



THE POWER HOUSE AT UNION STATION • 401 S. 18<sup>th</sup> ST., STE. 400 • SAINT LOUIS, MISSOURI 63103-2296  
314-531-4321 • FAX 314-531-6966 • www.HornerShifrin.com

## Shop Drawing Review

To: Peter Steuterman c/o Hastings & Chivetta	From: Dave Lauver
Project name and number: 2217700 – Jeff Co Crime Lab	Date: 05/14/2024
Subject: RTU	

Review is for general compliance with contract documents.

No responsibility is assumed for correctness of dimensions, quantities, or details.

**REVIEWER'S RESPONSE:**

**ACTIONS REQUIRED:**

- NO EXCEPTIONS TAKEN
- MAKE CORRECTIONS NOTED
- REJECTED- SEE REMARKS
- ACCEPTED AS INFORMATION ONLY

- NO RESUBMITTAL REQUIRED
- PARTIAL RESUBMITTAL REQUIRED
- RESUBMITTAL REQUIRED

Horner & Shifrin inc.

DATE: 5/14/2024 BY: DEL

1. Contractor shall coordinate modifications to the structural steel as required to accommodate alternate unit manufacturer.
2. Provide with additional 4" filter rack to allow for an additional filter to be installed.



# K&S Associates Inc

12963 Maurer Industrial Dr St Louis, MO 63127 Ph : 314-647-3535 Fax: 314-647-5302

www.ksgcstl.com

## Submittal

**Job:** KS 4830  
GOVERNMENTAL

JEFFERSON COUNTY CRIME LAB  
1177 MASON CIRCLE  
PEVELY, MO 63070

**Spec Section No:** 237413

**Submittal No:** 1

**Revision No:** 0

**Sent Date:** 5/3/2024

**Spec Section Title:** PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS

**Submittal Title:** RTU 01 Product Data

**Contractor:**  
K&S Associates Inc

**Other:**  
HASTINGS+CHIVETTA ARCHITECTS  
SARA HOLT

### Contractor's Stamp

<b>K&amp;S Associates, Inc.</b> 12963 Maurer Industrial Drive St. Louis, MO 63127 GENERAL CONTRACTOR REVIEW			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>REVIEWED</b>	<b>REVISE &amp; RESUBMIT</b>	<b>REJECTED</b>	
<b>BY</b> <i>B. G. H.</i>		<b>DATE</b> 5/3/2024	
<small>This review is only for general conformance of the submittal with the documents. Corrections or comments made on this submittal during review do not relieve Subcontractor/Supplier from compliance with the requirements of the plans and/or specifications. Subcontractor/Supplier is responsible for verifying all dimensions and quantities. Fabrication is to be confirmed and correlated with actual field dimensions by Subcontractor/Supplier.</small>			

### Architect's Stamp

### Engineer's Stamp



**AC SYSTEMS INCORPORATED**

**Jefferson County Crime Lab**

1177 Mason Cir  
Pevely, MO

**Architect:**

**Hastings + Chivetta**

2464 Westport Plaza, Suite 200  
St. Louis, MO

**Mechanical Engineer:**

**Horner & Shifrin**

401 S 18th St Suite 400  
St. Louis, MO 63103

**Mechanical Contractor:**

**Crystal Heating and Cooling**

3 Cave Industrial Dr  
Festus, MO

**A. C. Systems, Inc.**

Matthew S. Hickey P.E.

11724 Adie Rd.

Maryland Heights, MO 63043

phone: 314-569-1000

**Equipment Submittals for:**

AAON Rooftop Unit

Date: 3/16/2024



# Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266  
Ecat Version: 345.0

**RNA-070-D-A-3-EAB0B-CB3L0:00-0AGAM-F00-00000-ABCBH-DC-000**  
**0-00-00-0-AV0-EB-DA0A-00-000-A00A00-C0000F-000000B**

1 2 3A 3B 3C 3D 3E 4A 4B 4C 5A 5B 5C 5D 5E 6A 6B 6C 6D 6E 7 8 9A 9B 9C  
9D 10A 10B 11A 11B 12 13A 13B 13C 14 15 16A 16B 16C 16D 17A 17B 18A 18B 18C 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

**Tag: RTU 01**

## Job Information

Job Name: *Jefferson County Crime Lab*  
Job Number: *X30070MH*  
Site Altitude: *0 ft*  
Refrigerant: *R-410A*  
System Charges (oz): *304 / 304 / 304 / 304*

## Unit Information

Approx. Op./Ship Weights: *7238 lbs / 7238 lbs (±5%)*  
Ambient Temperature (DB/WB): *95.0 °F / 78.0 °F*  
Coil Filter FV / Qty: *239.6 fpm / 24*  
Exhaust Airflow/ESP/TSP: *11500 SCFM / 0.25 in. w.g. / 0.50 in. w.g.*  
Supply Airflow/ESP: *11500 SCFM / 3.75 in. w.g.*  
Outside Airflow: *9020 SCFM*  
Return Temperature (DB/WB): *75.0 °F / 62.0 °F*

## Static Pressure

External:	<i>3.75 in. w.g.</i>	Economizer:	<i>0.15 in. w.g.</i>
Evaporator:	<i>0.25 in. w.g.</i>	Heating:	<i>0.11 in. w.g.</i>
Filters Clean:	<i>0.10 in. w.g.</i>	Cabinet:	<i>0.06 in. w.g.</i>
Dirt Allowance:	<i>0.35 in. w.g.</i>	Total:	<i>4.77 in. w.g.</i>
Reheat Coil:			

## Cooling Section

	Gross	Net
Total Capacity:	<i>798.6 MBH</i>	<i>758.1 MBH</i>
Sensible Capacity:	<i>446.1 MBH</i>	<i>405.6 MBH</i>
Latent Capacity:	<i>352.5 MBH</i>	
Mixed Air Temp (DB/WB):	<i>90.0 °F</i>	<i>75.0 °F</i>
Entering Air Temp (DB/WB):	<i>90.0 °F</i>	<i>75.0 °F</i>
Lv Air Temp (Coil) (DB/WB):	<i>53.1 °F</i>	<i>53.1 °F</i>
Lv Air Temp (Unit) (DB/WB):	<i>56.3 °F</i>	<i>54.4 °F</i>

## Heating Section

Preheat Type: *Std (No Preheat)*

Auxiliary Heating Type: *Nat. Gas Heat*  
Heating Airflow: *11500 SCFM*  
Total Capacity: *720.0 MBH*  
Entering Air Temp (DB/WB): *15.1 °F / 14.4 °F*  
Leaving Air Temp (DB/WB): *72.9 °F / 48.1 °F*  
Input: *900 MBH*  
Consumption: *900.0 MBH*  
Total Turndown Ratio: *15.0:1*

Supply Air Fan: *1 x 270D @ 14.81 BHP Ea.*  
SA Fan RPM / Width: *1657 RPM / 6.130 in*  
SA Fan FEI: *1.00*  
Exhaust Air Fan: *1 x MW3505-20-RN @ 1.48 BHP Ea.*  
EA Fan RPM / Width: *1209 RPM /*  
EA Fan FEI: *1.81*

Evaporator Coil: *43.8 ft² / 6 Rows / 12 FPI*  
Evaporator Face Velocity: *262.9 fpm*

## Rating Information

Cooling EER: *10.1 BTU/h-W*  
*Outside the scope of AHRI Standard 340/360 (I-P). Rated using procedure described in AHRI 340/360 (I-P).*

Application EER @ Op. Conditions: *9.6 BTU/h-W*

## Electrical Data

### Circuit 1

Rating: *460V/3Ø/60Hz*  
Unit FLA: *161*  
SCCR: *10 KAIC*

Minimum Circuit Amp: *168*  
Maximum Overcurrent: *175*

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	2		460	3	3500		26.9
Compressor 2:	2		460	3			26.9
Condenser Fan:	6	1.00	460	1	1100	3.6	
Supply Fan:	1	20.00	460	3	1760	27.0	
Exhaust Fan:	1	3.00	460	3	1760	4.8	
Combustion:	3	0.25	460	1	3200	0.9	



# Unit Rating

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Ecat Version: 345.0

## Cabinet Sound Power Levels\*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW (dB):	96	94	95	100	96	93	90	87
Return LW (dB):	87	84	80	77	78	77	74	70

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



# 27.4" STAR Plenum

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266  
Ecat Version: 345.0

## JOB INFORMATION:

**Job Name:** Jefferson County Crime Lab  
**Job Tag:** RTU 01  
**Date:** 3/16/2024 12:00:00 AM

## WHEEL SPECIFICATION:

**Max RPM:** 1800  
**Diameter x Qty:** 27.4 in. x 1  
**CFM:** 11500  
**Inertia:** 16WR<sup>2</sup>

## OPERATING CONDITIONS

**Air Flow:** 11500  
**Fan Energy Index (FEI):** 1.00  
**Static Pressure:** 4.77 in. Wg  
**Relief Dampers DP:** 0 in. Wg  
**TSP:** 4.77 in. Wg  
**Site Altitude:** 0 ft  
**TSP @ Sea Level:** 4.77 in. Wg

## MOTOR SELECTION

**Rated HP / Bypass:** 20 x 1 / No  
**Frame Size:** 256T  
**Nominal RPM:** 1760  
**VAC/PH/HZ:** 460V/3Ø/60Hz  
**Enclosure Type:** ODP  
**Max Inertial Load:** 0 WR<sup>2</sup>

## FAN PERFORMANCE:

**RPM:** 1657  
**BHP:** 14.81  
**Efficiency:** 58.39%  
**Max Duct SP with Blocked Airway:** 0 in. Wg @ 1657 RPM

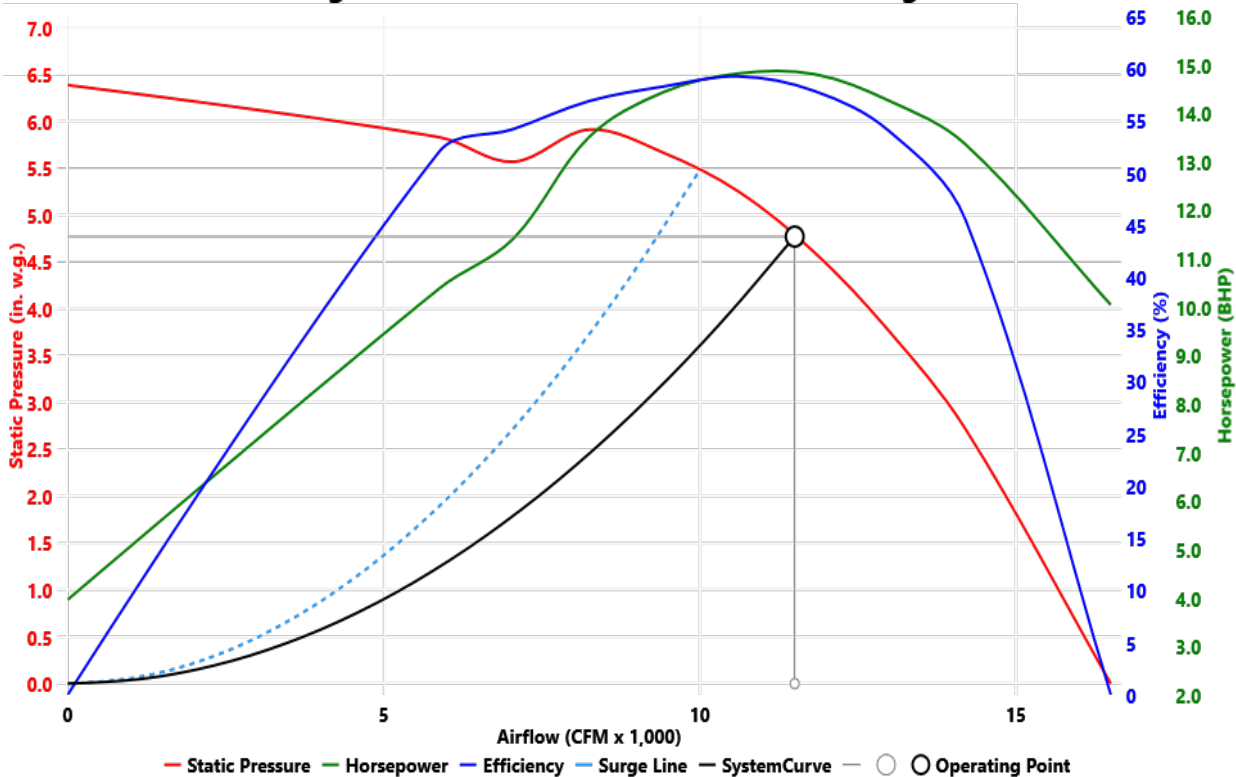
## FAN SOUND POWER (Inlet/Outlet)

Octave Band:	(Re 10 <sup>-12</sup> watts)							
	1	2	3	4	5	6	7	8
	94	93	91	90	90	89	88	87
	96	94	95	100	98	95	92	89

SOUND POWER A-Weighted: 89 dB

Max Duct SP with Blocked Airway:

**Supply Fan Model: 270D @ 1657 RPM and 100% Width**  
**Design Conditions: 11500 CFM @ 4.77 in. w.g. SP**





# MW3505-20 Axial Fan

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266  
Ecat Version: 345.0

## JOB INFORMATION:

**Job Name:** Jefferson County Crime Lab  
**Job Tag:** RTU 01  
**Date:** 3/16/2024 12:00:00 AM

## WHEEL SPECIFICATION:

**Max RPM:** 1760  
**Diameter x Qty:** 35.5 in. x 1  
**CFM:** 11500  
**Inertia:** 9WR<sup>2</sup>

## OPERATING CONDITIONS

**Air Flow:** 11500  
**Fan Energy Index (FEI):** 1.81  
**Static Pressure:** 0.50 in. Wg  
**Relief Dampers DP:** 0 in. Wg  
**TSP:** 0.50 in. Wg  
**Site Altitude:** 0 ft  
**TSP @ Sea Level:** 0.50 in. Wg

## MOTOR SELECTION

**Rated HP / Bypass:** 3 x 1 / No  
**Frame Size:** 182T  
**Nominal RPM:** 1760  
**VAC/PH/HZ:** 460V/3Ø/60Hz  
**Enclosure Type:** ODP  
**Max Inertial Load:** 0 WR<sup>2</sup>

## FAN PERFORMANCE

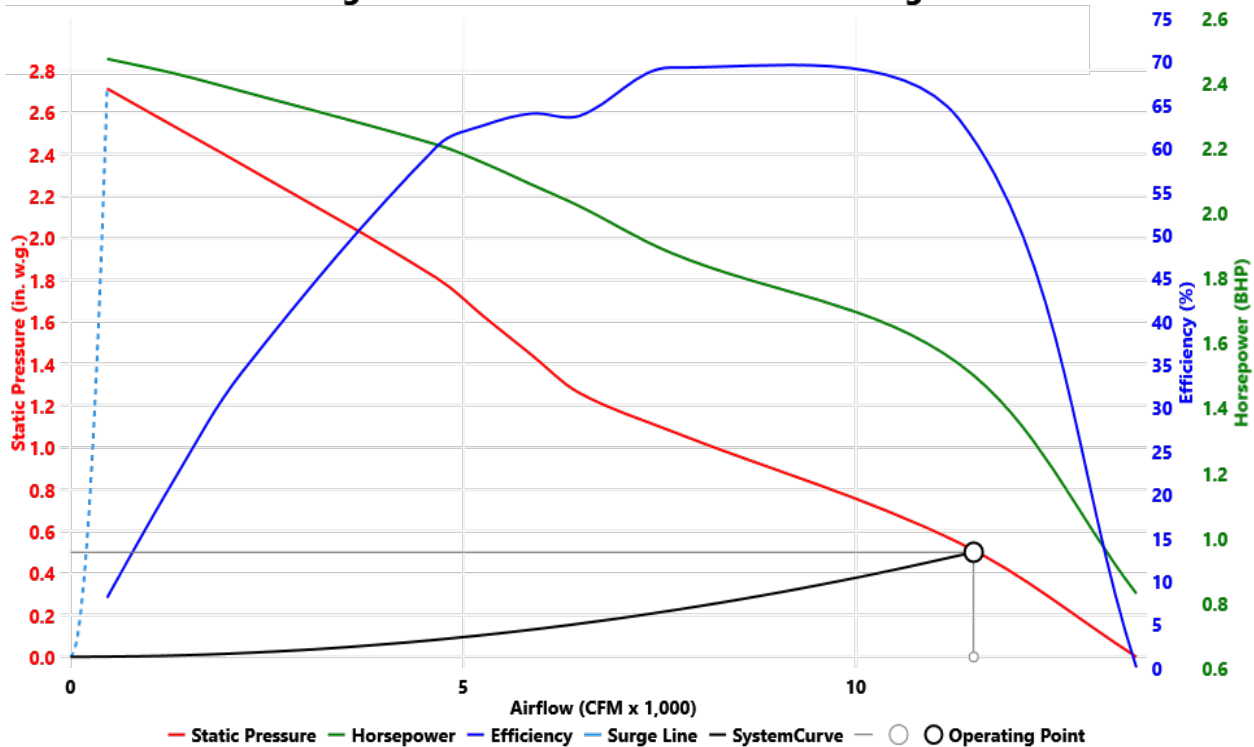
**RPM:** 1209  
**BHP:** 1.48  
**Efficiency:** 61.25%  
**Max Duct SP with Blocked Airway:** 0 in. Wg @ 1209 RPM  
**Airway:**  
**Max Duct SP with Blocked Airway:**

## FAN SOUND POWER (Inlet/Outlet)

Octave Band:		(Re 10 <sup>-12</sup> watts)							
1	2	3	4	5	6	7	8		
1	2	3	4	5	6	7	8		
85	83	83	83	81	79	76	73		

SOUND POWER A-Weighted: dB

**Exhaust Fan Model: MW3505-20 @ 1209 RPM and 100% Width**  
**Design Conditions: 11500 CFM @ 0.5 in. w.g. SP**





# Unit Submittal

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Ecat Version: 345.0

1 2 3A 3B 3C 3D 3E 4A 4B 4C 5A 5B 5C 5D 5E 6A 6B 6C 6D 6E 7 8 9A 9B 9C  
**RNA-070-D-A-3-EAB0B-CB3L0:00-0AGAM-F00-00000-ABCBH-DC-000**  
**0-00-00-0-AV0-EB-DA0A-00-000-A00A00-C0000F-000000B**  
 9D 10A 10B 11A 11B 12 13A 13B 13C 14 15 16A 16B 16C 16D 17A 17B 18A 18B 18C 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

Tag: RTU 01

Job Name: **Jefferson County Crime Lab**

Unit Worksheet For:

Job Number: **X30070MH**

Unit Worksheet Date: **3/16/2024**

	Base Option	Description
<b>RN</b>	Generation	RN Series
<b>A</b>	Major Revision	Major Revision A
<b>070</b>	Unit Size	Seventy
<b>D</b>	Series	D Series
<b>A</b>	Minor Revision	Minor Revision A
<b>3</b>	Voltage	460V/3φ/60Hz
<b>E</b>	Compressor Style	R-410A Variable Capacity Scroll Comp (4-circuit)
<b>A</b>	Condenser Style	Microchannel Air-Cooled Condenser
<b>B</b>	Indoor Coil Configuration	6 Row Evaporator
<b>0</b>	Cooling Heat Exchanger Construction	Standard
<b>B</b>	Cooling Staging	2 Variable Capacity Comp + 2 On/Off Comp
<b>C</b>	Heat Type	Natural Gas (Vertical Unit Configuration)
<b>B</b>	Heat Construction	Stainless Steel Heat Exchanger, Gas Piping to the Valve
<b>3</b>	Heat Designation	900 MBH
<b>L</b>	Heat Staging	High Turndown Modulating Gas Heat - Temperature Control
<b>0</b>	Heat Pump Auxiliary Heating	No Heat Pump

	Feature Option	Description
<b>0</b>	<b>F1.</b>	Unit Orientation Standard Access - Hinged Access Doors with Lockable Handles
<b>0</b>	<b>F2.</b>	Supply & Return Locations Bottom Supply+Bottom Return
<b>0</b>	<b>F3A.</b>	Supply Fan Quantity 1 Fan
<b>A</b>	<b>F3B.</b>	Supply Fan Configuration 1 Fan per VFD + Full Width Fan
<b>G</b>	<b>F3C.</b>	Supply Fan Size 27" Direct Drive Backward Curved Aluminum
<b>A</b>	<b>F3D.</b>	Supply Fan Motor Type High Efficiency Open Motor (1,800 nominal rpm)
<b>M</b>	<b>F3E.</b>	Supply Fan Motor Size 20 hp
<b>F</b>	<b>F4A.</b>	Outside Air Section Economizer + Power Exhaust (Axial Fans)
<b>0</b>	<b>F4B.</b>	Energy Recovery Type No Energy Recovery
<b>0</b>	<b>F4C.</b>	Energy Recovery Size No Energy Recovery
<b>0</b>	<b>F5A.</b>	Return Fan Quantity 0 Return Fans
<b>0</b>	<b>F5B.</b>	Return Fan Configuration No Return Fan
<b>0</b>	<b>F5C.</b>	Return Fan Size No Return Fan
<b>0</b>	<b>F5D.</b>	Return Fan Motor Type No Return Fan
<b>0</b>	<b>F5E.</b>	Return Fan Motor Size No Return Fan
<b>A</b>	<b>F6A.</b>	Exhaust Fan Quantity 1 Fan
<b>B</b>	<b>F6B.</b>	Exhaust Fan Configuration 1 Fan per VFD + Full Width Fan
<b>C</b>	<b>F6C.</b>	Exhaust Fan Size 36" Axial Fan
<b>B</b>	<b>F6D.</b>	Exhaust Fan Motor Type High Efficiency Open Motor (1,800 nominal rpm)
<b>H</b>	<b>F6E.</b>	Exhaust Fan Motor Size 3 hp
<b>D</b>	<b>F7.</b>	Outside Air Control Fully Modulating Actuator - Enthalpy Limit
<b>C</b>	<b>F8.</b>	Return and Exhaust Air Options Standard Barometric Relief EA Dampers
<b>0</b>	<b>F9A.</b>	Unit Filter Type 2" Pleated - MERV 8
<b>0</b>	<b>F9B.</b>	Unit Filter Size & Location Standard Filters in Standard Position
<b>0</b>	<b>F9C.</b>	Final Filter Type No Final Filters
<b>0</b>	<b>F9D.</b>	Filter Options None
<b>0</b>	<b>F10A.</b>	Refrigeration Control A Standard - Adj Comp. Cooling Lock Out Through Unit Controls

	Feature Option		Description
0	F10B.	Refrigeration Control B	Standard
0	F11A.	Refrigeration Options A	None
0	F11B.	Refrigeration Options B	Standard Packaged Unit
0	F12.	Refrigeration Accessories	None
A	F13A.	Unit Disconnect Type	Single Point Power - Non-fused Disconnect Power Switch
V	F13B.	Disconnect 1 Size	250 Amps
0	F13C.	Disconnect 2 Size	Standard - None
E	F14.	Safety Options	Remote Safety Shutdown Terminals
B	F15.	Electrical Accessories	Phase & Brown Out Protection
D	F16A.	Control Sequence	VAV Unit Controller - VAV Cool + CAV Heat
A	F16B.	Control Supplier	AAON Controls
0	F16C.	Control Supplier Options	None
A	F16D.	BMS Connection & Diagnostics	BACnet IP
0	F17A.	Preheat Configuration	Standard - None
0	F17B.	Preheat Sizing	Standard - None
0	F18A.	Option Box Location	None
0	F18B.	Option Box Size	None
0	F18C.	Option Box Accessories	None
A	F19.	Outside Air Accessories	Outside Air Hood
0	F20.	Cabinet Options	Standard - None
0	F21.	Accessories	Standard
A	F22.	Maintenance Accessories	Factory Wired 115V Convenience Outlet
0	F23.	Code Options	Standard - ETL U.S.A. Listing
0	F24.	Shipping Splits	Standard
C	F25.	Air-Cooled Condenser Accessories	ECM Condenser Fan Head Pressure Control
0	F26.	Evap-Cooled Condenser Accessories	Standard
0	F27.	Water-Cooled Condenser Accessories	None
0	F28.	Energy Recovery Accessories	None
0	F29.	VFD Options	Standard
F	F30.	Miscellaneous Options	Condensate Overflow Switch + SCCR (10kA)
0	F31.	Blank	Standard
0	F32.	Blank	Standard
0	F33.	Blank	Standard
0	F34.	Blank	Standard
0	F35.	Warranty	Standard Warranty
0	F36.	Cabinet Material	Galvanized Cabinet - Double Wall + R-13 Foam Insulation
B	F37.	Specials & Paint	Premium AAON Gray Paint Exterior Paint



# Controller Components

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1 2 3A 3B 3C 3D 3E 4A 4B 4C 5A 5B 5C 5D 5E 6A 6B 6C 6D 6E 7 8 9A 9B 9C  
**RNA-070-D-A-3-EAB0B-CB3L0:00-0AGAM-F00-00000-ABCBH-DC-000**  
**0-00-00-0-AV0-EB-DA0A-00-000-A00A00-C0000F-000000B**  
 9D 10A 10B 11A 11B 12 13A 13B 13C 14 15 16A 16B 16C 16D 17A 17B 18A 18B 18C 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

**Tag: RTU 01**

Job Name: Jefferson County Crime Lab  
Job Number: X30070MH

VCCX For:  
VCCX Date: March 16, 2024

Part#	Included Parts	Assigned Channel	BACnet Point
ASM07424	VCCX-IP CONTROLLER		
ASM01643	Space Temp Sensor	VCCX control point AI 1	AI:12
ASM01643	Space Temp Slide Adjust	VCCX control point AI 2	AI:8
ASM01692	OSA Temp/Hum Sensor	EBUS2 communicating sensor	AI:16,AI:17,AI:18,AI:19
R82890	Supply Temp Sensor - Field Installed	VCCX control point AI 3	AI:9
R82890	Return Temp Sensor	VCCX control point AI 4	AI:14
ASM01832	Building Pressure Sensor	VCCX control point AI 5	AI:23
ASM01640	Duct Static Pressure Sensor	VCCX control point AI 8	AI:21
	Supply Fan Control Signal 0-10VDC	VCCX control point AO 1	AI:22
	Economizer	VCCX control point AO 2	AI:30
	Building Pressure Control Signal	VCCX control point AO 4	AI:24
R62330	Proof of Air Flow	VCCX control point BI 1	BI:6, BI:24
	Safety Shut Down	VCCX control point BI 8	BI:26
	Supply Fan	Configured Relay Point	BI:47
	Exhaust Fan	Configured Relay Point	BI:48
	Morning Warm-Up	Configured Relay Point	BI:49
ASM02201	DIGITAL REFRIGERATION MODULE 1		
R42680	Comp Discharge Temp A	RSMD 1 point TEMP1	AI:66
V38391	Suction Pressure Sensor A	RSMD 1 point SP-1	AI:48
V38391	Suction Pressure Sensor C	RSMD 1 point SP-2	AI:73
	Comp Status Input A	RSMD 1 point BI1	BI:77
	Comp Status Input C	RSMD 1 point BI2	BI:78
	Emergency Shutdown	RSMD 1 point BI4	BI:83
	Comp Enable A	RSMD 1 Fixed Relay point	BI:84
	Comp Unload Signal A	RSMD 1 point T1	AI:44
	Comp Enable C	RSMD 1 Fixed Relay point	BI:85
	Comp Unload Signal B	RSMD 1 point T2	AI:45
ASM02201	DIGITAL REFRIGERATION MODULE 2		
R42680	Comp Discharge Temp B	RSMD 2 point TEMP1	AI:91
V38391	Suction Pressure Sensor B	RSMD 2 point SP-1	AI:73
V38391	Suction Pressure Sensor D	RSMD 2 point SP-2	AI:74
	Comp Status Input B	RSMD 2 point BI1	BI:89
	Comp Status Input D	RSMD 2 point BI2	BI:90
	Emergency Shutdown	RSMD 2 point BI4	BI:95
	Comp Enable B	RSMD 2 Fixed Relay point	BI:96
	Comp Unload Signal A	RSMD 2 point T1	AI:69
	Comp Enable D	RSMD 2 Fixed Relay point	BI:97
	Comp Unload Signal B	RSMD 2 point T2	AI:70
ASM01695	MODULATING GAS MODULE 1		
	Gas Valve Signal 1A	MODGAS-XWR 1 Gas Valve 1	

	Gas Valve Signal 1B	MODGAS-XWR 1 Gas Valve 2	
	Proof of Ignition 1A	MODGAS-XWR 1 BI3	
	Proof of Ignition 1B	MODGAS-XWR 1 BI4	
	Heat Stage 3 (IGN 3L)	MODGAS-XWR 1 Heat 3 Relay	
	Heat Stage 4 (IGN 4L)	MODGAS-XWR 1 Heat 4 Relay	
	Low Speed Enable	MODGAS-XWR 1 Low Speed Relay	
	Mod Heat Stage 1 (IGN 1A)	MODGAS-XWR 1 Heat 1 Relay	
	Mod Heat Stage 2 (IGN 1B)	MODGAS-XWR 1 Heat 2 Relay	
<a href="#">ASM01695</a>	MODULATING GAS MODULE 2		
	Gas Valve Signal 2A	MODGAS-XWR 2 Gas Valve 1	
	Gas Valve Signal 2B	MODGAS-XWR 2 Gas Valve 2	
	Proof of Ignition 2A	MODGAS-XWR 2 BI3	
	Proof of Ignition 2B	MODGAS-XWR 2 BI4	
	Heat Stage 5 (IGN 3H)	MODGAS-XWR 2 Heat 3 Relay	
	Heat Stage 6 (IGN 4H)	MODGAS-XWR 2 Heat 4 Relay	
	Low Speed Enable	MODGAS-XWR 2 Low Speed Relay	
	Mod Heat Stage 1 (IGN 2A)	MODGAS-XWR 2 Heat 1 Relay	
	Mod Heat Stage 2 (IGN 2B)	MODGAS-XWR 2 Heat 2 Relay	

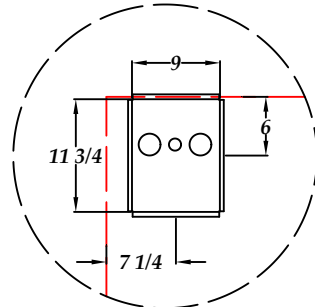
# RN UNITS 50-70 TON

## AIR COOLED, POWER EXHAUST

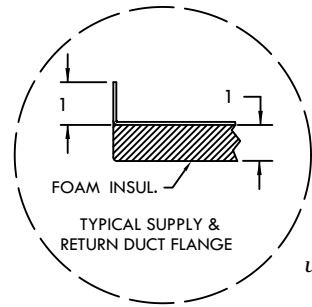


CLEARANCES	
LOCATION	UNIT SIZE
	50-70 TON
OUTSIDE AIR (BACK)	48
CONTROLS SIDE (FRONT)	48
LEFT SIDE	48
RIGHT SIDE	70
TOP	UNOBSTRUCTED

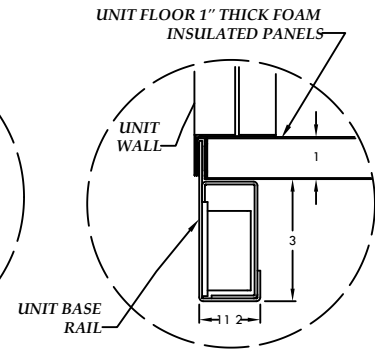
NOTE: RIGHT AND LEFT SIDE UNIT CLEARANCES ARE INTERCHANGEABLE ON UNITS THAT DO NOT HAVE THE HYDRONIC HEATING OPTION. (UNITS WITH HYDRONIC HEAT MUST HAVE 70" RIGHT SIDE ACCESS FOR SERVICE.)



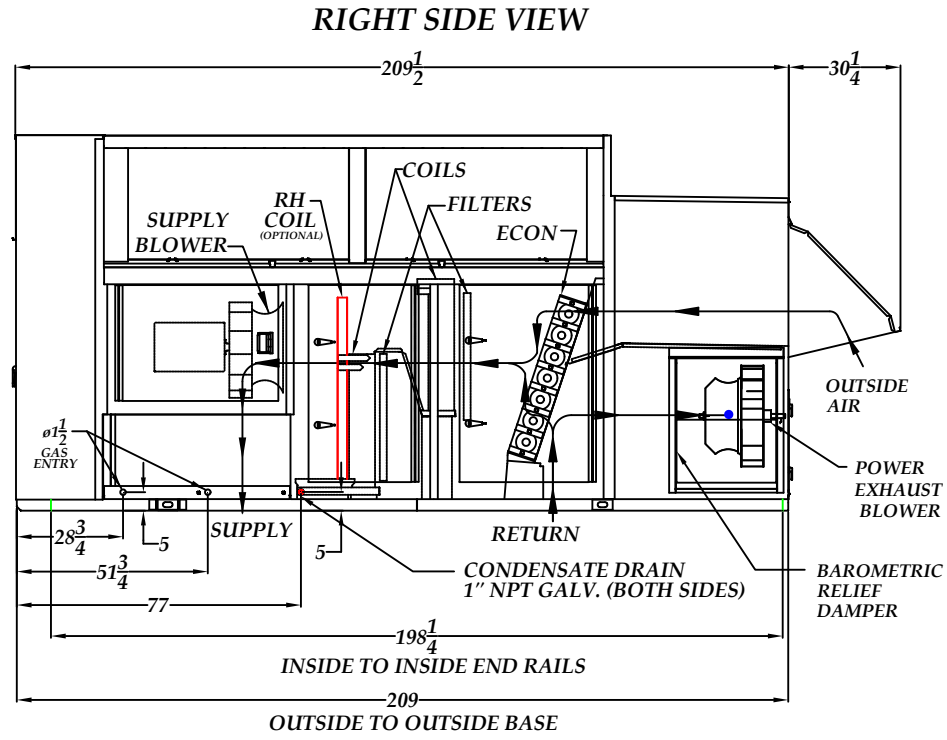
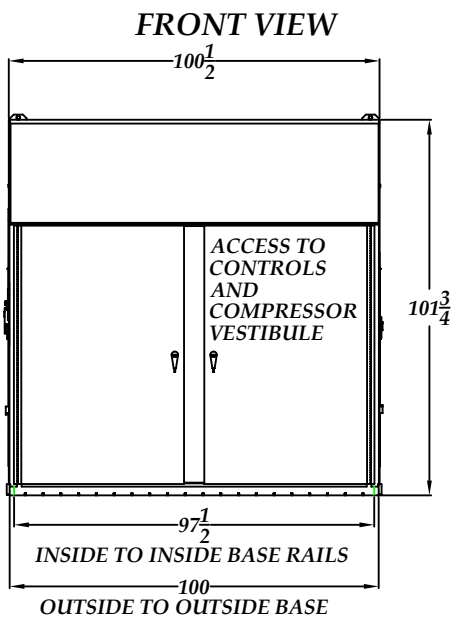
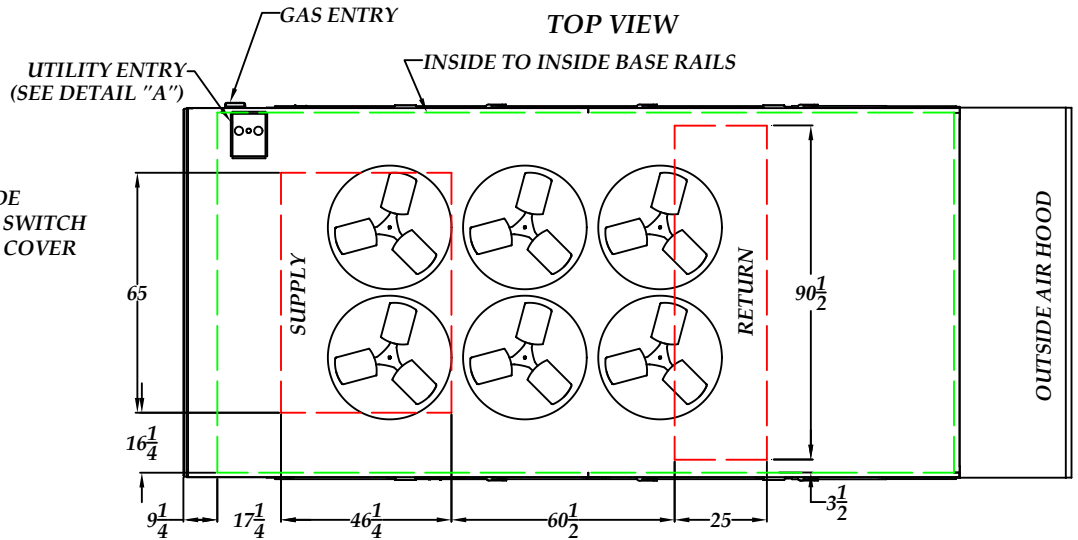
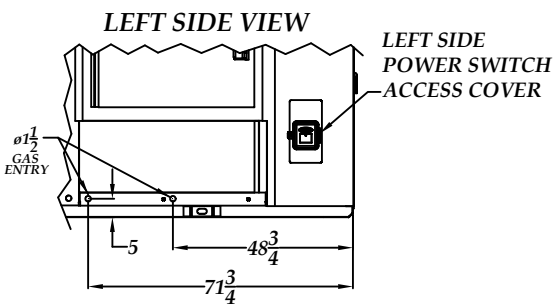
**DETAIL A**  
UTILITY ENTRY



**DETAIL B**  
TYPICAL SUPPLY & RETURN DUCT FLANGE



**BASE RAIL CLEARANCE**



CAT000305 RNA-D REV:D 01/05/23 JWC  
ALL DIMENSIONS ARE IN INCHES

# FIELD GAS PIPING DETAILS

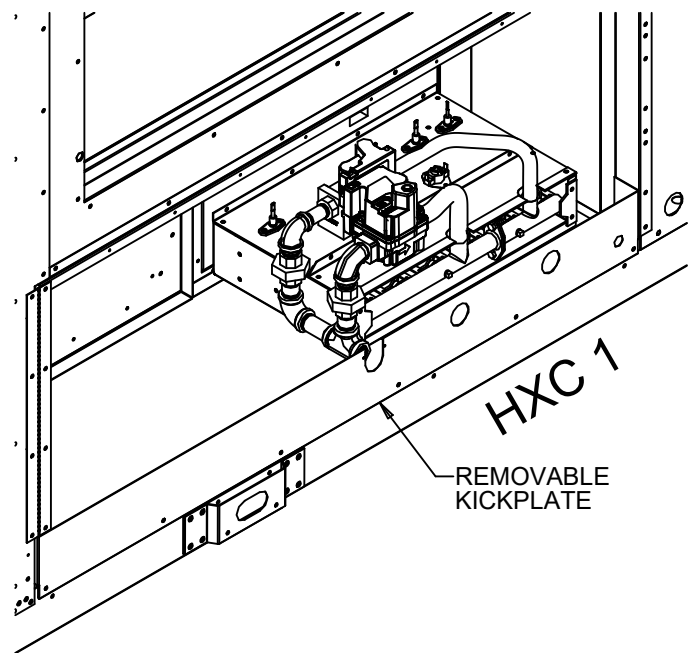
## RNA SERIES D - CABINET 26-70 TON

### 900 MBH HIGH TURNDOWN

CAT000434A RNA-D REV A 04/26/23 JAS  
ALL DIMENSIONS ARE IN INCHES

Field gas piping is required to the internal gas valves.  
Piping should be installed adhering to building codes.  
Perform leak check prior to operation.

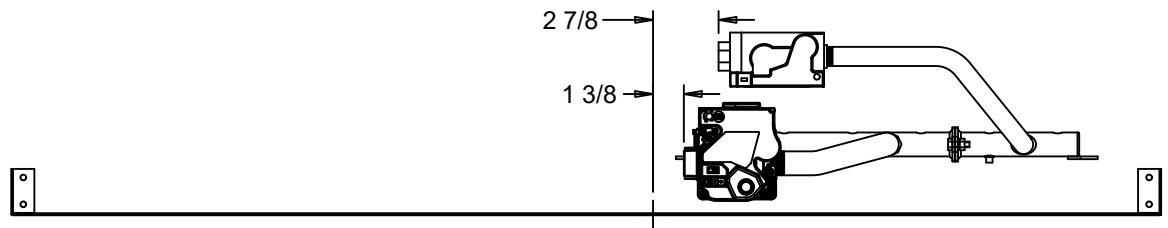
Reference IOM for additional information,  
and details on optional gas entry through base.



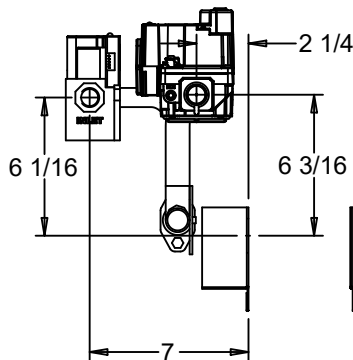
RIGHT SIDE VIEW

## HEAT EXCHANGER 1

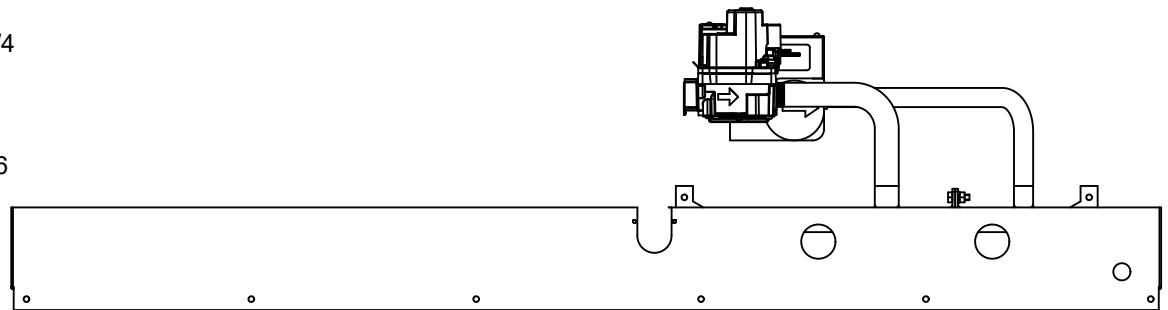
TOP



SIDE



FRONT



# FIELD GAS PIPING DETAILS

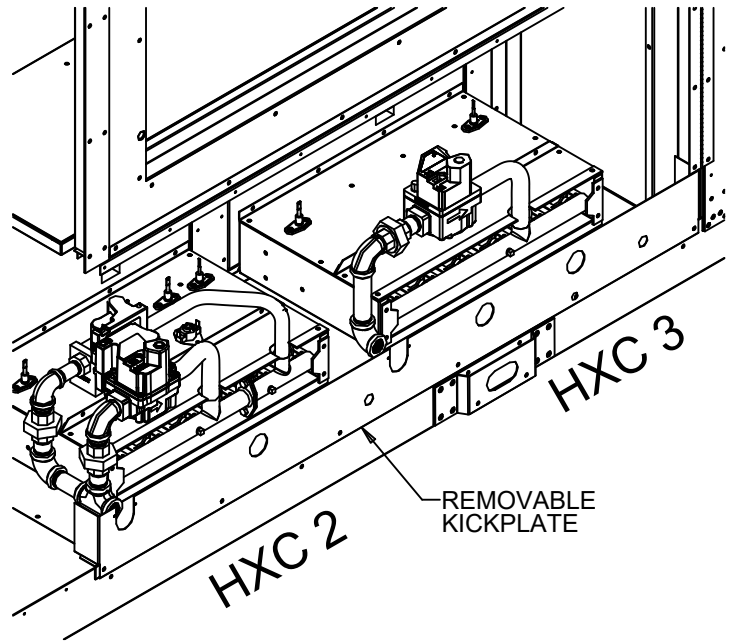
## RNA SERIES D - CABINET 26-70 TON

### 900 MBH HIGH TURNDOWN

CAT000434B RNA-D REV A 04/26/23 JAS  
ALL DIMENSIONS ARE IN INCHES

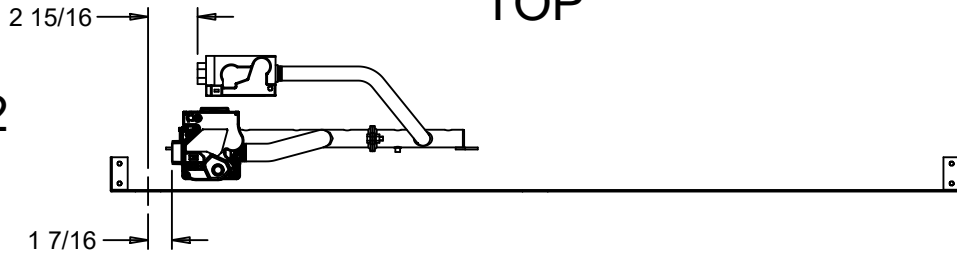
Field gas piping is required to the internal gas valves.  
Piping should be installed adhering to building codes.  
Perform leak check prior to operation.

Reference IOM for additional information,  
and details on optional gas entry through base.

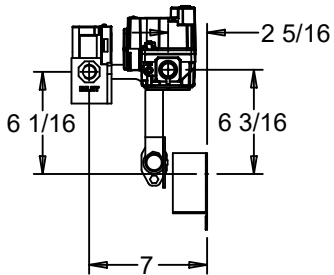


TOP LEFT SIDE VIEW

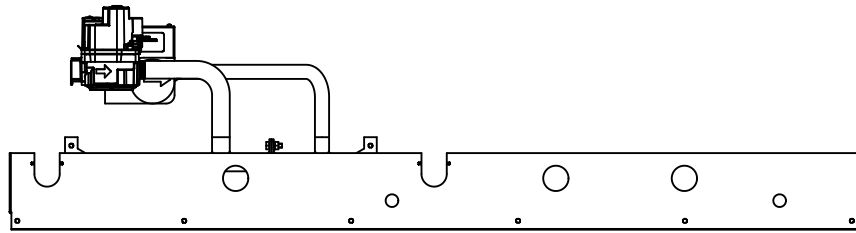
### HEAT EXCHANGER 2



### SIDE

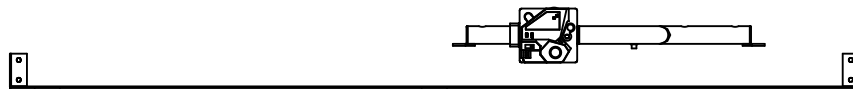


### FRONT

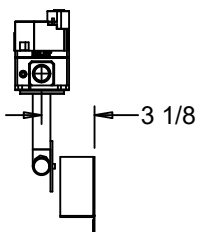


### HEAT EXCHANGER 3

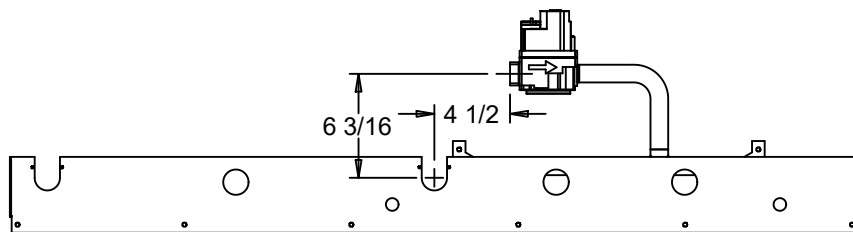
### TOP



### SIDE



### FRONT



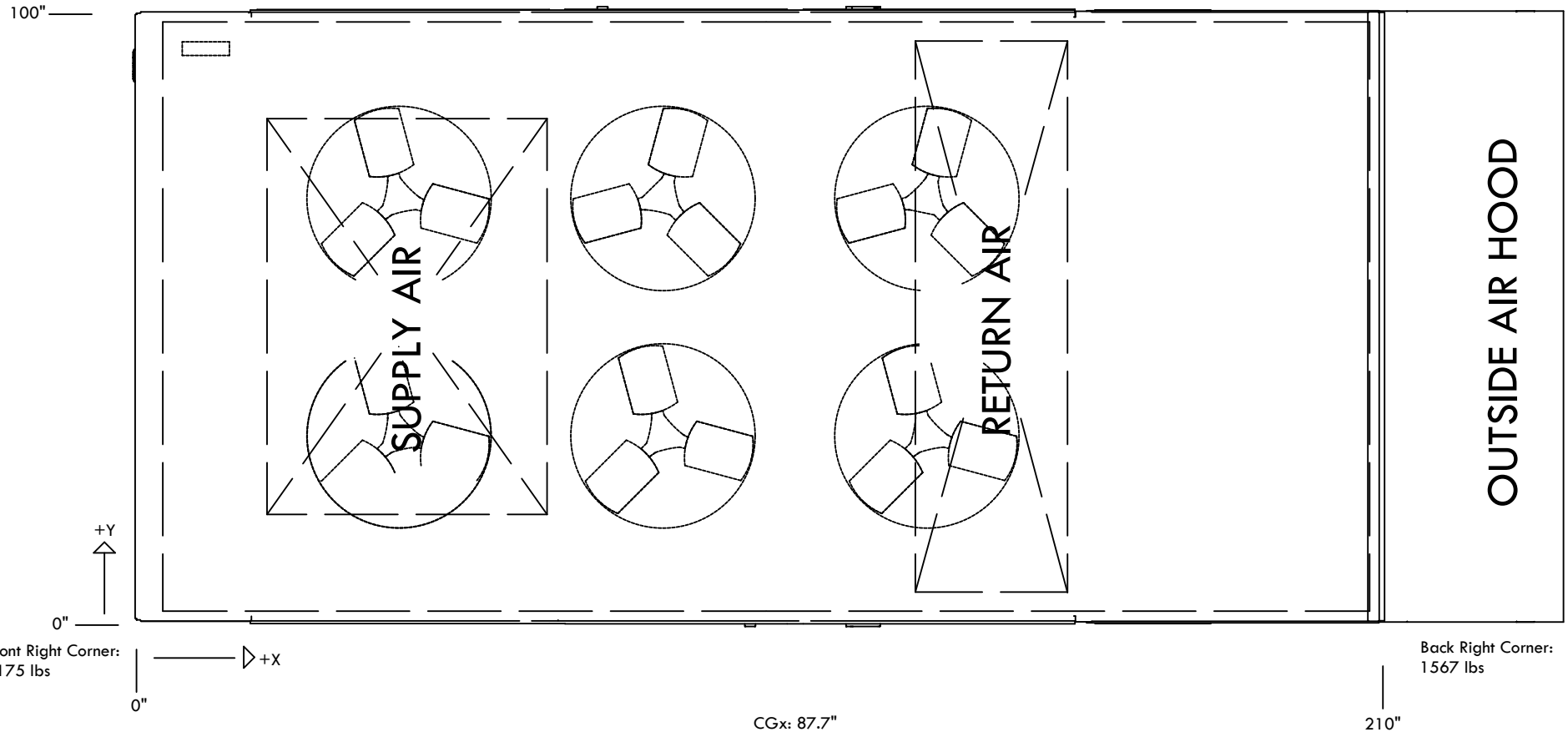
# RND CABINET AIR COOLED CONDENSING UNIT POWER EXHAUST



RNA-070-D-A-3-EAB0B-CB3L0:00-0AGAM-F00-00000-ABCBH-DC-0000-00-00-0-AV0-EB-DA0A-00-000-A00A00-C0000F-000000B

Front Left Corner:  
2032 lbs

Back Left Corner:  
1464 lbs



CGx: 87.7"  
CGy: 48.3"

Total Weight:  
7238 lbs

Disclaimer:  
This weight estimate does not account for any SPAs.