



SUBMITTAL

Project

RTU Submittals R454B 208-3ph

Date

Wednesday, June 4, 2025

12.5T R454B 208-3

Project: RTU Submittals R454B 208-3ph
Prepared By:

06/11/2025
04:35PM

12.5T R454B 208-3

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report
Unit Feature Sheet
Spec Sheet**

Unit Report For 12.5T R454B 208-3

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Unit Parameters

Unit Model:.....48FEFM14A3A5-0A0A0
Unit Size:.....14 (12.5 Tons)
Volts-Phase-Hertz:.....208-3-60
Heating Type:.....Gas
Refrigerant:.....R-454B
Heat Control:.....High Gas Heat
Duct Cfg:.....Vertical Supply / Vertical Return
DX Options:.....Single Circuit, Two Stage Cooling

Dimensions (ft. in.) & Weight (lb.) ***

Unit Length:.....7' 4.125"
Unit Width:.....4' 11.5"
Unit Height:.....4' 1.375"
Total Operating Weight:.....1008 lb

*** Weights and Dimensions are approximate. Weight does not include unit packaging. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions and weights, refer to appropriate product data catalog.

Lines and Filters

Gas Line Size:.....3/4
Condensate Drain Line Size:.....3/4
Return Air Filter Type:.....Throwaway
Return Air Filter Quantity:.....4
Return Air Filter Size:.....20 x 20 x 2

Selection includes construction throwaway filter into the base fan curve.

Unit Configuration

High Gas Heat
High Static - EcoBlue Vane Axial Fan
Al/Cu - Al/Cu
Electromechanical Controls
Standard Packaging

Warranty Information

1-Year parts(std.)
5-Year compressor parts(std.)
10-Year heat exchanger - Aluminized(std.)

No optional warranties were selected.

NOTE: Please see Warranty Catalog 500-089 for explanation of policies and ordering methods.

Ordering Information




Part Number	Description	Quantity
48FEFM14A3A5-0A0A0	Rooftop Unit	1
	Base Unit	
	High Gas Heat	
	High Static - EcoBlue Vane Axial Fan	
	Electromechanical control, No intake or exhaust option. Will allow for use of field installed econom	

Certified Drawing for 12.5T R454B 208-3

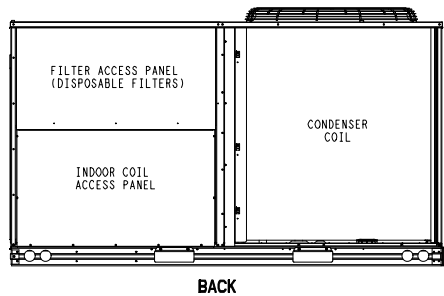
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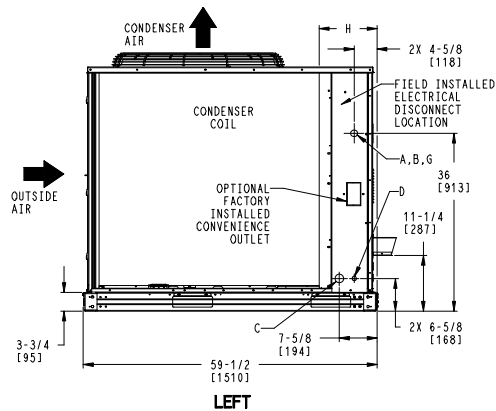
NOTES:

1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
2.  CENTER OF GRAVITY
3.  DIRECTION OF AIR FLOW
4.  ALL VIEW DRAWN USING 3RD ANGLE

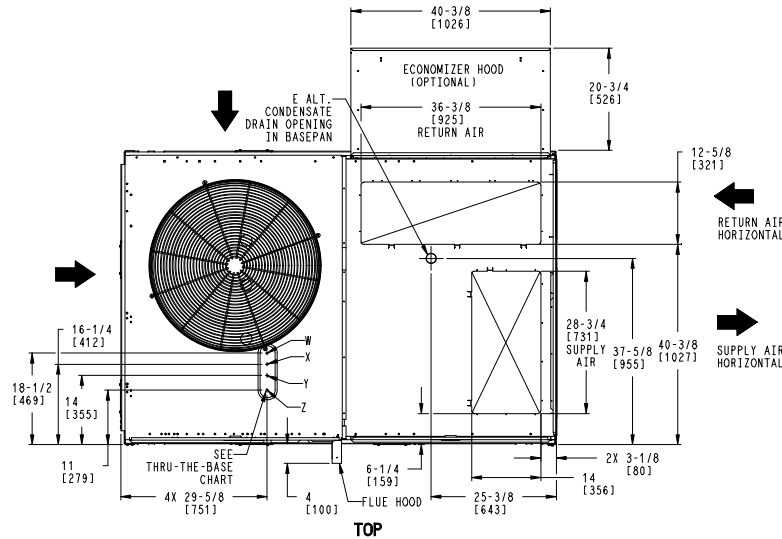
UNIT	OUTDOOR COIL TYPE	H
48FE-M14	RTPF	15 7/8 [403]
RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)		



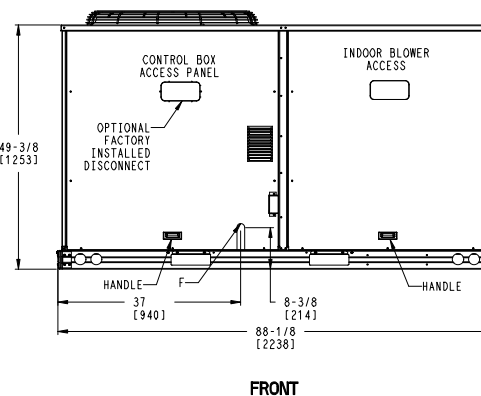
BACK



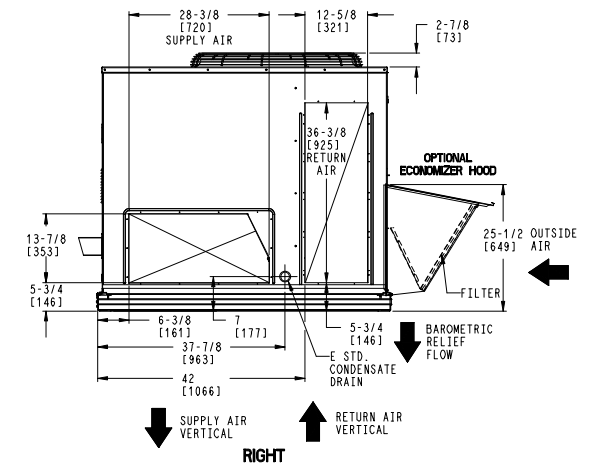
LEFT



TOP



FRONT



RIGHT



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CONNECTION SIZES	
A	1 3/8" [35] DIA FIELD POWER SUPPLY HOLE
B	2 1/2" [64] DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [51] DIA GAUGE ACCESS PLUG
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	3/4"-14 NPT GAS CONNECTION
G	2" [51] DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPWR002A01,004A01			
THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)	
W	1/2"	ACC.	7/8" [22.2]
X	1/2"	24V	7/8" [22.2]
Y	1 1/4" (002,004)	POWER	1 3/4" [44.4]
Z*	(004) 3/4" FPT	GAS	1 5/8" [41.3]
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED			
* (002) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.			

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	48FE-14 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	48TM009978	REV
U.S. ECCN:NSR	1 OF 3	08/02/24	-			-

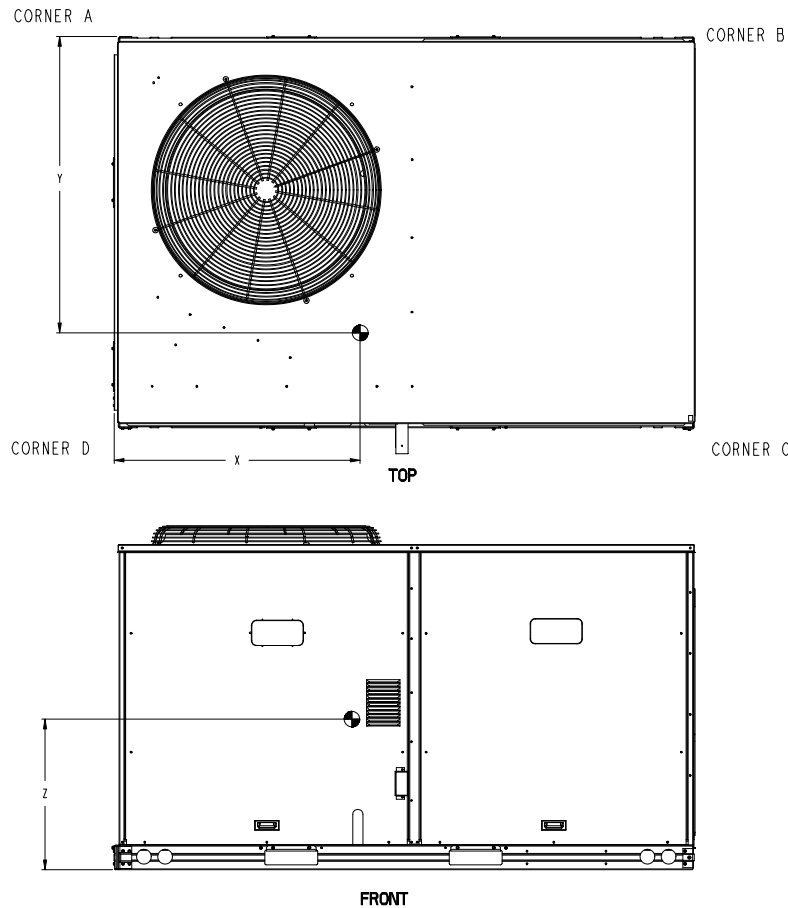
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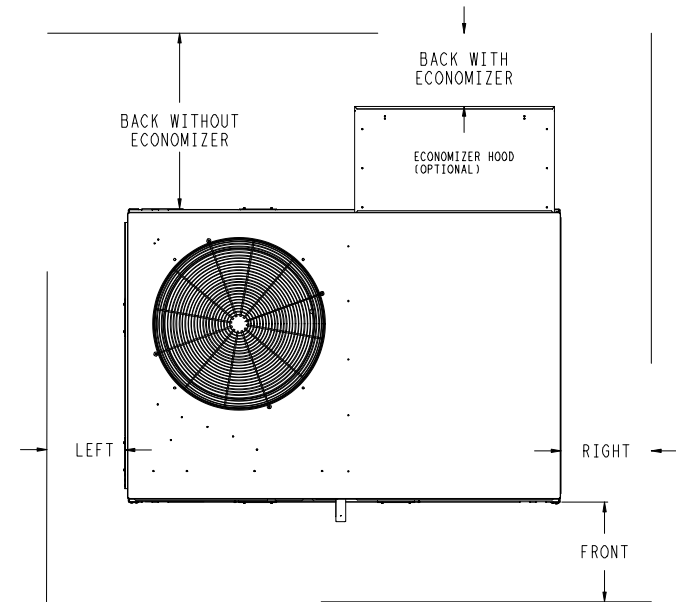
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UNIT	OUTDOOR COIL TYPE	STD. UNIT WEIGHT***		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
48FE-M14	RTPF	1041	472	243	110	195	88	269	122	335	152	39 1/4 [997]	34 1/2 [876]	21 7/8 [556]
RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)														

*** STANDARD UNIT WEIGHT IS WITH LOW GAS HEAT AND WITHOUT PACKAGING.
FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



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NOTE:

- FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

SURFACE	SERVICE WITH:		OPERATING CLEARANCE
	CONDUCTIVE BARRIER	NONCONDUCTIVE BARRIER	
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O ECON	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/ECON	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

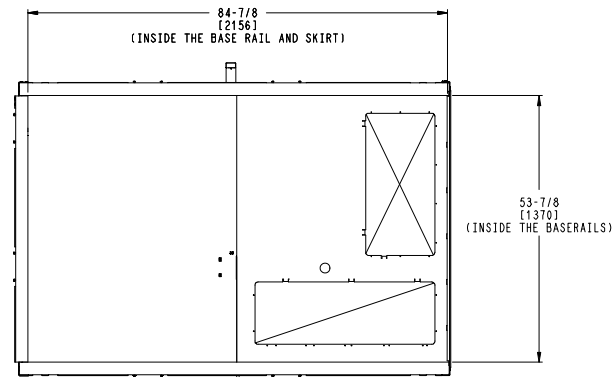
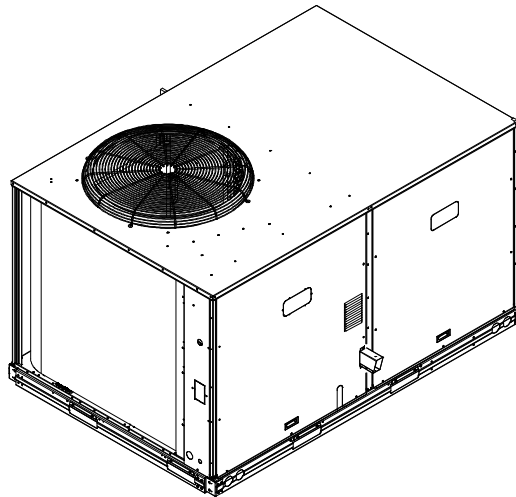
ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	48FE-14 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	48TM009978	REV
U.S. ECCN: NSR	2 OF 3	08/02/24	-			-

Certified Drawing for 12.5T R454B 208-3

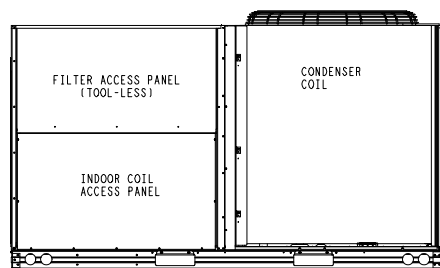
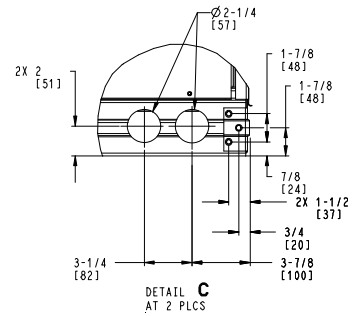
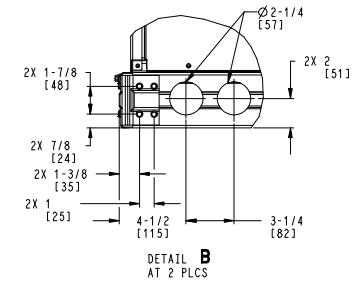
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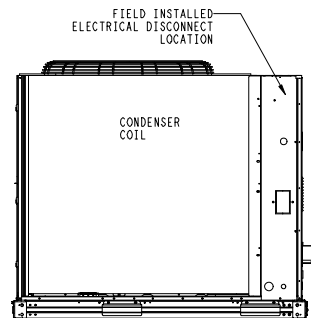
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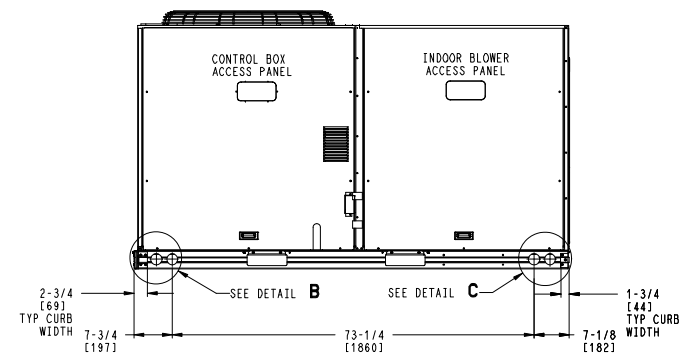
INSIDE BASERAIL DIMENSIONS
BOTTOM



BACK



LEFT



FRONT

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	48FE-14 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	48TM009978	REV
U.S. ECCN:NSR	3 OF 3	08/02/24	-			-

Performance Summary For 12.5T R454B 208-3

Project: RTU Submittals R454B 208-3ph
Prepared By:

06/11/2025
04:35PM

Part Number: 48FEFM14A3A5-0A0A0

Refrigerant: R-454B
ARI EER: 10.80
IEER: 15.0

Base Unit Dimensions

Unit Length: 88.1 in
Unit Width: 59.5 in
Unit Height: 49.4 in

Operating Weight

Base Unit Weight: 978 lb
High Static - EcoBlue Vane Axial Fan: 30 lb
Total Operating Weight: 1008 lb

Unit

Unit Voltage-Phase-Hertz: 208-3-60
Air Discharge: Vertical
Fan Drive Type: Vane Axial
Actual Airflow: 5000 CFM
Site Altitude: 0 ft

Cooling Performance

Condenser Entering Air DB: 95.0 F
Evaporator Entering Air DB: 80.0 F
Evaporator Entering Air WB: 67.0 F
Entering Air Enthalpy: 31.44 BTU/lb
Evaporator Leaving Air DB: 59.6 F
Evaporator Leaving Air WB: 57.7 F
Evaporator Leaving Air Enthalpy: 24.81 BTU/lb
Gross Cooling Capacity: 149.09 MBH
Gross Sensible Capacity: 110.08 MBH
Compressor Power Input: 11.24 kW
Coil Bypass Factor: 0.060

Heating Performance

Heating Airflow: 5000 CFM
Entering Air Temp: 70.0 F
Leaving Air Temp: 108.0 F
Gas Heating Input Capacity: 200.0 / 250.0 MBH
Gas Heating Output Capacity: 160.0 / 205.0 MBH
Temperature Rise: 38.0 F
Thermal Efficiency (%): 82.0

Supply Fan

External Static Pressure: 0.80 in wg
Fan RPM: 1918
Fan Power: 3.67 BHP
NOTE: Selected IFM RPM Range: 1320 - 2200

Selection includes construction throwaway filter into the base fan curve. This filter is not MERV Rated.

Electrical Data

Voltage Range: 187 - 253
Compressor #1 RLA: 22.3
Compressor #1 LRA: 166
Compressor #2 RLA: 21.1
Compressor #2 LRA: 157
Indoor Fan Motor Type: HIGH

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Indoor Fan Motor FLA (Total):	12.6
Combustion Fan Motor FLA (ea):	0.48
Power Supply MCA:	69
Power Supply MOCP (Fuse or HACR):	80
Disconnect Size FLA:	73
Disconnect Size LRA:	348
Electrical Convenience Outlet:	None
Outdoor Fan [Qty / FLA (ea)]:	1 / 7.4

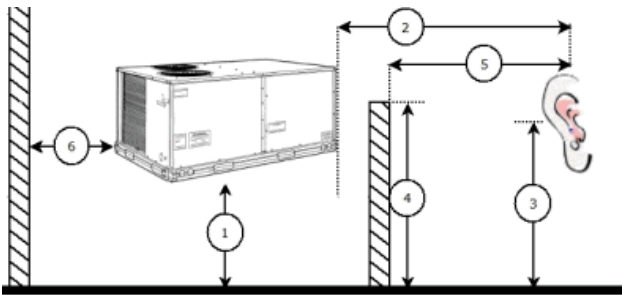
Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	92.8	88.2	85.6
125 Hz	88.3	82.3	84.7
250 Hz	84.0	75.4	80.5
500 Hz	82.2	74.0	76.0
1000 Hz	83.4	73.1	72.4
2000 Hz	80.0	68.1	68.0
4000 Hz	74.7	58.6	62.8
8000 Hz	66.8	50.7	59.3
A-Weighted	87.2	77.2	79.0

Advanced Acoustics



Advanced Accoustics Parameters

1. Unit height above ground:	30.0	ft
2. Horizontal distance from unit to receiver:	50.0	ft
3. Receiver height above ground:	5.7	ft
4. Height of obstruction:	0.0	ft
5. Horizontal distance from obstruction to receiver:	0.0	ft
6. Horizontal distance from unit to obstruction:	0.0	ft

Detailed Acoustics Information

Octave Band Center Freq. Hz	63	125	250	500	1k	2k	4k	8k	Overall
A	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3	89.2 Lw
B	59.4	68.6	71.9	72.8	72.4	69.2	63.8	58.2	78.5 LwA
C	53.2	52.3	48.1	43.6	40.0	35.6	30.4	26.9	56.8 Lp
D	27.0	36.2	39.5	40.4	40.0	36.8	31.4	25.8	46.1 LpA

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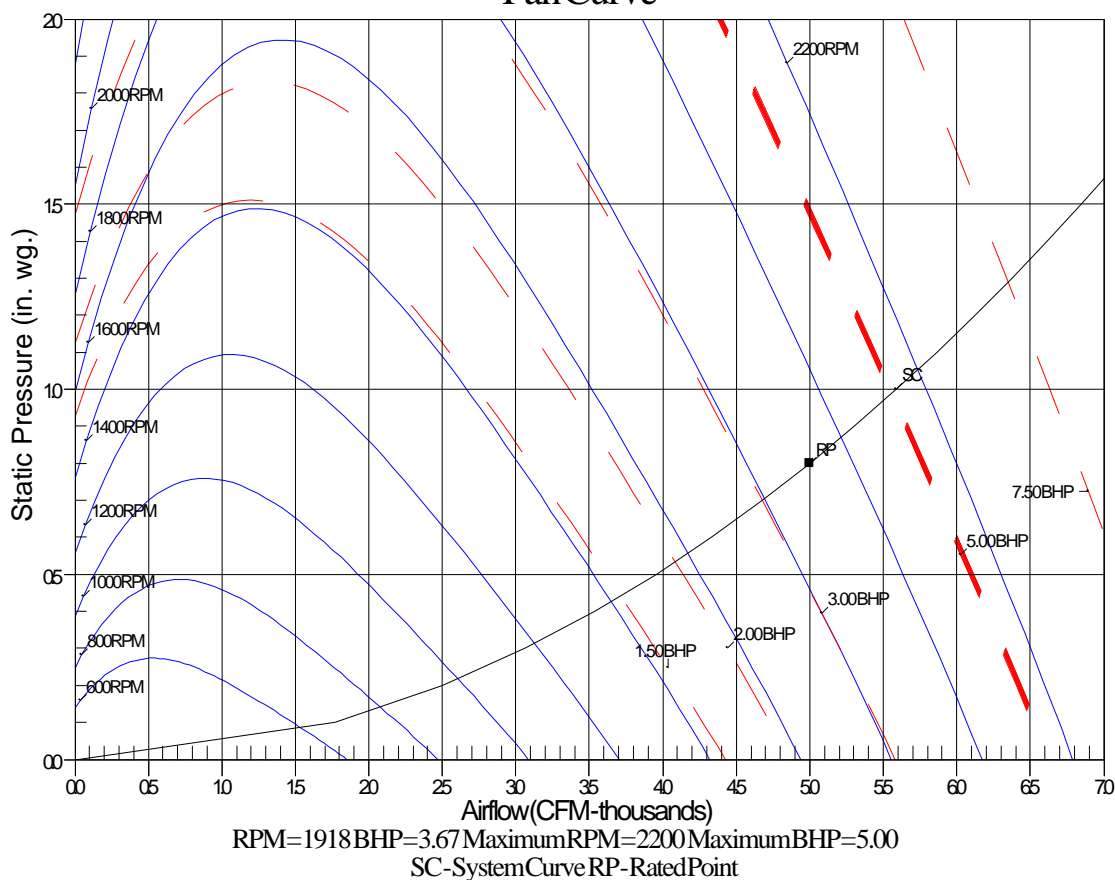
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Legend

- A Sound Power Levels at Unit's Acoustic Center, Lw
- B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA
- C Sound Pressure Levels at Specific Distance from Unit, Lp
- D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Fan Curve



Unit Feature Sheet for 12.5T R454B 208-3

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PURON ADVANCE™ PACKAGED ROOFTOP GAS HEATING/ELECTRIC COOLING UNITS WITH ECOBLUE™ TECHNOLOGY-7.5, 8.5, 10, 12.5, 15 TONS

48FE units are single packaged electric cooling, gas heating rooftops. All units are prewired and pre-charged with Carrier snow, low global warming potential Puron Advance™ (R-454B) refrigerant. Puron Advance represents a 75% reduction in refrigerant GWP over legacy Puron™ (R-410A) models. All units are factory tested in both heating and cooling modes and use two stage cooling capacity control.



PERFORMANCE FEATURES

- " Puron Advance (R-454B) refrigerant
- " Two-stage cooling capacity control on all models
- " IEERs up to 15.0
- " New-A2L leak detection and dissipation system factory installed standard
- " Leak system ensures unit and occupant safety during operation and includes an alarm relay for optional use
- " Onboard recallable leak detection history for easier troubleshooting and service
- " Direct Drive EcoBlue™ Technology Indoor fan system uses Vane Axial fan design and electronically commutated motor
- " New Unit Control Board with intuitive quick fan speed adjustment
- " ASHRAE 90.1 and IECC code compliant
- " Sound levels as low as 79 dB
- " Exclusive non-corrosive composite condensate pans in accordance with ASHRAE 62 Standard, sloping design; side or center drain
- " AFUE Gas efficiencies up to 82%
- " Induced draft combustion design
- " Redundant gas valve, with up to 2 stages of heating
- " Pre-painted exterior panels and primer-coated interior panel tested to 500 hours salt spray protection
- " TXV refrigerant metering system on all models
- " Exclusive iGC solid-state control for on-board diagnostics with LED error code designation, burner control logic and energy saving indoor fan motor delay

PERFORMANCE FEATURES (continued)

- " Standard cooling operating range up to 125 °F (52 °C), except 14 size models with 115 °F (46 °C) and down to 40 °F (-4 °C), except 14 size models with 0 °F (-18 °C) Low Ambient kit allows cooling operation down to 0 °F (-18 °C).
- " Rated in accordance with AHRI Standards 340/360
- " Designed in accordance with Underwriters Laboratories Standard UL 60335-1 and UL 60335-2-40
- " Listed by UL and CUL-Canada

MAINTENANCE FEATURES

- " Large access panels with easy grip handles
- " Innovative, easy starting, no-strips screw feature on unit access panels
- " Two-inch disposable return air filters
- " Tool-less filter access door
- " New Vane Axial evaporator-fan system has no fan belts, pulleys, blower shaft, and blower bearings with side out design.
- " Unit control board facilitates simple safety circuit troubleshooting and simplified control box arrangement.

INSTALLATION FEATURES

- " Field Convertible from vertical to horizontal airflow on all models. No special kit required on 08-14 models. Supply duct kit required for 16 size model only.
- " Provisions for thru-the-bottom power entry capability
- " Single point gas and electric connections
- " Full perimeter base rail with built-in rigging adapters and forklift slots

STANDARD LIMITED PARTS WARRANTY

- " 10-year heat exchanger-Aluminized
- " 15-year heat exchanger-Stainless Steel
- " 5-year compressor parts
- " 3-year System VU™ controller
- " 1-year parts

AVAILABLE OPTIONS:

- " Patented Humid-MiZer® adaptive dehumidification system. This option also includes Low Ambient controls
- " Through the base connections for gas and electric available as option
- " Stainless steel gas heat exchanger includes tubes, vestibule plate and collector box.
- " Disconnect and convenience outlet options
- " High static motor options
- " Smoke detector, supply and/or return air
- " Corrosion resistant options for evaporator and condenser coils
- " CO2 Sensor
- " Phase Monitor Protection
- " 4 MERV-13 Filters
- " 2-position damper
- " Hinged access panels
- " Integrated economizer system. Low and ULTRA Low Leak versions.
- " Condensate overflow switch
- " System VU Controls

Spec Sheet for 12.5T R454B 208-3

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