

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 & 14

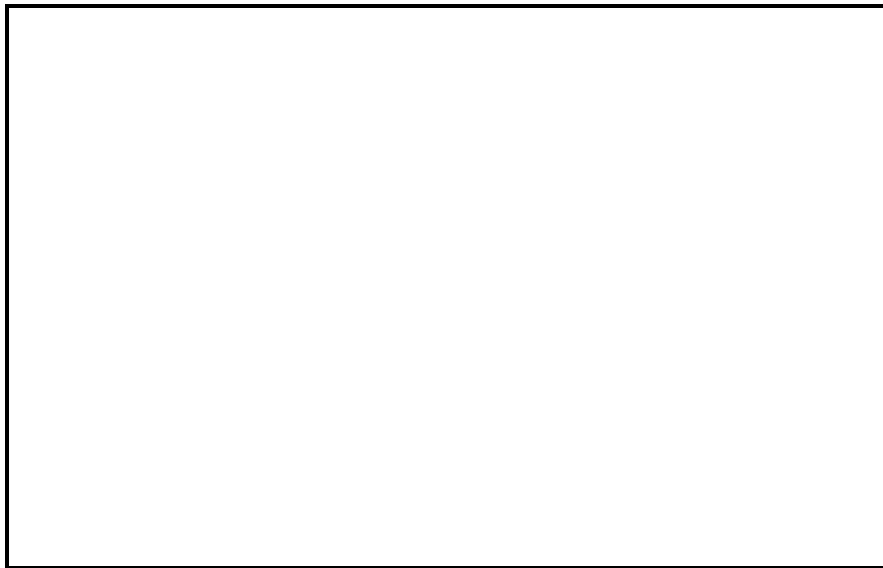


turn to the experts



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 9001:2008

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 and 14 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
- AHRI certified efficiency levels up to 12.3 EER
- Tested in accordance with AHRI 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 & 14)
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Standard cooling operating range from 4°C up to 52°C (40°F up to 125°F). Field installable accessory extends the minimum down to -29°C (-20°F).
- 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

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 _____ External Static Pressure _____ Pa

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

50TC

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
- CO₂ sensor
- Condenser hail guard - louvered style

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 - 356mm (14 inch) tall
- Roofcurb - 610mm (24 inch) tall
- Thru-the-bottom connections-electrical
- 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 -18°C (0°F)
- Low ambient head pressure controller, down to -29°C (-20°F)
- Time Guard II compressor anti-cycle protection

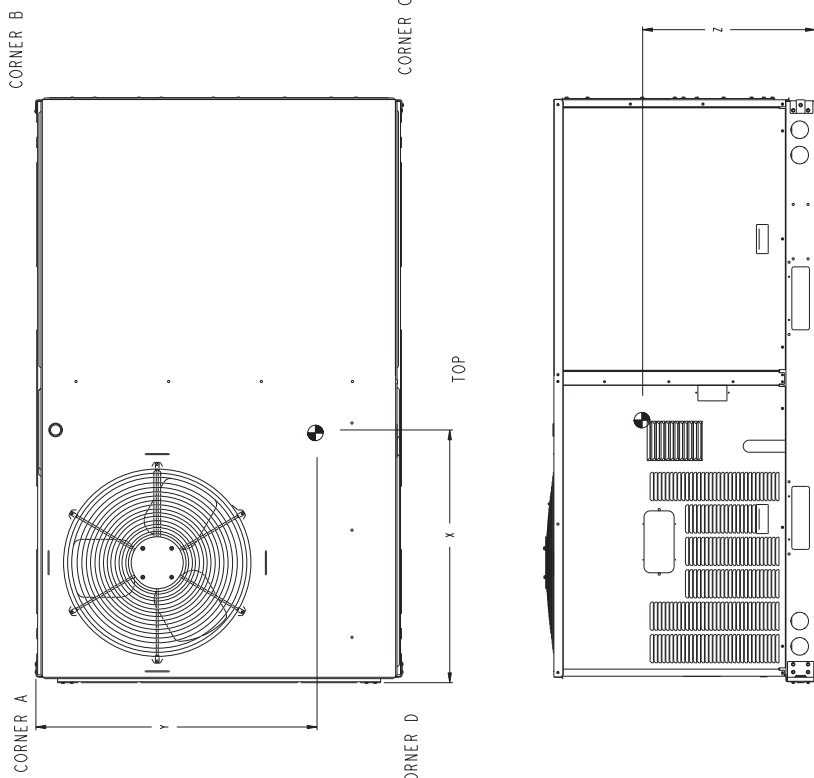
Economizer Sensors

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

CERTIFIED DIMENSION 50TC**07


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UNIT	STD. UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C. G.			HEIGHT			
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z				
50TC-A04	438	198	108	49	115	52	110	50	104	47	38	(965)	22	(559)	17	1/4	(438)
50TC-A05	494	224	122	55	130	59	117	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 2 OF 2	DATE 11-24-08	SUPERCEDES 09-29-08	50TC-04-07 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48TM500994	REV 5.0
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CERTIFIED DIMENSION 50TC**08, 09 & 12

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UNIT	J	K	H
50TC-A08	41 1/4 (1046)	33 (658)	15 7/8 (403)
50TC-A09	49 3/8 (1253)	36 3/8 (925)	23 7/8 (609)
50TC-A12	49 3/8 (1253)	36 3/8 (925)	15 7/8 (403)
50TC-D08	41 1/4 (1046)	33 (658)	15 7/8 (403)
50TC-D12	49 3/8 (1253)	36 3/8 (925)	15 7/8 (403)

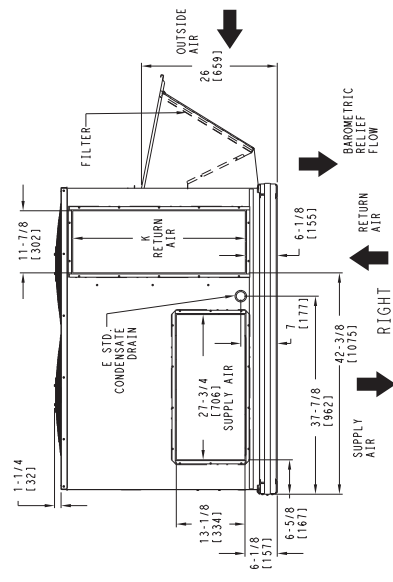
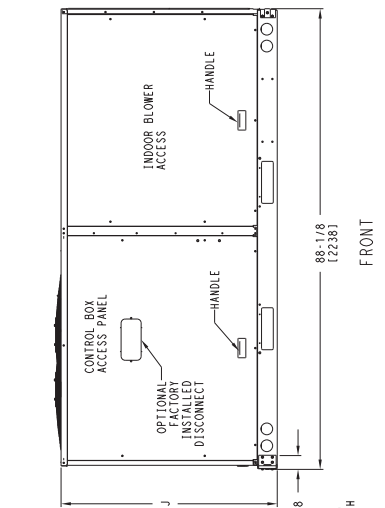
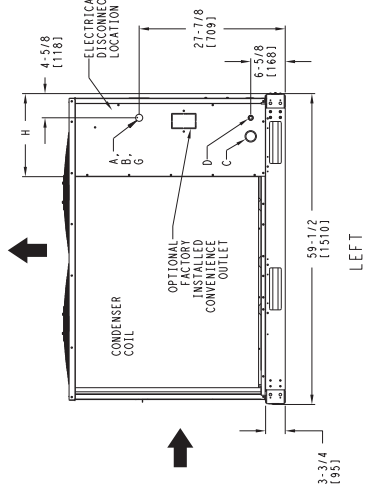
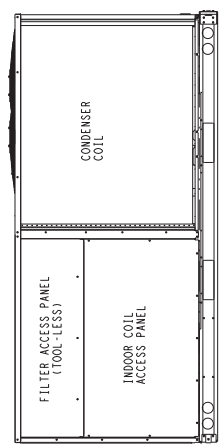
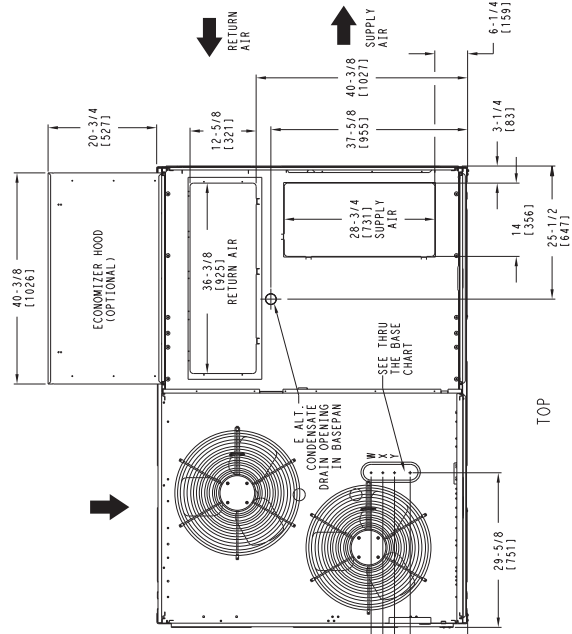
- NOTES:
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
 2. CENTER OF GRAVITY
 3. DIRECTION OF AIR FLOW

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

CONNECTION SIZES	
A	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
G	2" (51) DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPR02A01	
THREADED CONDUIT SIZE	REQ'D HOLE WIRE USE SIZES (MAX.)
W 1/2"	ACC. 7/8" (22.2)
X 1/2"	ACC. 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	REV
1 OF 2	11-24-08	09-29-08	5.0

50TC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT

48TM500986

C09650

50TC

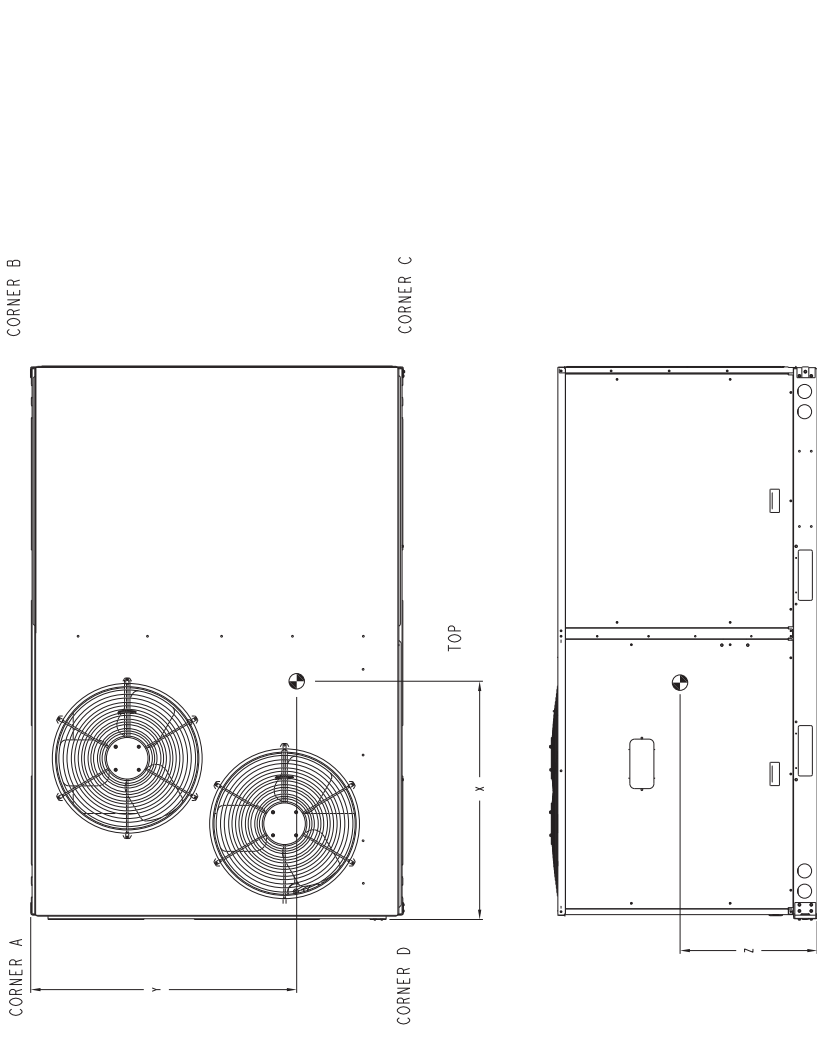
CERTIFIED DIMENSION 50TC**08, 09 & 12

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UNIT	STD. UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C. G.			
	KG.	LB.	KG.	LB.	KG.	LB.	KG.	LB.	KG.	LB.	X	Y	Z	
50TC-08	730	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	108	259	118	40 3/4 (1035)	32 3/8 (822)	25 1/4 (641)	
50TC-08	780	354	147	66.8	130	59.1	234	106	265	120	41 (1041)	37 1/8 (942)	21 (534)	
50TC-09	850	385	192	87.1	170	77.2	229	104	258	117	40 1/8 (1019)	33 1/8 (841)	21 1/8 (535)	



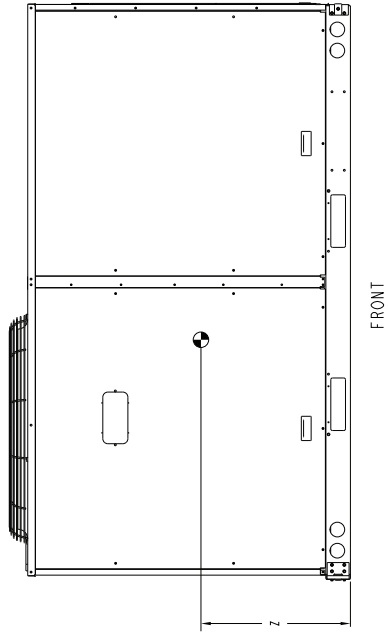
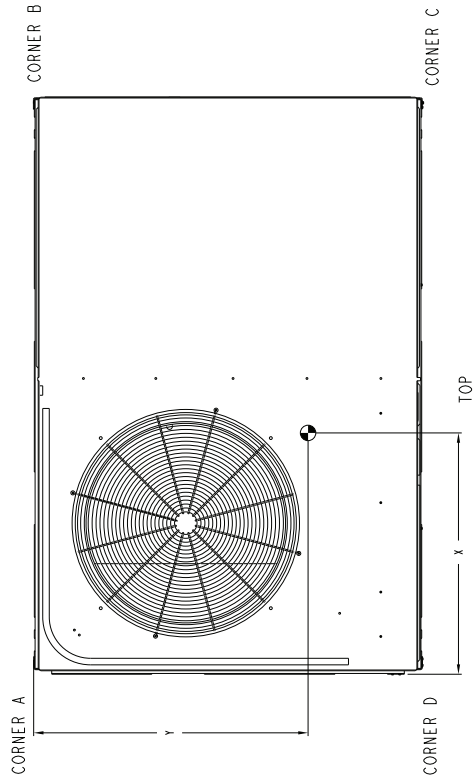
SHEET 2 OF 2	DATE 11-24-08	SUPERSEDES 09-29-08	50TC-08-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48TM500986	REV 5.0
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CERTIFIED DIMENSION 50TC**14

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UNIT	STD. 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.	LBS.	KG.	LBS.	KG.	X	Y		Z	
50TC-014	1030	467	214	133	146	66	197	89	46	179	28	3/8	[172]	33	1/8	[841]	21	3/8	[543]	7



SHEET	DATE	SUPERCODES	REV
2 OF 2	11-24-08	10-07-08	5.0

50TC 14 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT

48TM501442


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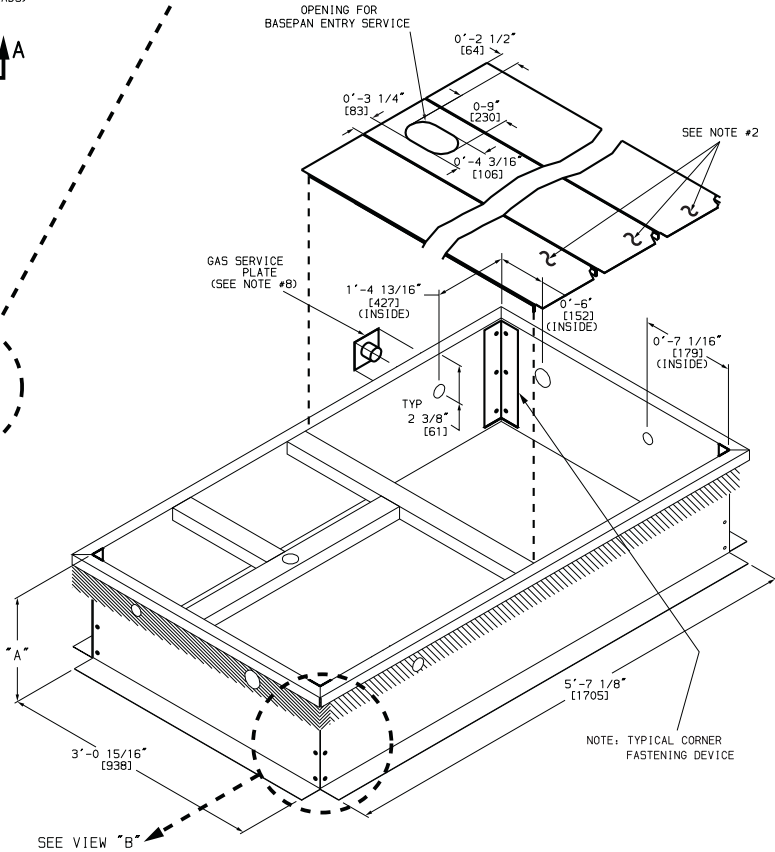
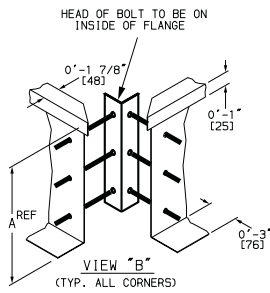
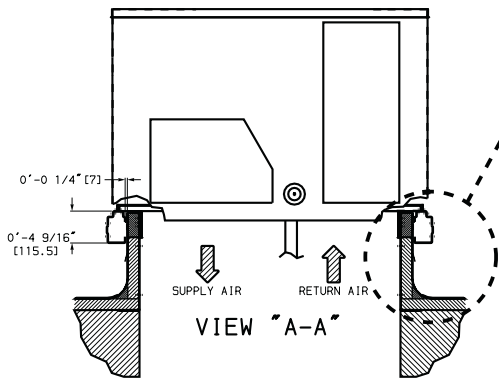
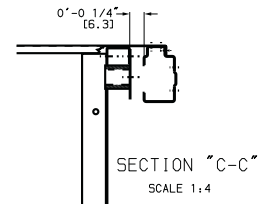
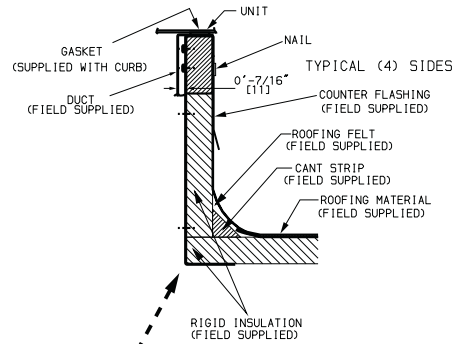
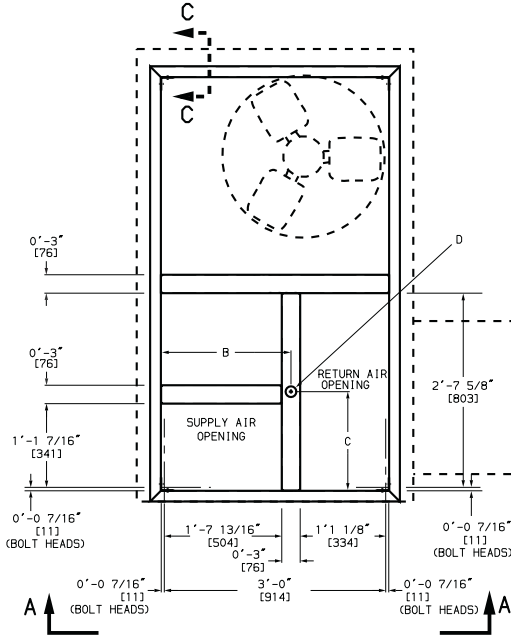
ROOF CURB DETAILS

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
CRRFCURB002A01	2'-0" [610]	A04-A07

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.




50TC

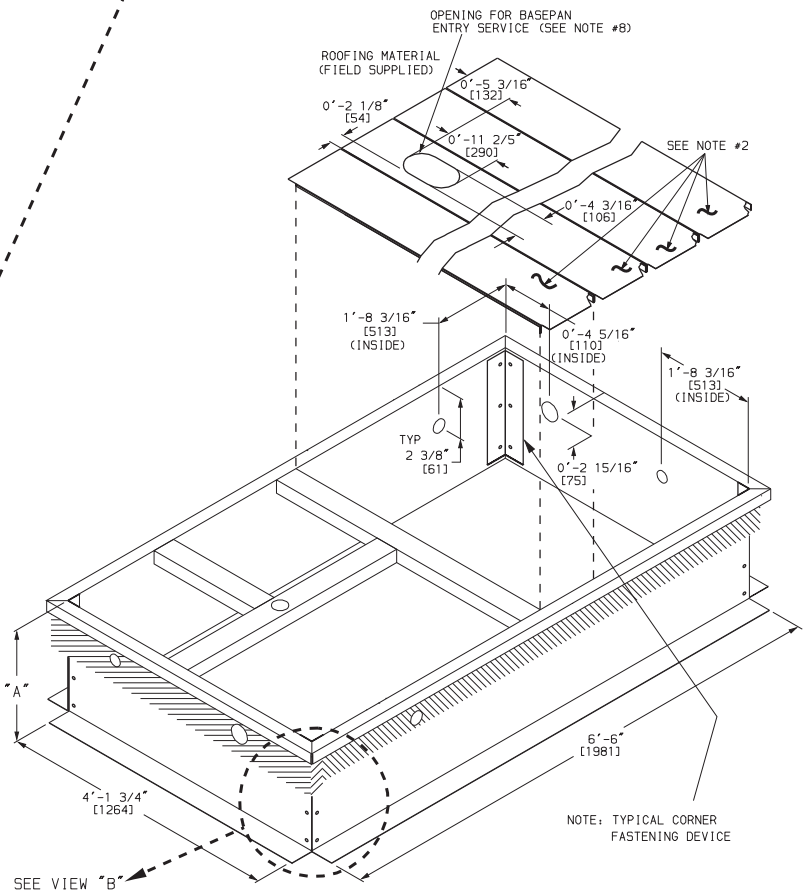
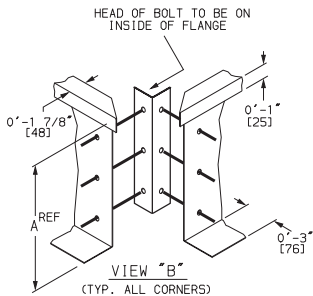
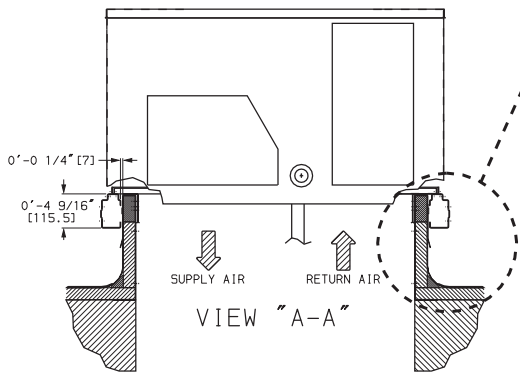
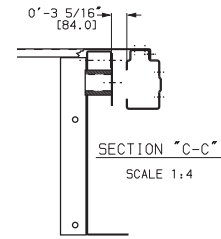
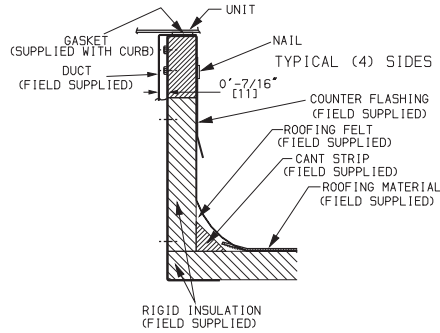
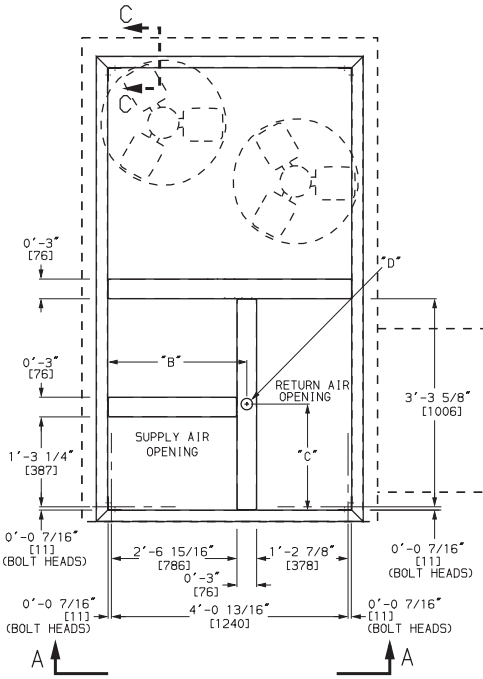
ROOF CURB DETAILS

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