

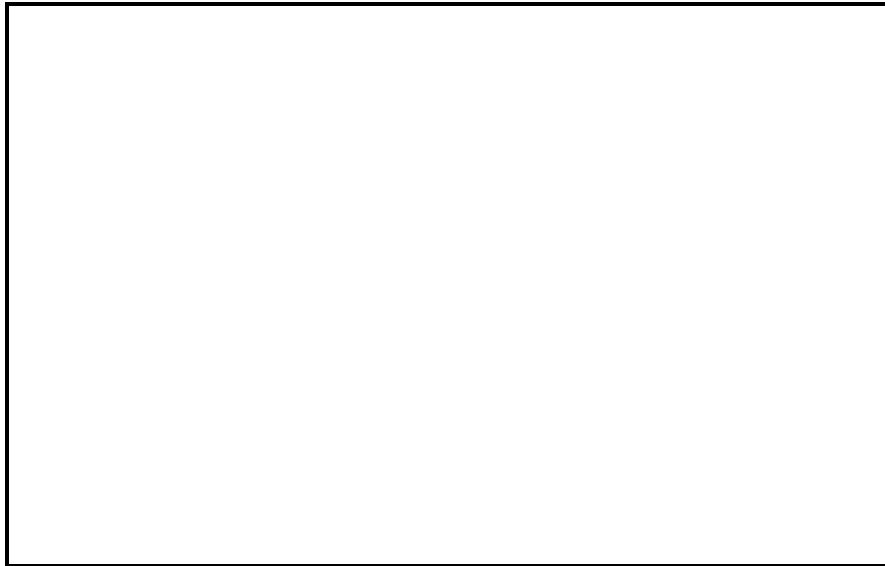
## 50TC

50Hz Single Package Rooftop, Cooling Only  
with Puron® (R-410A) Refrigerant  
One Stage Cooling Capacity Control: Size 07  
Two Stage Cooling Capacity Control: Sizes 08, 09 & 12



# 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 9001:2000



## DESCRIPTION

50TC units are high-efficiency, single-package electric cooling only units that are pre-wired and pre-charged with environmentally sound Puron® (R-410A) HFC refrigerant. These units are available with Round Tube/Plate Fin (RTPF) condenser coil. Size 08, 09 & 12 units provide two-stage cooling capacity. Electric heat is available as a field-installed accessory. The units are factory tested in the cooling mode. These units meet the ASHRAE 90.1-2007.

50TC

## STANDARD FEATURES

### Base Unit

- Puron (R-410A) HFC refrigerant
- ARI certified efficiency levels up to 12.3 EER
- Rated in accordance with ARI Standard 360
- Designed in accordance with Underwriters' Laboratories Std 1995 and listed by UL and UL, Canada
- One-stage cooling capacity control (size: 07)
- Two-stage cooling capacity control (sizes: 08, 09 & 12)
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Standard cooling operating range from 40°F up to 125°F (4°C up to 52°C). Field installable accessory extends the minimum down to -20°F (-29°C).
- Convertible from vertical to horizontal airflow for slab mounting
- Two-inch disposable return air filters
- Thru-the-bottom power entry capability
- 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
- Low-pressure and high-pressure switches
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- Centralized Terminal Board for component and unit wiring connections

### Cabinet

- Access panels with easy grip handles and NO-STRIP screw collar
- 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
- Round Copper Tube/Aluminum Plate Fin (RTPF) condenser coil
- Round Copper Tube/Aluminum Plate Fin (RTPF) evaporator coil
- Removable gauge line plugs for reading refrigerant pressure with unit panels in place

### Standard Parts Warranty

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

## PERFORMANCE DATA

Unit Operating Weight \_\_\_\_\_ lb

Curb Weight \_\_\_\_\_ lb

### **Cooling**

Gross Total Capacity: \_\_\_\_\_ Btuh  
at Condenser Air Temperature \_\_\_\_\_ °F

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

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

Indoor Entering db \_\_\_\_\_ °F wb \_\_\_\_\_ °F

Airflow \_\_\_\_\_ External Static Pressure \_\_\_\_\_ in.wg

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

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

### **Heating**

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)

- Open protocol RTU-MP 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
- Non-fused disconnect
- High static evaporator fan motor
- Return Air smoke detector
- Supply Air smoke detector
- CO<sub>2</sub> sensor
- Condenser hail guard - louvered style

### 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™ 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
- 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 connections-electrical
- Condenser hail guard - louvered style
- Phase monitor (loss of phase/phase reversal)
- Winter start kit, down to 25°F (-4°C)
- Low ambient head pressure controller, down to 0°F (-18°C)
- Low ambient head pressure controller, down to -20°F (-29°C)
- Time Guard II compressor anti-cycle protection

### Economizer Sensors

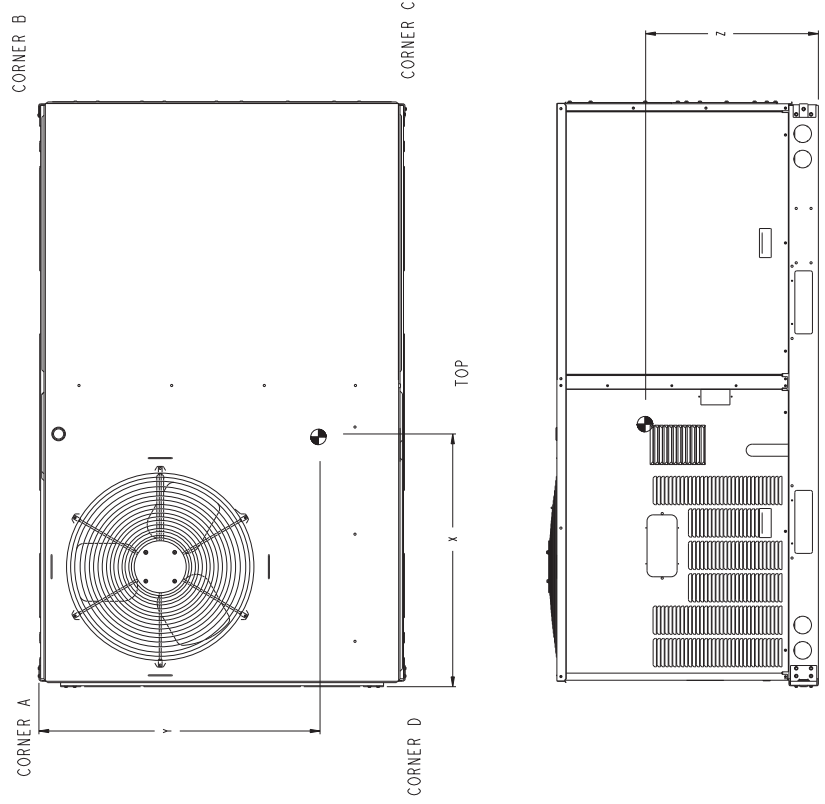
- Single Dry bulb control
- Differential Dry bulb control
- Single enthalpy control
- Differential enthalpy control
- CO<sub>2</sub> - wall mounted
- CO<sub>2</sub> - duct mounted
- CO<sub>2</sub> - unit mounted



# CERTIFIED DIMENSION 50TC\*\*07


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UNIT	STD. UNIT		CORNER		CORNER		CORNER		CORNER		C. G.		HEIGHT
	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	
50TC-A04	438	199	108	49	115	52	110	50	104	47	38 (965)	22 (559)	17 1/4 (438)
50TC-A05	494	224	122	53	130	59	117	53	111	53	38 (965)	22 (559)	17 1/2 (445)
50TC-A06	524	238	130	59	138	63	132	60	124	56	38 (965)	22 (559)	17 3/4 (451)
50TC-A07	607	275	150	68	160	73	153	69	144	65	38 (965)	22 (559)	20 3/4 (527)



SHEET	DATE	SUPERCEDES	REV
2 OF 2	11-24-08	09-29-08	5.0

50TC-04-07 SINGLE ZONE ELECTRICAL  
 COOLING WITH ELECTRIC HEAT  
 48TM500994

# CERTIFIED DIMENSION 50TC\*\*08, 09 & 12

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TECHNOLOGIES SYRACUSE, NY 13221 CARRIER

UNIT	J	K	H
50TC-A08	41-1/4 (1046)	33 (658)	15-7/8 (403)
50TC-A09	49-3/8 (1253)	37-1/4 (946)	23-7/8 (609)
50TC-A12	49-3/8 (1253)	37-1/4 (946)	15-7/8 (403)
50TC-D08	41-1/4 (1046)	33 (658)	15-7/8 (403)
50TC-D12	49-3/8 (1253)	37-1/4 (946)	15-7/8 (403)

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

\* - FOR TWO STAGE COOLING MODELS WITH NOVATION CONDENSER COILS.

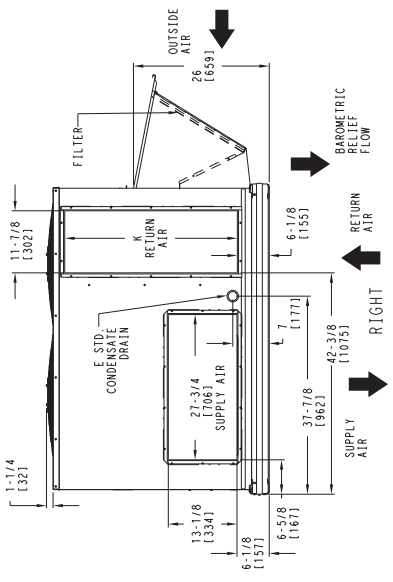
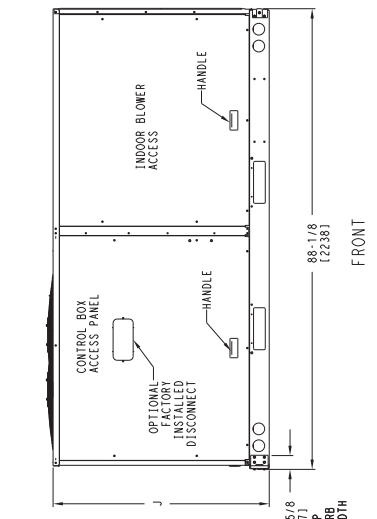
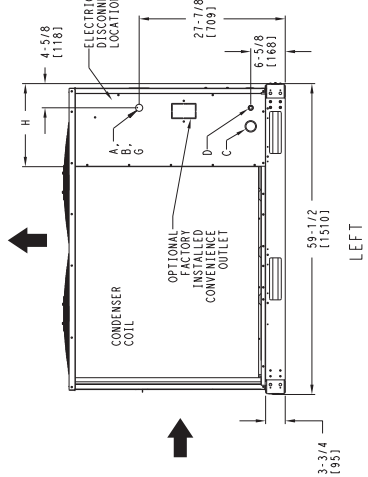
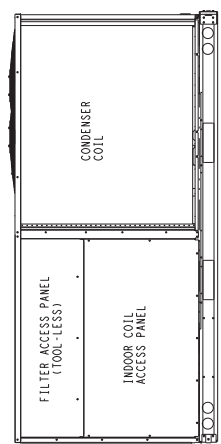
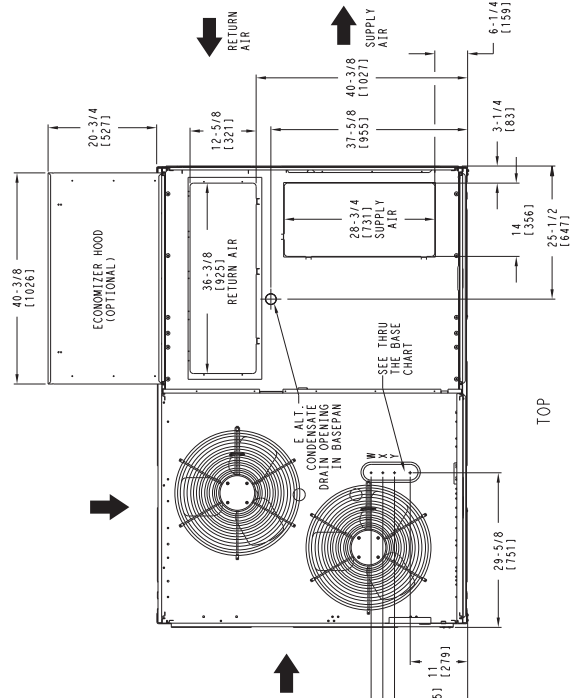
CONNECTION SIZES

	A	B	C	D	E	G
1	3/8" (32)	1/2" (41)	5/8" (64)	3/4" (76)	1" (102)	1 1/4" (127)
2	1/2" (41)	5/8" (64)	3/4" (76)	1" (102)	1 1/4" (127)	1 3/4" (152)
3	5/8" (64)	3/4" (76)	1" (102)	1 1/4" (127)	1 3/4" (152)	2" (51)
4	3/4" (76)	1" (102)	1 1/4" (127)	1 3/4" (152)	2" (51)	2 1/2" (64)
5	1" (102)	1 1/4" (127)	1 3/4" (152)	2" (51)	2 1/2" (64)	3" (76)
6	1 1/4" (127)	1 3/4" (152)	2" (51)	2 1/2" (64)	3" (76)	3 1/2" (89)
7	1 3/4" (152)	2" (51)	2 1/2" (64)	3" (76)	3 1/2" (89)	4" (102)

THRU-THE-BASE CHART  
THESE HOLES REQUIRED FOR USE  
CRBTMPR02A01

	THREADED CONDUIT SIZE	WIRE SIZE (MAX.)	REQ'D HOLE SIZE (MAX.)
W	1/2"	14	7/8" (22.2)
X	1/2"	24	7/8" (22.2)
Y	1 1/4" (002)	POWER 1 3/4" (44.4)	

FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X & Y ARE PROVIDED.



SHEET	DATE	SUPERCEDES	50TC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	REV
1 OF 2	11-24-08	09-29-08	48TM500986	5.0

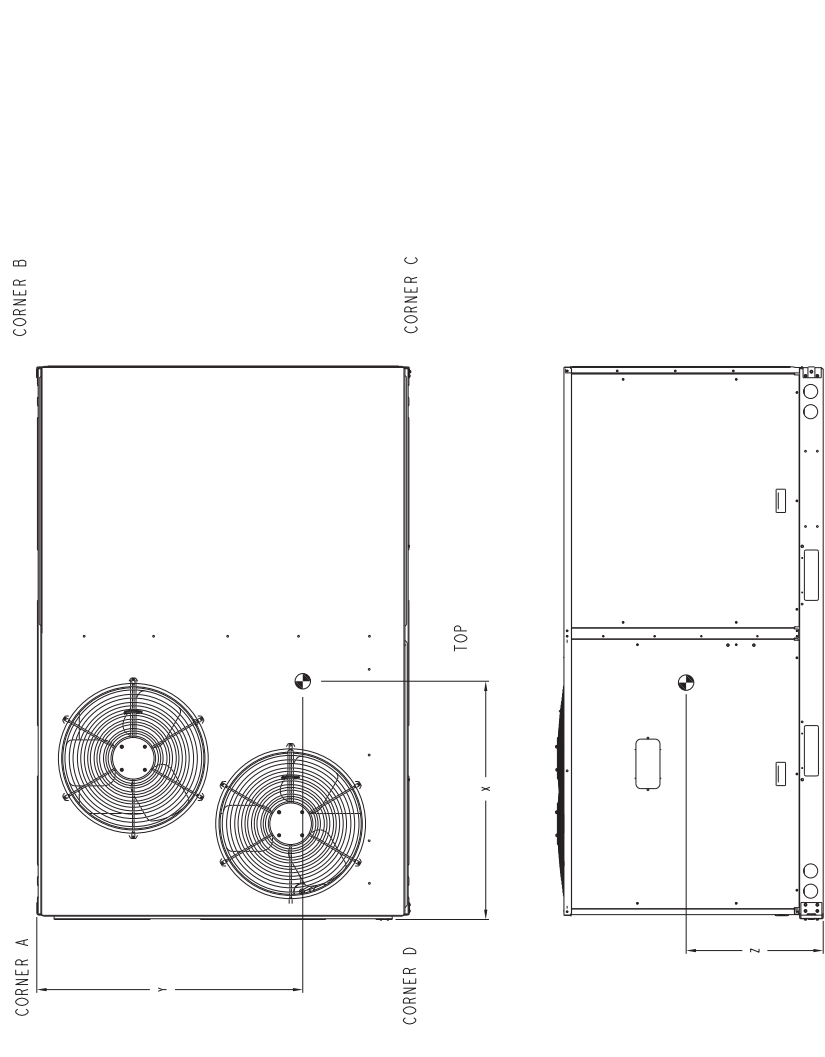
C09650

50TC

# CERTIFIED DIMENSION 50TC\*\*08, 09 & 12

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UNIT	STD. UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C. G.		
	LIBS.	KG.	LIBS.	KG.	LIBS.	KG.	LIBS.	KG.	LIBS.	KG.	X	Y	Z
50TC-08	370	332	167	76	146	66	195	89	222	101	39 7/8 [1013]	33 [838]	21 1/4 [540]
50TC-09	830	377	189	86	163	74	221	100	257	117	39 1/2 [1003]	33 1/4 [845]	24 [610]
50TC-12	885	402	203	92	186	85	237	106	259	118	40 3/4 [1035]	32 3/8 [822]	25 1/4 [641]
50TC-088	780	354	147	66.6	130	59.1	234	106	265	120	41 [1041]	37 1/8 [942]	21 [534]
50TC-012	850	385	192	87.1	170	77.2	229	104	258	117	40 1/8 [1019]	33 1/8 [841]	21 1/8 [535]



SHEET 2 OF 2	DATE 11-24-08	SUPERCEDES 09-29-08	50TC-08-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48TM500986	REV 5.0
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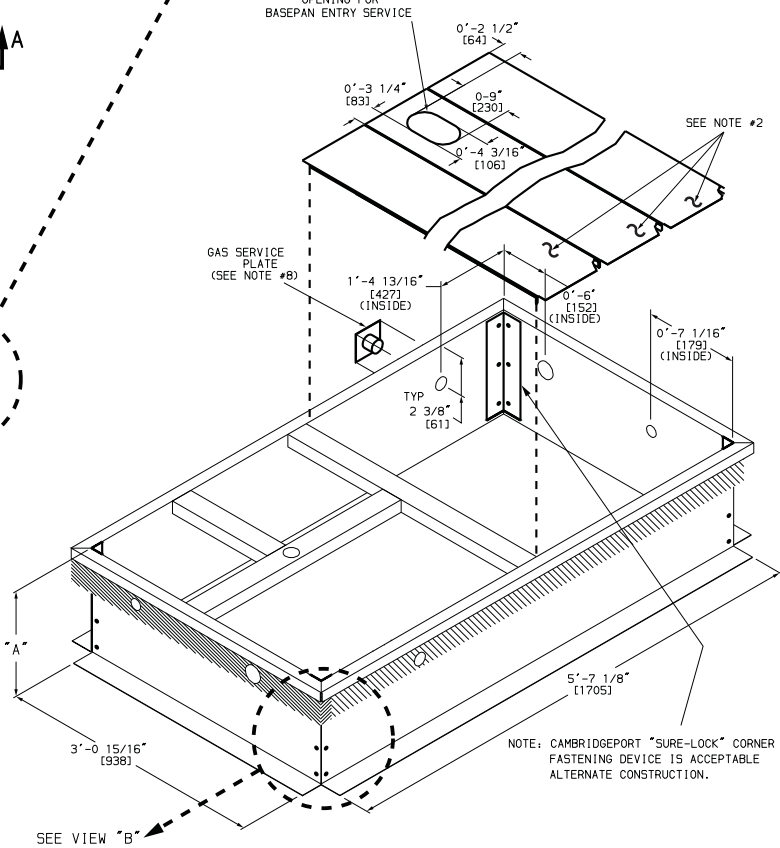
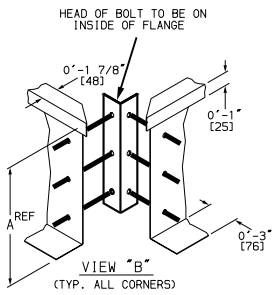
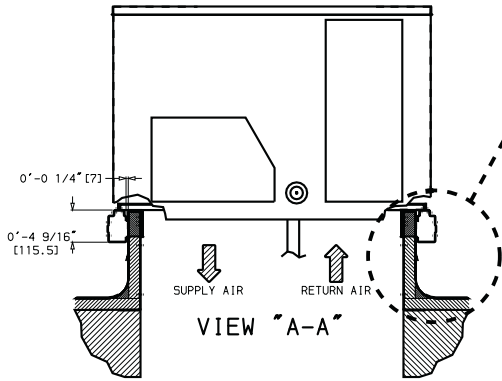
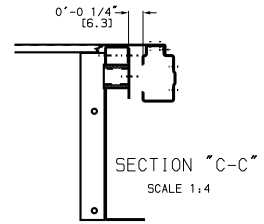
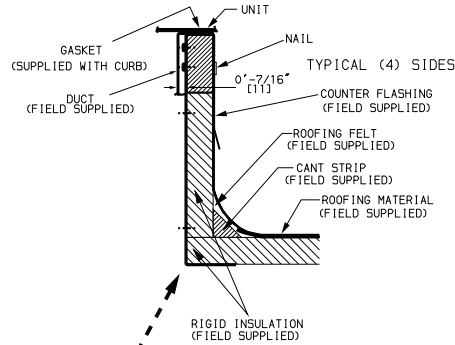
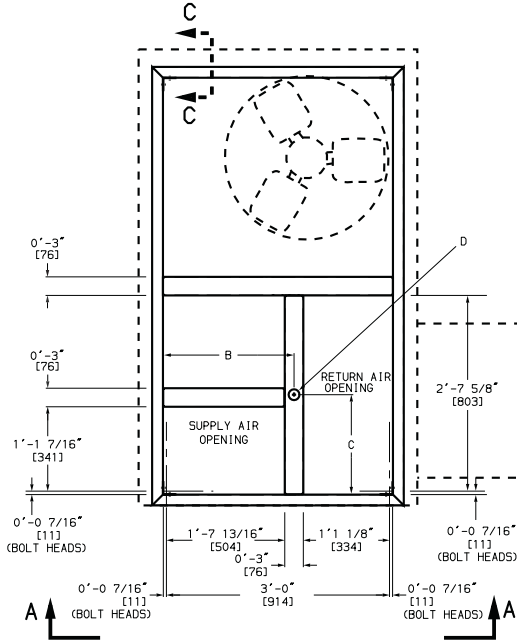
# ROOF CURB DETAILS

CONNECTOR PKG. ACCY.	B	C	D ALT DRAIN HOLE	POWER	CONTROL	ACCESSORY POWER
CRBTMPWR003A01	1'-9 11/16" [551]	1'-4" [406]	1 3/4" [44.5]	3/4" [19] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRBTMPWR004A01				1 1/4" [31.7]		

ROOFCURB ACCESSORY	A	UNIT SIZE
CRRFCURB001A01	1'-2" [356]	50TC A04-A07
CRRFCURB002A01	2'-0" [610]	

**NOTES:**


1. Roof curb accessory is shipped disassembled.
2. Insulated panels.
3. Dimensions in [ ] are in millimeters.
4. Roof curb: galvanized steel.
5. Attach ductwork to curb (flanges of duct rest on curb).
6. Service clearance: 4 ft on each side.
7.  Direction of airflow.



C07523

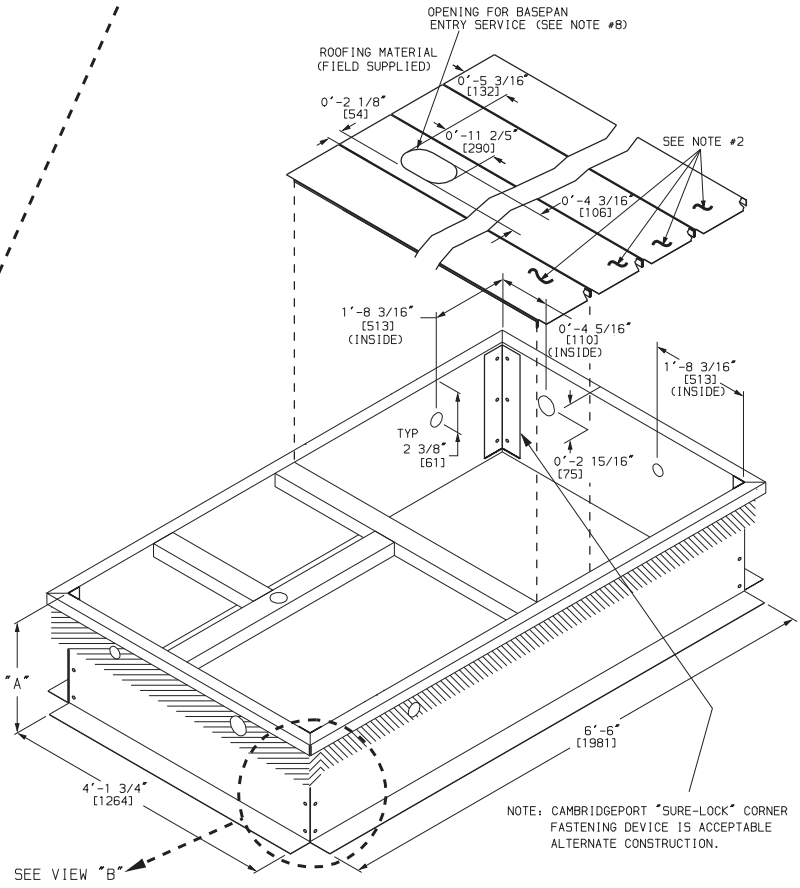
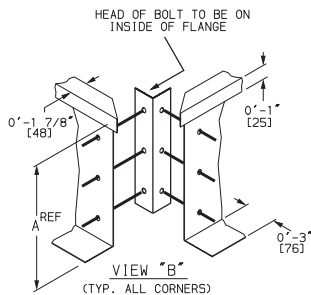
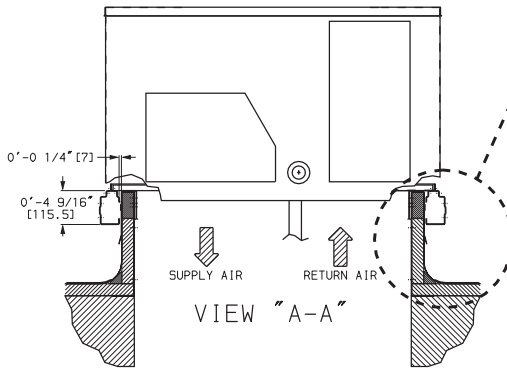
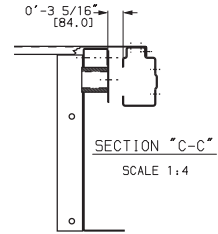
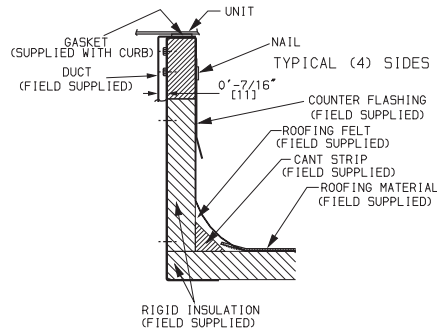
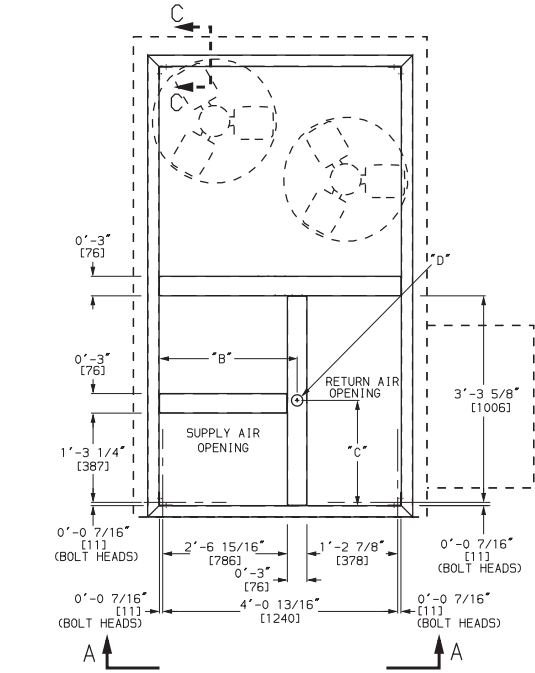
ROOFCURB ACCESSORY	A	UNIT SIZE
CRRFCURB003A01	1'-2" (356)	50T**08 - 14
CRRFCURB004A01	2'-0" (610)	

NOTES:

1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS: 1" THK. POLYURETHANE FOAM, 1-3/4 # DENSITY.
3. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
4. ROOFCURB: 16 GAGE STEEL.
5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB)
6. SERVICE CLEARANCE 4' ON EACH SIDE.
7.  DIRECTION OF AIR FLOW.

CONNECTOR PKG. ACC.	B	C	D ALT DRAIN HOLE	POWER	CONTROL	ACCESSORY PWR
CRBTMPWR001A01 CRBTMPWR002A01	2'-8 7/16" [827]	1'-10 15/16" [583]	1 3/4" [44.5]	3/4" [19]NPT 1 1/4" [31.7]	1/2" [12.7]NPT	1/2" [12.7]NPT
CRBTMPWR003A01				3/4" [19]NPT		
CRBTMPWR004A01				1 1/4" [31.7]		

50TC



NOTE: CAMBRIDGEPORT "SURE-LOCK" CORNER FASTENING DEVICE IS ACCEPTABLE ALTERNATE CONSTRUCTION.



