



CROMWELL

SUBMITTAL REVIEW FORM

1300 East 6th Street
LITTLE ROCK, AR 72202
PHONE: 501-372-2900
FAX: 501-372-0482

Reviewing is only for conformance with the design concepts of the Project and compliance with the information given in the contract documents. The Contractor is responsible for dimensions to be confirmed or correlated at the site; for information that pertains solely to the fabrication process, or to the means, methods, techniques, sequences, and procedures of construction; and for coordination of the work of all other trades

JOB TITLE: Sherwood Public Works

JOB NO: 2023-249

SUBMITTAL NO: 23 81 28 Admin - HVAC - RTUs

AHUs Split AC

BY: Jesus Padilla, PE

DATE: 02-25-2025

Item No.	Description (See contractor transmittal for corresponding description)	No Exception Taken	Make Corrections Noted	Revise and Resubmit	Not Accepted	Comments
1.	Packaged Rooftop Units (PAHU-1,2)	X				
2.	Air Handling Units (AHU-1,2)		X	X		1. Both air handling units shall have a supply fan for the airflows listed on sheet M-601-A in lieu of having a return/exhaust fan on AHU-1. 2. The submitted equipment electrical data differ as the electrical requirement on sheet M-601-A. The electrical contractor shall coordinate all wiring and accessories required for a fully operational system.
3.	Condensing Units	X				
4.	Ductless & Mini-Split Systems		X	X		1. MCA/MOP values are not listed for the indoor unit. Coordinate with the electrical contractor to provide wiring and all other accessories required for equipment operation. 2. The refrigerant pipe length exceeds the recommended max total length of 99 ft. Resubmit mini-slit system to accommodate refrigerant pipe length of 164 ft.



Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 2/4/2025

Return Request: 2/14/2025

Project: City Of Sherwood Public Works (Administration Building)

Supplier: Harrison Energy Partners

Manufacturer: Lennox

Submittal: Packaged Rooftop Units (PAHU-1,2)

Submittal Number: 23 62 13-01

Drawing # and Installation: Mechanical Drawings

ARCHITECT

Cromwell
1300 East 6th Street
Little Rock, AR 72202
501-372-2900

ENGINEER

Cromwell
1300 East 6th Street
Little Rock, AR 72202
501-372-2900

GENERAL CONTRACTOR

Baldwin & Shell
1000 W. Capitol Ave.
Little Rock, AR 72201
501-374-8677

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

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CSUSA PROJECT NO.

24-6084

sean@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117



Harrison
Energy Partners

Submittal

Prepared For:
Cromwell Architects Engineers

Date:
12/10/2024

Sold To:
Comfort Systems USA

Job Name:
Sherwood Public Works

Harrison Energy Partners is pleased to provide the enclosed submittal for your review and approval.

Qty.	Product Summary
3	Rooftop Package Units (PAHU-1,2 & PAHU-1)

Admin Bldg.

Josh Robinson, New Systems Sales
501-539-0633 • harrisonenergy.com
Harrison Energy Partners • Commercial HVAC Excellence
1501 Westpark Dr., Ste. 9 • Little Rock, AR 72204

The attached information describes the equipment we propose to furnish for this project and is submitted for your approval.

Lennox Rooftop Package Units (PAHU-1,2 (Admin Bldg) & PAHU-1 (Maint Bldg))

- Packaged Gas/Electric
- Downflow Configuration
- Downflow to Horizontal Transition Curb
- 4 Ton Nominal Capacity (PAHU-1 Admin)
- 6 Ton Nominal Capacity (PAHU-2 Admin)
- 17.5 Ton Nominal Capacity (PAHU-1 Maint)
- 208-230/3 V/Ph
- Hot Gas Reheat
- High Performance Economizer
- Single Enthalpy Control (PAHU-1 Maint)
- Barometric Relief
- 108 MBH 2-Stage Gas Heat (PAHU-1,2 Admin)
- 360 MBH 2-Stage Gas Heat (PAHU-1 Maint)
- 2" MERV 4 Filters
- Disconnect Switch (Factory Installed)
- Supply & Return Smoke Detector (Factory Installed; PAHU-1 Maint)
- BACnet MS/TP

NOTE: Curbs to be provided in separate submittal.



Project Submittal

Project Name: Sherwood Public Works
Project Number: 756014
Project Altitude: 500
Project Location:
, Arkansas US

Date: 12/20/2024
Quote: 519225
Roof Top Units: 3
Split Systems: 0

Customer: Harrison Energy Partners
Engineer: Cromwell Engineers

Table of Contents

Tag	Qty	Model	Description
<u>PAHU-1 Admin</u>	1	LGT048H5E	LGT048H5E-Y 4T
<u>PAHU-2 Admin</u>	1	LGT072H5E	LGT072H5E-Y 6T
<u>PAHU-1 Maintenance</u>	1	LGT210H5M	LGT210H5M-Y 17.5T

Revit® Building Information Modeling (BIM) - [Click here](#)

AutoCAD® Templates - [Click here](#)



Project Submittal

Tag: PAHU-1 Admin
Model: LGT048H5E - LGT048H5E-Y 4T

UNIT OVERVIEW

Voltage	SEER2 EER2	MCA/MOCP (amp)	Gross Cooling Ttl/Sens (MBH)	Net Cooling Ttl/Sens (MBH)	Supply Air Flow (cfm)	ESP/TSP (in.WC)	EAT DB/WB (°F)	LAT DB/WB (°F)
208V 3Ph 60Hz	17.3 13	23 / 30	48.3 / 28.8	47.2 / 27.7	1,250	0.50 / 0.60	77.9 / 67.1	55.7 / 54.1

COOLING

Cooling Performance			Temperatures (DB/WB °F)		
Gross Cooling (Ttl/Sens)	48.3 / 28.8 MBH		Ambient	95.0	
Net Cooling (Ttl/Sens)	47.2 / 27.7 MBH		Entering	77.9	67.1
Coil Moisture Removal	18.37 lb/hr		Total Leaving – (Coil)	55.7	54.1
System Moisture Removal	18.37 lb/hr		Total Leaving – (Unit)	56.6	54.4

ARI Performance		Compressors		Refrigerant		Condensate Drain	
ARI Cooling	50.1 / 49.0 MBH	Cooling Stages	2.0	Type	R-454B	Qty	1
ARI Power	3,800 W	Compressor Qty	1	Charge	5 LBS. 4 OZ.	Size	1 in.
		Compressor RLA	10.2 amp			Pipe Thread	npt

HUMIDITROL - HOT GAS REHEAT

Humiditrol Dehumidification Performance			Temperatures (DB/WB °F)		
Gross Cooling - Stage 1(Ttl/Sens)	11.7 / 11.7 MBH		Ambient	95.0	
Moisture Removal - Stage 1	lb/hr		Entering	80.0	67.0
			Total Leaving – (Stage 1)	71.0	64.1

HEATING

Heating Performance		Temperatures (DB/WB °F)		Specifications	
Output (High/Low)	87.0 / 66.0 MBH	Total Leaving	63.7	Heat Stages	2
Input (High/Low)	108.0 / 81.0 MBH			Thermal Efficiency NOX	81.0%
Gas Heat Rise	63.7 °F			Gas Line Size	0.5 in.
				Gas Pressure	7 in.WC

VENTILATION

Air Flow (cfm)		Supply Fan		Air Resistance (in.WC)	
Supply	1,250	Nominal Power	1.50 hp	Total	0.60
Outdoor	200	Required Power	0.35 hp	Ext Supply	0.50
		Drive Type	MSAV Direct Drive		
		Required Watts	258 W		

AIR RESISTANCE - OPTIONS/ACCESSORIES (in.WC)

Wet Coil	Humiditrol	Heat	Economizer	Filters	Diffuser	Exhaust	ERW
0.04	0.00	0.02	0.04				

ELECTRICAL

Voltage	208V 3Ph / 60Hz	Compressor RLA	10.2 amp
MCA	23 amp	Condenser FLA	2.8 amp
MOCP	30 amp	Supply Fan FLA	4.4 amp
Oper Range-Nom Volt	+/- 10%	Cooling FLA Total	17.4 amp

ADDITIONAL DATA

Cabinet	85.25 in. x 47.00 in. x 46.88 in.	Total Weight	779 lb
Downflow Supply	20.0 in. x 18.0 in.	Base Unit Net Weight	629 lb
Downflow Return	29.0 in. x 11.0 in.	OAS/Econ Weight	84 lb
Filters	(4) 20.0 in. x 20.0 in. x 2.0 in.	Humiditrol Weight	27 lb
Sound Rating	75 dBA	Gas Heat Weight	8 lb
		Coil/Hail Guard Weight	31 lb



Project Submittal

Tag: PAHU-1 Admin

Factory Installed Options

Direct Drive
Unit Orientation Downflow
Supply Fan: Multi-Speed ECM Direct Drive
208/220/230/240V 3Phase
80Amp Non-Fused Disconnect Factory Installed
Built-in BACnet IP and MS/TP (standard)
Refrigerant R-454B
Supply Motor - 1.5 Hp ECM - w/ MSAV
108K S.S. (Dual Stage)
Low Nox Factory Installed
Combination Coil/Hail Guards Factory Installed
Hinged Access Doors Factory Installed
15A GFCI Factory Installed/Field Wired
Environ Evaporator and Condenser Coil System Factory Installed
Drain Pan Overflow Switch Factory Installed
Humiditrol Factory Installed
2" MERV4 - Std. Filter Factory Installed

Field Installed Accessories

Catalog Number	Qty	Description
20H48	1	High Performance Economizer Field Installed
21Z21	1	Barometric Relief Dampers (for PE Kit) Field Installed
21Z13	1	Power Exhaust Fan Field Installed

Product Features

Cabinet

Hinged Access Panels
Durable Outdoor Enamel Paint Finish
Totally Enclosed Outdoor Fan Motor
PVC Coated Fan Guard
Corrosion-Resistant Removable, Reversible Drain Pan
Isolated Compressor Compartment

Cooling System

Scroll Compressor
Expansion Valves
High Capacity Driers
Crankcase Heater
System can operate from 0°F to 125°F without any additional controls
Pre-charged Refrigeration System
Timed Off Control
Internal Pressure Relief Valve
Humiditrol - Hot Gas Reheat Dehumidification System

Heating System

Redundant Automatic Gas Valve with Manual Shut-off
Electronic Flame Sensor
Direct Spark Ignition
Inshot Burners
AGA-CGA Certified
If configured for room sensor control, additional staging may be possible. Refer to performance tables within the EHB

Control System

Fan and Limit Controls
Overload Protection
Microprocessor Controls – Lennox® CORE Control System
Auto reset high & low pressure switch with strike 3 lockout feature in Lennox® CORE Control System
Built-in BACnet IP & MS/TP
Return Air Sensor Factory Installed
Outdoor Air Sensor Factory Installed
Factory Installed Discharge Air Sensor
Refrigerant Detection System (RDS) and mitigation response, per UL safety standard 60335-2-40

Compliance



Project Submittal

Components are Bonded for Grounding
Factory Test Operated
All models are ASHRAE 90.1 energy efficiency compliant and meet or exceed requirements of Section 6.8
All models meet DOE 2023 energy efficiency standards
All models are compliant with and listed to UL standard 60335-2-40

Model meets California Code of Regulations, Title 24 and ASHRAE 90.1-2016 Section 6.4.3.10 requirements for staged airflow
Model meets HCAI (formerly OSHPD) OSP and Special Seismic Certification (Number: OSP-0596) and meet 2018 International Building Code (IBC), 2019
California Building Code (CBC) ASCE 7, and ICC-ES AC156
ISO 9001 Registered Manufacturing Quality System

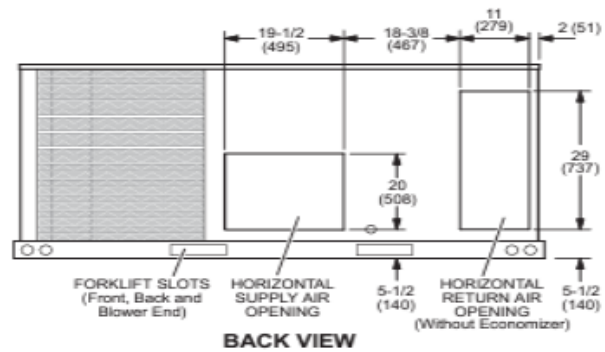
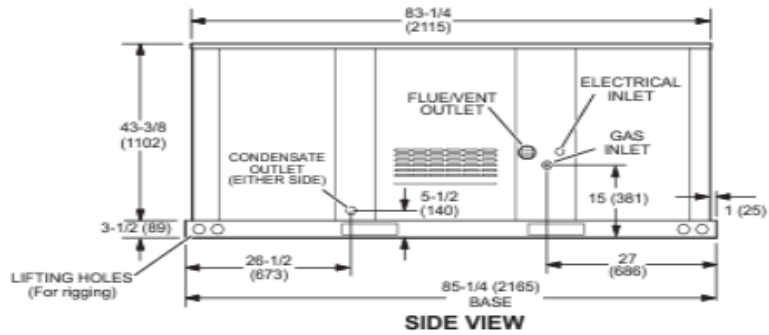
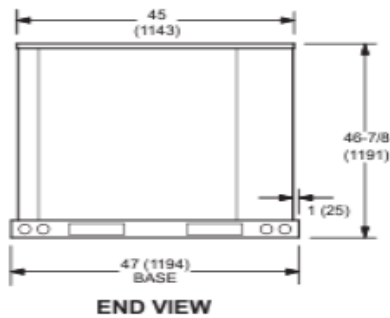
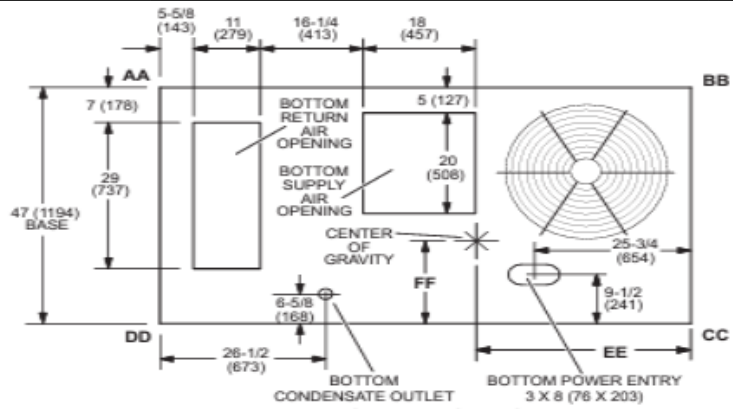
Warranty

Limited warranty on stainless steel heat exchanger of 15 years
Limited warranty on compressor of 5 years
Limited warranty on Environ Coil System of 3 years
Limited warranty on all other components of 1 year
Limited warranty on Lennox® CORE Control System of 3 years
See Limited Warranty Certificate included with unit for details

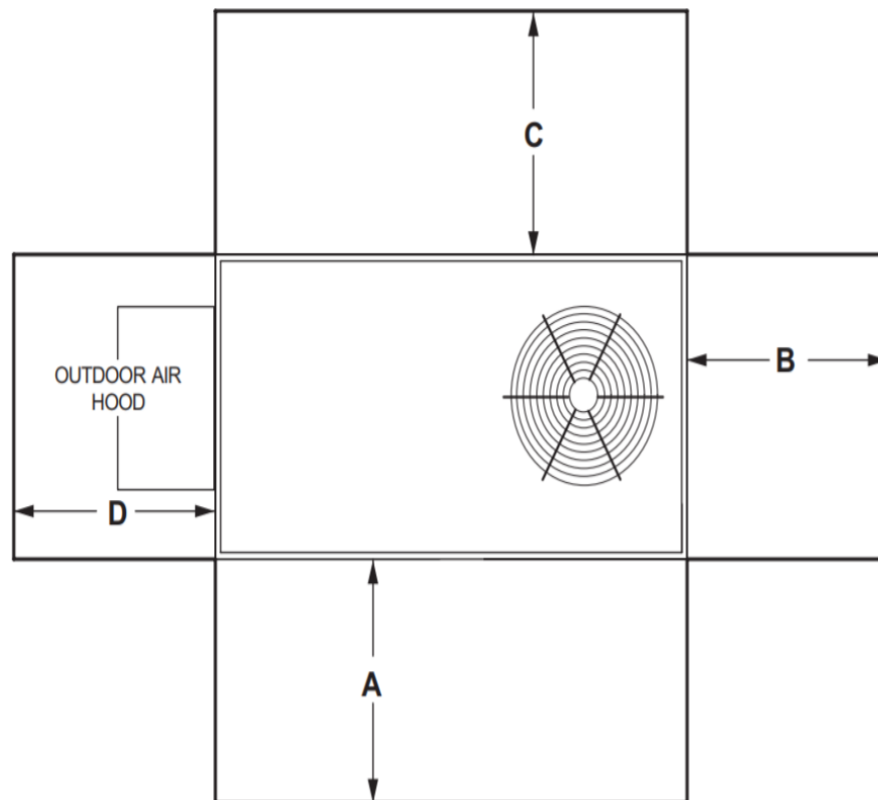


Project Submittal

Corner Weights (lb)								Center of Gravity (in.)			
AA		BB		CC		DD		EE		FF	
Base	Max	Base	Max	Base	Max	Base	Max	Base	Max	Base	Max
131	169	161	207	220	283	179	230	38.25	39.75	19.88	19.88



UNIT CLEARANCES



¹ Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	48	1219	36	914	36	934	36	914	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	1	25	
Minimum Operation Clearance	36	914	36	914	36	914	36	914	

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

¹ **Service Clearance** - Required for removal of serviceable parts.

Clearance to Combustibles - Required clearance to combustible material.

Minimum Operation Clearance - Required clearance for proper unit operation.



Project Submittal

Tag: PAHU-2 Admin
Model: LGT072H5E - LGT072H5E-Y 6T

UNIT OVERVIEW

Voltage	IEER EER	MCA/MOCP (amp)	Gross Cooling Ttl/Sens (MBH)	Net Cooling Ttl/Sens (MBH)	Supply Air Flow (cfm)	ESP/TSP (in.WC)	EAT DB/WB (°F)	LAT DB/WB (°F)
208V 3Ph 60Hz	17.3 12.2	34 / 50	72.6 / 46.1	69.4 / 42.9	1,950	1.00 / 1.21	77.9 / 67.1	55.1 / 54.6

COOLING

Cooling Performance			Temperatures (DB/WB °F)		
Gross Cooling (Ttl/Sens)	72.6 / 46.1 MBH		Ambient	95.0	
Net Cooling (Ttl/Sens)	69.4 / 42.9 MBH		Entering	77.9	67.1
Coil Moisture Removal	24.97 lb/hr		Total Leaving – (Coil)	55.1	54.6
System Moisture Removal	24.97 lb/hr		Total Leaving – (Unit)	56.7	55.2

ARI Performance		Compressors		Refrigerant		Condensate Drain	
ARI Cooling	72.0 / 69.0 MBH	Cooling Stages	2.0	Type	R-454B	Qty	1
ARI Power	5,600 W	Compressor Qty	1	Charge	4 LBS. 8 OZ.	Size	1 in.
		Compressor RLA	19.2 amp			Pipe Thread	npt

HUMIDITROL - HOT GAS REHEAT

Humiditrol Dehumidification Performance			Temperatures (DB/WB °F)		
Gross Cooling - Stage 1(Ttl/Sens)	17.6 / 17.6 MBH		Ambient	95.0	
Moisture Removal - Stage 1	lb/hr		Entering	80.0	67.0
			Total Leaving – (Stage 1)	71.3	64.2

HEATING

Heating Performance		Temperatures (DB/WB °F)		Specifications	
Output (High/Low)	87.0 / 66.0 MBH	Total Leaving	40.8	Heat Stages	2
Input (High/Low)	108.0 / 81.0 MBH			Thermal Efficiency NOX	81.0%
Gas Heat Rise	40.8 °F			Gas Line Size	0.5 in.
				Gas Pressure	7 in.WC

VENTILATION

Air Flow (cfm)		Supply Fan		Air Resistance (in.WC)	
Supply	1,950	Nominal Power	1.50 hp	Total	1.21
Outdoor	230	Required Power	1.03 hp	Ext Supply	1.00
		Drive Type	MSAV Direct Drive		
		Required Watts	764 W		

AIR RESISTANCE - OPTIONS/ACCESSORIES (in.WC)

Wet Coil	Humiditrol	Heat	Economizer	Filters	Diffuser	Exhaust	ERW
0.10	0.03	0.04	0.05				

ELECTRICAL

Voltage	208V 3Ph / 60Hz	Compressor RLA	19.2 amp
MCA	34 amp	Condenser FLA	2.8 amp
MOCP	50 amp	Supply Fan FLA	4.4 amp
Oper Range-Nom Volt	+/- 10%	Cooling FLA Total	26.4 amp

ADDITIONAL DATA

Cabinet	85.25 in. x 47.00 in. x 46.88 in.	Total Weight	780 lb
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Project Submittal

Tag: PAHU-2 Admin

Factory Installed Options

Direct Drive
Unit Orientation Downflow
Supply Fan: Multi-Speed ECM Direct Drive
208/220/230/240V 3Phase
80Amp Non-Fused Disconnect Factory Installed
Built-in BACnet IP and MS/TP (standard)
Refrigerant R-454B
Supply Motor - 1.5 Hp ECM - w/ MSAV
108K S.S. (Dual Stage)
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Cabinet

Hinged Access Panels
Durable Outdoor Enamel Paint Finish
Totally Enclosed Outdoor Fan Motor
PVC Coated Fan Guard
Corrosion-Resistant Removable, Reversible Drain Pan
Isolated Compressor Compartment

Cooling System

Scroll Compressor
Expansion Valves
High Capacity Driers
Crankcase Heater
System can operate from 0°F to 125°F without any additional controls
Pre-charged Refrigeration System
Timed Off Control
Internal Pressure Relief Valve
Humiditrol - Hot Gas Reheat Dehumidification System

Heating System

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Electronic Flame Sensor
Direct Spark Ignition
Inshot Burners
AGA-CGA Certified
If configured for room sensor control, additional staging may be possible. Refer to performance tables within the EHB

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Fan and Limit Controls
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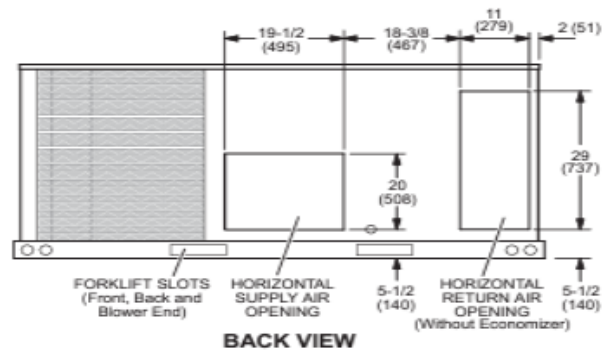
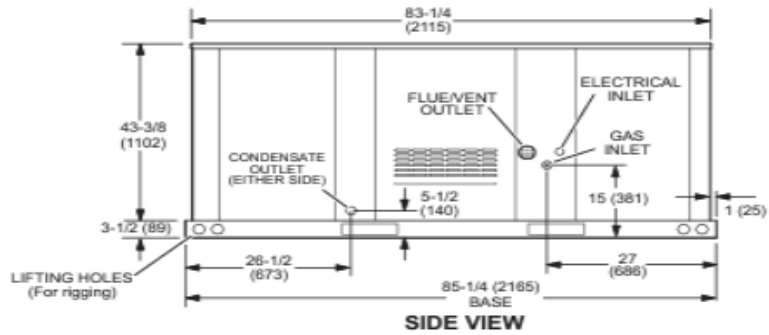
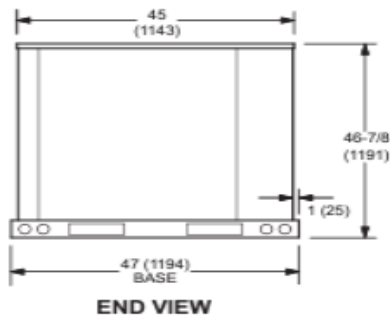
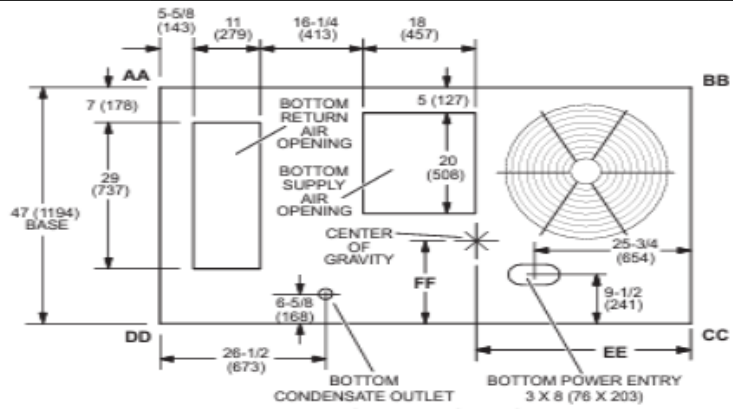
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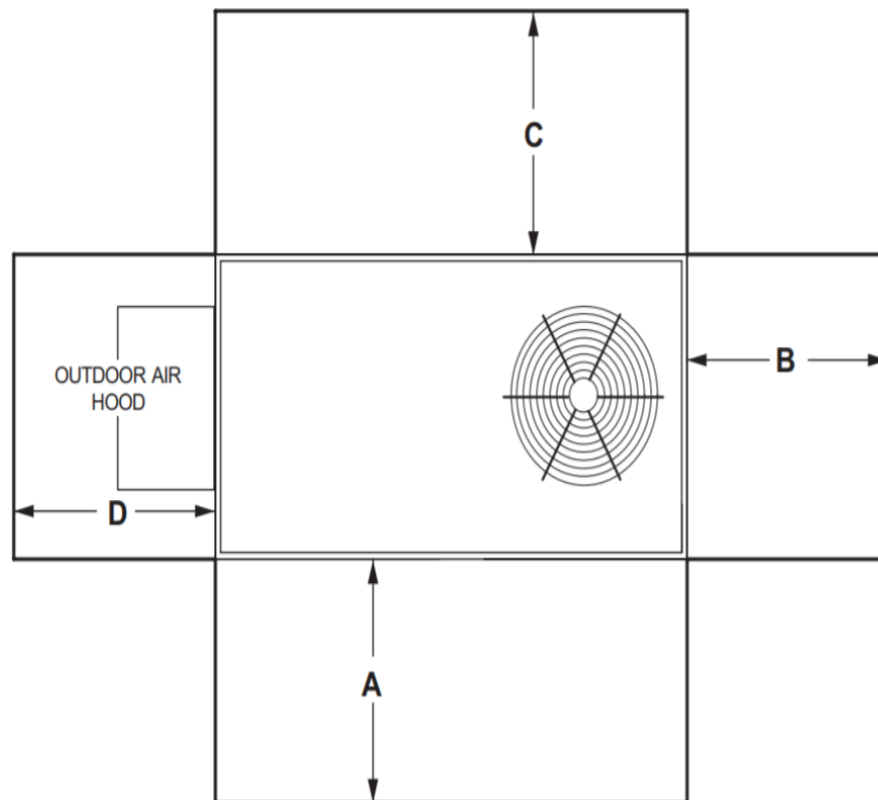


Project Submittal

Corner Weights (lb)								Center of Gravity (in.)			
AA		BB		CC		DD		EE		FF	
Base	Max	Base	Max	Base	Max	Base	Max	Base	Max	Base	Max
131	169	161	208	220	284	179	231	38.25	39.75	19.88	19.88



UNIT CLEARANCES



¹ Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	48	1219	36	914	36	934	36	914	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	1	25	
Minimum Operation Clearance	36	914	36	914	36	914	36	914	

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

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