

## Single Package R-410A AC with Reheat

Project Name: **Cherokee Hills Club House**

Unit Model #: **J12ZRE54R2B5HAA1A1**

Quantity: **2**

System: **J12ZRE54R2B5HAA1A1 (2)**

### Cooling Performance

Total gross capacity	150.5 MBH
Sensible gross capacity	104.0 MBH
Total net capacity	138.9 MBH
Sensible net capacity	92.4 MBH
Efficiency (at ARI)	11.00 EER
Integrated eff. (at ARI)	13.20 IEER
Ambient DB temp.	105.0 °F
Entering DB temp.	80.0 °F
Entering WB temp.	67.0 °F
Leaving DB temp.	57.3 °F
Leaving WB temp.	55.7 °F
Power input (w/o blower)	13.13 kW
Sound power	84 dB(A)

### Refrigerant

Refrigerant type	R-410A
Sys1	20 lbs
Sys2	19 lbs

### Reheat Performance

Total capacity	75.2 MBH
Sensible capacity	6 MBH
Ambient DB temp.	85 °F
Entering DB temp.	75 °F
Entering WB temp.	67 °F
Leaving DB temp.	73.7 °F
Leaving WB temp.	61.8 °F
Power input (w/o blower)	10.05 kW
Gallons of water per hour	7.90 gal/hr

### Heating Performance

Entering DB temp.	60 °F
Heating output capacity (Max)	138.4 MBH
Nominal electric heat	54 kW
Applied electric heat	40.6 kW
Installed	Factory
Supply air	4250 CFM
Leaving DB temp.	90.2 °F
Air temp. rise	30.2 °F
Stages	2

### Supply Air Blower Performance

Supply air	4250 CFM
Ext. static pressure	1.0 IWG
Addl. Unit Losses (Options/Accessories)	0.71 IWG
Blower speed	1398 RPM
Max BHP of Motor (including service factor)	5.75 HP
Duct location	Bottom
Motor rating	5.00 HP
Actual required BHP	3.65 HP
Power input	3.40 kW
Elevation	0 ft.
Drive type	BELT
Requires field-supplied drive	true

### Electrical Data

Power supply	208-3-60
Unit min circuit ampacity	158.4 Amps
Unit max over-current protection	175 Amps

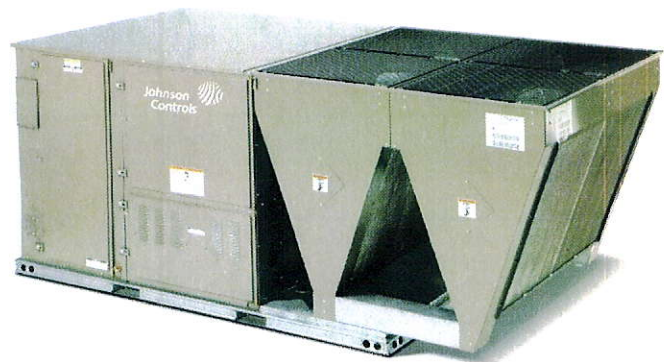
### Dimensions & Weight

Hgt	51 in.	Len	120 in.	Wth	59 in.
Weight with factory installed options	1609 lbs.				

### Clearances

Right	12 in.	Front	36 in.	Back	36 in.
Top	72 in.	Bottom	0 in.	Left	36 in.

Note: Please refer to the tech guide for listed maximum static pressures



### 12.5 Ton

- JCI Series 10 units are manufactured at an ISO 9001 registered facility and each rooftop is completely computer-run tested prior to shipment.

### Unit Features

- Two Staged Cooling
- 54 kW Factory Installed Electric Heat
- Unit Cabinet Constructed of Powder Painted Steel, Certified At 1000 Hours Salt Spray Test (ASTM B-117 Standards)
- Full perimeter base rails with built in rigging capabilities
- Scroll Compressors
- Scroll Compressors
- Dry Bulb Low Leak Economizer w/Barometric Relief and Hoods (Bottom or Horizontal End Return Only) with Economizer Fault Detection & Diagnostic (Meets ASHRAE 90.1-2013, IECC 2015, California Title 24, AMCA 511).
- Slide-Out Blower/5 HP Belt Drive Motor Assembly
- Unit Ships with 2" Throwaway Filters
- Solid Core Liquid Line Filter Driers
- Replacement Filters: 4 - (24" x 20"). Unit accepts 2" or 4" wide filters.
- Non-Powered Convenience Outlet
- Through-the-Curb and Through-the-Base Utility Connections
- Short Circuit Current: 5kA RMS Symmetrical
- HACR Circuit Breaker/Disconnect
- Single Point Power Connection
- Return Air Smoke Detector
- Copper tube/aluminum fin condenser coil, Copper tube/aluminum fin evaporator coil
- Composite Drain Pan - Front Connection
- Tool-free maintenance with features like hinged doors for all-access panels, slide-out blower and blower motor tray

### BAS Controller

- IntelliSpeed control of the VFD based on stages of cooling. Provides Single Zone VAV Fan Operation as defined by ASHRAE 90.1 section 6.4.3.10.
- Simplicity SE Controller including Discharge Air, Return Air, and Outdoor Air Temperature Sensors

### Standard Unit Controller: Simplicity Control Board

- Safety Monitoring - Monitors the High and Low-Pressure Switches, the Freezestats, the Gas Valve, if Applicable, and the Temperature Limit Switch on Gas and Electric Heat Units. The Unit Control Board will Alarm on Ignition Failures, Safety Lockouts and Repeated Limit Switch Trips.

### Warranty

- One (1) Year Limited Warranty on the Complete Unit
- Five (5) Year Warranty - Compressors and Electric Heater Elements



Project Name: Cherokee Hills Club House

Unit Model #: J12ZRE54R2B5HAA1A1

Quantity: 2

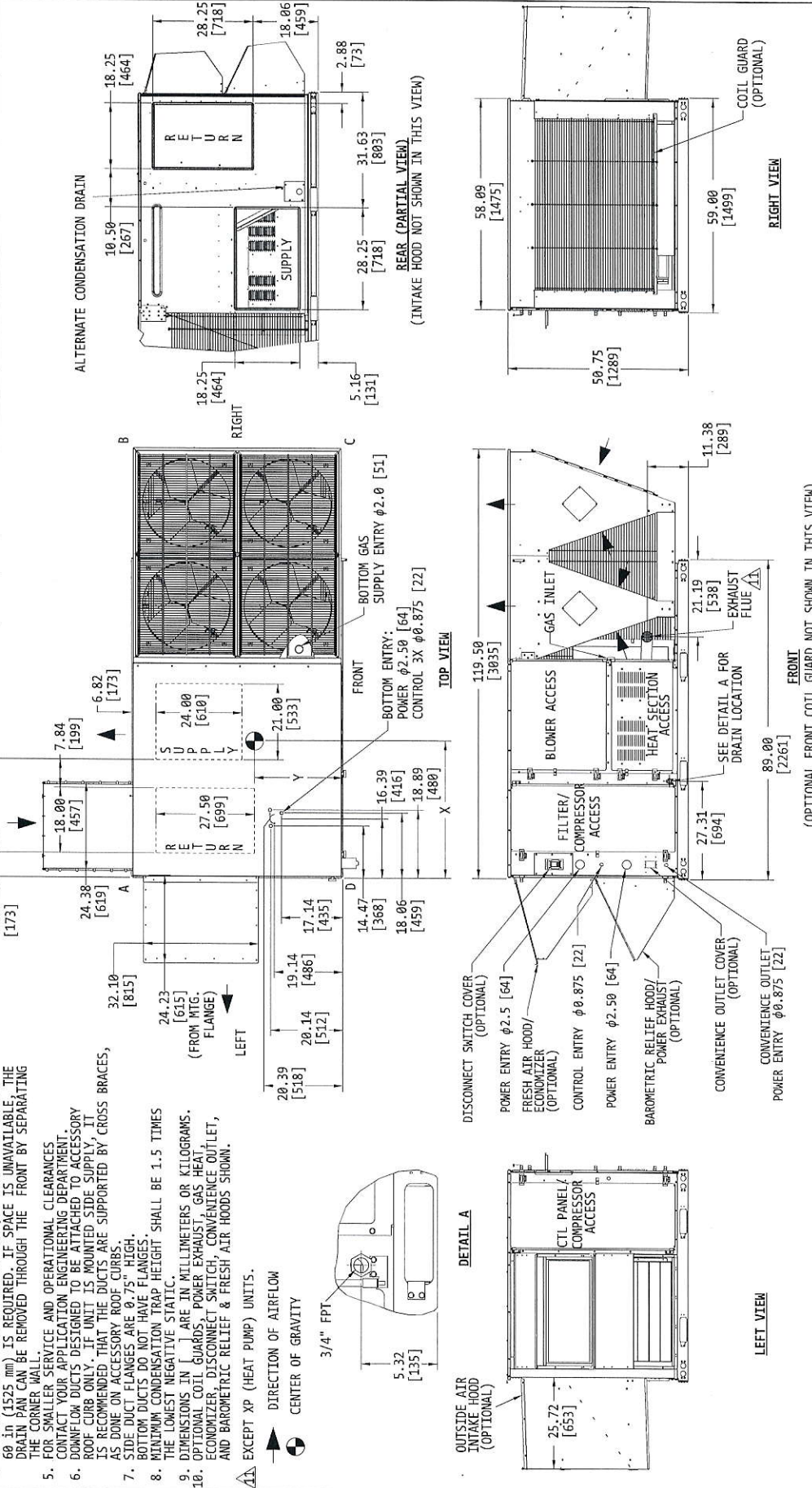
System: J12ZRE54R2B5HAA1A1 (2)

### Consolidated Drawing

TONNAGE	U N I T	OPERATING WEIGHT (LBS) (BASE UNIT)	CENTER OF GRAVITY LOCATION (BASE UNIT)				4 POINT CORNER LOADS (LBS) (BASE UNIT)			
			X	Y	A	B	C	D		
12.5	XP	1403 [636]	51 [1295]	25.5 [648]	259 [118]	347 [157]	456 [207]	340 [154]		
12.5	ZR	1465 [665]	51 [1295]	25.5 [648]	270 [123]	363 [165]	477 [216]	355 [161]		
12.5	ZJ	1280 [581]	48 [1219]	24 [610]	240 [109]	281 [128]	410 [186]	350 [159]		
12.5	ZH	1215 [551]	46 [1168]	26 [660]	259 [118]	277 [126]	351 [159]	328 [149]		

### NOTES:

- FOR OUTDOOR USE ONLY.
- WEIGHTS SHOWN ARE FOR COOLING ONLY UNITS.
- MIN. CLEARANCES TO BE:  
RIGHT SIDE: 12 [305]  
LEFT SIDE: 36 [915]  
FRONT: 36 [915]  
REAR: 36 [915]  
TOP: 72 [1830]  
BOTTOM: 0 [0]
- TO REMOVE THE SLIDE-OUT DRAIN PAN, A REAR CLEARANCE OF 60 IN (1525 mm) IS REQUIRED. IF SPACE IS UNAVAILABLE, THE DRAIN PAN CAN BE REMOVED THROUGH THE FRONT BY SEPARATING THE CORNER WALL.
- FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT YOUR APPLICATION ENGINEERING DEPARTMENT.
- DOWNDRAFT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. IF UNIT IS MOUNTED SIDE SUPPLY, IT IS RECOMMENDED THAT THE DUCTS ARE SUPPORTED BY CROSS BRACES, AS DONE ON ACCESSORY ROOF CURBS.
- SIDE DUCT FLANGES ARE 0.75" HIGH.
- BOTTOM DUCTS DO NOT HAVE FLANGES.
- MINIMUM CONDENSATION TRAP HEIGHT SHALL BE 1.5 TIMES THE LOWEST NEGATIVE STATIC.
- DIMENSIONS IN [ ] ARE IN MILLIMETERS OR KILOGRAMS.
- OPTIONAL COIL GUARDS, POWER EXHAUST, GAS HEAT ECONOMIZER, DISCONNECT SWITCH, CONVENIENCE OUTLET, AND BAROMETRIC RELIEF & FRESH AIR HOODS SHOWN.
- EXCEPT XP (HEAT PUMP) UNITS.



Project Name: Cherokee Hills Club House

Unit Model #: J10NMC00D2BAA3

Quantity: 2

System: J10NMC00D2BAA3 (2)

No Performance Data Available

Run Performance to view metrics



### 10 Ton

- Series 20 split system units are manufactured at an ISO 9001 registered facility

### Unit Features

- Unit Cabinet Constructed of Powder Painted Steel, Certified At 1000 Hours Salt Spray Test (ASTM B-117 Standards).
- Easily converted in the field from vertical to horizontal configuration.
- Slide-out Composite Drain Pan
- Dual Circuit Refrigeration
- Adjustable balanced port TXV's
- 3.0 HP Motor and Adjustable Sheave Belt Drive
- Unit ships with 2" Throwaway filters with a standard filter rack that will accept up to 4" filters.
- Short Circuit Current: 5kA RMS Symmetrical
- Intellispeed VFD w/o Bypass

### Warranty

- One (1) Year Limited Warranty on all Other Parts
- Five (5) Year limited Warranty on Electric Heating Elements

Project Name: Cherokee Hills Club House

Unit Model #: J10NMC00D2BAA3

Quantity: 2

System: J10NMC00D2BAA3 (2)

## NL/NM Piping, Electrical, & Duct Opening Connection Sizes



### PIPING, ELECTRICAL AND DUCT OPENING CONNECTION SIZES

MODEL	J07NC/NL	J10NC/NL	J10ND/NM	J15NC/NL	J15ND/NM	J20NC/NL	J20ND/NM	J25NC/NL
<b>SYSTEM DATA</b>								
No. Refrigeration Circuits	1	1	2	1	2	1	2	1
Suction Line OD (in.)	1 1/8	1 3/8	1 1/8	1 5/8	1 3/8	1 5/8	1 3/8	2 1/8
Liquid Line OD (in.)	5/8	7/8	5/8	7/8	5/8	7/8	7/8	7/8
Power Wiring Knockout	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	7/8
Control Wiring Knockout	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Electric Heat Wiring Knockout	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	7/8
Drain Line Fitting PVC Stub	3/4	3/4	3/4	3/4	3/4	3/4	3/4	7/8 <sup>1</sup>
<b>BLOWER OUTLET</b>								
Number	1	1	1	1	1	2	2	2
Width	13.4	15.9	15.9	18.9	18.9	15.9	15.9	22
Length	15.6	18.6	18.6	21.6	21.6	18.6	18.6	22
<b>RETURN AIR INLET</b>								
Width	20.5	20.5	20.5	27.3	27.3	19.2	19.2	33.2
Length	52.0	52.0	52.0	71.9	71.9	93.4	93.4	95.6

<sup>1</sup> 7/8 In Steel pipe

### Minimum Clearances

Minimum Clearances	
Top with Supply Air Opening <sup>1</sup>	24"
Front with Return Air Opening	24"
Right Side with access for Piping, Power & Control Wiring Connections <sup>2</sup>	24"
Left Side	24"
Rear <sup>3</sup>	N/A
Bottom <sup>4</sup>	N/A

<sup>1</sup> This dimension will vary if an electric heater, a supply air plenum or a base is used.

<sup>2</sup> This dimension is required for normal installation and service.

<sup>3</sup> Although no clearance is required for service and operation, some clearance may be required for routing the power and control wiring.

<sup>4</sup> Allow enough clearance to trap the condensate drain line.

**Note:** If the coil has to be removed, the blower section can be unbolted and set aside and the coil can be lifted out the top of the evaporator section.

Project Name: Cherokee Hills Club House

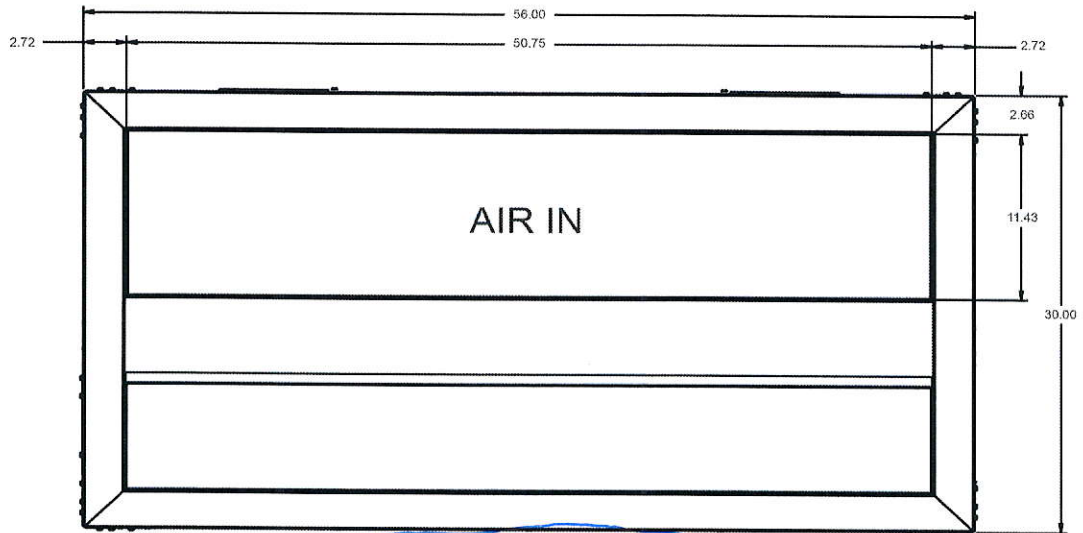
Unit Model #: J10NMC00D2BAA3

Quantity: 2

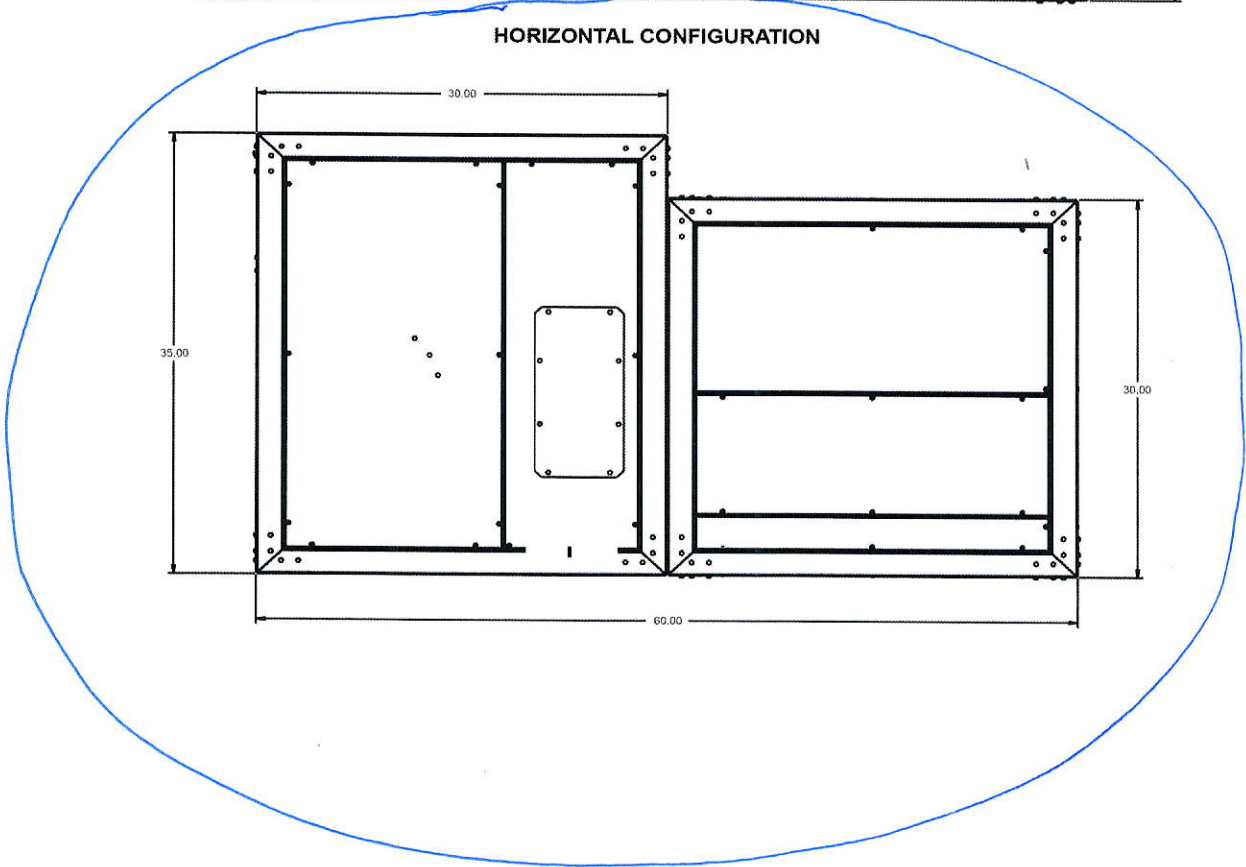
System: J10NMC00D2BAA3 (2)

Dimensions 7.5 to 10 Ton P2

### BOTTOM VIEW



### HORIZONTAL CONFIGURATION



Project Name: Cherokee Hills Club House

Unit Model #: J10NMC00D2BAA3

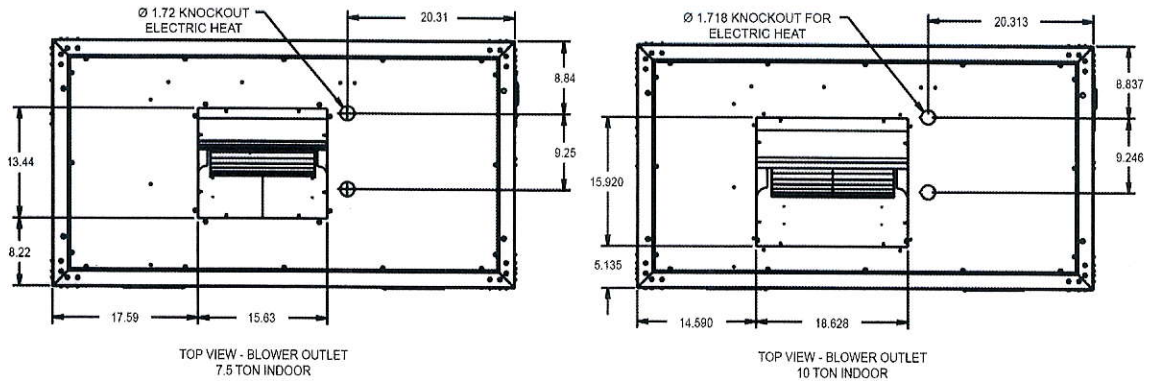
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System: J10NMC00D2BAA3 (2)

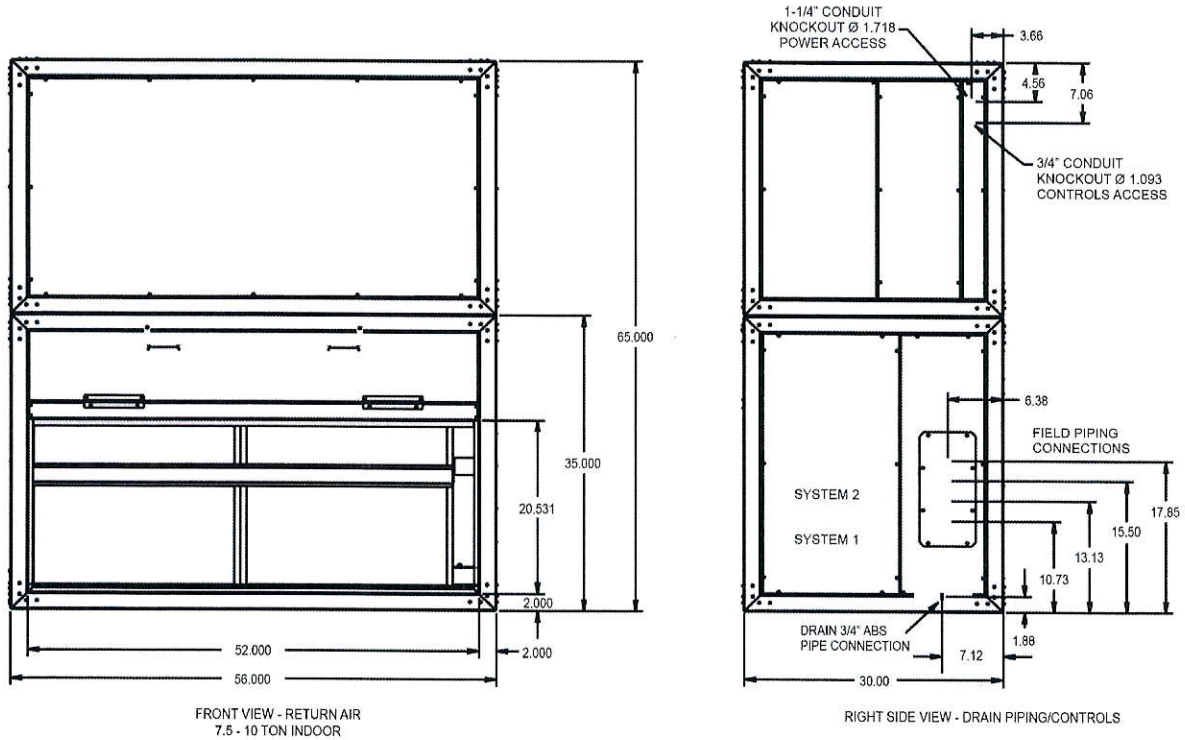
Dimensions 7.5 to 10 Ton P1

Unit Dimensions NS-07/-10, NL090/120, NST07/T10, NWT10, NW-10 and NM120

TOP VIEW



FRONT AND SIDE VIEW



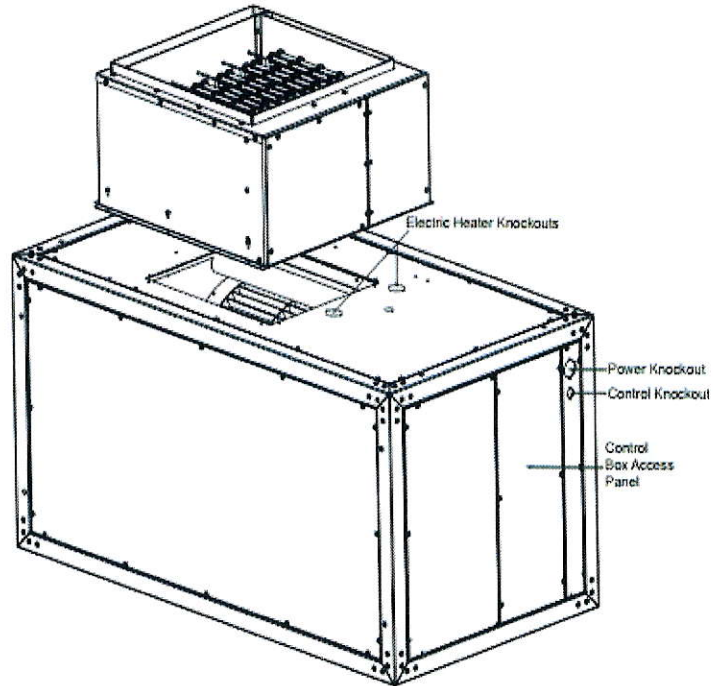
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Unit Model #: J10NMC00D2BAA3

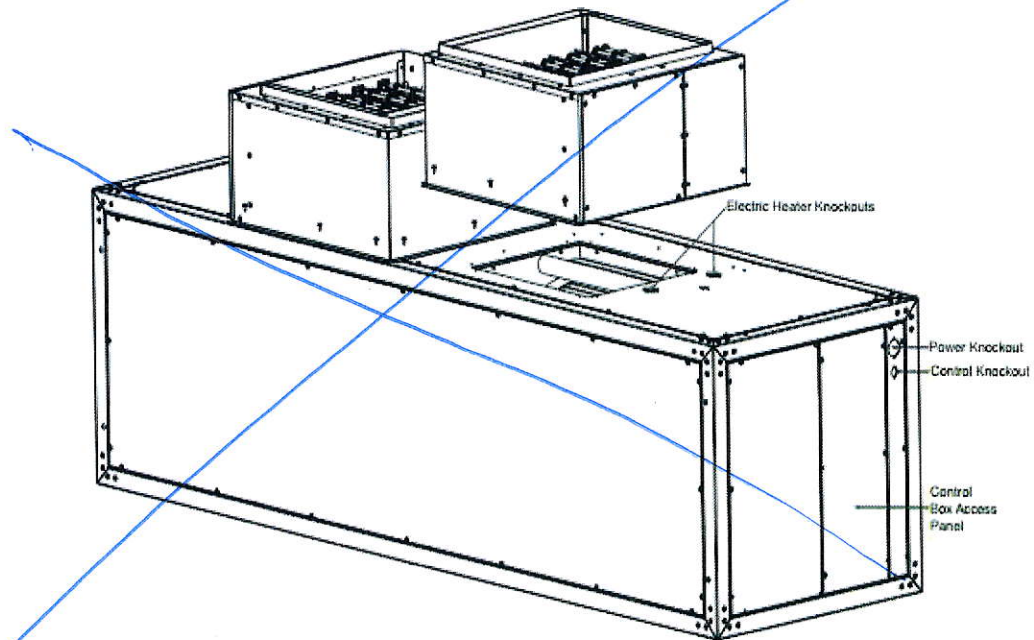
Quantity: 2

System: J10NMC00D2BAA3 (2)

### Commercial Split Electric Heater Installation



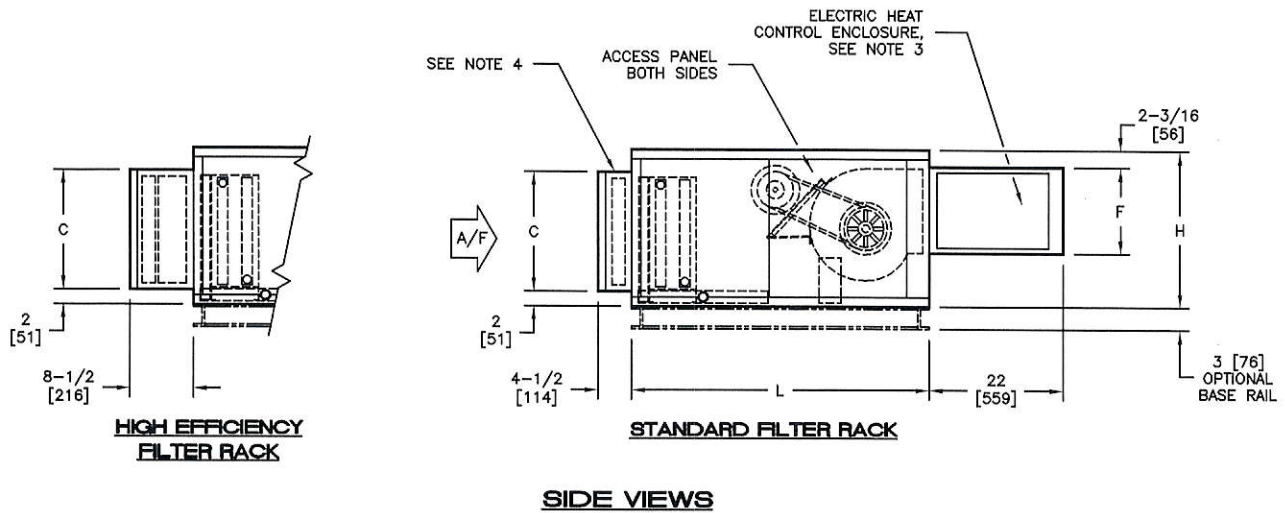
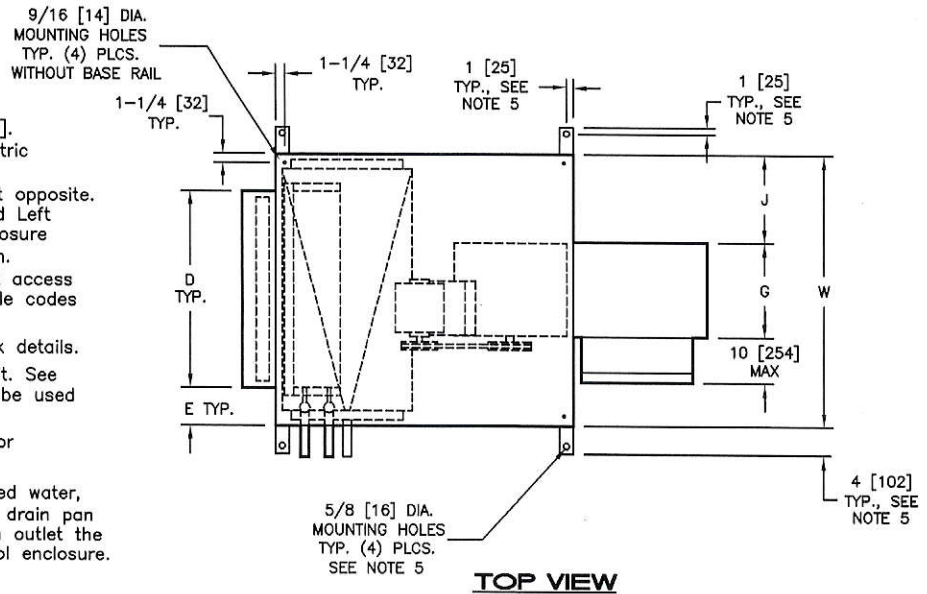
**FIGURE 1 - ACCESSORY INSTALLATION (7-1/2, 10, & 15 TONS)**



**FIGURE 2 - ACCESSORY INSTALLATION (20 TONS)**

**NOTES:**

1. All dimensions are inches [millimeters]. All dimensions are  $\pm 1/4"$  [6mm]. Metric values are soft conversion.
2. Right hand unit shown, left hand unit opposite. Motor/drive location may be specified Left or Right Hand. Standard control enclosure location matches motor/drive position.
3. Provide sufficient clearance to permit access to controls and comply with applicable codes and ordinances.
4. See drawing FR-001-J for filter rack details.
5. Base rail is optional on the base unit. See drawing BR-001-J. Base rails must be used with mixing box.
6. See coil connection detail drawings for coil connection sizes and locations.
7. Units with electric heat only (No chilled water, DX, hot water or steam coils) and a drain pan will be supplied with condensate drain outlet the same side as the electric heat control enclosure.



**DIMENSIONS**

SIZE	FAN SIZE	L	W	H	C	D	E	F	G	J
08	9 X 4 [229 X 102]	40 [1016]	30 [762]	21 [533]	16 [406]	20 [508]	5 [127]	11-7/8 [302]	8-7/8 [225]	10-9/16 [268]
12	9 X 6 [229 X 152]	40 [1016]	36 [914]	21 [533]	16 [406]	25 [635]	5-1/2 [140]	11-7/8 [302]	8-7/8 [225]	13-9/16 [344]
16	10 X 8 [254 X 203]	40 [1016]	44 [1118]	21 [533]	16 [406]	39-1/2 [1003]	2-1/4 [57]	12 [305]	10-7/8 [276]	16-9/16 [421]
20	10 X 10 [254 X 254]	40 [1016]	50 [1270]	21 [533]	16 [406]	44-1/2 [1130]	2-3/4 [70]	12 [305]	13-7/8 [352]	18-1/16 [459]
30	15 X 9 [381 X 229]	46 [1168]	59 [1499]	30 [762]	25 [635]	51 [1295]	4 [102]	16-5/8 [422]	13-7/8 [352]	22-9/16 [573]
40	15 X 11 [381 X 279]	46 [1168]	68 [1727]	30 [762]	25 [635]	59 [1499]	4-1/2 [114]	16-5/8 [422]	15-5/8 [397]	21-11/16 [551]



TITLE: MODEL AHI SERIES C  
BELT DRIVE BLOWER COIL UNIT  
BASIC UNIT - DISCHARGE ARG. 3  
W/ BLOW-THRU ELECTRIC HEAT

DRN BY: JCR	DATE: 9/04/09	SCALE: 1=22	DRAWING NO.
CKD BY: DPB	DATE: 7/28/10	REV: 01	35-80010-J

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## PHYSICAL AND ELECTRICAL DATA

MODEL		TCD30 B31S	TCD36 B31S	TCD42 B31S	TCD48 B31S	TCD60 B31S	TCD30 B41S	TCD36 B41S	TCD42 B41S	TCD48 B41S	TCD60 B41S	TCD36 B51S	TCD48 B51S	TCD60 B51S
Unit Supply Voltage		208-230V, 3 $\phi$ , 60Hz					460V, 3 $\phi$ , 60Hz					575V, 3 $\phi$ , 60Hz		
Normal Voltage Range <sup>1</sup>		187 to 252					432 to 504					540 to 630		
Minimum Circuit Ampacity		11.5	12.1	16.1	18.4	21.2	5.8	6.3	7.1	8.4	10.3	5.4	6.6	7.7
Max. Overcurrent Device Amps <sup>2</sup>		20	20	25	30	35	15	15	15	15	15	15	15	15
Min. Overcurrent Device Amps <sup>3</sup>		15	15	20	20	25	15	15	15	15	15	15	15	15
Compressor	Type	Recip	Recip	Recip	Scroll	Scroll	Recip	Recip	Recip	Scroll	Scroll	Recip	Scroll	Scroll
	Rated Load	8.6	8.6	11.8	13.7	15.9	4.3	4.5	5.2	6.2	7.7	3.8	4.8	5.7
	Locked Rotor	63.0	68.0	88.0	83.1	110.0	30.0	34.0	44.0	41.0	52.0	28.0	33.0	38.9
Crankcase Heater		No	No	No	No	No	No	No	No	No	No	No	No	No
Factory External Discharge Muffler		No	No	Yes	No	No	No	No	Yes	No	No	No	No	No
Fan Diameter Inches		22	22	24	24	26	22	22	24	24	26	22	24	26
Fan Motor	Rated HP	1/8	1/4	1/4	1/4	1/4	1/8	1/4	1/4	1/4	1/4	1/4	1/4	1/4
	Rated Load Amps	0.80	1.30	1.30	1.30	1.30	0.40	0.65	0.65	0.65	0.65	0.58	0.58	0.58
	Nominal RPM	1075	850	850	850	850	1075	850	850	850	850	850	850	850
	Nominal CFM	2950	3275	3500	3500	4300	2850	3200	3650	3650	4075	3300	3550	4125
Coil	Face Area Sq. Ft.	13.83	17.37	18.74	18.74	23.40	13.83	17.37	18.74	18.74	23.40	17.37	18.74	23.40
	Rows Deep	1	1	1	1	1	1	1	1	1	1	1	1	1
	Fins / Inch	23	23	23	23	23	23	23	23	23	23	23	23	23
Liquid Line Set OD (Field Installed)		3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Vapor Line Set OD (Field Installed) <sup>4</sup>		3/4	3/4	7/8	7/8	1-1/8 <sup>‡</sup>	3/4	3/4	7/8	7/8	1-1/8 <sup>‡</sup>	3/4	7/8	1-1/8 <sup>‡</sup>
Unit Charge (Lbs. - Oz.) <sup>5</sup>		4 - 3	4 - 14	5 - 2	4 - 15	5 - 12	4 - 3	4 - 14	5 - 2	4 - 15	5 - 12	4 - 14	4 - 15	5 - 12
Charge Per Foot, Oz.		0.62	0.62	0.67	0.67	0.75	0.62	0.62	0.67	0.67	0.75	0.62	0.67	0.75
Operating Weight Lbs.		155	180	215	200	205	155	180	215	200	205	180	200	205

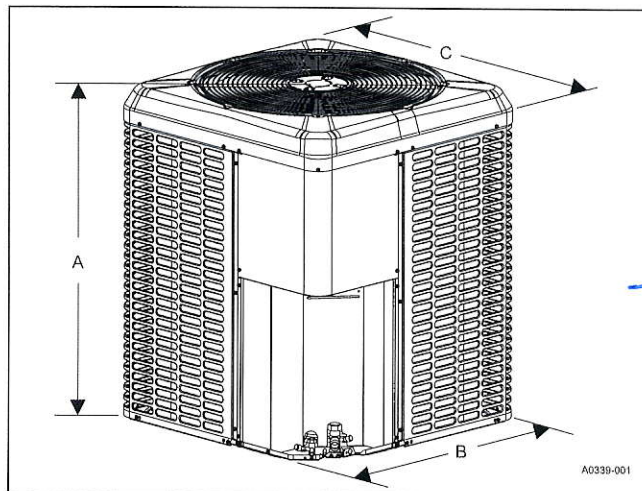
1. Rated in accordance with AHRI Standard 110-2012, utilization range "A".

2. Dual element fuses or HACR circuit breaker. Maximum allowable overcurrent protection.

3. Dual element fuses or HACR circuit breaker. Minimum recommended overcurrent protection.

4. For applications with non-standard vapor line sizes, see the "Applications & Accessories" section of this Technical Guide.

5. The Unit Charge is correct for the outdoor unit, smallest matched indoor unit, and 15 feet of refrigerant tubing. For tubing lengths other than 15 feet, add or subtract the amount of refrigerant, using the difference in actual lineset length (not the equivalent length) multiplied by the per foot value.



### DIMENSIONS

Unit Model	Dimensions (Inches)			Refrigerant Connection Service Valve Size	
	A	B	C	Liquid	Vapor
TCD30B(3,4)1S	30	29-1/4	29-1/4	3/8	3/4
TCD36B(3,4,5)1S	36-1/4	29-1/4	29-1/4		
TCD42B(3,4)1S	33-1/4	35-1/4	31-3/4		7/8
TCD48B(3,4,5)1S	33-1/4	35-1/4	31-3/4		
TCD60B(3,4,5)1S	36-1/4	38	34-1/4		

<sup>‡</sup> Adapter fitting must be field installed for the required 1-1/8" line set.  
 All dimensions are in inches and are subject to change without notice.  
 Overall height is from bottom of base pan to top of fan guard.  
 Overall length and width include screw heads.