



Unit Rating

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

L-095-3-0-0F04-221 : EEDH-E00-JBZ-000-JHABOBH-00-0DB000BOX

Tag: RTU# 4

Job Information

Job Name: Cherokee Casino & Hotel
Job Number:
Site Altitude: 0 ft

Static Pressure

External: 0.75 in. wg.
Evaporator: 0.47 in. wg.
Filters Clean: 0.13 in. wg.
Dirt Allowance: 0.35 in. wg.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	1497.79 MBH	1449.89 MBH
Total Capacity:	989.23	941.33 MBH
Sensible Capacity:	737.22	689.32 MBH
Latent Capacity:	252.01 MBH	
HW Total Cooling Capacity:	508.56 MBH	
Mixed Air Temp:	78.80 °F DB	64.89 °F WB
Entering Air Temp:	80.80 °F DB	65.55 °F WB
Lv Air Temp (Coil):	50.07 °F DB	49.99 °F WB
Lv Air Temp (Unit):	50.07 °F DB	49.99 °F WB
Supply Air Fan:	BT - 2 x 300 @ 8.76 BHP Ea.	
EA Fan RPM / Width:	1196 / 6.810"	
Exhaust Air Fan:	1 x MW4816-30 @ 11.71 BHP Ea.	
EA Fan RPM / Pitch:	1139 / 30°	
Evaporator Coil:	53.1 ft ² / 6 Rows / 12 FPI	
Evaporator Face Velocity:	414.1 fpm	
Energy Recovery Wheel:	1 x ERC-81146	

EER - ARI Listing Information

No ARI Rating Program Exists for Units Over 250 MBH
All AAON Units Are Tested in Accordance With ARI Standards

EER @ ARI Conditions: 12.1
Application EER @ Op. Conditions: 15.4

EER Compressor Only @ ARI Conditions: 15.3
Condensing Unit EER @ Op. Conditions: 13.9

Electrical Data

Rating: 460/3/60
Unit FLA: 210

Minimum Circuit Amp: 219
Maximum Overcurrent: 250

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	2		460	3			21.1
Compressor 2:	2		460	3			33.1
Condenser Fans:	2	3.00	460	3	1170	4.8	
Condenser Pump:	1	3.00	460	3	1760	4.8	
Supply Fan:	2	20.00	460	3	1760	27.0	
Exhaust Fan:	1	15.00	460	3	1170	21.3	
Combustion:	4	0.25	460	1	3450	0.9	
Heatwheel:	1	0.25	460	3	1760	0.8	
Vestibule Heater:	1		460	3		2.1	
Sump Heater:	1		460	3		9.4	

Cabinet Sound Power Levels*

Ave Bands:	63	125	250	500	1000	2000	4000	8000
Charge LW(dB):	87	88	95	89	84	77	70	60
Return LW(dB):	92	93	96	87	89	87	84	80

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.



Energy Wheel Rating

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

1A 1B 1C 1D 2 3 4 5A 5B 5C 6A 6B 6C 7 8 9 10 11 12 13 14A 14B 15 16 17 18 19 20 21 22 23

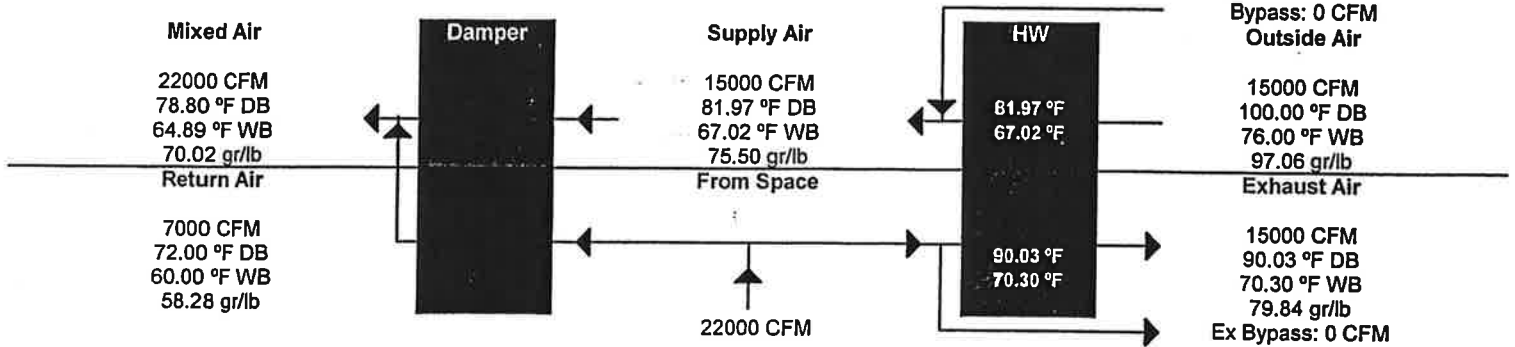
L-095-3-0-0F04-221: EEDH-E00-JBZ-000-JHAB0BH-00-0DB000BOX

Tag: RTU# 4

Job Name **Cherokee Casino & Hot**
Job Number
Site Altitude **0'**

Heat Wheel Type: **Total**
Heat Wheel Model: **ERC-81146**
Heat Wheel Qty: **1**

Summer Conditions



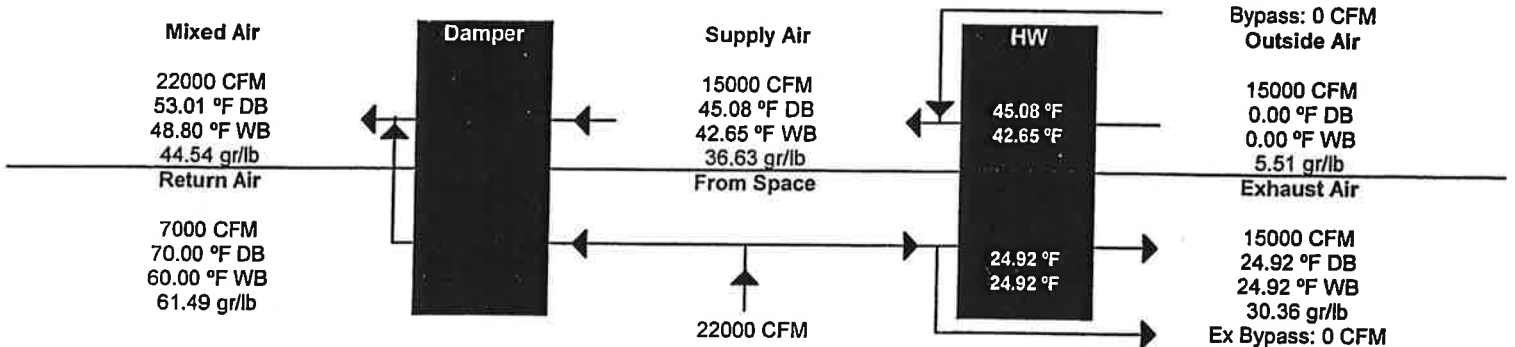
Cooling/Dehumidification

Total Capacity: **508.56 MBH**
Sensible Capacity: **294.20 MBH**
Latent Capacity: **214.36 MBH**

Heating/Humidification

0.00 MBH
0.00 MBH
0.00 MBH

Winter Conditions



Cooling/Dehumidification

Total Capacity: **0.00 MBH**
Sensible Capacity: **0.00 MBH**
Latent Capacity: **0.00 MBH**

Heating/Humidification

1040.54 MBH
722.59 MBH
317.95 MBH

30.0" STAR Plenum



2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
Job Tag: RTU# 4
Rep Firm: 711
Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,760
Diameter x Qty: 30.4 in. x 2
Width%: 100
Tip Speed: 9,519 FPM
Inertia: 90 WR²

OPERATING CONDITIONS:

Air Flow: 22,000 CFM
Static Pressure: 3.31 in. Wg.
Plenum DP: 0.02 in. Wg.
Inlet Grill DP: 0.09 in. Wg.
TSP: 3.42 in. Wg.
Site Altitude: 0.00 Ft
TSP @ Sea Level: 3.42 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 20 x 2 / No
Frame Size: 256T
Nominal RPM: 1760
VAC/PH/HZ: 460/3/60
Efficiency: Premium / 0.931
Enclosure Type: ODP
Max Inertial Load: 99 WR²

FAN PERFORMANCE:

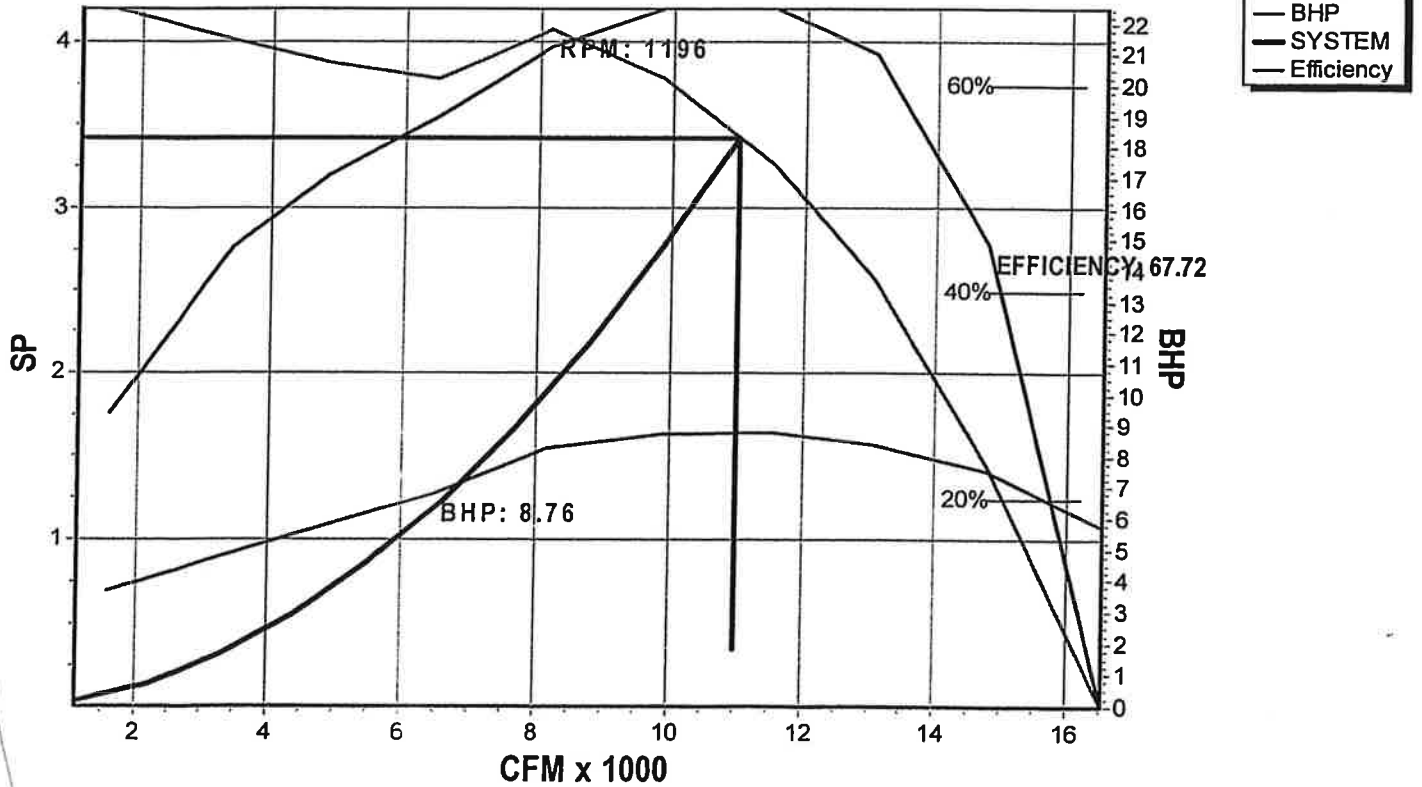
RPM: 1196
BHP: 8.76
Efficiency: 67.7%
In/Out Velocity: 1852/2434 FPM
Plenum Out Velocity: 366 FPM

FAN SOUND POWER x 2 Fans (In/Out):

Octave Band:	(Re 10 ⁻¹² watts)							
	1	2	3	4	5	6	7	8
	89	90	90	89	89	86	82	77
	94	93	96	98	96	92	88	82

SOUND POWER A-Weighted: 93 / 99 dB

Fan Model: 300 @ 1196 RPM and 100% Width
Design Conditions: 11000 CFM @ 3.42" SP





4816-30 Axial Fan

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.36 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
 Job Tag: RTU# 4
 Rep Firm: 711
 Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,170
 Diameter x Qty: 48.0 in. x 1
 CFM: 22000
 Tip Speed: 14,313 FPM
 Inertia: 38 WR²

OPERATING CONDITIONS:

Air Flow: 22,000 CFM
 Static Pressure: 1.55 in. Wg.
 Relief Dampers DP: 0.10 in. Wg.
 TSP: 1.65 in. Wg.
 Site Altitude: 0.00 Ft
 TSP @ Sea Level: 1.65 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 15 / No
 Frame Size: 284T
 Nominal RPM: 1170
 VAC/PH/Hz: 460/3/60
 Efficiency: Premium / 0.937
 Enclosure Type: ODP
 Max Inertial Load: 200 WR²

FAN PERFORMANCE:

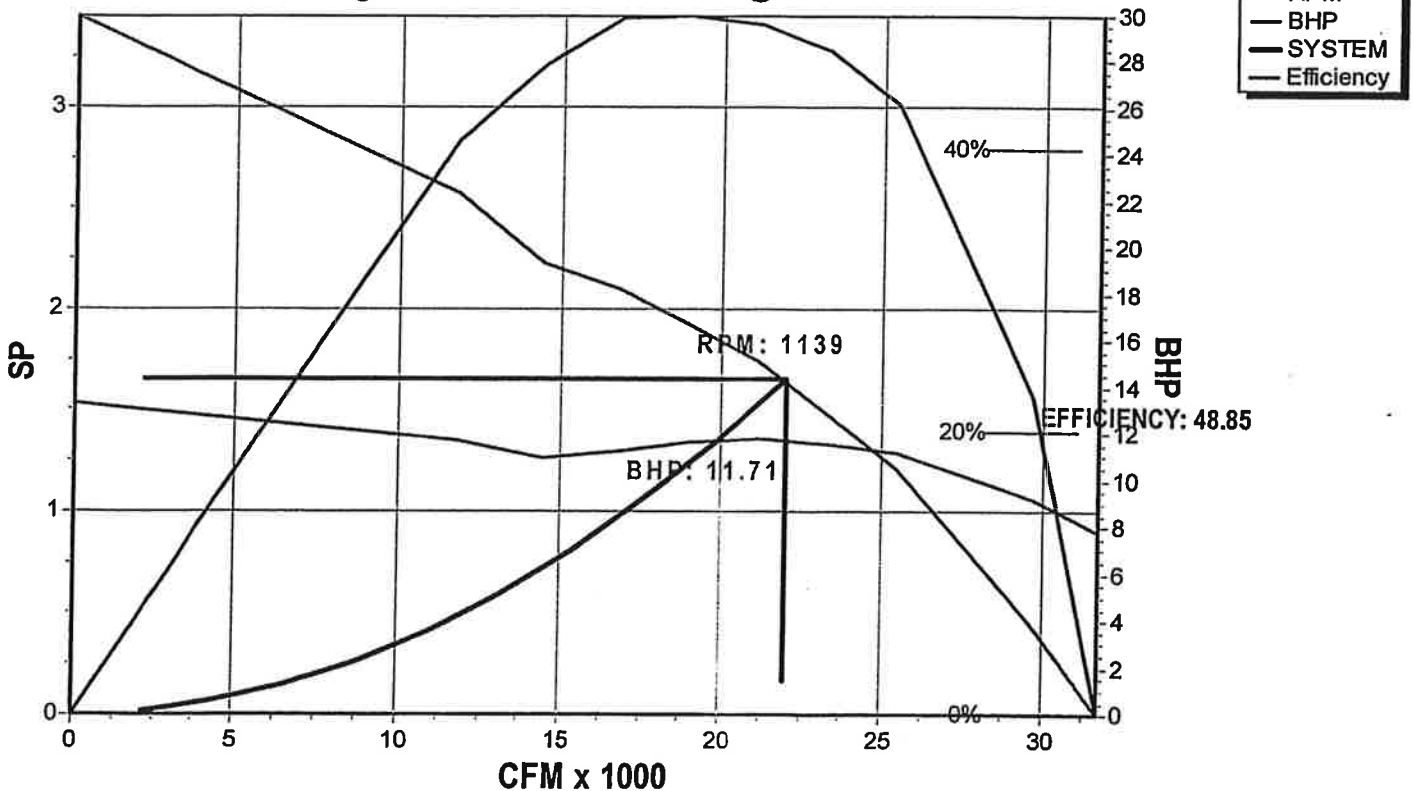
RPM: 1139
 BHP: 11.71
 Efficiency: 48.9%
 In/Out Velocity: 763/885 FPM
 Plenum Out Velocity: 366 FPM

FAN SOUND POWER (Inlet/Outlet):

Octave Band:		(Re 10 ⁻¹² watts)							
1	2	3	4	5	6	7	8		
91	92	100	93	91	88	85	82		
91	92	100	93	91	88	85	82		

SOUND POWER A-Weighted: 96 / 96 dB

Fan Model: MW4816-30 @ 1139 RPM and 100% Width
 Design Conditions: 22000 CFM @ 1.65" SP





Unit Submittal

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

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Tag: RTU# 4

Job Name:
Job Number:

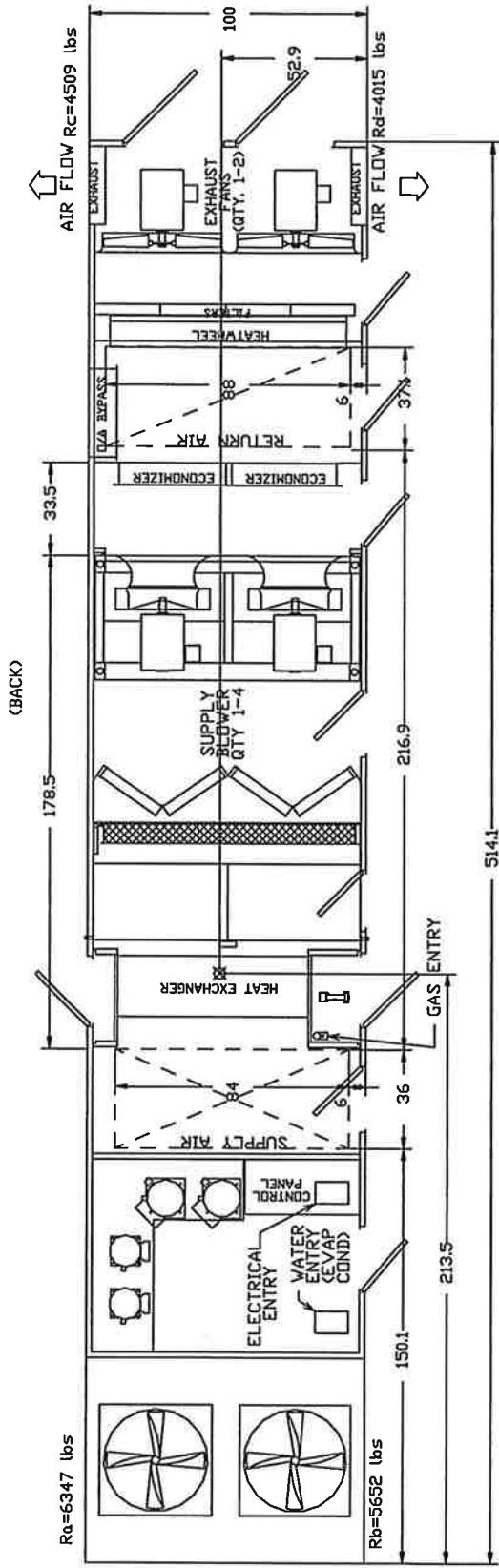
Cherokee Casino & Hotel

Unit Submittal For:
Unit Submittal Date:

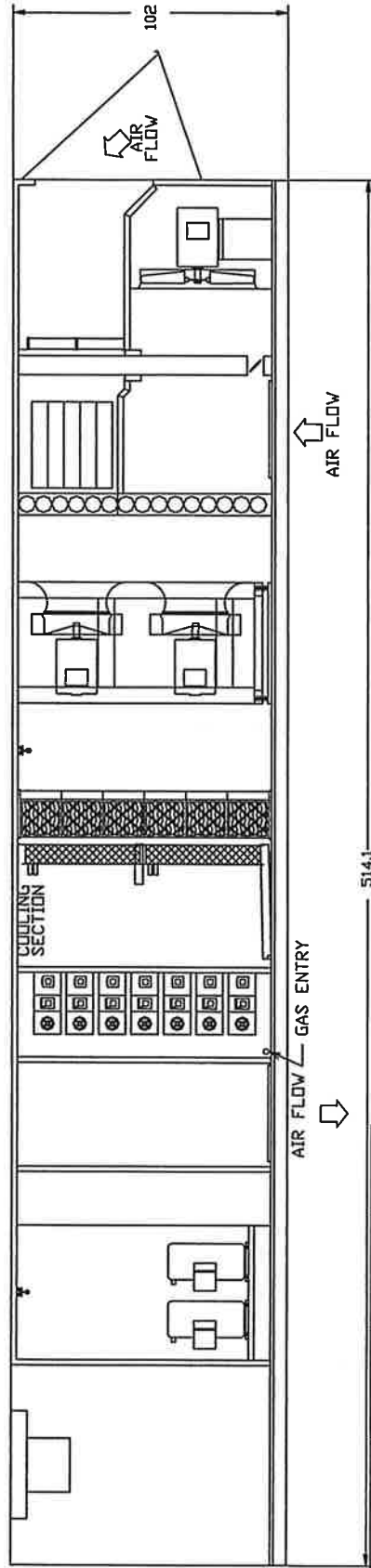
Cherokee Nation Enterprises
August 29, 2003

	Base Option	Description
R	Series	Roof Top Unit
L	Generation	Tenth Generation
095	Unit Size	Ninety Five
3	Voltage	460V/3Ø/60Hz
0	Inter. Protection	Standard
0	Cooling - Style	Blow Thru - R22 Dual Circuitied Compressors
F	Cooling - Configuration	Evap Cond w/ 6R Coil High CFM
0	Cooling - Coating	Std
4	Cooling - Staging	4 Stage
2	Heating - Type	Nat. Gas Single Rack (SR)
2	Heating - Designation	Heat 2 - 4 Heaters
1	Heating - Staging	2 Stage

	Feature Option	Description
E	1A. Return / Outside Air Section	Heat Wheel Medium (Total) (1-81 inch wheel)
E	1B. R/A Blower Configuration	1 Blower (Prem eff mtr) w/VFD
D	1C. R/A Blower	Blower D (48" Dia 16 Blade)
H	1D. R/A Motor	15 hp (1170 rpm)
E	2. O/A Control	DDC Econ Control
0	3. Discharge Locations	Bottom Discharge
0	4. Return Locations	Bottom Return
J	5A. S/A Blower Configuration	2 Blowers w/(Prem eff mtr) w/1-VFD
B	5B. S/A Blower	Blower B (30" Diameter)
Z	5C. S/A Motor	20.0 hp (1760 rpm)
0	6A. Pre-Filter	2" Pleated (Std Position)
0	6B. Final Filter	Std
0	6C. Filter Options	Std
J	7. Refrig. Control	5 MTDR On & Off + 20 STDR + 115V Outlet Factory Wired
H	8. Refrig. Options	HGB Lead + HGB Lag + MHGR
A	9. Refrig Accessories	Sight Glass
B	10. Power Options	400 Amps Power Switch
0	11. Safety Options	Std
B	12. Controls	Phase & Brown Out Protection
H	13. Special Controls	Field Installed DDC Controls by Others
0	14A. Preheat Configuration	Std (No Preheat)
0	14B. Preheat Sizing	Std (No Preheat)
0	15. Option Boxes	Std
D	16. Cabinet Options	SS Drain Pans + Marine Lights
B	17. Cabinet Options	Burglar Bars (BB)
0	18. Customer Code	Std
0	19. Code Options	Std ETL USA Listing
0	20. Unit Splits	Std (One Piece Unit)
B	21. Evap and Water Condenser	Sump and Vestibule Heaters (Evap Cond)
0	22. Blank	Std
0	23. Type	Special Price Authorization & Gray Paint



514.1
PLAN VIEW (FRONT)



514.1
ELEVATION VIEW

SECTION CLEARANCES	FRONT	BACK	END
CONDENSER	100	100	100
GAS HEAT EXCHANGER	100	100	0
COOLING	100	100	0
HEAT WHEEL	100	100	100

AADON inc.

TULSA OKLAHOMA

Total Weight: 20523 / Shipping Weight: 17523

Configuration: RL-095-3-0-0F04-221EEDH-E00-JBZ-000-JHAB0BH-00-0DB000BOX

JOB NAME: Cherokee Casino & Hotel

PURCHASER: Cherokee Nation Enterprises

PURCHASE ORDER: 2766

DATE: 08/29/2003

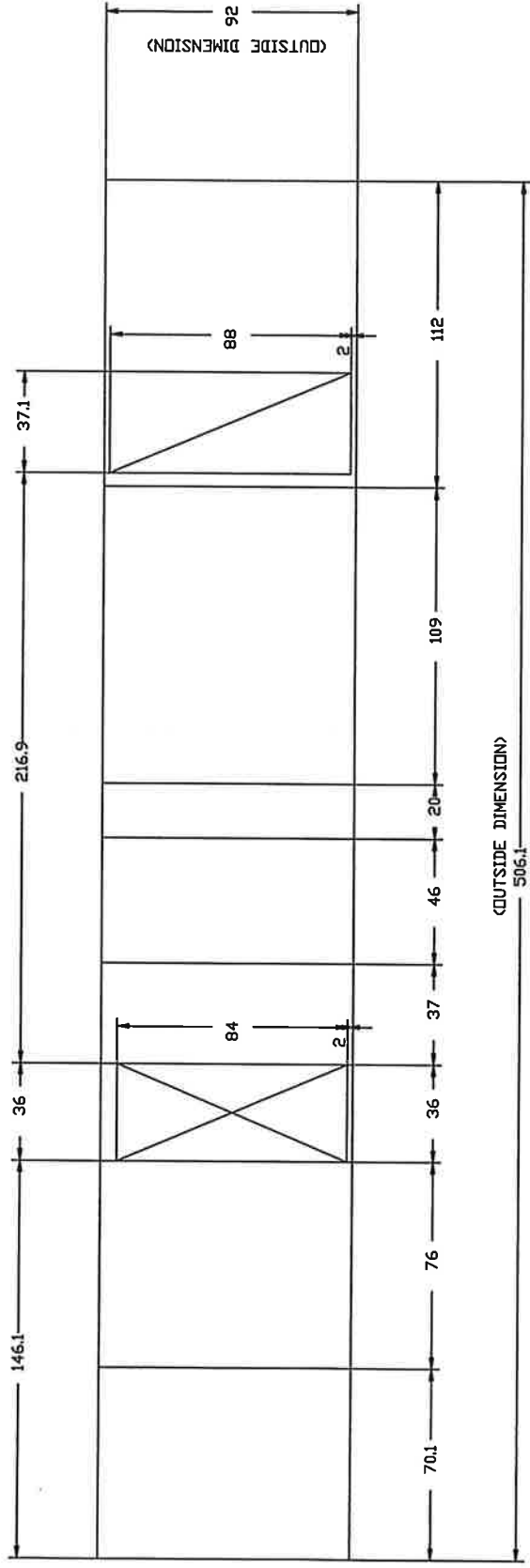
UNIT TAG: RTU# 4

SERIAL NO.:

Software SN:

Ordered By: Rob Tels

0318096



BASE

<p>AADON inc. TULSA OKLAHOMA</p> <p>Total Weight: 20523 / Shipping Weight: 17523</p>		<p>Configurator: RL-095-3-0-0F04-E21EEDH-E00-JBZ-000-JHAB08H-00-0DB000BOX</p>		<p>UNIT TAG: RTU# 4</p>
		<p>JOB NAME: Cherokee Casino & Hotel</p>		<p>SERIAL NO: 0318096</p>
<p>PURCHASER: Cherokee Nation Enterprises</p>		<p>PURCHASE ORDER: 2766</p>		<p>DATE: 08/29/2003</p>
<p>Rep Contact:</p>		<p>Ordered By: Rob Tels</p>		<p>Software S/N: 0318096</p>



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1A 1B 1C 1D 2 3 4 5A 5B 5C 6A 6B 6C 7 8 9 10 11 12 13 14A 14B 15 16 17 18 19 20 21 22 23
RL-045-3-0-0F04-211:FFCE-E00-JFW-000-JHAA0BH-00-0DB000BOX
 Tag: RTU# 7

Job Information

Job Name: Cherokee Casino & Hotel
 Job Number:
 Site Altitude: 0 ft

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 19685 / 17385 lbs.**
 Supply CFM/ESP: 15000 / 0.75 in. wg.
 Pre-Filter FV / Qty: 300.00 fpm / 18
 Exhaust CFM/ESP/TSP: 15000 / 0.50 / 1.44 in. wg.
 Outside CFM: 15000
 Ambient Temperature: 100 °F DB / 76 °F WB
 Return Temperature: 72 °F DB / 60 °F WB

Static Pressure

External: 0.75 in. wg.
 Evaporator: 0.40 in. wg.
 Filters Clean: 0.11 in. wg.
 Dirt Allowance: 0.35 in. wg.

Economizer: 0.14 in. wg.
 Heating: 0.18 in. wg.
 Cabinet: 0.27 in. wg.
 Heatwheel: 0.84 in. wg.
 Total: 3.04 in. wg.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	1140.37 MBH	1111.03 MBH
Total Capacity:	500.14	470.81 MBH
Sensible Capacity:	424.28	394.94 MBH
Latent Capacity:	75.87 MBH	
HW Total Cooling Capacity:	640.22 MBH	
Mixed Air Temp:	78.27 °F DB	64.52 °F WB
Entering Air Temp:	80.07 °F DB	65.12 °F WB
Lv Air Temp (Coil):	54.04 °F DB	53.91 °F WB
Lv Air Temp (Unit):	54.04 °F DB	53.91 °F WB
Supply Air Fan:	BT - 2 x 270 @ 5.29 BHP Ea.	
A Fan RPM / Width:	1232 / 5.701"	
Exhaust Air Fan:	2 x MW4212-25 @ 3.71 BHP Ea.	
EA Fan RPM / Pitch:	1139 / 25°	
Evaporator Coil:	37.5 ft ² / 6 Rows / 12 FPI	
Evaporator Face Velocity:	400.0 fpm	
Energy Recovery Wheel:	2 x ERC-7490	

Heating Section

PreHeat Type: Std (No Preheat)
 Heating Type: Nat. Gas Heat
 Total Capacity: 258.3 MBH
 OA Temp: 0.0 DB / 0.0 °F WB
 RA Temp: 70.0 °F DB / 60.0 °F WB
 Entering Air Temp: 54.3 °F DB / 49.8 °F WB
 Leaving Air Temp: 70.3 °F DB / 56.4 °F WB
 Input: 303.9 MBH
 Heater Qty (Hi/Low): 0 / 2
 Consumption: 303.9 MBH
 Operation: Single Bank

EER - ARI Listing Information

No ARI Rating Program Exists for Units Over 250 MBH
 All AAON Units Are Tested in Accordance With ARI Standards

EER @ ARI Conditions: 12.6
 Application EER @ Op. Conditions: 23.0

EER Compressor Only @ ARI Conditions: 17.8
 Condensing Unit EER @ Op. Conditions: 14.9

Electrical Data

Rating: 460/3/60
 Unit FLA: 117

Minimum Circuit Amp: 120
 Maximum Overcurrent: 125

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	4		460	3			12.8
Condenser Fans:	1	2.00	460	3	1170	3.4	
Condenser Pump:	1	3.00	460	3	1760	4.8	
Supply Fan:	2	10.00	460	3	1760	14.0	
Exhaust Fan:	2	5.00	460	3	1170	8.1	
Combustion:	2	0.25	460	1	3450	0.9	
Heatwheel:	2	0.25	460	3	1760	0.8	
Vestibule Heater:	1		460	3		2.1	
Sump Heater:	1		460	3		9.4	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Charge LW(dB):	88	87	94	86	82	77	72	65
urn LW(dB):	93	93	95	86	88	87	84	83

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.



Energy Wheel Rating

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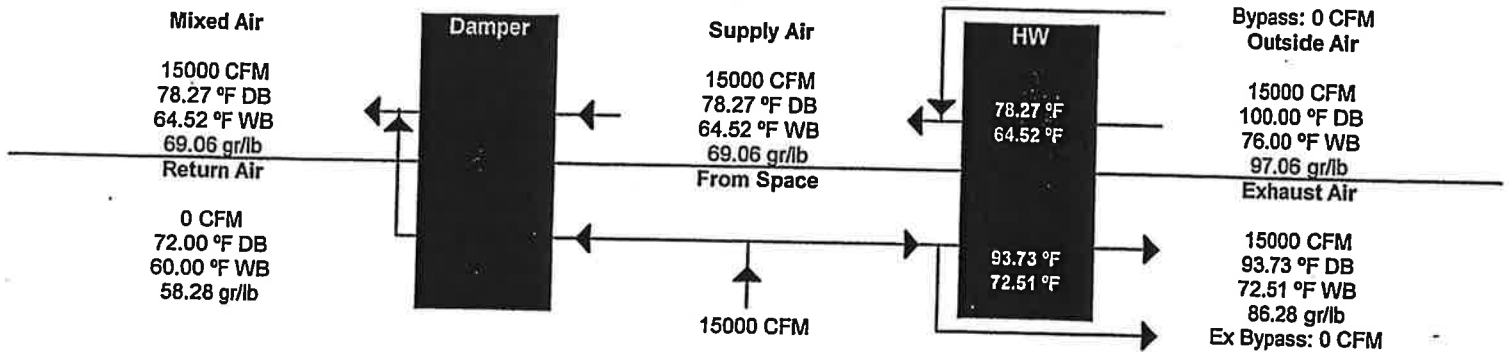
RL-045-3-0-0F04-211: FFCE-E00-JFW-000-JHAA0BH-00-0DB000BOX
Tag: RTU# 7

Job Name Cherokee Casino & Hot
Job Number
Site Altitude 0'

Heat Wheel Type:
Heat Wheel Model:
Heat Wheel Qty: 2

Total
ERC-7490
2

Summer Conditions



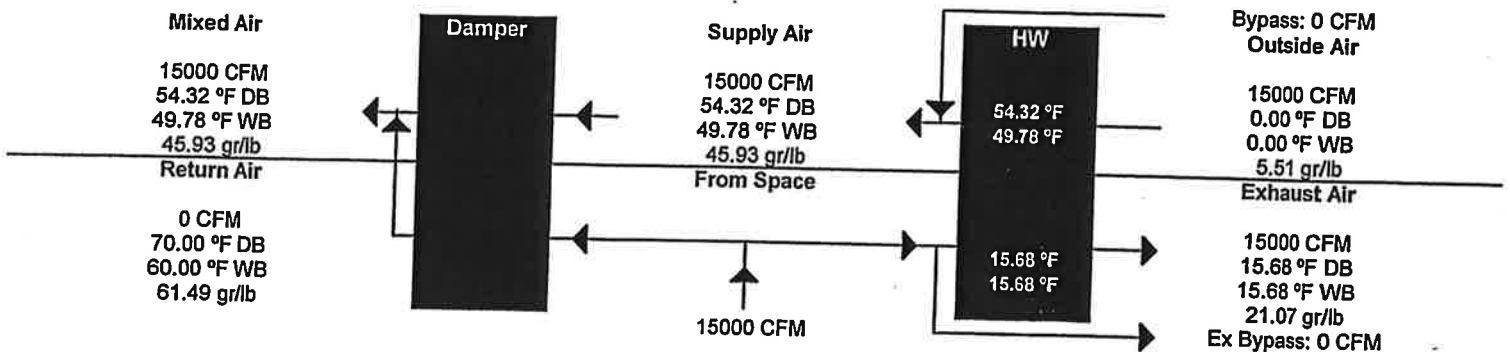
Cooling/Dehumidification

Total Capacity: 640.22 MBH
Sensible Capacity: 354.21 MBH
Latent Capacity: 286.01 MBH

Heating/Humidification

0.00 MBH
0.00 MBH
0.00 MBH

Winter Conditions



Cooling/Dehumidification

Total Capacity: 0.00 MBH
Sensible Capacity: 0.00 MBH
Latent Capacity: 0.00 MBH

Heating/Humidification

1284.97 MBH
871.76 MBH
413.21 MBH



27.0" STAR Plenum

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AAONEcat32 Ver. 4.35 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
 Job Tag: RTU# 7
 Rep Firm: 711
 Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,760
 Diameter x Qty: 27.4 in. x 2
 Width%: 93
 Tip Speed: 8,838 FPM
 Inertia: 16 WR²

OPERATING CONDITIONS:

Air Flow: 15,000 CFM
 Static Pressure: 2.92 in. Wg.
 Plenum DP: 0.01 in. Wg.
 Inlet Grill DP: 0.11 in. Wg.
 TSP: 3.04 in. Wg.
 Site Altitude: 0.00 Ft
 TSP @ Sea Level: 3.04 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 10 x 2 / No
 Frame Size: 215T
 Nominal RPM: 1760
 VAC/PH/HZ: 460/3/60
 Efficiency: Premium / 0.918
 Enclosure Type: ODP
 Max Inertial Load: 51 WR²

FAN PERFORMANCE:

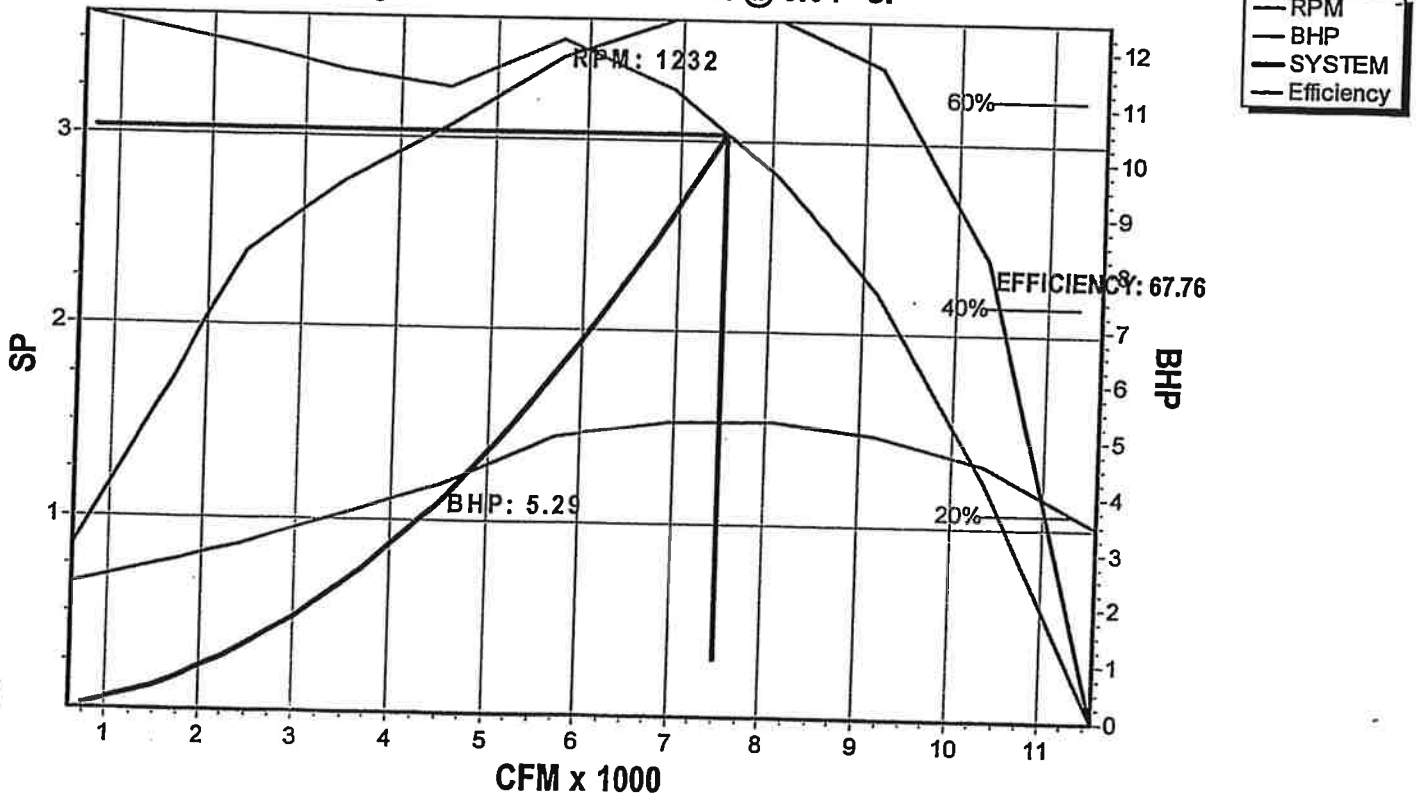
RPM: 1232
 BHP: 5.29
 Efficiency: 67.8%
 In/Out Velocity: 1958/2049 FPM
 Plenum Out Velocity: 250 FPM

FAN SOUND POWER x 2 Fans (In/Out):

Octave Band:	(Re 10 ⁻¹² watts)							
	1	2	3	4	5	6	7	8
	89	87	86	84	84	85	84	84
	91	90	93	94	92	90	88	85

SOUND POWER A-Weighted: 93 / 97 dB

Fan Model: 270 @ 1232 RPM and 93% Width
 Design Conditions: 7500 CFM @ 3.04" SP





4212-25 Axial Fan

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AAONEcat32 Ver. 4.35 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
 Job Tag: RTU# 7
 Rep Firm: 711
 Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,170
 Diameter x Qty: 42.0 in. x 2
 CFM: 7500
 Tip Speed: 12,524 FPM
 Inertia: 18 WR²

OPERATING CONDITIONS:

Air Flow: 15,000 CFM
 Static Pressure: 1.34 in. Wg.
 Relief Dampers DP: 0.10 in. Wg.
 TSP: 1.44 in. Wg.
 Site Altitude: 0.00 Ft
 TSP @ Sea Level: 1.44 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 5 x 2 / No
 Frame Size: 215T
 Nominal RPM: 1170
 VAC/PH/HZ: 460/3/60
 Efficiency: Premium / 0.893
 Enclosure Type: ODP
 Max Inertial Load: 71 WR²

FAN PERFORMANCE:

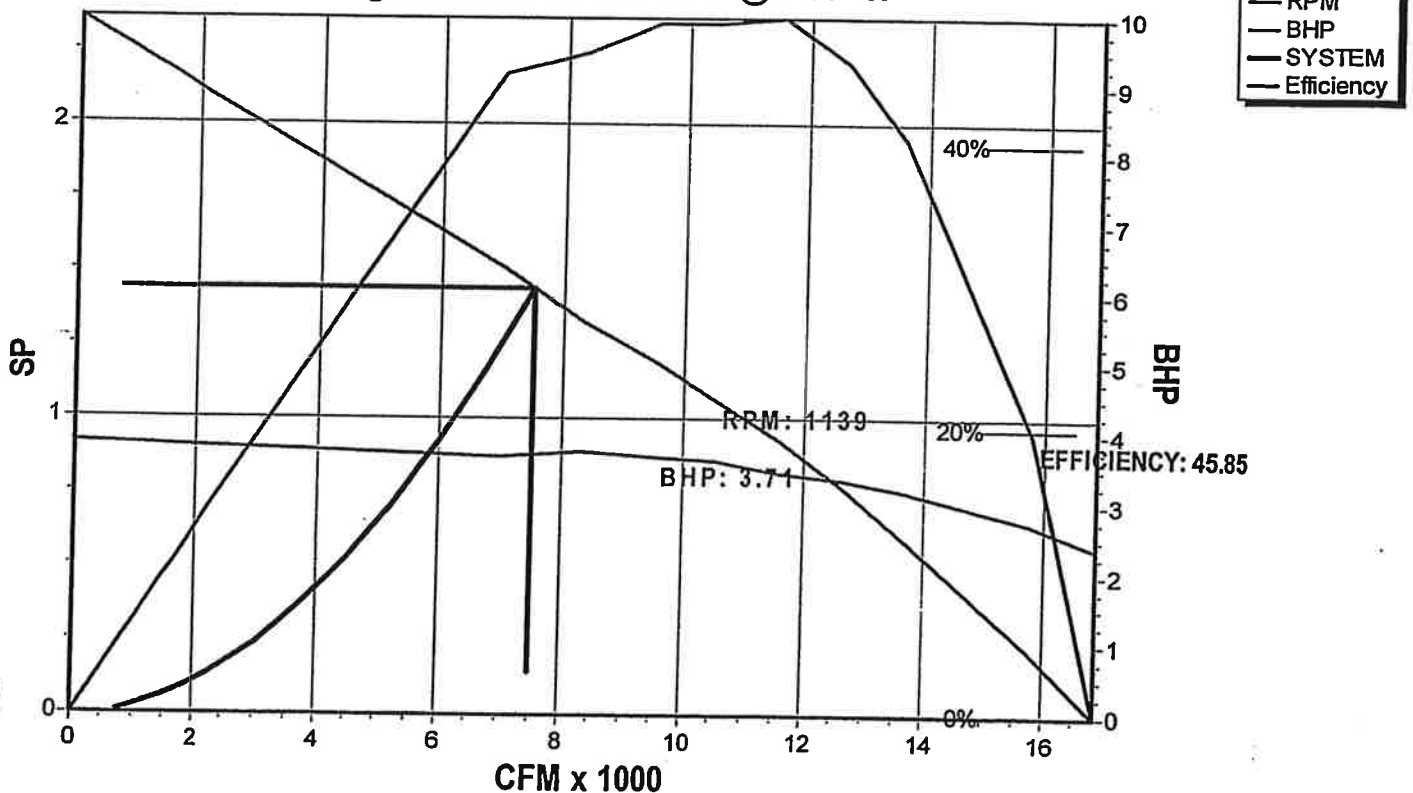
RPM: 1139
 BHP: 3.71
 Efficiency: 45.8%
 In/Out Velocity: 316/366 FPM
 Plenum Out Velocity: 250 FPM

FAN SOUND POWER x 2 Fans (In/Out):

Octave Band:	(Re 10 ⁻¹² watts)							
	1	2	3	4	5	6	7	8
	91	92	100	93	91	88	85	82
	91	92	100	93	91	88	85	82

SOUND POWER A-Weighted: 96 / 96 dB

Fan Model: MW4212-25 @ 1139 RPM and 100% Width
 Design Conditions: 7500 CFM @ 1.44" SP





Unit Submittal

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L-045-3-0-0F04-211:FFCE-E00-JFW-000-JHAA0BH-00-0DB000BOX
Tag: RTU# 7

Job Name:
Job Number:

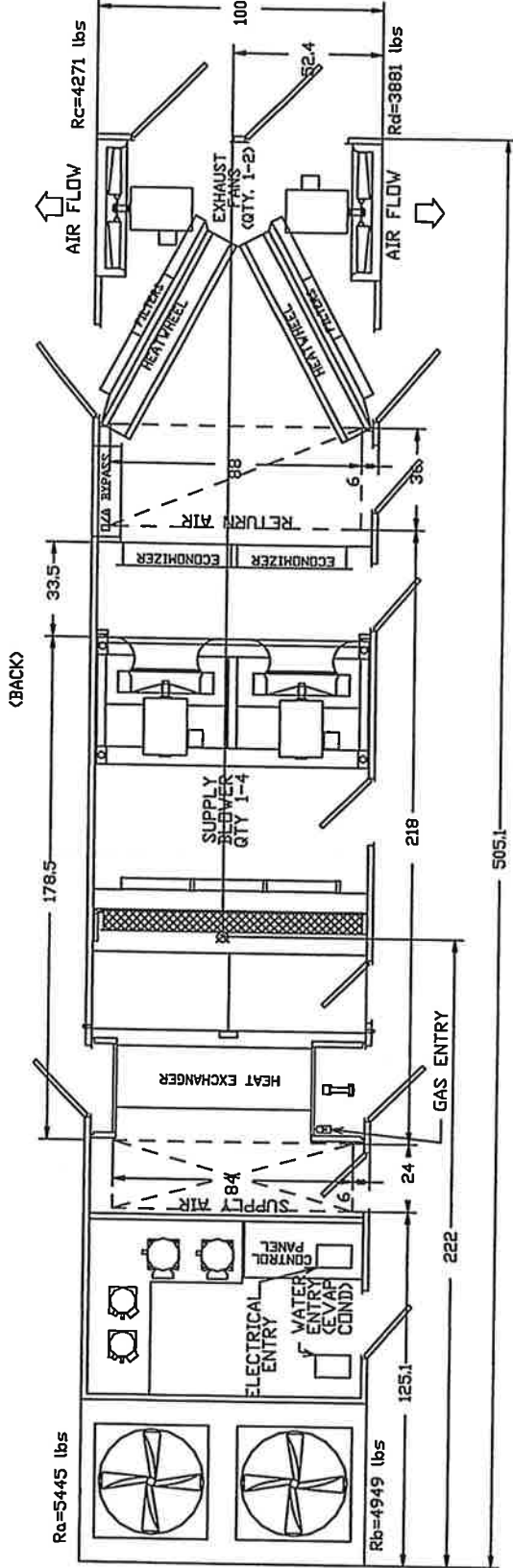
Cherokee Casino & Hotel

Unit Submittal For:
Unit Submittal Date:

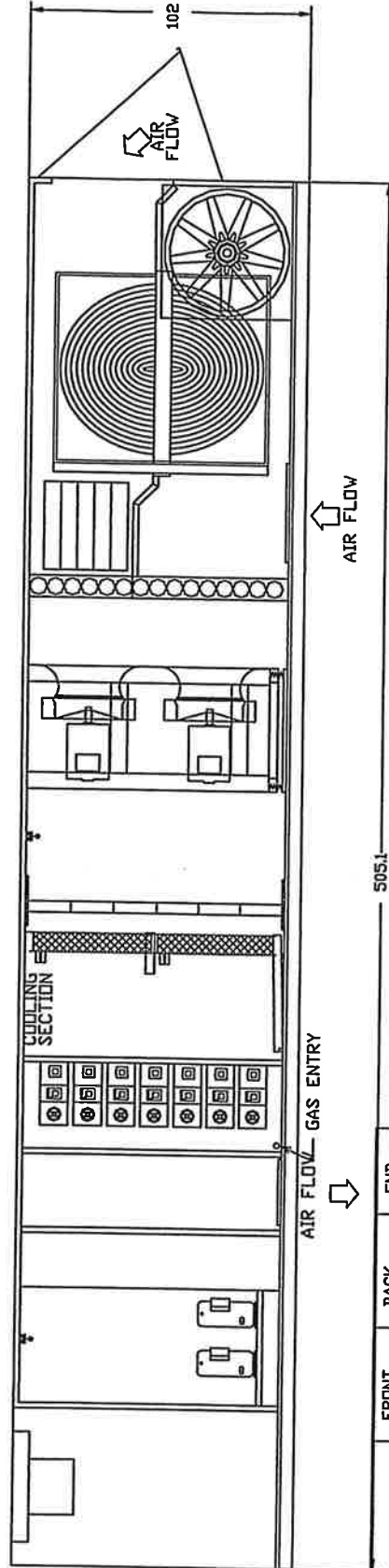
Cherokee Nation Enterprises
August 29, 2003

	Base Option	Description
R	Series	Roof Top Unit
L	Generation	Tenth Generation
045	Unit Size	Forty Five
3	Voltage	460V/3Ø/60Hz
0	Inter. Protection	Standard
0	Cooling - Style	Blow Thru - R22 Dual Circuited Compressors
F	Cooling - Configuration	Evap Cond w/ 6R Coil High CFM
0	Cooling - Coating	Std
4	Cooling - Staging	4 Stage
2	Heating - Type	Nat. Gas Single Rack (SR)
1	Heating - Designation	Heat 1 - 2 Heaters
1	Heating - Staging	2 Stage

	Feature Option	Description
F	1A. Return / Outside Air Section	Heat Wheel Large (Total) (2-74 inch wheel)
F	1B. R/A Blower Configuration	2 Blowers (Prem eff mtr)/w/ 2-motors 1-VFD
C	1C. R/A Blower	Blower C (42" Dia 12 Blade)
E	1D. R/A Motor	5.0 hp (1170 rpm)
E	2. O/A Control	DDC Econ Control
0	3. Discharge Locations	Bottom Discharge
0	4. Return Locations	Bottom Return
J	5A. S/A Blower Configuration	2 Blowers w/(Prem eff mtr) w/1-VFD
F	5B. S/A Blower	Blower A (27" Diameter) W/ Damper
W	5C. S/A Motor	10 hp (1760 rpm)
0	6A. Pre-Filter	2" Pleated (Std Position)
0	6B. Final Filter	Std
0	6C. Filter Options	Std
J	7. Refrig. Control	5 MTDR On & Off + 20 STDR + 115V Outlet Factory Wired
H	8. Refrig. Options	HGB Lead + HGB Lag + MHGR
A	9. Refrig Accessories	Sight Glass
A	10. Power Options	225 Amps Power Switch
0	11. Safety Options	Std
B	12. Controls	Phase & Brown Out Protection
H	13. Special Controls	Field Installed DDC Controls by Others
0	14A. Preheat Configuration	Std (No Preheat)
0	14B. Preheat Sizing	Std (No Preheat)
0	15. Option Boxes	Std
D	16. Cabinet Options	SS Drain Pans + Marine Lights
B	17. Cabinet Options	Burglar Bars (BB)
0	18. Customer Code	Std
0	19. Code Options	Std ETL USA Listing
0	20. Unit Splits	Std (One Piece Unit)
B	21. Evap and Water Condenser	Sump and Vestibule Heaters (Evap Cond)
0	22. Blank	Std
0	23. Type	Special Price Authorization & Gray Paint



505.1
PLAN VIEW (FRONT)



505.1
ELEVATION VIEW

SECTION CLEARANCES	FRONT	BACK	END
CONDENSER	100	100	100
GAS HEAT EXCHANGER	100	100	0
COOLING	100	100	0
HEAT WHEEL	100	100	100

AAON inc.

TULSA OKLAHOMA

Total Weight: 18546 / Shipping Weight: 16246

Configurator: RL-045-3-0-0F04-211FFBE-E00-JFV-000-JHAA0BH-00-0D8000BOX

JOB NAME: Cherokee Casino & Hotel

PURCHASER: Cherokee Nation Enterprises

PURCHASE ORDER: 2766

Rep Contact:

Ordered By: Rob Tels

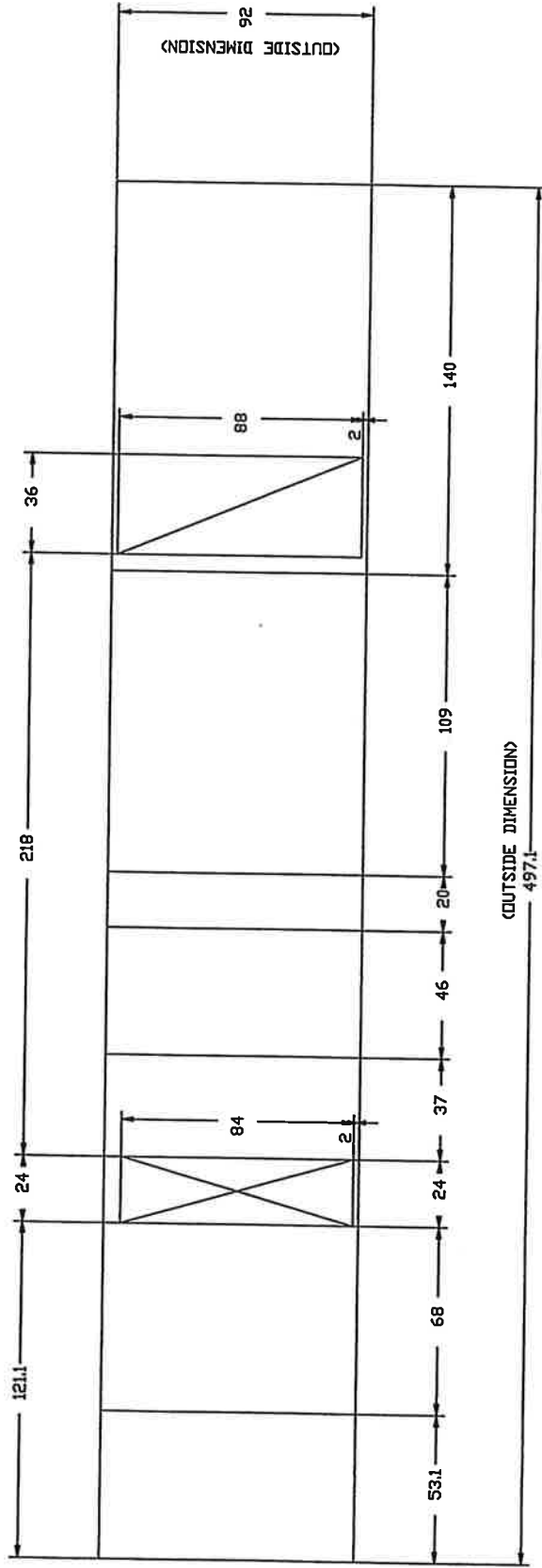
UNIT TAG: RTU# 7

SERIAL NO:

DATE: 08/29/2003

Software SN:

0318096



BASE

AAON inc.

TULSA OKLAHOMA

Total Weight: 18546 / Shipping Weight: 16246

Configurator: RL-045-3-0-0F04-211FFBE-E00-JFV-000-JHAA0BH-00-0DB000B0X
 JOB NAME: Cherokee Casino & Hotel

Rep Contact:

Ordered By: Rob Tels

PURCHASE ORDER: 2766

DATE: 08/29/2003

UNIT TAG: RTU# 7

Software SN:

0318096



Unit Rating

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

1A 1B 1C 1D 2 3 4 5A 5B 5C 6A 6B 6C 7 8 9 10 11 12 13 14A 14B 15 16 17 18 19 20 21 22 23
RL-045-3-0-0F04-211:EECF-E00-HBF-000-JHAAOBH-00-0DB000BOX
 Tag: RTU# 11

Job Information

Job Name: Cherokee Casino & Hotel
 Job Number:
 Site Altitude: 0 ft

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 18329 / 16029 lbs.**
 Supply CFM/ESP: 11000 / 0.75 in. wg.
 Pre-Filter FV / Qty: 220.00 fpm / 18
 Exhaust CFM/ESP/TSP: 11000 / 0.50 / 1.36 in. wg.
 Outside CFM: 10920
 Ambient Temperature: 100 °F DB / 76 °F WB
 Return Temperature: 72 °F DB / 60 °F WB

Economizer: 0.12 in. wg.
 Heating: 0.13 in. wg.
 Cabinet: 0.17 in. wg.
 Heatwheel: 0.76 in. wg.
 Total: 2.59 in. wg.

Static Pressure

External: 0.75 in. wg.
 Evaporator: 0.24 in. wg.
 Filters Clean: 0.07 in. wg.
 Dirt Allowance: 0.35 in. wg.

Heating Section

PreHeat Type: Std (No Preheat)
 Heating Type: Nat. Gas Heat
 Total Capacity: 352.6 MBH
 OA Temp: 0.0 DB / 0.0 °F WB
 RA Temp: 70.0 °F DB / 60.0 °F WB
 Entering Air Temp: 50.3 °F DB / 46.8 °F WB
 Leaving Air Temp: 30.0 °F DB / 59.2 °F WB
 Input: 430.0 MBH
 Heater Qty (Hi/Low): 2 / 0
 Consumption: 430.0 MBH
 Operation: Single Bank

Cooling Section

	Gross	Net
Equivalent Total Capacity:	905.88 MBH	887.11 MBH
Total Capacity:	482.02	463.25 MBH
Sensible Capacity:	362.11	343.34 MBH
Latent Capacity:	119.91 MBH	
HW Total Cooling Capacity:	423.86 MBH	
Mixed Air Temp:	79.88 °F DB	65.61 °F WB
Entering Air Temp:	81.45 °F DB	66.12 °F WB
Lv Air Temp (Coil):	51.21 °F DB	51.19 °F WB
Lv Air Temp (Unit):	51.21 °F DB	51.19 °F WB
Supply Air Fan:	BT - 1 x 300 @ 6.77 BHP	
EA Fan RPM / Width:	1100 / 6.810"	
Exhaust Air Fan:	1 x MW4212-30 @ 5.04 BHP	
EA Fan RPM / Pitch:	1084 / 30°	
Evaporator Coil:	37.5 ft ² / 6 Rows / 12 FPI	
Evaporator Face Velocity:	293.3 fpm	
Energy Recovery Wheel:	1 x ERC-81146	

EER - ARI Listing Information

No ARI Rating Program Exists for Units Over 250 MBH
 All AAON Units Are Tested in Accordance With ARI Standards

EER @ ARI Conditions: 12.6
 Application EER @ Op. Conditions: 20.8

EER Compressor Only @ ARI Conditions: 17.8
 Condensing Unit EER @ Op. Conditions: 14.6

Electrical Data

Rating: 460/3/60
 Unit FLA: 94

Minimum Circuit Amp: 97
 Maximum Overcurrent: 100

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	4		460	3			12.8
Condenser Fans:	1	2.00	460	3	1170	3.4	
Condenser Pump:	1	3.00	460	3	1760	4.8	
Supply Fan:	1	7.50	460	3	1170	11.0	
Exhaust Fan:	1	7.50	460	3	1170	11.0	
Combustion:	2	0.25	460	1	3450	0.9	
Heatwheel:	1	0.25	460	3	1760	0.8	
Vestibule Heater:	1		460	3		2.1	
Sump Heater:	1		460	3		9.4	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Charge LW(dB):	86	86	91	85	80	75	68	60
rn LW(dB):	90	91	93	83	85	84	80	77

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.



Energy Wheel Rating

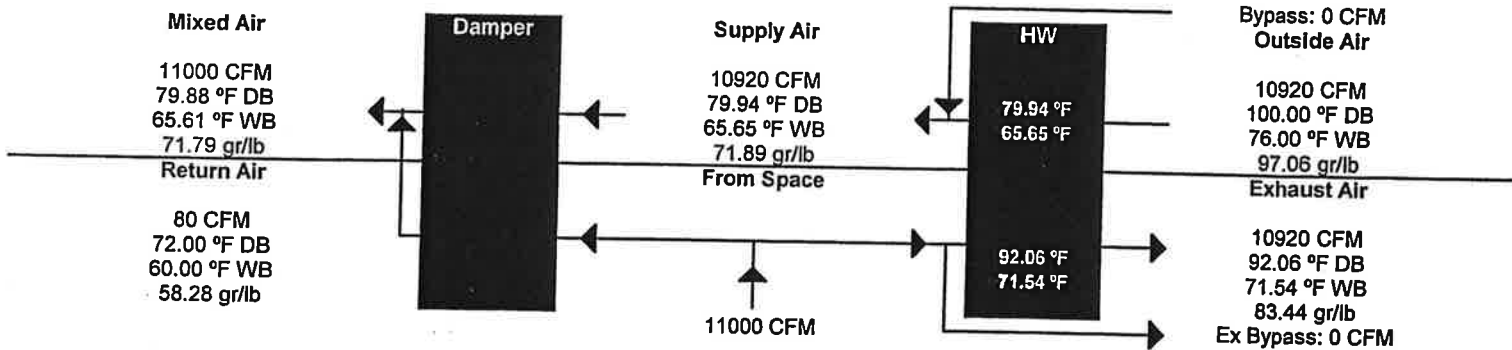
2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

RL-045-3-0-0F04-211:EECF-E00-HBF-000-JHAA0BH-00-0DB000BOX
Tag: RTU# 11

Job Name Cherokee Casino & Hot
Job Number
Site Altitude 0'

Heat Wheel Type: Total
Heat Wheel Model: ERC-81146
Heat Wheel Qty: 1

Summer Conditions



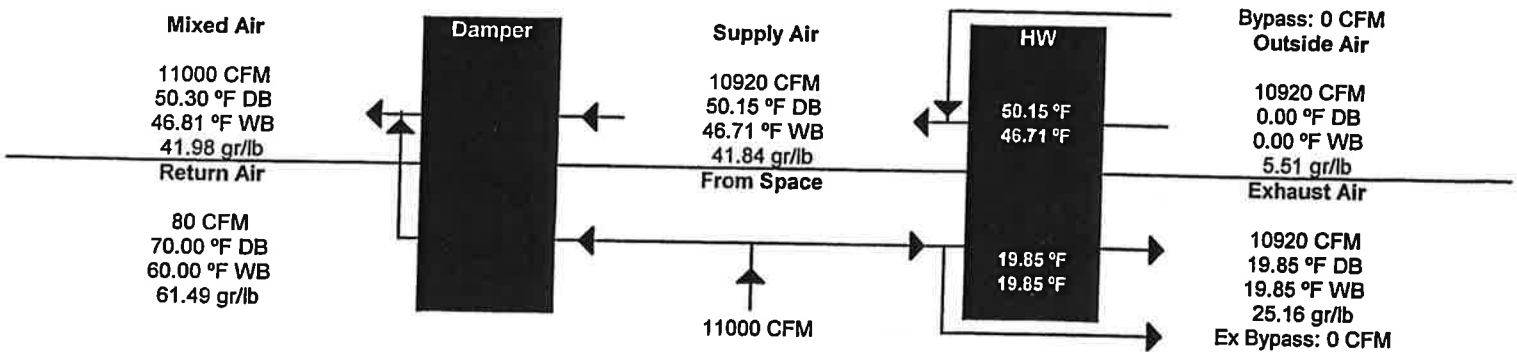
Cooling/Dehumidification

Total Capacity: 423.86 MBH
Sensible Capacity: 238.16 MBH
Latent Capacity: 185.70 MBH

Heating/Humidification

0.00 MBH
0.00 MBH
0.00 MBH

Winter Conditions



Cooling/Dehumidification

Total Capacity: 0.00 MBH
Sensible Capacity: 0.00 MBH
Latent Capacity: 0.00 MBH

Heating/Humidification

855.88 MBH
585.62 MBH
270.26 MBH



30.0" STAR Plenum

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
 Job Tag: RTU# 11
 Rep Firm: 711
 Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,760
 Diameter x Qty: 30.4 in. x 1
 Width%: 100
 Tip Speed: 8,755 FPM
 Inertia: 90 WR²

OPERATING CONDITIONS:

Air Flow: 11,000 CFM
 Static Pressure: 2.50 in. Wg.
 Plenum DP: 0.00 in. Wg.
 Inlet Grill DP: 0.09 in. Wg.
 TSP: 2.59 in. Wg.
 Site Altitude: 0.00 Ft
 TSP @ Sea Level: 2.59 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 7.5 / No
 Frame Size: 254T
 Nominal RPM: 1170
 VAC/PH/HZ: 460/3/60
 Efficiency: Premium / 0.917
 Enclosure Type: ODP
 Max Inertial Load: 104 WR²

FAN PERFORMANCE:

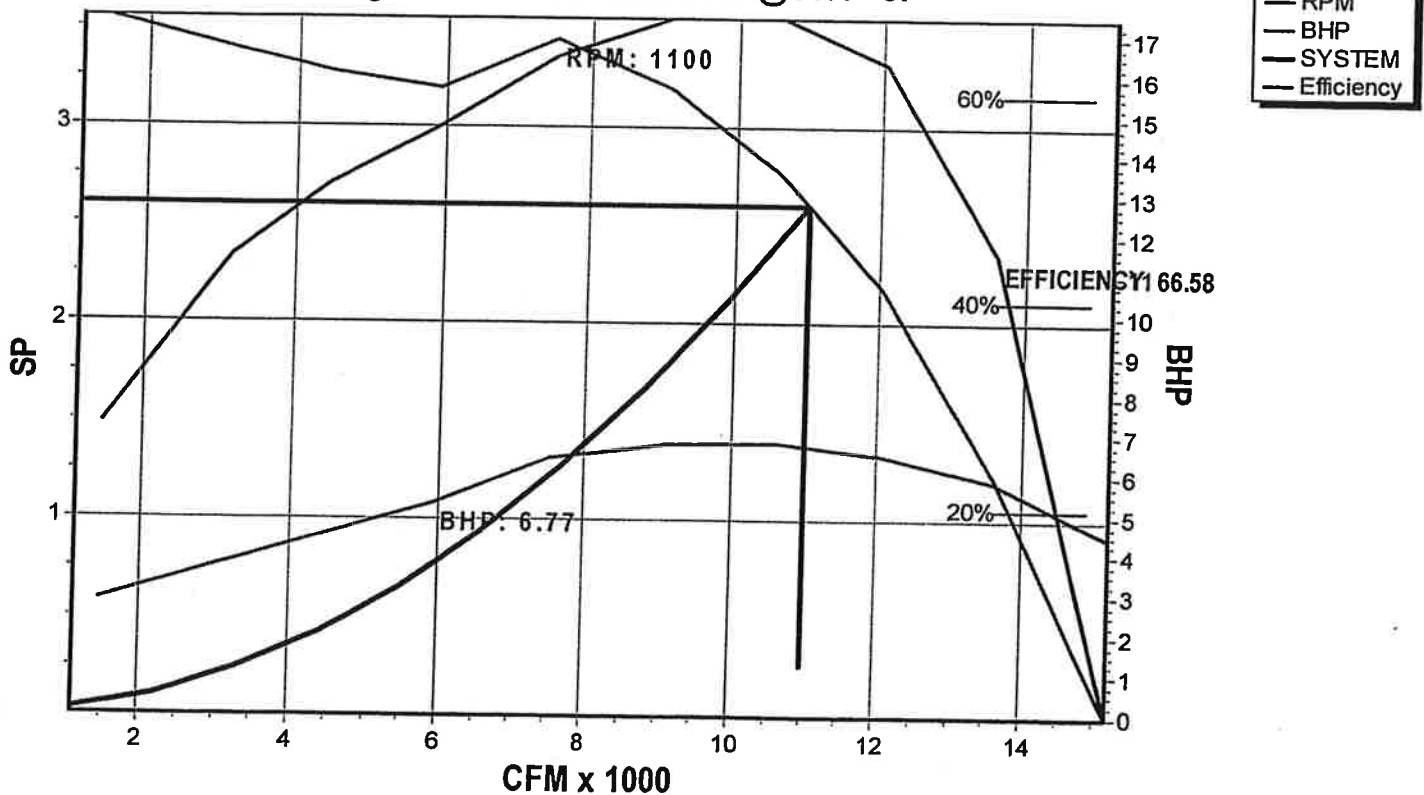
RPM: 1100
 BHP: 6.77
 Efficiency: 66.6%
 In/Out Velocity: 1852/2434 FPM
 Plenum Out Velocity: 183 FPM

FAN SOUND POWER (Inlet/Outlet):

Octave Band:	(Re 10 ⁻¹² watts)							
	1	2	3	4	5	6	7	8
	85	87	86	86	85	83	78	73
	89	90	93	95	92	89	84	77

SOUND POWER A-Weighted: 89 / 95 dB

Fan Model: 300 @ 1100 RPM and 100% Width
 Design Conditions: 11000 CFM @ 2.60" SP





4212-30 Axial Fan

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
 Job Tag: RTU# 11
 Rep Firm: 711
 Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,170
 Diameter x Qty: 42.0 in. x 1
 CFM: 11000
 Tip Speed: 11,919 FPM
 Inertia: 18 WR²

OPERATING CONDITIONS:

Air Flow: 11,000 CFM
 Static Pressure: 1.26 in. Wg.
 Relief Dampers DP: 0.10 in. Wg.
 TSP: 1.36 in. Wg.
 Site Altitude: 0.00 Ft
 TSP @ Sea Level: 1.36 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 7.5 / No
 Frame Size: 254T
 Nominal RPM: 1170
 VAC/PH/Hz: 460/3/60
 Efficiency: Premium / 0.917
 Enclosure Type: ODP
 Max Inertial Load: 104 WR²

FAN PERFORMANCE:

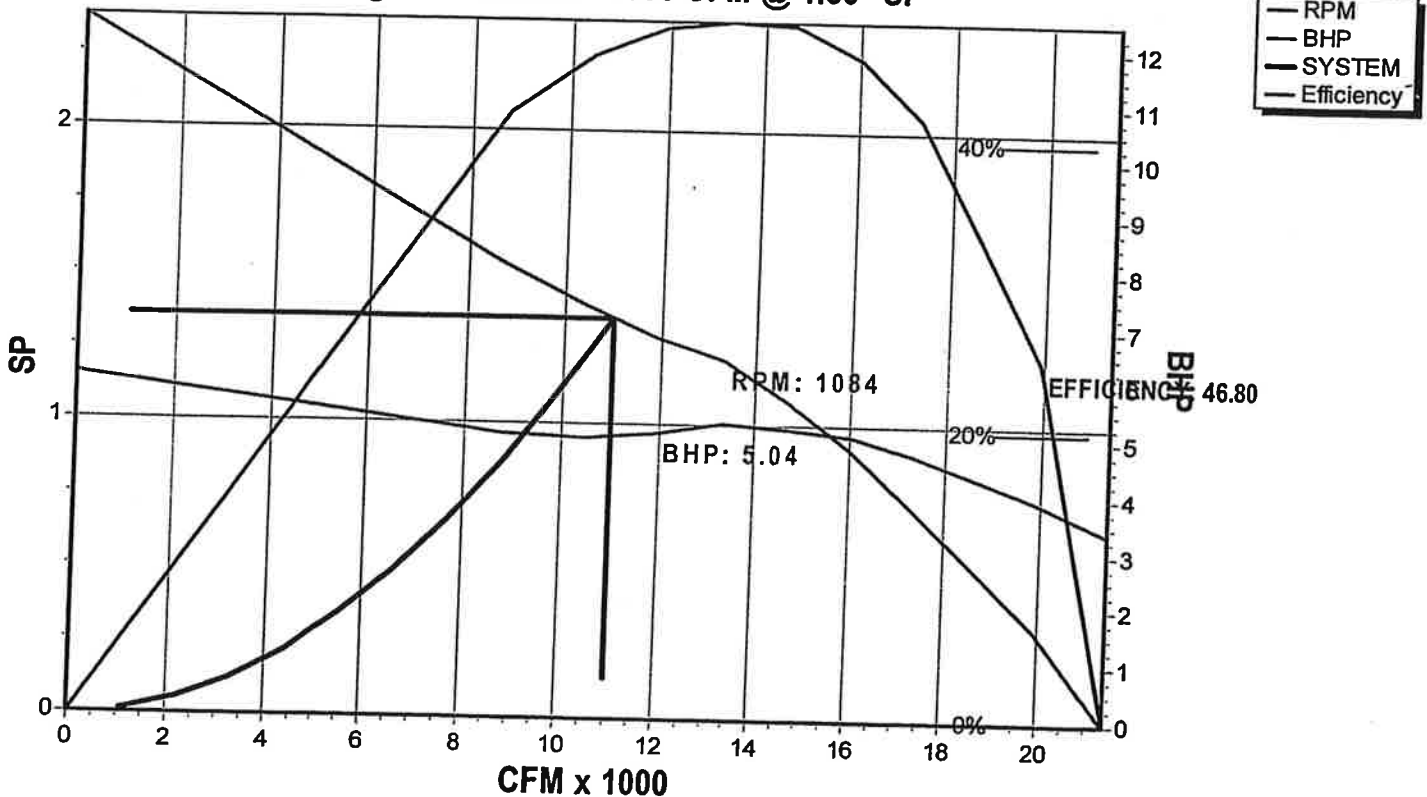
RPM: 1084
 BHP: 5.04
 Efficiency: 46.8%
 In/Out Velocity: 464/537 FPM
 Plenum Out Velocity: 183 FPM

FAN SOUND POWER (Inlet/Outlet):

Octave Band:	(Re 10 ⁻¹² watts)							
	1	2	3	4	5	6	7	8
	89	90	97	90	88	85	82	79
	89	90	97	90	88	85	82	79

SOUND POWER A-Weighted: 93 / 93 dB

Fan Model: MW4212-30 @ 1084 RPM and 100% Width
 Design Conditions: 11000 CFM @ 1.36" SP





Unit Submittal

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-61
AAONEcat32 Ver. 4.35 (SN: 02212)

RL-045-3-0-0F04-211:EECF-E00-HBF-000-JHAA0BH-00-0DB000B0
Tag: RTU# 11

Job Name:
Job Number:

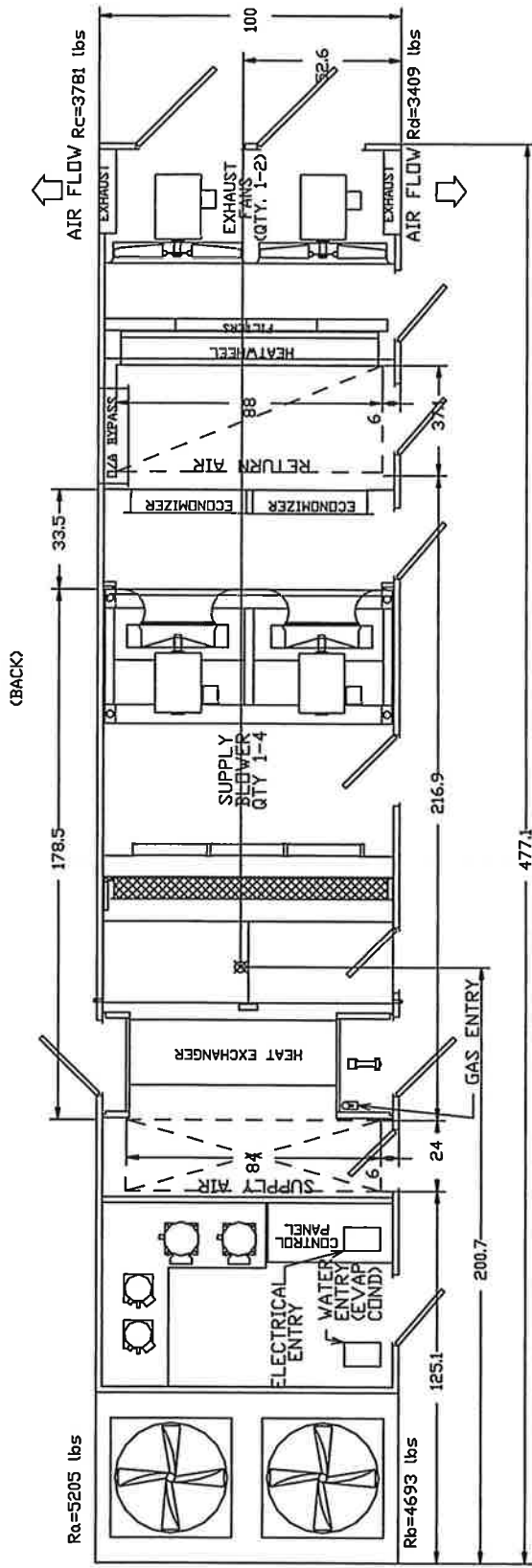
Cherokee Casino & Hotel

Unit Submittal For:
Unit Submittal Date:

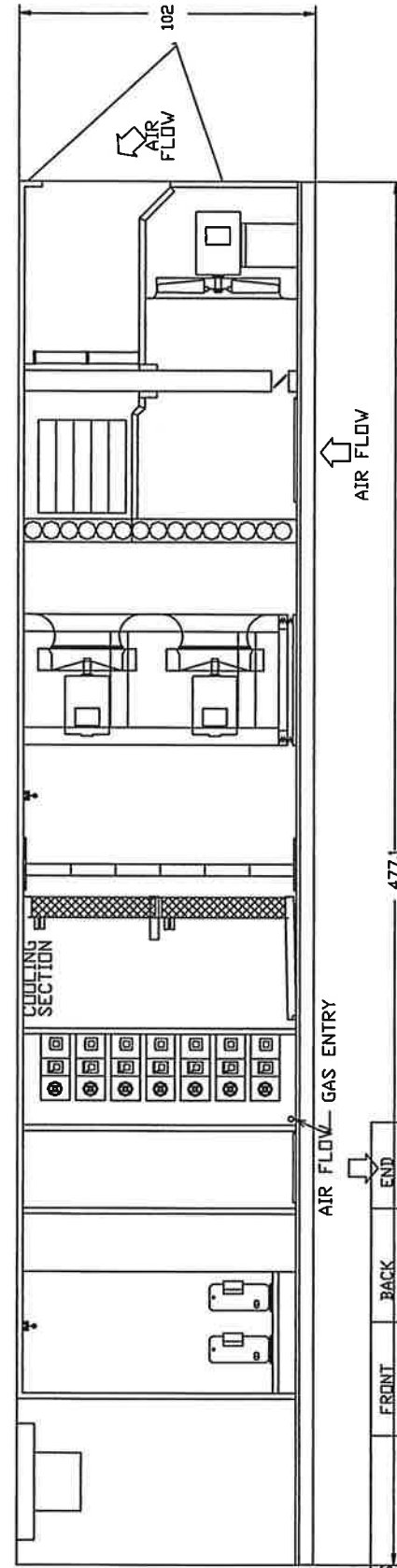
Cherokee Nation Enterprises
August 29, 2003

R	Base Option	Description
R	Series	Roof Top Unit
L	Generation	Tenth Generation
045	Unit Size	Forty Five
3	Voltage	460V/3Ø/60Hz
0	Inter. Protection	Standard
0	Cooling - Style	Blow Thru - R22 Dual Circuited Compressors
F	Cooling - Configuration	Evap Cond w/ 6R Coil High CFM
0	Cooling - Coating	Std
4	Cooling - Staging	4 Stage
2	Heating - Type	Nat. Gas Single Rack (SR)
1	Heating - Designation	Heat 1 - 2 Heaters
1	Heating - Staging	2 Stage

E	Feature Option	Description
E	1A. Return / Outside Air Section	Heat Wheel Medium (Total) (1-81 inch wheel)
C	1B. R/A Blower Configuration	1 Blower (Prem eff mtr) w/VFD
F	1C. R/A Blower	Blower C (42" Dia 12 Blade)
E	1D. R/A Motor	7.5 hp (1170 rpm)
0	2. O/A Control	DDC Econ Control
0	3. Discharge Locations	Bottom Discharge
H	4. Return Locations	Bottom Return
B	5A. S/A Blower Configuration	1 Blower w/(Prem eff mtr) w/VFD
F	5B. S/A Blower	Blower B (30" Diameter)
0	5C. S/A Motor	7.5 hp (1170 rpm)
0	6A. Pre-Filter	2" Pleated (Std Position)
0	6B. Final Filter	Std
J	6C. Filter Options	Std
H	7. Refrig. Control	5 MTDR On & Off + 20 STDR + 115V Outlet Factory Wired
A	8. Refrig. Options	HGB Lead + HGB Lag + MHGR
A	9. Refrig Accessories	Sight Glass
0	10. Power Options	225 Amps Power Switch
B	11. Safety Options	Std
H	12. Controls	Phase & Brown Out Protection
0	13. Special Controls	Field Installed DDC Controls by Others
0	14A. Preheat Configuration	Std (No Preheat)
0	14B. Preheat Sizing	Std (No Preheat)
D	15. Option Boxes	Std
B	16. Cabinet Options	SS Drain Pans + Marine Lights
0	17. Cabinet Options	Burglar Bars (BB)
0	18. Customer Code	Std
0	19. Code Options	Std ETL USA Listing
B	20. Unit Splits	Std (One Piece Unit)
0	21. Evap and Water Condenser	Sump and Vestibule Heaters (Evap Cond)
0	22. Blank	Std
	23. Type	Special Price Authorization & Gray Paint



477.1 PLAN VIEW (FRONT)

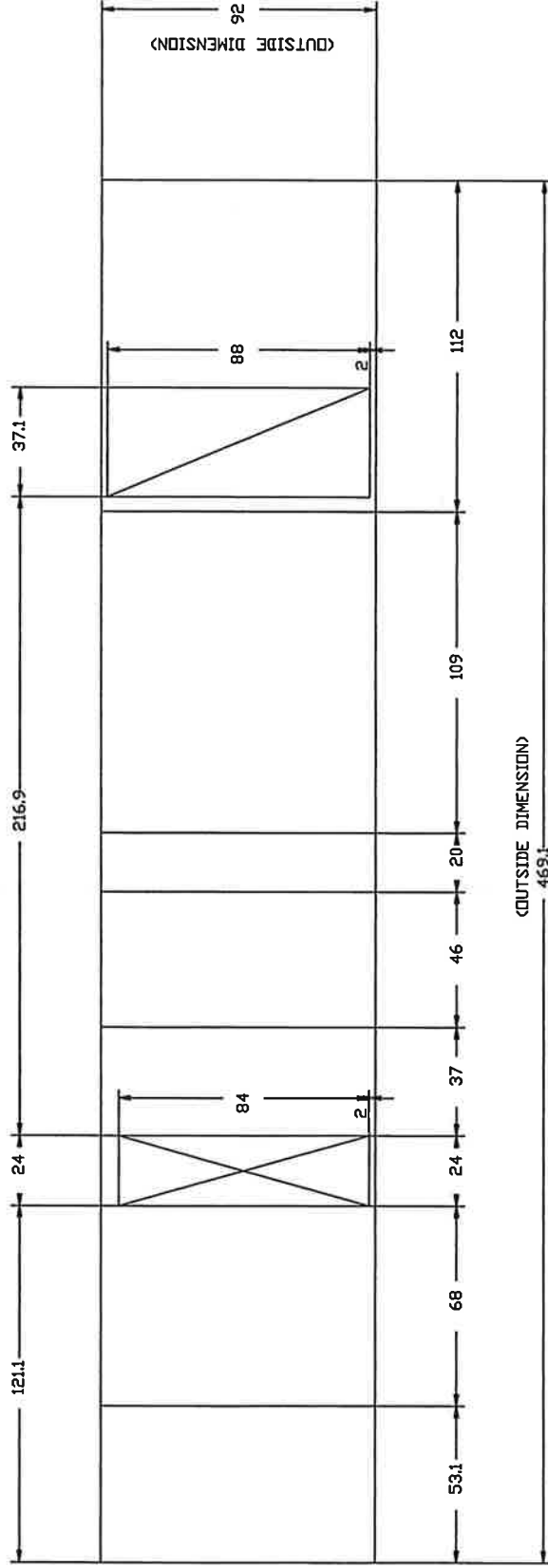


477.1 ELEVATION VIEW

SECTION CLEARANCES	FRONT	BACK	END
CONDENSER	100	100	100
GAS HEAT EXCHANGER	100	100	0
COOLING	100	100	0
HEAT WHEEL	100	100	100

AADON inc.
TULSA OKLAHOMA

Configurator: RL-045-3-0-0F04-2111EEBE-E00-HBF-000-JHAA09H-00-0DB000BOX		UNIT TAG: RTU# 11
JOB NAME: Cherokee Casino & Hotel		SERIAL NO.:
PURCHASER: Cherokee Nation Enterprises		DATE: 08/29/2003
Purchase Order: 2766		Software SN: 0318096
Rep Contact: Ordered By: Rob Tels		
Total Weight: 17089 / Shipping Weight: 14789		



BASE

AAON inc.

TULSA OKLAHOMA

Total Weight: 17089 / Shipping Weight: 14789

Configurator: RL-045-3-0-0F04-211EEBE-E00-HBF-000-JHAA0BH-00-0DB000BOX

JOB NAME: Cherokee Casino & Hotel

PURCHASER: Cherokee Nation Enterprises

PURCHASE ORDER: 2766

Rep Contact:

Ordered By: Rob Tels

UNIT TAG: RTU# 11

SERIAL NO:

DATE: 08/29/2003

Software SN:

0318096

Unit Rating



2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

1A 1B 1C 1D 2 3 4 5A 5B 5C 6A 6B 6C 7 8 9 10 11 12 13 14A 14B 15 16 17 18 19 20 21 22 23
RN-031-3-0-AA04-2A2: FFFE-E0B-FEQ-000-RJAA0BH-00-0AB00000X
 Tag: RTU# 12

Job Information

Job Name: Cherokee Casino & Hotel
 Job Number:
 Site Altitude: 0 ft

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 7845 / 7845 lbs.**
 Supply CFM/ESP: 9000 / 0.75 in. wg.
 Final-Filter FV / Qty: 231.25 fpm / 8
 Exhaust CFM/ESP/TSP: 9000 / 0.50 / 1.21 in. wg.
 Outside CFM: 5580
 Ambient Temperature: 100 °F DB / 76 °F WB
 Return Temperature: 72 °F DB / 60 °F WB

Static Pressure

External: 0.75 in. wg.
 Evaporator: 0.31 in. wg.
 Filters Clean: 0.10 in. wg.
 Dirt Allowance: 0.35 in. wg.
 Re-Heat Coil: 0.04 in. wg.

Economizer: 0.12 in. wg.
 Heating: 0.07 in. wg.
 Cabinet: 0.07 in. wg.
 Heatwheel: 0.61 in. wg.
 Total: 2.42 in. wg.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	566.26 MBH	551.76 MBH
Total Capacity:	331.76	317.26 MBH
Sensible Capacity:	255.64	241.14 MBH
Latent Capacity:	76.12 MBH	
HW Total Cooling Capacity:	234.50 MBH	
Mixed Air Temp:	75.86 °F DB	62.97 °F WB
Entering Air Temp:	75.86 °F DB	62.97 °F WB
Lv Air Temp (Coil):	50.11 °F DB	49.91 °F WB
Lv Air Temp (Unit):	51.60 °F DB	50.57 °F WB
Supply Air Fan:	2 x 270D @ 2.58 BHP Ea.	
SA Fan RPM / Width:	1109 / 4.291"	
Exhaust Air Fan:	2 x RM270 @ 1.29 BHP Ea.	
EA Fan RPM / Width:	782 / 6.130"	
Evaporator Coil:	31.9 ft ² / 4 Rows / 14 FPI	
Evaporator Face Velocity:	282.4 fpm	
Energy Recovery Wheel:	2 x ERC-5245	

Heating Section

PreHeat Type: Std (No Preheat)
 Heating Type: Nat. Gas Heat
 Total Capacity: 437.4 MBH
 OA Temp: 0.0 DB / 0.0 °F WB
 RA Temp: 70.0 °F DB / 60.0 °F WB
 Entering Air Temp: 64.1 °F DB / 56.0 °F WB
 Leaving Air Temp: 109.1 °F DB / 71.2 °F WB
 Input: 540.0 MBH
 Heater Qty: 1
 Consumption: 540.0 MBH
 Operation: N/A

Re-Heat Coil:

Capacity: 193 MBH
 LA DB / WB: 70.00 °F / 58.06 °F

EER - ARI Listing Information

No ARI Rating Program Exists for Units Over 250 MBH
 All AAON Units Are Tested in Accordance With ARI Standards

EER @ ARI Conditions: N/A
 Application EER @ Op. Conditions: 15.4

EER Compressor Only @ ARI Conditions: N/A
 Condensing Unit EER @ Op. Conditions: 11.3

Electrical Data

Rating: 460/3/60
 Unit FLA: 74

Minimum Circuit Amp: 76
 Maximum Overcurrent: 80

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	4		460	3			11
Condenser Fans:	4	0.75	460	1	1075	2.0	
Supply Fan:	2	3.00	460	3	1170	4.8	
Exhaust Fan:	2	3.00	460	3	1760	4.8	
Combustion:	2	0.25	460	1	3200	0.9	
Heatwheel:	2	0.1667	230	1	1760	1.2	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	87	87	89	87	83	85	82	78
Return LW(dB):	81	78	74	69	73	74	72	71

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.



Energy Wheel Rating

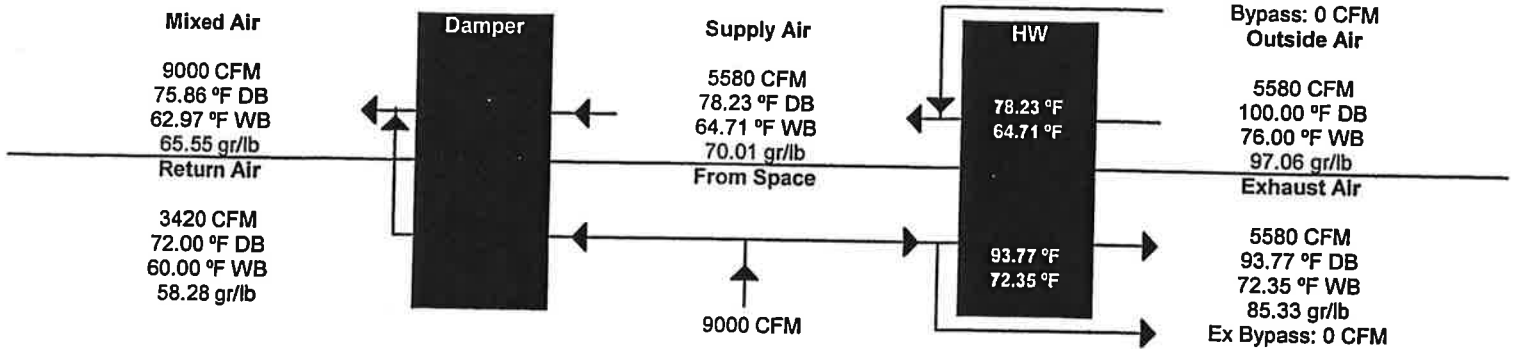
2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

1A 1B 1C 1D 2 3 4 5A 5B 5C 6A 6B 6C 7 8 9 10 11 12 13 14A 14B 16 16 17 18 19 20 21 22 23
 RN-031-3-0-AA04-2A2: FFFE-EOB-FEQ-000-RJAA0BH-00-0AB00000X
 Tag: RTU# 12

Job Name Cherokee Casino & Hot
 Job Number
 Site Altitude 0'

Heat Wheel Type:
 Heat Wheel Model: ERC-5245
 Heat Wheel Qty: 2

Summer Conditions



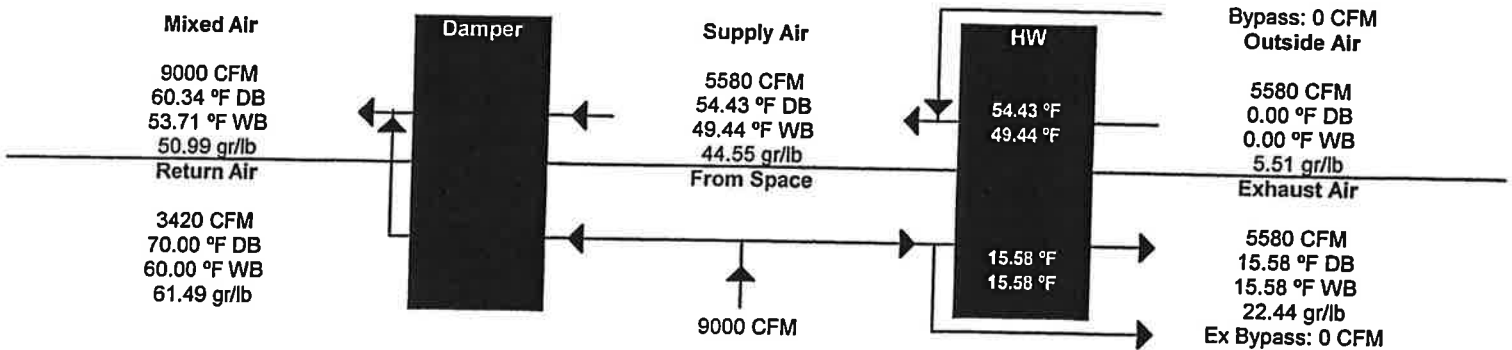
Cooling/Dehumidification

Total Capacity: 234.50 MBH
 Sensible Capacity: 132.04 MBH
 Latent Capacity: 102.46 MBH

Heating/Humidification

0.00 MBH
 0.00 MBH
 0.00 MBH

Winter Conditions



Cooling/Dehumidification

Total Capacity: 0.00 MBH
 Sensible Capacity: 0.00 MBH
 Latent Capacity: 0.00 MBH

Heating/Humidification

473.27 MBH
 324.86 MBH
 148.41 MBH



27.0" STAR Plenum

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
 Job Tag: RTU# 12
 Rep Firm: 711
 Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,800
 Diameter x Qty: 27.4 in. x 2
 CFM: 4500
 Tip Speed: 7,955 FPM
 Inertia: 16 WR²

OPERATING CONDITIONS:

Air Flow: 9,000 CFM
 Static Pressure: 2.42 in. Wg.
 Relief Dampers DP: 0.00 in. Wg.
 TSP: 2.42 in. Wg.
 Site Altitude: 0.00 Ft
 TSP @ Sea Level: 2.42 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 3 x 2 / No
 Frame Size: 213T
 Nominal RPM: 1170
 VAC/PH/HZ: 460/3/60
 Efficiency: Premium / 0.906
 Enclosure Type: ODP
 Max Inertial Load: 44 WR²

FAN PERFORMANCE:

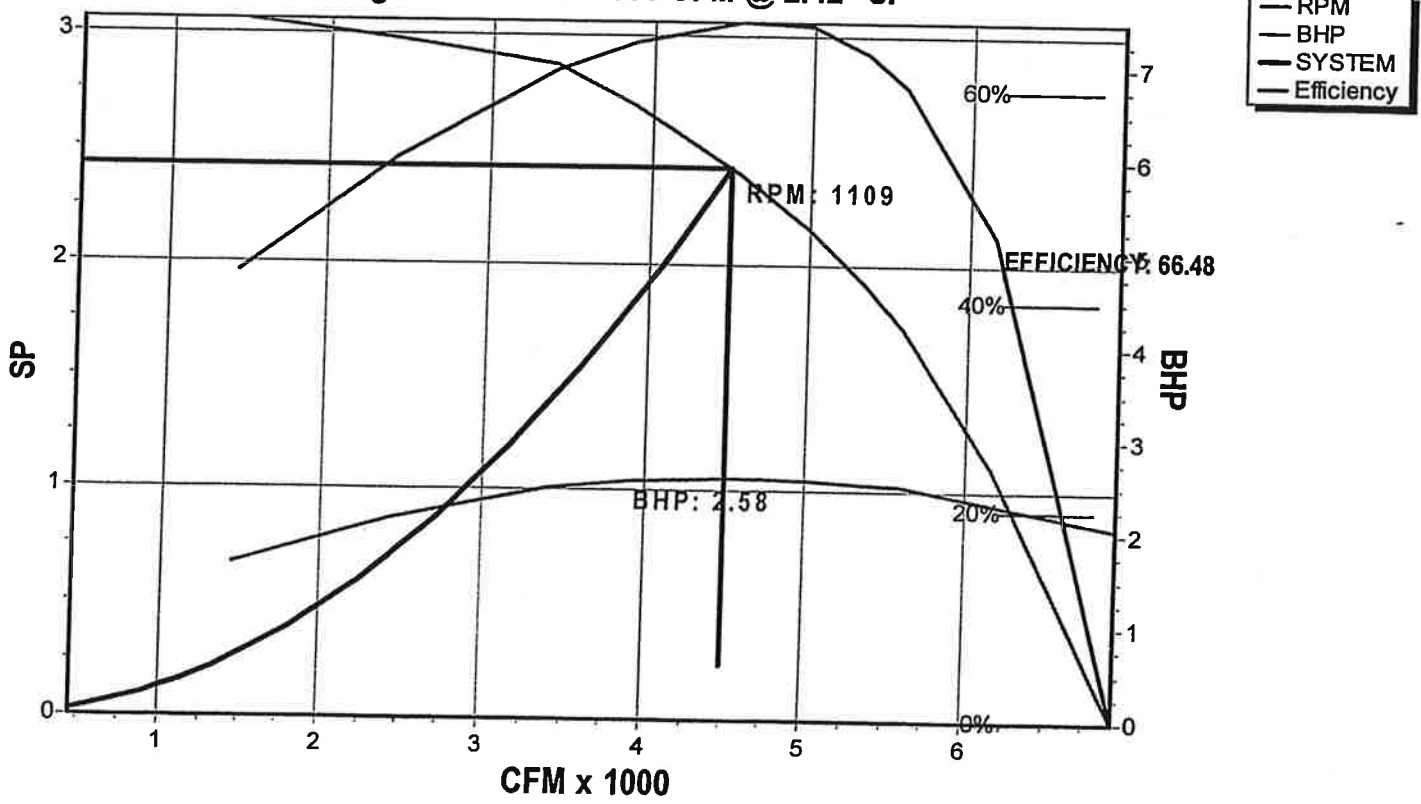
RPM: 1109
 BHP: 2.58
 Efficiency: 66.5%
 In/Out Velocity: 1175/1230 FPM
 Plenum Out Velocity: 102 FPM

FAN SOUND POWER x 2 Fans (In/Out):

Octave Band:	(Re 10 ⁻¹² watts)							
	1	2	3	4	5	6	7	8
	85	82	81	80	80	80	80	79
	87	87	89	88	86	88	86	82

SOUND POWER A-Weighted: 89 / 94 dB

Fan Model: 270D @ 1109 RPM and 70% Width
 Design Conditions: 4500 CFM @ 2.42" SP





27.0" STAR Plenum

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
Job Tag: RTU# 12
Rep Firm: 711
Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,800
Diameter x Qty: 27.4 in. x 2
CFM: 4500
Tip Speed: 5,610 FPM
Inertia: 14 WR²

OPERATING CONDITIONS:

Air Flow: 9,000 CFM
Static Pressure: 1.11 in. Wg.
Relief Dampers DP: 0.10 in. Wg.
TSP: 1.21 in. Wg.
Site Altitude: 0.00 Ft
TSP @ Sea Level: 1.21 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 3 x 2 / No
Frame Size: 182T
Nominal RPM: 1760
VAC/PH/HZ: 460/3/60
Efficiency: Premium / 0.897
Enclosure Type: ODP
Max Inertial Load: 17 WR²

FAN PERFORMANCE:

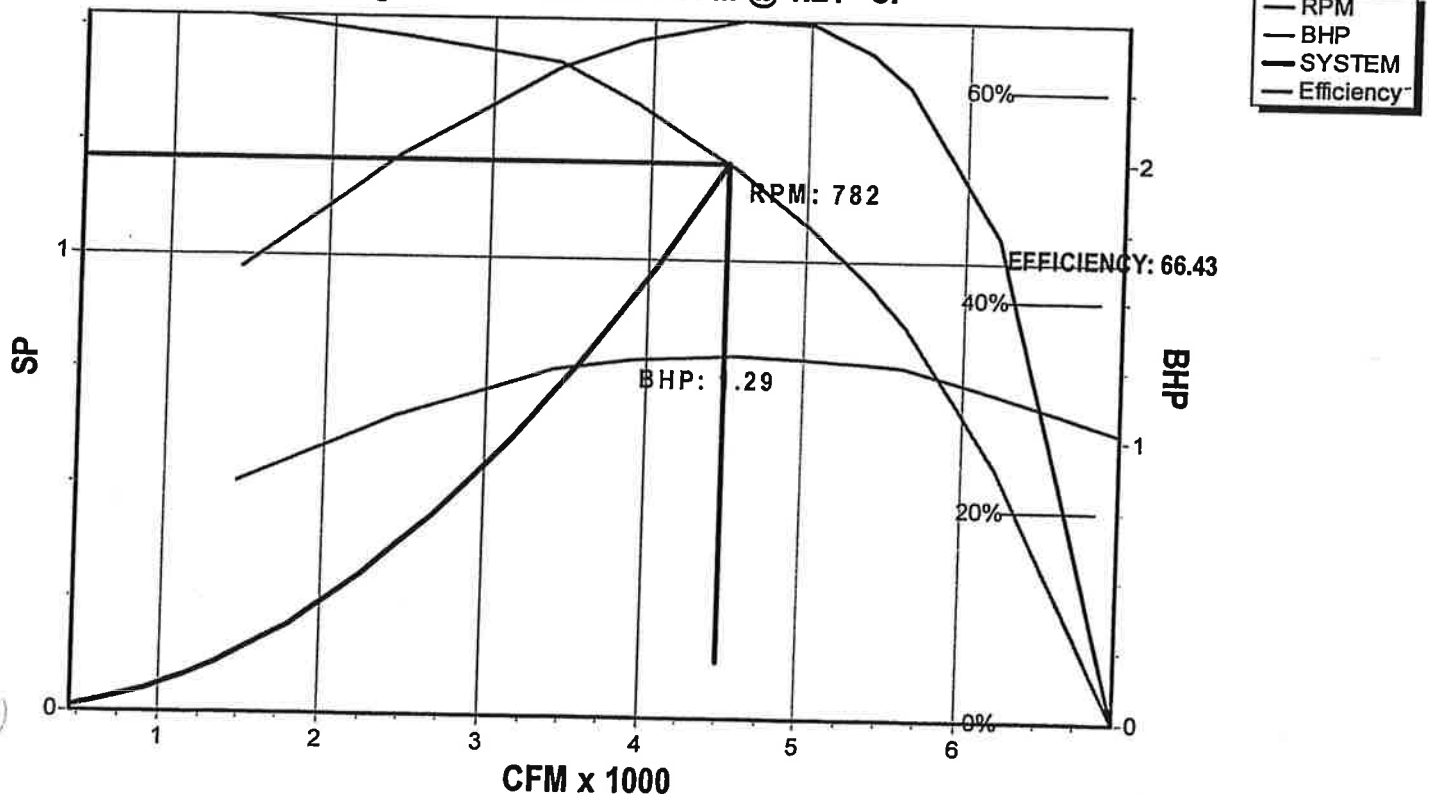
RPM: 782
BHP: 1.29
Efficiency: 66.4%
In/Out Velocity: 1175/1230 FPM
Plenum Out Velocity: 102 FPM

FAN SOUND POWER x 2 Fans (In/Out):

Octave Band:	(Re 10 ⁻¹² watts)							
	1	2	3	4	5	6	7	8
	78	77	75	74	76	76	75	74
	80	81	85	83	81	81	77	73

SOUND POWER A-Weighted: 83 / 86 dB

Fan Model: RM270 @ 782 RPM and 100% Width
Design Conditions: 4500 CFM @ 1.21" SP





Unit Submittal

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

1A 1B 1C 1D 2 3 4 5A 5B 5C 6A 6B 6C 7 8 9 10 11 12 13 14A 14B 15 16 17 18 19 20 21 22 23
 RN-031-3-0-AA04-2A2 : F F F F E - E 0 B - F E Q - 0 0 0 - R J A A 0 B H - 0 0 - 0 A B 0 0 0 0 0 X
 Tag: RTU# 12

Job Name:
Job Number:

Cherokee Casino & Hotel

Unit Submittal For:
Unit Submittal Date:

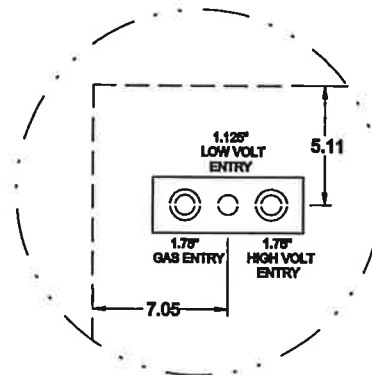
Cherokee Nation Enterprises
August 29, 2003

	Base Option	Description
R	Series	Roof Top Unit
N	Generation	Ninth Generation
031	Unit Size	Thirty One
3	Voltage	460V/3Ø/60Hz
0	Inter. Protection	Standard
A	Cooling - Style	R22
A	Cooling - Configuration	Air Cooled Cond w/ Std Coil
0	Cooling - Coating	Standard
4	Cooling - Staging	4 Stage
2	Heating - Type	Nat. Gas Aluminized
A	Heating - Designation	Heat A - 540 MBtuh
2	Heating - Staging	2 Stage

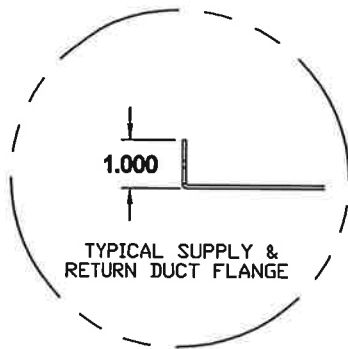
	Feature Option	Description
F	1A. Return / Outside Air Section	Heat Wheel (Total) Low CFM
F	1B. R/A Blower Configuration	2 Blowers (Premium efficiency motor) w/ two motors on one VFD
F	1C. R/A Blower	Blower F (27" PF BI)
E	1D. R/A Motor	3.0 hp (1760 rpm)
E	2. O/A CONTROL	DDC Actuator
0	3. GAS OPTIONS	Standard
B	4. MAINTENANCE OPTIONS	115V convenience outlet, factory wired
F	5A. S/A BLOWER CONFIG.	2 Blowers (Premium efficiency motor) w/ two motors on one VFD
E	5B. S/A BLOWER	Blower E (BI 27")
Q	5C. S/A MOTOR	3.0 hp (1140 rpm)
0	6A. PRE FILTER TYPE	Standard (None)
0	6B. UNIT FILTER TYPE	Standard - 2" Pleated 30% eff
0	6C. FILTER OPTIONS	Std
R	7. REFRIG. CONTROL	5 MTDR Off + 20 STDR Delay + Fan Cycling
J	8. REFRIG. OPTIONS	HGB Lead + HGB Lag + MHGR
A	9. REFRIG. ACCESSORIES	Sight Glass
A	10. POWER OPTIONS	Power Switch (100 amps)
0	11. SAFETY OPTIONS	Standard
B	12. CONTROLS	Phase & Brown Out Protection
H	13. SPECIAL CONTROLS	Field Installed DDC Controls by Others
0	14A. PREHEAT CONFIG.	Standard (No Preheat)
0	14B. PREHEAT SIZING	Standard (No Preheat)
0	15. BLANK	Standard
A	16. INT. CAB. OPTIONS	Stainless Steel Drain Pans
B	17. EXT. CAB. OPTIONS	Burglar Bars
0	18. CUSTOMER CODE	Standard
0	19. CODE OPTIONS	Std ETL U.S.A. Listing 1
0	20. CRATING	Standard
0	21. WATER COOLED COND.	Std (No Water Condenser)
0	22. BLANK	Standard
	23. TYPE	Special Price Authorization & Gray Paint

RN SERIES D - CABINET ECONOMIZER, HEAT RECOVERY & PLENUM FAN EXHAUST ~ 26-70 TON

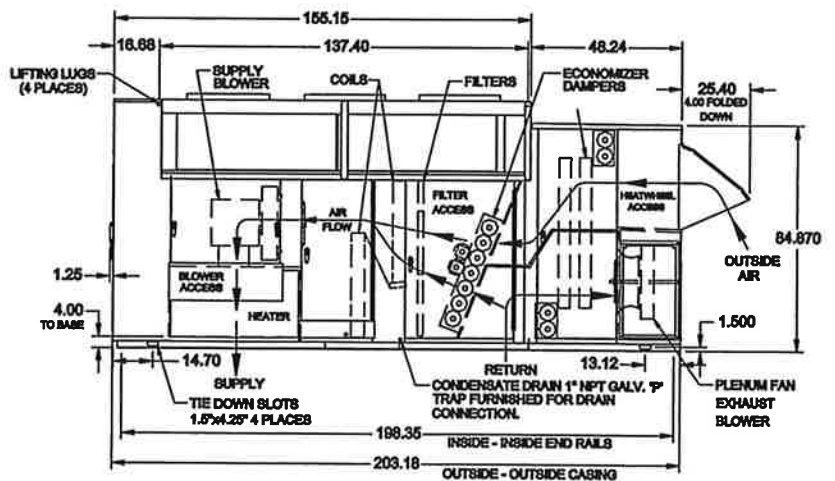
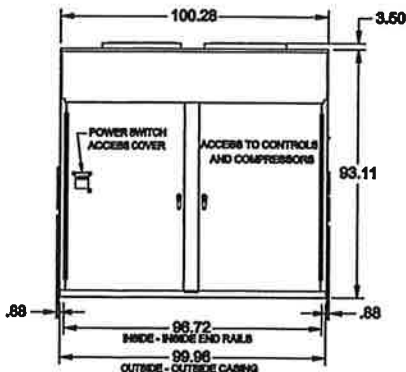
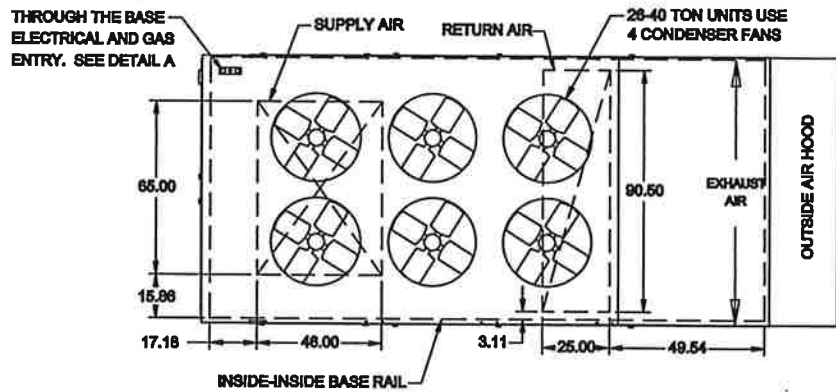
CLEARANCES	
LOCATION	? UNIT SIZE ? 26 - 70 TON
RETURN AIR (BACK)	48
VENT SIDE (FRONT)	48
LEFT SIDE	48
RIGHT SIDE	48
TOP	UNOBSTRUCTED



DETAIL A

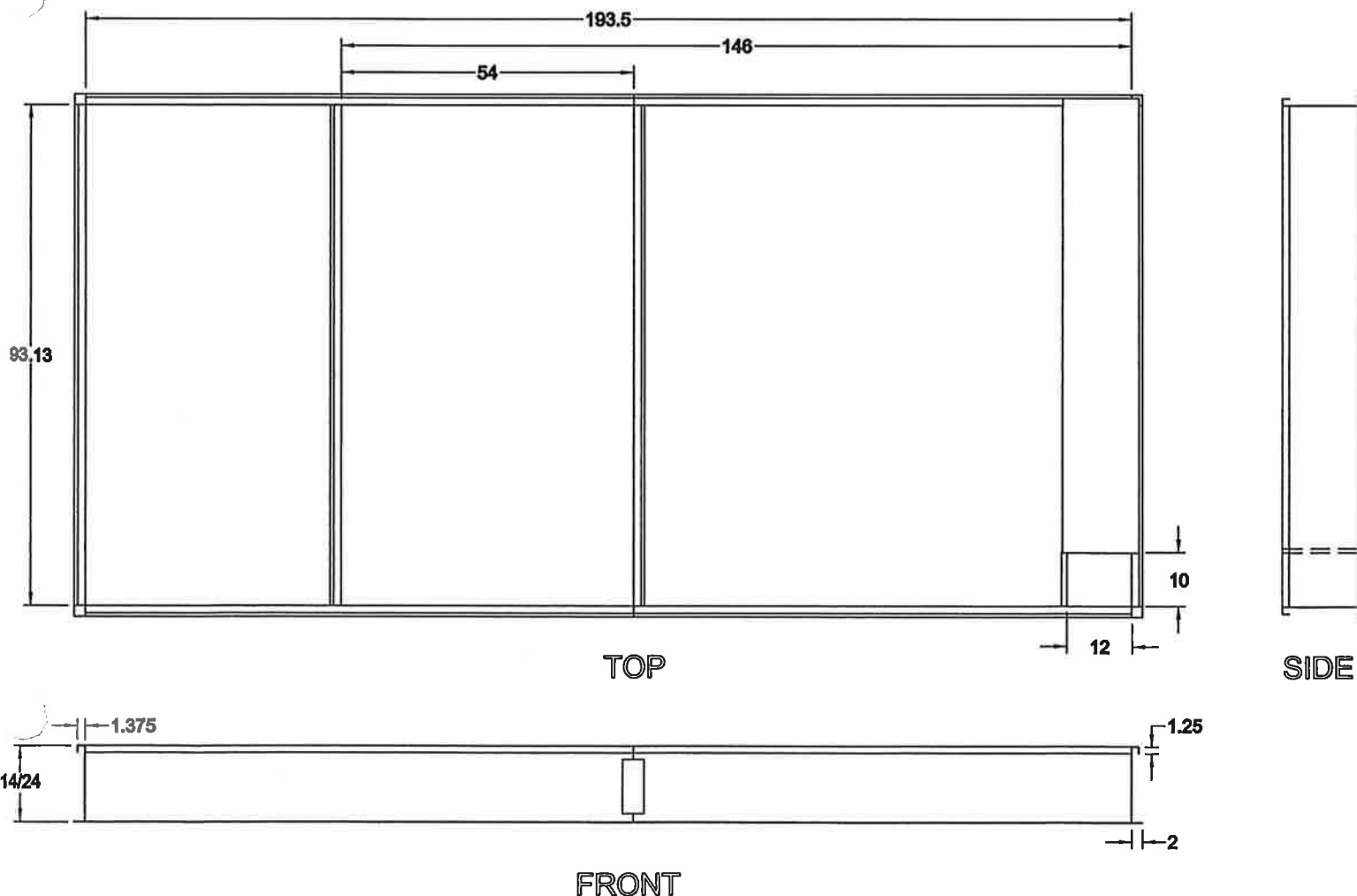


DETAIL B



NOTE: ALL DIMENSIONS ARE OUTSIDE TO OUTSIDE UNLESS NOTED OTHERWISE.

D-BOX (26-70 TON) SOLID BOTTOM CURB
HEAT WHEEL & POWER RETURN OPTIONS



1A 1B 1C 1D 2 3 4 5A 5B 5C 6A 6B 6C 7 8 9 10 11 12 13 14A 14B 15 16 17 18 19 20 21 22 23
RN-031-3-0-AA04-2A2 : FFFE-E0B-FEQ-000-RJAAOBH-00-0AB00000X
 Tag: RTU# 13

Job Information

Job Name: Cherokee Casino & Hotel
 Job Number:
 Site Altitude: 0 ft

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 7845 / 7845 lbs.**
 Supply CFM/ESP: 9000 / 0.75 in. wg.
 Final-Filter FV / Qty: 281.25 fpm / 8
 Exhaust CFM/ESP/TSP: 9000 / 0.50 / 1.18 in. wg.
 Outside CFM: 5250
 Ambient Temperature: 100 °F DB / 76 °F WB
 Return Temperature: 72 °F DB / 60 °F WB

Economizer: 0.12 in. wg.
 Heating: 0.07 in. wg.
 Cabinet: 0.06 in. wg.
 Heatwheel: 0.58 in. wg.
 Total: 2.38 in. wg.

Static Pressure

External: 0.75 in. wg.
 Evaporator: 0.31 in. wg.
 Filters Clean: 0.10 in. wg.
 Dirt Allowance: 0.35 in. wg.
 Re-Heat Coil: 0.04 in. wg.

Heating Section

PreHeat Type: Std (No Preheat)
 Heating Type: Nat. Gas Heat
 Total Capacity: 437.4 MBH
 OA Temp: 0.0 DB / 0.0 °F WB
 RA Temp: 70.0 °F DB / 60.0 °F WB
 Entering Air Temp: 65.0 °F DB / 56.6 °F WB
 Leaving Air Temp: 110.0 °F DB / 71.6 °F WB
 Input: 540.0 MBH
 Heater Qty: 1
 Consumption: 540.0 MBH
 Operation: N/A

Re-Heat Coil:

Capacity: 196 MBH
 LA DB / WB: 70.00 °F / 57.93 °F

Cooling Section

	Gross	Net
Equivalent Total Capacity:	553.83 MBH	539.53 MBH
Total Capacity:	330.47	316.22 MBH
Sensible Capacity:	254.87	240.62 MBH
Latent Capacity:	75.60 MBH	
HW Total Cooling Capacity:	223.36 MBH	
Mixed Air Temp:	75.50 °F DB	62.71 °F WB
Entering Air Temp:	75.50 °F DB	62.71 °F WB
Lv Air Temp (Coil):	49.85 °F DB	49.65 °F WB
Lv Air Temp (Unit):	51.30 °F DB	50.29 °F WB
Supply Air Fan:	2 x 270D @ 2.54 BHP Ea.	
A Fan RPM / Width:	1102 / 4.291"	
Exhaust Air Fan:	2 x RM270 @ 1.26 BHP Ea.	
EA Fan RPM / Width:	775 / 6.130"	
Evaporator Coil:	31.9 ft ² / 4 Rows / 14 FPI	
Evaporator Face Velocity:	282.4 fpm	
Energy Recovery Wheel:	2 x ERC-5245	

EER - ARI Listing Information

No ARI Rating Program Exists for Units Over 250 MBH
 All AAON Units Are Tested in Accordance With ARI Standards

EER @ ARI Conditions: N/A
 Application EER @ Op. Conditions: 15.1

EER Compressor Only @ ARI Conditions: N/A
 Condensing Unit EER @ Op. Conditions: 11.3

Electrical Data

Rating:	460/3/60		Minimum Circuit Amp:		76		
Unit FLA:	74		Maximum Overcurrent:		80		
Compressor 1:	Qty	HP	VAC	Phase	RPM	FLA	RLA
Condenser Fans:	4		460	3			11
Supply Fan:	4	0.75	460	1	1075	2.0	
Exhaust Fan:	2	3.00	460	3	1170	4.8	
Combustion:	2	3.00	460	3	1760	4.8	
Heatwheel:	2	0.25	460	1	3200	0.9	
		0.1667	230	1	1760	1.2	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	87	87	89	87	83	85	82	78
Return LW(dB):	81	78	74	69	73	74	72	71

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.



Energy Wheel Rating

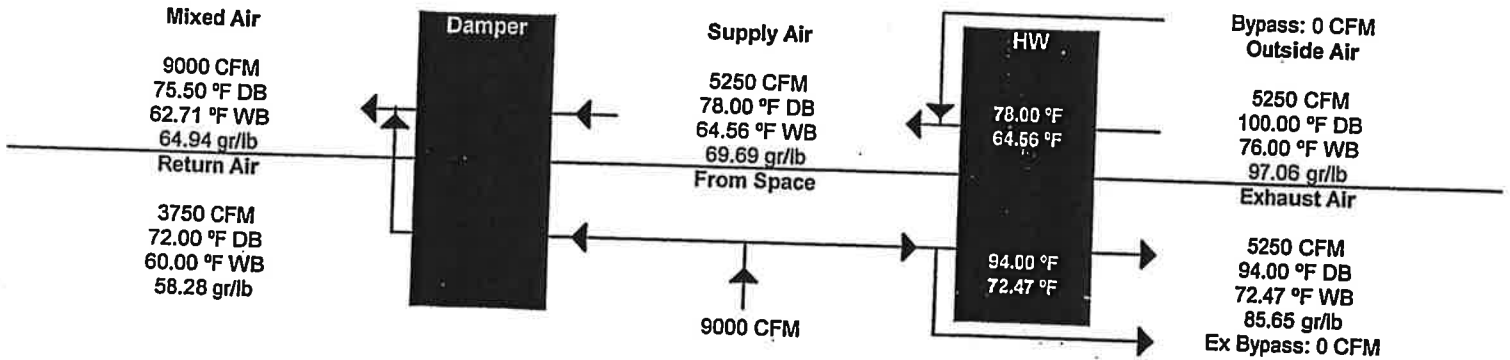
2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

RN-031-3-0-AA04-2A2 : F F F E - E O B - F E Q - 0 0 0 - R J A A 0 B H - 0 0 - 0 A B 0 0 0 0 0 X
Tag: RTU# 13

Job Name Cherokee Casino & Hot
Job Number
Site Altitude 0'

Heat Wheel Type: Total
Heat Wheel Model: ERC-5245
Heat Wheel Qty: 2

Summer Conditions



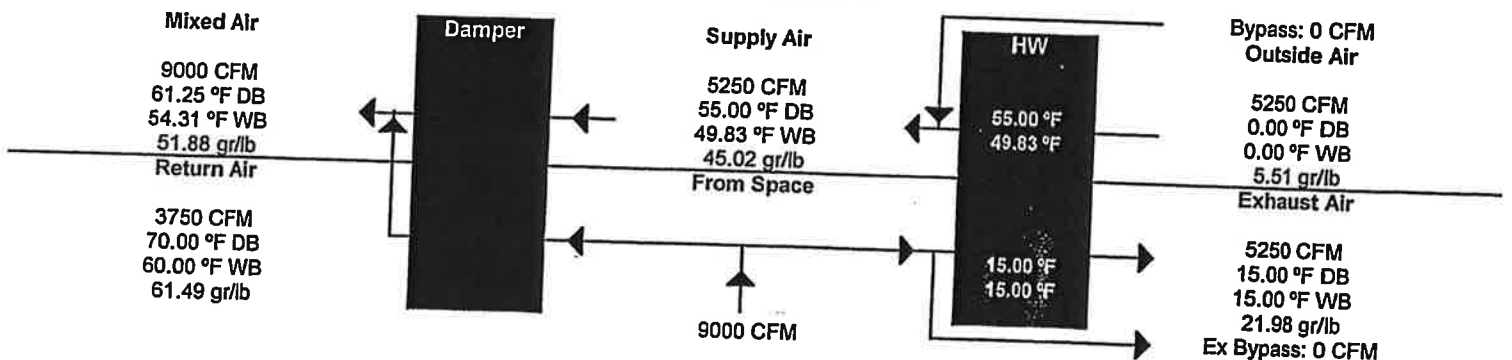
Cooling/Dehumidification

Total Capacity: 223.36 MBH
Sensible Capacity: 125.54 MBH
Latent Capacity: 97.82 MBH

Heating/Humidification

0.00 MBH
0.00 MBH
0.00 MBH

Winter Conditions



Cooling/Dehumidification

Total Capacity: 0.00 MBH
Sensible Capacity: 0.00 MBH
Latent Capacity: 0.00 MBH

Heating/Humidification

450.19 MBH
308.91 MBH
141.27 MBH



27.0" STAR Plenum

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.35 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
 Job Tag: RTU# 13
 Rep Firm: 711
 Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,800
 Diameter x Qty: 27.4 in. x 2
 CFM: 4500
 Tip Speed: 7,905 FPM
 Inertia: 16 WR²

OPERATING CONDITIONS:

Air Flow: 9,000 CFM
 Static Pressure: 2.38 in. Wg.
 Relief Dampers DP: 0.00 in. Wg.
 TSP: 2.38 in. Wg.
 Site Altitude: 0.00 Ft
 TSP @ Sea Level: 2.38 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 3 x 2 / No
 Frame Size: 213T
 Nominal RPM: 1170
 VAC/PH/Hz: 460/3/60
 Efficiency: Premium / 0.906
 Enclosure Type: ODP
 Max Inertial Load: 44 WR²

FAN PERFORMANCE:

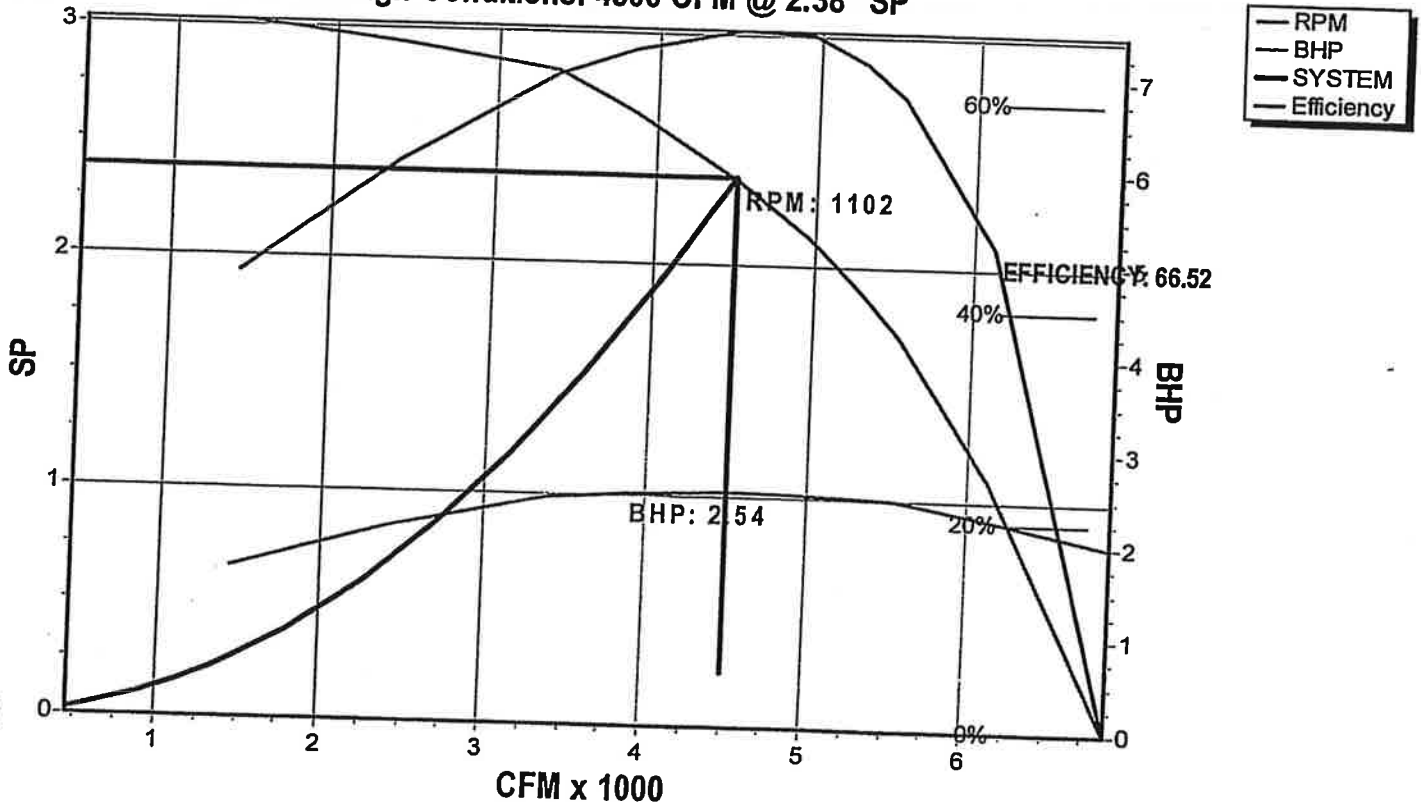
RPM: 1102
 BHP: 2.54
 Efficiency: 66.5%
 In/Out Velocity: 1175/1230 FPM
 Plenum Out Velocity: 102 FPM

FAN SOUND POWER x 2 Fans (In/Out):

Octave Band:	(Re 10 ⁻¹² watts)							
	1	2	3	4	5	6	7	8
	85	82	81	80	80	80	80	79
	87	87	89	88	86	88	86	82

SOUND POWER A-Weighted: 89 / 94 dB

Fan Model: 270D @ 1102 RPM and 70% Width
 Design Conditions: 4500 CFM @ 2.38" SP





27.0" STAR Plenum

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat92 Ver. 4.35 (SN: 0221229)

JOB INFORMATION:

Job Name: Cherokee Casino & Hotel
 Job Tag: RTU# 13
 Rep Firm: 711
 Date: 08/29/2003

WHEEL SPECIFICATION:

Max RPM: 1,800
 Diameter x Qty: 27.4 in. x 2
 CFM: 4500
 Tip Speed: 5,559 FPM
 Inertia: 14 WR²

OPERATING CONDITIONS:

Air Flow: 9,000 CFM
 Static Pressure: 1.08 in. Wg.
 Relief Dampers DP: 0.10 in. Wg.
 TSP: 1.18 in. Wg.
 Site Altitude: 0.00 Ft
 TSP @ Sea Level: 1.18 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 3 x 2 / No
 Frame Size: 182T
 Nominal RPM: 1760
 VAC/PH/Hz: 460/3/60
 Efficiency: Premium / 0.897
 Enclosure Type: ODP
 Max Inertial Load: 17 WR²

FAN PERFORMANCE:

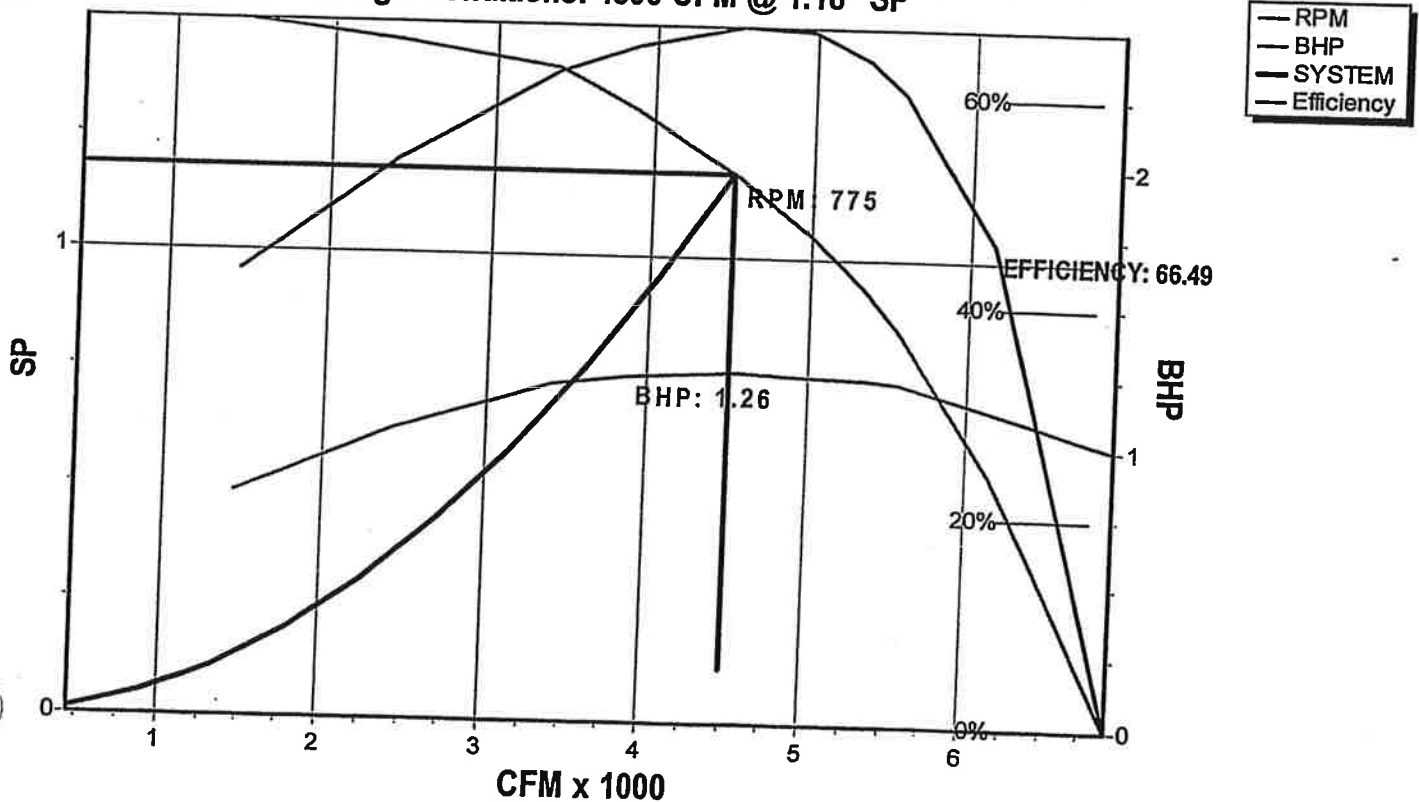
RPM: 775
 BHP: 1.26
 Efficiency: 66.5%
 In/Out Velocity: 1175/1230 FPM
 Plenum Out Velocity: 102 FPM

FAN SOUND POWER x 2 Fans (In/Out):

Octave Band:	(Re 10 ⁻¹² watts)							
	1	2	3	4	5	6	7	8
	78	77	75	74	76	76	75	74
	80	81	85	83	81	81	77	73

SOUND POWER A-Weighted: 83 / 86 dB

Fan Model: RM270 @ 775 RPM and 100% Width
 Design Conditions: 4500 CFM @ 1.18" SP



1A 1B 1C 1D 2 3 4 5A 5B 5C 6A 6B 6C 7 8 9 10 11 12 13 14A 14B 15 16 17 18 19 20 21 22 23
 RN-031-3-0-AA04-2A2 : FFFFE-E0B-FEQ-000-RJAA0BH-00-0AB00000X
 Tag: RTU# 13

Job Name:
Job Number:

Cherokee Casino & Hotel

Unit Submittal For:
Unit Submittal Date:

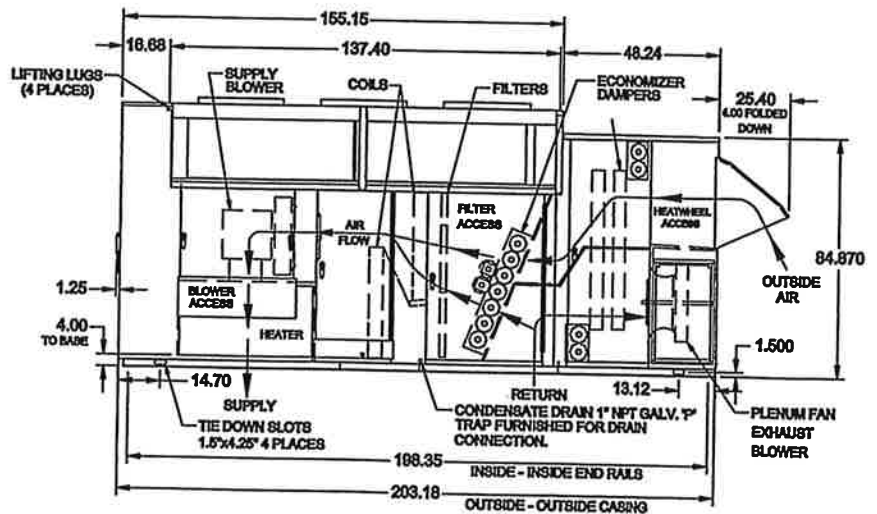
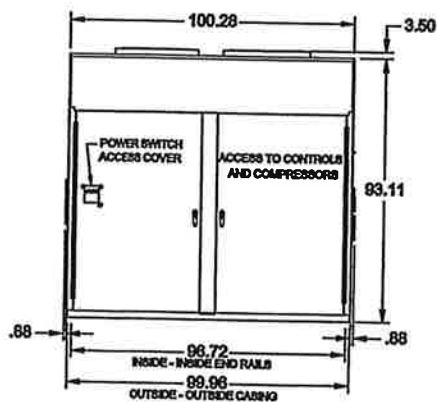
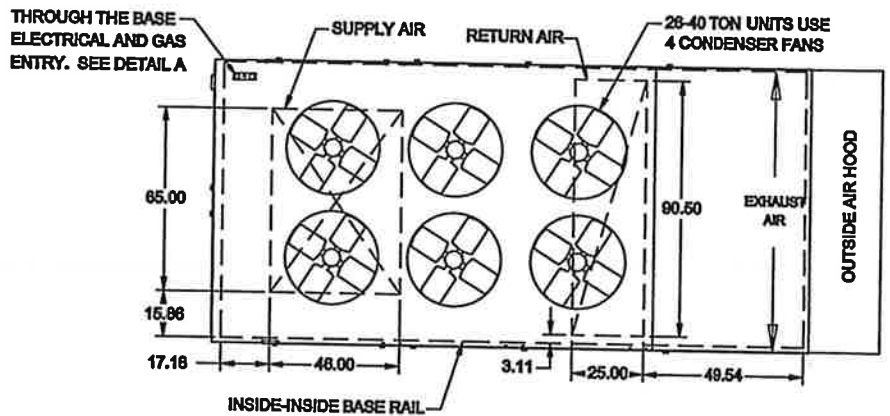
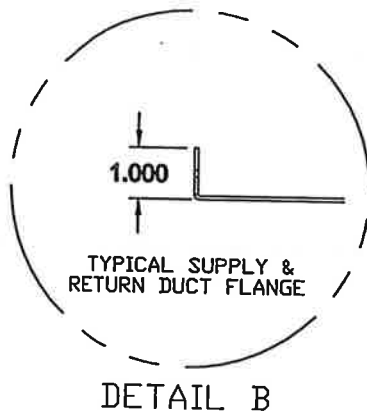
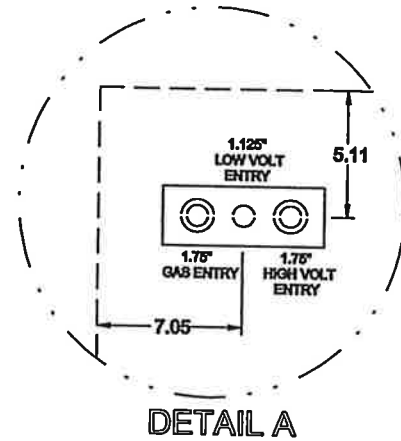
Cherokee Nation Enterprises
August 29, 2003

	Base Option	Description
R	Series	Roof Top Unit
N	Generation	Ninth Generation
031	Unit Size	Thirty One
3	Voltage	460V/3Ø/60Hz
0	Inter. Protection	Standard
A	Cooling - Style	R22
A	Cooling - Configuration	Air Cooled Cond w/ Std Coil
0	Cooling - Coating	Standard
4	Cooling - Staging	4 Stage
2	Heating - Type	Nat. Gas Aluminized
A	Heating - Designation	Heat A - 540 MBtuh
2	Heating - Staging	2 Stage

	Feature Option	Description
F	1A. Return / Outside Air Section	Heat Wheel (Total) Low CFM
F	1B. R/A Blower Configuration	2 Blowers (Premium efficiency motor) w/ two motors on one VFD
F	1C. R/A Blower	Blower F (27" PF BI)
E	1D. R/A Motor	3.0 hp (1760 rpm)
E	2. O/A CONTROL	DDC Actuator
0	3. GAS OPTIONS	Standard
B	4. MAINTENANCE OPTIONS	115V convenience outlet, factory wired
F	5A. S/A BLOWER CONFIG.	2 Blowers (Premium efficiency motor) w/ two motors on one VFD
E	5B. S/A BLOWER	Blower E (BI 27")
Q	5C. S/A MOTOR	3.0 hp (1140 rpm)
0	6A. PRE FILTER TYPE	Standard (None)
0	6B. UNIT FILTER TYPE	Standard - 2" Pleated 30% eff
0	6C. FILTER OPTIONS	Std
R	7. REFRIG. CONTROL	5 MTDR Off + 20 STDR Delay + Fan Cycling
J	8. REFRIG. OPTIONS	HGB Lead + HGB Lag + MHGR
A	9. REFRIG. ACCESSORIES	Sight Glass
A	10. POWER OPTIONS	Power Switch (100 amps)
0	11. SAFETY OPTIONS	Standard
B	12. CONTROLS	Phase & Brown Out Protection
H	13. SPECIAL CONTROLS	Field Installed DDC Controls by Others
0	14A. PREHEAT CONFIG.	Standard (No Preheat)
0	14B. PREHEAT SIZING	Standard (No Preheat)
0	15. BLANK	Standard
A	16. INT. CAB. OPTIONS	Stainless Steel Drain Pans
B	17. EXT. CAB. OPTIONS	Burglar Bars
0	18. CUSTOMER CODE	Standard
0	19. CODE OPTIONS	Std ETL U.S.A. Listing 1
0	20. CRATING	Standard
0	21. WATER COOLED COND.	Std (No Water Condenser)
0	22. BLANK	Standard
	23. TYPE	Special Price Authorization & Gray Paint

RN SERIES D - CABINET ECONOMIZER, HEAT RECOVERY & PLENUM FAN EXHAUST ~ 26-70 TON

CLEARANCES	
LOCATION	? UNIT SIZE ? 26 - 70 TON
RETURN AIR (BACK)	48
VENT SIDE (FRONT)	48
LEFT SIDE	48
RIGHT SIDE	48
TOP	UNOBSTRUCTED



NOTE: ALL DIMENSIONS ARE OUTSIDE TO OUTSIDE UNLESS NOTED OTHERWISE.

D-BOX (26-70 TON) SOLID BOTTOM CURB
HEAT WHEEL & POWER RETURN OPTIONS

