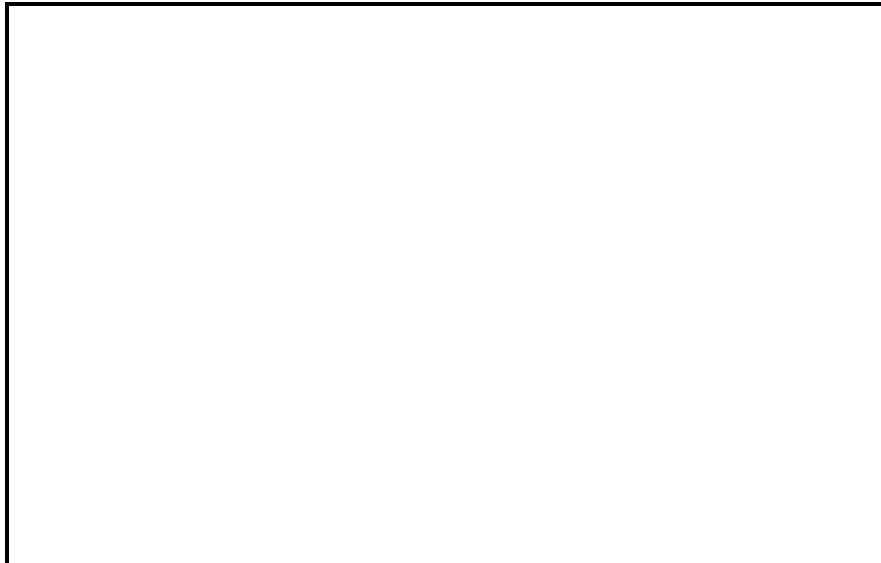


**50TC WeatherMaker® Series**  
50Hz Single Package Rooftop,  
Cooling Only, with Optional Electric Heat  
Two Stage Cooling Capacity Control  
with Puron® (R-410A) Refrigerant  
Sizes: 17, 20, 24, 28, 30  
(49.2kW to 83.8kW)



## 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

## DESCRIPTION

50TC\*D 50Hz units are single-packaged electric cooling only units that are pre-wired and pre-charged with environmentally sound Puron® (R-410A) HFC refrigerant. Electric heat is available as a field-installed accessory. The units are factory tested prior to shipment.

## STANDARD FEATURES

### Base Unit

- Puron (R-410A) HFC refrigerant
- EER's up to 11.3
- IEER's up to 13.0
- Designed in accordance with Underwriters' Laboratories Std 1995
- Listed by ETL
- Two-stage cooling capacity control
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Standard cooling operating range up to 52°C (125°F) and down to 4°C (40°F).
- Dedicated vertical and horizontal airflow models available as factory option. No special field kits required.
- Two-inch disposable return air filters
- Provisions for thru-the-bottom power entry capability as standard in an environmentally protected area.
- Single point electric connections
- 24-volt control circuit protected with resettable circuit breaker and 75-VA transformer
- Belt drive, constant torque, permanently lubricated evaporator-fan motor
- Totally enclosed condenser motors with permanently lubricated bearings
- Blower bearing extended lubrication line on all sizes

- Low-pressure and high-pressure switch protection
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- New central terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement.
- High performance belt drive motor with variable pitch pulleys, quick adjust belt system and fan belt protection

### Cabinet

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

### Refrigerant System

- Acutrol™ refrigerant metering system
- Liquid line filter drier on each circuit
- Scroll compressors with internal line-break overload protection
- Copper tube, aluminum fin evaporator coil
- Round Tube/Plate Fin (RTPF) condenser coils on all model sizes or NOVATION™ all aluminum condenser coils available on 17 - 28 sizes.

## PERFORMANCE DATA

Unit Operating Weight \_\_\_\_\_ kg

Curb Weight \_\_\_\_\_ kg

### Cooling

Gross Total Capacity: \_\_\_\_\_ Btuh

at Condenser Air Temperature \_\_\_\_\_ °C

Gross Sensible Capacity: \_\_\_\_\_ Btuh

Compressor Power Input: \_\_\_\_\_ kW

Indoor Entering db \_\_\_\_\_ °C wb \_\_\_\_\_ °C

Airflow \_\_\_\_\_ L/s External Static Pressure \_\_\_\_\_ Pa

Indoor Fan Motor Size \_\_\_\_\_ Hp

Exhaust Fan Motor Size \_\_\_\_\_ Hp

### Heating (Electric)

Heating Capacity:

Stage 1 \_\_\_\_\_ Btuh

Stage 2 \_\_\_\_\_ Btuh

Heating Capacity Total \_\_\_\_\_ Btuh

Stage 1 \_\_\_\_\_ kW

Stage 2 \_\_\_\_\_ kW

Heating Capacity Total \_\_\_\_\_ kW

## ELECTRICAL DATA

Power Supply to Unit \_\_\_\_\_ Volts \_\_\_\_\_ Phase \_\_\_\_\_ Hz

Minimum Circuit Amps \_\_\_\_\_ Maximum Overcurrent Protection \_\_\_\_\_

## SUBMITTAL DATA

Job Name \_\_\_\_\_

Architect \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor \_\_\_\_\_

Unit Designation \_\_\_\_\_

## OPTIONS AND ACCESSORIES

### FACTORY-INSTALLED OPTIONS (FIOPs)

- Vertical air flow duct configuration models
- Horizontal air flow duct configuration models
- RTU Open protocol controller communicates to LON, MODBUS, BACNET and Johnson N2 protocols.
- CCN Direct Digital Control (DDC) - PremierLink
- Through the base connectors electric conduit/piping
- Economizer with dry bulb sensing and barometric relief
- Economizer with enthalpy sensing and barometric relief
- 2 position motorized outdoor air damper
- 25% Manual outdoor air damper
- Non-fused disconnect
- Medium and High static motor options
- Return Air smoke detector
- Supply Air smoke detector
- CO<sub>2</sub> sensor
- Condenser hail guard - louvered style
- Special coating protection for evaporator and condenser coils

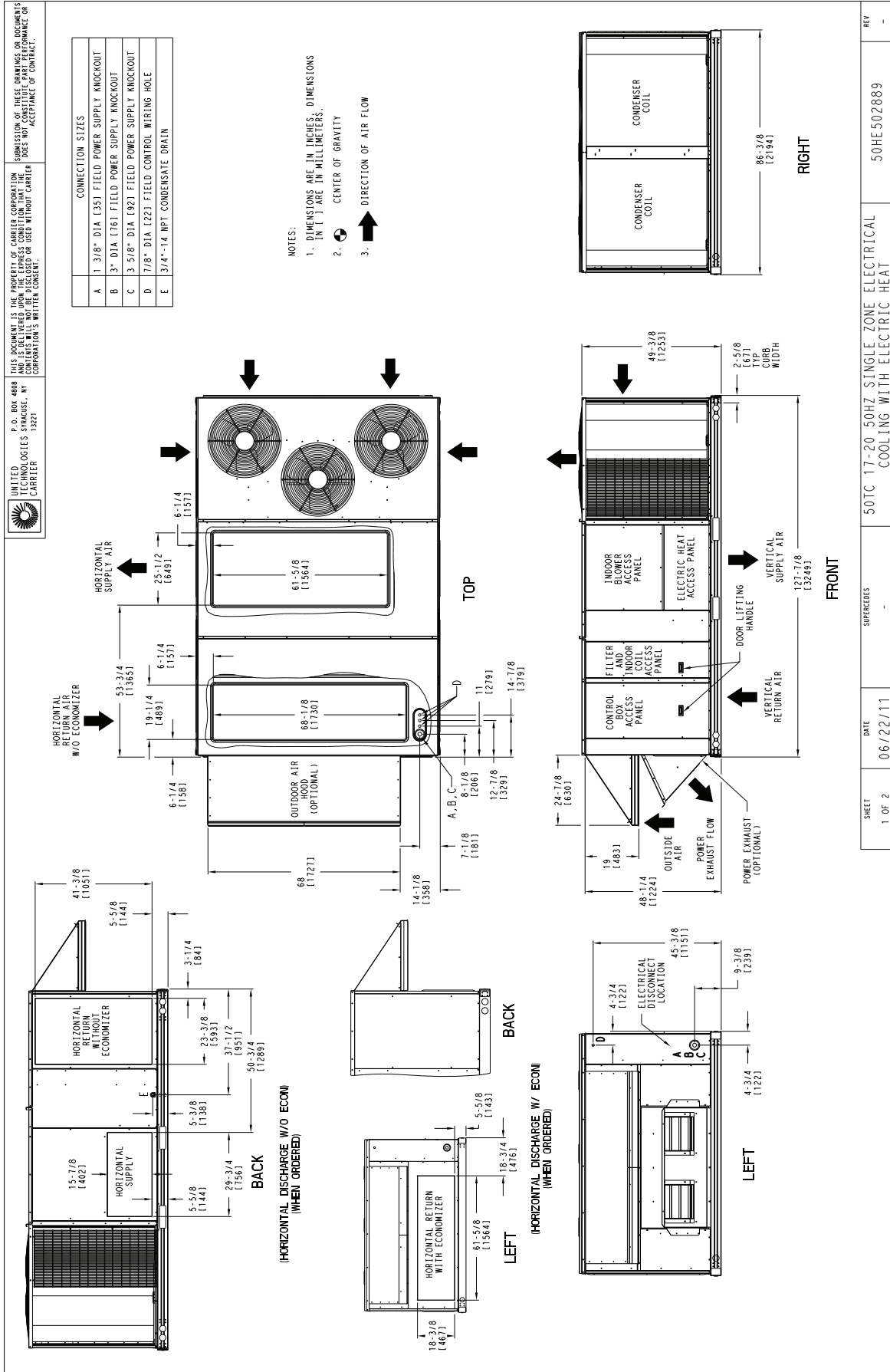
### FIELD INSTALLED ACCESSORIES

- EconomiSer™ IV-electromechanical, gear driven with Belimo actuator (2-10v DC signal) and controller
- EconomiSer™ 2-compatible with DDC controls; gear driven with Belimo actuator (4-20mA) signal and no controller
- Electric heater(s)
- Single point kit
- Power exhaust - centrifugal fan design
- Two-position motorized outdoor air damper
- 25% Manual outdoor air damper
- Roofcurb - 356mm (14 inch) tall
- Roofcurb - 610mm (24 inch) tall
- Adapter Curb (for sizes 17-24 only) - Adapts to Carrier DP/DR, TJ, HJ, TM, roofcurbs
- Condenser hail guard - louvered style
- Phase monitor (loss of phase/phase reversal)
- Winter start kit, down to -4°C (25°F)
- Low ambient head pressure controller, down to -29°C (-20°F)
- Time Guard II compressor anti-cycle protection
- Four inch filter tracks
- Return Air smoke detector
- Supply Air smoke detector
- Thermostats and Sensors

### Economizer Sensors

- Single Dry bulb control
- Differential Dry bulb control
- Single enthalpy control
- Differential enthalpy control
- CO<sub>2</sub> - wall mounted
- CO<sub>2</sub> - duct mounted
- CO<sub>2</sub> - unit mounted

# CERTIFIED DIMENSION 50TC-D17, 20



SHEET	1 OF 2	DATE	06/22/11	SUPERCODES	50TC 17-20 50HZ SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	REV	-
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**50TC--D**

C11330

# CERTIFIED DIMENSION 50TC-D17, 20

UNIT	CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50TC17	822	415	189	492	224	488	222	412	42	29 1/2	16 1/2
50TC20	823	419	190	496	224	493	224	415	42	29 1/2	16 1/2

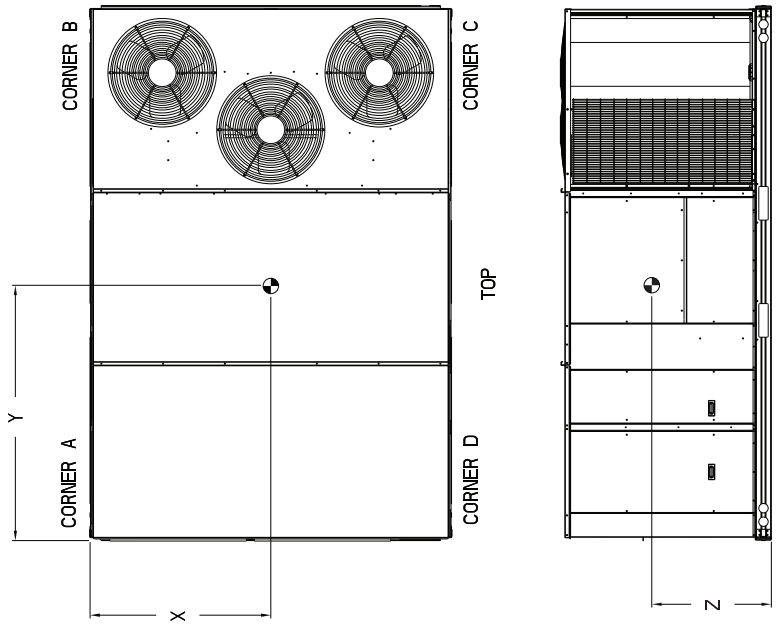
\* STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.  
 FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.

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SHEET	DATE	SUPERCHANGES	50TC 17-20 50HZ SINGLE ZONE ELECTRICAL	50HE502889	REV
2 OF 2	06/22/11	-	COOLING WITH ELECTRIC HEAT		-

C11331

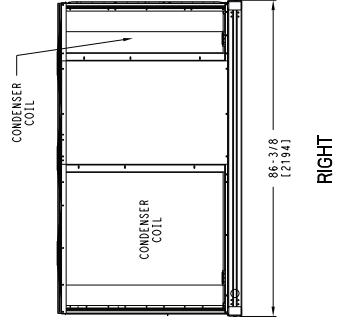
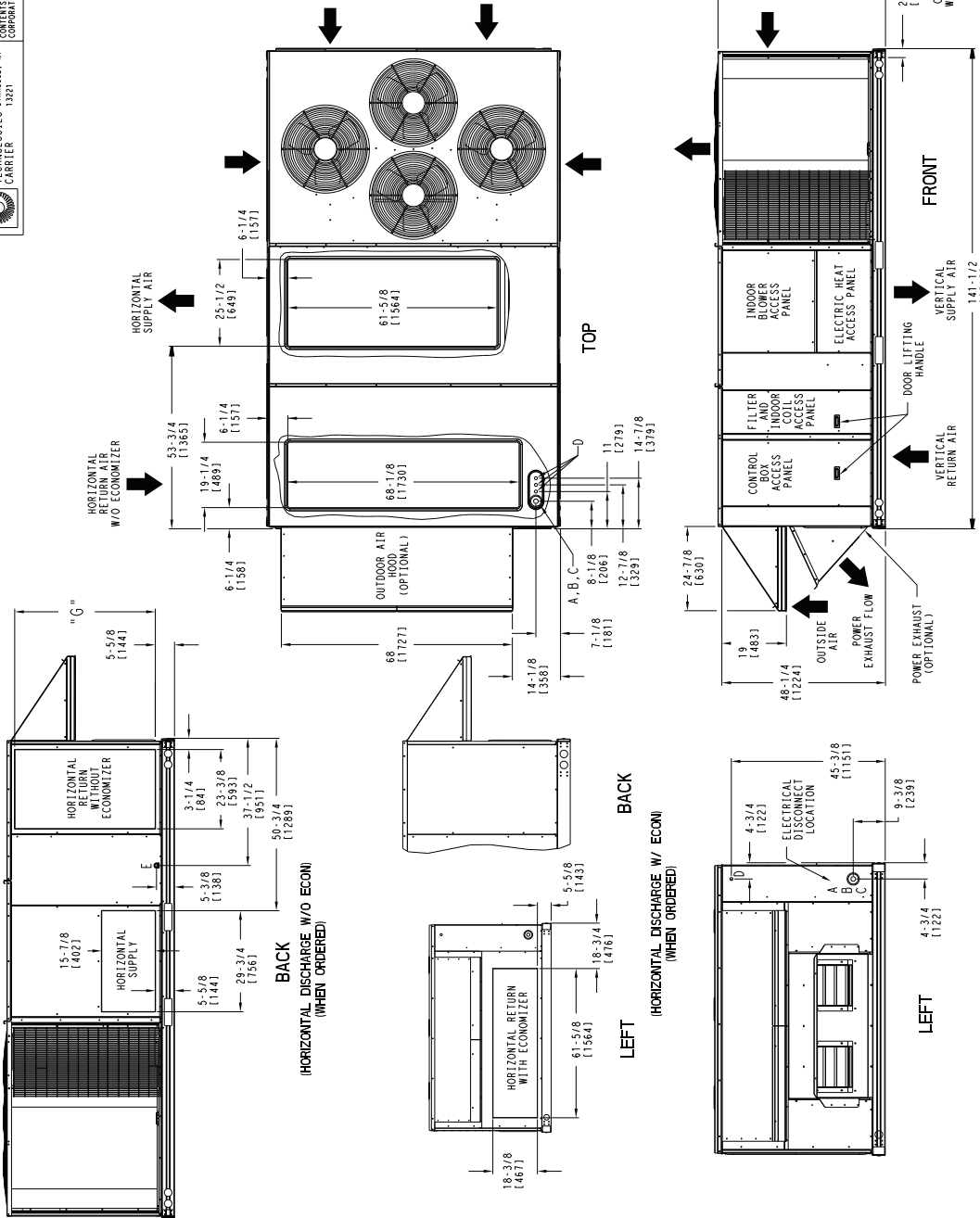
# CERTIFIED DIMENSION 50TC-D24, 28

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CONNECTION SIZES			
	A	B	C
UNIT	G	H	H
24 SIZE	41-3/8 (1051)	49-3/8 (1253)	49-3/8 (1253)
28 SIZE	49-3/8 (1253)	57-3/8 (1456)	57-3/8 (1456)

UNIT	G	H
24 SIZE	41-3/8 (1051)	49-3/8 (1253)
28 SIZE	49-3/8 (1253)	57-3/8 (1456)

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



SHEET	DATE	SUPERCHANGES	REV
1 OF 2	06/22/11	-	-

50TC 24-28 50HZ SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT

50HE502890

C11332

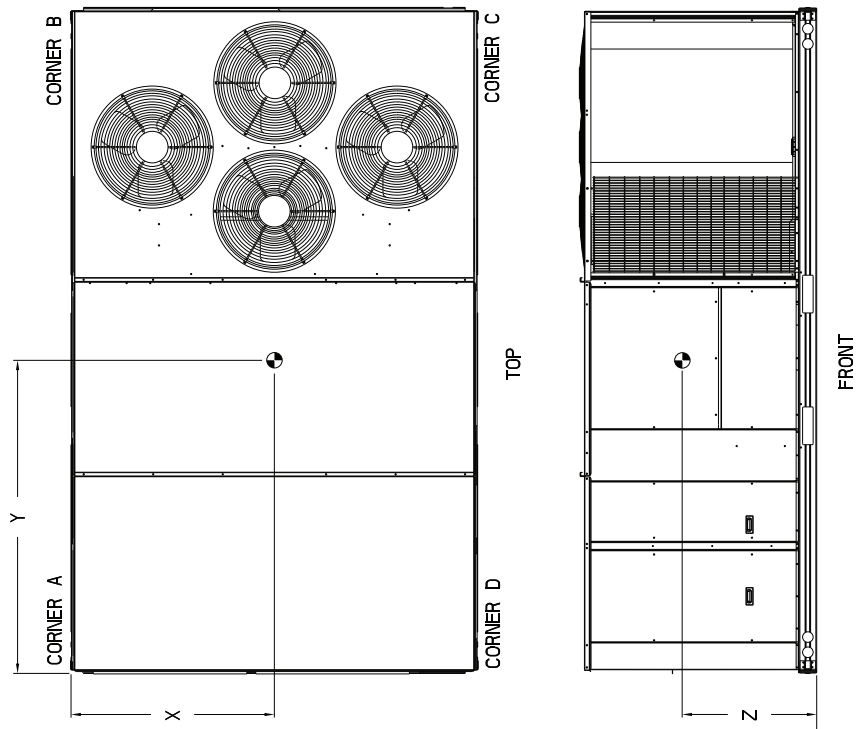
**50TC--D**

# CERTIFIED DIMENSION 50TC-D24, 28

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UNIT	CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.					
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z			
50TC24	1973	897	532	242	522	237	456	207	464	211	40	5/32 [1020]	70 [1778]	16 1/2 [419]
50TC28	2088	954	545	248	539	245	504	229	510	232	41	21/32 [1058]	70 1/4 [1784]	19 [483]

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



SHEET	DATE	SUPERCHG	50TC 24-28 50HZ SINGLE ZONE ELECTRICAL	REV
2 OF 2	06/22/11	-	COOLING WITH ELECTRIC HEAT	-
			50HE502890	

C11333

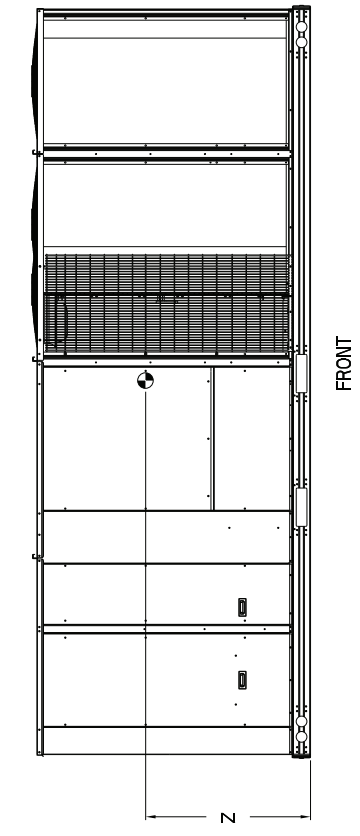
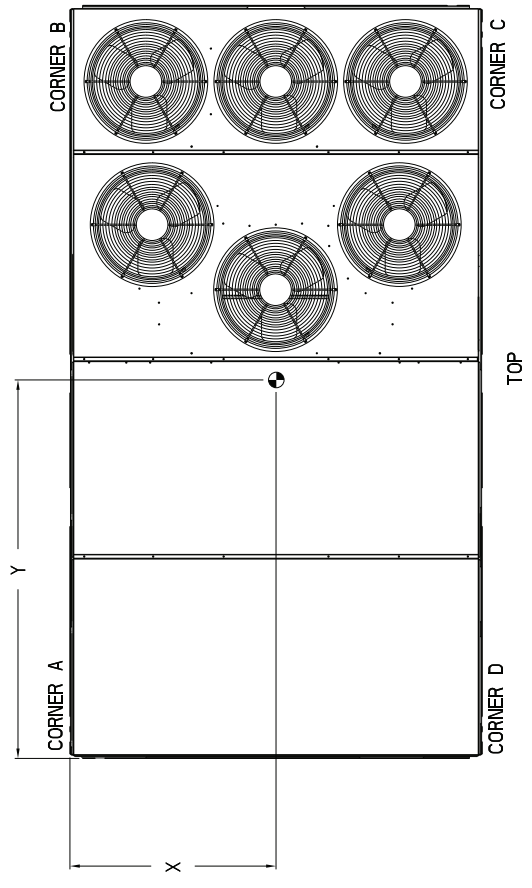


**CERTIFIED DIMENSION 50TC-D30**

UNIT	CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.				
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z		
50TC30	2513	1142	664	302	566	257	591	269	693	315	44 (1118)	72 1/2 (1842)	19 (483)

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

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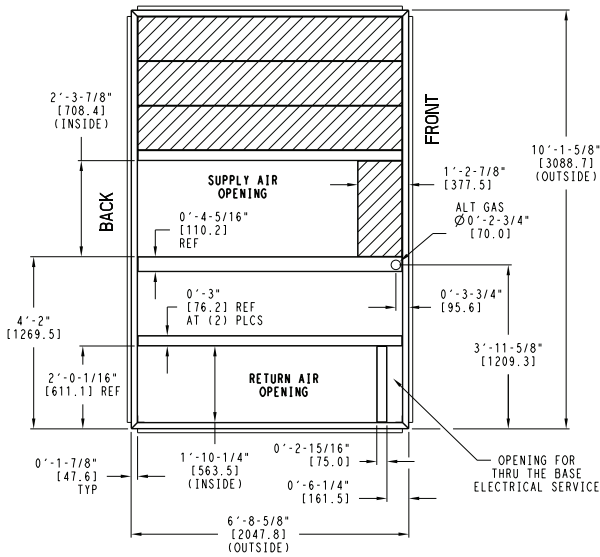


SHEET 2 OF 2	DATE 05/19/11	SUPERCEDES 08/24/10	50TC 30 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	50HE502175	REV A
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C11246

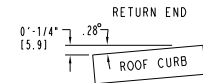
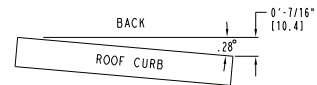
# ROOF CURB DETAILS - 17 & 20 SIZE UNITS

UNIT SIZE	"A"	ROOF CURB ACCESSORY
17,20	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB045A00 CRRFCURB046A00

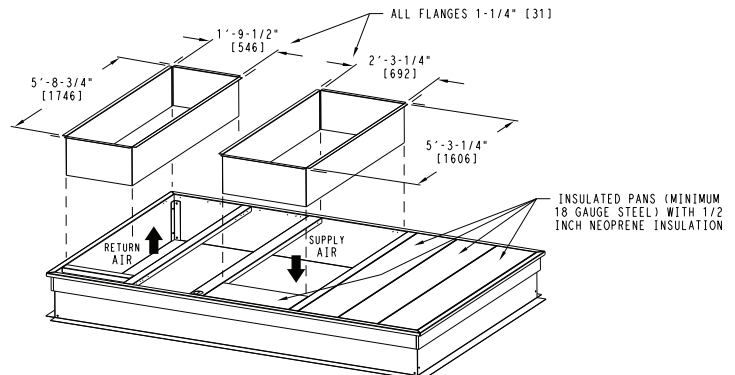
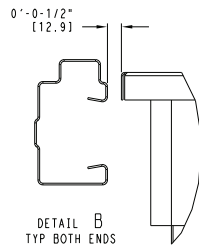
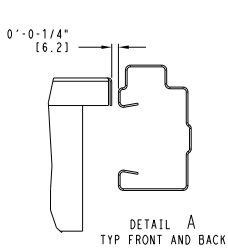
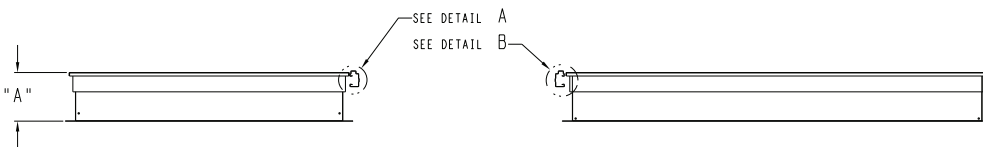
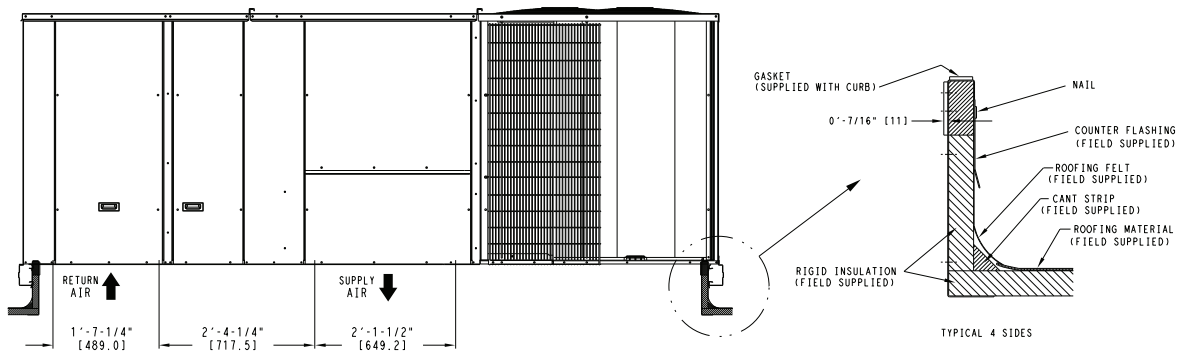


- NOTES:
- 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
  - 2 DIMENSIONS IN [ ] ARE IN MILLIMETERS.
  - 3 ROOF CURB GALVANIZED STEEL.
  - 4 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
  - 5 SERVICE CLEARANCE 4 FT ON EACH SIDE

➔ DIRECTION OF AIR FLOW



MAX CURB LEVELING TOLERANCES

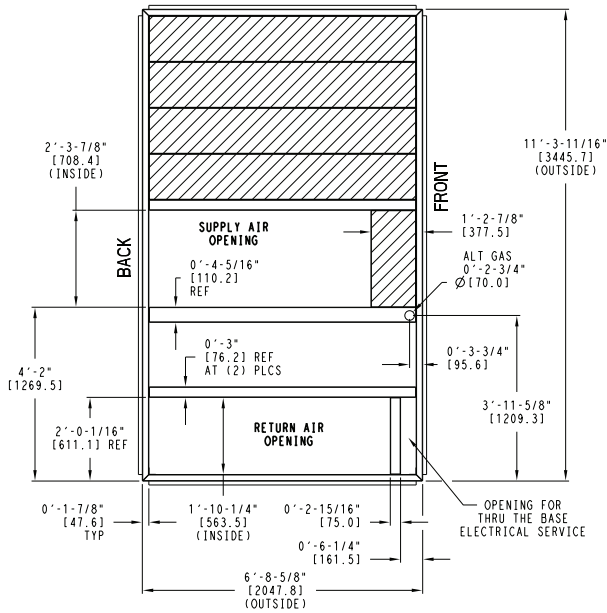


50TC-D

# ROOF CURB DETAILS - 24 & 28 SIZE UNITS

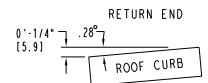
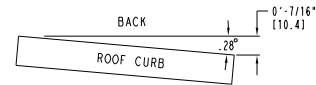
UNIT SIZE	"A"	ROOF CURB ACCESSORY
24, 28	1'-2" [356.0]	CRRFCURB047A00
	2'-0" [610.0]	CRRFCURB048A00

**50TC-D**

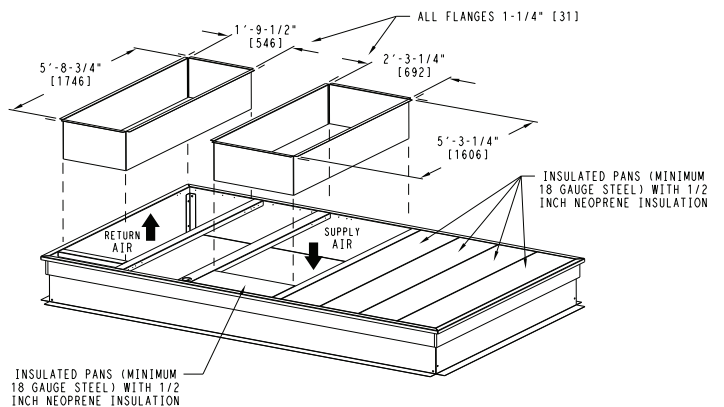
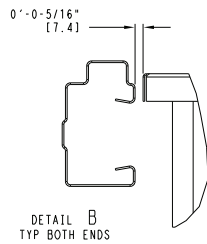
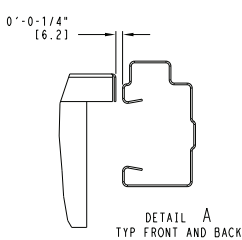
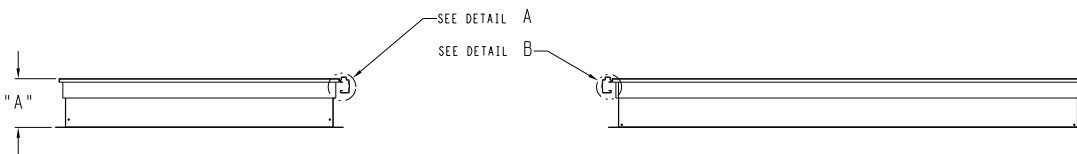
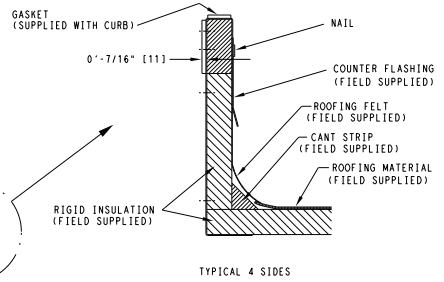
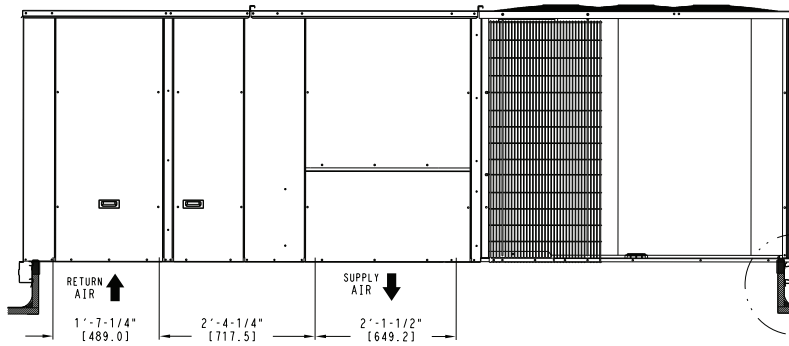


- NOTES:
- 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
  - 2 DIMENSIONS IN [ ] ARE IN MILLIMETERS.
  - 3 ROOF CURB GALVANIZED STEEL.
  - 4 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
  - 5 SERVICE CLEARANCE 4 FT ON EACH SIDE

➔ DIRECTION OF AIR FLOW



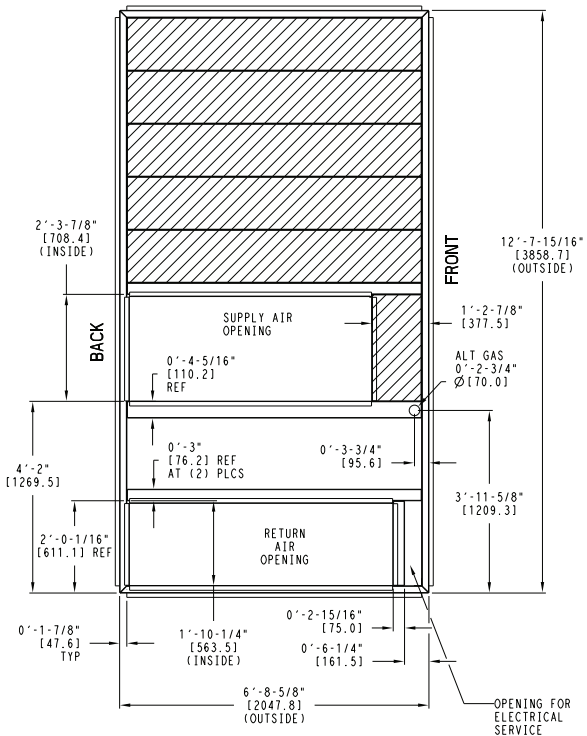
MAX CURB LEVELING TOLERANCES



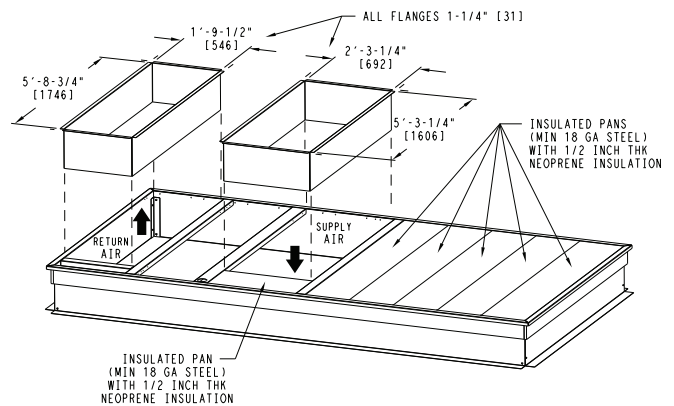
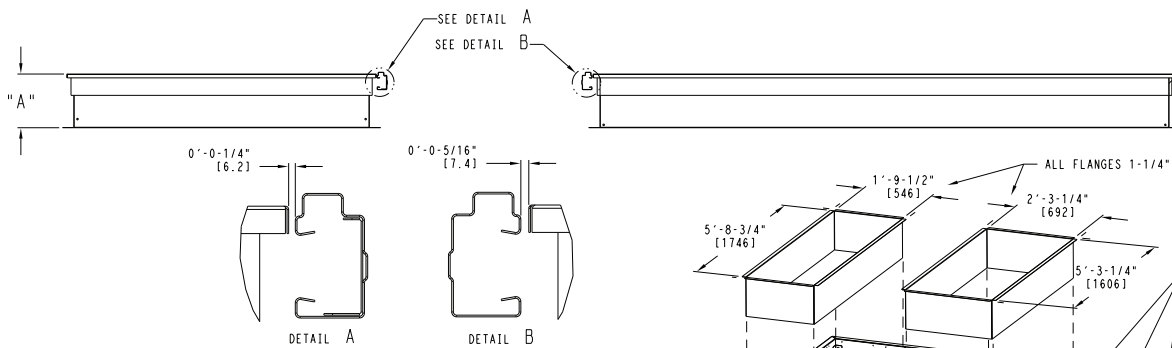
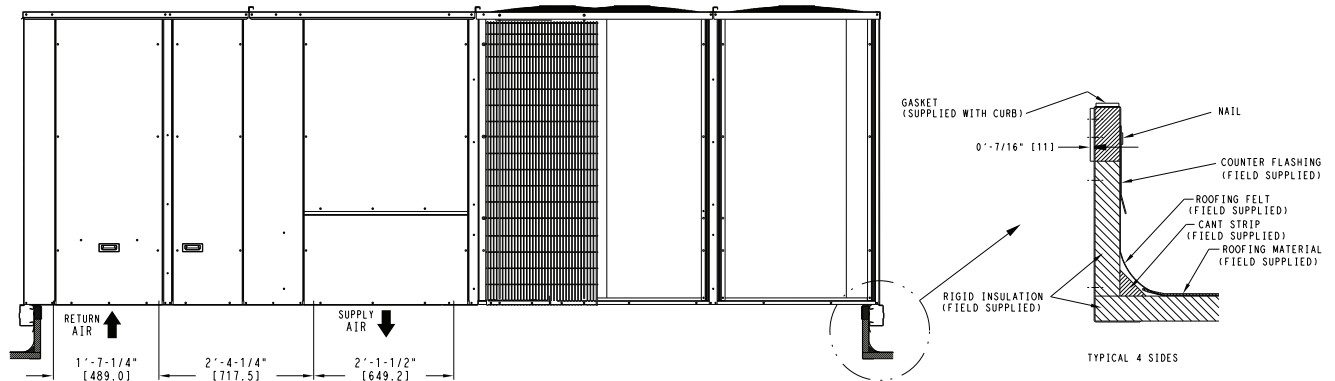
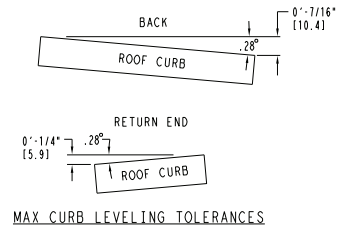
C09140A

# ROOF CURB DETAILS - 30 SIZE UNIT

UNIT SIZE	"A"	ROOF CURB ACCESSORY
30	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB049A00 CRRFCURB050A00



- NOTES:  
 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.  
 2 BOLT HEADS TO BE ON INSIDE OF FLANGE. CLEARANCE IS [11] 0-0-7/16" TYP ALL CORNERS.  
 3 DIMENSIONS IN [ ] ARE IN MILLIMETERS.  
 4 ROOF CURB GALVANIZED STEEL.  
 5 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)  
 6 SERVICE CLEARANCE 4 FT ON EACH SIDE  
 → DIRECTION OF AIR FLOW



50TC-D

