



Unit Rating

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-5094
AAONEent32 Ver. 4.109 (SN: 0198887)

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
1-010-3-0-AA02-344:A000-E0B-0CF-0AA-0C0A00H-00-00C00000B

Tag: RTU-H.E1

Job Information

Job Name: Western VA Regional Jail
Job Number:
Site Altitude: 0 ft
Refrigerant: R-22

Static Pressure

External: 1.50 in. wg.
Evaporator: 0.29 in. wg.
Filters Clean: 0.09 in. wg.
Dirt Allowance: 0 in. wg.

Cooling Section

	Gross	Net
Total Capacity:	136.46	127.60 MBH
Sensible Capacity:	100.59	91.74 MBH
Latent Capacity:	35.86 MBH	
Mixed Air Temp:	82.30 °F DB	70.20 °F WB
Entering Air Temp:	82.30 °F DB	70.20 °F WB
Lv Air Temp (Coil):	61.11 °F DB	60.89 °F WB
Lv Air Temp (Unit):	62.91 °F DB	61.53 °F WB
Supply Air Fan:	1 x 185 @ 2.86 BHP	
SA Fan RPM / Width:	1701 / 6.290"	
aporator Coil:	11.7 ft ² / 3 Rows / 14 FPI	
aporator Face Velocity:	385.7 fpm	

EER - ARI Listing Information

EER @ ARI Conditions: 11.0

Electrical Data

Rating: 460/3/60
Unit FLA: 28

	Qty	HP	VAC
Compressor 1:	2		460
Condenser Fans:	1	0.75	460
Supply Fan:	1	5.00	460
Combustion:	1	0.25	460

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	82	83	87	90	85	81	74	70
Return LW(dB):	77	78	76	71	67	64	56	49

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

Unit Information

Approx. Op./Ship Weights: 1567 / 1567 lbs.
Supply CFM/ESP: 4500 / 1.5 in. wg.
Final-Filter FV / Qty: 337.50 fpm / 6
Outside CFM: 1490
Ambient Temperature: 95 °F DB / 75 °F WB
Return Temperature: 78 °F DB / 65 °F WB

Economizer: 0.11 in. wg.
Heating: 0.20 in. wg.

Re-Heat Coil: 0.07 in. wg.
Total: 2.27 in. wg.

Heating Section

PreHeat Type: Std (No Preheat)
Heating Type: Nat. Gas Heat
Heating CFM: 4500
Total Capacity: 218.7 MBH
OA Temp: 12.0 DB / 10.0 °F WB
RA Temp: 70.0 °F DB / 53.0 °F WB
Entering Air Temp: 50.8 °F DB / 41.5 °F WB
Leaving Air Temp: 35.8 °F DB / 60.8 °F WB
Input: 270.0 MBH
Heater Qty: 1
Consumption: 270.0 MBH
Operation: N/A

Re-Heat Coil:

Capacity: 84 MBH
LA DB / WB: 78.88 °F / 66.72 °F
RH: 55%

Application EER @ Op. Conditions: 9.9

Minimum Circuit Amp: 30
Maximum Overcurrent: 35

Phase	RPM	FLA	RLA
3			9
1	1075	2.3	
3	1760	7.6	
1	3200	0.9	

AAON®**18.5" STAR Plenum**2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.109 (SN: 0198887)**B INFORMATION:**

Job Name: *Western VA Regional Jail*
Job Tag: *RTU-H.E1*
Rep Firm: *Breeden & Collier*
Date: *06/04/2007*

WHEEL SPECIFICATION:

Max RPM: *2,200*
Diameter x Qty: *18.5 in. x 1*
Width%: *100*
Tip Speed: *8,238 FPM*
Inertia: *3 WR²*

OPERATING CONDITIONS:

Air Flow: *4,500 CFM*
Static Pressure: *2.27 in. Wg.*
Plenum DP: *0.00 in. Wg.*
Inlet Grill DP: *0.00 in. Wg.*
TSP: *2.27 in. Wg.*
Site Altitude: *0.00 Ft*
TSP @ Sea Level: *2.27 in. Wg.*

MOTOR SELECTION:

Rated HP / Bypass: *5 / No*
Frame Size: *184T*
Nominal RPM: *1760*
VAC/PH/HZ: *460/3/60*
Efficiency: *Standard / 0.875*
Enclosure Type: *ODP*
Max Inertial Load: *52 WR²*

FAN PERFORMANCE:

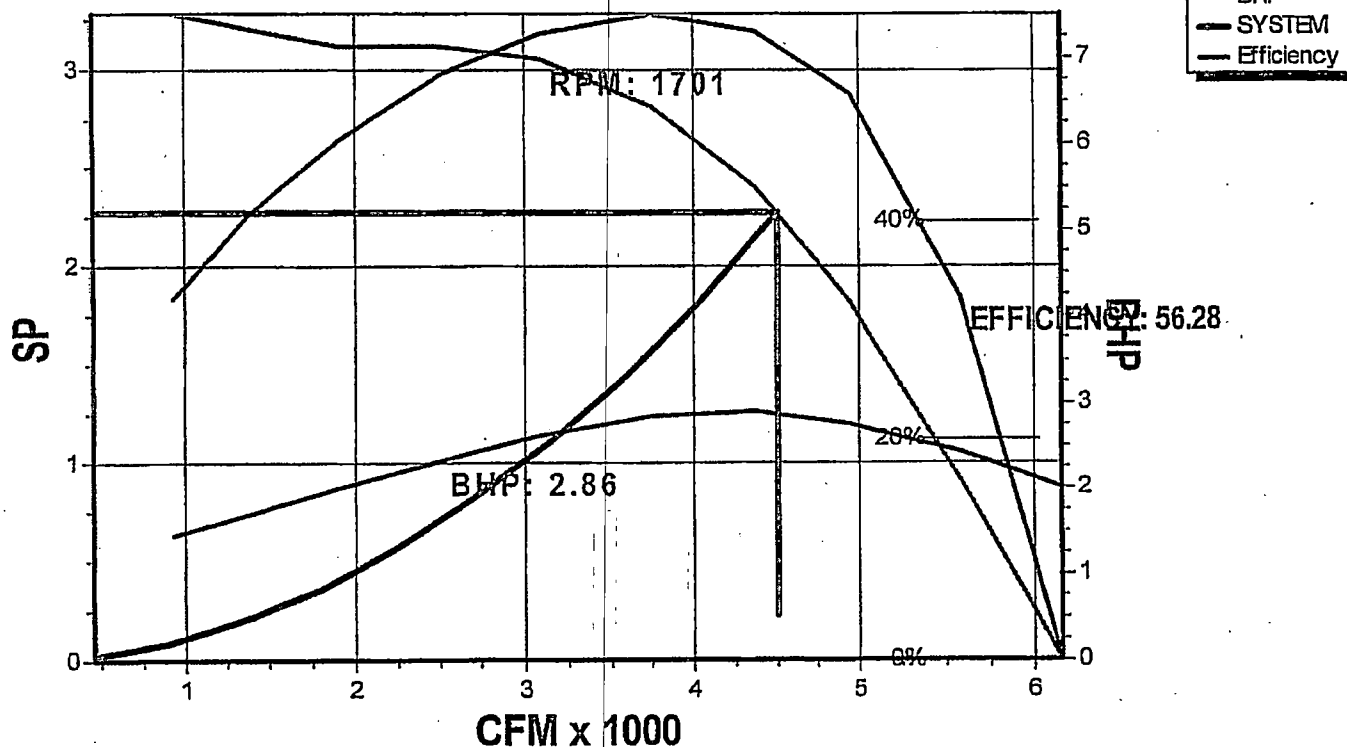
RPM: *1701*
BHP: *2.86*
Efficiency: *56.3%*
In/Out Velocity: *2284/1772 FPM*
Plenum Out Velocity: *75 FPM*

FAN SOUND POWER (Inlet/Outlet):

Octave Band:		(Re 10 ⁻¹² watts)						
1	2	3	4	5	6	7	8	
82	83	85	84	78	76	72	68	
82	83	87	91	87	83	77	73	

SOUND POWER A-Weighted: *85 / 90 dB*

Supply Fan Model: 185 @ 1701 RPM and 100% Width
Design Conditions: 4500 CFM @ 2.27" SP





Unit Submittal

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEent32 Ver. 4.100 (SN: 0198387)

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
1-010-3-0-AA02-344:A000-E0B-0CF-0AA-0C0A00H-00-00C00000B
Tag: RTU-HE1

Job Name:
Job Number:

Western VA Regional Jail

Unit Submittal For:
Unit Submittal Date:

Southern Air, Inc.
June 04, 2007

	Base Option	Description
R	Series	Roof Top Unit
M	Generation	Eighth Generation
010	Unit Size	Ten
3	Voltage	460V/3Ø/60Hz
0	Inter. Protection	Standard
A	Cooling - Style	R-22
A	Cooling - Configuration	Air-Cooled Cond w/ Std Coil
0	Cooling - Coating	Standard
2	Cooling - Staging	2 Stage
3	Heating - Type	Nat. Gas Stainless Steel
4	Heating - Designation	Heat 4 - 270 MBtu/h
4	Heating - Staging	4 Stage

	Feature Option	Description
A	1A. Return / Outside Air Section	Economizer
0	1B. R/A Blower Configuration	Std (None)
0	1C. R/A Blower	Std (None)
0	1D. R/A Motor	Std (No Motor)
E	2. O/A Control	DDC Actuator
0	3. Gas Options	Standard
B	4. Maintenance Options	115V convenience outlet, factory wired
0	5A. S/A Blower Config.	1 Blower (Standard efficiency motor)
C	5B. S/A Blower	Blower C (BI 18.5")
F	5C. S/A Motor	5.0 hp (1760 rpm)
0	6A. Pre Filter Type	Standard (None)
A	6B. Unit Filter Type	2" Pleated 30% eff
A	6C. Filter Options	Clogged Filter Switch (CFS)
0	7. Refrig. Control	Std (Fixed 55 deg CLO)
C	8. Refrig. Options	Hot Gas Reheat Coil [HGRC]
0	9. Refrig. Accessories	Standard
A	10. Power Options	Power Switch (100 amps)
0	11. Safety Options	Standard
0	12. Controls	Standard
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
0	16. Int. Cab. Options	Standard
C	17. Ext. Cab. Options	Cond Coil Guards
0	18. Customer Code	Standard
0	19. Code Options	Std ETL U.S.A. Listing
0	20. Grating	Standard
0	21. Water Cooled Cond.	Std (No Water Condenser)
0	22. Control Vendors	Standard
B	23. Type	Standard (Includes 'Gray Paint')

AADN®

Unit Rating

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AAONEent32 Ver. 4.109 (SN: 0198387)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
1-010-3-0-AA02-334:A000-E0B-0CE-0AA-0C0A00H-00-00C00000B

Tag: RTU-HE2

Job Information

Job Name: Western VA Regional Jail
Job Number:
Site Altitude: 0 ft
Refrigerant: R-22

Static Pressure

External: 1.50 in. wg.
Evaporator: 0.27 in. wg.
Filters Clean: 0.09 in. wg.
Dirt Allowance: 0 in. wg.

Cooling Section

	Gross	Net
Total Capacity:	134.49	125.79 MBH
Sensible Capacity:	97.17	88.46 MBH
Latent Capacity:	37.33 MBH	
Mixed Air Temp:	81.80 °F DB	69.90 °F WB
Entering Air Temp:	81.80 °F DB	69.90 °F WB
Lv Air Temp (Coil):	60.40 °F DB	60.22 °F WB
Lv Air Temp (Unit):	62.24 °F DB	60.89 °F WB
Supply Air Fan:	1 x 185 @ 2.65 BHP	
SA Fan RPM / Width:	1654 / 6.290"	

Evaporator Coil: 11.7 ft² / 3 Rows / 14 FPI
Evaporator Face Velocity: 368.6 fpm

EER - ARI Listing Information

EER @ ARI Conditions: 11.0

Application EER @ Op. Conditions:

9.9

Electrical Data

Rating: 460/3/60
Unit FLA: 25

Minimum Circuit Amp: 27
Maximum Overcurrent: 35

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	2		460	3			9
Condenser Fans:	1	0.75	460	1	1075	2.3	
Supply Fan:	1	3.00	460	3	1760	4.8	
Combustion:	1	0.09	460	1	3000	0.7	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	82	83	86	89	84	80	73	69
Return LW(dB):	75	78	75	70	67	63	55	48

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

Unit Information

Approx. Op./Ship Weights: 1490 / 1490 lbs.
Supply CFM/ESP: 4300 / 1.5 in. wg.
Final-Filter FV / Qty: 322.50 fpm / 6
Outside CFM: 1330
Ambient Temperature: 95 °F DB / 75 °F WB
Return Temperature: 78 °F DB / 65 °F WB

Economizer: 0.11 in. wg.
Heating: 0.19 in. wg.

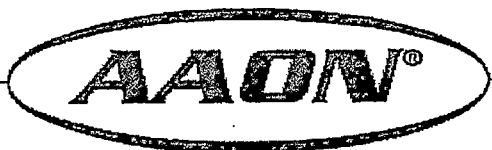
Re-Heat Coil: 0.06 in. wg.
Total: 2.22 in. wg.

Heating Section

PreHeat Type: Std (No Preheat)
Heating Type: Nat. Gas Heat
Heating CFM: 4300
Total Capacity: 145.8 MBH
OA Temp: 12.0 DB / 10.0 °F WB
RA Temp: 70.0 °F DB / 53.0 °F WB
Entering Air Temp: 52.1 °F DB / 42.3 °F WB
Leaving Air Temp: 83.5 °F DB / 56.3 °F WB
Input: 180.0 MBH
Heater Qty: 1
Consumption: 180.0 MBH
Operation: N/A

Re-Heat Coil:

Capacity: 83 MBH
LA DB / WB: 78.25 °F / 66.31 °F
RH: 54%



18.5" STAR Plenum

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 588-2266 Fax (918) 588-6094
AAONEcat32 Ver. 4.109 (SN: 0198387)

B INFORMATION:

Job Name: Western VA Regional Jail
Job Tag: RTU-H.E2
Rep Firm: Breeden & Collier
Date: 06/04/2007

WHEEL SPECIFICATION:

Max RPM: 2,200
Diameter x Qty: 18.5 in. x 1
Width%: 100
Tip Speed: 8,011 FPM
Inertia: 3 WR³

OPERATING CONDITIONS:

Air Flow: 4,300 CFM
Static Pressure: 2.22 in. Wg.
Plenum DP: 0.00 in. Wg.
Inlet Grill DP: 0.00 in. Wg.
TSP: 2.22 in. Wg.
Site Altitude: 0.00 Ft
TSP @ Sea Level: 2.22 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 3 / No
Frame Size: 182T
Nominal RPM: 1760
VAC/PH/HZ: 460/3/60
Efficiency: Standard / 0.825
Enclosure Type: ODP
Max Inertial Load: 29 WR³

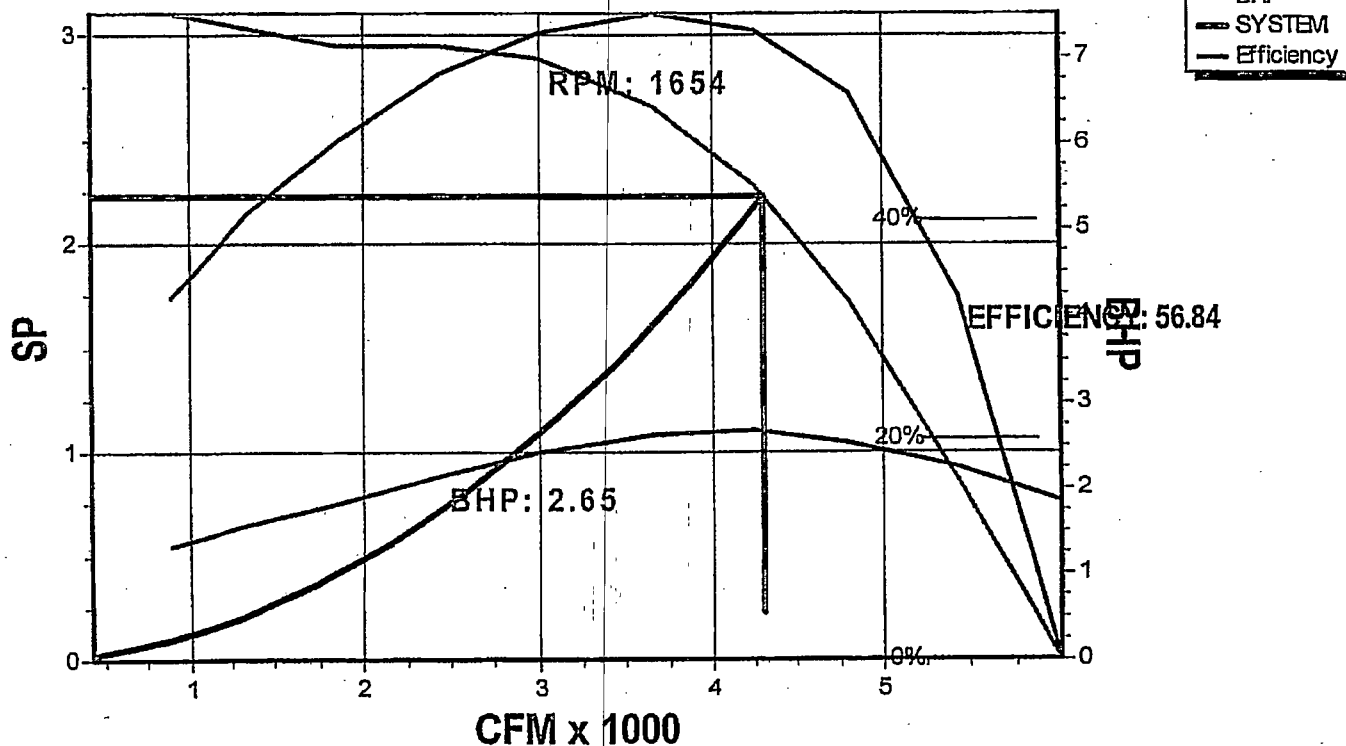
FAN PERFORMANCE:

RPM: 1654
BHP: 2.65
Efficiency: 56.8%
In/Out Velocity: 2183/1693 FPM
Plenum Out Velocity: 72 FPM

FAN SOUND POWER (Inlet/Outlet):

Octave Band:	1	2	3	4	5	6	7	8
	81	83	84	84	78	75	71	67
	82	83	86	90	87	83	76	72
SOUND POWER A-Weighted:	84 / 89 dB							

Supply Fan Model: 185 @ 1654 RPM and 100% Width
Design Conditions: 4300 CFM @ 2.22" SP





Unit Submittal

2425 South Yukon Ave • Tulsa, Oklahoma 74107-2728 • Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.109 (SN: 0198387)

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
 1-010-3-0-AA02-334:A000-E0B-0CE-0AA-0C0A00H-00-00C00000B
 Tag: RTU-H.E2

Job Name:
Job Number:

Western VA Regional Jail

Unit Submittal For:
Unit Submittal Date:

Southern Air, Inc.
June 04, 2007

	Base Option	Description
R	Series	Roof Top Unit
M	Generation	Eighth Generation
010	Unit Size	Ten
3	Voltage	460V/3Ø/60Hz
0	Inter. Protection	Standard
A	Cooling - Style	R-22
A	Cooling - Configuration	Air-Cooled Cond w/ Std Coil
0	Cooling - Conting	Standard
2	Cooling - Staging	2 Stage
3	Heating - Type	Nat. Gas Stainless Steel
3	Heating - Designation	Heat 3 - 180 MBtuh
4	Heating - Staging	4 Stage

	Feature Option	Description
A	1A. Return / Outside Air Section	Economizer
0	1B. R/A Blower Configuration	Std (None)
0	1C. R/A Blower	Std (None)
0	1D. R/A Motor	Std (No Motor)
E	2. O/A Control	DDC Actuator
0	3. Gas Options	Standard
B	4. Maintenance Options	115V convenience outlet, factory wired
0	5A. S/A Blower Config.	1 Blower (Standard efficiency motor)
C	5B. S/A Blower	Blower C (BI 18.5")
E	5C. S/A Motor	3.0 hp (1760 rpm)
0	6A. Pre Filter Type	Standard (None)
A	6B. Unit Filter Type	2" Pleated 80% eff
A	6C. Filter Options	Clogged Filter Switch (CFS)
0	7. Refrig. Control	Std (Fixed 55 deg CLO)
C	8. Refrig. Options	Hot Gas Reheat Coil (HGRC)
0	9. Refrig. Accessories	Standard
A	10. Power Options	Power Switch (100 amps)
0	11. Safety Options	Standard
0	12. Controls	Standard
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
0	16. Int. Cab. Options	Standard
C	17. Ext. Cab. Options	Cond Coil Guards
0	18. Customer Code	Standard
0	19. Code Options	Std ETL U.S.A. Listing
0	20. Crating	Standard
0	21. Water Cooled Cond.	Std (No Water Condenser)
0	22. Control Vendors	Standard
B	23. Type	Standard (Includes 'Gray Paint')



Unit Rating

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2260 Fax (918) 583-6094
AAONEnt32 Ver. 4.109 (SN: 0198387)

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
-010-3-0-AA02-334:A000-EOB-0CE-0AA-0C0A00H-00-00C00000B

Tag: RTU-H.E3

Job Information

Job Name: Western VA Regional Jail
Job Number:
Site Altitude: 0 ft
Refrigerant: R-22

Static Pressure

External: 1.50 in. wg.
Evaporator: 0.25 in. wg.
Filters Clean: 0.07 in. wg.
Dirt Allowance: 0 in. wg.

Cooling Section

	Gross	Net
Total Capacity:	134.43	126.70 MBH
Sensible Capacity:	95.25	87.53 MBH
Latent Capacity:	39.17 MBH	
Mixed Air Temp:	82.50 °F DB	70.20 °F WB
Entering Air Temp:	82.50 °F DB	70.20 °F WB
Lv Air Temp (Coil):	59.91 °F DB	59.78 °F WB
Lv Air Temp (Unit):	61.67 °F DB	60.42 °F WB
Supply Air Fan:	1 x 185 @ 2.34 BHP	
SA Fan RPM / Width:	1587 / 6.290"	
aporator Coil:	11.7 ft ² / 3 Rows / 14 FPI	
Evaporator Face Velocity:	342.9 fpm	

EER - ARI Listing Information

EER @ ARI Conditions: 11.0

Electrical Data

Rating: 460/3/60
Unit FLA: 25

	Qty	HP	VAC
Compressor 1:	2		460
Condenser Fans:	1	0.75	460
Supply Fan:	1	3.00	460
Combustion:	1	0.09	460

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	81	81	85	87	83	78	71	67
Return LW(dB):	75	77	74	69	65	61	53	46

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

Unit Information

Approx. Op./Ship Weights: 1490 / 1490 lbs.
Supply CFM/ESP: 4000 / 1.5 in. wg.
Final-Filter FV / Qty: 300.00 fpm / 6
Outside CFM: 1360
Ambient Temperature: 95 °F DB / 75 °F WB
Return Temperature: 78 °F DB / 65 °F WB

Economizer: 0.09 in. wg.
Heating: 0.17 in. wg.

Re-Heat Coil: 0.06 in. wg.
Total: 2.14 in. wg.

Heating Section

PreHeat Type: Std (No Preheat)
Heating Type: Nat. Gas Heat
Heating CFM: 4000
Total Capacity: 145.8 MBH
OA Temp: 12.0 DB / 10.0 °F WB
RA Temp: 70.0 °F DB / 53.0 °F WB
Entering Air Temp: 50.3 °F DB / 41.2 °F WB
Leaving Air Temp: 84.0 °F DB / 56.3 °F WB
Input: 180.0 MBH
Heater Qty: 1
Consumption: 180.0 MBH
Operation: N/A

Re-Heat Coil:

Capacity: 83 MBH
LA DB / WB: 79.09 °F / 66.35 °F
RH: 51%

Application EER @ Op. Conditions: 10.2

Minimum Circuit Amp: 27
Maximum Overcurrent: 35

Phase	RPM	FLA	RLA
3			9
1	1075	2.3	
3	1760	4.8	
1	3000	0.7	

AAON®**18.5" STAR Plenum**2425 South Yukon Ave • Tulsa, Oklahoma 74107-2728 • Ph. (918) 583-2266 Fax (918) 583-6094
AAONEnt32 Ver. 4.109 (SN: 0108387)**B INFORMATION:**

Job Name: Western VA Regional Jail
Job Tag: RTU-H.E3
Rep Firm: Breeden & Collier
Date: 06/04/2007

OPERATING CONDITIONS:

Air Flow: 4,000 CFM
Static Pressure: 2.14 in. Wg.
Plenum DP: 0.00 in. Wg.
Inlet Grill DP: 0.00 in. Wg.
TSP: 2.14 in. Wg.
Site Altitude: 0.00 Ft
TSP @ Sea Level: 2.14 in. Wg.

FAN PERFORMANCE:

RPM: 1587
BHP: 2.34
Efficiency: 57.6%
In/Out Velocity: 2030/1575 FPM
Plenum Out Velocity: 67 FPM

WHEEL SPECIFICATION:

Max RPM: 2,200
Diameter x Qty: 18.5 in. x 1
Width%: 100
Tip Speed: 7,686 FPM
Inertia: 3 WR²

MOTOR SELECTION:

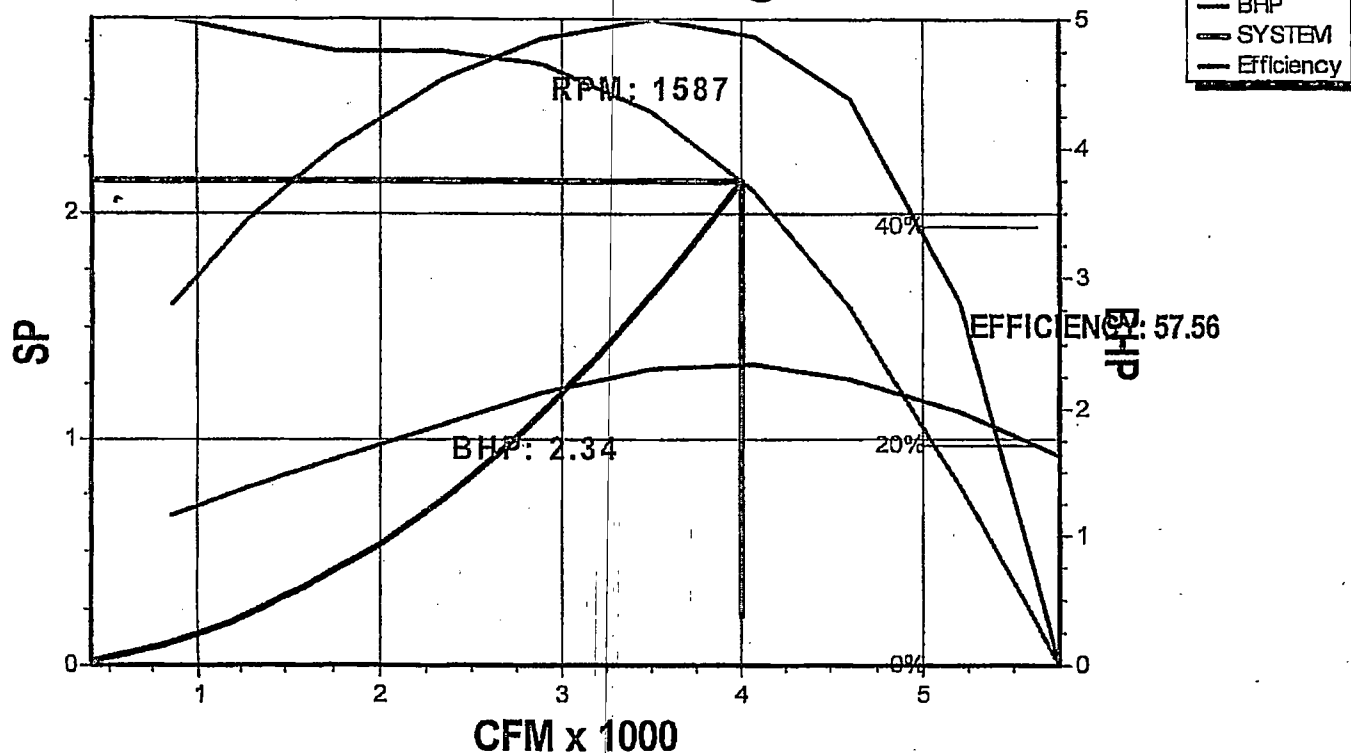
Rated HP / Bypass: 3 / No
Frame Size: 182T
Nominal RPM: 1760
VAC/PH/HZ: 460/3/60
Efficiency: Standard / 0.825
Enclosure Type: ODP
Max Inertial Load: 29 WR²

FAN SOUND POWER (Inlet/Outlet):

Octave Band:		(Re 10 ⁻¹² watts)					
1	2	3	4	5	6	7	8
80	82	83	82	76	73	69	65
81	81	85	88	85	81	74	70

SOUND POWER A-Weighted: 83 / 88 dB

Supply Fan Model: 185 @ 1587 RPM and 100% Width
Design Conditions: 4000 CFM @ 2.14" SP





Unit Submittal

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fnx (918) 583-6094
AAONEcat32 Ver. 4.109 (SN: 0196387)

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

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Tag: RTU-H.E3

Job Name:
Job Number:

Western VA Regional Jail

Unit Submittal For:
Unit Submittal Date:

Southern Air, Inc.
June 04, 2007

	Base Option	Description
R	Series	Roof Top Unit
M	Generation	Eighth Generation
010	Unit Size	Ten
3	Voltage	480V/3Ø/60Hz
0	Inter. Protection	Standard
A	Cooling - Style	R-22
A	Cooling - Configuration	Air-Cooled Cond w/ Std Coil
0	Cooling - Coating	Standard
2	Cooling - Staging	2 Stage
3	Heating - Type	Nat. Gas Stainless Steel
3	Heating - Designation	Heat 3 - 180 MBtuh
4	Heating - Staging	4 Stage

	Feature Option	Description
A	1A. Return / Outside Air Section	Economizer
0	1B. R/A Blower Configuration	Std (None)
0	1C. R/A Blower	Std (None)
0	1D. R/A Motor	Std (No Motor)
E	2. O/A Control	DDC Actuator
0	3. Gas Options	Standard
B	4. Maintenance Options	115V convenience outlet, factory wired
0	5A. S/A Blower Config.	1 Blower (Standard efficiency motor)
C	5B. S/A Blower	Blower C (BI 18.5")
E	5C. S/A Motor	3.0 hp (1760 rpm)
0	6A. Pre Filter Type	Standard (None)
A	6B. Unit Filter Type	2" Pleated 30% eff
A	6C. Filter Options	Clogged Filter Switch (CFS)
0	7. Refrig. Control	Std (Fixed 55 deg CLO)
C	8. Refrig. Options	Hot Gas Reheat Coil [HGRC]
0	9. Refrig. Accessories	Standard
A	10. Power Options	Power Switch (100 amps)
0	11. Safety Options	Standard
0	12. Controls	Standard
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
0	16. Int. Cab. Options	Standard
C	17. Ext. Cab. Options	Cond Coil Guards
0	18. Customer Code	Standard
0	19. Code Options	Std ETL U.S.A. Listing
0	20. Crating	Standard
0	21. Water Cooled Cond.	Std (No Water Condenser)
0	22. Control Vendors	Standard
B	23. Type	Standard (Includes 'Gray Paint')



Unit Rating

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2206 Fax (918) 583-6094
AAONEcat32 Ver. 4.100 (SN: 0198387)

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
1-010-3-0-AA02-334:A000-E0B-0CE-0AA-0C0A00H-00-00C00000B

Tag: RTU-H.E4

Job Information

Job Name: Western VA Regional Jail
Job Number:
Site Altitude: 0 ft
Refrigerant: R-22

Static Pressure

External: 1.50 in. wg.
Evaporator: 0.26 in. wg.
Filters Clean: 0.08 in. wg.
Dirt Allowance: 0 in. wg.

Cooling Section

	Gross	Net
Total Capacity:	134.95	126.60 MBH
Sensible Capacity:	97.24	88.88 MBH
Latent Capacity:	37.71 MBH	
Mixed Air Temp:	82.40 °F DB	70.20 °F WB
Entering Air Temp:	82.40 °F DB	70.20 °F WB
Lv Air Temp (Coil):	60.44 °F DB	60.28 °F WB
Lv Air Temp (Unit):	62.26 °F DB	60.94 °F WB
Supply Air Fan:	1 x 185 @ 2.54 BHP	
SA Fan RPM / Width:	1629 / 6.290"	
aporator Coil:	11.7 ft² / 3 Rows / 14 FPI	
Lvaporator Face Velocity:	360.0 fpm	

Unit Information

Approx. Op./Ship Weights: 1490 / 1490 lbs.
Supply CFM/ESP: 4200 / 1.5 in. wg.
Final-Filter FV / Qty: 315.00 fpm / 6
Outside CFM: 1390
Ambient Temperature: 95 °F DB / 75 °F WB
Return Temperature: 78 °F DB / 65 °F WB

Economizer: 0.10 in. wg.
Heating: 0.18 in. wg.

Re-Heat Coil: 0.06 in. wg.
Total: 2.19 in. wg.

Heating Section

PreHeat Type: Std (No Preheat)
Heating Type: Nat. Gas Heat
Heating CFM: 4200
Total Capacity: 145.8 MBH
OA Temp: 12.0 DB / 10.0 °F WB
RA Temp: 70.0 °F DB / 53.0 °F WB
Entering Air Temp: 50.8 °F DB / 41.5 °F WB
Leaving Air Temp: 83.0 °F DB / 56.0 °F WB
Input: 180.0 MBH
Heater Qty: 1
Consumption: 180.0 MBH
Operation: N/A

Re-Heat Coil:

Capacity: 88 MBH
LA DB / WB: 78.78 °F / 66.52 °F
RH: 53%

EER - ARI Listing Information

EER @ ARI Conditions: 11.0

Application EER @ Op. Conditions: 10.0

Electrical Data

Rating: 460/3/60
Unit FLA: 25

Minimum Circuit Amp: 27
Maximum Overcurrent: 35

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	2		460	3			9
Condenser Fans:	1	0.75	460	1	1075	2.3	
Supply Fan:	1	3.00	460	3	1760	4.8	
Combustion:	1	0.09	460	1	3000	0.7	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	82	83	86	89	83	79	73	69
Return LW(dB):	75	77	74	69	67	62	55	47

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



18.5" STAR Plenum

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.109 (SN: 0108387)

B INFORMATION:

Job Name: Western VA Regional Jail
Job Tag: RTU-H.E4
Rep Firm: Breeden & Collier
Date: 06/04/2007

WHEEL SPECIFICATION:

Max RPM: 2,300
Diameter x Qty: 18.5 in. x 1
Width%: 100
Tip Speed: 7,890 FPM
Inertia: 3 WR²

OPERATING CONDITIONS:

Air Flow: 4,200 CFM
Static Pressure: 2.19 in. Wg.
Plenum DP: 0.00 in. Wg.
Inlet Grill DP: 0.00 in. Wg.
TSP: 2.19 in. Wg.
Site Altitude: 0.00 Ft
TSP @ Sea Level: 2.19 in. Wg.

MOTOR SELECTION:

Rated HP / Bypass: 3 / No
Frame Size: 182T
Nominal RPM: 1760
VAC/PH/HZ: 460/3/60
Efficiency: Standard / 0.825
Enclosure Type: ODP
Max Inertial Load: 29 WR²

FAN PERFORMANCE:

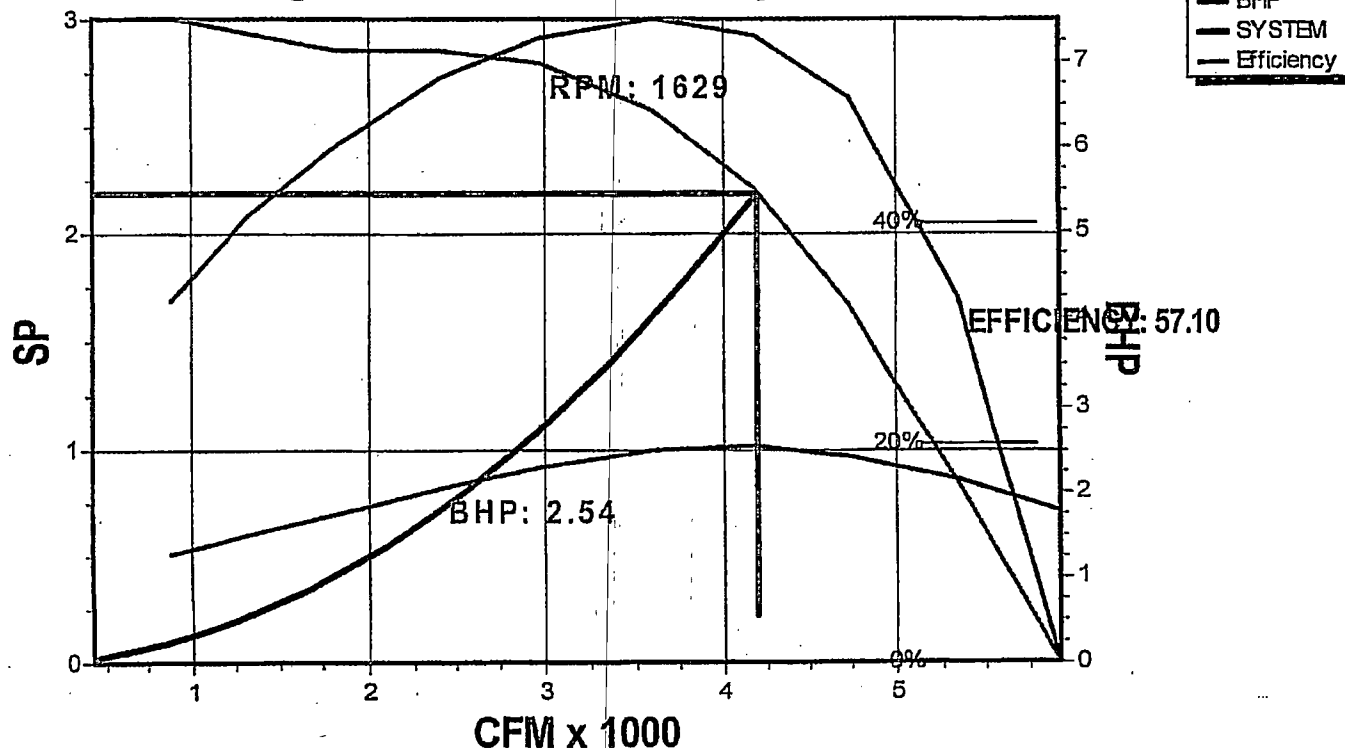
RPM: 1629
BHP: 2.54
Efficiency: 57.1%
In/Out Velocity: 2132/1654 FPM
Plenum Out Velocity: 70 FPM

FAN SOUND POWER (Inlet/Outlet):

Octave Band:	1	2	3	4	5	6	7	8
(Re 10 ⁻¹² watts)	81	83	84	83	77	75	71	67
	82	83	86	90	85	82	76	72

SOUND POWER A-Weighted: 84 / 88 dB

Supply Fan Model: 185 @ 1629 RPM and 100% Width
Design Conditions: 4200 CFM @ 2.19" SP





Unit Submittal

2425 South Yukon Ave • Tulsa, Oklahoma 74107-2728 • Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.109 (SN: 0198387)

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

- 010-3-0-AA02-334:A000-E0B-0CE-0AA-0C0A00H-00-00C00000B

Tag: RTU-H.E4

Job Name:
Job Number:

Western VA Regional Jail

Unit Submittal For:
Unit Submittal Date:

Southern Air, Inc.
June 04, 2007

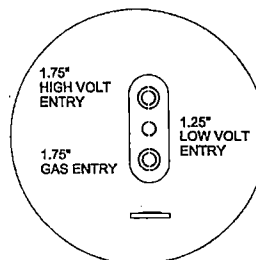
	Base Option	Description
R	Series	Roof Top Unit
M	Generation	Eighth Generation
010	Unit Size	Ten
3	Voltage	460V/3Ø/60Hz
0	Inter. Protection	Standard
A	Cooling - Style	R-22
A	Cooling - Configuration	Air-Cooled Cond w/ Std Coil
0	Cooling - Coating	Standard
2	Cooling - Staging	2 Stage
3	Heating - Type	Nat. Gas Stainless Steel
3	Heating - Designation	Heat 3 - 180 MBtuh
4	Heating - Staging	4 Stage

	Feature Option	Description
A	1A. Return / Outside Air Section	Economizer
0	1B. R/A Blower Configuration	Std (None)
0	1C. R/A Blower	Std (None)
0	1D. R/A Motor	Std (No Motor)
E	2. O/A Control	DDC Actuator
0	3. Gas Options	Standard
B	4. Maintenance Options	115V convenience outlet, factory wired
0	5A. S/A Blower Config.	1 Blower (Standard efficiency motor)
C	5B. S/A Blower	Blower C (BI 18.5")
E	5C. S/A Motor	3.0 hp (1760 rpm)
0	6A. Pre Filter Type	Standard (None)
A	6B. Unit Filter Type	2" Pleated 30% off
A	6C. Filter Options	Clogged Filter Switch (CFS)
0	7. Refrig. Control	Std (Fixed 55 deg CLO)
C	8. Refrig. Options	Hot Gas Reheat Coil (HGRC)
0	9. Refrig. Accessories	Standard
A	10. Power Options	Power Switch (100 amps)
0	11. Safety Options	Standard
0	12. Controls	Standard
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
0	16. Int. Cab. Options	Standard
C	17. Ext. Cab. Options	Cond Coil Guards
0	18. Customer Code	Standard
0	19. Code Options	Std ETL U.S.A. Listing
0	20. Crating	Standard
0	21. Water Cooled Cond.	Std (No Water Condenser)
0	22. Control Vendors	Standard
B	23. Type	Standard (Includes 'Gray Paint')

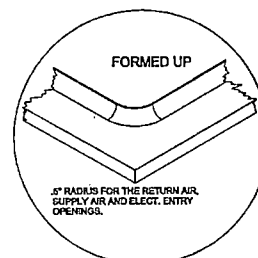
B Cabinet 8-15 ton

w/ economizer & power exhaust option

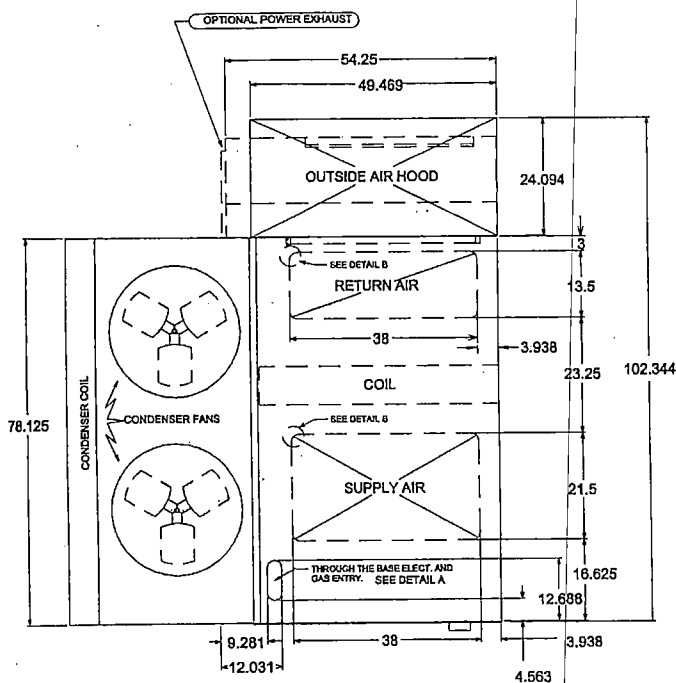
CLEARANCES	
LOCATION	• UNIT SIZE •
	8 • 10 • 13 • 15
RETURN AIR (BACK)	48
VENT SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	60
TOP	UNOBSTRUCTED



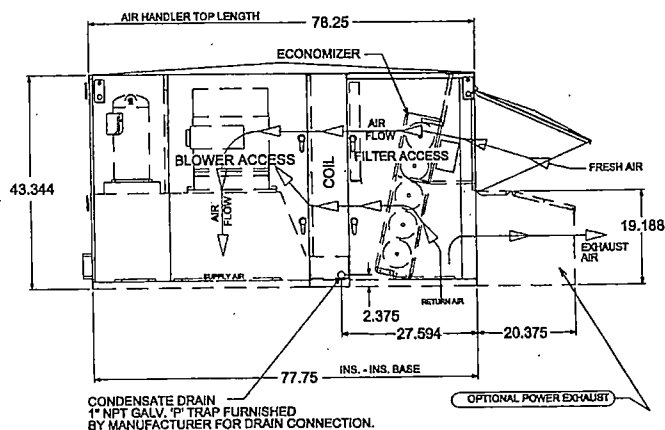
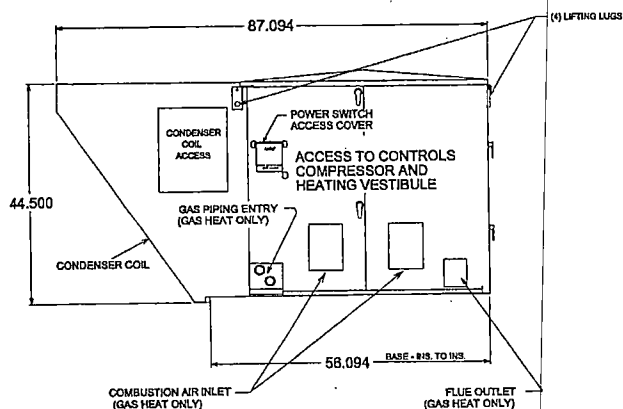
DETAIL A



DETAIL B



NUMBER OF CONDENSER FANS
 8-10 TON - 1 FAN
 13-15 TON - 2 FANS

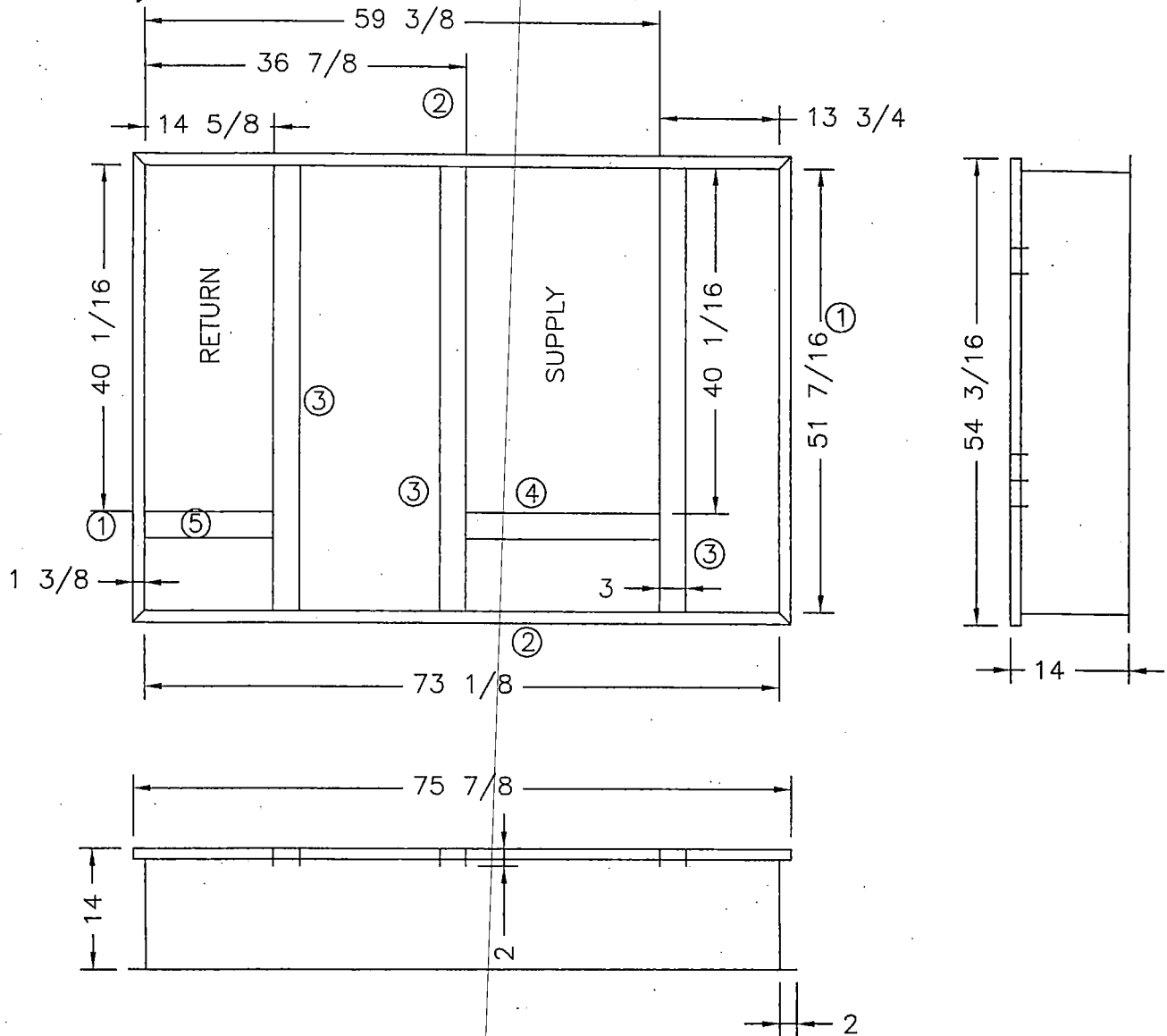


NOTES:
 ALL DIMENSIONS ARE OUTSIDE TO OUTSIDE UNLESS NOTED OTHERWISE.
 ALLOW .625\"/>



ARC-6/AAON RM 08-15 (B CABINET) FLAT

* ALL B CABINET UNITS (24 TOTAL)



FEATURES:

- 18 GA GALVANIZED STEEL
- 1 X 1 ANGLE IRON IN CORNERS
- PRESSURE TREATED 1 X 4 WOOD NAILER
- FULLY WELDED CONSTRUCTION
- 14" HIGH / NO SLOPE
- (1) 50' ROLLS NEOPRENE GASKET

QTY: 24

TAG: ALL B CABINETS

LEAD TIME QUOTED BEGINS AFTER APPROVED COPY OF THIS DRAWING IS RECEIVED BY AES

APPROVED: _____
DATE: _____

AES ORDER NO:

JOB NAME: WVRJ

FILENAME: AA03_ARC6_14F0000.DWG

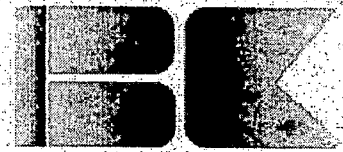
LOCATION: ROANOKE, VA

DRAWN BY: JAH

DATE: 6/19/01

EQUIPMENT SCOPE

BREEDEN & COLLIER



COMPANY, INC.
MANUFACTURERS' REPRESENTATIVE

Packaged Rooftop Units by AAON, INC. (Section 15735)

- 18 gauge galvanized steel painted and insulated single wall cabinet (color: AAON-Grey).
- Plenum airfoil supply fan with high efficiency ODP motor.
- Motorized outside air damper with 2-position actuator (*as required*).
- Full modulating economizer with DDC actuator (control by others) (*as required*).
- Power exhaust fan with high efficiency ODP motor (*as required*).
- Copper tube/aluminum fin DX cooling coil with double sloped, galvanized steel drain pan.
- Copper tube/aluminum fin hot gas reheat coil (w/ on-off control) piped to lead refrigerant circuit (*as required*).
- Condensing section with direct drive vertical discharge condenser fans, copper tube/aluminum fin coil. Condenser coil guards are included for units up to 30 tons. Fan cycling / low ambient option is included for units without outside air.
- Scroll type compressors with thermal overload protection.
- Natural gas heat with aluminized steel or stainless steel heat exchanger (*as required*), staged control (4 stages on units with nominal cooling capacity of 10 tons and larger; 2 stages on smaller capacity units) and electronic ignition. Note: Natural gas supply pressure supply range is 6 – 10.5" w.g. Units tagged RTU-A.2 & F.3 do not incorporate gas heat.
- Standard unit warranty (parts only – one year). 5 year compressor warranty (parts only).
- 2" pleated 30% efficient supply air filters (1 spare set included).
- Unit mounted control panel with N/F disconnect switch, motor starters, and control circuit transformer. Unit voltage is 460V/3ph.
- 115V GFI service receptacle (factory wired).
- Field installed temperature and humidity controls by others.
- 14" high full perimeter roof curb (no slope).