all the programs. The modifications carried out from **Mod** menu affect the eight programs.

#### 6.7.1. Summary table of the changeable parameters

PARAMETER	MODIFICATION OF		OPTIONS	CE	USA
		b-0	Without buzzer		
b	Buzzer	b-1	Low buzzer		
	Duzzei	b-2	Normal buzzer	+	<b>←</b>
		b-3	Strong buzzer		
dt	Information on the display during a	dt-0	Functions display	+	+
u.	program	dt-1	Program time remaining display		
C/F	Temperature unit	С	Temperature displayed in degrees Celsius	+	
C/P	remperature unit	F	Temperature displayed in degrees Fahrenheit		<b>←</b>
dc	Cleaning the	dc-0	Dispenser cleaning NO activated	+	+
ac	dispenser	dc-1	Dispenser cleaning YES activated		
AC	Dragram appalaration	AC-0	Without acceleration permission		
AC	Program acceleration	AC-1	With acceleration permission	+	+
SP	(note 1)	SP-0	Without suds prevention	+	+
32		Suds prevention option enabled			
	Wash temperature	tS-0	Wash temperature selection disabled		
tS	selection when starting program	tS-1	Wash temperature selection enabled	<b>←</b>	<b>←</b>
P.	Hot water purge	Pg-0	Purge option disabled	+	+
Pg	(note 2)	P250	Maximum purge time: 250 sec.		
Pd	Purge drain	Pd-2	Purge water outlet via normally opened drain valve	+	+
Pu	selection. (note 3)	Pd-3	Purge water outlet via normally closed drain valve or pump.		
ld	Network identifier	Id-0	Disabled communication	+	+
10	network identilier	Id-199	Enabled communication		

← Indicates default option following configuration.

Note 1: EH020 models only.

Note 2: Except models HS-6008, RMS610 & EH020.

Note 3: Option available only on models with a double drainage kit installed on the machine and activated on the configuration menu.





## 6.7.2. Summary table of the changeable parameters Applicable only in the United Kingdom

PARAMETER	MODIFICATION OF		OPTIONS	CE	USA
	Buzzer	b-0	Without buzzer		
b		b-1	Low buzzer		
b	Buzzei	b-2	Normal buzzer	+	+
		b-3	Strong buzzer		
dt	Information on the display during a	dt-0	Functions display	+	+
ut	program	dt-1	Program time remaining display		
C/F	Temperature unit	С	Temperature displayed in degrees Celsius	+	
071	remperature unit	F	Temperature displayed in degrees Fahrenheit		+
dc	Cleaning the	dc-0	Dispenser cleaning NO activated	+	+
	dispenser	dc-1	Dispenser cleaning YES activated		
AC	Program acceleration	AC-0	Without acceleration permission		
7.0	_	AC-1	With acceleration permission	+	+
tS	Wash temperature	tS-0	Wash temperature selection disabled		
ເວ	selection when starting program	tS-1	Wash temperature selection enabled	+	<b>←</b>
JL	Automatic weighing	JL-0	Option disabled	+	+
JL	system (notes 1 and 2)	JL-2	Option enabled		
dL	Proportional dosing	dL-0	Option disabled	+	+
aL	time (notes 1 and 2)	dL-1	Option enabled		
D.,	Hot water purge	Pg-0	Purge option disabled	+	+
Pg	(note 3)	P250	Maximum purge time: 250 sec.		
Pd	Purge drain selection.	Pd-2	Purge water outlet via normally opened drain valve	+	+
, u	(note 4)	Pd-3	Purge water outlet via normally closed drain valve or pump.		
14	Notwork identifier	Id-0	Disabled communication	+	<b>←</b>
ld	Network identifier	Id-199	Enabled communication		

← Indicates default option following configuration.

Note 1: The weighing system is only applicable to HS models (Programs: 2, 3, 4 and 7).

Note 2: The automatic weighing system is not applicable to model HS-6024.

Note 3: Except models HS-6008 & RMS610.

Note 4: Option available only on models with a double drainage kit installed on the machine and activated on the configuration menu.





#### 6.7.3. Parameter modification sequence

Access to ADVANCED USE MODE. Section 6.2. The display shows Pro.

Press the ▲ key twice. The display shows *INFO*, *Mod* successively.

Press key to display the first parameter.

#### **Buzzer**

The door safety unlock can be warned by sounding a beep. The duration of this warning is programmable.

OPTIONS	MEANING	
b-0	Buzzer OFF	
b-1	Low buzzer: two beeps	
b-2	Normal buzzer: four beeps	
b-3	Strong buzzer: six beeps	

The ▲key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Information on the display during a program

Allows the user to select the information to be displayed during the program execution.

If the view functions option is selected, the table in Section 5.1 allows the user to identify the reports on the display with the functions that the washing machine is executing.

OPTIONS	MEANING	
dt-0 Display of functions being executed by the washer		
dt-1	Display of the program time remaining in minutes	

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Temperature unit

The bath water temperature can be displayed in degrees Celsius or Fahrenheit.

OPTIONS MEANING	
C Temperature unit in degrees Celsius	
F Temperature unit in degrees Fahrenheit	

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.



#### Dispenser cleaning



#### CAUTION!

DO NOT ACTIVATE THIS OPTION IN MACHINES CONNECTED TO EXTERNAL DOSING INSTALLATIONS.

This option activates the cleaning of the dispenser liquid product compartments by opening their water filling valves to eliminate the possible remaining products.

OPTIONS	MEANING	
dc-0	Dispenser cleaning NO activated	
dc-1	Dispenser cleaning YES activated	

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### **Program acceleration**

Program acceleration can reduce the time of the programs accessing functions or subsequent phases, or reducing the times of rotation and spinning. There is also the possibility of increasing the rotation times. The **AC** option enables or disables the use of the **ACCEL** (acceleration) key.

OPTIONS	MEANING	
AC-0	Acceleration option disabled	
AC-1	Acceleration option enabled	

The ▲key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Suds prevention program

(EH020 models only.)

Certain detergents commonly used in some countries produce large quantities of suds and can complicate the proper functioning of the wash programs.

To reduce this problem it is advisable to activate the suds prevention option (**SP-I**). This option modifies the contents of the programmes (see Section 5.3) by increasing rinsing efficiency.



#### **CAUTION!**

THE USE OF SOAP CHEMICALS WITH SUDS CONTROL IS RECOMMENDED. DO NOT EXCEED THE RECOMMENDED DOSAGE.

OPTIONS	MEANING	
SP-0	Without suds prevention	
SP-1 Suds prevention option enabled		

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.





#### One-off wash phase temperature selection

This option allows the user to disable the possibility of modifying the temperature of the wash phase for the program that is currently in use.

OPTIONS	MEANING
tS-0 Wash phase temperature selection disabled	
tS-1	Wash phase temperature selection enabled

The ▲key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Automatic weighing system (UK setting only)

This option enables the user to activate the automatic weighing system. HS models only.

OPTIONS	MEANING
JL-0	Automatic weighing system disabled
JL-2	Automatic weighing system enabled

The ▲key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Proportional dosing time (UK setting only)

This option only appears if **JL-2** has been programmed in the previous stage.

This modifies the dosing time in proportion to the bath level calculated according to the load detected.

OPTIONS MEANING	
dL-0 Proportional modification of the dosing time deactivated	
dL-1	Proportional modification of the dosing time activated

The ▲ key allows the user to modify the option displayed.

The **PRO** key validates the selection on the display and allows the user to access the following programmable function.

#### Hot water purge

(Option not available on **HS-6008**, **MS-610**, **RMS610**, **EH020** and **EM025**)

The purge is an option that keeps the water inlet valve and the drain valve simultaneously open during the programmed time, with the aim of purging the hot water pipe.

The purge function is only executed at the first phase of the program with water filling at a temperature equal to or higher than 86 °F (30 °C).

Purge time: programmable in 5 second steps.

	OPTIONS	MEANING
	Pg-0	Purge disabled
ĺ	P***	Purge time in seconds (maximum time 250 sec.)

The ▲/▼ keys allows to activate and modify the purge time.

The key validates the selection on the display and allows the user to access the following programmable function.

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#### Purge drain

(Option available only on models with a double drainage kit installed on the machine and activated on the configuration menu. Intervention reserved for the Authorised Technical Service)

The parameter only appears if a Purge Time other than 0 has been programmed in the previous parameter.

This option allows selecting the drain through which the purging water will be drained.

OPTIONS	MEANING
Pd-2	Purge water outlet via normally opened drain valve
Pd-3	Purge water outlet via normally closed drain valve or pump.

The ▲/▼ keys allows to activate and modify the purge time.

The key validates the selection on the display and allows the user to access the following programmable function.

#### **Network identifier**

This parameter assigns a network identifier to the washer. This identifier enables the communication of the washer with the environment through a protocol based on RS-485. Selected option by default: **Id-0.** 

OPTIONS	MEANING
Id-0	Disabled communication
Id-199	Enabled communication

For further information, see the Communication Protocol Instruction Manual.

The ▲/▼ keys allows to activate and modify the Network identifier.

Press key [ . The display shows **Mod**.

The ▲/▼ keys allow the user to access to other menus.

To exit the ADVANCED USE MODE press the START/STOP key.

## 6.8. Code for accessing the ADVANCED USE MODE. Ncod menu

As described in Section 6.2, the access to the CONFIGURATION mode is restricted by an access code.

This code can be modified by the user if so desired.

The code must always contain a combination of EIGHT numbers.

#### 6.8.1. Modifying of the access code

Access the ADVANCED USE MODE. Section 6.2. The display shows Pro.

Press ▲ key three times. The display shows *INFO*, *Mod*, *NCod successively*.

Press the key to set a new code. All the information on the display will disappear.

Enter a combination of eight numbers using the four central keys in the control panel.

The key pressed is shown on the display as follows:

KEY	CORRESPONDENCE
•	1
<b>A</b>	2
••	3
<b>T</b>	4

At the end of the sequence the SURE report will be shown.

Confirm the new code with the key

If you do not wish to validate the new code, press the START/STOP key.

In both cases, the display will show Ncod.

The ▲/▼ keys allow the user to access to other menus.

To exit the ADVANCED USE MODE press the **START/STOP** key.

#### NOTE

If you forget the modified code, call the Service Department to restore the original code.

#### 6.9. System clock. Hour Menu

Access to this menu is only possible if the clock option is available, and it allows the user to enquire and / or modify the time in the system.

The clock must be set at the real time for the proper operation of the starting time.

#### 6.9.1. Setting the clock

Access the ADVANCED USE MODE. Section 6.2. The display shows Pro.

Press the ▲ key four times. The display will show *INFO*, *Mod*, *NCod*, *Hour* successively.

When displaying *Hour* press the [ key. The *SURE* report will be displayed.

The washing machine control requests confirmation of the access command for the time modification.

To exit the *Hour* menu, press **START/STOP**.

Press | key to access and modify the clock time.

The system time is shown on the display in the format: hh.mm (24 hour time format).

The changeable parameters are shown flashing.

Press | key to pass from the minute modification to the hour modification.

Change the selected value with the ▲/▼ keys.

Press the key to validate the selection.

The **START/STOP** key allows the user to exit the menu without validating the modification.

After validating the time selection, *Hour* is shown on the display.

The ▲/▼ keys allow the user to access to other menus.

To exit the ADVANCED USE MODE press the **START/STOP** key. The washing machine can execute the programs.

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## LOGI PRO. SPECIFIC INFORMATION

#### 7. LOGI PRO. WASH PROGRAMS

The washing machine offers the possibility of selecting from among 25 different washing programs. The first 8 programs are devoted to different types of linen and degrees of soiling. The remaining programs have a single content in all their phases and are designed for the user to be able to modify them, thereby creating new programs.

Depending on the AREA OF USE defined in the washing machine SETUP, the original content of the programs varies.

The original content of the programs is defined as indicated in the charts in Section 7.3.

The content of the programs may be modified; see Chapter 8: ADVANCED USE MODE.

#### 7.1. Main reports that appear on the display

Viewing on the display the parameters that the washer is executing during the washing cycle. Value of the *dt-0* parameter in the **Mod** menu. (Section 8.5).

REPORT	MEANING
LOAd	Determination of load volume.
Pr-*	Program selected. Machine ready to wash
A-1	Cold water inlet
A-2	Hot water inlet
d-*	First dosing
C-** F***	Water temperature in degrees Celsius or Fahrenheit
rt-*	Rotation time left
C-**	Cooling temperature
PUSH STAR	Program halt using the <b>rh</b> function
Et-*	Spin time remaining
End	End of program. Door unlocked
door	Washer with door open



## 7.2. Interpretation of the program tables

SYMBOL	OPTION	DESCRIPTION
_		Estimated program time
•		Minimum program time based on a machine with hot water supply and without
	**	heating. Time in minutes.
Ph		Phase number
ГП	**	The phase indicated with a grey background belongs to the wash phase.
		Phase execution
Y/N	Y	Phase can be executed
	N	Phase cannot be executed
	_	Bath level
l L	0	Without water inlet
_	1	Low level
, , .	2	Medium low level
(see note in Section	3	Medium level
8.5.3)	4	Medium high level
0.0.0)	5 6	High level
	0	Extra high level
C/F	**	Temperature of the bath Value in degrees Celsius or Fahrenheit
		First dosing
	0	No dosing
	1	Dispensing via Compartment 1 (solid product)
1d	2	Dispensing via Compartment 1 (solid product)  Dispensing via Compartment 2 (solid product)
	3	Dispensing via Compartment 2 (solid product)  Dispensing via Compartment 3 (liquid product)
	4	Dispensing via Compartment 4 (liquid product)
	-	First dosing time
dt	**	Value in seconds (see note in section 8.5.3)
0.1	**	Second dosing
<b>2</b> d	**	The same parameters as in the first dosing
al 4	**	Second dosing time
dt		Value in seconds
		Drum rotation sequence
	no	No rotation in the phase
r	Lo	Light rotation sequence: 5 sec. ON / 25 sec. OFF
	Md	Normal rotation sequence: 15 sec. ON / 15 sec. OFF
	Hi	Vigorous sequence rotation: 25 sec. ON / 5 sec. OFF
rt		Rotation time
11	**	Value in minutes
		Gradual cool down
С	0	Option not available
	1	Option available
	_	Program stop
rh	0	Option not available
	1	Option available
	_	Bath drain
	0 1	Access to the next phase without draining in the bath
l E	2	Drain + wash speed Drain + positioning speed
	4	Drain + medium spin speed
	6	Drain + high spin speed
	<u> </u>	
Et	**	Spin time Value in minutes
=:	**	Non programmable function in the phase
		Non programmable function in the phase



# 7.3. Original content of the washing programs 7.3.1. General application. HS-6008, RMS610, RMG models

Pr -	Pr - 1. Extra heavy soil													
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	E	Et
1	Υ	3	20	68	1	30	0		Hi	1	0	0	0	
2	Υ	3	40	104	0		0		Hi	6	0	0	1	
3	Υ	3	40	104	1	30	0		Hi	6	0	0	3	3
4	Υ	2	80	176	2	30	0		Hi	12	0	0	1	
5	Υ	3	40	104	3	30	0		Hi	6	0	0	1	
6	Υ	4	0	32	0		0		Hi	2	0	0	3	3
7	Υ	4	0	32	0		0		Hi	2	0	0	1	1
8	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7

Pr -	2. H	<b>EAVY</b>	SOIL -	WHITE									© 56	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	E	Et
1	Υ	3	20	68	0		0		Hi	2	0	0	1	
2	Υ	3	30	86	1	30	0		Hi	6	0	0	3	3
3	Υ	2	60	140	2	30	0		Hi	10	0	0	2	2
4	Υ	3	40	104	3	30	0		Hi	6	0	0	1	
5	Υ	4	0	32	0		0		Hi	2	0	0	3	3
6	Υ	4	0	32	0		0		Hi	2	0	0	1	1
7	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7

Pr -	r - 3. White													MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	40	104	1	30	0		Hi	6	0	0	3	3
2	Υ	2	50	122	2	30	0		Hi	8	0	0	2	2
3	Υ	3	30	86	3	30	0		Hi	6	0	0	1	
4	Υ	4	0	32	0		0		Hi	2	0	0	3	3
5	Υ	4	0	32	0		0		Hi	2	0	0	1	1
6	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7

Pr -	Pr - 4. LIGHT SOIL - WHITE													
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	E	Et
1	Υ	2	40	104	2	30	0		Hi	6	0	0	0	
2	Υ	3	30	86	3	30	0		Hi	6	0	0	1	
3	Υ	4	0	32	0		0		Hi	2	0	0	3	3
4	Υ	4	0	32	0		0		Hi	2	0	0	1	1
5	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7





Pr -	Pr - 5. HEAVY SOIL – COLOR													
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	0	32	0		0		Hi	4	0	0	1	
2	Υ	3	40	104	1	30	0		Hi	6	0	0	3	3
3	Υ	2	50	122	2	30	0		Hi	10	0	0	2	2
4	Υ	4	0	32	0		0		Hi	2	0	0	3	3
5	Υ	4	0	32	0		0		Hi	2	0	0	1	1
6	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7

Pr -	Pr - 6. MEDIUM SOIL - COLOR													
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	30	86	1	30	0		Md	4	0	0	2	2
2	Υ	2	40	104	2	30	0		Hi	8	0	0	2	2
3	Υ	4	0	32	0		0		Md	2	0	0	3	3
4	Y	4	0	32	0		0		Md	2	0	0	1	1
5	Υ	3	0	32	4	30	0		Md	4	0	0	6	7

Pr -	Pr - 7. SYNTHETICS													) MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	40	104	1	30	0		Md	4	0	0	2	2
2	Υ	2	40	104	2	30	0		Md	6	0	0	2	2
3	Υ	4	0	32	0		0		Md	2	0	0	3	3
4	Υ	4	0	32	0		0		Md	2	0	0	1	1
5	Υ	3	0	32	4	30	0		Md	4	0	0	6	6

Pr -	· 8.	DELICA	TES AN	ID WOO	)L								<b>少</b> 31	I мім
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	4	0	32	1	30	0		Lo	4	0	0	1	
2	Υ	4	30	86	2	30	0		Lo	9	0	0	1	
3	Υ	4	0	32	0		0		Lo	2	0	0	1	
4	Υ	4	0	32	0		0		Lo	2	0	0	1	
5	Υ	4	0	32	4	30	0		Lo	4	0	0	2	2

Pr-	- 9	25.	SINGL	E CON	TENT P	ROGRA	MS						<b>®</b> 5	MIN
Ph	Y/N	L	С										Е	Et
1	Υ	2	0	32	0	0	0		Hi	2	0	0	1	

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## 7.3.2. USA/CANADA application. EH020, REM025, RMG models

Pr -	· 1. E	XTRA I	HEAVY	SOIL -	WHITE								<b>®</b> 49	MIN (
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	40	104	1	30	0		Hi	6	0	0	3	2
2	Υ	3	80	176	2	30	0		Hi	12	0	0	1	
3	Υ	3	60	140	3	30	0		Hi	6	0	0	3	2
4	Υ	4	0	32	0		0		Hi	2	0	0	1	
5	Υ	4	0	32	0		0		Hi	2	0	0	1	
6	Υ	3	0	32	4	30	0		Hi	2	0	0	6(*)	6

Pr -	2. H	EAVY	SOIL - V	WHITE									<b>少 42</b>	2 MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	40	104	1	30	0		Hi	3	0	0	3	2
2	Υ	3	66	150	2	30	0		Hi	8	0	0	1	
3	Υ	3	60	140	3	30	0		Hi	5	0	0	3	2
4	Υ	4	0	32	0		0		Hi	2	0	0	1	
5	Υ	4	0	32	0		0		Hi	2	0	0	1	
6	Υ	3	0	32	4	30	0		Hi	3	0	0	6(*)	6

Pr -	- 3. N	lEDIUN	SOIL -	WHITE									<b>®</b> 37	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Y	3	60	140	2	30	0		Hi	10	0	0	1	
2	Y	3	60	140	3	30	0		Hi	5	0	0	3	2
3	Y	4	0	32	0		0		Hi	2	0	0	1	
4	Υ	4	0	32	0		0		Hi	2	0	0	1	
5	Υ	3	0	32	4	30	0		Hi	2	0	0	6(*)	6

Pr -	4. L	IGHT S	OIL - W	/HITE									① 28	В мім
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	60	140	2	30	0		Hi	6	0	0	1	
2	Υ	3	60	140	3	30	0		Hi	4	0	0	3	2
3	Υ	4	0	32	0		0		Hi	2	0	0	1	
4	Υ	3	0	32	4	30	0		Hi	2	0	0	6(*)	6





Pr -	5. H	EAVY	SOIL - (	COLOR									<sup>(1)</sup> 42	. MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Y	3	40	104	1	30	0		Hi	4	0	0	3	2
2	Υ	3	60	140	2	30	0		Hi	10	0	0	1	
3	Υ	3	21	70	0		0		Hi	2	0	0	3	2
4	Υ	4	0	32	0		0		Hi	2	0	0	1	
5	Υ	4	0	32	0		0		Hi	2	0	0	1	
6	Υ	3	0	32	4	30	0		Hi	3	0	0	6 <sup>(*)</sup>	6

Pr -	- 6. N	<b>I</b> EDIUM	SOIL -	COLO	R								<sup>®</sup> 36	3 МІМ
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	30	86	1	30	0		Hi	4	0	0	3	2
2	Υ	3	40	104	2	30	0		Hi	8	0	0	1	
3	Υ	3	21	70	0		0		Hi	2	0	0	3	2
4	Υ	4	0	32	0		0		Hi	2	0	0	1	
5	Υ	3	0	32	4	30	0		Hi	3	0	0	6(*)	6

Pr -	· 7.	SYNT	HETICS	3									<b>①</b> 29	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	40	104	2	30	0		Hi	8	0	0	1	
2	Υ	3	21	70	0		0		Hi	2	0	0	3	2
3	Υ	4	0	32	0		0		Hi	2	0	0	1	
4	Y	3	0	32	4	30	0		Hi	3	0	0	6(*)	6

Pr -	- 8. V	OOL A	ND DE	LICATE	S								<b>② 27</b>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Y	3	30	86	2	30	0		Md	8	0	0	2	2
2	Y	4	0	32	0		0		Md	2	0	0	1	
3	Y	4	0	32	0		0		Md	2	0	0	1	
4	Υ	3	0	32	4	30	0		Md	3	0	0	5	4

Pr	<b>–</b> 9	25.	Singi	LE CON	ITENT F	PROGR	AMS						<b>(</b> )	5 мім
Ph	Y/N	L	С	F 1d dt 2d dt r rt c rh									Ш	Et
1	Υ	2	0	32	0	0	0		Hi	2	0	0	1	

 $<sup>^{(*)}</sup>$  In Models RMG033/40/55/70 the default spin value is 5.



## 7.3.3. United Kingdom application. HS-6008, RMS610, RMG models

Pr ·	-1. H	<b>EALTH</b>	ICARE	SLUIC	E								<b>少43</b>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	0	32	0		0		Hi	2	0	0	1	
2	Υ	3	0	32	1	30	0		Hi	2	0	0	1	
3	Υ	2	67	153	2	30	0		Hi	11	0	0	2	2
4	Υ	3	0	32	3	30	0		Hi	3	0	0	1	
5	Υ	4	0	32	0		0		Md	2	0	0	1	
6	Υ	4	0	32	4	30	0		Hi	4	0	0	6	7

Pr -	· 2.	<b>IEAVY</b>	SOIL										<b>少 37</b>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	0	32	1		0		Hi	3	0	0	3	3
2	Υ	2	55	131	2	30	0		Hi	6	0	0	2	2
3	Υ	3	0	32	3	30	0		Hi	2	0	0	3	3
4	Υ	4	0	32	0		0		Hi	2	0	0	1	
5	Υ	3	0	32	4	30	0		Md	3	0	0	6	7

Pr -	- 3. E	CO. 6	60 e <sup>w</sup>										① 32	2 MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	E	Et
1	Υ	3	60	140	2	30	0		Hi	10	0	0	2	1
2	Υ	4	0	32	0		0		Hi	3	0	0	1	
3	Υ	4	0	32	4	30	0		Hi	3	0	0	6	9

Pr -	- 4. L	IGHT S	OIL										<b>少 32</b>	2 MIN
Ph	Y/N	٦	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	2	40	104	2	30	0		Hi	6	0	0	1	
2	Υ	3	0	32	3	30	0		Md	4	0	0	3	3
3	Υ	4	0	32	0		0		Hi	2	0	0	1	
4	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7

Pr -	· 5. (	COLOR											<b>少 48</b>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	3	0	32	0		0		Md	4	0	0	1	
2	Υ	3	0	32	1	30	0		Md	6	0	0	3	3
3	Υ	2	40	104	2	30	0		Hi	7	0	0	2	2
4	Υ	4	0	32	0		0		Md	2	0	0	3	3
5	Υ	4	0	32	0		0		Md	2	0	0	1	
6	Υ	3	0	32	4	30	0		Md	4	0	0	6	7

Pr -	6. E	CO E	XPRES	s 40°C	;								<sub>28</sub>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	2	40	104	2		0		Hi	6	0	0	2	2
2	Υ	3	0	32	0	30	0		Md	3	0	0	3	3
3	Υ	3	0	32	4	30	0		Md	4	0	0	6	7





Pr -	· 7.	ЗҮИТНІ	ETICS										① 29	MIN (
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	2	40	104	2	30	0		Md	5	0	0	2	2
2	Υ	4	0	32	0		0		Md	2	0	0	3	3
3	Υ	4	0	32	0		0		Md	2	0	0	1	
4	Υ	3	0	32	4	30	0		Md	4	0	0	6	6

Pr -	- 8. V	Vool /	AND DE	LICATI	ES								① 32	2 MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Υ	4	0	32	1	30	0		Lo	3	0	0	1	
2	Υ	3	30	86	2	30	0		Md	8	1	0	1	
3	Υ	4	0	32	0		0		Lo	3	0	0	1	
4	Υ	4	0	32	0		0		Lo	2	0	0	1	
5	Υ	4	0	32	4	30	0		Lo	4	0	0	4	3

Pr-	- 9	25.	SINGL	E CON	TENT P	ROGRA	AMS						① <b>5</b>	MIN
Ph	Y/N	L	C F 1d dt 2d dt r rt c rh									Е	Et	
1	Υ	2	0	32	0	0	0		Hi	2	0	0	1	

#### 8. LOGI PRO. ADVANCED USE MODE

There is an ADVANCED USE mode: This mode includes five different menus by means of which each user can personalise the operation of the washing machine.

#### 8.1. ADVANCED MODE menus

MENU	PURPOSE
Pro	Programming menu. Modification of the program contents
INFO	Information menu
Mod	Modification of the general operating parameters menu
Ncod	Modification of the access code menu
HOUR	Adjustment of the system time menu

#### 8.2. Access to ADVANCED MODE

Connect the washer and open the door. The display will show door.

Hold down the key until the display shows *Cod*.

Enter the access code into the menus by pressing the sequence of eight keys of the code without interruption. In basic configuration (factory set) the code to access the ADVANCED USE MODE is: **12341234** 

#### Numerical correspondence of each key

KEY	CORRESPONDENCE
	1
<b>A</b>	2
••	3
▼	4

If the sequence entered is correct, the display will show *Pro*, corresponding to the first menu.

The ▲/▼ keys allow the user to select the precedent table menus. The menu selected is shown on the display following its keyword. To enter the menu, press the key when displaying it.

If you wish to skip the ADVANCED USE MODE, press **START/STOP** and the machine will return to the program execution mode.

#### 8.3. Modifying the contents of programs. Menu Pro

In its original configuration the washer presents the first eight programs with a content adapted to a broad sector of use.

The content of the remaining programs is the same in all the phases.

The content of each program can be modified to adapt it to specific needs of different areas.

The modifications are always made within the limits set by a PROGRAMMING VECTORS that includes the possible programmable parameters and the maximum and minimum values of certain options.

At the start of each phase, a parameter of the value *Ph-Y / Ph-N* (executable phase *YES /* executable phase **NO**) will allow the user to determine whether the accessed phase should either be executed or omitted.

Once the phase is defined as to be executed, proceed to the display and modification (if desired) of the parameters or values of the phase.

In the **LOGI PRO CONTROL**, the programmable values are the same in all the phases of all the programs. Phase 11 is always of obligatory execution since it defines the end of the program.

Cod. 523340

Rev. 11/1218





## 8.4. Initial program content

## 8.4.1. General application. HS-6008, RMS610, RMG models

Pr -	· 1. E	XTRA I	HEAVY	SOIL									ۍ 66	З МІМ
Ph	Y/N	Ь	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	Υ	3	20	68	1	30	0		Hi	1	0	0	0	
4	Υ	3	40	104	0		0		Hi	6	0	0	1	
5	Υ	3	40	104	1	30	0		Hi	6	0	0	3	3
6	Υ	2	80	176	2	30	0		Hi	12	0	0	1	
7	Υ	3	40	104	3	30	0		Hi	6	0	0	1	
8	N	4	0	32	0		0		Hi	2	0	0	1	
9	Υ	4	0	32	0		0		Hi	2	0	0	3	3
10	Υ	4	0	32	0		0		Hi	2	0	0	1	1
11	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7
D.:	0 11-		-·· V	M									@ F/	

Pr -	2. HE	AVY S	OIL – V	VHITE									<b>ٿ 5</b> 6	Э МІМ
Ph	Y/N	Ь	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Ν	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	20	68	0		0		Hi	4	0	0	1	
4	Υ	3	20	68	0		0		Hi	2	0	0	1	
5	Υ	3	30	86	1	30	0		Hi	6	0	0	3	3
6	Υ	2	60	140	2	30	0		Hi	10	0	0	2	2
7	Υ	3	40	104	3	30	0		Hi	6	0	0	1	
8	N	4	0	32	0		0		Hi	2	0	0	1	
9	Υ	4	0	32	0		0		Hi	2	0	0	3	3
10	Υ	4	0	32	0		0		Hi	2	0	0	1	1
11	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7

Pr -	- 3. W	/HITE											少 5°	1 MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	C	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	30	86	0		0		Hi	4	0	0	1	
4	N	3	0	32	0		0		Hi	2	0	0	1	
5	Υ	3	40	104	1	30	0		Hi	6	0	0	3	3
6	Υ	2	50	122	2	30	0		Hi	8	0	0	2	2
7	Υ	3	30	86	3	30	0		Hi	6	0	0	1	
8	N	4	0	32	0		0		Hi	2	0	0	1	
9	Υ	4	0	32	0		0		Hi	2	0	0	3	3
10	Υ	4	0	32	0		0		Hi	2	0	0	1	1
11	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7

Pr -	- 4. L	IGHT S	SOIL - V	VHITE									<b>①</b> 37	7 MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	30	86	0		0		Hi	4	0	0	1	
4	N	3	0	32	0		0		Ξ	2	0	0	1	
5	N	3	30	86	1	30	0		Ξ	6	0	0	3	3
6	Υ	2	40	104	2	30	0		Ξ	6	0	0	0	
7	Υ	3	30	86	3	30	0		Ξ	6	0	0	1	
8	N	4	0	32	0		0		Ξ	2	0	0	1	
9	Υ	4	0	32	0		0		Ξ	2	0	0	3	3
10	Υ	4	0	32	0		0		Hi	2	0	0	1	1
11	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7



Pr -	5. H	<b>IEAVY</b>	SOIL -	Colo	R								<sub>\$\begin{aligned} \text{\$\text{\$}}\end{aligned}</sub>	1 мім
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Ν	3	0	32	0		0		Ή	2	0	0	1	
2	Ν	3	0	32	0		0		Ή	2	0	0	1	
3	Ν	3	40	104	0		0		Ή	4	0	0	1	
4	Υ	3	0	32	0		0		Ή	4	0	0	1	
5	Υ	3	40	104	1	30	0		Ή	6	0	0	3	3
6	Υ	2	50	122	2	30	0		Ή	10	0	0	2	2
7	Ν	4	0	32	0		0		Ή	2	0	0	1	
8	Ν	4	0	32	0		0		Ή	2	0	0	1	
9	Υ	4	0	32	0		0		Ή	2	0	0	3	3
10	Υ	4	0	32	0		0		Ή	2	0	0	1	1
11	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7

Pr -	- 6. M	EDIUM	SOIL -	Colo	R								<b>少40</b>	) MIN
Ph	Y/N	Ш	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0	-	0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	30	86	0		0		Md	4	0	0	1	
4	N	3	0	32	0		0		Md	2	0	0	1	
5	Υ	3	30	86	1	30	0		Md	4	0	0	2	2
6	Υ	2	40	104	2	30	0		Hi	8	0	0	2	2
7	N	4	0	32	0		0		Md	2	0	0	1	
8	N	4	0	32	0		0		Md	2	0	0	1	
9	Υ	4	0	32	0		0		Md	2	0	0	3	3
10	Υ	4	0	32	0		0		Md	2	0	0	1	1
11	Υ	3	0	32	4	30	0		Md	4	0	0	6	7

Pr -	7. S	YNTHE	TICS										<b>少30</b>	) MIN
Ph	Y/N	Ш	C	F	1d	dt	2d	dt	r	rt	C	rh	ш	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	4	30	86	0		0		Md	4	0	0	1	
4	N	4	0	32	0		0		Md	2	0	0	1	
5	Υ	3	40	104	1	30	0		Md	4	0	0	2	2
6	Υ	2	40	104	2	30	0		Md	6	0	0	2	2
7	N	4	0	86	0		0		Md	2	0	0	1	
8	N	4	0	32	0		0		Md	2	0	0	1	
9	Υ	4	0	32	0		0		Md	2	0	0	3	3
10	Υ	4	0	32	0		0		Md	2	0	0	1	1
11	Υ	3	0	32	4	30	0		Md	4	0	0	6	6

Pr -	8. C	ELICA	TES AN	ID WOO	DL								① 3´	1 MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	Ν	3	0	32	0		0		Ξ	2	0	0	1	
3	Ν	4	0	32	0		0		Lo	4	0	0	1	
4	Ν	4	0	32	0		0		Lo	2	0	0	1	
5	Υ	4	0	32	1	30	0		Lo	4	0	0	1	
6	Υ	4	30	86	2	30	0		Lo	9	0	0	1	
7	N	4	0	32	0	-	0		Lo	2	0	0	1	
8	N	4	0	32	0		0		Lo	2	0	0	1	
9	Υ	4	0	32	0		0		Lo	2	0	0	1	
10	Υ	4	0	32	0		0		Lo	2	0	0	1	
11	Υ	4	0	32	4	30	0		Lo	4	0	0	2	2

Pr -	9	25. Sı	NGLE C	ONTEN	IT PRO	GRAMS	3						① <b>5</b>	MIN
Ph	Ph Y/N L C F 1d dt 2d dt r rt c rh E											Е	Et	
110	Ν	3	0	32	0		0		Hi	2	0	0	1	
11	Υ	2	0	32	0	0	0		Hi	2	0	0	1	



## 8.4.2. USA/CANADA application. EH020, REM025, RMG models

Pr	- 1. E	XTRA I	HEAVY	SOIL - W	HITE								<b>ئ 49</b> ك	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	40	104	1	30	0		Hi	4	0	0	1	
4	N	3	0	32	0		0		Hi	2	0	0	1	
5	Υ	3	40	104	1	30	0		Hi	6	0	0	3	2
6	Υ	3	80	176	2	30	0		Hi	12	0	0	1	
7	Υ	3	60	140	3	30	0		Hi	6	0	0	3	2
8	N	4	0	32	0		0		Hi	1	0	0	1	
9	Υ	4	0	32	0		0		Hi	2	0	0	1	
10	Υ	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	3	0	32	4	30	0		Hi	2	0	0	6(*)	6

Pr	- 2. H	EAVY S	SOIL - \	WHITE									<b>ئ 42</b> ا	MIN
Ph	Y/N	٦	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Ξ	2	0	0	1	
2	Ν	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	40	104	0		0		Hi	4	0	0	1	
4	N	3	0	32	0		0		Hi	2	0	0	1	
5	Υ	3	40	104	1	30	0		Ξ	3	0	0	3	2
6	Υ	3	66	151	2	30	0		Ξ	8	0	0	1	
7	Υ	3	60	140	3	30	0		Ξ	5	0	0	3	2
8	N	4	0	32	0		0		Ξ	1	0	0	1	
9	Υ	4	0	32	0		0		Hi	2	0	0	1	
10	Υ	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	3	0	32	4	30	0		Hi	3	0	0	6(*)	6

Pr	- 3. N	IEDIUN	I SOIL -	- WHITE									<u> 37 ا</u>	MIN
Ph	Y/N	Ш	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Ν	3	0	32	0		0		Ξ	2	0	0	1	
2	Ν	3	0	32	0		0		Ξ	2	0	0	1	
3	Ν	3	30	86	0		0		Ξ	4	0	0	1	
4	Ν	3	0	32	0		0		Ξ	2	0	0	1	
5	Ν	3	30	86	1	30	0		Ξ	6	0	0	3	3
6	Υ	3	60	140	2	30	0		Ξ	10	0	0	1	
7	Υ	3	60	140	3	30	0		Ξ	5	0	0	3	2
8	Ν	4	0	32	0		0		Hi	1	0	0	1	
9	Υ	4	0	32	0		0		Hi	2	0	0	1	
10	Υ	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	3	0	32	4	30	0		Hi	2	0	0	6(*)	6

Pr	- 4. L	IGHT S	OIL - W	/HITE									<b>® 28</b> 1	ΛIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	E	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Ħ	2	0	0	1	
3	N	3	30	86	0		0		Hi	4	0	0	1	
4	N	3	0	32	0		0		Hi	2	0	0	1	
5	N	3	30	86	1	30	0		Hi	6	0	0	3	3
6	Υ	3	60	140	2	30	0		Hi	6	0	0	1	
7	Υ	3	60	140	3	30	0		Hi	4	0	0	3	2
8	N	4	0	32	0		0		Hi	1	0	0	1	
9	N	4	0	32	0		0		Ξ	1	0	0	1	
10	Υ	4	0	32	0		0		Ξ	2	0	0	1	
11	Υ	3	0	32	4	30	0		Hi	2	0	0	6(*)	6





Pr ·	- 5. H	EAVY S	SOIL - (	COLOR									<b>少 42</b>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	40	104	0		0		Md	4	0	0	1	
4	N	3	0	32	0		0		Md	4	0	0	1	
5	Υ	3	40	104	1	30	0		Hi	4	0	0	3	2
6	Υ	3	60	140	2	30	0		Hi	10	0	0	1	
7	Υ	3	21	70	0		0		Hi	2	0	0	3	2
8	N	4	0	32	0		0		Md	1	0	0	1	
9	Υ	4	0	32	0		0		Hi	2	0	0	1	
10	Υ	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	3	0	32	4	30	0		Hi	3	0	0	6 <sup>(*)</sup>	6
D::	C N	<b>1</b>				•	•		•	•	•		@ <u>20</u>	

Pr -	- 6. N	IEDIUM	SOIL -	COLO	R								<b>少 36</b>	MIN
Ph	Y/N	٦	С	щ	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Ν	3	0	32	0		0		Hi	2	0	0	1	
2	Ν	3	0	32	0		0		Hi	2	0	0	1	
3	Ν	3	30	86	0		0		Md	4	0	0	1	
4	Ν	3	0	32	0		0		Md	2	0	0	1	
5	Υ	3	30	86	1	30	0		Hi	4	0	0	3	2
6	Υ	3	40	104	2	30	0		Hi	8	0	0	1	
7	Υ	3	21	70	0		0		Hi	2	0	0	3	2
8	Ν	4	0	32	0		0		Md	1	0	0	1	
9	Ν	4	0	32	0		0		Md	1	0	0	1	
10	Υ	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	3	0	32	4	30	0		Hi	3	0	0	6 <sup>(*)</sup>	6

Pr -	7. S	YNTHE	TICS										<b>少 29</b>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	Ν	3	0	32	0		0		Hi	2	0	0	1	
3	Ν	4	0	32	0		0		Md	4	0	0	1	
4	Ν	4	0	32	0		0		Md	2	0	0	1	
5	Ν	3	0	32	1	30	0		Md	4	0	0	2	2
6	Υ	3	40	104	2	30	0		Hi	8	0	0	1	
7	Υ	3	21	70	0		0		Hi	2	0	0	3	2
8	Ν	4	0	32	0		0		Md	1	0	0	1	
9	Ν	4	0	32	0		0		Md	1	0	0	1	
10	Υ	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	3	0	32	4	30	0		Hi	3	0	0	6(*)	6

Pr -	- 8. W	OOL A	ND DE	LICATE	S								① 27	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Ν	3	0	32	0		0		Ξ	2	0	0	1	
2	Ν	3	0	32	0		0		Ξ	2	0	0	1	
3	Ν	4	0	32	0		0		Lo	4	0	0	1	
4	Ν	4	0	32	0		0		Lo	2	0	0	1	
5	Ν	4	0	32	1	30	0		Lo	4	0	0	1	
6	Υ	3	30	86	2	30	0		Md	8	0	0	2	2
7	N	3	0	32	0		0		Md	2	0	0	1	
8	N	4	0	32	0		0		Md	1	0	0	1	
9	Υ	4	0	32	0		0		Md	2	0	0	1	
10	Υ	4	0	32	0		0		Md	2	0	0	1	
11	Υ	3	0	32	4	30	0		Md	3	0	0	5	4

Pr-	- 9	25. Sı	NGLE C	ONTEN	IT PRO	GRAMS	3						<b>少</b> 5	MIN
Ph													E	Et
110	Ν	3	0	32	0		0		Hi	2	0	0	1	
11	Υ	2	0	32	0	0	0		Hi	2	0	0	1	

 $<sup>\</sup>ensuremath{^{(*)}}$  In Models RMG033/40/55/70 the default spin value is 5.



## 8.4.3. United Kingdom application. HS-6008, RMS610, RMG models

Pr ·	<u>- 1. H</u>	EALTH	CARE	SLUICE									<u> </u>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	E	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	40	104	1	30	0		Hi	4	0	0	1	
4	Υ	3	0	32	0		0		Hi	2	0	0	1	
5	Υ	3	0	32	1	30	0		Hi	2	0	0	1	
6	Υ	2	67	153	2	30	0		Hi	11	0	0	2	2
7	Υ	3	0	32	3	30	0		Hi	3	0	0	1	
8	Υ	4	0	32	0		0		Md	2	0	0	1	
9	N	4	0	32	0		0		Hi	2	0	0	1	
10	N	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	4	0	32	4	30	0		Hi	4	0	0	6	7
Pr ·	- 2.	HEAVY	SOIL										<b>①</b> 37	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	Υ	3	40	104	0		0		Hi	4	0	0	1	
4	N	3	0	32	0		0		Hi	2	0	0	1	
5	Υ	3	0	32	1	30	0		Hi	3	0	0	3	3
6	Υ	2	55	131	2	30	0		Hi	6	0	0	2	2
7	Υ	3	0	32	3	30	0		Hi	2	0	0	3	3
8	Υ	4	0	32	0		0		Hi	2	0	0	1	
9	N	4	0	32	0		0		Hi	2	0	0	1	
10	N	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	3	0	32	4	30	0		Md	3	0	0	6	7
Pr ·	- 3. E	ECO. 6	60 e <sup>w</sup>										<b>①</b> 32	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	30	86	0		0		Hi	4	0	0	1	
4	N	3	0	32	0		0		Hi	2	0	0	1	
5	N	3	40	104	1	30	0		Hi	6	0	0	3	3
6	Υ	3	60	140	2	30	0		Hi	10	0	0	2	1
7	Υ	4	0	32	0		0		Hi	3	0	0	1	
8	N	4	0	32	0		0		Hi	2	0	0	1	
9	N	4	0	32	0		0		Hi	2	0	0	1	
10	N	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	4	0	32	4	30	0		Hi	3	0	0	6	9
Pr ·	- 4. L	IGHT S	SOIL										① 32	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	E	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	30	86	0		0		Hi	4	0	0	1	
4	N	3	0	32	0		0		Hi	2	0	0	1	

Pr.	· 4. L	IGHT S	OIL										© 32	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Ш	Et
1	Ν	3	0	32	0		0		Ξ	2	0	0	1	
2	Ν	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	30	86	0		0		Hi	4	0	0	1	
4	N	3	0	32	0		0		Hi	2	0	0	1	
5	N	3	30	104	1	30	0		Hi	6	0	0	3	3
6	Υ	2	40	104	2	30	0		Hi	6	0	0	1	
7	Υ	3	0	32	3	30	0		Md	4	0	0	3	3
8	Υ	4	0	32	0		0		Hi	2	0	0	1	
9	N	4	0	32	0		0		Hi	2	0	0	1	
10	N	4	0	32	0		0		Hi	2	0	0	1	
11	Υ	3	0	32	4	30	0		Hi	4	0	0	6	7



Pr ·	- 5. (	COLOR											<sup>(1)</sup> 48	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	40	104	0	30	0		Md	4	0	0	1	
4	Υ	3	0	32	0		0		Md	4	0	0	1	
5	Υ	3	0	32	1	30	0		Md	6	0	0	3	3
6	Υ	2	40	104	2	30	0		Hi	7	0	0	2	2
7	Υ	4	0	32	0		0		Md	2	0	0	3	3
8	N	4	0	32	0		0		Hi	2	0	0	1	
9	N	4	0	32	0		0		Md	2	0	0	1	
10	Υ	4	0	32	0		0		Md	2	0	0	1	
11	Υ	3	0	32	4	30	0		Md	4	0	0	6	7

Pr -	- 6. E	CO E	XPRES	s 40°C									<b>少 28</b>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	N	3	0	32	0		0		Hi	2	0	0	1	
2	N	3	0	32	0		0		Hi	2	0	0	1	
3	N	3	30	86	0		0		Md	4	0	0	1	
4	Ν	3	0	32	0		0		Md	2	0	0	1	
5	Ν	3	40	104	1	30	0		Md	4	0	0	2	2
6	Υ	2	40	104	2	30	0		Hi	6	0	0	2	2
7	Υ	3	0	32	0		0		Md	3	0	0	3	3
8	N	4	0	32	0		0		Md	2	0	0	1	
9	Ν	4	0	32	0		0		Md	2	0	0	1	
10	N	4	0	32	0		0		Md	2	0	0	1	
11	Υ	3	0	32	4	30	0		Md	4	0	0	6	7

Pr -	7. 8	ЗҮНТИ	ETICS										<b>少 29</b>	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Z	3	0	32	0		0		Hi	2	0	0	1	
2	Z	3	0	32	0		0		Hi	2	0	0	1	
3	Ν	4	30	86	0		0		Md	4	0	0	1	
4	N	4	0	32	0		0		Md	2	0	0	1	
5	Ν	3	40	104	1	30	0		Md	4	0	0	2	2
6	Υ	2	40	104	2	30	0		Md	5	0	0	2	2
7	Υ	4	0	32	0		0		Md	2	0	0	3	3
8	Ν	4	0	32	0		0		Md	2	0	0	1	
9	N	4	0	32	0		0		Md	2	0	0	1	
10	Υ	4	0	32	0		0		Md	2	0	0	1	
11	Υ	3	0	32	4	30	0		Md	4	0	0	6	6

Pr -	- 8. V	VOOL A	AND DE	LICATI	ES								① 32	MIN
Ph	Y/N	L	C	F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
1	Ν	4	0	32	0		0		Hi	2	0	0	1	
2	Ν	4	0	32	0		0		Hi	2	0	0	1	
3	Ν	4	0	32	0		0		Lo	4	0	0	1	
4	Ν	4	0	32	0		0		Lo	2	0	0	1	
5	Υ	4	0	32	1	30	0		Lo	3	0	0	1	
6	Υ	3	30	86	2	30	0		Md	8	1	0	1	
7	Υ	4	0	32	0		0		Lo	3	0	0	1	
8	N	4	0	32	0		0		Lo	2	0	0	1	
9	N	4	0	32	0		0		Lo	2	0	0	1	
10	Υ	4	0	32	0		0		Lo	2	0	0	1	
11	Υ	4	0	32	4	30	0		Lo	4	0	0	4	3

Pr-	- 9	25.SIN	IGLE C	ONTEN	T PRO	GRAMS	;						₾ 5	MIN
Ph	Y/N	L	С	F	1d	dt	2d	dt	r	rt	С	rh	E	Et
110	Ν	3	0	32	0		0		Hi	2	0	0	1	
11	Υ	3	0	32	0	0	0		Hi	2	0	0	1	



## 8.5. Modifying a program

8.5.1. Programming vectors

PHASE	Ph	L	C/F	1d	dt	2d	dt	r	rt	С	rh	Е	Et
110	Y/N	06	0 90 32 194	04	199	04	199	no, Lo, Md, Hi	020	0/1	0/1	0 / 16	n.p. 29
11	Υ	06	0 90 32 194	04	199	04	199	no, Lo, Md, Hi	020	0/1	0 / 1	16	n.p. 29

8.5.2. Definition of programmable functions and values for each phase

FUNCTION	CONCEPT	OPTIONS	
D/-	Dhara	Ph-Y	Phase can be executed
Ph	Phase execution	Ph-N	Phase cannot be executed
		L-0	Without water inlet
		L-1	Low level
	Bath level	L-2	Medium low level
L		L-3	Medium level
	(see note in Section 8.5.3)	L-4	Medium high level
		L-5	High level
		L-6	Extra high level
C/F	Tomporature of the both	0/90	Programmable range in degrees Celsius
C/F	Temperature of the bath	32 / 194	Programmable range in degrees Fahrenheit
		1d-0	Phase without dosing
		1d-1	Dosing via compartment 1 (powder) External dosing signal 1
1d	First dosing	1d-2	Dosing via compartment 2 (powder) External dosing signal 2
		1d-3	Dosing via compartment 3 (liquid) External dosing signal 3
		1d-4	Dosing via compartment 4 (liquid) External dosing signal 4
t	First dosing time	0/99	Value in seconds (see note in section 8.5.3)
2d Second dosing		2d-*	The same parameters as in the first dosing
t	Second dosing time	1/99	Value in seconds
		no	No rotation in the phase
r	Rotation sequence	Lo	Light rotation sequence: ON: 5 sec. / OFF: 25 sec.
,	·	Md	Normal rotation sequence: ON: 15 sec. / OFF: 15 sec.
		Hi	Vigorous rotation sequence: ON: 5 sec./ OFF: 25 sec.pm
rt	Rotation time	120	Value in minutes
С	Gradual cool down	0	Without gradual cool-down
Ů	0.0000	n.p	Gradual cool-down activated
rh	Program stop	0	Without program stop
		1	Program stop activated
		0	Access to the next phase without draining in the bath
	Bath drain	1	Drain + wash speed
_		2	Drain + positioning speed
E		3	Drain + low extract speed
		4	Drain + medium spin speed
		5	Drain + medium/high extract speed
<b>-</b>		6	Drain + high spin speed
Et	Extract time	**	Time in minutes.



#### 8.5.3. Program modification sequence

Access the ADVANCED USE MODE (Section 8.2). The display shows *Pro*.

Press the key to access the PROGRAMMING menu.

The display shows *Pr-1*. Program 1 is ready for modification. The ▲/▼ keys allow the user to select another program. Press the 🎏 key to access the modification of the displayed program.

The display shows  $\overline{Pr-1}$ . Phase 1 is ready for modification. The  $\triangle/\nabla$  keys allow the user to select another phase. Press the  $\bigcirc$  key to start modifying the values of the selected phase.

When the number of the phase is displayed (at the start of phase), the **START/STOP** key is used to finalise the program modification.

Once a program modification has been finalised, the display will show the **Pr-\*** report (modified program). Pressing the **START/STOP** key allows the user to access the higher level of the menu. Pressing twice consecutively allows the user to exit the ADVANCED USE MODE.

#### Activation of the phase

Allows the user to program the execution of the selected phase.

Once the desired phase to be modified has been selected, press the key. The display shows **Ph-\***.

OPTIONS	MEANING
Ph-Y	The phase to be executed is available
Ph-N	The phase to be executed is unavailable

The ▲key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### **Bath level**

Bath level allows the selection of the bath level inside the washer.

OPTIONS	MEANING
L-0	Without water inlet
L-1	Low level
L-2	Medium low level
L-3	Medium level
L-4	Medium high level
L-5	High level
L-6	Extra high level

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.



#### CAUTION!

**Programming levels L4, L5 and L6 IS NOT ALLOWED** in models with a pump drain or drain closed without power supply.



#### Temperature of the bath

Allows the water temperature to be modified

OPTIONS	MEANING
	Programmable values
C-00 C-90	C-**:degrees Celsius
F 32 F 194	F***:degrees Fahrenheit

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### First dosing

This allows the dosing of each phase to be selected.

The simultaneous dosing of two products can be programmed in each phase. The programming option for the second product will only appear if product dosing has been programmed in the first dosing.

OPTIONS	MEANING
1d-0	Phase without dosing
1d-1	Dosing via compartment 1 (powder) External dosing signal 1
1d-2	Dosing via compartment 2 (powder) External dosing signal 2
1d-3	Dosing via compartment 3 (liquid) External dosing signal 3
1d-4	Dosing via compartment 4 (liquid) External dosing signal 4

The external dosing signals are simultaneously connected with the water inlets via the dispenser.

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### First dosing time

Duration of the first dosing programmed in the phase.

This option will only appear if product dosing has been programmed in the first dosing.

The dosing time controls both the duration of the opening of the valve for entry of water into the dispenser and the signal for activating the external dosing.



#### CAUTION!

IT IS NOT ADVISABLE TO REDUCE THE DISPENSING TIME IN MACHINES THAT ARE NOT CONNECTED TO EXTERNAL DISPENSING EQUIPMENT.

Default values of the program tables may slightly vary depending on the machine model.

OPTIONS	MEANING
1 99	Programmable range. Value in seconds

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

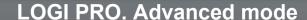
#### Second dosing and second dosing time

This allows the user to select the second dosing of each phase and its corresponding duration.

The second dosing is initiated at the same time as the first dosing.

These options only appear if the product dosing has been programmed in the first dosing.

Programmable options and range as in the first dosing.





#### **Rotation sequence**

The mechanical action of the washing machine on the linen is different depending on the rotation sequence selected.

			R.P.M. FOLLOWING MACHINE MODEL				
OPTIONS	ROTATION SEQUENCE	REVERSE	HS-6008 RMS610 EH020 REM025	RMG613/17 RMG033/040	RMG623 RMG055	RMG628 RMG070	
no	No rotation in the phase						
Lo	Low	ON: 5 sec. OFF: 25 sec.	25	30	30	20	
Md	Normal	ON: 15 sec. OFF: 15 sec.	35	37	37	36	
Hi	High	ON: 25 sec. OFF: 5 sec.	50	47	44	42	

Time **ON**: drum rotating Time **OFF**: drum stopped

The speeds may vary slightly depending on the type of load.

The ▲key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Gradual cool down

The gradual cooling down of the water is achieved by adding cold water until a temperature of 45 °C (113 °F) is reached.

This function will appear only if the programmed temperature in the phase is over 50 °C (122 °F).

OPTIONS	MEANING
c-0	Gradual cool-down deactivated
c-1	Gradual cool-down activated

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

### **Program stop**

All the functions of the washing machine stop, maintaining the water inside, with a light rotation of the drum at 15 minute intervals.

This option can be programmed in any phase of the program.

When programmed before the final phase spin, the indicator light for the function lights up on the control panel.

OPTIONS	MEANING
rh-0	Program stop deactivated
rh-1	Program stop active in the phase

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

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## LOGI PRO. Advanced mode

#### Bath drain

The emptying of the washing machine bath involves activating the draining system, and the selection of a drum rotation speed.

Option E-1 implies an unchangeable time value. The duration of options E-2...E-6 is programmable within a determined range.

			R.P.M. (G FORCE) FOLLOWING MACHINE MODEL						
	MEANING	HS-6008 EH020	RMS610 REM025	RMG613 RMG033	RMG617 RMG040	RMG623 RMG055	RMG628 RMG070		
E-0	Without draining Access to the next phase								
E-1	Drain + wash speed	50	50	44	47	47	45		
E-2	Drain + positioning speed	100	100	100	100	100	100		
E-3	Drain + low extract speed	400(50)	400(50)	380(50)	380(50)	360(50)	342(50)		
E-4	Drain + medium spin speed	600(110)	500(75)	574(115)	574(115)	505(100)	485100)		
E-5	Drain + medium/high extract speed	800(190)	580(100)	635(140)	635(140)	600(140)	570(140)		
E-6	Drain + high spin speed	970(280)	600(108)	760(200)	760(200)	715(200)	685(200)		

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Spin time

Extract time programmed in the phase. Time in minutes.

OPTIONS	MEANING
n.p.	Draining time E-1 not programmable
2 9	Programmable values

The ▲/▼ keys allow the user to modify the option displayed.

The key validates the displayed selection and ends the phase programming.

The display will show the following phase.

When finalising the programming of the last phase of the program, the display shows *Pr-\** (modified program).

The ▲/▼ keys allow the user to select another program in the PROGRAMMING menu.

#### 8.6. Information menu. INFO menu

PARAMETERS	MEANING				
LOGI	Type of control				
****	Washer model				
EP	O. flavor				
****	Software version				
Pr	Number of total cycles executed				
Pr-*	Number of cycles executed individually by each program				
SUD	Number of times the anti-suds function has been activated				

Access the ADVANCED USE MODE. Section 8.2. The display shows Pro.

Press the ▲key. The display shows *INFO*.

Press the key to sequentially access the listing of the different parameters and the values for the corresponding counters.

Once the last option is listed, press the key. The display shows *INFO*.

The ▲/▼ keys allow the user to access to other menus.

To exit the ADVANCED USE MODE press the START/STOP key.



## 8.7. Modifying the operating parameters. Mod menu

The **Mod** menu allows the user to modify the operation parameters of all the programs. The modifications carried out from **Mod** menu affects all programs.

#### 8.7.1. Summary table of the changeable parameters

PARAMETER	MODIFICATION OF	OPTIONS		CE	USA
6		b-0	Without buzzer		
	<b>b</b> Buzzer	b-1	Low buzzer		
	<b>b</b> Buzzei	b-2	Normal buzzer	<b>←</b>	+
		b-3	Strong buzzer		
dt	Information on the display during a	dt-0	Functions display	<b>←</b>	<b>←</b>
at .	program	dt-1	Program time remaining display		
C/F	Temperature unit	С	Temperature unit in degrees Celsius	+	
C/F	remperature unit	F	Temperature unit in degrees Fahrenheit		<b>←</b>
dc	Cleaning the	dc-0	Dispenser cleaning NO activated	+	+
uc_	dispenser	dc-1	Dispenser cleaning YES activated		
AC	Program acceleration	AC-0	Without acceleration permission		
AC	1 Togram acceleration	AC-1	With acceleration permission	←	<b>←</b>
JL	Proportional water	JL-0	Option disabled	<b>←</b>	<b>←</b>
JL	level	JL-1	Option enabled		
dL	Proportional dosing	dL-0	Option disabled	<b>←</b>	<b>←</b>
	time	dL-1	Option enabled		
Pg	Het water purge	PG-0	Purge option disabled	+	+
	Hot water purge	PG***	Maximum purge time: 250 sec.		
ld	Nietuoni, identifie:	Id-0	Disabled communication	+	+
	Network identifier	Id-199	Enabled communication		

<sup>←</sup> Indicates default option following configuration.

#### 8.7.2. Parameter modification sequence

Access to ADVANCED USE MODE. Section 8.2. The display shows Pro.

Press the ▲ key twice. The display shows *INFO*, *Mod* successively.

Press key to display the first parameter.

#### **Buzzer**

The door safety unlock can be warned by sounding a beep. The duration of this warning is programmable.

OPTIONS	MEANING
b-0	Buzzer OFF
b-1	Low buzzer: two beeps
b-2	Normal buzzer: four beeps
b-3	Strong buzzer: six beeps

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

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#### Information on the display during a program

Allows the user to select the information to be displayed during the program execution.

If the View Functions option is selected, the table in Section 7.1 allows the user to identify the reports displayed with the functions that the washing machine is executing.

OPTIONS	MEANING
dt-0	Display of functions being executed by the washer
dt-1	Display of the program time remaining in minutes

The  $\blacktriangle$  key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Temperature unit

The bath water temperature can be displayed in degrees Celsius or Fahrenheit.

OPTIONS	MEANING
С	Temperature unit in degrees Celsius
F	Temperature unit in degrees Fahrenheit

The \( \Lambda \) key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Dispenser cleaning



#### CAUTION!

DO NOT ACTIVATE THIS OPTION IN MACHINES CONNECTED TO EXTERNAL DOSING INSTALLATIONS.

This option activates the cleaning of the dispenser liquid product compartments by opening their water filling valves to eliminate the possible remaining products.

OPTIONS	MEANING
dc-0	Dispenser cleaning NO activated
dc-1	Dispenser cleaning YES activated

The ▲/▼ keys allow the modification of the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### **Program acceleration**

Program acceleration can reduce the time of the programs accessing functions or subsequent phases, or reducing the times of rotation and spinning. There is also the possibility of increasing the rotation times.

The **AC** option enables or disables the use of the | (acceleration) key.

OPTIONS	MEANING
AC-0	Acceleration option disabled
AC-1	Acceleration option enabled

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

Cod. 523340



#### **Proportional water level**

This modifies the values of the bath levels in proportion to the predetermined load.

OPTIONS	MEANING
JL-0	Proportional modification of the bath time deactivated
JL-1	Proportional modification of the bath time activated

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Proportional dosing time

This option only appears if *JL-1* has been programmed in the previous stage.

It modifies the dosing time in proportion to the bath level calculated according to the predetermined load.

OPTIONS	MEANING
dL-0	Proportional modification of the dosing time deactivated
dL-1	Proportional modification of the dosing time activated

The ▲ key allows the user to modify the option displayed.

The key validates the selection on the display and allows the user to access the following programmable function.

#### Hot water purge

The purge is an option that keeps the water inlet valve and the drain valve simultaneously open during the programmed time, with the aim of purging the hot water pipe.

The purge function is only executed during the first phase of the program with water filling if the programmed temperature is equal or higher than 86 °F (30 °C).

Purge time: programmable in 5 second steps.

OPTIONS	MEANING
Pg-0	Purge disabled
Pg**	Programmed purge time. Maximum time: 250 sec.

The ▲/▼ keys allows to activate and modify the purge time.

The key validates the selection on the display and allows the user to access the following programmable function.

#### **Network identifier**

This parameter assigns a network identifier to the washer. This identifier enables the communication of the washer with the environment through a protocol based on RS-485. Selected option by default: **Id-0.** 

OPTIONS	MEANING
Id-0	Disabled communication
Id-199	Enabled communication

For further information, see the Communication Protocol Instruction Manual.

The ▲/▼ keys allows to activate and modify the Network identifier.

Press the key. The display shows **Mod**.

The ▲/▼ keys allow the user to access to other menus.

To exit the ADVANCED USE MODE press the **START/STOP** key.



## 8.8. Code for accessing the ADVANCED MODE. Ncod menu

As described in Section 8.2 the access to ADVANCED MODE is restricted by an access code.

This code can be modified by the user if so desired.

The code must always contain a combination of EIGHT numbers.

#### 8.8.1. Modifying of the access code

Access to ADVANCED MODE. Section 8.2. The display shows Pro.

Press ▲ key three times. The display shows *INFO*, *Mod*, *NCod successively*.

Press the key to set a new code. All the information on the display will disappear.

Enter a combination of eight keys using the four central keys in the control panel.

The pressed key is shown on the display as follows:

KEY	CORRESPONDENCE
	1
+	2
•	3
_	4

At the end of the sequence the **SURE** report will be shown.

Confirm the new code with the key [\*\*]

If you do not wish want to validate the new code, press the **START/STOP** key.

In both cases, the display will show Ncod.

The ▲/▼ keys allow the user to access to other menus.

To exit the ADVANCED USE MODE press the **START/STOP** key.

#### NOTE.

If you forget the modified code, call the Service Department to restore the original code.

#### 8.9. System clock. Hour Menu

Access to this menu is only possible if the clock option is available.

This menu allows the user to check and / or modify the time in the system.

The clock must be set at the real time for the proper operation of the starting time.

### 8.9.1. Setting the clock

Access to ADVANCED MODE. Section 8.2. The display shows Pro.

Press the ▲ key four times. The display shows *INFO*, *Mod*, *NCod*, *Hour* successively.

When displaying *Hour* press the key. The *SURE* report will be displayed.

The washing machine control requests confirmation of the access command for the time modification.

To exit the *Hour* menu, press **START/STOP**.

Press | key to access and modify the clock time.

The system time is shown on the display in the format: hh.mm (24 hour time format).

The changeable parameters are shown flashing.

Press | key to pass from the minute modification to the hour modification.

Change the selected value with the ▲/▼ keys.

Press the key to validate the selection.

The **START/STOP** key allows the user to exit the menu without validating the modification.

After validating the time selection, *Hour* is shown on the display.

The ▲/▼ keys allow the user to access to other menus.

To exit the ADVANCED MODE press the **START/STOP** key. The washing machine can execute the programs.



# INFORMATION COMMON TO BOTH LOGI CONTROL AND LOGI PRO CONTROL

#### 9. TROUBLESHOOTING

#### 9.1. Freeing a trapped person



## PROCEDURE IN THE EVENT OF ENTRAPMENT OF A PERSON OR AN ANIMAL INSIDE THE WASHER

- 1. **Press the START/STOP key**. This action interrupts the wash cycle in operation and opens the washing machine drain. The washing machine control circuit remains in operation.
- 2. **Open the door**. After the bath has been drained and the drum rotation has ended, the door lock is unblocked allowing the door to be opened.
- 3. If the door fails to release: Consult the following sections: Dismantling the door of the washing machine, or Manual realising of the safety lock (sections 9.2 and 9.3)

CAUTION! If instead of pressing the START/STOP key you perform one of the following actions THE DOOR LOCK WILL NOT BE RELEASED immediately:



- Pressing the EMERGENCY STOP
- Disconnecting the ON/OFF switch
- Disconnecting the SWITCH DISCONNECTOR

#### 9.2. Manual releasing the safety lock



#### **WARNING**:

This procedure is recommended in problems caused by a failure to realise the door of the machine. It should only be carried out by the Authorised Technical Service except in emergency situations.

Specific information for HS-6023, HS-6024, EH055, EH060, RMS/RMG628, REM/RMG070 models.

Before disassembling the door of the washing machine:

- Check that the bath level does not exceed the door opening level.
- Close and mechanically interlock the manual water supply valves.
- Close and mechanically lock the manual steam inlet valve (steam heated washing machines)
- Disconnect and mechanically lock the External Automatic Switch or the of the washing machine disconnector switch.

In order to release the safety lock manually, completely insert a rod with a diameter of 0.2 inches (3 mm) and an approximate length of 4 inches (100 mm)into the bottom side of the safety lock cover, and at the same time turn the knob downwards (Fig. 9.3).

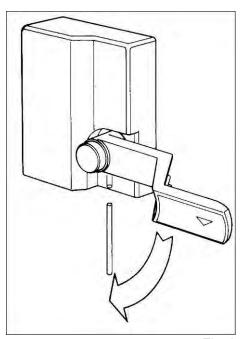


Fig. 9.3



#### 9.3. Disassembling the door of the washing machine



#### **WARNING**:

It should only be carried out by the Authorised Technical Service except in emergency situations. This procedure is recommended in problems caused by a failure to realise the door of the machine.

Specific information for RMS610, RMS/RMG613, RMS//RMG617, RMS/RMG623, RMS/RMG628, HS-6008, HS-6013, HS-6017, HS-6024, REM/025, REM/RMG033, REM/RMG040, REM/RMG055, REM/RMG070, EH020, EH030, EH040, EH060.

Before disassembling the door of the washing machine:

- Check that the bath level does not exceed the door opening level.
- Close and mechanically interlock the manual water supply valves.
- Close and mechanically lock the manual steam inlet valve (steam heated washing machines)
- Disconnect and mechanically lock the External Automatic Switch or the of the washing machine disconnector switch.



- Remove the protective caps from the hinge securing screws. (Fig. 9.1). On RMS/RMG628, REM/RMG070, HS-6024 and EH040 models, the plastic protector has to be removed first (Fig.9.2/A).
- Remove the hinge securing screws (Fig. 9.3).

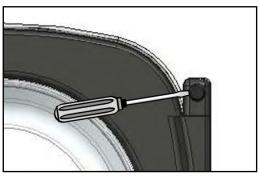


Fig. 9.1

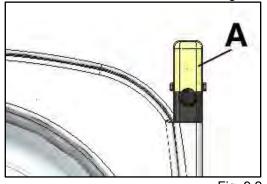


Fig. 9.2

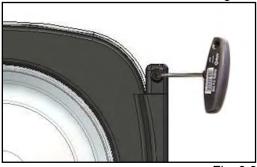


Fig. 9.3





#### 9.4. What to do when ...

Some of the washing machine's operating problems can be solved by the user intervention. These problems are detailed below.

Should you have any questions, remember to consult the Authorised Technical Service.

## .....the wash cycle ends with the report: END/BAL

This report indicates that the final spin cycle is not possible because the load is unbalanced.

- Unload the machine and reload it.
- Begin the wash cycle and accelerate the program to the last phase.
- The washing machine will repeat the last spin cycle without refilling with water.
- If the problem persists, or occurs often, contact the Authorised Technical Service.

#### .....the machine makes a strange noise during the spin cycle

- Check the levelling of the machine. See Instruction Manual for Installation.
- Tighten the locking screws on the outside panels.
- If fault persists, contact the Authorised Technical Service.

#### .....the door is leaking

Clean the door seal of any possible deposits or remains of linen.

#### .....there is water leaking inside the washer cabinet

- Check the outlet draining pipe.
- Check the seals on the water inlet hoses; tighten the connection couplings.
- Check the condition of the door seal and check whether there are any ruptures.
- If the problem persists, seal all of the water inlets and contact the Authorised Technical Service.

#### .....you have forgotten the access code for the advanced mode

Contact the Authorised Technical Services.

.....the clock (option) stops working correctly. Possible battery failure. Contact the Authorised Technical Services.



## 9.5. System alarms

The safety of the washing machine in use requires the machine to monitor itself closely for any possible anomalies. These anomalies are reported in the form of alarms.

The **ALM** message will appear on the washing machine's display alternating with the specific alarm report.

DISPLAY REPORT	LIKELY CAUSE	PROCEDURE
ALM/A-*	Faulty water inlet	Check water entry pressure. Check the manual water inlet valves. Check the status of the filters in the solenoid valves. (Refer to section 10: Maintenance)
	Defect in the solenoid valves Defect in the level control system	Contact Authorised Technical Services.
	Machines with pump drain: obstruction of the draining pump	Contact Authorised Technical Services.
ALM/E	Anomaly in the drain system Error in drain configuration	Check the status of the washing bath's output hoses. Contact Authorised Technical Services.
ALM/HOT	Inadequate stop of the washing machine with bath at high temperature Excessive temperature when machine is stopped Anomaly in the heating system	Close the door of the washing machine to allow opening of cold water valve.  Press START/STOP key to drain the bath and access the door opening.  Repeat this operation until the alarm report disappears.  If the alarm report does not disappear after five attempts, disconnect the general power supply and close the water inlet manual valves.  Contact AUTHORISED TECHNICAL SERVICES.
ALM/L	Leakage in the solenoid valve Bath level with machine idle	Close manual water inlet valves. Contact AUTHORISED TECHNICAL SERVICES.
ALM/SL	Bath level exceeded	Close manual water inlet valves. Contact AUTHORISED TECHNICAL SERVICES.
ALM/C	Defect in the temperature probe Error in the heating configuration Defect in the heating circuit	Contact AUTHORISED TECHNICAL SERVICES.
ALM/Prob	Defect in the temperature probe	Contact AUTHORISED TECHNICAL SERVICES.
ALM/BAL	Defect in the unbalance control switch	Contact AUTHORISED TECHNICAL SERVICES.
ALM/VAR*	Disconnection of the motor's thermal protection Alarm set off by the inverter	Contact AUTHORISED TECHNICAL SERVICES.
ALM door	Faulty door lock	Contact AUTHORISED TECHNICAL SERVICES.
Hot	Interruption of the program using the START/STOP key with the bath at high temperature	The washing machine will automatically accept cold water and will not allow the door unlock. When the bath temperature is below 45 °C (133 °F) the bath will drain and the safety door lock will be released.
door	Door badly closed	Open and close the door.



### **10. MAINTENANCE**



### Caution

- The users must refrain from carrying out actions reserved for the Authorised Technical Services.
- Before performing any work on the washing machine, disconnect and mechanically lock the external switch, and close and mechanically lock the manual water inlet valves.
- Check that the temperature of the parts to be handled represents no risk of burns.
- The dispenser may contain residues of chemical products. In cleaning operations, avoid direct contact with the skin and protect the eyes.
- The draining pump and valve may contain residual water. When handling these components, avoid direct contact with the skin and use eye protection.
- Remember to reassemble ALL of the panels and replace them correctly after any maintenance
- It is highly recommended to ask the Authorised Technical Service for a register or report of all the maintenance and service work done on your washer.

### **Operations described**

#### **USER-MAINTENANCE INSTRUCTIONS**

- Cleaning the washer (Section 10.1)
- Cleaning the door seal (Section 10.2)
- Cleaning the solenoid valve filters (Section 10.3)
- Checking safety devices (Section 10.4)



### ONLY TO BE PERFORMED BY THE AUTHORISED TECHNICAL SERVICE

- Cleaning the dispenser (Section 10.5)
- Cleaning the drain pump (Section 10.6)
- Checking the condition of the bearing housing seals (Section 10.7)
- General overhaul (Section 10.8)

### 10.1. Cleaning the washer

- We recommend cleaning the outside of the washing machine periodically. Use a damp cloth or sponge.
- To remove grease marks use a neutral soap and rinse well.
- Never use aggressive products, solvents, abrasive scourers or tools that may scratch or deteriorate the external surface of the washing machine.

### 10.2. Cleaning the door seal

- Use a cloth or sponge moistened in water.
- Be especially careful to remove traces of laundry products or pieces of fabric that could be caught between the folds of the seal.
- Never use abrasive products or tools that could cut or damage the seal.

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### 10.3. Cleaning the solenoid valve filters



### Only by qualified personnel

### Required tools:

- Disassembly of the fittings: Slip-joint pliers or pipe spanner diam. 1-½ in. (35 mm)
- Disassembly of the filter supports: spanner 1-3/8 in (34 mm)
- Disassembly of the filters: pliers

### Steps to follow

- Disconnect and mechanically lock the external switch. Close and mechanically interlock the manual water supply valves.
- To avoid the risk of burns, check the temperature of the hot water inlet hose.
- Disassemble the fittings that connect the hoses to the washing machine.
- Disassemble the filter supports (according to model).
- Remove the filters from their housings and clean the filters with pressurised water. Refit them in their housings.
- Assemble the solenoid valve supports (according to model).
- Assemble the hoses in their corresponding inputs. Tighten the fittings.
- Connect the external switch, open the manual water input valves and check the water-tightness of the coupling.

### 10.4. Checking safety mechanisms

### 10.4.1. Checking the door lock

Check the door safety lock device on a DAILY basis.



### CAUTION. Only by qualified personnel

Take great care in checking the safety mechanisms.

Carry out the check described below while the drum is turning at washing speed and never at a higher speed.

If there is a failure in the door lock, never place one's hand in the loading area of the washer.

### Checking procedure:

Disconnect the **ON** switch. The display is off.

Close and mechanically interlock the manual water supply valves (and steam inlet valve in washers with this option included).

Open the washing machine door.

Connect the **ON/OFF** switch. The display will read **door**.

Close the door.

Select and start a wash cycle.

About a minute after starting the cycle, check that the door is locked.

Press the **START/STOP** key to finish the check.

After a safety period of no longer than 30 seconds has passed, the door lock will be released.

The check is completed.

If no anomaly has been detected, open the fluid inlet valves.



### **CAUTION**

If anything other than that was described is detected during the operation, disconnect the washer, do not use it, and contact the Authorised Technical Service **URGENTLY**.

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10.4.2. Checking the emergency stop

(Only models with Emergency Stop Button)

Check the Emergency Stop on a WEEKLY basis.

### Checking procedure:

Connect the **ON/OFF** switch. The display will read **door**.

Close the door. Select and start a wash cycle.

About a minute after starting the cycle, activate the EMERGENCY button. The buzzer will sound and the drum will stop rotating. The display will read ALM EMER.

Unlock the Emergency Stop button by turning the activation in the direction of the arrows, and press the START key to resume the operation of the washing machine.

After a safety period of no longer than 3 minutes has passed, the washing machine will resume operation.

Press the **START/STOP** key to end the washing cycle. The check is completed.



### CAUTION

If anything other than that was described is detected during the operation, disconnect the washer, do not use it, and contact the Authorised Technical Service URGENTLY.

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### 10.5. Cleaning the dispenser



### Only to be performed by the Authorised Technical Service

- Disconnect and mechanically lock the external switch. Close and mechanically interlock the manual water supply valves.
- Clean the dispenser by using a cloth or sponge dampened with water. Warm water makes cleaning easier. Never use abrasive products, solvents or tools that could scratch or damage the dispenser.

Once the dispenser cleaning and assembly operations are finished:

- Connect the external switch and open the manual water inlet valves.
- Start a washing program that uses a bleaching agent and softener and check that both compartments drain properly.

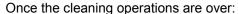
### 10.5.1. Washers with front dispenser

### Required tools:

Unscrewing the fastening tabs: Torx T20 screwdriver

### Disassembly and assembly:

- Open the dispenser drawer and loosen the screws on the retaining tabs visible along the bottom (Fig. 10.1).
- Completely remove the drawer and dismount the siphon tubes from the liquid compartment by pulling them upwards.



- Replace the siphon tubes and replace the drawer in its housing.
- Refit the fastening tabs and check that the drawer cannot be completely removed.

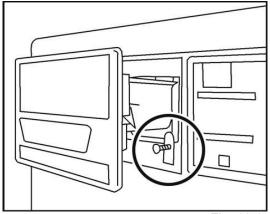


Fig. 10.1

### 10.5.2. Washers with top dispenser

### Disassembly and assembly

- Open the fastening clasps on the top cover. The dispenser is now accessible.
- Detach the siphon tubes from the liquid compartment by pulling them upwards.
- To clean the lower basin, remove the leak seal and separate the two dispenser bodies by separating the side lips (Fig. 10.2).

Once the cleaning operations are over:

- Refit the two dispenser bodies and check that the side lips fasten both pieces.
- · Replace the siphon tubes.
- Check that the dispenser is set well in its bracket.
- Check the condition of the top cover seal. If seal is damaged, deformed or has lost elasticity, call the AUTHORISED TECHNICAL SERVICE for replacement.
- Replace the seal. Fit the top cover. Close the clasps.

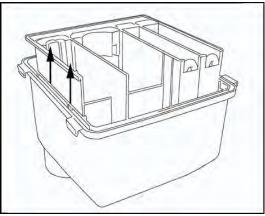


Fig. 10.2



### VERY IMPORTANT

The dispenser protection seal is necessary to prevent humidity and corrosion inside the machine and the premature damage of the electrical and electronic circuits of machine control.



### 10.6. Cleaning the drain pump

(Drain pump washers. Fig. 10.3)



### Only to be performed by the Authorised Technical Service

Required tools. Disassembly of the lower front panel: Torx. T25 screwdriver

- Before disassembling the lower front panel of the washing machine, disconnect and mechanically lock the external switch, and close and mechanically lock the manual water inlet valves.
- Empty any residual water contained in the drain ducts, placing the corrugated rear tube horizontally on the floor. The water will come out of the end.
- Disassemble the lower front panel. The draining pump is accessible.
- Turn the filter counter-clockwise and separate it from the pump body.
- Clean the filter and any possible deposits from the inside of the pump body.
- Assemble the filter and the draining pump.
- Replace the bottom panel.
- Connect the external switch and open the manual water inlet valves.
- Begin a washing program and check that there are no water leaks.

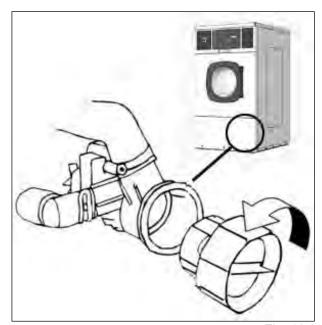


Fig. 10.3



The bottom front cover is a stabilising element of the washer cabinet. Make sure that it is properly fitted and fastened.

### 10.7. Checking the condition of the bearing housing seals



### Only to be performed by the Authorised Technical Service

At regular intervals check that no water is leaking out of the bearing drain pipe located at the back of the washer at the bottom. Water loss indicates that the seals are in poor condition and need to be replaced.

### 10.8. General Overhaul



### Only to be performed by the Authorised Technical Service

- As preventive maintenance action, it is very important to request the Authorised Technical Service for a periodic overhaul of the washing machine.
- Recommended periodicity: once a year or every 3000 washing cycles.
- When performing this overhaul on **HS-6008** / **EH020** models, due to the wear and tear it is subject to, we recommend carefully checking the door seal and replacing it if wear is noticed.

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### 11. WITHDRAWING FROM SERVICE



- · Removing the washer from service requires a specialised company.
- Never release the washer unsecured.
- To release the washer and carry out subsequent transportation, refer to the same specifications and cautions indicated for Installation.

### When removing the machine from service:

- Disconnect and mechanically lock the external switch. Remove the supply cables.
- Close and mechanically interlock the manual water supply valves. Remove the water supply hoses.
- Disassemble the drain outlet pipe and empty any residual water left in the washing machine.
- Assemble the shipping restraints.
- Dismantle the door of the washing machine (consult the Authorised Technical Service).

### **Dismantling**

Most of the machine's components are made of recyclable or recoverable materials.

The injected pieces bear information on the materials that were used to make them.

The main materials are:

- Steel plates
- Stainless steel plate
- Grey cast iron
- Aluminium
- Glass
- Polypropylene (PP)
- Ethylene Propylene (EPDM)
- ABS
- Copper
- Electronic components





### Management of waste from electronic devices

In compliance with Directive 2002/96/EC on the management of waste from electronic devices, it is the obligation of the manufacturer to warn that:

The electronic components installed in the washing machine, must be dismantled and delivered to treatment facilities authorised for this purpose.

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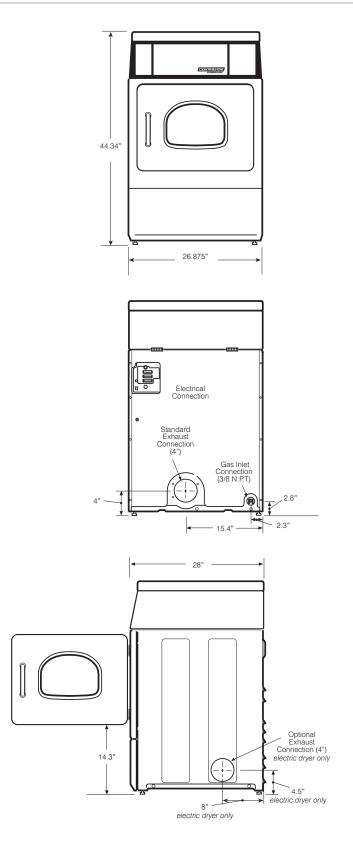
PRODUCT SPECIFICATIONS

# KDE/KDG

### LIGHT COMMERCIAL ON-PREMISE DRYER

PRODUCT SPECS				
Capacity Ibs	up to 25			
Cylinder Volume cu ft	7			
Net Weight <i>lbs</i> Electric Gas	150 155			
Crated Weight <i>lbs</i> Electric Gas	160 165			
Machine Dimensions <i>inch</i> WxDxH	26.875 x 28 x 44.34			
Door Opening inch	23.5			
Shipping Dimensions inch WxDxH	29.5 x 30.5 x 45			
Motor Power hp	1/3			
Exhaust Diameter inch	4			
Exhaust Air Flow cfm	220			
Gas Connection inch	3/8 NPT			
Gas Heating <i>BTU/h</i>	25000			
Available Voltages/Wire Conductor/# Electric Electric Gas	Amp 240/60/1, 3-prong cord, 30 240/60/1, 4-prong cord, 30 120/60/1, 3-prong cord, 15			

<sup>\*</sup> Specifications subject to change without notice or obligation. Contact Continental Girbau at (800) 256-1073 for dimensions not shown or for clarification.





### **Laundry Soap Dispensing System**

TYPE AND SOURCE TO BE DETERMINED BY OWNER AS TYPICALLY PROVIDED AT NO EXPENSE FROM JANITORIAL SUPPLIER.



### PRODUCT DESCRIPTION

Wall-mounted unit dispenses up to four chemical products--four high flow, four low flow. Diluted product will dispense at rate of 2.5 GPM. Dispenser system is closed loop, reducing human exposure to chemicals. Easy to install--no tubes or metering tips to install. Water supply must be available to use dispenser. Designed for use with Zep® Professional Advantage+ chemicals.

BRAND NAME	Zep Professional
MANUFACTURER	Zep Inc.
MPN	1045914
UPC	723783210915
GTIN	00723783210915
SELLING UNIT	1/Each
DIMENSION	19.75" Length x 6.75" Width x 29" Height
PRODUCT LENGTH	19.75" Length
PRODUCT WIDTH	6.75" Width
PRODUCT HEIGHT	29" Height
REQUIRES	Water Supply

SOURCE: <a href="https://www.pjpmarketplace.com/zep-professional-advantage-4-1-wall-mount-dispensing-system-blue-plastic-metal-19-5x6-75x29.html">https://www.pjpmarketplace.com/zep-professional-advantage-4-1-wall-mount-dispensing-system-blue-plastic-metal-19-5x6-75x29.html</a>



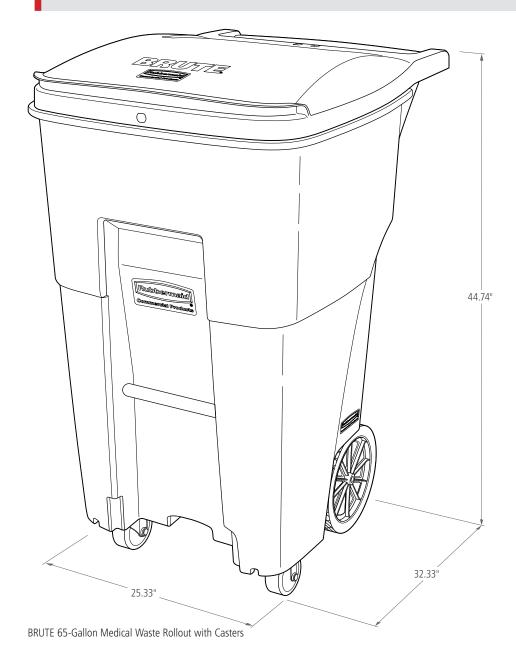
BRUTE Medical Waste Rollouts with Casters are designed for use in the healthcare industry. Locking lids keep regulated medical waste secure, smooth contours make cleaning easier, and front swivel casters enable balanced maneuverability.

### **Features and Benefits:**

- Heavy-duty wheels with high-performance treads are optimized for use indoors and outdoors
- Reinforced rim for superior structural integrity and robust lid designed for added strength
- Rollout lids open fully and stay in place to prevent swinging during transport
- Compliant with ANSI Standard Z245.60 (Types B and G) for compatibility with auto-lifters
- Smooth contours and seamless construction make cleaning easier and quicker, to improve staff productivity
- Designed with an ergonomic handle for comfortable push or pull operation
- Locking lid with key allows for secure transportation of medical waste
- Swivel casters at the front of the container distribute weight evenly and allow for more controlled use



# **BRUTE MEDICAL WASTE ROLLOUT WITH CASTERS**



### **BRUTE MEDICAL WASTE ROLLOUT WITH CASTERS**

SKU #	DESCRIPTION	COLOR	CAPACITY	LENGTH	WIDTH	HEIGHT	WEIGHT	PACK SIZE
			GAL	IN	IN	IN	LB	
1971977	BRUTE 65G MEDICAL WASTE ROLLOUT W/CASTERS	RED	65G	32.33	25.33	44.74	36.00	1
1972000	BRUTE 95G MEDICAL WASTE ROLLOUT W/CASTERS	RED	95G	37.15	28.60	46.02	44.00	1



# 3039a WASTE BASKET 28 QT FOR UNDER DESK AREAS

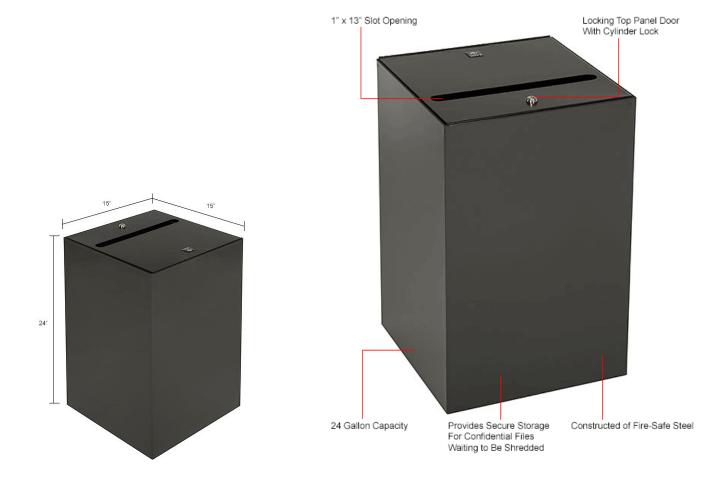


RUBBERMAID FG254300BLA SPECS	
Length	14 1/2 Inches
Width	10 1/2 Inches
Height	15 5/16 Inches
Capacity	28 qt.
Color	Black
_	Fire Resistant
Features	UL Listed
Material	Resin
Shape	Rectangle
Туре	Trash Cans

 $SOURCE: \underline{https://www.webstaurantstore.com/rubbermaid-fg254300bla-28-qt-black-rectangular-fire-resistant-medical-wastebasket/690FG2543BK.html}$ 

#### 3039b

### SECURE DOCUMENT WASTE CONTAINER



### 24 Gallon Container

Secure document containers provide secure storage for confidential files waiting to be shredded. Document containers store medical records, personnel files and other confidential papers. Narrow paper slot allows easy file storage while preventing unwanted access to storage area. Private document containers are made with fire-safe steel. Confidential waste containers include cylinder lock with 2 keys for security. Document receptacles help facilities comply with federal HIPAA regulations. Closed-Top Containers feature a locking top panel door with narrow slot for secure storage. Slot opening measures 1"x13". **Made in the USA.** 

### **Product Specifications**

- WIDTH INCHES
- **DEPTH INCHES**15
- HEIGHT INCHES24
- COLOR FINISHBlack
- CONSTRUCTIONSteel
- MANUFACTURERS PART NUMBER24MSR-CB
- OPENINGTop Opening
- BRANDWitt Industries
- CAPACITY GALLONS24

SOURCE: <a href="https://www.globalindustrial.com/p/janitorial-maintenance/garbage-recycling/containers-steel/steel-secure-document-container-24-gallon-capacity-3">https://www.globalindustrial.com/p/janitorial-maintenance/garbage-recycling/containers-steel/steel-secure-document-container-24-gallon-capacity-3</a>



### STEP ON CONTAINER 23 GAL RED

SKU: FG614600RED

The Rubbermaid Commercial Step-On Container provides sanitary waste management.

- Slow-close, integrated lid damper keeps odors and bacteria from escaping
- Puncture-resistant, all-plastic construction
- Ideal for medical waste containment
- Quiet, heavy-duty pedal for hands-free, sanitary use
- Made in the USA

### **SPECIFICATIONS -U.S.**

Product Length	16.50 in
Product Width	19.75 in
Product Height	32.63 in
Product Weight	15.00 lb
UPC	00086876052596
Case Pack Length	16.60 in
Case Pack Width	20.30 in
Case Pack Height	33.30 in
Case Pack Weight	16.20 lb

Case Pack Quantity	1
UCC	00086876052596
Packaging Length	16.10 in
Packaging Width	29.80 in
Packaging Height	33.19 in
Packaging Weight	16.20 lb
Capacity	23 gal (US)
Color	Red
Material Type	Plastic

SOURCE: <a href="https://www.globalindustrial.com/searchResult?q=FG614600RED">https://www.globalindustrial.com/searchResult?q=FG614600RED</a>

### 3040a



### **STEP ON CONTAINER 23 GAL BEIGE**

SKU: FG614600BEIG

The Rubbermaid Commercial Step-On Container provides sanitary waste management.

- Slow-close, integrated lid damper keeps odors and bacteria from escaping
- Puncture-resistant, all-plastic construction
- Ideal for medical waste containment
- Quiet, heavy-duty pedal for hands-free, sanitary use
- Made in the USA

### **SPECIFICATIONS- U.S.**

Product Length	16.50 in
Product Width	19.75 in
Product Height	32.63 in
Product Weight	15.00 lb
UPC	00086876052589
Case Pack Length	16.60 in
Case Pack Width	20.30 in
Case Pack Height	33.30 in
Case Pack Weight	16.20 lb
Case Pack Quantity	1

UCC	00086876052589
Packaging Length	16.10 in
Packaging Width	29.80 in
Packaging Height	33.19 in
Packaging Weight	16.20 lb
Capacity	23 gal (US)
Color	Beige
Material Type	Plastic
Country of Origin	USA

SOURCE: <a href="https://www.globalindustrial.com/searchResult?q=FG614600BEIG">https://www.globalindustrial.com/searchResult?q=FG614600BEIG</a>



### Rubbermaid® Fire Safe Step On Plastic Container, 8 Gallon, Red - FG614300RED

The Rubbermaid Commercial Step-On Container provides sanitary waste management.

#### **Features**

- Slow-close, integrated lid damper keeps odors and bacteria from escaping
- Puncture-resistant, all-plastic construction
- Ideal for medical waste containment
- Quiet, heavy-duty pedal for hands-free, sanitary use
- Made in the USA

### **Product Specifications**

- WIDTH INCHES16-1/4
- **DEPTH INCHES**15-3/4
- **HEIGHT INCHES**17-1/8
- COLOR FINISHRed
- ASSEMBLYAssembled
- **CONSTRUCTION**Plastic
- MANUFACTURERS PART NUMBERFG614300RED
- PACKAGE QUANTITY1
- STYLELegacy Series

- TYPESquare
- WEIGHT LBS6.83
- WHEELSNo
- BRANDRubbermaid® Commercial
- CAPACITY GALLONS8
- UL LISTEDN
- **DESCRIPTION**Step On Container
- FM APPROVEDY

SOURCE: <a href="https://www.globalindustrial.com/p/outdoor-grounds-maintenance/garbage-recycling/containers-step-on/fire-safe-step-on-plastic-container-8-gallon-red-fg614300red?unbxdSuggestion=SUGGESTION%20-">https://www.globalindustrial.com/p/outdoor-grounds-maintenance/garbage-recycling/containers-step-on/fire-safe-step-on-plastic-container-8-gallon-red-fg614300red?unbxdSuggestion=SUGGESTION%20-">https://www.globalindustrial.com/p/outdoor-grounds-maintenance/garbage-recycling/containers-step-on/fire-safe-step-on-plastic-container-8-gallon-red-fg614300red?unbxdSuggestion=SUGGESTION%20-">https://www.globalindustrial.com/p/outdoor-grounds-maintenance/garbage-recycling/containers-step-on/fire-safe-step-on-plastic-container-8-gallon-red-fg614300red?unbxdSuggestion=SUGGESTION%20-</a>

 $\frac{\%20 Rubbermaid\%20 Fire\%20 Safe\%20 Step\%20 On\%20 Plastic\%20 Container,\%208\%20 Gallon,\%20 Red\%20-100 Red\%20 Gallon,\%20 Red%20 Gallon,\%20 Red\%20 Gallon,\%20 Red\%20 Gallon,\%20 Red\%20 Gallon,\%20 Red\%20 Gallon,\%20 Red%20 Gallon,\%20$ 

### 3041a



### SLIM JIM® 8 GAL STEP ON RESIN END STEP BEIGE--SKU: 1883457

The Rubbermaid Commercial Slim Jim® Step-On Container features a slim profile and small footprint to fit in tightest spaces. Slim Jim® Step-On containers are constructed with premium-quality materials and meet the needs of any environment with efficiency, safety, and durability.

- Slim Jim® Step-On containers constructed with premium-quality plastic meet the needs of any environment with efficiency, safety, and durability.
- Slim profile and small footprint maximize space to fit in tightest spaces.
- Internal hinge design prevents wall damage.
- Quiet and controlled lid-closure minimizes noise to enhance guest and patient satisfaction.

Factory mutual certified ensures fire safety for regulatory compliance.

### **Product Specifications**

- **WIDTH INCHES**12-3/10
- **DEPTH INCHES**19-3/5
- **HEIGHT INCHES**22-3/10
- COLOR FINISHBeige
- **CONSTRUCTION**Plastic
- MANUFACTURERS PART NUMBER 1883457
- PACKAGE QUANTITY1
- TYPEEnd Step
- WHEELSNo
- BRANDRubbermaid® Commercial
- CAPACITY GALLONS8
- DESCRIPTIONSlim Jim Step On Container
- FM APPROVEDY

SOURCE: <a href="https://www.globalindustrial.com/p/janitorial-maintenance/garbage-recycling/containers-step-on/rubbermaid-174-slim-jim-174-1883457-plastic-step-on-container-end-step-8-gallon-beige">https://www.globalindustrial.com/p/janitorial-maintenance/garbage-recycling/containers-step-on/rubbermaid-174-slim-jim-174-1883457-plastic-step-on-container-end-step-8-gallon-beige</a>



### HALF ROUND OPEN TOP 12 GAL PERFORATED TEXTURED BLACK SKU: FGSH12EPLTBK

The Half Rounds Series indoor decorative waste container fits flush against walls to conserve space and reduce obstructions in high-traffic areas. The sleek and functional design of this receptacle blends seamlessly with upscale and modern indoor facilities.

- Sleek and functional design fits flush against walls to conserve space and reduce obstructions in high-traffic areas
- Leak-proof rigid plastic liner included to contain liquids and keep the surrounding area cleaner
- Heavy-gauge, fire-safe steel for lasting durability in high traffic areas
- Leg levelers for stability on uneven surfaces
- Bottom rim is designed to protect floors

### **Product Specifications**

- WIDTH INCHES 18
- **DEPTH INCHES**9
- HEIGHT INCHES32
- COLOR FINISHStainless
- CONSTRUCTIONStainless Steel
- LINERPlastic Liner
- MANUFACTURERS PART NUMBER
- OPENING7"Dia.
- STYLEHalf Round
- TYPEOpen Top
- BRANDRubbermaid® Commercial
- CAPACITY GALLONS12



The Crowne decorative refuse indoor container has an attractive contemporary design with a curved open top that prevents objects from being placed on top of the can, keeping a neater overall appearance.

### FEATURES AND BENEFITS:

### **FEATURES**

- ► The Open Top style has a large opening for easy waste disposal
- ► Base of receptacle is designed to protect floors
- ► Leak-proof rigid plastic liner included to contain liquids and keep the surrounding area cleaner
- ► Fire-safe construction
- Shipped fully assembled



### CROWNE

OPEN TOP



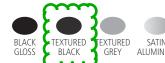
GALLONS	LENGTH (in.)	WIDTH (in.)	HEIGHT (in.)
15G* (SHOWN)	15.00	15.00	30.00
30G	20.00	20.00	34.50



### CROWNE

OPEN TOP

### STANDARD COLOR OPTIONS









SKU #	DESCRIPTION	LINER	COLOR	GALLONS	WEIGHT (lbs.)	LENGTH (in.)	WIDTH (in.)	HEIGHT (in.)
FGAOT15BKPL	CROWNE OPEN TOP 56L/15G	PLASTIC	BLACK GLOSS	15	25	15.00	15.00	30.00
FGAOT15SABKPL	CROWNE OPEN TOP 56L/15G	PLASTIC	TEXTURED BLACK WITH ALUMINUM TRIM	15	25	15.00	15.00	30.00
FGAOT15SAGRPL	CROWNE OPEN TOP 56L/15G	PLASTIC	TEXTURED GREY WITH ALUMINUM TRIM	15	25	15.00	15.00	30.00
FGAOT15SAPL	CROWNE OPEN TOP 56L/15G	PLASTIC	SATIN ALUMINUM	15	25	15.00	15.00	30.00
FGAOT15SBBRPL	CROWNE OPEN TOP 56L/15G	PLASTIC	TEXTURED BROWN BRASS	15	25	15.00	15.00	30.00
FGAOT15SBPL	CROWNE OPEN TOP 56L/15G	PLASTIC	SATIN BRASS	15	25	15.00	15.00	30.00
FGAOT30BKPL	CROWNE OPEN TOP 113L/30G	PLASTIC	TEXTURED BLACK	30	47	20.00	20.00	34.50
FGAOT30SABKPL	CROWNE OPEN TOP 113L/30G	PLASTIC	TEXTURED BLACK WITH ALUMINUM TRIM	30	47	20.00	20.00	34.50
FGAOT30SAGRPL	CROWNE OPEN TOP 113L/30G	PLASTIC	TEXTURED GREY WITH ALUMINUM TRIM	30	47	20.00	20.00	34.50
FGAOT30SAPL	CROWNE OPEN TOP 113L/30G	PLASTIC	SATIN ALUMINUM	30	47	20.00	20.00	34.50
FGAOT30SBBRPL	CROWNE OPEN TOP 113L/30G	PLASTIC	TEXTURED BROWN BRASS	30	47	20.00	20.00	34.50
FGAOT30SBPL	CROWNE OPEN TOP 113L/30G	PLASTIC	SATIN BRASS	30	47	20.00	20.00	34.50

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Locations								
01-00-01	3044	1	LOBBY					
01-00-00	3044	1	VESTIBULE, MAIN ENTRY					

Rubbermaid® Silhouette SC18E Square Open Top Receptacle w/Plastic Liner, 20 Gallon - Black 29 gallon perforated heavy gauge fire safe square steel receptacle. Black Uni-Koat powder coated finish. Leak-proof rigid plastic liner along with folding retainer bands to neatly hold poly bags in place. Hinged top for easy emptying. Leg levelers for stability on uneven surfaces.

### **Product Specifications**

- WIDTH INCHES18-3/4
- **DEPTH INCHES**18-3/4
- HEIGHT INCHES30
- COLOR FINISHBlack
- **CONSTRUCTION**Steel
- LINERPlastic Liner
- MANUFACTURERS PART NUMBERFGSC18EPLTBK
- **OPENING**8-1/2"Dia.
- **STYLE**Square
- TYPEOpen Top
- BRANDRubbermaid® Commercial
- CAPACITY GALLONS20

SOURCE: <a href="https://www.globalindustrial.com/p/janitorial-maintenance/garbage-recycling/containers-steel/square-open-top-trash-container-black-29-gal-18-75-sq-x-30-h">https://www.globalindustrial.com/p/janitorial-maintenance/garbage-recycling/containers-steel/square-open-top-trash-container-black-29-gal-18-75-sq-x-30-h</a>



01-05-01 3045 1 MEP LARGE SPACE, 1ST FLOOR

### 25 Gallon Rubbermaid Marshal® Waste Receptacles

These waste receptacles combine rugged construction, neat clean appearance and fire safety. They're ideal for high visibility, high traffic areas, indoors or out, and they endure temperature extremes. Trash cans feature a permanently attached easy-empty lid with a gravity close door, hardware to secure and conceal trash bags, and a textured finish that stays attractive. Factory Mutual (FM) and California State Fire Marshal (CSFM) approved for fire safety.

Use with or without the heavy duty rigid liner (sold separately).

### **Product Specifications**

- WIDTH INCHES18
- DEPTH INCHES18
- HEIGHT INCHES42
- COLOR FINISHBlack
- ASSEMBLYAssembled
- **CONSTRUCTION**Plastic
- MANUFACTURERS PART NUMBERFG817088BLA
- MODEL501978BK
- **TYPE**Round
- WEIGHT LBS22.6
- BRANDRubbermaid® Commercial
- CAPACITY GALLONS25
- FM APPROVEDY

SOURCE: <a href="https://www.rubbermaidcommercial.com/resin-specialty-containers/marshal-classic-containers/?sku=FG817088BRN">https://www.rubbermaidcommercial.com/resin-specialty-containers/marshal-classic-containers/?sku=FG817088BRN</a>



BRUTE® containers are guaranteed to never fade, warp, crack, or crush, with a proprietary design constructed with the highest quality material.

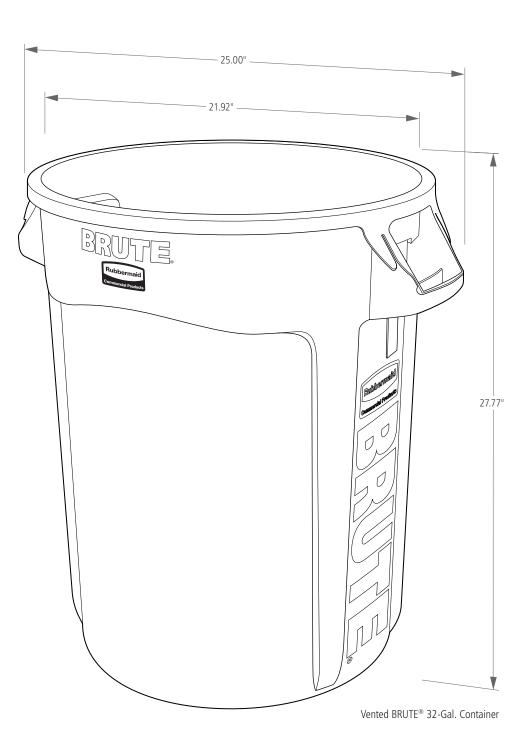
### **Features and Benefits:**

- Venting channels make removing liners up to 50% easier, improving productivity and reducing the risk of injury
- Commercial-grade construction guaranteed to never fade, warp, crack, or crush
- Bag cinches secure liners, allowing for knot-free liner changes. Tested to 200,000 cycles
- Contoured base handles improve grip and ergonomics, reducing strain and improving efficiency
- Rim with rib-strengthened design increases strength and resists crushing
- Rounded handles make lifting and moving easier
- Reinforced base is specifically engineered to be dragged over rough surfaces in tough environments



2 & 21 Compliant

### **BRUTE® CONTAINERS**



### **BRUTE® CONTAINERS**

SKU #	DESCRIPTION	COLOR	<b>CAPACITY</b> GAL	HEIGHT IN	<b>DIAMETER</b> IN	DIAMETER WITH HANDLE IN	PACK SIZE
FG261000GRAY	BRUTE® 10 GALLON CONTAINER	GRAY	10G	17.13	15.63	18.00	6
FG261000WHT	BRUTE® 10 GALLON CONTAINER	WHITE	10G	17.13	15.63	18.00	6
FG261000RED	BRUTE® 10 GALLON CONTAINER	RED	10G	17.13	15.63	18.00	6
FG261000YEL	BRUTE® 10 GALLON CONTAINER	YELLOW	10G	17.13	15.63	18.00	6
1779699	BRUTE® 10 GALLON CONTAINER	BLUE	10G	17.13	15.63	18.00	6
FG261000DGRN	BRUTE® 10 GALLON CONTAINER	DARK GREEN	10G	17.13	15.63	18.00	6
1926827	BRUTE® 10 GALLON CONTAINER	BLACK	10G	17.13	15.63	18.00	6
FG262000GRAY	BRUTE® 20 GALLON CONTAINER	GRAY	20G	22.91	19.38	22.50	6
FG262000WHT	BRUTE® 20 GALLON CONTAINER	WHITE	20G	22.91	19.38	22.50	6
FG262000RED	BRUTE® 20 GALLON CONTAINER	RED	20G	22.91	19.38	22.50	6
FG262000YEL	BRUTE® 20 GALLON CONTAINER	YELLOW	20G	22.91	19.38	22.50	6
FG262000BLUE	BRUTE® 20 GALLON CONTAINER	BLUE	20G	22.91	19.38	22.50	6
FG262000DGRN	BRUTE® 20 GALLON CONTAINER	DARK GREEN	20G	22.91	19.38	22.50	6
1779734	BRUTE® 20 GALLON CONTAINER	BLACK	20G	22.91	19.38	22.50	6
FG262073BLUE	BRUTE® 20 GALLON RECYCLING CONTAINER	BLUE	20G	22.91	19.38	22.50	6
1926828	BRUTE® 20 GALLON RECYCLING CONTAINER	DARK GREEN	20G	22.91	19.38	22.50	6
FG263200GRAY	BRUTE® 32 GALLON CONTAINER	GRAY	( <mark>32G</mark> )	27.77	21.92	25.00	6
FG263200WHT	BRUTE® 32 GALLON CONTAINER	WHITE	32G	27.77	21.92	25.00	6
FG263200RED	BRUTE® 32 GALLON CONTAINER	RED	32G	27.77	21.92	25.00	6
FG263200YEL	BRUTE® 32 GALLON CONTAINER	YELLOW	32G	27.77	21.92	25.00	6
FG263200BLUE	BRUTE® 32 GALLON CONTAINER	BLUE	32G	27.77	21.92	25.00	6
FG263200DGRN	BRUTE® 32 GALLON CONTAINER	DARK GREEN	32G	27.77	21.92	25.00	6
1867531	BRUTE® 32 GALLON CONTAINER	BLACK	32G	27.77	21.92	25.00	6
FG263273BLUE	BRUTE® 32 GALLON RECYCLING CONTAINER	BLUE	32G	27.77	21.92	25.00	6
1788472	BRUTE® 32 GALLON RECYCLING CONTAINER	DARK GREEN	32G	27.77	21.92	25.00	6
FG264360GRAY	BRUTE® 44 GALLON CONTAINER	GRAY	44G	31.50	24.00	27.75	4
1779740	BRUTE® 44 GALLON CONTAINER	WHITE	44G	31.50	24.00	27.75	4
FG264360RED	BRUTE® 44 GALLON CONTAINER	RED	44G	31.50	24.00	27.75	4
FG264360YEL	BRUTE® 44 GALLON CONTAINER	YELLOW	44G	31.50	24.00	27.75	4
FG264360BLUE	BRUTE® 44 GALLON CONTAINER	BLUE	44G	31.50	24.00	27.75	4
1779741	BRUTE® 44 GALLON CONTAINER	DARK GREEN	44G	31.50	24.00	27.75	4
FG264360BLA	BRUTE® 44 GALLON CONTAINER	BLACK	44G	31.50	24.00	27.75	4
FG264307BLUE	BRUTE® 44 GALLON RECYCLING CONTAINER	BLUE	44G	31.50	24.00	27.75	4
1926829	BRUTE® 44 GALLON RECYCLING CONTAINER	DARK GREEN	44G	31.50	24.00	27.75	4
FG265500GRAY	BRUTE® 55 GALLON CONTAINER	GRAY	55G	33.19	26.38	30.75	3
FG265500WHT	BRUTE® 55 GALLON CONTAINER	WHITE	55G	33.19	26.38	30.75	3
FG265500RED	BRUTE® 55 GALLON CONTAINER	RED	55G	33.19	26.38	30.75	3
FG265500YEL	BRUTE® 55 GALLON CONTAINER	YELLOW	55G	33.19	26.38	30.75	3
1779732	BRUTE® 55 GALLON CONTAINER	BLUE	55G	33.19	26.38	30.75	3
FG265500DGRN	BRUTE® 55 GALLON CONTAINER	DARK GREEN	55G	33.19	26.38	30.75	3
1779739	BRUTE® 55 GALLON CONTAINER	BLACK	55G	33.19	26.38	30.75	3



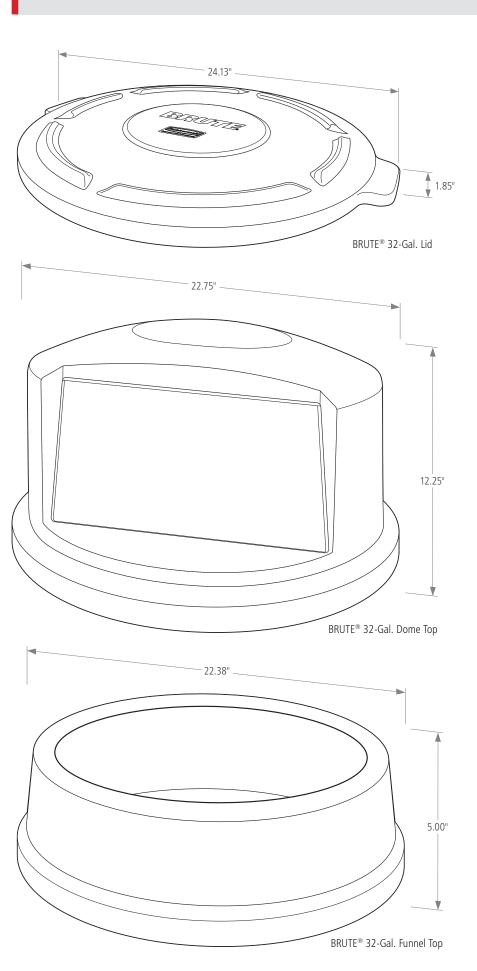


BRUTE® lids are constructed with the highest quality material; a UV inhibitor ensures long life in even the most extreme commercial environments. Lids come in a variety of different styles, including self-draining lids, dome top lids, and funnel lids to meet any commercial need.

### **Features and Benefits:**

- Self-draining lids have channels that prevent water from pooling, reducing still water buildup, and include ridges that enable stacking to provide space-efficient storage
- Dome top lids have a spring action door that allows for easy trash disposal while keeping odors and insects out
- Self-draining lids and dome top lids both have a snap-lock feature that ensures a secure fit
- Funnel top lids have a cut-out top that enables hands-free refuse disposal and a funnel design that conceals waste from public view

### **BRUTE® LIDS**



### **BRUTE® LIDS**

SKU #	DESCRIPTION	COLOR	FITS	HEIGHT	DIAMETER	DIAMETER WITH HANDLE	PACK SIZE
				IN	IN	IN	
FG260900GRAY	BRUTE® 10 GALLON LID	GRAY	10G	1.25	15.88	17.13	6
FG260900WHT	BRUTE® 10 GALLON LID	WHITE	10G	1.25	15.88	17.13	6
FG260900RED	Brute® 10 Gallon LID	RED	10G	1.25	15.88	17.13	6
FG260900YEL	Brute® 10 Gallon Lid	YELLOW	10G	1.25	15.88	17.13	6
1779700	Brute® 10 Gallon Lid	BLUE	10G	1.25	15.88	17.13	6
FG260900DGRN	Brute® 10 Gallon Lid	DARK GREEN	10G	1.25	15.88	17.13	6
1926826	Brute® 10 Gallon Lid	BLACK	10G	1.25	15.88	17.13	6
FG261960GRAY	BRUTE® 20 GALLON LID	GRAY	20G	1.80	19.88	21.63	6
FG261960WHT	BRUTE® 20 GALLON LID	WHITE	20G	1.80	19.88	21.63	6
FG261960RED	Brute® 20 Gallon LID	RED	20G	1.80	19.88	21.63	6
FG261960YEL	BRUTE® 20 GALLON LID	YELLOW	20G	1.80	19.88	21.63	6
1779731	Brute® 20 Gallon LID	BLUE	20G	1.80	19.88	21.63	6
FG261960DGRN	Brute® 20 Gallon LID	DARK GREEN	20G	1.80	19.88	21.63	6
FG261960BLA	Brute® 20 Gallon Lid	BLACK	20G	1.80	19.88	21.63	6
FG263100GRAY	BRUTE® 32 GALLON LID	GRAY	32G	1.85	22.38	24.13	6
FG263100WHT	BRUTE® 32 GALLON LID	WHITE	32G	1.85	22.38	24.13	6
FG263100RED	BRUTE® 32 GALLON LID	RED	32G	1.85	22.38	24.13	6
FG263100YEL	BRUTE® 32 GALLON LID	YELLOW	32G	1.85	22.38	24.13	6
FG263100BLUE	BRUTE® 32 GALLON LID	BLUE	32G	1.85	22.38	24.13	6
FG263100DGRN	BRUTE® 32 GALLON LID	DARK GREEN	32G	1.85	22.38	24.13	6
1867532	BRUTE® 32 GALLON LID	BLACK	32G	1.85	22.38	24.13	6
FG264560GRAY	BRUTE® 44 GALLON LID	GRAY	44G	2.00	24.25	26.75	4
FG264560WHT	BRUTE® 44 GALLON LID	WHITE	44G	2.00	24.25	26.75	4
FG264560RED	BRUTE® 44 GALLON LID	RED	44G	2.00	24.25	26.75	4
FG264560YEL	BRUTE® 44 GALLON LID	YELLOW	44G	2.00	24.25	26.75	4
1779636	BRUTE® 44 GALLON LID	BLUE	44G	2.00	24.25	26.75	4
FG264560DGRN	BRUTE® 44 GALLON LID	DARK GREEN	44G	2.00	24.25	26.75	4
FG264560BLA	BRUTE® 44 GALLON LID	BLACK	44G	2.00	24.25	26.75	4
			55G	2.09	26.75	29.13	3
FG265400GRAY	BRUTE® 55 GALLON LID	GRAY	55G	2.09	26.75	29.13	3
FG265400WHT	BRUTE® 55 GALLON LID	WHITE	55G	2.09		29.13	3
FG265400RED	BRUTE® 55 GALLON LID	RED			26.75		
FG265400YEL	BRUTE® 55 GALLON LID	YELLOW	55G	2.09	26.75	29.13	3
1779733	BRUTE® 55 GALLON LID	BLUE	55G	2.09	26.75	29.13	3
FG265400DGRN	BRUTE® 55 GALLON LID	DARK GREEN	55G	2.09	26.75	29.13	3
1779738	BRUTE® 55 GALLON LID	BLACK	55G	2.09	26.75	29.13	3
FG263788GRAY	BRUTE® 32 GALLON DOME TOP	GRAY	32G	12.25	22.75	-	1
FG263788RED	BRUTE® 32 GALLON DOME TOP	RED	32G	12.25	22.75	_	1
1829397	BRUTE® 32 GALLON DOME TOP	DARK GREEN	32G	12.25	22.75	-	1
1829398	Brute® 32 Gallon dome top	BLUE	32G	12.25	22.75	-	1
1829399	BRUTE® 32 GALLON DOME TOP	YELLOW	32G	12.25	22.75	-	1
FG264788GRAY	BRUTE® 44 GALLON DOME TOP	GRAY	44G	12.63	24.88	-	1
FG264788RED	BRUTE® 44 GALLON DOME TOP	RED	44G	12.63	24.88	-	1
1834838	BRUTE® 44 GALLON DOME TOP	DARK GREEN	44G	12.63	24.88	-	1
1834839	BRUTE® 44 GALLON DOME TOP	YELLOW	44G	12.63	24.88	-	1
1834840	BRUTE® 44 GALLON DOME TOP	BLUE	44G	12.63	24.88	-	1
FG265788GRAY	Brute® 55 Gallon dome top	GRAY	55G	14.50	27.25	-	1
FG265788RED	Brute® 55 Gallon dome top	RED	55G	14.50	27.25	_	1
FG354300GRAY	BRUTE® 32 GALLON FUNNEL TOP	GRAY	55G	5.00	22.38	-	4





BRUTE® dollies are designed to be durable, long-lasting, and are able to withstand the toughest commercial environments while simplifying everyday tasks.

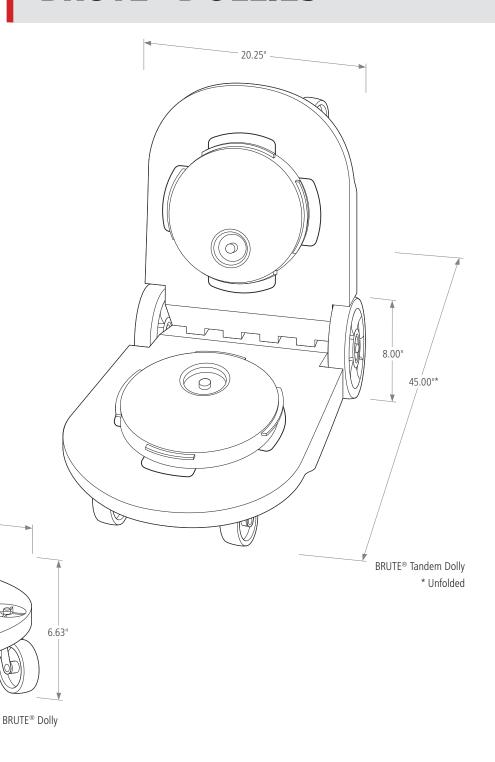
### **Features and Benefits:**

- Rugged casters help keep fully loaded BRUTE® containers stable, even on rough and uneven floors, and swivel smoothly for easy maneuvering
- Twist locks hold containers securely in place and unlock easily for unloading, allowing for easy transport
- Structural foam construction provides superior strength and durability

18.25"

0000000000000000

### **BRUTE® DOLLIES**



### **BRUTE® DOLLIES**

SKU #	DESCRIPTION	COLOR	FITS	LENGTH	WIDTH	HEIGHT	DIAMETER	PACK SIZE
				IN	IN	IN	IN	
FG264000BLA	BRUTE® DOLLY	BLACK	ALL	_	_	6.63	18.25	2
FG264043BLA	BRUTE® QUIET DOLLY	BLACK	ALL	-	-	6.63	18.25	2
FG264600BLA	BRUTE® TANDEM DOLLY	BLACK	ALL	45.00	20.25	8.00	_	1

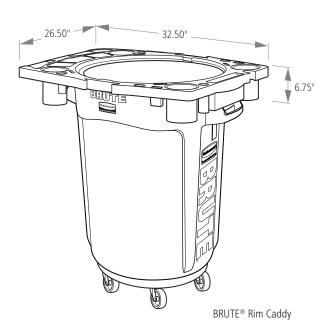




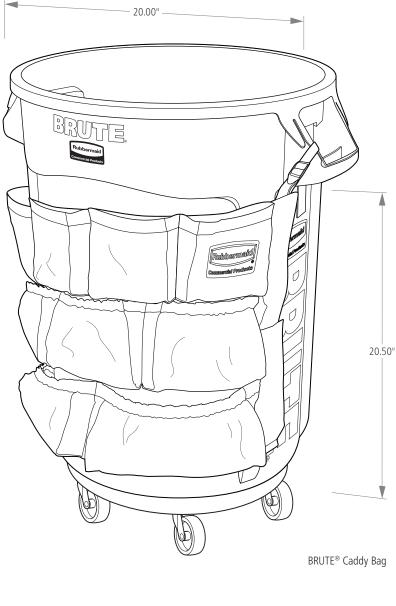
BRUTE® caddies are designed to improve productivity. Caddies make the BRUTE® container more versatile and efficient, making the toughest jobs easier.

### **Features and Benefits:**

- The Caddy Bag is made of a heavy-duty vinyl material with elastic pockets that make on-board storage easy. The adjustable straps make installation and removal easy on 32and 44-gallon BRUTE® containers
- The Rim Caddy has multiple storage compartments and hooks, along with liner retention bands to keep liners securely in place, and has snap-on tabs to hold the caddy in place



### **BRUTE® CADDIES**



### **BRUTE® CADDIES**

SKU #	DESCRIPTION	COLOR	FITS	LENGTH	WIDTH	HEIGHT	DIAMETER	PACK SIZE
				IN	IN	IN	IN	
FG264200YEL	BRUTE® CADDY BAG	YELLOW	32 AND 44 GALLON	-	-	20.50	20.00	6
1867533	<b>EXECUTIVE</b> BRUTE® CADDY BAG	BLACK	32 AND 44 GALLON	-	-	20.50	20.00	6
FG9W8700YEL	BRUTE® RIM CADDY	YELLOW	44 GALLON	32.50	26.50	6.75	-	1





VENTED BRUTE® 32 GAL GRAY CONTAINER ---SKU: FG263200GRAY

BRUTE® 32 GAL LID GRAY----SKU: FG263100GRAY

BRUTE® QUIET DOLLY BLACK---SKU: FG264043BLA

BRUTE® EXECUTIVE SERIES™ CADDY BAG BLACK---SKU: 1867533

### RUBBERMAID 32 GALLON TRASH COLLECTOR WITH LID, ON DOLLY, WITH WRAP AROUND CADDY FOR EVS

02-17-30	3046	1	EVS CLOSET
			EVS BULK STORAGE
01-04-02	3046	1	EVS CLOSET

- Innovative venting channels make lifting out liners up to 50% easier, improving productivity and reducing the risk of injury.
- Integrated cinches secure the liner, allowing for efficient knot free liner changes. Tested to 20,000 cycles.
- Rounded handles make lifting and moving easier, and are reinforced to resist tearing or damage from even the heaviest loads.
- Reinforced base is specifically engineered to be dragged over rough surfaces, extending life and overall durability even in the toughest environments.
- Contoured base handles improve grip and ergonomics, reducing strain and improving efficiency when emptying containers.
- Rim features integrated rib structure to increase strength and resist crushing.
- The Rubbermaid Commercial BRUTE® Self-Draining Lids feature self-draining channels that prevent water from pooling.
- Self-draining channels prevent water from pooling and reduce still water build-up on the trash can lid
- Snap-lock ensures a secure fit
- Ridges enable stacking of BRUTE® containers to provide a space-efficient storage solution
- Easy-to-clean, seamless construction is guaranteed to never fade, warp, crack, or crush and features a UV inhibitor for a long-life in extreme environments
- Proprietary design constructed with the highest-quality materials plus a UV inhibitor ensures long life in even the most extreme commercial environments. Guaranteed to never fade, warp, crack, or crush.
- The Rubbermaid Commercial BRUTE® Dolly provides easy mobility and maneuverability when collecting and transporting heavy loads.
- Fits 20-, 32-, 44-, and 55-Gallon BRUTE® Containers
- Heavy-duty 3" swivel gray casters offer better mobility through work areas
- Attach waste containers with easy twist-and-lock action
- Specifically designed for hospitals, nursing homes, offices and schools
- Turn your Rubbermaid Commercial BRUTE® container into a cleaning cart with storage and transport for spray bottles, wet-floor signs, lobby dust pan, brushes, liners, gloves, and other cleaning supplies
- Numerous pockets for all your cleaning supplies
- Durable vinyl material for easy cleaning
- Fits 32- and 44-Gallon BRUTE® Containers
- Allows easy organization for waste receptacles to increase efficiency
- Constructed of heavy-duty vinyl that is easy to clean

**SOURCE:** <u>https://www.rubbermaidcommercial.com/brute-containers/brute-vented-containers/?sku=FG263200GRAY</u>



#### RUBBERMAID PLASTIC TILT TRUCK- FG9T1700BLA

Designed for single user operation, these durable polyethylene trucks handle industrial waste efficiently. Ideal for recyclable products, as trucks meet FDA and OSHA food and sanitary requirements. Seamless smooth ribbed plastic construction cleans easily. Counterbalance design helps to prevent "backing up" when tilting.

### **Product Specifications-TRUCK-**

- LENGTH INCHES60
- WIDTH INCHES28
- HEIGHT INCHES38-5/8
- CAPACITY CUBIC YARDS1/2
- CAPACITY LBS300
- COLOR FINISHBlack
- ASSEMBLYAssembled
- **CONSTRUCTION**Plastic
- LIMITED WARRANTY YEARS1 Year
- MANUFACTURERS PART NUMBERFG9T1700BLA
- **REFERENCE #**9T17
- **TYPE**Light Duty
- WHEEL DIAMETER INCHES 10
- WHEEL TYPERubber
- BRANDRubbermaid®

### LID FOR Rubbermaid® 1/2 CU. YARD PLASTIC TILT TRUCK- FG102800BLA

Fits snug and allows access to contents without removal. Comes in black only.

### **Product Specifications-LID**

- LENGTH INCHES60
- WIDTH INCHES28
- CAPACITY LBS--
- COLOR FINISHBlack
- ASSEMBLYAssembled
- **CONSTRUCTION**Plastic
- LIMITED WARRANTY YEARS1 Year
- MANUFACTURERS PART NUMBERFG130700BLA
- REFERENCE #1307
- BRANDRubbermaid®

SOURCE: <a href="https://www.globalindustrial.com/p/material-handling/trucks-carts/tilt-trash-refuse/rubbermaid-light-duty-1-2-cu-yd-black-tilt-truck">https://www.globalindustrial.com/p/material-handling/trucks-carts/tilt-trash-refuse/rubbermaid-light-duty-1-2-cu-yd-black-tilt-truck</a>



### Rubbermaid Brute® Container With Venting Channels, 44 Gallon - Black

Polyethylene resin construction of these waste receptacles ensures strength, stability and long term use and withstands weather and steam cleaning. Rubbermaid Brute containers nest when empty to save space. Integrated vented channels simplifies removal of a filled trash can liner. Waste container features built-in ProTouch<sup>TM</sup> handles that offer a fully rounded, comfortable grip. Can liner cinches for one-step bag retention. Double ribbed base and reinforced rim increase strength and stability. NSF certified.

### **Product Specifications-CONTAINER**

- WIDTH INCHES24
- DEPTH INCHES24
- HEIGHT INCHES31-1/2
- COLOR FINISHBlack
- CONSTRUCTIONPlastic
- MANUFACTURERS PART NUMBERFG264360BLA

BRUTE® DOLLY BLACK- SKU: FG264000BLA

- PACKAGE QUANTITY1
- TYPEVented
- BRANDRubbermaid® Commercial
- CAPACITY GALLONS44
- **DESCRIPTION**Brute Container w/Venting Channels

This dolly with five 3" swivel casters helps Rubbermaid Brute containers maneuver without lifting. Locks onto container bottom for easy assembly. 250 lb. capacity. Black structural foam construction. Price is each. Sold in quantities of 1.

### **Product Specifications-DOLLY**

- HEIGHT INCHES6-5/8
- COLOR FINISHBlack
- ASSEMBLYAssembled
- CONSTRUCTIONPlastic
- MANUFACTURERS PART NUMBER FG264000BLA
- MODEL239003BK

- PACKAGE QUANTITY1
- WEIGHT LBS7.8
- BRANDRubbermaid® Commercial
- FOR USE WITH20,32,44 and 55 Gallon Round Containers
- **DIAMETER INCHES**18-1/4

### Flat Lid for 44 Gallon Round Rubbermaid Brute Plastic Containers

Polyethylene resin construction ensures strength, stability and long term use and withstands weather and steam cleaning. USDA compliant and NSF listed. Self-draining lid reduces pooling when containers are stored outside. Fits 44 gallon Rubbermaid Brute containers tightly to stay put and keep in odors. **Sold individually.** 

### **Product Specifications-LID**

- WIDTH INCHES24.5
- DEPTH INCHES24-1/2
- COLOR FINISHBlack
- **ASSEMBLY**Assembled
- CONSTRUCTIONPlastic

- MANUFACTURERS PART NUMBERFG264560BLA
- MODEL239008BK
- BRANDRubbermaid® Commercial
- CAPACITY GALLONS44
- LID TYPEFla

SOURCE: <u>HTTPS://WWW.GLOBALINDUSTRIAL.COM/P/JANITORIAL-MAINTENANCE/GARBAGE-RECYCLING/CONTAINERS-PLASTIC/FLAT-LID-44-GALLON-RUBBERMAID-ROUND-BRUTE-CONTAINER</u>



### Rubbermaid Slim Jim Recycling Container, 16 Gallon, Black - 1955959

16 Gallon Vented Slim Jim - Black Slim Jim with venting channels offers uncompromised performance in constrained spaces. Integrated venting channels take the strain out of liner removal. Venting channels dramatically reduce the force required to remove a full can liner up to 60% when compared to traditional Slim Jim containers. Space-saving profile fits virtually anywhere. Four can liner cinches improve productivity eliminating the need to tie knots. Molded-in handles and base grips make lifting and emptying containers easier.

### **Product Specifications**

- WIDTH INCHES11
- **DEPTH INCHES**22
- HEIGHT INCHES25
- COLOR FINISHBlack
- CONSTRUCTIONPlastic
- MANUFACTURERS PART NUMBER1955959
- PACKAGE QUANTITY4
- STYLEContainer w/Handles
- TYPERectangle
- WEIGHT LBS6.41
- BRANDRubbermaid® Commercial
- CAPACITY GALLONS16
- **DESCRIPTION**16G Slim Jim Black

SOURCE: <a href="https://www.globalindustrial.com/p/janitorial-maintenance/garbage-recycling/containers-recycling/slim-jim-recycling-container-16-gallon-black-1955959">https://www.globalindustrial.com/p/janitorial-maintenance/garbage-recycling/containers-recycling/slim-jim-recycling-container-16-gallon-black-1955959</a>



### Waste > null

### 3540-60 Slim Jim® with Venting Channels



Features innovative patent-pending solutions that increase efficiency and improve worker well-being.

- Integrated, patent-pending venting channels take the strain out of liner removal.
- Space-saving profile fits virtually anywhere.
- Four patent-pending can liner cinches improve productivity.
- Molded-in handles and base grips make lifting and emptying easier.
- Available with Universal Recycling Symbol, <u>SKU# 3540-07</u>.
- Custom imprinting available; contact Rubbermaid Customer Service at (800) 347-9800 for details.

### **AVAILABLE COLORS**

#### **Product UPC/** Order # Color **UCC Code** FG354060 GRAY **GRAY** 086876186376 / 10086876186373 FG354060 BLA **BLA** 086876186352 / 10086876186359 FG354060 BEIG **BEIG** 086876186369 / 10086876186366





Beige BEIG

### **SPECIFICATIONS**

	U.S.	Metric
Length:	22 in	55.9 cm
Width:	11 in	27.9 cm
Height:	30 in	76.2 cm
Volume Capacity [Nom]:	23 gal	87.1 L
Volume Capacity [Max]:		
Volume Capacity [Min]:		
Carton Length:	22 in	55.9 cm
Carton Width:	11 in	27.9 cm
Carton Height:	49 1/2 in	125.7 cm
Carton Cube:	6.93 ft3	0.20 m3
Ship Weight/Carton:	30.60 lb	13.88 kg
Pack Quantity: Cartons Per Pallet:		4 8

### **ADDITIONAL INFORMATION:**

Product Sell Sheets: RCP\_SM700\_SlimJimVentingChannels.pdf

Chemical Resistance Guide: chem.pdf

#### Products in Slim Jim® with Venting Channels

Item #	Description	Length	Width	Height	<b>Volume Capacity</b>	
3540-60	Slim Jim® with Venting Channels	22 in	11 in	30 in	23 gal	

### Accessories for 3540-60:

No.	Description
2688-88	Slim Jim® Handle Top for Slim Jim® Containers
2692-88	Slim Jim® Bottle and Can Recycling Top for Slim Jim® Containers
2703-88	Slim Jim® Paper Recycling Top for Slim Jim® Containers
9W16	Slim Jim® Confidential Document Container Lids for 3540, 3541 Containers
2673-60	Slim Jim® Swing Lid for Slim Jim® Containers
2674	Slim Jim® Hinge Lid for Slim Jim® Containers
3553	Slim Jim® Stainless Steel Dolly for Slim Jim® Containers

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### 3540-60 is an Accessory to:

No. Description	Length Height Width
9T45 StockMate® ES Restocking Truck with Hinging Deck	63 in 19 1/4 in 19 1/4 in
9T50 StockMate® Restocking Truck, Standard Deck	63 in 33 5/8 in 19 1/8 in
9T79 Double Capacity Cleaning Cart	51 3/4 in 44 in 22 in
9T52 StockMate® Restocking Truck, Standard Deck with Cardboard Management System, Polyurethane Wheel and Casters	63 in 64 1/4 in 18 in
9T56 StockMate® Restocking Truck, Utility Deck, Olefin Wheels and Casters	63 in 64 1/4 in 18 in
9T72 High Capacity Cleaning Cart	49 3/4 in 38 3/8 in 21 3/4 in
9T73 Rubbermaid HYGEN™ Microfiber Cleaning Cart	48 1/4 in 44 in 22 in
9T74 Rubbermaid HYGEN™ Microfiber Cleaning Cart with Color-Coded Pails	48 1/4 in 44 in 22 in
9T75 High Security Cleaning Cart	48 1/4 in 53 1/2 in 22 in
9T76 Compact Folding Housekeeping Cart	51 3/4 in 44 in 22 in
9T77 Turndown Housekeeping Cart	38 1/4 in 44 in 22 in
9T78 High Security Housekeeping Cart	51 3/4 in 53 1/2 in 22 in
9W71 Mega BRUTE® Mobile Waste Collector - 3 Pack	52 1/2 in 42 1/2 in 27 1/2 in
9W73 Mega BRUTE® Mobile Waste Collector - 1 Pack	52 1/2 in 42 1/2 in 27 1/2 in
9T92 Triple Capacity Cleaning Cart	51 3/4 in 44 in 22 in
9T94 Deluxe Paneled Compact Housekeeping Cart	38 1/4 in 44 in 22 in
9T95 Deluxe Paneled Housekeeping Cart	51 3/4 in 53 1/2 in 22 in

### Consumables/Replacement Parts for 3540-60

No.	Fits	Description	
5009-88	3540-60	Linear Low Density Can Liners	



Rubbermaid Commercial Products, LLC 3124 Valley Avenue, Winchester, VA 22601 www.rcpworksmarter.com

2 of 2



# THE NEW GENERATION WAVEBRAKE®





### **UP TO 80% LESS SPLASH**<sup>1</sup>

Patented WaveBrake® baffles result in less splashing while mopping and maneuvering, helping to create a safer environment for patrons and staff.



#### **FASY TO EMPTY**

A built-in drain eliminates the strain of lifting and bending when emptying mop buckets. Integrated handles help ensure a secure grip to lift and empty the mop bucket.



### 5-YEAR WRINGER GUARANTEE<sup>2</sup>

The side-press and down-press wringers are designed to last 5 years or 200,000 wringing cycles.

WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER							
	DESCRIPTION	ITEM #	COLOR	CASE QTY			
26-QUART	26-QT WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER	FG748000YEL	YELLOW	1			
	35-QT WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER	FG758088YEL	YELLOW	1			
	35-QT WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER	FG758088BRN	BROWN	1			
	35-QT WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER	FG758888BLUE	BLUE	1			
35-QUART	35-QT WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER	FG758888RED	RED	1			
	35-QT WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER	FG758888GRN	GREEN	1			
	35-QT WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER, EXECUTIVE SERIES	1863896	BLACK	1			
	35-QT WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER WITH DRAIN	2031764	YELLOW	1			
44-QUART	44-QT WAVEBRAKE® SIDE-PRESS BUCKET AND WRINGER WITH DRAIN	FG618688YEL	YELLOW	1			
WAVEBR	AKE® DOWN-PRESS BUCKET AND WRINGER						
	35-QT WAVEBRAKE® DOWN-PRESS BUCKET AND WRINGER	FG757788YEL	YELLOW	1			
	35-QT WAVEBRAKE® DOWN-PRESS BUCKET AND WRINGER	FG757788BRN	BROWN	1			
OLIART	35-QT WAVEBRAKE® DOWN-PRESS BUCKET AND WRINGER	FG757888BLUE	BLUE	1			
35-QUART	35-QT WAVEBRAKE® DOWN-PRESS BUCKET AND WRINGER	FG757888RED	RED	1			
	35-QT WAVEBRAKE® DOWN-PRESS BUCKET AND WRINGER	FG757888GRN	GREEN	1			
	35-QT WAVEBRAKE® DOWN-PRESS BUCKET AND WRINGER, EXECUTIVE SERIES	1863898	BLACK	1			
44-QUART	44-QT WAVEBRAKE® DOWN-PRESS BUCKET AND WRINGER WITH DRAIN	FG757688YEL	YELLOW	1			
WAVEBR	AKE® INSTITUTIONAL BUCKET AND WRINGER						
25 01125	35-QT WAVEBRAKE® INSTITUTIONAL BUCKET AND SIEVE WRINGER	FG759088YEL	YELLOW	1			
35-QUART	35-QT WAVEBRAKE® INSTITUTIONAL BUCKET AND WRINGER (WITHOUT SPRING AND BAIL)	FG757900YEL	YELLOW	1			
WAVEBR	AKE® BUCKET AND CASTERS						
26-QUART	26-QT WAVEBRAKE® BUCKET AND CASTERS	2064996	YELLOW	4			
	35-QT WAVEBRAKE® BUCKET AND CASTERS	2064914	YELLOW	4			
	35-QT WAVEBRAKE® BUCKET AND CASTERS	2064906	BROWN	4			
	35-QT WAVEBRAKE® BUCKET AND CASTERS	2064904	BLUE	4			
35-QUART	35-QT WAVEBRAKE® BUCKET AND CASTERS	2064910	RED	4			
	35-QT WAVEBRAKE® BUCKET AND CASTERS	2064916	GREEN	4			
	35-QT WAVEBRAKE® BUCKET AND CASTERS, EXECUTIVE SERIES	2064909	BLACK	4			
	35-QT WAVEBRAKE® BUCKET AND CASTERS WITH DRAIN	2031763	YELLOW	1			
WAVEBR	AKE® WRINGER						
	WAVEBRAKE® SIDE-PRESS WRINGER	2064915	YELLOW	2			
	WAVEBRAKE® SIDE-PRESS WRINGER	2064885	BROWN	2			
SIDE-PRESS	WAVEBRAKE® SIDE-PRESS WRINGER	2064888	BLUE	2			
5.52 . 11255	WAVEBRAKE® SIDE-PRESS WRINGER	2064884	RED	2			
	WAVEBRAKE® SIDE-PRESS WRINGER	2064912	GREEN	2			
	WAVEBRAKE® SIDE-PRESS WRINGER, EXECUTIVE SERIES	2064960	BLACK	2			
	WAVEBRAKE® DOWN-PRESS WRINGER	2064959	YELLOW	2			
	WAVEBRAKE® DOWN-PRESS WRINGER	2065003	BROWN	2			
DOWN-PRESS	WAVEBRAKE® DOWN-PRESS WRINGER	2064999	BLUE	2			
	WAVEBRAKE® DOWN-PRESS WRINGER	2065001	RED	2			
	WAVEBRAKE® DOWN-PRESS WRINGER	2064953	GREEN	2			
	WAVEBRAKE® DOWN-PRESS WRINGER, EXECUTIVE SERIES	2064994	BLACK	2			
WAVEBR	AKE® DIRTY WATER BUCKET						
	35-QT WAVEBRAKE® DIRTY WATER BUCKET	2064907	RED	6			
35-QUART	35-QT WAVEBRAKE® DIRTY WATER BUCKET	2064908	YELLOW	6			
	35-QT WAVEBRAKE® DIRTY WATER BUCKET	2064905	GRAY	6			





### The Cleaning Station **Gym Wipe + Hand Sanitizer Dispenser**



### **FEATURES:**

- Gym Wipes Dispenser or Paper Towel Dispenser with Interchangable Nozzles
- · Built-in shelf for foam hand sanitizer dispensers
- Hidden trash receptacle with removeable waste basket
- FREE Hand Sanitizer Dispenser Included
- · Four shelves provide easy access to even more cleaning supplies (sold separately)
- · Base is weighted for stability and ease of mobility

#### **SPECS:**

- Weight: 37 lbs
- Dimensions: 47" h x 12" w x 17" d
- Trash Can Capacity: 4 gal
- · Material: Plastic

### **ORDERING INFORMATION**

PRODUCT DETAILS SKU#

TCS-S-9325 The Cleaning Station (Silver) TCS-B-9325 The Cleaning Station (Black)



Unmatched **Customer Service** 



Wipe Cases Ship Free



**Lowest Price** Guarantee



**Bulk Pricing Discounts** 



**Happiness** Guaranteed



Autoship **Program** 

### SINGLE GLOVE BOX HOLDER



### **PRODUCT** HIGHLIGHTS

- Fit glove boxes of any size
- Mount on any wall horizontally or vertically
- Durable clear plastic
- 2 per case

### **PRODUCT DETAILS**

**Brand:** AliMed

**Returns:** Returnable

Made in the USA

### **MORE ABOUT** THIS PRODUCT

**AliMed® Glove Dispensers** Keep gloves available anywhere in your facility with our glove dispensers made of clear, durable PETG plastic. These dispensers fit glove boxes of any size, mount on any wall horizontally or vertically, and are made of durable, clear plastic for easy viewing. Single model is spring-loaded. Case of 2.

3/32" thick • PETG plastic • Hardware included

Single: 5-1/2"W x 10"H x 3-3/4"D Double: 10-1/2"W x 10"H x 3-3/4"D Triple: 15-3/4"W x 10"H x 3-3/4"D Quadruple: 22-1/4"W x 10"H x 3-3/4"D

SOURCE: https://www.alimed.com/glove-dispensers.html

#### 3088



#### Covidien SharpStar Wall Mount In-Room Sharps Cabinet with 5-Quart Sharps Container, Beige

SharpStar In-Room Locking Wall Mount Enclosure safely secures sharps containers and is designed to limit accidental or intentional access to used sharps. The complete In-Room System includes a 5-quart Locking Wall Mount Unit, and a 5 quart Sharpstar Transparent Red Sharps Container with lid. Easily monitor container fill levels through front and side viewing windows. Economical horizontal drop maximizes container volume. Container locks for final disposal. Neutral beige color enclosure features keyed-alike locks for convenient security. Enclosure includes container with Sharpstar lid. Enclosure is made with sturdy ABS plastic for extra protection of the sharps container and long-lasting use. Meets OSHA bloodborne pathogens standard.

#### Package includes:

- (1) SharpStar<sup>TM</sup> In-Room Wall Enclosure
- (1) SharpStar<sup>TM</sup> 5-Quart Sharps Container

#### **Product Specifications**

- BRANDCovidien
- MANUFACTURERS PART NUMBERSWMU100609
- WIDTH INCHES13
- **DEPTH INCHES**5-1/2
- HEIGHT INCHES 11-3/4
- WEIGHT LBS5 lbs
- COLOR FINISHBeige
- CONSTRUCTIONPlastic
- DESCRIPTIONSharpStar Wall Mount In-Room Sharps Cabinet
- CAPACITY5 Quart
- **LID**Counterbalance Lid
- **TYPE**Sharp Container
- **REFERENCE** #85161H
- CERTIFICATIONSOSHA
- PACKAGE QUANTITY1
- INCLUDESWall Mount Cabinet, 5 Qt. Sharps Container

SOURCE: <a href="https://www.globalindustrial.com/p/medical-lab/medical-equipment/sharps-biohazard-disposal/wall-mount-in-room-cabinet-with-5-quart-sharps-container-beige">https://www.globalindustrial.com/p/medical-lab/medical-equipment/sharps-biohazard-disposal/wall-mount-in-room-cabinet-with-5-quart-sharps-container-beige</a>



#### **PRODUCT** HIGHLIGHTS

- Fit glove boxes of any size
- Mount on any wall horizontally or vertically
- Durable clear plastic
- 2 per case

#### **PRODUCT** DETAILS

Brand: AliMed

Returns: Returnable

Made in the USA

#### **MORE ABOUT** THIS PRODUCT

**AliMed® Glove Dispensers** Keep gloves available anywhere in your facility with our glove dispensers made of clear, durable PETG plastic. These dispensers fit glove boxes of any size, mount on any wall horizontally or vertically, and are made of durable, clear plastic for easy viewing. Single model is spring-loaded. Case of 2.

3/32" thick • PETG plastic • Hardware included

Single: 5-1/2"W x 10"H x 3-3/4"D Double: 10-1/2"W x 10"H x 3-3/4"D Triple: 15-3/4"W x 10"H x 3-3/4"D Quadruple: 22-1/4"W x 10"H x 3-3/4"D

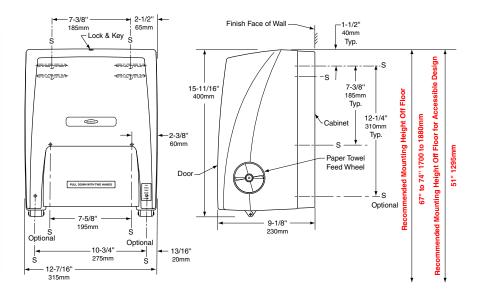
SOURCE: <a href="https://www.alimed.com/glove-dispensers.html">https://www.alimed.com/glove-dispensers.html</a>



### SURFACE MOUNTED ROLL-PAPER-TOWEL DISPENSER

**B-72860** 





#### **MATERIALS:**

**Door and Housing** — Durable, high-impact resin materials. Door is translucent dark grey with high-gloss finish on exposed surfaces and is secured to light grey Housing with stainless steel hinge pins at bottom and keyed lock at top. Door may be opened with removable or permanent keys provided. Additional "permanent" snap-in key supplied for use in non-vandal-prone installations.

**Roll-Paper-Towel Mechanism** — Durable, high-impact resin materials. Accepts standard-core rolls up to 8" (205mm) wide, 8" (205mm) diameter. Dispenses one 12" (305mm) length of towel per pull. Accommodates up to 3-1/2" (90mm) diameter stub roll with automatic transfer to full roll.

#### OPERATION:

Touch-Free pull towel dispensing mechanism dispenses one 12" (300mm) length of towel per pull and operates smoothly and quietly. User only touches the paper. Exterior paper towel feed wheel available for use when filling dispenser and for user to advance paper should it become necessary to feed paper through dispenser. Automatic transfer dispenses stub roll before new roll is dispensed. When stub roll is depleted, advancement of paper towel feed wheel allows the main roll to start dispensing without the need to open the dispenser. Dispenser accommodates up to 8" (205mm) wide, 8" (205mm) diameter, non-perforated paper towel rolls and dispenses with less than 5 pounds of force (22.2 N) to comply with barrier-free accessibility guidelines (including ADAAG in U.S.A.).

#### **INSTALLATION:**

Mount unit on wall with four sheet-metal screws, furnished by manufacturer, at points indicated by an *S*. Optional mounting screw locations available, at installer's discretion. Mounting template available on exterior of carton end. For plaster or drywall construction, provide concealed backing to comply with local building codes, then secure unit with sheet-metal screws. For other wall surfaces, use wall anchors, furnished by manufacturer, for use with sheet metal screws, or provide 1/8" (3mm) toggle bolts or expansion shields (not furnished) for use with machine screws.

#### SPECIFICATION:

Surface-mounted roll-paper-towel dispenser shall have durable, high-impact, dark translucent grey resin door with high-gloss finish on exposed surfaces and durable, high-impact, light grey resin housing with matte finish. Door shall be secured to housing with two stainless steel hinge pins and keyed lock. Door shall have lock which is opened with removable or permanent key. Towel mechanism accommodates up to 8" (205mm) wide, 8" (205mm) diameter, non-perforated paper towel rolls. Touch-Free pull towel mechanism dispenses one 12" (305mm) length of towel per pull. User only touches the paper. Automatic transfer shall dispense stub roll up to 3-1/2" (90mm) diameter before new roll is dispensed. Equipped with paper towel feed wheel for use in filling the dispenser, for user to advance paper should it become necessary to feed paper through dispenser. Paper towels are dispensed with pull force of less than 5 pounds (22.2 N) to comply with accessible design guidelines (including ADAAG in U.S.A.).

Surface-Mounted Roll-Paper-Towel Dispenser shall be Model B-72860 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

#### 3102

#### TYPICAL TOUCH FREE WALL MOUNT SOAP DISPENSER



#### Purell Touch Free Soap Dispenser - ES8 Graphite 1200mL - 7734-01

Always-ready touch-free hand soap dispenser with energy-on-the-refill. Each new refill comes with its own energy source - a coin cell battery integrated into the refill. Optional SMARTLINK™ modules add capability for service alerts, compliance monitoring and other upgrades as technology evolves. Elegant design complements décor. AT-A-GLANCE™ refills provide the easiest way to see when refills need to be changed. Uses PURELL® ES8 1200 mL HEALTHY SOAP® refills. Dispenser and formulation are calibrated to provide the optimal dose for effective hand hygiene. SANITARY SEALED™ PET refill bottle with tear-off collar for easy recycling. LOCK OR NOT™ technology - can convert to a locking system. Fully ADA compliant. Guaranteed reliability.

#### **Product Specifications**

- WIDTH INCHES5-1/4
- HEIGHT INCHES12-1/8
- CAPACITY1200 ml
- COLOR FINISHGraphite
- ASSEMBLYAssembled
- **BRAND**Purell
- CONSTRUCTIONPlastic
- DESCRIPTIONES8 Touch-Free Soap Dispenser
- FOR USE WITH7770-02, 7771-02, 7774-02, 7777-02, 7779-02
- MANUFACTURERS PART NUMBER7734-01
- PACKAGE QUANTITY1
- STYLEAutomatic
- TYPEFoam
- **WEIGHT LBS**1.99

SOURCE: <a href="https://www.globalindustrial.com/p/janitorial-maintenance/bathroom/dispensers/purell-touch-free-soap-dispenser-es8-graphite-1200ml-7734-01">https://www.globalindustrial.com/p/janitorial-maintenance/bathroom/dispensers/purell-touch-free-soap-dispenser-es8-graphite-1200ml-7734-01</a>

#### 3102a



### PURELL HAND SANITIZER TFX Touch Free Dispenser

The most popular brand in hand sanitization Purell hand sanitizer kills 99.99% of most common germs that may cause illness. Patent-pending 62% ethyl alcohol formula contains no fluorinated chemicals and works in as little as 15 seconds. Purell contains moisturizers to help keep skin hydrated and leaving hands soft and refreshed. Purell Wall Mount Dispenser is great for bathrooms, kitchens and more. Automatic activation. Mounts to wall with adhesive (included) or hardware (not included). Features a site window that makes it easy to see when it's time to refill. ADA compliant. Touch Free Dispenser automatically activates with user's motion. Accepts Purell Hand Sanitizer 1200-ml refills. Uses 3 C-cell alkaline batteries (sold separately).

Includes Dispenser Only, Hand Sanitizer Sold Separately.

#### **Product Specifications**

- WIDTH INCHES6-1/2
- **DEPTH INCHES**4-1/2
- HEIGHT INCHES11-1/4
- CAPACITY1200 ml
- COLOR FINISHWhite
- **BRAND**Purell
- CONSTRUCTIONPlastic
- DESCRIPTIONTFX Touch Free Dispenser
- MANUFACTURERS PART NUMBER2720-12
- PACKAGE QUANTITY1
- STYLEAutomatic
- TYPEDispenser
- WALL-MOUNTABLEYes

SOURCE: <a href="https://www.globalindustrial.com/p/janitorial-maintenance/bathroom/hand-sanitizers/purell-touch-free-hand-sanitizer-dispenser">https://www.globalindustrial.com/p/janitorial-maintenance/bathroom/hand-sanitizers/purell-touch-free-hand-sanitizer-dispenser</a>

# Bradley

#### **Accessories**

**Die Cast Accessories** 

Polished Chrome Finish

Surface-Mounted

Concealed Wall Plates

#### **Product Materials**

**UNITS:** die cast, high quality Zamac zinc alloy. Copper, nickel plated with a highly polished chrome finish.

WALL PLATES: heavy steel, cadmium plated.

#### Installation

Verify all rough-in dimensions prior to installation. Secure wall plate(s) to wall with screws (included) at holes provided. Slip notched section of unit over top lip of wall plate. Tighten concealed set screw to lock unit in place.

#### **Guide Specification**

Surface-mounted accessory shall be fabricated of die cast, high quality Zamac zinc alloy and copper, nickel plated with highly polished chrome finish.



□ **921 Bradex**<sup>®</sup> Soap Dish, 3<sup>15</sup>/<sub>16</sub> W x 2<sup>7</sup>/<sub>8</sub> D

□ **921-60**Soap Dish with Drain Holes



□ **924**Tumbler and Toothbrush Holder,
4½"W x 3½"D







8½" Deep Towel Shelf with Towel Bar and Support Braces

18"W 24"W







Orders composed of products indicated as **Bradex**® will be available to ship in three days after receipt of order at the factory. There is no pricing penalty for this service from Bradley.

Page 1 of 1 3/3/2017
This information is subject to change without notice.
Bradley\_ChromePlatedDieCastAccessories

#### TYPICAL COAT HOOK SYSTEM-PROVIDED BY CONTRACTOR



#### Package Includes:

1 x Coat Rack (15 Hooks)

2 X Screws.

30 Day Money Back Guaranteed! 12-month free replacement warranty for manufacturer's defects!

#### **Product Description:**

- 100% brand new and high quality
- All hardware required for installation is included, and also send extra spare screws for replacement
- The coat hooks are easy to attach to the wall, package including the screws and anchors, once secured into the wall, the anchors hold up perfectly
- This wall mount coat hooks is trendy design and highly reflective mirror chrome finish with chrome material, ensures great quality and durable
- The coat rack can be mounted in the bathroom, bedrooms, kitchens, hallways, entryways with stylish design, hanging your coats, hats, towels, handbags, umbrellas or robes etc. **Product Features:**
- · Hook Material: Chrome
- Plate Material: Stainless Steel
- Net Weight: 10.2oz(292g)
- Size: 17.7x5.11inch(45x13cm)
- Hook Quantity: 15 (5 up, 10 down)
- The coat hooks are easy to attach to the wall, package including the screws and anchors, once secured into the wall, the anchors hold up perfectly

#### **Specifications**

Brand	EEEkit

SOURCE: <a href="https://www.walmart.com/ip/Wall-Mounted-Coat-Hooks-15-Hooks-Stainless-Steel-Coat-Hangers-Rack-Robe-Hat-Clothes-Hook-Wall-Coat-For-Bedroom-Bathroom-Kitchen/140567944">https://www.walmart.com/ip/Wall-Mounted-Coat-Hooks-15-Hooks-Stainless-Steel-Coat-Hangers-Rack-Robe-Hat-Clothes-Hook-Wall-Coat-For-Bedroom-Bathroom-Kitchen/140567944</a>

# KOALA KARE PRODUCTS KB200 HORIZONTAL WALL MOUNTED BABY CHANGING STATION

KB200-00 CREAM

KB200-01 GREY

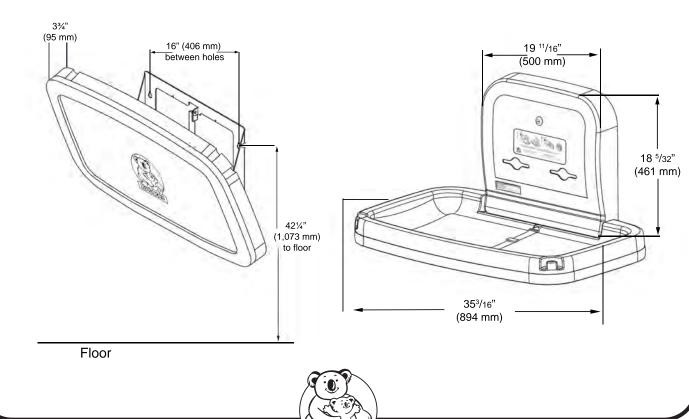
PREFERRED COLOR

KB200-05 WHITE GRANITE

KB200-11 EARTH

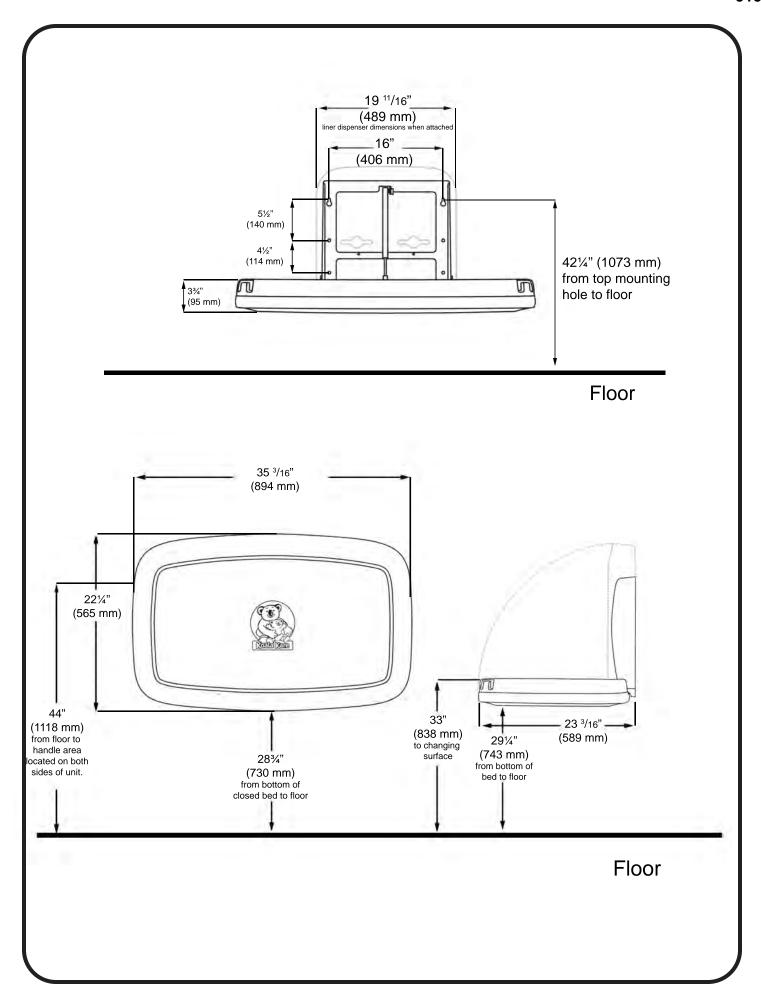






**KB200 TECHNICAL DATA SHEET** 

Koala Kare



#### **MATERIALS:**

Injection-molded polypropylene with Microban® antimicrobial additive embedded into the bed surface. Reinforced steel-on-steel hinge mechanism and metal mounting chassis with mounting hardware included. Labelled usage instructions and safety messages in four languages. Optional Braille label available. Contoured changing surface area is 450 sq. in (2903 sq. cm) and comes complete with nylon safety strap and bag hooks. Dual cavity liner dispenser holds approximately 50 KB150-99 bed liners.

#### **OPERATION:**

Concealed pneumatic cylinder and metal mounting chassis provides controlled, slow opening and closing of bed. Polypropylene is easy to clean and resists odors and bacterial growth. Complies with ASTM static load performance requirements when properly installed.

Warning: To ensure that the unit supports the intended loads, baby changing stations must be properly installed according to the manufacturer's instructions.

#### **SPECIFICATION:**

Baby changing station body shall be durable, injection-molded polypropylene. Design of unit shall be surface-mounted. Unit shall be equipped with a pneumatic cylinder for controlled opening and closing of bed. Bed shall be secured to metal mounting chassis with a concealed steel-on-steel hinge. No hinge structure shall be exposed on interior or exterior surfaces. Unit shall have mounting hardware included. Unit shall have Microban® antimicrobial embedded into plastic material on the changing surface. Unit shall comply with ADA regulations when properly installed. Bed shall have smooth concave changing area with a nylon safety strap and two hooks for bags or purses. The design and manufacture of Koala products is intended to be compliant with the 2010 ADA Standards for Accessible Design and the 2009 ICC A117.1, Accessible and Usable Buildings and Facilities. Unit shall conform to ASTM F 2285-04 Standard Safety Performance Specification for Diaper Changing Tables for Commercial Use, ANSI Z535.4 Product Safety Signs and Labels, EN 12221:2008, TUV Certified, ASTM G22 Antibacterial standards or local code if more stringent installation requirements are applicable for Barrier-Free accessibility.

Unit shall have a built-in Liner Dispenser for use with 3-ply chemical free biodegradable bed liners, instructional graphics and safety messages in 4 languages. Optional Braille label is available. Unit shall be backed by manufacturer's 5-year limited warranty on materials and workmanship and include a provision for replacement caused by vandalism. Unit shall be manufactured in the U.S.A.

#### **INSTALLATION:**

To ensure proper installation and compliance to building codes, it is recommended that a qualified person or carpenter perform the installation of the unit. The unit must be properly installed onto a permanent wall that is capable of supporting significant weight and can accommodate the supplied installation hardware. The Koala Baby Changing Station meets ADA regulations when properly installed. Installer should account for the space that a unit occupies when in the down position and with the caregiver (whether standing or seated) in front of the unit. Locate the unit so that paths of travel are maintained around it when being used.

- 1. Remove changing station from the shipping container and check for any freight damage. If damage is found, please call Koala Kare Products' Customer Service at 888.733.3456. Remove "Installation Kit" and "Operator Kit" from box. Please give "Operator Kit" to facility manager or operator. Box should contain two pieces: the bed and metal mounting chassis and the wall mount liner dispenser. Identify the best location for installing the unit.
- 2. Remove the bed and chassis from the box and select the wall area where the unit will be installed. Make sure you have taken into consideration the operating clearance of 9½" (241 mm) on both sides of the exposed chassis and 23 3/16" (589 mm) from wall surface when open.

For Wood Stud Wall- Measure from the floor 42¼" (1073 mm) on stud center and mark the wall. The mounting holes are designed for 16" (406 mm) stud centers. Ensure the locations you have marked for the mounting holes are level before drilling. Drill pilot holes for keyhole mounting using a 1/8" regular drill bit. If the wall has wooden studs that are not on 16" (406 mm) centers, you will need to use toggles to secure one side of the unit. The other side should be secured to the stud using the screws provided. You must allow for space inside the wall for the toggles to turn. This will vary depending on the toggles used.

For Masonry or Tile over Stud Wall- Use a 7/32" (5 mm) masonry drill bit for the pilot hole until you hit the stud. Change bit to 1/8" (3 mm) regular drill bit.

For Metal Stud or Concrete Block- If the wall has metal studs or an underlying surface of concrete block, you will need to use toggles to secure one side of the unit. The other side should be secured to the stud using the screws provided. You must allow for space inside the wall for the toggles to turn. This will vary depending on the toggles used.

- 3. Screw two of the mounting screws into the pilot holes leaving ¼" (6 mm) exposed to allow keyhole slots to be easily mounted over the screw heads. Place chassis over screws. After securing the unit using the keyhole slots, verify that the unit is level. Tighten top two screws so that they are flush with the wall. Use the four lower holes as a guide to mark and drill pilot holes. Use remaining four screws and four washers to complete installation of bed and metal mounting bracket. Insert washers over lower four screws. All <u>SIX</u> screws and four washers must be mounted to the chassis.
- 4. Ensure liner dispenser is free from damage. Remove key, unlock, and open liner dispenser lid. This will expose liner dispenser mounting holes. Line up dispenser mounting holes onto chassis and secure with the four screws provided. Close and lock the liner dispenser door.
- 5. Clean work area and inspect unit to ensure it opens and closes smoothly. Give Operator Kit and key to the facility operator. Replacement parts and additional liners can be purchased from your local distributor or by calling Koala at 888.733.3456 or 303.539.8300.

The illustrations and descriptions herein are applicable to production as of the date of this Technical Data Sheet. The manufacturer reserves the right to, and does from time to time, make changes and improvements in designs and dimensions without notice.



## HAND SINKS SPECIAL PURPOSE



Conforms To NSF 61/9 Lead Free Requirements

Keyhole Bracket for easier installation and greater stability.













7-PS-727
CLASS 1 SECURITY
INSTALLATION



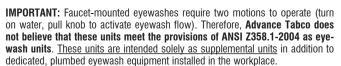
7-PS-747 CLASS 2 SECURITY INSTALLATION



(F)







Faucet-mounted eyewashes should be used with cold or warm water only. Use of hot water might cause scalding.

Eyewash Faucets not to be used with Electronic Faucets.

#### **FEATURES:**

One piece Deep Drawn sink bowl design.

Sink bowl is 10" x 14" x 5".

All sink bowls have a large liberal radii with a minimum dimension of 2" and are rectangular in design for increased capacity. Keyhole wall mount bracket.

Stainless steel basket drain 1-1/2" IPS.

Splash mounted 4" O.C. gooseneck faucet furnished with aerator.

#### **Specific Features:**

**7-PS-55** features eye wash faucet attachment.

**7-PS-64** features tubular support brackets.

**7-PS-72** is H.A.C.C.P. compliant hand sink featuring slow, self-closing, metering faucet with mixing valve.

**7-PS-727** Unit totally enclosed. Bottom security panel provides access for installation and services. Vandal Proof Aerators. All fasteners are stainless steel tamper proof. Concealed drain. Heavy duty gooseneck faucet. Towel dispenser with hinged towel box with lock. Unit uses standard C-fold towels. Liquid Soap dispenser.

**7-PS-747** Unit totally enclosed. Bottom security panel provides access for installation and services. Vandal Proof Aerators. All fasteners are stainless steel tamper proof. Concealed drain. Heavy duty gooseneck faucet.

#### **CONSTRUCTION:**

All TIG welded.

Welded areas blended to match adjacent surfaces and to a satin finish

Die formed Countertop Edge with a 3/8" No-Drip offset. One sheet of stainless steel - No Seams.

#### **MATERIAL:**

Heavy gauge type 304 series stainless steel.

Wall mounting bracket is galvanized and of offset design.

All fittings are brass / chrome plated unless otherwise indicated.

#### **MECHANICAL:**

Faucet supply is 1/2" IPS male thread hot and cold.

#### **WARNING:**

Equipment that includes a faucet may expose you to chemicals, including lead, that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more Info.,visit www.p65warnings.ca.gov.



Customer Service Available To Assist You 1-800-645-3166 8:30 am - 8:00 pm E.S.T.

For Orders & Customer Service:

Email: customer@advancetabco.com or Fax: 631-242-6900

For Smart Fabrication™ Quotes: Email: smartfab@advancetabco.com or Fax: 631-586-2933

### DIMENSIONS and SPECIFICATIONS

3159

FITTINGS SUPPLIED AS SHOWN TOL Overall: ± .500" Interior: ± .250" ALL DIMENSIONS ARE TYPICAL 7-PS-72 -17 1/4" 7-PS-64 -17 1/4" -8 5/8" 15 1/4" 10" 17 1/4" 10' Faucet Metered Faucet p 🖁 🧟 13" 25 lbs. 10 1/2 15 lbs. 1 1/2" -17 1/4" -7-PS-55 **EYE WASH DETAIL** 55/64"-27 FEMALE INLET 15 1/4" DIVERTER VALVE 10 (PULL KNOB TO ACTIVATE EYE WASH) (76mm) Faucet Eye Wash 1 1/2 Attachment 8" p T a 13' AERATED OUTLET HEAD MAY BE ADJUSTED TO ANY DESIRED ANGLE REMOVABLE AERATOR 15 lbs. Mounting 7-PS-747 Detail 17 1/4" -23-1/4" 15-3/4 77 6 15 1/4" 10" 17-1/8" 15-1/8" Faucet **Security Skirt Enclosure** p Ba 23 1/2" 15 7/8" 7-PS-727 45 lbs. P-Trap **Unit with Towel Dispenser** 



ADVANCE TABCO is constantly engaged in a program of improving our products. Therefore, we reserve the right to change specifications without prior notice.



## **DROP-IN SINKS**Three Compartments - FOR GENERAL PURPOSE USE

#### **Sinks Includes Faucet & Drain**

# Item #: 3160 Qty #: 1 Model #: K55 Project #:

#### **FEATURES:**

One piece seamless Deep Drawn sink bowl design.

All sink bowls have a large liberal radii with a minimum dimension of 2" and are rectangular in design for increased capacity.

Self-Rim Design. Mounting clips provided accommodates all thicknesses of counter. (Quantity supplied varies based on drop in sink ordered).

Includes 4" O.C.  $\mathbf{K\text{-}50}$  faucet (DI-3-1612 includes  $\mathbf{K\text{-}53}$  faucet) & basket drain.

#### **CONSTRUCTION:**

Bowls fabricated from one sheet of stainless steel.

All bowls are Sound Deadened.

Units feature Advance Tabco's **Smart Finish**<sup>TM</sup>.

#### **MECHANICAL:**

Faucet supply is 1/2" IPS male thread.

Deck mounted faucets are furnished with aerator.

#### **MATERIAL:**

18 gauge type 304 series stainless steel.

Faucets are brass-nickel plated.

Stainless Steel 1-1/2" IPS basket drain.



#### STANDARD MOUNTING CLIPS

For countertops over 7/8" and up to 2" thick.

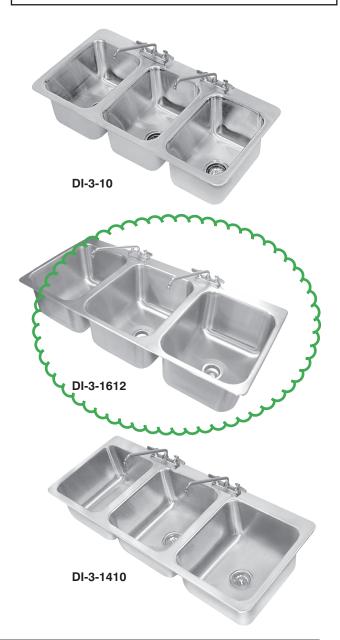
Replacement # K-28 (Per Sink)

Available Faucets & Accessories	Model #	Qty
Deck Mounted 8" Swing Spout. 4" O.C.	K-50	
Deck Mounted 12" Swing Spout. 4" O.C.	K-53	
Deck Mounted 8 1/2" Large Gooseneck. 4" O.C.	K-55	
Deck Mounted Swing w/Spray. 8" O.C.*	K-58	
Mounting Clips (Bag of 4).	K-28	

<sup>\*</sup>REQUIRES K-472 FAUCET HOLE REVISION



NOTE: Multi-Compartment Drop-In Sinks ARE NSF Approved when used in Mobile Food Carts and Kiosks only.



WARNING: Faucets on this page may expose you to chemicals, including lead, that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more Info., visit www.p65warnings.ca.gov.



#### Customer Service Available To Assist You 1-800-645-3166 8:30 am - 8:00 pm E.S.T.

For Orders & Customer Service:

Email: customer@advancetabco.com or Fax: 631-242-6900

For Smart Fabrication™ Quotes:

Email: smartfab@advancetabco.com or Fax: 631-586-2933

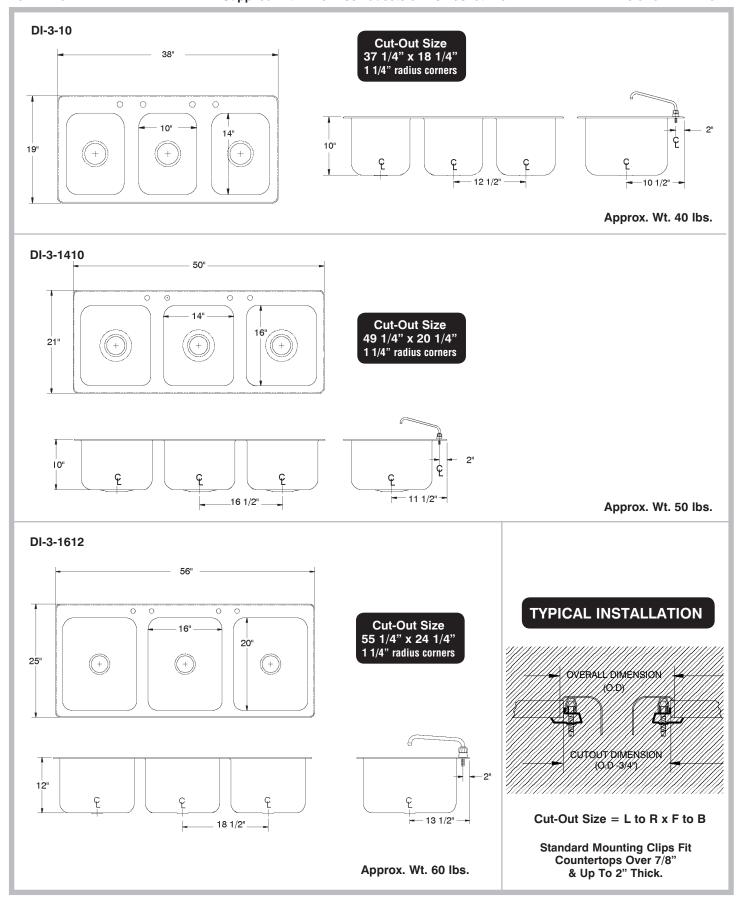
### **DIMENSIONS and SPECIFICATIONS**

3160

TOL ± .125"

Supplied with Two K-50 Faucets & K-6 Basket Drain

ALL DIMENSIONS ARE TYPICAL





**REF-A** 



True to BlueStar's heritage as a manufacturer of commercial-quality cooking products for the home, we offer hood lines that combine heavy-duty construction with seamless design to offer uncompromised durability, functionality and beauty. BlueStar hoods are available in 24", 30", 36", 42", 48", 54", 60" and 66" width sizes and peak at 1400CFM.



#### **PRODUCT FEATURES**

- Handcrafted seamless construction with 16 gauge material
- Dishwasher safe stainless steel baffles
- Welded seamless corners
- Reversible top or rear exhaust
- Available in 750+ colors and finishes
- 12" duct cover available (Sold separately)
- Duct free recirculating kits available for all sizes
- Transition or collar required for installation (Included with hood)

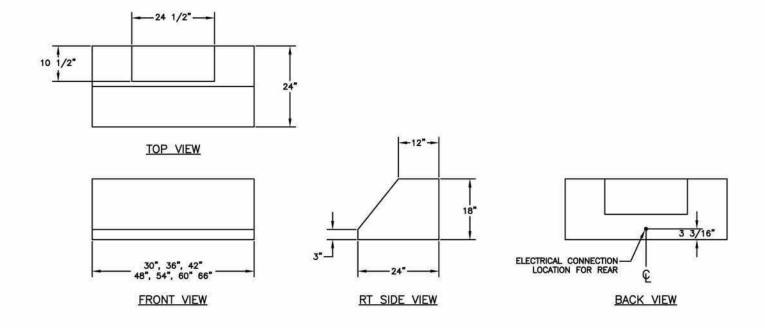
**Blower Options:** 

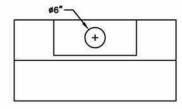
In-hood Blowers: 300, 600 & 1200CFM
In-line Blowers: 300, 600 & 1200CFM
Remote Blowers: 1000 & 1400CFM

24" Proline Hood	BS-PL24240 TS
30" Proline Hood	BS-PL30240 TS
36" Proline Hood	BS-PL36240 TS
42" Proline Hood	BS-PL42240 TS
48" Proline Hood	BS-PL48240 TS
54" Proline Hood	BS-PL54240 TS
60" Proline Hood	BS-PL60240 TS
66" Proline Hood	BS-PL66240 TS

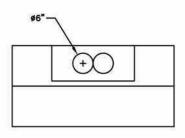
		IN-HOOD			IN-LINE			REMOTE		DISCHARGE	
MODEL	300	600	1200	300	600	1200	1000	1400	TOP	REAR	
BS-PL24240 TS	į į			<u></u>	, in	i iku	- 122 122	(•)			
BS-PL30240 TS	74	•	N=0	38	*	100	¥	38#71	**	•	
BS-PL36240 TS			),●((	*	•	1 <b>9</b> 0	*	. 2( <b>⊕</b> )		29	
BS-PL42240 TS			100	•							
BS-PL48240 TS	7.0	•	596	*	*	280	*	82 <b>4</b> 17		*	
BS-PL54240 TS		*	8.00	<b>;</b> *		3.00	*	. AME		1.0	
BS-PL60240 TS	1	8	<b>₩</b>	*	•	(10)	9	•		<b>(•</b>	
BS-PL66240 TS		₩:	8#6	19		<b>(%)</b>	¥I	3(#3)	<b>a</b> )		

#### **VENTILATION HOOD DIMENSIONS**





600 CFM BLOWER



1200 CFM BLOWER

### **BLOOMFIELD**

OPTIONAL ACCESSORIES SUCH AS THIS RACK



#### MODEL 8792

#### 8792 Gourmet 1000™ Dual Automatic Airpot Coffee Brewer

(with Hot Water Faucet)

Gourmet 1000™ Dual Airpot brewers offer volume brewing, proper extraction and holding capacity. Traditional electromechanical controls and a high level of component compatibility mean many years of dependable, quality brewing. These uniquely designed units eliminate flow control problems and resist clogging in adverse water conditions. Coffee is brewed into an airpot for easy transport to remote serving areas where the coffee will be preserved for optimal temperature and taste.



- **Dual brewer** will accomodate demand fluctuations and brewing variables.
- A high level of commonality of parts
  with other Bloomfield brewers will significantly
  reduce the inventory of spare parts required to
  service many body styles.
- Exclusive design provides easy access to components for quick, efficient service.
- Water volume adjustments can be made with ease; no tools required and no panels to remove.
- Ready-to Brew light indicated the proper water temperature to help eliminate guesswork in brewing.
- **Built-in pour over feature** provides flexibility of installation.
- Premium quality thermostat has a stainless steel bulb that recognizes water temperature extremely accurately and cycles less frequently.
- Superior sprayhead design spreads water over the coffee grounds, creating aggitation and a floating action that completely saturates the coffee to capture the full rich essence of every bean.



- Unique water valve with built-in flow control assures consistent operation for inlet water pressures between 20 - 80 p.s.i..
- Independent front mounted hot water faucet allows drawing of hot water without affecting coffee taste or brew cycle.
- One-piece drawn stainless steel water tank has a superior design for extended life.
- Rugged base rails provide stability and strength while minimizing brewer herght, and provides easy placement of airpot.
- High quality easy to clean stainless steel construction.
- Convenient tank heater on/off switches located on rear of unit provide energy saving options.

#### Accessories

Bloomfield offers a full line of airpots, thermal servers and coffee grinders.





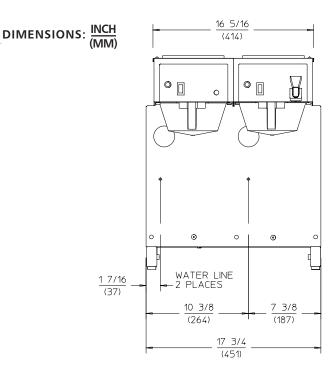


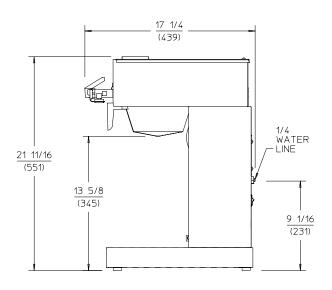
### **BLOOMFIELD**



**MODELS** 8792







#### **SPECIFICATIONS:**

MODELS	WATTS	VOLTS	AMPS	PHASE	POWER SUPPLY CORD
* 8792	4000	120/240 4-WIRE	17	SINGLE	NONE

**(** 

NOTE: Specifications are subject to change without notice and are not intended for installation purposes. See operation and maintenance manual for complete instructions.

**ACCESSORIES**: See the Bloomfield Brew Brew product catalog for a complete listing of brewers and accessories.



<sup>\*</sup> Also meets Canadian tandards

### **BLOOMFIELD**

8572, 8574 Koffee King® 3-Warmer Stepped Right **Automatic Coffee Brewer** 

(with Hot Water Faucet)

8572L Koffee King® **3-Warmer Stepped Left Automatic Coffee Brewer** 

(with Hot Water Faucet)

8573 Koffee King® 3-Warmer Stepped Right **Automatic Coffee Brewer** 

(without Hot Water Faucet)

#### How do you get more for less?

Use the Bloomfield Lo-Profile® brewing system. At less than 17" tall, the Lo-Profile is small in stature but big on capacity. Like all Bloomfield products, this proven, efficient brewing system is designed to take advantage of the finest electrical components and has the lowest service cost in the industry for this type of brewer.

#### **Features**

- A high level of commonality of parts with other Bloomfield models will significantly reduce the inventory of spare parts required to service many body styles.
- Exclusive design provides easy access to components for quick service and cleaning.
- Water volume adjustments can be made with ease; no panels to remove or tools required.
- · Ready-to-Brew light indicated the proper water temperature to help eliminate the guesswork in brewing.
- · Built-in pour-over feature provides flexibility.
- · Independent front-mounted hot water faucet (except 8573) allows drawing of hot water without affecting coffee taste or brewing cycle.
- Premium Quality Thermostat has a stainless steel sensing bulb that recognizes water temperature very accurately, and cycles less frequently.
- · Superior sprayhead design spreads water over the coffee grounds, creating agitation and a floating action that completely saturates the coffee to capture the full, rich essence of every bean.

#### **MODELS** 8572, 8572L, 8573, 8574



- · Unique water valve with built-in flow control and strainer assures consistent operation at supply water pressures from 20 - 90 psi.
- · One-piece drawn stainless steel water tank has a superior design for extended life.
- Three warming stations with porcelain enameled warmer plates position decanters securely and, with no exposed screw heads, will not scratch or scrape decanters.
- High quality, easy to clean stainless steel construction.

#### Accessories

Bloomfield offers a full line of coffee warmers, grinders and glass decanters.







### OOMFIELD



E9253

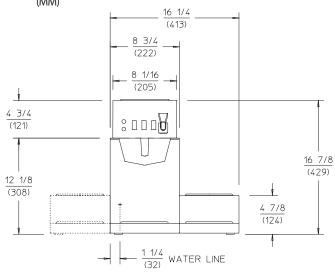


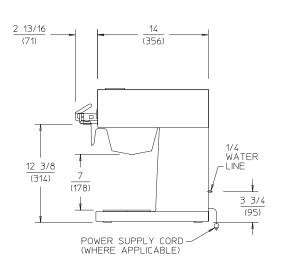




**MODELS** 8572, 8572L, 8573, 8574

DIMENSIONS:





#### SPECIFICATIONS:

	MODELS	WATTS	VOLTS	AMPS	PHASE	POWER SUPPLY CORD
	<mark>8572,</mark> 8572L	1800	120	15	SINGLE	<b>NEMA 5-15P</b>
*	8572CA	1500	120	12.5	SINGLE	NEMA 5-15P
$\mathbb{C}$	8572EU, UK	2100	220-240	9	SINGLE	SUPPLIED
	8572AU, PI, KO	2100	220-240	9	SINGLE	SUPPLIED
	8573	1800	120	15	SINGLE	NEMA-5-15P
	*8574	3800	115/230 4-WIRE	17	SINGLE	NONE

**(** 

Meets Canadian Standards





Denotes export products \* Also meets Canadian Standards

Specifications are subject to change without notice and are not intended for installation purposes. See operation and maintenance manual for complete instructions.

ACCESSORIES: See the Bloomfield Brew Brew products catalo

g for a complete listing of brewers and acce





8730 Coffee Grinder 7 lb. Hopper



Wunder-Bar · 2060 Cessna Drive, Suite 100, Vacaville, CA 95688 U.S.A.

Phone: (707) 448-5151 • Fax (707) 448-1521 www.wunderbar.com · Printed in the U.S.A.



**BLOOMFIELD** 

ssories

### VP17-1, SST (1 Lower Warmer)

Height: 17.3" Width: 8.4" Depth: 18.8" (43.9cm) (21.3cm) (47.8cm)



- Pourover brewer requires no plumbing completely portable
- SplashGard® funnel deflects hot liquids away from the hand
- · All stainless steel construction
- PROP 65 Warning Decal included in packaging with equipment
- Servers not included unless otherwise noted



Agency:





### **Specifications**

Product #: 13300.0001 Warmers: One Lower

Water Access: Not Plumbed

Finish: Stainless
Funnel: Black Plastic

**Electrical & Capacity** 

Volts*	Amps	Watts	Cord Attached	Plug Type	8oz cups/hr 236ml cups/hr	Input H <sup>2</sup> O Temp.	Phase	# Wires plus Ground	Hertz
120	13.3	1600	Yes	NEMA 5-15P	62	60°F (15.5°C)	1	2	60

"When a BUNN is machine rated 120/208-240V, 120/208V or 120/240V, the higher voltage is the supply voltage needed to power the machine. The 120V is there to supply power to some components rated 120V in the machine, but it is not the supply voltage and would not power the machine if the machine is marked with the before mentioned ratings.

#### Plumbing Requirements

PSI kPa		Fitting Supplied	Water Flow Required (GPM)						
-	-	-	-						

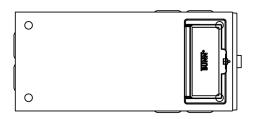
### CAD Drawings

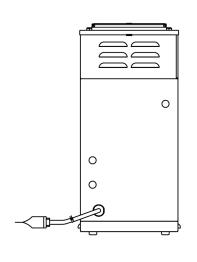
**Additional Features** 

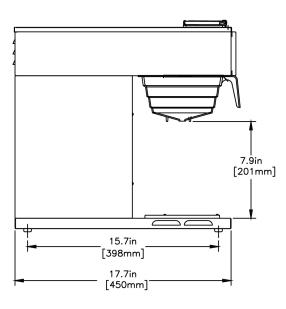
2D	Revit	KLC
•		

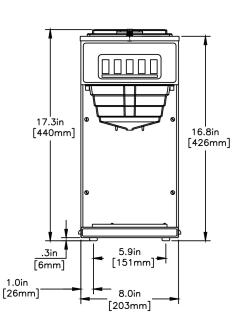
WARNING: This product can expose you to chemicals including Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov











Unit			Shipping					
	Height	Width	Depth	Height	Width	Depth	Weight	Volume
English	17.3 in.	8.4 in.	18.8 in.	23.8 in.	12.5 in.	26.5 in.	26.000 lbs	4.566 ft <sup>3</sup>
Metric	43.9 cm	21.3 cm	47.8 cm	60.3 cm	31.8 cm	67.4 cm	11.794 kgs	0.129 m³



### Related Products & Accessories: VP17-1, SST (1 Lower Warmer)(13300.0001)









### Serving & Holding Options: VP17-1, SST (1 Lower Warmer)(13300.0001)



EASY POUR®,(BLK) 1/CS

Product #:06100.0101



EASY POUR®, (BLK) 2/CS

Product #:06100.0102



EASY POUR®,(BLK) 3/CS

Product #:06100.0103



EASY POUR®, (BLK) 6/CS

Product #:06100.0106



EASY POUR®,(BLK) 12/

Product #:06100.0112



EASY POUR®,(BLK) 24/ CS

Product #:06100.0124



EASY POUR,(BLK) 6-1/

Product #:06100.0156



EASY POUR®,(ORN) 1/

Product #:06101.0101



EASY POUR®,(ORN) 2/ CS

Product #:06101.0102



EASY POUR®,(ORN) 3/

Product #:06101.0103



EASY POUR®,(ORN) 6/

Product #:06101.0106



EASY POUR,(ORN) 12/ CS

Product #:06101.0112



EASY POUR®,(ORN) 24/ CS

Product #:06101.0124



DECANTER,GLASS-BLK 12C 24/CS

Product #:42400.0024



DECANTER,GLASS-BLK 12CUP 1PK

Product #:42400.0101



12C 3/CS

Product #:42400.0103



DECANTER,GLASS-ORN 12C 24/CS

Product #:42401.0024



DECANTER, GLASS-ORN 12 CUP 1PK

Product #:42401.0101



DECANTER,GLASS-ORN 12C 3/CS

Product #:42401.0103



OWNER TO DETERMINE IF THEY PREFER BULK (REACH IN) Manitowoc DISPENSING OR HOTEL TYPE DISPENSING



### **Indigo™ Series** 322 Ice Cube Machine

ID-0322A \_\_\_\_ID-0323W I<sub>IY-0324A</sub> Model: Indiao Series i-322

#### Ice Machine Flectric

115/60/1 standard. (208-230/60/1 and 230/50/1 also available)

#### Minimum circuit ampacity:

Air-cooled: 11.5 1ph Water-cooled: 10.7 1ph

#### Maximum fuse size:

Air-cooled: 15 amps Water-cooled: 15 amps

Ice Machine on B-320 Bin

#### **Specifications**

#### **BTU Per Hour:**

3,300 (average) 4,500 (peak)

#### Refrigerant:

R-404A CFC-free

#### **Operating Limits:**

- Ambient Temperature Range: 35° to 110°F (1.7° to 43.3°C) Water Temperature Range: 35° to 90°F (1.7° to 32.2°C)
- · Water Pressure Ice Maker Water In: Min. 20 psi (137.9 kPA) Max. 80 psi (551.1 kPA)

Designed for operators who know that ice is critical to their business, the Indigo™ Series ice machine's preventative diagnostics continually monitor itself for reliable ice production. Improvements in cleanability and programmability make your ice machine easy to own and less expensive to operate.

J<sub>IY-0325</sub>W

- Space-Saving Design Up to 350 lbs. (159 kgs.) daily ice production and only 22" (55.88 cm) wide.
- Intelligent Diagnostics provide 24 hour preventative maintenance and diagnostic feedback for trouble free operation.
- Acoustical Ice Sensing Probe for reliable operation in challenging water conditions.
- EasyRead Display communicates operating status, cleaning reminders, and asset information through a blue illuminated display.
- Programmable Ice Production by On/Off Time, Ice Volume or Bin Level (with accessory bin level control) further improves energy efficiency and savings.
- Easy to Clean Foodzone Hinged front door swings out for easy access. Removable water-trough, distribution tube, curtain, and sensing probes for fast and efficient cleaning. Select components made with AlphaSan® antimicrobial.
- DuraTech™ Exterior provides superior corrosion resistance. Stainless finish with innovative clear-coat resists fingerprints and dirt.
- Available LuminIce™ Growth Inhibitor controls the growth of bacteria and yeast within the foodzone.



#### Ice Shape



**Half Dice** (.95 x 2.86 x 2.22 cm)



Dice ½" x ½" x ½" (2.22 x 2.22 x 2.22 cm)













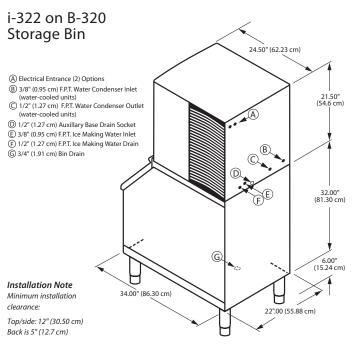
COMPANY WITH QUALITY SYSTEM

2110 South 26th Street PO Box 1720 Manitowoc, WI 54221-1720 USA Tel: 1.920.682.0161 Fax: 1.920.683.7589 www.manitowocice.com









#### Space-Saving Designs



	i-322 B-320	i-322 B-420
Height	59.50" 151.13 cm	71.50" 181.61 cm
Width	22.00" 55.88 cm	22.00" 55.88 cm
Depth	34.00" 86.30 cm	34.00" 86.30 cm
Bin Storage	210 lbs. 95 kgs.	310 lbs. 141 kgs.

Height includes adjustable bin legs 6.00" to 8.00", (15.24 to 20.32 cm) set at 6.00" (15.24 cm).

#### **Specifications**

			Ice Production 24 Hours		Power Usage kWh/100 lbs.	Water Usage/100 lbs. 45.4 kgs. of Ice	ENERGY			
	Model	Ice Shape	70°Air/ 50°F Water	90°Air/ 70°F Water	@90°Air/70°F	Potable Water	STAR*			
۵	ID 03334	dice	335 lbs.	225 lbs.	7.49	23.9 Gal.				
AIR-COOLED	ID-0322A		152 kgs.	102 kgs.	7.49	90.5 L				
R-C	5 IV 02244	half-dice	350 lbs.	230 lbs.	7.32	23.9 Gal.				
Ā	IY-0324A		159 kgs.	104 kgs.	7.52	90.5 L				
	ID-0323W	dice	330 lbs.	270 lbs.	6.19	23.9 Gal.	NA			
OTED	ID-0323W		150 kgs.	122 kgs.	0.19	90.5 L	IVA			
Ş	IY-0325W	half-dice	350 lbs.	290 lbs.	5.94	23.9 Gal.	NA			
WATER-COOLED	11-032500		159 kgs.	132 kgs.	5.94	90.5 L				
Ž	* Water-cooled Condenser Water I Isage / 100 lbs /45 4 kgs Of Ice 193 gal/731 I									

\* Water-cooled models are excluded from ENERGY STAR qualification.

Order ice storage bin separately.

#### Accessories

#### LuminIce™ **Growth Inhibitor** reduces yeast and bacteria growth for a

cleaner ice machine.



**Bin Level Control** Allows ice bin level to be automatically set. Built-in LED light illuminates bin.



**Arctic Pure® Water Filters** Reduces sediment and chlorine odors for

better tasting ice.



**AuCS®** schedules and performs routine ice machine cleaning automatically.



4775 E ©2014 Manitowoc 2/14. Continuing product improvement may necessitate change of specifications without notice

2110 South 26th Street PO Box 1720 Manitowoc, WI 54221-1720 USA Tel: 1.920.682.0161 Fax: 1.920.683.7589 www.manitowocice.com





# **Indigo NXT Ice Machines**

### Installation, Operation and Maintenance Manual



#### **⚠** Caution

Read this instruction before operating this equipment.

**Original Document** 



### **Safety Notices**

#### **Safety Notices**

### Read these precautions to prevent personal injury:

- Read this manual thoroughly before operating, installing or performing maintenance on the equipment. Failure to follow instructions in this manual can cause property damage, injury or death.
- Routine adjustments and maintenance procedures outlined in this manual are not covered by the warranty.
- Proper installation, care and maintenance are essential for maximum performance and troublefree operation of your equipment. Visit our website www.manitowocice.com for manual updates, translations, or contact information for service agents in your area.
- This equipment contains high voltage electricity and refrigerant charge. Installation and repairs are to be performed by properly trained technicians aware of the dangers of dealing with high voltage electricity and refrigerant under pressure. The technician must also be certified in proper refrigerant handling and servicing procedures. All lockout and tag out procedures must be followed when working on this equipment.
- This equipment is intended for indoor use only. Do not install or operate this equipment in outdoor areas.

#### **Definitions**

#### **A** DANGER

Indicates a hazardous situation that, if not avoided, will result in death or serious injury. This applies to the most extreme situations.

#### **▲**Warning

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

#### **A**Caution

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

#### **Notice**

Indicates information considered important, but not hazard-related (e.g. messages relating to property damage).

NOTE: Indicates useful, extra information about the procedure you are performing.

#### **▲**Warning

### Follow these precautions to prevent personal injury during installation of this equipment:

- Installation must comply with all applicable equipment fire and health codes with the authority having jurisdiction.
- To avoid instability the installation area must be capable of supporting the combined weight of the equipment and product. Additionally the equipment must be level side to side and front to back.
- Ice machines require a deflector when installed on an ice storage bin. Prior to using a non-OEM ice storage system with this ice machine, contact the bin manufacturer to assure their ice deflector is compatible.
- Prior to installing a non-OEM ice storage system with this ice machine, follow the manufacturers installation procedures and verify the location and installation meets the local/national mechanical codes and stability requirements.
- Remove all removable panels before lifting and installing and use appropriate safety equipment during installation and servicing. Two or more people are required to lift or move this appliance to prevent tipping and/or injury.

- Legs or casters must be installed and the legs/casters must be screwed in completely. When casters are installed the mass of this unit will allow it to move uncontrolled on an inclined surface. These units must be tethered/secured to comply with all applicable codes. Swivel casters must be mounted on the front and rigid casters must be mounted on the rear. Lock the front casters after installation is complete.
- Connect to a potable water supply only.
- Do not damage the refrigeration circuit when installing, maintaining or servicing the unit.
- This equipment contains refrigerant charge. Installation of the line sets must be performed by a properly trained and EPA certified refrigeration technician aware of the dangers of dealing with refrigerant charged equipment.

#### **A** DANGER

Follow these flammable refrigeration system requirements during installation, use or repair of this equipment:

- Refer to nameplate Ice machine models may contain up to 150 grams of R290 (propane) refrigerant. R290 (propane) is flammable in concentrations of air between approximately 2.1% and 9.5% by volume (LEL lower explosion limit and UEL upper explosion limit). An ignition source at a temperature higher than 470°C is needed for a combustion to occur. Refer to nameplate to identify the type of refrigerant in your equipment.
- To minimize the risk of ignition due to improper installation, replacement parts or service procedures, only refrigeration technicians with flammable refrigerant training who are aware of the dangers of dealing with high voltage electricity and refrigerant under pressure are allowed to work on this equipment.
- All replacement parts must be like components obtained from the equipment manufacturers authorized replacement part network.
- This equipment must be installed in accordance with the ASHRAE 15 Safety Standard for Refrigeration Systems.
- This equipment can not be installed in corridors or hallways of public buildings.
- Installation must comply with all applicable equipment fire and health codes with the authority having jurisdiction.

- All lockout and tag out procedures must be followed when working on this equipment.
- This equipment contains high voltage electricity and refrigerant charge.
   Shorting electrical wires to refrigeration tubing may result in an explosion. All electrical power must be disconnected from the system before servicing the system. Refrigerant leaks, can result in serious injury or death from explosion, fire, or contact with refrigerant or lubricant mists.
- Do not damage the refrigeration circuit when installing, maintaining or servicing the unit. Never use sharp objects or tools to remove ice or frost. Do not use mechanical devices or other means to accelerate the defrosting process.

#### **▲**Warning

### Follow these electrical requirements during installation of this equipment:

- All field wiring must conform to all applicable codes of the authority having jurisdiction. It is the responsibility of the end user to provide the disconnect means to satisfy local codes. Refer to rating plate for proper voltage.
- This appliance must be grounded.
- This equipment must be positioned so that the plug is accessible unless other means for disconnection from the power supply (e.g., circuit breaker or disconnect switch) is provided.
- Check all wiring connections, including factory terminals, before operation.
   Connections can become loose during shipment and installation.

#### **A** DANGER

Do not operate equipment that has abused, been misused, neglected, damaged, or altered/modified from that of original manufactured specifications. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by a person responsible for their safety. Do not allow children to play with, clean or maintain this appliance without proper supervision.

#### **A** Warning

# Follow these precautions to prevent personal injury while operating or maintaining this equipment:

- Read this manual thoroughly before operating, installing or performing maintenance on the equipment. Failure to follow instructions in this manual can cause property damage, injury or death.
- Crush/Pinch Hazard. Keep hands clear of moving components. Components can move without warning unless power is disconnected and all potential energy is removed.
- Moisture collecting on the floor will create a slippery surface. Clean up any water on the floor immediately to prevent a slip hazard.
- Objects placed or dropped in the bin can affect human health and safety.
   Locate and remove any objects immediately.
- Never use sharp objects or tools to remove ice or frost. Do not use mechanical devices or other means to accelerate the defrosting process.
- When using cleaning fluids or chemicals, rubber gloves and eye protection (and/or face shield) must be worn.

#### **A** DANGER

Follow these precautions to prevent personal injury during use and maintenance of this equipment:

- It is the responsibility of the equipment owner to perform a Personal Protective Equipment Hazard Assessment to ensure adequate protection during maintenance procedures.
- Do Not Store Or Use Gasoline Or Other Flammable Vapors Or Liquids In The Vicinity Of This Or Any Other Appliance. Never use flammable oil soaked cloths or combustible cleaning solutions for cleaning.
- All covers and access panels must be in place and properly secured when operating this equipment.
- Risk of fire/shock. All minimum clearances must be maintained. Do not obstruct vents or openings.
- Failure to disconnect power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.
- All utility connections and fixtures must be maintained in accordance with the authority having jurisdiction.
- Turn off and lockout all utilities (gas, electric, water) according to approved practices during maintenance or servicing.

- Units with two power cords must be plugged into individual branch circuits.
   During movement, cleaning or repair it is necessary to unplug both power cords.
- Never use a high-pressure water jet for cleaning on the interior or exterior of this unit. Do not use power cleaning equipment, steel wool, scrapers or wire brushes on stainless steel or painted surfaces.
- Two or more people are required to move this equipment to prevent tipping.
- Locking the front casters after moving is the owner's and operator's responsibility. When casters are installed, the mass of this unit will allow it to move uncontrolled on an inclined surface. These units must be tethered/secured to comply with all applicable codes.
- The on-site supervisor is responsible for ensuring that operators are made aware of the inherent dangers of operating this equipment.
- Do not operate any appliance with a damaged cord or plug. All repairs must be performed by a qualified service company.

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# Section 1 General Information

#### **Model Numbers**

This manual covers the following models:

This manual covers the following models.				
Self- Contained Air-Cooled	Self- Contained Water- Cooled	Remote Air- Cooled		
IDF0300A	IDF0300W			
IYF0300A	IYF0300W			
IYP0320A				
IDT0420A	IDT0420W			
IYT0420A	IYT0420W			
IDT0450A	IDT0450W			
IYT0450A	IYT0450W			
IDT0500A	IDT0500W	IDT0500N		
IYT0500A	IYT0500W	IYT0500N		
IRT0500A	IRT0500W	IDF0500N		
IDP0500A		IYF0500N		
IDP0520A				
IYP0520A				
IDF0600A	IDF0600W	IDF0600N		
IYF0600A	IYF0600W	IYF0600N		
IDT0620A	IDT0620W			
IYT0620A	IYT0620W			
IRT0620A				
IDT0750A	IDT0750W			
IYT0750A	IYT0750W			
IRT0750A	IRT0750W			
IDF0900A	IDF0900W	IDF0900N		
IYF0900A	IYF0900W	IYF0900N		
IRF0900A	IRF0900W			
IDT0900A	IDT0900W			
IYT0900A	IYT0900W			
IRT0900A	IRT0900W			
IDT1200A	IDT1200W	IDT1200N		
IYT1200A	IYT1200W	IYT1200N		
IDT1500A	IDT1500W	IDT1500N		
IYT1500A	IYT1500W	IYT1500N		

Self- Contained Air-Cooled	Self- Contained Water- Cooled	Remote Air- Cooled
IDT1900A	IDT1900W	IDT1900N
IYT1900A	IYT1900W	IYT1900N
IRT1900A		IRT1900N

QuietQube Indoor Head Section	QuietQube Air-Cooled Condensing Unit	
IYF0600C	CVDF0600	
IBF0620C	CVDFUUUU	
IBF0820C	CVDF0900	
IYF0900C		
IBT1020C		
IDT1200C	CVDT1200	
IYT1200C		
IDF1400C	CVDF1400	
IYF1400C	CVDF1400	
IDF1800C	CVDF1800	
IYF1800C		
IDF2100C	CVDF2100	
IYF2100C	CADLSION	

#### **Accessories**

#### **Ice Deflector**

An ice deflector is required when the ice machine is installed on a bin. An ice deflector is not required when the ice machine is installed on a dispenser.

General Information Section 1

### **Top Air Discharge Kit**

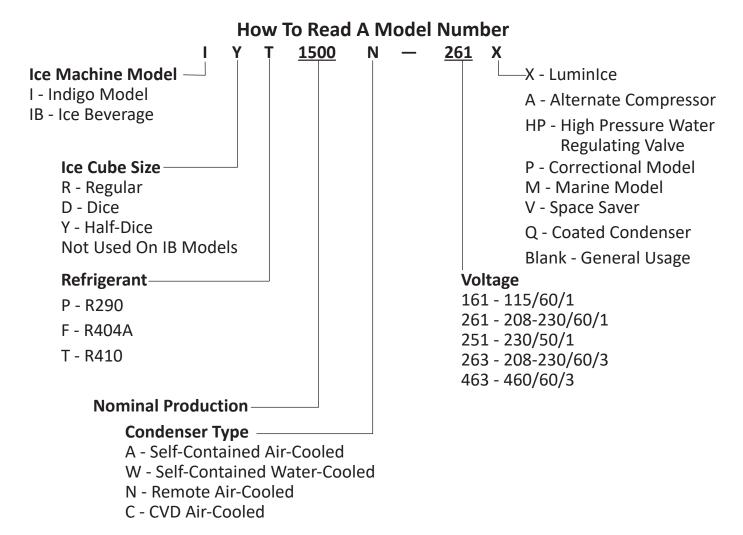
The top air discharge kit can be used on select ice machine models. This kit directs warm exhaust air upward rather than out the side panels.

### **AuCS® Automatic Cleaning System**

This accessory reduces equipment cleaning expense. The AuCS® accessory monitors ice making cycles and initiates a remedial cleaning procedure automatically.

### LuminIce® II

The LuminIce® growth inhibitor recirculates the air in the ice machine foodzone over a UV bulb. This process will inhibit the growth of common micro-organisms on all exposed foodzone surfaces.



NOTE: These products are hermetically sealed and contain fluorinated greenhouse gas R404A or R410A.

### Installation

# **Location Requirements**

The location selected for the ice machine head section must meet the following criteria. If any of these criteria are not met, select another location.

- The location must be indoors and must be free of airborne and other contaminants.
- The location must not be near heatgenerating equipment or in direct sunlight.
- The location must allow enough clearance for water, drain, and electrical connections in the rear of the ice machine.
- The location must not obstruct airflow through or around the ice machine.

# **Installation Requirements**

- The ice machine and bin must be level.
- Vent the ice machine and bin drains separately.
- Bin drain termination must have an air gap.
- The ice machine and bin must be descaled and sanitized after installation.
- The drain line must contain a union or other suitable means of disconnection at the ice machine.

### QuietQube Models Only

- The ice machine top panel can be trimmed with an aviator snips to allow the line set, water line and electrical connections to exit the top. Only cut out what is needed, the back panel must support the top panel.
- The water inlet and electrical connection must contain a service loop to allow future access.

# **Minimum/Maximum Temperatures**

Model		Maximum Air Temperature
All Ice		
Machine	35°F	110°F
Head	2°C	43°C
Sections		

	Minimum Air Temperature	Maximum Air Temperature
All Models	-20°F	120°F
	-29°C	49°C

QuietQube Condensing Units		Maximum Air Temperature
CVDF0600 CVDF0900 CVDT1200 CVDF2100	-20°F -29°C	120°F 49°C
CVDF1400 CVDF1800	-20°F -29°C	130°F 54°C

# **Ice Machine Heat of Rejection**

Ice Machine	Heat of F	Rejection
Series	Air Conditioning	Peak
IF0300	4600	5450
IT0420	3800	6000
IT0450	3800	6000
IT0500	3800	6000
IF0500	3800	6000
IP0500	3800	6000
IP0520	3800	6000
IF0600	11800	13700
IT0620	5400	6300
IT0750	12800	13700
IF0900	13000	16000
IT0900	12700	14800
IT1200	16200	19100
IT1500	23000	27000
IT1900	26100	30500

### Use this information when:

- Sizing air conditioning equipment where self-contained air-cooled ice machines are installed.
- Determining the load on a cooling tower.
   Use the peak figure for sizing the load.

### **Clearance Requirements**

IF0300	Self- Contained Air-Cooled	Self- Contained Water-Cooled
Top/Sides	16" (40 cm)	8" (20 cm)
Back	5" (13 cm)	5" (13 cm)

IT0420 IT0620	Self- Contained Air-Cooled	Water-Cooled or Remote Condenser
Top/Sides	12" (31 cm)	8" (20 cm)
Back	5" (13 cm)	5" (13 cm)

IT0450 IT0500 IF0500 IP0500 IP0520 IF0600 IT0750 IF0900 IT0900	Self- Contained Air-Cooled	Self- Contained Water-Cooled
Top/Sides	8" (20 cm)	8" (20 cm)
Back	5" (13 cm)	5" (13 cm)

NOTE: Top air discharge kits require the same clearance requirements as the comparable self-contained air-cooled model.

IT1200 60 Hz	Self- Contained Air-Cooled	Water-Cooled or Remote Condenser
Top/Sides	8" (20 cm)	8" (20 cm)
Back	5" (13 cm)	5" (13 cm)

IT1200 50 Hz	Self- Contained Air-Cooled	Water-Cooled or Remote Condenser
Тор	12" (31 cm)	8" (20 cm)
Sides	23" (58 cm)	8" (20 cm)
Back	8" (20 cm)	5" (13 cm)

IT1500	Self-Contained Air-Cooled	Water-Cooled or Remote Condenser
Тор	12" (31 cm)	8" (20 cm)
Sides	8" (20 cm)	8" (20 cm)
Back	12" (31 cm)	5" (13 cm)

IT1900	Self-Contained Air-Cooled	Water-Cooled or Remote Condenser
Top/Sides	24" (61 cm)	8" (20 cm)
Back	12" (31 cm)	5" (13 cm)
Bristol Compressor		

¹IT1900	Self-Contained Air-Cooled	Water-Cooled or Remote Condenser
Top/Sides	8" (20 cm)	8" (20 cm)
Back	5" (13 cm)	5" (13 cm)
¹Copeland Compressor		

# **QuietQube Model Clearance Requirements**

Model	Тор	Back	Sides
IF0600C			
IT0750C	5"	5"	5"
IF0900C	(13 cm)	(13 cm)	(13 cm)
IT0900C	(13 (11)	(13 (11)	(13 (11)
IT1200C			
IBF0620C			
IBF0820C			
IBT1020C	2"**	5"	8" **
IF1400C	(5 cm)	(13 cm)	(20 cm)
IF1800C			
IF2100C			

<sup>\*\* 24&</sup>quot; (61 cm) is recommended on top/sides for servicing

### **Condensing Unit Clearance Requirements**

Model	Top/Sides	Back	Front
CVDF0600			
CVDF0900			
CVDT1200	0"	48"	48"
CVDF1400	(0 cm*)	(122 cm)	(122 cm)
CVDF1800			
CVDF2100			

<sup>\* 24&</sup>quot; (61 cm) is recommended on top/sides for servicing

### **Notice**

The ice machine must be protected if it will be subjected to temperatures below 32°F (0°C). Failure caused by exposure to freezing temperatures is not covered by the warranty.

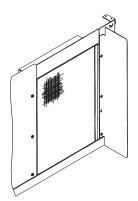
### Air Baffle

### **Self-Contained Air-cooled Only**

The air-cooled baffle prevents condenser air from recirculating.

To install:

- Loosen the back panel screws next to the condenser.
- 2. Align the keyhole slots in the air baffle with the screw holes and slide the baffle down to lock in place.



### **Bin Installation Requirements**

- The installation area must be capable of supporting the combined weight of the equipment and product.
- All ice machines installed on a bin require an ice deflector.
- Manitowoc bins have a deflector installed and require no modifications when used with a forward-facing evaporator.
- Ice machines with multiple evaporators require a deflector kit.
- Align sides and back of ice machine with sides and back of bin when placing ice machine on bin.
- Optional sales kits are available to adapt various sized or multiple ice machines on large bins.

### **Bin Installation**

NOTE: When using casters, the units must be tethered or secured to comply with all applicable codes. Swivel casters must be mounted on the front and rigid casters must be mounted on the rear. Lock the front casters after installation is complete.

- 1. Remove threaded plug from drain fitting.
- 2. Screw the leveling legs onto the bottom of the bin.
- 3. Screw the foot of each leg in as far as possible.
- 4. Move the bin into its final position.
- 5. Level the bin to assure that the bin door closes and seals properly. Use a level on top of the bin. Turn the base of each foot as necessary to level the bin.
- 6. Inspect bin gasket prior to ice machine installation. (Manitowoc bins come with a closed cell foam gasket installed along the top surface of the bin.)
- 7. Remove all panels from ice machine before lifting and installing on bin. Remove front panel, top cover, left and right side panels.

### **Dispenser Installation**

Observe following recommendations unless required by the dispenser manufacturer.

- An adapter is not required for ice machines that match the dispenser size.
- A deflector is not required.
- Ice level management is recommended to prevent water leakage or movement of ice machine during agitation.
- Align sides and back of ice machine with sides and back of dispenser when placing ice machine.
- Follow ice machine installation procedures in this manual and any additional installation requirements specified by the dispenser manufacturer.

### **Electrical Requirements**

All electrical work, including wire routing and grounding, must conform to local, state and national electrical codes. The following precautions must be observed:

- The ice machine must be grounded.
- A separate fuse/circuit breaker (dedicated circuit) must be provided for each ice machine head section, condenser or condensing unit.
- A qualified electrician must determine proper wire size dependent upon location, materials used and length of run (minimum circuit ampacity can be used to help select the wire size).

### **A**Warning

All wiring must conform to local, state and national codes.

### Voltage

The maximum allowable voltage variation is +10% / -5% of the rated voltage at ice machine start-up (when the electrical load is highest).

# **▲**Warning

The ice machine must be grounded in accordance with national and local electrical codes.

# Fuse/Circuit Breaker

A separate electrical disconnect, which disconnects all poles and has 3 mm (1/8") contact separation, must be provided for fixed wiring. Circuit breakers must be H.A.C.R. rated in USA.

### **Minimum Circuit Ampacity**

The minimum circuit ampacity is used to help select the wire size of the electrical supply. (Minimum circuit ampacity is not the ice machine's running amp load.)

The wire size (or gauge) also depends on location, materials used, length of run, etc., so it must be determined by a qualified electrician.

### **Ground Fault Circuit Interrupter**

We do not recommend the use of a GFCI/GFI circuit protection with our equipment. If a GFCI/GFI is required by code, use a GFCI/GFI breaker rather than an outlet, which is more prone to intermittent nuisance trips than panel circuit breakers.

# **Maximum Breaker Size & Minimum Circuit Amperage Chart**

NOTE: Due to continuous product improvements, this information is for reference only. Please refer to the ice machine data plate to verify electrical data. Model/Serial data plate information overrides information listed on this page.

<u> </u>		Air-Co	ooled	Water-	Cooled	Remote C	ondenser
Ice	Voltage/	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Machine	Phase/Cycle	Fuse/Circuit	Circuit	Fuse/Circuit	Circuit	Fuse/Circuit	Circuit
		Breaker	Amps	Breaker	Amps	Breaker	Amps
	115/1/60	15	10.8	15	10.0		
IF0300	230/1/50	15	6.1	15	5.6		
	230/1/60	15	6.1	15	5.7		
	115/1/60	15	11.3	15	10.6		
IT0420	208-230/	1.5		15	г 2		
IT0420	1/60	15	5.5	15	5.2		
	230/1/50	15	5.7				
	115/1/60	20	11.9	20	11.2		
ITO4FO	208-230/	15	5.6	15	5.3		
IT0450	1/60	15	5.6	15	5.3		
	230/1/50	15	5.6	15	5.3		
	115/1/60	15	11 5	15	10.0	20	13.7
	115/1/60	15	11.5	15	10.8	20	<sup>1</sup> 14.8
IT0500	208-230/ 1/60	15	Г 1	15	4.0		
		15	5.1	15	4.8		
	230/1/50	15	5.6				
	115/1/60					20	14.8
IF0500	208-230/					45	44.7
	60/1					15	11.7
	115/1/60	15	<sup>1</sup> 11.5				
100500	208-230/	45	1= 4				
IP0500	1/60	15	<sup>1</sup> 5.1				
	230/1/50	15	<sup>1</sup> 5.6				
	115/1/60	15	<sup>1</sup> 11.5				
IDOFOO	208-230/	4-					
IP0520	1/60	15	<sup>1</sup> 5.1				
	230/1/50	15	<sup>1</sup> 5.6				
	208-230/	45		45	10.7	45	11.7
	1/60	15	11.1	15	10.7	15	<sup>1</sup> 8.9
IF0600	222/4/52	4.5	6.7	4.5	C 4	45	7.1
	230/1/50	15	6.7	15	6.1	15	¹8.1
	115/1/60	20	12.2	20	11.6		
IT0620	208-230/	1-		1-			
110020	1/60	15	5.9	15	5.6		
	230/1/50	15	5.6	15	5.4		

		Air-Co	ooled	Water-	Cooled	Remote C	ondenser
Ice	Voltage/	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Machine	Phase/Cycle	Fuse/Circuit	Circuit	Fuse/Circuit	Circuit	Fuse/Circuit	Circuit
		Breaker	Amps	Breaker	Amps	Breaker	Amps
	208-230/	15	8.4	15	8.1		
ITOZEO	1/60	15	<sup>1</sup> 8.3	15	<sup>1</sup> 7.9		
IT0750	230/1/50	15	8.4	15	8.1		
	230/1/30	13	<sup>1</sup> 6.7	13	¹6.5		
	208-230/	20	12.2	20	11.2	20	12.2
	1/60	15	<sup>1</sup> 9.5	20	<sup>1</sup> 8.8	15	<sup>1</sup> 9.8
IF0900	208-230/ 3/60	15	9.7	15	8.7	15	9.7 ¹7.2
	3,00						8.6
	230/1/50	15	8.9	15	8.2	15	¹9.0
	208-230/	15	9.5	15	8.8		
IT0900	1/60						
	230/1/50	15	10.7	15	10.1		
	208-230/	20	14.2	20	13.4	15	11.0
	1/60						<sup>1</sup> 10.9
IT1200	208-230/	15	8.6	15	7.9	15	9.2 ¹10.1
	3/60					15	11.1
	230/1/50	20	14.0	20	13.3	25	¹15.6
	208-230/	25	15.4	25	14.0		14.0
	1/60	30	¹18.5	30	¹17.0	25	¹15.6
						20	11.3
IT1500	208-230/	20	12.8	20	11.3	25	¹15.3
	3/60		¹13.4		¹12.0	20	¹13.0
	000/1/50	25	14.9	25	14.2	25	15.2
	230/1/50	20	¹14.3	20	¹13.5	20	¹14.6
	200 220/		17.0	25	16.5	25	17.0
	208-230/	30	17.9	25	<sup>1</sup> 15.0	30	<sup>1</sup> 18.5
	1/60		120.1	30	¹18.8	30	¹19.3
	208-230/	20	14.2	20	12.8	20	13.0
IT1900	3/60	20	114.4	20	¹13.0	20	¹13.1
	230/1/50	25	15.8 ¹16.5	25	15.0	25	15.3 ¹15.8
	380-460/ 3/50-60			15	6.1		

<sup>1</sup>Alternate compressor - Refer to model serial tag on ice machine to verify your minimum circuit amps.

# **QuietQube Head Sections**

Ice Machine	Voltage/Phase/ Cycle	Maximum Fuse/ Circuit Breaker	Minimum Circuit Amps	Total Amps
Ice Beverage	115/1/60	15 amp		1.2
Models	230/1/50	15 amp		1.0
All Non IB	115/1/60	15 amp	1.2	
QuietQube Models	230/1/50	15 amp	1.0	

# **CVD Condensing Units**

Condensing Unit	Voltage/Phase/ Cycle	Maximum Fuse/Circuit Breaker	Minimum Circuit Amps	Minimum Wire Size Required by Manitowoc
	208-230/1/60	15 amp	11.6	#12 Solid Copper Conductor
CVDF0600	208-230/3/60	15 amp	<sup>1</sup> 9.0 10.2 <sup>1</sup> 6.6	#12 Solid Copper Conductor
	230/1/50	15 amp	10.2	#12 Solid Copper Conductor
	208-230/1/60	20 amp	11.5	#10 Solid Copper Conductor
CVDF0900	208-230/3/60	15 amp	7.1	#12 Solid Copper Conductor
	230/1/50	20 amp	8.7	#10 Solid Copper Conductor
	208-230/1/60	25 amp	14.8	#10 Solid Copper Conductor
CVDT1200	208-230/1/60	20 amp	¹13.3	#10 Solid Copper Conductor
CVDT1200	208-230/3/60	1F amn	9.3	#12 Calid Cappar Candustar
		15 amp	¹11.1	#12 Solid Copper Conductor
	208-230/1/60	20 amp	14.2	#10 Calid Cappar Canduster
CVDF1400			¹11.1	#10 Solid Copper Conductor
	208-230/3/60	15 amp	11.1	#12 Solid Copper Conductor
	208-230/1/60	30 amp	19.2	#8 Solid Copper Conductor
CVDF1800	208-230/3/60	20 amp	13.3	#10 Solid Copper Conductor
	230/1/50	40 amp	25.0	#8 Solid Copper Conductor
CVDF2100	208-230/1/60	50 amp	40.0	#6 Solid Copper Conductor
CADLSTOO	208-230/3/60	30 amp	30.0	#10 Solid Copper Conductor

<sup>1</sup>Alternate compressor - Refer to model serial tag on ice machine to verify your minimum circuit amps.

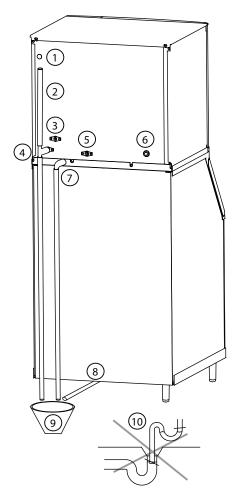
Water Supply and Drain Line Sizing/Connections					
Location	Water Temperature	Water Pressure	Ice Machine Fitting	Tubing Size up to Ice Machine Fitting	
Ice Making Water Inlet	40°F (4.4°C) Min. 90°F (32°C) Max.	20 psi (140 kPa) Min. 80 psi (550 kPa) Max.	3/8" Female Pipe Thread	3/8" (10 mm) minimum inside diameter	
Ice Making Water Drain	_	_	1/2" Female Pipe Thread	1/2" (13 mm) minimum inside diameter	
Condenser Water Inlet	40°F (4.4°C) Min. 90°F (32°C) Max.	20 psi (140 kPa) Min. 276 psi (1900 kPa) Max.	I0300 - I1000 = 3/8" Female Pipe Thread I1200 - I1800 = 1/2" Female Pipe Thread		
Condenser Water Drain	_	_	1/2" Female Pipe Thread	1/2" (13 mm) minimum inside diameter	
Bin Drain	_	_	3/4" Female Pipe Thread	3/4" (19 mm) minimum inside diameter	
Large Capacity Bin Drain			1" Female Pipe Thread	1" (25 mm) minimum inside diameter	

Min. = Minimum, Max. = Maximum

### **Water Connections**

- Local water conditions may require treatment of the water to inhibit scale formation, filter sediment, and remove chlorine odor and taste.
- Connect ice making water inlet to potable water only.
- Install a water shut-off valve for potable water and water cooled condenser lines.
- Do not connect the ice machine to a hot water supply. Verify hot water restrictors installed on other equipment are functioning correctly. (Check valves on sink, faucets, dishwashers, etc.)
- Install a water regulating valve if water pressure exceeds the maximum valve rating.
- Insulate water and drain lines to prevent condensation.

# **Water Supply and Drain Connections**



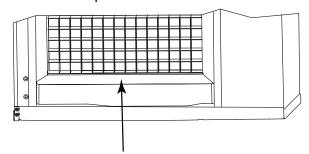
### **↑** Caution

Do not apply heat to water inlet valve or water drain fittings. Heating will damage the nonmetallic connector. Do not over tighten fittings. Two turns after hand tight is the maximum.

Item	Description
1	Electrical Entrance
2	Vent Tube - Minimum Height 18" (46 cm)
3	Potable Water Inlet - 3/8" FPT
4	Potable Water Drain - 1/2" FPT
5	Condenser Water Outlet - 1/2" FPT Water-cooled Models Only Install Separate Drain When Used
6	Condenser Water Inlet See "Condenser Water Inlet" on page 22 for fitting sizes
7	Base Drain - 1/2" CPVC Socket
8	Bin Drain - See "Bin Drain" on page 22 for fitting sizes
9	Floor Drain - Open and Trapped
10	Do Not Trap Drain Line - Leave Air Gap Between Drain Line and Floor Drain

#### **AIR GAP**

A greater than 1-inch air gap is built into the ice machine for back-flow prevention. This air gap exceeds NSF 12 requirements for back-flow prevention.



This air gap is greater than 1"

# **INSTALLATION NOTE (SWITZERLAND)**

The connection to the drinking water network must be made with a certified backflow preventer type EA (EN13959) and with a certified connection hose (EN13618 or EN61770) on site.

# Cooling Tower Applications (Water-Cooled Models)

A water cooling tower installation does not require modification of the ice machine.

- Water pressure at the condenser cannot exceed 276 psig (1900 kPa).
- Water entering the condenser must not exceed 90°F (32°C).
- Water flow through the condenser must not exceed 5 gallons (19 liters) per minute.
- Allow for a pressure drop of 7 psi (50 kPa) between the condenser water inlet and the outlet of the ice machine.
- Water exiting the condenser must not exceed 110°F (43°C).

### **Drain Connections**

Follow these guidelines when installing drain lines to prevent drain water from flowing back into the ice machine and storage bin:

- Drain lines must have a 1.5 inch drop per 5 foot (2.5 cm per meter) of run and must not create traps.
- The floor drain must be large enough to accommodate drainage from all drains.
- Run separate bin and ice machine drain lines. Insulate them to prevent condensation.
- Install a tee at the ice machine drain outlet and install an 18" (46 cm) vent above the drain line.
- Drain termination must have an air gap that meets local code.

### **Auxiliary Base Drain Installation**

An auxiliary drain is located in the ice machine base to remove moisture in high humidity areas.

- 1. View the back of the ice machine base on the compressor side and locate and remove the cap plug.
- 2. Route tubing to an open site drain:
  - Use 1/2 inch CPVC tubing.
  - Apply a bead of silicone around the exterior of the ice machine tubing and insert into ice machine base. The silicone will secure the tubing and provide a watertight seal.
  - Provide support for tubing.

# Remote Condenser and Condensing Unit Refrigeration System Installation

Each ice machine head section ships from the factory with a refrigerant charge appropriate for the entire system operation. The serial tag on the ice machine indicates the refrigerant charge.

QuietQube® Ice Machine	Remote Condenser	Line Set*	Additional Refrigerant Charge for 50' to 100' (15 to 30 Meter) Line Sets
IF0600C IBF0620C	CVDF0600	DC 24	1.5 lbs - 680 g
IBF0820C IF0900C	CVDF0900	RC-21 RC-31	2 lbs - 907 g
IBT1020C	CVDT1200	RC-51	2 lbs - 907 g
IT1200C	CVDT1200		2 lbs - 907 g
IF1400C	CVDF1400	RC-20	2 lbs - 907 g
IF1800C	CVDF1800	RC-30 RC-50	2 lbs - 907 g
IF2100C	CVDF2100	RC-23 RC-33 RC-53	4 lbs - 1814 g

*Line Set	Suction Line	Liquid Line	Minimum Insulation Thickness
RC 21/31/51	5/8 inch	3/8 inch	1/2" (13 mm) Suction Line
RC 21/31/51	16 mm	10 mm	1/4" (7 mm) Liquid Line
RC 20/30/50	3/4 inch	1/2 inch	1/2" (13 mm) Suction Line
RC 20/30/50	19 mm	13 mm	1/4" (7 mm) Liquid Line
DC 22/22/52	3/4 inch	5/8 inch	1/2" (13 mm) Suction Line
RC 23/33/53	19 mm	16 mm	1/4" (7 mm) Liquid Line

# **▲**Warning

Installation of a QuietQube® Condensing Unit may require the use of special equipment for placement. Trained and qualified personnel are required for proper rigging and lifting. Holes are provided on the corners of the condensing unit to allow the use of lifting shackles.

### **Important**

Manitowoc remote systems are only approved and warranted as a complete new package. Warranty on the refrigeration system will be void if a new ice machine head section is connected to pre-existing (used) tubing or condensing units or vice versa.

### **Remote Condenser Models**

Ice Machine	Remote Condenser	Additional Amount of Refrigerant to Be Added to Nameplate Charge for 50' to 100' (15 to 30 Meter) Line Sets
IF0500N	JCF0500	1.5 lbs - 680 g
IT0500N	JCT0500	1.5 lbs - 680 g
IF0600N	JCF0900	1.5 lbs - 680 g
IF0900N	JCF0900	2 lbs - 907 g
IT1200N	JCT1200	2 lbs - 907 g
IT1500N	JCT1500	2 lbs - 907 g
IT1900N	JCT1500	2 lbs - 907 g

Line Set	Discharge Line	Liquid Line	Model
RT 20/35/50 R404A	1/2 inch (13 mm)	5/16 inch (7.9 mm)	IF0500N IF0600N IF0900N
RT 20/35/50 R410A	1/2 inch (13 mm)	5/16 inch (7.9 mm)	IT0500N IT1200N
RL 20/35/50 R410A	1/2 inch (13 mm)	3/8 inch (9.5 mm)	IT1500N IT1900N

NOTE: R404A line sets have white protective caps and R410A line sets have pink protective caps.

### **▲**Warning

# **Potential Personal Injury Situation**

The ice machine head section contains the refrigerant charge. Installation and brazing of the line sets must be performed by a properly trained and EPA certified refrigeration technician aware of the dangers of dealing with refrigerant charged equipment.

### **CALCULATING INSTALLATION DISTANCES**

### **Line Set Length**

The maximum tubing length is 100 feet (30 meters).

### **Line Set Rise/Drop**

The maximum rise is 35 feet (10.7 meters). The maximum drop is 15 feet (4.5 meters).

### **Notice**

If a line set has a rise followed by a drop, another rise cannot be made. Likewise, if a line set has a drop followed by a rise, another drop cannot be made.

### **Calculated Line Set Distance**

The maximum calculated distance is 150 feet (45 meters).

Line set rises, drops, horizontal runs (or combinations of these) in excess of the stated maximums will exceed compressor start-up and design limits. This will cause poor oil return to the compressor. Make the following calculations to make sure the line set layout is within specifications.

- 1. Insert the **measured rise** into the formula below. Multiply by 1.7 to get the **calculated rise**.
- 2. Insert the **measured drop** into the formula below. Multiply by 6.6 to get the **calculated drop**.
- Insert the measured horizontal distance into the formula below. No calculation is necessary.

4. Add together the calculated rise, calculated drop, and horizontal distance to get the total calculated distance. If this total exceeds 150 feet (45 meters), move the condenser/ condensing unit to a new location and perform the calculations again.

### **Maximum Line Set Distance Formula**

### **Notice**

The refrigeration system warranty will not apply if the Manitowoc Ice Machine and Manitowoc CVD Condensing Unit are not installed according to specifications. This warranty also will not apply if the refrigeration system is modified with a condenser, heat reclaim device, or other parts or assemblies not approved by Manitowoc.

### REMOTE CONDENSER MODELS

### Step 1 Secure the Condenser.

Through-holes are provided to secure the condenser to a curb, rack or wooden timber.

### **A**Warning

The ice machine head section contains refrigerant charge. The ice machine head section contains refrigeration valves that must remain closed until proper installation of the line sets is completed.

# **▲**Warning

Electrical power to the ice machine head section, condensing unit or condenser must be disconnected before proceeding.

### **Step 2 Route the Refrigeration Tubing.**

Route the refrigeration tubing between the ice machine head section and the condenser.

- Maximum line set exposed on rooftop is 25% of total line set length.
- A qualified person must perform all roof penetrations.
- Interconnecting wire must be routed between the ice machine and condenser.

### **Step 3 Connect the Line Set.**

In most cases, by routing the line set properly, shortening will not be necessary. When shortening or lengthening is required, do so before connecting the line set to the ice machine or the remote condenser. This prevents the loss of refrigerant in the ice machine or condenser.

The quick connect fittings on the line sets are equipped with access valves. Use these valves to recover any vapor charge from the line set.

When lengthening or shortening lines, follow good refrigeration practices, purge with nitrogen and insulate all tubing. Do not change the tube sizes. Evacuate the lines and place about 5 oz (145 grams) of vapor refrigerant charge in each line.

- 1. Remove the dust caps from the line set, condenser and ice machine.
- Apply refrigeration oil to the threads on the quick-disconnect couplers before connecting them to the condenser.
- 3. Carefully thread the female fitting to the condenser or ice machine by hand, then tighten the couplings with a wrench until they bottom out.
- Turn an additional quarter turn to ensure proper brass-to-brass seating. Torque to the following specifications:

Liquid Line	Discharge Line
10 - 12 ft lbs	35 - 45 ft lbs
13.5-16.2 N∙m	47.5-61.0 N∙m

- 5. Check all fittings and valve caps for leaks and reinstall and tighten caps.
- 6. Interconnecting line voltage wiring is used to energize and de-energize the condenser fan motor. The remote condenser voltage matches the ice machine head section voltage.

Interconnecting Wiring Connections		
Ice Machine Remote Condense		
F1	L1	
F2 L2		

Installation is finished for remote condenser models. Proceed to page 32 for start-up procedure.

### **QUIETQUBE MODELS**

### **Step 1 Secure the Condensing Unit.**

Through-holes are provided to secure the condensing unit to a curb, rack or wooden timber.

### **Step 2 Route the Refrigeration Tubing.**

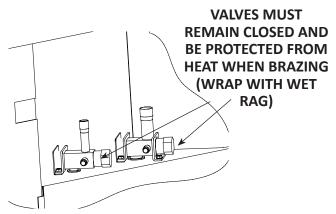
Route the refrigeration tubing between the ice machine head section and the condenser or CVD condensing unit.

- A suction line oil trap is required when rise is more than 20 feet (6 meters).
- Only one trap is allowed in the line set.
- Shorten the line set as required, do not coil line set.

### **Manitowoc S-Trap Kit**

Model	S-Trap Kit Number	Tubing Size
IBF0620C IBF0820C IBT1020C IF0600C IF0900C IT1200C	K00172	5/8 inch (16 mm)
IF1400C IF1800C IF2100C	K00166	3/4 inch (19 mm)

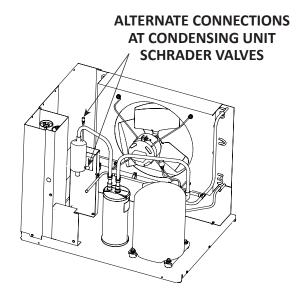
- Maximum amount of time the refrigeration system can be exposed to the atmosphere is 15 minutes.
- Purge line set with dry nitrogen while brazing.
- Shutoff valves for the line set on the ice machine must remain closed and be protected from heat during brazing.
- The condensing unit ships with a 50/50 mixture of nitrogen/helium.

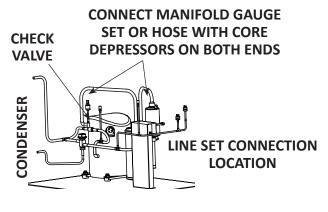


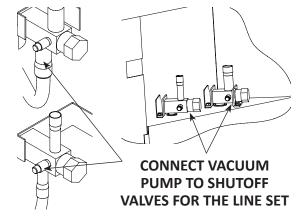
Step 3 Pressure Test and Evacuate Line Set and CVD Condensing Unit.

- Shutoff valves for the line set must remain closed until pressure testing and evacuation are complete.
- Valve core removal tools that allow for removal and installation of the valve cores without removing hoses for the manifold gauge set are recommended to decrease the evacuation time.
- Pressure test at 150 psi (1000 kPa) for a minimum of 15 minutes.
- Minimum evacuation level is 500 microns.

Pressure test the line sets and CVD Condensing Unit with 150 psi (1000 kPa) of dry nitrogen. Add nitrogen at the shutoff valves for the line set located at the back of the ice machine head section or from the access valves located in the CVD Condensing Unit. Complete the pressure test, verify no leaks are present and remove the nitrogen from the system before connecting the vacuum pump. Connect vacuum pump and evacuate system to 500 microns.



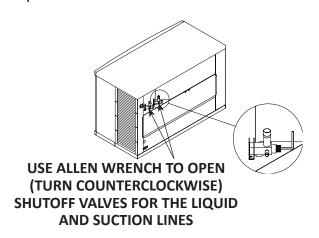




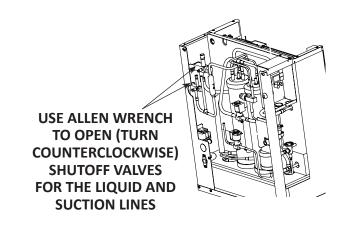
# Step 4 Open Valves for the Line Set and Receiver.

You will not hear refrigerant flow when the valves are opened. Refrigerant will not flow until the ice machine is started and the solenoid valve opens.

- All valve caps must be reinstalled, tightened and leak-checked to assure no refrigerant leakage exists.
- Counterclockwise opens all valves. Open the shutoff valves for the suction and liquid lines.

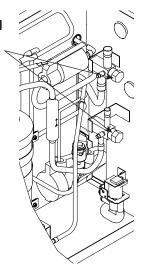


**QuietQube Models** 



**Ice Beverage Models** 

USE ALLEN WRENCH TO OPEN (TURN COUNTERCLOCKWISE) SHUTOFF VALVES FOR THE LIQUID AND SUCTION LINES



### IF1400C/IF1800C/IF2100C

### **Notice**

After opening suction, discharge and receiver service valves, refrigerant pressure will not be detected until the ice machine starts a freeze cycle and the solenoid valves energize.

# Step 5 Leak-Check the Refrigeration System.

- A. Connect power to the ice machine head section Do not connect power to the CVD condensing unit.
- B. Press the power switch and energize the ice machine for 60 seconds to equalize pressures.
- C. Disconnect power to the ice machine head section.
- D. Leak-check line set connections, S trap and all factory joints in head section and condensing unit.
- E. Connect power to the CVD condensing unit and allow system to pump down.

### **Step 6 Insulation Requirements.**

- To prevent condensation, the entire suction line, including the shutoff valve, must be insulated.
- All insulation must be airtight and sealed at both ends.

The following insulation requirements prevent condensation at 90° F (32°C) ambient temperature and 90% relative humidity. If higher humidity is expected, increase insulation thickness:

Suction Line	Liquid Line	Min. Insulation Thickness
3/4 inch	1/2 inch	Suction Line -
(19 mm)	(13 mm)	1/2" (13 mm)
5/8 inch	3/8 inch	Liquid Line -
(16 mm)	(10 mm)	1/4" (7 mm)
		Suction Line -
3/4 inch	5/8 inch	3/4" (19 mm)
(19 mm)	(16 mm)	Liquid Line -
		1/4" (7 mm)

# Step 7 Insulation for the Suction Shutoff Valve.

The insulation for the suction shutoff valve is located in the plastic bag taped to the water curtain.

### **Step 8 Ice Beverage Models Only.**

The thermostat probe must be moved from the shipping position to the ice-making position.

- The bin thermostat probe must be rotated down to enable ice contact and proper operation.
- Verify probe wire does not interfere with the water curtain.
- The control is preset and does not require programming.
- 1. Loosen thumbscrew securing probe.
- 2. Rotate the probe from horizontal to vertical position.
- 3. Tighten thumbscrew to secure probe.

### Starting the Ice Machine

Starting the ice machine and completing the Operational Checks are the responsibilities of the owner/operator.

Adjustments and maintenance procedures outlined in this manual are not covered by the warranty.

# REMOVE ICE THICKNESS PROBE SHIPPING BRACKETS

Remove and discard shipping brackets before starting the ice machine.



**Step 1** Ice machine must be programmed refer to "Setup Wizard" on page 37 for details.

**Step 2** Refer to "Descaling and Sanitizing" on page 43 and clean and sanitize the ice machine and bin before placing in operation.

**Step 3** Refer to "Ice Making Sequence of Operation" on page 39 for operational details.

# MINIMUM/MAXIMUM SLAB WEIGHT

Adjust ice thickness to maintain the correct bridge thickness and "Minimum/Maximum Slab Weight" on page 41.

### Warranty

For warranty information visit:

www.manitowocice.com/Service/Warranty

- Warranty Coverage Information
- Warranty Registration
- Warranty Verification

Warranty coverage begins the day the ice machine is installed.

### WARRANTY REGISTRATION

Completing the warranty registration process is a quick and easy way to protect your investment.

Scan the QR code with your smart device or enter the link in a web browser to complete your warranty registration.



WWW.MANITOWOCICE.COM/SERVICE/WARRANTY#WARRANTY-REGISTRATION

Registering your product insures warranty coverage and streamlines the process if any warranty work is required.

# Remote Ice Machine Usage with Non-Manitowoc Multi-Circuit Condensers

### Warranty

The sixty (60) month compressor warranty, including thirty six (36) month labor replacement warranty, shall not apply when the remote ice machine is not installed within the remote specifications. The foregoing warranty shall not apply to any ice machine installed and/or maintained inconsistent with the technical instructions provided by Manitowoc Ice. Performance may vary from Sales specifications. ARI certified standard ratings only apply when used with a Manitowoc remote condenser.

If the design of the condenser meets the specifications, Manitowoc's only approval is for full warranty coverage to be extended to the Manitowoc manufactured part of the system. Since Manitowoc does not test the condenser in conjunction with the ice machine, Manitowoc will not endorse, recommend, or approve the condenser, and will not be responsible for its performance or reliability.

# **Important**

Manitowoc warrants only complete new and unused remote packages. Guaranteeing the integrity of a new ice machine under the terms of our warranty prohibits the use of pre-existing (used) tubing or condensers.

### **Design & Burst Pressure**

Design Pressure 600 psig - 4137 kPa Burst Pressure 2500 psig - 17237 kPa

### **Head Pressure Control Valve**

Do not use a fan cycling control to try to maintain discharge pressure. Compressor failure will result. Any remote condenser connected to a Manitowoc Ice Machine must have the OEM head pressure control valve installed. Manitowoc will not accept substitute "off the shelf" head pressure control valves.

### **Fan Motor**

The condenser fan must be on during the complete ice machine freeze cycle (do not cycle on fan cycle control). The ice maker has a condenser fan motor circuit for use with a Manitowoc condenser. It is recommended that this circuit be used to control the condenser fan(s) on the multicircuit condenser to assure it is on at the proper time. Do not exceed the rated amps for the fan motor circuit listed on the ice machine's serial tag.

### **Internal Condenser Volume**

The multi-circuit condenser internal volume must not be less than or exceed that used by Manitowoc. Do not exceed internal volume and try to add charge to compensate, as compressor failure will result.

Model	Minimum ft³ (cm³)	Maximum ft <sup>3</sup> (cm <sup>3</sup> )
IT0500N	0.020	0.030
IF0500N	(566)	(850)
IF0600N/IF0900N	0.045	0.060
IT1200N	(1274)	(1699)
IT1500N/IT1900N	0.085	0.105
11120011/11190011	(2407)	(2973)

### **Heat of Rejection**

Model	Peak	Average
IF0500N	6900	6100
IT0500N	6900	6100
IF0600N	13900	9000
IF0900N	16000	13000
IT1200N	24500	20700
IT1500N	27000	23000
IT1900N	30500	26100

# **Refrigerant Charge**

The ice machine model/serial tag lists the refrigerant amount. Remote condensers and line sets contain a vapor charge only.

Model	Amount	Type
IF0500N	6.0 lbs - 2.72 kg	R404A
IT0500N	6.0 lbs - 2.72 kg	R410A
IF0600N	6.5 lbs - 2.95 kg	R404A
IF0900N	7 lbs - 3.18 kg	R404A
IT1200N	7.5 lbs - 3.40 kg	R410A
IT1500N	8.0 lbs - 3.63 kg	R410A
IT1900N	8.0 lbs - 3.63 kg	R410A
l		

Model/serial plate information overrides all data listed in this chart.

# **Quick Connect Fittings**

The ice machine and line sets come with quick connect fittings. It is recommended that matching quick connects (available through Manitowoc Distributors K00129) be installed in the multi-circuit condenser, and that a vapor "holding" charge, 5 oz. (150 ml), of proper refrigerant be added to the condenser prior to connection of the ice machine or line set to the condenser.

# Section 3 Operation



### **Touch Screen Features**

The Indigo® NXT control panel offers a series of pressure-sensitive buttons and an interactive touchscreen.

### **Buttons**

**Power Button:** Provides On/Off functions for the ice machine.

**Lock/Unlock Button:** Allows or prevents touchscreen navigation.

**Cleaning Button:** Initiates a cleaning cycle. Refer to Section 4 for details.

#### **Touchscreen**

Home screen allows viewing of ice machine status, alerts and messages. Navigation with the touchscreen provides access to menu items, machine information, settings and event logs. Setup and Energy Saver settings can be adjusted along with access to service and troubleshooting information.

NOTE: Touchscreen is to be activated with finger tips only.

**Icons:** Provide status indication and allow navigation by pressing the icon.

Operation Section 3

### **HOME SCREEN ICON DESCRIPTIONS**

Icon	Description
Home Screen	Center portion of the screen displays the current condition of the ice machine - Making ice, bin full, program mode or machine off
Alert 3	Alert icon with number of messages. Pressing this icon will display the alert log which will allow viewing and resetting of alerts
Message	Notification icon with quantity of messages. Pressing this icon will display the routine maintenance reminder screen which will allow viewing and resetting of the reminder
Menu	Menu icon will take you to the main menu
Information	Information icon provides model and serial number, installation date and other information specific to the ice machine
Service Locator	Provides contact information for your local service support - Default is the Manitowoc Ice website service locator
Lock/Unlock	Indicates if screen is locked or unlocked
LuminIce	Only visible when a LuminIce® II accessory is connected.  Blue S - Normal operation  Red S - Replace bulb  Red/Blue alternating - Incorrect bulb installed

# **Performance Specifications**

NOTE: The performance statistics are calculated based on the performance of the machine at 90 degree ambient temperature and 70 degree water temperature. The actual statistics may vary depending on your operating conditions.

Section 3 Operation

# **Setup Wizard**

Screens will automatically advance after a selection is made or press the right arrow to advance one screen, press left arrow to go back one screen. All settings can be accessed and changed without the wizard by using menu screen navigation.

Setup	Description		
Press ON/	On/Off button is used to		
<b>OFF Button</b>	start/stop ice making.		
	Only visible if model number		
Enter Model	can not be automatically		
Number	identified. The ice machine		
Number	will not start without model		
	identification.		
Select	Default is English. Scroll to		
Language	select a different language.		
Start Wizard	Setup wizard will guide ice		
Start Wizard	machine programming.		
	Detects if Ice Level Sensor,		
Accessory	LuminIce II or AuCS are		
Detection	connected.		
	Checkmark = yes - X = no		
	Only used when setup		
	features have been		
USB Setup	transferred to a USB drive.		
	Skip screen by selecting right		
_	arrow.		
Configure	Select Month/Day/Year or		
Date and	Day/Month/Year.		
Time	Select 12 hour or 24 hour		
Formats	time format.		
Set Time	Use arrows to set local time.		
Set Date	Use arrows to set date for		
	your location.		
Units	Select standard or metric.		
Brightness	Configure screen brightness		
Dilgittiess	during normal operation.		

Setup	Description		
Ice Program	Program ice machine run times or press right arrow to skip this setup.		
Cleaning Reminder	Set descale or sanitize reminder or press right arrow to skip.		
IAuCS Only when detected	Set frequency of operation when this accessory is installed.		
Air Filter Air-cooled models only	Set to ON for self-contained air cooled models.		
Water Usage	Factory default or Use less water for reverse osmosis systems or Use more water to improve clarity for unfiltered water		
Water Filter LuminIce II Only when detected	Select Yes or No.  12 month reminder is automatically set.		
Ice Level Sensor Only when detected	Reminder to rotate the sensor from shipping to operational position.		
Wizard Complete	Press right arrow or home icon to return to home screen.		

Operation Section 3

# **Menu Screen Navigation**

Select SETTINGS Icon from the Home Screen to access Main Menu screen.

Energy	Service	Settings	Reset Defaults	
Ice Program	Data	Language	Require Setup Wizard	
Water Usage	Alert Log	Reminders	Backup Current Settings	
Statistics	Manual Harvest	Time & Date	Reset To Factory Defaults	
	Control Board Replacement	Units		
	Diagnostics	Brightness +		
	Contact Information	USB		
	USB	*AuCS		
	*AuCS			
	*Prime AuCS Pump			
* Only visible when this o	* Only visible when this optional accessory is installed			

Section 3 Operation

# **Ice Making Sequence of Operation**

The power button must be depressed and the water curtain/ice dampers must be in place on the evaporator before the ice machine will start.

### **Water Purge Cycle**

The ice machine purges any remaining water from the water trough down the drain.

### **Prechill Cycle**

The refrigeration system cools the evaporator before the water pump is energized.

### **Freeze Cycle**

Water flows across the evaporator and the refrigeration system chills the evaporator. Ice builds on the evaporator and the freeze cycle continues until the ice thickness probe senses a sheet of ice has formed. The ice thickness probe signals the control board to start a harvest.

# **Harvest Cycle**

Any remaining water is purged down the drain as refrigerant gas warms the evaporator. When the evaporator warms, the sheet of cubes slides off the evaporator and into the storage bin. If all cubes fall clear of the water curtain (or ice damper) the ice machine starts another freeze cycle.

### Off Cycle

If the water curtain or ice damper are held open by ice cubes the ice machine shuts off. When the water curtain or ice damper closes, the ice machine starts a new cycle at the water purge.

### **Control Board Timers**

The control board has the following non-adjustable timers:

- The ice machine control board will set its own install date after 100 freeze and harvest cycles.
- The ice machine is locked into the freeze cycle for 6 minutes before a harvest cycle can be initiated.
- The maximum freeze time is 35 minutes at which time the control board automatically initiates a harvest sequence.
- The maximum harvest time is 7 minutes, the control board will perform a water thaw cycle and then return the ice machine to the freeze cycle.

### **Service Faults**

Service Faults are stored and indicated by the control board after three cycles. The number of cycles required to stop the ice machine varies for each Service Fault.

- Long Freeze Cycle If the freeze time reaches 35 minutes, the control board automatically initiates a harvest cycle.
   If 6 consecutive 35 minute freeze cycles occur, the ice machine stops.
- Long Harvest Cycle If the harvest time reaches 7 minutes, the control board automatically returns the ice machine to the freeze cycle. After 3 consecutive long harvest cycles the ice machine stops.

Refer to Section 5 if you receive an alert for Service Fault E01 or E02.

Operation Section 3

### **Safe Operation Mode**

Allows the ice machine to operate up to 72 hours if the ice thickness probe and/or water level probe sensors fail.

- When the control board starts the safe mode, an alert is flashed on the display to notify the end-user they have a production problem.
- The control board automatically initiates and monitors the safe mode. The control will automatically exit the safe mode if a normal signal is received from the input.
- After 72 hours, the control board will enter a standby mode and turn off.

NOTE: The control board needs a five cycle history to operate safe mode. If five cycles have never been successfully completed the ice machine will shut-off.

### **Water Assist Harvest**

When the damper/curtain does not open within 3.5 minutes in the harvest cycle the following occurs:

- 3.5 minutes The water inlet valve energizes until water touches the high water level probe.
- 4 minutes The water pump energizes.
- 6.5 to 7 minutes The water dump valve energizes.

### **Water Thaw Cycle**

When the damper/curtain does not open during the 7 minute harvest cycle the following water thaw cycle occurs:

- 7 minutes The compressor, harvest solenoid valve and dump valve deenergize.
- The water pump remains energized and the water inlet valve energizes until water touches the high water level probe.
- 2. Water is circulated over the evaporator.
- 3. Water is circulated, dumped and refilled to the high water level probe for approximately 1 hour.
- At the end of the thaw cycle the ice machine will start another freeze cycle (approximately 1 - 1.75 hour).

Section 3 Operation

# Minimum/Maximum Slab Weight

Adjust ice thickness to meet chart specifications.

Model	Minimum Ice Weight Per Cycle Ibs Grams	Maximum Ice Weight Per Cycle Ibs Grams
IF0300	2.40 lbs 1089 grams	2.80 lbs 1270 grams
IT0420 IT0450 IP0520 IT0620C	3.40 lbs 1542 grams	3.90 lbs 1769 grams
IT0500 IF0500 IP0500	4.60 lbs 2087 grams	5.20 lbs 2359 grams
IF0600 IT0750	4.12 lbs 1869 grams	4.75 lbs 2155 grams
IBF0820C	5.75 lbs 2608 grams	6.50 lbs 2948 grams
IF0900 IT0900	6.20 lbs 2812 grams	7.20 lbs 3266 grams
IT1200 IBT1020C	7.50 lbs 3402 grams	8.20 lbs 3719 grams
IF1400C	12.00 lbs 5443 grams	14.00 lbs 6350 grams
IT1500	13.20 lbs 4649 grams	14.80 lbs 5216 grams
IF1800C	15.5 lbs 7031 grams	16.75 lbs 7598 grams
IT1900	13.20 lbs 5987 grams	14.80 lbs 6713 grams
IF2100C	16.00 lbs 7257 grams	17.25 lbs 7824 grams

# **Important**

Routine adjustments and maintenance procedures are not covered by the warranty.

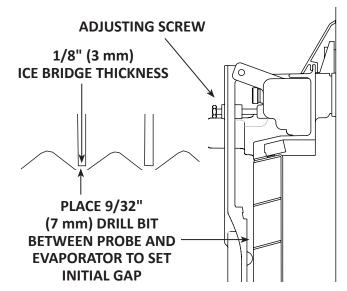
### **Ice Thickness Check**

After a harvest cycle, inspect the ice cubes in the ice storage bin. The ice thickness probe is factory-set to maintain the ice bridge thickness at 1/8" (3 mm).

NOTE: Make sure the water curtain is in place when performing this check. It prevents water from splashing out of the water trough.

- 1. Inspect the bridge connecting the cubes. It must be approximately 1/8" (3 mm) thick.
- 2. If adjustment is necessary, turn the ice thickness probe adjustment screw clockwise to increase bridge thickness, counterclockwise to decrease bridge thickness. Set a 7 mm (9/32") gap between ice thickness probe and evaporator as starting point, then adjust to achieve a 1/8" (3 mm) bridge thickness.

NOTE: Turning the adjustment one-third of a turn will change the ice thickness about 1/16" (1.5 mm).



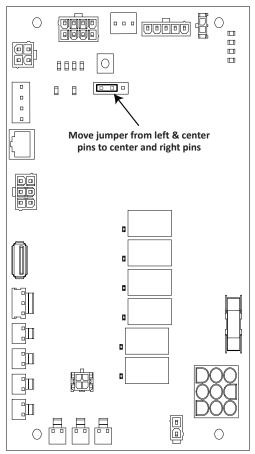
Verify the ice thickness probe wire doesn't restrict probe movement.

Operation Section 3

# Reverse Osmosis or Deionized Water Usage

When using water with low total dissolved solid content (low TDS) the water level probe sensitivity can be increased by moving the jumper over one pin.

The Electronic Control Board diagram shows the default position of the jumper covering the left and center pins. Moving the jumper to the center and right pins and enabling R.O. menu "Use less water with reverse osmosis" (Settings/Energy/Water Usage/Use Less Water With Reverse Osmosis) will increase the sensitivity of the water level probe.



# Section 4 Maintenance

# **Descaling and Sanitizing**

#### General

You are responsible for maintaining the ice machine in accordance with the instructions in this manual. Maintenance procedures are not covered by the warranty.

Descale and sanitize the ice machine every six months for efficient operation. If the ice machine requires more frequent descaling and sanitizing, consult a qualified service company to test the water quality and recommend appropriate water treatment. An extremely dirty ice machine must be taken apart for descaling and sanitizing.

Manitowoc Ice Machine Cleaner/Descaler and Sanitizer are the only products approved for use in Manitowoc ice machines.

### **Ice Machine Inspection**

Check all water fittings and lines for leaks. Also, make sure the refrigeration tubing is not rubbing or vibrating against other tubing, panels, etc.

Do not put anything (boxes, etc.) in front of the ice machine. There must be adequate airflow through and around the ice machine to maximize ice production and ensure long component life.

### **Exterior Cleaning**

Clean the area around the ice machine as often as necessary to maintain cleanliness and efficient operation.

Wipe surfaces with a damp cloth rinsed in water to remove dust and dirt from the outside of the ice machine. If a greasy residue persists, use a damp cloth rinsed in a mild dish soap and water solution. Wipe dry with a clean, soft cloth.

The exterior panels have a clear coating that is stain resistant and easy to clean. Products containing abrasives will damage the coating and scratch the panels.

- Never use steel wool or abrasive pads for cleaning.
- Never use chlorinated, citrus based or abrasive cleaners on exterior panels and plastic trim pieces.

### **Remedial Cleaning Procedure**

 This procedure descales all components in the water flow path, and is used between the bi-yearly detailed descaling and sanitizing procedure.

### **Detailed Descaling/Sanitizing Procedure**

This procedure must be performed a minimum of once every six months.

- The ice machine and bin must be disassembled descaled and sanitized.
- All ice produced during the descaling and sanitizing procedures must be discarded.

Maintenance Section 4

### **△** Caution

Use only Manitowoc approved Ice Machine Cleaner/De-scaler and Sanitizer for this application (Manitowoc Cleaner/De-scaler part number 9405463 and Manitowoc Sanitizer part number 9405653). It is a violation of Federal law to use these solutions in a manner inconsistent with their labeling. Read and understand all labels printed on bottles before use.

# **Detailed Descaling and Sanitizing Procedure**

Ice machine cleaner/de-scaler is used to remove lime scale and mineral deposits. Ice machine sanitizer disinfects and removes algae and slime.

NOTE: Although not required and dependent on your installation, removing the ice machine top cover may allow easier access.

**Step 1** Open the front door to access the evaporator compartment. Ice must not be on the evaporator during the descaling/sanitize cycle. Follow one of the methods below:

- Press the power switch at the end of a harvest cycle after ice falls from the evaporator(s).
- Press the power switch and allow the ice to melt.

### **Notice**

Never use anything to force ice from the evaporator. Damage may result.

**Step 2** Remove all ice from the bin/dispenser.

Step 3 Press the Clean button and select "Turn off when complete". Water will flow through the water dump valve and down the drain. Wait approximately 1 minute until the water trough refills and the display indicates Add Chemical. Add the proper amount of ice machine cleaner/descaler to the water trough by pouring between the water curtain and evaporator, then confirm the chemical was added.

### **△** Caution

Do not mix Cleaner/Descaler and Sanitizer solutions together. It is a violation of Federal law to use these solutions in a manner inconsistent with their labeling.

### **▲**Warning

Wear rubber gloves and safety goggles (and/or face shield) when handling Ice Machine Cleaner/Descaler or Sanitizer.

Model	Amount of Cleaner/ Descaler
IF0300/IT0420/IP0520	3 oz
IT0620	(90 ml)
IT0450/IT0500/IF0500 IP0500/IF0600/IT0750 IF0900/IT0900/IT1200	5 oz (150 ml)
IBF0620C/IBF0820C	5 oz
IBT1020C	(150 ml)
IF1400C/IT1500/IT1700	9 oz
IF1800C/IT1900/IF2100C	(265 ml)

Section 4 Maintenance

**Step 4** Wait until the cycle is complete (approximately 24 minutes). Then disconnect power to the ice machine (and dispenser when used).

### **▲**Warning

Disconnect the electric power to the ice machine at the electric service switch box.

**Step 5** Remove parts for descaling.

Refer to parts removal page 46. Continue with Step 6 when the parts have been removed.

**Step 6** Mix a solution of cleaner/descaler and lukewarm water. Depending upon the amount of mineral buildup, a larger quantity of solution may be required. Use the ratio in the table below to mix enough solution to thoroughly descale all parts.

Solution Type	Water	Mixed With
Cleaner/ Descaler	1 gal (4 L)	16 oz (475 ml) cleaner/descaler

**Step 7** Use half of the cleaner/descaler & water mixture to descale all components. The solution will foam when it contacts lime scale and mineral deposits; once the foaming stops, use a soft-bristle nylon brush, sponge or cloth (NOT a wire brush) to carefully descale the parts. Soak parts for 5 minutes (15 - 20 minutes for heavily scaled parts). Rinse all components with clean water.

**Step 8** While components are soaking, use half of the solution to descale all food zone surfaces of the ice machine and bin (or dispenser). Use a nylon brush or cloth to thoroughly descale the following ice machine areas:

- Side walls
- Base (area above water trough)
- Evaporator plastic parts including top, bottom and sides
- Bin or dispenser

Rinse all areas thoroughly with clean water.

### SANITIZING PROCEDURE

**Step 9** Mix a solution of sanitizer and lukewarm water.

Solution Type	Water	Mixed With
Sanitizer	3 gal (12 L)	2 oz (60 ml) sanitizer

**Step 10** Use half of the sanitizer/ water solution to sanitize all removed components. Use a spray bottle to liberally apply the solution to all surfaces of the removed parts or soak the removed parts in the sanitizer/water solution. Do not rinse parts after sanitizing.

Maintenance Section 4

**Step 11** Use half of the sanitizer/water solution to sanitize all food zone surfaces of the ice machine and bin (or dispenser). Use a spray bottle to liberally apply the solution. When sanitizing, pay particular attention to the following areas:

- Side walls
- Base (area above water trough)
- Evaporator plastic parts including top, bottom and sides
- Bin or dispenser

Do not rinse the sanitized areas.

**Step 12** Replace all removed components and wait 20 minutes.

**Step 13** Press the Clean button and select "Make ice when complete". Water will flow through the water dump valve and down the drain. Wait approximately 1 minute until the water trough refills and the display indicates Add Chemical. Add the proper amount of ice machine sanitizer to the water trough by pouring between the water curtain and evaporator, then confirm the chemical was added.

Model	Amount of Sanitizer
IF0300/IT0420/IT0450/IT0500	
IF0500/IP0500/IP0520/IF0600	3 oz
IT0620/IBF0620C/IT0750	(90 ml)
IBF0820C/IF0900/IT0900	
IT1200/IBT1020C	3.5 oz
111200/18110200	(104 ml)
IT1500/IT1900	6 oz
111300/111900	(180 ml)
IF1400C/IF1800C/IF2100C	12 oz
1F1400C/1F1800C/1F2100C	(355 ml)

**Step 14** Close and secure the front door. The ice machine will automatically start ice making after the sanitize cycle is complete (approximately 24 minutes).

# Parts Removal for Detailed Descaling and Sanitizing

Single evaporator is shown; Each evaporator will have a distribution tube and water curtain/damper.

### A. Remove the water curtain(s)

- Gently flex the curtain in the center and remove it from the right side.
- Slide the left pin out.

### B. Remove the ice thickness probe

- Compress the hinge pin on the top of the ice thickness probe.
- Pivot the ice thickness probe to disengage one pin then the other. The ice thickness probe can be descaled and sanitized at this point without complete removal. If complete removal is desired, disconnect the ice thickness control wiring from the control board.

### C. Remove the water trough

- Depress tabs on right and left side of the water trough.
- Allow front of water trough to drop as you pull forward to disengage the rear pins.

Section 4 Maintenance

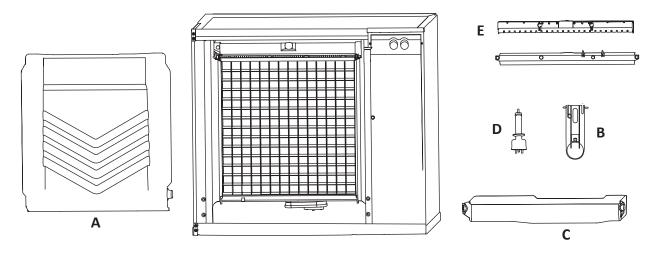
### D. Remove the water level probe

- Pull the water level probe straight down to disengage.
- Lower the water level probe until the wiring connector is visible.
- Disconnect the wire lead from the water level probe.
- Remove the water level probe from the ice machine.

### E. Remove the water distribution tube(s)

NOTE: Thumbscrews for the distribution tube are retained to prevent loss. Loosen thumbscrews, but do not pull thumbscrews out of distribution tube.

- Loosen the two outer screws (do not remove screws completely because they are retained to prevent loss) and pull forward on the distribution tube to release from slip joint.
- Disassemble distribution tube by loosening the two (2) middle thumbscrews and dividing the distribution tube into two pieces.



Maintenance Section 4

# **Remedial Cleaning Procedure**

This procedure descales all components in the water flow path, and is used to descale the ice machine between the bi-yearly detailed descaling and sanitizing procedure.

Ice machine cleaner/descaler is used to remove lime scale and mineral deposits. Ice machine sanitizer disinfects and removes algae and slime.

NOTE: Although not required and dependent on your installation, removing the ice machine top cover may allow easier access.

**Step 1** Ice must not be on the evaporator during the clean/sanitize cycle. Follow one of the methods below:

- Press the power switch at the end of a harvest cycle after ice falls from the evaporator(s).
- Press the power switch and allow the ice to melt.

#### **Notice**

Never use anything to force ice from the evaporator. Damage may result.

**Step 2** Open the front door to access the evaporator.

**Step 3** Press the Clean button and select "Make ice when complete". Water will flow through the water dump valve and down the drain. Wait approximately 1 minute until the water trough refills and the display indicates Add Chemical. Add the proper amount of ice machine descaler to the water trough by pouring between the water curtain and evaporator, then confirm the chemical was added.

Model	Amount of Cleaner/Descaler
IF0300/IT0420	3 oz
IP0520/IT0620	(90 ml)
IT0450/IT0500/IF0500	
IP0500/IF0600	5 oz
IT0750/IF0900/IT0900	(150 ml)
IT1200	
IBF0620C/IBF0820C	5 oz
IBT1020C	(150 ml)
IF1400C/IT1500	0.07
IF1800C	9 oz
IT1900/IF2100C	(265 ml)

**Step 4** Close and secure the front door. The ice machine will automatically start ice-making after the clean cycle is complete (approximately 24 minutes).

Section 4 Maintenance

# **Cleaning the Air Filter and Condenser**

The washable filter on self-contained ice machines is designed to catch dust, dirt, lint and grease. Clean the filter once a month with mild soap and water.

A dirty condenser restricts airflow, resulting in excessively high operating temperatures. This reduces ice production and shortens component life.

#### **A**Warning

Disconnect electric power to the ice machine at the electric service switch before cleaning the air filter or the condenser. The condenser fins are sharp; Use care when removing or installing the air filter.

- Clean the condenser at least every six months.
- Shine a flashlight through the condenser to check for dirt between the fins.
- Blow compressed air or rinse with water from the inside out (opposite direction of airflow).
- If dirt still remains, call a service agent to clean the condenser.

# **Removal from Service/Winterization**

#### **All Models**

- 1. Descale and sanitize the ice machine.
- 2. Turn off the water supply, disconnect and drain the incoming ice-making water line at the rear of the ice machine and drain the water trough.
- 3. Energize the ice machine, wait one minute for the water inlet valve to open and blow compressed air in both the incoming water and the drain openings in the rear of the ice machine to remove all water.

#### WATER-COOLED MODELS ONLY

- Disconnect the incoming water and drain lines from the water-cooled condenser.
- Insert a large screwdriver between the bottom spring coils of the water regulating valve and pry open the Water Regulating Valve.
- Hold the valve open and blow compressed air through the condenser until no water remains.

#### **All Models**

- 4. Press the power switch and disconnect electrical power at the main disconnect/circuit breaker.
- 5. Fill spray bottle with sanitizer and spray all interior food zone surfaces. Do not rinse and allow to air dry.
- 6. Replace all panels.

Maintenance Section 4

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# Section 5 Troubleshooting

# **Before Calling for Service Checklist**

If a problem arises during operation of your ice machine, follow the checklist below before calling service. Routine adjustments and maintenance procedures are not covered by the warranty.

Problem	Possible Cause	To Correct
Ice machine does not operate.	No electrical power to the ice machine and/or condensing unit.	Replace the fuse/reset the breaker/turn on the main switch.
	High pressure cutout tripping.	Clean condenser coil. (See page 49)
	Energy Saver or other field entered programming is stopping ice machine.	Reset to factory defaults.
	Water curtain off or stuck open.	Water curtain must be installed and swinging freely.
	Ice machine is not turned on.	Press power button, display must indicate "Making Ice".
	IB Models Only - Dispenser ice level thermostat is open.	Adjust thermostat to maintain correct dispenser level.
Ice machine stops, and can be restarted by pressing the power switch.	Service Fault feature stopping the ice machine.	Refer to "Service Faults" on page 53.
Ice machine does not release ice or is slow to	Ice machine is dirty.	Descale and sanitize the ice machine. (See page 43)
harvest.	Ice machine is not level.	Level the ice machine.
	Low air temperature around ice machine head section.	Air temperature must be at least 35° (2°C).
	Fan cycle control does not de- energize condenser fan motor.	Call for service.
	Water regulating valve incorrectly adjusted or will not close.	Check for water at condenser drain outlet in harvest cycle. Contact a qualified service company to adjust/replace valve if water is present.

Problem	Possible Cause	To Correct
Ice machine does not cycle into harvest mode.	The six-minute freeze time lock-in has not expired yet.	Wait for the freeze lock-in to expire.
	Ice thickness probe is dirty.	Descale and sanitize the ice machine. (See page 43)
	Ice thickness probe is disconnected.	Connect the probe to the control board.
	Ice thickness probe is out of adjustment.	Adjust the ice thickness probe. (See page 41)
	Uneven ice fill (thin at the top of evaporator).	Verify sufficient water level in sump trough. Contact a qualified service company to check refrigeration system.
Ice quality is poor (soft or not clear).	Poor incoming water quality.	Contact a qualified service company to test the quality of the incoming water and make appropriate filter recommendations.
	Water filtration is poor.	Replace the filter.
	Ice machine is dirty.	Descale and sanitize the ice machine. (See page 43)
	Water dump valve is not working.	Disassemble and clean the water dump valve.
	Water softener is working improperly (if applicable).	Repair the water softener.
Ice machine produces shallow or incomplete	Ice thickness probe is out of adjustment.	Adjust the ice thickness probe. (See page 41)
cubes, or the ice fill pattern on the evaporator	Water trough level is too low.	Check the water level probe position.
is incomplete.	Water inlet valve filter screen is dirty.	Remove the water inlet valve and clean the filter screen.
	Water filtration is poor.	Replace the filter.
	Hot incoming water.	Connect the ice machine to a cold water supply. (See page 22)
	Water inlet valve is not working.	Replace the water inlet valve.
	Incorrect incoming water pressure.	Water pressure must be 20 psi - 80 psi (140 kPa - 550 kPa).
	Ice machine is not level.	Level the ice machine.

Problem	Possible Cause	To Correct
Low ice capacity.	Water inlet valve filter screen is dirty.	Remove the water inlet valve and clean the filter screen.
	Incoming water supply is shut off.	Open the water service valve.
	Water inlet valve stuck open or leaking.	Press the power button and turn off the ice machine, if water continues to enter water trough, replace the water inlet valve.
	The condenser is dirty.	Clean the condenser.
	High air temperature entering condenser.	Refer to minimum/maximum air temperature chart for your model on page 14.
	The harvest assist air compressor is not functioning.	Call for service.

#### **Service Faults**

In addition to the standard safety controls, such as the high pressure cutout, your Manitowoc ice machine features built-in service faults which will stop the ice machine if conditions arise which could cause a major component failure.

Before calling for service, re-start the ice machine using the following procedure:

- Press the power button. The display reads "Off". Press the power button again, and the display reads "Making Ice".
  - A. If a service fault has stopped the ice machine, it will restart after a short delay. Proceed to step 2.
  - B. If the ice machine does not restart, see "Ice machine does not operate" on page 51.

- 2. Allow the ice machine to run to determine if the condition repeats.
  - A. If the ice machine stops again, the condition has repeated. Call for service.
  - B. If the ice machine continues to run, the condition has corrected itself. Allow the ice machine to continue running.

Troubleshooting Section 5

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MANITOWOC ICE 2110 SOUTH 26TH STREET, MANITOWOC, WI 54220

800-545-5720 WWW.MANITOWOCICE.COM



Welbilt offers fully-integrated kitchen systems and our products are backed by KitchenCare® aftermarket parts and service. Welbilt's portfolio of award-winning brands includes Cleveland™, Convotherm®, Crem®, Delfield®, fitkitchen®, Frymaster®, Garland®, Kolpak®, Lincoln®, Manitowoc®, Merco®, Merrychef® and Multiplex®.

Bringing innovation to the table • welbilt.com



Project #:		
Item #:		



Model RCS10TS shown

# Medium Volume This category of microwave is ideal for...

#### **Applications:**

- Pizza restaurants
- Casual dining
- Clubs
- Deli

#### Defrost:

- Defrosts most frozen food products

All ACP, Inc. commercial ovens are backed by our Culinary Center. Call us with any question regarding food preparation, menu development and cooking times. 866-426-2621.

# **Medium Volume**

#### Amana Commercial Microwave Model RCS10TS

#### **Power Output**

- 1000 watts of power.
- Five power levels for consistent, delicious results for frozen, refrigerated and fresh foods - from the freezer to table in minutes.

#### Easy to Use

- Up to 100 programmable menu items simplifies cooking and ensures consistent results.
- Four stage cooking option for easy one-touch cooking.
- Multiple quantity pad calculates the proper cooking times for multiple portions.
- User friendly touch controls are easy to use.
- Time entry option for added flexibility.
- Digital display with countdown timer for simple operation and "at-a-glance" monitoring.
- Braille touch pads are ADA compliant.
- See-through door and lighted interior for monitoring without opening the door.
- 1.2 cubic ft. (.034m³) capacity accommodates a 14" (356 mm) platter, prepackaged foods and single servings.
- Stackable to save valuable counter space.

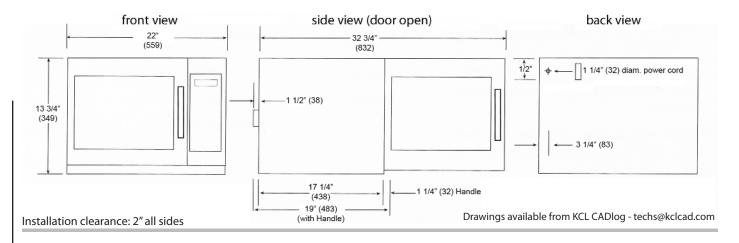
#### Easy to Maintain

- Stainless steel exterior and interior for easy cleaning and a professional look.
- Non-removable air filter protects oven components.
- Constructed to withstand the foodservice environment.
- Limited 3 year warranty.
- Backed by the ACP, Inc. 24/7 ComServ Support Center, 866-426-2621.
- UL and ETL Listed.





# Amana Commercial Microwave Model RCS10TS | Medium Volume



Specifications			
Model	RCS10TS	UPC Code 728	028020724
Configuration	Countertop		
Control System	Touch		
Programmable Control	10		
Settings Programmable	100		
Max. Cooking Time	60:00		
Power Levels	5		
Defrost	Yes		
Time Entry Option	Yes		
Microwave Distribution	Rotating anten	na, top	
Magnetron(s)	1		
Display	LED		
Stackable	Yes		
Stage Cooking	Yes, 4		
Interior Light	Yes		
Door Handle	Grab & Go		
Signal	End of cycle, adjustable		
Air Filter	Non-removable	with cleaning	reminder
Multiple Portion Setting	Yes, X2		
Exterior Dimensions	H 13¾" (349.25)		D*19" (482.6)
Cavity Dimensions	H 8½" (216)	W 14½" (368.3	) D 15" (381)
Door Depth	34" (864 mm), 9	0°+ door open	
Usable Cavity Space	1.2 cubic ft. (.03	34 m³)	
Exterior Finish	Stainless steel		
Interior Finish	Stainless steel		
Power Consumption	1550 W, 13 A		
Power Output**	1000 W** Micro	wave	
Power Source	120V, 60 Hz, 15	A single phase	
Plug Configuration / Cord	NEMA 5-15	5 ft. (1.5m)	
Frequency	2450 MHz		
Product Weight	41 lbs. (18.6 kg.	)	
Ship weight (approx.)	48 lbs. (21.8 kg	.)	
UPS Shippable	Yes		
Shipping Carton Size	H 17 ¼" (432)	W 25 ½" (660)	D 20 ½" (508)

#### **Specifications**

Commercial microwave 10 touch pad control panel shall be programmable with the ability to program up to 100 menu items with two multiple portions. Touch pad shall include Braille for ADA compliance. Cooking timer shall be 60 minute, countdown style with a time entry option and an adjustable end of cycle audible signal. LED display shall be a backlit. There shall be 5 power levels, including defrost and 4 cooking stages. Microwave output shall be 1000 watts distributed by one magnetron with a rotating top antenna to provide superior even heating throughout the cavity. Durable door shall have a tempered glass window and a grab and go handle with a 90°+ opening for easy access. An interior light shall facilitate monitoring without opening the door. The large 1.2 cubic ft. (.034 m³) cavity shall accommodate a 14" (356 mm) platter. Interior ceramic shelf shall be sealed and recessed on oven bottom to reduce plate-to-shelf edge impact. Oven shall have a stainless steel interior and exterior and be stackable to save counter and shelf space. Front air filter shall be permanently affixed to the front of the oven and have a clean filter reminder. Microwave oven shall comply with standards set by the U.S Department of Health and Human Services, UL for safety and ETL for sanitation.



#### Warranty

Limited 3 year warranty:

Year 1 - parts, labor, and travel are covered.

Years 2 - 3 - magnetron tube (part only) is covered.

All products are backed by the ACP, Inc. 24/7 ComServ Support Center.



Measurements in () are millimeters

- \* Includes handle
- \*\* IEC 705 Tested



Product of the U.S.A.

Printed in the U.S.A.

# INSTALLATION INSTRUCTIONS 30" (76.2 CM) FREESTANDING ELECTRIC RANGE WITH DOUBLE OVENS

# INSTRUCTIONS D'INSTALLATION POUR CUISINIÈRE ÉLECTRIQUE AUTOPORTANTE AVEC FOURS DOUBLES DE 30" (76,2 CM)

#### Table of Contents/Table des matières

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# **RANGE SAFETY**

#### Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word "DANGER" or "WARNING." These words mean:

# **ADANGER**

You can be killed or seriously injured if you don't immediately follow instructions.

# AWARNING

You can be killed or seriously injured if you don't follow instructions.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

#### **IMPORTANT:**

Save for local electrical inspector's use.

#### **IMPORTANT:**

À conserver pour consultation par l'inspecteur local des installations électriques.

# AWARNING



**Tip Over Hazard** 

A child or adult can tip the range and be killed.

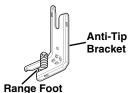
Install anti-tip bracket to floor or wall per installation instructions.

Slide range back so rear range foot is engaged in the slot of the anti-tip bracket.

Re-engage anti-tip bracket if range is moved.

Do not operate range without anti-tip bracket installed and engaged.

Failure to follow these instructions can result in death or serious burns to children and adults.



To verify the anti-tip bracket is installed and engaged:

- · Slide range forward.
- · Look for the anti-tip bracket securely attached to floor or wall.
- Slide range back so rear range foot is under anti-tip bracket.
- See installation instructions for details.

# **INSTALLATION REQUIREMENTS**

#### **Tools and Parts**

Gather the required tools and parts before starting installation. Read and follow the instructions provided with any tools listed here.

#### **Tools Needed**

- Tape measure
- Level
- Phillips screwdriver
- Flat-blade screwdriver
- Wrench or pliers
- 3/8" nut driver
- Hand or electric drill
- 1/8 (3.2 mm) drill bit

#### Parts supplied

Check that all parts are included.

- 3 10-32 hex nuts (attached to terminal block)
- 3 Terminal lugs
- Oven racks
- 2 #12 x 1<sup>5</sup>/<sub>8</sub>" (4.1 cm) screws (for mounting anti-tip bracket)
- Anti-tip bracket (taped inside upper oven with package containing literature)

Anti-tip bracket must be securely mounted to back wall or floor. Thickness of floor may require longer screws to anchor bracket to sub floor. Longer screws are available from your local hardware store.

#### Parts needed

#### If using a power supply cord:

- A UL Listed power supply cord kit marked for use with ranges. The cord should be rated at 250 V minimum, 40 A or 50 A that is marked for use with nominal 13/8" (3.5 cm) diameter connection opening and must end in ring terminals or open-end spade terminals with upturned ends.
- A UL Listed strain relief.

Check local codes. Check existing electrical supply. See the "Electrical Requirements" section.

It is recommended that all electrical connections be made by a licensed, qualified electrical installer.

#### **Location Requirements**

**IMPORTANT:** Observe all governing codes and ordinances.

- It is the installer's responsibility to comply with installation clearances specified on the model/serial/rating plate. The model/serial/rating plate is located behind the control panel.
- To eliminate the risk of burns or fire by reaching over-heated surface units, cabinet storage space located above the surface units should be avoided. If cabinet storage is to be provided, the risk can be reduced by installing a range hood that projects horizontally a minimum of 5" (12.7 cm) beyond the bottom of the cabinets.
- Cabinet opening dimensions that are shown must be used.
   Given dimensions are minimum clearances.
- The floor anti-tip bracket must be installed. To install the anti-tip bracket shipped with the range, see the "Install Anti-Tip Bracket" section.
- Grounded electrical supply is required. See the "Electrical Requirements" section.

**IMPORTANT:** To avoid damage to your cabinets, check with your builder or cabinet supplier to make sure that the materials used will not discolor, delaminate or sustain other damage. This range has been designed in accordance with the requirements of UL and CSA International and complies with the maximum allowable wood cabinet temperatures of 194°F (90°C).

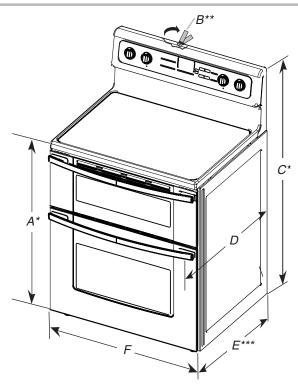
#### **Mobile Home - Additional Installation Requirements**

The installation of this range must conform to the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 (formerly the Federal Standard for Mobile Home Construction and Safety, Title 24, HUD Part 280). When such standard is not applicable, the Standard for Manufactured Home Installations, ANSI A225.1/NFPA 501A or with local codes.

#### Mobile home installations require:

- When this range is installed in a mobile home, it must be secured to the floor during transit. Any method of securing the range is adequate as long as it conforms to the standards listed above.
- Four-wire power supply cord or cable must be used in a mobile home installation. The appliance wiring will need to be revised. See the "Electrical Connection" section.

#### **Product Dimensions**



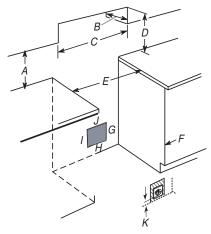
- A. 35<sup>3</sup>/<sub>4</sub>" ± <sup>1</sup>/<sub>8</sub>" (90.8 cm ± 0.3 cm) cooktop height (minimum) with leveling legs screwed all the way in\*
- B. Model/serial/rating plates (located behind the control panel)\*\*
- C. 47<sup>1</sup>/<sub>8</sub>" ± <sup>1</sup>/<sub>8</sub>" (120.3 cm ± 0.3 cm) overall height (minimum) with leveling legs screwed all the way in\*
- D. 28<sup>1</sup>/<sub>2</sub>" ± <sup>1</sup>/<sub>4</sub>" (72.4 cm ± 0.6 cm) depth with handle
- E. 26<sup>1</sup>/<sub>8</sub>" ± <sup>1</sup>/<sub>8</sub>" (66.4 cm ± 0.3 cm)\*\*\*
- F. 29<sup>15</sup>/<sub>16</sub>" ± <sup>1</sup>/<sub>16</sub>" (76.0 cm ± 0.2 cm) width
- \* Range can be raised approximately 1" (2.5 cm) by adjusting the leveling legs.
- \*\* Model/serial/rating plates may be rotated up from behind the control panel for viewing from the front of the range.
- \*\*\* Excludes handle. Dimension given is from wall to front of oven door and will vary based on electric outlet receptacle installation.

#### **Cabinet Dimensions**

Cabinet opening dimensions shown are for 25" (63.5 cm) countertop depth, 24" (61.0 cm) base cabinet depth, and 36" (91.4 cm) countertop height.

**IMPORTANT:** If installing a range hood or microwave hood combination above the cooking surface, follow the range hood or microwave hood combination installation instructions for dimensional clearances above the cooktop surface.

A freestanding range may be installed next to combustible walls with zero clearance.



- A. 18" (45.7 cm) upper cabinet to countertop
- B. 13" (33.0 cm) upper cabinet depth
- C. 30" (76.2 cm) min. opening width
- D. For minimum clearance to the top of the cooktop, see NOTE.
- E. U.S.A.: 30" (76.2 cm) min. opening width Canada: 31" (78.7 cm) min. opening width
- F. Cabinet door or hinge should not extend into cutout\*
- G. 1<sup>1</sup>/<sub>2</sub>" (3.8 cm) min. from right side cabinet
- H. 2" (5.1 cm) min. from floor
- I. 7" (17.8 cm) height
- J. 8" (20.3 cm) width
- K. 3<sup>1</sup>/<sub>2</sub>" (8.9 cm) min. from floor

Proper positioning of outlet shown above.

\* Nothing located in shaded areas can extend more than 11/2" (3.8 cm) from wall or range will not slide all the way back.

**NOTE:** 24" (61.0 cm) minimum when bottom of wood or metal cabinet is covered by not less than <sup>1</sup>/<sub>4</sub>" (0.64 cm) flame-retardant millboard covered with not less than No. 28 MSG sheet steel, 0.015" (0.4 mm) stainless steel, 0.024" (0.6 mm) aluminum, or 0.020" (0.5 mm) copper.

30" (76.2 cm) minimum clearance between the top of the cooking platform and the bottom of an uncovered wood or metal cabinet.

# Electrical Requirements - U.S.A. Only

If codes permit and a separate ground wire is used, it is recommended that a qualified electrical installer determine that the ground path and wire gauge are in accordance with local codes.

Do not use an extension cord.

Be sure that the electrical connection and wire size are adequate and in conformance with the National Electrical Code, ANSI/ NFPA 70-latest edition and all local codes and ordinances.

A copy of the above code standards can be obtained from:

National Fire Protection Association 1 Batterymarch Park Quincy, MA 02169-7471

**WARNING:** Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service technician if you are in doubt as to whether the appliance is properly grounded. Do not modify the power supply cord plug. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

#### **Electrical Connection**

To properly install your range, you must determine the type of electrical connection you will be using and follow the instructions provided for it here.

- Range must be connected to the proper electrical voltage and frequency as specified on the model/serial/ rating plate. The model/serial/ rating plate is located behind the control panel. Refer to the figures in "Product Dimensions" in the "Location Requirements" section.
- This range is manufactured with the neutral terminal connected to the cabinet. Use a 3-wire, UL Listed, 40- or 50- amp power supply cord (pigtail) (see the following Range Rating chart). If local codes do not permit ground through the neutral, use a 4-wire power supply cord rated at 250 V, 40 or 50 A and investigated for use with ranges.

Range Rating*		Specified Rating of Power Supply Cord Kit and Circuit Protection
120/240 Volts	120/208 Volts	Amps
8.8 - 16.5 KW	7.8 - 12.5 KW	40 or 50**
16.6 - 22.5 KW	12.6 - 18.5 KW	50

<sup>\*</sup>The NEC calculated load is less than the total connected load listed on the model/serial/ rating plate.

- A circuit breaker is recommended.
- The range can be connected directly to the circuit breaker box (or fused disconnect) through flexible or nonmetallic sheathed, copper, or aluminum cable. See the "Electrical Connection - U.S.A. Only" section.
- Allow 2 to 3 ft (61.0 cm to 91.4 cm) of slack in the line so that the range can be moved if servicing is ever necessary.
- A UL Listed conduit connector must be provided at each end of the power supply cable (at the range and at the junction box).
- Wire sizes and connections must conform with the rating of the range.
- The wiring diagram is located on the Tech Sheet.
- The Tech Sheet is located on the back of the range inside a clear plastic bag.

#### If connecting to a 4-wire system:

This range is manufactured with the ground connected to the neutral by a link. The ground must be revised so the green ground wire of the 4-wire power supply cord is connected to the cabinet. See the "Electrical Connection - U.S.A. Only" section.

Grounding through the neutral conductor is prohibited for new branch-circuit installations (1996 NEC); mobile homes; and recreational vehicles, or an area where local codes prohibit grounding through the neutral conductor.

When a 4-wire receptacle of NEMA Type 14-50R is used, a matching UL Listed, 4-wire, 250 V, 40 or 50 A, range power supply cord (pigtail) must be used. This cord contains 4 copper conductors with ring terminals or open-end spade terminals with upturned ends, terminating in a NEMA Type 14-50P plug on the supply end.

The fourth (grounding) conductor must be identified by a green or green/yellow cover and the neutral conductor by a white cover. Cord should be Type SRD or SRDT with a UL Listed strain relief and be at least 4 ft (1.22 m) long.



4-wire receptacle (14-50R)

The minimum conductor sized for the copper 4-wire power cord are:

40-amp circuit

2 No.-8 conductors

1 No.-10 white neutral

1 No.-10 green grounding

#### If connecting to a 3-wire system:

Local codes may permit the use of a UL Listed, 3-wire, 250 V, 40 or 50 A range power supply cord (pigtail). This cord contains 3 copper conductors with ring terminals or open-end spade terminals with upturned ends, terminating in a NEMA Type 10-50P plug on the supply end. Connectors on the appliance end must be provided at the point the power supply cord enters the appliance. This uses a 3-wire receptacle of NEMA Type 10-50R.



3-wire receptacle (10-50R)

<sup>\*\*</sup> If connecting to a 50-amp circuit, use a 50-amp rated cord with kit. For 50-amp rated cord kits, use kits that specify use with a nominal 13/8" (34.9 mm) diameter connection opening.

# **Electrical Requirements - Canada Only**

# AWARNING



**Electrical Shock Hazard** 

Electrically ground range.

Failure to do so can result in death, fire, or electrical shock.

If codes permit and a separate ground wire is used, it is recommended that a qualified electrical installer determine that the ground path is adequate and wire gauge are in accordance with local codes.

Be sure that the electrical connection and wire size are adequate and in conformance with CSA Standard C22.1, Canadian Electrical Code, Part 1 - latest edition, and all local codes and ordinances.

A copy of the above code standards can be obtained from:

Canadian Standards Association 178 Rexdale Blvd. Toronto, ON M9W 1R3 CANADA

 Check with a qualified electrical installer if you are not sure the range is properly grounded.

Range Rating*		Specified Rating of Power Supply Cord Kit and Circuit Protection
120/240 Volts	120/208 Volts	Amps
8.8 - 16.5 KW	7.8 - 12.5 KW	40 or 50**
16.6 - 22.5 KW	12.6 - 18.5 KW	50

- \*The NEC calculated load is less than the total connected load listed on the model/serial/rating plate.
- \*\* If connecting to a 50-amp circuit, use a 50-amp rated cord with kit. For 50-amp rated cord kits, use kits that specify use with a nominal 13/s" (34.9 mm) diameter connection opening.
- A time-delay fuse or circuit breaker is recommended.
- This range is equipped with a CSA International Certified Power Cord intended to be plugged into a standard 14-50R wall receptacle. Be sure the wall receptacle is within reach of range's final location.



Do not use an extension cord.

# INSTALLATION INSTRUCTIONS

# **Unpack Range**

# AWARNING

**Excessive Weight Hazard** 

Use two or more people to move and install range. Failure to do so can result in back or other injury.

- Remove shipping materials, tape, and film from the range. Keep cardboard bottom under range.
- 2. Remove oven racks and parts package from inside oven.
- 3. To place range on its back, take 4 cardboard corners from the carton. Stack one cardboard corner on top of another. Repeat with the other 2 corners. Place them lengthwise on the floor behind the range to support the range when it is laid on its back.
- **4.** Using 2 or more people, firmly grasp the range and gently lay it on its back on the cardboard corners.
- 5. Pull cardboard bottom firmly to remove.
- 6. Use an adjustable wrench to loosen the leveling legs.
- Place cardboard or hardboard in front of range. Using 2 or more people, stand range back up onto cardboard or hardboard.

# **Adjust Leveling Legs**

 If range height adjustment is necessary, use a wrench or pliers to loosen the 4 leveling legs.

This may be done with the range on its back or with the range supported on 2 legs after the range has been placed back to a standing position.

**NOTE:** To place range back up into a standing position, put a sheet of cardboard or hardboard in front of range. Using 2 or more people, stand range back up onto the cardboard or hardboard.

2. Adjust the leveling legs to the correct height. Leveling legs can be loosened to add up to a maximum of 1" (2.5 cm). A minimum of 3/16" (5.0 mm) is needed to engage the anti-tip

**NOTE:** If height adjustment is made when range is standing, tilt the range back to adjust the front legs, then tilt forward to adjust the rear legs.

3. When the range is at the correct height, check that there is adequate clearance under the range for the anti-tip bracket. Before sliding range into its final location, check that the anti-tip bracket will slide under the range and onto the rear leveling leg prior to anti-tip bracket installation.

# **Install Anti-Tip Bracket**

# AWARNING



**Tip Over Hazard** 

A child or adult can tip the range and be killed.

Install anti-tip bracket to floor or wall per installation instructions.

Slide range back so rear range foot is engaged in the slot of the anti-tip bracket.

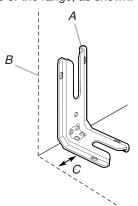
Re-engage anti-tip bracket if range is moved.

Do not operate range without anti-tip bracket installed and engaged.

Failure to follow these instructions can result in death or serious burns to children and adults.

- Remove the anti-tip bracket that is taped inside the upper oven with the package containing literature.
- Determine which mounting method to use: floor or wall. If you have a stone or masonry floor, you can use the wall mounting method.

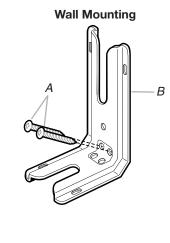
**3.** Determine and mark edge of range in the cutout space. The mounting bracket can be installed on either the left side or right side of the cutout. Position mounting bracket in cutout so that right (or left) edge of the bracket is <sup>15</sup>/<sub>16</sub>" (2.4 cm) from the marked edge of the range, as shown.



- A. Anti-tip bracket
- B. Mark edge of range.
- C. 15/16" (2.4 cm)
- Drill two <sup>1</sup>/<sub>8</sub>" (3.0 mm) holes that correspond to the bracket holes of the determined mounting method. See the following illustrations.

# Floor Mounting A B

A. #12 x 1<sup>5</sup>/<sub>8</sub>" (4.1 cm)screws B. Anti-tip bracket



A. #12 x 1<sup>5</sup>/<sub>8</sub>" (4.1 cm)screws B. Anti-tip bracket

 Using a Phillips screwdriver, mount anti-tip bracket to the wall or floor with the two #12 x 1<sup>5</sup>/8"(4.1 cm) screws provided.

# **Electrical Connection - U.S.A. Only**

#### **Power Supply Cord**

# **AWARNING**



**Electrical Shock Hazard** 

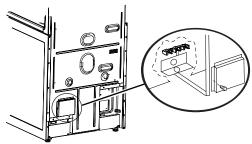
Disconnect power before servicing.

Use a new 40 amp power supply cord.

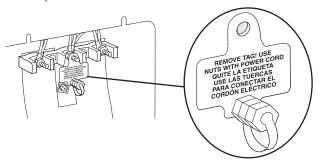
Plug into a grounded outlet.

Failure to follow these instructions can result in death, fire, or electrical shock.

- 1. Disconnect power.
- Use Phillips screwdriver to remove the terminal block cover screw located on the back of the range. Pull cover down and toward you to remove cover.



3. Remove plastic tag holding three 10-32 hex nuts from the middle post of the terminal block.



4. Add strain relief.

#### **Direct Wire**

# **AWARNING**



**Electrical Shock Hazard** 

Disconnect power before servicing.

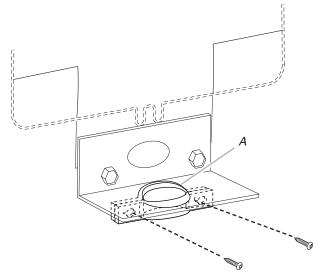
Use 8 gauge copper or 6 gauge aluminum wire.

Electrically ground range.

Failure to follow these instructions can result in death, fire, or electrical shock.

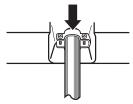
#### Style 1: Power supply cord strain relief

Assemble a UL Listed strain relief in the opening.



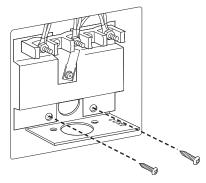
A. UL Listed strain relief

- Feed the power supply cord through the strain relief in the cord/conduit plate on bottom of range. Allow enough slack to easily attach the wiring to the terminal block.
- Tighten strain relief screw against the power supply cord.

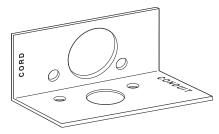


#### Style 2: Direct wire strain relief

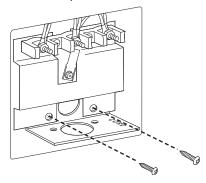
 Use Phillips screwdriver to remove screws and slide cord/ conduit plate down and out.



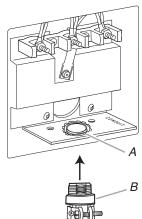
 Position cord/conduit plate as shown in the following illustration.



■ Replace cord/conduit plate and insert screws.



Assemble a UL Listed conduit connector in the opening.



- A. Removable retaining nut
- B. Strain relief

- Feed the flexible conduit through the strain relief, allowing enough slack to easily attach wiring to the terminal block.
- Tighten strain relief screw against the flexible conduit.



- 5. Replace back panel and screws on rear of range.
- **6.** Complete installation following instructions for your type of electrical connection:
  - 4-wire (recommended)
  - 3-wire (if 4-wire is not available)

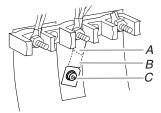
#### **Electrical Connection Options**

Electrical Confidential Options		
If your home has:	And you will be connecting to:	Go to Section:
4-wire receptacle (NEMA type 14-50R)	A UL Listed, 250-volt minimum, 40-amp, range power supply cord	4-Wire Connection: Power Supply Cord
4-wire direct	A fused disconnect or circuit breaker box	4-Wire Connection: Direct Wire
3-wire receptacle (NEMA type 10-50R)	A UL Listed, 250-volt minimum, 40-amp, range power supply cord	3-Wire Connection: Power Supply Cord
3-wire direct  (2.5 cm)  (7.6 cm)	A fused disconnect or circuit breaker box	3-Wire Connection: Direct Wire

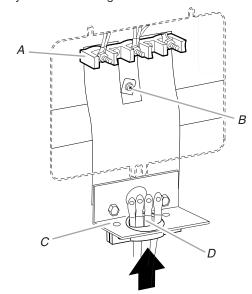
#### 4-Wire Connection: Power Supply Cord

Use this method for:

- New branch-circuit installations (1996 NEC)
- Mobile homes
- Recreational vehicles
- In an area where local codes prohibit grounding through the neutral
- 1. Part of metal ground strap must be cut out and removed.

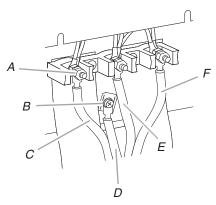


- A. Metal ground strap
- B. Discard
- C. Ground-link screw
- Use Phillips screwdriver to remove the ground-link screw from the back of the range. Save the ground-link screw and the end of the ground link under the screw.
- Feed the power supply cord through the strain relief in the cord/conduit plate on bottom of range. Allow enough slack to easily attach the wiring to the terminal block.



- A. Terminal block
- C. Cord/conduit plate
- B. Ground-link screw
- D. Power supply cord wires
- 4. Use Phillips screwdriver to connect the green ground wire from the power supply cord to the range with the ground-link screw. The ground wire must be attached first.

 Use <sup>3</sup>/<sub>8</sub>" (9.5 mm)nut driver to connect the neutral (white) wire to the center terminal block post with one of the 10-32 hex nuts.



- A. 10-32 hex nut
- D. Green ground wire
- B. Ground-link screw
- E. Neutral (center) wire
- C. Line 1 (black)
- F. Line 2 (red)
- 6. Connect line 1 (black) and line 2 (red) wires to the outer terminal block posts with 10-32 hex nuts.
- 7. Securely tighten hex nuts.

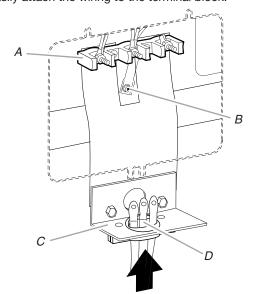
**NOTE:** For power supply cord replacement, only use a power cord rated at 250 volts minimum, 40 amps or 50 amps that is marked for use with nominal 13/8" (3.5 cm) diameter connection opening, with ring terminals and marked for use with ranges.

- 8. Replace terminal block access cover.
- 9. Slide range back so rear range foot is under the anti-tip bracket. See the "Verify Anti-Tip Bracket is Installed and Engaged" section.

#### 3-Wire Connection: Power Supply Cord

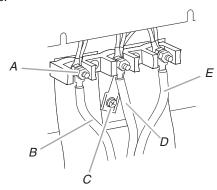
Use this method only if local codes permit connecting chassis ground conductor to neutral wire of power supply cord.

1. Feed the power supply cord through the strain relief in the cord/conduit plate on bottom of range. Allow enough slack to easily attach the wiring to the terminal block.



- A. Terminal block
- B. Ground-link screw
- C. Cord/conduit plate
- D. Power supply cord wires

2. Use <sup>3</sup>/<sub>8</sub>" (9.5 mm) nut driver to connect the neutral (white) wire to the center terminal block post with one of the 10-32 hex nuts.



- A. 10-32 hex nut
- D. Neutral (white) wire
- B. Line 1 (black)
- E. Line 2 (red)
- C. Ground-link screw
- 3. Connect line 1 (black) and line 2 (red) wires to the outer terminal block posts with 10-32 hex nuts.
- 4. Securely tighten hex nuts.

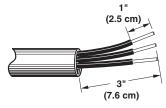
NOTE: For power supply cord replacement, only use a power cord rated at 250 volts minimum, 40 amps or 50 amps that is marked for use with nominal 13/8" (3.5 cm) diameter connection opening, with ring terminals and marked for use with ranges.

- 5. Replace terminal block access cover.
- 6. Slide range back so rear range foot is under the anti-tip bracket. See the "Verify Anti-Tip Bracket is Installed and Engaged" section.

#### **Direct Wire Installation: Copper or Aluminum Wire**

This range may be connected directly to the fuse disconnect or circuit breaker box. Depending on your electrical supply, make the required 3-wire or 4-wire connection.

1. Strip outer covering back 3" (7.6 cm) to expose wires. Strip the insulation back 1" (2.5 cm) from the end of each wire.

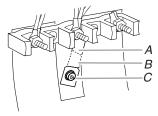


- Allow enough slack in the wire to easily attach the wiring terminal block.
- Complete electrical connection according to your type of electrical supply (4-wire or 3-wire connection).

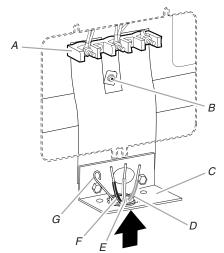
#### 4-Wire Connection: Direct Wire

Use this method for:

- New branch-circuit installations (1996 NEC)
- Mobile homes
- Recreational vehicles
- In an area where local codes prohibit grounding through the neutral
- 1. Part of metal ground strap must be cut out and removed.

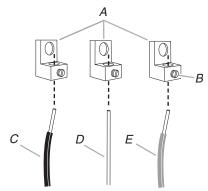


- A. Metal ground strap
- B. Discard
- C. Ground-link screw
- Use Phillips screwdriver to remove the ground-link screw from the back of the range. Save the ground-link screw and the end of the ground link under the screw.
- Pull the conduit through the strain relief on cord/conduit plate on bottom of range. Allow enough slack to easily attach wiring to the terminal block.



- A. Terminal block
- B. Ground-link screw
- C. Cord/conduit plate
- D. Line 2 (red) wire
- E. Neutral (white) wire
- F. Line 1 (black) wire
- G. Bare (green) ground wire

4. Attach terminal lugs to line 1 (black), neutral (white), and line 2 (red) wires. Loosen (do not remove) the setscrew on the front of the terminal lug and insert exposed wire end through bottom of terminal lugs. Securely tighten setscrew to XX lbs-in. torque. See "Bare Wire Torque Specifications" chart.



- A. Terminal lug
- B. Setscrew
- C. Line 1 (black) wire

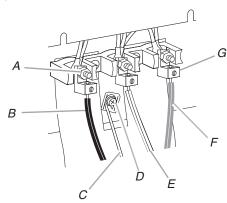
**Bare Wire Torque Specifications** 

- D. Neutral (white) wire
- E. Line 2 (red) wire

Attaching terminal lugs to the terminal block - 20 lbs-in. (2.3 N-m)

Wire Awg	Torque
8 gauge copper	25 lbs-in. (2.8 N-m)
6 gauge aluminum	35 lbs-in. (4.0 N-m)

- 5. Use Phillips screwdriver to connect the bare (green) ground wire to the range with the ground-link screw. The ground wire must be attached first and must not contact any other terminal.
- Use 3/8" (9.5 mm) nut driver to connect the neutral (white) wire to the center terminal block post with one of the 10-32 hex nuts.

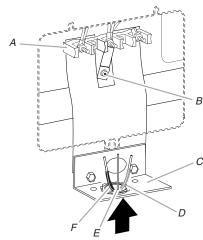


- A. 10-32 hex nut
- E. Neutral (white) wire
- B. Line 1 (black)
- C. Bare (green) ground wire
- F. Line 2 (red)
- G. Terminal lug
- D. Ground-link screw
- 7. Connect line 1 (black) and line 2 (red) wires to the outer terminal block posts with 10-32 hex nuts.
- 8. Securely tighten hex nuts.
- 9. Replace terminal block access cover.
- 10. Slide range back so rear range foot is under the anti-tip bracket. See the "Verify Anti-Tip Bracket is Installed and Engaged" section.

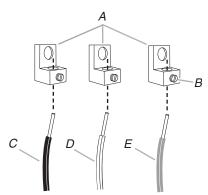
#### 3-Wire Connection: Direct Wire

Use this method only if local codes permit connecting ground conductor to neutral supply wire.

1. Pull the conduit through the hole and conduit plate on bottom of range. Allow enough slack to easily attach the wiring to the terminal block.



- A. Terminal block
- B. Ground-link screw
- C. Cord/conduit plate
- D. Line 2 (red) wire
- E. Bare (green) ground wire
- F. Line 1 (black) wire
- 2. Attach terminal lugs to line 1 (black), bare (green) ground, and line 2 (red) wires. Loosen (do not remove) the setscrew on the front of the terminal lug and insert exposed wire end through bottom of terminal lugs. Securely tighten setscrew to XX Ibs-in. torque. See "Bare Wire Torque Specifications" chart.



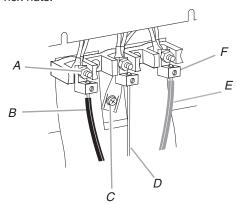
- A. Terminal lug
- B. Setscrew
- C. Line 1 (black) wire
- D. Bare (green) ground wire
- E. Line 2 (red) wire

#### **Bare Wire Torque Specifications**

Attaching terminal lugs to the terminal block - 20 lbs-in. (2.3 N-m)

Wire Awg	Torque
8 gauge copper	25 lbs-in. (2.8 N-m)
6 gauge aluminum	35 lbs-in. (4.0 N-m)

 Use <sup>3</sup>/<sub>8</sub>" (9.5 mm) nut driver to connect the bare (green) ground wire to the center terminal block post with one of the 10-32 hex nuts.



- A. 10-32 hex nut
- B. Line 1 (black)
- C. Ground-link screw
- D. Bare (green) ground wire
- E. Line 2 (red)
- F. Terminal lug
- 4. Connect line 1 (black) and line 2 (red) wires to the outer terminal block posts with 10-32 hex nuts.
- 5. Securely tighten hex nuts.
- 6. Replace terminal block access cover.
- Slide range back so rear range foot is under the anti-tip bracket. See the "Verify Anti-Tip Bracket is Installed and Engaged" section.

# Verify Anti-Tip Bracket Is Installed and Engaged

 Place the outside of your foot against the bottom front of the oven door to keep the range from moving, and grasp the lower right or left side of the control panel as shown.

**NOTE:** If your countertop is mounted with a backsplash, it may be necessary to grasp the range higher than is shown in the illustration.



- Slowly attempt to tilt the range forward.If you encounter immediate resistance, the range foot is engaged in the anti-tip bracket.
- 3. If the rear of the range lifts more than 1/2" (1.3 cm) off the floor without resistance, stop tilting the range and lower it gently back to the floor. The range foot is not engaged in the anti-tip bracket.

**IMPORTANT:** If there is a snapping or popping sound when lifting the range, the range may not be fully engaged in the bracket. Check to see if there are obstructions keeping the range from sliding to the wall or keeping the range foot from sliding into the bracket. Verify that the bracket is held securely in place by the mounting screws.

- **4.** Slide the range forward, and verify that the anti-tip bracket is securely attached to the floor or wall.
- 5. Slide range back so the rear range foot is inserted into the slot of the anti-tip bracket.

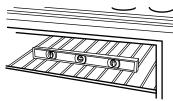
**IMPORTANT:** If the back of the range is more than 2" (5.1 cm) from the mounting wall, the rear range foot may not engage the bracket. Slide the range forward and determine if there is an obstruction between the range and the mounting wall. If you need assistance or service, refer to the "Assistance or Service" section of the Use and Care Guide, or the cover or the "Warranty" section of the User Instructions, for contact information.

**6.** Repeat steps 1 and 2 to ensure that the range foot is engaged in the anti-tip bracket.

If the rear of the range lifts more than  $^{1}/_{2}$ " (1.3 cm) off the floor without resistance, the anti-tip bracket may not be installed correctly. Do not operate the range without anti-tip bracket installed and engaged. Please reference the "Assistance or Service" section of the Use and Care Guide, or the cover or the "Warranty" section of the User Instructions, to contact service.

## **Level Range**

- 1. Place a rack in oven.
- Place level on rack and check levelness of range, first side to side, then front to back.



- 3. If range is not level, pull range forward until rear leveling leg is removed from the anti-tip bracket.
- Use a wrench or pliers to adjust leveling legs up or down until the range is level. Push range back into position.
- Check that rear leveling leg is engaged in the anti-tip bracket.

**NOTE:** Range must be level for satisfactory baking performance.

# **Complete Installation**

- Check that all parts are now installed. If there is an extra part, go back through the steps to see which step was skipped.
- 2. Check that you have all of your tools.
- 3. Dispose of/recycle all packaging materials.
- 4. Check that the range is level. See the "Level Range" section.
- 5. Use a mild solution of liquid household cleaner and warm water to remove waxy residue caused by shipping material. Dry thoroughly with a soft cloth. For more information, read the "Range Care" section of the Use and Care Guide.
- 6. Read the range Use and Care Guide.
- Plug power cord into appropriate outlet. Slide range into its final location. Check that the flexible conduit or power supply cord is not bent.
- Turn power on. Turn on surface elements and oven. See the Use and Care Guide for specific instruction on range operation.

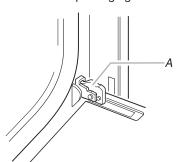
#### If range does not operate, check the following:

- Household fuse is intact and tight, or circuit breaker has not tripped.
- Range is plugged into a grounded outlet.
- Electrical supply is connected.
- See the "Troubleshooting" section in the Use and Care Guide.

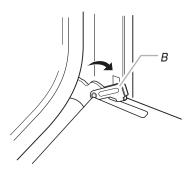
When the range has been on for 5 minutes, check for heat. If range is cold, turn off the range and contact a qualified technician.

# Remove Oven Door(s)

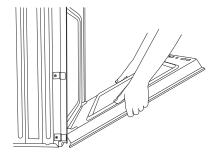
- The range is designed to not need the oven doors removed for standard usage and cleaning, however, they can be removed if necessary.
- Do not lift or move the range by the door handle(s).
- Prepare a surface where you will place the door(s). This surface should be flat and covered with a soft blanket, or use the corner posts from the packaging material.



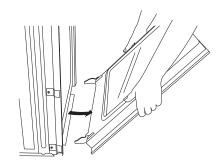
A. Oven door hinge in the locked position



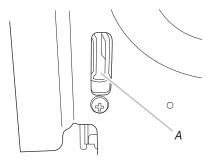
B. Oven door hinge in the unlocked position



Partially close the door to engage the door latch locks. The door will stop at this point.



Use two hands to remove and replace the oven door(s). It may be necessary to gently shift door from side to side.



A. Slot in the oven frame for the door hinge lock

- To replace the oven door(s), locate the slots in the oven cavity for the hinge locks and repeat the steps above in reverse order. Make sure the door closes properly and there is no interference from the door latch. If necessary, remove the door and repeat the steps above. If power is connected to the range, open and close the door to make sure the oven light comes on and goes off appropriately.
- Follow the installation instructions found in the bag containing the literature.

# Moving the Range

# AWARNING



**Tip Over Hazard** 

A child or adult can tip the range and be killed.

Install anti-tip bracket to floor or wall per installation instructions.

Slide range back so rear range foot is engaged in the slot of the anti-tip bracket.

Re-engage anti-tip bracket if range is moved.

Do not operate range without anti-tip bracket installed and engaged.

Failure to follow these instructions can result in death or serious burns to children and adults.

When moving range, slide range onto cardboard or hardboard to avoid damaging the floor covering.

If removing the range is necessary for cleaning or maintenance:

#### For power supply cord-connected ranges:

- **1.** Slide range forward.
- 2. Unplug the power supply cord.
- 3. Complete cleaning or maintenance.
- 4. Plug power supply cord into a grounded outlet.
- 5. Slide range back so rear range foot is under anti-tip bracket.



- **6.** Refer to the "Verify Anti-Tip Bracket Is Installed and Engaged" section to verify engagement.
- 7. Check that range is level.

For direct-wired ranges:

## AWARNING



#### **Electrical Shock Hazard**

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

- 1. Disconnect power.
- 2. Slide range forward.
- 3. Complete cleaning or maintenance.
- 4. Slide range back so rear range foot is under anti-tip bracket.



- 5. Refer to the "Verify Anti-Tip Bracket Is Installed and Engaged" section to verify engagement.
- **6.** Check that range is level.
- 7. Reconnect power.



#### TRUE MANUFACTURING CO., INC. U.S.A. FOODSERVICE DIVISION

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Project Name:		AIA #
Location:		
Item #:	Qty:	SIS #
Model #:		

Model:

T-49DT-HC

**T-Series:** 

Reach-In Solid Swing Door Dual Temperature Refrigerator/Freezer with Hydrocarbon Refrigerant



#### T-49DT-HC

- Designed using the highest quality materials and components to provide the user with colder product temperatures, lower utility costs, exceptional food safety and the best value in today's food service marketplace.
- Refrigerator located in left section; freezer in the right.
- Factory engineered, self-contained, capillary tube system using environmentally friendly R290 hydro carbon refrigerant that has zero (0) ozone depletion potential (ODP), & three (3) global warming potential
- High capacity, factory balanced refrigeration systems that maintains cabinet refrigerator temperatures of 33°F to 38°F (.5°C to 3.3°C) and freezer temperatures of -10°F (-23.3°C).
- Stainless steel solid doors and front. The very finest stainless with higher tensile strength for fewer dents and scratches.
- Adjustable, heavy duty PVC coated shelves.
- Positive seal self-closing doors. Lifetime guaranteed door hinges and torsion type closure system.

#### **Bottom mounted units feature:**

- "No stoop" lower shelf.
- Storage on top of cabinet.
- Compressors perform in coolest, most grease free area of kitchen.
- Easily accessible condenser coil for cleaning.

#### **ROUGH-IN DATA**

Specifications subject to change without notice. Chart dimensions rounded up to the nearest 1/8" (millimeters rounded up to next whole number).

			Cabinet Dimensions (inches) (mm)		Н	IP			NEMA	Cord Length (total ft.)	Crated Weight (lbs.)	
Model	Doors	Shelves	W	D	H*	Ref.	Frz	Voltage	Amps	Config.	(total rt.)	(kg)
T-49DT-HC	2	6	54%	29½	78%	1/4	1/2	115/60/1	4.6	5-15P	9	510
			1375	750	1991				N/A		2.74	232

<sup>\*</sup> Height does not include 5" (127 mm) for castors or 6" (153 mm) for optional legs.

INNOVATION CEAR COMMISSION OF THE USA COMMIS		APPROVALS:	AVAILABLE AT:
1/19	Printed in U.S.A.		

Model:

T-49DT-HC

#### **T-Series:**

Reach-In Solid Swing Door Dual Temperature Refrigerator/Freezer with Hydrocarbon Refrigerant



# STANDARD FEATURES

#### DESIGN

- True's solid door reach-in's are designed with enduring quality that protects your long term investment.
- True's commitment to using the highest quality materials and oversized refrigeration systems provides the user with colder product temperatures, lower utility costs, exceptional food safety and the best value in today's food service marketplace.

#### **REFRIGERATION SYSTEM**

- Equipped with two, independent, factory engineered, self-contained, capillary tube refrigeration systems using environmentally friendly environmentally friendly R290 hydrocarbon refrigerant that has zero (0) ozone depletion potential (ODP), & three (3) global warming potential (GWP).
- Refrigerator located in left section; freezer in the right.
- High capacity, factory balanced refrigeration system that maintain colder standard temperatures for the best in food preservation. Refrigerator holds 33°F to 38°F (.5°C to 3.3°C); freezers holds -10°F (-23.3°C).
- State of the art, electronically commutated evaporator and condenser fan motors. ECM motors operate at higher peak efficiencies and move a more consistent volume of air which produces less heat, reduces energy consumption and provides greater motor reliability.
- Bottom mounted condensing units positioned for easy cleaning. Compressors run in coolest and most grease free area of the kitchen. Allows for storage area on top of unit.
- Automatic freezer defrost system time-initiated, temperature-terminated. Saves energy consumption and provides shortest possible defrost cycle.

#### **CABINET CONSTRUCTION**

- Exterior Stainless steel front. Anodized quality aluminum ends. Corrosion resistant GalFan coated steel back.
- Interior attractive, NSF approved, clear coated aluminum liner. Stainless steel floor with coved corners.
- Insulation entire cabinet structure and solid doors are foamed-in-place using a high density, polyurethane insulation that has zero ozone depletion potential (ODP) and zero global warming potential (GWP).
- Welded, heavy duty steel frame rail, black powder coated for corrosion protection.
- Frame rail fitted with 4" (102 mm) diameter stem castors locks provided on front set.

#### **DOORS**

- Stainless steel exterior with clear aluminum liners to match cabinet interior. Doors extend full width of cabinet shell. Door locks standard.
- Lifetime guaranteed recessed door handles. Each door fitted with 12" (305 mm) long recessed handle that is foamed-in-place with a sheet metal interlock to ensure permanent attachment.
- Positive seal self-closing doors. Lifetime guaranteed door hinges and torsion type closure system.
- Magnetic door gaskets of one piece construction, removable without tools for ease of cleaning.

#### SHFIVING

- Six (6) adjustable, heavy duty PVC coated wire shelves 22% "L x 23 ¼ "D (582 mm x 591 mm).
   Four (4) chrome plated shelf clips included per shelf.
- Shelf support pilasters made of same material as cabinet interior; shelves are adjustable on ½" (13 mm) increments.

#### LIGHTING

 Compartmentalized, interior lighting (one per section) - safety shielded. Lights activated by rocker switch mounted above doors.

#### **MODEL FEATURES**

- Two (2) exterior digital temperature displays, one for refrigerator section and one for freezer.
- Evaporators are epoxy coated to eliminate the potential of corrosion.
- Freezer rear airflow guards prevent product from blocking optimal airflow.
- Minimum wattage heater in cabinet frame and freezer door.
- NSF/ANSI Standard 7 compliant for open food product.

#### **ELECTRICAL**

 Unit completely pre-wired at factory and ready for final connection to a 115/60/1 phase, 15 amp dedicated outlet. Cord and plug set included.

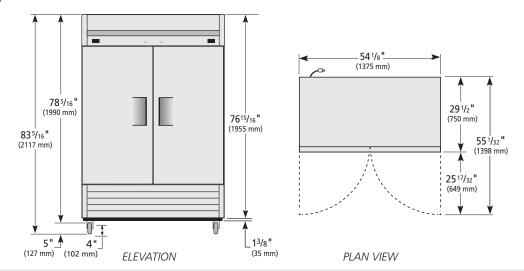


#### **OPTIONAL FEATURES/ACCESSORIES**

Upcharge and lead times may apply.

- ☐ 6" (153 mm) standard legs.
- ☐ 6" (153 mm) seismic/flanged legs.
- ☐ 2½" (64mm) castors.
- ☐ 2½" (64 mm) standard legs.
- ☐ Half door bun tray racks. Each holds up to eleven 18"L x 26"D (458 mm x 661 mm) sheet pans (sold separately) (airflow guard needs to be removed from freezer).
- ☐ Full door bun tray racks. Each holds up to twentytwo 18"L x 26"D (458 mm x 661 mm) sheet pans (sold separately) (airflow guard needs to be removed from freezer).
- □ Additional shelves.
- ☐ Novelty baskets.

### PLAN VIEW



#### WARRANTY

Three year warranty on all parts and labor and an additional 2 year warranty on compressor. (U.S.A. only) METRIC DIMENSIONS ROUNDED UP TO THE NEAREST WHOLE MILLIMETER

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ſ	KCL	Model	Elevation	Right	Plan	3D	Back
l	KCL	T-49DT-HC					





# LDCS24223\_

24 cu.ft. 2-Door Bottom Mount, 33" Wide

#### **KEY FEATURES**

24 cu.ft., Largest Capacity

**Smart Cooling System** 

10-Year Manufacturer's Limited Warranty on Linear Compressor

**Multi-Air Flow Cooling** 

**ENERGY STAR® Qualified** 

**Premium LED Lighting** 

Full Width, Temperature-Controlled Glide N' Serve™ Drawer

2 Humidity Crispers

5 Total (3 Full, 1 Flip-Up + Dairy) + 3 Bottle Guides

LoDecibel™ Quiet Operation

SmartDiagnosis™ System



#### **PRODUCT FEATURES**

Freezer Light

CAPACITY	
Refrigerator	16.40 cu. ft.
Freezer	7.70 cu. ft.
Total	24.1 cu. ft.
FEATURES  FAUTORIA CONTROL OF THE CO	(6001))(104
ENERGY STAR® Qualified	• (608 kWh/Year)
Ice System	Factory Installed Ice Maker
Daily Ice Production	2.8 lbs / 3.1 lbs (IcePlus)
Ice Storage Capacity	12 lbs
Smart Cooling System	•
Linear Compressor	•
Multi-Air Flow Cooling	•
Temperature Sensors	6
Display Type	Membrane (Green LED)
Hidden Hinges	
Temperature Controls	Electronic / Digital
Door Alarm	
LoDecibel™ Quiet Operation	•
SmartDiagnosis™	•
REFRIGERATOR	
No. of Shelves	2 Full
Shelf Construction	SpillProtector™ Tempered Glass
Crisper Bins	2 Humidity Crispers
Glide N' Serve™ Drawer	•
Refrigerator Light	Premium LED
REFRIGERATOR DOOR	
No. of Shelves/Bin	5 Total (3 Full, 1 Flip-Up + Dairy)
Door Bin Construction	Clear
Dairy Corner	
FREEZER	
Drawers	2-Tier Organization
Drawers Handle	2-Tier Organization Vista

MATERIAL CAMP FINISHES	
MATERIALS AND FINISHES Contour Door	
20112011	•
Hidden Hinges	•
Surface	Coated Metal, Stainless Steel
Back	Flush & Metal Cover Over Mechanical Parts
Available Colors	Stainless Steel (S), Smooth White (W), Smooth Black (B)
Handles	Matching Commercial Handles
DIMENSIONS/CLEARANCES/WEIGHT	
Depth with Handles	34 7/8"
Depth without Handles	33"
Depth without Door	29"
Depth (Total with Door Open)	62 3/4"
Height to Top of Case	68 5/8"
Height to Top of Door Hinge	69 7/8"
Width	32 3/4"
Width (Door Open 90° with Handle)	36 1/2"
Width (Door Open 90° without Handle)	34 1/2"
Door Edge Clearance with Handle	4 1/4"
Door Edge Clearance without Handle	2"
Installation Clearance	Sides 1/8", Top 1", Back 1"
Weight (Unit/Carton)	235 lbs./248 lbs.
Carton Dimensions (WxHxD)	34 3/8" x 70 1/2" x 36 6/8"
WARRANTY	
	1 Year Parts and Labor,
	7 Years on the Sealed System,
	10 Years on Linear Compressor
UPC CODES	
LDCS24223S Stainless Steel	048231 787444
LDCS24223B Smooth Black LDCS24223W Smooth White	048231 787451 048231 787468
LDC327223VV 3IIIUUUII VVIIIC	040231707400

Premium LED

# MANITOWOC\*



# CNF0201 • CNF0202 Countertop Nugget Ice Maker & Dispenser



- New bite-sized nugget boasts 85% ice content\* with only 15% water offering one of the best nugget ratios for maximum cooling and minimal drink dilution.
- Up to 315 lbs. (143 kgs) standard daily ice production including ice and water content.
- New DuraTech™ front panel for easy cleaning and reduced hardwater staining in the dispense area.
- Only 16.25" (41.28 cm) wide by 24.00" (61.00 cm) deep by 35.00" (89.00 cm) tall on the RNS12 and 42.00" (107.00 cm) tall without legs; legs sold separately.
- Trouble-free ice dispensing. Simply place cup under chute and activate.
- Two ice activation options: activation arm or touchless.
- Dispense opening (10.50"/ 26.67 cm) from grate to chute maximizes clearance for tall containers.
- · Larger drain pan minimizes ice spillage.
- Blue LED light provides dispense visibility for rooms with limited ambient light.
- · Water and drain connections in back or bottom of unit for flush mounting.
- · Manitowoc's patented cleaning technology manages the cleaning process from start to finish.

#### Ice Machine Electric

115/60/1. (230/50/1 also available.) 115/60/1 ice machines are factory pre-wired with a 6' (180 cm) power cord and NEMA 5-15P-plug configuration. 230/50/1 ice machines are factory pre-wired with a 6' (180 cm) power cord only, no plug is supplied.

Total ampacity: Air-cooled: 10.3 amps.

Maximum fuse size: Air-cooled: 15 amps.

HACR-type circuit breakers can be used in place of fuses.

# COMMERCIAL WARRANTY ICE MAKER YEAR PARTS YEAR PARTS

# **Specifications**

BTU Per Hour: 2,300 (average)

Compressor: Nominal rating: 1/3 HP Refrigerant: R404A

Operating Limits:

- Ambient Temperature Range: 45°-110°F (7.2°-43.3°C)
- Water Temperature Range: 45°-90°F (7.2°-32°C)
- · Water Pressure Ice Maker Water In: Min. 20 psi (137.9 kPA) Max. 80 psi (551.1 kPA)

# Ice Shape

Nugget ice consists of small pieces ranging from 3/8" to 1/2" in width and length on average. Offers a 85% ice to water ratio with a softer, chewable texture while still providing maximum cooling effect and great dispensibilty.









COMPANY WITH QUALITY SYSTEM

2110 South 26th Street Manitowoc, WI 54220 USA Tel: 1.920.682.0161 Fax: 1.920.683.7589 www.manitowocice.com



# MANITOWOC<sup>®</sup>



		Ice Producti	Power kWh/ 100 lbs.		
Model	Ice Shape	70°Air/50°F Water 21°Air/10°C Water	90°Air/70°F Water 32°Air/21°C Water	@ 90°/70°F 32°/21°C	
CNEO201A	CNF0201A nugget	315 lbs.	222 lbs.	6.69	
CNFUZUTA		143 kgs	101 kgs	0.09	
CNF0202A		315 lbs.	222 lbs.	6.69	
CNFUZUZA	nugget	143 kgs	101 kgs	0.09	
Water usage/100 lbs./45.4 kgs of Ice					
Potable Water: 12 gallons, 45.4 liters					

<sup>&</sup>quot;A" following model number indicates "Air" condensing unit.

# Space-Saving Designs



	CNF0201	CNF0202
Height*	35.00" 89.00 cm	42.00" 107.00 cm
Width	16.25" 41.30 cm	16.25" 41.30 cm
Depth	24.00" 61.00 cm	24.00" 61.00 cm
Bin Storage	10 lbs. 4.5 kgs	20 lbs. 9.1 kgs

<sup>\*</sup>Height without legs. Legs sold separately: K-00345.

# Air Flow





Initiate ice, off and clean operations with simple upfront selector switch. No need to remove front panel.

# Front Access



# \*Height includes 6" legs

# 42.00" (107.00 cm) 35.00" (89.00 cm) 12.50" (31.80 cm) 24.00' (61.00 cm) 16.25" (41.30 cm) (A) 3/8" (0.95 cm) F.P.T. Ice Making Water Inlet B 3/4" (1.91 cm) Bin Drain © Electrical Entrance

CNF0201/202

#### MINIMUM INSTALLATION CLEARANCE -

Top: 24" (60.96 cm); Sides: 8" (20.32 cm); Back: 5" (12.7 cm); Bottom: 0" (0 cm).

Stand offers a solution when there is no counter space available for an CNF0201 or 202 unit.

Kit Number	WxDxH	Shipping Weight	
K 00453	22.2 x 29.2 x 36"	100 lbs	
K-00453	56.4 x 74.2 x 76.2 cm	50 kgs	

# Lever-activated or Touchless Dispensing\*



CNF0201L

CNF0202L



CNF0202

\*Select at time of purchase. K-00377 can be used to convert from lever-activated to touchless sensing.

2110 South 26th Street Manitowoc, WI 54220 USA Tel: 1.920.682.0161 Fax: 1.920.683.7589 www.manitowocice.com 6550 03/18





# Countertop Nugget Ice Machines CNF201 & CNF202

#### Technician's Handbook



#### **Safety Notices**

#### Read these precautions to prevent personal injury:

- Read this manual thoroughly before operating, installing or performing maintenance on the equipment. Failure to follow instructions in this manual can cause property damage, injury or death.
- Routine adjustments and maintenance procedures outlined in this manual are not covered by the warranty.
- Proper installation, care and maintenance are essential for maximum performance and trouble-free operation of your equipment.
- Visit our website www.manitowocice.com for manual updates, translations, or contact information for service agents in your area.
- This equipment contains high voltage electricity and refrigerant charge. Installation and repairs are to be performed by properly trained technicians aware of the dangers of dealing with high voltage electricity and refrigerant under pressure. The technician must also be certified in proper refrigerant handling and servicing procedures. All lockout and tag out procedures must be followed when working on this equipment.
- This equipment is intended for indoor use only. Do not install or operate this equipment in outdoor areas.

As you work on this equipment, be sure to pay close attention to the safety notices in this handbook. Disregarding the notices may lead to serious injury and/or damage to the equipment.

#### **A**Warning

Follow these electrical requirements during installation of this equipment.

- All field wiring must conform to all applicable codes of the authority having jurisdiction. It is the responsibility of the end user to provide the disconnect means to satisfy local codes. Refer to rating plate for proper voltage.
- This appliance must be grounded.
- This equipment must be positioned so that the plug is accessible unless other means for disconnection from the power supply (e.g., circuit breaker or disconnect switch) is provided.
- Check all wiring connections, including factory terminals, before operation. Connections can become loose during shipment and installation.

#### **A**Warning

# Follow these precautions to prevent personal injury during installation of this equipment:

- Installation must comply with all applicable equipment fire and health codes with the authority having jurisdiction.
- To avoid instability the installation area must be capable of supporting the combined weight of the equipment and product. Additionally the equipment must be level side to side and front to back.
- Ice machines require a deflector when installed on an ice storage bin. Prior to using a non-OEM ice storage system with this ice machine, contact the bin manufacturer to assure their ice deflector is compatible.
- Remove all removable panels before lifting and installing and use appropriate safety equipment during installation and servicing. Two or more people are required to lift or move this appliance to prevent tipping and/or injury.
- Do not damage the refrigeration circuit when installing, maintaining or servicing the unit.
- Connect to a potable water supply only.
- This equipment contains refrigerant charge.
- Installation of the line sets must be performed by a properly trained and EPA certified refrigeration technician aware of the dangers of dealing with refrigerant charged equipment.

#### **A**Warning

Follow these precautions to prevent personal injury while operating or maintaining this equipment.

- Legs or casters must be installed and the legs/casters
  must be screwed in completely. When casters
  are installed the mass of this unit will allow it to
  move uncontrolled on an inclined surface. These
  units must be tethered/secured to comply with all
  applicable codes. Swivel casters must be mounted
  on the front and rigid casters must be mounted on
  the rear. Lock the front casters after installation is
  complete.
- Some 50 Hz models may contain up to 150 grams of R290 (propane) refrigerant. R290 (propane) is flammable in concentrations of air between approximately 2.1% and 9.5% by volume (LEL lower explosion limit and UEL upper explosion limit). An ignition source at a temperature higher than 470°C is needed for a combustion to occur.
- Refer to nameplate to identify the type of refrigerant in your equipment.
- Only trained and qualified personnel aware of the dangers are allowed to work on the equipment.
- Read this manual thoroughly before operating, installing or performing maintenance on the equipment. Failure to follow instructions in this manual can cause property damage, injury or death.
- Crush/Pinch Hazard. Keep hands clear of moving components. Components can move without warning unless power is disconnected and all potential energy is removed.
- Moisture collecting on the floor will create a slippery surface. Clean up any water on the floor immediately to prevent a slip hazard.

# **A**Warning

Follow these precautions to prevent personal injury while operating or maintaining this equipment.

- Objects placed or dropped in the bin can affect human health and safety. Locate and remove any objects immediately.
- Never use sharp objects or tools to remove ice or frost.
- Do not use mechanical devices or other means to accelerate the defrosting process.
- When using cleaning fluids or chemicals, rubber gloves and eye protection (and/or face shield) must be worn.

# **A** DANGER

Do not operate equipment that has been misused, abused, neglected, damaged, or altered/modified from that of original manufactured specifications. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by a person responsible for their safety. Do not allow children to play with, clean or maintain this appliance without proper supervision.

# **A**Warning

Follow these precautions to prevent personal injury during use and maintenance of this equipment:

- It is the responsibility of the equipment owner to perform a Personal Protective Equipment Hazard Assessment to ensure adequate protection during maintenance procedures.
- Do Not Store Or Use Gasoline Or Other Flammable Vapors Or Liquids In The Vicinity Of This Or Any Other
- Appliance. Never use flammable oil soaked cloths or combustible cleaning solutions for cleaning.
- All covers and access panels must be in place and properly secured when operating this equipment.
- Risk of fire/shock. All minimum clearances must be maintained. Do not obstruct vents or openings.
- Failure to disconnect power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.
- All utility connections and fixtures must be maintained in accordance with the authority having jurisdiction.
- Turn off and lockout all utilities (gas, electric, water) according to approved practices during maintenance or servicing.
- Units with two power cords must be plugged into individual branch circuits. During movement, cleaning or repair it is necessary to unplug both power cords.

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# **General Information**

## **Model Numbers**

## Self-Contained Air-Cooled

CNF201A - Air-cooled lever dispense model

CNF201AT - Air-cooled touchless dispense model

CNF202A - Air-cooled lever dispense model

CNF202AT - Air-cooled touchless dispense model

# **Model/Serial Number Location**

These numbers are required when requesting information from your local Manitowoc Distributor, service representative, or Manitowoc Ice, Inc. The model and serial number are listed on the OWNER WARRANTY REGISTRATION CARD. They are also listed on the MODEL/SERIAL NUMBER DECAL affixed to the ice machine.

## Manitowoc Cleaner and Sanitizer

Manitowoc Ice Machine Cleaner and Sanitizer are available in 16 oz. (473 ml) bottles. These are the only cleaners and sanitizer approved for use with Manitowoc products.

# **∴** Caution

Nugget models must use cleaner part number **000000084 ONLY** (clear cleaner). Damage to the evaporator will result with repeated use or high concentrations of standard (green) cleaner. This damage is not covered by the warranty.

Cleaner Part Number		Sanitizer Pa	art Number
16 oz.	000000084	16 oz.	9405653
1 gal	N/A	1 gal.	9405813

# Legs

Optional four inch adjustable legs are available.

## SEALING TO COUNTERTOP OR STAND

Ice machines installed without legs must be sealed to the countertop or stand. This prevent liquids or debris from infiltrating beneath the ice machine.

# **Touchless Sensing Option**

Touchless sensing can be ordered installed on the ice machine from the factory or a field conversion kit is available. The field conversion kit includes a replacement front panel and instructions for installation

# Ice Machine Warranty Information

For warranty information visit: http://www.manitowocice.com/Service/Warranty

- Warranty Verification
- Warranty Registration
- View and download a copy of the warranty Owner Warranty Registration Card

Warranty coverage begins the day the ice machine is installed.

# Installation

# **A**Warning

## PERSONAL INJURY POTENTIAL

Remove all ice machine panels before lifting and installing.

## Location of Ice Machine

The location selected for the ice machine must meet the following criteria. If any of these criteria are not met, select another location.

- The location must be indoors and free of airborne and other contaminants...
- The air temperature must be at least 45°F (7°C), but must not exceed 110°F (43°C).
- The water temperature must be at least 45°F (7°C), but must not exceed 90°F (32°C).
- The location must not be near heat-generating equipment or in direct sunlight.
- The location must be capable of supporting the weight of the ice machine and a full bin of ice and allow the ice machine to be level front to back and side to side.
- The location must allow enough clearance for water and electrical connections in the rear of the ice machine. The drain can be routed out the rear or bottom of dispenser.
- The location must not obstruct airflow through or around the ice machine. Airflow is in the left side and out the top. Refer to chart for clearance requirements.
- The ice machine must be protected if it will be subjected to temperatures below 32°F (0°C). Failure caused by exposure to freezing temperatures is not covered by the warranty. See "Removal from Service/ Winterization"

# **Ice Machine Clearance Requirements**

CNF201 - CNF202	Self-Contained Air-Cooled
Тор	24" (61.0 cm)
Sides	8" (20.3 cm)
Back	5" (12.7 cm)

# Ice Machine Heat of Rejection

Series Ice Machine Heat of Rejection		
	Air Conditioning	
CNF201 - CNF202	2,300	

<sup>\*</sup> BTU/Hour. Because the heat of rejection varies during the ice making cycle, the figure shown is an average.

Ice machines, like other refrigeration equipment, reject heat through the condenser. It is helpful to know the amount of heat rejected by the ice machine when sizing air conditioning equipment where self-contained air-cooled ice machines are installed.

## **Electrical Service**

## General

# **A**Warning

All wiring must conform to local, state and national codes.

## Voltage

The maximum allowable voltage variation is ± 10% of the rated voltage on the ice machine model/serial number plate at start-up (when the electrical load is highest).

## Fuse/Circuit Breaker

A separate fuse/circuit breaker must be provided for each ice machine. Circuit breakers must be H.A.C.R. rated (does not apply in Canada).

# **▲**Warning

The ice machine must be grounded in accordance with national and local electrical codes.

## CIRCUIT AMPACITY

The minimum circuit ampacity is used to help select the wire size of the electrical supply. (Minimum circuit ampacity is not the ice machine's running amp load.)

The wire size (or gauge) is also dependent upon location, materials used, length of run, etc., so it must be determined by a qualified electrician.

Self Contained Air-Cooled				
Ice Machine   Voltage Phase   Max. Fuse/   Total Am		Total Amps		
ice iviaciiiie	Cycle	Circuit Breaker	iotal Allips	
CNF201	115/1/60	15*	10.3*	
CNF202	230/1/50	15*	5.4*	

<sup>\*</sup>Indicates preliminary data - Model/Serial plate information overrides the data in this chart.

# Ice Machine Head Section Water Supply and Drains

## POTABLE WATER SUPPLY

The ice machine must be connected to a potable water supply only. Local water conditions may require treatment of the water to inhibit scale formation, filter sediment, remove chlorine, and improve taste and clarity.

# **Important**

If you are installing a Manitowoc water filter system, refer to the Installation Instructions supplied with the filter system for ice making water inlet connections.

#### POTABLE WATER INLET LINES

Follow these guidelines to install water inlet lines:

- Do not connect the ice machine to a hot water supply.
   Be sure all hot water restrictors installed for other equipment are working. (Check valves on sink faucets, dishwashers, etc.)
- If water pressure exceeds the maximum recommended pressure of 80 psig (5.5 Bar), obtain a water pressure regulator from your Manitowoc Distributor.
- Install a water shut-off valve and union for both the ice making and condenser water lines.
- Insulate water inlet lines to prevent condensation.

## DRAIN CONNECTIONS

Follow these guidelines when installing drain lines to prevent drain water from flowing back into the ice machine and storage bin:

- Drain lines must have a 1.5 in. drop per 5 ft. of run (2.5 cm per meter), and must not create traps.
- The floor drain must be large enough to accommodate drainage from all drains.
- Run separate bin drain line. Insulate to prevent condensation.
- Vent the bin drain to the atmosphere.
- Drains must have a union or other suitable means to allow a place of disconnection from the ice machine when servicing is required.

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# Operation

# Ice Making Sequence of Operation

# CNF201 - CNF202 NUGGET MACHINES Ice Making Sequence of Operation

## PRIOR TO START-UP

When the toggle switch is placed in the ICE position, the following must occur in the listed order before ice making will start.

- The 15-minute delay period must be expired. The delay period starts upon application of power or a change in toggle switch position.
- The ice chute damper must be in the closed or down position.
- The water sensing switch must be closed (water reservoir full of water and water sensing float in the up position).

## **INITIAL START-UP**

A 15-minute delay period must expire. The delay period starts to time out upon application of power and can only be overridden by depressing the test switch on the control board. The gear motor energizes and when water in the reservoir closes the water sensing (float switch) the compressor and condenser fan motor energize.

## FREEZE CYCLE

The float valve automatically maintains the water level in the reservoir. The ice damper will open and close to verify ice production. The ice machine will continue to make ice until the ice damper is held open (up) as ice fills the bin.

## **AUTOMATIC SHUTOFF**

When the ice damper is held open by ice, the gear motor, compressor and condenser fan de-energize. The ice machine will remain off until the 15-minute delay period expires and the ice damper closes.

## RESTART AFTER AUTOMATIC SHUTOFF

The 15-minute delay period must be expired. The delay period starts when the ice machine enters Automatic Shutoff and can not be overridden.

The restart sequence is dependent on the amount of time the ice machine has been off:

The ice machine was off for less than 30 minutes.

When the 15-minute delay period expires, the gear motor, compressor and condenser fan motor energize.

2. The ice machine was off for more than 30 minutes.

The gear motor and dump valve energize to drain the water from the evaporator and reservoir. After 45 seconds, the dump valve de-energizes. When the reservoir fills with water, the water sensing switch closes and the compressor and condenser fan motor energize.

# CHANGING TOGGLE SWITCH POSITION IN THE FREEZE CYCLE

Moving the toggle switch from ICE to OFF will start a 15-minute delay period.

- Moving the toggle switch immediately to the ICE position - The ice machine waits 15 minutes, then starts.
- Moving the toggle switch to the ICE position after 15 minutes have elapsed - The ice machine immediately starts.

## **Control Board Features**

## POWER INTERRUPTION DELAY

If power is disconnected, the ice machine stops. When power is reapplied, a 15-minute delay is initiated.

## **SAFEGUARDS**

The ice machine control board has safety features to protect the ice machine from severe failures. The ice machine will stop when conditions arise that would cause major component failure. Refer to Safeguards for details.

## TOUCH PAD SEQUENCE OF OPERATION

- The control board monitors the touch pad. Pressing/ selecting Ice, Water, or Ice & Water will energize the corresponding blue Led selection and waits for dispense lever or touchless sensor activation.
- Depressing the dispense lever or activating the touchless sensor closes the relay selected with the touch pad. Depending on selection, either the water solenoid, ice dispense motor or both components activate.

#### WATER LEVEL CHECK

The float valve maintains the correct water level. The water level is factory set and normally will not require adjustment. The water level is correct if the Water Level indicator light is energized and no water is entering the overflow tube.

The float valve is secured with 2 stop nuts. If an adjustment is required, raise or lower the stop nuts as needed.

# SEQUENCE OF OPERATION CHART

inugget iviaciiiiles					
Sequence	Contactor Coil	Dump Valve	Gear Motor	Ice Damper	Duration
Initial Start-Up Time Delay	ӈo	ЭŲ	Off	Closed	15 Minutes
Gear Motor Start	JJO	JJO	o	Closed	5 Seconds
Compressor Start	uO	Off	On	Closed	200000 C ablall 2011 114011
Freeze Cycle	uO	ЭŲ	On	Moves to Verify Ice Production	Open Open
Automatic Shut-Off	JJO	Off	JJO	Open	Until Damper Closes
Restart					
More than 30 minutes have	#0	Š	#	מנים	AE Cocond Chick cuclo
passed since automatic shutoff	5	5	5	כוסאבת	43 Second Fidsh Cycle,
cycle initiated					
Initial Startup	Off	Off	On	Closed	5 Seconds
Restart					15 minute delay from
Less than 30 minutes have	# <del></del> 0	#0	Š	معمال	full bin initiation must
passed since automatic shutoff	5	5	5	מפסוס	expire, then gear motor
cycle initiated					starts

# Maintenance

Maintenance procedures or failures due to a lack of maintenance are not covered by the warranty.

Manitowoc Ice Machine Cleaner and Sanitizer are the only products approved for use in Manitowoc ice machines.

# **⚠** Caution

Use the correct Manitowoc approved metal safe Ice Machine Cleaner (part number 00000084) and Sanitizer (part number 9405653). It is a violation of Federal law to use these solutions in a manner inconsistent with their labeling. Read and understand all labels printed on bottles before use.

# **A**Caution

Do not mix Cleaner and Sanitizer solutions together. It is a violation of Federal law to use these solutions in a manner inconsistent with their labeling.

# **A**Warning

Wear rubber gloves and safety goggles (and/or face shield) when handling ice machine Cleaner or Sanitizer.

# **▲** Warning

If you do not understand the procedures or the safety precautions that must be followed, call your local Manitowoc Distributor or Manitowoc Ice.

# Manitowoc's Cleaning Technology

Manitowoc CNF201 - CNF202 Ice Machines allow the initiation and completion of a cleaning cycle at the flip of a switch. This cycle will permit cleaning of all surfaces that come in contact with the water distribution system. Periodic maintenance must be performed that includes sanitizing the bin and adjacent surface areas, which are not contacted by the water distribution system.

Depending on local water conditions Manitowoc recommends initiating preventative maintenance cleaning procedures between the 6-month cleanings. This preventive maintenance removes mineral build-up from the evaporator, which results in peak efficiency and lower operating costs.

This technology allows initiation and completion of a clean cycle, after which the ice machine automatically starts ice making again.

There are three separate cleaning procedures.

## **Heavily Scaled Cleaning Procedure**

Perform this procedure if you have some or all of these symptoms.

- Grinding, popping or squealing noises from the evaporator.
- Grinding noise from gearbox.
- Ice machine trips speed sensor.

A Cleaning/Sanitizing Procedure must be performed after this procedure.

# Cleaning/Sanitizing Procedure

This procedure must be performed a minimum of once every six months:

- All ice must be removed from the bin/dispenser.
- The ice machine and bin/dispenser must be disassembled, cleaned and sanitized.
- The ice machine produces ice with the cleaner and sanitizer solutions.
- All ice produced during the cleaning and sanitizing procedure must be discarded.

## **Preventative Maintenance Cleaning Procedure**

Perform this procedure as often as required for your water conditions:

- Allows cleaning the ice machine without removing all of the ice from the bin/dispenser.
- Removes mineral deposits from areas that are in direct contact with water during the Freeze cycle (reservoir, evaporator, auger, drain lines).

## **EXTERIOR CLEANING**

Clean the area around the ice machine as often as necessary to maintain cleanliness and efficient operation.
Use cleaners designed for use with stainless steel products.

Sponge any dust and dirt off the outside of the ice machine with mild soap and water. Wipe dry with a clean, soft cloth.

Heavy stains should be removed with stainless steel wool. Never use plain steel wool or abrasive pads. They will scratch the panels.

## WEEKLY

Remove grill from scrap ice tray and wipe splash panel, scrap ice tray and grill with sanitizer & water solution. Pour excess solution in scrap ice tray to clear drain.

## **TOUCHLESS SENSOR ONLY**

Wipe sensor window with a soft cloth and mild detergent. Rinse with clear water and dry with a clean soft cloth.

Dust and dirt can be removed from exterior surfaces with mild household dish-washing detergent and warm water. Wipe dry with a clean, soft cloth.

## **Preventative Maintenance Procedure**

Ice machine cleaner is used to remove lime scale or other mineral deposits. It is not used to remove algae or slime. Refer to "Sanitizing Procedure" for removal of algae and slime. To initiate a cleaning cycle using Manitowoc's Cleaning Technology use the following procedure.

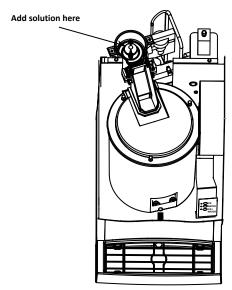
**Step 1** To start a cleaning cycle, move the toggle switch to the CLEAN position. Water will flow through the water dump valve and down the drain.

**Step 2** Remove the top panel and translucent plastic ice chute cover. Wait about one minute then add the proper amount of Manitowoc Ice Machine Cleaner. Rinse the cleaner from the top of the evaporator with 2 ounces (60 ml) of clear water and re-install cover

# **⚠** Caution

Use only Manitowoc approved Ice Machine Cleaner part number 000000084. It is a violation of Federal law to use these solutions in a manner inconsistent with their labeling. Read and understand all labels printed on bottles before use.

Model	Amount of Cleaner Part Number 000000084
CNF201 CNF202	2 ounces (60 ml)



**Step 3** The ice machine will run a wash cycle, a series of rinse cycles and then stop. This entire cycle lasts approximately 30 minutes.

NOTE: Periodic cleaning must be performed on adjacent surface areas not contacted by the water distribution system.

NOTE: The ice machine may be set to start and finish a cleaning procedure, and then automatically start ice making again

- A. After cleaner is added, move the switch from CLEAN to ICE position.
- When the cleaning cycle is complete, ice making will start automatically.

## Changing toggle switch position during clean cycle:

- Less than 60 seconds into Clean cycle The Clean cycle will end when the toggle switch is moved to the OFF position.
- More than 60 seconds into Clean cycle The ice machine will complete the clean cycle. Toggle switch position will determine the next cycle after the Clean cycle is completed.
  - CLEAN POSITION The ice machine will wait for a change in toggle switch position.
  - OFF POSITION The ice machine will wait for a change in toggle switch position.
  - ICE POSITION The ice machine will start making ice automatically.
- To abort the clean cycle move the toggle switch from CLEAN to OFF to CLEAN and back to OFF within a 15 second time period.

Manitowoc recommends disassembling, cleaning and sanitizing the ice machine and dispenser every six months.

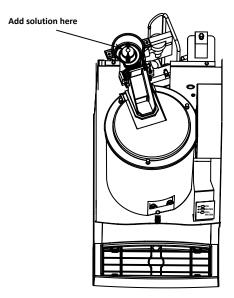
# **Heavily Scaled Cleaning Procedure**

Ice machines that are heavily scaled or have not been cleaned on a regular basis will need to run this Procedure. Failure to do so may result in binding of the auger as the lime scale releases from the auger and evaporator barrel.

- **Step 1** Remove panels and set the ICE/OFF/CLEAN toggle switch to the OFF position.
- **Step 2** Remove all ice from the bin.
- **Step 3** Turn off the water supply to the ice machine.
- **Step 4** Place ICE/OFF/CLEAN toggle switch in the CLEAN position. The dump valve will open and drain the water from the evaporator and reservoir.
- **Step 5** Wait approximately 30 seconds (or until the evaporator is drained) and place the toggle switch in the OFF position.

**Step 6** Refer to chart and add the correct amount of cleaner for your model ice machine.

Model	Amount of Cleaner Part Number 000000084
CNF201 CNF202	12 ounces (355 ml)



**Step 7** Turn on the water supply to the ice machine.

# **Important**

Leave the cleaner/water solution in the evaporator for a minimum of 4 hours.

- **Step 8** Move the toggle switch to the ICE position. The compressor will energize and produce ice with the cleaning solution. Continue the freeze cycle for 15 minutes.
- **Step 9** Move the toggle switch to the OFF position, then follow the standard cleaning and sanitizing procedures.

# **Cleaning Procedure**

Ice machines that are heavily scaled or have not been cleaned on a regular basis will need to run the Heavily Scaled Cleaning Procedure before this one. Failure to do so may result in binding of the auger as the lime scale releases from the auger and evaporator barrel.

Ice machine cleaner is used to remove lime scale or other mineral deposits. Ice machine sanitizer is used to remove algae or slime.

- **Step 1** Remove panels and set the ICE/OFF/CLEAN toggle switch to the OFF position.
- **Step 2** Turn off the water supply to the ice machine.
- **Step 3** Remove all ice from the bin.
- **Step 4** Place ICE/OFF/CLEAN toggle switch in the CLEAN position. The dump valve will open and drain the water from the evaporator and reservoir.
- **Step 5** Wait approximately 30 seconds (or until the evaporator is drained) and place the toggle switch in the OFF position.

# **⚠** Caution

Use only Manitowoc approved Ice Machine Cleaner part number 000000084. It is a violation of Federal law to use these solutions in a manner inconsistent with their labeling. Read and understand all labels printed on bottles before use.

**Step 6** Refer to chart and premix the correct solution of cleaner and cool water for your model ice machine.

Model	Amount of Cleaner Part Number	Amount of Water
	00000084	
CNF201 CNF202	2 oz (60 ml)	32 oz (1 liter)

- **Step 7** Remove the top cover from the ice chute and pour the cleaner/water solution into the evaporator. Add the entire amount of premixed solution (excess solution will exit through the overflow tube in the water reservoir).
- **Step 8** Replace the ice chute cover and allow the ice machine to stand for 30 minutes.
- **Step 9** Turn on the water supply to the ice machine.
- **Step 10** Move the toggle switch to the ICE position. The compressor will energize and produce ice with the cleaning solution.
- **Step 11** The ice machine will freeze and discharge the cleaning solution into the bin. Allow the cycle to run for 15 minutes.

NOTE: Discard all ice produced during the cleaning process. Cleaning and sanitizing must be performed on adjacent surface areas not contacted by the water distribution system. Refer to "Removal of Parts for Cleaning or Sanitizing" on page 38 - Disassemble, clean and sanitize the ice machine a minimum of once every six months.

# **Sanitizing Procedure**

Ice machine sanitizer is used to remove algae or slime. It is not used to remove lime scale or other mineral deposits. Refer to the "Cleaning Procedure" for removal of lime scale or other mineral deposits.

NOTE: Sanitizing must be performed on adjacent surface areas not contacted by the water distribution system. Always perform Component Disassembly for Cleaning/Sanitizing procedure and a Cleaning Procedure before sanitizing the ice machine.

- **Step 1** Turn off the water supply to the ice machine.
- **Step 2** Place ICE/OFF/CLEAN toggle switch in the CLEAN position. The dump valve will open and drain the water from the evaporator and reservoir.
- **Step 3** Wait approximately 30 seconds (or until the evaporator is drained) and place the toggle switch in the OFF position.

**Step 4** Refer to chart and premix the correct solution of sanitizer and cool water for your model ice machine.

Model	Amount of Sanitizer Part Number 9405653	Amount of Water
CNF201 CNF202	2 ounces (60 ml)	3 gallons (11.4L)

- **Step 5** Remove the top cover from the ice chute and pour the sanitizer/water solution into the evaporator. Add the entire amount of premixed solution (excess solution will exit through the overflow tube in the water reservoir).
- **Step 6** Replace the ice chute cover and allow the ice machine to stand for 30 minutes.
- **Step 7** Turn on the water supply to the ice machine.
- **Step 8** Move the toggle switch to the ICE position. The compressor will energize after the 15 minute delay and produce ice with the sanitizing solution.

- **Step 9** The ice machine will freeze and discharge the sanitizing solution into the bin. Allow the cycle to run for 15 minutes.
- **Step 10** Discard all ice produced during the sanitizing process.
- **Step 11** Place the toggle switch in the CLEAN position. The ice machine will automatically time out a series of flush and rinse cycles, and then stops. This entire cycle lasts approximately 30 minutes.
- **Step 12** Refer to Component Disassembly for Cleaning and Sanitizing and remove, clean and sanitize all parts listed.

# Component Disassembly for Cleaning and Sanitizing

# **A**Warning

Disconnect electric power to the ice machine at the electric switch box before proceeding.

# **A**Warning

Wear rubber gloves and safety goggles (and/or face shield) when handling Ice Machine Cleaner or Sanitizer.

# **A** Caution

Do not mix Cleaner and Sanitizer solutions together. It is a violation of Federal law to use these solutions in a manner inconsistent with their labeling.

## GENERAL INFORMATION

The ice machine must be disassembled, cleaned and sanitized every six months.

- Turn off the water supply to the ice machine at the water service valve, or disconnect water supply line at float valve quick disconnect by depressing stainless steel lever.
- Remove the components you want to clean or sanitize. See the pages specific to the model you are working on for removal procedures.
- 3. Soak the removed parts to clean and sanitize.

Solution	Water	Mixed With
Туре		
Cleaner	1 gal. (4 L)	16 oz. (500 ml) cleaner
Sanitizer	6 gal. (23 L)	4 oz. (120 ml) sanitizer

- Use a soft-bristle brush or sponge (NOT a wire brush) to carefully clean the parts.
- 5. Use the solution and a brush to clean all disassembled components and the inside of the bin.
- Re-install the removed parts and turn on the water and electrical supply.

# Removal of Parts for Cleaning or Sanitizing

- 1. Turn off water supply to ice machine.
- Place toggle switch in the clean position for 30 seconds to drain water from reservoir, then move toggle switch to Off position.
- Run dispenser to transfer all ice from the bin to a container.

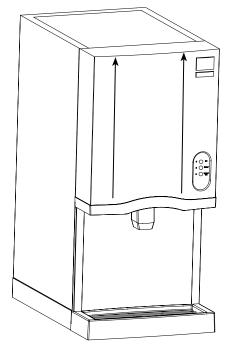
# **A**Warning

Disconnect electric power to the ice machine at the electric switch box before proceeding.

- 4. Disconnect electrical power to the ice machine.
- 5. Remove top cover.
  - Remove two screws.
  - B. Lift up on top cover to remove.



- 6. Remove front cover.
  - A. Lift up on front cover.
  - B. Pull forward to disengage keyhole slots.

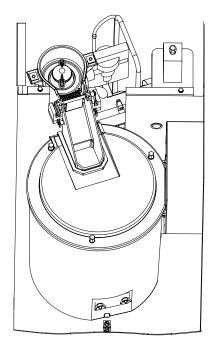


7. Remove side panels.

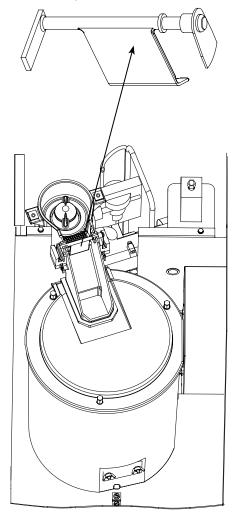
# 8. Remove ice chute cover

- A. Turn the two thumbscrews 1/4 turn.
- B. Lift to remove cover.

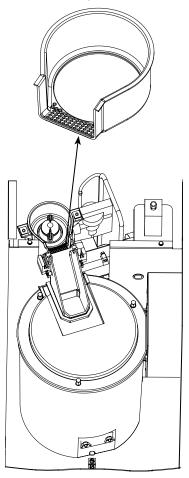




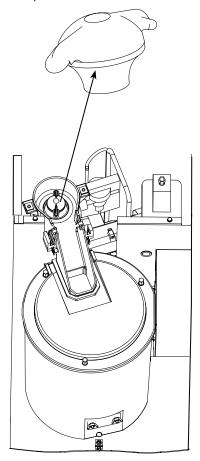
# 9. Lift out ice damper.



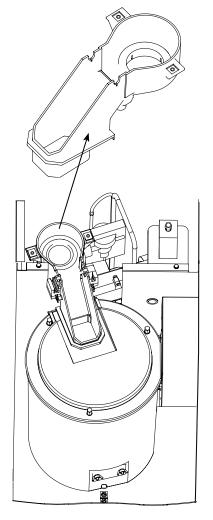
# 10. Lift out ice strainer ramp.



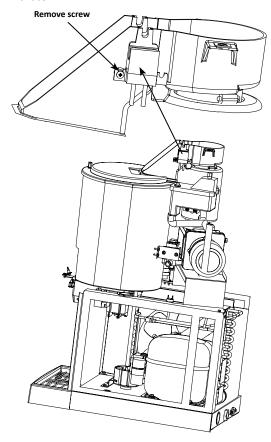
# 11. Turn ice wiper counterclockwise to remove.



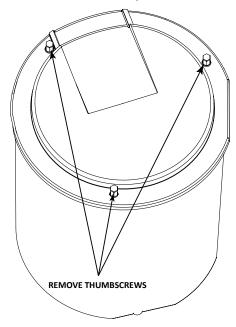
- 12. Loosen ice chute hose clamp.
- 13. Disconnect ice chute drain.
- 14. Lift up on ice chute to remove. The ice chute must be removed before the bin cover can be removed.



15. The ice chute can be cleaned in place. If complete removal is desired, use a Phillips screwdriver to remove the Hall Effect switch assembly from the ice chute.



16. Remove three thumbscrews, then remove bin cover.



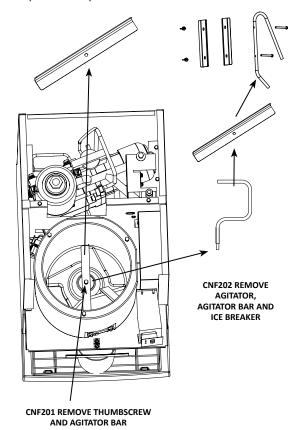
# **Important**

Do not pour cleaner or sanitizer solutions into the bin. The solution will leak out of the front of the bin and into the compressor compartment.

# 17. Remove agitator bar.

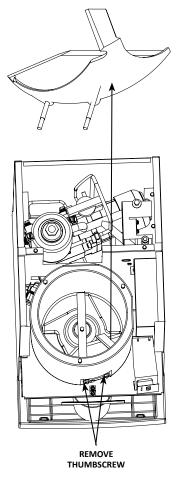
- CNF201 Remove the thumbscrew and lift off.
- CNF202 Unscrew the upright agitator bar.

NOTE: Bar must be reassembled by inserting front edge into the paddle wheel, then lowering the back edge (rounded 90 angle) to prevent water leakage into the compressor compartment.

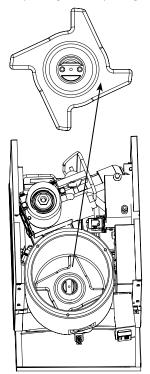


# 18. Remove ice deflector.

- A. Remove the two thumbscrews.
- B. Lift the ice deflector out.

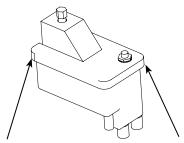


19. Remove ice dispensing wheel by lifting straight out.



# 20. Water Reservoir Cover Removal

A. Push up on cover to snap off.



## CLEANING THE CONDENSER

# **A** Warning

Disconnect electric power to the ice machine at the electric service switch before cleaning the condenser. The condenser fins are sharp. Use care when cleaning them.

A dirty condenser restricts airflow, resulting in excessively high operating temperatures. This reduces ice production and shortens component life. Clean the condenser at least every six months. Follow the steps below.

- The washable foam filter on self-contained ice machines is designed to catch dust, dirt, lint and grease. This helps keep the condenser clean. Clean the filter with a mild soap and water solution.
- Clean the outside of the condenser with a soft brush or a vacuum with a brush attachment. Clean from top to bottom, not side to side. Be careful not to bend the condenser fins.
- Shine a flashlight through the condenser to check for dirt between the fins. If dirt remains:
  - A. Blow compressed air through the condenser fins from the inside. Be careful not to bend the fan blades.
  - Use a commercial condenser coil cleaner. Follow the directions and cautions supplied with the cleaner.
- 4. Straighten any bent condenser fins with a fin comb.
- Carefully wipe off the fan blades and motor with a soft cloth. Do not bend the fan blades. If the fan blades are excessively dirty, wash with warm, soapy water and rinse thoroughly.

# **A** Warning

If you are cleaning the condenser fan blades with water, cover the fan motor to prevent water damage.

# **Removal from Service/Winterization**

#### GENERAL

Special precautions must be taken if the ice machine is to be removed from service for an extended period of time or exposed to ambient temperatures of 32°F (0°C) or below.

# **∴** Caution

If water is allowed to remain in the ice machine in freezing temperatures, severe damage to some components could result. Damage of this nature is not covered by the warranty.

- Disconnect the electric power at the circuit breaker or the electric service switch.
- 2. Turn off the water supply.
- Disconnect and drain the incoming ice-making water line at the rear of the ice machine.
- Disconnect drain tubing (from the inlet to dump valve) and drain water into container and discard.
- Make sure water is not trapped in any of the water or drain lines.

# **Troubleshooting**

## SafeGuard Feature

The ice machine will stop when conditions arise that would cause major component failure.

## Standby Mode

The first time a failure occurs, the ice machine deenergizes and initiates a Standby Mode. The ice machine will remain off for 60 minutes, then automatically restart to see if the problem reoccurs. If the same failure keeps occurring, the ice machine will initiate a SafeGuard Mode and remain off until manually restarted.

# SafeGuard Indicator Lights

During a SafeGuard Mode, the corresponding control board light will flash continuously.

The SafeGuard will remain in memory for 48 hours of ice making time. After 48 hours of ice making time, the SafeGuard will automatically be erased. If power is interrupted during the 48 hours, the timing will resume when power is applied to the ice machine.

# Placing the toggle switch in the OFF position:

The corresponding light will flash continuously.

# Placing the toggle switch in the ICE position:

The light will de-energize and a start-up sequence will initiate. The corresponding light will flash anytime the toggle switch is placed in the OFF position provided 48 hours of ice making time has not been exceeded.

## Reset Procedure

- Move the ICE/OFF/CLEAN toggle switch to OFF.
  - A. If a safeguard feature has stopped the ice machine, it will restart after a short delay. Proceed to Step 2.
  - B. If the ice machine does not restart, see "Ice Machine Does Not Operate."
- Allow the ice machine to run to determine if the condition is reoccurring.
  - If the ice machine continues to run, the condition has corrected itself. Allow the ice machine to continue running.
  - B. If the ice machine stops, determine the safeguard mode, then refer to the specific safeguard for troubleshooting procedures.

# **SafeGuards**

- No Water
- No Ice Production

## **NO WATER**

The water sensing switch opens for more than 30 seconds.

## Operation

When the float switch is open at initial start-up, the ice machine will wait for the switch to close before starting.

During the freeze cycle, if the water float opens for 30 seconds, the ice machine will:

- 1. De-energize the compressor and gear motor.
- 2. The Water Ok light on the control board will deenergize.
- 3. A 15-minute delay is initiated.

The water Ok light will flash when the float switch closes or when the toggle switch is placed in the OFF position.

The ice machine will remain off until the 15-minute delay period expires and the water float switch closes.

## NO ICE PRODUCTION

The ice damper did not open and close at least once every 90 seconds in the freeze cycle.

## Operation

During the first 12 minutes of operation:

The control board must see the ice damper open/close at least once. This allows time for ice production to start at all ambient temperatures.

After the initial 12-minute period:

The control board must see the ice damper open/close at least once every 90 seconds.

When the ice damper does not open/close within the specified time, the control board will:

- De-energize the compressor and gear motor.
- HES #1 light on the control board will flash (the light will not flash if the ice damper is open).
- 3. A 15-minute delay is initiated.
- 4. After the 15-minute delay the ice machine will:
  - A. Energize the dump valve for 30 seconds
  - B. Energize the gear motor
  - C. Wait until the water float valve closes and then energize the compressor and fan motor.

- 5. If the ice damper fails to open/close at least once in the initial 12-minute period, the control board will initiate another safety shutdown. This sequence will repeat until:
  - The ice machine restarts and operates normally for 10 minutes.
    - B. The ice machine is unable to run normally within 300 minutes of the initial shutdown.

If the ice machine does not run normally within 300 minutes of the initial shutdown, the control board will lock out and require a manual reset.

The control board will flash the HES #1 light anytime the toggle switch is placed in the OFF position for the first 48 hours after the failure.

## **Reset Procedure**

Move the ICE/OFF/CLEAN toggle switch from OFF to ICE or disconnect and reapply power to the ice machine.

# Ice Machine Will Not Run Diagnostics

# **A**Warning

High (line) voltage is applied to the control board (terminals #39 and #90) at all times. Removing control board fuse or moving the toggle switch to OFF will not remove the power supplied to the control board.

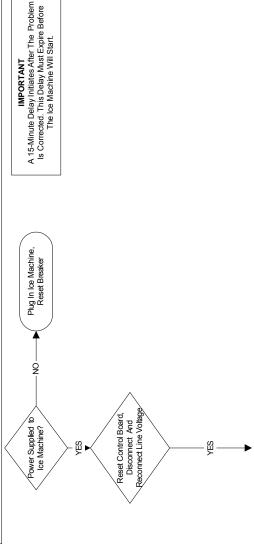
The following sequence describes the normal startup procedure for the ice machine when line voltage is disconnected then reconnected to the ice machine.

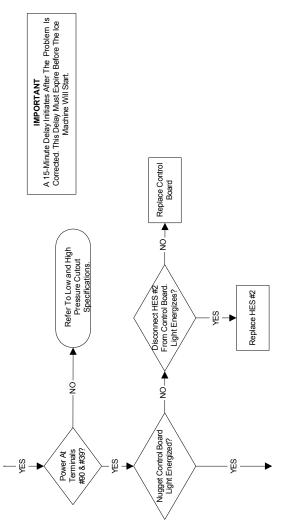
- Power is supplied to the control board.
- The control board lights race (energize/de-energize in sequence) to indicate the ice machine is in a 15-minute delay mode.
- When the 15-minute delay ends, the ice machine starts. The following lights are energized:
  - HES #1
  - HFS #2
  - Water OK

The HES #1 light will de-energize and re-energize as ice passes beneath the ice damper.

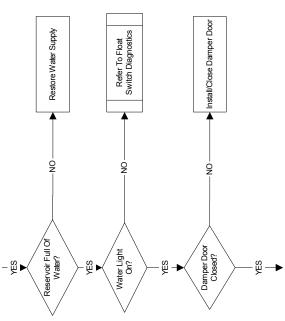
When the ice damper lifts approximately 45 degrees, HES #2 de-energizes and the ice machine shuts off immediately on full bin. A 15-minute time delay is initiated, which prevents the ice machine from immediately restarting.

# Ice Machine Will Not Run

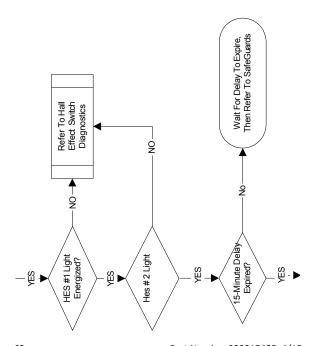




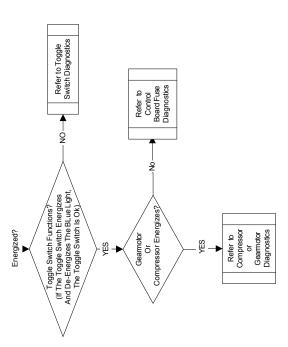












# **Refrigeration Diagnostics**

#### BEFORE BEGINNING SERVICE

Ice machines may experience operational problems only during certain times of the day or night. A machine may function properly while it is being serviced, but malfunctions later. Information provided by the user can help the technician start in the right direction, and may be a determining factor in the final diagnosis.

Ask these questions before beginning service:

- When does the ice machine malfunction? (night, day, all the time, only during the Freeze cycle, etc.)
- When do you notice low ice production? (one day a week, every day, on weekends, etc.)
- Can you describe exactly what the ice machine seems to be doing?
- Has anyone been working on the ice machine?
- During "store shutdown," is the circuit breaker, water supply or air temperature altered?
- Is there any reason why incoming water pressure might rise or drop substantially?

## INSTALLATION/VISUAL INSPECTION CHECKLIST

Possible Problem List	Corrective Action List
Filter and/or condenser is dirty.	Clean the filter and condenser.
Water filtration is plugged (if used).	Install a new water filter.
Water drain is not vented or is	Run and vent drains according
improperly installed.	to the installation manual.

## WATER SYSTEM CHECKLIST

A water-related problem could cause component misdiagnosis.

Water system problems must be identified and eliminated prior to replacing other components.

Possible Problem List	Corrective Action List
Water area (evaporator) is	Clean as needed.
dirty.	
Water inlet pressure not	Install a water regulator valve or
between 20 and 80 psig.	increase the water pressure.
Incoming water temperature	If too hot, check the hot water
is not between 45°F (1.7°C)	line check valves in other store
and 90°F (32.2°C).	equipment.
Water filtration is plugged (if	Install a new water filter.
used).	
Vent tube is not installed on	See installation instructions.
water outlet drain.	
Hoses, fittings, etc., are	Repair/replace as needed.
leaking water.	
Water float valve is stuck	Clean/replace as needed.
open or closed.	
Dump valve is leaking.	Clean dump valve.
	Ice machine will shut off on Low
	Water SafeGuard.

## ICE PRODUCTION/QUALITY CHECK

## **QUALITY CHECK**

Ice quality will vary with ambient and water temperatures, and is measured by the amount of excess water in the ice. An easy test is to squeeze a handful of ice. High quality ice releases only a small amount of water. As ice quality drops, more water can be removed.

Generally speaking, higher incoming water temperature results in lower ice quality.

Lower water temperature results in higher ice quality.

### ICE PRODUCTION CHECK

- Run the ice machine a minimum of 10 minutes to allow the system to stabilize.
- Catch the ice in a non-perforated container for 7 minutes and 12 seconds or for more accuracy 14 minutes and 24 seconds.
- Weigh the container and ice, then deduct the weight of the container.
- Convert ounces to pounds.
   Example: 3 lbs. 12 oz. converts to 3.75 lbs.
   (12 oz. ÷ 16 oz. = .75 lb.)
- 5. Determine the 24-hour ice production capacity.
  - 7 minutes 12 seconds: Multiply the total ice weight by 200.
  - 14 minutes 24 seconds: Multiply the total ice weight by 100.

## Example:

- Collected ice for 7 minutes 12 seconds.
- 2. Total weight (minus container) = 3.75 lbs.
- 3. 3.75 lbs. x 200 = 750 lbs. of ice every 24 hours.
- Compare the capacity to the 24-hour ice production chart for the model being tested.
- Ice production checks that are within 10% of the charted capacity are considered normal due to variances in air and water temperatures. Actual temperatures will seldom match the chart exactly.

### ANALYZING DISCHARGE PRESSURE

- 1. Determine the ice machine operating conditions:
  - · Air temperature entering condenser
  - · Air temperature around ice machine
  - Water temperature entering water reservoir
- Refer to 24-Hour Ice Production/Refrigeration Pressure Chart for ice machine being checked.

Use the operating conditions determined in Step 1 to find the published normal discharge pressures and compare to actual discharge pressure readings.

- 3. Measure the actual discharge pressure.
- 4. Compare the actual discharge pressure (step 3) with the published discharge pressure (step 2).

The discharge pressure is normal when the actual pressure falls within the published pressure range for the ice machine's operating conditions.

# **Discharge Pressure High Checklist**

Problem	Cause
Improper installation	Refer to "Installation/Visual Inspection Checklist."
	Dirty air filter
Restricted	High inlet air temperature
condenser air	Condenser discharge air recirculation
flow	Dirty condenser fins
	Defective fan motor
Improper	Overcharged
refrigerant	Non-condensible in system
charge	Wrong type of refrigerant
	Non-Manitowoc components in system
Other	High side refrigerant line/component restricted
	(before mid-condenser)

# **Discharge Pressure Low Checklist**

Problem	Cause
Improper installation	Refer to "Installation/Visual Inspection Checklist."
Improper refrigerant charge	Undercharged Wrong type of refrigerant
Other	Low ambient temperature Non-Manitowoc components in system High side refrigerant lines/component restricted (before mid-condenser) Suction pressure is too low and affecting discharge pressure. (Refer to "Suction Pressure Low Checklist.") No water or insufficient pressure Expansion valve incorrectly adjusted
	Defective compressor Moisture in refrigeration system

NOTE: Do not limit your diagnosis to only the items listed in the checklists.

## **ANALYZING SUCTION PRESSURE**

NOTE: Analyze discharge pressure before analyzing suction pressure.

High or low discharge pressure may be causing high or low suction pressure.

# **Suction Pressure High Checklist**

Problem	Cause
Improper installation	Refer to "Installation/Visual Inspection Checklist."
Discharge pressure	Discharge pressure is too high and is affecting suction pressure. Refer to "Discharge Pressure High Checklist."
Improper refrigerant	Overcharged Wrong type of refrigerant
charge	Non condensible in system
Other	Dump valve leaking Non-Manitowoc components in system Expansion valve incorrectly adjusted Defective compressor

# **Suction Pressure Low Checklist**

Problem	Cause
Improper installation	Refer to "Installation/Visual Inspection Checklist."
Discharge pressure	Discharge pressure is too low and is affecting suction pressure. Refer to "Discharge Pressure Low Checklist."
Improper refrigerant charge	Undercharged Wrong type of refrigerant
Other	Non-Manitowoc components in system Restricted/plugged liquid line drier Restricted/plugged tubing in suction side of refrigeration system Expansion valve starving No water or insufficient pressure Moisture in refrigeration system Dirty Evaporator

NOTE: Do not limit your diagnosis to only the items listed in the checklist.

# **Component Check Procedures**

# **Electrical Components**

#### MAIN FUSE

## **FUNCTION**

The control board fuse stops ice machine operation if electrical components fail causing high amp draw.

## **SPECIFICATIONS**

• The main fuse is 250 Volt, 10 amp, time delay.

# **A** Warning

High (line) voltage is applied to the control board at all times. Removing the control board fuse or moving the toggle switch to OFF will not remove the power supplied to the control board.

### CHECK PROCEDURE

 Energized control board lights do not indicate a good fuse.

# Warning

Disconnect electrical power to the entire ice machine before proceeding.

Remove the fuse. Check for continuity across the fuse with an ohmmeter.

Reading	Result
Open (OL)	Replace fuse
Closed (O)	Fuse is good

## **ICE/OFF/CLEAN TOGGLE SWITCH**

### **FUNCTION**

The switch is used to place the ice machine in ICE, OFF or CLEAN mode of operation.

## **SPECIFICATIONS**

Single-pole, double-throw switch. The switch is connected into a varying low D.C. voltage circuit.

### CHECK PROCEDURE

NOTE: Because of a wide variation in D.C. voltage, it is not recommended that a voltmeter be used to check toggle switch operation.

- 1. Inspect the toggle switch for correct wiring.
- Isolate the toggle switch by disconnecting the molex connector.
- Check continuity across the toggle switch terminals. Note where the wire numbers are connected to the switch terminals, or refer to the wiring diagram to take proper readings.

Switch Setting	Terminals	Ohm Reading
ICE	1-6	Open
	1-2	Closed
	2-6	Open
CLEAN	1-6	Closed
	1-2	Open
	2-6	Open
	1-6	Open
OFF	1-2	Open
	2-6	Open

 Replace the toggle switch if continuity readings do not match all three switch settings.

#### FLOAT SWITCH

## **FUNCTION**

The float switch prevents the ice machine from running when the water level is below the control setpoint.

The float switch must be closed (float in up position) before the ice machine will start, and must remained closed throughout the freeze cycle.

#### SPECIFICATIONS

A mechanical liquid level sensor, that magnetically operates a reed switch.

## **CHECK PROCEDURE**

NOTE: The water float switch is connected to the water reservoir cover. The reservoir cover must be in place and water must be present in the reservoir to close the switch. Verify water is supplied to the float valve, the water inlet screen is clean, and the float and float arm are free moving.

- 1. Disconnect power to the ice machine.
- Disconnect the float switch from the control board and connect an ohm meter to the switch wires.
- Verify the switch is in the up position (reservoir full of water), then check continuity.

Step 3 Check for Continuity	
Reading Result	
Closed	The switch is working properly
Open	Replace the switch

Remove cover from reservoir by lifting straight up.
 Verify the switch opens as the float drops.

#### ICE DAMPER AND HALL EFFECT SWITCHES

## **Damper Door**

#### **FUNCTION**

Opens and closes as ice passes from the ice chute to the bin. A metal lever attached to the damper interrupts the magnetic field sensed by the Hall Effect switches as the damper opens and closes.

## Hall Effect Switch #1 - Operational Sensing

This switch will open and re-close in conjunction with the ice damper as ice is discharged from the evaporator. The control board must see this switch open and close at least once every 90 seconds during the freeze cycle.

#### Hall Effect Switch #2 - Shut-Off and Restart

This switch also works in conjunction with the ice damper. When the switch opens, the ice machine stops immediately. The ice machine restarts when the switch recloses and the five-minute delay period expires.

## **FUNCTION TEST**

Place toggle switch in OFF position. HES#1 and HES#2 lights will energize. Move ice damper slowly to open position.

- HES#1 light de-energizes, HES#2 remains energized.
- HES#2 light de-energizes as damper continues to open.

Move damper slowly to closed position. HES#2 energizes, HES#1 remains de-energized.

HES#1 energizes as the damper continues to close.

## Hall Effect Switch Diagnostics

All diagnostics must be performed with the ice damper installed and in the closed position. The control board lights will not indicate as described below with the ice damper in the open position. The ice damper must swing freely, if the damper is binding adjust/loosen screws that hold the Hall Effect switch housing in place.

## SWITCH FAILS OPEN OR IS DISCONNECTED

#### HFS#1

- 1. Reset line voltage to the ice machine
- 2. Wait 15 minutes for delay to expire.
- 3. HES#1 light energizes and ice machine starts.
- 4. When 15-minute delay period ends, the ice machine shuts off and flashes the HES#1 light.

#### HES#2

- 1. Reset line voltage to the ice machine.
- 2. Wait 15 minutes for delay to expire.
- HES#2 light is energized and HES#1 light is deenergized.
- 4. Ice machine starts.
- 5. After 15 minutes the ice machine shuts off. HES#1 is de-energized and HES#2 is energized.

# SWITCH FAILS CLOSED

### HES#1

- 1. Reset line voltage to the ice machine
- 2. Wait 15 minutes for delay to expire.
- 3. HES#1 light de-energized.
- The ice machine starts, runs for 20 seconds, then deenergizes.
- HES#1 light is de-energized.

## HES#2

- 1. Reset line voltage to the ice machine
- 2. Wait 15 minutes for delay to expire.

HES #2 is a three wire switch and can stop in three separate failure modes.

- HES #1 is energized, HES #2 is de-energized, and the ice machine will not start.
- HES #1 and HES #2 lights are de-energized, and the ice machine will not start.
- HES #1 and HES #2 are energized. The ice machine starts, immediately shuts off and starts another 15-minute delay period (control board lights race to indicate 15-minute delay period). The ice machine will repeat the sequence until the toggle switch is moved to OFF or power is disconnected to the ice machine.

In all failure modes, disconnecting HES #2 from the control board will result in Switch Fails Open or Is Disconnected symptoms (see previous page).

## SELECTOR SWITCH

## **FUNCTION**

Selects product dispensed. Ice, Water or Ice and Water.

### CHECK

#### **DISPENSE LEVER ACTIVATED**

**Step 1** Verify line voltage is present at control board wires #20 & #22. Note - If a blue indicator light is energized on the touch pad, the control board has line voltage.

**Step 2** Depress each selection on the touch pad.

- 1 or more LEDs do not energize/de-energize when a selection is pressed - Replace touch pad
- Each touch pad LED energizes/de-energizes as selections are pressed - Go to next step

**Step 3** Isolate and ohm the ice dispense switch (Wires #59 & #60). The selector switch closes when depressed and opens when released.

- Switch does not close/open when the switch is pressed/released - Replace switch
- Switch closes/opens as the switch is pressed/released
   Go to next step

**Step 4** Reconnect dispense switch and test both relays for line voltage:

- Wires #58 & #54 = Ice Dispense Motor
- Wires #52 & #56 = Water Solenoid
- Replace wiring, component or control board as required.

#### TOUCHLESS SENSOR ACTIVATED

**Step 1** Verify line voltage is present at control board wires #20 & #22. Note - If a blue indicator light is energized on the touch pad, the control board has line voltage.

**Step 2** Depress each selection on the touch pad.

- 1 or more LEDs do not energize/de-energize when a selection is pressed - Replace touch pad
- Each touch pad LED energizes/de-energizes as selections are pressed - Go to next step

**Step 3** Verify line voltage is supplied to touchless sensing control board at wires #49 & #50.

## Will Not Dispense

- Disconnect wires from C (common) and NO (normally open) terminals on the sensor control board.
- Use an ohm meter to verify the switch is opening and closing. Place hand in front of sensor, if the sensor activates and closes the switch, the sensor is working correctly.
- If the sensor does not activate the switch, disconnect the sensor wire from the sensor control board. Short +5 and SIG.
  - If the contacts close, replace the sensor.
  - If the contacts remain open, replace the sensor control board.

# Will Not Stop Dispensing

- Disconnect sensor plug from sensor control board.
  - If the dispensing stops, replace the sensor
  - If the dispensing continues, disconnect wires #59
     #60 from the control board
- Check resistance across control board contacts
  - Closed = Replace the touchless sensing control board
  - Open = Dispense control board is not functioning correctly, check control board relays

Replace the selector switch if ohm readings do not match all three switch settings.

### **DISPENSE SWITCH**

#### **FUNCTION**

Supplies power to the product selector switch when activation lever is depressed.

### CHECK

- 1. Inspect the selector switch for correct wiring.
- Isolate the switch by disconnecting all wires from the switch.
- 3. Check across the switch terminals with an ohm meter.

Activation Lever Position	Resistance Reading
Depressed	Closed
Released	Open

Replace the selector switch if ohm readings do not match.

#### **TOUCHLESS SENSOR**

#### **FUNCTION**

Supplies power to the product selector switch when container activates sensor.

### **CHECK**

Container must be within an inch of sensor to activate.

### Will Not Dispense

- Verify power is supplied to the ice machine. When the toggle switch is in ICE position, the blue LED light will be on.
- Disconnect wires from C (common) and NO (normally open) terminals on the sensor control board.
- Use an ohm meter to verify the switch is opening and closing. Place hand in front of sensor, if the sensor activates and closes the switch, the sensor is working correctly.
- If the sensor does not activate, disconnect the sensor wire from the sensor control board. Short +5 and SIG.
  - If the contacts close, replace the sensor.
  - If the contacts remain open, replace the sensor control board.

# Will Not Stop Dispensing

- 1. Disconnect sensor plug from sensor control board.
  - If the dispensing stops, replace the sensor.
  - If the dispensing continues, disconnect wires 22 & 59/60 from the control board.
- 2. Check resistance across control board contacts.
  - Closed = Replace the sensor control board
  - Open = Refer to selector switch diagnostics

#### HIGH PRESSURE CUTOUT CONTROL

#### **FUNCTION**

Stops the ice machine if subjected to excessive high-side pressure.

The HPCO control is normally closed, and opens on a rise in discharge pressure.

Specifications				
Cut-Out Cut-In				
450 psig ±10				
(3103 kPa ±69)	Automatic Reset			
31 bar ±.69				
(Must be below 300 psig				
[2068 kPa 20.68 bar] to reset.)				

#### CHECK PROCEDURE

- Set ICE/OFF/CLEAN switch to OFF, (Manual reset HPCO reset if tripped).
- 2. Disconnect main power supply to the ice machine.
- 3. Connect manifold gauges to the access valves.
- Hook voltmeter in parallel across the HPCO, leaving wires attached.
- 5. Reconnect main power supply to the ice machine.
- 6. Set ICE/OFF/CLEAN switch to ICE.
- No water or air flowing through the condenser will
  cause the HPCO control to open because of excessive
  pressure. Watch the pressure gauge and record the
  cut-out pressure.

# **A**Warning

If discharge pressure exceeds 460 psig (3172 kPa 31.72 bar) and the HPCO control does not cut out, set ICE/OFF/CLEAN switch to OFF to stop ice machine operation.

# Replace the HPCO control if it:

- 1. Will not reset (below 300 psig [2068 kPa 20.68 bar]).
- 2. Does not open at the specified cut-out point.

### **FAN CYCLE CONTROL**

#### **FUNCTION**

Energizes and de-energizes the condenser fan motor.

The fan cycle control closes on an increase, and opens on a decrease in discharge pressure.

Specifications			
Cut-In (Close) Cut-Out (Open)			
250 psig ±5	200 psig ±5		

#### **CHECK PROCEDURE**

- Verify fan motor windings are not open or grounded, and fan spins freely.
- 2. Connect manifold gauge set to ice machine.
- 3. Hook voltmeter in parallel across the fan cycle control, leaving wires attached.
- Refer to chart below.

FCC Setpoint:	Reading Should Be:	Fan
		Should Be:
Above Cut-In	0 Volts	Running
Below Cut-Out	Line Voltage	Off

# LOW PRESSURE CUTOUT (LPCO) CONTROL

#### **FUNCTION**

Stops the ice machine if the low side pressure is too low. The LPCO control is closed at pressures above setpoint and opens at pressures below setpoint.

	Specifications	
	Cut-Out	Cut-In
Current Production & Replacement Part	17 psig ±5	35 psig ±7

### **CHECK PROCEDURE**

- 1. Connect manifold gauge set to suction access valve.
- 2. Disconnect wires from low pressure switch and connect ohm meter across LPCO terminals.

### Replace the LPCO control if it:

- Is not closed at the specified setpoint.
- 2. Does not open at the specified setpoint.

#### COMPRESSOR ELECTRICAL DIAGNOSTICS

The compressor does not start or will trip repeatedly on overload.

### Check Resistance (Ohm) Values

NOTE: Compressor windings can have very low ohm values. Use a properly calibrated meter.

Perform the resistance test after the compressor cools. The compressor dome should be cool enough to touch (below 120°F/49°C) to assure that the overload is closed and the resistance readings will be accurate.

### SINGLE PHASE COMPRESSORS

- Disconnect power, then remove the wires from the compressor terminals.
- The resistance values between C and S and between C and R, when added together, should equal the resistance value between S and R.
- If the overload is open, there will be a resistance reading between S and R, and open readings between C and S and between C and R. Allow the compressor to cool, then check the readings again.

### **Check Motor Windings to Ground**

Check continuity between all three terminals and the compressor shell or copper refrigeration line. Scrape metal surface to get good contact. If continuity is present, the compressor windings are grounded and the compressor should be replaced.

### **Compressor Drawing Locked Rotor**

To determine if the compressor is seized, check the amp draw while the compressor is trying to start.

The two likely causes of this are a defective starting component and a mechanically seized compressor.

To determine which you have:

- 1. Install gauge on high and low side.
- 2. Try to start the compressor.
- 3. Watch the pressures closely.
  - A. If the pressures do not move, the compressor is seized. Replace the compressor.
  - B. If the pressures move, the compressor is turning slowly and is not seized. Check the capacitors and relay.

### COMPRESSOR DRAWING HIGH AMPS

The continuous amperage draw on start-up should not be near the maximum fuse size indicated on the serial tag.

# **Diagnosing Capacitors**

- If the compressor attempts to start, or hums and trips the overload protector, check the starting components before replacing the compressor.
- Visual evidence of capacitor failure can include a bulged terminal end or a ruptured membrane. Do not assume a capacitor is good if no visual evidence is present.
- A good test is to install a known good substitute capacitor.
- Use a capacitor tester when checking a suspect capacitor. Clip the bleed resistor off the capacitor terminals before testing.

#### DIAGNOSING START COMPONENTS

If the compressor attempts to start, or hums and trips the overload protector, check the start components before replacing the compressor.

### Capacitor

Visual evidence of capacitor failure can include a bulged terminal end or a ruptured membrane. Do not assume a capacitor is good if no visual evidence is present. A good test is to install a known good substitute capacitor. Use a capacitor tester when checking a suspect capacitor. Clip the bleed resistor off the capacitor terminals before testing.

### Relay

The relay has a set of contacts that connect and disconnect the start capacitor from the compressor start winding. The contacts on the relay are normally closed (start capacitor in series with the start winding). The relay senses the voltage generated by the start winding and opens the contacts as the compressor motor starts. The contacts remain open until the compressor is de-energized.

### **Relay Operation Check**

# **A**Warning

Disconnect electrical power to the ice machine before proceeding.

- 1. Disconnect wires from relay terminals.
- Verify the contacts are closed.
   Measure the resistance between terminals 1 and 2.
   No continuity indicates open contacts. Replace the relay.
- Check the relay coil.
   Measure the resistance between terminals 2 and
   No resistance indicates an open coil. Replace the relay.
- 4. Move toggle switch to the ICE position.
- The compressor start winding should energize for less than 1 second. Continued high amperage draw could indicate:
  - Low incoming power supply.
     (Check voltage at compressor start-up when load is greatest.)
  - Defective relay.
  - Defective capacitor.
  - Defective compressor.
- 6. Verify voltage and replace all start components.
- If all of the previous tests are satisfactory and the compressor will not operate or continue to operate, replace the compressor.

# **Refrigerant Recovery/Evacuation**

### NORMAL SELF-CONTAINED PROCEDURES

Do not purge refrigerant to the atmosphere. Capture refrigerant using recovery equipment. Follow the manufacturer's recommendations.

# **Important**

Manitowoc Ice assumes no responsibility for the use of contaminated refrigerant. Damage resulting from the use of contaminated refrigerant is the sole responsibility of the servicing company.

# **Important**

Replace the liquid line drier before evacuating and recharging. Use only a Manitowoc (OEM) liquid line filter-drier to prevent voiding the warranty.

### CONNECTIONS

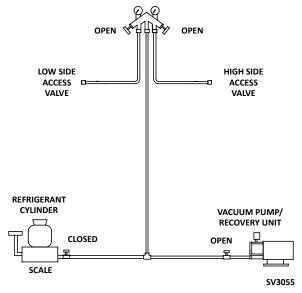
Manifold gauge sets must utilize low loss fittings to comply with U.S. Government rules and regulations.

#### Make these connections:

- Suction side of the compressor through the suction service valve.
- Discharge side of the compressor through the discharge service valve.

### **Recovery/Evacuation Procedures**

- 1. Place the toggle switch in the OFF position.
- Install manifold gauge set, scale, and recovery unit or two-stage vacuum pump.



### RECOVERY/EVACUATION CONNECTIONS

- 3. Perform recovery or evacuation:
  - A. Recovery: Operate the recovery unit as directed by the manufacturer's instructions.
  - B. Evacuation prior to recharging: Pull the system down to 250 microns. Then allow the pump to run for an additional half hour. Turn off the pump and perform a standing vacuum leak check.

NOTE: Check for leaks using an electronic leak detector after charging the ice machine.

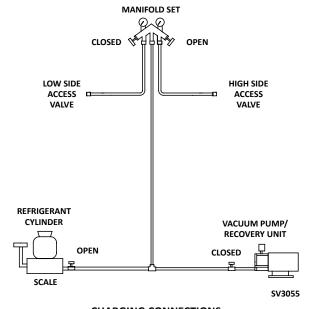
4. Follow the Charging Procedures on the next page.

### **Charging Procedures**

# **Important**

The charge is critical on all Manitowoc ice machines. Use a scale to ensure the proper charge is installed.

1. Be sure the toggle switch is in the OFF position.



### **CHARGING CONNECTIONS**

- 2. Close the vacuum pump valve and the low side manifold gauge valve.
- 3. Open the high side manifold gauge valve.
- Open the refrigerant cylinder and add the proper refrigerant charge (shown on nameplate) through the discharge access valve.
- 5. Let the system "settle" for 2 to 3 minutes.
- 6. Place the toggle switch in the ICE position.

Close the high side on the manifold gauge set. Add any remaining vapor charge through the suction access valve (if necessary).

NOTE: Manifold gauge set must be removed properly to ensure that no refrigerant contamination or loss occurs.

- Make sure that all of the vapor in the charging hoses is drawn into the ice machine before disconnecting the charging hoses.
  - A. Run the ice machine in the Freeze cycle.
  - B. Remove the quick disconnect fitting from the high side access valve at the ice machine.
  - C. Open the low side service valve at the ice machine.
  - D. Open the high and low side valves on the manifold gauge set. Any refrigerant in the lines will be pulled into the low side of the system.
  - E. Allow the pressures to equalize while the ice machine is in the Freeze cycle.
  - F. Remove the quick disconnect fitting from the low side access valve at the ice machine and install both access valve caps.

# System Contamination Clean-Up

#### General

This section describes the basic requirements for restoring contaminated systems to reliable service.

# **Important**

Manitowoc Ice assumes no responsibility for the use of contaminated refrigerant. Damage resulting from the use of contaminated refrigerant is the sole responsibility of the servicing company.

#### DETERMINING SEVERITY OF CONTAMINATION

System contamination is generally caused by either moisture or residue from compressor burnout entering the refrigeration system.

Inspection of the refrigerant usually provides the first indication of system contamination. Obvious moisture or an acrid odor in the refrigerant indicates contamination.

If either condition is found, or if contamination is suspected, use a Total Test Kit from Totaline or a similar diagnostic tool. These devices sample refrigerant, eliminating the need to take an oil sample. Follow the manufacturer's directions.

If a refrigerant test kit indicates harmful levels of contamination, or if a test kit is not available, inspect the compressor oil.

- 1. Remove the refrigerant charge from the ice machine.
- 2. Remove the compressor from the system.
- 3. Check the odor and appearance of the oil.
- 4. Inspect open suction and discharge lines at the compressor for burnout deposits.
- If no signs of contamination are present, perform an acid oil test.

Check the chart on the next page to determine the type of cleanup required.

Contamination/Cleanup Chart		
Symptoms/Findings	Required Cleanup Procedure	
No symptoms or suspicion of contamination	Normal evacuation/ recharging procedure	
Moisture/Air Contamination symptoms Refrigeration system open to atmosphere for longer than 15 minutes Refrigeration test kit and/or acid oil test shows contamination Leak in water cooled condenser No burnout deposits in open compressor lines	Mild contamination cleanup procedure	
Mild Compressor Burnout symptoms Oil appears clean but smells acrid Refrigeration test kit or acid oil test shows harmful acid content No burnout deposits in open compressor lines	Mild contamination cleanup procedure	
Severe Compressor Burnout symptoms Oil is discolored, acidic, and smells acrid Burnout deposits found in the compressor, lines, and other components	Severe contamination cleanup procedure	

#### CLEANUP PROCEDURE

### Mild System Contamination

- 1. Replace any failed components.
- 2. If the compressor is good, change the oil.
- 3. Replace the liquid line drier.

NOTE: If the contamination is from moisture, use heat lamps during evacuation. Position them at the compressor, condenser and evaporator prior to evacuation. Do not position heat lamps too close to plastic components, or they may melt or warp.

# **Important**

Dry nitrogen is recommended for this procedure. This will prevent refrigeration release.

- 4. Follow the normal evacuation procedure, except replace the evacuation step with the following:
  - A. Pull vacuum to 1000 microns. Break the vacuum with dry nitrogen and sweep the system.
     Pressurize to a minimum of 5 psig (35 kPa, .35 bar).
  - Pull vacuum to 500 microns. Break the vacuum with dry nitrogen and sweep the system.
     Pressurize to a minimum of 5 psig (35 kPa, .35 bar).
  - C. Change the vacuum pump oil.
  - Pull vacuum to 500 microns. Run the vacuum pump for 1/2 hour on self-contained models, 1 hour on remotes.

NOTE: You may perform a standing vacuum test to make a preliminary leak check. You should use an electronic leak detector after system charging to be sure there are no leaks.

- 5. Charge the system with the proper refrigerant to the nameplate charge.
- 6. Operate the ice machine.

# **Severe System Contamination**

- 1. Remove the refrigerant charge.
- 2. Remove the compressor.
- 3. Wipe away any burnout deposits from suction and discharge lines at compressor.
- 4. Sweep through the open system with dry nitrogen.

# **Important**

Refrigerant sweeps are not recommended, as they release refrigerant into the atmosphere.

- 5. Install a new compressor and new start components.
- Install a suction line filter-drier with acid and moisture removal capability. Place the filter drier as close to the compressor as possible.
- Install an access valve at the inlet of the suction line drier.
- 8. Install a new liquid line drier.

# **Important**

Dry nitrogen is recommended for this procedure. This will prevent refrigerant release.

- Follow the normal evacuation procedure, except replace the evacuation step with the following:
  - A. Pull vacuum to 1000 microns. Break the vacuum with dry nitrogen and sweep the system.
     Pressurize to a minimum of 5 psig (35 kPa, .35 bar).
  - B. Change the vacuum pump oil.
  - C. Pull vacuum to 500 microns. Break the vacuum with dry nitrogen and sweep the system. Pressurize to a minimum of 5 psig (35 kPa, .35 bar).
  - D. Change the vacuum pump oil.
  - E. Pull vacuum to 500 microns. Run the vacuum pump for 1/2 hour on self-contained models, 1 hour on remotes.

NOTE: You may perform a standing vacuum test to make a preliminary leak check. You should use an electronic leak detector after system charging to be sure there are no leaks.

- 10. Charge the system with the proper refrigerant to the nameplate charge.
- Operate the ice machine for one hour. Then, check the pressure drop across the suction line filter-drier.
  - A. If the pressure drop is less than 1 psig (7 kPa, .7 bar), the filter-drier should be adequate for complete cleanup.
  - B. If the pressure drop exceeds 1 psig (7 kPa, .7 bar), change the suction line filter-drier and the liquid line drier. Repeat until the pressure drop is acceptable.
- Operate the ice machine for 48-72 hours. Then remove the suction line drier and change the liquid line drier.
- 13. Follow normal evacuation procedures.

# REPLACING PRESSURE CONTROLS WITHOUT REMOVING REFRIGERANT CHARGE

This procedure reduces repair time and cost. Use it when any of the following components require replacement, and the refrigeration system is operational and leak-free.

- · Fan cycle control
- High pressure cut-out control
- Low pressure control
- · High side service valve
- Low side service valve

# **Important**

This is a required in-warranty repair procedure.

- 1. Disconnect power to the ice machine.
- Follow all manufacturer's instructions supplied with the pinch-off tool. Position the pinch-off tool around the tubing as far from the pressure control as feasible. (See the figure on next page.) Clamp down on the tubing until the pinch-off is complete.

# **A**Warning

Do not unsolder a defective component. Cut it out of the system. Do not remove the pinch-off tool until the new component is securely in place.

- Cut the tubing of the defective component with a small tubing cutter.
- Solder the replacement component in place. Allow the solder joint to cool.
- Remove the pinch-off tool.
- Re-round the tubing. Position the flattened tubing in the proper hole in the pinch-off tool. Tighten the wing nuts until the block is tight and the tubing is rounded.

NOTE: The pressure controls will operate normally once the tubing is re-rounded. Tubing may not re-round 100%.

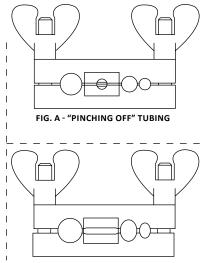


Fig. B - re-rounding tubing

SV1406

# **Using Pinch Off Tool**

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# **Component Specifications**

#### MAIN FUSE

The main fuse is 250 Volt, 10 amp.

### **ICE/OFF/CLEAN TOGGLE SWITCH**

Single-pole, double-throw switch. The switch is connected into a varying low D.C. voltage circuit.

### HIGH PRESSURE CUTOUT (HPCO) CONTROL

Cut-Out	Cut-In	
450 psig ±10		
(3103 kPa ±69)	Automatic Reset	
31 bar ±.69		
(Must be below 300 psig		
[2068 kPa 20.68 bar] to reset.)		

#### FILTER-DRIERS

Driers are covered as a warranty part. The drier must be replaced any time the system is opened for repairs.

The size of the filter-drier is important. The refrigerant charge is critical. Using an improperly sized filter-drier will cause the ice machine to be improperly charged with refrigerant. Listed below is the recommended OEM field replacement drier:

Model	Drier Size	<b>End Connection Size</b>
CNF201 CNF202	DML-032S	1/4"

# **Total System Refrigerant Charge**

# **Important**

This information is for reference only. Refer to the ice machine serial number tag to verify the system charge. Serial plate information overrides information listed on this page.

Model	Refrigerant Charge	
CNF201 CNF202	9 oz. / 255 *g	
*Indicates preliminary data - Mo	del/Serial plate information	
overrides the data in this chart.		

NOTE: All ice machines are charged using R-404A refrigerant.

### Charts

# Cycle Times/24-Hour Ice Production/ Refrigerant Pressure Charts

These charts are used as guidelines to verify correct ice machine operation.

Accurate collection of data is essential to obtain the correct diagnosis.

- Refer to "Refrigeration System Diagnostics" for the data that must be collected. This list includes: before beginning service, ice production check, installation/ visual inspection, water system checklist, safeguards, discharge and suction pressure analysis.
- Ice production checks that are within 10% of the chart are considered normal. This is due to variances in water and air temperature. Actual temperatures will seldom match the chart exactly.
- Zero out manifold gauge set before obtaining pressure readings to avoid misdiagnosis.
- Discharge and suction pressure are highest at the beginning of the cycle. Allow system to stabilize, then verify the pressures are within the range indicated.
- All pressure readings must be obtained at the ice machine head section. Line set length will affect pressures at the condensing unit.
- Water temperature will affect suction and discharge pressure - 50° water temperature will result in pressures on the lower end of the ranges specified.
   90° water temperatures will result in pressures on the upper end of the ranges specified.

### CNF201

### SELF-CONTAINED AIR-COOLED

NOTE: These characteristics will vary depending on operating conditions.

### 24-Hour Ice Production

Air Temperature	Water Temperature °F/°C		
Entering Condenser °F/°C	50/10	70/21	90/32
50/10	325	300	280
70/21	310	275	260
80/27	265	250	230
90/32	240	225	210
100/38	210	195	185
110/43	180	165	150

# Operating Pressures (PSIG)

Air Temperature	Freeze Cycle		
Entering Condenser °F/°C	Discharge Pressure	Suction Pressure	
50/10	180-210	28-31	
70/21	210-230	28-31	
90/32	260-290	28-31	
100/38	320-375	28-31	
110/43	360-380	28-31	

NOTE: Data is preliminary and subject to change

### **CNF202**

# SELF-CONTAINED AIR-COOLED

NOTE: These characteristics will vary depending on operating conditions.

### 24-Hour Ice Production

Air Temperature	Wate	r Temperature	°F/°C
Entering Condenser °F/°C	50/10	70/21	90/32
50/10	325	300	280
70/21	310	275	260
80/27	265	250	230
90/32	240	225	210
100/38	210	195	185
110/43	180	165	150

# **Operating Pressures (PSIG)**

Air Temperature	Freeze Cycle		
Entering Condenser °F/°C	Discharge Pressure	Suction Pressure	
50/10	180-210	28-31	
70/21	210-230	28-31	
90/32	260-290	28-31	
100/38	320-375	28-31	
110/43	360-380	28-31	

NOTE: Data is preliminary and subject to change

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# **Diagrams**

# **Wiring Diagrams**

The following pages contain electrical wiring diagrams. Be sure you are referring to the correct diagram for the ice machine you are servicing.

# **A** Warning

Always disconnect power before working on electrical circuitry.

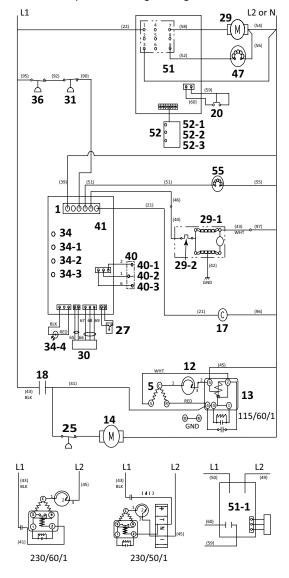
### Wiring Diagram Legend

The following symbols are used on all of the wiring diagrams:

- Internal Compressor Overload (Some models have external compressor overloads)
- Fan Motor Run Capacitor
   (Some models do not incorporate fan motor run capacitor)
- ( ) Wire Number Designation (The number is marked at each end of the wire)
- —>>— Multi-pin Connection (Electrical Box Side) —>>— (Compressor Compartment Side)

# CNF201 & CNF202 115/60/1 - 230/60/1 - 230/50/1

Refer to Nameplate for Voltage Rating

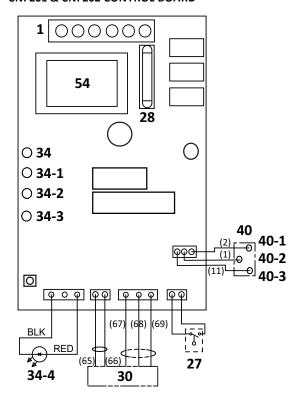


# CNF201 & CNF202 Electrical Diagram

Number	Component		
1	Control board Line Voltage Connector		
5	Compressor		
12	Compressor Start Capacitor		
13	Compressor Start Relay		
14	Condenser Fan Motor		
17	Contactor Coil		
18	Contactor Contacts		
20	Dispense Switch		
25	Fan Cycle Control		
27	Float Switch - Water Level		
29	Motor - Dispense		
29-1	Motor - Evaporator		
29-2	Motor - Evaporator Overload		
30	Hall Effect Switch		
31	High Pressure Cutout		
36	Low Pressure Control		
34	LED - HES1		
34-1	LED - HES2		
34-2	LED - Clean		
34-3	LED - Water Level		
34-4	LED - Blue Light		
40	On/Off/Clean Switch		
40-1	Ice		
40-2	Off		
40-3	Clean		
41	See Control Board Schematic For Detail		
47	Solenoid Valve - Water Dispense		
51	Touchless Control Board		
51-1	Touchless Control Board Wiring		
52	Touchless Control Pad		
52-1	Ice Only Selection		
52-2	Water Only Selection		
52-3	Water and Ice Selection		
55	Water Dump Valve		
	Wire Colors		
BLK	Black		
RED	Red		
WHT White			
Refer to contr	ol board schematic for control board detail		

# **Electronic Control Board**

### CNF201 & CNF202 CONTROL BOARD



#### Electronic Control Board Schematic

Number	Description		
1	Power Connector Lne Voltage		
27	Float Switch		
28	Fuse		
30	Hall Effect Switch		
34	LED - HES1		
34-1	LED - HES2		
34-2	LED - Clean		
34-3	LED - Water Level		
34-4	LED - Blue Light		
40	On/Off/Clean Switch		
40-1	Ice		
40-2	Off		
40-3	Clean		
54	Transformer		

### **Control Board Lights**

HES #1 - Green, works in conjunction with the Hall Effect Switch #1. When the ice damper is closed the light is on.

HES #2 - Green, works in conjunction with the Hall Effect Switch #2. When the ice damper is closed the light is on.

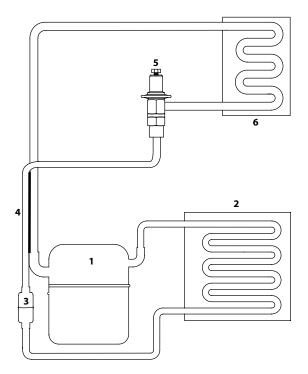
Clean - Yellow, indicates the unit is in a clean sequence.

Water - Energizes when the water level in the reservoir closes (raises) the float switch. De-energizes when the float switch opens.

Racing Lights - All lights racing indicates a 15-minute delay period is timing out.

# **Refrigeration Tubing Schematic**

# CNF201 - CNF202



Number	Component		
1	Compressor		
2	Condenser - Air or Water Cooled		
3	Liquid Line Filter Drier		
4	Heat Exchanger		
5	TXV - Thermostatic Expansion Valve		
6	Evaporator		



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Part Number 000015432 4/18

### SUMMIT

### **AL54CSSTB**



32" x 23.63" x 22.63" (H x W x D)

Built-in undercounter ADA compliant all-refrigerator with wrapped stainless steel exterior, towel bar handle, door storage, and digital controls

### **Highlights:**

32" height fits under lower ADA compliant counters

Flexible design allows built-in or freestanding use in 24" wide spaces

Stainless steel wrapped cabinet and door with professional handle for a deluxe appearance with lasting durability

#### **Product Features:**

ADA compliant design	32" height allows easy installation under lower ADA compliant counters	
Built-in capable	Front-breathing design lets you make the best use of space by installing your appliance under the counter	
Wrapped stainless steel exterior	Cabinet and door feature stainless steel construction for a luxury look built to last	
Professional towel bar handle	Curved handle in brushed stainless steel offers a sturdy grip with professional elegance	
Factory installed lock	Keyed lock offers added security	
Frost-free operation	No-frost operation for minimum user maintenance	
Digital thermostat	Electronic controls located inside the unit for precise temperature management	
Recessed LED light	Efficient and attractive presentation with LED lighting	
Adjustable glass shelves	Rearrange refrigerator space to accommodate all sizes or remove shelves for simple cleanup	



### **AL54CSSTB Specifications:**

Overview	
Height of Cabinet	32.0" (81 cm)
Width	23.63" (60 cm)
Depth	22.63" (57 cm)
Capacity	4.8 cu.ft. (136 L)
Defrost Type	Frost-Free
Door	Stainless Steel
Cabinet	Stainless Steel
US Electrical Safety	ETL
Canadian Electrical Safety	ETL-C
Sanitation	ETL-S
Energy Usage/Year	250.0kWh/year
Amps	1.0
Voltage/Frequency	115 V AC/60 Hz
Weight	110.0 lbs. (50 kg)
Shipping Weight	115.0 lbs. (52 kg)
Parts & Labor Warranty	1 Year
Compressor Warranty	5 Years
Refrigerator Features	
Sabbath Mode	Yes
Door Swing	RHD
Reversible	Factory Reversible
Shelf Type	Glass
Shelf Qty	3
Full Door Shelf Qty	2
Adjustable Shelves	Yes
Thermostat Type	Digital
Fan Type	Interior and Exterior
Refrigerant Type	R600a
Refrigerant Amount	0.99oz.
High Side PSI	270.0
Low Side PSI	105.0
Level Legs Qty	4
Interior Light	Yes
Temperature Range	36 to 43°F
Dimensions	
Interior Height	25.0" (64 cm)
Interior Width	20.0" (51 cm)

Interior Depth	17.5" (44 cm)
Compressor Step Height	3.25" (8 cm)
Compressor Step Width	20.0" (51 cm)
Compressor Step Depth	5.25" (13 cm)



### PES7227DL/SL/EL/BL/FM

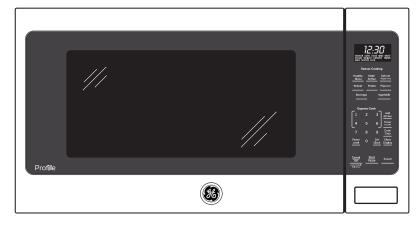
GE Profile<sup>™</sup> Series 2.2 Cu. Ft. Countertop Sensor Microwave Oven

### **DIMENSIONS AND INSTALLATION INFORMATION (IN INCHES)**

EXTERIOR DIMENSIONS* (IN INCHES)			
WxHxD	24" x 13 1/2" x 18 1/2"		

<sup>\*</sup>Height includes feet. Depth does not include handle.





This unit designed to be placed on countertop.





### PES7227DL/SL/EL/BL/FM

### GE Profile<sup>™</sup> Series 2.2 Cu. Ft. Countertop Sensor Microwave Oven

#### **FEATURES AND BENEFITS**

2.2 cu. ft. capacity - 1100 watts (IEC-705 test procedure)

Sensor cooking controls - Automatically adjusts time and power

Weight and time defrost – Simply enter the weight of the food, and the oven automatically sets the optimal defrosting time and power level or set your desired time for defrosting

Extra-large 16.5" turntable – Rotates food throughout the cycle and accommodates large cookware

Instant on controls - One-touch instant operation

Control lockout - Helps prevent accidental activation

Add 30 seconds - Add 30 seconds of microwave cooking time

Kitchen timer - Minute timer helps keep you on track

Model PES7227DLWW - White

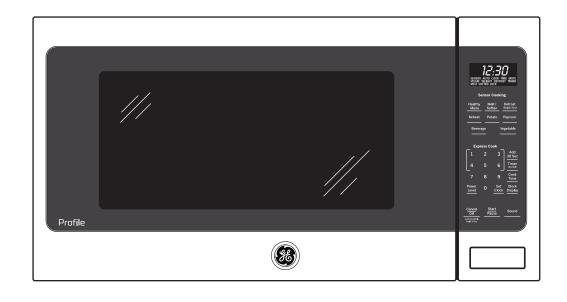
Model PES7227DLBB - Black

Model PES7227SLSS – Stainless steel

Model PES7227ELES - Slate

Model PES7227BLTS - Black stainless steel

Model PES7227FMDS - Black slate







# Professional Dishwashers PG 8056 & PG 8061







Various baskets and inserts available

#### The new generation of professional dishwashers

The world's fastest fresh water commercial dishwashers provide impeccable cleaning results, unmatched performance, and user friendliness. Miele's new dishwashers can run up to 40 cycles per day and can accommodate a large variety of baskets and inserts, including commercial plastic baskets. The PG 8056 and PG 8061 are equipped with an innovative, high-performance circulation pump and new spray arm design for even better cleaning results and reduced water consumption.

Both models are exclusively recommended by Riedel and are ADA compliant. The PG 8056 is ideal for homes, butler's pantries and offices while the PG 8061, with its final rinse temperature of 185° F, is ideal for applications requiring sanitization including wineries, nursing homes, inns, community kitchens, restaurants, schools and other businesses.

#### The Miele difference at a glance

- Fastest cycle time as short as 6 minutes
- Large capacity and multi-level cleaning for high throughput
- Low noise emission 59 db or less
- Special programs and cycles e.g. China & Crystal
- Built-in water softener

#### Designed to last

The PG 8056 and PG 8061 fresh water dishwashers are designed to last at least 15,000 operating hours. If used 6 times a day, 6 days a week, the unit will last for more than 13 years.

Email proinfo@mieleusa.com for a full brochure with information on all dishwasher models, baskets, inserts and accessories.



Standard basket configuration





## Professional Dishwashers PG 8056 & PG 8061





Model		PG 8056			PG 8061	
Design						
Style	Undercounter			Undercounter		
Freestanding Conversion Kit	Optional			Optional	Optional	
Baskets	U 890 with 2 x E 816 and	d 2 x E 165, O 891 with	1 x E 810	U 890 with 2 x E 816	and 2 x E 165, O 891 with 1 x E 810	
Commercial Dish Racks	Optional			Optional		
Cutlery	Cutlery Holder			Cutlery Holder		
Door Panel	Stainless steel			Stainless steel		
Performance Features						
Fastest Cycle		6 mins			15 mins	
Max. Number of Recommend Cycles/Day		40			40	
Number of Programs		10			3	
Convenience Features						
AutoClose/ComfortClose					•	
AutoOpen					•	
EasyOpen		•				
Delay Start		•		•		
Automatic Liquid Detergent Dispenser Pump		Optional		Optional		
Cleaning Features						
Condenser/Auto Open Drying				•		
Built-In Water Softener		•		•		
Perfect GlassCare	•					
Safety Features						
Double WaterProof System	•			•		
Approvals, Certifications and Compliance						
ADA Compliant		•		•		
NSF Certified					Pending	
Riedel Exclusively Recommends		•		Y	•	
Technical Data				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
Dimensions	33" H x 24" W x 23" D			33" H x 24" W x 24" I		
Weight	154 lbs		160 lbs			
Water Connection	2 (hot and cold water)		3 (hot, cold, cold)*			
Noise Emission	59 db		57 db			
Electrical Requirements					<u> </u>	
Model Number	61805650USA	61805655USA		61806120USA	61806125USA	
Voltage	2 AC 208V	2 AC 240V		3 AC 208V (conv. 2 AC 208V)	3 AC 240V ( <b>conv. 2 AC 240V</b> )	
Rated Load	5.8 kW	5.8 kW	1	5.8 kW	5.8 kW	
Circuit Breaker	30 A	30 A		3 x 20 A ( <b>30 A</b> )	3 x 20 A ( <b>30 A</b> )	
Plug	NEMA L6-30	NEMA L6-30	Y	NEMA L15-20 (NEMA L6-30)	NEMA L15-20 (NEMA L6-30)	

 $<sup>{}^{\</sup>star}\text{Use}$  supplied Y-connector if only one cold water connection is available

NOTE: UNIT REACHES 185 DEGREE WATER TEMP ON



### Multifunction Printer



WorkCentre 7500 series shown with 1 Tray Option and Work Surface



WorkCentre 7500 series shown with 3 Tray Option



WorkCentre 7500 series shown with High Capacity Tandem Tray Option, Work Surface and Integrated Office Finisher (optional only with 7525/7530/7535)



WorkCentre 7500 series shown with High Capacity Tandem Tray Option, Work Surface and Office Finisher LX with Booklet Maker Option



WorkCentre 7500 series shown with High Capacity Tandem Tray Option, Work Surface and Professional Finisher

System Specifications					
Output Speed (Printing and Copying)	WorkCentre 7525	WorkCentre 7530	WorkCentre 7535	WorkCentre 7545	WorkCentre 7556
Color	Up to 25 ppm	Up to 30 ppm	Up to 35 ppm	Up to 45 ppm	Up to 50 ppm
Black and White	Up to 25 ppm	Up to 30 ppm	Up to 35 ppm	Up to 45 ppm	Up to 55 ppm
Functions					
Standard  Copy, Print (Adobe® PostScript® 3™, PCL, XML Paper Specifications (XPS), PDF, Print from USB) Scan Kit (Scan to USB, Email, Mailbox, Network Folder, Home), Fax (Server Fax integration, Internet Fax), Data Security (Hard Disk encryption, Disk Overwrite), Network Accounting, EIP					
Optional	Walk-up Fax (One- or Two-line), ScanFlowStore®, SMARTsend®, CAC / Personal Identification Verification (PIV), Xerox Secure Access Unified ID System® EFI® Fiery Workflow				
Specifications	-				
Processor	r 1.5 GHz				
Memory	2 GB system plus 1 GB page memory				
Hard Drive	160 GB				
Connectivity	10/100/1000Base-T Ethernet High-Speed USB 2.0 Wireless Ethernet 802.11b (via third-party adapters)				
USB Port	PC Interface for Xerox® Copier Assistant® via USB Type B port Software upgrade via USB Type A port USB Print and Scan				

Control Panel Languages	Languages: (Select from 18 languages for user interface – International English, International French, Italian, German, International Spanish, Dutch, Brazilian Portuguese, Swedish, Norwegian, Danish, Finnish, Turkish, Greek, Russian, Czech, Polish, Hungarian or Romanian)				
Сору					
First-Copy-Out Time (Letter-size/A4, from Platen to Center Tray)	WorkCentre 7525	WorkCentre 7530	WorkCentre 7535	WorkCentre 7545	WorkCentre 7556
Color	As fast as 13.2 seconds	As fast as 10.9 seconds	As fast as 11.0 seconds	As fast as 7.8 seconds	As fast as 7.2 seconds
Black and White	As fast as 11.1 seconds	As fast as 8.7 seconds	As fast as 8.6 seconds	As fast as 6.6 seconds	As fast as 5.8 seconds
Copy Specifications					
Sides (input:output)	1-1, 1-2, 2-2, 2-1				
Quantity	1 to 9,999				
Resolution (max)	Scan at 600 x 600 dp	i, output at 1200 x 240	0 dpi		
Reduction/Enlargement	Variable Zoom from 2	5% - 400% in 1% incre	ments		
Concurrency	Program-ahead to all	ow job to be initiated w	hile initial job is process	ed (Copy, Print, Fax and	l Scan)
Basic Copy Features & Options	Collation Automatic 2-sided/Duplex Auto Reduction & Enlargement to fit selected paper size Hole Punching Booklet Creation Stapling Large Job Interrupt Auto Paper Select Authentication for Services (i.e. Color Copy) Auto Tray Switching Features Help (Intuitive text and graphic descriptions)				
Imaging Copy Features	Image Quality:  Original Type Selection: Photo & Text, Photo, Text, Newspaper/Magazine, Inkjet Original, Maps.  Image Options: Lighten/Darken, Sharpness, Saturation.  Image Enhancement: Auto Background Suppression, Auto and Manual Contrast.  Color Effects: Off, Single Color, Lively, Bright, Warm, Cool.  Color Balance: Normal, Basic Color Balance, Advanced Color Balance  Book Copying/Bound Copying  Edge Erase  Single Color  Repeat Image  Mixed Size Original  Image Shift (with Auto Center option)  Image Shift Preset: Support for 3 Preset Options  Annotation and Bates™ stamping (with color capability and font size adjustment)				
Output Copy Features	Covers (Front only, front and back, back only, printed inside and out: Blank or Printed) Build Job: (Enables page-level programming and also lets you proof each section or delete last section as the job is built) Transparencies Dividers (blank) Multi-up (up to 15 columns by 15 rows) Invert Image (negative or mirror image) Sample Set Job Settings Save Job Settings				

Paper Handling				
Duplex Automatic Docume	ent Feeder			
Capacity <sup>1</sup>	110 sheets			
Speed	up to 70 images per minute mono and color			
Paper Sizes Sensed	5.5 x 8.5 in. to 11 x 17 in. / A5 to A3			
Weights	16 lb bond to 32 lb bond (50 gsm to 128 gsm)			
Bypass Tray				
Capacity <sup>1</sup>	100 sheets			
Sizes	Custom sizes up to 12.6 x 19 in. / 320 x 483 mm			
Weights	16 lb bond to 110 lb cover (55 to 300 gsm)			
Types	Plain Bond Lightweight Heavyweight Extra Heavyweight Plus Gloss Heavyweight Gloss Extra Heavyweight Gloss Extra Heavyweight Gloss Custom Envelopes			
1 Tray Option (Includes Tra	ay 1 and Tray 2)			
Capacity <sup>1</sup>	Tray 1: 520 sheets Tray 2: 520 sheets			
Sizes	Tray 1: Custom Sizes from 5.5 x 7.5 in. SEF to 11.7 x 17 in. SEF / 140 x 182 mm to 297 x 432 mm Tray 2: Custom Sizes from 5.5 x 7.5 in. SEF to 12.6 x 18 in. SEF / 140 x 182 mm to 320 x 457 mm			
Weights	16 lb bond to 140 lb index (60 to 256 gsm)			
Types	Plain Bond Heavyweight Extra Heavyweight Gloss Heavyweight Gloss Labels Transparencies Custom			
3 Tray Option (Includes Tra	3 Tray Option (Includes Trays 1-4)			
Capacity <sup>1</sup>	Trays 1-4: 520 sheets each tray			
Sizes	Tray 1: Custom Sizes from 5.5 x 7.5 in. SEF to 11.7 x 17 in. SEF / 140 x 182 mm to 297 x 432 mm Trays 2-4: Custom Sizes from 5.5 x 7.5 in. SEF to 12.6 x 18 in. SEF / 140 x 182 mm to 320 x 457 mm			
Weights	16 lb bond to 140 lb index (60 to 256 gsm)			

Types	Plain Bond Heavyweight Extra Heavyweight Gloss Heavyweight Gloss Labels Transparencies Custom
High Capacity Tandem Tra	y Option
Capacity <sup>1</sup>	Tray 1: 520 sheets Tray 2: 520 sheets Tray 3: 867 sheets Tray 4: 1,133 sheets
Sizes	Tray 1: Custom Sizes from 5.5 x 7.5 in. SEF to 11.7 x 17 in. SEF / 140 x 182 mm to 297 x 432 mm Tray 2: Custom Sizes from 5.5 x 7.5 in. SEF to 12.6 x 18 in. SEF / 140 x 182 mm to 320 x 457 mm Trays 3-4: Standard Sizes: 7.25 x 10.5 in., 8.5 x 11 in. LEF / A4
Weights	16 lb bond to 140 lb index (60 to 256 gsm)
Types	Plain Bond Heavyweight Extra Heavyweight Gloss Heavyweight Gloss Labels Transparencies Custom
High Capacity Feeder (HCF	(Optional with 3 Tray Option or High Capacity Tandem Tray Option)
Capacity <sup>1</sup>	2000 sheets
Sizes	Standard Sizes: 7.25 x 10.5 in., 8.5 x 11 in. LEF / A4
Weights	16 lb bond to 140 lb index (55 to 256 gsm)
Envelope Tray (Optional - F	Replaces Tray 1)
Capacity <sup>1</sup>	Up to 60 envelopes
Sizes	#10 Commercial (9.25 x 4.125 in.), Monarch, DL, C5 Custom sizes: 3.9 x 5.8 in. to 6.4 x 9.5 in. (98 x 148 mm to 162 x 241 mm)
Weights	20 lb bond to 24 lb bond (75 to 90 gsm)
Total Capacity	
Device Total Capacity	5,140 sheets
Paper Output / Finishing	
Output Trays (Standard)	
Stacking Trays <sup>1</sup>	Dual Offset Catch Tray – up to 250 sheets each Left-side Face up Tray – up to 100 sheets

Output – Integrated Office	Finisher (Optional with 7525/7530/7535)			
Stacking Tray	500 sheets of 20 lb bond (80 gsm) 8.5 x 11 in.	/A4 or 250	sheets of 20 lb bond (80 gsm) 11 x 17 in./A3	
Sizes	3.5 x 3.9 in. to 11 x 17 in. / 89 x 98 mm to A3			
Weights	16 lb bond to 80 lb cover / 60 to 220 gsm			
Stapling		Single		
Office Finisher LX (Option	ıl)			
Capacity <sup>1</sup>	Stacking Tray: 2,000 sheets unstapled or 1,000 (8.5 x 11 in./A4)	) sheets sing	gle stapled or 750 sheets dual stapled	
Sizes	7.2 x 8.3 in. to 11 x 17 in. / 182 x 210 mm to A	٨3		
Weights	16 lb bond to 80 lb cover (60 to 220 gsm)			
Multiposition Stapling	50 sheets of 24 lb bond (90 gsm)			
Hole Punch (Optional)	North America 2-3 Hole Punch		Europe 2-4 Hole Punch	
Booklet Maker for Office F	inisher LX (Score/Crease, Saddle-stitch Staple)	(Optional)		
Capacity	40 booklets (2-15 sheets per booklet – 20 lb/80 gsm or less)			
Sizes	Letter – 8.5 x 11 in. (A4) SEF Legal – 8.5 x 14 in. (216 x 356 mm) SEF Ledger – 11 x 17 in. (A3) SEF			
Saddle-stitch Stapling	2-15 sheets / 8 – 60 page booklet 16 lb bond to 24 lb bond / 60 to 90 gsm			
Score/Crease	1-15 sheets / unstapled			
Professional Finisher (Option	onal)			
Capacity <sup>1</sup>	Top Tray:  Stacking Stapling Tray:  500 sheets of 8.5 x 11 in. / A4 unstapled  1,500 sheets of 8.5 x 11 in. / 11 x 17 in. / A4 / A3 / SRA3 unstapled or  200 stapled sets of 8.5 x 11 in. / A4 or  100 stapled sets of 11 x 17 in. / A3 / SRA3			
Sizes	8 x 10 in. to 12 x 18 in. / B5 to SRA3			
Weights	16 lb bond to 80 lb cover (60 to 220 gsm)			
Stapling	Single and multiposition stapling Auto stapling (50 sheets maximum) – 24 lb/90 gsm Letter, Legal, Tabloid, A3, A4, B4 and B5 sizes supported			
Hole Punch (Standard)	North America 2-3 Hole Punch 2-4 Hole Punch 4 Hole Swedish Punch (Optional)			
Booklet Maker	aker Saddle-stitch 2 to 15 sheets of 24 lb / 90 gsm or less V-fold up to 5 sheets Letter, Legal, Tabloid, A3, A4, SRA3 supported			
Convenience Stapler (Option	onal - Includes Work Surface)			
Capacity <sup>1</sup>	50-sheet stapling 5,000 staples Requires a separate outlet			

Print				
Print Controller				
Page Description Languages (PDL) (Standard)	PCL <sup>®</sup> 6 PCL <sup>®</sup> 5c Adobe <sup>®</sup> PostScript <sup>®</sup> 3 <sup>™</sup> PDF XPS <sup>®</sup> HP-GL2 <sup>™</sup> TIFF	PCL <sup>®</sup> 5c Adobe <sup>®</sup> PostScript <sup>®</sup> 3 <sup>™</sup> PDF XPS <sup>®</sup> HP-GL2 <sup>™</sup>		
Print resolution	<ul> <li>Standard - 600x600 dots per inch with 256 halftone le</li> <li>Enhanced - Raster image processing at 600x600 dots resolution enhancement and LED marking at 1200x24 halftone levels.</li> </ul>	<ul> <li>Toner Saver - 600x600 dots per inch, with limits on maximum saturation</li> <li>Standard - 600x600 dots per inch with 256 halftone levels.</li> <li>Enhanced - Raster image processing at 600x600 dots per inch with eight bits per pixel. Halftone creation with resolution enhancement and LED marking at 1200x2400 dots per inch with 256</li> </ul>		
Print Features	Application defaults Banner Sheet enable/disable Bi-directional status Color Options  • Automatic Color  • Vivid Color  • Black and White  • Custom Color Options  • Color By Words  • Color Correction (allows for different RGB, CMYK, Spot and other specifications)  • Color Adjustments (Lightness, Contrast, Saturation, Color cast) Cover selection Delay Print (specific time) Duplex (2-sided) Enhanced Gloss at normal speed User Permissions required to access Print and Print Features (e.g. color access, or time restrictions) reflects in the print driver Finishing  • Multiple stapling positions  • Hole punch  • Booklet creation  • Fit to new paper size  • Saddle stitch with Professional finisher  • Output tray selections  • Store and recall driver setting Inserts and exception pages Image Options  • Toner Saver  • Resolution options (Standard, High resolution, Enhanced, Toner Saver)  • Reduction/Enlargement  • Rotate 180 degrees  • Margins  • Mirrored output	Job identification (Print ID or Banner, Print ID in margins on first page only or all pages) Job Type  • Secure, Sample, Delay, Save Layout/Watermark (N-up (16) / Multi-up, Booklet Layout / Finishing, Fit to new paper size) Margins Mirror image N-up Overlays Paper selection by attribute Print calibration Print to Fax (requires optional Fax kit) Sample Set Scaling Secure Print Special Pages (exception page programming (covers, inserts, exception pages) Store and Recall driver settings Store file in folder Sustainablity features  • Xerox Earth Smart settings  • Duplex  • N-up  • Turn-off banner and print ID on document  • Smart Sample set  • Hold All Jobs Transparency separators		
Print from USB	Mirrored output  Allows walk-up printing from Type A USB port on front possible Supports direct printing from computer via Type B USB p			

Operating Systems	Microsoft Windows XP (32- and 64-bit), Windows Server 2003 (32- and 64-bit), Server 2008 (32- and 64-bit), Windows Vista (32- and 64-bit), Windows 7 (32- and 64-bit)  Mac OS 10.4 (PPD only)  Mac OS 10.5-10.6 (PostScript only)  Solaris 9, 10  HP UX 11, 11i  AIX 5  Linux RedHat Fedora Core 1-7  Linux RedHat Enterprise Linux 4  SUSE 10.X
Network Protocols	TCP/IP: HTTP/HTTPS, Internet Printing Protocol, LPR/LPD, Raw Socket Printing/Port 9100, IPv4/IPv6, WSD NetWare: Bindery and NDS IPX/SPX, NDPS®/NEPS (with Server Gateway) AppleTalk® EtherTalk® Microsoft Windows Networking over IP (Most protocols not in use can be disabled) Bonjour IPv6 Secure FTP
Administrative Protocols	DHCP, BOOTP, SNMP, WINS, DDNS, SLP® v2, HTTP, RARP, DHCP Autonet, SSL, NTP
Fonts	PCL: 94 scalable fonts, line printer and bitmap font (including Cyrillic font support) PostScript 3: 173 Type 1 fonts, 2 Multiple Master fonts
Xerox® Mobile Express Driver® (X-MED)	Makes it easy for mobile users to find, use and manage Xerox and non-Xerox devices in every new location. Plug into a new network, and X-MED automatically discovers available printers and provides status and capability information. Save a list of "favorite" printers for each location, store application print settings for use on any printer in any network, and greatly reduce mobile support calls to IT.  Printers are automatically discovered Printer list can be managed based on location Gives Bi-directional feedback device status, supplies, queue management
Xerox® Global Print Driver® (X-GPD)	A truly universal print driver that lets IT administrators install, upgrade and manage Xerox and non-Xerox devices from a single driver. It provides a consistent, easy-to-use interface for end-users, reducing the number of support calls, and simplifying print services management.  • Lets IT managers qualify, deploy and manage all print devices on the network using a single driver  • Fast and easy installation of new devices improves IT efficiency  • Truly universal print driver supports Xerox and non-Xerox printers, PCL and PostScript  • Gives Bi-directional feedback device status, supplies, queue management
Scan	
Concurrency	Scan while the system is printing, copying, or while it is transferring scan to network or fax jobs (priority is for return of scanned originals and printing concurrent jobs)
Input Speed	Scan at up to 70 ipm color scanning, up to 70 ipm black-and-white – 8.5 x 11 in. / A4 LEF
Resolution	600 x 600 dpi 400 x 400 dpi 300 x 300 dpi 200 x 200 dpi 150 x 150 dpi 100 x 100 dpi 72 x 72 dpi Bit Depth: 1-bit (black and white), 8-bit (grayscale), 24-bit (color)
Maximum Scan Area	11 x 17 in. / A3
Scan Template Management	Support 250 scan templates Create device specific CentreWare scan templates Select confirmation sheet options Share scan templates via device cloning

Network Protocols	FTP via TCP/IP Microsoft SMB via TCP/IP NetWare, HTTP and HTTPS
File Formats	Color TIFF (TIFF 6.0 or TTN2 with JPEG, LZW) Black and White TIFF (G3MH, G4 MMR compression - single or multiple pages) PDF or PDF/A (MRC, JPEG, G3 MH, G4 MMR, JBIG 2 Huffman, JBIG Arithmetic Compression, Deflate (for B/W and within MRC)) JPEG XPS Searchable PDF, PDF/A, XPS Encrypted / Password Protected PDF (for Workflow Scanning) Linearized PDF
Document Management Fields (Metadata)	Features only available in Network Scan to File Templates:  1-6 user programmable metadata fields per network scan to file templates and unlimited fields within the template – Metadata Field consists of field name, display at the LUI or not, default value and other configurations  Customized fields viewed on user interface  Variable data entered using virtual keyboard at device
Scan Features	Mixed size originals Bound originals Edge erase Reduction/enlargement Scan Build Job Compression Quality/File Size Control Original type (photo and text, photo, text, map, newspaper/magazine) Auto Background and Shadow Suppression Size for size (for mixed size originals)
Supported Scan Destinations (Standard)	Scan to network server Scan to USB Drive Scan to Email Scan to client (SMB or FTP) Scan to Mailbox Scan to Secure FTP Scan to Home
Supported Scan Destinations (Optional)	Scan to application Scan to Microsoft Exchange 2000 Web Folders Scan to PC Desktop (Professional and SE) SMARTsend® ScanFlowStore ScanSoft PaperPort ScanSoft OmniPage Various Xerox® Business Innovation Partner Solutions
Scan to USB	Supports walk-up scan to USB via Type A USB port
Authentication	Authentication mechanism  Network ID  Supports Kerberos (UNIX / Windows Server 2003 / Windows Server 2008)  SMB (Windows 2000 / Windows Server 2003 / Windows Server 2008)  NDS  LDAP  Xerox® Secure Access Unified ID System®  CAC / PIV  Locally on device (internal dababase)
Scan to Email (Standard)	
Directory Access	Address list via LDAP (Exchange/Notes/Domino) Downloaded address list (comma-separated file format)

Scan Features	Email signatures (6 lines each of 128 character max), emo- confirmation sheet options Scan to Email s/MIME Encryption (with CAC option) Auto send to self	ail message body (user configurable), email CWIS	
Network Scanning – Soft	ware Solutions		
Xerox® Scan to PC Desktop® Professional (optional)	<ul> <li>Nuance PaperPort Professional image viewing and file r         <ul> <li>Complete PDF functionality</li> <li>Secure PDF workflow of all scanning applications</li> </ul> </li> <li>Nuance OmniPage Pro Office (for desktop/client installe and document conversion</li> <li>Image Retriever – provides fully automated retrieval of</li> </ul>	<ul> <li>Secure PDF workflow of all scanning applications</li> <li>Nuance OmniPage Pro Office (for desktop/client installation) – Professional OCR software for digital archiving</li> </ul>	
Xerox <sup>®</sup> SMARTsend <sup>®</sup> (optionαl)	Server based document routing software that supports multiple scan-enabled multifunctional systems (up to 250 per server):  • Enables transformation, distribution and routing of scanned documents – with features like LDAP and auto discovery  • Workflow creation via Web browser-based task creation (destinations, devices, document attributes – 20 file types including searchable PDF, workflow settings, workflow summary)  • Scan to File Destinations: email, Novell NetWare folder, network folder, SMB folder, FTP, Microsoft Exchange 2000 Web folders, Web URL, remote printers  • Scan to Document Repository Destinations: DocuShare, Domino, Domino.doc, Microsoft SharePoint  • Workflow initiation via device scanning user interface (template selection at device UI)		
Xerox® SMARTsend® Professional (optional)	Everything in Xerox® SMARTsend, plus:  • Workflow initiation via Paperware (Scan cover sheets)  • Server-based Optical Character Recognition (OCR)  • Adding Metadata  • Scan to Internet fax file destination		
Security			
Features	144 CAC/PIV Card Support (2048 bit certificate key) Expanded Authentication  Network authentication to access device and/or device services via:  Kerberos (UNIX / Windows Server 2003 / Windows Server 2008)  SMB (Windows 2000 / Windows Server 2003 / Windows Server 2008)  NDS  LDAP  Xerox Secure Access  Local Authentication (internal database)  Smart Card authentication with CAC/PIV Secure Data  Digitally signed PDF (only via CAC)  Encrypted Scan to Email (only via CAC)  Password Protected PDF (via Workflow scanning; not Scan to Email)  Secure Print (up to 10 digit PIN)  Immediate Image Overwrite  On Demand Image Overwrite (Scheduled, Manual), includes sanitation of unused area of disk  256 bit Hard Disk Encryption	Expanded Authorization  • SA access based on network credentials  • Authorization per user per service  • User Permissions required to access Print and Print Features (e.g. color access, or time restrictions) reflects in the print driver  Secure Network Access  • IP Filter  • IPsec  • IPv6 Ready  • Secure print-channel encryption with IPsec  • Secure scanning and network management (SSL, SNMPv3)  • Secure Web Page via SSL  • Secure web interface via HTTPs  • 802.1X  Device Security  • Port disablement including USB ports  FIPS 140-2 Compliant Encryption  Audit Log  Hide Print Job Names  Secure Print Separate Queue  My Jobs view  Common Criteria EAL2+ conformant with 2600.2  protection profile for hardcopy devices	
Xerox® Secure Access Unified ID System® (Optional)	The Xerox® Secure Access Unified ID System USB card rec Authentication Device (also known as the flat box control controller eliminating the need for a second IP address. D functionality. The plug-ins are available at the Xerox® Sec download pages on www.xerox.com. Secure Access is compatible with Scan to Home.	ler). The USB card reader connects directly to the device	

Fax	
Network Server Fax Feature	es
Compatibility	ITY (CCITT) group 3 Various Xerox Business Innovation Partner Solutions
Maximum Scan Area	11 x 17 in. (A3)
Fax Send Features	One- or two-sided scanning (up to 11 x 17 in. – A3) Phone number entry Add to send list (50 numbers maximum) Delay send (specific time) Original type (photo, text or photo and text) Build Job Speed Dial
Fax Print Features	One- or two-sided printing Staple on/off Secure print on/off
Transmission Resolution	Superfine - 400 x 200 dpi (Scan at 600 x 600 dpi) Fine - 200 x 200 dpi Standard - 200 x 100 dpi
Fax Options – Internet Fax	(Standard)
Capability	Direct print-ready document transmission to remote Internet Fax machines or email clients (SMTP) Reception and automatic printout of documents sent via email from remote Internet Fax machines or email clients
Address Directory Access	Send: Multi-page TIFF, PDF, PDF/A Receive: TIFF, MTIFF, PDF, PDF/A, PS, text, PCL, PRN, JPEG
Resolution	600 x 600 dpi 400 x 400 dpi 300 x 300 dpi 200 x 200 dpi 200 x 100 dpi 150 x 150 dpi 100 x 100 dpi 72 x 72 dpi Bit Dept: 1-bit (black and white)
Network Protocols	SMTP (send) POP3 (receive)
Compliance	ITU-T T.37 compliant
Fax Options – Walk-up Opt	ion - One or Two line (Optional; Customer installable)
Compatibility	ITY (CCITT) Group 3
Speed/Modems	One or Two V.34 modems: 33,600 bps. Less than 4 seconds per page transmission time ISDN via third-party adapter
Compression/Speed	MH/G3, MMR/G4
Fax Send Features	LAN Fax (fax from print driver) Auto fax transmission reduction Page-by-page job status at the machine Delay start Automatic memory resend Automatic cover sheets Broadcast Booklet Scan PSTN Fax Build Job Speed Dial Searchable Dial Directory

Fax Receive Features	One- or two-sided printing Stapled or unstapled, hole punch Receive print mode – Manual (size, margin, stock, header) / Auto Output tray selection Junk Fax prevention Up to 200 password protected mailboxes
Fax Forward	Forward to Email or SMB Location Fax forward on receive only
Fax Reports	Activity Dial directory Group directory Transmission confirmation Pending fax Options report On demand overwrite report
Auto Dialing	Speed Dials: 1,000 total (one- or two-line options)  Group Dials: Up to 200 groups with up to 400 recipients per group (one- or two-line options)  Auto Redial: Up to 14 attempts 1 to 25 minute intervals Batch send (up to memory capacity)
Device Management	
Management Support	SNMP Version 1. SNMP Version 2c and SNMP Version 3 trap over TCP/IP and IP MIB access (IETF-MIBII RFC 1213), Host Resources MIB RFC 2790, Printer MIB RFC 1759 v.2
Xerox® CentreWare® Web	<ul> <li>A Web-based server application for network administrators that permits Web browser-based device management from any workstation, whether running Windows, UNIX or any other operating system:</li> <li>Works with any SNMP-managed printer from any manufacturer.</li> <li>Provides help with device discovery and installation, health checks and troubleshooting, and device upgrades, as well as basic accounting and asset management.</li> <li>Requires Windows XP, 2000 (Professional or Advanced Server) or Windows 2003 and Internet Explorer 6.0 and higher</li> </ul>
Xerox <sup>®</sup> CentreWαre for Tivoli <sup>®</sup> NetView <sup>®</sup>	Provides for the identification of Xerox® WorkCentre multifunction systems in the general discovery performed by Tivoli NetView
Novell NDPS/NEPS	Server gateway application: centralized management tool
Xerox® CentreWare® for Unicenter TNG®	Provides added identification to the general discovery performed by Unicenter TNG and the ability to see the WorkCentre under a Unicenter TNG Business Process View
Xerox <sup>®</sup> CentreWare <sup>®</sup> for Microsoft Management Console (MMC)	CentreWare MC Snap-in supports printer discovery and management via a Microsoft Management Console (MMC) link to an embedded Web server. It is a general-purpose management display framework for hosting administrative tools.
Xerox® CentreWare for HP® OpenView®	Provides for the identification of Xerox® WorkCentre multifunction systems in the general discovery performed by HP Openview Provides traps and message updates to the Open View alarm browser and the ability to launch CentreWare Internet Services for device management directly from OpenView

Xerox® Device Manager	Xerox® Device Manager collects and manages the data that drives fact-based decisions for your enterprise device
Actor Device Munuger	management environment. It is a single tool to install print queues and configure, manage, monitor and report on both networked and locally connected devices – regardless of vendor – across your enterprise. Xerox® Device Manager provides:  • Device monitoring and troubleshooting  • Extensive reporting and discovery of new devices  • Usage collection, chargeback and billing capabilities
Xerox® Device Types for SAP R/3 Environment  Information available at www. xeroxofficesapsolutions. com	Simplifies printing in SAP R/3 environments by providing users of SAP R/3 3.x, 4.x, 4.5x, 4.6x, SAP Enterprise 4.7x, ERP applications with enhanced WorkCentre printing functionality (PostScript and PCL):  One- to two-sided printing Finishing provides single or dual stapling Tray pull location from any tray Number of copies – provide the ability to print multiple copies Paper Type and color – provide ability to select different paper types and paper colors, such as transparency, red, etc. Print security via PIN ID capability Network Accounting – Provides capability to add Network Accounting User IDs to SAP print jobs Printer banner sheet – Provide the ability to enable/disable printer banner sheets Barcode printing – Xerox standard PostScript device types available at www.xeroxofficesapsolutions.com supports Intelligent Barcode Printing with Xerox Barcode Pro PS. This Barcode Pro PS can be purchased at www.font.net.
Xerox® SAP R/3 Intelligent Barcode Utility (optional)  Information available at www. xeroxofficesapsolutions. com	Provides built-in process intelligence that allows the printing of barcodes on any appropriately configured PostScript printer on the SAP R/3 4.1x, 4.5x, 4.6x and within Latin-1 (ISO8859-1) SAP system code pages only. Used in conjunction with Xerox PostScript Device Types for SAP R/3 environment and Xerox Font Center Barcode Fonts. Utility enables automated checksum calculation, placement of start/stop characters, encoding of data string and data compression.
Xerox® Barcode Pro PS (optional)  Information available at www. xeroxofficesapsolutions. com	Enables intelligent PostScript printing on Xerox multifunction systems by storing Xerox software, as well as, the barcode fonts on the printer hard disk. Enables the printing of barcodes from any application (SAP R/3 client or mainframe) that supports PostScript printing. Automatically calculates the check digit, places start/stop and middle bar characters in the data string, compresses and encodes the data string, and rotates the barcode through 90 or 270 degrees.
CentreWare Internet Servi	ces – Integrated Web Pages Provided by the Device
Device Status	Web server embedded in Network Controller:  Tray status/contents Consumables status Alerts
Job Submission	Print ready files: PS, PCL, TIFF, PDF, JPG, XPS Output feature selection (2-sided, output color, collate, orientation, staple, hole punch, folding, output destination) Delivery options (Immediate, sample set, delay and secure, Save job or reprint)
Device Administration	Allows simple, remote installation setting of configuration options and management of the device
Browsers	Netscape 7.x, 9.x Internet Explorer 6.x, 7.x, 8.x Safari 3.0-3.2, 4.0.3 Mozilla Firefox 2.x, 3.5, 3.6.3 Opera 9.x, 10 Chrome 1.0, 4.1, 5.x
Support	Install print/scan drivers and online support available via web page
Languages Supported	International English, International French, Italian, German, International Spanish, Dutch, Brazilian Portuguese, Swedish, Norwegian, Danish, Finnish or Russian

Smart eSolutions	
MeterAssistant <sup>®</sup>	Automates the process of collecting and submitting meter reads for tracking and billing of Xerox device usage. Eliminates the need for time-consuming end-user involvement and ensures that meter reads are submitted to Xerox on time.  Device Direct or via Smart eSolutions Client for Windows or via CentreWare® Web.
SuppliesAssistant <sup>®</sup>	Automatically orders supplies for Xerox output devices based on actual usage, eliminating the need to manually manage supplies inventory.  Device Direct or via Smart eSolutions Client for Windows or via CentreWare Web.
MaintenanceAssistant	Offers a fast (and free) way to resolve potential issues and receive assistance and automate the troubleshooting/repair process. Diagnostic data is sent to Xerox, allowing for problems to be solved faster with increased uptime. Device Direct
Online Support Assistant	Xerox® Online Support keeps you up and running by providing instant access to searchable online help right at the WorkCentre 7500 series multifunction printer's front panel. You get the same information our Product Support Specialists use when resolving printer problems, assisting with error codes, print quality, media jams, software installation, and more.
EFI Fiery Network Controll	er with System Software 9e (Optional)
Processor	2.66 GHz, Intel Core 2 Duo E5300
Memory (ESS)	1 GB
System Disk	160 GB
Print Languages (PDL)	PostScript v 3019
Features	Command WorkStation capability via a PC or MAC (customer to provide) with Queue Management Job Preview Job Merge Change Job Properties Pantone Color Tables Expert Color Settings: Profile, Rendering and Simulation ColorWise Pro Tools – calibration support, color editor, profile manager FreeForm – Variable Data capabilities Booklet Maker 4.0 – booklet wizard to create booklets Print from USB flash drive Paper Catalog Secure Erase
Connectivity	10Base-T/100Base-TX/1000Base-T Ethernet
Optional	SeeQuence Suite (Impose & Compose) Mini-bundle (Spot On, Auto Trapping, Hot folders, Virtual Print) A la Carte Spot On, Auto Trapping, Hot folder/Virtual Printers)
Accounting	
Accounting – Xerox® Stanc	lard Accounting (Standard)
Tracking	Copy, Print, Fax and Scan usage
Accounting	Up to 2,500 User accounts (User ID) Up to 500 General accounts (Client) Up to 500 Group accounts (Department)

Features	Enable/disable via the Web User Interface or the device control panel in tools, Administrator can manage the feature remotely via the Web User Interface Data can be exported via a CSV file Supports entering Xerox® Standard Accounting ID into the print driver when submitting a print job
Accounting Options – Netv	work Accounting – Third Party Enablement
	<ul> <li>Enhanced network accounting with up to the minute data on how the WorkCentre system is being used</li> <li>Comprehensive management and enterprise scale tracking and reporting of device usage of copy, print, scan and server fax</li> <li>Various options are available through Xerox® Alliance Partner solutions. For details visit www.xerox.com</li> <li>Security enhancements with the addition of HTTPS protocol support</li> <li>WorkCentre requests account authentication from 3rd-party server enabling larger databases of users and accounts</li> <li>Accept Authentication Login at control panel and pass to 3rd party Networking Account</li> <li>Interface with 3rd party accounting terminal for accounting user interface</li> </ul>
Device Specifications	
Monthly Duty Cycle	
	WorkCentre 7525: up to 75,000 pages/month WorkCentre 7530: up to 90,000 pages/month WorkCentre 7535: up to 110,000 pages/month WorkCentre 7545: up to 200,000 pages/month WorkCentre 7556: up to 300,000 pages/month
Basic Configurations	
	1 Tray Option 3 Tray Option High Capacity Tandem Tray Option
Accessories	
Optional	High Capacity Feeder Envelope Tray (Replaces Tray 1) Integrated Office Finisher (optional with 7525/7530/7535 only) Office Finisher LX Booklet Maker for Office Finisher LX Hole Punch for Office Finisher LX Professional Finisher Convenience Stapler (includes Work Surface) Common Access Card Enablement Kit Xerox® Secure Access Unified ID System® (with USB Card Reader) EFI® Fiery Network Controller Foreign Device Interface Xerox® Copier Assistant® Walk up Fax (One- or Two-line options, includes LAN Fax) Xerox® Scan to PC Desktop® ScanFlowStore® Xerox® Unicode International Print Kit
Foreign Device Interface (FDI) (Optional)	Interface to third party access control devices, coin machines, card readers Support a variety of vending stations available through the Xerox® Custom Application Service
Accessibility Option	Xerox® Copier Assistant® (XCA) Software provides a PC-based alternative to the user interface touch screen. Used in conjunction with a customer-supplied PC attached via the USB port, this software supports text-to-speech, screen magnification and easy PC keyboard access to basic and advanced copy features. Section 508 compliant. For more information, visit www.xerox.com.
Electrical Requirements	
North America	Voltage: 110 –127 VAC +/- 10% Frequency: 50/60 Hz +/- 3%, 15 A Power Consumption: 1.108 KVA maximum printing continuously (120V)

Europe	Voltage: 220-240 VAC +/- 10 % Frequency: 50/60 Hz +/- 3 %, 10 A Power Consumption: 1.203 KVA maximum printing continuously (240V), 1.760 KVA maximum printing continuously (220)			
Power Consumption (Base	IOT)			
Running (Average)	984 watts/hour			
Standby Mode	130 watts/hour			
Low Power Mode	82 watts/hour			
Auto Off / Sleep mode	9.1 watts/hour (Default time to Sleep mode = 2 minutes)			
Warm-up	2 minutes, 59 seconds			
Low Power Recovery	< 9 seconds			
Operating Environment				
Required Temperature Range	50° to 82° F (10° to 28° C)			
Required Relative Humidity	15% to 85%			
Sound Power Levels	Operating 7.5 B(A), Standby:	3.6 B(A)		
Sound Pressure Levels	Operating: 58 dB(A), Standby	: 18 dB(A)		
Dimensions and Weight	Width	Depth	Height	Weight
Base Configuration	41.9 in. / 1,064 mm	27 in. / 685 mm	44.4 in. / 1,127 mm	308 lbs. / 140 kg
With Integrated Office Finisher	44.4 in. / 1,129 mm	27 in. / 685 mm	44.4 in. / 1,127 mm	334 lbs. / 152 kg
With Office Finisher LX (with Booklet Maker)	65.6 in. / 1,666 mm	27.4 in. / 695 mm	44.4 in. / 1,127 mm	390 lbs. / 177 kg
With Professional Finisher	75.7 in. / 1,922 mm	27 in. / 685 mm	44.4 in. / 1,127 mm	502 lbs. / 228 kg
With Professional Finisher and High Capacity Feeder	75.7 in. / 1,922 mm	27 in. / 685 mm	44.4 in. / 1,127 mm	564 lbs. / 256 kg
Certifications				
	FCC Class A Compliant (US), I TUV Listed (UL 60950-1, Secondary Composition (IEC 60950-1, Secondary Co	ond Edition) cond Edition)	nada)	

Supplies	Description	Yield	Order Number
Toner Cartridges (Metered)	Black	26,000³	006R01509
	Cyan	15,000³	006R01512
	Magenta	15,000³	006R01511
	Yellow	15,000³	006R01510
Toner Cartridges (Sold)	Black	26,000³	006R01513
	Cyan	15,000³	006R01516
	Magenta	15,000³	006R01515
	Yellow	15,000³	006R01514
Transfer Belt Cleaner	1 Assembly	160,000³	001R00613
Second Bias Transfer Roll	1 Assembly	200,000³	008R13064
Staple Cartridge	for Integrated Office Finisher, Office Finisher LX, Professional Finisher and Convenience Stapler (1 cartridge per carton)	5,000 each cartridge	008R12964
Staple Cartridge	for Office Finisher LX Booklet Maker (8 cartridge per carton)	2,000 each cartridge	008R12897
Staple Cartridge	for Professional Finisher Booklet Maker (1 cartridge per carton)	5,000 each cartridge	008R12925
Staple Refills	for Integrated Office Finisher, Office Finisher LX, Professional Finisher and Convenience Stapler (3 refills per carton)	5,000 each refill	008R12941
Smart Kits®	Description	Yield	Order Number
Drum Cartridge	1 Cartridge	125,000³	013R00662
Waste Toner Container	1 Cartridge	43,000³	008R13061

<sup>&</sup>lt;sup>3</sup> Approximate pages. Declared Yield based on 5 page job size, 30% color and 70% Black and white ratio, using letter-/A4-size media. Yield will vary based on media size, image area coverage, media orientation and usage patterns.









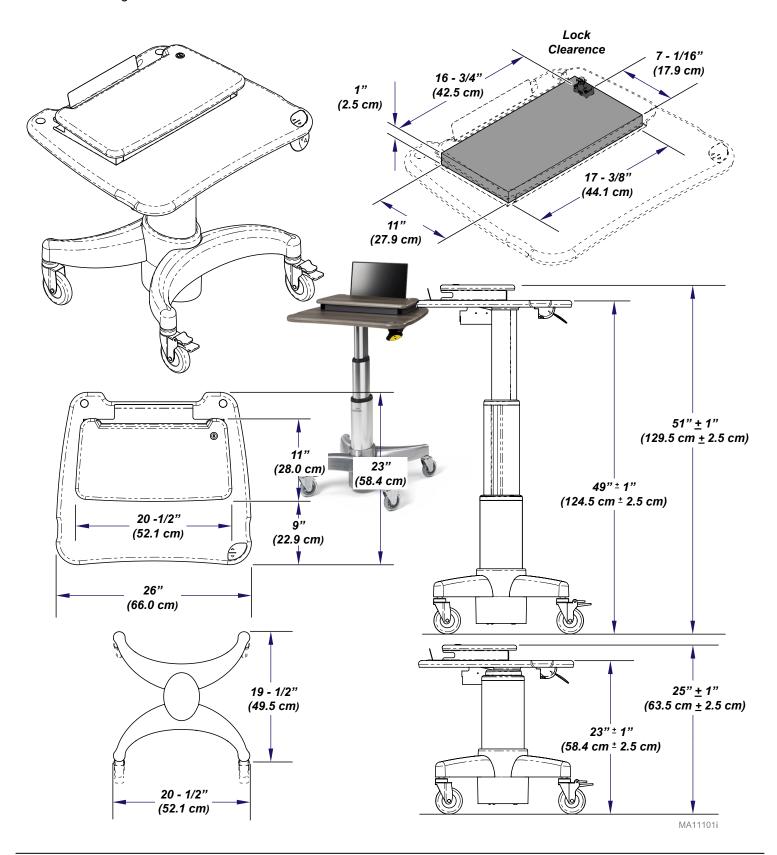






### **6211 Secure Laptop Workstation**

Capacity20 lb max weight.



#### TRADES CART FOR FACILITIES MAINTENANCE



# TRADES CART WITH LOCKING CABINET, INCLUDES 2 PARTS BOXES AND 4 PARTS BINS, BLACK

SKU: FG618088BLA

The Rubbermaid Commercial Rolling Tool Chest moves productivity right to the work site with a total tool storage and mobile workbench system.

- Won't rust, dent, chip, or peel
- Rounded corners protect walls and furniture
- Easy-access bottom shelf
- 5" non-marking casters
- Four 5" non-marking casters maneuver the cart easily over hard surfaces and through doorways

RUBBERMAID FG618088BLA SPEC	CS .
Length	38 Inches
Width	19 3/16 Inches
Height	33 3/8 Inches

SOURCE: <a href="https://www.webstaurantstore.com/rubbermaid-fg618088bla-38-x-19-3-16-black-trades-cart-with-locking-cabinet/690FG61808BK.html?utm\_source=bing&utm\_medium=cpc&utm\_campaign=Shopping%20LP&utm\_term=11\_00400560686&utm\_content=Equipment\_source=bing&utm\_branch\_sourc



#### **PRODUCT HIGHLIGHTS**

- 4K Ultra High Definition (3840 x 2160)
- · UHD Upscaling
- UHD Dimming
- PurColor
- Smart TV with Quad-Core Processor

#### **SIZES**









UN75JU6500

UN65JU6500

UN60JU6500

UN55JU6500







UN50JU6500

UN48JU6500

UN40JU6500

With 4K UHD resolution you'll enjoy a picture with 4X the detail of Full HD. Watch and play your way with the advanced Samsung Smart TV platform that lets you quickly and easily access your favorite content.

#### **KEY FEATURES**

#### **PICTURE QUALITY**

- 4K UHD (3840 x 2160 Resolution)
- · Contrast Enhancer
- Ultra Clear Panel
- · UHD Upscaling
- UHD Dimming
- PurColor
- Motion Rate 120

#### SMART

- Quad-Core Processor
- Smart TV
- Smart Apps
- Full Web Browser

#### **SMART INTERACTION**

• Motion Control with Optional Camera Accessory

#### **SMART CONNECTIVITY**

- Screen Mirroring
- ConnectShare™ Movie
- Smart View 2.0
- Briefing on TV

#### **CONNECTIONS**

- 4 HDMI® Connections<sup>1</sup>
- 3 USB Connections
- 802.11ac Wi-Fi Built In
- 1 Component In
- 1 Composite In (Shared with AV Component input)

#### AUDIO

- Dolby® Digital Plus
- DTS® Premium Sound 5.1™
- DTS® Studio Sound

#### **INCLUDES**

• Standard Remote Control

**SAMSUNG** 

### KEY FEATURES (page 1 of 2)

#### **PICTURE QUALITY**

#### 4K UHD (3840 x 2160 RESOLUTION)

Enjoy incredible picture crispness and dramatic detail, no matter how big the screen, with 4X the resolution of full HD.

#### **CONTRAST ENHANCER**

Experience a greater sense of depth with optimized contrast across multiple zones of the screen.

#### **ULTRA CLEAR PANEL**

Get superior picture quality with minimized glare from any angle with a screen that absorbs ambient light, reduces reflections, and lets the picture come to life.

#### **UHD UPSCALING**

Upgrade all lower resolution media to a stunning near ultra high-definition experience with enhanced detail and optimized picture quality.

#### **UHD DIMMING**

Experience UHD picture quality with deeper blacks, purer whites, brighter colors, and enhanced detail in every image.

#### **PURCOLOR**

Enjoy incredible shades of color, as nature intended, with technology that accurately blends primary and secondary colors for spectacular picture performance.

#### **MOTION RATE 120**

Enjoy improved fast-action moving picture resolution at Motion Rate 120 with outstanding refresh rate, processing speed and backlight technology.

#### **SMART**

#### **QUAD-CORE PROCESSOR**

Enjoy a fluid browsing experience and faster control – switching between apps, streaming content, and other media effortlessly.<sup>1</sup>

#### SMART TV

Access your favorite program choices, live TV, video on demand, apps, and social media in one easy-to-browse navigation experience.<sup>2</sup>

#### **SMART APPS**

Put your favorite media and entertainment at your fingertips with apps built for your Samsung Smart TV – including streaming TV and movies, sports, social media, interactive games, weather, and more.<sup>2</sup>

#### **FULL WEB BROWSER**

Easily browse the web right on your TV – enjoy everything from online shopping and social media to entertainment news.<sup>2</sup>

#### **SMART INTERACTION**

#### MOTION CONTROL WITH OPTIONAL CAMERA ACCESSORY

Make Skype calls from your TV and control things like volume, content browsing, and playback with hand motion control by adding Samsung's VG-STC5000/ZA.

#### SMART CONNECTIVITY

#### **SCREEN MIRRORING**

The screen mirroring feature allows you to mirror your phone or other compatible mobile device's screen onto the TVs screen wirelessly instead of your devices smaller screen for showing content, media playback, or other function.

#### **CONNECTSHARE™ MOVIE**

Enjoy a fluid browsing experience and faster control – switching between apps, streaming content, and other media effortlessly.

#### **SMART VIEW 2.0**

Watch your TV entertainment on your mobile device – or your mobile media on your  ${\sf TV}.^2$ 

#### **BRIEFING ON TV**

Have your Samsung Smart TV act as an alarm when synchronized with your other Samsung mobile devices. Use the large screen to display important items such as the time, weather, and your daily schedule.

#### CONNECTIONS

#### **HDMI®**

Enjoy higher quality audio and video with an HDMI connection that transmits both signals over a single cable.<sup>3</sup>

#### WI-FI

Enjoy your favorite on-demand content seamlessly through your existing network with built-in Wi-Fi (802.11ac).

#### 1 COMPONENT IN

Analog video connection transmits HD RGB video using three RCA connections.

#### 1 COMPOSITE IN (SHARED WITH AV COMPONENT INPUT)

Analog video connection transmits video using one RCA connection.



<sup>&</sup>lt;sup>1</sup>Versus Dual-Core Processor

<sup>&</sup>lt;sup>2</sup> All devices must be on the same network and internet connection is required

<sup>&</sup>lt;sup>3</sup> HDMI – CEC (Consumer Electronics Control) facilitates convenient control functions with compatible devices

### KEY FEATURES (page 2 of 2)

#### **AUDIO**

#### **DOLBY® DIGITAL PLUS**

Enjoy the ultimate in digital sound quality on all your favorite movies, TV shows and streaming content. Dolby Digital Plus optimizes your entertainment experience with enhanced sound richness and clarity.

#### **DTS STUDIO SOUND**

Advanced audio processing adapts the Digital Theater System stream to your stereo system, creating a cinematic digital audio experience for your home entertainment system.

#### DTS® PREMIUM SOUND 5.1™

Feel like you're part of the action by immersing your senses in 5.1 surround sound.

#### **INCLUDES**

#### STANDARD REMOTE CONTROL

Remote control that operates the TV.

©2015 Samsung Electronics America, Inc. Samsung is a trademark or registered trademark of Samsung Electronics Co., Ltd. Samsung and Samsung SMART TV are trademarks or registered trademarks of Samsung Electronics Co., Ltd. All other brand, product and service names and logos are marks and/or registered trademarks of their respective owners. Screen images are simulated. Some devices may require Internet access. Apps may vary by product model. 4K UHD launch timing may vary by provider. Selection of 4K UHD content subject to individual content provider availability. Netflix® or M-GO streaming membership required. Only select titles on Netflix or M-GO are available in 4K UHD.

**SAMSUNG** 

### **MODELS**

**MODEL:** UN75JU6500

ORDER CODE: UN75JU6500FXZA

**SCREEN SIZE CLASS: 75**"

**SCREEN DIAGONAL MEASUREMENT: 74.5"** 

**UPC CODE:** 887276075686

**COUNTRY OF ORIGIN: Mexico** 

#### **DIMENSIONS (INCHES W x D x H):**

TV WITHOUT STAND: 66.5 x 2.6 x 38.3

• TV WITH STAND: 66.5 x 14 x 40.7

• **SHIPPING:** 71.5 x 9.8 x 44.2

#### **WEIGHT (LBS):**

• TV WITHOUT STAND: 80.5

• **TV WITH STAND:** 93.7

• **SHIPPING:** 113.1

VESA SUPPORT: Yes (400 mm x 400 mm)

#### **ACCESSORIES INCLUDED IN BOX:**

• **REMOTE MODEL:** Standard TM1260C

MODEL: UN65JU6500

ORDER CODE: UN65JU6500FXZA

**SCREEN SIZE CLASS: 65"** 

**SCREEN DIAGONAL MEASUREMENT: 64.5"** 

**UPC CODE:** 887276075679

**COUNTRY OF ORIGIN: Mexico** 

#### **DIMENSIONS (INCHES W x D x H):**

- TV WITHOUT STAND: 57.6 x 2.5 x 33.2
- TV WITH STAND: 57.6 x 12.5 x 35
- **SHIPPING:** 65.8 x 7.3 x 37.5

#### **WEIGHT (LBS):**

- TV WITHOUT STAND: 52.2
- **TV WITH STAND**: 60.6
- **SHIPPING:** 72.8

VESA SUPPORT: Yes (400 mm x 400 mm)

#### **ACCESSORIES INCLUDED IN BOX:**

### **MODELS**

**MODEL:** UN60JU6500

ORDER CODE: UN60JU6500FXZA

**SCREEN SIZE CLASS: 60"** 

**SCREEN DIAGONAL MEASUREMENT: 60"** 

**UPC CODE:** 887276075662

**COUNTRY OF ORIGIN: Mexico** 

#### **DIMENSIONS (INCHES W x D x H):**

• TV WITHOUT STAND: 53.7 x 2.5 x 31.1

- TV WITH STAND: 53.7 x 12.5 x 32.8
- **SHIPPING:** 62.8 x 7.2 x 36.1

#### **WEIGHT (LBS):**

- TV WITHOUT STAND: 46.1
- **TV WITH STAND:** 54.5
- SHIPPING: 67

VESA SUPPORT: Yes (400 mm x 400 mm)

#### **ACCESSORIES INCLUDED IN BOX:**

• **REMOTE MODEL:** Standard TM1260C

MODEL: UN55JU6500

ORDER CODE: UN55JU6500FXZA

**SCREEN SIZE CLASS: 55"** 

**SCREEN DIAGONAL MEASUREMENT: 54.6"** 

**UPC CODE:** 887276075655

**COUNTRY OF ORIGIN: Mexico** 

#### **DIMENSIONS (INCHES W x D x H):**

- TV WITHOUT STAND: 48.9 x 2.5 x 28.3
- TV WITH STAND: 48.9 x 10.5 x 30.1
- **SHIPPING:** 55.8 x 6.1 x 32.1

#### **WEIGHT (LBS):**

- TV WITHOUT STAND: 33.1
- **TV WITH STAND:** 38.1
- **SHIPPING:** 47.2

VESA SUPPORT: Yes (400 mm x 400 mm)

#### **ACCESSORIES INCLUDED IN BOX:**

### **MODELS**

**MODEL:** UN50JU6500

ORDER CODE: UN50JU6500FXZA

**SCREEN SIZE CLASS: 50"** 

**SCREEN DIAGONAL MEASUREMENT: 49.5"** 

**UPC CODE:** 887276075648

**COUNTRY OF ORIGIN: Mexico** 

#### **DIMENSIONS (INCHES W x D x H):**

• TV WITHOUT STAND: 44.4 x 2.5 x 25.8

• **TV WITH STAND:** 44.4 x 10 x 27.1

• **SHIPPING:** 53 x 5.6 x 29.1

#### **WEIGHT (LBS):**

• TV WITHOUT STAND: 26.9

• **TV WITH STAND:** 31.7

• **SHIPPING:** 39.7

VESA SUPPORT: Yes (400 mm x 400 mm)

#### **ACCESSORIES INCLUDED IN BOX:**

• **REMOTE MODEL:** Standard TM1260C

**MODEL:** UN48JU6500

ORDER CODE: UN48JU6500FXZA

**SCREEN SIZE CLASS: 48"** 

**SCREEN DIAGONAL MEASUREMENT: 47.6"** 

**UPC CODE:** 887276075709

**COUNTRY OF ORIGIN: Mexico** 

#### **DIMENSIONS (INCHES W x D x H):**

• TV WITHOUT STAND: 42.8 x 2.5 x 24.8

• TV WITH STAND: 42.8 x 10 x 26.6

• **SHIPPING:** 51.4 x 5.5 x 28.1

#### **WEIGHT (LBS):**

• TV WITHOUT STAND: 25.1

• TV WITH STAND: 30

• **SHIPPING:** 35.1

VESA SUPPORT: Yes (400 mm x 400 mm)

#### **ACCESSORIES INCLUDED IN BOX:**

### **MODELS**

**MODEL:** UN40JU6500

ORDER CODE: UN40JU6500FXZA

**SCREEN SIZE CLASS: 40"** 

**SCREEN DIAGONAL MEASUREMENT: 40"** 

**UPC CODE:** 887276075716

**COUNTRY OF ORIGIN: Mexico** 

#### **DIMENSIONS (INCHES W x D x H):**

• TV WITHOUT STAND: 36.1 x 2.5 x 21.1

• **TV WITH STAND:** 36.1 x 9.5 x 22.9

• **SHIPPING:** 44.5 x 5.3 x 23.5

#### **WEIGHT (LBS):**

• TV WITHOUT STAND: 17

• **TV WITH STAND:** 20.7

• **SHIPPING:** 24.3

VESA SUPPORT: Yes (200 mm x 200 mm)

#### **ACCESSORIES INCLUDED IN BOX:**











42" class (42.2"/1071mm diagonal)



Run messages on up to 50 TVs in the form of a billboard without any additional hardware. Advertisements, information and broadcast content can be arranged on the same screen to attract attention and deliver specific messaging to your customer base.

#### MESSAGE DELIVER

Deliver your messages while broadcasting live channels simultaneously.



#### **ALL-IN-ONE DISPLAY SOLUTION**

No need to purchase any additional hardware or software.



#### SIMPLE CONNECTION

Needs only a power, LAN connection and a USB to operate.



#### FREE SUPERSIGN LITE

- 74 pre-installed templates for multiple verticals
- Schedule your messages to show on all or on specific TV's, at the times you choose.
- Remotely control maximum 50 TVs over the network



Free templates

#### HOW TO USE SUPERSIGN TV

Option 1. Stand-alone





### LX530S TV Tuner Built-In Digital Signage



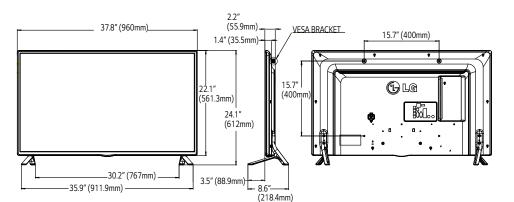
42" class (42.2"/1071mm diagonal)











Rear Jack Panel

MARPHING: To prevent I's form being over, the "I'd doubt be accoming district to the footwall per redailable networkers. Toping, shalling, or rodning the machine may cause righty.	
OPTICAL DIGITAL AUDIO OUT  RGB IN IPC: RS-232C IN ICONTROL & SERVICE	EXTERNAL PEAKER OUT
HIGH IN IPC) HS-222C IN ICONING A SENTO	9
	ANTENNA/ CABLE IN
Manufactured under Roense from Dolby Laboratories. Dolby and the double-D MIECO/Ø Ø © INTERNATION @	
symbol are trademarks of Dolby Laboratories.  COMPONENT IN/AVIN	MCR65307622

DANEL	MODEL	42LX530S
PANEL	Size	42" Class (42.2"/1071mm" diagonal)
	Panel Technology	IPS
	Backlight Type	LED (Direct)
	Brightness	300 cd/m <sup>2</sup>
	Dynamic Contrast Ratio	1,000,000 : 1
	Static Panel Contrast Ratio	1,200 : 1
	Viewing Angle	178°/178°
	Response Time (G to G)	8 ms
	Frame Rate	60Hz
BROADCASTING SYSTEM	Analog	NTSC
	Digital	ATSC, Clear QAM/VSB
	Resolution	1920 x 1080 (FHD)
VIDEO	Triple XD Engine	Yes
	Triple AD Engine	Yes 6 modes (16:9, Just scan,Set by program,
	Aspect Ratio	4:3,Zoom,Cinema zoom1)
AUDIO	Audio Output	10W + 10W
	Sound System	2.0 ch
	Sound Mode	Yes 6 modes (Standard, News, Music, Cinema, Sport, Game)
	Clear Voice	Yes
	Sound Optimizer	Yes 3 modes (Normal, Wall-Mount Type, Stand Type)
SPECIAL FEATURES	Remote Diagnosis/ Self Diagnosis	Yes (USB)
	HDMI-CEC	Yes (without ARC)
	HTNG-CEC	Yes
	Welcome Screen	Yes (Splash Image)
	Lock Mode	Yes
	Multi IR Code	Yes
	Public Display Mode	Yes
	USB Cloning	Yes
	IR Out	RS-232C
	USB Auto Play Back	Yes
	Moving Picture Playback (SD/HD/Plus HD)	asf, wmv, 3gp, 3gp2, divx, avi, mp4, m4v, mov, mkv, ts, trp, tp, mts, m2ts, vob, mpg, mpeg, mpe
	Picture	ipeg, jpg, jpe, BMP, PNG
	Audio Codec	mp3, AAC, M4A, OGG, WMA, WMA 10 Pro
	External Speaker Out	Variable/Fixed/Line Out, 3.5mm, Stereo, Single Ended Type (GND,L+,R+), 1W with $8\Omega$
	RJP Compatibility	RS232C, HDMI
	RJP Interface	RS232C, HDMI CEC
	Auto Off/ Auto Sleep	Yes
	Smart Energy Saving	Yes
	Kensington Lock	Back Cover
	RTC (Real Time Clock)	Yes
	Wi-Fi	Wi-Fi Dongle Ready
	SuperSign Lite (3.0)	Yes
	,	

INTERFACE (SIDE)	MODEL	42LX530S
	HDMI In	1
	USB	2 (2.0)
INTERFACE (REAR)	RF In	1
	AV In (Composite)	1 (Sharing with Component In)
	Component In	1 (Y, Pb,Pr) + Audio (L/R)
	Digital Audio Out	1 (Optical)
	RGB In	1 (D-sub 15pin)
	PC Audio Input	1 (Sharing with Component In)
	RS-232C	1 (D-sub 9pin)
	HDMI In	1
	LAN	1 (RJ45)
	External Speaker Out	1 (3.5mm Phone Jack)
POWER	Voltage	110 ~ 240V, 50/60Hz
	Typical	35.5W
	Stand-by	0.5W↓
CABINET	Bezel On (L/R, T, B) (mm)	11.0/11.0, 11.0, 16.5
	Bezel Off (L/R, T, B) (mm)	8.5/8.5, 8.5, 14.0
	Depth	2.2" (55.5mm)
	Without Stand (WxHxD)	37.8"x22.3"x2.2" (960mm x566.4mm x55.9mm)
	With Stand (WxHxD)	37.8"x24.0"x8.6" (960mm x609.6mm x218.4mm)
	Weight	20.9 lbs
	Carton (WxHXD)	41.5"x 25.4"x5.7" (1,054mm x645.2mm x 144.7mm)
	Carton Weight	25.6 lbs
	VESA™ Compatibility	400mm x 400mm
CERTIFICATION	Safety	UL, FCC
(STANDARD)	Environment	RoHS, cUL, NOM
	Energy Star® 7.0	Yes
WARRANTY	2-Year Limited Warranty (Parts and Labor)   Extended Warranties Available	
UPC	7 19192 19705 3	
ACCESSORIES	Cable	Power cord
	Manual / ESG	Simple book
OPTIONAL ACCESSORIES	AN-WF500 (Wi-Fi Dongle)	



The estimated annual energy cost determined in accordance with 16 CFR Part 305.5 for models 42LX530S is \$9.

"Your energy cost depends on your utility rates and use. The estimated cost is based on 11 cents per kWh and 5 hours of use per day. For more information, visit www.ftc.gov/energy." 1

<sup>1</sup>FTC Television labeling rule (18 CFR Part 305, as added by 76 Fed. Reg. 1038 (Jan 6, 2011)).















LGsolutions.com



LG Electronics U.S.A., Inc. HE B2B Division 2000 Millbrook Drive Lincolnshire, IL 60069

Customer Service: 888.865.3026 www.LGsolutions.com/support

Contact your LG Regional Sales Representative: Channel: 800.897.8871 Hospitality: 800.228.1236 E-mail: info@LGsolutions.com

LG\_SPEC\_42LX530S\_041518\_g







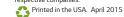






All screen images are simulated. Dimensions and weights are approximate. Design, features and specifications subject to change without notice.

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26" CLASS (26.0" MEASURED DIAGONALLY) 22" CLASS (21.6" MEASURED DIAGONALLY)

26LT560C 22LT560C



### LED Commercial Widescreen Integrated HDTV



The estimated annual energy cost determined in accordance with 16 CFR Part 305.5 for models 2617560C and 2217560C are \$8 and \$5, respectively.

"Your energy cost depends on your utility rates and use. The estimated cost is based on 11 cents per kWh and 5 hours of use per day. For more information, visit www.ftc.gov/energy." 1

<sup>1</sup>FTC Television labeling rule (18 CFR Part 305, as added by 76 Fed. Reg. 1038 (Jan 6, 2011)).





ENERGY STAR 5.3 AND ROHS COMPLIANT

PUBLIC DISPLAY SETTING-Cloning Capable

BED 1/2/3/4 CONTROLLABILITY when used with Optional 124-213-10 remote

MPEG-2/MPEG-4 H.264 DECODING

NATIVE DISPLAY RESOLUTION 1366 x 768 HD (26"/22")

BUILT-IN ATSC/NTSC/QAM CLEAR TUNER

INVISIBLE SPEAKER SYSTEM Hidden speaker grilles

90° DETACHABLE SWIVEL STAND

LG'S EXCLUSIVE XD ENGINE®

USB 2.0 MEDIA HOST FOR PHOTOS AND MUSIC

**USB CLONING** 

CLEAR VOICE II

REAL CINEMATM

3 HDMI<sup>TM</sup> INPUTS WITH HDCP V.1.3 with deep color

AUTO SENSING REMOTE JACK PACK (RJP) COMPATIBLE\*

MATTE BLACK WITH GLOSSY BLACK EDGE

2 YEAR LIMITED WARRANTY (parts and labor)





## WHEN IT'S GREEN.

LG is committed to improving product development, manufacturing and usage to meet the demand for environmentally friendlier products. Our LT560C televisions have technologies to reduce power consumption and in return increase **cost savings** per room.

#### EcoSmart

Energy Saving Levels - Manually select your choice for the brightness level for the television.

- CEC Compliant Meets the Appliance Efficiency Regulations of the California Energy Commission.
- RoHS Compliant
   Meets directive on restriction of hazardous substances.
- Energy Star 5.3 Qualified Meets current reduction requirements of energy consumption.

PICTURE

(i) (c)

© e∅ Energy Saving : Off

# FEATURES



LG's newest core technology, Picture Wizard, enables easy selfcalibration by providing on-screen reference points for key picture quality elements such as black level, color, tint, sharpness and backlight levels. By using this easy-to-use calibration process, the picture setting can be set to better fit the type of room application.





Dramatization

#### BED1/2/3/4 REMOTE CONTROLLABILITY (with optional remote)

 ${\it LG}$  TVs with Bed 1/2/3/4 function eliminates the remote control signal interference between TVs in multiple dwelling rooms. This system will work using the same  ${\it LG}$  TV model.



## ENGINE

Six distinct processes contribute to picture improvement. LG's XD Engine® takes the low resolution of analog signals to near HD levels by improving brightness, contrast, detail and enhancing color as well as reducing signal noise.

Manually select your choice for the brightness level for the television. By selecting Minimum, Medium, or Maximum, the power consumption will

be reduced and an increase in energy savings can be achieved. (Note:

Selecting minimum level may slightly increase power consumption on some models)



**ENERGY SAVING LEVELS** 

Brightness



Dramatization

Dramatization

## OPTIONAL ACCESSORY SIMPLE 7 BUTTON REMOTE

Resident / Simple 7 button sanitary membrane remote control. Model: 124-213-10 (sold separately)



USB 2.0 will support JPG and MP3 files from a USB storage device.

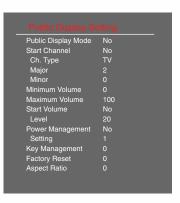


		Jp Folder			KY103	03/30/2008
IMJ001		(Y101	06/10/2008		KY104	06/19/2008
		(Y102	04/03/2008		KY105	01/31/2008
2	= 1	MJ001	01/01/2000	п	JMJ005	05/13/2008
1366×768. 125KB	- 1	MJ002	06/15/2008	п	JMJ006	05/26/2008
1300-700, 12310	- 1	MJ003	04/03/2008	=	JMJ007	02/18/2008
Up Folder	1 1	MJ004	02/18/2008		JMJ008	02/18/2008



#### **PUBLIC DISPLAY SETTINGS**

When used in public areas, these HDTVs can be easily programmed by the installer to have the TV turn on at a specified channel/volume level, set the minimum/ maximum volume, lock out the control panel/remote, set the aspect ratio, and return to a factory reset. By using Power Management, these displays can be programmed to turn off if there has been no activity (remote or control panel buttons) for a preset time (1-7) hours.



#### **USB CLONING**

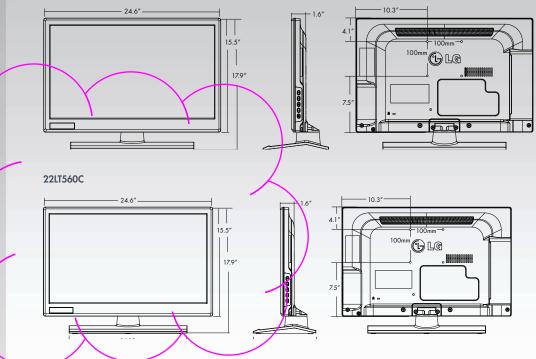
USB cloning will allow for easy transfer of Public Display Settings from the "Master TV" to an unlimited number of same type televisions.



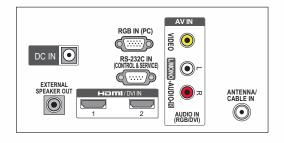
# invisible SPEAKER SOUND IS HEARD, NOT SEEN Enjoy a combination of smart technology and stylish design with the invisible

and stylish design with the invisible speaker system custom tuned by audio expert Mr. Mark Levinson. This unique system provides a clean, polished look and an enhanced auditory experience by increasing the sweet spot and providing a wider sound field.

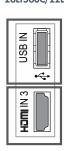




#### REAR JACK PANEL 26LT560C/22LT560C



SIDE JACK PANEL 26LT560C/22LT560C



26" CLASS (26.0" MEASURED DIAGONALLY) 22" CLASS (21.6" MEASURED DIAGONALLY)

LCD SPECIFICATION

LCD SPECIFICATION	
LED Backlighting	Edge lit
Screen Size	26" class (26.0" measured diagonally) 22" class (21.6" measured diagonally)
Native Display Resolution	1366 x 768 (HD)
Viewing Angle Degree	178°/178°
Frame Rate	60Hz
BROADCASTING SYSTEM	
Analog	Yes (NTSC)
Digital	Yes (ATSC / Clear QAM / Mpeg4)
VIDEO	, , , , , , , , , , , , , , , , , , , ,
XD Engine	Yes
24p Real Cinema (24p 5:5/2:2 Pull down)	Yes
Eye Care (Anti Dazzling)	Yes
AUDIO	
Audio Output	5W+5W
Speaker System	1 Way 2 Speakers
Infinite Sound	Yes
Invisible Speaker	Yes
Clear Voice II	Yes
COMMERCIAL FEATURES	103
TV Link Tuner	Yes
Big Size Menu	Yes
Hotel Mode/PDM	Yes (PDM 2.6)
IR Out	Yes (RS-232C)
SIMPLINK	Yes
External Speaker Out	
RJP Compatibility	Yes (Variable, 3.5mm, Stereo, 1W with 8 Ω) LG, Teleadapt, Guestlink
USB (2.0)	Yes (MP3, Jpeg, HD DivX)
USB Cloning	Yes
One Channel Map / Logical Channel Map	Simple Channel List
Multi IR Code	Yes
Welcome Screen (Splash Image)	Yes
Auto Off/Auto Sleep	Yes
Video Mute	Yes
Smart Energy Saving	Yes
	Yes
Anti-theft System Kensington Lock	Yes
AUDIO/VIDEO INPUTS/OUTPUTS	163
HDMI In	17:13
	1 (side)
USB 2.0 RF In	1 (side)
AV In	1 (rear)
	1 (rear)
HDMI/HDCP Input	2 (rear)
RGB In (D-sub 15pin) - PC	l (rear)
PC Audio Input	1 (Sharing with AV In)
RS-232C (Control / SVC only)	1 (rear)
POWER  External Speaker Out (3.5mm phone jack)	1
Voltage, Hz	100V - 240V, 50/60Hz
Stand-by Mode (Max)	Under 1W
Power Consumption	Typical 32W (26"), 21W (22")
CABINET/ACCESSORIES	
Cabinet Color	Matte black with glossy black edge
Swivel Stand (degrees)	+90°/-90°
VESA® Standard Mount Compatible (WxH)	100mm x 100mm
Remote Control	Yes
Optional Accessory	124-213-10 remote

REQUIRED LISTING (CERTIFICATION)	
Required Approvals	UL, cUL, NOM
RoHS Compliant	Yes
ENERGY STAR 5.3 Qualified	Yes
DIMENSIONS & WEIGHT	
TV without stand (WxHxD)	24.6" x 15.5" x 1.6" (26") 20.4" x 13.0" x 1.6" (22")
TV with stand (WxHxD)	24.6" x 17.9" x 7.6" (26") 20.4" x 15.2" x 7.6" (22")
Unit Weight	with Stand 10.4 lbs (26") 9.0 lbs (26") 8.2 lbs (22") 6.8 lbs (22")
Shipping Dimensions (WxHxD)	27.0" x 21.0" x 4.7" (26") 23.0" x 18.2" x 4.4" (22")
Shipping Weight	14.8 lbs (26") 11.0 lbs (22")
SERVICE/LIMITED WARRANTY	2 Years (Parts/Labor)
UPC CODE	
26LT560C	7 19192 90391 3
22LT560C	7 19192 90390 6

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Contact your LG Regional Sales Representative: Channel: 800.897.8871 Hospitality: 800.228.1236 E-mail: info@LGsolutions.com

SPEC\_LT560Cseries\_101206\_PR



















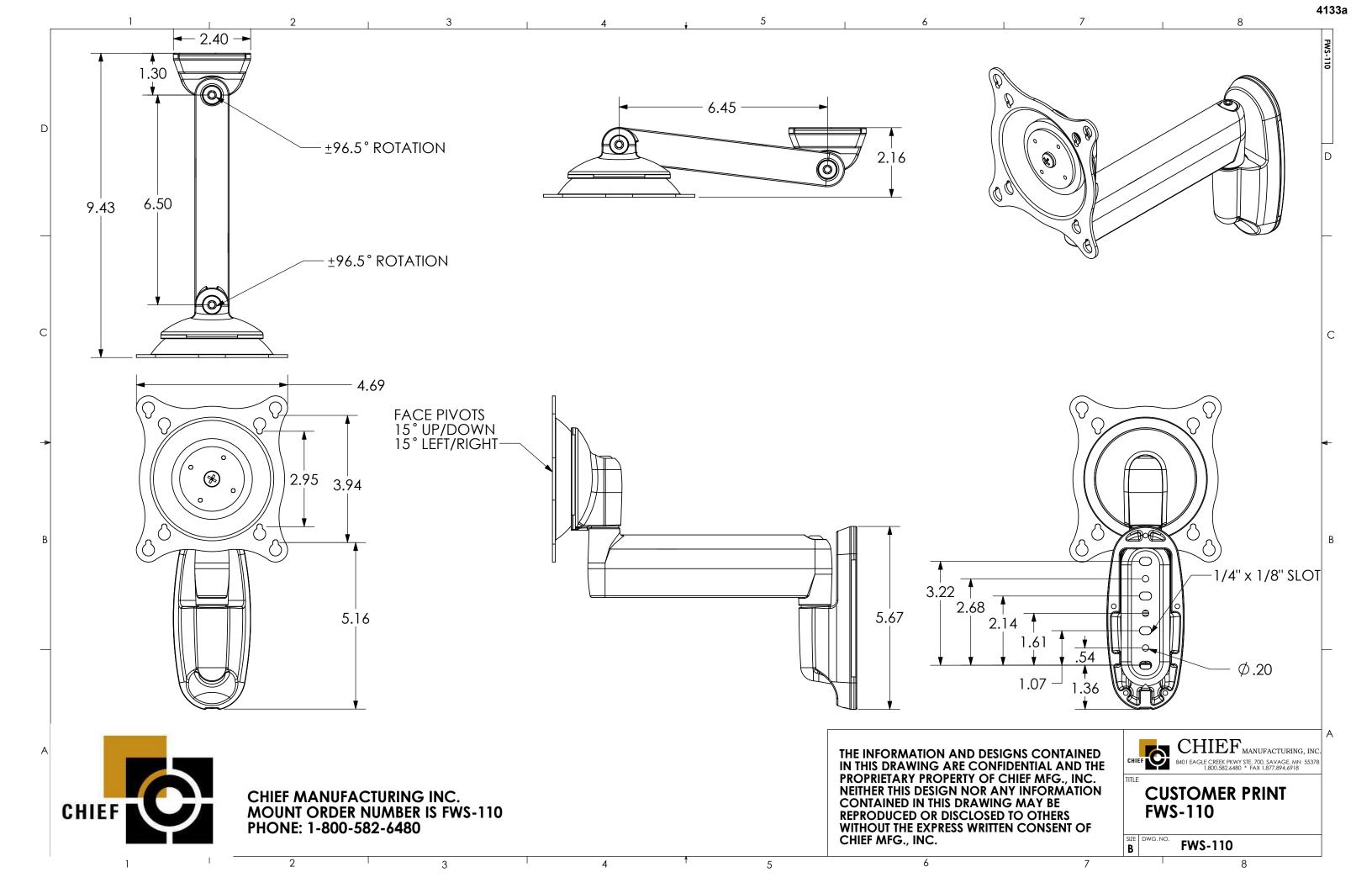






All screen images are simulated. Dimensions and weights are approximate. Design, features and specifications subject to change without notice.

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# QuickSpecs

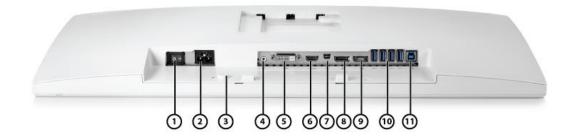
Overview

#### **HP HC270 Healthcare Edition Display**



- 1. Menu button
- **2.** Luminance
- 3. Color control

- 4. Input control
- 5. Information
- 6. Power button/LED



- 1. Master power switch
- **2.** Power connector
- 3. Security lock slot
- 4. Audio output 3.5 mm
- 5. DVI-D
- **6.** HDMI v 1.4 input (MHL 2.0)

- **6.** Mini-DisplayPort
- 7. DisplayPort v 1.2 in
- 8. DisplayPort v 1.2 out
- **9.** (4) USB 3.0 downstream ports (one fast charging)
- **10.** (1) USB 3.0 upstream port

## QuickSpecs

#### Overview

#### **Overview**

Work efficiently and accurately with the HP HC270 Healthcare Edition Display, a DICOM Part 14-calibrated QHD display that delivers consistent views of clinical data and non-diagnostic images<sup>1</sup>.

#### **Key features:**

- Be assured that grayscale and color medical images and patient information are consistent and accurate on every display, plus the HP Pixel Policy<sup>2</sup> guarantees zero bright dots.
- View up to 60% more³ of your images and records onscreen with a 2560 x 1440, 27" diagonal display⁴; work across multiple displays⁵ with micro-edge bezels and DisplayPort™ multi-stream support.
- Attach your HP Desktop Mini or select HP Thin Client behind the display<sup>6</sup> for an integrated, small footprint solution that's perfect for busy and shared spaces like nurse's or charting stations.
- Connect to multiple display and devices with a range of integrated ports right at the display.
- Use Picture-in-Picture or Picture-by-Picture to boost your multi-tasking productivity with simultaneous views from two connected devices.
- Work comfortably with customizable tilt, height adjustment, swivel, and pivot settings.
- Design the screen for how you work with HP Display Assistant software, which enables screen partitioning and helps deter theft by deactivating a display that's disconnected without approval.
- Reduce power consumption and help lower your costs with an energy-efficient design.
- Rest assured that your IT investment is supported by a three-year standard limited warranty, and optional HP Care service.<sup>7</sup>
- 1 The display is not intended for primary image interpretation or diagnostic use.
- 2 The HP Pixel Policy allows no bright sub-pixel defects for this display. For complete details, see <a href="http://support.hp.com/us-en/document/c00288895">http://support.hp.com/us-en/document/c00288895</a>.
- 3 Compared to a WUXGA display.
- 4 All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
- 5 Each sold separately.
- 6 Sold separately. HP PC Mounting Bracket for Monitors required and sold separately; see Bracket QuickSpecs for exact compatibility.
- HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc. HP Services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.



## QuickSpecs

#### Change Log

Models: Z0A73A4

Panel Type 27-inch IPS w/LED backlight

Viewable Image Area

(diagonal)

**68,47 cm** (27-inch) widescreen; diagonally measured

Panel Active Area

(W × H)

**59,67 x 33,56 cm** (23.49 × 13.21 in)

**Resolution** 2560 x 1440 @ 60 Hz (QHD)

Aspect Ratio 16:9

Viewing Angle Up to 178° horizontal/178° vertical typical

**Brightness** 350 cd/m<sup>2</sup>

Contrast Ratio (Typical) 1000:1 Static; 5,000,000:1 Dynamic (DCR)

**Response Times\*** 14 ms typical (G-to-G)

Pixel Pitch 0.2331 mm
Pixels Per Inch (PPI) 108.8 DPI

Backlight Lamp Life (to half brightness)

30,000 hours minimum

**Color Gamut** Up to 16.7 million colors with the use of FRC technology

**Color Gamut (Typical)** 99% sRGB

**Default Color Setting** DICOM

<sup>\*</sup> Performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

User Controls Buttons or Switches	Menu, Information	i, Input Control	, Color Control, Luminance
-----------------------------------	-------------------	------------------	----------------------------

**User Programmable Modes** 20

Languages 10 (German, S-Chinese, T-Chinese, Japanese, English, Spanish,

French, Italian, Netherlands and Portuguese)

On Screen Display (OSD) User Controls Luminance, Color Control, Input Control, Image Control, PIP Control, Power Control, OSD Control, Management, Language, Information

Audio Controls N/A

Signal Interface/ Performance **Horizontal Frequency** 30 - 90 kHz (DVI, DP, HDMI); 27 - 75 (MHL) **Vertical Frequency** 50 - 60 Hz (DVI, DP, HDMI); 24 - 60 (MHL)

 Native Resolution
 2560 x 1440 @60Hz

 Preset Graphic Modes (non-interlaced)
 640 x 480 @ 60Hz

 720 x 400 @ 70 Hz
 800 x 600 @ 60 Hz

1024 x 768 @ 60 Hz 1280 x 720 @ 60 Hz 1280 x 800 @ 60 Hz 1280 x 1024 @ 60 Hz 1366 x 768 @60Hz



## QuickSpecs

Change Log

1440 x 900 @ 60 Hz 1600 x 900 @ 60 Hz 1600 x 1200 @ 60 Hz 1680 x 1050 @ 60 Hz 1920 x 1080 @ 60 Hz 1920 x 1200 @ 60 Hz 2560 x 1440 @ 60 Hz **Maximum Pixel Clock Speed** 250 MHz(DVI, DP, HDMI); 150 MHz (MHL) **Anti-Glare** Yes Video/Other **Plug and Play** Yes Inputs **Input/Output Connectors** (1) DVI-D Dual Link (1) MHL 2.0<sup>1</sup>/HDMI 1.4 (1) DisplayPort 1.2, (1) Mini-DisplayPort, (1) DisplayPort 1.2 out HDCP support on all inputs **USB** 4 USB 3.0 [4 downstream (one fast charging), 1 upstream] **Video Cables Included** (1) DisplayPort **1,8 m** (5.9 ft) (1) HDMI **1,8 m** (5.9 ft) (1) USB 3.0 **1.8 m** (5.9 ft) **Audio** (1) Audio output 3.5mm Multimedia N/A **Speakers Power Power Supply** Internal **Input Power** 100 - 240 VAC 50/60 Hz **Maximum Power** 85 W **Typical Power** 50 W **Sleep Power** 0.5 W (standby) **Power Cable Length** 1,8 m (5.9 ft) Unpacked w/stand Mechanical **Dimensions** 61,43 x 21,82 x 53,37 cm  $(W \times D \times H)$ 24.2 x 8.6 x 21 in (max height) 61,43 x 21,82 x 40,37 cm 24.2 x 8.6 x 15.9 in (min height) Unpacked w/o stand 61,43 x 5,39 x 36,41 cm (head only) (24.2 x 2.1 x 14.3 in) 73,1 x 28,5 x 47,9 cm Packaged (28.8 x 11.2 x 18.9 in) Weight **Head Only 5,1 kg** (11.16 lb) Unpacked **7,7 kg** (16.9 lb) Packaged **10 kg** (22.1 lb) Ergonomic **Detachable Stand** Yes, ships detached **Features Height Adjustment** Yes, 130 +/-3 mm **Tilt Range** -2° to + 20° vertical Yes, 45° +/-2° (Clockwise/Counterclockwise) **Swivel** 



## QuickSpecs

#### Change Log

Pivot Yes, 90° Quick Release<sup>5</sup> HP QR2 guick release included **Environmental** 5° to 35° C (41° to 95° F) **Temperature - Operating** Temperature - Non-**-20° to 60° C** (-4° to 140° F) operating **Humidity - Operating** 20% to 80% non-condensing **Humidity - Non-operating** 5% to 95%, 38.7° C max wet-bulb Altitude - Operating 0 to 5,000 m (0 to 16,404 ft) 0 to 12,192 m (0 to 40,000 ft) Altitude - Non-operating White LED Backlights Yes **CCFL Panel** No **Arsenic-Free Display Glass** Yes Low Halogen<sup>2</sup> Yes (except cables) **Mercury-Free Display** Yes **Backlighting** HP LCD Speaker Bar—Part **Options** Powered directly by the connected PC, the Speaker Bar seamlessly attaches to the monitor's lower bezel to bring full audio support to (each sold number NQ576AA select HP flat panel monitors. Features include dual speakers with separately) full sound range and dual external headphone jacks. Sold separately. For more information, refer to the product's QuickSpecs. **HP PC Mounting Bracket** Customize an altogether better solution with the HP PC Mounting for Monitors— Part Bracket for Monitors, which lets you attach your HP Desktop Mini, HP number N6N00AA Chromebox, or select HP Thin Client directly behind the monitor. **HP Single Monitor Arm**— The flexible design of the HP Single Monitor Arm provides a Part number BT861AA seemingly endless range of display adjustments with an amazing 13 inches of lift, 75 degrees of tilt, and 360 degrees of pan and rotation - all at your fingertips -- helping you stay comfortable and productive throughout the day. HP DisplayPort Cable Kit — Connects a DisplayPort connector on an HP Business Desktop Part number VN567AA computer to a DisplayPort connector on a monitor **HP Ouick Release Bracket—** An easy-to-use, VESA-compliant, LCD monitor mounting solution Part number EM870AA5 that allows you to quickly and securely attach an LCD monitor to a variety of stands, brackets, arms or wall mounts. For more information, refer to this product's QuickSpecs document. **HP Business PC Security** Attaches to the rear of the PC with a six-foot steel cable that can be **Lock Kit** — Part number used to secure a PC or peripherals such as mice, keyboards, monitors PV606AA or USB security devices to protect them against unauthorized removal by physically connecting the system to an anchor point. What's in the **Monitor and Accessories** HP HC270 Healthcare Edition Display, AC power cord 1,83 m (6 ft), box? DisplayPort cable 1,8 m (5.9 ft), HDMI cable 1,8 m (5.9 ft), USB 3.0



cable 1,8 m (5.9 ft)

## QuickSpecs

#### **HP HC270 Healthcare Edition Display**

#### Change Log

**Other** 

Software	HP Display Assistant
User Guide Languages	English, Arabic, S. Chinese, T. Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Kazakh, Korean, Norwegian, Polish, Brazilian Portuguese, Russian, Slovenian, Spanish, Swedish and Turkish.
Warranty Languages	English, Arabic, S. Chinese, T. Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Kazakh, Korean, Norwegian, Polish, Brazilian Portuguese, Russian, Slovenian, Spanish, Swedish and Turkish.

CD (includes user guide, warranty, drivers)

Color White

**VESA Mounting** 100 mm VESA mount

**Security Lock-Ready** Yes **Country of Origin** China

Certification and Compliance

ENERGY STAR® Qualified, EPEAT® Gold3,

CE, CB, KC, KCC, NOM, PSB, ICE, TUV-S, ISO 9241-307, EAC, UL, CSA, PSB, ISC, CCC, CEL, CECP, TCO Certified Edge, ISC, VCCI, FCC, BSMI, Vietnam MEPS, Australian-New Zealand MEPS, WEEE, DICOM Part 14. CE. FCC(Canada). BSMI .KC .VCCI .C-Tick. NFPA 99 certification for EMI

Microsoft WHQL Certification (Windows 10, Windows 8, and Windows 7); SmartWay Transport

Partnership (NA)

**Documentation** 

Compatibility Compatible with platforms using the VESA standard video modes. Recommended for use with HP

products.

Service and Warranty

Protected by HP, including a 3 year standard limited warranty. Optional HP Care Pack Services are extended service contracts that extend your protection beyond the standard warranties.<sup>4</sup>

- 1. MHL 2.0 port will charge a MHL compatible smart phone and tablet battery. Requires the smart phone or tablet to be enabled for MHL or have an HDMI dongle to connect to the monitor. See your mobile device specifications.
- Power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.
- EPEAT ® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country. See HP's 3rd party option store for solar energy accessory http://www.hp.com/go/options.
- Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Service starts from date of hardware purchase. Restrictions and limitations apply. See www.hp.com/go/cpc for details.
- The HP Quick Release has been designed to support a maximum of up to 24 lbs (10.9 kg) for all devices mounted. Because mounting surfaces vary widely and the final mounting method and configuration may vary, mounting fasteners are not supplied (other than the VESA-compliant screws). HP recommends that you consult with a qualified engineering, architectural or construction professional to determine the appropriate type and quantity of mounting fasteners required for your application and to ensure that your mounting solution is properly installed to support applied loads.

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# QuickSpecs

Change Log

Change	Log		
Date	Version	Description	
	Version 1 to 2		













▶ 60LN549E

60" class (59.58" measured diagonally)

▶ 55LN549E

55" class (54.6" measured diagonally)

▶ 47LN549E

47" class (46.9" measured diagonally)

▶ 42LN549E

42" class (41.9" measured diagonally)

▶ 39LN549E

39" class (38.5" measured diagonally)

▶ 32LN549E

32" class (31.5" measured diagonally)



#### Digital Signage + Television: Billboard TV

The LG EzSign TV is the world's first TV that comes with a signage function. Run messages on the TV screen in the form of a billboard without additional hardware. Advertisements, information and broadcast content can be arranged on the same screen to attract attention and deliver specific messaging to your customer base.



#### **COST EFFECTIVE**

No need to buy a media player - Create your own signage content by using your PC and the free EzSign TV software. Transfer that content by using a USB flash drive and plug it in to the EzSign TV to run it.



#### **CUSTOMIZED TO YOUR NEEDS**

Signage content can be customized for your business - The LG EzSign TV allows you to create your own signage content and make revisions on the fly.



Edit content quickly and easily - Select one of the pre-made templates. Add your images and text to it. It's that simple.



Choose from a broad range of template designs - The LG EzSign TV gives you the power to choose and change according to your needs.







The Best Award Winner (two consecutive years) from the Commercial Integrator magazine for digital signage hardware and the product of the year from CRN, the LG EzSign TV is an innovation in digital signage that can entertain while maximizing the impact of your message.



#### LG EzSign TV Free Software v3.0

#### **CREATE CONTENT IN JUST 4 EASY STEPS**



Choose from a wide array ofpre-installed



Schedule events, make playlists.



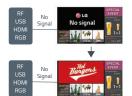
into the content boxes



Export your content to the TV via USB or wirelessly.

#### FAIL OVER

An image without a signal can be replaced with a customized image.



#### INSTANT MESSAGE

Pop-Up messages can be added for adding special promotions or breaking news



CONTROL TV

Users can control several TVs through Wi-Fi.



#### FOR EFFICIENT MANAGEMENT



#### PUBLIC DISPLAY MODE

From channel selection to energy-saving features, Public Display Mode allows you to control the TV settings in your business area prevent misuse by customers, set volume limits, or restore factory defaults on any TV. You are in control of it all.





#### JSB CLONING

The USB Cloning feature allows you to simply copy the TV settings onto all TVs using a USB stick, a process that is fully automated to save time without having to set each TV one by one.





#### WELCOME SCREEN

Welcome visitors with a warm greeting message that includes your business name and logo.







#### RS232C CONTROL

Via the TV's RS-232C port, you can remotely control multiple TVs' power and volume settings simultaneously.



#### FOR CONVENIENCE & ENTERTAINMENT



#### EXTERNAL SPEAKER OUT

Enhance the entertainment experience by adding an additional speaker, visitors to listen to and control the TV audio from anywhere in your business area, including restrooms.





#### REMOTE JACK PACK

The plug and play function with compatible Remote Jack Pack enables guests to view media from their portable devices on the TV screen seemlessly.





#### IR OUT

IR Out enables customized set-top boxes to receive IR signals via LG TV Signage. This added convenience requires only simple connections and allows easy management using a single remote control.





#### USB 2.0

You can play images and videos from and record TV programs to external storage devices. Immediate recording and reserved recording options are available.



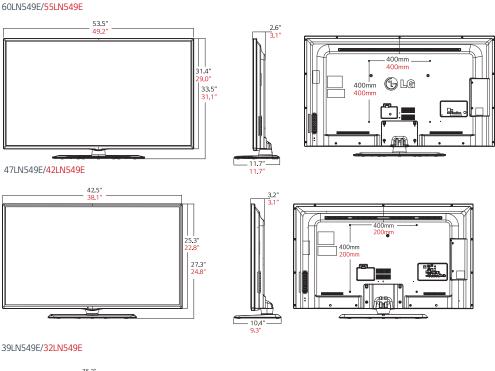


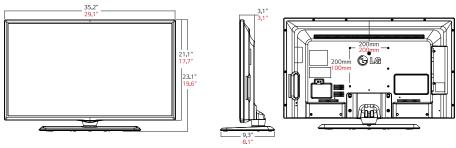
## when it's green.

LG is committed to improving product development, manufacturing and usage to meet the demand for products with environmentally friendlier features. Our televisions have technologies to reduce power consumption and in return increase cost savings per room.

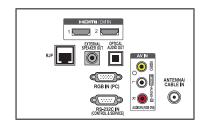
#### EcoSmart

- Energy Saving Levels Manually select your choice for the brightness level for the
- CEC Compliant Meets the Appliance Efficiency Regulations of the California Energy Commission.
- RoHS Compliant Meets directive on restriction of hazardous substances.
- Energy Star 6.0 Qualified Meets current reduction requirements of energy consumption.





Rear Jack Panel



Side Jack Panel



#### The LG EzSign TV LED Commercial Widescreen

#### ▶ 60LN549E

60" class (59.58" measured diagonally)

#### ▶ 55LN549E

55" class (54.6" measured diagonally)

#### ▶ 47LN549E

47" class (46.9" measured diagonally)

#### ▶ 42LN549E

42" class (41.9" measured diagonally)

#### ▶ 39LN549E

39" class (38.5" measured diagonally)

#### ▶ 32LN549E

32" class (31.5" measured diagonally)

Model USB (2.0)

RF In

AV In

Digital Audio Out (Coaxial / Optical)

HDMI/HDCP Input RGB In (D-sub 15pin)

PC Audio Input

							-52	CIGOS	
PANEL	Model	60LN549E	55LN549E	47LN549E	42LN549E	39LN549E	32LN	549E	
	Backlighting			Direc	t LED				
	LCD Panel Type (measured diagonally)	60" Class (59.58")	55" Class (54.6")	47" Class (46.9)	42" Class (41.9")	39" Class (38.5)	32" (		
	Native Resolution		192	20 x 1080 (FF	ID)		1366x7		
	Brightness			300c	cd/m <sup>2</sup>				
	Dynamic CR			1,000	,000:1				
	Viewing Angle (HxV)		178°,	/178°		176°/176°	178°/	/178°	
	Response Time		91	ms		9.5ms	9n	ns	
	Frame Rate			60	Hz				
VIDEO	Built-In Tuner		ATSC/NTSC/Clear QAM						
	XD Engine	Yes							
	24p Real Cinema (24p 5:5/2:2 Pull down)	Yes							
	Eye Care (Anti Dazzling)				es				
AUDIO	Audio Output		20	)W (10W x 2)	(W/RJP 7W)	(2)			
	Speaker System			1 Way 2	Speakers				
	Infinite Sound	Yes							
	Invisible Speaker				es				
	Clear Voice II	Yes							
SPECIAL	RF(1/2Tuner)	Yes (1 Tuner)							
FEATURES	HCAP (GEM/FLASH/ HTML) ** Service Carousel (TLX)			Flo	ısh				
	Simplink	Yes (HDMI-CEC)							
	SI Compatible (TVLink Protocol)			Yes (TV L	ink Tuner)				
	WiFi			USB c	longle				
	Hotel Mode/ PDM /Installer Menu			Y	es				
	IR Out			Yes (RS	5-232C)				
	External Speaker Out	Yes		ed/Line Out, e(GRD,L+,R+			nded		
	RJP Interface			Yes (RJ4:	5, HDMI)				
	RJP Compatibility		LG,Teleadap	t (RJ45, HDN	II CEC), G-Lir	nk(HDMI-CEC	C)		
	USB		USB2.0,	USB Auto Pla	ay back, USE	3 Cloning			
	Moving Picture Playback (SD/HD/Plus HD)	Divx HD							
	Picture	JPEG							
	Audio Codec	AC3(Dolby Digital), EAC3, AAC, Mpeg, MP3, PCM							
	USB Cloning	USB 2.0							
	Multi IR Code	Yes							
	Welcome Screen (Splash Image)	Yes							
	Auto Off / Auto Sleep	Yes							
	Video Mute	Yes							
	Smart Energy Saving				es				
	Anti-theft System			Kensing	ton Lock				
	Credenza Bracket	ket Yes							

EMERGY GUIDE	T A F
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The estimated annual energy cost determined in accordance with 16 CFR Part 305.5 for models 60LN549E, 55LN549E, 47LN549E, 42LN549E, 39LN549E and 32LN549E are \$20, \$17, \$14, \$11, \$10 & \$9 respectively.

"Your energy cost depends on your utility rates and use. The estimated cost is based on 11 cents per kWh and 5 hours of use per day. For more information, visit www.fic.gov/energy." "FTC Television labeling rule (18 CFR Part 305, as added by 76 Fed. Reg. 1038 (Jan 6, 2011)).

			, ,					
	RS-232C (D-Sub 9pin)			1 Re	ear			
	RJ45 (RJP interface)	1 Rear						
	External Speaker Out (3.5mm phone jack)			ear				
CABINET	Bezel Width (off Bezel) (mm)	19.9mm, 24.5mm						
	With Stand	53.5"×33.5"×11 <i>7</i> "	49.2"×31.1"×11.7"	42.5"×273"×10.4"	38.1"×24.8"×9.3"	35.2"×23.1"×9.3"	29.1" x 19.6" x 8.1	
	Weight	58.0 lbs.	46.7 lbs.	32.0 lbs.	23.6 lbs.	21.4 lbs.	15.4 lbs.	
	Without Stand	53.5" x 31.5" x 2.6"	49.2"×29.0"×3.1"	42.5" x25.3" x3.2"	38.1"×22.8"×3.1"	35.2"x21.1"x3.1"	29.1" x 177" x 3.1	
	Weight	53.4lbs	42.1 lbs	28.9 lbs	21.2 lbs	18.9 lbs	14.1 lbs	
	Carton	65.0" x 34.6" x 8.9"	61.0"×33.1"×8.3"	52.4"×29.5"×6.9"	45.3" x 26.0" x 6.9"	423"x252"x6.5"	35.5"×20.9"×6.4	
	Weight	70.5 lbs.	59.5 lbs.	40.6 lbs.	31.3 lbs.	28.2 lbs.	20.3 lbs.	
	Swivel	Fixed		±9	0°	±15°		
	Color		E	Black with Ho	lairline Finish			
	VESA <sup>TM</sup> Standard Mount Interface	40	0mm x 400mm	n	200mm x	200mm x 100mm		
	Flame Retardant			Yes (Back C	Cover only)			
REQUIRED	Safety			cUL, UL, N	OM, FCC	CC		
LISTINGS	RoHS			Ye	s			
	Energy Star 6.0	Yes						
UPC		7 19192 91585 5	7 19192 90448 4	7 19192 90447 7	7 19192 90446 0	7 19192 91560 2	7 19192 90444 6	
POWER	Power Source	100~240V			50/60Hz			
	Watts (Typical)	89W	74W	64W	50W	43W	37W	
	Stand-by			0.5	W			
WARRANTY	2 Year Limited War	rranty (Parts/Labor/Backlight)						

60LN549E 55LN549E 47LN549E 42LN549E 39LN549E 32LN549E

2 Side (1-Dongle only)

1 Rear

1 Rear

1 Rear (Optional) 3 (2 Rear, 1 Side)

1 Rear

1 (Sharing with AV In)

Required PC spec for installation: Pentium M or 4 CPU, 512MB RAM, Windows XP sp2, 200MB HDD





TV -

HDMI



















Customer Service: 888.865.3026 www.LGsolutions.com/support

Contact your LG Regional Sales Representative: Channel: 800.897.8871 Hospitality: 800.228.1236 E-mail: info@LGsolutions.com

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## STX645(P) STX645I





Display size 32"-60"



Max load 100lb (45kg)

# SMARTMOUNT Universal Tilt Wall Mount

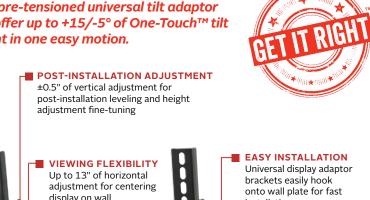
FOR 32" TO 60" DISPLAYS

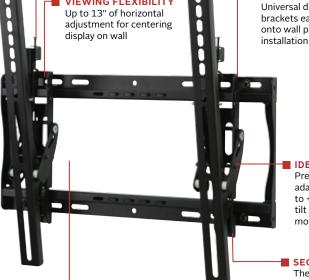
Limitless placement opportunities are delivered with speed and ease with both horizontal and vertical adjustment capability. Its slim, open wall plate architecture delivers display placement flexibility and enables hands-free behind-the-display access along with cable management. Quick and easy installation and optional IncreLok™ Tilt technology complete the ultimate secure, low profile display installation

STX645's pre-tensioned universal tilt adaptor brackets offer up to +15/-5° of One-Touch™ tilt adjustment in one easy motion.

#### **Additional Features**

- Open wall plate design allows for total wall access, increasing electrical and cable management options
- Optional IncreLok™ feature offers fixed tilt lock in 5° increments
- Easy-Glide<sup>™</sup> design ensures that the display is securely attached to the wall plate
- 5° of back tilt offers 3" of space for hands-free, behind the display access
- Up to 13" (330mm)of horizontal adjustment for centering display on wall
- Up to 1" (25mm) of vertical adjustment on each universal display adaptor bracket for post-installation leveling and height adjustment fine-tuning
- Universal tilt adaptor brackets easily hook onto wall plate for fast installation
- Low profile design holds display 1.69" (43mm) from the wall
- Fits displays with mounting hole patterns from 100 x 100mm (3.94"W x 3.94"H) to 431 x 405mm (16.96"W x 15.95"H)





Pre-tensioned universal tilt adaptor brackets offer up to +15/-5° of One-Touch™ tilt adjustment in one easy

**IDEAL VIEWING ANGLE** 

motion

SECURE INSTALLATION

Theft resistant screws on secure units

**OPEN ARCHITECTURE** Open wall plate architecture for flexible cable management and wall placement



Contact your Peerless-AV sales representative for more information

Increased security with included Master Lock 510KAD keyed-alike padlock on locking model











Patented. Design Patent No. D659.689. Utility Patent No. 8,313,073; 8,348,212; 8,282,059; 8,517,322.



#### **Model Numbers**

STX645 SmartMountXT<sup>™</sup> Universal Tilt Wall Mount for 32" to 60" Displays - security models
STX645L SmartMountXT<sup>™</sup> Universal Tilt Wall Mount for 32" to 60" Displays - security locking model
STX645P SmartMountXT<sup>™</sup> Universal Tilt Wall Mount for 32" to 60" Displays - standard models

#### **Product Specifications**

	DIMENSIONS (W x H x D)	PRODUCT WEIGHT	LOAD CAPACITY	FINISH	AVAILABLE COLORS
STX645(P) STX645L	19.37" x 16.89" x 1.69"-6.55" (492 x 429 x 43-166mm)	7.13lb (3.23kg) 7.63lb (3.45kg)	100lb (45kg)	Powder coat	Black

#### **Package Specifications**

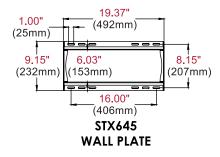
	PACKAGE SIZE (W x H x D)	PACKAGE SHIP WEIGHT	PACKAGE UPC CODE	PACKAGE CONTENTS	UNITS IN PACKAGE
STX645(P) STX645L	10.125" x 3.5" x 21.125" (257 x 89 x 537mm)	9.1lb (4.13kg) 10.6lb (4.99kg)	STX645: 735029278931 STX645L: 735029278943 STX645P: 735029279372	Universal Tilt Wall Mount, attachment hardware, installation instructions	1

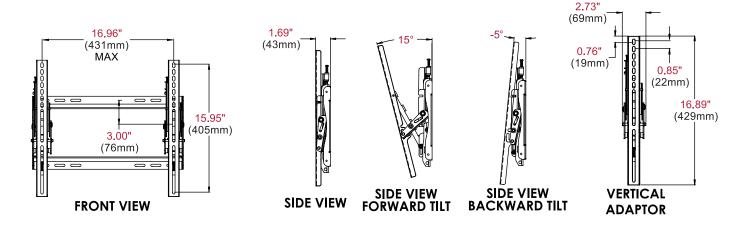
#### **Accessories**

ACCXT302: SmartMountXT<sup>™</sup> Video Conferncing Shelf accessory

ACCXT400: In-Wall Cable and Power Management Accessory with AC Surge Suppressor

All dimensions = inch (mm)





#### **Architect Specifications**

The SmartmountXT™ Universal Tilt Wall Mount shall be a Peerless-AV® model STX645, STX645L or STX645P and shall be located where indicated on the plans. Assembly and installation shall be done according to instructions provided by the manufacturer.

Visit peerless-av.com to see the complete line of AV solutions from Peerless-AV, including outdoor displays, wireless, kiosks, digital audio, display mounts, projector mounts, carts/stands, and a full assortment of accessories.

#### Peerless-AV

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LIT-0743 rev.3



Installation & Assembly - Suspended Ceiling Kit

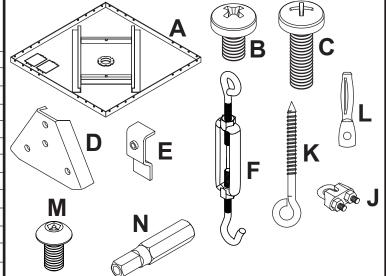
| Model: CMJ450

c (ՍL) սչ

UL) us LISTED Max. UL Load Capacity: 250 lb (113 kg)

IMPORTANT! Read entire instruction sheet	before you start
assembly and installation.	

PART # QTY.		QTY.	DESCRIPTION
Α	1455-476W	1	ceiling tray
В	520-9401	8	M6 x 10 mm long phillips screw
С	520-9402	4	M6 x 20 mm long phillips screw
D	1452-278	4	hanger bracket
Ε	1452-279	4	hanger bracket clamp
F	560-9620	4	turnbuckle
G	1450-522	1	20' (6.1m) tie wire (not shown)
Н	1450-517	1	safety cable (not shown)
J	1450-518	2	safety cable clamp
K	580-0006	5	eye bolt
L	580-0005	5	concrete anchor
М	505-9010	1	M5 x 10 mm penta pin screw
N	520-9249	1	M5 x 1" penta pin driver



## **A WARNING**

Weight of TV or screen shall not exceed maximum UL load capacity.

#### **IMPORTANT PRE-ASSEMBLY INFORMATION:**

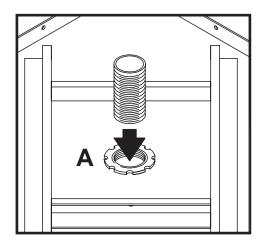
Ceiling Tray (**A**) is designed to fit within a 24" (610 mm) x 24" (610 mm) section of a conventional suspended ceiling system. Ceiling runners (see **DETAIL 1, page 2**) should have a "T" cross section and a minimum height of 1.5" (38 mm). In cases where 24" (610 mm) x 48" (1219 mm) ceiling tiles are used, cut one tile in half and add another 24" (610 mm) ceiling runner in order to make a 24" (610 mm) x 24" (610 mm) section.

For certain installations it may be best to install ceiling anchors (step 3) before installing the ceiling tray (step 2).



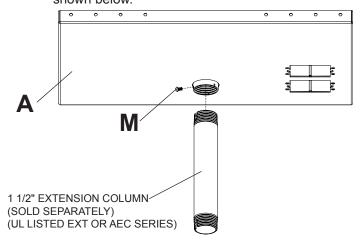
**For FLUSH MOUNT TUBE Installation:** From the top, thread the Flush Mount Tube (not included) through center of ceiling tray (**A**).

Skip to step step 2.

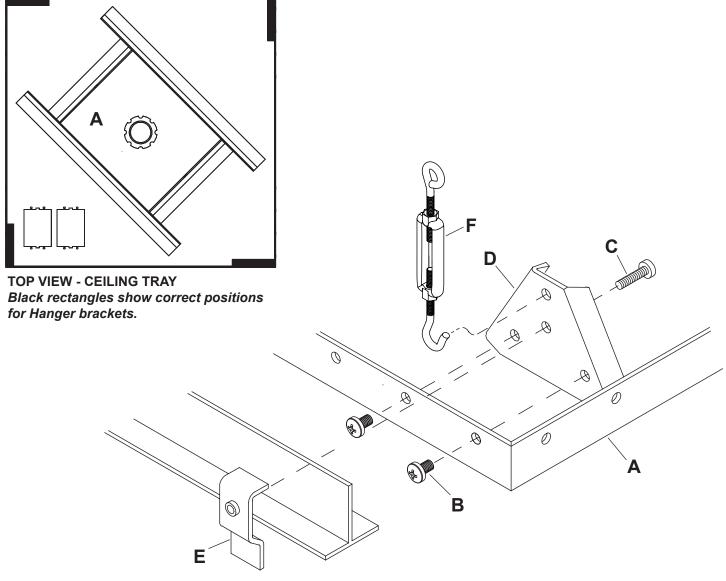




For EXTENSION COLUMN Installation: From the bottom up, thread extension column (not included) up through retaining collar in adjustable collar mount plate. Align notch in extension column with hole in collar and fasten using M5 x 10 mm penta pin screw (M) with M5 penta pin driver (N) as shown below.



Attach four Hanger Brackets (**D**) to four corners of Ceiling Tray (**A**) using 10 mm long phillips screws (**B**). Place Ceiling Tray (**A**) into 24" (610mm) x 24" (610mm) opening in ceiling (in place of a ceiling tile). Clamp Ceiling Tray (**A**) to Ceiling Runners using Hanger Bracket Clamps (**E**) and 20 mm long phillips screws (**C**). Hook Turnbuckles (**F**) into Hanger Brackets (**D**).





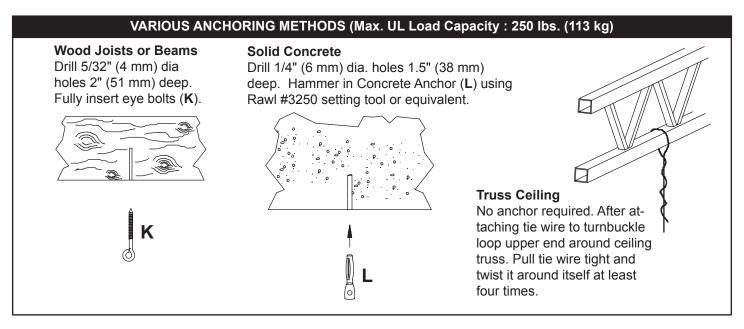
Cut tie wire (**G**) into four pieces of equal length. Insert wires through ends of turnbuckles. Twist each wire around itself at least four times.

Drill holes for four ceiling anchors (see "Various Anchoring Methods"). Position the holes so that when the tie wires (**G**) when attached and taut will angle out at 15°. Drill a fifth anchor hole directly above the **center** of the ceiling tray.

Pull tie wires tight and attach to ends of ceiling anchors (or truss). Again twist each wire around itself at least four times.

When this step is complete, the weight of the ceiling tray should be supported by the tie wires.

**Note:** 20' (6.1 m) of tie wire (**G**) is provided. If space between the true ceiling and suspended ceiling is more than 36" (914 mm), additional wire (12 gauge annealed, steel, black) will be needed.



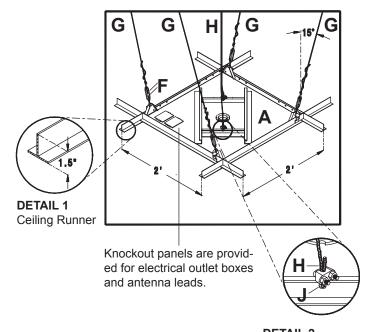
## **A WARNING**

 Installer must verify that the ceiling will safely support four times the combined weight of all attached equipment and hardware.



Run the safety cable (**H**) through the remaining ceiling anchor. Pass each end through holes in ceiling plate reinforcements and join with cable clamp (**J**). **DO NOT TIGHTEN YET!** 

Suspended Ceiling Kit installation is now complete. After all components (Jumbo Mount, Extension Column, etc.) and equipment (monitor, VCR, etc.) have been attached, tension the tie wires by adjusting turnbuckles (F). Load must be carried by tie wires - not suspended ceiling runners. Finally, take up the slack in safety cable (H) leaving it slightly loose. Tighten both safety cable clamps (J).



**DETAIL 2**Safety Cable and Cable Clamp.

## LIMITED FIVE-YEAR WARRANTY

Peerless Industries, Inc. establishes a warranty period of five years for products manufactured or supplied by Peerless. This period commences from the date of sale of the product to the original consumer, but will in no case last for more than six years after the date of the product's manufacture. During the warranty period such products will be free from defects in material and workmanship, provided they are installed and used in compliance with the instructions established by Peerless Industries, Inc. Subject to applicable legal requirements, during the warranty period Peerless will repair or replace, or refund the purchase price of, any such product which fails to conform with this warranty.

Any other warranties prescribed by the law which may apply with respect to such products also are limited in duration to the warranty period specified in this Limited Five-Year Warranty.

This warranty does not cover damage caused by (a) service or repairs by the customer or a person who is not authorized for such service or repairs by Peerless Industries, Inc., (b) the failure to utilize proper packing when returning the product, (c) incorrect installation or the failure to follow Peerless' instructions or warnings when installing, using or storing the product, or (d) misuse or accident, in transit or otherwise, including in cases of third party actions and force majeure.

In no event shall Peerless be liable for incidental or consequential damages or damages arising from the theft of any product, whether or not secured by a security device which may be included with the product.

This Limited Five-Year Warranty is in lieu of all other warranties, expressed or implied, and is the sole remedy with respect to product defects. No retailer, dealer, distributor, installer or other person is authorized to modify or extend this warranty or impose any obligation on Peerless in connection with the sale of any product manufactured or supplied by Peerless.

This warranty gives specific legal rights, and you may also have other rights provided by the national legislation of the country in which you purchased such product.



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RoomWizard II Scheduling System

## Love how you work.

## **Steelcase**

#### Visit steelcase.com

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Concept & Design Steelcase Product design RoomWizard II, media:scape & i2i Steelcase Design in collaboration with IDEO.

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### **Observations & Insights**

40% of workers waste up to 30 minutes a day searching for space to collaborate.\*

\*Steelcase Workplace Survey realised over the last 10 years.





**Observation:** according to a Steelcase workplace survey, 40% of workers waste up to thirty minutes a day searching for space to collaborate.\*

**Insight:** users should have a tool that allows to save time in setting up meetings.





**Observation:** how people go about scheduling space varies. First-come-first-serve, post-it notes and even corporate calendar systems haven't proven effectiveness.

**Insight:** people need an effective and seamless scheduling system.





**Observation:** meetings often take place in informal spaces, not only in rooms.

**Insight:** companies need a solution that manages open and closed collaborative spaces.

## RoomWizard II Scheduling System

**Collaborative work is more important than ever.** The world is becoming more and more global, especially in workplaces which leads to an increase of team work and of collaborative spaces.

In modern office environments people still face a lack of consistent scheduling methods to easily and quickly find available spaces to collaborate.

That's why Steelcase has introduced RoomWizard II, a solution designed specifically to organize today's workplace.

#### Why RoomWizard II?

- **1. Effective**: it saves time in searching for a room and avoids interruptions in meetings.
- **2. Simple**: it allows users to find and reserve a room from any network PC or smartphone.
- **3. Flexible**: it provides a solution that manages open and closed collaborative spaces.



11:00 AM

Supply Chain group meeting Matt Peterson 11:00 am – 11:45 am

11

12

1 2

5:00 PM

Q4 Planning Wendy James 5:00 pm - 6:00 p

5

### Reserves spaces. Not just rooms.

Facilitating workers collaboration in helping them scheduling and organizing meetings while saving time is essential.

The redesigned RoomWizard II is a web-based room scheduling system that solves the dilemma of connecting workers to meeting spaces. It offers an interactive touch screen display providing real-time meeting information, right outside the room. The red and green status lights display immediately availability of the space.

It can be used in a synchronised mode: RoomWizard II works with a variety of calendaring systems including Microsoft® Outlook® and Lotus Notes® or other calendaring systems. So meetings can be managed seamlessly on web, via computers or smartphones.

Room reservations become easy.



Red light status indicates immediately room unavailability to workers.



When users see a green light status, they can reserve the room instantly directly from the screen or via their network.



RoomWizard II mounted on a media:scape Totem.



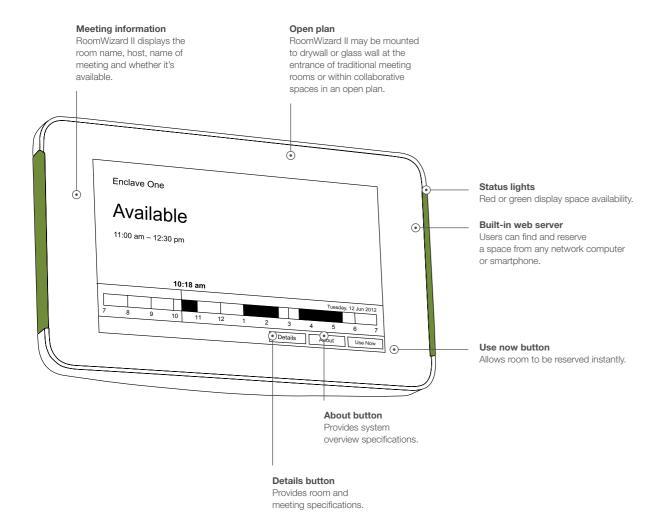
11:00 AM

Stephan Kieffer 11:00 am - 12:00 am

4:30 PM

Karin O'Connor

#### **Technology**





#### Reporting

What percentage of time are rooms occupied? What is the average number of meetings per day?

RoomWizard II even keeps careful track of space utilization with a database that measures and report reservation patterns.



#### Introducing SnapTag™

The SnapTag™ app from Steelcase captures whiteboard notes, connects with RoomWizard II and sends the content directly to meeting participants.

Currently for iPhone only.



#### ZigBee wireless connectivity

ZigBee is a short-range, low-power, wireless protocol that enables communication with other ZigBee enabled devices. A ZigBee enabled RoomWizard II could allow future connection with building and energy controls along with mobile devices and other future Steelcase ZigBee devices.

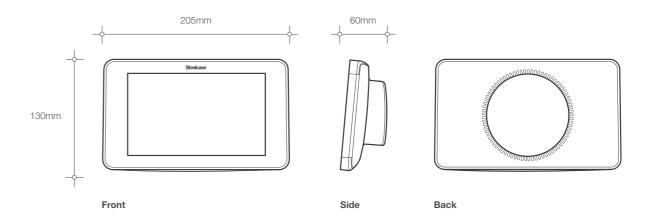
#### Statement of line

Use RoomWizard II as a stand-alone system, or seamlessly book rooms with an existing reservation system such as Microsoft Outlook, Lotus Notes or other advanced scheduling systems.

RoomWizard II was designed for ease of installation with its power over Ethernet support and its flexible fixing options.

Thanks to the standard fixing bracket, RoomWizard II can be mounted to drywall applications. Glass applications are accommodated with the direct to glass mounting bracket.

The universal mounting bracket thoughtfully manages the cable by cantilevering the RoomWizard II off the door frame out in front of the glass.



Features	
Color Touchscreen	7" (16:9), Capacitive Touch, 16M Colors
Weight	600g
Memory	4 GB
Ethernet	10BaseT/100BaseTX, DHCP, IEEE 802.3U & 802.3af compliant
Power	PoE (Power over Ethernet)
Status Lights	Yes
ZigBee Wireless Connectivity	Yes
Self-contained device. No external server or software required	Yes
Synchronisation – Available Connectors	Microsoft Exchange, Lotus Domino and other advanced scheduling systems
Open Platform for additional connectivity and integration	Yes
Remote Administration	Yes
Mobile Phone Apps	SnapTag™

#### You require official certifications. We can deliver them.

Designed by Steelcase, Room Wizard II is manufactured in Meridian, USA, for the EMEA (Europe, Middle East and Africa) market.

Sustainability actions and results are annually communicated in the annual Steelcase Corporate Responsibility report. See on our website **www.steelcase.com** 

INSTALLATION INSTRUCTIONS AND SERVICE GUIDE

FILLMASTER® FILTRATION



# **GIVE THIS TO PHARMACY MANAGER**

FILLMASTER® SYSTEMS, LLC

www.fillmastersystems.com 619-596-9900 FAX 619-596-8700 TOLL FREE 1-888-284-7873 PO BOX 711537 SANTEE, CA 92072-1537

## Fillmaster® Pharmacy Water Purification and Dispensing System Installation Instructions and Service Guide

Model Fillmaster® Filtration Assembly with Model FMD 3400, 3600, and 2600 dispenser

#### IMPORTANT INFORMATION

Welcome to the Fillmaster® Family! This illustrated guide contains step-by-step instructions and service information to facilitate installation and continued life of your new system. Average installation time is about one hour. Before beginning the installation process, please review this guide and examine all the contents of your shipment.

If you have questions about installation steps, please call customer service at (619) 596-9900. Most situations can be explained over the phone.

The Fillmaster® System is an Advanced Reverse Osmosis Water Purification and Dispensing System. When properly installed and maintained (See page 11 for recommended routine maintenance) the system will provide a long life of constant pharmacy grade measured water. Keep in mind that you may use the Air Gap Faucet located near the sink as a source of healthy drinking water. You may dispense non-measured water with the faucet or measured water with the dispenser. Mount your dispenser at a convenient location anywhere in the pharmacy.

Be careful not to overturn the valves on the 2600 dispenser. Follow the arrows indicating the proper way to turn the valve knobs for filling and dispensing. Don't forget to maintain a service schedule. Use the last page of this service guide to write down the date when the system was installed and each time you perform any service to the system. Change the filters and clean the system frequently. NOTE: The filters must be replaced every 12 months at a minimum. As an added value service, we can ship the filters automatically every 12 months to you. If you would like this service please indicate on the product registration form.

Please return your product registration form promptly! This form is needed to activate the product warranty. We need this so we can keep constant communication with you for product bulletins and updates regarding your Fillmaster® system.

**Please install as directed.** Any variance from the steps outlined in this guide may void the warranty. Please consult with our customer service department before making any modifications.

#### NOTE: Professional installers, plumbers and contractors:

You must make this service guide available to the Pharmacy Manager where the unit is installed.

FILLMASTER® SYSTEMS, LLC
Customer Service
619-596-9900 FAX 619-596-8700
TOLL FREE 1-888-284-7873
www.fillmastersystems.com
PO BOX 711537
SANTEE, CA 92072-1537

#### CONDITIONS FOR USE

This Reverse Osmosis (RO) Pharmacy Water Purification and Dispensing System has been designed for serviceability and ease of installation and constructed with the finest materials available. Using these guidelines and paying close attention to the parameters outlined within the "conditions for use" will ensure a successful installation. To insure the system continues to operate at the optimum level, it is necessary to have a routine maintenance and replacement schedule. The frequency at which the filters need changing will depend upon the quality of the feed water supply and the level of system usage. Filters must be replaced at least every 12 months, and the membrane every 24 months.

Familiarity with RO installations and city, state, and local plumbing codes is important. In case there is a conflict between this manual and your local plumbing code, you must follow your local plumbing code.

MEMBRANE: THIN FILM COMPOSITE (TFC)

SOURCE WATER SUPPLY	
Community/Private	Chlorinated/Non-Chlorinated
System	242 – 690 kPa (35 – 100 psig)
Temperature	4° - 38° C (40° - 100° F)
pH Range	3.0 to 11.0
Maximum TDS Range	2000 mg/L
Turbidity	<1.0 NTU
Silt Density Index	<4.0 SDI

CHEMICAL PARAMETERS		
Hardness (CaCO <sub>3</sub> )	350 mg/L (<20 grains/gallon U.S.)	
Iron (Fe)	<0.1 mg/L	
Manganese ( Mn )	<0.05 mg/L	
Hydrogen Sulfide ( H <sub>2</sub> S )	<0.00 mg/L	
Chlorine ( Cl <sub>2</sub> )	<2.0 mg/L	

#### **CAUTION**

DO NOT USE THIS SYSTEM WHERE WATER IS MICROBIOLOGICALLY UNSAFE OR WITH WATER OF UNKNOWN QUALITY.

#### **NOTE**

This water treatment system is for use on potable water supplies only. Source water exceeding Chemical Parameters requires pretreatment.

#### **PARTS LIST**

Use the following list of components to ensure that all parts are included with your system while familiarizing yourself with the items before installation.

<u>Qty</u>	Part Number	<u>Description</u>
1	FAUC1360	Air Gap Faucet
1	FITT2206	Faucet Adapter 3/8" x 7/16"
1	TANK1400	Water Storage Tank (reservoir)
1	MANI1201	FMF Fillmaster® Filtration System



Fillmaster System Components

<u>Qty</u>	Part Number	<u>Description</u>
1	DRAN1350	DLA-12 Drain Line Adapter Package
1	EZFA2400	EZ Faucet Adapter Kit
1	TUBE2355	3/8" Blue Tubing, 48" long
1	FITT2209	Reducing Tee inserted
1	TUBE2353	3/8" Clear Tubing, 48" long
1	TUBE2354	3/8" Red Tubing, 48" long
1	TUBE2350	1/4" White Tubing, 36" long
1	REGU2200*	50 PSI Regulator
1	FLOW1253	1/4" FLR Red Tubing
	*[ONLY for sys	items with FMD 3400 and 3600 Dispenser]



Fillmaster® Tubing and Fitting Kit

<u>Qty</u>	Part Number	<u>Description</u>
1	20126	FMD 2600 Fillmaster® Dispenser
1	TUBE2351	1/4" White Parflex Tubing, 50' long
1	BAGG2300	Installation Hardware Bag (see page 5)

Note: If you order two or more Dispensers you will receive an additional 25 feet of 1/4" White Tubing and Hardware bag, per dispenser.



Fillmaster® Dispenser, Tubing and Hardware

#### **PARTS LIST (continued)**

<u>Qty</u>	Part Number	<u>Description</u>
3	TIPP2310	Dispensing Tip Package
4	ANCH2301	Hallow Blue Wall Anchors
2	SCRE1300	Fillmaster® filltration Mounting Screws
4	SCRE2303	Dispenser Mounting Screws
2	SCRE2304	Dispenser Assembly Screws
4	CABL2302	Dispenser Tubing Staples



Installation Hardware Bag Contents

#### OTHER FILLMASTER® PRODUCTS

#### Fillmaster® 3400 and 3600 - Dispenser

Designed as an addition to the Fillmaster<sup>®</sup> dispenser product line, the fully computerized, battery-operated Fillmaster<sup>®</sup> 3400 and 3600 dispenser employ multiple microprocessors to provide accurate and even-flow dispensing. By using the electronic dispenser, pharmacists increase prescription integrity by greatly reducing the possibility of human error while dispensing prescriptions.

#### Script Scanner - Bar Code Scanner

The Script Scanner is a pager-sized, plug-in modular upgrade to the Fillmaster \$\mathbb{g}\$ 3600 dispenser. Users simply scan a prescription's NDC bar code in front of the dispenser, and the Fillmaster 3600 displays the product name and required water quantity. The prescription is then dispensed at the touch of a button. The Script Scanner's database contains proprietary and generic oral drug types by manufacturers including Bristol-Meyers Squibb Co., Apothecon, SmithKline Beecham, Eli Lilly & Co. and many others.

For more information about these or any other FILLMASTER® SYSTEMS, LLC products, please contact our sales department at (888) 284-7873 or our website www.fillmastersystems.com

#### PRELIMINARY INSTALLATION STEPS

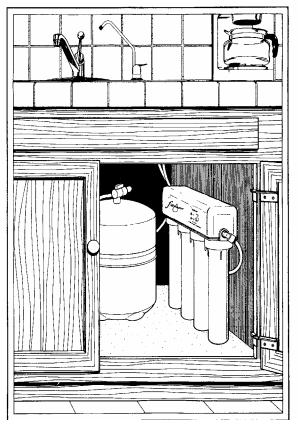
- 1. Examine the cold water feed line, usually located underneath the pharmacy sink. You will be installing an In-Line Adapter and Ball Valve on the cold water line.
- 2. Determine the location for the Fillmaster® Filtration System. In most pharmacies the Fillmaster® filter unit will fit underneath the pharmacy sink inside the cabinet. Mount the filter unit on the right side of the cabinet if possible. The Water Storage Tank should fit inside the cabinet as well. If the tank does not fit, place as close as possible to the filtration system.
- 3. Determine the location of the Fillmaster<sup>®</sup> Dispenser. The dispenser requires a flat, vertical surface at least 24" high. The end cap of a prescription bay, or close to your consulting counter are generally excellent locations for maximum convenience. When mounting the dispenser, be conscious of varying heights among your staff. The ideal height for mounting the dispenser is 66" from the floor to the top of the dispenser.
- **4.** Determine the location of the Air Gap Faucet. If you have an unused knockout in your sink, the faucet will fit there. If not, you will need to drill a 1¼" diameter hole through the counter next to the sink.
- 5. Assemble installation tools: Electric Drill with ¼" and ½" drill bits, Hack Saw, Small Adjustable Wrench, Hammer, Flat Blade Screwdriver, Phillips Screwdriver, Razor Knife and a 1¼" Hole Saw or Spade Bit to drill a hole for the faucet.



Installation Tools



Typical Fillmaster® Dispenser location.

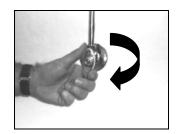


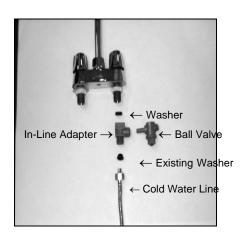
Standard location for Fillmaster® Filtration System and Water Storage Tank.

#### INSTALLATION INSTRUCTIONS

#### Installing the In-Line Adapter and Ball Valve

- 1. Turn off the cold water under your sink by rotating the cold water supply valve in a *clockwise* direction. If you are not sure which is the cold water, run both taps, then feel the tubing. The hot water feed will be noticeably warmer. Drain the line by opening the sink faucet.
- 2. Using a wrench, disconnect the cold water supply where it connects to the cold water inlet on your faucet.
- 3. Insert the rubber washer into the In-Line Adapter and install the adapter onto the supply connecting to the cold inlet on your faucet.
- **4.** Align the outlet hole (in the side of the adapter) toward the Pharmapure Unit location.
- 5. Replace existing rubber grommet on cold water supply line and attach cold water supply line to the cold water inlet on your faucet to the In-line adapter.
- **6.** Firmly push in the stem of the Ball Valve into the In-Line Adapter all the way until it locks (refer to Inter-Component Connection Instructions below).
- 7. Insert the 3' length of ¼" White Tubing into the Ball Valve all the way until it seats firmly in the bottom of the fitting. Be sure the valve is in the closed position before proceeding. Closed position is horizontal to the ¼" white tubing.



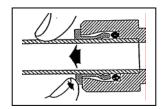


#### **Inter-Component Connections (Speed Fittings)**

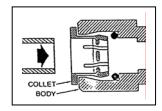
The Inter-Component Connection Fittings consist of 2 parts: a Body and a colored Collet (collar or ring). Most collet colors corresponds to the tubing color to be used at that connection.

- ♦ To remove a tube or protective plug: Push and hold the collet against the body while pulling out the tube.
- ♦ **To install a tube**: Push it through the collet until it seats firmly at the bottom of the fitting.

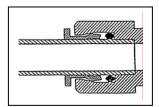
  Make sure to cut tube ends square and straight. Sharp points or scratches on a tube can result in leaking.



To Remove: push Collet against Body to release



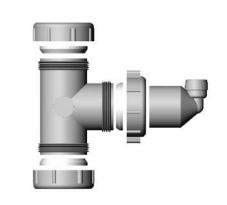
To Install: firmly push tube through Collet into Body



Tube must seat firmly (lock) into bottom of fitting

#### **Installing the Drain Line Adapter**

1. Open and verify the DLA-12 Drain Line Adapter parts.



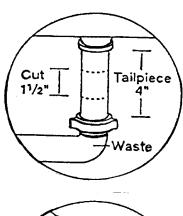
<u>Qty</u>	<u>Description</u>
3	Slip-Joint Nuts
3	Beveled Washers
1	3-Way Repair Tee
1	Adapter

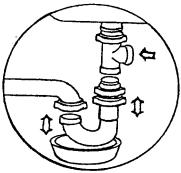
2. Check the drainpipe directly below the sink drain. Make sure that you have at least 4" of vertical pipe between sink drain and the trap. Also confirm that the drain line adapter can be mounted above the trap outlet, but low enough so that the 3/8" red drain tube runs "downhill" all the way to the drain, as indicated in the photo below.

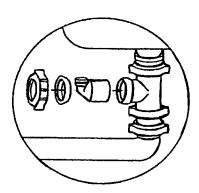


The Drain Line Adapter must be above trap outlet pipe

- **3.** Cut 1½" section from the drain tailpiece using a hacksaw.
- **4.** Disconnect and lower (or simply loosen if you have enough play in the system) the J-Bend of the trap, using a bowl or small trash can to catch the water in the trap.
- **5.** Put the Slip-Joint Nuts and Beveled Washers on the exposed ends of the drain pipe with the beveled side of the washer towards the cut portions.
- **6.** Insert the 3-way Repair Tee, reconnect the trap and tighten the washers on the Tee.
- 7. Insert the new drain line adapter into the side outlet of the Tee as shown. Tighten the slip-joint nut.





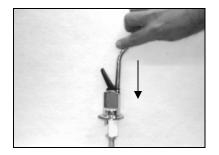


#### Installing the Air Gap Faucet and Fillmaster® Filtration Unit

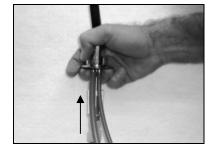
- 1. *IMPORTANT:* Installation of the air gap faucet is <u>not</u> optional. It <u>must</u> be installed. The air gap faucet is the systems' means of drain water backflow prevention. If you have a knockout hole in your sink the Air Gap Faucet will fit there. If not, drill a 1¼" hole in your counter. Allow enough room for the faucet base, do not drill too close to the sink. Be sure to install faucet so that the spout empties water into the sink.
- 2. Assemble the faucet. Remove the protective plugs. Push the gooseneck into the base until it stops. Loosen the brass nut on the faucet stem, remove the slotted washer and slide the white plastic spacer down to the bottom of the stem. If the black plastic lever comes loose, it will lock in place by a metal "T" that the slotted lever will fit into.
  CAUTION: The Flow Restrictor (FLR) is installed inside the 1/4" red tubing at the end connected to the manifold. DO NOT TRIM THE END OF THE 1/4" FLR RED TUBING (END WITH FLR LABEL) CONNECTED TO MANIFOLD. (See Figure 1)
- 3. Attach the red tubes to the black faucet barbs. Firmly push the red tubes all the way onto the black barbs. The 1/4" FLR red tube from the manifold will fit on the smaller barb and the 3/8" red tube will fit on the larger barb.
- **4.** Feed tubes through the hole and drop the faucet into place. Place the slotted washer on the underside of the counter. Move the spacer up and tighten the nut. Insert the blue tube with the "T" fitting into the faucet stem by pushing it up into the plastic faucet connector with the blue collet.
- 5. Remove the protective plugs from the Fillmaster® Filtration Unit (See pg. 7, Inter-Component Connections (Speed Fittings)), and mount on the cabinet wall using the two longest (#12 x ¾" PH) metal screws provided.



Step 1. Alternate location for hole.



Step 2. Push gooseneck down.



Step 3. Push tubes up into the barbs.



Step 4. Drop tubes down through



Step 5. Mount Pharmapure on wall.

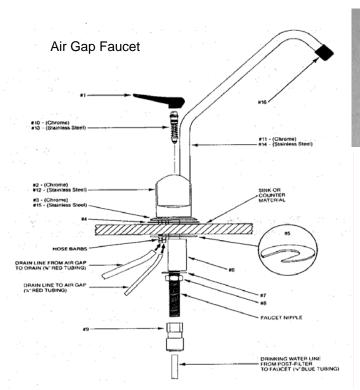


Figure 1

10 TON 00

#### Installing the Fillmaster® FMD 2600 Dispenser

- 1. Assemble the Fillmaster® Dispenser by joining the lower and upper part of the dispenser together with the two #10 x ½" FH metal screws.
- **2.** Ask the pharmacist where he or she would like the dispenser mounted.
- 3. Mount the dispenser on the most convenient flat vertical surface using the four #10 x ¾" FH metal screws. Average height is 66" from the floor to the top of the dispenser.

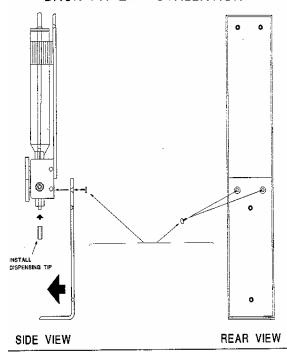
If you need to use wall anchors (drywall or stucco), drill a  $\frac{1}{4}$ " hole to accommodate the wall anchors.

- Install one of the three dispensing tips on the white ¼" tube on the bottom side of the control box.
- **5.** Attach the 50', ¼" white tubing into the elbow on the side of the dispenser.
- **6.** Run the white tubing from the dispenser to the filtration unit. Trim for proper length.

**Note:** Dispensing tips should be sanitized and/or changed frequently, to eliminate cross contamination. To sanitize tips, soak in a mild bleach solution and rinse.

#### DISPENSER ASSEMBLY

BACK PANEL INSTALLATION



**IMPORTANT:** Be careful not to force or overturn the dispenser valves. Doing so may strip the handles with the valve stuck in an open or closed position.

#### **Final Tubing Connections**

Finish making system connections as indicated below. (**Read all steps 1-5**) For a look at the completed Fillmaster<sup>®</sup> System refer to the Inter-Connect Diagram on page 9. For all connections, make sure to trim any excess tubing to eliminate slack and improve flow rate. Be sure all tubes are cut square and straight. Sharp points or scratches on the tube will cause leaking. Avoid sharp changes in direction when routing the tubing. Sharp turns cause the tubing to flex and deform which reduces the flow rate. The tubes and appropriate fittings are color coded for convenience.

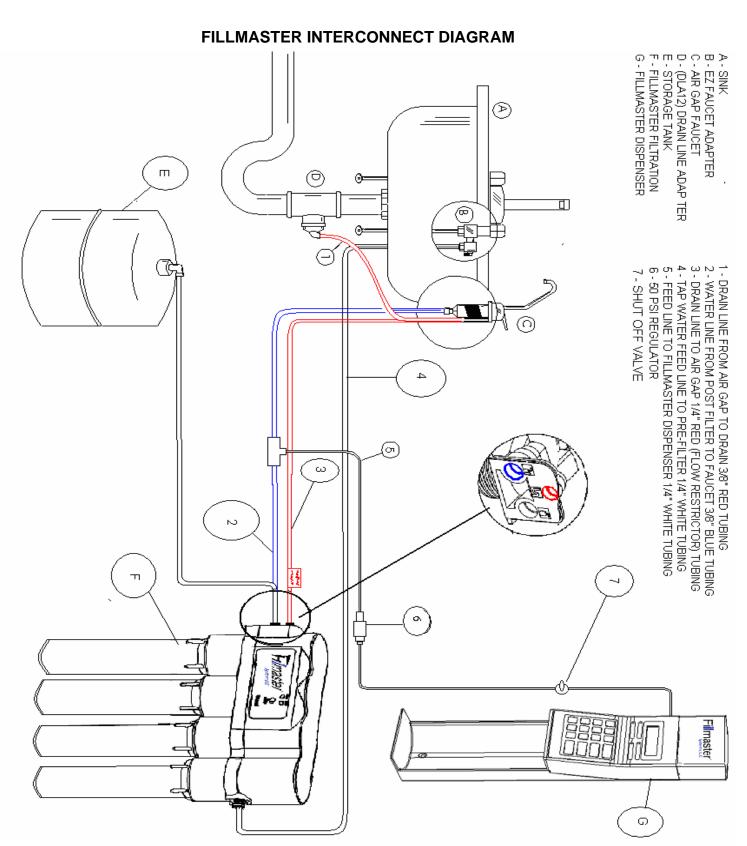


- Connect the large 3/8" red tube from the faucet barb to the DLA-12 Drain Line Adapter. The tube must be as straight as possible so the water will travel "Downhill" to the drain. IMPORTANT: Any sag or slack in the drain line will cause water to back up and leak from the air gap on the back of the faucet.
  - 2. Connect the blue 3/8" tube from the faucet stem to the blue connector on the back of the Fillmaster® Filtration Unit.
- 3. Connect the 1/4" white tube from cold water line to the right side of the filtration unit.
- 4. Connect the 3/8" clear tube from left side of filtration unit to the water storage tank.

#### **Final Tubing Connections (continued)**

5. Connect the 1/4" tubing from the dispenser to the "T" connector between the 3/8" blue tubing.

NOTE: Systems with the FMD 3400 and 3600 dispenser: Connect the ¼" tubing form the dispenser to the regulator that is connected to the "T" connector.



## **ACTIVATING THE SYSTEM**

## CAUTION: Make sure all water supply lines, drain lines, and fittings are secure and free from leakage.

- 1. Open source water supply valve. Close product water faucet. Check for leakage.
- 2. Turn tank valve one-quarter turn counter-clockwise to open valve (handle should be in line with tubing as it enters connection).
- 3. Confirm system is producing water. Module will be sending rinse water to drain.

## Optional AquaScan Water Quality Monitor Perform Steps 4-7

- **4. CAUTION:** Wiring within module cover connects monitor components. If wires, circuit board, or connections are damaged and/or wetted, monitor will not function.
- **5. CAUTION:** Verify battery connector alignment before making connection.

**CAUTION:** Connect battery to monitor after system has been in production mode for at least 5 minutes. This ensures sensing switch is in proper position to record data.

- Connect battery on manifold by pressing clip onto battery terminals.
- **6.** Replace manifold cover and tighten screws
- **7.** Test battery connection by activating monitor. Press push button. If either indicator light illuminates, connection is good.

**NOTE:** Release button or close faucet immediately after light illuminates. Test is to confirm battery connection, not water quality.

- **8.** Open product water faucet and let water flow until all air has been expelled from system. Lock faucet by rotating the handle 90 degree or by lifting handle. As applicable.
- 9. Close product water faucet. In 30 minutes, check connections for leaks and correct if necessary
- 10. Allow storage tank to fill overnight.
- 11. WARNING: DO NOT USE THE FIRST FULL STORAGE TANK OF WATER

Discard (to drain) first full tank of water by opening product water ( and extra point-of-use) faucet until water flow stops, then close faucet. This will flush sanitizing solution from system.

12. System is ready to use. Should there be any aftertaste or odor to water, repeat Steps 10 and 11

## DO NOT USE THE FIRST STORAGE TANK OF WATER

Allow storage tank to fill overnight. Dispense this water to drain.

This process removes factory-installed sanitizing solution from the entire system and sends it to drain.

This process also sanitizes fittings and tubing used during installation

#### MAINTENANCE PROCEDURE PREPARATION

# RECOMMENDATIONS HAVE ALL EQUIPMENT AND REPLACEMENT COMPONENTS ON HAND AND READY BEFORE BEGINNING PROCEDURE. A CLEAN WORK AREA AND EQUIPMENT ARE ESSENTIAL TO PROPERLY CLEAN AND/OR SANITIZE THE SYSTEM. (i.e,. CLEAN HANDS, TOOLS, WORK SURFACE, AND CONTAINERS)

EQUIPMENT NEEDED			
Safety glasses	Household bleach – Unscented Only	Plastic bucket	
Rubber gloves, sanitary Wash Cloth, Clean and Lint-free Liquid dish soap	(5 ¼ % sodium hypo chlorite) Plastic storage bag Manual Air Pump	Plastic bowl "O" ring lube FDA Approved	

Congratulations! You now have an endless supply of Pharmacy grade water, and are free from ever having to buy bottled water again. We are confident that you will find your Fillmaster® an essential Pharmacy efficiency tool.

If you have any questions or concerns regarding your new system, our Customer Service Department is available Monday-Friday 8am-5pm PST and after hours for emergencies. Please call us at 619-596-9900 or our website www.fillmastersystems.com

## RECOMMENDED ROUTINE MAINTENANCE

To insure the system operates at its maximum efficiency level, the following routine maintenance must be performed:

- ◆ Test your system frequently using the AquaScan button. The AquaScan monitor does not indicate when the filters should be changed, it does measure the integrity of the product water and the membrane. To accurately test using the AquaScan button, the system must be in the "make-water" mode. To do so, draw at least one quart of water from faucet. Wait 10-15 minutes and press button.
- ◆ The Filters (one sediment and two carbon) must be replaced every 12 months, at a minimum. High usage and poor feed water quality will dictate more frequent filter changes.
- Drain the storage tank at least once each week (best at the end of a work day) by lifting the faucet handle up, until all the water stops, lower handle. Allow storage tank to refill overnight. This ensures that enough water passes through the filtration system.
- The Thin Film Composite Membrane must be replaced every 24 months, or every other time you change the filters.
- The 9-volt battery for the AquaScan light should be changed every 2 years, or when you replace the membrane.
- The system should be cleaned and sanitized every time you change filters.
- Change and clean your dispensing tips frequently to avoid cross-contamination between antibiotics.
- DO NOT put anything down your drain that is not a free-flowing liquid. Too much buildup in your drain will cause a backflow of drain water around the auxiliary faucet.

## **Cleaning the Dispenser**

- Open the fill valve allowing the graduated cylinder to fill.
- 2. Using an eye dropper, insert 2-3 full droppers of bleach in the vent, which is covered by a silver screen on top of the reconstitube.
- 3. Let the solution sit for 30 minutes.
- 4. Flush the dispenser with water.

## **Changing The AquaScan Battery**

The AguaScan monitor and battery are mounted inside the manifold cover.

- 1. Remove the cover by gently pulling it up and away from the manifold body. You may need to loosen mounting bracket screws.
- 2. Disconnect the battery. The connection to the battery is a snap type connector. Remove the battery by sliding it out of its holder.
- 3. Replace the battery with an alkaline 9-volt transistor battery.
- 4. Carefully slide the battery into its holder.
- 5. Press the AquaScan button to test the new battery. If either indicator light illuminates, the battery is good.

## Cleaning and Sanitizing the System During a Filter Change

- 1. Mix a mild cleaning solution of dish soap and water.
- Turn off the cold water supply and open the Air Gap Faucet. Lock the faucet in the open position by lifting the lever to the full-up position. This will empty the storage tank and relieve pressure in the system.
- Unscrew each filter housing by turning it counter-clockwise. Remove each filter and discard.
- 4. If you're not changing the membrane, clean the membrane outer wrap with cleaning solution. Do not immerse the membrane in the solution. Do not scrub the membrane wrap with abrasive cleaners. Rinse the membrane well with clean water.
- 5. Place membrane into clean plastic bag and close bag.
- 6. Remove the filter housing "O" rings and wash them with cleaning solution. Rinse them well with clean water. Inspect the "O" rings for damage (i.e., nicks or scratches). Replace damaged "O" rings.
- 7. Clean the inside and outside of the filter housings and the manifold. Use a soft cloth; do not use abrasive materials. Rinse the housings and manifold well with water. Inspect manifold and filter housing "O" ring groove area for damage (i.e., nicks or scratches). Replace damaged components. Use caution when cleaning the manifold cover. Do not get the AquaScan electronics wet.
- Lightly lubricate the filter housing "O" rings. Install the "O" ring into the filter housing groove.
- - #1 Carbon Filter #2 Membrane #3 Carbon Filter
  - #4 Sediment Filter #5 AquaScan Battery
- 9. Mix a sanitizing solution of 1.5 ml (1/3 teaspoon) of household bleach and 3.8 L (1 gallon) of clean water in a bucket. Mix the solution well. Excessive concentrations of chlorine (sodium hypochlorite) may damage plastic and rubber components. Rinse all parts that contact the bleach with clean water. Handle the sanitizing solution carefully to avoid contact with unprotected areas.
- 10. Add 236 ml (one cup or 8 oz.) of sanitizing solution to each of the filter housings and install them onto the manifold (do not install filters or membrane at this time). Tighten each filter housing by hand only. Do not use a filter-housing wrench, as this will over torque the housing. Do not use pliers, as they will damage the housing.
- 11. Slowly open the feed water supply valve. Leave the air gap faucet open until water starts coming out.
- 12. Close the air gap faucet. Leave the feed water supply valve open for five minutes, and then close the valve. This will fill the entire system and tank with the chlorine solution.
- 13. After 30 minutes, fill the Fillmaster with the solution and drain then, lift and lock the air gap faucet lever in the open position to drain the rest of the system. Remove the filter housings and dispose of the water. Rinse the housings thoroughly with clean water.
- 14. Do not remove the protective plastic bag from the filters or membranes. Open the top of the bag only enough to expose the top cap and "O" rings.
- 15. Holding the cartridge by the protective plastic bag, insert the cartridge into the manifold turning it 1/2 turn as it enters the port. Slide the protective plastic bag from the cartridge and discard. Replace each filter housing as each cartridge is installed. Be sure to tighten filter housings by hand only.
- 16. Turn the feed water valve to the open position. Open the air gap faucet. Let the water flow until all the air has been expelled from the system. This will take about one hour. Close the air gap faucet.
- 17. Allow the storage tank to fill overnight.
- 18. **Do not use the first tank of water!** Drain the first full tank of water by opening the air gap faucet until the water flow stops, then close the faucet. This will flush the sanitizing solution from the system. The system is ready to use when the tank fills up. This takes up to 8 hours.

## **TROUBLE SHOOTING GUIDE**

Symptom	Probable Cause	Solution
Leak from Air Gap Faucet	Excessive slack in drain tubing <i>(new system)</i>	Cut off excess tubing (*Tubing #1) so that tube runs "downhill" to drain
	incorrect (new system)	3/8" blue tube (*Tubing #2) to plastic fitting on very bottom of faucet, 1/4" and 3/8" red tubes (*Tubing #3 & #1) onto faucet barbs
		1. Turn off cold water. 2. Turn tank handle off. 3. Disconnect 3/8" red drain tube (*Tubing #1) from drain elbow and remove any debris using a pipe cleaner or swab. 4. Disconnect drain elbow and remove any debris. 5. Turn cold water and tank handle back on. 6. If still having backflow, treat sink drain with Drano or Liquid Plumber buildup remover, not clog remover (enzyme-based and plastic pipe approved only).
Leaks from Tubing Connections	Tubing end cut at an angle	Re-cut tubing straight
5	Tube not seated at bottom of fitting	Push in tube until it seats firmly at the bottom of fitting
Leak from Top of Filter Vessel Housing	Missing or damaged vessel housing "O" ring <i>(recent filter change)</i>	Replace vessel housing "O" ring
No Water <i>or</i> Not Enough Water	Not enough time to fill reservoir tank (new system or recent filter change)	Allow at least 8 hours for tank to fill
		Follow 1/4" white tube (*Tubing #4) away from filtration. Turn aqua handle to parallel to white tube. If your valve is a tapping valve (small metal "t" type handle), turn counter-clockwise until fully open.
	Main cold water supply "off"	Turn to "on" position (counter-clockwise)
	Reservoir tank handle "off"	Turn blue handle to "on" position (parallel to gray or white fitting underneath)
	Clogged filters or depleted membrane	Replace filters annually, replace membrane every 2 years (at a minimum)
		Check filters. Should have 2 "O" rings at top of each filter.
	tubing/depleted membrane	Replace flow restrictor tubing (model FMF 950) flow control (FMF 940) and membrane
	•	Check water pressure coming into filtration. System will not operate at less than 35 psi.
Low Product Water Pressure (tank is full- heavy)		Empty water from storage tank and adjust tank air pressure to 8 psi

<sup>\* -</sup> Refers to the Fillmaste  $^{\rm @}$  Interconnect Diagram on page 11

# TROUBLE SHOOTING GUIDE (CONTINUED)

Symptom	Probable Cause	Solution	
Yellow Service Light on Aquascan Monitor	Low usage or non-usage NOTE: The AquaScan monitor does not check filter condition (see Routine Maintenance, page 12)	Drain one quart of water from auxiliary faucet. Wait 10-15 minutes and retest.	
	Depleted or fouled membrane	Replace membrane and sanitize system (see page 12)	
	Clogged FR tube	Replace FR tube	
Air Noises from Air Gap Faucet	Initial pressurization of system	Pressure will automatically be bled from system over the 1st week of use. Can speed up this process by draining tank nightly for 2-3 days.	
Hear Water Running to Drain	Is normal. The reverse osmosis process separates impurities from feed water and transports them through water to the drain	No solution necessary	
Cloudy Water	First tank of filtered water not emptied (new system or recent filter change)	Empty tank of water. Let refill for 8 hours.	
Water has Offensive Taste and/or Odor	Sanitizer not flushed out (new system or recent filter change)	Empty tank of water. Let refill for 8 hours.	
	Carbon filter depleted	Empty tank of water. Replace post carbon filter.	
	Sediment/carbon filters depleted	Replace filters, sanitize system	
	Membrane depleted or fouled	If AquaScan monitor reads yellow <i>or</i> if TDS test shows less than 70% rejection, drain storage tank, replace membrane, sanitize system.	
Boil Alert Issued	Boil alerts are issued when there is the possibility of microbes being passed into the drinking water	1) Discontinue use of the system 2) Turn off cold water supply to system 3) The remaining water in the reservoir tank may be used until the tank is empty 4) Replace the 1 sediment, 2 carbon filters, sanitize, and clean manifold	
		This will ensure that the system will remain uncontaminated after the boil alert has been lifted	
Manual Dispenser	Call Customer Service	Call Customer Service	
3400 And 3600 dispenser	See 3400, 3600 and Script Scanner User Guide	See 3400, 3600 and Script Scanner User Guide	
Script Scanner	See 3400, 3600 and Script Scanner User Guide	See 3400, 3600 and Script Scanner User Guide	

## WARRANTY

Subject to the conditions and limitations described below, FILLMASTER® SYSTEMS, LLC warrants its Fillmaster® System, Model FMF (Fillmaster® filtration) Reverse Osmosis Water Purification Unit and Model FMD-2600, 3400 and 3600 Fillmaster® Dispenser to be free from defects in materials and workmanship under normal use within the operating specifications listed below. For a period of two years from the date of purchase, FILLMASTER® will repair or replace any part of this Water Purification and Measurement System with the exception of the cartridge filters and the battery. Fillmaster® filtration carries a five-year warranty (READ CONDITIONS OF WARRANTY). The RO Membranes carry a 12-month prorated warranty as follows: Credit 1/12th of replacement cost for each unused month provided the system is installed and maintained according to factory instructions. The unit and/or parts under warranty will be repaired or replaced and returned to the customer, FOB California.

## **CONDITIONS OF WARRANTY**

The above warranty shall not apply to any part of the Fillmaster<sup>®</sup> filtration Reverse Osmosis Unit or Fillmaster<sup>®</sup> Dispenser that is damaged because of neglect, misuse, alteration, accident, misapplication, physical damage, fouling and/or scaling of membranes by minerals, bacterial attack, sediment or damage caused by fire, flood, Act of God, freezing or hot water. If the Unit is altered, modified or if it is installed in a manner inconsistent with the attached instructions or if it is not maintained according to factory instructions, this warranty is void.

FILLMASTER® assumes no warranty liability in connection with the Reverse Osmosis Unit or Dispenser Unit other than as specified herein. FILLMASTER® shall not be liable for consequential damages of any kind or nature due to the use of FILLMASTER® SYSTEMS, LLC products.

## **OPERATING SPECIFICATIONS**

Membrane TFC
Feed water pressure 35-100 psi
Feed water temperature 40-100° F (4-38° C)
Feed water supply Chlorinated
Maximum TDS 2000
Feed water pH 3-11

The filters must be replaced every (12) months minimum and the membrane every (24) months. Depending on the feed water quality and system usage, the Pharmapure System may require replacement of filters and membrane at more frequent intervals. Routine maintenance such as cleaning and sanitizing the system at least once a year is required. See page 12 for recommended routine maintenance.

## MAINTENANCE SCHEDULE

Date system installed:	Filters Replaced Date	Membrane Replaced Date	Other Services Performed Date
Serviced Performed By:			Date

Notes:

# PRODUCT REGISTRATION

This form must be returned within 10 days of installation or warranty will not be valid

Company	Store Number
Pharmacy Owner / Manager	
Address	
	State Zip
Pharmacy Phone	Fax
Installation Date	
Filtration Serial Number	(label on the back of the filtration system hood)
3400 or 3600 Serial Number	Script Scanner Bar Code Reader? Yes No
I certify that I have received the installation	on manual, including the warranty information and service
Signature	Date
As an added value service we can provid your installation, and membrane shipmer	natic Filter Ship Program le automatic filter shipments on the yearly anniversary of nts every other year. It is critical that filter changes are made performance and system integrity. Simply sign below and
Signature <i>(Required)</i>	Date
Print Name <i>(Required)</i>	
	pleted form within 10 days of installation

to validate warranty via fax or email @ www.fillmastersystems.com

FILLMASTER® SYSTEMS, LLC CUSTOMER SERVICE DEPARTMENT 619-596-9900 FAX 619-596-8700

Fax: (619) 596-8700 TOLL FREE 1-888-284-7873

PO BOX 711537 SANTEE, CA 92072-1537



FILLMASTER® SYSTEMS, LLC 619-596-9900 FAX 619-596-8700 TOLL FREE 1-888-284-7873 www.fillmastersystems.com PO BOX 711537 SANTEE, CA 92072-1537





## 18-Gallon MedSafe®

18-Gallon #17818

Dispose of ultimate users unused controlled (Schedules II-V) and non-controlled medications with MedSafe, an easy-to-operate, affordable system, that is DEA compliant. MedSafes generate foot traffic at retail locations promoting take-back events or act as a value-added service for pharmacies managing long-term care facilities. They are also great for hospitals with on-site pharmacies, law enforcement and drug treatment centers. However, a DEA registered collector must manage the program.

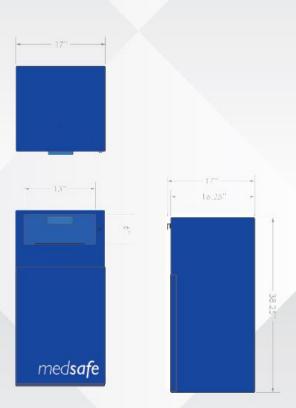
MedSafe combines a powder-coated, stainless steel collection receptacle with a removable, prepaid shipback inner liner. The receptacle, which secures to the floor or wall, is equipped with two locks on the main door and a one-way medicine drop with lock. When the inner liner is full, it is removed from the collection receptacle by authorized persons, securely sealed and returned by way of common carrier for proper destruction.

## SYSTEM INCLUDES

- · Outbound shipping from seller to customer
- · Collection receptacle
- · One serialized inner liner for tracking
- · Prepaid return shipping via common carrier for liner
- · Proper destruction and online documentation

## **ADVANTAGES**

- · Fixed, cost-effective pricing inner liners to fit your needs
- Approved for controlled and non-controlled medications
- · Convenient return shipping for inner liners
- Online tracking and proof of destruction via SharpsTracer available 24/7









## 38-Gallon MedSafe®

38-Gallon #17838

Dispose of ultimate users unused controlled (Schedules II-V) and non-controlled medications with MedSafe, an easy-to-operate, affordable system, that is DEA compliant. MedSafes generate foot traffic at retail locations promoting take-back events or act as a value-added service for pharmacies managing long-term care facilities. They are also great for hospitals with on-site pharmacies, law enforcement and drug treatment centers. However, a DEA registered collector must manage the program.

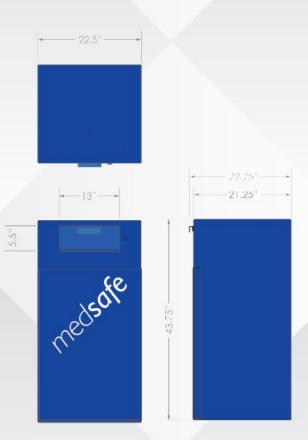
MedSafe combines a powder-coated, stainless steel collection receptacle with a removable, prepaid shipback inner liner. The receptacle, which secures to the floor or wall, is equipped with two locks on the main door and a one-way medicine drop with lock. When the inner liner is full, it is removed from the collection receptacle by authorized persons, securely sealed and returned by way of common carrier for proper destruction.

## SYSTEM INCLUDES

- · Outbound shipping from seller to customer
- · Collection receptacle
- · One serialized inner liner for tracking
- · Prepaid return shipping via common carrier for liner
- · Proper destruction and online documentation

## **ADVANTAGES**

- · Fixed, cost-effective pricing inner liners to fit your needs
- · Approved for controlled and non-controlled medications
- · Convenient return shipping for inner liners
- Online tracking and proof of destruction via SharpsTracer available 24/7









# Cactus Smart Sink® Frequently Asked Questions

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## 1. What is the Cactus Smart Sink®? How does it work?

- The Cactus Smart Sink® is an easy to use, go green waste solution for unused pharmaceuticals. It accepts unused portions or partial doses of controlled substances and provides for a secure alternative to a sink, toilet, red sharps container or waste bin for drug waste. This innovative and compact system helps bring medical facilities into compliance by eliminating the impact to our environment while preventing unauthorized use of unused narcotics.
- The Smart Sink® system automatically secures and renders controlled substance waste "unrecoverable, un-usable, non-retrievable" while providing a secured bridge from traditional drug disposal to proper and responsible disposal.
- This one-of-a-kind system utilizes two replaceable cartridges: One liquid cartridge for liquid waste and one solid cartridge for capsules, tablets, and patches. Both cartridges allows for continuous disposal over time and are designed to last up to 90 days. The system utilizes automatic timers and weight indicators providing notice when cartridges are full or have expired. The system also allows you to choose a preferred expiration date by using the built-in timer selector switch.
- The Smart Sink® helps bring medical facilities into compliance by providing a secured and environmentally friendly method of disposal. It forces proper witnessed-wasting of narcotics in the open and near the drug dispensing systems where needed, improving safety and saving time. It allows for up-front waste documentation and forces this process to be completed immediately (when controlled substances are dispensed) rather than sometime later. It eliminates the unacceptable practice of inserting unused drugs into red sharps containers. (This practice if out of compliance with today's regulations). It reduces the opportunities for drug diversion by incorporating two person witnessed-wasting and by keeping partially filled vials and syringes out of red sharps containers, which have become a key source for drug diversion in medical facilities.

## 2. How does it render narcotics unrecoverable, non-retrievable and unusable?

- When liquid waste is introduced it is automatically filtered through proprietary mixture of denaturants and deterrents
  and it is converted to a semi-solid state within fifteen seconds, rendering waste unrecoverable, non-retrievable and
  unusable. The byproduct cannot be recovered or used.
- Solids (tablets, capsules and patches) are captured through a one-way pill maze and patch slot, secured and rendered
  unrecoverable, non-retrievable and unusable with a proprietary liquid mixture. Solid cartridges are activated by your
  facility upon installation.
- Smart Sink® allows for multiple, secured waste events over time and does not require frequent change-out or disposal.
   This system is automatic and hands free, and does not require any action by the user after the introduction of waste.

## Where do I install the Smart Sink®?

- The Cactus Smart Sink® can be installed wherever controlled substances or medications are drawn, stored, or administered or wherever there is a need for a secured disposal system for controlled substance waste.
- The most common application is next to automated medication dispensing systems.
- Near locations where out of compliance wasting tends to occur (i.e. sink, toilet, waste bin, or red sharps container).
- Good locations include: nursing stations, procedure rooms, ICU, ER, OR, near Pyxis & Omnicell systems, pharmacy, outpatient clinics, surgery centers, long-term care facilities, hospice, and EMS/ambulances.

## 4. Who maintains access?

- Access or control is determined by your facility policies and procedures (P&Ps). Only authorized facility personnel can gain access to the unit with a secured and coded lock system. Cactus can provide P&P templates upon request.
- Even though controlled substance waste is rendered "unusable and non-retrievable" limited access is still recommended for proper waste control.



## 5. How big is the Cactus Smart Sink®? Will it fit on a wall or on a cabinet?



- Measurements are 15 % inches wide, 12 % inches tall, 9 % inches deep. Installation is very simple; instruction manual, installation video, "how to use" inservice videos are also provided.
- $\bullet$  The Smart Sink  $^{\circ}$  liquid capacity is approximately 3.0L, and the solids capacity is approximately 1.7L.

(Approximately 500-1500 tablets/capsules).

- The system can be easily mounted to a wall or countertop.
- The Smart Sink® comes with a mounting bracket, installation hardware and installation instructions.

## 6. What kind of waste can the Cactus Smart Sink® accept?

- Raw pharmaceutical waste only. The system is not a sharps container and **does not** accept syringes, tubing or packaging such as vials or bottles.
- The system is ideal for unused and remaining portions of partially-dispensed controlled substances.
- Non-hazardous or hazardous pharmaceutical waste. All units must be labeled and disposed of per proper waste
  protocols. If RCRA Hazardous waste is introduced into the Cactus Smart Sink®, the appropriate RCRA guidelines for
  labeling, tracking and disposal must be followed.
- Will not accept sharps or bio-hazard waste.
- Will not accept chemotherapy or nuclear medicine waste. Please use the appropriate of containers for this type of waste.

## 7. Can the Cactus Smart Sink® accept RCRA hazardous waste (such as Coumadin)?

- Yes, however some facilities may designate just one or two units as hazardous only. This will reduce RCRA waste accumulation.
- Due to its many safety and security features, most facilities use the Smart Sink® system for controlled substance waste only.
- Most facilities prefer to place a small black RCRA waste bin nearby in order to sort out hazardous waste. This will limit the amount of hazardous waste that is accumulated in various locations. If the Smart Sink® is used for controlled substance waste only there are very few (if any) that are considered hazardous. Most of these are not part of a hospital formulary.
- Cactus can provide referrals to pharmaceutical waste consultants upon request.
- If RCRA Hazardous waste is introduced into the Cactus Smart Sink®, the appropriate RCRA guidelines for labeling, tracking and disposal must be followed.

# 8. What happens to the cartridges once they are full? Who can take them? Can we just throw them in the trash?

- Unused drugs are securely captured and rendered unrecoverable, non-retrievable and unusable using a proprietary technology and mixture. Once introduced, narcotics may be disposed of as "non-hazardous" pharmaceutical waste. (If RCRA hazardous waste is introduced into the Cactus Smart Sink®, the appropriate RCRA guidelines for labeling, tracking and disposal must be followed).
- Once the cartridges are full or expired, they can be disposed of through your authorized waste management company.
- Even though some states may consider the waste or byproduct to be "unusable" or "neutral", to reduce environmental impact or risk, Cactus recommends final incineration of the used cartridges. (Per standard EPA and state Department of Environmental Protection guidelines). This service can be provided by most contracted waste companies. Should your facility consider trash disposal for the used cartridges, we recommend that you request state Environmental Agency

<sup>\*</sup>Always follow all Federal, State, tribal, and local disposal regulations for RCRA Hazardous Waste.



- approval prior to doing so. Even though some waste containers may be marketed as "inert", from an environmental perspective, proper approval from your state or local solid waste facility should be obtained. Always follow State, Tribal and Federal guidelines for proper waste categorization and disposal. Some States and local solid waste municipalities may not allow for trash disposal of a pharmaceutical waste from medical facilities in any form, regardless of claims.
- Federal and State agencies hold medical facilities responsible for the tracking pharmaceuticals from the time that they are received until the time they are either administered or destroyed ('cradle to grave'). Pharmaceutical waste that is captured, stored and disposed of by medical facilities (regardless of its classification) must be accounted for by the facility. If an authorized waste service provider manages your waste, this documented disposal service should be provided by them and should follow all Federal and State requirements. If a medical facility chooses to dispose of waste containers in the garbage there is typically no tracking or documentation of pharmaceutical waste, and the facility may be held accountable for the documentation and tracking of the final waste product. Any environmental impact of the waste will be the responsibility of the medical facility. This could create risk and negative effects for the medical facility.

  Our recommendation: Should a medical facility choose to use garbage disposal of any container regardless of its claims of being "inert" we recommend periodic randomized independent testing of the containers to prove that final contents are "inert" and not harmful to the environment. Since no two waste containers are alike in content, this on-going process may be required by your State and local solid waste municipality.
- Cactus provides individualized bar coding specific to each cartridge that provides for tracking and proper disposal documentation if needed.
- Smaller facilities may have local exceptions to dispose of the sealed containers through regular disposal methods regardless of its classification or product claims of being "inert".

## 9. What if we do not have a contracted waste management company?

• Cactus can recommend an authorized waste management company or other compliant solution upon request.

## 10. Do State and Federal regulatory agencies approve the Smart Sink®?

- Federal and State Agencies do not recommend or endorse **any** specific product, but may recommend a general procedure, technology or alternative method of disposal. These agencies now prefer methods other than flushing or red sharps container disposal. Federal, State, Tribal and hospital regulatory agencies still recommend diversion prevention protocols, witness and wasting, proper waste sorting and proper waste policies be followed.
- The Cactus Smart Sink® meets the DEA requirements for controlled substance waste disposal. (DEA Rule on Disposal of Controlled Substances, 9/9/14).
- Many agencies have reviewed the system and agree that the Cactus Smart Sink® fits the requirement for safe and proper drug disposal.
- If needed seek appropriate approvals and follow all state and federal guidelines for pharmaceutical waste.

# 11. What is the DEA's position on partially dispensed controlled substances in medical facilities? Do they consider the waste drugs "unrecoverable, non-retrievable and/or unusable"?

- Based on the recent DEA Ruling on September 9<sup>th</sup>, 2014 and the DEA "Dear Practitioner" Letter, it is up to the facility to decide as to the best method of disposal for partially administered controlled substance waste. Witness and wasting protocols and effective diversion prevention programs are still recommended by the DEA.
- The Smart Sink® provides an excellent alternative to a red sharps container, sink, toilet, or waste bin for drug disposal.
- Many States and regions have now moved toward a "no flush" policy and are working at the state level to provide solutions and alternatives to wasting in the sink, toilet or waste bins. The Smart Sink® system provides this solution.
- Based on extensive lab recoverability testing, Cactus, LLC maintains a position that unused controlled substances put into the Smart Sink® system, will be rendered "unrecoverable, non-retrievable and unusable".

<sup>\*</sup>Always follow all Federal, State, tribal, and local disposal regulations for pharmaceutical waste



# 12. Does the Cactus Smart Sink® meet the DEA's requirements for controlled substance disposal?

- Yes.
  - Partial doses: The DEA does not require or recommend any particular method or means of destruction. Once a
    controlled substance has been dispensed or administered to a patient, the remaining waste portion should be
    properly disposed of and is no longer subject to the DEA's regulations. DEA strongly recommends witness and
    waste documentation and effective diversion prevention. See DEA "Dear Practitioner" Letter
    (<a href="http://www.deadiversion.usdoj.gov/drug\_disposal/dear\_practitioner\_pharm\_waste\_101714.pdf">http://www.deadiversion.usdoj.gov/drug\_disposal/dear\_practitioner\_pharm\_waste\_101714.pdf</a>).
  - o For other controlled substances: The new DEA rule allows for on-site destruction of controlled substance waste with "deactivation" capability so long as such destruction is consistent with the standards set forth in the rule and the destruction results in a non-retrievable state. See DEA Title 21 Code of Federal Regulations, part 1317 subpart C (http://www.deadiversion.usdoj.gov/21cfr/cfr/1317/subpart c.htm).
  - O Unused hospital inventory: Current reverse distributor programs with 222 transfer forms must be used. However, a destruction system may be used for non-returnable product. Destruction Form 41 must be filed with the DEA if a facility choses to destroy unused inventory.
  - o For patient prescriptions/patient-owned medication: A new category of "Collector" has been established to allow for medical facilities to accept patient-owned medications. The facility must register with the DEA as a "Collector" and must follow all new protocols for destruction or removal of the waste. The Cactus Smart Sink® will only accept raw pharmaceutical waste and will not accept packaging in any form. (No vials, packages, bottles, syringes).
- The DEA is allowing Smart Sink® cartridges to be handled by authorized waste companies as pharmaceutical waste.

## 13. How does the Cactus Smart Sink® fit in with our hospital drug waste program?

- In our surveys, we find most medical employees promote good environmental stewardship and, as an alternative to drain disposal, tend to waste unused controlled substances in inappropriate containers, such as red sharps bins. About 90% of the facilities we visit may not have near-by sinks or toilets in order to "witness and waste" drugs. Their tendency is to deposit unused drugs into sharps bins, trash cans, and other type containers, all of which do not meet protocol, are potential violations of regulations and provide opportunities for diversion.
- The Smart Sink® can accept roughly 94% of pharmaceutical waste usually what is flushed down the toilet or sink, or put in sharps containers or waste bins. (It is best to review this protocol with your pharmacy director).
- In the hospital nursing suite or procedure room environment, we find about 90% of the drug waste will be liquids and the rest consists of a few tablets, capsules and patches. Other facilities, such as long-term-care, may waste more capsules, patches and tablets than liquids. The Cactus Smart Sink® provides a universal central waste system for liquid, capsules and patches.
- Smart Sink® complements drug waste programs and protocols and addresses the need to responsibly dispose of partially administered doses of medication while simplifying the complex process of controlled substance waste disposal.

## 14. Is the Cactus Smart Sink® economical to use? What about cost?

- Upon installation the Smart Sink® system is very easy and economical to use.
- When considering the benefits:
  - 1- Time savings
  - 2- Bringing the facility into proper witness and waste protocol
  - 3- Proven success in eliminating drug-filled vials and syringes in red sharps containers
  - 4- Allows for hands-free use for tablets and liquids
  - 5- Forces witness and wasting up front rather than later
  - 6- Allows for continuous automatic use over time no mixing or shaking each time it is used
  - 7- Secured with locks, expiration alerts and alarms and is self-monitoring
  - 8- Improves patient safety and reduces potential for patient overdoses during administering of medications
- Pricing is based on facility size and number of units purchased.
- Please email sales@cactusLLC.net or call 843-856-7400 for pricing.



## 15. How long will the cartridges last?

- The Cactus Smart Sink® incorporates built-in timers that can be set for 30, 60, 90 or 180 days. This will allow your facility to determine the frequency of cartridge change out.
- The change-out frequency is also determined by what goes in the unit, quantity of waste, and how the waste may be classified.
- It is recommended that cartridges containing non-hazardous pharmaceutical waste should be changed out every 90 days or less.
- The system will automatically alert you when the cartridges are full or expired.
- We find most hospitals dispose of more liquid waste than solid waste. The cartridges can be changed independent of each other as they fill up or expire.

## 16. Will this add to our disposal costs?

- When you consider the cost of monitoring and managing drug waste protocols, possible fines, and bringing your facility into compliance, the Smart Sink® should help reduce your cost overall. In many cases the Smart Sink® saves a lot of time for your staff due to convenient locations and easy classification.
- The Smart Sink® will accept the drug waste in its raw form and therefore the weight of vials, tubing and other containers are not a part of the pharmaceutical waste accumulation. The empty containers can now go into regular waste or sharps bins rather than into the more expensive pharmaceutical waste bins.
- Many facilities spend thousands of dollars per year managing this program and utilizing consultants. Facilities must also consider the cost and risk of unused drugs ending up in the hands of unauthorized personnel in the acute setting. We also help to simplify the confusion and errors that occur when wasting controlled substances. The system provides an easy solution to a very complex issue. The Smart Sink® helps complement your waste protocols and programs.
- Some facilities may utilize a universal waste classification system and 'overclassify' all pharmaceutical waste as RCRA hazardous (black bin waste). While this practice ensures that no RCRA Hazardous waste is accidentally entered into the regular pharmaceutical waste stream, this process tends to be more costly than segregating waste. RCRA hazardous waste is more expensive to dispose of than regular pharmaceutical waste. By implementing the Cactus Smart Sink® system, many facilities are able to reduce their waste cost by disposing of all or some of their non-hazardous pharmaceutical waste in the Smart Sink® and utilizing black bin for the small amounts of RCRA hazardous waste they generate.

# 17. I can just put my waste in sharps containers or down the drain for free. Why do I need to have this?

- Red sharps containers and waste bins are not acceptable means of pharmaceutical waste disposal. Red sharps containers do not render pharmaceutical waste unrecoverable, non-retrievable or unusable, nor do they provide proper security and have become a key and common source for illegal drug diversion.
- Many state and federal agencies as well as numerous healthcare facilities are more concerned than ever about
  pharmaceutical waste in our environment. This environmental issue has also been the primary topic for many
  government agencies. Many facilities understand that waste regulations are becoming more stringent, and now there is
  an alternative to a sink, toilet or sharps bin with the Smart Sink® system.
- Many states, counties and cities are moving toward 'no-flush' policies and medical facilities are being held accountable
  for all waste that they generate. Methods of disposal that were allowed in the past such as 'sewering' or red sharps
  containers may no longer be allowed. Failure to comply with these new regulations could result in sanctions and/or
  fines.
- Many hospitals are currently in the process of updating their pharmaceutical waste programs to bring them into compliance. As part of this initiative, they are moving toward innovative technologies and environmentally friendly, "Go Green" concepts.
- The Cactus Smart Sink® forces witness and wasting in the open. In many facilities sinks or toilets are not always available where needed and in many cases nurses may not follow proper witness and wasting protocols because of the location of these disposal methods.



By installing the Cactus Smart Sink® near medication dispensing systems and by forcing the double witness and wasting
process up front, hospitals will realize improved patient safety, significant time savings for nursing staff, and a dramatic
reduction in accumulation of half-filled vials in red sharps bins. The opportunity for drug diversion is also significantly
reduced.

## 18. How much training is involved?

- Very little The Cactus Smart Sink® goes anywhere needed, is easy to install and easy to use.
- The security bracket and installation hardware is provided with each unit.
- Educational programs, installation guides and video in-services are available from Cactus, LLC.
- Install, lock it down, add cartridges, and start filling them. The machine does the rest. It's that simple.
- The system allows for continuous wasting events over time. The Smart Sink® is hands-free and there is no need for opening, shaking or mixing. Patches are inserted via the patch plunger.

## 19. Does it need power or an outlet?

- The Cactus Smart Sink® is battery powered so that you do not have to worry about electrical outlets.
- As an option, Cactus offers an AC Adapter plug-in pack for your Smart Sink®.
- The typical battery life is about 12 to 14 months. A low battery warning light indicates that battery replacement is needed.

## 20. How much security does it have?

- Quite a bit! Smart Sink® provides a heavy duty bracket that allows for secured countertop or wall mounting with a lock and key. A full installation hardware kit is also provided.
- The Smart Sink® has alarms that alert you when the unit is full, expired, or when the system is being accessed. One cannot access the system without the coded security key. The low battery warning system also provides advance notice when the battery needs to be replaced. The warning will typically allow for 2 to 3 week notice prior to battery expiration.
- Unused narcotics that are injected or inserted into the Smart Sink® are not only secured with the locking system, but are rendered "non-retrievable, unusable and non-recoverable". If preferred, for added security and tracking each cartridge is individually coded to account for final documentation and incineration of the byproduct.

## 21. What is the Cactus Pharma Lock®? How does it work?

- The Cactus Pharma Lock® is a compact unit that consists of a simple design that will securely house one cartridge. It is designed to be placed in areas where space is limited (i.e. anesthesia carts, ambulances).
- It works with current Cactus liquids or solids cartridges.
- It is easily mounted to any flat surface.
- An optional OR Kit can be purchased which will provide an antimicrobial coating to allow for easy cleaning in sterile
  environments.
- Cactus Pharma Lock® does not require a power source and does not include visual or audible alerts.

Cactus

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## KI 1Plus

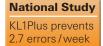
## **Streamlined Counting Plus Verification Device**

## Assurance against dispensing errors for all medications, plus simple, accurate counting.

- Orders are verified and filled in less time than traditional hand-counting; average 30-count Rx verified, counted and poured into patient vial in 10.6 seconds.
- Filled orders can be retrieved quickly to validate quantity and time of each dispense.
- Based on the unique KL1 tablet counter, the KL1Plus is about the same footprint as a counting tray.
- Bar code scanning provides verification for all dispensed medications (tablets, capsules and unit of use). KL1Plus software alerts the technician to a mismatch.
- Interfaces with your pharmacy management system (2-way interfaces available).
- Inventory counting software.

# Software and Design Updates

The KL1Plus is assurance against errors. Your patients receive the right medication every time.





## Filling accurate orders is simple



Scan the patient's Rx label.



Scan the matching stock bottle (or unit-of-use item). KL1Plus alerts you to a match or mismatch.



Pour the exact amount of tablets/capsules through.



With two screen taps, an Rx Archive can be brought up, from 1 minute ago to 10 years ago.

## KL1Plus Updates

**Inventory:** Track inventory counts by UPC and total quantity; export as .csv.

**User login and tracking:** Track who filled each prescription (optional fingerprint scan).

**Double-count reminder:** For controlled or expensive meds.

**Scan-override:** Allows for generic substitution during the filling process.

**Partial fill management:** Store IOU records to fill the following day. Tracks both fills. **Indicate what's filled by your robot:** Show what medications are in your onsite pharmacy robot (any brand). Double-count your robot's controls/expensive meds on the KL1Plus.

Design update: Better accommodates a variety of tablet-pouring techniques.

**View KL1Plus Video** 



## KL1Plus Technical Specifications

## **Streamlined Counting Plus Scan-Verification Device**

Function: Tablet counter with barcode scan-verification

for retail and outpatient pharmacies

Verification: All medications (tablets/capsules and unit-of-use) can be verified by scanning the barcode on the pharmacy label and then the barcode on the medication stock bottle/box

Medication Counting: Counts almost all non-

translucent oral solid medication

**Dimensions:** 14.6"H x 12.5"D x 8"W

(37.1cm x 31.75cm x 20.3cm)

**Top Funnel Diameter:** 5.2" (13.2cm)

**Weight:** 9.65 lb (4.4kg)

Touch Screen: 7" WSVGA (1024 x 600) color TFT

LCD display

Tray Capacity: 800cc

Tray Pouring: Left or right opening

Count Capacity: Up to 9,999

Maximum Tablet Size: 0.86" long (22mm) and 0.74"

wide (19mm)

Minimum Tablet Size: 0.125" smallest diameter

(3.175 mm)

Throughput: Up to 15 tablets/capsules per second

**Special Mode:** For counting items with odd shapes or

**Inventory Mode:** Count full and partial stock bottles and unit-of-use medications; export as .csv file

Pharmacy Management System Interface: See KL1Plus website page for link to available interfaces; 2-way interfaces available

User Maintenance & Tracking: Flexible system to track usage and authorize tasks; can be turned on & off

**Optional:** Biometric fingerprint scanner

Barcode Scanner: Imaging scanner reading traditional

and 2D barcodes

Rx Archive: Retrieve the time/date of fill, count quantity, NDC match and user (if enabled), record kept

up to 10 years

Operating Systems: Windows 7 Embedded Network: RJ45 connector for interfacing and

networking automation



**Drug Images:** 100,000+ medications pre-loaded; updates quarterly via USB update

**USB:** 2 external connectors

Power: Standard wall outlet, 110V/220V/240V,

60Hz/50Hz (no adjustments needed)

Vial Size Indicator: Recommends vial size (drams) based on what was poured through

Cleaning & Maintenance: Once-a-day cleaning recommended; see Kirby Lester's Service & Support website page for complete cleaning instructions

Warranty: 1 year from ship date



# SP 200 with Collating Control Center Robotic Prescription Dispensing System

ScriptPro's SP 200 with Collating Control Center is a proven and reliable prescription dispensing system that automates the repetitive, manual dispensing tasks most subject to human error and automatically collates all prescriptions for each patient.

SP 200 interfaces with the pharmacy computer system to fill, label, and collate up to 150 prescriptions per hour. Each slot displays the patient name for easy vial retrieval.

The system can be configured to collate the prescriptions in various ways, such as for a given patient or dispensing priority. Electronic displays on both sides of the control center show the contents of the slot.



SP 200 contains 200 universal dispensing cells, which are easily calibrated on-site by pharmacy staff, and three vial dispensers or two bulk load vial dispensers. It dispenses tablets and capsules of all shapes and sizes into standard pharmacy vials. There is no drug cross-contamination because the system fills directly from the dispensing cells into the vial. The system also prints and applies the prescription and auxiliary labels and collates the uncapped vials into slots for final inspection using on-screen drug image verification.

Barcodes are used throughout the process for accuracy and quality control. Pharmacy staff manages the dispensing process from prescription entry to approval of the finished product.

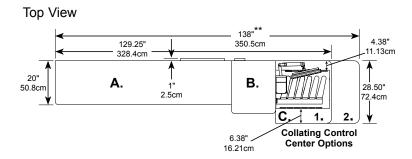


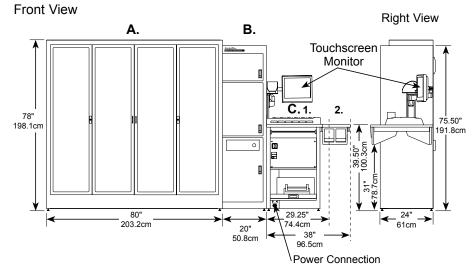
SP 200 with Collating Control Center and Bulk Load Vial Dispensers

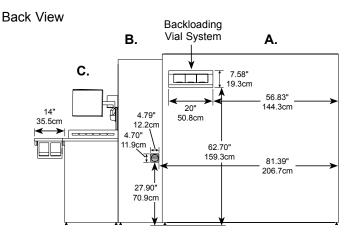


Pharmacy Automation

# **SP 200 with Collating Control Center**









## Specifications\*

## Weight:

- A. Robotics Cabinet: 850.5 lbs (385.8 kg)
  - 1. Vial Dispensers: 166.5 lbs (75.5 kg)
  - 2. Bulk Load Dispensers: 87.5 lbs (39.7 kg)
  - 3. Spiral Vial Dispenser: 64 lbs (29 kg)
- B. Electrical Cabinet: 326 lbs (147.9 kg)
- C. Collating Control Centers:
  - 1. 190 lbs (86.2 kg) or
  - 2. 235 lbs (106.6 kg)

## Robot Footprints:

- 1. 20.2 sq. ft. (1.88m<sup>2</sup>)
- 2. 22 sq. ft. (2.04m<sup>2</sup>)

Electrical Input: 120-127 VAC, 50/60 Hz, 12 AMP (robot only, includes UPS), 16 AMP with all peripherals, 1 Phase, Uninterruptible Power Supply included. Dedicated 20 AMP power outlet located within 10 feet (3m) of power connection

Communications: Serial, parallel, or ethernet pharmacy computer connection. Firewall provided for network connectivity.

#### Remote Support Requirements:

- VPN over high-speed Internet connection.
   Also requires access to backup telephone line as specified in #2 below, such as a fax line.
   OR
- Modem-Dedicated analog RJ-11 telephone outlet accessible to outside line and capable of sending and receiving calls.

Barcode Scanner - Caution: Class IIa Laser Product.

Do not stare into beam. 650nm visible laser light diode - .663 mW maximum output.

Computer/Software: Client/Server system on ScriptPro-installed network; Intel Core 2 Duo PCs with dual SATA drives. TCP/IP socket connections; USB connections; Software built with Visual C++; Windows XP/MSDE. Redundant data and transaction log backups. Customer access limited to SP Central user interface.

Monitor: 17" touchscreen with articulating arm

## Temperatures:

Operating: 41°F to 86°F (5°C to 30°C) Storage: 5°F to 104°F (-15°C to 40°C) Relative Humidity: 20–85% Altitude: Up to 9,843 feet (3000m) Dissipated Heat: 1,926 BTU/HR max

## Cell Capacity:

Single Cell: 676 cc/183 dram Extended Cell: 1900 cc/514 dram

## Peripheral Products Supported:

See product sheet on peripheral products

System has 6 slots with a maximum capacity of 7 vials per conveyor.

ANSI Barcode Print Quality Grade: B

Sound Level: 77 db at front edge of Control Center

Training: Up to four Full Time Equivalent (FTE) training days included with original lease/purchase. Approx. two FTE days for Training and Setup and approx. two FTE days for Go-Live and Support.

One "FTE" day is defined as one trainer on-site for one day for up to 10 hours. If more than one trainer is on-site, it is counted as multiple FTE days.

- \* Specifications subject to change without notice.
- \*\*Requires one additional inch clearance for installation.



# OmniRx<sup>®</sup> TT

Ideal for operating rooms, cath labs, nursing homes, assisted living centers, and other areas short on space, the OmniRxTT provides automated dispensing of medications in a secure and controlled manner within a flexible, space-efficient system.

## Modular, Space-Efficient Design

Measuring just 24.5" high by 26" wide by 23.5" deep, the OmniRxTT facilitates the automated dispensing of medications in areas where space is limited and fewer medications are typically needed. The system fits easily on any counter or table and can be bolted to the surface to provide additional security. The OmniRxTT can also be integrated with Omnicell's auxiliary cabinet options to maintain a single user interface for supply and medication dispensing throughout the facility.

## **Small Footprint, Large Capacity**

Despite its small size, the OmniRxTT provides plenty of space for medication dispensing. A single system can hold up to 288 items.

## Flexible Security Levels

Providing a full spectrum of security options, the OmniRxTT can accommodate a wide variety of drawer types, including the high-security FlexBin Single-Dose Drawer, the high-security locking drawer, the medium-security Sensing Drawer, the Lighted Matrix Drawer, and the Matrix Drawer.

## **Greater Accountability and Control**

The OmniRxTT includes the easy-to-use Omnicell Color Touch graphical user interface. Using this touch-screen technology, users simply enter their user ID and password to access the system. Alternatively, users can use integrated magnetic or optical card readers, or Touch & Go<sup>™</sup>,



Omnicell's biometric, positive ID system, to gain access to the OmniRxTT. Integrated with the OmniCenter® server, the OmniRxTT provides greater accountability for medications and allows the pharmacy to maintain tight control over narcotics and other sensitive medications.

## **Specifications**

Height: 24.5" Width: 26" Depth: 23.5"

Total Footprint: 4.25 sq. ft.

Weight: 115 lbs. (excluding variable drawer weight)

For more information about OmniRxTT, please call (800) 850-6664, e-mail info@omnicell.com, or visit www.omnicell.com.



# **SP Checkpoint**™

SP Checkpoint is an interactive prescription verification, tracking and management device that provides control over the entire dispensing process. With SP Checkpoint, managers and supervisors can access pharmacy operations, local or remote, and view the status of prescriptions in process. Workload and workflow can be managed on-screen in real time.

Used at the point of dispensing, SP Checkpoint provides paperless prescription tracking for each patient.

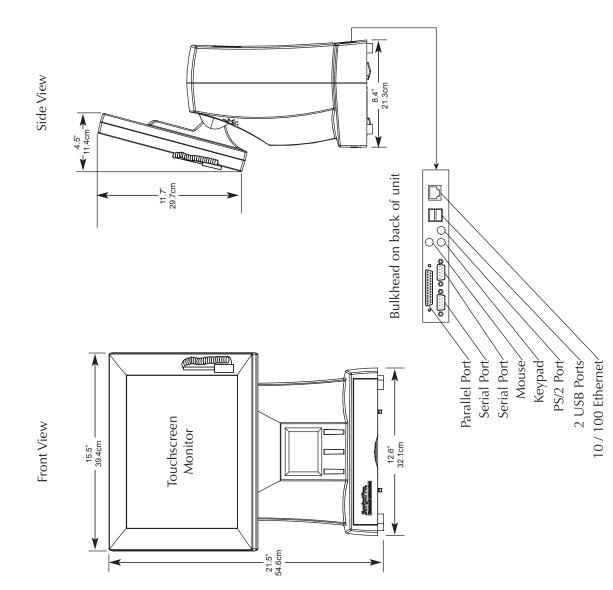


# ScriptPro<sub>®</sub>

## **Pharmacy Automation**

For more information call: 800.673.9068 913.384.1008 www.scriptpro.com

# SP Checkpoint<sup>TM</sup>



# Specifications

Weight: 36 lbs (16 kg)

120 VAC ±10%, 50/60 Hz, 1.5 AMP, 1 Phase Outlet located within 5 feet (1.5m) from Electrical Input: North American specs. International specs available upon request. power connection. Bar Code Scanner - Caution: Class II Laser Product. Avoid long-term viewing of direct laser light.

Computer/Software: Client on ScriptPro-installed network server; Pentium III-class PC. TCP/IP socket connections.

Operating Temp: 41°F to 86°F (5°C to 30°C) Storage Temp: 5°F to 104°F (-15°C to 40°C)

Peripheral Products Supported:

Electronic Signature (one per unit) Wireless Scanner (one per unit) Script Scanner (one per unit)

Keyboard Options:

Full Size Ergonomic (on countertop) Full Size (on countertop) Śmall (standard, in tray)



# ScriptPro

Pharmacy Automation

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## **SP Printer**

ScriptPro's SP Printer works with ScriptPro's SP Datapoint and SP Checkpoint to produce high quality direct thermal prescription labels. With its flexible design, the printer can be used in a horizontal or vertical position to print labels with clear and legible fonts, barcodes, and detailed drug image line drawings.

For filling accuracy and safety, SP Printer interfaces with ScriptPro's SP Central software to ensure the user scans the correct product code before printing the prescription label. Once the product code is verified, SP Printer presents the label in the label window for quick and easy retrieval.

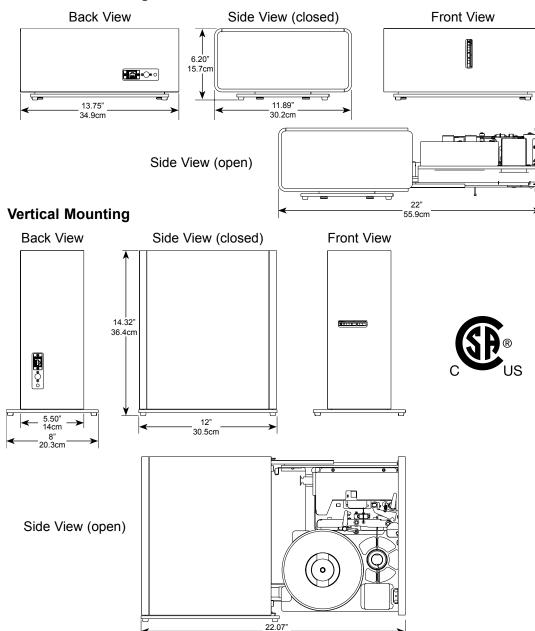
Labels are easy to load, and the printer's compact size allows it, along with the SP Datapoint or SP Checkpoint, to fit on any pharmacy countertop.



SP Printer with an SP Datapoint

## **SP** Printer

## **Horizontal Mounting**



56.1cm

## Specifications\*

Weight: 53 lbs (24 kg)

Electrical Input: 100-240 VAC ±10%, 50/60 Hz, 2-1 AMP, 1 Phase. Outlet located within 5 feet (1.5m) of power connection.

Computer/Software: USB connections; requires SP Central software, build series 10.14+.

Temperatures:

Operating: 41°F to 86°F (5°C to 30°C) Storage: 5°F to 104°F (-15°C to 40°C)

Relative Humidity: 20–85% Altitude: Up to 9,843 feet (3000m) Dissipated Heat: 200 BTU/hr

Print Technology: Direct Thermal

Print Color: Black

Mounting: May be placed horizontally under SP Datapoint/SP Checkpoint or vertically next to

SP Datapoint/SP Checkpoint.

Labels: Supports ScriptPro's specifically designed and certified 2" x 4" Direct Thermal Prescription Label and Reorder Label. Use of non-certified labels may cause harm to the SP Printer and result in unsatisfactory labels.

Label Capacity: 1 roll; 1,250 labels per roll ANSI Barcode Print Quality Grade: B





## Pharmacy Automation

800.606.7628 • 913.384.1008 www.scriptpro.com

<sup>\*</sup>Specifications subject to change without notice.

# **Electronic Signature**

Electronic Signature interfaces with ScriptPro's SP Central system to electronically capture a patient's signature regarding the counseling decision and third party insurance message acceptance.

Although a physically small device, Electronic Signature has a big impact on pharmacy. Now your pharmacy can record, then easily recall who signed for a prescription and when it was picked up.



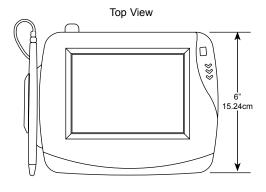
Electronic Signature allows patients to request counseling on any prescriptions. The choice on counseling and the accompanying signature is recorded electronically, replacing cumbersome paper logs. Patients appreciate the courtesy and personal service while pharmacy staff save valuable time by managing signatures electronically.

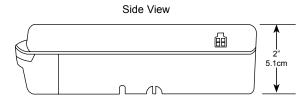
HIPAA form acknowledgment and pharmacy-customized forms are also supported.



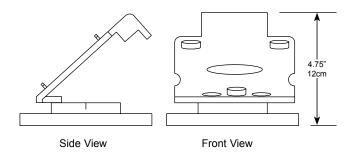
## **Electronic Signature**

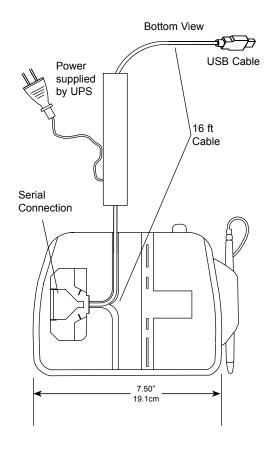
## A. Electronic Signature





B. Optional Counter Mount (additional charges may apply)





## Specifications\*

Weight:

A. Electronic Signature: 3 lbs (1.4 kg) B. Counter Mount: 1 lbs (0.5 kg)

Electrical Input: 12-24 VDC, 1-0.6 AMP

Computer/Software: Electronic Signature requires one SP Datapoint, SP Station, SP Checkpoint, or SPUD per unit.

Display: 65,536 color, ¼ VGA, active matrix, 5.7" TFT screen with capacitive/chemically-hardened glass.

Temperatures:

Operating: 32°F to 104°F (0°C to 40°C) Storage: 0°F to 150°F (-18°C to 66°C)

Humidity: 15–95%

Installation: Optional Counter Mount that includes four screws available for purchase in the ScriptPro Supplies Catalog.

Platforms Supported:

SP Central Workflow System

SP Central Pharmacy Management System

\*Specifications subject to change without notice.





## Pharmacy Automation

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# **Pharmacy Services Portal (PSP)**

Pharmacy Services Portal is an enterprise-wide hardware and software application of SP Central Workflow System that provides self-service patient pharmacy services, ticket queuing, and patient/prescription integration. PSP checks patients into pharmacies, notifies pharmacy staff of the check-in, prints patient tickets, calls patients to pharmacy pickup windows and exception areas, and broadcasts pharmacy waiting room statistics to pharmacy staff.



# **Pharmacy Services Portal (PSP)**

Using the following PSP components, patients can manage the time and the location where they will pick up their prescriptions.



## Welcome Notice Board

When patients arrive at the pharmacy waiting area, ScriptPro's Welcome Notice Board greets them with a pharmacy-configured welcome message, pharmacy video, and/or television program.

## **SP Kiosk**

ScriptPro's SP Kiosk, a standalone kiosk located in the pharmacy waiting area, allows the patient to get a check-in ticket for pharmacy services, select a prescription pickup time and pharmacy location, and request prescriptions for family members. SP Kiosk prints a barcoded ticket, projects the patient wait time, and sends the data to SP Central Workflow System to prioritize and link the ticket with the patient's prescriptions.

For added flexibility, an SP Kiosk also may be located in the physician clinic, allowing patients to select the time and location for their prescription pickup. The SP Kiosk includes a privacy filter on the screen to ensure patient check-in remains private.





## **SP Central Workflow Integration**

SP Central Workflow prioritizes tickets for processing and collates all prescriptions for the pharmacy staff to fill, verify, and dispense. Prescriptions can be expedited in the pharmacy based on the ticket priority.



## **PSP Prescription Dispensing**

Pharmacy staff uses PSP Dispensing Queues to place automated ticket calls for dispensing. Tickets are queued and called for dispensing based on ticket priority.

## **Now Serving Notice Board**

ScriptPro's Now Serving Notice Board brings visible organization to the pharmacy waiting area by displaying which tickets are being processed at each pharmacy pickup window. It also can (option) play pharmacy videos or television programs.





## **Ticket Window Display**

ScriptPro's Ticket Window Display mounts above each pharmacy pickup window so patients can easily see which ticket number is being processed at that window.

## **Ticket Statistics Notice Board**

Inside the busy pharmacy, ScriptPro's Ticket Statistics Notice Board broadcasts important operation metrics (wait times, number of queued tickets, etc.) in a large, easy-to-see, dashboard view.



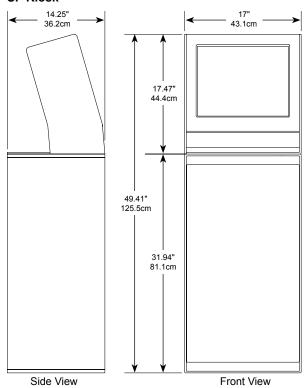
## **Reporting Package**

PSP offers many reports to manage patient wait times and filling, including:

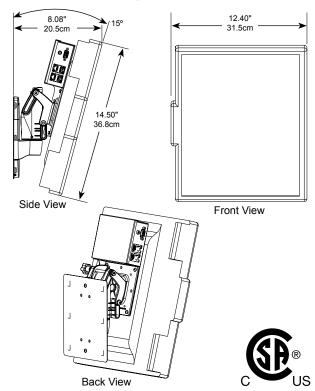
- Number of patients served and # of prescriptions filled per technician or window
- Patient wait time from kiosk check-in to prescription pickup
- Average and maximum wait times by category
- Tickets created versus tickets checked in

# **Pharmacy Services Portal (PSP)**

## **SP Kiosk**



## **Ticket Window Display**



## Specifications\*

## **Pharmacy Services Portal**

Communications: Serial, parallel, or Ethernet pharmacy computer connection. Firewall provided for network connectivity.

Computer/Software: Client/Server system on ScriptPro-installed network; requires Pharmacy Services Portal (single site) or Pharmacy Services Portal Enterprise Package (multiple sites) and SP Central Workflow System. Pharmacy Services Portal site setup required for each pharmacy in the enterprise.

#### **SP Kiosk**

Weight: Kiosk: 60.5 lbs (27.4 kg); Stand: 103 lbs (46.7 kg)

Mounting: Kiosk: Stand or tabletop; 2 M6 socket head cap screws

Stand: Floor or wall; mounting hardware of appropriate type for floor/wall material

Supports mounting surfaces of concrete, wood studs, and metal studs.

Electrical Input: 100-240 VAC ±10%, 50/60 Hz, 1.5 AMP (Includes UPS),

1 Phase. Outlet located within 5 feet (1.5m) of power connection.

Computer/Software: Client on ScriptPro-installed network server; Core 2 Duo-Class PC. TCP/IP socket connections; Windows Operating System.

#### Temperatures:

Operating: 41°F to 86°F (5°C to 30°C) Storage: 5°F to 140°F (-15°C to 60°C)

Relative Humidity: 20–85% non-condensing

Altitude: Up to 9,843 feet (3000m)

Barcode Scanner: 2-D scanner. Class I LED. Visible red LED 645 nm ±7.5 nm.

Monitor: 17" touchscreen; privacy filter standard

Ticket Paper: 31/s" x 273' single ply thermal paper. Recommend PM Company, part #: PMC05213.

## **Ticket Window Display**

Weight: 15.4 lbs (7 kg)

Electrical Input: 100-240 VAC, 50/60 Hz, 2.3 AMPs, 1 Phase. Outlet and RS 422 serial daisy chain drop located within 5 feet (1.5m) of power connection. Distance from computer to last Ticket Window Display must not exceed 1,000 ft.

Screen: 17" monitor

## Welcome Notice Board XL and Now Serving Notice Board XL<sup>†</sup>

Electrical Input: Notice Board: 100-240 VAC, 50/60 Hz, 2 AMPs, 1 Phase. Outlet located within 5 feet (1.5m) of power connection

Computer/Software: Client on ScriptPro-installed network server; Intel Core 2 Duo PC. TCP/IP socket connections.

Screen: 40"; 1366 x 768 resolution; 16:9 aspect ratio

Audio: Television audio stops when Now Serving Notice Board XL calls a ticket or produces other audio feed

Audio Package: Supports 1-20 speakers. See installation guide for audio recommendations. Speakers: Ceiling or wall mount

Weight: 2.8 lbs (1.27 kg)

Dimensions: 7" (17.8cm) H x 10.3" (26.2cm) W x 3.4" (8.6cm)

Television: Supports split screen television/DVD option; Standard type F coaxial cable connection for cable television. Compatible Models: 1800-3010-003 and 1800-3010-002. May require firmware update.

Now Serving Notice Board XL Package includes 1 Now Serving Notice Board XL and Ticket Window Display Setup. Additional parts purchased separately.

## Ticket Statistics Notice Board XL<sup>†</sup>

Electrical Input: Notice Board: 100-240 VAC, 50/60 Hz, 2 AMPs, 1 Phase. Outlet located within 5 feet (1.5m) of power connection.

Computer/Software: Client on ScriptPro-installed network server; Intel Core 2 Duo PC. TCP/IP socket connections.

Screen: 40"; 1366 x 768 resolution; 16:9 aspect ratio

Data Refresh: Every 15 seconds

Training: Up to two Full Time Equivalent (FTE) training days included with original lease/ purchase. Approx. one FTE day for Training and Setup and approx. one FTE day for Go-Live and Support.

One "FTE" day is defined as one trainer on-site for one day for up to 10 hours. If more than one trainer is on-site, it is counted as multiple FTE days.

For specifications on PSP Server and PSP Enterprise Server see SP Central Server, SP Central Expanded Server, and/or SP Central Expanded Server (Rackmount) product sheets.

\*Specifications subject to change without notice.

†See Notice Board XL product sheet for additional specifications and mounting options.









## Notice Board XL



SP Central's Notice Board XL is a large screen option that offers quick patient notification when prescriptions are ready for pickup. The final step of the prescription filling process triggers the Notice Board XL to display the patient's name, or partial name, depending on the pharmacy's choice. Display information is configurable to meet HIPAA requirements and supports pharmacy messages such as holiday store hours.

Patients know immediately when their prescription is ready. Wait time is reduced and questions to the staff about prescription status are minimized. Everyone benefits from the quiet, efficient information exchange.



Configurable to show full or protected patient name (as shown), or other identifying information such as ticket number for sites utilizing ScriptPro's Pharmacy Services Portal.

## **Features and Benefits**

- Offers efficient, easy-to-see in-store prescription notifications
- Minimizes wait times and improves customer service
- Configurable to protect PII
- Supports pharmacy-specific messaging

## **About ScriptPro**

We create innovative, seamlessly-integrated robotics and workflow systems that optimize pharmacy services. As patient care progresses from inpatient to outpatient and long-term care settings, the need for advanced systems to support medication therapy is evolving. Our solutions include strategic planning and financial management services that help health systems succeed in a dynamic and financially challenging environment.

## Notice Board XL



## Specifications\*

Weight: A. Notice Board XL: 39.7 lbs (18 kg)

- B. Computer: 12.7 lbs (5.8 kg)
- C. Wall Mount: 8 lbs (3.6 kg)
- D. Ceiling Mount: 24 lbs (10.9 kg) E. Slim Wall Mount: 6.1 lbs (2.7 kg)

#### **Electrical Input:**

- A. Notice Board XL: 100-240 VAC, 1.4-0.7 AMPs, 50/60 Hz, 1 Phase. Outlet located within 5 feet (1.5m) of power connection.
- B. Computer/Software: Client on ScriptPro-installed network server; Intel Core i5 PC. TCP/IP socket connections.

Five Notice Boards count as a single client against server load limit.

Screen: 40"; 1920 x 1080 resolution; 16:9 aspect ratio

## Temperatures:

Operating: 41°F to 104°F (5°C to 40°C) Storage: -4°F to 140°F (-20°C to 60°C)

Relative Humidity: 20-85% Altitude up to 9,843 feet (3,000m)

## **Installation Mounting Options:**

C. Wall Mount: (corner mount available with same hardware, not shown)

Note: Wall Mount allows monitor to tilt up to 20 degrees from vertical. Supports mounting surfaces of concrete, wood studs, and metal studs.

## D. Ceiling Mount:

Note: Ceiling Mount allows monitor to tilt up to 20 degrees from vertical.

## E. Slim Wall Mount:

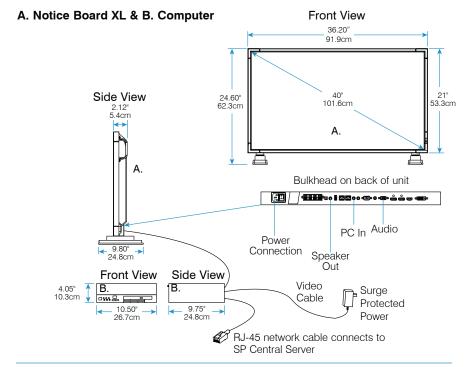
Note: Slim Wall Mount allows monitor to tilt up to 10 degrees from vertical. Supports mounting surfaces of concrete, wood studs, and metal studs. Requires remote installation of Computer (length of video cable between Computer and Monitor cannot exceed 50 ft).

Television (optional): Supports split screen television/ DVD option; standard type F coaxial cable connection for cable television; digital signal only. Compatible Models: 1800-3010-003 and 1800-3010-002. May require firmware update.

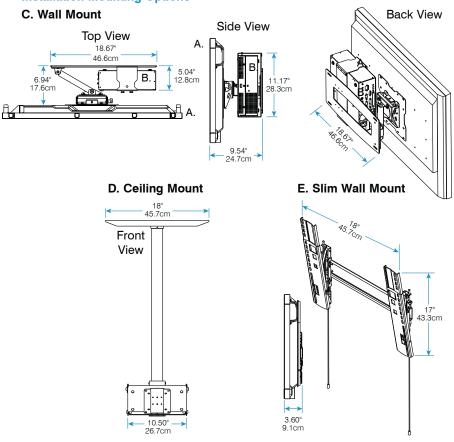
Customer is responsible for installing Notice Board mounting brackets and all required facilities preparation, including electrical and data drops. Installation must be per local codes and provided by local licensed contractor (at customer's expense).

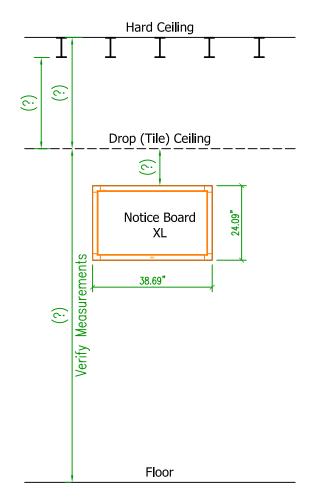
\*Specifications subject to change without notice.

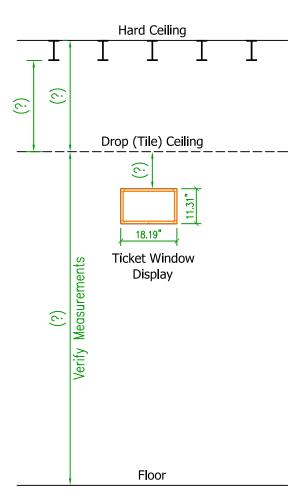
\*\*Requires one additional inch clearance for installation.



## **Installation Mounting Options**









Helmer Scientific, Noblesville, Indiana www.helmerinc.com

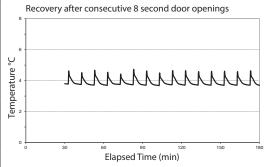
# Technical Data Sheet High-Performance, Medical-grade Refrigerator

Performance Characteristics

Model: iPR125-GX, i.Series® Pharmacy / Upright

Application, Rating, & Electrical Data			
Application	High performance storage of medical and scientific products		
Storage Volume	25.2 cu ft   714 L		
Temperature Range	+2°C to +10°C		
Set Point	+5°C		
Electrical Power	115V 60Hz   220-240V 50/60Hz		
Maximum Current	2.8A   1.55A		
Facility Supply Rating	Branch circuit with earth ground, meeting plug/cord ratings as well as local electrical safety codes and requirements 110-120V AC: 15 A (minimum) 220-240V AC: 10 A (minimum)		
Power Plug/Power Cord Length	NEMA 5-15 hospital-grade   115V 60Hz, 8 to 10 ft (2.4-3.0m) Inquire about additional plug/cord options		
Certification/Agency Listing	QPS (Certified to UL and CSA Standards) IEC/UL61010-2-01: 2016   IEC 61010-1:2010, AMD1:2016		
Energy Star	Yes		
Indoor/Outdoor Use	Indoor use only, non-residential		
Application Environment	Non-corrosive, non-flammable, non-explosive		
Ambient Operating Temperature	+15°C to +32°C   +59°F to +90°F		
Refrigeration			
Refrigeration System	VCC compressor-based, forced-air hydrocarbon		
Compressor	Hermetic, variable speed (VCC). Rated speed range: 1300-4000 rpm		
Condenser Type	Air-cooled fin and tube, sealed		
Expansion Device	Cap tube		
Evaporator Type	Direct expansion with forced-air fin and tube		
Defrost Method	Automatic		
Refrigerant	R600a, Isobutane, EPA SNAP compliant		
Controller / Configuration Settings			
User Interface	i.C3° color touchscreen, door mounted, 7in   177mm, °C or °F		
Power Switch	On/Off		
Controller Type	Microprocessor with touchscreen input & display		
Security	Lockable door, password protected settings, PIN access via optional access control		
Control Sensor	RTD, stainless steel		
Communication Ports	USB, Remote alarm contacts, RJ45 (Ethernet). API available for Ethernet connectivity development		
Power Failure Alarm	Yes		
High/Low Alarms - Tests	Yes, fully adjustable, automatic (Peltier) testing		
Door Ajar Alarm	Yes, fully adjustable		
Condenser Temperature Alarm	Yes, fully adjustable		
Min/Max Temperature	Yes, display and reset		
Download	Yes, via USB. CSV and PDF		
Event Log	Yes, all alarms, door openings, download via USB		
Temperature Log	Yes, download via USB		
Access Log	Yes, with optional access control, download via USB		
Interactive Temperature Graph	Yes		
Temperature Monitoring Ballast	Yes, two 4 oz bottles with screw caps, solid ballasts optional		

Uniformity   °C	+/-1.0
Recovery to 8°C after 3 min door opening   min	9
Stability   °C	0.75
Energy Consumption   kWh/day	3.09
Noise emission   dB	49
Heat Rejection / Emission   BTU/hr	915
Pull-down time to 5°C   min	53
All performance data from 25 cu ft refrigerator, 24.8°	°C ambient, 5.0°C



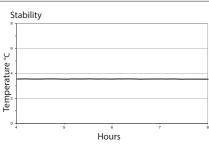
#### Typical Temperature Map 25 cu ft. Temperature Map ℃

	1BL 1M 1FR	●1BR
<b>J</b> FL	· · · · ·	
3FL	3BL 3M 3FR	3BR
	5BL	<b>5</b> BB/
5FL	5FR	
-7FL	77BL 7M 7FR	<b>●</b> 78B
#7FL		

Location of Test Probes

	AVG	MAX	MIN	
1BL	4.8	5.2	4.4	
1BR	4.4	5.4	4.1	
1FL	5.1	5.6	4.8	
1FR	5.5	5.7	5.2	
2M	4.9	5.3	4.5	
3M	4.7	4.9	4.3	
4BL	4.3	4.7	3.9	
4BR	4.3	4.9	4.0	
4FL	5.0	5.1	4.7	
4FR	5.1	5.3	4.8	
5M	4.8	4.9	4.5	
6M	4.6	4.9	4.4	
7BL	4.4	5.1	4.1	
7BR	4.5	5.1 4.		
7FL	4.7	5.1	4.2	
7FR	4.7	5.1	4.3	

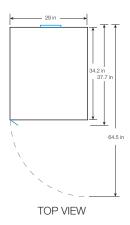
Uniformity	,			
ure °C				
Temperature °C				
آ يَّ				
4	5	Hours	7	8

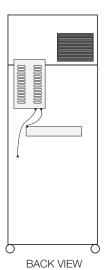


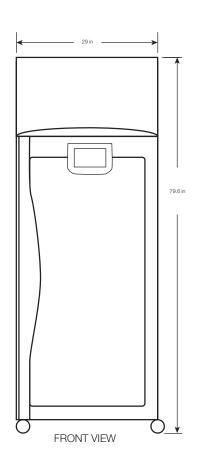


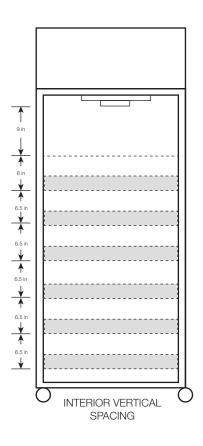
Dimensions and Construction				
Interior (w x h x d)	24.7 x 58.1 x 30 in   628 x 1476 x 762 mm			
Exterior (w x h x d)	29 x 79.6 x 34.2 in   737 x 2021 x 867 mm			
Overall Exterior (w x h x d)	$29 \times 78.3 \times 37.7$ in $ 737 \times 1989 \times 956$ mm *add 0.5" to width if choosing optional access control			
Insulation	Sustainable, US EPA, SNAP and GRAS approved foam			
Exterior/Interior Finish	Bacteria-resistant powder-coating			
Door	1, dual-pane glass, right-hinge			
Access Port	Top Access Port- for external monitoring probe(s) (0.75 in   19 mm diameter) Left Sidewall Port - with interior and exterior plugs (1.75 in   45 mm diameter)			
Interior Storage (w x h x d)	1 ventilated, powder coated, shelf, adjustable 22.5 x 27.9 in   572 x 709 mm, 100 lb   46 kg max capacity/shelf 6 ventilated, powder coated, pull-out drawers, adjustable 21.5 x 3.9 x 28 in   546 x 100 x 713 mm, 100 lb   46 kg max capacity/drawer			
Casters	Yes, swivel-locking			
Integrated Access Control	Optional- electromagnetic-lock with PIN entry via i.C3® user interface			
Net Weight	517 lb   235 kg			
Shipping Weight	607 lb   276 kg			
Clearance Requirements	Minimum of 8" (203mm) above and 3" (76mm) behind unit for clearance and feature access			
Options   Accessories	Integrated access control, Stainless steel interior, Chart recorder, Chart paper, Leveling feet, Solid ballast, Remote alarms, Remote lock adapter kit, Floor and Wall bracket kit, Seismic anchoring Kit, Storage trays, Screen protector, Locking drawer, Left-hinge door, Solid or heated glass door, Top cover, Side-wall access ports, Certificate of calibration, Temperature validation, Validation guide (IQ/OQ), Extended warranty			
Warranty	Rel.i <sup>™</sup> Plus Warranty- 7 years compressor, 2 years parts, 1 year labor Outside US and Canada- Contact your distributor for warranty information			



















# Technical Data Sheet

Laboratory Freezer

## Model

i.Series® iLF104-ADA Undercounter Laboratory Freezer

# Specifications

Application, Rating and Electrical Data				
Application	Storage of medical and scientific products			
Storage Volume	4 cu ft (113 L)			
Temperature Range	-15° to -30°C			
Electrical Power	115V 60Hz			
Maximum Current	5.75 FLA			
Building Supply Rating	15 amp dedicated ground circuit			
Power Plug / Power Cord Length	NEMA 5-15 hospital grade plug (115V) 8-10 ft (2439-3048 mm)			
Certification / Agency Listing	QPS (Certified to UL and CSA Standards)			
Indoor/Outdoor Use	Indoor use only			
Application Environment	Non-corrosive, non-flammable, non-explosive, 15°C to 32°C (59°F to 90°F)			
Refrigeration System				
Refrigeration System	Forced-air circulation			
Compressor / Number	.33 HP hermetic / 1			
Condenser Type / Number	Air-cooled fin and tube / 1			
Expansion Device	TXV valve			
Evaporator Type	Air-cooled fin and tube			
Defrost Method	Automatic, programmable			
Refrigerant Charge	R404A Non-CFC			
Performance Data				
Uniformity	+/-2°C at -30°C Setpoint			
Warranty				
Rel.i™ (US/Canada)	5 years compressor, 2 years parts, 1 year labor			
Outside US/Canada	Consult your local representative			

Controller			
Interface	i.C³ <sub>®</sub> color touchscreen		
Power Switch	On/Off		
Controller Type	Microprocessor with touchscreen input and display. Includes USB port for data retrieval.		
Security	Lockable door, password protected settings, optional PIN access		
Control Sensor	RTD		
Communication Ports	(2) USB Ports (1) RJ45 Hub (1) RS232 Port (optional)		
High / Low Alarms	Fully adjustable		
High / Low Alarm Test	Automatic (Peltier)		
Door Ajar Alarm	Fully adjustable		
Power Failure Alarm	Yes		
Condenser Temperature Alarm	Fully adjustable		
Event Log	All alarms, door openings, download via USB		
Temperature Log	60 days, download via USB		
Access Log	60 days, download via USB		
Interactive Temperature Graph	Yes		
Battery Back-up	20 hour display and alarm battery back-up for i.C³ <sub>®</sub> touchscreen (rechargeable 12V, lead acid battery)		
Dimensions and Construction	ı		
Interior (w x h x d)	19.5 x 17.75 x 22 in 496 x 451 x 559 mm		
Exterior (w x h x d) (Includes leveling feet)	24 x 32 x 26.75 in 610 x 813 x 680 mm		
Overall Exterior (w x h x d) (Includes door handle and leveling feet)	24 x 32 x 28.5 in 610 x 813 x 724 mm		
ADA Compatible	Fits under 34" (864 mm) ADA compliant counters		
Insulation	Sustainable, U.S. EPA and SNAP approved Ecomate®		
Exterior / Interior Finish	Bacteria-resistant powder coating		
Doors	1, Solid		
Access Ports	Rear access port		
Perimeter Heater	Mullion Electric Heater		
Interior Storage / Capacity	2 epoxy coated shelves 18 x 18 in (458 x 458 mm) 100 lb (46 kg) max capacity / shelf		
Leveling Feet	Standard		
Casters	Optional / swivel locking		
Integrated Access Control	Optional - Electromagnetic lock via i.C³ User Interface PIN		
Net Weight	211 lb (96 kg)		
Shipping Weight	271 lb (123 kg)		
Clearance Requirements	Minimum of 3" (76mm) behind unit for clearance and feature access.		
Options / Accessories	Chart Recorder, Stacking Kit, Floor & Wall Bracket Kit, Remote Alarms, Casters, Stainless Steel Interior and Exterior, Remote Lock Adapter Kit, Extended Warranty		

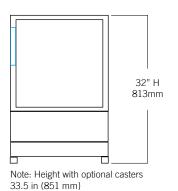


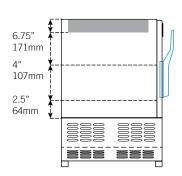
# **Technical Data Sheet**

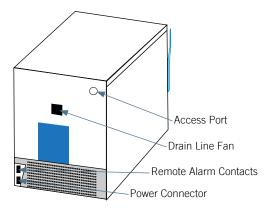
Laboratory Freezer

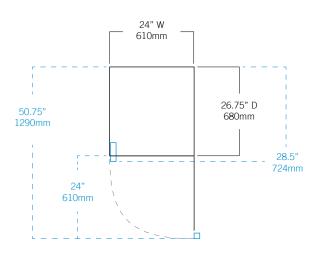
i.Series® iLF104-ADA











Helmer Scientific | 14400 Bergen Boulevard | Noblesville, IN 46060 | USA +1.317.773.9073 | www.helmerinc.com





Helmer Scientific, Noblesville, Indiana www.helmerinc.com

# Technical Data Sheet High-Performance, Medical-grade Refrigerator

Model: iPR105-GX, i.Series® Pharmacy / Undercounter

Application, Rating, & Electrical Data				
Application	High-performance storage of medical and scientific products			
Storage Volume	5.3 cu ft   (150 L)			
Temperature Range	+2°C to +10°C			
Set Point	+5°C			
Electrical Power	115V 60Hz   220-240V 50/60Hz			
Maximum Current	1.4A   0.85A			
Facility Supply Rating	Branch circuit with earth ground, meeting plug/cord ratings as well as local electrical safety codes and requirements 110-120V AC: 15 A (minimum) 220-240V AC: 10 A (minimum)			
Power Plug/Power Cord Length	NEMA 5-15 hospital-grade   115V 60Hz, 8 to 10 ft (2.4-3.0m) Inquire about additional plug/cord options			
Certification/Agency Listing	QPS (Certified to UL and CSA Standards) IEC/UL61010-2-01: 2016   IEC 61010-1:2010, AMD1:2016			
Energy Star	Yes			
ADA Compliant	Yes, fits under standard 34" high ADA compliant countertop			
Indoor/Outdoor Use	Indoor use only, non-residential			
Application Environment	Non-corrosive, non-flammable, non-explosive			
Ambient Operating Temperature	+15°C to +32°C   +59°F to +90°F			
Refrigeration				
Refrigeration System	VCC compressor-based, forced-air hydrocarbon			
Compressor	Hermetic, variable speed (VCC). Rated speed range: 1300-4000 rpm			
Condenser Type	Air-cooled fin and tube, sealed			
Expansion Device	Cap tube			
Evaporator Type	Direct expansion with forced-air fin and tube			
Defrost Method	Automatic			
Refrigerant	R600a, Isobutane, EPA SNAP compliant			
Controller / Configuration Settings				
Controller / Configuration Settings User Interface	i.C3° color touchscreen, door-mounted, 7in   177mm, °C or °F			
	i.C3° color touchscreen, door-mounted, 7in   177mm, °C or °F  On/Off			
User Interface	·			
User Interface Power Switch	On/Off			
User Interface Power Switch Controller Type	On/Off Microprocessor with touchscreen input & display			
User Interface Power Switch Controller Type Security	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control			
User Interface Power Switch Controller Type Security Control Sensor	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports Power Failure Alarm	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development Yes			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports Power Failure Alarm High/Low Alarms - Tests	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development Yes Yes, fully adjustable, automatic (Peltier) testing			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports Power Failure Alarm High/Low Alarms - Tests Door Ajar Alarm	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development Yes Yes, fully adjustable, automatic (Peltier) testing Yes, fully adjustable			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports  Power Failure Alarm High/Low Alarms - Tests Door Ajar Alarm Condenser Temperature Alarm	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development Yes Yes, fully adjustable, automatic (Peltier) testing Yes, fully adjustable Yes, fully adjustable			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports  Power Failure Alarm High/Low Alarms - Tests Door Ajar Alarm Condenser Temperature Alarm Min/Max Temperature	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development Yes Yes, fully adjustable, automatic (Peltier) testing Yes, fully adjustable Yes, fully adjustable Yes, display and reset			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports  Power Failure Alarm High/Low Alarms - Tests Door Ajar Alarm Condenser Temperature Alarm Min/Max Temperature Download	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development Yes Yes, fully adjustable, automatic (Peltier) testing Yes, fully adjustable Yes, fully adjustable Yes, display and reset Yes, via USB. CSV and PDF			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports  Power Failure Alarm High/Low Alarms - Tests Door Ajar Alarm Condenser Temperature Alarm Min/Max Temperature Download Event Log	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development Yes Yes, fully adjustable, automatic (Peltier) testing Yes, fully adjustable Yes, fully adjustable Yes, display and reset Yes, via USB. CSV and PDF Yes, all alarms, door openings, download via USB			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports  Power Failure Alarm High/Low Alarms - Tests Door Ajar Alarm Condenser Temperature Alarm Min/Max Temperature Download Event Log Temperature Log	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development Yes Yes, fully adjustable, automatic (Peltier) testing Yes, fully adjustable Yes, fully adjustable Yes, display and reset Yes, via USB. CSV and PDF Yes, all alarms, door openings, download via USB Yes, download via USB			
User Interface Power Switch Controller Type Security Control Sensor Communication Ports  Power Failure Alarm High/Low Alarms - Tests Door Ajar Alarm Condenser Temperature Alarm Min/Max Temperature Download Event Log Temperature Log Access Log	On/Off Microprocessor with touchscreen input & display Lockable door, password protected settings, PIN access via optional access control RTD, stainless steel USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development Yes Yes, fully adjustable, automatic (Peltier) testing Yes, fully adjustable Yes, fully adjustable Yes, fully adjustable Yes, display and reset Yes, via USB. CSV and PDF Yes, all alarms, door openings, download via USB Yes, with optional access control, download via USB			

1FL	1BL	1FR	1BR
2FL	2BL	2FR	2BR
			$\overline{}$

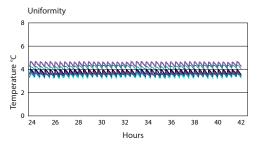
Location of test probes

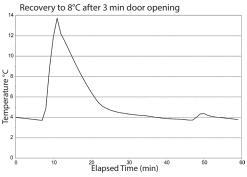
# Typical Temperature Map 5 cu ft. Temperature Map (°C)

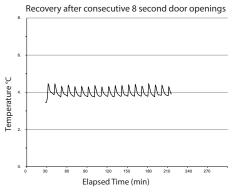
	cara remperature map ( c)							
	1BL	1BR	1FL	1FR	2BL	2BR	2FL	2FR
Avg	3.6	3.4	3.2	3.3	4.4	3.4	4.1	3.7
Max	4.0	4.0	3.5	3.6	4.7	3.8	4.4	4.0
Min	3.2	3.0	2.9	2.9	4.1	3.1	3.8	3.3

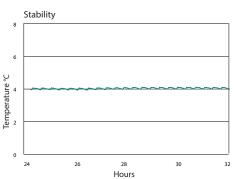
Performance Characteristics (normal operating conditions)		
Uniformity   °C	+/-1.0	
Recovery to 8°C after 3 min door opening   min	11	
Stability   °C	0.72	
Energy consumption   kWh/day	1.37	
Noise emission   dB	42	
Heat rejection   BTU/hr	460	
Pull-down time to 4°C   min	37	

All performance data from 5 cu ft refrigerator, 24.8 ambient, 4.0  $^{\circ}\text{C}$ 





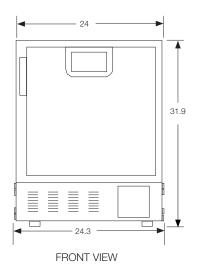


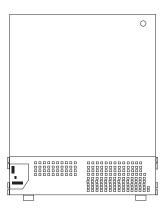




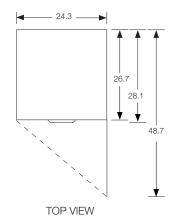
Dimensions and Construction	
Interior (w x h x d)	19.5 x 19.9 x 22.8 in   496 x 505 x 580 mm
Exterior (w x h x d)	$24 \times 31.5 \times 26.7$ in $ 610 \times 798 \times 678$ mm *Add 2.5" to the height if choosing optional casters.
Overall Exterior (w x h x d)	24.3 x 31.9 x 28.1 in   616 x 809 x 714 mm  *Add 0.2" to width if choosing optional access control  *Includes leveling feet, door handle, user interface, and access panels.
Insulation	Sustainable, US EPA, SNAP and GRAS approved foam
Exterior/Interior Finish	Bacteria-resistant powder-coating
Door	Solid, field-reversible
Access Port	Rear Access Port- for external monitoring probe(s) (0.75 in   19 mm diameter)
Interior Storage (w x h x d)	2 ventilated drawers, adjustable 16.7 x 4 x 20.6 in $ $ 424 x 101 x 523 mm, 100 lb $ $ 46 kg max capacity/drawer
Leveling Feet	Yes, adjustable
Integrated Access Control	Optional- electromagnetic-lock with PIN entry via i.C3® user interface
Net Weight	182 lb   83 kg
Shipping Weight	243 lb   111 kg
Clearance Requirements	Minimum 3" (76 mm) behind unit for plug/cord and feature access Front ventilation eliminates the need for top or side clearance
Options   Accessories	Integrated access control, Stainless steel exterior/interior, Chart recorder, Chart paper, Swivel/Locking casters, Solid ballast, Remote alarms, Remote lock adapter kit, Floor and Wall bracket kit, Stacking kit, Pedestal, Storage trays, Screen protector, LED light, Locking drawer, Left-hinge door, Glass door, Certificate of calibration, Temperature validation, Validation guide (IQ/OQ), Extended warranty
Warranty	Rel.i™ Plus Warranty- 7 years compressor, 2 years parts, 1 year labor Outside US and Canada- Contact your distributor for warranty information

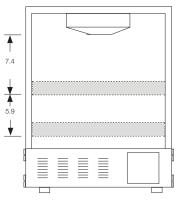






**BACK VIEW** 





INTERIOR VERTICAL SPACING







### 5274

#### Dri Bath Incubator 1 Block



**Specifications** 

Hertz 50/60Hz

Temperature Range (Metric) Ambient +5° to 130°C (Ambient at 25°C)

Certifications/Compliance CE, cULus, RoHS

Electrical Requirements 100-120V 50/60Hz (US)

Dimensions (L x W x H) 11.3 x 7.9 x 3.9 in. (288 x 200 x 100mm)

Includes Dry bath, US style plug, block lifter

No. of Blocks

Temperature Uniformity  $\leq \pm 1^{\circ}C$ 

SOURCE: <a href="https://www.fishersci.com/shop/products/isotemp-digital-dry-baths-block-heaters/s28681">https://www.fishersci.com/shop/products/isotemp-digital-dry-baths-block-heaters/s28681</a>

# **PLANMECA®**





# The premium intraoral X-ray unit...

## ProX Intraoral X-ray

PLANMECA is proud to introduce a new intraoral X-ray unit to its comprehensive collection of imaging products- the ProX.

This advanced unit provides easy and precise positioning, a simple easy-to-use procedure, and high-quality, high-resolution images.

The unique design concept of PLANMECA's ProX makes intraoral imaging easier and more reliable than ever.

- Optimal images for all diagnostic needs: variable kV and mA
- Quick and easy to use: pre-programmed quick settings, practical design
- Digital-ready
- Integrates cleanly with PLANMECA ProSensor system
- Perfect workflow with PLANMECA Romexis
- Versatile installation options



# Superior imaging...

## Optimal images for all diagnostic needs

Advanced technology and practical design make PLANMECA's ProX a premium choice for intraoral imaging. The freely selectable exposure parameters (kV, mA and exposure time) maximize the diagnostic value of intraoral radiography. The focal spot size of the X-ray tube is 0.4 mm, which ensures optimal resolution and clear images.

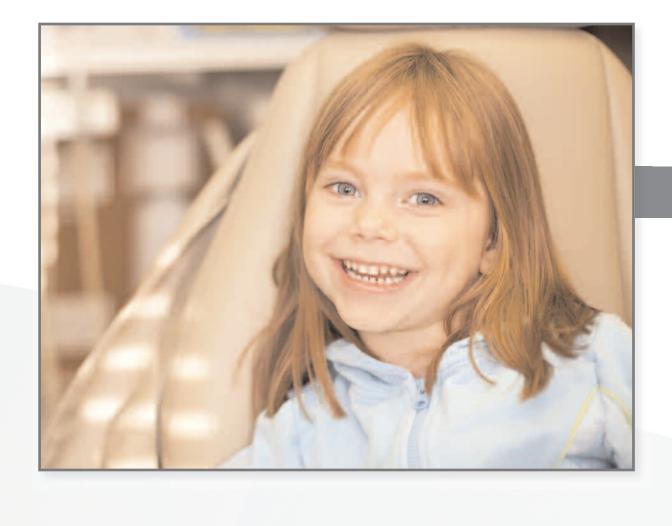
PLANMECA's ProX provides options that assure the best image contrast and density for every diagnostic need and anatomical condition, enabled by variable kilovolts (50–70 kV) and milliamperes (2–8 mA).

50 kV: Low kV settings result in high-contrast images that are useful for endodontics, apex, and bone structure diagnostics.

60 kV: Medium kV settings provide a wide grayscale for general diagnostics when a wide range of clinical information is required.

70 kV: High kV settings produce images with a long grayscale spectrum, which is useful in the detection of caries and periodontal diagnostics





**PLANMECA®** 

#### Reduced radiation

The high-frequency operation of the ProX's constant potential X-ray generator provides significant advantages:

- Reduced radiation dose by up to 25% when compared to conventional AC generators
- Quality, uniform image contrast
- Improved reliability and prolonged lifespan of the X-ray tube

# **PLANMECA®**

# Ease of use...

## **Ergonomic design for easy imaging**

The unique design of the X-ray tube head makes aiming exceptionally easy and precise. Both short cone (20 cm SSD) and long cone (30 cm SSD) imaging techniques can be used, and an additional rectangular collimator can be adapted to the long cone for improved accuracy and localization of radiation to the patient. The steady arm provides smooth and precise movements, ensuring drift-free and accurate positioning of the lightweight tube head.

#### Quick settings with intuitive operation

The imaging parameters are selected from the intuitive control panel.

The unit is pre-programmed with 66 quick settings of different exposure value combinations, and imaging parameters are automatically retrieved according to the selected exposure region and the diagnostic need:

- Periapical imaging
- Upper and lower occlusal plane imaging
- Bitewing imaging
- Endodontic imaging.

The control panel displays the selected values, which can be manually adjusted if needed. There are distinct optimally adjusted settings for adults and children. Altered settings can also be saved into the quick setting memory.



#### Easy imaging mode selection and self-diagnostic system

PLANMECA's ProX offers a smart control for maintaining constant darkness of radiographs whenever imaging conditions change. The unit has 11 density steps that adjust all quick settings when changing the film type or switching between the short and long cone. The selection of the imaging mode allows a rapid transformation of all pre-programmed settings when changing to a new image receptor type. There are predefined imaging modes for film, imaging plate, and digital sensor, which allows a quick and hassle-free transition to new imaging technologies without any reprogramming.

The unit's self-diagnostic control system monitors all functions and displays error messages in the case of abnormal operation; this assists in the correct use of the unit and speeds up technical service.

# **PLANMECA®**

# Image ready...

## Integrated control electronics for digital sensors

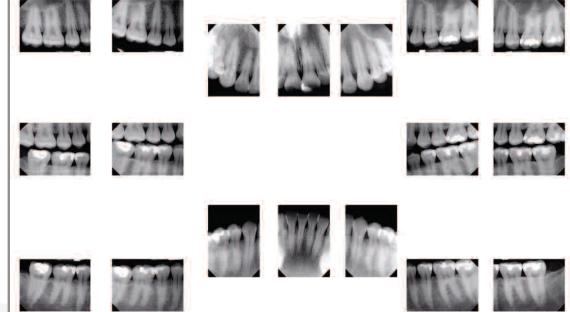
The PLANMECA ProSensor digital intraoral X-ray imaging system supports the workflow of dental treatment. A simple selection of the ProX image mode (film, phosphor plates, or digital) automatically adapts the pre-programmed settings for digital sensors.

The ProX works with PLANMECA's ProSensor digital sensor system for ultimate user-friendliness:

- User can easily position the sensor into patient's mouth with the sensor holder.
- The PLANMECA ProSensor interconnection cable is routed inside the X-ray unit arm, which results in a clear and clean working area with no interfering cables.

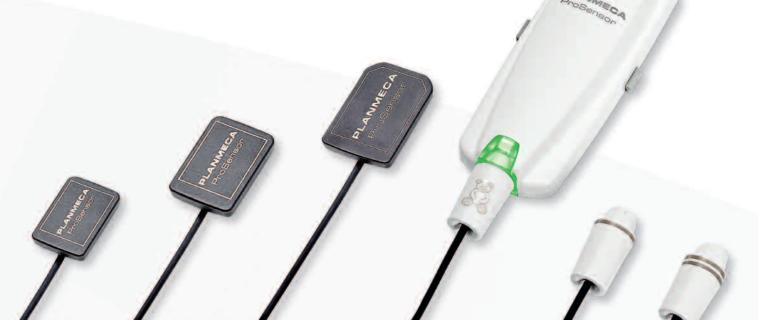
To guarantee a smooth workflow, the PLANMECA ProX has integrated-control electronics and a magnetic connector for Planmeca ProSensor intraoral sensors; this ensures that the ProSensor is always in the right place and within easy reach. All the components of the imaging system – the sensor, the control box, and the PC – can be optimally placed in the treatment environment.





#### Full mouth series customization and support

After the exposure, the image is displayed on the screen within seconds, dramatically shortening the time needed for an intraoral X-ray examination when compared to imaging plates or conventional film.



# **ProX Technical Specifications**

Generator	Constant potential, microprocessor controlled, operating frequency 66 kHz
X-ray tube	Toshiba D-041SB
Focal spot size	0.4 mm according to IEC 60336
Cone diameter	60 mm (2.36 in.) Rectangular 33 x 43 mm (1.30 x 1.69 in.)
Max. symmetrical radiation field	Ø60 mm at SSD 200 mm Ø60 mm at SSD 300 mm according to IEC 806
Total filtration	min. 2.5 mm Al equivalent at 70 kV according to IEC 60522
Anode voltage	7 mA: 50, 52, 55, 57, 60 kV, ±2 kV 2–6 mA: 50, 52, 55, 57, 60, 63, 66, 70 kV, ±2 kV
Exposure times	0.01-2 sec. ±(5% + 0.001 sec.), 24 steps
SSD (Source-Skin Distance) Standard/Long	200 mm (8 in.)/300 mm (12 in.)
Mains voltage	100 V~/110-115 V~/220-240 V~, 50/60 Hz
Duty cycle	1:30, automatic control
Electrical classification	Class I Type B
Weight	total 29 kg (64 lbs) tube head with standard cone 4.2 kg (9.3 lbs) tube head with long cone 4.5 kg (10 lbs)
Color	White (RAL 9016)

# **ProSensor Specifications**

	Size 0	Size 1	Size 2
Sensor type	CMOS with Scintillator		CMOS with Scintillator
Sensor Size	33.6 x 23.4 mm (1.33 x .92 in.)	39.7 x 25.1 mm (1.56 x 0.99 in.)	44.1 x 30.4 mm (1.76 x 1.2 in.)
Active Area	25.5 x 18.9 mm (1.0 x 0.74 in.)	31.5 x 20.7 mm (1.24 x 0.81 in.)	36 x 26.1 mm (1.42 x 1.03 in.)
Physical pixel size	15μm x 15μm		
Theoretical Resolution	33 lp/mm		
Resolution	17 lp/mm		
Pixel size	30 μm		
Interface	USB or Ethernet		

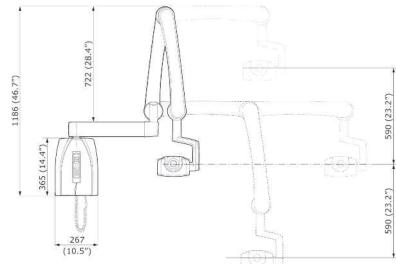
Mounting height from floor:

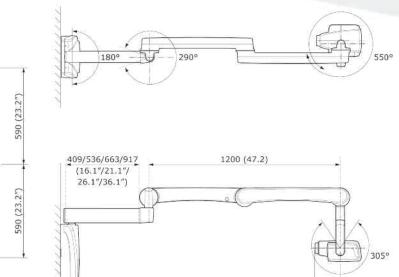
Recommended: 990 mm (39")

Minimum Requirement: 790 mm (31")

PLANMECA®

5760 & 5760a

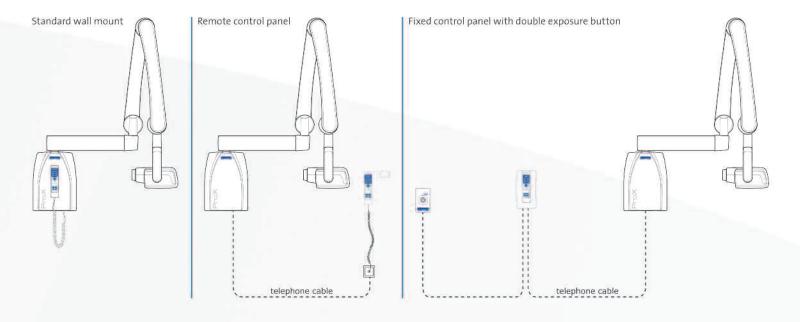




1524/1651/1778/2032 (60"/65"/70"/80")

## Installation options

**Dimensions** 



# digital perfection

#### 5760

# PLANMECA

#### **Technical specifications**

#### Technical data

Generator Constant potential, microprocessor controlled, operating frequency 66 kHz

X-ray tube Toshiba D-041SB

Focal spot size 0.4 mm according to IEC 60336

Cone diameter 60 mm (2.36 in.), Rectangular 33 x 43 mm (1.30 x 1.69 in.)

Max. symmetrical radiation field Ø60 mm at SSD 200 mm, Ø60 mm at SSD 300 mm, according to IEC 806

Total filtration min. 2.5 mm Al equivalent at 70 kV according to IEC 60522

Inherent filtration 1 mm Al equivalent at 70 kV according to IEC 60522

Anode voltage 60, 63, 66, 70 kV, ±2 kV

Anode current 8, 7, 6, 5, 4,  $3, 2 \text{ mA} \pm (5\% + 0.2 \text{ mA})$ 

Exposure times 0.01-2 sec.  $\pm(5\% + 0.001$  sec.), 24 steps

SSD (Source-Skin Distance) Standard/Long 200 mm (8 in.)/300 mm (12 in.)

Mains voltage 100 V~/110-115 V~/220-240 V~, 50/60 Hz

Duty cycle 1:30, automatic control

Electrical classification Class I Type B

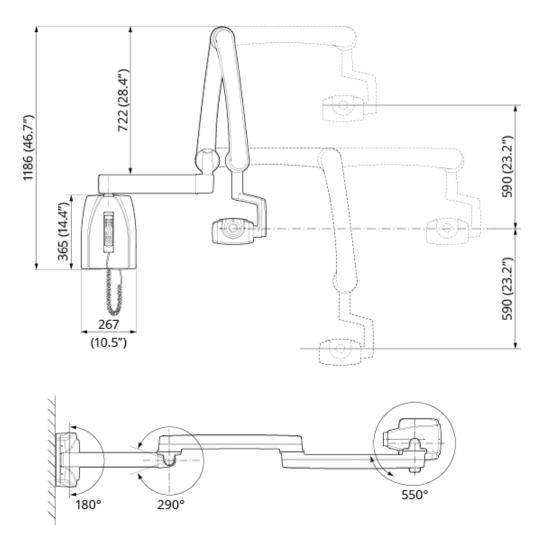
Weight total 29 kg (64 lbs), tube head with standard cone 4.2 kg (9.3 lbs), tube head with long cone 4.5 kg (10 lbs)

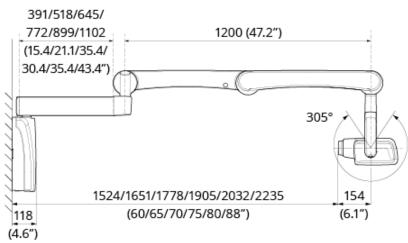
Colour White (RAL 9016)





## **Dimensions**

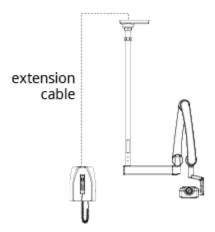




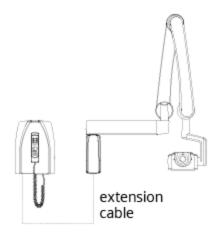
# **Installation options**



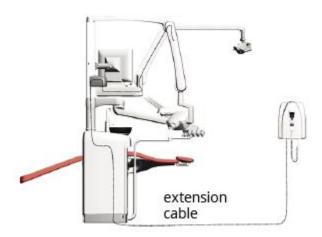
## Standard wall mount



Ceiling mount



Single stud mount



Dental unit mount



## Mobile stand



Floor column



	Tromox op comcontrom
Generator	Constant potential, microprocessor controlled, operating frequency 80kHz
X-ray tube	D-052SB
Focal spot size	0.5 x 0.5 mm (IEC 336)
Total filtration	2.5 mm Al equivalent
Anode voltage	Pan 50 - 84 kV Ceph 60 -84 kV Tomo 50 - 80 kV
Anode current	Pan 1 - 16 mA DC Ceph 1 - 16 mA DC Tomo 0.5 - 15 mA DC
SID	Pan 480 mm (19 in.) Ceph 163 - 170 cm (64 -67 in.)
Primary collimator	Automatic 4-blade
Focal Trough	9-way adjustment
Segmentation	5 vertical; 3 horizontal
Line voltage regulation	100 - 240 VAC 50 / 60 Hz, ± 10 % (automatic)
Line current	8 - 15 Amps
Exterior color	RAL 9016 (white)
Weight	ProMax pan only - 113 kg (248 lbs.) ProMax pan / ceph - 128 kg (282 lbs.)

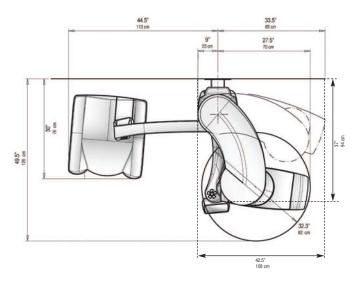
# **ProMax** Film Specifications

Film size	Pan 15 x 30 cm Pan 12.5 x 30 cm Ceph 18 x 24 cm Ceph 8 x 10 in Ceph 24 x 30 cm
Cassette type	Flat
Scan time	Pan 2.7 - 16 sec Ceph 0.2 - 5 sec Tomo 3 - 12 sec
Magnification	Pan constant 1.2 Ceph film 1.08 - 1.13

# **ProMax** Digital Specifications

Digital sensor	CCD Technology
CCD pixel size	33 microns
Image pixel size (selectable)	66 microns, 99 microns, 132 microns
CCD sensor active sensor area	Pan: 9 x 136 mm Ceph: 9 x 270 mm
Grayscale range	12 to 16-bit dynamic range 131,072 grayscale
Image resolution	Pan: 9 lp / mm Ceph: 5.7 lp / mm
Magnification	Pan constant 1.2 Ceph digital 1.13
High speed ceph	Reduce scan time by 50%
Scan time	Pan: 2.5 - 16 sec Ceph: 10 -17 sec Tomo: 3 - 12 sec
Digital image field	Pan: 14 x 30 cm (5.5 x 12") Ceph: 24 x 18 cm (9 x 7") Ceph: 24 x 29 cm (9 x 11.4") Ceph: 27 x 18 cm (10.6 x 7") Ceph: 27 x 29 cm (10.6 x 11.4") Ceph: 18 x 24 cm (7 x 9") Ceph: 18 x 27 cm (7 x 10.6") Ceph: 29 x 24 cm (11.4 x 9") Ceph: 29 x 27 cm (11.4 x 10.6")



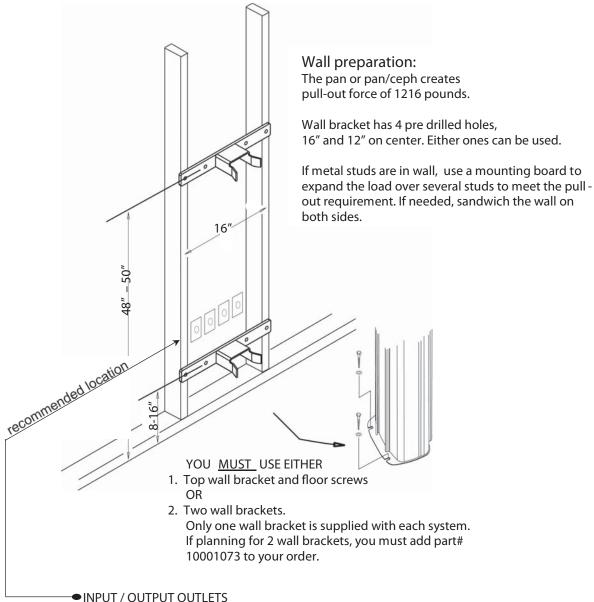


# **Dimensions** and space requirements

		PLANMECA ProMax	PLANMECA ProMax w / Cephalostat
ace nts	Width	113 cm (44.5 in.)	198 cm (78 in.)
Physical Space Requirements	Depth	126 cm (49.5 in.)	76 cm (30 in)
Phys	Height*	154 - 243 cm (60.5 - 95.75 in.)	130 - 220 cm (51.25 - 86.5 in.)
	Width	150 cm (59 in.)	216 cm (85 in.)
Minimum Operational Space Requirements	Depth	163 cm (64 in.)	163 cm (64 in.)
	Height*	244 cm (96 in.)	244 cm (96 in.)
	Weight	113 kg (248 lbs)	128 kg (282 lbs)

\* The maximum height of the unit can be adjusted for offices with limited ceiling clearance

# **ProMax** PRE INSTALLATION INSTRUCTIONS AND DIMENSIONS



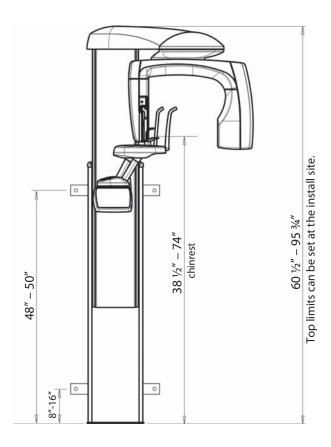
All outlets must be within 3ft from the back of the column and 12"-48" from the floor.

- 1. Power: 110V, 20A dedicated circuit.
- 2. Remote exposure switch (See page 6 for wiring diagram): 2"x4" electrical outlet boxes at ProMax and remote exposure switch location. ½ " conduit between the 2"x4" electrical boxes required.

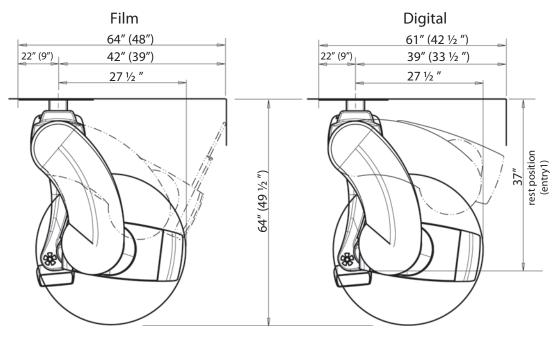
All parts supplied for exposure switch connection.

- 3. Pan/ceph film units w/ Admark: 1½ " conduit to the darkroom, 30ft. cable supplied.
- 4. ProMax Ethernet interface: Standard Ethernet RJ45 port to the network HUB/SWITCH.

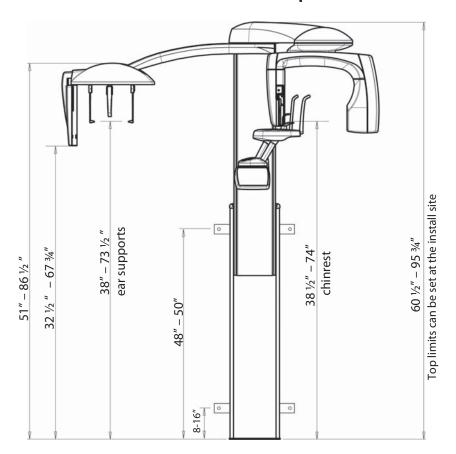
# **ProMax Panoramic**



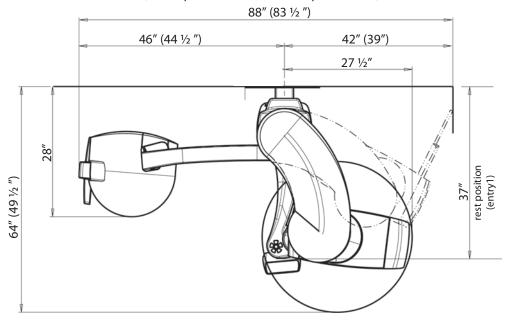
# Recommended operating dimensions (actual product dimensions in parenthesis)



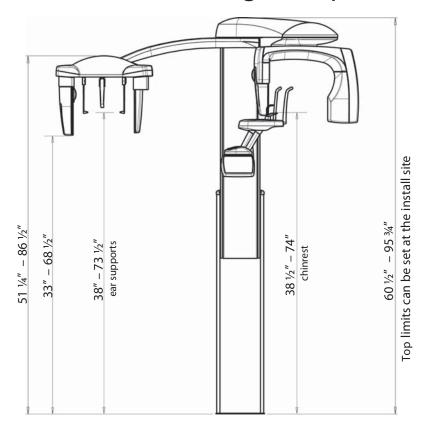
# Promax Film Ceph



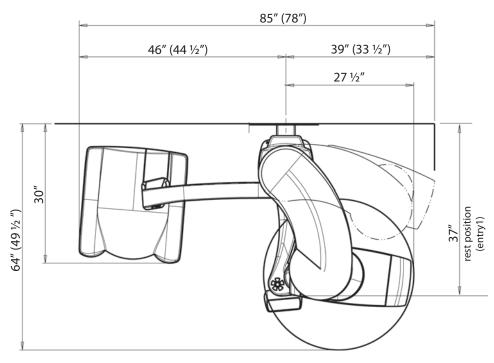
# Recommended operating dimensio ns (actual product dimensions in parenthesis)



# ProMax Digital ceph



# Recommended operating dimensions (actual product dimensions in parenthesis)





#### Other install information:

Each film based machine comes with one Autoprint Pan Cassette ( pan unit )

Standard Pan Cassette plus Ceph Cassette for Admark use (pan/ceph unit)

Extra cassettes Standard panoramic, order number 50024021 w/ Lanex screens: Autoprint panoramic, order number 10001288

Cephalometric, order number 50024015

Film recommended: pan: Agfa Dentus Ortholux 6"x12"

ceph: Agfa Dentus Ortholux 8"x10"

Bite sticks: Bite sticks are autoclavable

Extra bite sticks,10-pak, order number 10004280 Tomo bite plates, 10-pak w/ 2 rods: order number 10005520

2<sup>nd</sup> wall bracket: (optional)

order number 10001073

Handheld exposure switch w/ wall mount

order number 10004040

(optional)

Darkroom: Light tight, GBX2 filter on safe light, 15W frosted maximum.

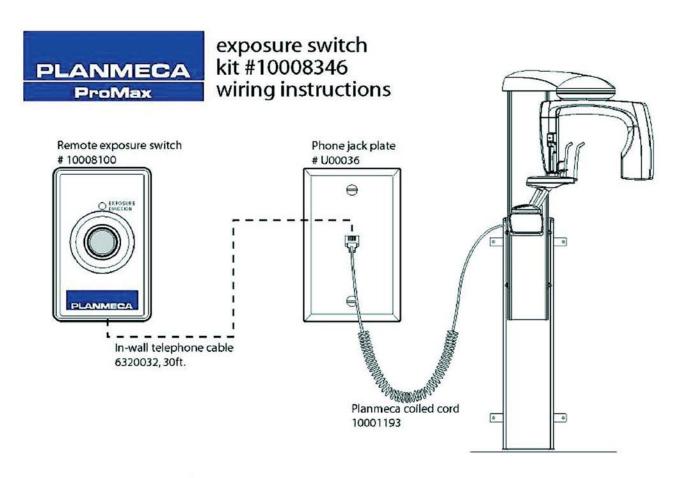
No closer than 48" from open film.

Computer specs: 512 MB of RAM for digital Win 2000, XP

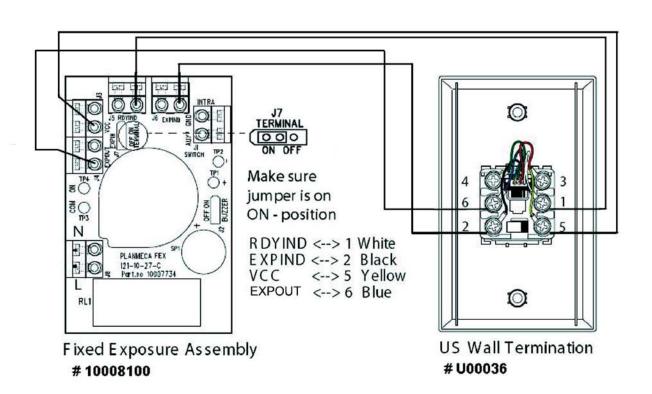
PCAnywhere connection in Imaging Station and Image server computers Hard drive: 2x 40GB for average size practice. Please consult with Planmeca certified computer provider for your computer needs. Requirements vary

greatly based on usage.

For more technical information, please contact Planmeca Customer Care (630) 529-2300 or visit www.PlanmecaUSA.com



## Connection view from behind the plates



# Digital X-ray Imaging Hardware Diagrams

and System Requirements for Planmeca Digital Panoramic and Dixi X-Ray Systems

Planmeca

Digital X-Ray

(ProMax Shown)

#### CPU Specifications Digital Image Workstation

For Panoramic, Bitewing, Tomographic and Cephalometric 2D images
• Pentium 4 or Higher

- 60 GB or better HD · 2 GB or more RAM
- WINDOWS XP / Server 2003 OS / Vista (32 bit OS Only)
- Ethernet 10/100 Mbit
- · 24-32 bit graphic card
- monitor 1024 x 768 res. min. · High Speed Internet, DSL or better

#### NOTE: Dimaxis is NOT compatible with 64Bit OS Systems

Image Acquisition Workstation (2D)

- · Dimaxis Software acquires the Panoramic, Tomographic and Cephalometric images (2D).
- · Dimaxis Imaging Software is used to enhance, filter, measure, diagnose, archive and export the images.

#### Database Server Specifications

- · Pentium 4 or Higher
- 2 Hard Drives, 160 GB each min.
- 1 GB or more RAM
   WINDOWS XP / Server 2003 OS / Vista (32 bit OS Only)
- Ethernet 10/100 Mbit

• Stores and archives all data to MS SQL or SOLID. The data server should have large hard drive disk space, hardware redundancy and a logical backup system.

Note: If using Vista, only Vista Business or Vista Ultimate (32 bit) OS is required and requires Dimaxis 4.3.X or newer.

#### **CPU Specifications** Additional Workstations

For Panoramic,

Tomographic and Cephalometric

images
• Refer to Digital Image Acquisition Workstation (2D)

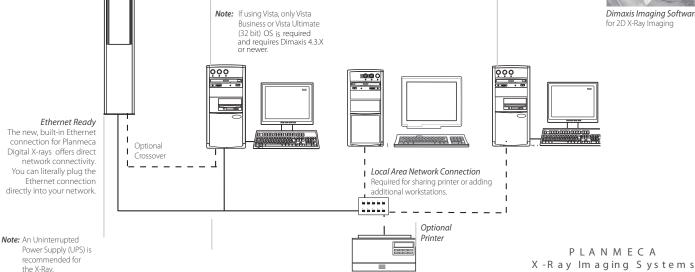
#### Additional Workstation

For Panoramic, Tomographic and Cephalometric images (2D)

· Dimaxis Software

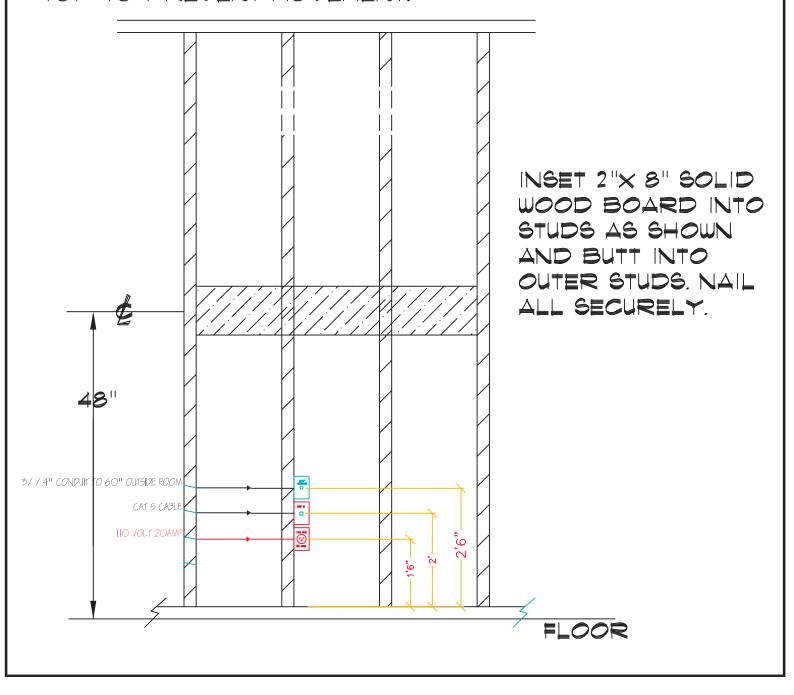


Dimaxis Imaging Software for 2D X-Ray Imaging



# PXRB PANORAMIC XRAY BACKING (NOT TO SCALE)

EACH SUPPORT BOLT MUST WITHSTAND 120 LBS. OF SHEAR LOAD AND 400 LBS. OF WITHDRAWAL FORCE. FLOOR MUST SUPPORT A WEIGHT OF APPROX. 500 LBS. PARTITION SHOULD BE STRUT-BRACED TO TRUSSES AT TOP TO PREVENT MOVEMENT.







M A730 Series

110-013-079 REV E ECO 202802

**Date Effective: JUNE 2017** 

When contacting Global Surgical Corporation for either Customer Service or Technical Service, it will be helpful if you have your **Customer Identification Number** and your **Customer Order Number** available. Please take a moment to record these numbers (printed on invoice) in the spaces below.

Customer Identification Number: _	
Customer Order Number:	



3610 TREE COURT INDUSTRIAL BLVD. ST. LOUIS, MO 63122 1-800-861-3585 IF OUTSIDE THE USA:1-636-861-3388

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Congratulations on your purchase of the A-Series Surgical Operating Microscope System.

We truly appreciate your business, and we're grateful for the trust you've placed in us.

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THE SAFETY AND SATISFACTION OF OUR CUSTOMERS AND THEIR PATIENTS ARE THE HIGHEST PRIORITIES OF GLOBAL SURGICAL CORPORATION. THIS MANUAL CONTAINS IMPORTANT INFORMATION REGARDING THE SAFE AND PROPER USE OF THIS EQUIPMENT AND SHOULD BE READ THOROUGHLY BY ALL OPERATORS PRIOR TO THEIR FIRST USE OF THE EQUIPMENT. FAILURE TO READ AND UNDERSTAND THIS MATERIAL COULD RESULT IN INJURY TO PATIENTS OR PERSONNEL OR IN DAMAGE TO THE EQUIPMENT.

### 1.1 Symbol Definitions



This symbol on the product is an attention symbol, alerting the user to read the Owner's Manual for important installation, operating instructions or safety information.



This symbol on the product indicates a potential electrical shock hazard and alerts the user to read the Owner's Manual for important safety information.



Symbol indicating "not for general waste." Recycle per the EUROPEAN WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) DIRECTIVE.



This symbol indicates earth ground.



For Professional Use Only.



Do Not Push.



This symbol indicates a surface that could be hot to the touch.



This symbol alerts the user that this product emits bright light.



This symbol indicates an explosion hazard.



This symbol indicates a situation in which incorrect handling through disregard of a warning might result in death or serious personal injury.



This symbol indicates a situation in which incorrect handling through disregard of a caution might result in personal injury or may result in damage to property.



This symbol indicates a message to avoid property damage or additional information to help complete a procedure.

### 1.2 Warnings and Cautions



ONLY QUALIFIED PERSONNEL SHOULD WORK ON OR AROUND THIS EQUIPMENT AFTER BECOMING THOROUGHLY FAMILIAR WITH ALL WARNINGS, SAFETY NOTICES AND MAINTENANCE PROCEDURES CONTAINED HEREIN. FOR THE PURPOSES OF THIS MANUAL AND PRODUCT LABELS, A QUALIFIED PERSON IS ONE WHO HAS BEEN TRAINED ON THE INSTALLATION, CONSTRUCTION, OPERATION AND MAINTENANCE OF THIS EQUIPMENT AND WITH THE HAZARDS INVOLVED.



DISCONNECT ALL ELECTRICAL POWER PRIOR TO CLEANING AND DISINFECTING. RISK OF ELECTRIC SHOCK RESULTING IN DEATH OR INJURY IS POSSIBLE IF THE ELECTRICAL POWER IS NOT DISCONNECTED PRIOR TO CLEANING THE UNIT.



TO AVOID THE RISK OF ELECTRIC SHOCK, THIS EQUIPMENT MUST ONLY BE CONNECTED TO A SUPPLY MAINS WITH PROTECTIVE EARTH (=GROUND).



THIS UNIT MUST BE USED ONLY WITH HOSPITAL GRADE EARTH-GROUNDED ACOUTLETS.



RISK OF EXPLOSION IF USED IN THE PRESENCE OF FLAMMABLE ANESTHETICS.



CONNECTING EQUIPMENT TO THE MULTIPLE SOCKET-OUTLET EFFECTIVELY LEADS TO CREATING A MEDICAL ELECTRICAL SYSTEM AND THE RESULT CAN BE A REDUCED LEVEL OF SAFETY.



IT IS HIGHLY RECOMMENDED THAT THE INSTALLATION OF THIS EQUIPMENT BE PERFORMED BY QUALIFIED TECHNICIANS. INSTALLATION BY UNQUALIFIED INDIVIDUALS COULD RESULT IN PERSONAL INJURY.



MINIMIZE SKIN EXPOSURE BY FOCUSING THE LIGHT ON THE AREA WHERE SURGERY IS BEING PERFORMED.



START THE MICROSCOPE WITH MINIMAL LIGHT INTENSITY AND INCREASE THE INTENSITY GRADUALLY. AVOID MAXIMUM INTENSITY OR USE IT FOR AS SHORT A TIME AS POSSIBLE.



NO MODIFICATION OF THE EQUIPMENT IS ALLOWED.



FAILURE TO FOLLOW THESE INSTRUCTIONS WILL RESULT IN DAMAGE TO THIS SYSTEM OR POSSIBLE INJURY (RECEIVER'S RESPONSIBILITY).



WHEN OPENING THE SHIPPING CARTON THE PLASTIC BANDS WILL SPRING APART WHEN CUT. ENSURE THEY WILL NOT HIT ANYONE OR ANYTHING. EYE PROTECTION SHOULD BE WORN WHEN REMOVING THE PLASTIC BANDS. WATCH FOR SHARP EDGES.



CONTACT GLOBAL TECHNICAL SERVICES BEFORE REPLACING THE FUSE.

Section 1	60 Important Safety Instructions
Section	important Salety instructions
WARNING	DISCONNECT ALL ELECTRICAL POWER PRIOR TO REPLACING FUSE.
WARNING	USE ONLY A 5MM X 20MM CYLINDER, SLOW-BLOW, 6 AMP 250 VOLT FUSE.
WARNING	NEVER REPLACE A BLOWN FUSE WITH A HIGHER-AMP FUSE. ALWAYS REPLACE THE FUSE WITH ONE WITH THE SPECIFIED AMP RATING.
CAUTION	Contents are fragile and should be removed carefully.
CAUTION	Some of the parts may be damaged by knives, open boxes carefully.
CAUTION	After opening boxes check the serial numbers of the optics against the packing slip.
CAUTION	Open boxes containing the optics over a table or counter.
CAUTION	When handling the optics do not touch the glass with your fingers.
CAUTION	Do not clean any surface with petroleum-based solvents such as acetone or M.E.K. (Methyl Ethyl Ketone). These solvents will remove paint and cause permanent damage to plastic surfaces. Using these solvents also presents a danger to individuals if the solvents are opened in a poorly ventilated room.
CAUTION	Replacement parts, such as cables, must be purchased through Global Surgical to ensure proper compliance requirements. The use of other cables may affect EMC performance. Unauthorized use of these items will void warranty and may cause injury to you, others and/or the equipment.
CAUTION	When used in clinical or residential areas near radio or TV units, this equipment may be subjected to radio interference. To avoid adverse electromagnetic effects, do not operate this equipment near RF energy equipment.
CAUTION	To prevent any potential electromagnetic interference, do not use any kind of cellular phone near the equipment.
NOTICE	Check for damage before discarding the shipping material and notify Global Surgical Customer Service if shipping damage is observed.

NOTICE

NOTICE

Save this manual for future reference.

components are still within.

NOTICE

If you have ordered accessories, then some of these may be assembled to the unit while others are supplied unassembled. Please examine the content of the box thoroughly. If any accessories require assembly, then instructions will be included.

Contents are packed in several boxes. Before discarding any packaging ensure no



This equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the installation manual 110-013-080 M A730 Series Installation Manual.



Portable and mobile RF communications equipment can affect medical electrical equipment.



See the owner's manual for each electrical component for specific safety and use information.





ARMS SHOULD BE FOLDED AND LOCKED IN STORAGE POSITION, AS SHOWN IN THIS FIGURE FOR SAFE TRANSPORT. FAILURE TO DO SO COULD RESULT IN DAMAGE TO THE SYSTEM OR PERSONAL INJURY.

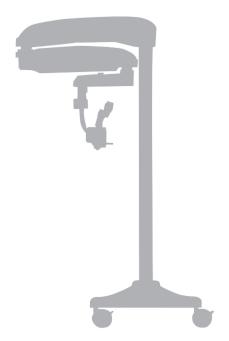








DO NOT PUSH UNTIL SUPPORT SYSTEM IS IN TRANSPORT POSITION.



WARNING
---------

FAILURE TO FOLLOW THESE INSTRUCTIONS WILL RESULT IN DAMAGE TO THIS SYSTEM OR POSSIBLE INJURY (RECEIVER'S RESPONSIBILITY).



THE PLASTIC BANDS WILL SPRING APART WHEN CUT ON THE SHIPPING BOX. ENSURE THEY WILL NOT HIT ANYONE OR ANYTHING. EYE PROTECTION SHOULD BE WORN WHEN REMOVING THE PLASTIC BANDS. WATCH FOR SHARP EDGES.



Contents are fragile and should be removed carefully.



Some of the parts may be damaged by knives, open boxes carefully.



After opening boxes check the serial numbers of the optics against the packing slip.



Open boxes containing the optics over a table or counter.



When handling the optics do not touch the glass with your fingers.

NOTICE

Check for damage before discarding the shipping material and notify Global Surgical Customer Service if shipping damage is observed.

NOTICE

Contents are packed in several boxes. Before discarding any packaging ensure no components are still within.

NOTICE

Save this manual for future reference.

NOTICE

If you have ordered accessories, then some of these may be assembled to the unit while others are supplied unassembled. Please examine the content of the box thoroughly. If any accessories require assembly then instructions will be included.

All shipping materials should be retained until it has been determined that the unit was not damaged during shipment.

#### If damage is discovered, complete the following:

- 1. Do not refuse shipment.
- 2. Make a notation on the delivery receipt and inspect the carton for damage.
- Take pictures of damage to the equipment and to the packaging (if evident).
- 4. If damage is discovered, leave in original container and request immediate inspection from the carrier within 3 days.
- 5. Contact the Global Surgical Customer Service Department at 1-800-861-3610.

If the product is damaged electrically or mechanically and in the event the original packing materials are no longer available, contact Global Surgical Technical Services Department.

Refer to Section 8 of this manual regarding Technical Service contact information and proceed as instructed.

# 3.1 A-Series Surgical Operating Microscope Systems

The Surgical Operating Microscope is a system of modular components intended to improve ergonomics, vision, and lighting during dental and medical procedures/examinations. If the options are chosen, the microscope system may also aid in documentation. Components may include, but are not limited to, support system, binoculars, objective lens, light source, beamsplitters, and video/photography systems. There are four support system options to choose from to meet the clinician's needs: a floor stand model, a floor mounted model, a wall mounted model and a ceiling mounted model. All support system models provide maneuverability and sturdy, stable support for the microscope and coupler arm assemblies. These systems fold into convenient storage positions when not in use.

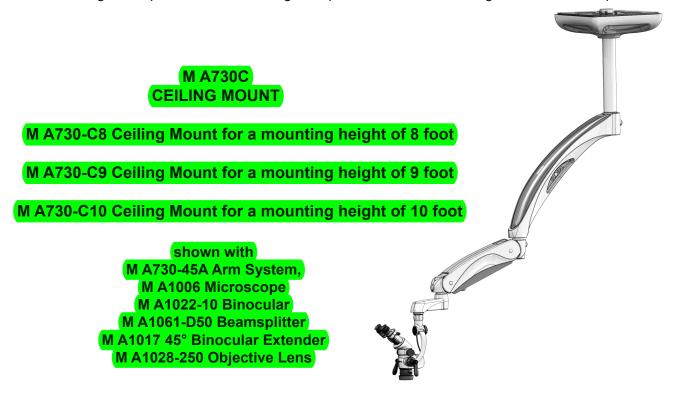
# 3.2 Microscope Support Systems Configurations

The A-Series Microscope Support System is available in four configurations:

**Floor Stand Support System Model (M A730F)** The floor stand support system model is designed for portability around the office/examination room. It uses a compact H-Base with four large casters, occupying minimal floor space. All four casters may be locked to prevent rolling. As the floor stand support system is mobile, care must be taken to ensure safe transportation and to avoid any personal injury or damage to the system.



Ceiling Mount Support System Model (M A730-C8, M A730-C9 and M A730C-10) The ceiling mount support system model is designed to permit maximum range of operation while eliminating the use of floor space.



#### Floor Mount Support System Model (M A730FM) and Thru The Floor Mount (M A730FMT)

The floor mount support system model is designed to be installed on the floor in a fixed location within the office/examination room.

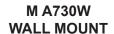


M A730FM FLOOR MOUNT

M A730FMT FLOOR MOUNT THROUGH THE FLOOR

shown with
M A730-HA Arm System,
M A1006 Microscope
M A1022-10 Binocular
M A1061-D50 Beamsplitter
M A1017 45° Binocular Extender
M A1028-250 Objective Lens

**Wall Mount Support System Model (M A730W)** The wall mount support system model is designed for areas with limited floor space. It provides an unobstructed range of working area and folds flat against the wall for convenient storage.



shown with
M A730-HA Arm System,
M A1006 Microscope
M A1022-10 Binocular
M A1061-D50 Beamsplitter
M A1017 45° Binocular Extender
M A1028-250 Objective Lens



## M A730W HIGH WALL MOUNT

shown with
M A730-45A Arm System,
M A1006 Microscope
M A1022-10 Binocular
M A1061-D50 Beamsplitter
M A1017 45° Binocular Extender
M A1028-250 Objective Lens

# 4.1 Microscope Components and Accessories

# **Microscope Head**

The A-Series M A1003 Microscope provides the user with 3 steps of magnification, the M A1004 provides 4 steps of magnification and the M A1006 Microscope provides 6 magnification steps.

Each of the A-Series Microscopes may be used with a variety of A-Series binoculars, objective lenses and other accessories.



# **M A801-LED**

The A-Series M A801-LED Light Source provides light to the surgical site for illumination and improved optical clarity.



Section 4

#### M A1047LFM Laser Filter

This laser filter is meant for use with a corresponding specific wavelength laser and A-Series Microscope System equipped with a M A1047LFM laser filter module.



# M A1019 Binocular Rotation Ring



Allows for better operator positioning. Rotates the binocular +/- 25 degrees.

# M A512 Dual Iris Diaphragm



Allows for greater depth of field which is particularly valuable for photography.

#### M A1061-D50 & M A1061-DVA50 Dual Port Beamsplitter



The dual port beamsplitter models have two (2) mounting ports for camera adapters. This allows the simultaneous use of a still camera and video camera if so desired, but other configurations are certainly feasible. The dual port beamsplitters can be configured with either one 50/50 prism and one 95/5 prism, M A1061-DVA50 or with two 50/50 prisms, M A1061-D50. The beamsplitter can mount to the microscope with either prism on the right or left, depending on personal preference. The choice of which prisms to use should be based on the type of cameras intended to be mounted to the microscope.

# M A1061-SVA & M A1061-S50 Single Port Beamsplitter



The single port beamsplitter models have one (1) mounting port for a camera adapter. The beamsplitter can be configured with a 50/50 prism M A1061-S50 or 95/5 prism M A1061-SVA. The M A1061-S50 model directs 50% of the light through the microscope toward a camera mounted on the side of the beamsplitter, while the other 50% of light passes through to the user's eye. The M A1061-SVA prism directs only 5% of the light toward the camera while the other 95% of the light passes through to the user's eye. The beamsplitter can mount to the microscope with the port oriented toward the user's right or left, depending on personal preference. The choice of which prism to use should be based on the type of camera intended to be mounted to the microscope.

# M A1017 Carr Adapter, 45° Binocular Extender



Provides ergonomic benefits by positioning the binocular higher and further from the microscope body.

#### M A1022 Series Binoculars



The inclinable binoculars allow for 0-220 degrees of tilt articulation. This feature accommodates multiple user heights while maintaining optimal ergonomic posture. It also allows the user to maintain this posture while moving the microscope head.

## M A1021 Series Binoculars,

The inclined binoculars are a more economical choice, but limited to a fixed 45 degree tilt angle.

#### M A1020 Series Binoculars

The straight binoculars are for use in ENT and otolaryngology and may also be used with the binocular coobservation systems.

#### M A1028-200, M A1028-250, M A1028-300 Objective Lens



Convenient fine focus feature allows for easy adjustment of objective lens. Range of 20mm allows for easy focus adjustment without moving the microscope. The M A1028-200 provides 200mm working distance between the lens and the surgical site; the M A1028-250 provides 250mm and the M A1028-300 provides 300mm.

# M 1028ML Multi-Focal Objective Lens



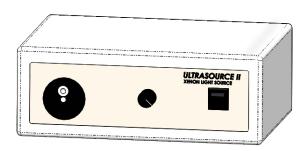
The Multi-Focal Objective Lens allows the user to focus the microscope on an object anywhere between 200 and 350mm away from the microscope without having to move the microscope. This promotes optimal ergonomic comfort and minimal adjustment throughout multiple procedures.

#### M A517HD1080 Series HD Color Video Camera



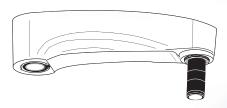
The M A517HD1080 Series high definition camera outputs HDMI video at true 1080p HD resolution. The 1/3" C-mount design offers a compact and lightweight HD video solution. The on-camera push-button is used for one-push white balance and push-hold for image flip. Use with camera adapter M A528STHDC.

# M A794XA-730 UltraSource II™ Xenon LightSource



The UltraSource II™ Xenon LightSource is a high efficiency light source utilizing Xenon illumination technology.

## M A730-717 17" Support Extension Arm



Provides additional reach for the microscope system for use in a wide variety of office applications. This arm can be used to avoid other obstacles in offices such as x-ray units or cabinets.

## **Eyecups**

#### M 1039GL



## Long Silicone Eyecup for A and G-Series Binocular

5/8 inches tall for Aand G-Series binocular this is the ideal eyecup for users who do not wear glasses.

#### M 1039G

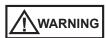


Low Profile Short Silicone Eyecup for A-Series Binocular

Low profile 5/16 inches silicone eyecup for A-Series binocular. This is the ideal eyecup for users who wear glasses.

Section 4 Accessor

#### **Multiple Socket-Outlet**



ONLY CONNECT ITEMS THAT GLOBAL SURGICAL HAS SPECIFIED AS BEING COMPATIBLE WITH THE MICROSCOPE SYSTEM. CONNECTING EQUIPMENT THAT IS NOT INTENDED FOR USE WITH THE MICROSCOPE SYSTEM TO THE MULTIPLE SOCKET OUTLETS MAY RESULT IN INJURY AND/OR DAMAGE TO THE MICROSCOPE SYSTEM.



CONNECTING ELECTRICAL EQUIPMENT TO THE MULTIPLE SOCKET OUTLETS EFFECTIVELY LEADS TO CREATING A MEDICAL EQUIPMENT SYSTEM AND THE RESULT CAN BE A REDUCED LEVEL OF SAFETY.



ADDITIONAL MULTIPLE SOCKET OUTLETS AND/OR EXTENSION CORDS SHOULD NOT BE CONNECTED TO THE MICROSCOPE SYSTEM'S MULTIPLE SOCKET OUTLETS.

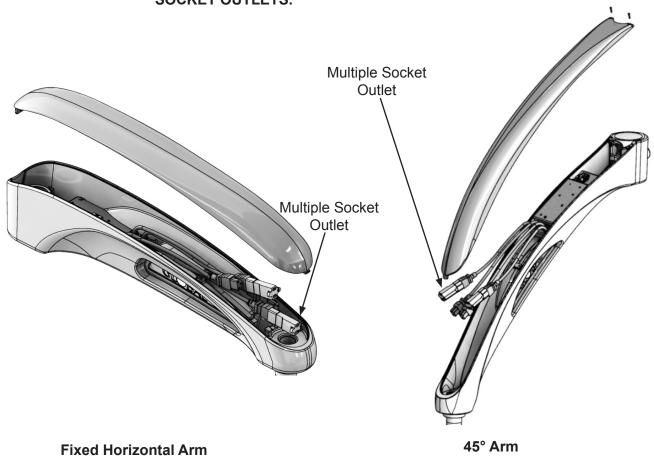


Figure 4-1 Multiple Socket Outlet

The multiple socket outlet provided with the microscope system allows for attaching additional equipment to aid in vision, lighting and documentation.

These outlets should only be used for supplying power to equipment that is intended to form part of the medical equipment system: digital camera, video camera, Xenon Ultrasource LightSource, and TV monitor. Please refer to International Standard IEC 60601-1:2005, Medical electrical equipment – Part 1: General requirements for basic safety and essential performance, for the requirements that are applicable to a medical equipment system.

The maximum permitted load for the microscope system is 240 VAC.

## 4.2 Installation of Optical Accessories

#### Installation of the A-Series Binocular

To install the binocular, **Refer to Figure 4-2** and proceed as follows:

- 1. Loosen the set screw on the microscope body with a 5/64" hex wrench so it will not interfere with the dovetail-shaped bottom of the binocular head.
- 2. Slide the binocular head into the retaining ring so the dovetail-shaped bottom slides under the two wedge-shaped tabs at the rear of the retaining ring.
- 3. To align the binocular, position the binocular head so the U-Shaped slot at the rear of the binocular base is installed over the slotted screw in the binocular retaining ring.
- 4. Tighten the set screw. When the microscope body and the binocular head are properly aligned, the binocular head will not rotate in the binocular retaining ring.

NOTICE

M A1047LFM Laser Filter, M A1019 Binocular Rotation Ring, M A512 Dual Iris Diaphragm, M A1061-D50 & M A1061-DVA50 Dual Port Beamsplitter, M A1061-SVA & M A1061-S50 Single Port Virtual Beamsplitter, M A1017 Carr Adapter will install in very much the same way. See the installation instructions that are included with each accessory.

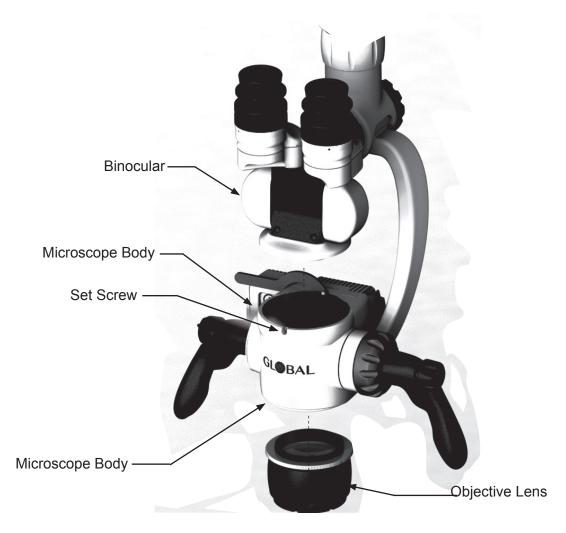


Figure 4-2 Installation of the A-Series M A1003, M A1004, and M A1006 Optics

## 4.3 Installation of the Multi Focal Objective Lens

To install the threaded objective lens to the microscope body, **Refer to Figure 4-3** and proceed as follows:

NOTICE

The knob is shipped unattached. Do not attach until after the multi-focal lens is assembled to the microscope.

- 1. Ensure the lock ring is threaded down fully on the Multi Focal lens before installing the lens on the microscope body.
- 2. Thread the Multi Focal lens into the microscope body in the direction of the arrow shown until the lens stops.
- 3. The knob location can be positioned for user comfort. Back the lens out of the microscope body (NO MORE THAN 1 FULL TURN) to position the knob shaft in the desired location (right side for right-handed user or left side for left-handed user is recommended).
- 4. While holding the multi-focal lens body, turn the lock ring until it is tight against the bottom of the microscope body. This prevents the multi-focal lens from rotating after installation.
- 5. Attach the knob by pushing it onto the shaft until fully seated.

NOTICE

The M A1028-200, M A1028-250 and M A1028-300 fine focus will install in very much the same way. See the installation instructions that are included with each accessory.

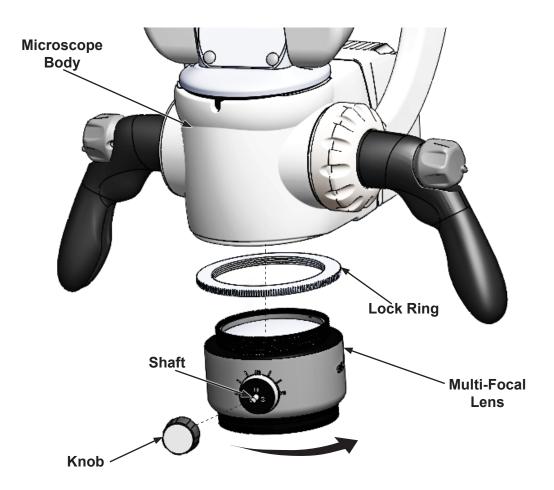


Figure 4-3 Installation of the A-Series™ M A1028ML Multi-Focal Lens

## 5.1 Turning On The System



THIS UNIT MUST BE USED ONLY WITH HOSPITAL GRADE EARTH-GROUNDED ACOUTLETS.

Plug in the system into a hospital grade earth-ground AC outlet. Turn power on to the system by depressing the LED power button. The green indicator light(s) at the lowest setting will come on indicating that there is power to the system and the intensity setting. When the LED power button is depressed again the light(s) will extinguish indicating that the power to the system is turned off. Depress the power button again and the LED will come on at the last intensity setting used. **See Section 5.13** "M A801-LED Light Source Operation" or the LED owner's manual 110-013-081 for instructions.

If set up with a wall switch make sure the wall switch is turned on and then depress the LED power button.

To safely terminate the operation of the microscope system, unplug the microscope or turn off the microscope via wall switch where applicable.



Figure 5-1 Power Button

# 5.2 Description and Location of Controls

Figure 5-2 shows the location of the system controls.

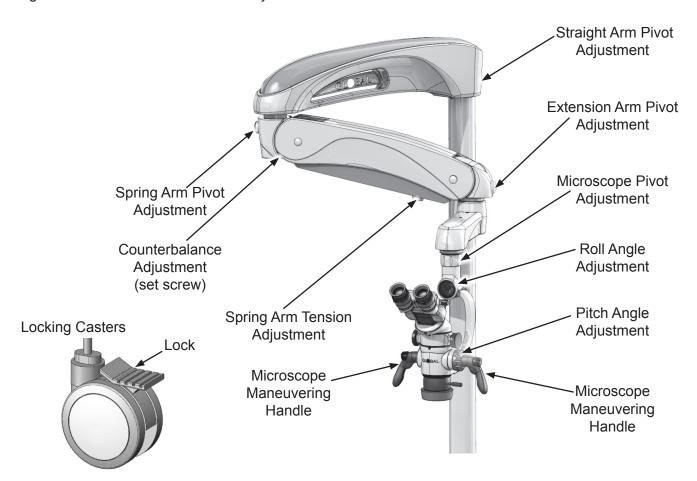


Figure 5-2 Location of Controls

It is best to set the feel of the microscope before attempting to use the microscope so the user comfort is optimized for the microscope procedures.

#### 5.3 Counterbalancing Adjustment

Counterbalancing is done to ensure the microscope head moves with very little pressure (typically from user pressing on the eyecups) To do this the weight of the microscope head must be counterbalanced with the spring arm.

The upward lift of the spring arm assembly can be adjusted to match the weight of the microscope and its accessories. This adjustment is called "counterbalancing". Before adjusting the counterbalance, ensure that all accessories are installed on the microscope and the spring arm tension adjustment knob is loose. To loosen the spring arm tension adjustment knob turn the knob clockwise. Insert the 3/16" hex wrench into the center hex-socket screw (located under the end of the spring arm assembly that attaches to the horizontal arm) and turn the tool to the right (clockwise) if the microscope falls when released, or turn the tool to the left (counterclockwise) if the microscope rises when released.

#### See Figure 5-3

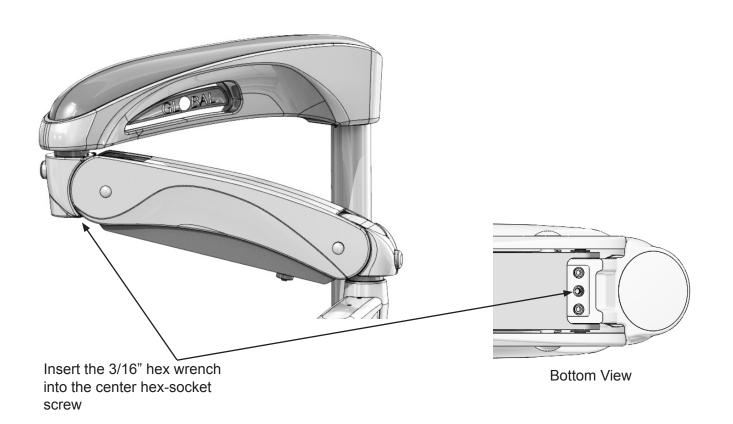


Figure 5-3 Counterbalancing Adjustment

# 5.4 Spring Arm Tension Adjustment

Adjusts the amount of tension required to move the spring arm up and down. Turn the knob to adjust the spring arm tension. **See Figure 5-2** 

## 5.5 Pivot Adjustment

Adjusts the amount of effort required to rotate the spring arm and extension arm from side to side. Push in the pivot knob until it pops out. Turn the pivot adjustment knob to the right to tighten the tension or turn to the left to loosen the tension. **See Figure 5-4** 

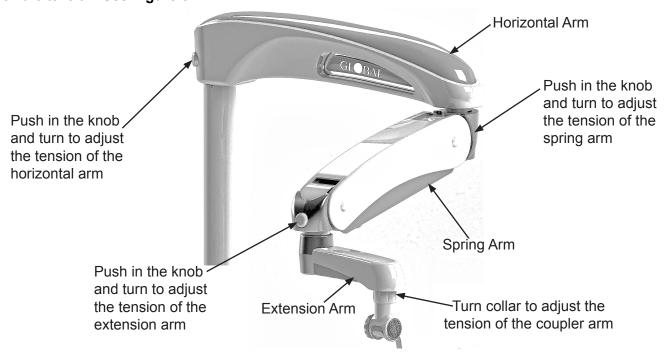


Figure 5-4 Pivot Adjustment

# 5.6 Roll Angle Adjustment

Adjusts the amount of tension required to rotate the microscope right or left. It can be adjusted by tightening or loosening the roll angle adjustment knob. This knob is located at the rear of the coupler arm. **See Figure 5-5** 

#### 5.7 Pitch Angle Adjustment

Adjusts the amount of tension required to rotate the microscope forward or backward. It is adjusted by tightening or loosening the pitch angle adjustment knob. This knob is located on the right side of the microscope body. **See Figure 5-5** 

## 5.8 Floorstand Locking Casters

To secure the support system after it is rolled to its desired location, engage the locks on the casters. The lock is pushed down to obstruct regular wheel movement. This fixes the support system into a desired place. You can pull up the caster lock to release the wheel and move the support system, if necessary. **See Figure 5-2** 

## 5.9 Microscope Maneuvering Handles

Maneuvering handles can be adjusted to user's preferred position. To change the position of the maneuvering handles, depress the handles in towards the body of the microscope. While depressing the handles, position the handles to a position comfortable for your purposes and then release the handles. The handles will lock into place. **See Figure 5-5** 

## **5.10 Microscope Components**

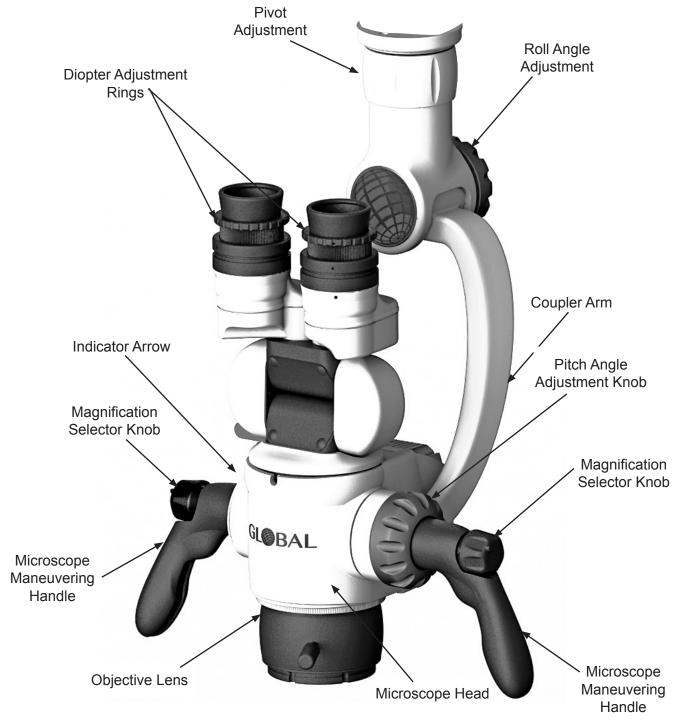


Figure 5-5 Microscope Components

# **5.11 Magnification Selection**

All A-Series M A1003, M A1004 and M A1006 Microscopes have two magnification factor selection knobs, one on each side of the microscope body. Either of these knobs should be turned until the desired magnification factor is facing the indicator arrow on the left side of the microscope body.

**See Section 9**, Technical Information, for the magnification and focal length information.

## 5.12 Focusing The Microscope

The coarse focus on the microscope system is achieved by raising or lowering the microscope assembly with the spring arm. Fine focus is obtained by moving the fine focus objective lens.

The parfocal adjustment of the microscope allows the user to adjust the eyepieces to correct for nearsightedness or farsightedness. It is essential to perform the parfocal adjustment prior to using any still or video camera applications. If the parfocal adjustment is not performed, the microscope can still be focused on a selected magnification, but other magnification settings may not be in focus.

The steps listed below should be followed for making the parfocal adjustments on the microscope:

- Each operator of the microscope will require his or her own parfocal settings which should be set before any procedures are performed. Due to changes in eye correction associated with time, it is recommended that this procedure be performed by each operator a minimum of one time per year.
- 2. Position the microscope above a flat stationary surface, with the bottom of the objective lens parallel to the surface.
- 3. Using a pen or pencil, mark an "X" on a piece of white paper for a focusing target and place it in the center of the illumination field of the microscope.
- 4. Depress the diopter tension lever and set the diopter adjustment rings on both eyepieces to "0". **See Section 5.18** for additional information.
- 5. Without looking through the binoculars, adjust the fine focus objective lens to its approximate midpoint.
- 6. Set the magnification to the highest setting. Raise or lower the microscope vertically until the "X" is in optimum focus.
- 7. Adjust the fine focus objective lens until a sharp focus is acquired.
- 8. Tighten the spring arm tension adjustment (**See Figure 5-2** for location) on the spring arm assembly to prevent the microscope from moving. Set the magnification to the lowest setting. Focus both eyepieces, one at a time, by turning the diopter adjustment ring until the image is clear and sharp.



It is particularly important to perform the parfocal procedure when an image through the microscope is clear but the same image through a still or video camera is not focused, or vice-versa.

Use direct vision whenever possible to free hands for instruments.

## 5.13 M A801-LED Light Source Operation

Once the light source is installed, it is ready for operation. The light source has instant on/off capabilities. The power button will toggle power off and on with each press of the button. When power is first applied to the light source, the green bottom indicator light will turn on. When the power button is pressed off and then on again the last level used will be illuminated. **See Figure 5-6** 



BEFORE operating the light source, refer to the Owner's Manual 110-013-081 for any warnings and cautions associated with the use of the Light Source to ensure safe operation.



The LED light source has been tested according to IEC 60601-2-57 Non-laser light source. The test results show no photobiological hazard associated with the use of this LED light source as it is intended, to include hazards associated with blue light wavelengths.

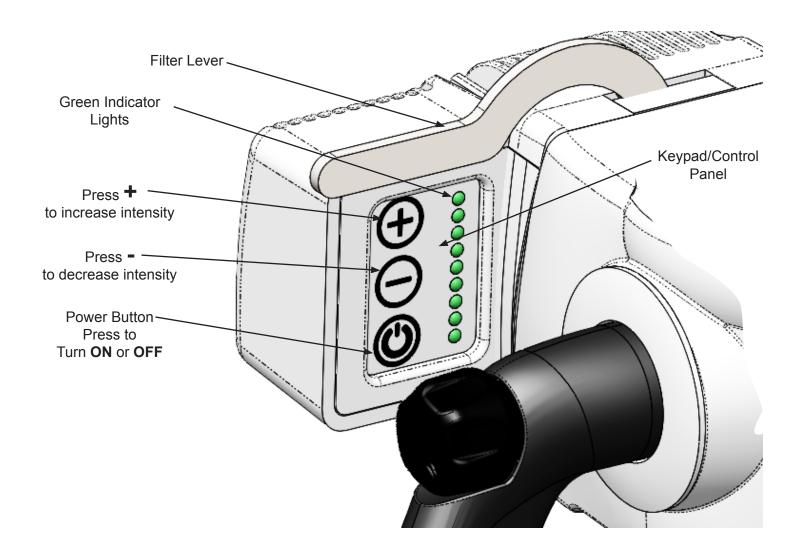


Figure 5-6 LED Control Panel

## 5.14 Brightness Settings and Memory

There are nine levels of brightness which can be selected using the  $\bigoplus$  and  $\bigoplus$  buttons while the power is on. The level of brightness is indicated by the green indicator lights located on the keypad/control panel. An indicator light will light up for each increase in brightness. **See Figure 5-6.** 

The + button is used to increase brightness setting. Each press will increase light source brightness. Any additional press of + will have no effect once the highest setting is reached.

The button is used to decrease brightness setting. Each press will decrease light source brightness. Any additional press of will have no effect once the lowest setting is reached.

Each button performs its intended function when the button is pressed. Holding a button has no effect. For example to increase the brightness from minimum to maximum, the user must press and release the button eight times. Pressing and holding the button will only increase the brightness to the next higher setting.

The light source has a recall feature. This feature remembers the last level of brightness used before being powered off. Any time the light source is powered on, the brightness level will be at the last level used.

#### 5.15 Filter

The LED light source emits white light, which includes all the colors of light combined in the visible light spectrum. Depending on what area of the patient is illuminated, a filter may be used to enhance the observation through the microscope. The LED light source has two kinds of filters: an amber filter (composite) and a green filter.

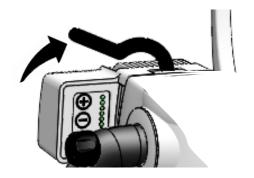
The use of the amber filter (composite) helps reduce the emissions of wavelengths below 520 nm (blue light) which are used to cure dental resins.

The use of the green filter provides a higher contrast of tissue by reducing the emissions of wavelengths around 650 nm (red light).

See M A801-LED Owner's Manual 110-013-081 for operation information



Filter Lever **DOWN** for **NO FILTER** 



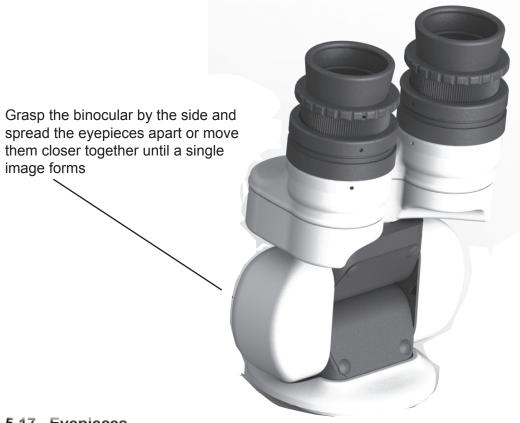
Filter Lever CENTER
for
AMBER DENTAL COMPOSITE
FILTER



Filter Lever UP for GREEN FILTER

## 5.16 Binocular Adjustment

The distance between the user's eyes is called the **inter-pupillary distance**. The inter-pupillary distance of the binocular **must** be adjusted to match the user's eyes in order to maintain proper stereoscopic vision. To adjust the binocular, the user should look into both eyepieces, grasp the binocular by the side and spread the eyepieces apart or move them closer together until a single image forms. A grid of the inter-pupillary distance in millimeters is engraved on the binocular for reference.



## 5.17 Eyepieces

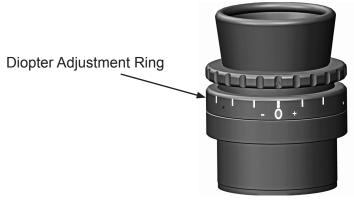
The eyepieces used on A-Series Microscopes are high eye point eyepieces. This means that a full-sized image is formed approximately one inch (25 mm) above the eyepiece to assist users who wear glasses.

Eyecups are used to position the user's head at the correct distance from the eyepiece without the user becoming fatigued. The eyecups on the A-Series M A1003, M A1004, M A1006 Microscopes are adjustable to provide maximum comfort for the user. To lower the eyecup, grasp the rubber eyecup and turn it clockwise. Turning it counterclockwise will raise the eyecup. The eyecups are properly adjusted when the user's eyes (or glasses) are touching the eyecups with the image through the microscope in full view. Reference lines are provided on the outside surface of the eyecups to verify that both are adjusted to the same height.

#### 5.18 Diopter Adjustment

Each binocular eyepiece is equipped with a diopter adjustment ring which is marked in plus(+) or minus(-) one diopter increments. To adjust the diopter setting, firmly grasp the diopter adjustment ring and adjust the settings until the image is clear and sharp.

The diopter adjustment corrects for the user's vision prescription, providing relaxed 20/20 vision with or without glasses or contact lenses. The diopter adjustment has a correction range of +5 diopters to -5 diopters. Users with natural correction outside this range must wear additional corrective lenses to achieve relaxed 20/20 vision.



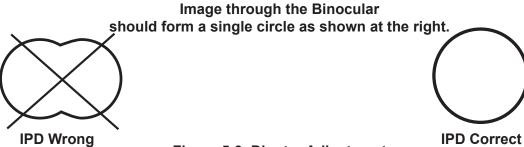


Figure 5-9 Diopter Adjustment

# 5.19 Fuse Replacement



CONTACT GLOBAL TECHNICAL SUPPORT BEFORE REPLACING THE FUSE.



DISCONNECT ALL ELECTRICAL POWER PRIOR TO REPLACING FUSE.



USE ONLY A 5MM X 20MM CYLINDER, SLOW-BLOW, 6 AMP 250 VOLT FUSE.



NEVER REPLACE A BLOWN FUSE WITH A HIGHER-AMP FUSE. ALWAYS REPLACE THE FUSE WITH ONE WITH THE SPECIFIED AMP RATING.

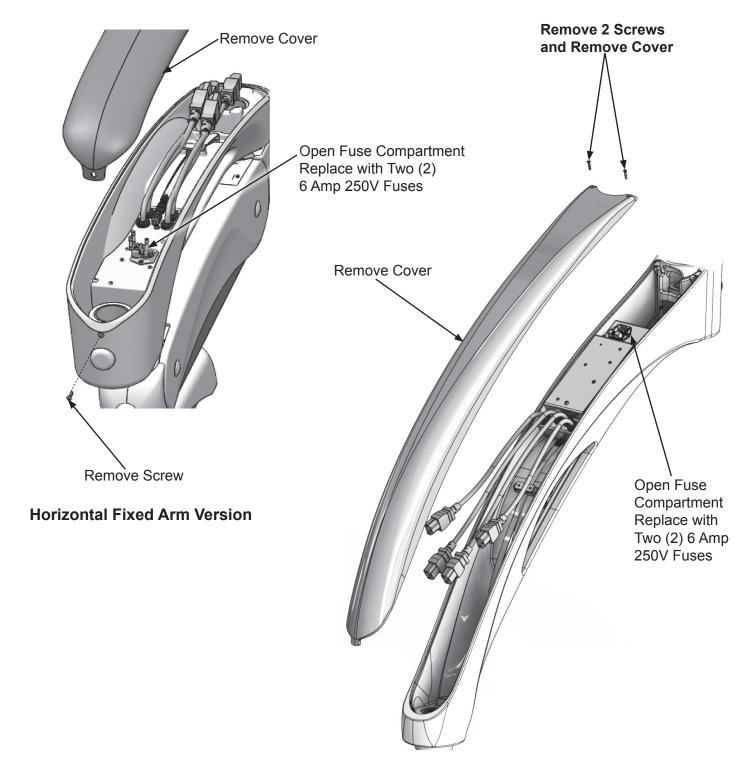
The fuse protects your electrical components in the system from a sudden and unexpected power surge.

To replace the fuses follow the steps below:

- 1. Unplug the power cord from the outlet to remove power to the system.
- 2. Remove the screw(s) holding the cover on the arm. See Figure 5-10
- 3. Remove the cover.
- 4. Open the fuse compartment cover.
- 5. Remove both fuses even if only one fuse is blown.
- 6. Replace with two (2) new 5mm x 20mm cylinder, slow-blow, 6 Amp 250 Volt Fuses.
- 7. Replace arm cover and insert screw(s) into arm and tighten.
- 8. Plug the power cord back into the outlet.

NOTICE

If your new fuse blows soon after installing it, you could have problems in that circuit. Contact Global Surgical Technical Support for assistance.



45° Arm Version

Figure 5-10 Fuse Replacement



DISCONNECT ALL ELECTRICAL POWER PRIOR TO CLEANING AND DISINFECTING. RISK OF ELECTRIC SHOCK RESULTING IN DEATH OR INJURY IS POSSIBLE IF THE ELECTRICAL POWER IS NOT DISCONNECTED PRIOR TO CLEANING THE UNIT.



Clean and disinfect after every patient according to CDC and OSHA requirements for non-critical devices.

## 6.1 Cleaning and Disinfecting

- 1. The support system can be cleaned with any cleaning agent, which is used for external cleaning of electrical equipment, according to instructions given by the manufacturer of the cleaning solution. Do not use cleaning agents that are not permitted for use with plastics, i.e., ammonia, acetone, salty acids (HCI), etc.
- 2. Do not allow excessive moisture or liquids to come in direct contact with the unit.
- 3. Avoid spraying optical components.
- 4. Do not allow cleaning agents or liquids to enter the power input.
- 5. Use any disinfectant agents which are commonly applied while disinfecting surfaces of electric medical equipment. Such disinfectant agents are usually in the form of sprays or damp cloths.
- Follow the instructions given by the manufacturer of the disinfectant solution.

#### 6.2 Cleaning the Microscope Optics

The exposed lens surfaces of the microscope system should only be cleaned when necessary to remove dust, fingerprints and other smudges. Handling optics increases their chances of getting dirty or damaged. Extreme care should be taken to avoid scratching the coated surfaces of the lenses. You should not touch any exposed lens surfaces as oil and debris from your hands can stain or damage optical coatings.

Use a low-lint soft cloth wetted with isopropyl alcohol in a circular motion starting in the center and working out towards the edge of the lens. Clean edges with a low-lint cotton-tipped swab.

# 7.1 Troubleshooting

Table 7-1 (below) lists some symptoms, possible causes and solutions.

**Table 7-1 Troubleshooting Guide** 

Symptoms	Solutions		
	Ensure that the AC power cord is properly connected.		
No power to the system	Verify building circuit breaker is not tripped, or that another device works in the same outlet.		
	Check the system's fuses. If necessary, replace. Replace both fuses if either is blown.		
System arms are hard to rotate right to left	The spring arm tension adjustment knob is adjusted too tight.		
Vertical movement is difficult	Adjust counterbalance per Section 5.3.		
Vertical position of arms/ microscope doesn't stay in position when released	Adjust counterbalance per Section 5.3.		
System arms drift	Apply slight tension to the spring arm tension adjustment. If still drifting, ensure wall, floor mount, or ceiling mount is installed level and plumb.		
horizontally on their own	If floorstand arms are still drifting, move to a different location on the floor and ensure column screws are tight.		
Floorstand seems unstable	Ensure that both weights are installed in the base (under the plastic cover)		
Floorstand is difficult to roll	Ensure that all the casters are unlocked.		
	Remove horizontal arm, spring arm, or 45 degree arm, and extension arm covers. Check for damaged or pinched cable.		
LED light source does not turn on	Ensure filter lever is located at one of the three correct positions.		
	Remove horizontal or 45 °arm cover, check to ensure that the LED power cord is securely plugged into one of the plugs on the multiple socket outlet located in the horizontal or 45° arm.		
For all other issues not covered above	Call Global Surgical Technical Services See Section 8.2 for contact information.		

## 8.1 Warranty Information

Global Surgical Corporation warranty information is located at:

## http://www.globalsurgical.com/warranty.html

#### 90-Day Money-back Guarantee on Microscopes and Accessories.

The microscope and microscope accessories you purchase will be unconditionally guaranteed and risk-free. You may return a product to Global in good condition for any reason within 90 days of invoice and receive a full product refund. Custom microscope parts are excluded from this policy. This money-back guarantee applies to the U.S. and Canada only.

#### **Microscope Limited Lifetime Warranty**

Your microscope will include an unprecedented lifetime warranty, including parts and labor, for all optical and support components. Please refer to detailed Limited Lifetime Warranty below.

#### **Upgradeable**

We will continue to do our best to design our microscopes to be modular and upgradeable, thus greatly minimizing the possibility of obsolescence.

#### Microscope Limited Lifetime Warranty

Except as set forth in this Limited Lifetime Warranty, Global Surgical Corporation (the "Company") hereby warrants that each microscope product manufactured and sold by the company ("Product") shall be free from defects in materials and workmanship under normal use and service for the life of the product. This warranty is non-transferable and is valid only with respect to the original purchase of the product. The Company's obligation under this warranty shall be limited to repairing or replacing at the Company's facility and at the Company's expense, any parts of components that are demonstrated to be defective. The purchaser shall be responsible for shipment of the product to and from the Company's facility at 3610 Tree Court Industrial Boulevard, St. Louis, Missouri, 63122, Attention: Technical Service, or such other facility as the Company may otherwise designate. Under certain circumstances which are pre-approved by the Company, necessary repairs may be made at the purchaser's facility.

A return authorization is required before returning any product for warranty service by calling 1-800-861-3610. The customer is responsible for all shipping expenses. Global Surgical suggests using a method that will allow you to track the package in the event it does not arrive. Global also recommends you insure the package.

This warranty shall not be applicable to: (I) any electrically-driven products sold by the Company, (II) any products which are not manufactured by the Company which may be attached to the product, such as video equipment, camera equipment, recording devices, monitors, printers (III) any components which are consumable or are required to be replaced or disposed of in connection with normal use of the product, such as lamps, fiber optic cables, rubber eyecups and drapes, or (IV) any product which was purchased prior to April 27, 1994.

This warranty shall be void and of no effect: (I) if the product is damaged due to misuse, use in a manner other than pursuant to the instructions for the use of Product, abuse, physical mishandling or natural causes such as flood, fire, earthquake, or other perils, as determined by the Company, or (II) if any repairs or replacements are made by persons not authorized by the Company to perform such services.

The warranties set forth herein are in lieu of any and all other warranties, expressed or implied, including, without limitation, warranties of merchantability and fitness for a particular purpose. Purchaser's rights thereunder are granted in lieu of any other rights purchaser may have and purchaser hereby waives all other rights, warranties, remedies or guarantees whatsoever with respect to the product. The Company shall not be liable for any third parties with respect to the product or its performance. Further, the Company shall not be liable for, and purchaser hereby releases the Company from any direct, or indirect, consequential, special, and incidental or punitive damages with respect to the product. In no event shall the Company be liable for any breach of warranty or other claim in an amount exceeding the purchase price of the product.

#### Warranty for Microscope products not included in the Limited Lifetime Warranty:

Electrical and electronic components, except for the LED lightsource, have a one-year warranty. The LED lightsource has a three-year warranty.

Consumables such as fiber optic cables, eyecups etc., have a one-year warranty. Light bulbs have a warranty equal to that given by the manufacturer.

This warranty applies to the U.S. and Canada only.

For international warranty information: Email: international@globalsurgical.com

Phone: 1-636-861-3388, Fax: 1-636-861-2969

## 8.2 Technical Services Department

When contacting our Technical Services Department, you will be served by highly knowledgeable representatives in an efficient manner. If service is required at your location, a skilled technician or sales representive will be dispatched within 24 hours.

If you have questions that are not covered in this manual, please call the Global Surgical Technical Services Department as listed below:

Toll Free Number: 1-800-861-3610

Technical Services Representatives: 1-636-861-3388

Fax Number: 1-636-861-5284

Email: techservice@globalsurgical.com

The staffing hours for the Global Surgical Technical Services Department are Monday through Friday from 8:00 a.m. to 5:00 p.m. Central Standard Time.

#### **Internet Access**

The Global Surgical Technical Services website has information about additional products and services and can be reached by using the online at: http://www.globalsurgical.com.

#### **Service Information**

In the event of any malfunction, you should immediately contact the Global Surgical Technical Services Department for assistance. A **Customer Identification Number and Customer Order Number** will be needed when contacting the Technical Services Department. These numbers are printed on your invoice. To save time in the event service is needed, record these numbers in the spaces provided in the front of this manual.

A **Return Material Authorization (RMA) number** must be obtained from the Global Surgical Technical Services Department prior to returning a product for repair. The following information must accompany all returned units:

- 1. Your name, address, and telephone number
- 2. The RMA number
- 3. A description of the problem

Ship or return the product to:

**Global Surgical Corporation** 

3610 Tree Court Industrial Blvd. St. Louis, MO 63122

Attention: Technical Services Department

**Table 9-1 Microscope Support System Specifications** 

SPECIFICATIONS		M A730 MICROSCOPE SUPPORT SYSTEM				
Model		Shipping Weight				
	M A730F	187 lbs. (85kg)				
Floor Systems:	M A730FM	50 lbs. (23kg)				
	M A730FMT	65 lbs. (29kg)				
	M A730C	30 lbs. (14kg) Required for M A730-C8, M A730-C9, M A730-C10				
	M A730CMF	31 lbs. (14kg) Required for M A730-C8, M A730-C9, M A730-C10				
Ceiling Systems:	M A730-C8	15 lbs. (7kg)				
	M A730-C9	21 lbs. (10kg)				
	M A730-C10	27 lbs. (12kg)				
Wall Systems:	M A730W	28 lbs. (13kg)				
A 0	M A730-HA	40 lbs. (18kg)				
Arm System:	M A730-45A	50 lbs. (23kg)				
Weight the suppor	ting structure must hold:	500 pounds (227 kg)				
Electrical Recepta		115 VAC, 15 A, 50/60 Hz				
	not required, connection should be d circuit breaker, and for Ceiling Mount	230 VAC, 15 A, 50/60 Hz				
	nt use a receptacle controlled with a	Standard: Duplex Outlet				
wall switch.						
Ceiling Mounting S	Surface:					
8' (2.44 m) Mounting	g Surface	8' (2.44 mm) high 2" x 8" (51 mm x 203 mm) or larger joists on 16" (406 mm) centers: <b>Use Model M A730-C8</b>				
9' (2.74 m) Mounting Surface		Use Model M A730-C9 (Same as Model M A730-C8 except column is 12" (305 mm) longer)				
10' (3.05 m) Mounting Surface		Use Model M A730-C10 (Same as Model M A730C8 except column is 24" (610 mm) longer)				
		Special construction by independent contractor must meet the above specifications.				
Custom		* If mounting to a ceiling that does not have wooden mounting surfaces,				
		mount is considered "custom" and all hardware is to be supplied by contractor.				
		Standard: 2" x 4" (51 mm x 101 mm) wood studs on 16" (406 mm)				
Wall Surfaces:		centers.  If metal studs: order wall mount board M W557-32.				
		If 24" (610 mm) centers: wood or metal order special mounting board				
		M 557				
		Note: Contractor to reinforce metal studded walls or particle walls.				
		OR:				
		Standard Concrete (Cinder) Block 8" x 16" (203 mm x 406 mm)				
		1				

Table 9-2 A-Series Binocular Focal Lengths

Binocular Model	Focal Length
M A1020 Series Straight Binocular	125 mm
M A1021 Series 45° Inclined Binocular	160 mm
M A1022 Series 220° Inclinable Binocular	160 mm

Table 9-3 M A801-LED Storage and Operation Specifications

ITEM	SPECIFICATION
Light Source Type	Light Emitting Diode (LED)
Color Temperature	5500°K
LED Life	50,000 Hours (typical)
Brightness Control	Controls Light Output Range from 30%-100%
Power Consumption	25 Watts
Input Voltage	90-240 VAC, 50/60 Hz, 0.9A
Output Voltage	25-35 VDC,(Variable, Dependant on Brightness) Constant 0.70A
Mode of Operation	Continuous Operation
Water Resistant	Non-Protected Equipment, IPX0
Operation Environment: Temperature Relative Humidity Air Pressure	+10° to +40°C (50° to 104°F) 0 to 95% 700 to 1060 kPa
Storage Environment: Temperature Relative Humidity Air Pressure	-20° to +60°C (-4° to 140°F) 0 to 95% 700 to 1060 kPa
Dimensions	4.70 in (119 mm) W x 3.25 in (83 mm) H x 3.0 in (76 mm) D
Weight	1.65 lbs (74 kg 140g)
IEC 62471 Risk Group	0
Regulations / Standards	Conforms to AAMI Std ES60601-1 & IEC 60601-1-6 Certified to CSA Stds C22.2 #s 60601-1 & 60601-1-6 FCC 47CFR 15B 15.103 IEC 60601-2-57
Maximum Optical Radiation Output	118.2 Lx
Maximum Variation of Output	147 Lx
Spectral Irradiance	$3.7 \times 10^{-3} \frac{W}{M^2}$ @ 400nm,3.23 x $10^{-3} \frac{W}{M^2}$ @ 750nm,3.32 x $10^{-3} \frac{W}{M^2}$ @ 1000nm

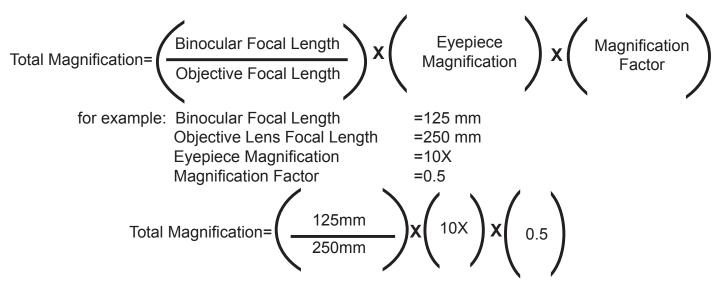
**Table 9-4 A-Series Microscope Total Magnification Chart** 

			Turret Magnification Factor (X)						
			0.33	0.5	0.8	1.0	1.25	2.0	3.0
A-Series A3 Microscope			Х		Х		Х		
	A-Series A4 Microscope			Х	Х		Х	Х	
	A-Series A6 Microscope		Х	Х	Х		Х	Х	Х
Binocular Focal Length (MM)	Objective Lens Focal Length (MM)	Eyepiece Mag (X)	Total Mag (X)	Total Mag (X)	Total Mag (X)	Total Mag (X)	Total Mag (X)	Total Mag (X)	Total Mag (X)
125	200	10	2.1	3.1	5.0	6.3	7.8	12.5	18.8
125	225	10	1.8	2.8	4.4	5.6	6.9	11.1	16.7
125	250	10	1.7	2.5	4.0	5.0	6.3	10.0	15.0
125	300	10	1.4	2.1	3.3	4.2	5.2	8.3	12.5
125	350*	10	1.2	1.8	2.9	3.6	4.5	7.1	10.7
160	200	10	2.6	4.0	6.4	8.0	10.0	16.0	24.0
160	225	10	2.3	3.6	5.7	7.1	8.9	14.2	21.3
160	250	10	2.1	3.2	5.1	6.4	8.0	12.8	19.2
160	300	10	1.8	2.7	4.3	5.3	6.7	10.7	16.0
160	350*	10	1.5	2.3	3.7	4.6	5.7	9.1	13.7
125	200	12.5	2.6	3.9	6.3	7.8	9.8	15.6	23.4
125	225	12.5	2.3	3.5	5.6	6.9	8.7	13.9	20.8
125	250	12.5	2.1	3.1	5.0	6.3	7.8	12.5	18.8
125	300	12.5	1.7	2.6	4.2	5.2	6.5	10.4	15.6
125	350	12.5	1.5	2.2	3.6	4.5	5.6	8.9	13.4
160	200	12.5	3.3	5.0	8.0	10.0	12.5	20.0	30.0
160	225	12.5	2.9	4.4	7.1	8.9	11.1	17.8	26.7
160	250	12.5	2.6	4.0	6.4	8.0	10.0	16.0	24.0
160	300	12.5	2.2	3.3	5.3	6.7	8.3	13.3	20.0
160	350	12.5	1.9	2.9	4.6	5.7	7.1	11.4	17.1

<sup>\*</sup> Objective Lens Focal Length only available on M A1028ML - Multi-Focal Length Lens

# 9.4 Finding Total Magnification

The following formula is used to calculate the total magnification of the System:



Therefore: Total Magnification = 2.5X

The focal length is printed on each objective lens and the eyepiece magnification is marked on each eyepiece. The magnification selection knob on the microscope shows the selected magnification factor. For the binocular, the model number is printed on the bottom of the dovetail mount and the focal length of each model number is shown in Table 9-2.

#### 9.5 Effects of Changing Components

The following chart lists the effects of changing components to the microscope system. For further information, contact Global Surgical Technical Services Department.

**Table 9-5 Effects of Changing Microscope Components** 

What is the effect of changing		Magnification	Field of View	Intensity of Illumination	Working Height	
Binocular	From 125 mm to 160 mm	Increases	Decreases	No Change	No Change	
(Focal Length)	From 160 mm to 125 mm	Decreases	Increases	No Change	No Change	
Objective Lens	From longer to shorter (i.e. 250 mm to 200 mm)	Increases	Decreases	Increases	Decreases	
(Focal Length)	From shorter to longer (i.e. 200 mm to 250 mm)	Decreases	Increases	Decreases	Increases	
Magnification	From higher to lower (i.e. 2X to 1X)	Decreases	Increases	No Change	No Change	
(Manual Change)	From lower to higher (i.e. 1X to 2X)	Increases	Decreases	No Change	No Change	
Eyepiece (Power)	From higher to lower (i.e. 12.5X to 10X)	Decreases	Increases	No Change	No Change	
	From lower to higher (i.e. 10X to 12.5X)	Increases	Decreases	No Change	No Change	



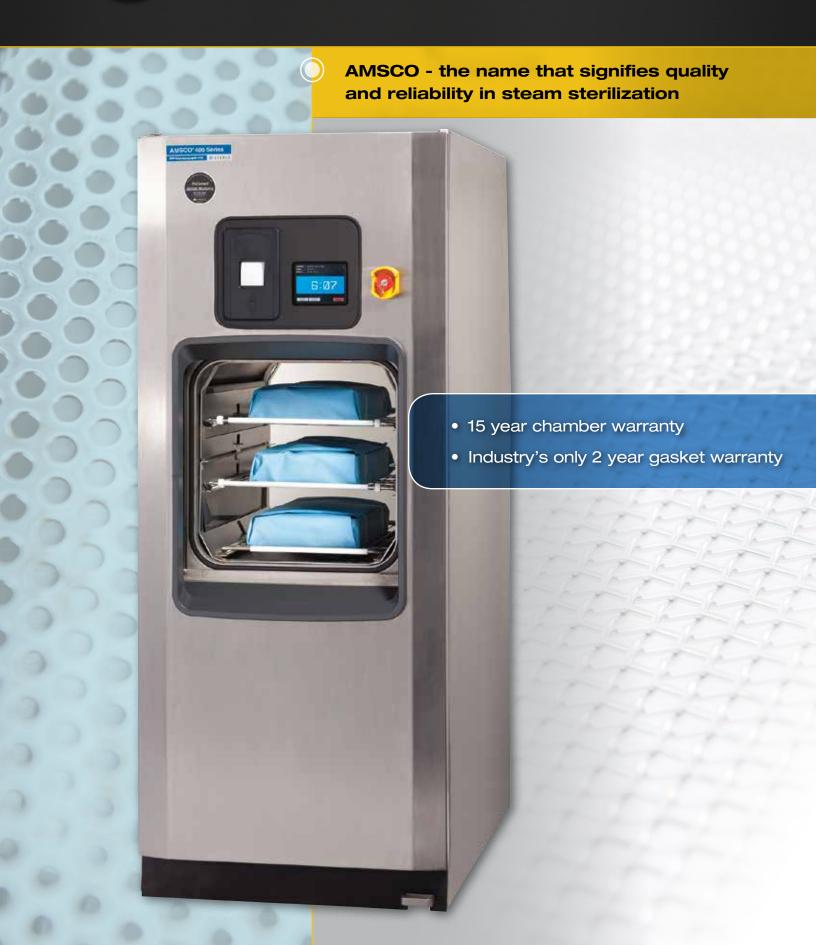


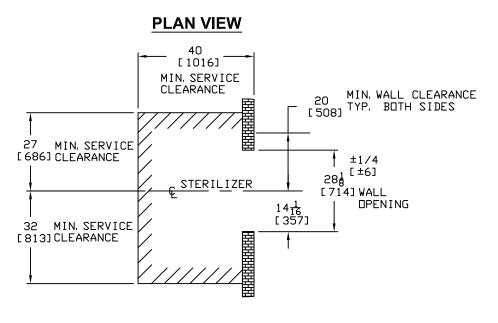


Global Surgical Corporation 3610 Tree Court Industrial Blvd. St. Louis, MO 63122



EMERGO EUROPE Prinsessegracht 20 2514 AP The Hague The Netherlands





CHAMBER SIZE
IN. (mm)

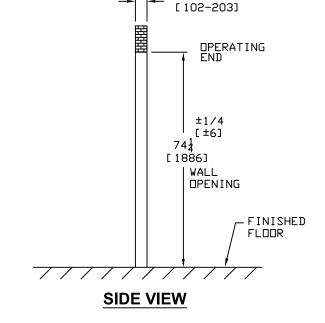
20 X 20 X 38
(508 X 508 X 965)

MAX. DUTSIDE DIM. DF STERILIZER

43 7/8 X 30 X 74 1/2
(1114 X 762 X 1891)

# NOTES:

- 1. WALL THICKNESS: 4" TO 8" (102-203).
- 2. ALL DIMENSIONS IN INCHES AND (MM).
- 3. THESE SERVICE CLEARANCES MUST BE MAINTAINED TO ALLOW ACCESS TO STERILIZER FOR SERVICEABILITY.
- 4. IF LOADING CAR AND CARRIAGE ARE TO BE USED, FRONT CLEARANCE SHOULD EQUAL TWICE THE LENGTH OF THE STERILIZER.



4 TO 8

## **SERVICE CLEARANCE**

20 x 20 x 38 AMSCO 400 SERIES SHT. 1 DF 6

ALL DIMENSIONS ARE IN INCHES
MILLIMETERS

APPLIEARETH BUTFMERY-MANTINGS

DWG. NO. 62941-091

STERIS\*

STERIS Corporation
Mentor, DH

PREVACUUM STERILIZER
DOUBLE SLIDING DOOR
RECESSED ONE WALL
ELECTRIC STEAM HEAT

129394-055

ITEM \_\_\_\_\_\_
LOCATION(S) \_\_\_\_\_

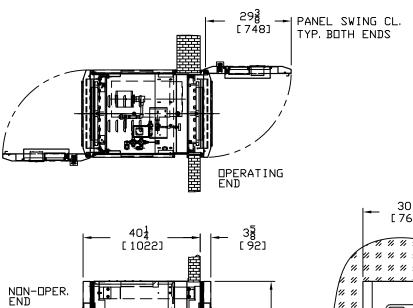
**PLAN VIEW** 

# **GENERAL NOTES:**

- 1. ALL DIMENSIONS IN INCHES AND (MM).
- 2. CURB WEIGHT: 20 x 20 x 38 DD VESSEL = 1600 LBS. (725 KG.)
- 3. MAXIMUM OPERATING WEIGHT BASED ON CHAMBER FULLY LOADED WITH WATER FLASKS:

20 x 20 x 38 DD VESSEL = 1726 LBS. (783 KG.)

- 4. FACILITY MUST PROVIDE REGULATED STEAM PRESSURE IN THE DYNAMIC RANGE SPECIFIED. FAILURE TO DO SO WILL RESULT IN IMPROPER EQUIPMENT OPERATION.
- 5. HEAT LOSS AT 70°F (21°C): 20 x 20 x 38 TO ROOM: 8750 BTU/HR (9,232 KILOJOULE)
- 6. LEVELING FEET ARE PROVIDED FOR PROPER INSTALLATION.
- 7. THE TIE-DOWN OF THIS STERILIZER HAS BEEN PRE-APPROVED IN CALIFORNIA (REF. OPA-0531). SEE STERIS DWG. NO. 83280-194 FOR SEISMIC LOADING AND TIE-DOWN SPECIFICATIONS.
- 8. FOR SEISMIC INSTALLATIONS: A SEISMIC ADD ON KIT (REF. 146660-184) MUST BE INSTALLED ON THE STERILIZER.
- 9. STERIS ASSUMES NO RESPONSIBILITY FOR CHANGES MADE NECESSARY THROUGH FAILURE TO OBSERVE THE SPECIFICATIONS ON EQUIPMENT DRAWING AND NOTE PAGES. SPECIFICATIONS AND DESCRIPTIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

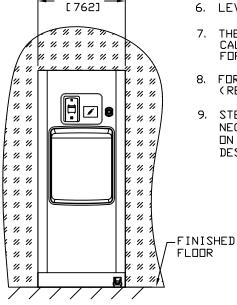


74호

423

[1086]

[ 1891]



**SIDE VIEW** 

**FRONT VIEW** 

#### STERILIZER INSTALLATION

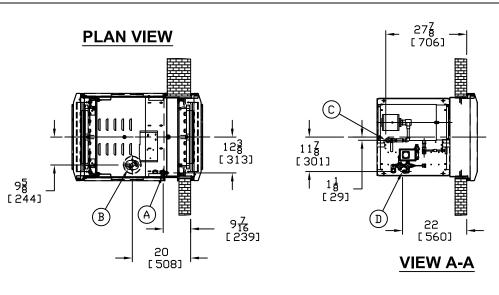
SHT, <u>2</u> DF <u>6</u>

STERIS"	STERIS Corporation Mentor, OH	
DWG. N□.	62941-091	
ALL DIMENSION (MILL APPLICABLE TO	20 x	

0 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED ONE WALL ELECTRIC STEAM HEAT

129394-055

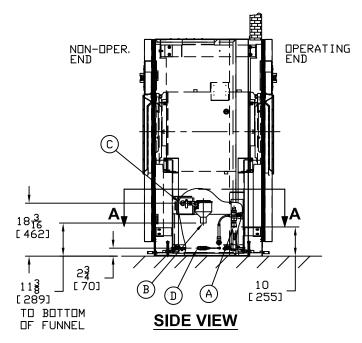
EQUIPMENT DRAWING NO.

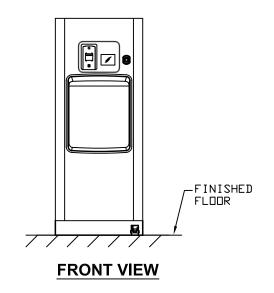


#### PLUMBING CONNECTIONS

- (A) STERILIZER COLD WATER
- (B) STERILIZER DRAIN
- © STERILIZER HOT WATER
- D ELECTRIC STEAM GENERATOR FLUSH DRAIN PORT

NOTE: SEE SHEET 4 FOR PLUMBING INSTALLATION SPECS. AND PLUMBING REQUIREMENTS.





SHT. <u>3</u> □F <u>6</u>

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)			
ALSO REFER TO GENERAL NOTES APPLICABLE TO EQUIPMENT DRAWINGS			
DWG. N□.	62941-091		
STERIS"	STERIS Corporation Mentor, DH		

20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED ONE WALL ELECTRIC STEAM HEAT EQUIPMENT DRAWING NO. 129394-055

ITEM \_\_\_\_\_LOCATION(S) \_\_\_\_\_

#### **INSTALLATION SPECIFICATIONS:**

THE INSTALLATION OF THE CHIMERON STERILIZER MUST MEET ALL APPLICABLE REGULATIONS.

INSTALLATION SPECIFICATION IS LISTED AS ENGINEERING AND INSTALLATION GUIDES. REFERENCED COMPONENTS AND SERVICE CONNECTIONS ARE NOT FURNISHED AS PART OF EQUIPMENT UNLESS UNDER WRITTEN AGREEMENT WITH STERIS.

- 1. PIPE SIZES LISTED UNDER **PLUMBING REQUIREMENTS** INDICATE THE EQUIPMENT TERMINATION SIZES ONLY. SIZE PIPING TO EQUIPMENT DEPENDING ON LENGTH OF PIPE RUN FROM PRESSURE REGULATING STATION FOR STEAM LINE, AND MAIN WATER HEADERS. TO SUPPLY THE SPECIFIED SERVICE PRESSURE AND FLOW RATE AT EQUIPMENT TERMINALS, INCLUDE EFFECT OF COINCIDENT DRAW OF MULTIPLE UNIT INSTALLATIONS.
- 2. PROVIDE PIPING, SHUT-OFF VALVE, PIPE PLUGGED TEE, AND UNION IN STEAM AND WATER SUPPLY CONNECTIONS BETWEEN EQUIPMENT AND STUB DUTS. PLUGGED TEE CAN LATER BE USED FOR TEST PRESSURE GAUGE CONNECTION. ARRANGE CONNECTION PIPING TO ALLOW ACCESS TO MACHINE COMPONENTS AND ELECTRICAL CONTROL PANEL.
- 3. RECOMMEND PROVISION OF BLOW DOWN VALVE AT EACH STEAM AND WATER STRAINER TO ENABLE STRAINER CLEAN OUT.
- 4. FOR RECOMMENDED FEED WATER QUALITY FOR STERILIZERS AND CARBON STEEL STEAM GENERATORS, SEE STERIS DWG. NO. 62941-091
- 5. BLOW DOWN BUILDING STEAM AND WATER SUPPLY LINES BEFORE FINAL CONNECTION TO EQUIPMENT.
- 6. THE STERILIZER IS NOT SUPPLIED WITH A VACUUM BREAKER OR BACKFLOW PREVENTER AND WHERE REQUIRED BY LOCAL CODES, INSTALLATION OF SUCH A DEVICE IN WATER LINE IS BY OTHERS.
- 7. FOR GENERAL INSTALLATION INFORMATION SEE STERIS DRAWING NO. 62941-091. (THIS DWG. SHOULD ALWAYS ACCOMPANY THE EQUIPMENT DWGS.) IF DWG. IS NOT ATTACHED, CONTACT STERIS SERVICE ENGINEERING AT 1-800-333-8848 TO DBTAIN A COPY.
- 8. PLACEMENT OF PIPING SHUTOFFS: WHEN INSTALLING; SHUTOFFS MUST BE LOCATED IN A SUITABLE LOCATION WITHIN LINE OF SIGHT AND CLEAR OF ANY OBSTRUCTIONS THAT WOULD PUT THE SERVICE PERSON IN HARMS WAY IN ORDER TO SHUT IT OFF.

#### **PLUMBING REQUIREMENTS**

(A) STERILIZER COLD WATER: (SEE NOTE #4)

SUPPLY TEMPERATURE REQUIREMENTS ARE 50-70°F (10-21°C).

VACUUM EFFICIENCY IS REDUCED AT WATER TEMPERATURES

ABOVE 70°F (21°C).

1" NPT
30-50 PSIG DYNAMIC (2.1 TO 3.5 bar)
CONSUMPTION IN CYCLE:
PEAK-15 gpm (57 lpm)
AVERAGE-175 gal/cycle (662 l/cycle)
CONSUMPTION OUT OF CYCLE:
AVERAGE-12 gal/hr (.76 lpm)

SFPP CYCLES REQUIRE A MINIMUM OF 40 psig COLD WATER PRESSURE.

- © STERILIZER HOT WATER:

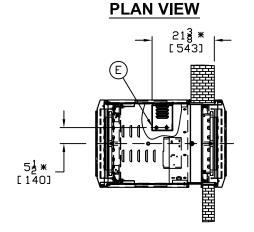
  SUPPLY TEMPERATURE REQUIREMENTS ARE =< 140°F.
  WATER RESISTIVITY NOT TO EXCEED 26000 DHMS/CM.
  TOTAL HARDNESS TO BE 0-3 PPM (CaCO )3

  1/2" NPT:
  20-50 DYNAMIC PSIG (137. 9-344. 7 KPA)
  CONSUMPTION: PEAK 1 GPM. PER CYCLE 5 GAL. IDLE 1 GPH.
- (D) DRAIN FROM ELECTRIC STEAM GENERATOR: 1/2" ODT.

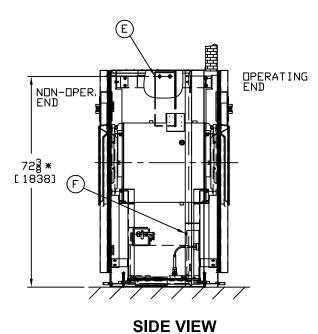
#### CHECK ALL NATIONAL CODES AND STANDARDS SHT. 4 DF 6

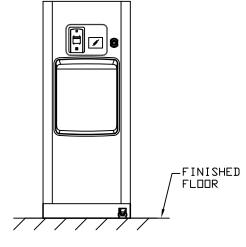
ALL DIMENSIONS AR (MILLIMETE APPLICABLE TO GENE APPLICABLE TO EQUIPME		20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER	EQUIPMENT DRAWING NO. 129394-055
DWG. NO. 629	941-091	DOUBLE SLIDING DOOR	ITEM
STERIS* STE	ERIS Corporation Mentor, DH	RECESSED ONE WALL ELECTRIC STEAM HEAT	LOCATION(S)

- (F) ELECTRIC STEAM GENERATOR POWER
- NOTE: SEE SHEET 6 FOR ELECTRICAL INSTALLATION SPECS.
  AND ELECTRICAL REQUIREMENTS.



\* = TO CONTROL BOX HOLE (E)





**FRONT VIEW** 

SHT. <u>5</u> DF <u>6</u>

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)			
APPLICABLE TO GENERAL NOTES APPLICABLE TO EQUIPMENT DRAWINGS			
DWG. NO. 62941-091			
STERIS* STERIS Corporation			

20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED ONE WALL ELECTRIC STEAM HEAT

129394-055

ITEM \_\_\_\_\_\_
LOCATION(\$> \_\_\_\_\_

EQUIPMENT DRAWING NO.

#### **INSTALLATION SPECIFICATIONS:**

THE INSTALLATION OF THE CHIMERON STERILIZER MUST MEET ALL APPLICABLE REGULATIONS.

INSTALLATION SPECIFICATION IS LISTED AS ENGINEERING AND INSTALLATION GUIDES. REFERENCED COMPONENTS AND SERVICE CONNECTIONS ARE NOT FURNISHED AS PART OF EQUIPMENT UNLESS UNDER WRITTEN AGREEMENT WITH STERIS.

- 1. PROVIDE GROUPED OR GANGED CIRCUIT PROTECTION AND DISCONNECT FOR STERILIZER POWER AS REQUIRED BY CODES AND STANDARDS. INDIVIDUAL POWER SHUTOFFS REQUIRED NEAR EACH MACHINE FOR SERVICING.
- 2. PROVIDE GROUNDED METAL CONDUIT AND WIRING BETWEEN EQUIPMENT TERMINALS AND STUB OUTS OR DISCONNECTS. CHECK LOCAL CODES FOR MINIMUM AWG. WIRE SIZE, #16 AWG. MINIMUM RECOMMENDED.
- 3. PLACEMENT OF ELECT. DISCONNECTS: WHEN INSTALLING; DISCONNECTS MUST BE LOCATED IN A SUITABLE LOCATION WITHIN LINE OF SIGHT AND CLEAR OF ANY OBSTRUCTIONS THAT WOULD PUT THE SERVICE PERSON IN HARMS WAY IN ORDER TO SHUT IT OFF. ALSO, THE LOCATION OF THE DISCONNECTS SHOULD ALLOW THE SERVICE PERSON TO SHUTOFF POWER FROM THE SIDE TO PREVENT POSSIBLE ARC FLASH.
- 4. CAUTION: DO NOT USE GROUND FAULT CURRENT INTERRUPTERS (GFCI).
- 5. ATTENTION: THE ELECTRICAL CLEARANCES REQUIRED BY THE NEC ARE THE RESPONSIBILITY OF THE INSTALLER. ALSO, ADHERENCE TO LOCAL CODES AND PROCUREMENT OF PERMITS ARE THE RESPONSIBILITY OF THE CUSTOMER UNLESS AGREED TO IN WRITING WITH STERIS.
- 6. FOR GENERAL INSTALLATION INFORMATION SEE STERIS DRAWING NO. 62941-091. (THIS DWG. SHOULD ALWAYS ACCOMPANY THE EQUIPMENT DWGS.) IF DWG. IS NOT ATTACHED, CONTACT STERIS SERVICE ENGINEERING AT 1-800-333-8848 TO OBTAIN A COPY.

#### **ELECTRICAL REQUIREMENTS**

(E) STERILIZER POWER:

CONTROL BOX FOR: 120V, 50/60 HZ, 9.5 AMP SINGLE PHASE SERVICE. MINIMUM RECOMMENDED LINE AND GROUND CONDUCTOR SIZE AWG #12 COPPER (2.05MM).

120VAC REQUIRE A THREE (3) WIRE CONNECTION (L1, NEUT, GND.).

MINIMUM 15A CIRCUIT BREAKER IS RECOMMENDED. INSTALLED NEAR THE EQUIPMENT WITHIN EASY REACH OF THE OPERATOR AND MARKED AS THE DISCONNECTING DEVICE FOR THE EQUIPMENT.

(F) ELECTRIC STEAM GENERATOR POWER:

30 KW HEATERS

208VAC, 50/60HZ, 83A, (3) PHASE. MINIMUM 90A CIRCUIT BREAKER RECOMMENDED. MINIMUM RECOMMENDED LINE CONDUCTOR SIZE AWG #1 COPPER (42.4 MM²) 75°C (167°F). REQUIRES A FOUR (4) WIRE "DELTA" CONNECTION (L1, L2, L3, GND.).

240VAC, 50/60HZ, 72A, (3) PHASE. MINIMUM 80A CIRCUIT BREAKER RECOMMENDED. MINIMUM RECOMMENDED LINE CONDUCTOR SIZE AWG #4 COPPER (21.5 MM²) 75°C (167°F). REQUIRES A FOUR (4) WIRE "DELTA" CONNECTION (L1, L2, L3, GND.).

480VAC, 50/60HZ, 36A, (3) PHASE. MINIMUM 45A CIRCUIT BREAKER RECOMMENDED. MINIMUM RECOMMENDED LINE CONDUCTOR SIZE AWG #8 COPPER (8.6 MM $^2$ ) 75°C (167°F). REQUIRES A FOUR (4) WIRE "DELTA" CONNECTION (L1, L2, L3, GND.).

#### CHECK ALL NATIONAL CODES AND STANDARDS SHT. 6 OF 6

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)			
APPLICABLE TO GENERAL NOTES APPLICABLE TO EQUIPMENT DRAWINGS			
DWG. NO.	62941-091		
STERIS* STERIS Corporation Mentor, DH			

20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED ONE WALL ELECTRIC STEAM HEAT



**WALL LEGEND** 

EXTERIOR

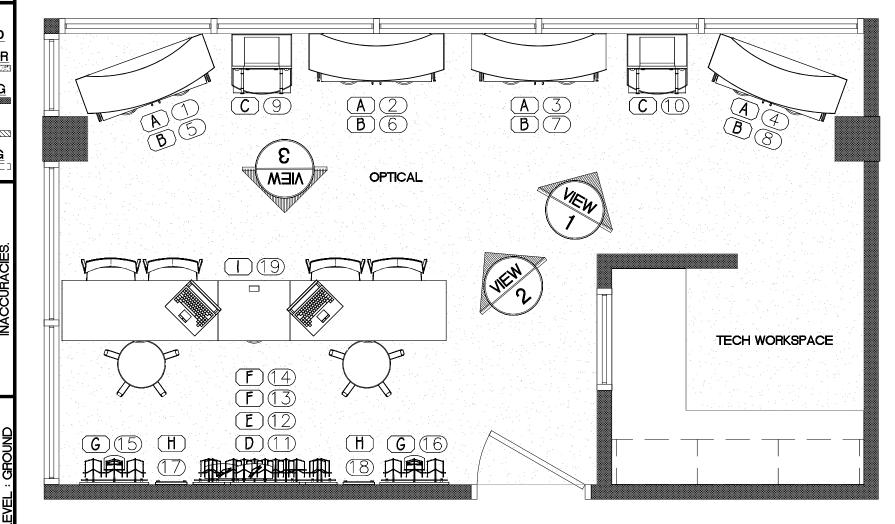
**EXISTING** 

NEW

**OPENING** 

NOTE: PLEASE VERIFY HEIGHTS. FASHION OPTICAL DISPLAYS CANNOT BE RESPONSIBLE FOR INACCURACIES

CEILING HEIGHT: 9'-0" SOFFIT HEIGHT FLOOR LEVEL



FLOOR PLAN

SCALE 3/8" = 1'-0"

SHEET

DESIGN PREPARED FOR: CHEROKEE NATION - STILWELL

DRAWN BY: LORI ESTRADA - BW FILE #: L57730J

DATE: October 7, 2019

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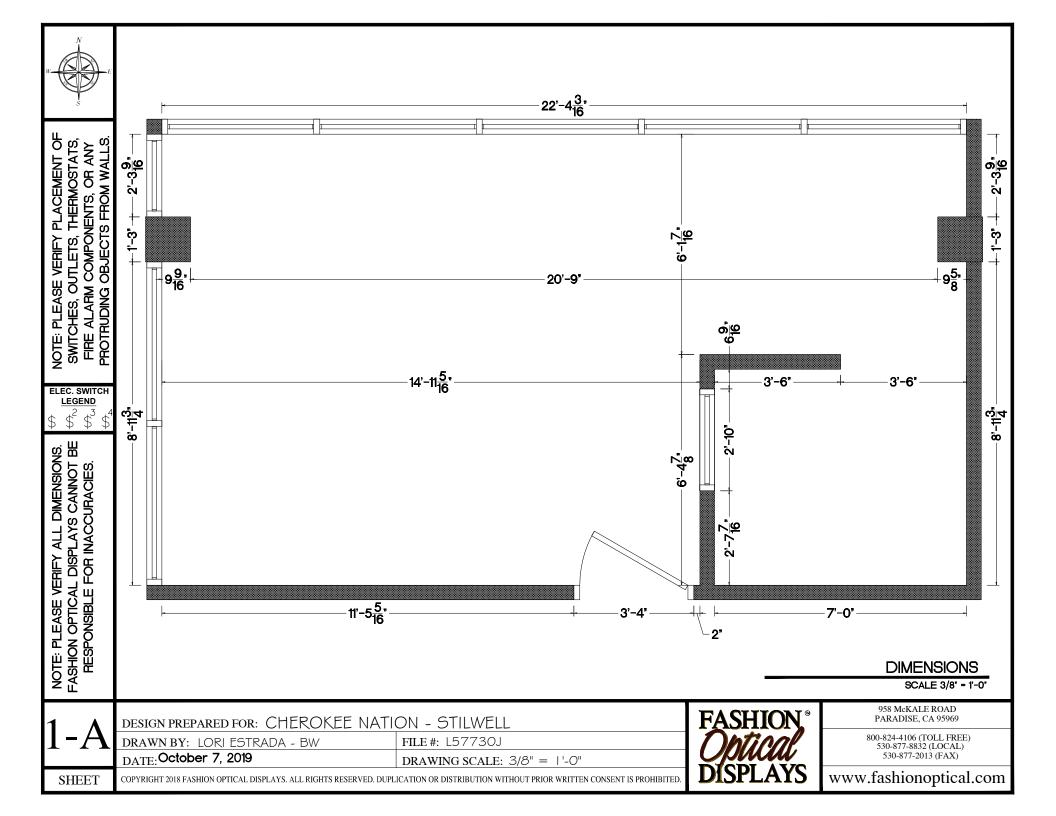
DRAWING SCALE: 3/8" = 1'-0"



958 McKALE ROAD PARADISE, CA 95969

800-824-4106 (TOLL FREE) 530-877-8832 (LOCAL) 530-877-2013 (FAX)

www.fashionoptical.com



#### APPROX. 467 FRAMES DISPLAYED + 100 FRAMES IN TRAYS

REF.#	DESCRIPTION	MODEL #
Α	5-WIDE OVATION FREESTANDING DISPLAY (75 FRAMES)	FD-500C
В	OVATION ROLLING CREDENZA W/ FRAME DIVIDERS IN DRAWERS (25 FRAMES IN TRAYS)	CA-500C-ODD
С	FREESTANDING BOW MIRROR W/ PERMANENT GLASS SHELF	WD-42   A-PGS-FREESTANDING
D	6-ROW SHORT OMNI WALL DISPLAY (42 FRAMES)	OM-433
E	3-ROW SHORT OMNI WALL DISPLAY (2   FRAMES)	OM-4325
F	I-ROW SHORT OMNI WALL DISPLAY (7 FRAMES)	OM-4315
G	3-ROW TALL OMNI WALL DISPLAY (45 FRAMES)	OM-432T
Н	OMNI WALL MIRROR	OM-430
1	24" 3 DRWR TABORET W/ DUAL 53" STRAIGHT TABLE WINGS - TAPERED LEGS	TA-410A/(2) STW53-TPL
J		
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#### CRATES

DESIGN PREPARED FOR: CHEROKEE NATION - STILWELL
DRAWN BY: LORI ESTRADA - BW
DATE: October 7, 2019

SHEET

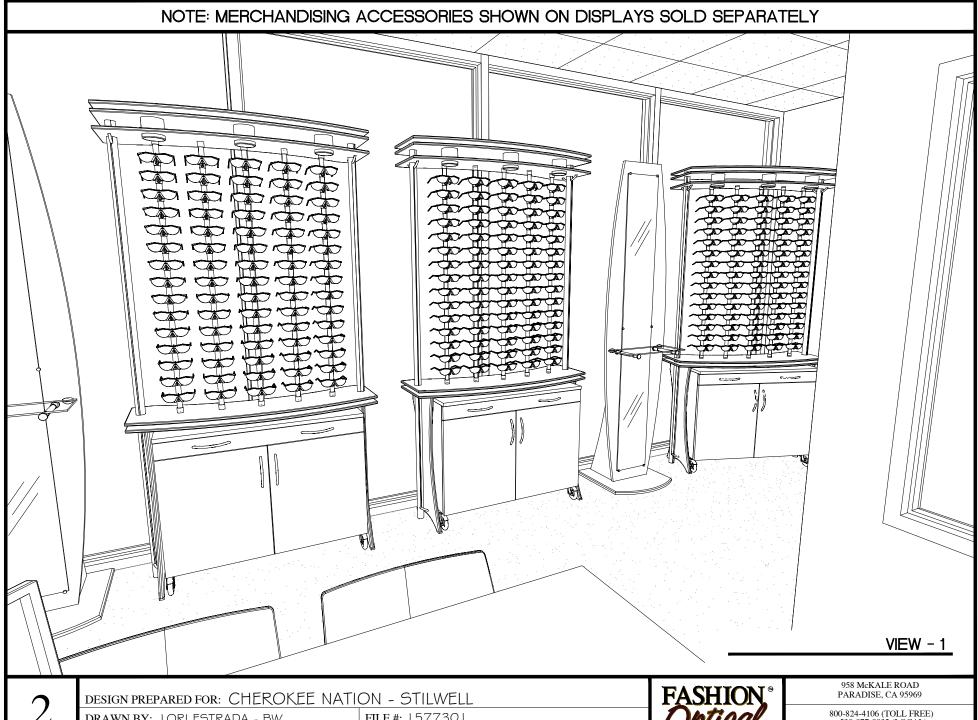
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SHEET

DRAWN BY: LORI ESTRADA - BW FILE #: L57730J

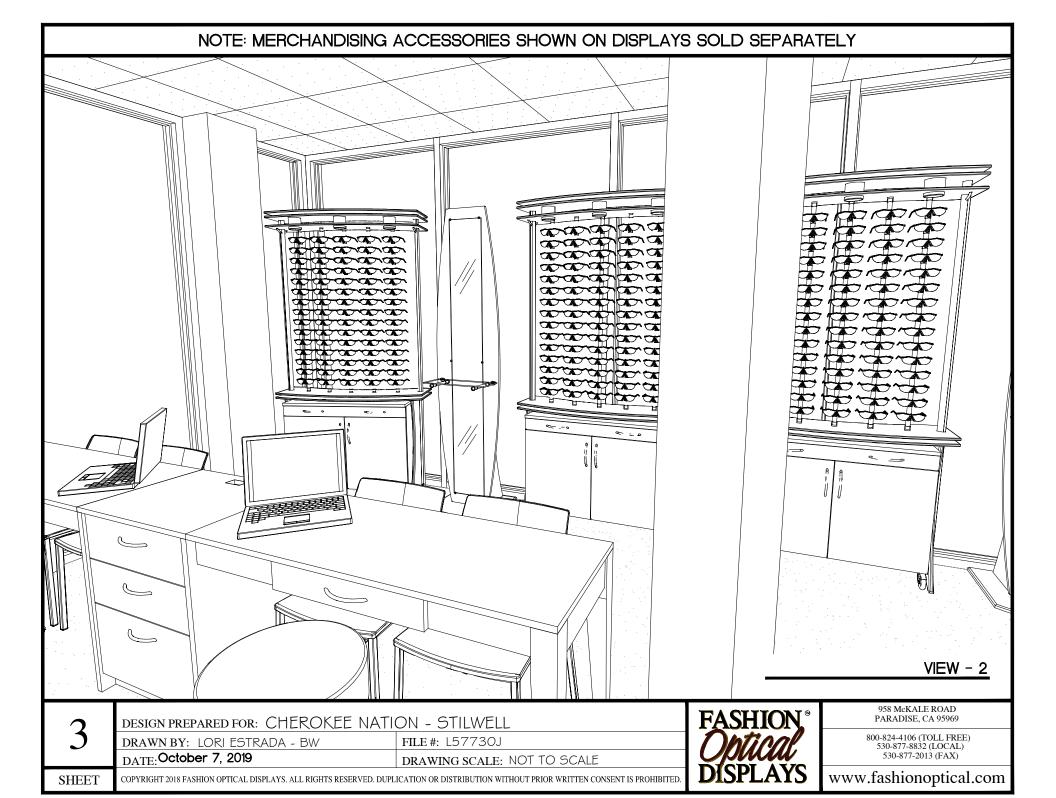
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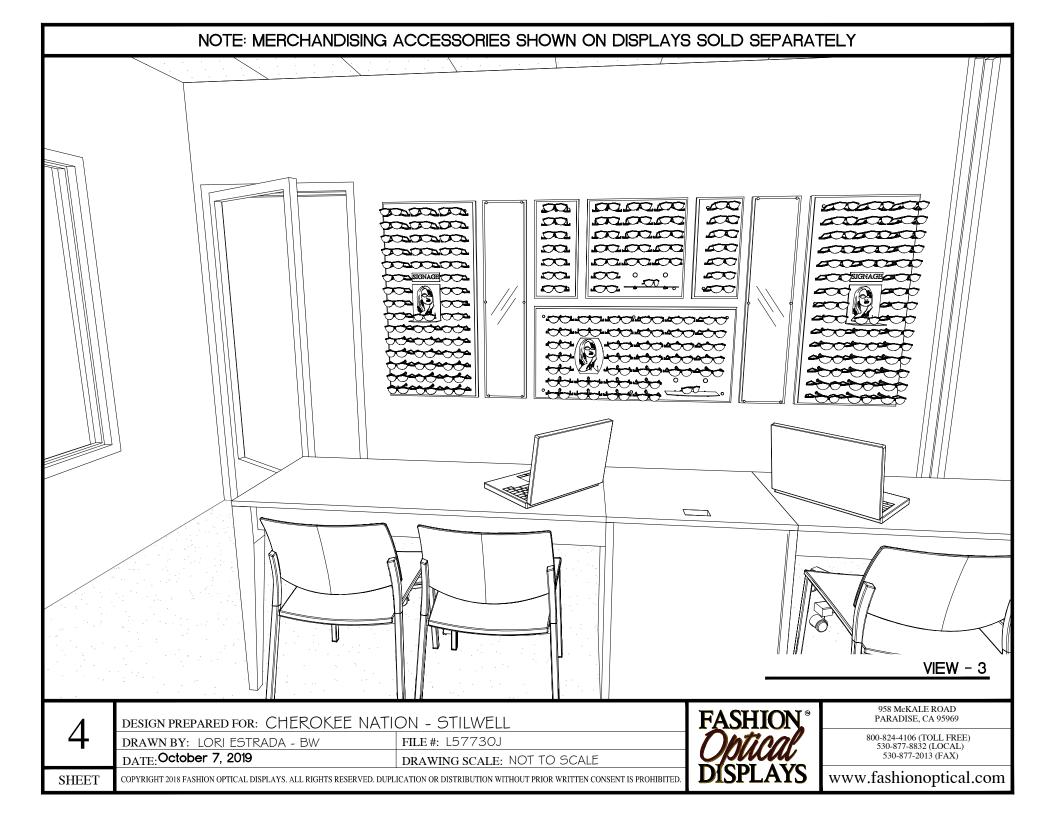
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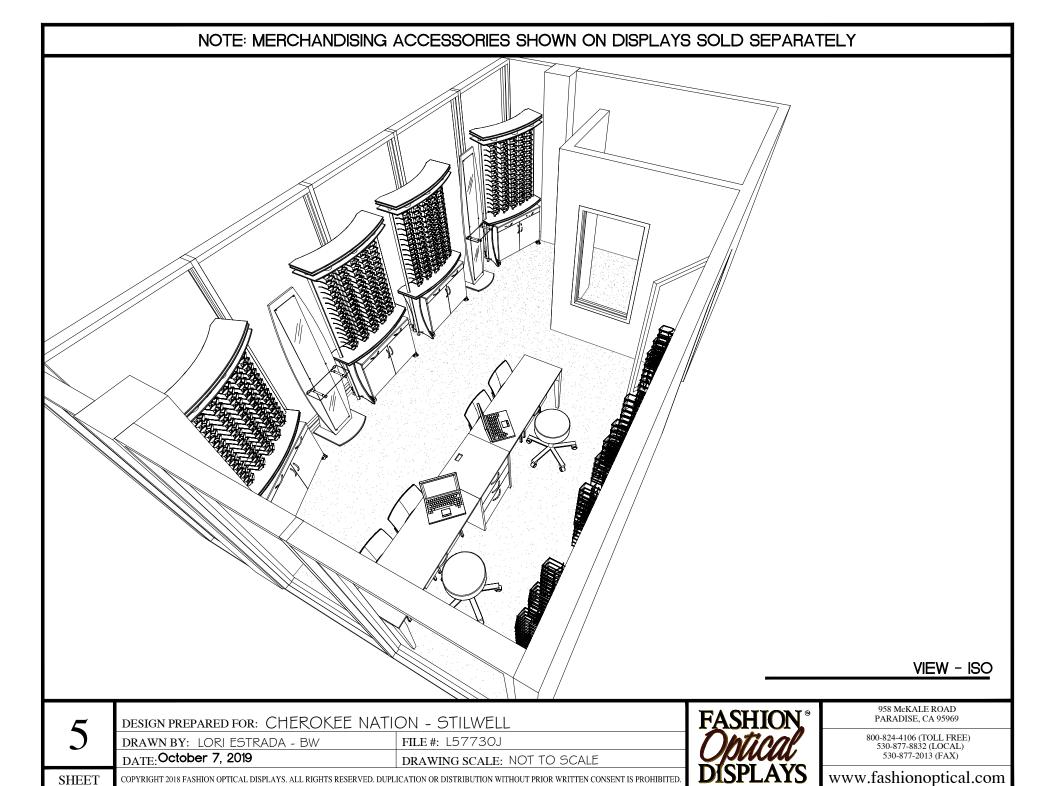


800-824-4106 (TOLL FREE) 530-877-8832 (LOCAL) 530-877-2013 (FAX)

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ELECTRICAL LEGEND

STANDARD DUPLEX OUTLET

DATA /COM OUTLET

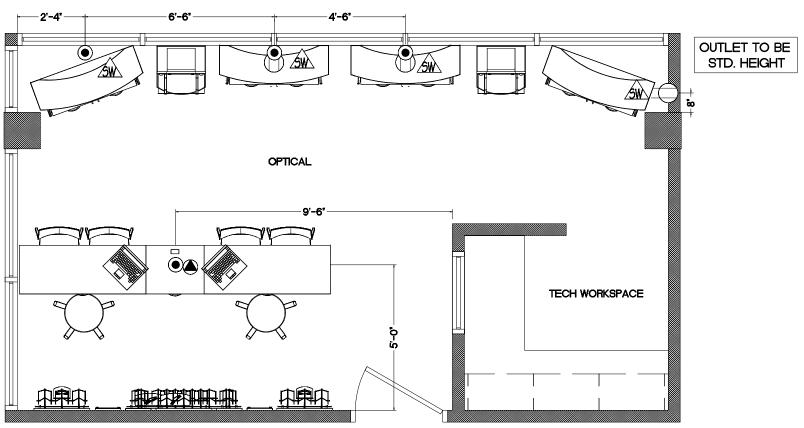
FLOOR OUTLET

ELEMENTAL LINEAR FIXTURE

FURNLITE CAN FIXTURE

PEGASUS FIXTURE

SWITCH PROVIDED BY
FASHION OPTICAL DISPLAYS



DESIGN PREPARED FOR: CHEROKEE NATION - STILWELL

FILE #: L57730J

REV. DATE: October 7, 2019

COPYRIGHT 2018 FASHION OPTICAL DISPLAYS. ALL RIGHTS RESERVED. DUPLICATION OR DISTRIBUTION WITHOUT PRIOR WRITTEN CONSENT IS PROHIBITED.

#### NOTES:

- 1. ALL OUTLETS FOR DISPLAYS TO BE WIRED TO A MASTER SWITCH IF POSSIBLE.
- 2. CLIENTS TO VERIFY COMPLIANCE W/LOCAL BUILDING AND SAFETY CODES.

FASHION OPTICAL DISPLAYS CAN NOT BE RESPONSIBLE FOR NON-COMPLIANCE



### / ENCORE AUTOMATIC CHAIR

• Easy-to-use backlit fingertip switches on both sides control chair elevation, recline and return functions.

Programmability allows the touch of a switch to instantly recline the chair to form a bed or any position desired. Another touch, and the chair assumes its original seated position.

- Recline, as well as elevation, is controlled by Marco's exclusive field-proven hydraulic system for smooth, quiet adjustments.
- Corded foot-pedal allows auxiliary control of elevation, recline and automatic return.
- •Can be interfaced with Marco's Encore and Deluxe2 Stands to form a wheelchair-accessible system.
- Standard single-handed headrest with unique lock indicator assures the headrest is firmly and securely in position. Optional pillow headrest and surgical package are also available.
- Scuff-resistant, high-impact covers on arms and chair base are easily cleaned.
- Standard Marco ten-step, hand-finished painting process.
- •The Encore Automatic Chair includes the special Boltaflex Sierra upholstery which features a protective fabric finish that is easy to clean.
- •A pneumatically-assisted manual version of the Encore Chair is available for greater value in applications that don't require automated recline functions, Stock #1280.



With the touch of a button, the **Marco Encore Automatic Chair** quickly reclines from an upright position to a fully horizontal, flat-table mode—or anywhere in between. Another button instantly returns the chair to its upright position. Marco's exclusive hydraulic system ensures silky smooth elevation and recline. This

Single-handed headrest

unique, fail-safe hydraulic mechanism also enables the chair to descend to an extremely low position for easy entry by elderly patients, yet the high-end elevation remains uncompromised. Backlit flat overlay switches on both sides of the chair are easy to see in darkened rooms. The Marco Encore Automatic Chair is the ideal choice for those who prefer instant, automatic recline functions. Electrical requirements:



Backlit flat overlay switches are easy to see in a darkened room.



Easy, "dial-in" programming control with safety switch to disable chair operation

110V AC, 50/60 Hz, 7 amps maximum.



Encore Automatic Chair in fully reclined position with Surgical Package installed

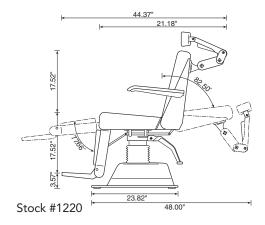


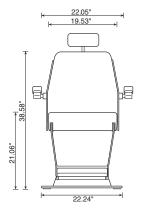
Ask your Marco Distributor about The Marco Package Plus Program.

#### PLAY IT SAFE.

Protect your warranty. Buy your Marco product only from an authorized Marco distributor. Call Marco for the name of the distributor nearest you.

#### **MEASUREMENTS**









A new, innovative design compliments the proven, 30-year mechanical operating system.

An electronic release button for slit lamp arm adjustments and a chair elevation switch are both conveniently located on the lower slit lamp arm.

An efficient counterbalanced refractor arm provides one-handed, immediate three-way locking of the refractor.

An attractive new overhead lamp features multiple adjustments, rotation stops and an on/off switch.

A full-featured flat overlay switch panel controls the slit lamp, chart projector, accessory instrument, overhead room lights, lamp brightness, chair elevation, and voltage for a corded instrument.

Three rechargeable wells and three 115V electrical receptacles.

Scuff-resistant, high-impact base cover is easily cleaned.

Standard Marco ten-step, hand-finished painting process.

DELUXE

Wheelchair Accessible

The industry's standard in efficient, instrument-delivery systems just got better. The new modern **DELUXE 2 STAND** clearly offers more pure quality and cosmetic appeal than any other instrument stand on the

market. Innovative features such as an electronic slit lamp arm release button, overhead room light switch, and a laborious ten-step hand-finished painting process make the Deluxe 2 Stand a unique and differentiated product. While maintaining our usual high standards of function, quality and



Deluxe 2 Lower Slit Lamp Arm

durability, the new Deluxe 2 Stand also remains competitively priced. For a compelling side-by-side demonstration against any other instrument stand, contact your local authorized Marco distributor.

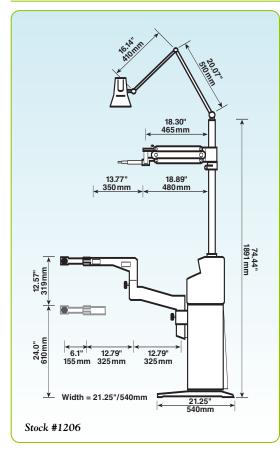


Deluxe 2 Stand fullfeatured instrument control panel, Stock #1206



Non-console Deluxe 2 Stand instrument control panel, Stock #1213

#### **MEASUREMENTS**





Ask your Marco Distributor about The Marco Package Plus Program.



PLAY IT SAFE. Protect your warranty. Buy your Marco product only from an authorized Marco distributor. Call Marco for the name of the distributor nearest you.







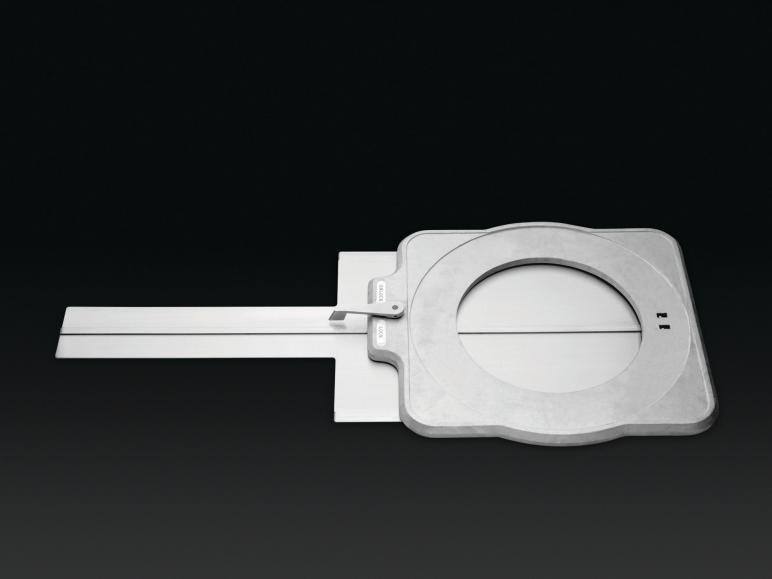












# **940**Chair Glide for ADA Compliance



# **940**Chair Glide for ADA Compliance



The 940 chair glide allows the practitioner to slide the existing chair back to accommodate wheelchairs. Its slimeline chair track also provides maximum access to the patient.

#### Base Plate

You can place the satin finished, stainless steel base plate on any floor or carpet. Centered on the plate, a stainless steel track guides the carriage and prevents lateral movement. Heavy-duty stops on the base plate limit the distance of travel.

#### Carriage

A heavy-duty cast aluminum carriage accommodates virtually any Reliance based chair.

#### Glide System

Case hardened steel rollers enable the practitioner to effortlessly slide chair out of the way and replace it with a wheelchair. The range of travel is 27".

#### **Tapered Track**

Track tapers into a 6" tail, which allows the practitioners to move an examination stool closer to the chair to provide greater accessibility to the patient.

#### **Locking Pedal**

Conveniently located foot lever activates and releases a friction lock that secures the chair in position anywhere along its 27" path.

#### **ADA Compliance**

The Model 940 helps practitioners comply with the mandatory requirements of the Americans with Disabilities Act. The entire cost of the Model 940 may be applied toward the tax credit provided by this legislation.

#### **Dimensions and Specifications**

Base plate length: 52" overall; wide section: 28"; narrow: 24". Base plate width: wide section: 20"; narrow: 6". Track: 3/4" wide x 3/16" high x 52" long. Overall carriage length: 29". Overall carriage width: 26".



# NEW KR-8005 Auto Kerato-Refractometer with subjective & glare testing





- Accurate objective measurement (REF, KRT, R/K)
- Subjective VA measurement for far and near distance
- Glare test
- Grid test
- Contrast test



# KR-800S 5-in-1 Auto Kerato-Refractometer

Topcon is proud to introduce the KR-800S Auto Kerato-Refractometer. It incorporates Topcon's exclusive Rotary Prism technology to allow for unparalleled precision and reliability. Furthermore, the KR-800 "S" is special in its ability to measure subjective VA for both far & near distance and also features additional subjective test modes including a glare test, grid chart test and contrast test.

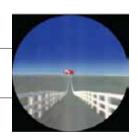
# Easy to see & operate

#### Wide 8.5-inch Touchscreen Control Panel

A wide 8.5 inch color touchscreen panel features clear, easy-to-read icons.



Accurate objective measurement



Subjective VA measurement for far & near distance



Glare test



Grid test







Topcon's latest engineering techniques have reduced the weight of the KR-800S by 23% compared to KR-800. This contributes to a smoother operation of the unit, a more fluid measuring process and more accurate results.



**Easy Load Printer** 

13.75 WI

There is no need to feed paper through the roller.

Just drop the paper in and print.



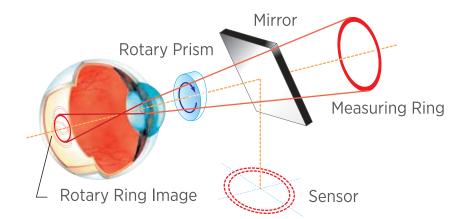


Exclusive Topcon Rotary Prism Technology

**Unique Technology for Unparalleled Accuracy** 

The unique Rotary Prism Technology, exclusive to Topcon, allows for unparalleled precision and reliability. This system measures an area of the retina while permitting measurements through pupils as small as 2mm in diameter.





# Technical Specifications

#### **Objective Refractometer Mode**

Sphere Range Cylinder Range **Axis Range** 

Minimum Measurable Pupil Diameter

• -25 to +22D (0.12D/0.25D steps) \*1

• OD to 10D (0.12D/0.25D steps) \*1

• 0°to 180° (1°/5° steps)

• ©2mm

Corneal Curvature Mode

**Corneal Curvature Radius Corneal Refraction** Refraction Index

Corneal Astigmatism

Corneal Astigmatism Axial Angle

Subjective Measurement Mode

Sphere Range Cylinder Range **Axis Range** 

**Others** 

PD Measurement Range

Input/Output

5.00mm to 10.00mm (0.01mm display unit)

• 67.50D to 33.75D(0.12D/0.25D steps)

• 1.3375

• 0D to 10D (0.12D/0.25D steps)

• 0 to 180° (1°/5° steps)

• -18 to +18D (0.25D steps) \*2

• OD to 8D (0.25D steps) \*2

• 0°to 180° (1°/5° steps)

• 20-85mm (0.5mm display unit)

• USB(for Import), RS-232C(for Export), LAN(for Export)

Other Specifications

**Dimensions** Weight

**Power Supply** 

• 317-341mm(W) Q 521-538mm(D) Q 447-477mm(H)

• 16kg

• 100-240V AC, 50-60Hz

\*1 -25D ≦ spherical refractive power + cylindrical refractive power or spherical refractive power + cylindrical refractive power ≤ +22D

\*2 -18D ≦ spherical refractive power + cylindrical refractive power or spherical refractive power + cylindrical refractive power ≦ +18D



†Not available in all countries, please check with your distributor for availability in your country \*Subject to change in design and/or specifications without advanced notice



IMPORTANT In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.







TOPCON CORPORATION

TOPCON CORPORATION

TOPCON CORPORATION



#### TOPCON CORPORATION

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#### **TOPCON CORPORATION DUBAI OFFICE**

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### 1000 00 000

### **Version 9 Features**

AcuityPro.com

Version 9 will integrate with Marco Refraction Models: RT-2100, RT 3100 & RT 5100. All charts in these instruments are available as well as total use of the Acuity Pro remote for Acuity Pro specific functions. Other features include a new white on black optotype option, easy importation of photos or videos, manual advance in slideshow mode for Nanolectures®, 6 new ETDRS charts, improved crowding bar function, new fixation dot sizes, improved remote for better stability and picture in picture.

#### Software Only:

Acuity Pro 9.0 with one license	\$1695
Extra licenses, same location	\$799
Upgrade to 9.0	\$499

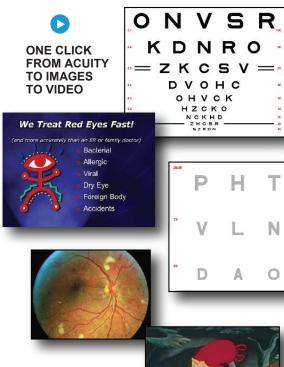
#### Software + Computer All In One Bundle:

Initial All-In-One Complete System.....\$2890 Includes: Acuity Pro Software, All-In-One Computer, Wall Mount, Wireless keyboard/ pointer, Acuity Pro Remote Additional Systems......\$1994

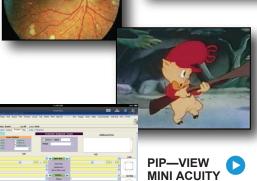
#### Software + Windows Stick System Bundle:

Initial Stick Computer Complete System...\$2590 Includes: Acuity Pro Software, Stick Computer & Compatible Monitor, Wall Mount, Wireless keyboard/pointer, Acuity Pro Remote

> Additional Systems......\$1694 (3 Year Warranty included on Stick Systems)













Multiple Optotypes

....

- **Smart Randomization**
- **Custom Exam Macros**
- Path Photo Gallery
- Cartoons
- Contrast Sensitivity
- Patient Education
- Video/Photo Imports
- Practice Marketing
- ETDRS
- ANSI Compliant
- License Portability
- Faster Refractions



PRACTICE MARKETING



901 N Main Street Elk City, OK 73644 580.243.1301 phone 580.243.1377 fax



info@acuitypro.com

#### "Think Outside the Bulb"

With over 15 years of sales and 8000+ installations around the world, we are the industry leader in computer generated eye charts. 000 000001

info@acuitypro.com

Visit AcuityPro.com for more!

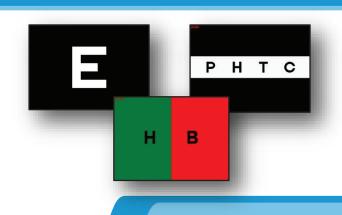
#### WHAT OUR DOCTORS THINK...

Acuity Pro is simple, effective and designed by docs like you and me who have to live with their own program every day. These are tough combinations to beat. Get into the world of flat screen computerized eye charts right away. It's the most return you'll ever see for such a small investment. - Jay Petersma, O.D.

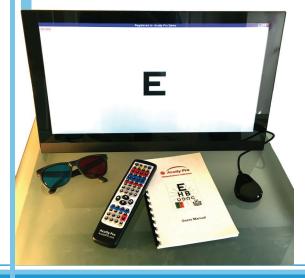
# We Think Outside The Bulb...

#### IT'S ABOUT DESIGN

Developed by doctors and improved by user input, Acuity Pro truly "Thinks Outside the Bulb" to provide a system that includes patient education and practice marketing. It is also exceptionally easy use and customize. Being software based, the license can be moved to other computers or placed on a laptop for portable use at school screenings, nursing homes or home visits. The software allows Acuity Pro to be used in a dual monitor setting, eliminating the need for a dedicated computer.



# A Feature Set That Sets The Standard...



#### ACCURATE AND FASTER

Not only does a bulb projector get dimmer every day, the slides, bulb and lenses gather dust daily. The brightness and consistency of the LCD monitor allows for refraction in a full or partial illuminated room for 'real world' evaluation of LASIK and multi-focal contact lens patients. Now with MARCO ephoropter integration, Acuity Pro makes perfect sense.

#### **▶** RESEARCH READY

The ability to control parameters makes Acuity Pro a natural for research. ARMD treatments, new IOL designs, new spectacle lens designs and new contact lens material testing all depend upon reliable and reproducible results. Acuity Pro delivers consistency with accurate calibration and controlled brightness and contrast. Acuity Pro was born in the clinic but is at home in any research facility where accuracy matters.

#### What Makes Us Better...

- Easy and Faster Refractions
- 56 Key Custom Remote
- Smart Randomization
- Multiline Display Choices
- 3 Letter Sets for Each Line
- Create Video Playlists
- 6 ETDRS Charts + Random
- Infinite Randomize on Charts
- Precise Optotypes, not fonts
- ANSI Compliant
- English, Metric, Decimal, or LogMar Display
- Marco Integration
- Software Only or All-in-One
   Systems + USB Licenses
- Free Lifetime Tech Support
- Training—flash tutorial
- Dual Monitor Compliant
- Smaller Increments of Larger
   Optotypes for Low Vision
  - Our custom IR remote pulls up each Acuity Pro feature with a rapid one button push. Ten programmable keys allow "daisy chain" capability to add entire exam sequences to just one button.



**○ ○** AcuityPro.com



# **4200**Series Pneumatic Stools



# **4200**Series Pneumatic Stools

#### Finished for Durability

- Select from 14 easy-to-maintain vinyl colors. Other vinyl colors available by request.
- All exposed metal, with exception of the aluminum base, is chrome-plated steel.
- Base and legs finished in tough, black epoxy enamel.
- Hooded dual-wheel casters.
- 5 legs for stability.

#### Optional Foot Ring

Order a foot ring with your stool, or at a later date.

#### **Tech Specs**

Base diameter: 22.5"

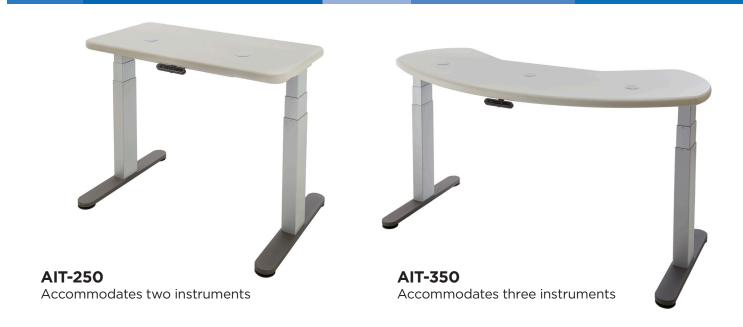


	4240	4246
Seat adjustment	Pneumatic Assist	Pneumatic Assist
Seat diameter	15"	15"
Seat construction	2" polyfoam	2" polyfoam
Seat swivels	360°	360°
Five legs for extra stability	Yes	Yes
Height range	19.50-27"	19.50-27"
Shipping weight	23 lbs	26 lbs



### AIT-250/350/650

Adjustable Instrument Tables





**AIT-650** For Ophthalmic Imaging Equipment

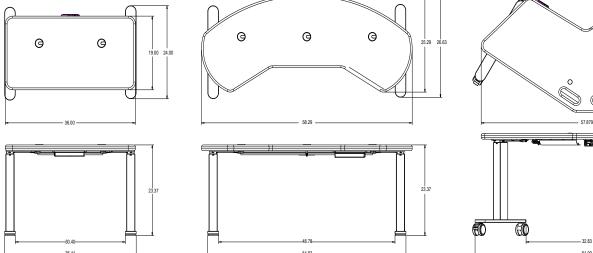
#### **KEY FEATURES**

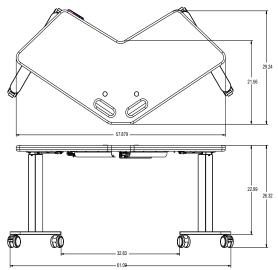
- » Wheelchair accessible: Complies with ADA regulations
- » Adjustable table height with synchronized table legs
- » New Switch Panel with LED display and 3-memory storage
- Wide range of elevation travel up to 41" (1041mm)
- » Electrical power strip supplied with each unit
- » Anti-Collision™ safety system that enhances patient's comfort and safety¹
- » Heavy duty powered legs and durable table top construction

#### **DIMENSIONS AND SPECIFICATIONS**

	AIT-250	AIT-350	AIT-650
ELECTRICAL			
110 Volt System	120 VAC (+ 10%),6.0A, 60Hz	120 VAC (+ 10%), 6.0A, 60Hz	120 VAC (+ 10%), 6.0A, 60Hz
220 Volt System	230 VAC (+ 10%), 2.5A, 50Hz	230 VAC (+ 10%), 2.5A, 50Hz	230 VAC (+ 10%), 2.5A, 50Hz
PROTECTION			
120 VAC	Class 1 (Against Electric Shock)	Class 1 (Against Electric Shock)	Class 1 (Against Electric Shock)
230 VAC	Class 2 (Against Electric Shock)	Class 2 (Against Electric Shock)	Class 2 (Against Electric Shock)
Table Load Capacity	300lbs (136kg)	300lbs (136kg)	300lbs (136kg)
Shipping Weight	103lbs (46.7kg)	113lbs (51.3kg)	115 lbs. (52.2 kg)
Nominal Speed (@ 0 load)	1.37-2.24in/s (35 - 57mm/s)	1.37-2.24in/s (35-57mm/s)	1.37-2.24in/s (35-57mm/s)
Table Dimensions	36"x 24" x 29" (914mm x 610mm x 737mm)	59" x 27" x 29" (1499mm x 686mm x 737mm)	58" x 30" x 29" (1473mm x 762mm x 737mm)
Table Height (retracted)	23" (584mm)	23" (584mm)	23" (584mm)
Table Height (full stroke)	49" (1245mm)	49" (1245mm)	49" (1245mm)
Wheelchair Accessible	YES	YES	YES

#### AIT-250 AIT-350 AIT-650





#### Topcon Medical Systems, Inc.

111 Bauer Drive, Oakland, NJ 07436 Phone: 800-223-1130

Customer Service: 866-922-6278 Fax: 201-599-5250 (Sales) • 201-599-5247 (Service)

topconmedical.com

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#### 6450

#### **AIR WARMER FOR FRAMES**



### PrimeAir Hot Air Frame Warmer #2400

#2400

This compact and quiet unit delivers a blast of heated air to your frame moments after activating the solid-state electronics.

Full temperature and air speed range allows you to use the proper heat setting for trouble free adjustments. Includes hot air concentrator for spot heating on frames. Made in Italy.

Specifications:

**Temperature range**:  $180^{\circ}$  F to  $325^{\circ}$  F

Air speed: Variable

Voltage: 115

**Watts:** 1000

**Amps:** 9

**Dimensions**: 8" W x 8-1/2" H x 5-3/4" D

SOURCE: <a href="https://westernoptical.com/products/primeair-hot-air-frame-warmer">https://westernoptical.com/products/primeair-hot-air-frame-warmer</a>

# **Computerized lensmeter**

**CL-300** 





#### **CL-300 Computerized lensmeter**

With a new UV Measurement Function, the CL-300 provides comprehensive data for the optometrists. Its compact, ergonomic design and intuitive touch color screen panel ensures that measurements can be easily and quickly obtained.

#### **Features**

- » LCD color touch panel
- » Compact slim body
- » Automatic mono- & multi-focal detection

- » UV transmittance measurement
- » Green measurement light beam

#### **CL-300 FEATURES**

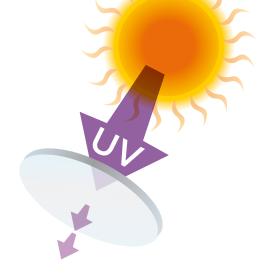
## UV transmittance measurement function

The CL-300's new UV measurement function provides information on the ultraviolet transmittance in the range of 0% to 100%, providing reliable measurement results for eyeglasses and sunglasses.









\* UV Transmittance Measurement is performed with the light beam of 365 nm wavelength.

#### Multi-focal lens measurement

Not only single lenses but also multifocal lenses can be easily measured. The CL-300 also features automatic detection for single lenses, bi-focal and progressive lenses.

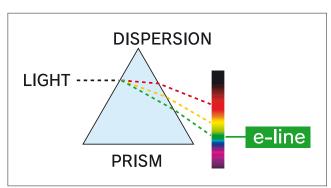
#### **Example: Progressive lens measurement**

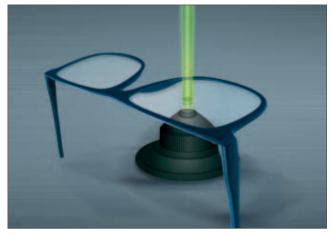
The image shows a near point measurement screen. With simple operation, the ADD value can be obtained by following the guide instructed on this progressive measuring mode.



#### **Green light beam**

The CL-300 incorporates the green light reading beam, which is also known as e-line. Due to the wavelength of 546 nm, the e-line can be well-sensed by the human's eye and it is determined as a standard by ISO 7944. ABBE compensation is no longer required with this new ISO 7944 compliant feature. Using green light beam in our instrument enhances lens measurement precision and reduces the chance of error in the measurements.





#### Improved lens support

Due to its new design, the lens support of the CL-300 is 6 mm more in height compared to the conventional model. This change enables smooth and trouble-free measurement of high-curve lenses, preventing from contact of the lens edge with external parts of the lens support.

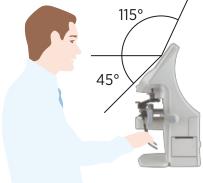
# Large 5.7 inch LCD monitor with wider directional angle

The wide LCD monitor covers a 160 degree angle of observation allowing clear, compatible readings from virtually any position regardless of the operator's height.

### White ink cartridge standard

The newly featured white marking ink provides clear marking even on lenses with anti-staining and anti-fog coating. Due to these favorable qualities, Topcon made the white marking ink standard in the new CL-300.







#### Models and marking ink

	white ink	red ink
Cartridge type	standard	optional
Holder type	-	standard

<sup>\*</sup> For availability in your region and other details please refer to the local Topcon authorized representative.

# Contact lens measurement

Contact lenses can be easily measured using the CL-300 lens support and ring accessories that come standard with the instrument.



#### Fast, easy drop in printer

Loading the thermal paper into the printer has never been easier. Just drop the printer paper into the receptacle and close the cover. The quick and quiet printer is ready to go. This improvement saves time and enhances workflow.



#### **Printout sample**

TOP	TOPCON CL-300			
$\langle R \rangle$	S	С	Α	
	+0.00	+0.00	180	
ADD	0.75			
PSM	0.00	OUT	0.00	
$\langle L \rangle$	S	С	Α	
	+0.75	+0.25	85	
ADD	0.75			
PSM	0.00	OUT 3.5	0 DWN	
TOPCON Optical Store				

### **EASY OPERATION**

#### Easy and fast operation

The large, newly designed color LCD monitor with a 5.7-inch touch panel simplifies the interpretation of readings even with progressive and multi-focal lenses. The dynamic color measuring graphics follow the measuring process and present each step of the operation with different color, providing better control and ease of use.





Smooth lens table support enables easy placement of eyeglasses.







Right after the lens is placed, the optical center (+) appears with the "BLUE" bar.





The "ALIGNMENT OK" is displayed when the target (+) comes within the circle. When BEEP function is ON, the buzzer will sound.



4

The measured data is memorized automatically with the "MARKING OK" when the target is aligned in the exact center (at  $O\Delta$ ).

In order to do marking, place down the lens retainer to secure the lens and marking is stamped accurately with the equipped marking cartridge.

#### **Specifications**

Measurement range	sphere cylinder axis addition prism	0 to ±25 D (0.01/0.12/0.25D steps) 0 to ±10 D (0.01/0.12/0.25D steps) 0 to 180°(1°step) 0 to + 10D (0.01/0.12/0.25D steps) 0 to 10Δ
Cylinder mode		MIX /-/+
Prism mode	•	X-Y (Orthogonal Coordinates), P-B (Polar Coordinates),No Display
UV transmittance	•	0 - 100% (1% / 5% steps)
Lens detection	•	AUTO for single & progressive lenses
Contact lens measurement	•	Hard / Soft contact lens
Light source	refractive measurement UV measurement	Green LED 535±5nm  UV LED 365±5nm
Wavelength criterion	•	e-line/d-line with ABBE compensation
Lens diameter		ø5 to 100 mm
Screen	•	5.7 inch color TFT-LCD touch screen
PD measurement range*		50-90mm
External interface	•	RS-232C × 2, LAN × 1*
Power supply	•	100-240V / 50/60Hz 1.2A (AC Adapter) : AUTO power save
Dimensions		197(W) × 220(D) ×404(H) mm
Weight		3.8Kg

Models	CL-300PL	CL-300PDL
PD measurement	-	included
Printer	included	included
LAN	-	included

#### **System Chart**



\* LAN is available with CL-300PDL











Subject to change in design and/or specifications without advanced notice.

In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.

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## WelchAllyn<sup>o</sup>

# Welch Allyn Connex® ProBP™ 3400 Digital Blood Pressure Device

Accurate, reliable, connected blood pressure readings in the palm of your hand



Take blood pressure accuracy to the next level.
In fact, take it anywhere.



# The Welch Allyn Connex ProBP 3400 puts consistent, accurate blood pressure readings at everyone's fingertips.



- Small, handheld design makes device easy to carry and capture readings on rounds or in triage settings
- SureBP® NIBP technology enables fast, accurate 15-second blood pressure readings, improving patient comfort
- Obtains accurate readings and minimizes error codes, even in the presence of many cases of motion or weak pulse
- USB-wired technology enables integration to select EHR/EMR systems, helping improve documentation accuracy and efficiency
- Compatible with Welch Allyn cuff sizes ranging from small child (size 8) to thigh (size 13)
- Lithium-ion battery technology delivers up to 100 readings on a single charge
- Configurable to match your workflow and specific patient needs.
   Upgradeable so that your initial investment is protected as your needs change

Small, handheld design makes device easy to carry and capture readings on rounds or in triage settings

#### Configured for your facility and your workflow.



*Power-cord configur Replace "B" in part nu with designation from below.	ımber
North America	В
Europe	2
UK	4
Australia (orange cord)	6
China	С
South Africa	7
Japan	J†

'Mobile stand version only. Handheld version uses North American "B" configuration

#### The perfect blood pressure solution for just about any care setting.



#### Physician Office

With AAMI/BHS-AA-certified accuracy, SureBP® blood pressure technology that captures readings in just 15 seconds, and the ability to work with a broad range of cuff sizes¹, the ProBP™ 3400 is a reliable alternative to manual sphygmomanometers. The ProBP 3400 is also an affordable approach to digitally capture blood pressure measurements and export readings to electronic health record systems.



#### Hospital

Small enough to carry in your hand, the ProBP 3400 is a convenient alternative to manual sphygmomanometers or larger vital signs devices for capturing reliable blood pressure readings during rounds or in triage settings. A mobile stand featuring a compact footprint and accessory basket enhances portability with an added measure of security and the ability to store extra cuff sizes on board.



#### Specialty Care

In situations when you need accurate blood pressure readings quickly and easily, look to ProBP 3400 first. Whether in long-term care, sports medicine, dental health, or other applications that call for reliable, repeatable blood pressure readings, the portable and accurate ProBP 3400 is the right choice for you.

"...(SureBP® technology)
offers great advantages
in speed and patient
comfort...clinicians can
have added confidence in
this new technology."\*
-Dr. Bruce S. Alpert



#### Proven Accuracy and Reliability

Using the same ground-breaking SureBP technology found in the Welch Allyn Spot Vital Signs LXi, the ProBP 3400 can capture blood pressure readings in just 15 seconds—nearly twice as fast as other electronic blood pressure devices.

- > Meets AAMI standard for blood pressure accuracy
- > Achieved "AA" rating by British Hypertension Society data analysis

#### Connex® ProBP™ 3400 Digital Blood Pressure Device



#### Connect to your electronic health record system.

The Connex ProBP 3400 comes connectivity-ready, allowing you to integrate it with the electronic health records system you have now or in the future. With hardwired USB connection, the Connex ProBP 3400 communicates with select EHR/EMR systems in both the physician's office and the hospital, helping reduce documentation errors and improve efficiency.



#### The correct cuff means the correct reading.

Unlike many digital blood pressure devices, the Connex ProBP 3400 works with a very broad range of cuff sizes<sup>1</sup>, minimizing the potential for inaccurate readings on patients large or small. Plus you have all the advantages of unique Welch Allyn FlexiPort® cuffs that enable quick, snap-fit connections, disposable cuffs to reduce cross-contamination risk and facility-standardization benefits. Visit www.welchallyn.com/flexiport for more information.

The ProBP 3400 is not intended for neonatal use.



#### Protect your investment

Remote troubleshooting. Software updates and upgrades. Extended warranties.

Go beyond the standard product warranty to take service and support to another level with Welch Allyn Partners in Care Services<sup>™</sup>. Get faster turnaround times, free shipping, software upgrades, and more—everything you need to keep your device on site and in service longer.\*

- Comprehensive Partnership Program (1 yr) / S1-3400
- Comprehensive Partnership Program (2 yr) / S1-3400-2

\*Availability of specific features, coverage, hours and response times may vary by location. Other limitations may apply.

For more information about Connex® ProBP 3400 please contact your Welch Allyn representative or visit www.welchallyn.com/connex.

Welch Allyn Corporate Headquarters 4341 State Street Road, P.O. Box 220 Skaneateles Falls, NY 13153-0220 USA (p) 800.535.6663 (f) 315.685.3361

Welch Allyn°

WWW.WELCHALLYN.COM



#### **Prescribed for Progress**™



#### **PRO1 Upper Body Product Specifications**

Order Code: PRO117-INT

#### **FEATURES**

Bi-directional movement and resistance	Pedaling in forward and reverse provides versatility, helps prolong exercise and promotes reciprocal muscle balance
Low starting resistance	6 watts
Resistance range	191 levels of resistance - 20 levels adjustable in .1 increments
Resistance system	3 phase combination generator & eddy current brake - largest watt range in the industry
Foot rests	Foot rests included for comfort and multiple foot placement options
Easy to transport	Integrated transport wheels
Heart rate monitoring	Telemetric (chest strap required)

#### ACCESSIBILITY & ADJUSTABILITY &

Adjustable, tilt head	Accommodates users of all heights and allows them to exercise while seated or standing
Adjustable arm cranks	4 range of motion settings, plus unison motion
Step-through seating	Adjustable step-through allows easy entry and safe and easy access for all users
Direct wheelchair access	Seat slides off for direct wheelchair access - ADA compliant
Wheelchair platform	Provides a sturdy foundation for wheelchair use or for standing exercise
Bariatric seat	Wide seat adjusts forward and back, has side handles and 600 lb user weight capacity.
360° Therapist Assist Pedals	Adjust the seat forward and back from any point around the machine
Seat removal handle	Integrated handle on seat back makes it easy to remove the seat
Zero-sloping forward/back seat adjustment	Adjust forward and back on level monorail for optimum control and safe positioning

#### INTELLI-FIT™ CONSOLE

7" LCD full color touch screen display	Touch screen with clear, simple screens and large, readable font.
Audible beep	Yes
Tactile buttons	Tactile buttons in addition to touch screen
Resistance levels	191 levels of resistance - 20 levels adjustable in .1 increments
Display feedback	Time, level, distance, METs, heart rate, calories, RPM, watts
One touch quick start	: Yes
Control METs - Constant Work Program	Set constant METs level and the workload remains constant throughout the program.
Iso-Strength Program	Isokinetic program for safe, accommodating resistance
Power Burst	8-second burst of high intensity training
Cool down	Automatic cool down begins after each exercise is completed
Administrative mode	User defined settings, metric or US units of measure and other custom settings
User-defined console languages	9 languages - English, Spanish, French, German, Russian, Japanese, Chinese, Italian, Dutch
Download results to USB flash drive	Plug USB flash drive into the Fit-Key® slot to save workout results in a .txt file
CSAFE port and 8-volt DC power port	: Yes
USB charger	For phones and other electronic devices

#### PRO1 Upper Body Product Specifications (cont.)

#### Order Code: PRO117-INT

#### INTELLI-FIT™ CONSOLE (cont.)

Water bottle holder, accessory tray, reading rack	Integrated			
Personal Cooling Fan	Integrated dual fans with three speeds			
Programs	Quick Start	Constant Work - METs	Hills	Heart Fit Test & Training
	Manual	Constant Work - Watts	Fit-Quik®	Power Fit Test & Training
	Heart Rate	Iso-Strength	Random	Stress Test

#### TECHNICAL SPECIFICATIONS

Power Requirements	Self-generating; low-voltage AC adapter, included	
Maximum user weight capacity	600 lbs.	
Unit weight	247 lbs.	
Unit size	60″L x 30″W x 77″H	
Color	Frame: Charcoal Cover: Cool Gray	
Manufacturing	Assembled in USA	

#### WARRANTY

Parts	3 years
Labor	1 year

#### **ENHANCEMENTS**

Fit-Key® software	Optional Fit-Key® software makes it easy to create specialized programs and track data
Entertainment options	Yes

#### **ACCESSORIES**

Internal/External Rotation Device	Strengthens internal and external rotators in one exercise
	Designed for individuals who require help gripping the hand cranks. Made of heavy-duty closed cell foam that resists moisture. Flexible, comfortable and easy to clean.
Straight Grips	For those who have spasticity, weakness, or tremors in their upper extremities.
Heavy duty wheelchair ramps	For manual and powered wheelchair access. Provides increased stabilization
Polar Chest Strap	Transmits heart rate directly to console - works on all SCIFIT products



SCIFIT Systems, Inc. reserves the right to change or alter specifications at any time without notice and without incurring any obligation.

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PRO1 Specs - PRO117-INT - 2015 - v1

#### **UBK 885**

#### Experience™ Series

# Upright Bike III

#### **Product Highlights**

The UBK 885 upright bike adds value to your facility by combining essential reliability and ease-of-use with smooth pedaling and biomechanically correct geometry. The UBK 885 features custom-designed handlebars with integrated touch heart rate in two places for maximum comfort.

#### Product Features

#### 1. P82 Console

The P82 console not only offers a brilliant 15 in / 38.1 cm screen that's ergonomically positioned to deliver crystal-clear entertainment viewing for exercisers in motion, but when networked, is also a direct-to-exerciser communication portal allowing you an opportunity to build your brand, share information about activities and services, and strengthen the sense of community within your facility.

#### 2. Over-molded Handlebars

The over-molded style adds comfort and durability while offering dual heart rate contacts and three ergonomic riding positions: upright, cruising, and road.

#### 3. Seat Adjustment and Improved Saddle Design

The simple seat adjustment allows the exerciser to change the position of the seat with one hand, either on or off the bike.

#### 4. Dual-sided Pedals

The dual-sided pedals allow the exerciser to use the pedals with or without the integrated straps. The extra wide pedals comfortably accommodate feet of all sizes to ensure proper pedaling form.

#### **5. Ease of Maintenance**

The easy-to-remove shroud ensures quick access to the belt-drive system for maintenance and servicing without removing the pedals or crank.

#### Specifications

**Dimensions (L x W x H):** 48 x 21 x 62 in / 122 x 53 x 157 cm

**Equipment Weight:** 169 lb / 77 kg **Power:** 120 volt, 15 amp circuit

Total Workouts: 17
Resistance Levels: 25

Minimum Watts: 18 (level 1 at 20 RPM)

Maximum Watts: 750 (level 25 at 150 RPM)

Language: English, Chinese, Danish, Dutch, French, Finnish, German, Italian, Japanese, Korean, Norwegian, Polish, Portuguese,

Russian, Spanish, Swedish, Traditional Chinese, Turkish





Gloss Metallic Silver

Refined colorways with dark Tungsten covers and two frame color options.



Black Pearl

Network Capabilities: Preva® network capable

**Entertainment:** 15 in / 38.1 cm LCD Capacitive Touch Screen

Mobile Device Charger and Audio Jack

Accessories: Integrated Reading Rack, Dual Bottle Holder

Optional - Cable Management

Warranty: Visit www.precor.com for warranty terms.





# over 100 years of innovation

#### UPC 835126203482



#### LK700R recumbent

- ≥ Easy walk-through design for safe entry and exit
- Self-generating, no external power required to operate the equipment. Enables flexible placement within a room without regard to power outlet location
- 16 Built-in programs and 16 levels of electronically controlled resistance
- Heavy duty commercial cranks, axles and bearings
- > Fore/Aft seat slider for a wide range of user sizes
- Oversized sure-grip pedals with racheting straps
- Convenient fingertip resistance controls allow for quick adjustments without losing focus on your workout
- Polar® wireless HR compatible. Polar Wireless compatible with built-in HR programming features

#### **SPECIFICATIONS**

- LED Display
- Polar® Heart Rate Strap Compatible
- Contact Heart Rate Grips
- 16 Built-in Programs
- Walk-Through Entry Design
- Self-Generating (No External Power Required)
- Electronic Resistance Adjustment
- 16 Levels of Resistance
- Fingertip Resistance Controls
- Fore/Aft Seat Adjustment
- Water Bottle Holder
- Transport Wheels
- Broadcast Vision® Television Mounts Compatible

#### **Club Commercial Warranty**

Frame: Lifetime | Parts: 3 years | Labor: 2 years | Club Commercial warranty applies when product is used in facilities where use may exceed 8 hours of use per day and all dues-paying facilities.

#### **Commercial Warranty**

Frame: Lifetime | Parts: 5 years | Labor: 2 years Commercial warranty applies when product is used in non-dues paying facilities with less than 8 hours of use per day.

Measurements	Max User Weight	350 lbs. 119 lbs.
Assembled Dimensions	Length Width Height	63.9 in. 25.4 in. 45.7 in.
Box Dimensions	Length Width Height	46 in. 13 in. 34 in.

Note: All pricing and specifications are subject to change without notice



#### **RBK 885**

#### Experience™ Series

## Recumbent Bike III

#### Product Highlights

The RBK 885 recumbent bike adds value to your facility by combining essential reliability and ease-of-use with smooth pedaling and biomechanically correct geometry. The RBK 885 features a step-through design to appeal to a wide range of exercisers of all ages. The simple seat adjustment allows the exerciser to change the position of the seat with one hand, either on or off the bike. A ventilated air flex seat provides exceptional comfort.

#### **Product Features**

#### 1. P82 Console

The P82 console not only offers a brilliant 15 in / 38.1 cm screen that's ergonomically positioned to deliver crystal-clear entertainment viewing for exercisers in motion, but when networked, is also a direct-to-exerciser communication portal allowing you an opportunity to build your brand, share information about activities and services, and strengthen the sense of community within your facility.

#### 2. Step-throuth Design

Designed for easy entry, the recumbent bike has a step-through design (14 in / 36 cm wide) with a low step-over height (4 in / 10 cm).

#### 3. Air Flex Seat Back

The custom-designed air flex seat features a ventilated panel and unique suspension system for a cool, cushioned ride.

#### 4. Seat Adjustment

The simple seat adjustment allows the exerciser to change the position of the seat with one hand, either on or off the bike.

#### 5. Ease of Maintenance

The easy-to-remove shroud ensures quick access to the belt-drive system for maintenance and servicing without removing the pedals or crank.

#### 6. Dual-sided Pedals

The dual-sided pedals allow the exerciser to use the pedals with or without the integrated straps. The extra wide pedals comfortably accommodate feet of all sizes to encourage proper pedaling form.

#### Specifications

**Dimensions (L x W x H):** 67 x 23 x 54 in / 170 x 58 x 136 cm

**Equipment Weight:** 219 lb / 99 kg **Power:** Dedicated 120 volt, 15 amp circuit

Total Workouts: 17
Resistance Levels: 25

Minimum Watts: 18 (level 1 at 20 RPM)

Maximum Watts: 750 (level 25 at 150 RPM)





Gloss Metallic Silver

Refined colorways with dark Tungsten covers and two frame color options.



Black Pearl

**Language:** English, Chinese, Danish, Dutch, French, Finnish, German, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Traditional Chinese, Turkish

**Network Capabilities:** Preva® network capable

**Entertainment:** 15 in / 38.1 cm LCD Capacitive Touch Screen

Mobile Device Charger and Audio Jack

Accessories: Integrated Reading Rack, Accessories Holder

Optional - Cable Management

**Warranty:** Visit www.precor.com for warranty terms.



#### 7103d

#### AIR ASSAULT BIKE



#### **ASSAULT AIRBIKE**

Finally, a heavy-duty exercise bike designed directly from the feedback of athletes and coaches. The Assault AirBike reinvents and retools nearly every component of the traditional fan bike, from the frame construction to the crank, pedals, monitor and more. The series is designed and tested in the USA by the experienced team at LifeCORE Fitness in Carlsbad, California.

Using air resistance, the Assault AirBike scales automatically to how hard you want to work. The harder you pedal, the greater the resistance. It's simple physics with big benefits.

#### **Specifications:**

- LCD screen outputs: Watts RPM -- Calories Heart Rate -- Distance Time Odometer Interval Training (Tabata and custom)
- Heavy Duty Steel Frame eliminates side-to-side movement
- 25" diameter steel fan
- Hybrid seat with multi-adjustment options
- Industrial powder coating for durability
- Reinforced pedals and crank
- 20 sealed cartridge bearings, utilized in every pivot
  - Optional Add-Ons and Accessories:
  - Assault Wind Screen: This attachment blocks the air from blowing in the user's face during workouts and also helps reduce fan noise.

SOURCE: https://www.roguefitness.com/assault-airbike-and-

accessories?msclkid=96f7e93037cd15c327c5b756939f654c&msclkid=96f7e93037cd15c327c5b756939f654c&utm\_campaign=Non-Brand+-+Conditioning&utm\_campaign=Non-Brand+-

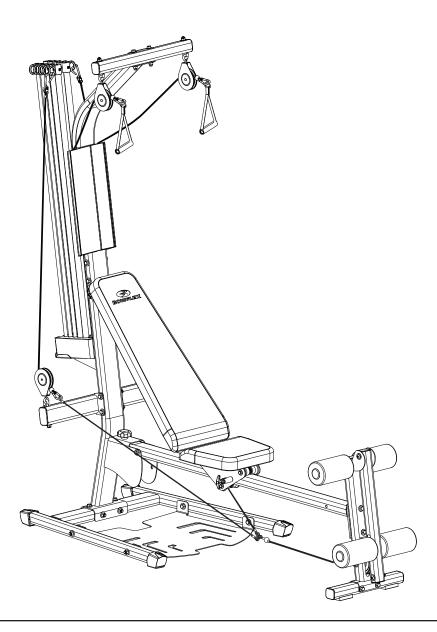
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## **PR1000 Home Gym**



#### **Owner's Manual**





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Length (not in use)82" (20	8cm)	Box Weight	145 lbs. (65.8kg)
Length (maximum in use)103" (26	2cm)	Box Dimensions5	4"l x 33"w x 8"h
Width (maximum in use)80" (20	3cm)	(13 <b>7</b> cm	x 84cm x 21cm)
Height82" (20	9cm)	Capacities	
Weight131 lbs. (59	.5kg)	Maximum Weight Capacity	. 300 lbs. (136kg)
To validate warranty support, keep the original proof of partial Number  Date of Purchase  To register your product warranty, go to: www.bowflex.  Or call 1 (800) 605–3369.			

If you have questions or problems with your product, please call 1 (800) NAUTILUS (628-8458).

# ENCOMPASS POWERTOWER CLINICAL COMPLETE PACKAGE

Clinical Complete Package accessories: SCRUNCH, Weight Bar, Leg Pulley System and Press Bar Also includes standard unit accessories: Closed Chain Platform and BAPS Adapter, Retractable Dip Bars, Squat Handle Bars, Slide Distance Regulator



#### **PRODUCT SPECIFICATIONS**

**RESISTANCE** 1% to 72% of bodyweight

**INCLINE LEVELS** 26 calibrated levels, with infinite

adjustment between levels

**IN USE** 106" x 38" x 65" (L/W/H)

(2.69 m x 0.96 m x 1.65 m)

**FOLDED** 20" x 38" x 65" (L/W/H)

(0.51 m x 0.96 m x 1.65 m)

**UNIT WEIGHT** 218 lbs (99 kg)

**STORAGE** Hydraulic lift assists folding

Rolls upright

**USER HEIGHT** Up to 6'10" (2.1 m)

**CAPACITY** Maximum total 650 lbs (295 kg)

**POWER** 110~220 VAC; 50~60 Hz

**CONSTRUCTION** Steel reinforced extruded

aluminum rails

**WARRANTY** Frame - 5 years;

Parts & Upholstery - 1 year; Foam & Rubber - 90 days;

Motor - 2 years

The Encompass PowerTower™ allows incremental load changes during exercise, providing the utmost versatility for post-injury or post-surgery rehabilitation as well as sports specific and athletic training. Motorized level adjustment improves client access to glideboard and ease of transitions between exercises.

**The Clinical Complete Package adds four additional accessories** to provide comprehensive support to clinicians in the utilization of the Encompass PowerTower — from rehabilitation to sport-specific power training and progress assessments.



#### **SCRUNCH**

For early closed-chain functional movement patterns in a partially loaded environment.

#### **WEIGHT BAR**

Provides attachment point for Biomechanical Ankle Platform System (BAPS board).

#### LEG PULLEY SYSTEM

Provides control and safety by enabling you to set the rolling distance of the glideboard.

#### PRESS BAR

Provides a solid handhold during squat exercises.



# ORDERING INFORMATION Part Number Description ColPac Chilling Unit Model C-5 3102 110 V Unit 3114 220 V Unit Standard Accessories 1500 Standard Size ColPacs (6x) 1506 Half Size ColPacs (6x)

Mains Power:	220~240 V 50 Hz; 115 V, 60 Hz
Weight:	74 kg
Dimensions*: 2	7"L x 16"W x 33"H
Electricial Safety Clas	ss: Type B
Safety Tests:	EN 60601-1

#### **COLPAC® CHILLING UNIT**





Note: there is a drain at the bottom of this unit to allow for cleaning

#### **FEATURES**

#### **ColPac Chilling Unit**

Large capacity and faster chilling time mean your patients will never have to wait for a ColPac. The ColPac Chilling Unit helps you keep pace throughout a busy day. No plumbing required, simply plug into a standard electrical outlet.

All ColPac Chilling Units include:

- Closed-cell foam insulation for efficiency
- Stainless steel, welded construction for long life
- Heavy-duty compressor for more efficient cooling
- Specially designed interior chilling coils cool packs faster
- 8 cm (3") swivel-type rubber casters for silent, friction-free movement of mobile units
- Drain valve for easy cleaning and defrosting
- One year warranty





#### **ORDERING INFORMATION Part Number** Description M-2 Mobile Hydrocollator 120 V Unit 2407 220 V Unit **Standard Accessories** Standard size HotPacs (12x) M-4 Mobile Hydrocollator 120 V Unit 220 V Unit 2506 **Standard Accessories** Standard size HotPacs (24x) SS-2 Mobile Hydrocollator 220 V Unit 2307 **Standard Accessories**

# TECHNICAL SPECIFICATIONS M-2 Mobile Hydrocollator Mains Power: 110~240V 50/60 Hz Power Consumption: 1000W Weight: 39 kg Dimensions\*\*: 27"W x 16"d x 33"h Electrical Safety Class: Class 1, Type B Safety Tests: EN 60601-1 M-4 Mobile Hydrocollator

110~240 V 50/60 Hz

1500 W

89 x 51 x 84 cm

Class 1, Type B

EN 60601-1

1000 W

30 kg

53 x 41 x 84 cm

Class 1, Type B EN 60601-1

110~240 V 50/60 Hz

Mains Power:

Weight:

Dimensions\*:

Safety Tests:

Mains Power:

Weight:

Dimensions\*:

Safety Tests:

Power Consumption:

Electrical Safety Class:

\* Dimensions are listed as L x W x H

Power Consumption:

Electrical Safety Class:

SS-2 Mobile Hydrocollator

Standard size HotPacs (8x)

#### HYDROCOLLATOR® MOBILE HEATING UNITS





Note: unit has a drain at the bottom for cleaning purposes

#### **FEATURES**

#### **Hydrocollator Mobile Heating Units**

These durable stainless steel water tanks house the Hydrocollator Moist Heat HotPacs. The units are thermostatically controlled to ensure the ideal therapeutic temperature for HotPacs. Hydrocollator remains the benchmark heating unit against which all other units are judged.

- Full fiberglass insulation to prevent heat loss
- Dependable, rugged stainless steel design
- Simple to fill with water. No plumbing required
- · Constant temperature of HotPacs is maintained
- Mobile units are equipped with 8 cm swivel, rubber casters for friction free movement about the clinic
- $\bullet \ \mathsf{One} \ \mathsf{year} \ \mathsf{warranty}$

	M-2	M-4	SS-2	E-2	E-1
Tank Capacity	69 L	136 L	49 L	43 L	15 L
Temperature Range	71°-74°C	71°-74°C	71°-74°C	71°-74°C	71°-74°C
Thermal Cut-Out Temp.	82°-85°C	82°-85°C	82°-85°C	82°-85°C	82°-85°C
Accuracy	10%	10%	10%	10%	10%
Heat up Time (to 70°C)	8 Hours	8 Hours	4 Hours	4 Hours	2 Hours
Cool Down Time (from 70°C)	3 Hours	4 Hours	4 Hours	2 Hours	1 Hour
Fiberglass Insulation	Yes	Yes	Yes	No	No

#### **HYDROCOLLATOR® STATIONARY HEATING UNITS**





#### **HYDROCOLLATOR ACCESSORIES**

#### **Side Table Rack**

Stainless steel work surface and wire shelves add efficiency to units. Racks available to fit most models (M-4, M-2).

2.25"h x 38.25"w

#### **Lotion Warmers**

Keeps massage lotion and ultrasound gel at a comfortable temperature. Easily attaches to any treatment table or wall. Mini-Lotion Warmer hangs on the front of the Hydrocollator E-1 or E-2 heating units (bottles not included).

#### Wall Mounted Towel Rack

This stainless steel rack provides a convenient way to dry or store towels and terry covers (towels not included).





#### **ORDERING INFORMATION Part Number** Description E-1 Stationary Hydrocollator 2102 120 V Unit 220 V Unit **Standard Accessories** 1006 Standard size HotPacs (4x) E-2 Stationary Hydrocollator 2802 120 V Unit 220 V Unit 2806 **Standard Accessories** Standard size HotPacs (3x) 1006 1004 Oversize HotPacs (2x) 1002 Neck Contour HotPac (1x) **Hydrocollator Accessories Side Table Rack** 4010 Side Table Rack (not shown) 4230 Extra Shelf for Side Table Rack TM-1 Electric Lotion Warmer TM-1 Electric Lotion Warmer (110 V only) Mini Non-Electric Lotion Warmer 22100 Mini Lotion Warmer **Dial Thermometer**

#### **TECHNICAL SPECIFICATIONS**

E-1 Stationary Hydrocollator

Wall Mounted Towel Rack

Dial Thermometer (not shown)

Wall Mounted Towel Rack 5 x 84 cm

4228

4016

Mains Power:	110~240 V 50/60 Hz
Power Consumption:	1000 W
Weight:	7 kg
Dimensions*:	33 x 20 x 41 cm
Electricial Safety Class:	Class 1, Type B
Safety Tests:	EN 60601-1
E-2 Stationary Hydro	collator
Mains Power:	110~240 V 50/60 Hz
Power Consumption:	1000 W
Weight:	14 kg
Dimensions*:	38 x 33 x 51 cm
Electricial Safety Class:	Class 1, Type B
Safety Tests:	EN 60601-1

SOURCE: https://www.sourceortho.net/chattanooga-wall-mounted-towel-rack/

#### 7113

#### **Parallel Bars-Powered With Manual Crank Override**



Models 1362

#### **Power Height and Width Parallel Bars**







- Motorized width adjustment of handrails from 13" to 25".
- Model 1363 15' long has (6) uprights.
- Motorized height adjustment from 27" to 37".
- Convenient hand control adjusts bars.
- 1 5/8" diameter stainless steel handrails.
- 34" wide wood platform is covered in textured gray styrene.
- Tapered ends for wheelchair access.
- Removable Abduction Board.
- Manual crank override.
- Steel uprights are powder coated in neutral cream finish.
- 30 ½" clearance between uprights.
- Hospital grade plug. 120 V, 60Hz, 5 Amps, UL Listed.
- Weight Capacity: 300 lbs.

MODEL #	LENGTH	WIDTH	HEIGHT
1362	10 ft	13" - 25"	27" - 37"

SOURCE: http://www.hausmann.com/product\_pages/t109\_pb7175/Model\_1362.html

#### 7115A

#### **3 Section Hi-Low Treatment Table**



Model 6053
3-Section Hi-Lo Multi-Position Treatment Table

Weight Capacity: 400 lbs.

MODEL #	LENGTH	WIDTH	HEIGHT
6053	76"	27"	19" - 37"

- Multi-position table can be used for a wide variety of therapy and treatment functions.
- Motorized height adjustment from 19" wheelchair height to 37" high.
- "Hands-free" foot control operation.
- Adjustable head section 15" x 27", raises up to 45° and lowers down to 90° below horizontal.
- 22"L x 27"W middle seat section is stationary.
- 39"L x 27"W leg/backrest section raises easily up to 73° with sturdy friction locking device and dual release handles.
- Top sections have welded steel support frames.
- Includes (4) 3" diameter swiveling casters with locking brakes.
- 110V., 60Hz, 1.8 amps. U.L. Listed
- 76"L x 27"W 3-section 1 ½" thick high-density gray vinyl top features contoured face/nose cutout in head section.

#### SOURCE:

http://www.hausmann.com/product\_pages/t101\_st3637/Model\_6053.html

TOC

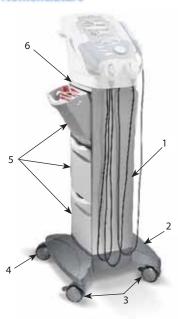
#### INSTALLATION/REMOVAL

#### **GENERAL INFORMATION-THERAPY SYSTEM CART**

The optional Therapy System Cart is designed for use with the Intelect Legend XT Electrotherapy and Combination Systems only and allows the user to easily transport the System from patient to patient within the clinic as well as store all necessary accessories, supplies and applicators used for the various modalities of the System.

The following instructions will explain the proper installation of the Intelect Legend XT Therapy System, with and without optional modules, to a Therapy System Cart.

#### Nomenclature



- **1.** Front and Rear Extrusion
- 2. Cart Base
- **3.** Front Locking Swivel Casters (2)
- **4.** Rear Swivel Casters (2)
- **5.** Removable Storage Bins (6)
- **6.** Cart Top

#### **Specifications**

#### Dimensions

Height

Standard Weight ...... 24 lbs (10.9 kg) Shipping Weight. ...... 33 lbs (15.0 kg)

**Power Required**. . . . 100 - 240 V, 50/60 Hz



7120a

Double Weight Rack



#### **Double Weight Rack**

Weight can hold up to 32 cuff weights and 22 dumbbells. Full length mirror with polished edges and ANSI safety backing.

Two rods hold 6 hollow core 50 yard band rolls. Solid surfaces with sliding hook system for lateral positioning.

Protective bumper molding around the base with 3" swivel casters. Weights and bands are not included.

Measures 31"L x 53" H x 24"W. Exercise supplies sold separately.

SOURCE: PATTERSON MEDICAL ITEM 562896

https://www.clinton-ind.com/product/7019-f-previously-7019-mobile-cuff-weight-dumbbell-and-band-rac

### GDR60 2-Tier Horizontal Dumbbell Rack









Optional Kettlebell Tier

GKRT6

GMRT6 Optional Medicine Ball Tier

GDR60

#### 2-Tier Horizontal Dumbbell Rack

GDRT6

Optional Third Tier

The industrial grade GDR60 is a two tier dumbbell rack for a 5-50lb hex dumbbell set; an optional third tier allows for expansion. Heavy gauge steel with 4-side welded construction is deburred inside and out for smoothness. Heavy-duty 2" x 3" mainframe construction features a reversed pitch design that allows easy access to all tiers. The GDR60 2-Tier Horizontal Dumbbell Rack includes shelves for the top two tiers, these hold up to one set of 5-50lb. hex style dumbbell pairs.

#### **Optional 3rd Tier**

GDRT6 - Dumbbell Tier GKRT6 - Kettlebell Tier GDRT6 - Medicine Ball Tier

Weight: 79 lbs

Dimensions: 23"L x 62"W x 32"H

#### **Special Features**

- Holds one (1) pair each 5-50 lb. Hex Dumbbells
- Optional 3rd Tier (#GDRT6) allows storage of up to 70 lb. Hex Dumbbell pairs
- Heavy-duty 2"x 3" mainframe features a reversed pitch design
- Ideal for home and commercial use

#### Warranty



Frame & Welds ...... Lifetime Bushings and Hardware...... 3 Years Pads, Cables and Grips ...... 1 Year



Frame & Welds ......Lifetime Bushings and Hardware..... Lifetime Pads, Cables and Grips ..... Lifetime

#### 7122

#### **CRUTCH AND CANE RACK**



#### **Sammons Preston® Storage Rack**

Item Description: Cane, Crutch, Roll and Walker Rack

**Item Number:** 7297 **Price:** \$269.65

This attractive, 66" long, wall-mounted rack holds up to twelve 6" or 8" diameter rolls or six of the larger sizes. Rolls are hung out of the way by the loops built into each one. Also great for storing crutches, canes and walkers. Consists of two bases: each 33"L x 5-1/4" W; extends 16-1/2" from wall. Latex free.

RECOMMEND BACKING FOR ADDITIONAL SUPPORT WEIGHT OF THE MULTIPLE CRUTCHES/CANES/WALKERS ETC...THAT IS HUNG ON THIS RACK.

RECOMMEND 2 LEVELS: 1 MOUNTED @ 48" ABOVE FINISHED FLOOR FOR CANES & WALKERS;  $2^{ND}$  MOUNTED @ 72" ABOVE FINISHED FLOOR FOR HANGING OF CRUTCHES.

SOURCE: <a href="http://pattersonmedical.com/app.aspx?cmd=getItemDetail&id=081186501">http://pattersonmedical.com/app.aspx?cmd=getItemDetail&id=081186501</a>

#### TRM 681 Treadmill Experience™ Series

#### **Product Features**

#### 1. P82 Console

The P82 console not only offers a brilliant 15 in / 38.1 cm screen that's ergonomically positioned to deliver crystal-clear entertainment viewing for exercisers in motion, but when networked is also a direct-to-exerciser communication portal giving you the opportunity to build your brand, share information about activities and services, and strengthen the sense of community within your facility.

#### 2. Commercial-Grade Drive and Lift Motor

The TRM 681 is equipped with a commercialgrade 3 HP AC-motor that enhances performance, efficiency, and reliability to deliver a treadmill that is ideal for fitness facilities located in multi-family housing complexes, corporations, small municipal service organizations, and many hospitality venues.

#### 3. Integrated Footplant Technology™

Recognizes the exerciser's natural foot speeds and matches every stride for an ultra-smooth feel that enhances their workout experience.

#### 4. Ground Effects\* Impact Control System

Our patented GFX system combines ideal cushioning, support, and stability for exercisers. Precor decks are designed to provide more absorption in the front where the exerciser's feet hit the belt and added rigidity at the back for a firm push-off.



#### **SPECIFICATIONS**

**Dimensions (L x W x H):** 83 x 35 x 62 in / 211 x 89 x 157.5 cm **Network** 

**Weight:** 332 lb / 151 kg

**Step-up Height:** 8.4 in / 21.3 cm**Handrail Length:** 18 in / 45.7 cm

**Running Surface:**  $60 \times 22 \text{ in} / 153 \times 56 \text{ cm}$ 

Power: 120 volt, 20 amp individual branch circuit

Total Workouts: 27

Elevation Range: 0% to 15% incline in 0.5% increments

**Speed Range:** 0.5 - 12 mph / 0.8 - 19.2 km/h

Language: English, Chinese, Danish, Dutch, French,

Finnish, German, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Traditional Chinese, Turkish

Network Capabilities: Preva® network capable

**Entertainment:** 15 in / 38.1 cm LCD Capacitive Touchscreen

Mobile Device Charger and Audio Jack

**Accessories:** Integrated Reading Rack

Optional - Cable Management

Warranty: Visit www.precor.com for warranty terms.



#### EFX® 761

#### Experience™ Series

### **ELLIPTICAL**

#### **Product Highlights**

The EFX® 761 combines essential reliability and ease-of-use with touchscreen technology at a value just right for you. This elliptical is designed to ensure easy cleaning and maintenance for you while providing a comfortable and effective workout for your exercisers. The simple, clean design holds up under heavy commercial use, ensuring your investment will last into the future.

#### **Product Features**

#### 1. Handlebars

With moving handlebars, exercisers can push and pull with their upper body to achieve a total body workout.

#### 2.P62 Console

The P62 touchscreen console features personalized viewing and the remarkable clarity of TV and internet options that exercisers crave, all in a 10 in / 25.4 cm screen. With the ability to "favorite" selections for the future, exercisers can customize their workout experience based on what's important to them.

#### 3. Fixed Ramp

Ramp incline is optimally set at 20 degrees for an effective lower body workout.

#### 4. Covered Rear Drive Housing

Experience easy maintenance with a covered rear drive housing that enables quick access for cleaning and service.

#### **5. Active Status Light**

To increase uptime, an external status light lets you and your staff know at a glance the operating condition of your elliptical and when to perform life-extending maintenance.

#### Specifications

**Dimensions (L x W x H):** 80 x 28 x 72 in / 203 x 71 x 183 cm

Equipment Weight: 280 lb / 127 kg

Step-up Height: 8 in / 20 cm (pedal at lowest point)

Power: 120 volt, 15 amp circuit

Total Workouts: 22
Resistance Levels: 20
Ramp Angle: 20 degrees fixed

Language: English, Chinese, Danish, Dutch, French, Finnish, German, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish,

Swedish, Traditional Chinese, Turkish



Network Capabilities: Preva® network capable

Entertainment: 10 in / 25.4 cm LCD Capacitive Touch Screen

Mobile Device Charger and audio jack

**Accessories:** Integrated Reading Rack

Optional - Cable Management

Warranty: Visit www.precor.com for warranty terms.







#### Prescribed for Progress™

#### StepOne™ Recumbent Stepper Product Specifications

Order Code: SONEØ2

#### **FEATURES**

Smooth, linear movement with start and stop motion
Low starting resistance
Resistance range
Neutral starting position
Arm to leg movement ratio
User-defined range of motion
Comfortable, ergonomic body position
Total body workout
Large flywheel
Small footprint
Easy to transport
Heart rate monitoring
Quiet belt drive



#### ACCESSIBILITY



Direct wheelchair access	Seat slides off easily for direct wheelchair access. ADA compliant.
Easy patient transfer	Adjustable swivel seat sits on a flat horizontal monorail and provides easy patient transfer.
Step-through seating	True adjustable step-through design, allows all users full access and ease of entry.
Step-through height	2"
Grab bar	Integrated for easy entry and support.

#### **SEAT**



Bariatric seat	Wide seat adjusts forward/back; side handles; and 600 lb user weight capacity
Removable seat	Seat removes easily without hardware for direct wheelchair access
360° Therapist Assist Pedals	Adjust the seat forward and back from any point around the machine
Seat removal handle	Integrated handle on seat back makes it easy to remove the seat
, ,	Adjust forward and back on a level monorail for optimum control and safe positioning

#### **ARMS & GRIPS**

Arm length adjustment	Adjust length of arms within a 12" range.
60 degree hand grip rotation	Position handles anywhere within the 60 degrees of hand grip rotation.
Non-absorbent, chemical resistant hand grips	Easy to clean, durable, made from 100% recyclable material.
Easy adjustment levers	Yes

#### **FOOT PEDALS**

Orthopedic foot beds with safety edge	Sturdy, oversized foot beds.
Heel cup	Yes
Foot straps	Yes

#### INTELLI-FIT™ CONSOLE

7" LCD full color touch screen display	Touch screen with	clear, simple screens and	large, readable font.
Audible beep	Yes		
Tactile buttons	Tactile buttons in addition to touch screen.		
Resistance levels	191 levels of resistance - 20 levels adjustable in .1 increments.		
Display feedback	Time, total steps, steps per minute, stride length, calories, ascent, METs, watts, heart rate and level.		
Intelli-Stride™ stride length measurement	Stride length is accommotion and improv		splayed to help monitor range of
Ascent	Displays a true mea	asure of ascent (ft.) based	d on stride length and steps.
One touch quick start	Yes		
Control METs - Constant Work Program	Set constant METs program	level and the workload r	emains constant throughout the
Iso-Strength Program	Isokinetic program for safe, accommodating resistance		
Power Burst	8-second burst of high intensity training		
Cool down	Automatic cool down begins after each exercise is completed.		
Administrative mode	User defined settings, metric or US units of measure and other custom settings.		
User-defined console languages	9 languages - English, Spanish, French, German, Russian, Japanese, Chinese, Italian, Dutch		
Download results to USB flash drive	Plug USB flash driv	e into the Fit-Key® slot to	save workout results in a .txt file.
CSAFE port and 8-volt DC power port	Yes		
USB charger	For phones and other electronic devices.		
Water bottle holder	Integrated		
Personal Cooling Fan	Integrated dual fans with three speeds.		
Programs	Quick Start	Fit-Quik®	Constant Work - METs
	Manual	Hills	Constant Work - Watts
	Heart Rate	Random	Iso-Strength
	Stress Test		

#### **TECHNICAL SPECIFICATIONS**

Power Requirements	Self generating; low voltage AC adapter included
Maximum user weight capacity	600 lbs.
User height range	Fits users 4'6" - 6"7"
Accuracy to EN 957-8 standard	Yes
Unit weight	303 lbs.
Unit size	68″L x 30″W x 48″H
Color	Frame: Charcoal Cover: Cool Gray
Manufacturing	Assembled in USA

#### StepOne™ Recumbent Stepper Product Specifications (cont.)

Order Code: SONEØ2

#### WARRANTY

Parts	3 years
Labor	1 year
Frame	5 years

#### **ENHANCEMENTS**

Fit-Key® software	Optional Fit-Key® software makes it easy to create specialized programs and track data.
Entertainment options	Yes

#### **ACCESSORIES**

StepOne™ Leg Stabilizer	Attaches at the calf where support is needed most. Natural pivot point at ankle. Durable steel construction.
Wheelchair Platform	Provides a sturdy foundation for wheelchair use, includes tethers for stabilization.
Heavy-Duty Wheelchair Ramps	For manual and powered wheelchair access. Provides increased stabilization.
Assist Gloves	Wrist support and enhanced grip - helps user maintain grip and position.
Polar Chest Strap	Transmits heart rate directly to console - works on all SCIFIT products.



SCIFIT Systems, Inc. reserves the right to change or alter specifications at any time without notice and without incurring any obligation.

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StepOne Specs - SONE02 - 2016 - v1

# 7137b Therapy Ball Rack Mobile



#### **MJM Therapy Ball Racks**

#### **Specifications**

- 64" L x 19" W x 62" H
- 4 Swivel Casters
- Holds 6 Plus Balls
- Assembles In Minutes

Item Description: Mobile Rack

Item Number: 8199 Price: \$262.85

SOURCE: PATTERSON MEDICAL.COM

#### **Product Data Sheet**







#### EXM3000LPS

#### **Body-Solid - Selectorized Multi-Station Gym**



#### EXM3000LPS

#### **Selectorized Multi-Station Gym**

If maximum strength and a weight room full of workout options is what you want in a minimum amount of space, then try the EX-M3000LPS on for size. This multi-station workhorse provides health club quality strength training for up to three people simultaneously. The EXM3000LPS features a multi-function Press Arm Station for bench press, incline press, shoulder press and chest supported mid-row exercises. The fully-adjustable Perfect Pec Station with range limiters allows users to achieve deeper muscle penetration for faster, more defined results.

The Leg Press/Calf Press Station operates on a 2 to 1 weight ratio giving the EXM3000LPS the awesome capacity of a 420 lb. leg press! The non-slip, rubber encased foot plate is constructed of heavy-gauge steel for safe operation during the most intense workouts.

Dimensions: 83"H x 91"L x 73"W

#### **Special Features**

- · Lifetime warranty
- Three stations in one with fully adjustable pads for all size users and full range of motion exercise
- Unique two bar linkage self-aligns the angle of the leg press plate to the user's body
- Perfect Pec Station with dual overhead cams with six increment settings per arm provide variable starting positions
- The Lat Pulldown/High Pulley Station is ideal for increasing size, strength and endurance of your back, shoulder and triceps muscles.

Job\_\_\_\_\_

#### Basix<sup>™</sup>-

#### Reliable performance for any application.

Basix™ is constructed from a strong steel alloy to endure the rigors of a daily routine while providing a safe, ergonomic and flexible work area for the user. The Basix line of carts is available in four styles: Basix, Basix Compact, Basix Plus and Basix Plus Compact. Basix Plus and Basix Plus Compact are covered under separate specification sheets due to the many enhancements over the standard line.

- **Safe** The polymer base protects the cart and surrounding environment from incidental contact. The base is designed to allow the 5" (127mm) casters to be mounted outboard of the cabinet, which keeps the cart stable when a fully loaded drawer is accessed.
- Ergonomic Polymer top provides a userfriendly work surface. Optional accessory push handles can be mounted in an ergonomic fashion to allow for easy pushing or pulling of the cart.
- **Flexible** User defined configurations can be accommodated by filling an empty cart shell with desired 3", 6", 9" and 12" (76, 152, 229, 305 mm) drawer heights.
- Accessible Full-extension drawers and a full array of accessories put equipment and supplies where needed for convenient access. Optional drawer dividers keep supplies neat and organized.
- Mobile This cabinet comes with 5" (127mm) diameter casters (2 with swivel brakes, 2 with swivel-lock) allowing it to be rolled easily from location to location or moved for convenience when cleaning.
- Accessories A full array of task support accessories are available for above the work surface or the side of the cart.



MBX4101TL, MB-TE (Teal)



MBX3210TL, MB-SG (Seafoam Green) with Accessory Package MBXANES-1





# Basix<sup>™</sup> Carts and Drawers

M B X 3 1 1 0 S B

Metro Basix Standard 3" Drawers 6" Drawers 9" Drawers 12" Drawers Color Tone¹ Lock Type²

<sup>1</sup> Color Tone: S- Solid - Cart body color matches drawer front color

T- Two Tone - Cart body color is light taupe

<sup>2</sup> Lock Type: B- Breakaway Lock Bar L- Keyed Lock

Part No.	Drawer Space (in.) (mm)	Drawer Config.	Color	Lock	Heig (in.)	ght (mm)	Width (in.) (mm)	Le (in.)	ength (mm)	Approx. F (lbs.)	Pkd. Wt. (kg)
MBX3110SB	24 610	3 - 3" 1 - 6" 1 - 9"	Solid	Breakaway Lock Bar	381/2	978	24 <sup>1</sup> / <sub>8</sub> 613	30	762	151	72
MBX3110TB	24 610	3 - 3" 1 - 6" 1 - 9"	Two Tone	Breakaway Lock Bar	381/2	978	241/8 613	30	762	151	72
MBX3110SL	24 610	3 - 3" 1 - 6" 1 - 9"	Solid	Key Lock	381/2	978	24 <sup>1</sup> / <sub>8</sub> 613	30	762	151	72
MBX3110TL	24 610	3 - 3" 1 - 6" 1 - 9"	Two Tone	Key Lock	381/2	978	24 <sup>1</sup> / <sub>8</sub> 613	30	762	151	72
MBX1210TL	24 610	1 - 3" 2 - 6" 1 - 9"	Two Tone	Key Lock	381/2	978	24 <sup>1</sup> / <sub>8</sub> 613	30	762	151	72
MBX4101SB	30 762	4 - 3" 1 - 6" 1 - 12"	Solid	Breakaway Lock Bar	45	1140	24 <sup>1</sup> / <sub>8</sub> 613	30	762	159	75
MBX4101TB	30 762	4 - 3" 1 - 6" 1 - 12"	Two Tone	Breakaway Lock Bar	45	1140	24 <sup>1</sup> / <sub>8</sub> 613	30	762	159	75
MBX3210TB	30 762	3 - 3" 2 - 6" 1 - 9"	Two Tone	Breakaway Lock Bar	45	1140	24 <sup>1</sup> / <sub>8</sub> 613	30	762	159	75
MBX4101SL	30 762	4 - 3" 1 - 6" 1 - 12"	Solid	Key Lock	45	1140	24 <sup>1</sup> / <sub>8</sub> 613	30	762	159	75
MBX4101TL	30 762	4 - 3" 1 - 6" 1 - 12"	Two Tone	Key Lock	45	1140	24 <sup>1</sup> / <sub>8</sub> 613	30	762	159	75
MBX2201TL	30 762	2 - 3" 2 - 6" 1 - 12"	Two Tone	Key Lock	45	1140	24 <sup>1</sup> / <sub>8</sub> 613	30	762	159	75
MBX3210TL	30 762	3 - 3" 2 - 6" 1 - 9"	Two Tone	Key Lock	45	1140	24 <sup>1</sup> / <sub>8</sub> 613	30	762	159	75



# Basix<sup>™</sup> Carts and Drawers

M B X 24 S B

Metro Basix Standard Vertical Color Tone Lock Type Drawer Space (in.)



MBX24SL with drawers

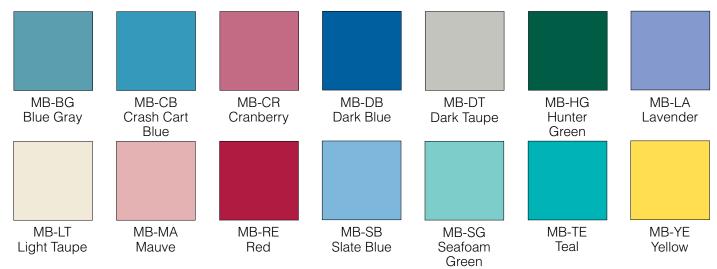
#### **Empty Carts**

	Drawer Space	Drawer			Heig	Height		Width		
Part No.	(in.) (mm)	Config.	Color	Lock	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
MBX24SB	24 610	Empty	Solid	Breakaway Lock Bar	381/2	978	241/8	613	30	762
MBX24TB	24 610	Empty	Two Tone	Breakaway Lock Bar	381/2	978	241/8	613	30	762
MBX24SL	24 610	Empty	Solid	Key Lock	381/2	978	241/8	613	30	762
MBX24TL	24 610	Empty	Two Tone	Key Lock	38 <sup>1</sup> / <sub>2</sub>	978	24 <sup>1</sup> / <sub>8</sub>	613	30	762
MBX30SB	30 762	Empty	Solid	Breakaway Lock Bar	45	1140	241/8	613	30	762
MBX30TB	30 762	Empty	Two Tone	Breakaway Lock Bar	45	1140	241/8	613	30	762
MBX30SL	30 762	Empty	Solid	Key Lock	45	1140	241/8	613	30	762
MBX30TL	30 762	Empty	Two Tone	Key Lock	45	1140	241/8	613	30	762

#### **Drawers**

		Interior Dimension —								
		Height		Wi	Width		Length		Weight Capacity	
Part No.	Description	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)	(lbs.)	(kg)	
MBX103	3" Deep Drawer	2 <sup>7</sup> / <sub>8</sub>	73	17	432	221/4	565	50	24	
MBX106	6" Deep Drawer	61/4	159	17	432	221/4	565	50	24	
MBX109	9" Deep Drawer	93/8	238	17	432	221/4	565	50	24	
MBX112	12" Deep Drawer	12 <sup>1</sup> / <sub>2</sub>	318	17	432	221/4	565	50	24	

#### Colors





#### Basix™

#### Basix Specifications:

Cart Body: Double wall construction

Inner wall: 22 gauge (.030"/.8mm) steel Outer wall: 20 gauge (.036"/.9mm) steel

Finish: Powder coated

Base: Blow-molded, high-density polyethylene

Steel reinforced caster channels

Caster mounts located outside of cart body footprint to provide counterbalance to full

extension drawers

Work Surface: .125" (3mm) ABS, raised on four sides

Dimensions: 1<sup>1</sup>/<sub>4</sub>"H x 18<sup>1</sup>/<sub>2</sub>"W x 26<sup>3</sup>/<sub>4</sub>"L (32H x 470W x 679mmL)

Usable work space: 17" x 25" (432mm x 635mm)

Casters: 5" (127mm) diameter with polyurethane tread

2 swivel-brake, 2 swivel-lock (coverts from swivel to rigid) 200 lbs. (90kg) per caster, 600lbs. (270kg) per cart

Drawers: 50 lbs. (23kg) load rating per drawer

Body: 22 Gauge (.030"/ .8mm) steel w/16 gauge (.060"/2mm) lock clips

Finish: Powder coated

Fronts: .032" (.8mm) coated aluminum

Finish: Powder coated

Pull: Polymer

Slides: Zinc-Plated Steel

Load Rating: 100 Lbs.(45kg)/set

Lock: Bright Nickel Type 3

G Cam, 7/8" (22mm) Cylinder

2 Keys,

Coded on lock and keys

All Metro Catalog Sheets are available on our Web Site: www.metro.com



For Product Information Call: 1-800-433-2232



# For those trained to save a life

As a BLS trained responder, an AED and CPR can help you save a life.<sup>1</sup> Philips HeartStart FRx defibrillator guides you through the process of treating a victim of suspected sudden cardiac arrest. The FRx defibrillator provides real-time step-by-step voice commands, an audible metronome and CPR guidance\*.



The HeartStart FRx defibrillator includes a variety of features to help guide the treatment of sudden cardiac arrest (SCA). With easy set-up, clear voice prompts, and rugged design, HeartStart FRx is designed for users trained in Basic Life Support (BLS).



# To help save a life

Cardiovascular disease is a leading cause of global mortality, accounting for almost 18 million deaths annually or 31% of all global mortality.<sup>5</sup> In developing countries, it causes twice as many deaths as HIV, malaria and TB combined. The survival rate from sudden cardiac arrest is less than 1% worldwide and close to 5% in the US.<sup>6</sup> Over half the victims of the most common cause of SCA can survive when treated early with CPR and shock from a defibrillator.<sup>7</sup>



When treating an infant or a child, simply insert the Infant/Child Key, and the FRx defibrillator adjusts instruction and shock energy. Pre-connected SMART Pads II can be used for both adults and children, so you don't waste a single second changing pads.

# Multiple features. Highly configurable.

The FRx defibrillator features intuitive, step-by-step voice instructions, including CPR guidance, to help guide BLS responders while treating a cardiac arrest. An audible metronome and voice commands help you time compressions and ventilations at a specified interval during CPR, and are paced to your actions. The FRx is highly configurable for local protocol considerations for example, in schools, communities, office buildings, gyms, corporations, etc.

#### **CPR** assistance

Just press the i-button for assistance with CPR, and the FRx provides instructions and audio cues for the appropriate number, rate, and depth of chest compressions, as well as for each breath. If the Infant/Child Key is inserted, the instructions adapt to CPR instructions that are appropriate for an infant or child.

#### **Defibrillation guidance**

To deliver a shock, simply place the pads on bare skin where indicated by the placement diagram, and press the orange Shock button when prompted. Flashing icons and a quick reference guide augment the voice instructions, so you'll know what to do even in a noisy setting.

#### **EMS** hand-off

The FRx even reminds you to be sure that emergency medical services (EMS) has been called. And once EMS arrives, hand-off is fast and easy because the FRx pads are compatible with advanced defibrillators from Philips and other manufacturers. Special adapters allow our pads to be plugged into advanced care devices to provide continuity of care.



#### Ready to use the moment it arrives

The HeartStart FRx Ready-Pack configuration arrives ready to use. Just pull the green tab to initiate the FRx self-test that confirms its readiness for use, and put the device into service. The FRx Ready-Pack comes with the FRx already inside its carry case, with pads connected, battery inserted, and a set of spare pads in place. Set-up is easy, and the Quick Setup Guide provides illustrated instructions for setting up the FRx.



#### Daily self-tests

The FRx is designed to be a comprehensive self-testing device. It performs a series of automatic self-tests, including daily, weekly, and monthly self-tests to check pad readiness and verify functionality and calibration of circuits and systems, and it can go up to four years between battery replacements.



#### Designed to work where you need it

Lightweight, rugged, and reliable, the FRx can withstand rough handling, extreme temperatures, and dusty or wet environments. Rigorous testing includes withstanding loads up to 500 kg (1100 lbs.), and drops from 1.22 m (4 ft.). It can even be used in standing water.

# Easy as **1-2-3**

The FRx comes with pre-connected SMART Pads II, so it is ready to be used for both adults and children.



Patented Quick Shock typically administers a shock just eight seconds after CPR, making the FRx among the fastest in its class at delivering shock treatment after CPR.<sup>8</sup> Studies show that minimizing time to shock after CPR may improve survival.<sup>9-12</sup> As the Guidelines note, "Reduction in the interval from compression to shock delivery by even a few seconds can increase the probability of shock success."<sup>13</sup>

# Easy as 1–2–3 in an emergency



1

Press the green On/Off button, which activates voice instruction and visual icons.



2

Place the pads on the patient as directed.



3

When advised by the device, press the orange Shock button.



# Advanced technology. Proven therapy.

The FRx contains patented technology that adapts to your actions.



- Integrated SMART Pads II placed on the victim's bare skin sense and adapt the defibrillator's instructions to your actions
- SMART Analysis automatically assesses the heart rhythm and will only deliver a shock if the rhythm is determined to be shockable even if the Shock button is pressed.
- Sensors in the pads immediately measure the resistance of the patient's body and adjust shock attributes accordingly.
- Artifact detection allows ECG analysis even in the presence of most electrical noise sources. When challenging sources of artifact are detected, the voice prompts suggest corrective action.

#### For infants, children, and adults

SMART Pads II can be used for both adults and children. Insert the Infant/Child Key into the FRx to instantly change the device settings for treating an infant or child. The defibrillator adjusts its CPR guidance to provide special pads placement and CPR instructions. The icons on SMART Pads II also flash to show optimized pads placement, and the device reduces defibrillation therapy to a level more appropriate for an infant or child.

Because you don't have to switch pads based on the person's age, you don't need separate pads for adults and children on hand.

#### **Proven therapy**

At the core of all HeartStart defibrillators are SMART Analysis and SMART Biphasic technologies. SMART Analysis determines if a shock is needed, and the SMART Biphasic shock waveform is effective at treating cardiac arrest.<sup>14</sup>

# HeartStart FRx defibrillator specifications

Defibrillator		Patient analysi	s system
Defibrillator family	Order 861304. Defibrillator, battery, SMART Pads II (1 set), Setup and Maintenance Guides, Owner's Manual, Quick Reference Guide, date sticker	Patient analysis	s Evaluates patient ECG to determine if a rhythm is shockable. Rhythms considered shockable are ventricular fibrillation (VF) and certain ventricular
HeartStart FRx Ready-Pack configuration	SMART Pads II (1 pre-connected set, 1 spare set), Setup and Maintenance Guides, Owner's Manual, Quick Reference Guide, date sticker		tachycardias (VT) associated with lack of circulation. For safety reasons, some VT rhythms associated with circulation will not be interpreted as shockable, and some very low-amplitude or low-frequency rhythms
Waveform	Truncated exponential biphasic; waveform parameters adjusted as a function of each patient's impedance	Sensitivity/	will not be interpreted as shockable VF.  Meets AAMI DF80 guidelines and AHA
Therapy	Adult defibrillation: nominal peak current 32 A (150 J nominal into a 50-ohm load)	specificity	recommendations for adult defibrillation
	Pediatric defibrillation with optional FRx Infant/Child Key installed: nominal peak current 19 A (50 J nominal into 50-ohm load)	Shock advised	Able to deliver a shock as soon as the device indicates a shock is advised  Able to deliver a shock after the last chest
Protocol	Device follows preconfigured settings; defibrillation and CPR protocol can be customized using	Quick Shock Shock-to-shock	compression of a CPR interval, typically in 8 seconds. Typically less than 20 seconds between shocks
User interface	HeartStart Event Review software	cycle time Artifact	in a series
Instructions	Detailed voice prompts and visual icons guide responder through use of the defibrillator	detection	Allows ECG analysis even in the presence of most pacemaker artifact and electrical noise sources; other artifacts are detected and corrective voice
CPR guidance	Verbal instructions for adult and infant/child		prompts issued
	CPR provides instructions and audio cues for the appropriate number, rate, and depth of chest	Battery (M5070	DA)
	compressions, as well as for each breath	Item number(s)	
Controls	Green On/Off button, blue-lit i-button, orange Shock button, optional Infant/Child Key	Туре	Aviation: 989803139301 (TSO C-142, U.S. only)  9 Volt DC, 4.2 Ah, lithium manganese dioxide, disposable long-life primary cell
Indicators	Ready light, blue-lit i-button, caution light, illuminated pads, icons; Shock button lights up when shock is advised	Capacity	Minimum 200 shocks or 4 hours of operating time (EN 60601-2-4:2003)
Physical Size	6 cm x 18 cm x 22 cm (2.4" x 7.1" x 8.9")	Install-by date	Battery is labeled with an install-by date of at least five years from date of manufacture
Size	DxHxW	Standby life	Four years typical when battery is installed by
Weight	With battery and pads case: 1.6 kg (3.5 lbs.)  /physical requirements		the install-by date (will power the AED in standby state within the specified standby temperature
Sealing	Waterjet-proof IPX5 per IEC60529 Dust-protected IP5X per IEC60529		range, assuming one battery insertion test and no defibrillation uses)
Temperature	Operating/Standby: 32° – 122° F (0° – 50° C)	SMART Pads II	000002120261
	Transient operating (for 20 minutes or less, after rapid transition from 68° F [20° C]): -4° to 122° F (-20 to 50°	Item number Active surface	989803139261 80 cm² (12.4"²) each
	C);	area	85 cm <sup>2</sup> (13.2" <sup>2</sup> ) each
Altitude	under non-condensing humidity conditions.  -400 m to 4,572 m (-1312 ft to 15,000 ft)	Cable length	121.9 cm (48")
Aircraft	Meets RTCA/DO-160G:2002 Section 21 (Category	Use-by date	Pads case is labeled with a use-by date of at least two years from date of manufacture
	M - Radiated Emissions) and Section 20 (Category M - Conducted Immunity, and Category D - Radiated Immunity).		Item # 989803139311
Crush	500 kg (1100 lbs)	Item number	989803139271
Drop	Withstands 1.22 m (4 ft) drop on any edge, corner, or face of the device onto masonry surface.	Function	Special pads place HeartStart FRx into training
Vibration	Operating: meets MILSTD 810G Fig. 5146E-1, random. Standby: meets MILSTD 810G Fig. 5146E-2,	Automated and	mode and disable its energy delivery capability; features eight real-world training scenarios
	swept sine (helicopter).		l user-activated self-tests  Tests internal circuitry, waveform delivery system,
EMI (radiated/ immunity)	Meets CISPR 11 Group 1 Class B and IEC 61000-4-3	self-tests	pads, and battery capacity
Data recording	and transmission	Pads integrity	Specifically tests readiness-for-use of pads
Infrared	Wireless transmission of event data to a PC using the IrDA protocol	Battery	(gel moisture)  Upon battery insertion, extensive automatic self-tests
HeartStart Event Review software	Data management software (optional) for download and review of data retrieved through defibrillator's infrared data port	insertion test Status indicators	and user-interactive test check device readiness  Blinking green "Ready" light indicates ready for use; audible "chirp" indicates need for maintenance
Data stored	First 15 minutes of ECG and the entire incident's events and analysis decisions		and managed to managed

<sup>\*</sup> Refer to the HeartStart FRx Defibrillator Owner's Manual for detailed product instructions. All specifications based on 25° C unless otherwise noted. The defibrillator and its accessories are made of latex-free materials.

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PAGE 1 OF 2

#### INSTALLATION INSTRUCTIONS: LIFESTART® AED CABINETS

#### SURFACE MOUNT METAL OR WOOD FRAMING:

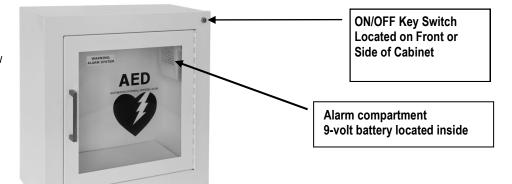
- 1. Remove all hardware and glazing, unlock cabinet if provided.
- 2. Use holes provided in back wall of cabinet tub for attaching to studding. If wall configuration does not allow for that, then follow step 2 below; otherwise, skip to step 4. Hollow wall anchors may be used in a maximum of (2) positions. The other two must be firmly anchored in framing members.
- 3. [Drilling Additional Holes] Drill (2) 1/8" holes through back wall of tub that correspond to location of framing members.
- 4. Place cabinet in position, attach with Universal # 10 x 1-1/2" self-drilling screws.
- 5. Check cabinet door for freedom of movement. If it binds, shim as necessary to remove any racking of tub attachments or studding.

#### **RECESSED METAL OR WOOD FRAMING:**

- 1. Install a framed opening above, below and at both sides of cabinet opening at specified location. Wall opening width, height and depth must correspond with dimensions indicated in catalog or detail and submittal sheet.
- 2. Use holes provided in cabinet tub for attaching to studding. If wall configuration does not allow for that, then follow step 3 below; otherwise, skip to step 4.
- 3. [Drilling Additional Holes] Drill (2) 1/8" holes through tub on each side of cabinet.
- 4. Place cabinet in position, attach with Universal # 10 x 1-1/2" self-drilling screws.
- 5. Check cabinet door for freedom of movement. If it binds, shim as necessary to remove any racking of tub attachments or studding.

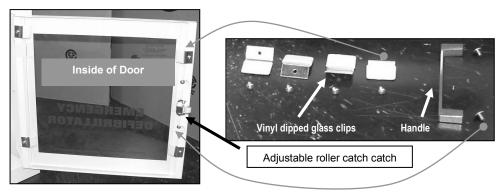
#### MASONRY:

- Leave or create an opening in the masonry wall at specified location. Wall opening width, height and depth must correspond with dimensions indicated in catalog or detail and submittal sheet.
- 2. Use holes provided in cabinet tub for attaching to studding. If wall configuration does not allow for that, then follow step 3 below; otherwise, skip to step 4.
- 3. [Drilling Additional Holes] Drill (2) 1/8" holes through tub on each side of cabinet.
- 4. Place cabinet in position and mark location of attachments on masonry using 1/8" holes as marking guides.
- 5. Remove cabinet and drill appropriately sized holes for your masonry anchors into masonry at marked points, and install anchors.
- 6. Place cabinet in position and attach with screws into masonry anchors.
- 7. Check cabinet door for freedom of movement. If it binds, shim as necessary to remove any racking of tub attachments or studding.



#### **INSTALL GLAZING, HANDLE AND ALARMS:**

- 1. Remove protective plastic from plexiglass or glass and install decal if intended for glass.
- 2. Align glazing on inside of door, holding in place while installing glass mounting clips on inside of door with sheet metal screws. (2) glass clips are provided for each side of door. Mounting holes are provided. Do not over-tighten.
- 3. Install handle with machine thread screws and roller catch or SAF-T-LOK™ in door.
- 4. Commander alarm is pre-installed in cabinet. See page 2 for operating instructions. See photos below for more details of installing door components.







SEE SEPARATE FIRE-RATED INSTALLATION INSTRUCTIONS FOR FIRE-RATED CABINETS

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#### INSTALLATION INSTRUCTIONS: LIFESTART® AED CABINETS

# COMMANDER ALARM OPERATING INSTRUCTIONS & TROUBLE SHOOTING GUIDE

AED cabinets comes standard with a 9-volt battery operated "Commander Alarm" and 2 keys that turn the alarm on or off. Alarm controller is a chrome key switch that is located on the exterior of the cabinet—either the front or the side.

#### **Alarm Operation**

- 1. Key in the vertical (Off) position alarm will not sound
- 2. Key in the horizontal (On) position Door is opened Alarm will sound Close to stop alarm.
- 3. Key switch is turned to the vertical (Off) position when the door is opened The Alarm will stop.

#### Maintenance

Replace 9-Volt battery yearly or as needed. Open alarm compartment by twisting the key or a coin inserted into the slot at the top of the unit.

#### **Trouble Shooting Guide**

- 1. Alarm Key Switch On Door Open Alarm Not Sounding: Change Battery
- 2. Alarm Key Switch On Door Closed Alarm Continues to Sound: Test by opening door & pushing in the plunger switch with finger, then turn on the alarm. If alarm does not come on until you release the plunger switch, Reposition the alarm compartment.

#### **Detail of Alarm Compartment**



#### PAGE 2 OF 2

Plunger switch
Turns alarm on & off

#### **Fire-Rated Wall Note:**

See separate installation instructions for Fire-rated cabinets.



#### **EMERGENCY SPECIALTIES**

# AED SEMI RECESSED WALL CABINET: SEE HIGHLIGHTED AREAS

#### FREESTANDING AED CABINET STAND: 1480 SERIES



This Decorative Stand with a Surface-Mount Steel or Aluminum Cabinet can be an Attractive Addition to a Building's Décor by Coordinating Finishes and Paint Colors.

**Construction:** 52" structural steel tubing and steel baseplate. White epoxy or silver metallic finish standard, with custom colors also available.

#### **DUAL CABINET FOR AED AND EMERGENCY OXYGEN:**

**OLYMPUS 1900 SERIES** 

Provide More Lifesaving Equipment by Including Emergency Oxygen with Your AED.

**Door & Trim Construction:** CRS with white powder-coat finish, #4 stainless steel or clear anodized aluminum. 1-3/4" trim on face and door, mounted in a 5/8" door stop and attached by a continuous hinge. All models feature a clear acrylic window with graphics, zinc-plated handle and roller catch.

Trim Style & Depth: Surface-mount has a square edge. Recessed – 3/8" flat

trim, Semi-Recessed – 1-1/2" square edge or 3" rolled edge.

**Alarm:** 85 db Commander (audible) alarm standard.

**Oxygen:** Accommodates up to "D" size cylinder. Available with patented Tx02 oxygen system that features easy-to use automatic flow system.

**Tub:** White powder coated CRS. Fire-rated option available.



1913F12

#### **WEATHER-RESISTANT AED CABINETS: 1463 SERIES**

Protect Your AED From Moisture and Dust with this Durable Surface-Mount Cabinet.

Construction: This AED cabinet is constructed of galvanized steel and powder coated for a durable, water resistant finish. Stainless steel turn handle and fully gasketed.



1463

#### **AUTOMATED EXTERNAL DEFIBRILLATORS:** LS-AED SERIES

All Defibrillators Meet Local and National Standards for Emergency Care in Public Places and are FDA-Approved. JL has Several Models Available Which All Feature Automatic Heartbeat Detection, Require Minimum Training to Operate and Include a Training Video.

This AED cabinet is "semi-recessed" which means it will need to be installed into a cut out in a wall (no electrical needed). Once installed the cabinet will extend from the surface of the wall 3 inches with 3 and ¾ inches of the cabinets depth housed inside the wall.

#### **METAL AED CABINET OPTIONS AND ACCESSORIES**

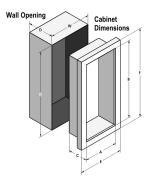
Siren Strobe Alarm and 85 db Alarm for 3" and surf mtd.(9V battery) (SA)

Alarm Connectivity Switch: Magnetic Door contact (14MAG) or Roller Reed Contact (14RR).

Optimal door styles - most FEC styles available.

Saf-T-Clasp for Visual Notification if Door has been Opened (14STC) Custom Door Graphics AED Wall Signs

Architectural Bronze or Brass Custom Sizes & Paint Colors Fire-Rated Recessed Cabinet - FX2



	Lifestart Series for Any Brand AED													
Trim and Door Material and Series #			Tub I.D.		Frame O.D.		Wall Opening Non-Rated			Wall Opening Fire-Rated Option				
Steel	Aluminum	Stainless Steel	Trim Style	A	В	С	E	F	w	Н	D	W	Н	D
1415F12	1425F12	1435F12	3/8 Flat Trim	14	14	6 3/4	17 3/8	17 3/8	15 1/4	15 1/4	6 1/2	16 5/16	16 5/16	7 11/16
1416F12	1426F12	1436F12	11/2 Square	14	14	6 3/4	17 3/8	17 3/8	15 1/4	15 1/4	5 7/8	16 5/16	16 5/16	6 7/16
1417F12	1427F12	1437F12	3or 2 1/2"Rolled	14	14	6 3/4	17 3/8	17 3/8	15 1/4	15 1/4	3 3/4*	16 5/16	16 5/16	4 15/16*
1413F12	1423F12	1439F12	Surf. Mtd.	17 3/16	17 3/16	7	17 3/8	17 3/8	-	-	-	-	-	-

\* MODEL 1427 HAS 2-1/2" TRIM & REQUIRES 5/8" DEEPER WALL OPENING

	The New Side-by-Side Olympus Series for AED & Extinguisher or Oxygen													
Trim and D	Trim and Door Material and Series # Tub I.D.		Frame O.D. Wall Opening No		ng Non-Rated		Wall Opening Fire-Rated Option							
Steel	Aluminum	Stainless Steel	Trim Style	W	Н	D	E	F	w	Н	D	W	Н	D
1915F12	1925F12	1935F12	3/8 Flat Trim	18	18	8	21 3/8	21 3/8	19	19	8	20 5/16	20 5/16	8 15/16
1916F12	1926F12	1936F12	11/2 Square	18	18	8	21 3/8	21 3/8	19	19	6 7/8	20 5/16	20 5/16	7 11/16
1917F12	1927F12	1937F12	3 Rolled	18	18	8	21 3/8	21 3/8	19	19	5 3/4*	20 5/16	20 5/16	6 3/16*
1913F12	1923F12	1939F12	Surf. Mtd.	21 3/16	21 3/16	8 1/2	21 3/8	21 1/8	-	-	-	-	-	-
	Dimensions in Inches													

\* MODEL 1927 HAS 2-1/2" TRIM & REQUIRES 5/8" DEEPER WALL OPENING

16



# The Hyfrecator 2000 Electrosurgical System

















To learn more about these and other innovative products, visit **ConMed.com**.

# For Over 75 Years, the Hyfrecator<sup>®</sup> Has Been a Top Choice by Physicians for Clinic or Office-Based Electrosurgery.





The Hyfrecator® is a multi-function electrosurgical generator with both monopolar and bipolar modes, self-diagnostics, and recall of stored power settings. Upon installation physicians experience simple use, precise tissue therapy, and years of safe, reliable operation.

#### There is only one Hyfrecator®

**High Output Terminal** for heavy desiccation and fulguration procedures requiring high intensity.

**Low Output Terminal** for light desiccation and fulguration procedures requiring low intensity and increased precision.

The independent outputs produce two different therapeutic effects, thus gaining better control of the desired clinical outcome. Subtle control to 1/10 of a watt in LO. Longer, broader arcs of current in HI.

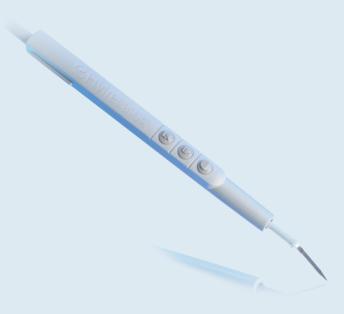
Dual Microprocessors, one microprocessor controls the output and functionality of the system while the second monitors the system and terminates activation if a safety hazard is detected. This results in regulated delivery of current, while simultaneously ensuring safe operation.



# Hyfrecator® Unit Specifications

Depth:	4 inches (102mm)
Width:	8.75 inches (222mm)
Height:	7.5 inches (190mm)
Weight:	6 pounds (2.7kg)
Output Power:	Low 0-20 watts (1/10 watt
	increments up to 10 watts)
High:	`

HYFRECATOR® 2000 ELECTROSURGICAL UNIT





FOOT CONTROL PENCIL



HAND CONTROL PENCIL



STERILE SHEATH

#### Autoclavable Pencils

The Hyfrecator® System offers hand-or foot-activated operation. Standard with the Hyfrecator® 2000 is the reusable 7-900-5 steam autoclavable hand control pencil with power adjustment buttons directly on the pencil. This allows the user the option of quickly fine tuning the power output from the field to achieve the desired surgical effect. All pencils are designed with a non-spinning hex collar for multipositional fail-safe blade locking and a durable, pliable pencil cord to reduce hand fatigue during use and ease connection to the unit.

# Maintain Sterility with Pencil Sheaths

The Sterile Sheath is a convenient and economical way to maintain a sterile field while using the Hyfrecator electrosurgical reusable pencils. The sheath is designed to fit over both Hyfrecator and other handheld instruments. The extra sheath length allows the instrument to be placed within the sterile field. A non-sterile sheath is also available.

Employed use of sheaths promotes pencil longevity, speeds changeover from patient to patient, and prevents pencil exposure to contaminants.

Description	Unit	Catalog Number
Autoclavable, Reusable Hand Control Pencil	Each	7-900-5
Autoclavable, Reusable Foot Control Pencil	Each	7-900-6
Reusable Hand Control Pencil	Each	7-800-5
Pencil Sheaths — Non-sterile	100/box	7-796-18BX
Pencil Sheaths – Sterile	25/box	7-796-19BX



#### with Electrolase® Electrodes

ConMed Electrolase® Disposable Hyfrecator electrodes are available in either blunt or sharp tip configurations. Electrolase® sharp tips are ideal for procedures requiring pinpoint precision and control while blunt tips are ideal for general broad based coagulation.

#### Safe and Convenient

Disposable Electrolase® electrodes eliminate patient-to-patient crosscontamination and the plastic safety collars simplify handling and help prevent accidental injury. Blunt and sharp tips are color coded for rapid identification. The blunt electrodes are dark grey and the sharp electrodes are white.

Description	Unit	Catalog Number
Disposable Electrodes		
Electrolase Sharp Tips / Non-sterile	100/box	7-100-12BX
Electrolase Sharp Tips / Sterile	50/box	7-100-8BX
Electrolase Blunt Tips / Non-sterile	100/box	7-101-12BX
Electrolase Blunt Tips / Sterile	50/box	7-101-8BX

#### Reusable Electrodes

To facilitate the Hyfrecator's applicability for an array of surgical usage, ConMed offers a wide choice of reusable electrode sizes and shapes to respond to a variety of treatment sites.

Description	Unit	Catalog Number
Reusable Electrodes		
General Purpose Electrode	Each	711B
Extra Fine Needle Electrode	6/case	714
Extra Fine Needle Electrode	6/case	714-S
Fine Wire Needle	Each	705A
Long Desiccation Needle	Each	716
Short Desiccation Needle	Each	7-221-S
Angled Needle Electrode	Each	7-221-A
Needle Electrode	5/case	138004
Angled Ball Electrode	Each	7-222-A
Long Ball Electrode	Each	7-222-L
Short Ball Electrode	5/case	138019
Reusable Electrode Starter Kit	5/case	700

UNIT

HYFRECATOR® 2000 ELECTROSURGICAL



HYFRECATOR® 2000 ELECTROSURGICAL UNIT



**ADSON SMOOTH TIPS** 

### Bipolar Forceps

As a multi-function electrosurgical generator, The Hyfrecator® 2000 has a bipolar mode similar to those found in much larger systems.

Bipolar Forceps are designed to grasp, manipulate and coagulate selected tissue. The electric current alternates between the two tips, reducing the length of the current's path and producing a precise, controlled therapeutic effect.

Description	Unit	Catalog Number
Forceps		
Jeweler's Micro Tips	Each	7-809-1
Gerald Micro Tips	Each	7-809-2
Hardy Micro Tips, Bayonet	Each	7-809-3
Adson Smooth Tips	Each	7-809-4
Cushing Smooth Tips	Each	7-809-5
Cushing Smooth Tips, Bayonet	Each	7-809-6
Adson Serrated Tips	Each	7-809-7
Cushing Serrated Tips	Each	7-809-8
Cushing Serrated Tips, Bayonet	Each	7-809-9
Bipolar Cord	Each	7-809-11
Foot Switch	Each	7-900-4



# Maximum Flexibility: Mobile Stand

Where the Hyfrecator is not already in each treatment room, the telescoping Hyfrecator mobile stand allows the flexibility and ease of moving the Hyfrecator from room to room. Just mount and go.

Description	Unit	Catalog Number
Telescoping Mobile Hyfrecator Stand	Each	7-900-1
Additional Accessories		
Patient Plate	Each	7-900-7
Electrosurgical Tip Cleaner	40/case	138029





# The Hyfrecator® 2000 Electrosurgical System

525 French Road Utica, NY 13502

Customer Service: 1-800-448-6506 International Sales: +1-315-797-8375

Fax: 1-800-438-3051

ConMed.com Hyfrecator.com info@mail.conmed.com

#### 8301

#### **EXAM ROOM FLAGS**

#### PROVIDE BACKING & MOUNT WITH BOTTOM AT 70 TO 72" AFF



Custom Labeled Metal Exam Room Flags: Custom Labeled Metal Exam Room Flags use position, color and text to show the room status (occupied, x-ray, ready for clean up, etc.) and increase the efficiency of your facility

- Custom Labeled Metal Exam Room Flags: Custom Printed Metal Exam Room Flags use position, color and text to show the room status (occupied, x-ray, ready for clean up, etc.) and increase the efficiency of your facility
   Custom Labeled Metal Exam Room Flags are available in custom colors, choose from green, red, grey, yellow
- Custom Labeled Metal Exam Room Flags are available in custom colors, choose from green, red, grey, yellow, turquoise, beige, white, blue, black, orange, lavender and coral (call 877-514-1140 to order). "Click" <u>Custom</u> Colors for color pallet
- To Order: Please complete this form "Click" <u>Custom Flags Order Form</u> and fax it to 616-514-1141 or e-mail to<u>sales@medicus-health.com</u>
- Tell us your preferred flag length 4" or 8"
- What text you would like for each flag
- Desired color
- Quantity desired
- Whether you want printing on both sides of the flag
- We can get you a quote
- Design your own color coding system to signal room status/occupancy
- Constructed of durable aluminum
- Flags can swing 180 degrees
- Lightweight and easy to mount (mounting hardware not included)

SOURCE: http://www.medicus-health.com/custom-labeled-exam-room-flags-metal.aspx





# 255 Lighting



#### Affordable, improved performance procedure lighting

Whether you practice in an office environment or specialized procedure area, your work requires superior, white, shadow-free illumination that is safe and cool to the touch. The Ritter 255 LED Procedure Light by Midmark is designed to deliver both quality and affordability with features that can help you provide the best care to your patients.



#### High-quality procedure lighting

Integrated controls on both sides of the light head provide convenient access to make lighting adjustments. You can turn the light on and off and adjust the light brightness from the control touchpad. The sleek contours and sealed light head were designed to make cleaning and care easier. And the handle can be removed for steam sterilization.



#### Features designed to make your life easier

The Ritter 255 LED Procedure Light is counterbalanced, designed to help you achieve precise positioning using less force – all without drifting or needing frequent adjustments like spring-based systems. And the yoke design is intended to further simplify positioning with its smooth range of motion.



Ritter 255 Mobile Procedure Light



Ritter 255 Combination Procedure Light



Ritter 255 Wall Mount Procedure Light

#### Seeing is believing

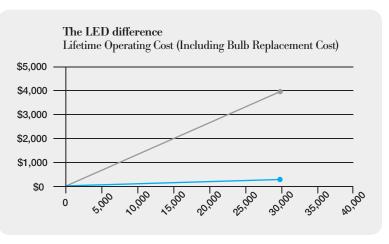
We've also designed the 255 light with a large reflector, including 1,040 reflecting facets, which provide an even distribution of light and reduction of shadows for uninterrupted illumination.



#### Superior lighting by design

The Ritter 255 LED Procedure Light is designed to deliver superior illumination. The combination of the optics enhances one's ability to see color variations in tissue and is intended to aid you in a more accurate diagnosis and treatment. Features include:

- 7,500 footcandles, significantly more light intensity of similar products
- An exceptional color rendering index of greater than 95
- And a color temperature of 4,400 K



LED Light
 Halogen Light

#### Lighting

#### S P E C I F I C A T I O N S

#### Ritter 255 Procedure Light Specifications

Illumination at 39" (1 m)

Focal length: 7,500 fc (80,700 lux) Pattern diameter: 7.5" (19 cm)

Depth of field: 29.8" (75.8 cm) Color temperature: 4,400 K

Diameter of lighthead: 20" (50.8 cm) LED Light Module: 16 LEDs arranged in

a 4x4 array, 32 Watt rating.

#### Electrical

115 VAC, 50/60 Hz, 0.7 amps 230 VAC, 50/60 Hz, 0.5 amps

Classified by TUV with respect to electric shock, fire, mechanical and luminaires for diagnosis hazards only in accordance with IEC/ES 60601-1, CAN/CSA C22.2 60601-1, 60601-1-2, 60601-2-41, CE Medical Device Directive 93/42/EEC Annex VII Class 1, and RoHS European Directive 2011/65/EU

#### Models

255-001 Single mount, 8' (2.4 m) ceiling 255-002 Single mount, 9' (2.7 m) ceiling 255-003 Dual mount, 8' (2.4 m) ceiling 255-004 Dual mount, 9' (2.7 m) ceiling 255-005 Mobile Procedure Light 255-006 Wall Mount

255-007 Mobile Procedure Light w/o cord

The following systems are recommended based on the following ceiling heights (measured from the bottom of the ceiling surface to the floor):

Less than 8' (2.4 m) Mobile Light

8' (2.4 m) to 9' (2.7 m) 8' (2.4 m) Single or Dual Light 9' (2.7 m) to 10' (3 m) 9' (2.7 m) Single or Dual Light

Greater than 10' (3 m) 8' (2.4 m) Single or Dual Light with 10' ceiling mount adapter kit(s) or Mobile light

#### Wall Mount

63.5"

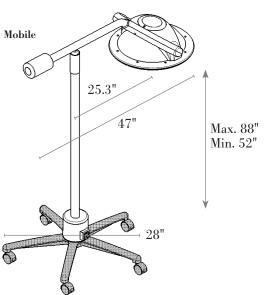
99"

Ceiling Mount

46.3"

13.6"

22.3"



#### Authorized CE Representative

Countries in the EEC should direct all questions, incidents, and complaints to Midmark's Authorized CE representative listed below:

Midmark EMEA Ltd Beech House, First Floor East Wing, Ancells Business Park Fleet, Hampshire, GU51 2UN, UK

Call: + 44 (0) 1252 360 940 Fax: + 44 (0) 1252 360 941

# Midmark is an ISO 13485 and ISO 9001 Certified Company.

For more information or a demonstration, contact your Midmark dealer or Midmark Corporation, Versailles, Ohio.

Call: 1-800-MIDMARK Fax: 1-800-365-8631 midmark.com



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Products subject to improvement changes without notice.

Litho in U.S.A. 007-1070-00 Rev. B1 (11/15)



### **255 Ceiling Mounted Light Installation**

#### Note

Installation requirements may vary the dimensions.

#### **Applies to Models:**

255 (-001 through -004; 021 through -024)

## Special Tools: Torque wrench

Language of origin: English

#### Step 1: Determine mounting location.

A) Use the weight / dimension information shown on this page to determine the mounting location.

Note: Power source must be within 12 ft. (3.6 m) of mounting location.

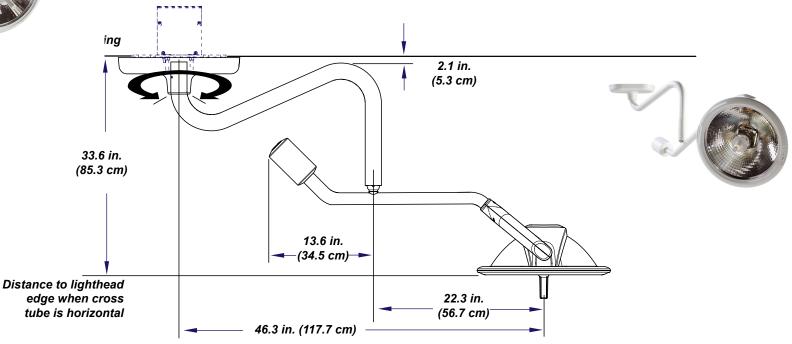
#### Notes (Applies to 9 ft ceiling):

The ceiling <u>must</u> be capable of supporting the light system.

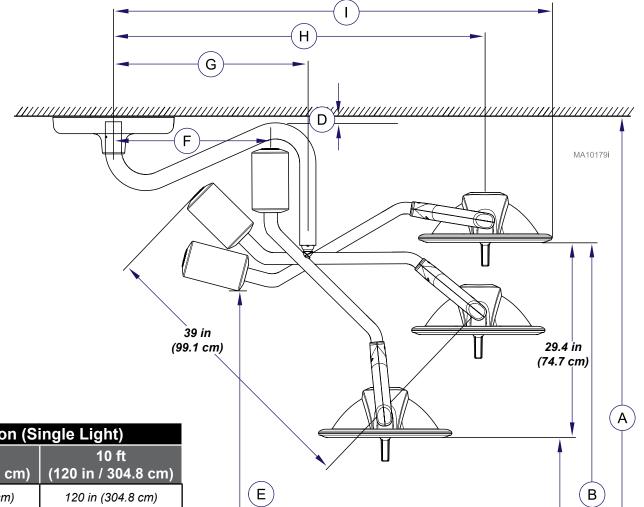
Weight (max.):.......118 lb (53.6 kg) (for double light) / 65 lb (29.5 kg) (for single light) Torque (max.):......172.9 ft-lb (234.4 Nm)

In addition to supporting the weights listed, the ceiling structure must be able to support the light without deflection. To prevent the suspension arm from drifting, the assembly must deflect no more than 1/16" (0.16 mm) over a 12" (30.5 cm) distance.

# For 8' ceiling







# Note Installation requirements may vary the dimensions. Ceiling Support Structure Insta

Ceil	Ceiling Support Structure Installation (Single Light)							
Reference	8 ft (96 in / 243.8 cm)	9 ft (108 in / 274.3 cm)	10 ft (120 in / 304.8 cm)					
Α	96 in (243.8 cm)	108 in (274.3 cm)	120 in (304.8 cm)					
В	80 in (203.2 cm)	81 in (205.7 cm)	81 in (205.7 cm)					
С	50.4 in (128 cm)	51.6 in (131.1 cm)	51.6 in (131.1 cm)					
D	2.1 in (5.3 cm)	11.2 in (28.4 cm)	17.2 in (43.7 cm)					
E	71 in (180.3 cm)	72.2 in (183.4 cm)	72.2 in (183.4 cm)					
F	19.1 in (48.5 cm)	17.1 in (43.4 cm)	17.1 in (43.4 cm)					
G	24 in (61 cm)	22 in (55.9 cm)	22 in (55.9 cm)					
Н	48.4 in (122.9 cm)	46.4 in (117.8 cm)	46.4 in (117.8 cm)					
1	58.4 in (148.3 cm)	56.4 in (143.2 cm)	56.4 in (143.2 cm)					

C

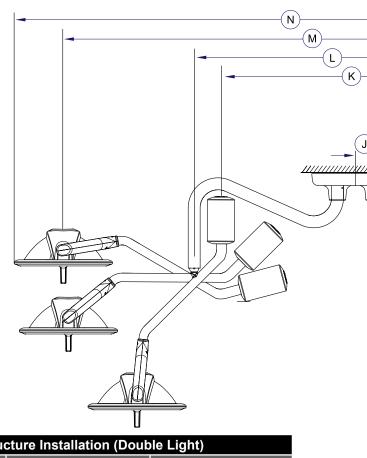


Installation requirements may vary the dimensions.

#### Notes

Reference J is the dimension from the center of the mount bracket and the center rotation point of the downtube.

References K through M are added dimensions for the double light.



	Ceiling Support Structure Installation (Double Light)						
Reference	8 ft (96 in / 243.8 cm)	9 ft (108 in / 274.3 cm)	10 ft (120 in / 304.8 cm)				
Α	96 in (243.8 cm)	108 in (274.3 cm)	120 in (304.8 cm)				
В	80 in (203.2 cm)	81 in (205.7 cm)	81 in (205.7 cm)				
С	50.4 in (128 cm)	51.6 in (131.1 cm)	51.6 in (131.1 cm)				
D	2.1 in (5.3 cm)	11.2 in (28.4 cm)	17.2 in (43.7 cm)				
E	71 in (180.3 cm)	72.2 in (183.4 cm)	72.2 in (183.4 cm)				
F	19.1 in (48.5 cm)	17.1 in (43.4 cm)	17.1 in (43.4 cm)				
G	24 in (61 cm)	22 in (55.9 cm)	22 in (55.9 cm)				
Н	48.4 in (122.9 cm)	46.4 in (117.8 cm)	46.4 in (117.8 cm)				
I	58.4 in (148.3 cm)	56.4 in (143.2 cm)	56.4 in (143.2 cm)				
J	3 in (7.6 cm)	3 in (7.6 cm)	3 in (7.6 cm)				
K	44.2 in (112.3 cm)	40.2 in (102.1 cm)	40.2 in (102.1 cm)				
L	54 in (137.2 cm)	50 in (127 cm)	50 in (127 cm)				
М	102.8 in (261.1 cm)	98.8 in (251 cm)	98.8 in (251 cm)				
N	122.8 in (311.6 cm)	118.8 in (301.8 cm)	118.8 in (301.8 cm)				

(E)	U U	B
		C
<u> </u>		↓ ↓

G

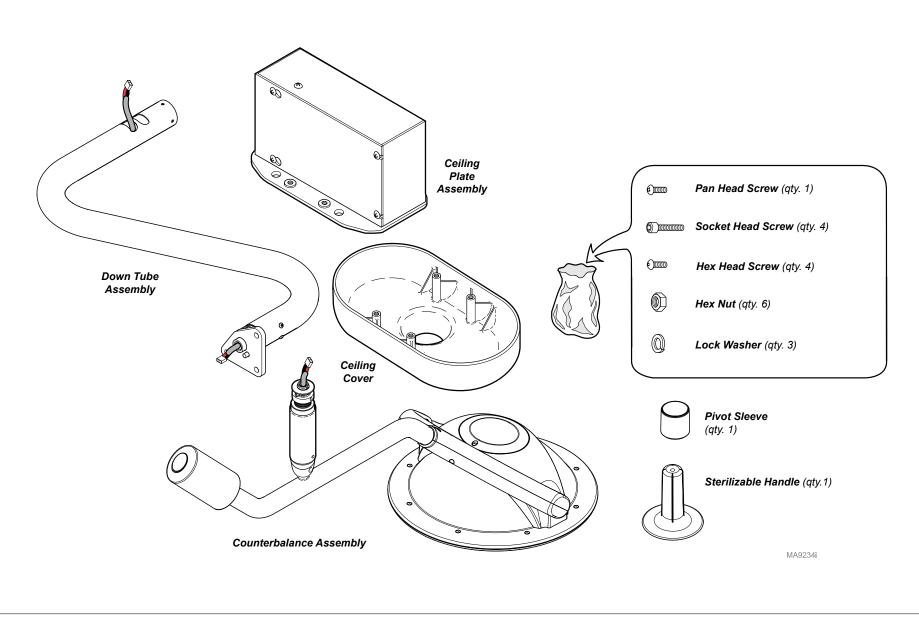
39 in

(99.1 cm)

29.4 in (74.7 cm)

(A)

English-3

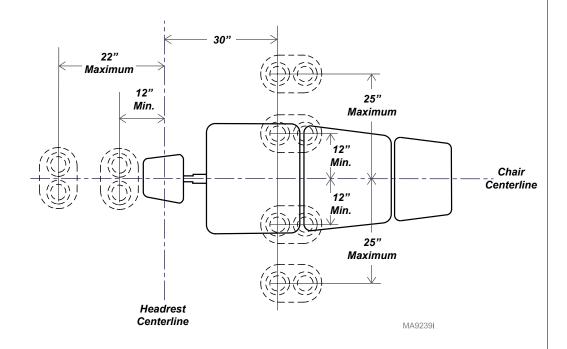


#### Attention

Illustrations are suggestions only. Midmark does not supply ceiling structures. Consult a structural engineer for the best solution for your situation.

#### **Recommended Ceiling Mounting Locations**

These locations allow the lighthead to be positioned over any portion of the patient's body without running into a physical arm restriction; mounting the light system on the centerline of the table or headrest will result in some areas of the patient's body not being able to be illuminated by the lighthead. Also, the light system should be mounted on the opposite side of the table as the doctor's work position, so the light system is not hanging above their head.



Ceiling Support Structure Installation			
<b>Mounting Style</b>	Ceiling Height	Weight	Torque
Single	8 ft (2.44 m)	64 lb (29.1 kg)	94 ft-lb (127 Nm)
	9 ft (2.74 m)	65 lb (29.5 kg)	87 ft-lb (118 Nm)
	10 ft (3.05 m)	66 lb (29.9 kg)	88 ft-lb (119 Nm)
Double	8 ft (2.44 m)	116 lb (52.7 kg)	171 ft-lb (232 Nm)
	9 ft (2.74 m)	118 lb (53.6 kg)	173 ft-lb (235 Nm)
	10 ft (3.05 m)	120 lb (54.4 kg)	176 ft-lb (239 Nm)

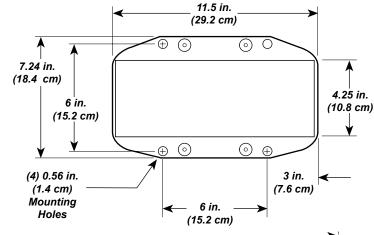
#### Recommended Ceiling Support Structure Layout

The 255 LED Lighting system requires a sturdy ceiling support structure to support the weight and the dynamic torque which will be applied to the support structure.

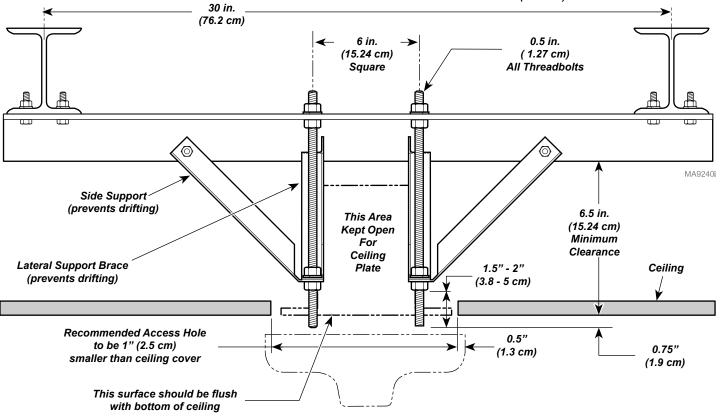
The 255 LED lighting system is engineered for ease of movement during positioning. The arm assemblies and lightheads(s) will rotate with a minimum of force, provided the arm assemblies are leveled and stay level. If, however, the ceiling support is weak and flexes, the weakness will have a negative impact on the operation of the arm assemblies during positioning.

If the ceiling support structure flexes too much, the lighthead(s) will drift to the lowest point. Although the arms are equipped with brakes to prevent drift, the undesirable side effect of stiffer braking is that the arm assemblies / lighthead(s) will be harder to move. For a set of arm assemblies to rotate without drift and a minimum amount of force, the ceiling plate assembly must not be allowed to deflect more than 1/16" over a 12" distance. The ceiling plate must be level and stay level when the arm assemblies are rotated in every position and all worst case scenarios (example: two sets of arm assemblies on one side), which requires the ceiling support structure be braced in multiple directions.

The bottom of the ceiling plate assembly must be installed so it is flush with the finished surface of the facility's ceiling. The ceiling cover is designed to fit up against the finished ceiling.



Caution
The ceiling support structure must support the weight of the system and the rotating suspension arms and lighthead(s) without deflection.



#### **Connect Junction Box Wiring**

#### Electromagnetic Interference

This product is designed and built to minimize electromagnetic interference with other devices.

If interference is noticed between another device and this product, then remove the interfering device from the room or wire this product into an isolated circuit.

#### Wiring Installation

The wiring, supplying power to the junction box of the 255 LED lighting system, must be supplied by the customer. The single and double 255 LED lighting system requires 115 VAC or 230 VAC input voltage. The wire should be a two-conductor with ground, 14 gauge copper wiring (minimum), rated for 120 VAC (for 115 VAC inputs) and 250 VAC (for 230 VAC inputs). The customer supplied wiring must be connected to the junction box with some form of strain relief fitting, preferably a conduit fitting. Connect and route the wiring according to state and local codes using conduit where necessary.



#### WARNING

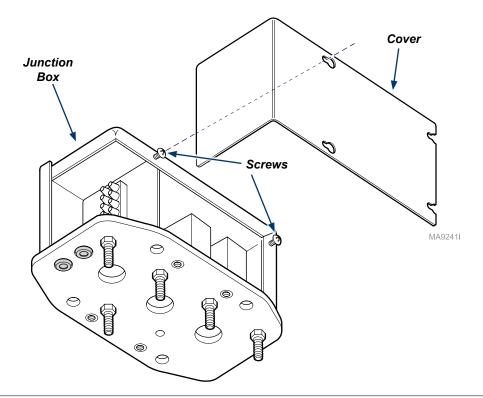
Ensure facility supplied wiring is turned to OFF.

#### Step 3: Prepare customer/facility supplied wiring.

- A) Turn OFF facility power breaker so no power in customer supplied wiring.
- B) In ceiling box, loosen four screws; then pull outward on cover and remove from junction box.
- C) Install conduit fitting (customer supplied) in the knockout of the junction box.
- D) Feed the facility supplied wiring through the knock-out in the junction box.

#### Note

Double unit shown in graphic.





#### WARNING

Ensure facility supplied wiring is not shorted to junction box and do not touch wires.

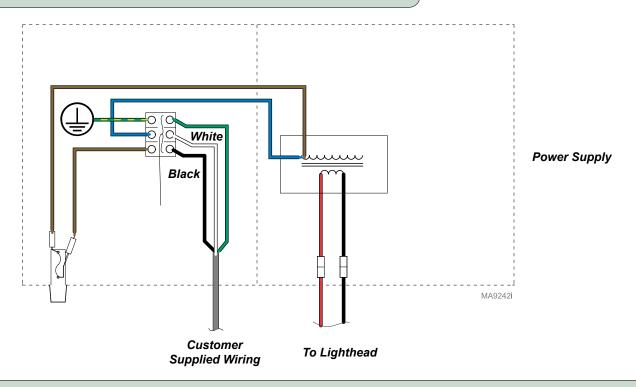


#### **Equipment Alert**

Single light wiring shown.
Customer supplied wiring same for double.

#### Step 4: Check facility power.

- A) Turn ON facility power breaker so there is power in customer supplied wiring.
- B) Using a multimeter, measure the input voltage between black power lead and white neutral lead of customer supplied wiring. Record this voltage.





#### WARNING

Ensure facility supplied wiring is turned to OFF.



#### CAUTION

Failure to properly connect and insulate wires in junction box could result in a short or electrical shock to personnel or improper system operation.

Always use a strain relief (conduit fitting) between facility wiring and the junction box. Always connect the earth ground wires inside the junction box.

# For single lights and double lights Step 5: Connect facility wiring.

- A) Turn OFF facility power breaker so there is no power in customer supplied wiring.
- B) Connect the line (L), neutral (N), and ground (L) wires as labeled.



#### **WARNING**

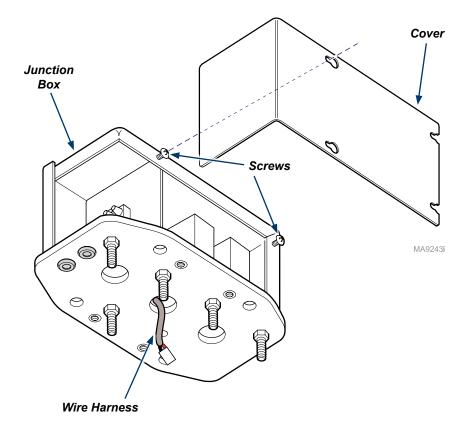
Ensure facility supplied wiring is not shorted to junction box and do not touch wires.

#### Step 6: Finalize facility wiring.

- A) Feed power supply output wire harness through hole in bottom of junction box.
- B) Position box cover on junction box and secure by tightening four screws.

#### **Notes**

Perform these steps now if the ceiling is a drywall/plastered ceiling; these steps cannot be performed later. Double unit shown in graphic.





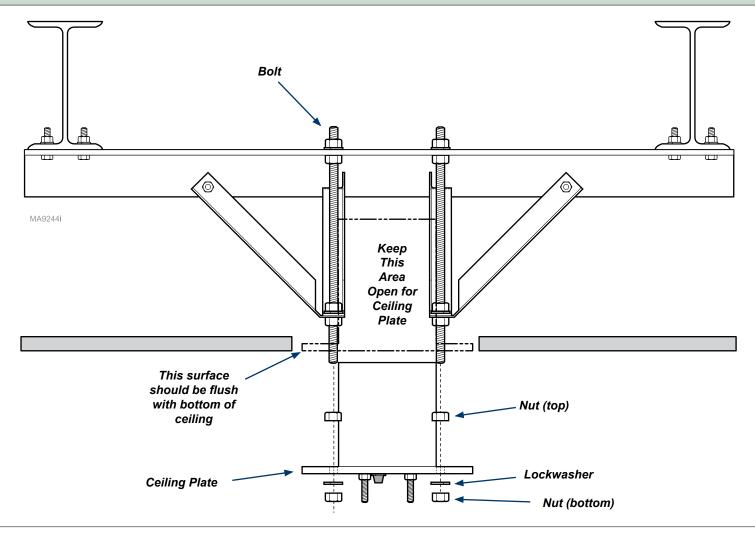
#### **WARNINGS**

Ensure facility supplied wiring is not shorted to junction box and do not touch wires.

Failure to install nuts so at least two full threads are visible below nuts could result in unit falling.

#### Step 7: Install ceiling plate assembly (guiding method - consider other methods).

- A) Install four 1/2" nuts on four all-thread bolts (not supplied) as far as possible.
- B) Install ceiling plate assembly on four all-thread bolts and secure with four 1/2" lockwashers and 1/2" nuts.
- C) Ensure nuts do not contact the ceiling plate assembly, otherwise leveling of ceiling plate assembly with nuts will not be possible. Adjust four nuts until bottom of ceiling plate assembly is flush with surface of ceiling.
- D) Use a level to check the levelness of ceiling plate assembly in all directions. Adjust four nuts as necessary until the ceiling plate assembly is level in all directions and flush with surface of ceiling.
- E) Tighten nuts against ceiling plate assembly; then recheck levelness of ceiling plate and readjust if necessary.



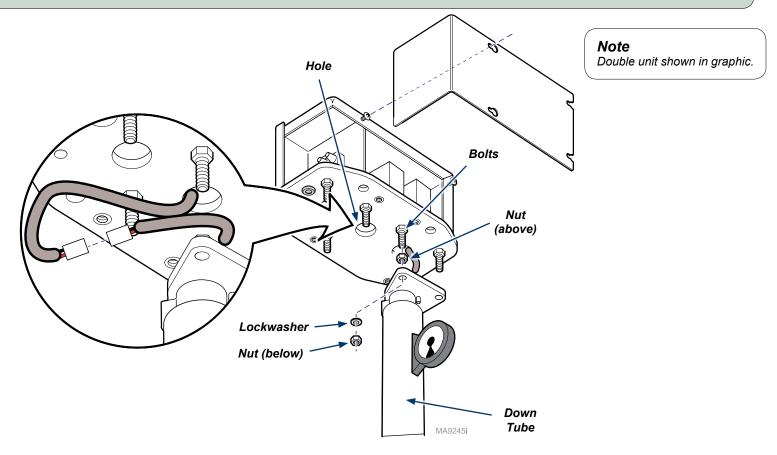


#### WARNING

Failure to install nuts so that there are at least two full threads visible below nuts, could result in unit falling.

#### Step 8: Install Down Tube.

- A) Thread three 3/8" x 16 hex nuts (supplied) onto three bolts until they are hand-tight; then back off each nut one full turn.
- B) Position down tube near hole.
- C) Connect junction box wire harness to down tube wire harness.
- D) Install down tube on three bolts and secure with three 3/8" lockwashers and 3/8" x 16 hex nuts (supplied).
- E) Under normal circumstances, the down tube should be level enough to provide drift-free operation. If, after complete assembly and operation of the light system, drifting is observed, use a protractor or level to adjust nuts until down tube is vertical (+/- 0.5 degrees); then tighten nuts.
- F) For double light, repeat steps A through E for remaining down tube.
- G) Slide ceiling cover onto down tube(s).
- H) Attach ceiling cover to ceiling plate with four #10-24 x 3/4" screws (supplied).

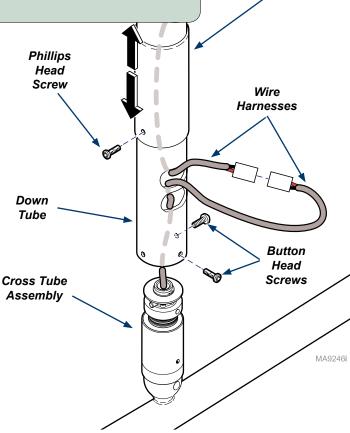


Note: There are three screw holes in cross tube; two of the holes are larger and have a courser thread.

Use these two holes to secure cross tube assembly with screws. The other hole is for securing ball pivot sleeve.

#### Step 9: Install Cross Tube Assembly.

- A) Slide ball pivot sleeve onto down tube making sure screw hole in sleeve is towards the bottom.
- B) With ball pivot sleeve positioned as high as possible on down tube, pull wire harness through top window of down tube.
- C) Align three screw holes; then insert pivot shaft of cross tube assembly into down tube. Secure cross tube assembly in position with two #10-24 x 3/8" button head screws.
- D) Feed wire harness through top window of down tube.
- E) Connect wire harnesses. Push harness into top window.
- F) Slide ball pivot sleeve down into position and secure with one #10-24 x 3/8" (New Units Only) phillips head screw.

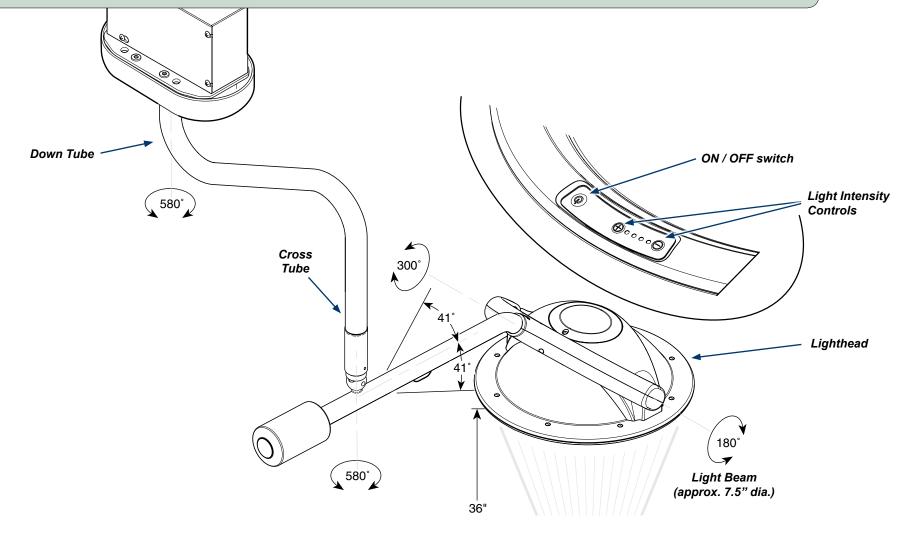


**Ball Pivot** 

Sleeve

#### Step 10: To verify operation...

- A) Turn ON facility power breaker so there is power in customer supplied wiring.
- B) Turn light ON (**b**) and adjust intensity as needed using light intensity controls.
- C) Position the light 36" from the table and aim the light at the table.
- D) Observe. There should be an evenly distributed circular pattern of bright light, approximately 7.5 inches in diameter, on the table surface.
- E) Rotate the lighthead, lamp tube, cross tube, and down tube through their range of motion. Release the lighthead at different positions.
- F) Observe. The lighthead should be able to be positioned easily through the entire range of its motion. When the lighthead is released in any position, no drifting should occur at any axis.
- G) If any problems are discovered, refer to the troubleshooting guide for adjustment and repair tips.



#### To adjust ball pivot tension...

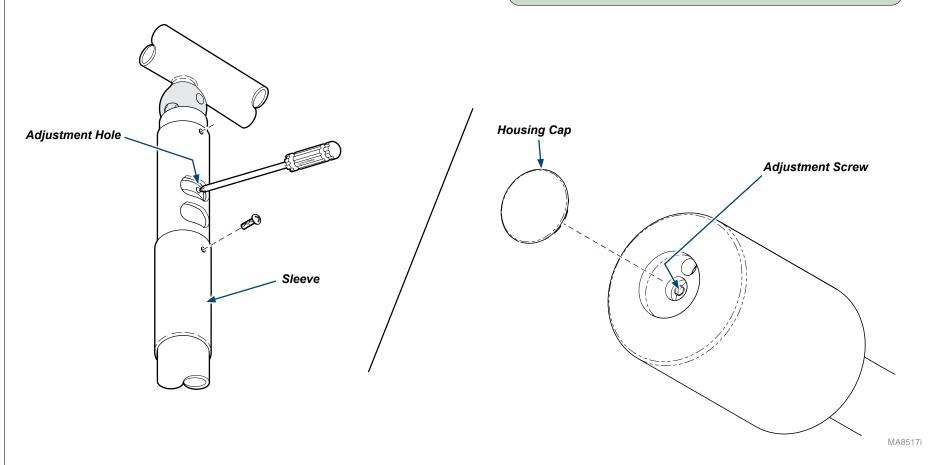
- A) Remove screw, then slide sleeve down.
- A) Insert screwdriver into adjustment hole.
- B) Move the screwdriver LEFT / RIGHT to adjust tension setting (LEFT: decreases tension / RIGHT: increases tension)
- C) Remove screwdriver, and check for desired tension. Repeat until desired tension is achieved.
- D) Slide fixed arm sleeve up, then install screw.

#### To adjust cross tube counterbalance...

- A) Release tension.
- B) Remove cap from counterbalance.
- C) Loosen / tighten the adjustment screw until the cross tube balances in horizontal position.
- D) Install cap onto counterbalance.
- E) Set tension.

Note: Turning the adjustment screw clockwise will lower the lighthead.

Turning the adjustment screw counterclockwise will raise the lighthead.





# 250 & 253 LED Exam Lights



LED lighting technology has many benefits as compared to other forms of lighting. LED units last significantly longer—nearly 10 times longer than halogen and over 20 times longer than incandescent. And Ritter LED exam lights are designed to consume 45-60% less energy than other lights, providing a considerable reduction in operating cost over the life of the LED.

#### Ritter 250 Exam Light

The Ritter 250 LED Exam Light takes our proven exam room lighting and makes it even better by incorporating LED technology for longer life and reduced energy consumption.



Add mobility to the 250 exam light with the optional base accessory.



Ritter 250 LED Exam Light





Mobile Ritter 253 LED Exam Light with caster base

#### Ritter 253 Exam Light

Easy to use, easy to clean, durable and aesthetically pleasing, the Ritter 253 exam light is the simple lighting solution. Because the controls are located on the light head within easy reach, you'll never have to reach around the patient to adjust the lighting, making this the perfect light for lengthy procedures. And, with table mount and mobile options available, the 253 is a flexible, space-saving addition perfect for any exam room.





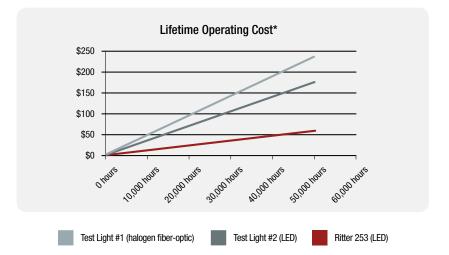
Rail mount







Hand controls



\*Energy consumption costs are calculated at \$0.1053 kW-hr and used 8 hours per day.

#### Ritter 250 & 253 LED Exam Lights

#### S P E C I F I C A T I O N S

### Ritter 253 LED Exam Light Specifications

#### Light Source

Single LED

Intensity at typical working distance of 16" (40.64 cm): 1,700 fc v(18,298 lux) nominal Color temperature: 4,500 K Life: greater than 50,000 hours\*

#### Electrical

 $110\text{-}240 \text{ VAC}, \, 50/60 \text{ Hz}, \, 0.05\text{-}0.1 \\ \text{AMP}$ 

\*LED manufacturer supplied data

UL60601-1, CAN/CSA C22.2 No. 601.1-M90, EN60601-1

Power Cord: 8 ft. (2.5 m), Hospital Grade Plug

#### Mechanical

Light Head Size: 2" (5.08 cm) dia x 5.32" (13.51 cm) long

#### Flex Arm

Length: 54.5" (138.43 cm) Diameter: 0.75" (1.90 cm) Neck Material: Carbon steel/ aluminum/brass Neck Covering: Polyolefin (Polyethylene)

#### Control Box

 $\begin{aligned} & \text{Height: 4.75" (12.06 cm)} \\ & \text{Width: 6.75" (17.15 cm)} \\ & \text{Depth: 2.62" (6.65 cm)} \end{aligned}$ 

Color: Mist

#### Weight

Light head/flex arm/control box unit 3 lb (1.4 kg) Light head/flex arm/control box/ caster base 12.2 lb (5.5 kg)

#### 253 LED Exam Light

253-011	LED Exam Light - light only
	- excludes mounting
	hardware

253-012 LED Exam Light - exam table kit - models 204/22X\*/62X\*

253-013 LED Exam Light - exam table kit - model 626 for 32" upholstery

253-015 LED Exam Light - procedure chair kit - models 230/630/ 641/646/647

253-016 LED Exam Light - mobile caster stand kit - includes

253-017 LED Exam Light - wall mount kit - includes light, wall mounting bracket and hardware, field installed

light & caster stand

#### Ritter 253 Accessories

9A619001 LED exam table mounting hardware (only) - models 204/22X\*/62X\*

9A620001 LED exam table mounting hardware (only) - model 626 with 32" upholstery

9A622001 LED procedure chair mounting hardware (only) models 230/630/641/ 646/647

9A628001 LED light mobile caster stand (only)

Caster base dia. 19" (48.26 cm)

Casters (5) 2" (5.08 cm) dia.

Base tube 29" ( 73.66 cm) from floor

9A623001 LED wall mount bracket

9A459001 Disposable Sheath; case of 5 boxes, 25/box



\* Mounts to tables with a 2006 or newer manufacture date

### Ritter 250 LED Exam Light Specifications

#### Light Source

Three 12V LED / Type MR16 (with glass cover) Illumination @ 18" (45.7 cm): 1,800 fc (19,375 lux) Color Temperature: 4,000 K Life: 25,000 hours

#### Electrical

115 VAC, 50/60 Hz, 0.12 AMP Power Cord: 8 ft. (2.5 m), Hospital Grade Plug

UL60601-1 (2nd Edition) CAN / CSA C22.2 No. 601.1-M90

#### Mechanical

Light Head Size: 4.5" (11.4 cm) dia. x 4" (10.2 cm) long

#### Flex Arm

Length: 22" (55.8 cm) Diameter: 0.585" (1.5 cm) Neck Material: High carbon steel Neck Covering: Heavy duty vinyl Base Tube

Length: 36" (91.4 cm) long Outer tube diameter: 1.0" (2.5 cm) Tube material: Painted Mist steel tube

Standard Base Housing Diameter: 13" (33 cm) Height: 2.25" (5.7 cm) Weight: 12 lb (5.4 kg)

Color

Mist

Ritter 250 Accessory

9A621001 Mobile caster stand (only)



The Ritter 225 exam chair offers powered barrier-free access, a heated drawer, stirrups, pelvic tilt. Combine that with the easy-to-clean Ritter 253 light (including easy access controls, high intensity light and focal adjustment) and you have the perfect solution for lower body examinations.

## Midmark is an ISO 13485 and ISO 9001 Certified Company.

For more information or a demonstration, contact your Midmark dealer or Midmark Corporation, Dayton, OH. Call: 1-800-MIDMARK Fax: 1-800-365-8631 or visit midmark.com

Ritter®

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# WelchAllyn<sup>®</sup>





An advancement in women's health technology that's nothing short of brilliant Welch Allyn KleenSpec® Disposable Vaginal Specula and Cordless Illumination System—

# now in every size

for every type of patient.



### 590 Series KleenSpec® Disposable Vaginal Specula

#### **Enhance Patient Comfort**

- The extra small speculum allows you to perform a comfortable exam with virginal/pediatric patients as well as post-menopausal and post-hysterectomy women—no more referrals or uncomfortable exams using metal specula or the wrong size
- Smooth, molded acrylic designed to prevent pinching or binding of tissue for greater patient comfort

#### Help Reduce Cross-Contamination

 Single-use speculum helps to reduce crosscontamination for improved patient safety while eliminating the time and expense of reprocessing metal specs

#### Improve Staff Productivity

- Features a wider handle design for improved maneuverability and better balance during exams
- A strong grip and a yoke that's more flexible than low-cost substitutes

The 590 Series KleenSpec Vaginal Speculum is compatible with the Cordless Illumination System (#80010) as well as the Corded Illumination System (#78900).



Look for the distinctive Welch Allyn blue, green, white and yellow colored handles

I had been using the corded version of the Welch Allyn Illumination System since 1980 and was thrilled when the cordless system was introduced. We have been using the Welch Allyn cordless Illumination system with disposable vaginal speculums for all of our patient exams since 2008 and couldn't be happier. This light is brighter than any I have ever seen and shows true tissue color. If you forget to charge the light, it is easy to grab a replacement from another room or use a spare. The light is small, easy and quick to use which truly makes us more efficient. With Manhattan space at a premium, not having floor space taken up by a light source is a great benefit to us. I would recommend this system to any clinicians looking to improve the quality of their care.

Shelley Kolton, MD / Downtown Women OB/Gyn Associates / New York City, NY



### KleenSpec Cordless Illumination System

- · LED technology as opposed to halogen, for a whiter, brighter light and true tissue color during an exam
- No bulb replacement necessary for a reduced cost of ownership
- Features a cordless design so you'll never have to worry about cords getting in your way, breaking or needing to be cleaned, speeding the exam and giving you a full range of motion
- Push-button on/off; the illumination system easily fits into every size 590 Series speculum
- Newly designed light pipe provides a homogeneous spot and eliminates glare back so all of the light is projected forward
- · Uniform spot—no dark or hot spots—for enhanced visualization of the exam area
- Produces much less heat than traditional lamps and has a continuous on time of 80 minutes
- A lithium ion battery provides a recharge time of five hours

### **Ordering Information**

Specula, **X-Small (24/box; 4 boxes/case)** 

aginal Specula, Small (24/box; 4 boxes/case)

**SUPPLY ITEM** pecula, Medium (24/box; 4 boxes/case)

s Premium Disposable Vaginal Specula, Large (18/box; 4 boxes/case)

### KleenSpec Vaginal Specula—Premium 590 Series with Smoke Tube

59005 KleenSpec 590 Series Premium Disposable Vaginal Specula with Smoke Tube, Small (12/box; 4 boxes/case)

59006 KleenSpec 590 Series Premium Disposable Vaginal Specula with Smoke Tube, Medium (12/box; 4 boxes/case)

(Complete KleenSpec Cordless Illuminator with Charging Station

80015 Same as above, for export purposes—specify country and voltage; conforms to IEC 60601-1

80000 KleenSpec Cordless Illuminator

74010 Charging Station for Cordless Illuminator

59010 Disposable Sheath for Cordless Illumination System (100/box; 5 boxes/case)

### KleenSpec Corded Illumination System

78900 KleenSpec Illumination System (with cord)—4.7 V Halogen Light Handle with on/off switch and transformer. 110-130 V, 60 Hz for North America. UL Listed, CSA Certified

78950 Same as above, for export purposes—specify country and voltage; conforms to IEC 60601-1

08800-U 4.6 V to 4.7 V Halogen Replacement Lamp for 78900 Illumination System

07800-U 6 V Halogen Replacement Lamp for 78010 Illumination System

58010 Disposable Sheath for Corded Illumination System (25/box; 5 boxes/case)

580 Series Premium Disposable Vaginal Specula with Sheath, Small (18/box; 4 boxes/case)

eath, Medium (18/box; 4 boxes/case)

### KleenSpec Storage Systems

78820 KleenSpec Corded Illumination Storage System

58014 KleenSpec Vaginal Speculum Dispenser

### Green Series™ Exam Light IV—Another LED innovation from Welch Allyn

48810 GS Exam Light IV with Table/Wall Mount

Mobile Stand for GS Exam Light IV

Disposable Sheath for Exam Light III and GS Exam Light IV (25/box, 5 boxes/case)

Explore the entire Welch Allyn women's health line, including the KleenSpec Series and Cordless Illumination System online at welchallyn.com/womenshealth or call us at 800.535.6663.

Welch Allyn, Inc. 4341 State Street Road

Skaneateles Falls, NY 13153 USA (p) 800.535.6663 (f) 315.685.3361 WWW.WELCHALLYN.COM













#48810



WelchAllyn











# **WelchAllyn**°



Welch Allyn

Connex® Spot Monitor



### Meet the Welch Allyn Connex Spot Monitor.

Accurate, automatic vitals sent to your EMR from the point of care to help enhance staff productivity, patient outcomes and risk reduction



# Single-reading blood pressure measurement may not be sufficient when diagnosing hypertension.<sup>1</sup>

The Connex Spot Monitor offers blood pressure averaging with SureBP® technology to support better assessment and diagnosis.



### Manual vital signs measurement is prone to challenges due to manual transcription, rounding errors and inconsistent technique.

Help improve accuracy and efficiency by sending automated vital signs directly to the EMR. The Connex Spot Monitor meets the ANSI/AAMI SP10:2002 and ISO/ANSI/AAMI 81060-2:2013 standards for noninvasive blood pressure accuracy (±5 mmHg mean error, 8 mmHg SD).



### Data breaches continue to make headlines.

The Connex Spot Monitor is DoD RMF approved, meaning it offers:

- FIPS-approved encryption algorithms of transmitted data
- Server authentication of the device
- Digitally signed software images and configuration files



<sup>1</sup>Pickering, Thomas G., MD, DPhil, et. al: Recommendations for Blood Pressure Measurement in Humans and Experimental Animals. Circulation. 2005: 111:697-716.



Every Connex Spot Monitor features an easy-to-use touchscreen display and reliable SureBP technology. You can also select from a number of options to get exactly the monitor you need, including:

### **Pulse Oximetry**

- Masimo® SET® SpO<sub>2</sub>
- Nonin<sup>®</sup> PureSAT<sup>®</sup> SpO<sub>2</sub>
- Nellcor® OxiMax® SpO<sub>2</sub>

### Thermometry

- SureTemp® Plus Thermometry
- Braun ThermoScan® PRO 6000 Ear Thermometry

See page 4 for mounting and mobility options, sold separately.



### Connectivity for Ambulatory Care

- Import vitals data to leading EMR providers—including Allscripts®, athenahealth®, Cerner®, eClinicalWorks®, Epic®, GE® Centricity™, Greenway® (Intergy®), NextGen® and many others—to ensure reliable device connectivity and to help you leverage your EMR investment.
- Connect your Connex Spot Monitor to scales from Detecto®, Health o meter® and SECA to accurately document height, weight and BMI.

### **Configurations Available**

**Connex Spot Monitor** 

	7100 Series	7300 Series
Parameters		
SureBP technology with BP averaging protocol	•	•
Interval monitoring	•	
SureTemp Plus thermometry	•	•
Braun ear thermometry	•	•
Masimo pulse oximetry		•
Nellcor pulse oximetry		•
Nonin pulse oximetry	•	•
Communications		
USB	•	•
Ethernet	•	
Bluetooth®		

	7100 Series	7300 Series
Scale Connectivity		
SECA	USB and Wireless	USB and Wireless
Health o meter	USB and Wireless	USB and Wireless
Detecto	USB	USB
Warranty		
Two years out of box	•	•
Service Programs		
Partners in Care <sup>sM</sup> services: one, two or five years (optional)	•	•

Accessories			
7000-APM	Accessory Power Management Stand	ВАТТ99	Accessory Power Management Stand Lithium-Ion Battery
7000-MWS	Mobile Work Surface Stand	106275	Connectivity Accessory Kit USB Cable
7000-MS3	Classic Mobile Stand	4500-35	Blood Pressure Hose with FlexiPort® (10 ft)
7000-DST	Desktop Stand	7000-33	Neonatal Blood Pressure Hose (10 ft)
7000-GCX	Wall Channel with Basket	02895-100	SureTemp Plus Thermometer Rectal Probe and Well
77794-MCSM	Green Series™ 777 Integrated Wall System with Coaxial Ophthalmoscope	106204	Braun PRO 6000 Ear Thermometer Tether
77794-2MCSM	Green Series 777 Integrated Wall System with PanOptic™ Ophthalmoscope	3278-010	Nonin Reusable Adult Sensor (2 meters)
7000-PS	Power Supply (required if not ordering a stand or wall mount)	2360-010	Nonin Reusable Pediatric Sensor (2 meters)
BATT22	Connex Spot Monitor Lithium-Ion Battery	103945	Virtual Channel Client Software

Partners in Care Service Programs		
S1-CSM-5	Connex Spot Monitor Comprehensive Partnership Program, 5 years*	
S2-CSM-5	Connex Spot Monitor Biomed Partnership Program, 5 years*	

<sup>\*</sup> One- and two-year service plans also available. For one- or two-year service plans, change the digit at the end of the part number to 1 or 2. For comprehensive service plans featuring annual factory service calibration option, add C to the part number (e.g., S1-CSM-2C).





















### Spot subtle but significant deterioration early

Now vital signs can count for more. The SureSigns VS4 helps you track subtle signs of deterioration so you can document and escalate effectively. It simplifies your workflow with an intuitive touchscreen interface, and provides time-saving tools like QuickCapture and QuickCheck for documentation, and QuickAlerts (single- or multi-parameter modified Early Warning Scoring) to activate your hospital's Rapid Response Team (RRT) as appropriate. Now you can act decisively to provide targeted care when it can do the most good. Because it's wiser to act rather than react.

### Key advantages

- Brings configurable Early Warning Scores to the bedside to help you identify subtle signs of patient deterioration for decisive action
- Provides intuitive tools, such as QuickCapture to simplify documentation, and QuickAlerts to highlight patient deterioration for escalation
- Offers desired interfacing, using standard networking infrastructures and the latest security and encryption<sup>1</sup>

# Specs that matter, clinical **benefits that count**

Now there's a vital signs monitor that helps you identify subtle signs of patient deterioration early and act decisively. Alternate between spot check and frequent measurement of vitals. Capture and check values. Streamline your workflow.

### Simplify your workflow

- · Touchscreen: color LED backlit screen
- · QuickCheck
- Caregiver authentication at the bedside
- Patient ID and record validation at the bedside
- Patient record review before export to EHR
- QuickCapture
- Customize up to 40 parameters and observations entries for fast recall and reuse
- · QuickAlerts
- Choose Single or Modified Early Warning Scoring
- MEWS on-device, auto-calculated at the bedside
- MEWS remote, with Philips Guardian Solution
- · OuickNBP
- Provides fast NBP measurements
- One-touch NBP on/off button
- · SpO,
- Choice of Philips FAST-based SpO<sub>2</sub> algorithm or Masimo® rainbow® SET® SpO<sub>2</sub>
- Either choice is compatible with a wide variety of sensors
- · Microstream™ etCO, option
  - Includes Integrated Pulmonary Index (IPI)
- · Temperature choices
  - Welch Allyn® Predictive, Covidien<sup>™</sup> tympanic, or Exergen® temporal
- $\cdot$  Biomedical and IT device maintenance tool kit
- Exergen TemporalScanner<sup>™</sup> thermometer option
- With optional disposable covers for cost-savings
- · 1D/2D/RFID barcode scanner
  - Programmable to support consistent and reliable patient ID entry

### Other benefits

- Uses same supplies as all Philips monitors
- Time-sync with hospital or network clock
- · Stores up to 800 patient records
- · Confirmation of exported records easily seen in green
- · LAN/serial data export in HL7 format
- Internal WiFi 802.11 a/b/g option
- USB port for easy software upgrades and to import configuration settings
- Nurse call output
- · Lithium ion battery
- Battery management, including a visible icon to show unit is plugged in and charging
- AC power input with power cord clip
- · Sturdy handle and rugged housing for easy portability
- Compatible with SureSigns Dashboard (863315)



# Easy to use, easy to maintain

### **Product specifications**

Width, height, depth	W: 26 cm (10.2 in), H: 22 cm (8.6 in), D: 14.5 cm (5.7 in)	SpO <sub>2</sub> Philips	Meets EN ISO 9919 standard SpO <sub>2</sub> measurement range: 0 – 100%
Weight 3.6 kg (8 lb)  Screen 21.3 cm (8.4 in) SVGA TFT-AM LCD, resistive touchscreen, 800 active pixels/line Resolution: 600 active lines per frame	FAST-based	SpO <sub>2</sub> accuracy range: 70 – 100% ±2-4% Pulse rate measurement range:	
		30 bpm – 300 bpm <b>Pulse accuracy:</b> within 2% or 1 bpm, whichever is greater	
Oscillometric using stepwise deflation pressure  NBP interval choices  Adult measurement range  Systolic: 30 – 270 mmHg (4.0 – 36.0 kPa)  Diastolic: 10 – 240 mmHg (1.3 – 32.7 kPa)  MAP: 20 – 250 mmHg (2.7 – 34.0 kPa)  Pediatric measurement range  Systolic: 30 – 180 mmHg (4.0 – 24.0 kPa)  Diastolic: 10 – 150 mmHg (1.3 – 20.0 kPa)  MAP: 20 – 160 mmHg (2.7 – 21.3 kPa)  Neonatal measurement range  Systolic: 30 – 130 mmHg (4.0 – 17.0 kPa)  Diastolic: 10 – 100 mmHg (1.3 – 13.3 kPa)  MAP: 20 – 120 mmHg (2.7 – 16.0 kPa)  MAP: 20 – 120 mmHg (2.7 – 16.0 kPa)  The NBP measurement has an accuracy over the ranges listed for these values  Maximum standard deviation: 8 mmHg  Maximum mean error: ±5 mmHg  Subsequent cuff inflation  (in NBP interval mode only)  The subsequent inflation pressure is determined automatically depending on the	Oscillometric using stepwise deflation pressure     NBP interval choices	SpO <sub>2</sub> spO <sub>2</sub> measurement range: 0 - SpO <sub>2</sub> accuracy: depends upon and motion/no motion	SpO <sub>2</sub> measurement range: 0 – 100% SpO <sub>2</sub> accuracy: depends upon patient type and motion/no motion
	Temperature Welch Allyn® predictive	Modes: predictive and monitored Probe sites: oral, rectal, or axillary Range:  Monitor mode: 26.7 – 43.3 °C (80.1 – 109.9 °F) Predictive mode: 34.4 – 40.6 °C (93.9 – 105.1 °F) Accuracy: ±0.1 °C (±0.2 °F)  Measurement time: 4 – 6 seconds	
	Temperature Covidien™ tympanic	Equivalency modes: ear (no adjustment), oral, core, and rectal (adjusted from ear) Range: 33 – 42.0 °C (91.4 – 107.6 °F) Accuracy (overall range): ±0.2 °C (±0.4 °F) Measurement response time: ≤ 2 seconds	
	<ul> <li>Maximum mean error: ±5 mmHg</li> <li>Subsequent cuff inflation (in NBP interval mode only)</li> <li>The subsequent inflation pressure is determined automatically depending on the</li> </ul>	Temperature Exergen® temporal	Range: 16 – 43 °C (60.8 – 109.4 °F) Accuracy: ±0.1 °C (±0.2 °F) Response time: approximately 1 second
		IntelliVue Guardian software	Adult only
CO <sub>2</sub>	Measurement range: 0 mmHg - 150 mmHg Total response time for adults: 3.9 seconds Accuracy: 0 mmHg - 38 mmHg: ±2 mmHg 39 mmHg - 150 mmHg: ±(5% of reading +	Battery	Lithium ion, 10.8 – 11.1 V
		Data output	HL7 format, via Ethernet port Serial data
	0.08% for every 1 mmHg above 38 mmHg) <b>Respiration rate range:</b> 1 – 150 bpm	Patient type	Adult, pediatric, neonatal



**Respiration accuracy:**  $\pm 1$  bpm in the range of 0 – 70 bpm,  $\pm 2$  bpm in the range of 71 – 120 bpm,  $\pm 3$  bpm in the range of 121 – 150 bpm

"An EWS system would be a major change in the hospital, especially from the nursing and medical records perspective."

# Make vital signs count for more

Catch the subtle signs that signal patient deterioration. With the SureSigns VS4, you can act, not just react.

### Ordering information

Parameters	To order
NBP, FAST-based SpO <sub>2</sub>	863283
SpO <sub>2</sub> and NBP accessories included	A01
No accessories	A02
Temperature	
Welch Allyn predictive temperature	T01
Covidien tympanic temperature	T02
Exergen temporal tempera	ature T03
Exergen temporal cap ho	older C05
SpO <sub>2</sub>	
Masimo SpO <sub>2</sub> technology	M01
NBP	
Adult NBP cuff	N01
Capnography	
Microstream CO <sub>2</sub>	E01
Other	
FIPS (US only)	F01
IntelliVue Guardian softw license	are G01
IntelliVue Guardian Gatellicense	way G02
Recorder	R01
802.11 a/b/g wireless	WO1
Also available	To order
SureSigns premium rollstand	989803176601

SureSigns standard rollstand	98980314400
Wall mount	989803144011
2D barcode scanner	989803147821
2D barcode scanner holder	989803191611
HS-1 2D barcode scanner	989803176611
HS-1 barcode scanner roll-stand insert	989803184701
Serial interface adapter	98980315960
Wireless upgrade kit	989803181201
Tympanic temperature upgrade kit	863293
Predictive temperature upgrade kit	863294
Temporal temperature upgrade kit	863342
IntelliVue Guardian software license	863357
SpO <sub>2</sub> FAST to Masimo upgrade kit	863343
Recorder upgrade kit	98980314849
Microstream CO2 up- grade kit	98980319880



Premium rollstand has an easy-to-clean molded basket that swivels for easy positioning in tight spaces, and dedicated sections for accessories such as a barcode scanner, cleaning wipes, NBP cuffs, extra disposable temperature covers, and the SpO<sub>2</sub> sensor.





<sup>&</sup>lt;sup>1</sup> SureSigns VS4 has tested compatible with Cisco Compatible Extensions, Version 4. Go to www.cisco.com/go/compatibledisclaimer for complete disclaimer. Masimo is a registered trademark of Masimo Corporation. Microstream and Covidien are trademarks of Covidien companies. Welch Allyn is a registered trademark and TemporalScanner is a trademark of Welch Allyn Corporation. Exergen is a registered trademark of Exergen Corporation. All other trademarks are property of their respective owners.

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www.philips.com/healthcare

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# Flexible power options to meet your needs.



### **EN200 Diagnostic Center**

The EN200 is easy to mount directly to the wall or on an optional wallboard for ultimate flexibility in a space-saving, easy-to-clean design.

- Two handles can be used simultaneously.
- Handles switch on and off
   automatically when placed into the
   charger, and are ready to remove as soon
   as you want to use them, at your desired
   brightness level.
- Integrated anti-theft system helps prevent unauthorized removal of instrument heads, ensuring they are always available where they are needed and reducing replacement costs.
- **LED**<sup>HQ</sup> **instruments** with 100,000-hour LED life reduces maintenance and service costs.
- Improves hygiene and reduces risk of cross-contamination with a flat, space-saving housing—no opening and no on/off switch.



# BETA® 4 NT Rechargeable Handle and NT4 Charging System

The BETA 4 NT rechargeable handle and NT4 charging system is the next generation in energy management with a flexible desktop design.

- **Rechargeable handles** with lithium-ion batteries provide a longer operating time with shorter recharging times.
- **Metal handles** for durability and ease of disinfection.
- New deep discharge protection prevents batteries from completely draining, protecting the battery and prolonging its lifetime.
- Low battery warning light turns yellow when the battery has less than 30% operating time remaining.
- Fastest **charging time** on the market— charging to 70% capacity in just two hours.
- Ready-to-use function allows you to set your brightness level once and it stays every time you use the instrument.
- **No risk** of the instrument staying on for extended periods of time.

### **Kit Options**

EN200 Wall Kits	NT4 Desktop Kits	Otoscope		Ophthalmoscope
A-095-12-208-166	A-853-24-420-166	BETA400 LED		BETA200 LED
A-095-12-209-166	A-832-24-420-166		BETA200 LED	BETA200 LED
A-095-12-204-166	A-853-23-420-166	BETA400 XHL		BETA200 XHL
A-095-12-205-166	A-832-23-420-166		BETA200 XHL	BETA200 XHL

BETA200 Otoscope available with 3x magnification. Halogen options also available.

### **Wall Kits**

Includes EN200 Wall Transformer and selected diagnostic instruments with polycarbonate, 11.5 ft (3.5 m) corded handles

### **EN200 Specifications**

Main Power Supply: 100 - 240 VAC / 50 - 60 Hz Current Consumption: 300 - 150 mA Output (USB): typ. 5 V Output (AV): typ. 1.6 V - 3.6 V

Class: II

Protection Class: IP 40 Dimensions: 7.1" x 9.2" x 3.9"  $(18 \text{ cm} \times 23.4 \text{ cm} \times 9.9 \text{ cm})$ Weight: 2.1 lb (0.94 kg) Regulatory Compliance: IEC 60601-1 Edition 3.1

### **Desktop Kits**

Includes NT4 Table Charger and selected diagnostic instruments with BETA4 NT Lithium-ion rechargeable handles

### **NT4 Specifications**

IEC 60601-1 Edition 3.1

Main Power Supply: 100 - 240 VAC / 50 - 60 Hz Current Consumption: max. 205 mA Output: max. 6 V / 0.9 A Fuse: Integral overload protection Charging Time: max. 6 h Class: II Protection Class: IP 20 Dimensions: 5.6" x 2.4" x 2.6" (14.2 cm x 6.1 cm x 6.6 cm)Weight: 0.52 lb (0.24 kg) Regulatory Compliance:

### **Otoscope Specifications**

Nominal Voltage: 3.0 V - 3.7 V Nominal Current: XHL: max. 760 mA: LED: max. 350 mA Class: Internally powered Device Classification According to IEC 62471: Applied Part: Type BF

### **Ophthalmoscope Specifications**

Nominal Voltage: 3.0 V - 3.7 V Nominal Current: XHL: max. 760 mA; LED: max 350 mA Class: Internally powered Device Classification According to ISO 10942: Group B Device Classification According to ISO 15004-2: Group 2

### **Options**

Wallboards X-095-12-006-166 (For device combination of EN200 + tip dispenser - without instruments)



X-095-12-007-166 (For device combination of EN200 + tip dispenser + Gamma® XXL Sphygmomanometer - without instruments)

AllSpec Tip Dispenser B-000-11-149-166



### **Supplies**

Rechargeable Lithium-ion Battery X-007-99-383-166

AllSpec Disposable Tips 4 mm B-000-11-127-166 (Box of 1,000) B-000-11-137-166 (10 boxes of 1,000)

AllSpec Disposable Tips 2.5 mm B-000-11-128-166 (Box of 1,000) B-000-11-138-166 (10 boxes of 1,000)

XHL® Xenon Halogen 3.5 V Bulb, Otoscope X-002-88-078-166 (6 per box)

XHL Xenon Halogen 3.5 V Bulb, Ophthalmoscope X-002-88-070-166 (6 per box)





# 8791 PULSE OXIMETER



# Concord Sapphire DELUXE Pulse Oximeter

This Concord pulse oximeter has been created to measure the heart rate and blood oxygen saturation levels of both children and adults, making it a perfect solution for caregivers monitoring both adult and pediatric patients.

With a dual color digital OLED display, the readout of the digit pulse oximeter can be accessed from 6 display modes; one facing you and with the push of a button, it faces your care giver! Flip the screen 180 degrees with one button for easy viewing. You can also flip to sideways view and show a graphical waveform. It has adjustable brightness for easy viewing and low power consumption for long battery life. It automatically powers off when removed from your finger. This makes it easy for the patient and caregiver to read the critical data and you can also utilize the adjustable brightness option to conserve battery life. Having a single pulse oximeter for pediatric and adult patients will simplify the process of monitoring everyone, and it also makes this item ideal for home usage.

It is very important for individuals with certain medical conditions to keep a close eye on their blood oxygen saturation levels and pulse rate, and the Concord Sapphire DELUXE Pulse Oximeter is a convenient, low weight option that can be worn around your neck at all times.

### Features include:

- Accurate, Easy and Efficient one button operation with auto power-off after 8 seconds
- Sp02, Pulse bar, Pulse and waveform.
- Battery-low indicator
- Flip display 4 ways with one button
- Comes with a sturdy, canvas case with belt loop attachment and a free neck lanyard
- Also includes 2-AAA batteries for up to 30 hours of continuous operation
- 2 year warranty
- Free shipping

SOURCE: <a href="https://www.concordhealthsupply.com/Concord-Sapphire-DELUXE-Pulse-Oximeter-p/cci-300c3-blue-dlx.htm">https://www.concordhealthsupply.com/Concord-Sapphire-DELUXE-Pulse-Oximeter-p/cci-300c3-blue-dlx.htm</a>



# TAKES RISKS ON MOUNTAINS.

NOT ON INFUSION PUMPS.

Sigma Spectrum Infusion System

**Every infusion counts** 

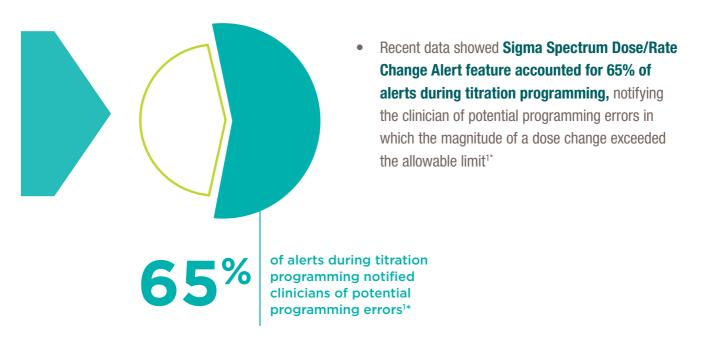


### PROTECT TITRATED INFUSIONS

Titration errors during high-risk infusions pose a significant threat to patient safety.<sup>5</sup> **Just 20 high-alert drugs are associated with an estimated 80% of all medication error—related deaths.**<sup>6</sup> Recent data has shown that an average of 91% of infusion pump programming actions with high-alert drugs were related to titrations.<sup>1\*</sup> Auto-programming systems apply only to the initial programming of an infusion; subsequent titrations must be programmed manually, leaving them vulnerable to error.<sup>1</sup>

**Sigma Spectrum** Infusion System is the only smart pump with a built-in Dose/Rate Change Error Prevention feature to help clinicians protect high-risk infusions.<sup>7</sup>

- All smart pumps have the traditional upper- and lower-dose limits in the drug library, but only
   Sigma Spectrum intercepts the excessive incremental dose/rate changes<sup>7</sup>
- Single Step Dose/Rate Change (Titration) Alert allows the hospital to define the percentage dose change limit for individual drugs, a feature that is available only on the Sigma Spectrum Infusion System<sup>7</sup>



<sup>\*</sup> Titration high alert medications. Infusions reported October 2014 - July 2015, 6 months per facility, across 45 facilities.

### **ACHIEVE HIGH DRUG LIBRARY COMPLIANCE**

The drug library is the defining feature of a smart pump, identifying potentially harmful infusion medication errors.<sup>8</sup> Constant high drug library compliance means that the pump is consistently sending alerts to clinicians to help protect against infusion programming errors.<sup>8</sup>



**Sigma Spectrum** Infusion System customers have achieved an overall average of **97% drug library compliance within 1 month** of implementation.<sup>2</sup>

The **Sigma Spectrum** intuitive infusion pump design drives drug library compliance from the start:

- **Sigma Spectrum** automatically defaults to the drug library at power-on<sup>7</sup>
- Continuous quality improvement (CQI) analysis and pump data management capabilities are designed to help ensure the Sigma Spectrum drug library supports clinical practice<sup>7</sup>
- Sigma Spectrum wirelessly updates the fleet's drug library, ensuring that programming
  is based on the most up-to-date drug information\*\*

The **Sigma Spectrum** Infusion Pump with Master Drug Library is intended to be used for the controlled administration of fluids. These may include pharmaceutical drugs, blood, blood products and mixtures of required patient therapy. The intended routes of administration consist of the following clinically accepted routes: intravenous, arterial, subcutaneous, epidural or irrigation of fluid space.

<sup>\*\*</sup> Battery capacity must be greater than 25% when pump is off and not connected to AC power.

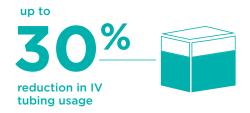
# EXPECT A HIGH STANDARD OF WORKFLOW EFFICIENCY

**Sigma Spectrum** Infusion System is designed to deliver efficiency improvements and standard set technology cost savings, factors that may increase clinician satisfaction.

Standard set technology can yield up to 53% cost savings in IV tubing sets and up to 30% reduction in IV tubing usage, and it may reduce the number of setups and teardowns, which can decrease the risk of touch contamination<sup>9\*</sup>

### Standard set technology has saved

53%
cost savings in





 Efficient, wireless drug library updates with no pump intervention or staff interaction needed, regardless of power mode or infusion status\*\*

IV tubing sets\*

- Auto-documentation of infusion history can save nurses time spent on documentation so their focus can be on patient care<sup>10</sup>
- Sigma Spectrum is the only smart pump with built-in, tagless asset tracking designed to save time and labor costs locating pumps<sup>7</sup>

A human factors simulated-use validation study revealed a 99.1% overall success rate across all user groups with a 100% task success rate for all primary infusions<sup>3</sup>

 100% of the participants stated that they could use the Sigma Spectrum Infusion Pump safely and effectively on a daily basis<sup>3</sup>



spectrum

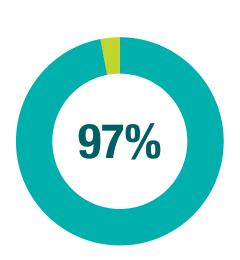
IV 0.9% NaCl

The **Sigma Spectrum** Infusion Pump is intended to be used in conjunction with legally marketed and compatible intravenous administration sets.

\* Data on file. Data provided by three facilities. Baxter makes no guarantee of cost savings

\*\* Battery capacity must be greater than 25% when pump is off and not connected to AC power.

# THE NUMBERS BEHIND SIGMA SPECTRUM INFUSION SYSTEM



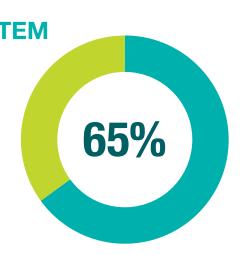
### ACHIEVE HIGH DRUG LIBRARY COMPLIANCE

**Sigma Spectrum** Infusion System customers have achieved an overall average of 97% drug library compliance within 1 month of implementation.<sup>2</sup>



# COUNT ON THE BAXTER COMMITMENT

Delivering quality, expertise, and support to infusion therapy innovation for more than 80 years.<sup>4</sup>



### PROTECT TITRATED INFUSIONS

Recent data showed **Sigma Spectrum** Infusion System Dose/Rate Change Alert feature accounted for 65% of alerts during titration programming.<sup>1</sup>



### EXPECT A HIGH STANDARD OF USABILITY

A human factors simulated-use validation study with **Sigma Spectrum** Infusion System revealed a 99.1% overall success rate across all user groups.<sup>3</sup>



### COUNT ON THE BAXTER COMMITMENT

Since 1931, Baxter products have helped people around the world in critical moments of care, when it matters most.<sup>4</sup> Annually, our Baxter parenteral products represent more than 1.4 billion infusions delivered worldwide.<sup>11\*</sup>

Baxter innovation pioneered in the development of safe and efficient infusion therapy products.<sup>4</sup> From the first commercially prepared IV solutions to the first flexible plastic IV container to the first needleless IV access system, Baxter has been **delivering** quality, expertise, and support to infusion therapy innovation for more than 80 years.<sup>4</sup>



\*For the years 2014-2015.

To learn more about the **Sigma Spectrum** Infusion System, visit sigmapumps.com or contact your local representative.

1. Data on file, Baxter Healthcare Corporation. Titration retrospective data, high-alert medications. Infusions reported Oct. 2014-July 2015, 6 months per facility, across 45 facilities. 2. Data on file, Baxter Healthcare Corporation. DERS new implementation compliance data 2015. 3. Interface Analysis Associates. Baxter infusion pump human factors validation study report. 2013. 4. Baxter Corporate Communications. Baxter history. website. http://www.baxter.com/index.page. Accessed November 16, 2015. 5. Rothschild, Keohane, Cook, others. A Controlled Trial of Smart Infusion Pumps to Improve Medication Safety in Critically III Patients. Critical Care Medicine. 2005, Volume 33, number 3. re-published November 2010. 6. Dennison RD. High-alert drugs: strategies for safe I.V. infusions. Am Nurs Today. 2006;1(2). http://www.americannursetoday.com/article.aspx?id=5134. Accessed July 2015. 7. ECRI Institute. ECRI LVP Smart Pump 2015 Review. 8. Hoh T, Beer I, Krueger P. Ensuring optimal smart pump use through augmented user interface. Horizons. Fall 2015. 9. Data on file, Baxter Healthcare Corporation. Total cost of ownership--standard set technology inventory and cost reduction data 2011-2013. 10. Hendrich A, Chow MP, Skierczynski BA, Lu Z. A 36-hospital time and motion study: How do medical-surgical nurses spend their time? The Permanente Journal. 2008;12(3):25-34. 11. Data on file, Baxter Healthcare Corporation, Finance. Yearly Worldwide Infusions. 2014.

Please refer to manufacturer's Package Insert for drug products mentioned herein for Full Prescribing Information. **Rx Only.** For the safe and proper use of this device, refer to the appropriate operator's manuals.

www.baxter.com www.sigmapumps.com

Baxter Healthcare Corporation Route 120 and Wilson Road Round Lake, IL 60073

Baxter and Sigma Spectrum are trademarks of Baxter International Inc. Any other trademarks, product brands or images appearing herein are the property of their respective owners.



QUESTIONS

CONTACT

6702/6702W Oversized Wheelchair Scales®

**Wheelchair Scales:** 

- Wheelchair, chair and stand-on scales.
- Oversized platforms accommodate electric and extra-large wheelchairs.
- Automatic zero.
- Weight recall.
- Reweigh.
- Cordless.







Shown with optional height gauge and handrail. Wall-mounted height gauge also available.

### 6702/6702W Oversized Wheelchair Scales

Platforms:	Low profile, mounted on large heavy-duty rubber wheels.
Model 6702:	28"w X 30"d X 2"h
Model 6702W:	28"w X 32"d X 2"h
Accuracy:	1/10 lb-100 gm.
Weighing Range:	1000 lb/454 kg.
Readout:	Digital LED display in pounds and kilograms, or kilograms only.
Power Source-Cordless:	6 D-size disposable batteries. Line cord power available.
Automatic Zero:	Returns to zero, ready for the next patient.
Weight Recall:	Recalls last weight.
Reweigh:	Recomputes weight while patient is on scale.
Audible Signal:	Indicates weight is in memory.
Low Battery Indicator:	Indicates battery needs replacing.
Weighing Mechanism:	
Weighing Weenumsin:	Electronic load cells.
Successive Weighing:	Electronic load cells.  Weigh a continuous stream of patients without re-zeroing.
	Weigh a continuous stream of
Successive Weighing:	Weigh a continuous stream of patients without re-zeroing.  (Accessory) Heavy-duty stainless
Successive Weighing: Handrail:	Weigh a continuous stream of patients without re-zeroing.  (Accessory) Heavy-duty stainless steel.

Need more info?

Click here to request a brochure, demo, prices or to have a Scale-Tronix representative contact you.

> Or call: 1 800 873 2001

Our new oversized wheelchair scales incorporate all of the new features of our standard model including automatic zero, weight recall, reweigh and cordless operation. The digital readout electronically displays weight in pounds and kilos.

The oversized platforms are designed to weigh patients in electric and oversized wheelchairs. The platform height is still a mere 2" providing high stability and easy wheelchair access. With its access ramps folded up, the 6702 may also be used as a stand-on or chair scale.

Model 6702SP is available with a 35"W X 30"D X 2"H platform.



Welch Allyn Scale-Tronix scales are designed for your patients and your demanding healthcare environment.

With low-profile platforms designed to help reduce fall risks, readings that can help clinicians prescribe correct medication dosages with confidence and a wide variety of models, it's easy to see why **Scale-Tronix is a trusted brand for healthcare environments.** 









### Durable. Long Lasting. Designed for Demanding Healthcare Environments.







### 5002 Mobile Stand-On Scale

- Versatile and ideal for hightraffic areas
- Low-profile platform designed to help reduce fall risk

### 5702 Mobile Bariatric Stand-On Scale

- All the benefits of the 5002 model, with a larger platform designed for bariatric patients
- Weighing capacity up to 1,000 lb (454 kg)

### 6002/6702/6702W/6702SP Wheelchair Scales

- Three scales in one: wheelchair, chair and stand-on
- Easily accommodates most wheelchairs
- Four sizes for increasing capacity

### Find the Right Scale for You

	5002 Stand-On Scales	5702 Bariatric Stand-On Scales	6002/6702/6702W/6702SP Wheelchair Scales
Weighing Capacity	880 lb / 400 kg	1,000 lb / 454 kg	880 lb / 400 kg
Platform	Low-profile 18" w x 19.5" d x 1.5" h	(Low-profile) (24" w x 26" d x 2"h)	6002: 24" w x 26" d 6702: 28" w x 30" d 6702W: 28" w x 32" d 6702SP: 35" w x 30" d
Optional Accessories	Handrail (optional in wheelchair models only; standard in others), integrated height gauge, wall-mount height gauge, printer, thermal printer paper, line cord power supply with battery backup		
Resolution	0.1 lb / 100 gm		
Readout	Digital LED display in pounds and kilograms (kilogram-only options available)		
Power Source (Cordless)	6 D-size disposable alkaline batteries. Line cord available.		
Automatic Zero	Automatically returns to zero, ready for next patient		
Weight Recall	Recalls last weight		
Reweigh	Recomputes patient's weight while patient is on scale		
Wheels	Heavy-duty rubber wheels		
Computer Connectivity	RS-232 output (optional)		

Welch Allyn, Inc. 4341 State Street Road Skaneateles Falls, NY 13153 USA (p) 800.535.6663 (f) 315.685.3361





### How DuraShock Technology Works

In traditional aneroid sphygmomanometer design, several delicate gears and springs convert and amplify vertical movement of the pinion to rotational movement to turn the pointer. The DuraShock gear-free design, however, uses a superior single helix spring to directly convert the vertical movement of the pinion to rotation of the pointer without the use of a multi-step gear arrangement.

By creating a gear-free design, Welch Allyn products with DuraShock technology have fewer moving parts, providing a gauge that is shock resistant and lighter than traditional gauges. Until now, a dropped sphygmomanometer required recalibration or replacement. The DuraShock gauges in the Bronze, Silver, and Gold lines can fall 30 inches onto a hard surface and still remain accurate. The DuraShock gauges in the Platinum line can fall 60 inches onto a hard surface and still remain accurate.

### Welch Allyn Part Numbers

### Welch Allyn Platinum Series

A premium professional line of quality sphygmomanometers

### Welch Allyn Tycos DS58 Classic

Hand gauge, thumbscrew release valve

DS58 Aneroid only

DS58-11 Aneroid with adult durable one-piece cuff and zipper case

DS58-11CB Aneroid with adult durable two-piece cuff and bladder and zipper case

DS58-MC Aneroid with large adult, adult, small adult, and child print durable one-piece cuff and zipper case DS58-MCCB Aneroid with large adult, adult, and child print durable two-piece cuff and bladder and zipper case

DS58-PD Aneroid with child print, small child, infant, and newborn durable one-piece cuff and zipper case DS58-PDCB Aneroid with child print, small child, and infant durable two-piece cuff and bladder and zipper case

5085-10 Small zipper case 5085-11 Large zipper case

### Welch Allyn Tycos DS48 Classic

Integrated gauge (cuff mounted)

DS48 Aneroid only

OS48-11 Aneroid with adult durable one-piece cuff and zipper case

5085-10 Small zipper case

### Welch Allyn Tycos DS48A Classic

Pocket gauge (clips on two-piece cuff and bladder)

DS48A Aneroid only

DS48-11CB Aneroid with adult durable two-piece cuff and bladder and zipper case

5085-10 Small zipper case

### Welch Allyn Gold Series

A professional line of quality sphygmomanometers

Hand gauge, trigger valve 5098-31 Aneroid only

Welch Allyn DS66 Trigger

5098-27 Aneroid with adult durable one-piece cuff and zipper case

5098-27CB Aneroid with adult durable two-piece cuff and bladder and zipper case

5098-30 Aneroid with large adult, adult, small adult, and child print durable one-piece cuff and zipper case 5098-30CB Aneroid with large adult, adult, and child print durable two-piece cuff and bladder and zipper case

5085-07 Single zipper case

5085-08 Double zipper case

# Welch Allyn Silver Series An entry-level line of quality sphygmomanometers

Welch Allyn DS45 Integrated Integrated gauge (cuff mounted) DS45 Aneroid only

DS45 Aneroid with adult durable one-piece cuff

DS45-11C Aneroid with adult durable one-piece cuff and zipper case

DS45-11CB Aneroid with integrated gauge adapter and adult durable two-piece cuff and bladder

5085-07 Single zipper case

### Welch Allyn Bronze Series

An economy line of quality sphygmomanometers

### Welch Allyn DS44 Integrated

Integrated gauge (cuff mounted)

DS44 Aneroid only

DS44-11 Aneroid with adult durable one-piece cuff
DS44-11V Aneroid with adult durable one-piece cuff and color bumper variety pack

DS44-11C Aneroid with adult durable one-piece cuff and zipper case

DS44-11CB Aneroid with addit durable one-piece curr and adult durable two-piece cuff and bladder

5085-09 Single zipper case

### Specifications

The Welch Allyn DuraShock aneroid sphygmomanometer is accurate to  $\pm 3$  mmHg or 2% of the reading above 200 mmHg. This product will maintain the safety and performance characteristics specified at temperatures ranging from  $10^{\rm o}$  C to  $40^{\rm o}$  C at a relative humidity level not to exceed 90%.

### Standards

American National Standard ANSI/AAMI, SP10: 2002, Manual, electronic, or automated sphygmomanometers.

American National Standard ANSI/AAMI, SP9: 1994, Non-automated sphygmomanometers (model DS44 and DS45 only)

4341 State Street Road, PO Box 220, Skaneateles Falls, NY 13153-0220 USA (p) 800.535.6663 (f) 315.685.2174 www.welchallyn.com

Patents: 5,966,829; 6,036,718; 6,082,170; 6,120,458; 6,168,566; 6,234,972. Additional patents pending.

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Welch Allyn Blood Pressure Products featuring DuraShock™ Technology



# Maintain Accurate Blood Pressure Readings with Lower Lifetime Cost

Welch Allyn's complete line of aneroid sphygmomanometers incorporating our shock-resistant DuraShock technology offers practical benefits compared to traditional aneroid sphygmomanometers. With gear-free DuraShock technology, you can count on Welch Allyn gauges to:

- > Remain in calibration longer than traditional blood pressure gauges, providing you with readings that maintain accuracy over time.
- Not need to be replaced as often as traditional aneroids, giving you a lower lifetime cost.
- Be capable of passing AAMI's shock resistant specification of surviving a 76 cm drop onto a hard surface and remaining in calibration.



Silver Series

All products in the Gold Series product range incorporate the following features:

- Jeweled movement for long life
- Laser-engraved dial for accuracy
- Shock resistant for accuracy and lower cost over time
- 15-year calibration warranty
- Premium aesthetics

### Welch Allyn DS66 Trigger

In addition to the features listed above, the DS66 Trigger features a smooth, trigger-style air release valve and ergonomic design with soft plastic inserts at key touch points for comfort.



10-year calibration warranty

### Welch Allyn DS45 Integrated

The DS45 Integrated features a unique integrated, cuff-mounted design that is compact and lightweight for ease of use. The gauge rotates 360° for easy viewing from any angle. A bumper around the dial provides added protection, and a large inflation bulb and high-quality air-release valve make inflation easy.

- Laser-engraved dial for accuracy
- Shock resistant for accuracy and lower cost over time
- Larger inflation bulb than bronze series

## Tycos® Classic Models: DS58, DS48, DS48A The Welch Allyn Tycos DS58 Classic is one of three

Platinum Series

All products in the Platinum Series product range

incorporate the following features:

Jeweled movement for long life

Laser-engraved dial for accuracy

Premium inflation system for comfort

to 60" drop and remain accurate Lifetime calibration warranty Premium aesthetics

DS58

Super shock-resistant—can withstand u

premium models in this new Welch Allyn product range. In addition to the features listed here, the DS58 comes with an ergonomic inflation bulb designed to enhance comfort while inflating a cuff.

The DS48 Classic aneroid plugs directly into an integrated cuff, providing a more robust design that is twice as shock resistant as the current DS44 and DS45 Integrated gauges from Welch Allyn. The gauge rotates 360° for easy viewing from any angle.

The DS48A Classic pocket-style aneroid is lightweight and will not weigh down a cuff on a patient's arm.

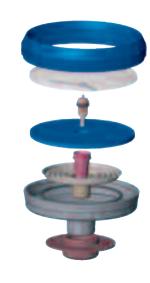


### All products in the Bronze Series product range incorporate the following features:

- Shock resistant for accuracy and lower cost over time
- 5-year calibration warranty

### Welch Allyn DS44 Integrated

The DS44 Integrated features a unique integrated, cuffmounted design that is compact and lightweight for ease of use. The gauge rotates 360° for easy viewing from any angle. A bumper around the dial provides added protection. The DS44 is available with four optional color bumpers for variety—blue, purple, red, and green.



Welch Allyn's aneroid sphygmomanometers incorporating shock-resistant DuraShock technology offer award-winning design for superior movement and accuracy. It's the first gear-free aneroid capable of meeting the Association for the Advancement of Medical Instrumentation (AAMI) Shock Resistant specification.





Patented DuraShock technology is the first major innovation in aneroid sphygmomanometer technology in nearly 100 years. It has received international recognition for medical design and technological significance in the marketplace.



### Laser-Engraved Dial Face

All Welch Allyn Platinum, Gold, and Silver line sphygmomanometers feature a gauge that is calibrated by a computer and laser-engraved with a custom made dial face that accurately reflects the readings of the DuraShock aneroid movement inside. This proprietary production process is unique to Welch Allyn and provides you with a sphygmomanometer of excellent accuracy.



# Specifications: M9 / M9D (-020 thru -022)





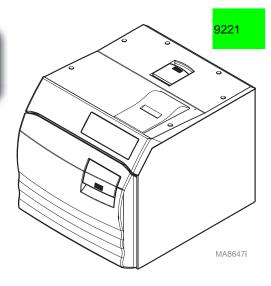
### **WARNING**

For 115 VAC models: Use 104 - 127 VAC, 50/60 Hz alternating current only. For 230 VAC models: Use 207 - 253 VAC, 50/60 Hz alternating current only. Failure to do so may result in electric shock to personnel and / or damage to sterilizer.



### **Equipment Alert**

A separate (dedicated) circuit is required for this sterilizer. Sterilizer should not be connected into an electrical circuit with other appliances or equipment unless circuit is rated for the additional load.



For model-specific ratings / dimensions, refer to the appropriate page.

Model Numbers	Refer to:
M9 / M9D (-020 / -022)	<u> Page 2</u>
M11 / M11D (-020 / -022)	<u>Page 3</u>

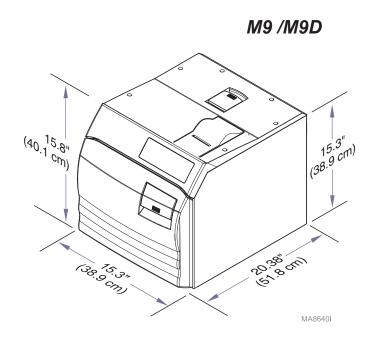




Requirements: M9 / M9D / M11 /M11D (-020 / -022)  Note To be properly grounded, unit must be connected to a matching, grounded, dedicated, properly polarized receptacle.		
115 VAC Unit: (115 VAC, (+/- 10%) 50/60 Hz, 12 amp) Dedicated Supply Circuit*: 120 VAC, 50/60 Hz, 15 amp) Max. Power Consumption: 1425 Watts)		
230 VAC Unit:	230 VAC, (+/- 10%) 50/60 Hz, 6.5 amp Dedicated Supply Circuit*: 230 VAC, 50/60 Hz, 10 amp Max. Power Consumption: 1500 Watts	
* Power source must have over-voltage limits less than 1500 watts from mains to ground.  (Installation Category II in accordance to IEC664)		
Fuse Ratings:		
115 VAC	F10.25 Amp, 250V, 3 AG Slo-blo, 1/4" x 1 1/4"	
	F215 Amp, 250V, 3 AB Fast Acting, 1/4" x 1 1/4"	
230 VAC	F10.125 Amp, 250V, Medium-Time Lag, 5 x 20 mm	
	F28 Amp, Type F 250V, Fast Acting, 5 x 20 mm	

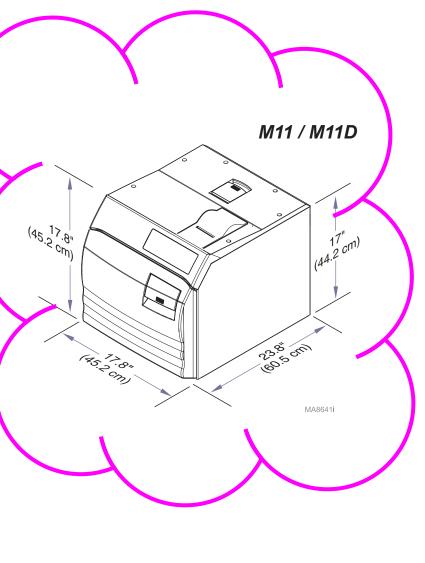
### Specifications / Dimensions:

Specifications Chart	: M9 / M9D (-020 / -022)					
Physical Dimensions:						
Overall Length w/Plug	20.38 in. (51.8 cm)					
Overall Width	15.3 in. (38.9 cm)					
Overall Height w/Printer	15.8 in. (40.1 cm)					
Counter Area	15.3 in. x 18 in. (38.9 cm x 45.7 cm)					
Chamber	9 in. dia. x 15 deep (22.9 cm x 38 cm)					
Standard Tray, Large	7 5/16 in. x 12 in. x 7/8 in. (18.6 cm x 30.5 cm x 2.2 cm)					
Standard Tray, Small	5 5/8 in. x 12 in. x 7/8 in. (14.3 cm x 30.5 cm x 2.2 cm)					
Weights:						
Weight with Empty Reservoir	73 lbs. (33.1 kg)					
Weight with Shipping Carton	81 lbs (36.7 kg)					
Water Reservoir Capacity	1.1 Gallons (4.1 liters) to Full Mark usable volume is 0.5 gallons (1.9 liters)					
Water Usage (per cycle)						
Standard Configuration	120 to 140 ml (varies depending on the cycle)					
Connected to Direct -to-Drain Thermal Reduction system. (VistaCool ™)	500 ml					
Chamber Pressure at 270 °F (132 °C)	27.1 psi. (186.2 kPa)					
Safety Valve Setting	40 psi (275.8 kPa)					
Heat Emission	5000 BTU / hr during operation					
Certifications	ASME Boiler & Pressure Vessel Code, Section VIII, Division 1. Canadian Registration Number available					
	UL61010-1 / IEC 61010-2-040 / CAN/CSA C22.2, #61010-1 / CSA C22.2, #61010-2-040- 07 Part 2-040					



### Specifications / Dimensions:

Specifications Chart:	M11 / M11D (-020 / -022)					
Physical Dimensions:						
Overall Length w/Plug	23.8 in. (60.5 cm)					
Overall Width	17.8 in. (45.2 cm)					
Overall Height w/Printer	17.8 in. (45.2 cm)					
Counter Area	17.8. x 21 in. (45.2 cm x 53.3 cm)					
Chamber	11 in. dia. x 18 in. deep (28 cm x 46 cm)					
Standard Tray, Large	9 in. x 15 in. x 1 1/8 in. (22.9 cm x 38 cm x 2.9 cm)					
Standard Tray, Small	6 5/8 in. x 15 in. x 1 1/8 in. (14.3 cm x 38 cm x 2.9 cm)					
Weights:						
Weight with Empty Reservoir	99 lbs. (44.9 kg)					
Weight with Shipping Carton	131 lbs (59.4 kg)					
Water Reservoir Capacity	1.4 Gallons (5.3 liters) to Full Mark usable volume is 1.0 gallons (3.8 liters)					
Water Usage (per cycle)						
Standard Configuration	120 to 180 ml (varies depending on the cycle)					
Connected to Direct -to-Drain Thermal Reduction system. (VistaCool ™)	650 m <u>l</u>					
Chamber Pressure at 270 °F (132 °C)	27.1 psi. (186.2 kPa)					
Safety Valve Setting	40 psi (275.8 kPa)					
Heat Emission	5000 BTU / hr during operation					
Certifications	ASME Boiler & Pressure Vessel Code, Section VIII, Division 1. Canadian Registration Number available					
	UL61010-1 / IEC 61010-2-040 / CAN/CSA C22.2, #61010-1 / CSA C22.2, #61010-2-040- 07 Part 2-040					



### 9299

### **IV POLE 4 HOOK ON CASTERS**



### Lakeside® 5-Leg IV Stand With 4 Ram's Horn Hook

Designed for tight spots, this **space saving 16" diameter size delivers the stability you need**. Epoxy coated steel base. Easy-to-clean chrome plated top post assembly. 3" rubber wheel, ball bearing casters provide smooth movement. Twist knob for easy height adjustment. Adjustment Range: 54" - 90-1/2". Some assembly required.

OR

McKesson Brand

### **Features**

- McKesson 5-Leg I.V. Stand
- 4-hook ram's horn.
- 5-leg, dual wheel nylon casters.
- Exclusive No Loss knob.
- Chrome-plated steel tubing.
- 25 inch cast aluminum base.
- Height Adjustment: 52-1/4 inch to 92-3/4 inch
- Load Capacity: 45 lbs.
- Some assembly required.
- Not Made with Natural Rubber Latex.
- Packaged: Each
- NOTE: Photo shown is the IV stand with 2 ram hooks versus 4.

SOURCES: https://www.globalindustrial.com/p/material-handling/service-carts/medical-stands/lakeside-5-leg-iv-stand

https://mms.mckesson.com/product/407332/McKesson-Brand-81-11360



# mayo stands



### STYLE TO BE SELECTED

### mayo stands



### foot-pedal operated

- Convenient foot-pedal operated lock adjusts height from 37" to 62½"
- All welded stainless steel construction
- Base designed to move under low clearance equipment with maximum stability
- 2" dual wheel swivel casters



### P-1065-SS

- Removable extra large 20" x 25" stainless steel tray for easy cleaning
- 50 lbs. weight capacity evenly distributed



P-1066-SS

- Removable 161/4" x 211/4" stainless steel tray for easy cleaning
- 50 lbs. weight capacity evenly distributed



P-1068-SS

- Removable 12<sup>5</sup>/<sub>8</sub>" x 19<sup>1</sup>/<sub>8</sub>" stainless steel tray for easy cleaning
- 50 lbs. weight capacity evenly distributed



P-1069-SS

- Removable large 16¼" x 21¼" stainless steel tray for easy cleaning
- Four 2" dual wheel swivel casters for increased mobility
- 50 lbs. weight capacity evenly distributed

### hand operated

- Adjust height from 37" to 61½" friction lock
- Base designed to move under low clearance equipment with maximum stability
- All welded stainless steel construction
- 2" dual wheel swivel casters



### P-1066-A-SS

- Removable 16½" x 21½" stainless steel tray for easy cleaning
- 50 lbs. weight capacity evenly distributed



P-1068-A-SS

- Removable 12<sup>5</sup>/<sub>8</sub>" (x 19<sup>1</sup>/<sub>8</sub>" stainless steel tray for easy cleaning
- 50 lbs. weight capacity evenly distributed



### P-1069-A-SS

- Removable large 16¼"
   x 21¼" stainless steel tray for easy cleaning
- 50 lbs. weight capacity evenly distributed



### **₹P-66**

- Removable 19¹/s"L x
   12⁵/s"W stainless steel tray on powder-coated frame
- Adjusts height from 32" to 53"
- Two 2" double ball bearing casters
- 50 lbs. weight capacity evenly distributed

### P-65 Medical Tray Unit

- Removable 19¹/s"L x 12⁵/s"W stainless steel tray on chrome plated frame
- Two 2" double ball bearing casters
- 40 lbs. weight capacity evenly distributed









# The most tender care possible

The Midmark 640 Pediatric Examination Table is designed to provide all the features and benefits you need to give your patients the most tender care possible.

Upholstered end panels, beveled sides and flat surfaces with no sharp edges assure precious patients are safe and secure during examinations.

Weighing infants can be efficient and accurate with our integrated scale design. Press the Zero/On button and within seconds the scale display will read, "Scale ready." Place the infant on the scale and the weight will be automatically displayed. And the reweigh feature allows a quick recapture of weight, no need to pick the infant back up. Just press the button and the scale will recalculate the weight.

The 640's infantometer is designed to measure infants easily and accurately—it pulls out easily and articulates out of the way when you are finished measuring.

The Midmark 640 surface height of 36 inches provides easy access and eliminates strain and stress from repeated bending during the exam.

For your storage needs, the Midmark 640 provides an oversized drawer as well as a bulk storage area that's perfect for keeping diapers and equipment. A hidden paper roll holder with a paper tear strap at one end is yet another convenience.

### Specifications

Patient Weight Capacity: 4.5 lb (2 kg) - 40 lb (18 kg)

Scale Resoluton: 0.5 oz for pounds-ounces 0.02 lb for pounds 0.01 kg for kilograms

Scale Accuracy: < 22 lb (10 kg) +/- 1.0 oz (28 g) ≥ 22 lb (10 kg) +/- 2.0 oz (56 g)

Working Height: 35.8" (90.8 cm)

Table Top Length: 41.9" (106.4 cm)

Table Top Depth: 20.8" (52.7 cm)

Paper Roll Holder: Upper portion of table accommodates one 14" x 3" (35.6 x 7.6 cm) diameter

Drawer: 33" x 15" x 4.125" (83.8 x 38.1 x 10.5 cm)

Drawer is constructed of high impact polystyrene with rounded corners for easy cleaning and is supported by side-mounted ball bearing steel slides.

Bulk Storage: 33.5" x 17" x 18.38" (85 x 43.2 x 46.7 cm)

### Safety Standards

ANSI/AAMI ES 60601-1:2005 CAN/CSA C22.2 NO. 60601-1-08

### **Options**

Door/Drawer Locks

### Built-in Scale

Measures in pounds or kilograms with unit lock to assure consistency of reading. New reweigh feature allows for a quick weigh recheck with the push of a button.

Automatically shuts off after 30 seconds to conserve energy.

### Midmark Premium Solid Upholstery Colors

Blueberry-235

Cashmere Blue-239

Silver Sage-236

Terra Cotta-240

Fossil Grey-238

Tea Green-237

Black-312

### Midmark Designer Pattern Upholstery Colors

Belagio-247

Capri-251

Siena-248

Treviso-252

Firenze-250

Tuscany-249

### Ritter Upholstery Colors

Navy-231

Dusty Blue-233

Moss-230

Clay-234

Pebble Grev-216

Shadow-232

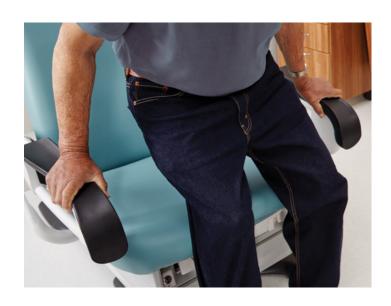
Perfect Plum-229

Midmark is an ISO 13485 and ISO 9001 Certified Company For more information or a demonstration, contact your Midmark dealer or call: 1-800-MIDMARK Fax: 1-800-365-8631 Outside the U.S.A. call: 1-937-526-3662 Fax: 1-937-526-8392 or visit our website at midmark.com

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# Accessible design ensures equal care for all







## Help patients help themselves

One key factor impacting accessible design in the exam space is the examination chair. The federal agency providing leadership and guidance for accessible design, the US Access Board, recommends an exam chair with a low, uncompressed seat height of 17" to 19". Midmark Barrier-Free exam chairs are the only chairs on the market that can lower to a height of 15.5" (uncompressed upholstery). A low seat height and wide, flat transfer surface enable patients to transfer onto and off of the exam chair with minimal assistance.



8 626 Barrier-Free Examination Chair

# Models + Options

	14.6" Seat Height (Compressed) 15.5" Seat Height (Uncompressed)	Clean Assist Roller System	Active Sensing Technology	Lockout Hand + Foot Controls	Wireless Hand + Foot Controls	Wired Hand + Foot Controls	Heated Upholstery	IQscale	650 lb Weight Capacity	Standard Rail Accessory Receivers	Tamper-Resistant Electrical Receptacles	Drawer Heater + Pelvic Tilt
Midmark												
626-001	•	•	•	•		•			•	•	•	•
626-002	•	•	•	•		•	•		•	•	•	•
626-003	•	•	•	•	•			•	•	•	•	•
626-004	•	•	•	•	•		•	•	•	•	•	•
626-005	•	0	•	•		•		•	•	•	•	•
626-006	•	•	•	•		•	•	•	•	•	•	•

# Optional Features (Available on select models)





### **HEATED UPHOLSTERY**

The heated upholstery option provides soothing heat to help relax the patient while on the exam chair.

### STANDARD FEATURES



**CLEAN ASSIST ROLLER SYSTEM** The retractable roller base allows you to safely move the chair for cleaning.



HAND + FOOT CONTROL Hand/foot control designed to make patient positioning quick and effective.



STIRRUPS + PELVIC TILT Helps position patients properly and comfortably for lower body examinations.



**ACTIVE SENSING TECHNOLOGY®** Pauses table movement when disrupting impact is detected.



QUICK EXAM® + RETURN TO HOME Quick Exam elevates the chair to the exam position. Return to Home returns the chair to its home position.



ACCESSORY RECEIVERS Standard receivers allow for the integration of accessories without the use of tools.



TAMPER-RESISTANT RECEPTACLES Receptacles on both sides of the chair provide a power connection for devices.



PREMIUM COMFORT SYSTEM® Elastomeric material stretched over a seat cutout for a chair-like feel.



DRAWER HEATER Point of care storage with the option to warm supplies used for lower-body examinations.

13



### **LOCKOUT OF HAND + FOOT CONTROLS**

Prevent unintended movement of the chair when staff is away by using the lockout feature. Simply press and hold the Stop and Back Down buttons simultaneously.

12 626 Barrier-Free Examination Chair

# Accessories help add versatility + function to your exam chair

26 Barrier-Free Examination Chair

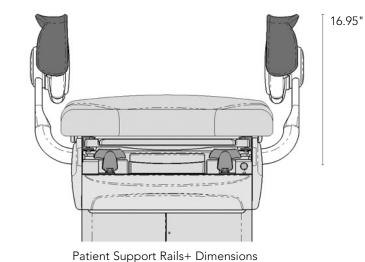
### 37.3"

### 28.6"



**ACCESSORIES** 

PATIENT SUPPORT RAILS+
Helps achieve proper positioning
of the patient's arm for blood
pressure capture.





PATIENT SUPPORT RAILS
Provides patients with a 1¼ inch
diameter continuous gripping surface
for entering, exiting or repositioning
on the exam table.



WIRELESS CONTROLS
Locate the hand and foot control
anywhere in the room, removing cords
and eliminating obstacles.



ARTICULATING KNEE CRUTCHES

The unique ball-socket design allows for a maximum range of adjustment, designed to ensure optimum knee and leg support. Available in a non-articulating option.



RITTER 253 LED LIGHT
The 253 is designed with easy access controls, high intensity light and an adjustable focal spot. Available in chair mount and mobile options.



STAINLESS STEEL TREATMENT PAN Ideal for lower-body procedures or other situations in which removal of fluid and debris is necessary.

19

## COLOR OPTIONS

## STANDARD UPHOLSTERY COLORS



### **ULTRAFREE\* UPHOLSTERY COLORS**



## \*ULTRALEATHER® BY ULTRFABRICS

## **SPECIFICATIONS**

## **SPECIFICATIONS**

Patient Weight Capacity: 650 lb (295 kg)

Height:

Uncompressed: 15.5" Low/37" High (39 cm/94 cm)

Compressed: 14.6" Low (36 cm) oversized casters

Premium Upholstery Dimensions (top): 28" W x 60" L (71 cm/152 cm)

Length with Footrest Extended: 76" (193 cm)

Pelvic Tilt: 5 1/5°

Heated Drawer: 24.6 Watt

Heated Drawer Temperature: 92°F to 112°F at 115 VAC input voltage, 70°F ambient

Paper Roll Holder: Holds 24" x 3.56" dia. paper roll (61 cm x 9 cm)

Electrical Receptacle: Electrical Draw: 4 A Hospital-grade, electrical receptacles on left and right sides

Table Weight: 435 lb (197 kg)

Shipping Weight: 485 lb (220 kg)

## **ELECTRICAL RATINGS**

115 VAC, 50/60 Hz, 12A

### **OPTIONS**

Heated Upholstery Temperatures: Low: 95°F/High: 102°F

Wide Premium Top: 32" W x 60" L (97 x 152 cm)

IOscale®: Scale Capacity: 650 lb (294.8 kg) Scale Resolution: 0.2 lb (0.1 kg)

wwwww

Scale Accuracy: 30 - 100 lb (13.6 - 45.4 kg) ± 0.2 lb (0.1 kg)

100 - 300 lb (45.4 - 136.1 kg) ± 0.4 lb (0.2 kg)

300 - 500 lb (136.1 - 226.8 kg) ± 0.6 lb (0.3 kg)

500 - 650 lb

(226.8 - 294.8 kg) ± 0.8 lb (0.4 kg)

Vital Signs Device ports on left and right sides, plus rear of table.

## **ACCESSORIES**

Patient Support Rails+

Patient Support Rails

Articulating Knee Crutches

Standard Knee Crutches

Stainless Steel Treatment Pan

## SOURCES

- 01 http://www.acc.org/latest-in-cardiology/articles/2017/11/08/11/47/mon-5pm-bp-guideline-aha-2017
- $02\ https://www.advisory.com/research/health-care-advisory-board/white-papers/2016/the-system-blueprint-for-clinical-standardization$
- 03 Calculated by 50,000,000 affected\* / 307,000,000 US 2009 population\*\* Data from: \*https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2911816/ and \*\*Census.gov
- 04 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2911816/
- 05 Panel size sourced from Journal of the American Board of Family Medicine July August 2016; Vol. 29, No. 4
- 06 \$733 x (9.8% of 1,900) = ~\$135,000, where 1) \$733 = cost of overtreatment per patient. Cost data from Agency for Healthcare Research and Quality (AHRQ). Article: "Expenditures for Hypertension Among Adults Age 18 and Older, 2010: Estimates for the U.S. Civilian Noninstitutionalized Population". Includes cost of ambulatory visit and prescription (payer is either the patient, insurance company or ACO), 2) 9.8% = percentage of population affected by overestimation of high blood pressure errors, calculated by 30,000,000 affected by overestimation\* / 307,000,000 the 2009 US population count\*\*. Data from \*https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2911816/ and \*\*Census.gov, and 3) 1,900 = typical patient panel size per physician. Panel size sourced from Journal of the American Board of Family Medicine, July-August 2016; Vol. 29, No. 4
- 07 Cost data from Agency for Healthcare Research and Quality (AHRQ). Article: "Expenditures for Hypertension among adults age 18 and Older, 2010: Estimates for the U.S. Civilian Noninstitutionalized Population"
- 08 According to BIFMA standards, the 3rd percentile female popliteal (knee) height is 13.4" plus 1.2" shoe height
- 09 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2911816/
- 10 https://wire.ama-assn.org/delivering-care/one-graphic-you-need-accurate-blood-pressure-reading

18 626 Barrier-Free Examination Chair

## Ritter®

MEDICAL

224 + 225 Barrier-Free® Examination Chairs



## 224 + 225 Barrier-Free® Exam Chairs

Your patients are changing.

The number of elderly and obese in the US is steadily growing, and over one fifth of adults in America are disabled.<sup>1</sup> Assisting patients with mobility limitations onto exam chairs has become a frequently performed task. Although caregivers working in healthcare facilities are one of the most at-risk professions for musculoskeletal disorders,<sup>2</sup> little has been done to evaluate and reduce risk.

Exam tables in ambulatory settings typically have a fixed height of about 33 inches, requiring caregivers to assist or lift patients with mobility limitations. In some cases, patients are unable to get onto the exam table—this inhibits the exam process, lowers the quality of care received and diminishes desired outcomes.



Adults will be retired by 2030, for the first time in US history. Older adults are projected to outnumber children by 2035.<sup>3</sup>



Of the US population 65 years and older have some form of disability.<sup>1</sup>



How much greater the risk of musculoskeletal disorders for nursing assistants than other workers.<sup>4</sup>

## We can help.

Ritter Barrier-Free Examination Chairs by Midmark adjust in height from 18-37 inches, improving accessibility to the exam chair and reducing the likelihood of staff injury. In a recent study, caregivers reported dramatically less perceived physical exertion when using a height-adjustable exam chair versus a fixed-height table. In fact, results showed an actual 95% to 98% reduction in perceived physical exertion.<sup>4</sup>



## **BETTER ACCESSIBILITY**

Ritter 224 and 225 Barrier-Free exam chairs are designed to offer low and high positioning heights so you can provide the best care to all patients, whether treating the elderly, expectant mothers or patients with disabilities.

2 224 + 225 Barrier-Free Examination Chairs



# The path to better care begins with a better vital signs process.

Vital signs are the beginning of the patient-caregiver interaction, providing critical information related to changes in patient health and playing an important role in a physician's treatment decisions. The integration of EMRs, new technologies and automated devices can have a significant impact on the overall efficiency of the process. In fact, by bringing all vital signs capture (including weight) to the point of care using an automated device, you can save over a minute per patient.

Using a Ritter Barrier-Free exam chair with an automated vital signs device like Midmark IQvitals® allows you to bring more to the point of care, not only saving time, but helping reduce common transcription errors. Once vital signs data is captured, it can be ported directly into the EMR.





Accessories help add versatility + function to your exam chair

## STANDARD FEATURES



Stirrups + Pelvic Tilt\*
Help position patients
properly and comfortably
for lower-body
examinations.



Foot Control
Standard foot control
designed to make patient
positioning quick, effective
and always within reach.



Tamper-Resistant
Receptacles\*
Easy-access receptacles
on both sides of the chair
provide a power connection
for ancillary devices. And
they are tamper resistant
to help prevent injury.



Accessory Receivers
Standard receivers are
designed to make the
integration of accessories
easy and efficient—no
tools required.





Clean Assist Roller System The retractable roller base allows you to easily and safely move the chair for cleaning.



## OPTIONAL ACCESSORIES



Patient Support Rails+
Helps achieve proper
positioning of the patient's
arm for blood pressure
capture.



Patient Support Rails
Provides patients with a
11/4 inch diameter continuous
gripping surface for entering,
exiting or repositioning on
the exam chair.



Assist Arms
Designed to offer patients
a stable gripping surface
for accessing the chair and
a sense of security during
positioning.



Ritter 253 LED Light

Designed with easy access
controls, high intensity light
and an adjustable focal spot.

Available in chair mount, wall
mount and mobile options.



Articulating Knee Crutches
The unique ball-socket
design allows for a
maximum range of
adjustment, designed to
ensure optimum knee and
leg support. Available in a
non-articulating option.



IOvitals® Chair Mount
Convenient chair mount for
the Midmark IOvitals vital
signs device, designed to
fit all Midmark and Ritter
exam chairs.



Supply Assistant
Provides extra storage for
bulky exam supplies. Keeps
drapes, gowns and similar
items within easy reach.



Stainless Steel Treatment Pan Ideal for lower-body procedures or other situations in which removal of fluid and debris is necessary.

8 224 + 225 Barrier-Free Examination Chairs

<sup>\*</sup>Pelvic tilt not available on 224-001 model.

## **SPECIFICATIONS**

## **FEATURES**

The Ritter 224 has a gasspring assisted back section with an easy access backrest mechanism while the Ritter 225 has a power back system. Both have adjustable low and high heights, built-in pillows, hideaway stirrups that lock in one of four lateral positions, foot extension shelves to expand the table length, paper roll holders hidden under the headrest, storage for one 24" x 3.56" diameter paper roll, polystyrene treatment pans\*, foot control and leveling feet.

\*No debris tray available for model 224-001.

Patient Weight Capacity: 500 lb (227 kg)

Height:

Uncompressed Height: 18" Low/37" High

(46 cm/94 cm)

Seamless Upholstery Dimensions:

28" W x 60" L (71 cm/152 cm)

Length with Footrest Extended:

76" (193 cm) Pelvic Tilt: 5 1/5°

Heated Drawer: 24.6 W

Heated Drawer Temperature: 92°F to 112°F at 115 VAC input

voltage, 70°F ambient

Paper Roll Holder: Holds 24" x 3.56" dia. paper roll (61 cm x 9 cm) Receptacle Electrical Draw: 4 A Hospital-grade, electrical receptacles

on left and right sides

Table Weight: 409 lb (185 kg) Shipping Weight: 465 lb (211 kg) Electrical Ratings

224-001: 115 VAC, 50/60 Hz, 9 A 224-002: 115 VAC, 50/60 Hz, 11.5 A 224-003: 115 VAC, 50/60 Hz, 11.5 A 225-002: 115 VAC, 50/60 Hz, 11.5 A 225-003: 115 VAC, 50/60 Hz, 11.5 A

## **ACCESSORIES**

Patient Support Rails+
Patient Support Rails
Assist Arms
Supply Assistant
Articulating Knee Crutches
Knee Crutches
Stainless Steel Treatment Pan
IQvitals® Table Mount

## **RITTER 224/225 COMPARISON CHART**

	18" Seat Height (Uncompressed)	500 lb Weight Capacity	Power Base	Standard Rail Accessory Receivers	Power Back	Clean Assist Roller System	Active Sensing Technology®	Drawer Heater + Pelvic Tilt	Tamper- Resistant Electrical Receptacles	Debris Tray
225-002	•	•	•	•	•		•	•	•	•
225-003	•	•	•	•	•	•	•	•	•	•
224-001	•	•	•	•						
224-002	•	•	•	•			•	•	•	•
224-003	•	•	•	•		•	•	•	•	•



## **SOURCES**

- $01\ CDC.\ https://www.cdc.gov/ncbddd/disabilityandhealth/documents/disabilities\_impacts\_all\_of\_us.pdf$
- 02 Bureau of Labor Statistics. https://www.bls.gov/iif/
- 03 https://www.census.gov/newsroom/press-releases/2018/cb18-41-population-projections.html
- 04 Reducing Risk: Fragala G. Reducing Occupational Risk to Ambulatry Caregivers. Workplace Health Saf. 2016 Sep;64(9):414-9. doi: 10.1177/2165079916642776. Epub 2016 May 12. PMID: 27174130

10 224 + 225 Barrier-Free Examination Chairs



## Healthcare is changing. Are you changing with it?

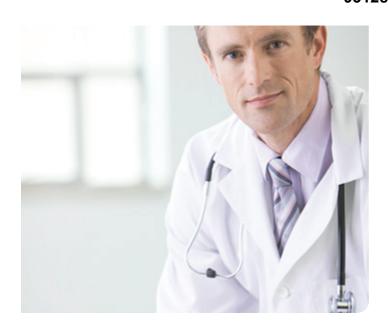
It's no secret-the face of healthcare is changing at an unprecedented rate. There are more patients, fewer providers and healthcare is trending patients away from hospitals and into ambulatory care settings. Having the most efficient workflow and the right equipment is more important now than it has ever been. That's where we come in. The Midmark 630 HUMANFORM® Procedures Table provides efficient, precise positioning designed around the people who use them.

## The doctor will see you now.

By 2020, it is anticipated there will be a shortage of 90,000 physicians across all specialties.

Association of American Medical Colleges

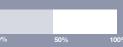
90,000







48%!



48% of physicians say they lack the resources to accept any of the 28 million new patients. Practice Profitability Index



9%



Only 9% of physicians describe their current technology as "very effective."

Practice Profitability Index



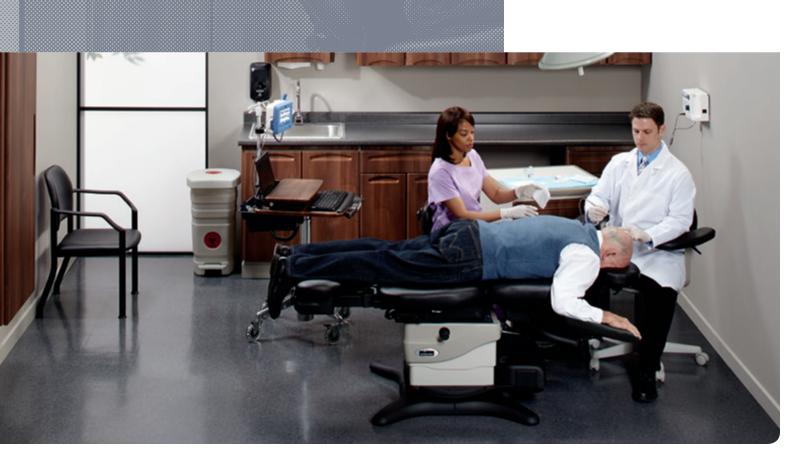
70%



Almost 70% of all surgical procedures are now performed in outpatient settings. US Centers for Disease Control and Prevention

## Natural, human-like movement that every body will appreciate

The Midmark 630 HUMANFORM® procedures table is the next generation of procedures tables designed around the people who use them, not the technology behind them. The first of its kind, the Midmark 630 HUMANFORM® procedures table is the new benchmark in patient and providercentered performance. Designed to move with the human body, this table enhances patient comfort while allowing physicians to remain in a proper working position throughout procedures.





Proper Height Work at elbow height with hands straight and in-line with forearms.



Straight Back Back should be kept straight when seated or standing.



**Relaxed Arms** Shoulders and arms should be relaxed with elbows close to the body.



## Bringing patient and provider together comfortably and safely

**Motion Profiling®** moves the table with the patient during positioning to maintain head and back support. This exclusive feature eliminates the need for patients to shift their position as the table back section raises or lowers.

Active Sensing Technology® (AST) enhances patient and provider protection by helping to avoid harmful impact during movement, such as objects being caught under the seat and footrest.

Premium Comfort System® utilizes unique contoured upholstery and an adjustable footrest to cradle the patient for a soothing, chair-like feel.

Barrier-Free® Design addresses the needs of a changing patient demographic with a best-in-class, 18-inch low seat height and 650-pound weight capacity.



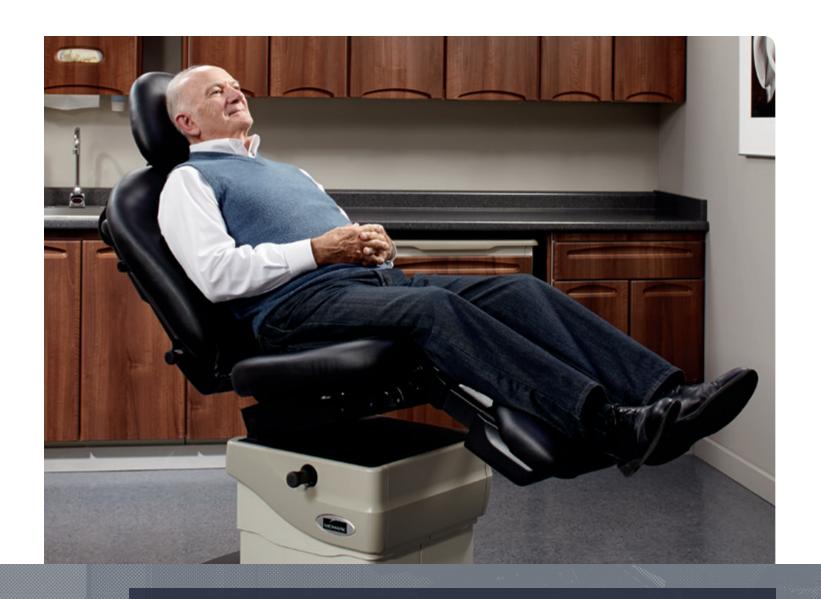
Foot Extension Extend the table footrest with the simple touch of a button to

accommodate taller patients.





Premium Comfort System® Advanced elastomeric material stretched over a seat cutout provides a "chair-like" feel for enhanced comfort. (Patented)



## Precise Medical Positioning for any procedure

When performing in-office procedures, physicians need a table that can achieve proper medical positioning to ensure ready access to the patient and a clear view of the surgical site. The Midmark 630 HUMANFORM® procedures tables gives physicians the flexibility to position patients where they need them for a wide range of procedures.





## Lithotomy

Position patients for surgical procedures and exams common in urology, obstetrics and gynecology.



## Trendelenburg

Widely used as a first-line treatment of acute hypotension and/or shock.



## Elevated Flat

Improve access and visibility to the patient's head, neck and torso.



## Barrier-Free® Entry

Low height of 18 inches allows for easy patient access.

## Patient positioning that makes sense for any body

No matter the type of procedure, proper positioning is necessary for unobstructed access to the patient and a clear view of the surgical site. Like the human body, the Midmark 630 has virtually endless movement capabilities. Power height, back, foot and tilt gives healthcare providers the freedom to effortlessly move patients into the most effective positions.



## Support where you need it most

## Adjustable headrest design

Easily adjust the headrest height or tilt angle ensuring safer, more comfortable positioning—for the provider and patient—and exceptional access to the head and neck area.

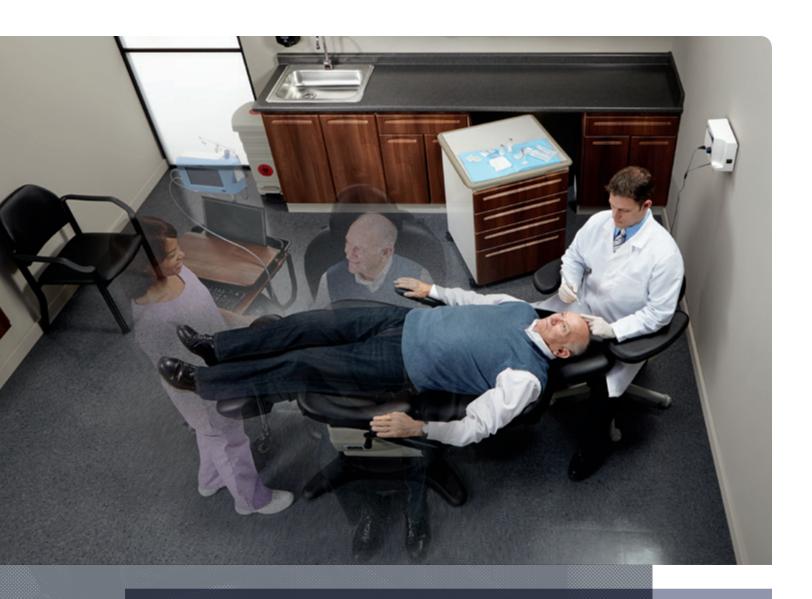


## Articulating Headrest Tilt the patient's head or

adjust for different procedures, improving access and patient comfort.



Tool-free Adjustment Simply loosen the knob, then rotate the headrest up or down.



## Intelligent features make time with patients more efficient

As the number of procedures performed in non-acute care settings and the number of patients continue to grow, physicians are going to be expected to do more, for more people, with fewer resources. That's why it's good to have a Midmark 630 HUMANFORM® procedures table by your side. Focused on efficient outcomes, the 630 remembers up to four of your favorite positions. With the touch of a button, patients can be quickly and precisely positioned where you need them. And, with optional chair rotation, providers can spend their time with the patient, not moving heavy equipment.

## Programmability = positioning made easy

Choose optional programmability and One-Touch patient positioning to save valuable time. With the press of a button, all sections of the table move simultaneously. Store up to four favorite positions to save even more time.



## Bring devices to the point of care.

## **Optional rotation**

Outfitting your table with optional rotation allows providers to bring the patient and necessary devices to the point of care. No more dragging heavy devices to and from the table or straining to increase accessibility to the patient.



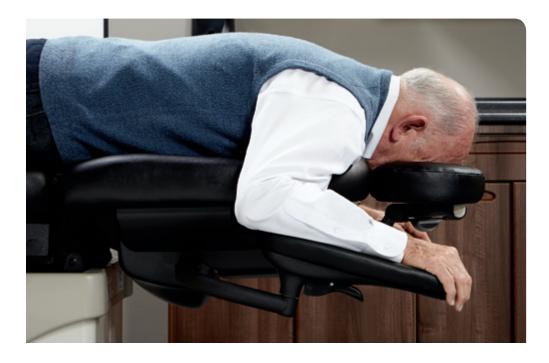






## Accessories when you want to add versatility

Customize the procedures table, improving function and saving valuable time. A variety of patient support accessories like adjustable headrests, arm systems and articulating knee crutches provide increased flexibility and more precise positioning.



Precise positioning and improved comfort means supporting patients where they need it most.



Swivel Chair Arms Available to fit 28" and 32" upholstery widths



Seat Rails Surgical Size 1 1/8"



Back/Base Accessory Rails Surgical Size 1 1/8" and Standard Size 1"



Gynecology Debris Tray Larger Optional Debri Tray 13" W x 12" L x 2 1/2" D



Fixed Armboard
Dimensions: 7" W x 24" L



Locking Casters 3 1/2" added height



Hand Surgery Armboard

Dimensions: 8 1/2" W x 26" L

Vision Block Screen



Articulating Armboard

Dimensions: 7" W x 24" L

Anesthesia Screen



Security Straps



Security Side Panels



Magnetic Headrest Dimensions: 8" H x 10" W



Flat Headrest Dimensions: 8" H x 9" W



Round-Shaped Headrest Dimensions: 8" H x 9" W



Rectangular Headrest Dimensions: 12" H x 18" W



U-Shaped Headrest Dimensions: 8" H x 11" W



Double Arm Instrument Tray



Single Arm Instrument Tray





Articulating Knee Crutches



Standard, Non-Articulating Knee Crutches



Ritter 253 LED Exam Light Available in table mount and mobile options.



Patient Weight Capacity: 650 lb (295 kg)

Height:

Minimum 18" (45.7 cm) Maximum 40" (101.6 cm)

Seat Tilt Angle Range: 0° to 30°

Back Support Angle Range: 0° to 80°

Foot Support Angle Range: 0° to 90°

28" Upholstery Width Dimensions: Headrest: 12" (30.5 cm) Back support: 26.5" (67.3 cm) Seat: 28" (71.1 cm) Foot support: 23" (58.4 cm)

32" Upholstery Width Dimensions: Headrest: 12" (30.5 cm) Back support: 31" (78.7 cm) Seat: 32" (81.3 cm) Foot support: 23" (58.4 cm)

Patient Support Surface Length: Flat position: 72" - 76" (182.9 - 193 cm)

Paper Roll Holder: Holds 18" x 3.5" paper roll (45.7 x 8.9 cm)

Stirrups are standard

### **Electrical Ratings**

115/230 VAC, 12/6A, 50/60 Hz (for standard models w/receptacle)

115/230 VAC, 9/4.5, 50/60 Hz (for rotation models)

Electrical Outlet Rating: 115 VAC, 3 Amps

## Safety Standards

ANSI/AAMI ES60601-1:2005+A2 (R2012)+A1

CAN/CSA-C22.2 NO. 60601-1-6:11 IEC 60601-1-6:2010

C€ Marked Tables Available

## Options

Premium Upholstery Top: Seamless design

Ultra-Premium Upholstery Top: Stitched, plush design

Programmability: Four customizable positions



## Upholstery

Oval headrest comes standard with all upholstery options

Wireless Controls:

Electrical Outlets: Duplex, hospital grade (on each side)1

Rotation: Allows table to rotate 350° and adds 3.5" to the minimum and maximum seat

Ritter 253 LED Exam Light

Back and base accessory rails -Surgical Size 1 1/8" and Standard Size 1"

Adjustable arm system -

Articulating armboard

Hand surgery armboard

Knee crutches articulating and non-articulating

Gynecology Debris Tray

Security straps

Security side panels

Instrument tray single or double arm

IV pole

Vision block/Anesthesia screen

Tamper resistant receptacles<sup>1</sup>

Casters<sup>1</sup>

3' power cord

Additional hand and foot controls

U-shaped headrest

Flat headrest

Magnetic headrest

Rectangular headrest

Round headrest

1 - Not available on rotation models

Available in 28" and 32" widths to accommodate all patients.

Hand and foot

height specifications

### Accessories

Seat rails -

Surgical Size 1 1/8"

Includes left and right arms

Fixed armboard

## Standard Upholstery Colors

Mist-813

Stone-814

Restful Path-858

Iron Ore-851

Lunar Gray-845

Obsidian-857

Oasis-843

Soothing Blue-855

Dream-847

Mineral-844

Healing Waters-848

Shaded Garden-853

Citrus-849

Sandy Retreat-850

Curative Copper-846

Cranberry-859

Dark Linen-856

Latte-860

Robust Brown-852

Deep Earth-854

## UltraFree\* Upholstery Colors

UltraFree Stone-865

UltraFree Restful Path-868

UltraFree Obsidian-867

UltraFree Harbor-861

UltraFree Wheatgrass-862

UltraFree Spice-863

UltraFree Cranberry-869

UltraFree Dark Linen-866

UltraFree Latte-870

UltraFree Branch-864

\*Ultraleather® by Ultrafabrics

CARB 93120.2 Phase 2 Compliant

Midmark is an ISO 13485 and ISO 9001 Certified Company
For more information or a demonstration, contact your Midmark
dealer or call: 1-800-MIDMARK Fax: 1-800-365-8631
Outside the U.S.A. call: 1-937-526-3662 Fax: 1-937-526-8392 or visit our website at midmark.com

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## 9854

## **SUNDRY JAR SET OF 5**



## **Product Details**

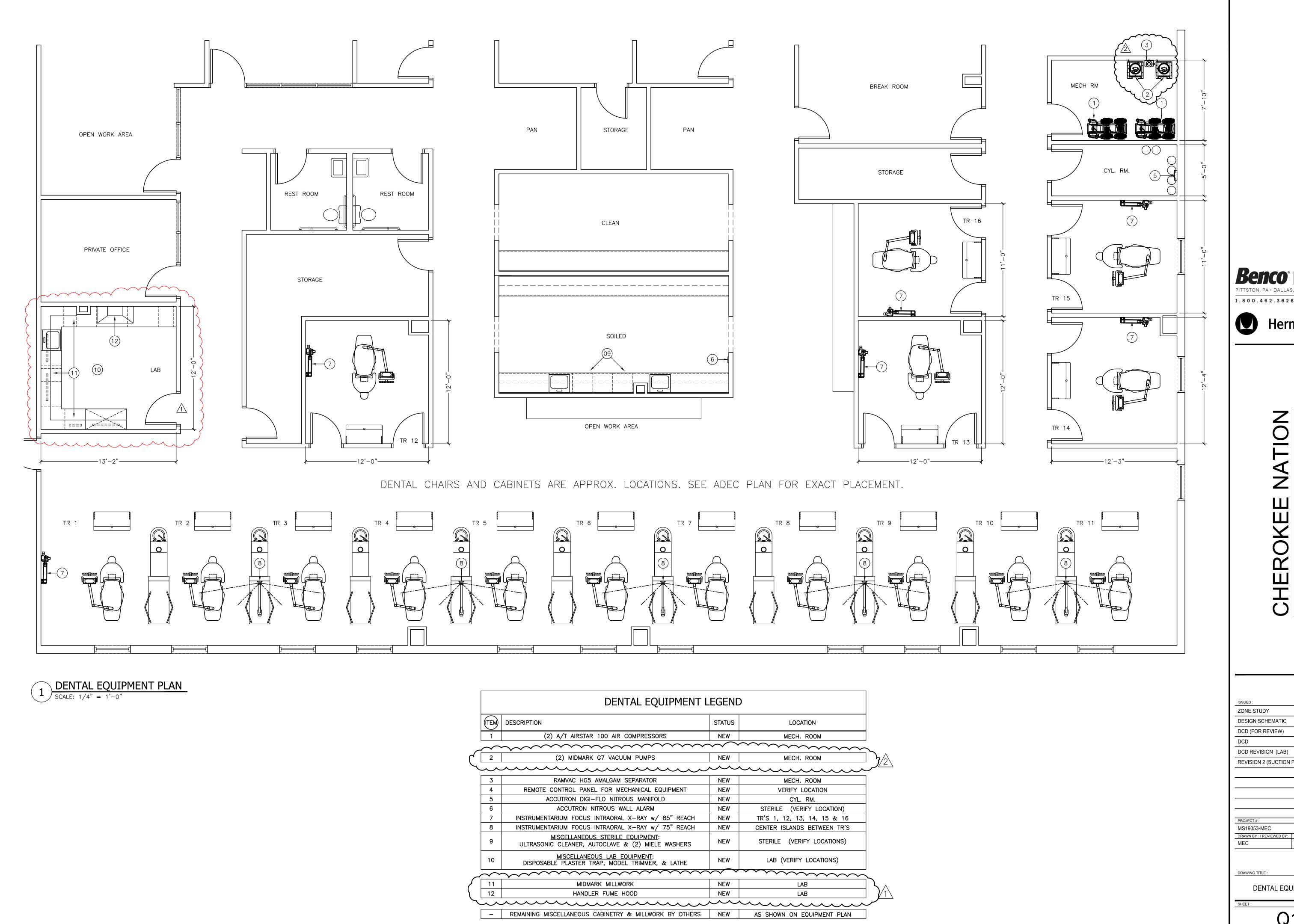
You will find many uses for these versatile sundry jars in your home or medical office.

- Product Dimensions 4.2" L x 3.9" W x 7" H
- Includes aluminum lids (non-screw tops)
- Includes 5 convenient imprints- cotton, gauze, bandages, applicators and tongue depressors
- The clear glass lets you easily see the contents
- Glass
- Hand Wash
- Imported
- Web ID: 10487048

SOURCE(S): https://www.macys.com/shop/product/mabis-stor-a-lot-sundry-apothecary-jars-with-imprints?ID=10487048&pla\_country=US&CAGPSPN=pla&cm\_mmc=MSN\_Bing\_Seasonal\_PLA-\_-All\_Products\_-BS\_All\_Products-\_-11617622401-\_-pg1050995623\_c\_kclickid\_83f3d28b-5212-4cfb-b980-f5fcb244f75c\_KID\_macys.kenshoo@outlook.com\_28835371\_4168314214\_11617622401\_pla-4584963490531886\_767056398122USA\_c\_KID\_&trackingid=489x1050995623&m\_sc=sem&m\_sb=Bing&m\_tp=PLA&m\_ac=MSN\_Bing\_Seasonal\_PLA&m\_ag=AllProducts&m\_cn=All\_Products\_-\_BS&m\_pi=bi\_cmp-28835371\_adg-4168314214\_ad-11617622401\_pla-4584963490531886\_dev-c\_ext-\_prd-767056398122USA&msclkid=6d2cd219bcee1214d0058c7ebe6c149d

OR

https://www.medicaldevicedepot.com/Mabis-Labled-Clear-Sundry-Jar-Set-of-5-Jars-p/39-812-000.htm



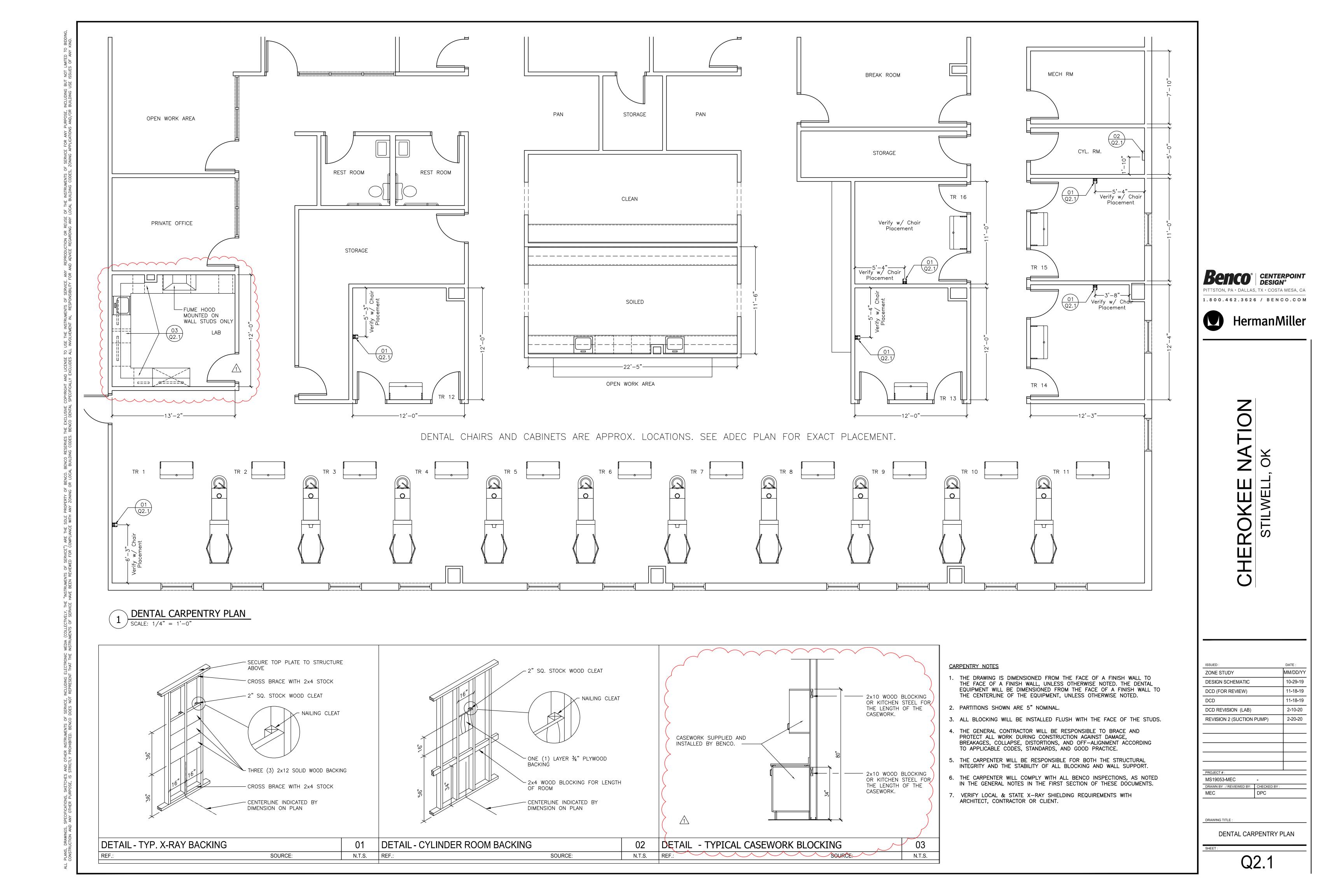
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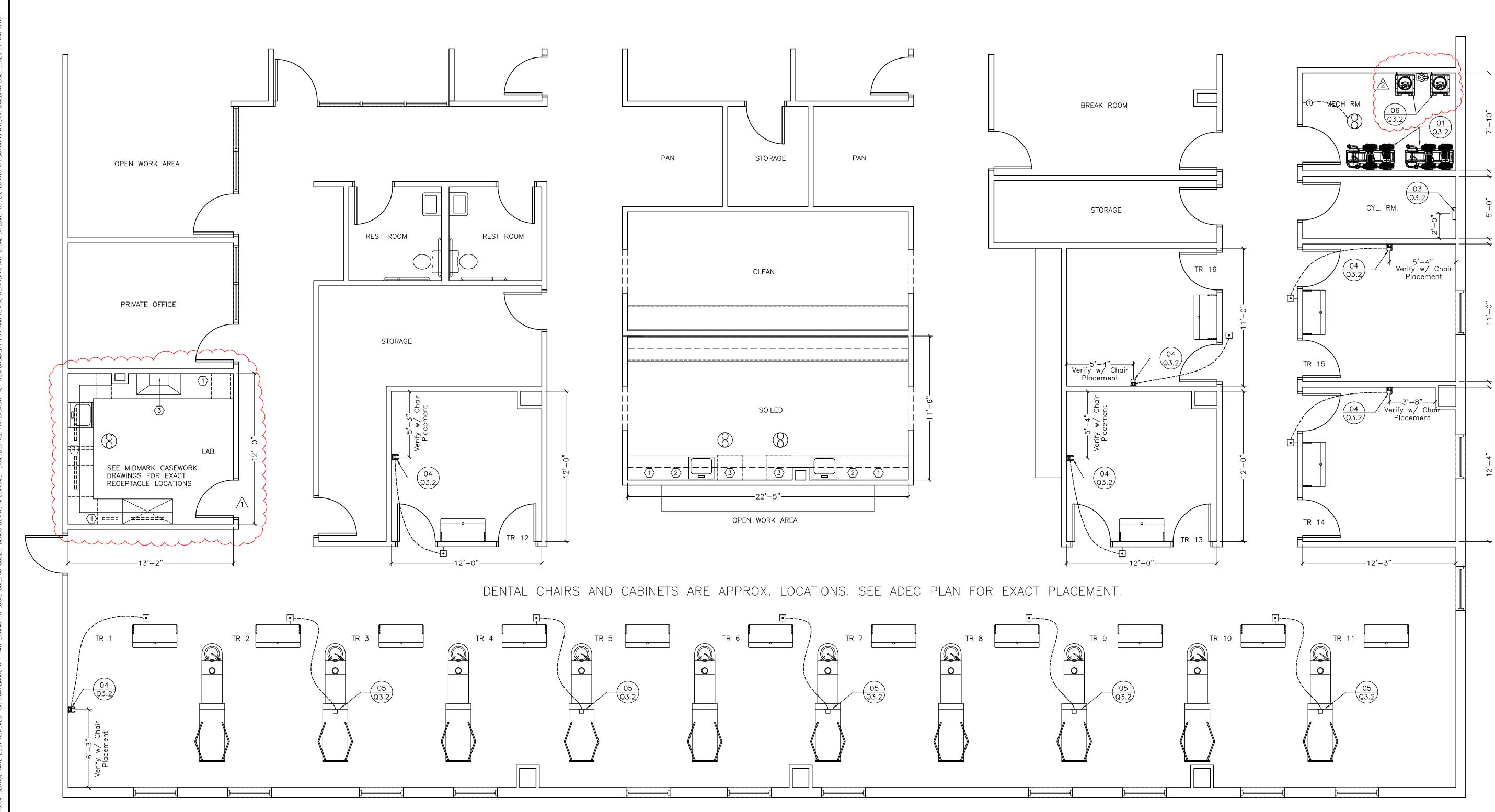
HermanMiller

ISSUED:		DATE :
ZONE STUDY		MM/DD/YY
DESIGN SCHEMATIC		10-29-19
DCD (FOR REVIEW)		11-18-19
DCD		11-18-19
DCD REVISION (LAB)		2-10-20
REVISION 2 (SUCTION	2-20-20	
PROJECT#:		<u> </u>
MS19053-MEC	-	
DRAWN BY : / REVIEWED BY:	CHECKED BY:	
MEC	DPC	
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DENTAL EQUIPMENT PLAN

Q1.1





DENTAL ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"

## ELECTRICAL NOTES

- 1. ALL EQUIPMENT WILL BE SINGLE PHASE, UNLESS OTHERWISE NOTED.
- 2. ALL WIRING WILL BE CONCEALED WITHIN THE WALLS AND/OR FLOOR, UNLESS OTHERWISE NOTED.
- 3. THE ELECTRICIAN WILL TAG ALL WIRES AT TERMINATION POINTS.
- 4. THE ELECTRICIAN WILL REMOVE ALL EXISTING RECEPTACLES AND SWITCHES IN THE AREA OF WORK. THE ELECTRICIAN WILL EITHER INSTALL A BLANK PLATE OVER RECEPTACLE OR SWITCH BOX OR REMOVE BOX ENTIRELY. THE ELECTRICIAN WILL TERMINATE WIRING AND CONDUIT IN A MANNER IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
- 5. THE ELECTRICIAN WILL INSTALL COMPLETE AND MAKE FINAL HOOK-UP TO THE FOLLOWING DENTAL EQUIPMENT, SUPPLIED BY EITHER THE DOCTOR OR BENCO DENTAL, INCLUDING, BUT NOT LIMITED TO:
- AIR COMPRESSORVACUUM PUMP
- WATER CONTROL VALVECONTROL PANEL
- 6. THE ELECTRICIAN WILL BE ONSITE ON THE DAY(S) OF INSTALLATION TO WORK WITH THE BENCO REPRESENTATIVE ON FINAL HOOK—UP. THE ELECTRICIAN WILL SUPPLY AND INSTALL ANY AND ALL MATERIALS INDICATED IN THE ELECTRICAL DETAILS SHOWN AND MANUFACTURER'S INSTALLATION INSTRUCTION SHEETS.
- 7. IN THE EVENT OF ANY EQUIPMENT BEING RELOCATED TO ANOTHER LOCATION, ANY AND ALL CIRCUITS MUST BE TERMINATED BY THE ELECTRICIAN IN ACCORDANCE WITH LOCAL CODE. VERIFY RESPONSIBILITY WITH THE OWNER.
- 8. THE ELECTRICIAN WILL SEAL ALL PENETRATIONS THROUGH THE FLOOR WITH A FIRESTOP OR EQUIVALENT WATERPROOFING.
- 9. THE ELECTRICIAN WILL COMPLY WITH ALL BENCO INSPECTIONS, AS NOTED IN THE GENERAL NOTES ON THE FIRST PAGE OF THESE DOCUMENTS.
- 10. ALL 120 VOLT, 20 AMP OUTLETS INSTALLED WITHIN 6 FEET OF A SINK AND THOSE LOCATED OUTDOORS SHALL HAVE GFCI PROTECTION.
- 11. ALL 120 VOLT, 20 AMP DENTAL EQUIPMENT OUTLETS INSTALLED WITHIN 6 FEET OF A WATER SOURCE SHALL HAVE GFCI PROTECTION.

## NOTES LEGEND

- (1) RECEPTACLES ABOVE &/OR BELOW COUNTERTOPS
  (VERIFY QUANTITY & LOCATION WITH BENCO REP AT TIME OF LAYOUT)
- (2) ULTRASONIC CLEANER & AUTOCLAVE RECEPTACLE 110V, 20 AMP CIRCUIT (VERIFY LOCATION W/BENCO REP AT TIME OF LAYOUT)
- (3) MIELE INSTRUMENT WASHER PROVIDE 230V 30AMP DEDICATED CIRCUIT.
- 3 HANDLER 236 FUME HOOD PROVIDE 115V 15A POWER SUPPLY

ELECTRICAL LEGEND				
SYMBOL	DESCRIPTION			
Ф	THERMOSTATIC ON/OFF SWITCH			
<b>/</b> \	WIRING, CONCEALED IN WALL OR CEILING			
8	EXHAUST FAN MOUNTED IN CEILING (VERIFY CFM REQUIREMENTS WITH ARCHITECT)			
·	EXPOSURE BUTTON			

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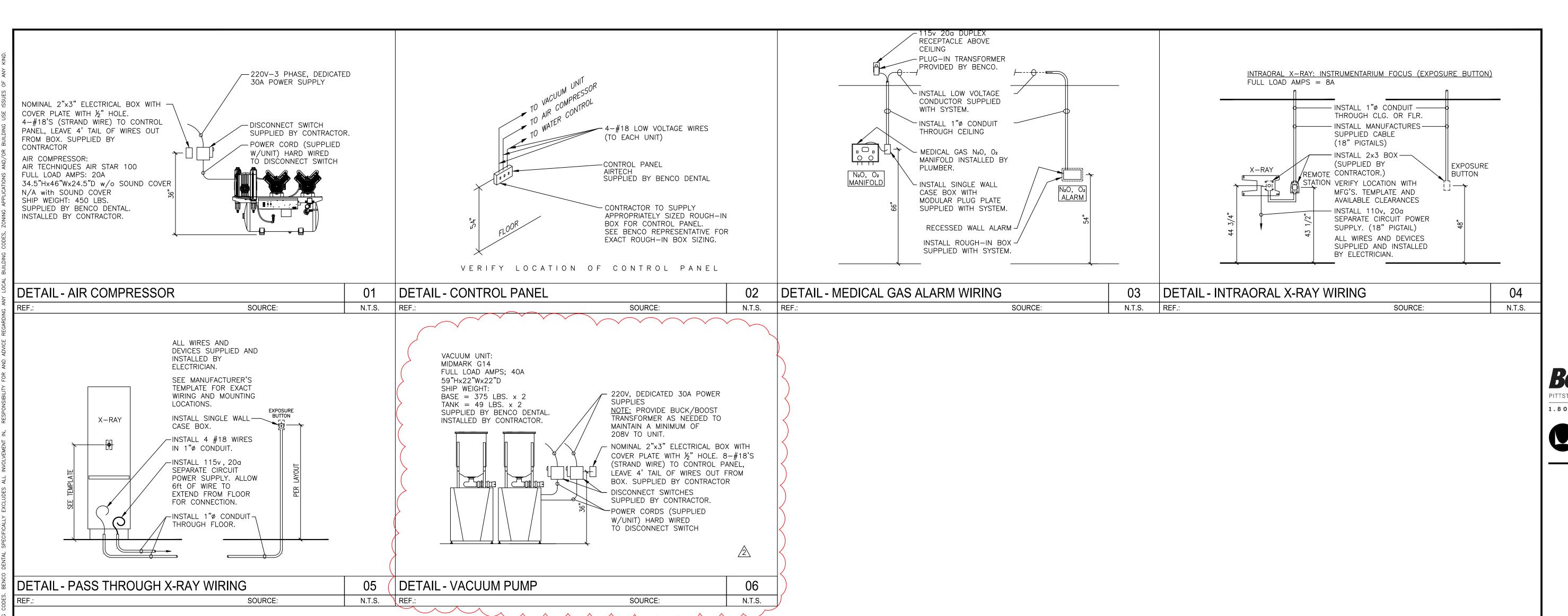


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MEC	DPC		

DENTAL ELECTRICAL PLAN

Q3.1





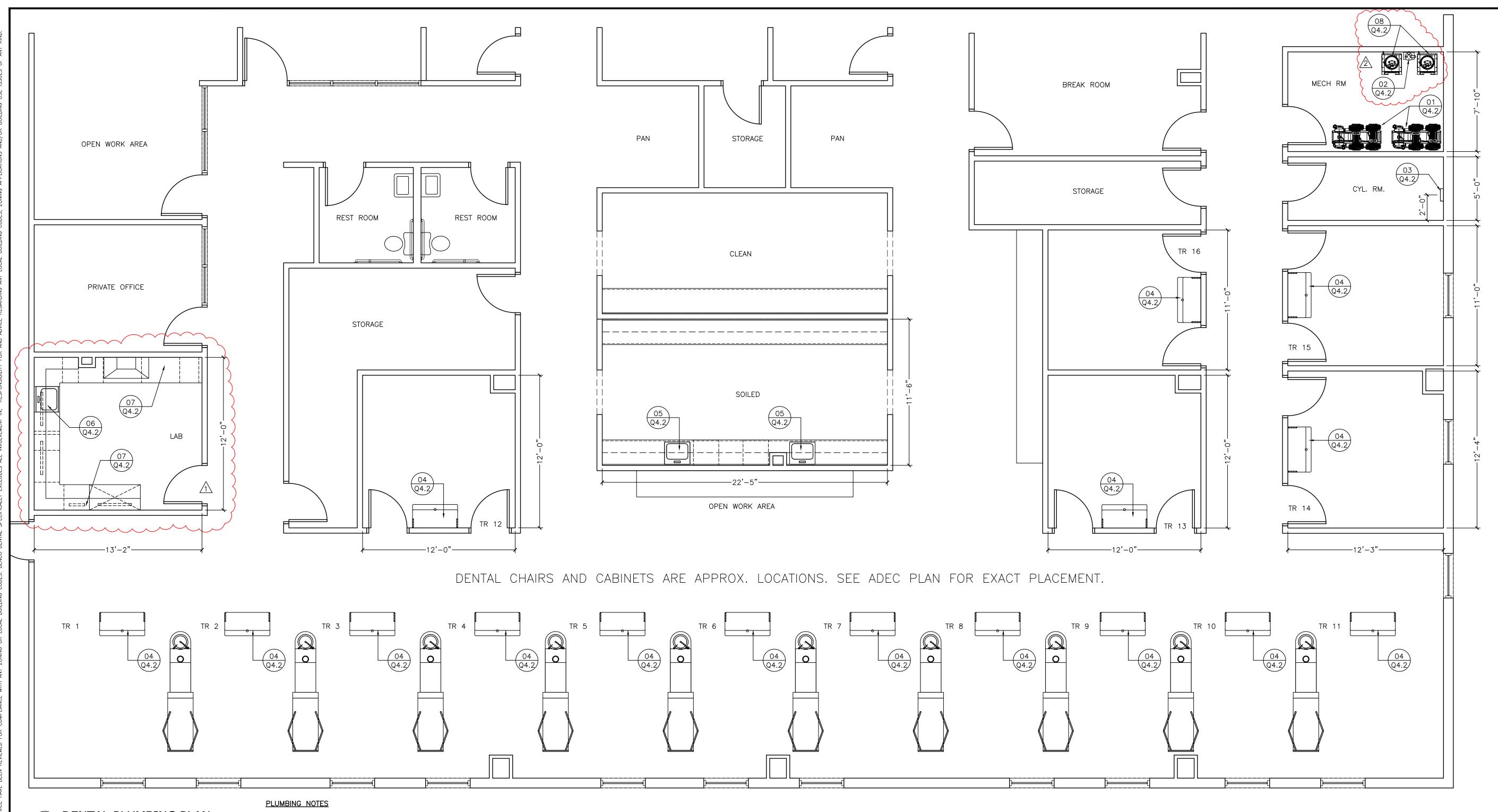


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MEC	DPC	

DENTAL ELECTRICAL DETAILS

Q3.2



## DENTAL PLUMBING PLAN $\int SCALE: 1/4" = 1'-0"$

## MEDICAL GAS NOTES (IF APPLICABLE)

- I. ENGINEER AND CONTRACTOR TO FOLLOW ALL APPLICABLE DESIGN AND INSTALLATION PROCEDURES AS LISTED UNDER NFPA #99C LEVEL 3 (MEDICAL GASES).
- 2. ALL MEDICAL GAS AND VACUUM PIPING LOCATED UNDER NOT ALLOWED) WITHIN BUILDINGS SHALL BE:
- a. ALL UNDER SLAB PIPING IS ALLOW AND DOES NOT REQUIRE CONDUIT, EXCEPT WHERE ANY AND ALL PIPING SHALL PENETRATE THE SLAB. (JOINTS ARE
- 3. FOLLOW NFPA 2012, 5.3.6. MED GAS PIPING & BRAZING
- 4. MEDICAL GAS CLOSETS NEED TO FOLLOW:

ALLOWED UNDER SLAB)

- a. NATURAL VENTILATION, NFPA 2012, 9.9, 2012, 9.3.6.5.2
- b. MECHANICAL VENTILATION, NFPA 2012, 9.3.6.5.3
- c. CONSTRUCTION TO HAVE FIRE RATED WALLS, FLOORING, CEILING, DOOR & DOOR FRAME. NFPA 2012, 99.11.3
- 5. WHEN (4) OR MORE TREATMENT ROOMS ARE EQUIPPED WITH MEDICAL GAS, THE DENTAL SUITE MUST BE EQUIPPED WITH A SPRINKLER SYSTEM. (THIS ONLY APPLIES TO ANESTHETIC LOCATIONS, AND DOES NOT APPLY TO N20/02 ANALGESIA/CONSIOUS SEDATION.)

- 1. THE PLUMBER WILL SUPPLY AND INSTALL A WATER PRESSURE REGULATOR ON INCOMING WATER SUPPLY. THE PLUMBER WILL SET THE REGULATOR NOT TO EXCEED 65 PSI.
- 2. THE PLUMBER WILL INSTALL THE WATER FILTER (AND THE WATER SOFTENER, AS NEEDED) ON THE COLD WATER MAIN ENTERING THE DENTAL SUITE. THE WATER FILTER WILL BE SUPPLIED BY EITHER BENCO DENTAL OR THE DOCTOR.
- 3. THE PLUMBER WILL SUPPLY AND INSTALL SEPARATE MANUAL SHUT-OFF VALVES ON ALL SINKS, DENTAL UNITS, AND OUTLETS REQUIRING WATER AND/OR AIR.
- 4. ALL SINKS AND FAUCETS WILL BE CONNECTED BY THE PLUMBER.
- 5. ALL PIPES WILL BE CONCEALED WITHIN THE WALLS AND/OR THE FLOOR, UNLESS OTHERWISE NOTED ON THE BENCO DRAWINGS.
- SLAB (AS PER NFPA 2012, 2015 & 2018, WITHIN SLAB IS 6. THE PLUMBER WILL SEAL ALL PENETRATIONS THROUGH THE FLOOR WITH A FIRESTOP OR EQUIVALENT WATERPROOFING.

THE DOCTOR/OWNER, AND A BENCO REP AT THE TIME OF LAYOUT AND PRIOR TO EQUIPMENT SELECTION.

- 7. ALL PIPES WILL BE FLUSHED CLEAR OF ALL DEBRIS BY THE PLUMBER.
- 8. THE PLUMBER WILL BE ONSITE ON THE DAY(S) OF INSTALLATION TO WORK WITH THE BENCO REPRESENTATIVE ON THE FINAL HOOK-UP. THE PLUMBER WILL SUPPLY AND INSTALL ANY AND ALL MATERIALS INDICATED IN THE PLUMBING DETAILS SHOWN AND THE MANUFACTURER'S INSTALLATION INSTRUCTION SHEETS.
- 9. THE PLUMBER WILL PROVIDE AND INSTALL ALL WATER SAFETY DEVICES (i.e. CHECK VALVES, BACKFLOW PREVENTERS, ETC.) IN ACCORDANCE WITH LOCAL CODE.
- BY ASSE 6010 MED GAS PLUMBER FOR INSTALLATIONS & 10. THE PLUMBER WILL INSTALL COMPLETE AND MAKE FINAL HOOK-UP TO THE FOLLOWING DENTAL EQUIPMENT, SUPPLIED BY THE DOCTOR AND/OR BENCO DENTAL, INCLUDING, BUT NOT LIMITED TO:
  - AIR COMPRESSOR VACUUM PUMP
  - AIR/WATER SEPARATORS - WATER CONTROL VALVE AND FILTER ASSEMBLY
  - 11. AN ELECTRIC MASTER WATER CONTROL VALVE AND FILTER ASSEMBLY IS REQUIRED FOR ANY/ALL COLD WATER LINES FEEDING ALL DENTAL EQUIPMENT. THIS WATER CONTROL VALVE AND FILTER ASSEMBLY IS REQUIRED WHETHER SUPPLIED BY BENCO, THE DOCTOR, OR THE PLUMBER. THE PLUMBER IS TO VERIFY THE EXACT LOCATION OF THE WATER CONTROL VALVE AND FILTER ASSEMBLY WITH
  - 12. THE PLUMBER WILL COMPLY WITH ALL BENCO INSPECTIONS, AS NOTED IN THE GENERAL NOTES ON THE FIRST PAGE OF THESE DOCUMENTS.
  - 13. GENERAL DENTAL PLUMBING LINES SHOWN ARE FOR GRAPHICALLY DISPLAYING ORIGINATION AND TERMINATION POINTS. FIELD CONDITIONS MAY ALTER PLUMBING LINE LAYOUT, PER PLUMBERS DISCRETION. THE FINAL LAYOUT OF THE PLUMBING LINES IS THE RESPONSIBILITY OF THE PLUMBER.
  - 14. THE APPLICATION OF DRIVE GAS (NFPA, 2012, 99.5.3.7, AS THIS IS NOT CONSIDERED NFPA "AIR" ) AS NOTED ON THIS PLAN IS NOT USED FOR LIFE-SUPPORT PURPOSES SUCH AS RESPIRATORS, IPPB MACHINES, ANALGESIA, ANESTHESIA, AND SO FORTH.
  - 15. NFPA, 2012, 99.5.3.8 VACUUM PIPING
  - 16. NFPA, 2012, 99.5.3.8 SCAVENGING PIPING

NFPA LEGEND					
SYMBOL	NFPA 2012/2015	NFPA 2018			
O=OXYGEN	99.5.3.6	99.15.4.4.2			
N=NITROUS OXIDE	99.5.3.6	99.15.4.4.2			
S=SCAVENGING	99.5.3.8	99.15.4.4.4			
V=VACUUM	99.5.3.8	99.15.4.4.4			
D=DRIVE GAS/ DENTAL AIR	99.5.3.6	99.15.4.3.3.2 99.15.4.4.3			
W=W.A.G.D.	99.5.3.8	99.15.3.2.1.5			

ALL	SINKS	BY	OTHERS

	2012	2015	2018
MED GAS PIPING, BRAZING, & TESTING	99.5.3.6	99.5.3.6	99.15.4
MED GAS STORAGE	99.11.3	99.11.3	99.11.3
MED GAS STORAGE VENTILATION NATURAL: MECHANICAL:	99.9.3.6.5.2 99.9.3.6.5.3	99.9.3.6.5.2 99.9.3.6.5.3	99.9.3.6.5.2 99.9.3.6.5.3
CATEGORY 3 DRIVE GAS	99.5.3.7	99.5.3.7	
DENTAL AIR			99.15.4.3.3.2
CATEGORY 3 VACUUM	99.5.3.8	99.5.3.8	
DENTAL VACUUM			99.15.4.3.3.
CATEGORY 3 SCAVENGING	99.5.3.8	99.5.3.8	
NITROUS OXIDE SCAVENGING			99.15.4.3.3.4

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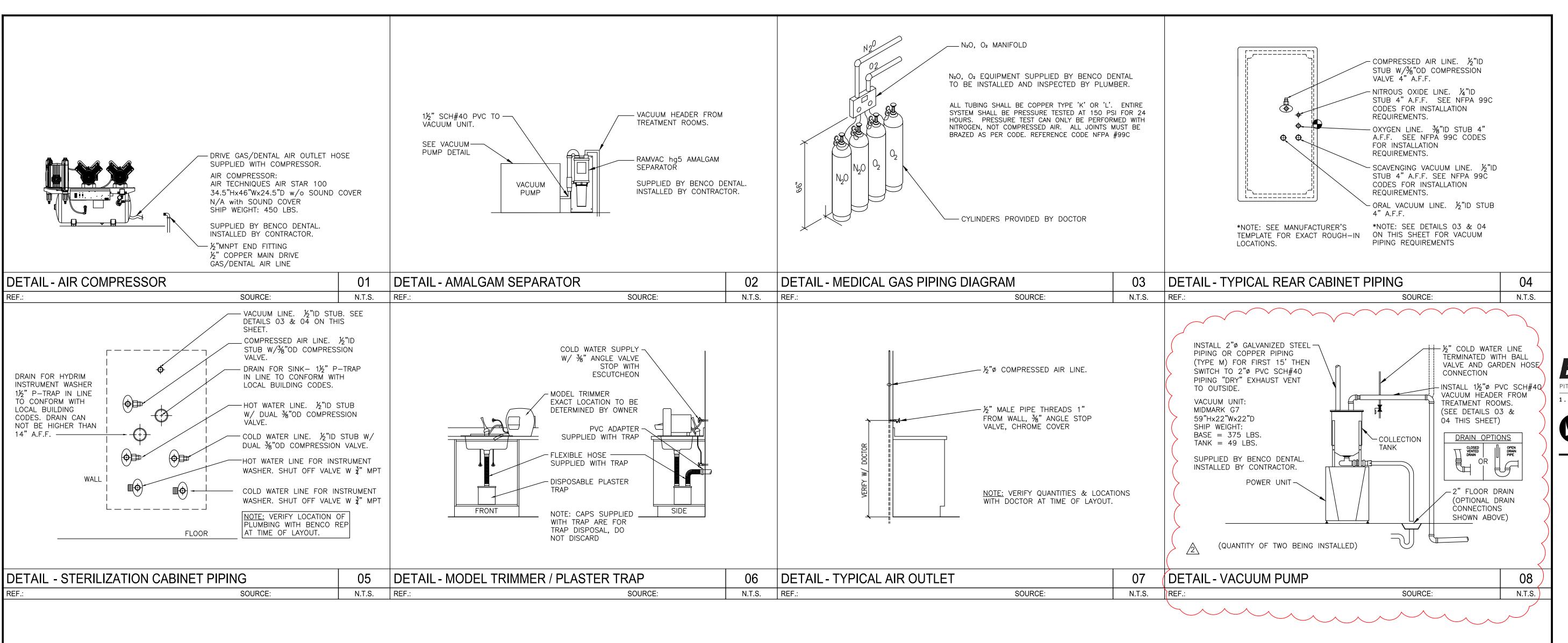
**HermanMiller** 

NATION

MM/DD/YY ONE STUDY ESIGN SCHEMATIC 10-29-19 11-18-19 CD (FOR REVIEW) 11-18-19 D REVISION (LAB) VISION 2 (SUCTION PUMP) 319053-MEC WN BY: / REVIEWED BY: CHECKED BY:

Q4.

DENTAL PLUMBING PLAN



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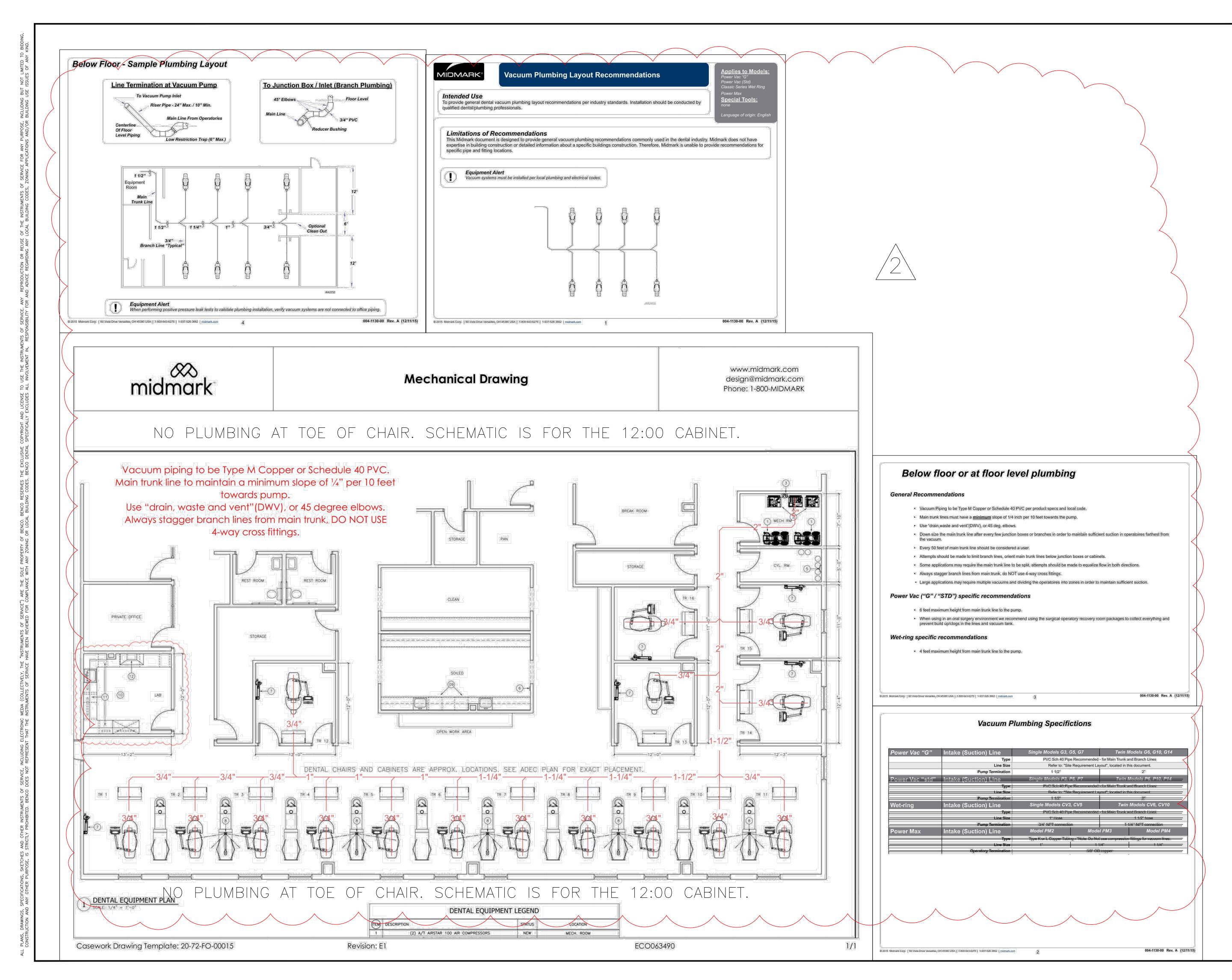
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DENTAL PLUMBING DETAILS

Q4.2



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DENTAL PLUMBING DETAILS

Q4.3