

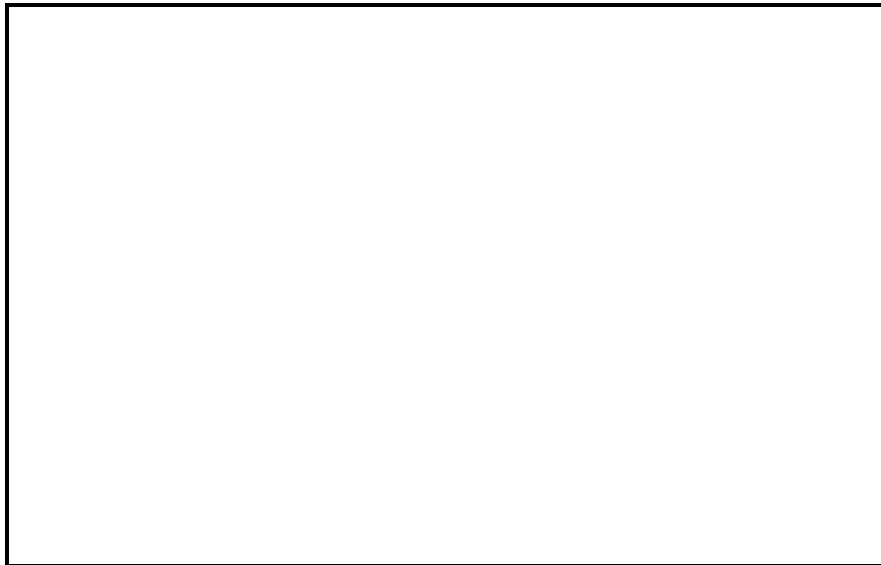
50TCQD

Single Package Rooftop,
Heat Pump Units
With Field-Installed Electric Heat
Sizes 17 & 24 with Puron[®] (R-410A) Refrigerant



Submittal Data

- **PERFORMANCE DATA**
- **CERTIFIED DIMENSION PRINTS**
- **CERTIFIED ROOF CURB
DIMENSION PRINTS**
- **SERVICE OPTION DIMENSION
PRINTS**



Job Data: _____ Location: _____
 Buyer: _____ Buyer P.O.#: _____ Carrier: _____
 Unit Number: _____ Model Number: _____
 Unit Designation: _____
 Performance Data Certified By: _____



Certified to ISO 9001



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



50TCQD

DESCRIPTION

50TCQD units are one-piece, two-stage high-efficiency heat pump units, with a low profile, prewired, tested and charged at the factory. These are intended for installation on a roof curb accessory (ordered separately), or for slab mounting (for horizontal duct connections). Units are designed to accept field-installed electric heaters. Units may be ordered with various factory-installed options. Field-installed accessories are also available.



STANDARD FEATURES

Base Unit

- Puron (R-410A) HFC refrigerant
- EER's up to 10.8
- IEER's:
 - up to 11.5 with single speed indoor fan motor
 - up to 12.0 with 2-speed/VFD indoor fan motor
- COP's up to 3.3
- ASHRAE 90.1 energy compliant
- Rated in accordance with AHRI Standard 340/360
- Designed in accordance with Underwriters' Laboratories Standard 1995
- Listed by ETL
- Two-stage cooling capacity control on all models
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Cooling operating range from 30°F up to 115°F (-1°C up to 46°C).
- Dedicated vertical and horizontal airflow models available, ordered as factory option. No special kits required
- Two-inch disposable return air filters
- Thru-the-bottom power entry capability
- Single point electric connections on field-installed electric heat units
- 24-volt control circuit protected with resettable circuit breaker and 75-VA transformer

- Belt drive, constant torque, permanently lubricated evaporator-fan motor on all size units.
- Totally enclosed condenser motors with permanently lubricated bearings
- State-of-the-art defrost control board, easily configured for defrost cycles of 30, 60, 90, or 120 minutes.
- Centralized Terminal Board for component and unit wiring connections.
- Loss of Charge, High-Pressure, and Freeze Protection switches
- Full perimeter base rail with built-in rigging adapters and fork truck slots.

Cabinet

- Access panels with easy grip handles
- Innovative, easy starting, no strip screw features on unit access panels.
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet
- Tool-less filter access door

Refrigerant System

- Acutrol™ refrigerant metering system
- Liquid line filter drier
- Scroll compressors with internal line-break overload protection
- Indoor and outdoor coils constructed of aluminum fins mechanically bonded to seamless copper tubes.

Refrigerant System (cont.)

- Removable gauge line plugs for reading refrigerant pressure with unit panels in place
- Four-way reversing valve operation
- Suction Line Accumulator standard - prevents excessive liquid flood back of refrigerant to the compressor even during the start of the defrost cycle.

Standard Parts Warranty

- 5-year electric heater (field-installed)
- 5-year compressor
- 1-year parts

PERFORMANCE DATA

Unit Operating Weight _____ lb

Curb Weight _____ lb

Cooling

Heating

Net Total Capacity _____ Btuh

Power Input to Unit _____ kw

Net Sensible Capacity _____ Btuh

Integrated Capacity _____ Btuh

Compressor Power Input _____ kW

Indoor Operating Air Temperature _____ °F db

at Outdoor Air Temperature _____ °F

Outdoor Air Temperature _____ °F (Winter Design)

Indoor Entering Air db: _____ °F wb _____ °F

Rating at 70% R.H. Outdoors _____ kW Heater Selected

Airflow _____ CFM External Static Pressure _____ in.wg

_____ Heat/Cool Ratio

Electrical Capacity Required _____ Btuh

50TCQD

ELECTRICAL DATA

Power Supply to Unit _____ Volts _____ Phase _____ Hz

Minimum Circuit Amps _____ Maximum Overcurrent Protection (Fuse Only) _____

SUBMITTAL DATA

Job Name _____

Architect _____

Engineer _____

Contractor _____

Unit Designation _____

OPTIONS AND ACCESSORIES

FACTORY-INSTALLED OPTIONS (FIOPs)

- Staged Air Volume (SAV) system utilizes a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor for 2 speed indoor fan motor control. Conforms to ASHRAE 90.1 2010 Standard – section 6.4.3.10.b.
- Open protocol RTU Direct Digital Control (DDC) LON, MODBUS, BACNET and Johnson N2 protocols.
- PremierLink CCN control
- Dedicated vertical discharge and return air units
- Dedicated horizontal discharge and return air units
- Through the base connectors electric conduit
- Standard Economizer with dry bulb sensing and barometric relief
- Standard Economizer with enthalpy sensing and barometric relief
- Ultra Low Leak economizer with maximum leakage rate equal or less than 4.0 cfm/sq. ft. at 1.0 in. w.g. Available on models with Staged Air Volume (SAV) 2 speed indoor fan motor only.
- Two-position motorized outdoor air damper
- Non-fused disconnect switch (80 A Max)
- Powered 115-volt convenience outlet
- Non-powered 115-volt convenience outlet
- High static indoor fan motor and drive
- Return Air smoke detector
- Supply Air smoke detector
- Smoke detectors — return and supply air
- Pre-coated Al/Cu condenser coil
- E-coated Al/Cu condenser coil
- E-coated Al/Cu condenser and evaporator coil
- Cu/Cu condenser coil
- Cu/Cu condenser coil and evaporator coil
- Condenser hail guard — louvered style
- CO₂ sensor

OPTIONAL WARRANTIES

- Complete Unit Parts only up to 5 years
 - Complete Unit Parts and Labor up to 5 years
- Many other optional warranties are available. See the *Commercial Start-Up and Optional Extended Warranty Price* price pages for further information.

FIELD INSTALLED ACCESSORIES

- EconoMiSer™ X – Ultra Low Leak electromechanical, gear driven with Honeywell W7220 digital controller. Used with 2 speed Staged Air Volume (SAV) systems only.
- Display Kit for Variable Frequency Drive (VFD), Staged Air Volume System. Allows additional set up and diagnostics of the unit VFD controller. Can be unit mounted or used with any other VFD model as a reusable device.
- EconoMiSer IV with controls and barometric relief — vertical or horizontal
- EconoMiSer2 with 4-20 mA actuator, barometric relief, and no microprocessor — vertical or horizontal
- Power Exhaust — vertical or horizontal
- PremierLink CCN controller
- Electric heat
- Single point kit
- Two-position motorized outdoor air damper
- Manual outdoor air damper 25%
- Manual outdoor air damper 50%
- Roofcurb — 14 inch (356mm) tall
- Roofcurb — 24 inch (610mm) tall
- Thru-the-bottom utility connection kit
- Thru-the-curb utility connection kit
- Time Guard II compressor anti-cycle control
- Outdoor coil hail guard — louvered style
- Low ambient head pressure controller, down to -20° F (-29° C)
- Thermostats and Sensors
- Phase Monitor
- Barometric Relief hood (for horizontal economizers)

Economizer Sensors

- Single Dry bulb control
- Differential Dry bulb control
- Single enthalpy control
- Differential enthalpy control
- CO₂ - wall mounted
- CO₂ - duct mounted

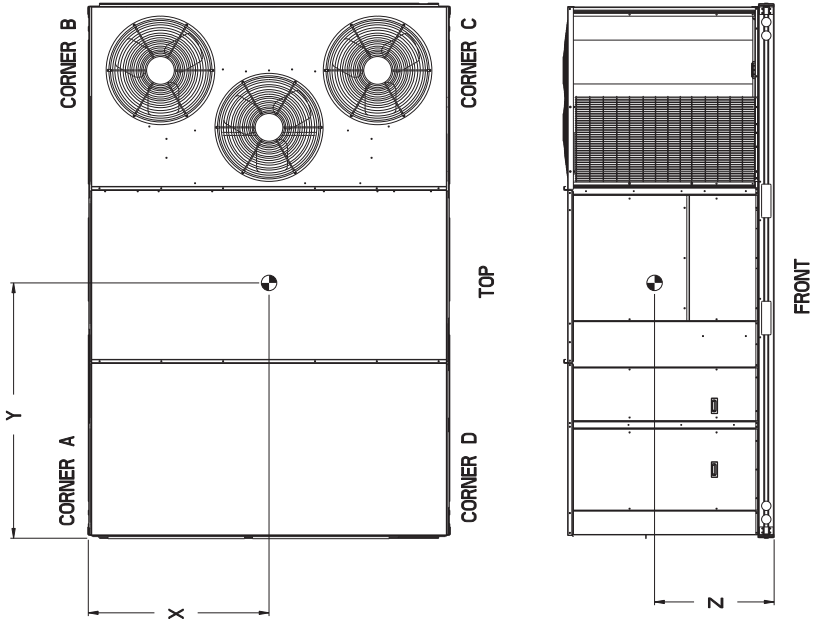
50TCQD

CERTIFIED DIMENSION 50TCQD17

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UNIT	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			
50TCQD17	1775	807	479	218	364	166	403	183	530	241	45 1/4	111 1/4	55 1/4	11403	16 1/2	4119


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



SHEET	DATE	SUPERCHANGES	50TCO 17 SINGLE ZONE ELECTRIC HEAT PUMP	50HE501633	REV
2 OF 2	05/24/10	-			-

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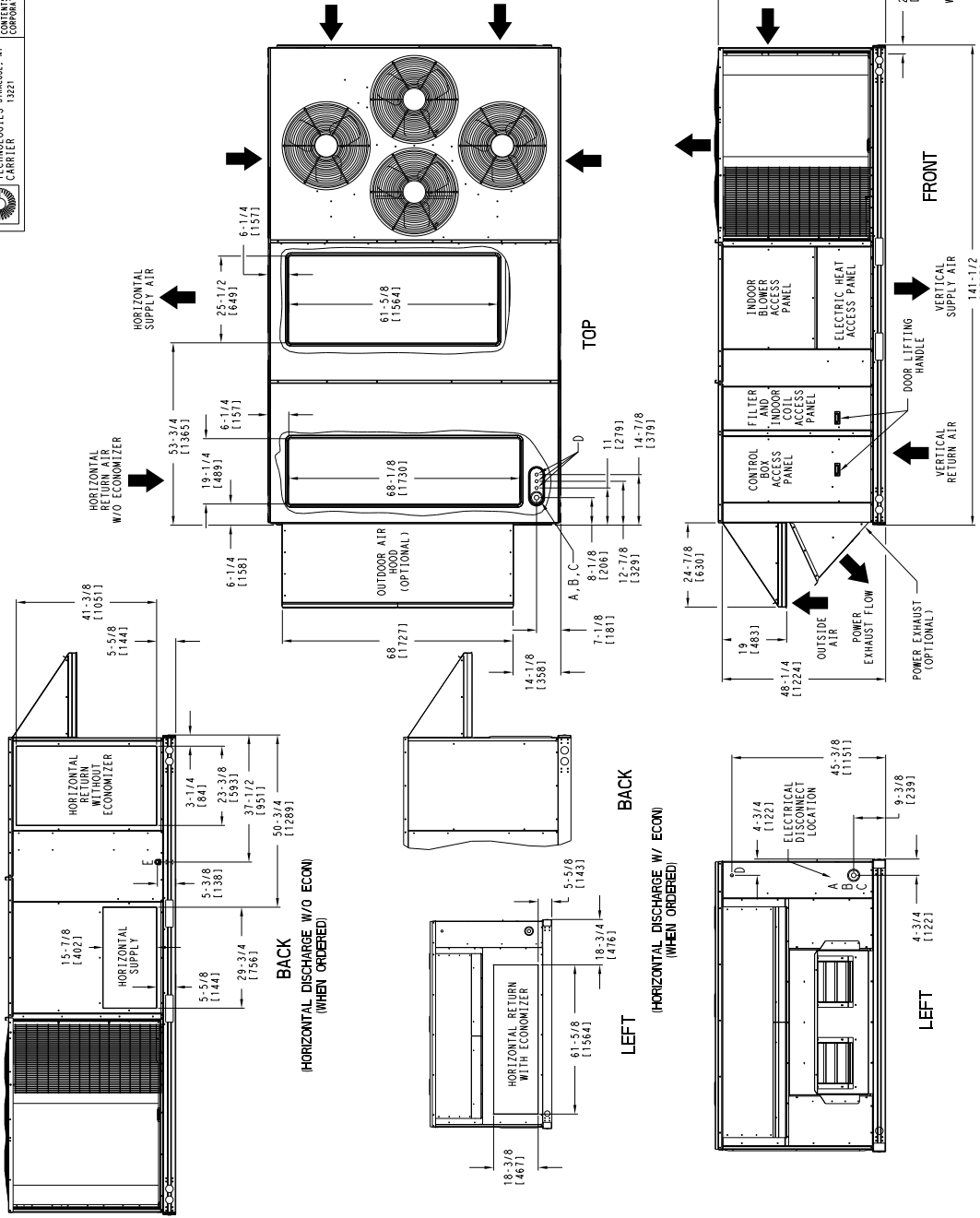
CERTIFIED DIMENSION 50TCQD24


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CONNECTION SIZES	
A	1 3/8" DIA [135] FIELD POWER SUPPLY KNOCKOUT
B	3" DIA [76] FIELD POWER SUPPLY KNOCKOUT
C	3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT
D	7/8" DIA [22] FIELD CONTROL WIRING HOLE
E	3/4"-1/4" NPT CONDENSATE DRAIN

- NOTES:
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
 2. CENTER OF GRAVITY
 3. DIRECTION OF AIR FLOW



SHEET	DATE	SUPERSEDES	50TCO 24 SINGLE ZONE ELECTRIC HEAT PUMP	50HE501636	REV
1 OF 2	11/09/10	05/24/10			A

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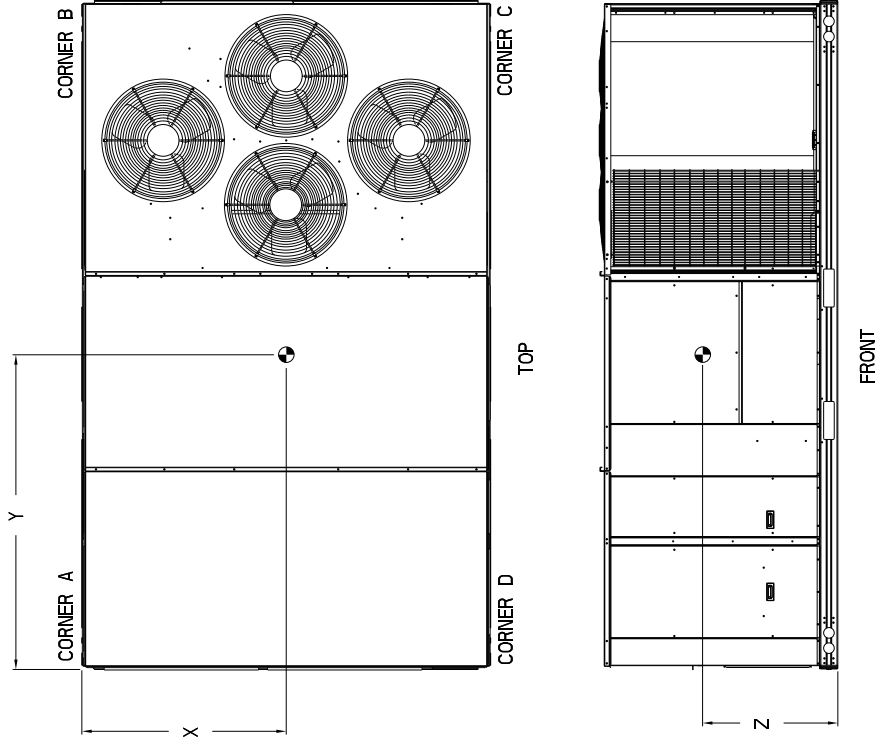
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CERTIFIED DIMENSION 50TCQD24

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UNIT	CORNER (A)		CORNER (B)		CORNER (C)		CORNER (D)		C.G.				
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z		
50TCQ24	2100	955	534	243	517	235	516	235	533	242	43 [1092]	69 1/2 [1765]	16.5 [419]

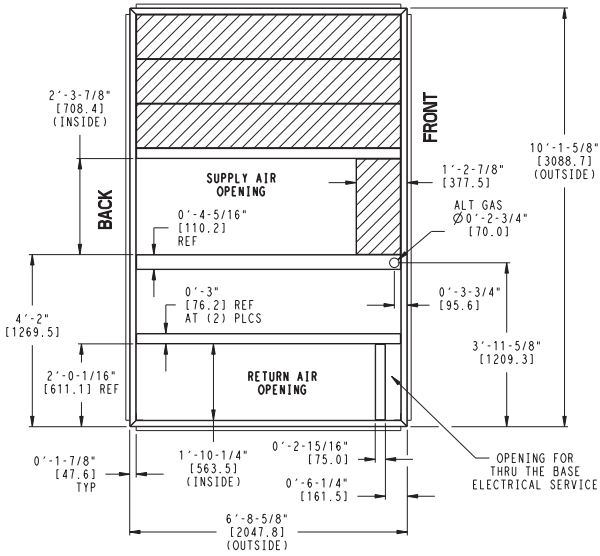
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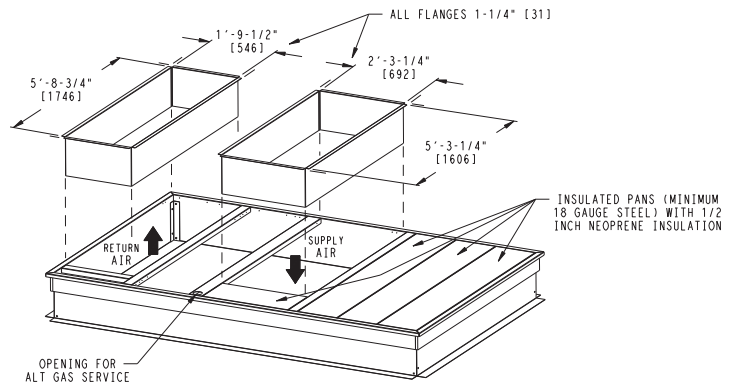
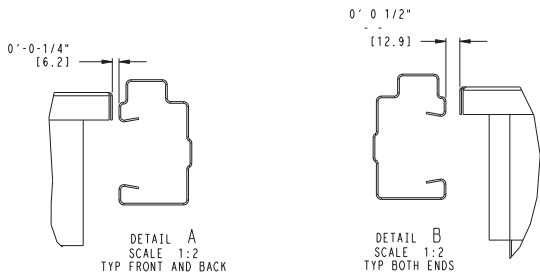
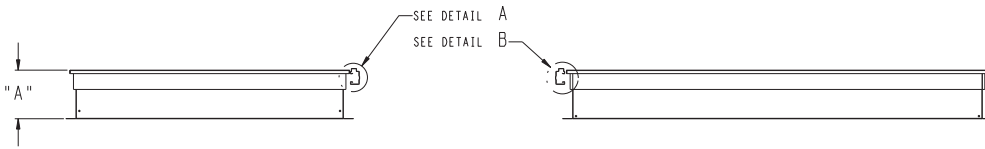
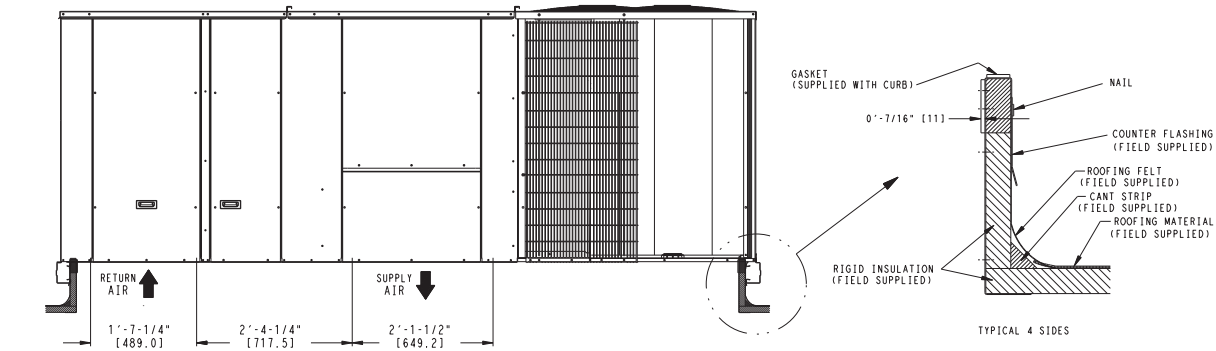
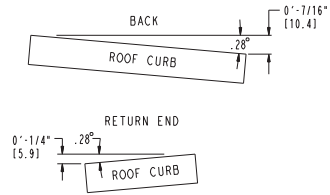
SHEET	DATE	SUPERVISOR	50TCQ 24 SINGLE ZONE ELECTRIC HEAT PUMP	REV
2 OF 2	11/09/10	05/24/10	50HE501636	A

ROOF CURB DETAILS - SIZE 17 UNITS

UNIT SIZE	"A"	ROOF CURB ACCESSORY
17	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB045A00 CRRFCURB046A00



- NOTES:
- 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
 - 2 DIMENSIONS IN [] ARE IN MILLIMETERS.
 - 3 ROOF CURB GALVANIZED STEEL.
 - 4 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
 - 5 SERVICE CLEARANCE 4 FT ON EACH SIDE
- ➔ DIRECTION OF AIR FLOW

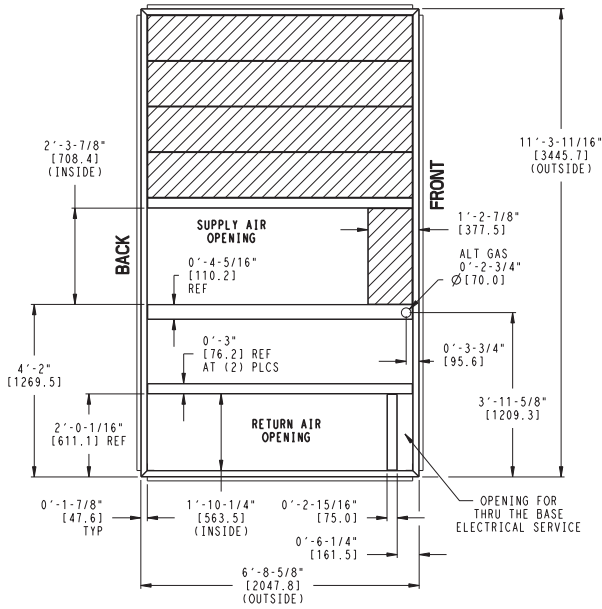


50TCQD

ROOF CURB DETAILS - SIZE 24 UNITS

UNIT SIZE	"A"	ROOF CURB ACCESSORY
24	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB047A00 CRRFCURB048A00

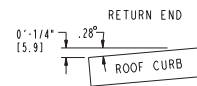
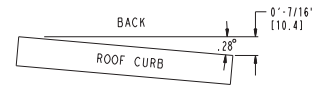
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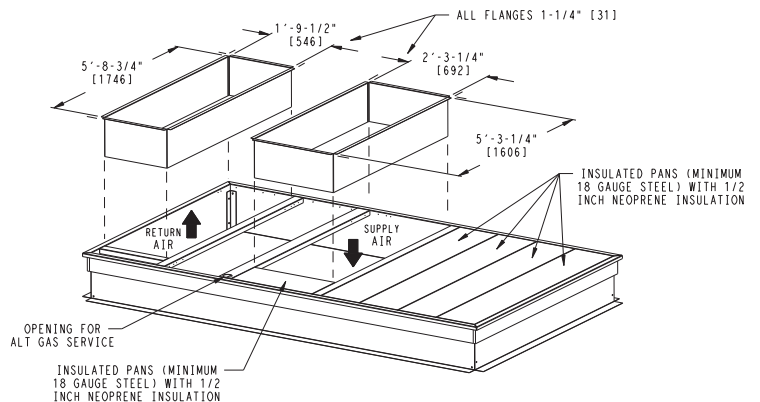
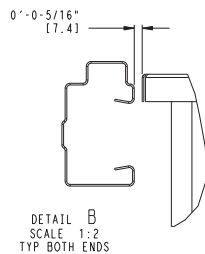
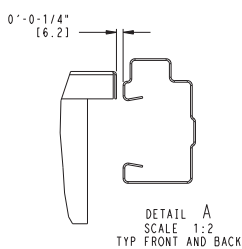
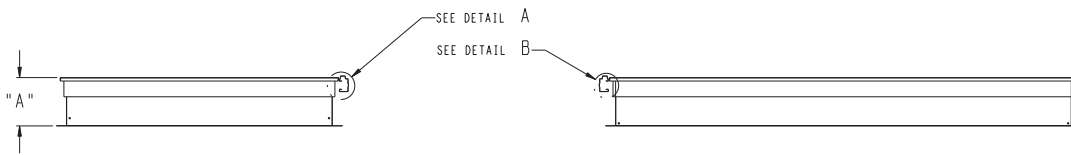
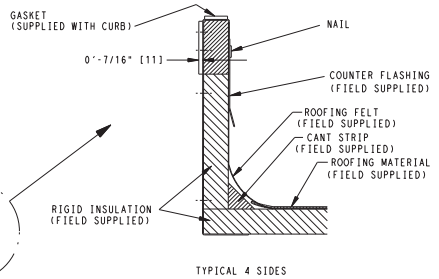
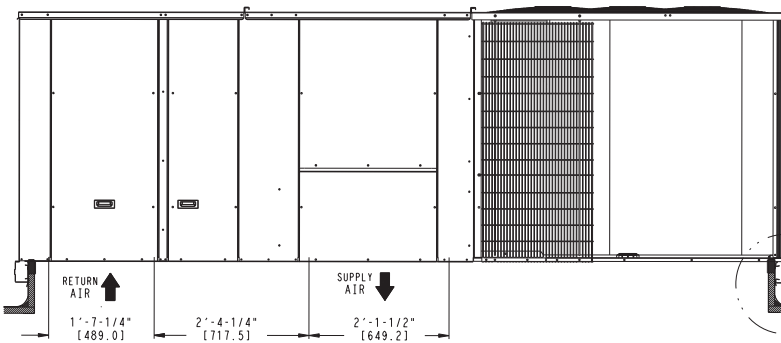
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- 5 SERVICE CLEARANCE 4 FT ON EACH SIDE

➔ DIRECTION OF AIR FLOW



MAX CURB LEVELING TOLERANCES



C10140