

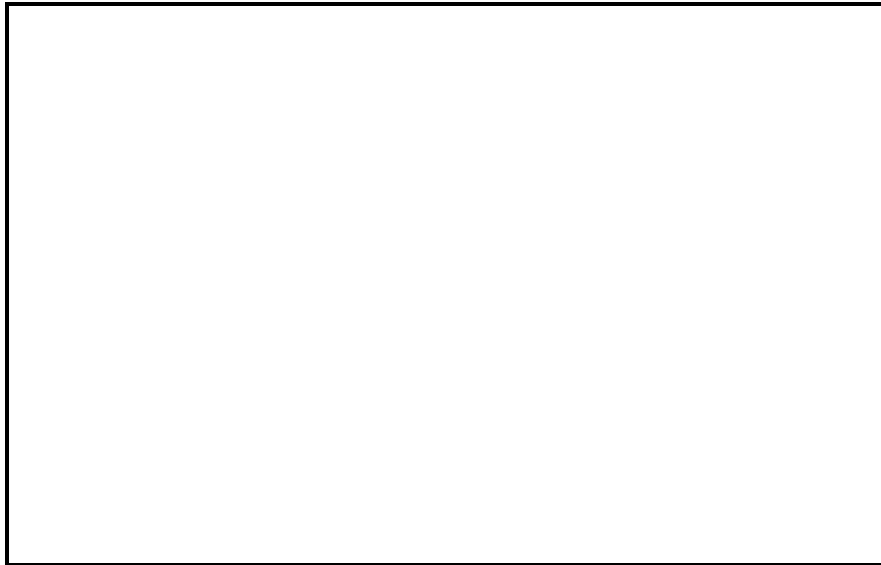
48TC

Single Package Rooftop, Gas Heating/Electric Cooling Unit
with Puron® (R-410A) Refrigerant
One Stage Cooling Capacity Control: Sizes 08–12
Two Stage Cooling Capacity Control: Sizes 08–16



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.



DESCRIPTION

48TC units are high-efficiency, single-package electric cooling, gas heating units that are pre-wired and pre-charged with Puron® (R-410A) HFC refrigerant. Single-stage cooling capacity control is available on sizes 08–12, while two-stage cooling capacity control is available on sizes 08–16. The units are factory tested in both heating and cooling modes.

STANDARD FEATURES

Base Unit

- Puron (R-410A) HFC refrigerant
- EER's up to 11.1
- IEER's up to 11.7
- ASHRAE 90.1 compliant
- Rated in accordance with AHRI Standard 340/360
- Designed in accordance with Underwriters' Laboratories Std 1995 and listed by UL and UL, Canada
- One-stage cooling capacity control (sizes: 08 to 12)
- Two-stage cooling capacity control (sizes: 08 to 16)
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Standard cooling operating range from 40°F up to 115°F (4°C up to 46°C). Field installable accessory extends the minimum down to -20°F (-29°C).
- Field convertible from vertical to horizontal airflow for slab mounting (sizes: 08 to 16)
- Two-inch disposable return air filters
- Thru-the-bottom power and gas entry capability
- Single point gas and 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
- Central 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
- Copper tube, aluminum fin evaporator coil
- Removable gauge line plugs for reading refrigerant pressure with unit panels in place

Gas Heat

- IGC solid-state gas heat exchanger control for on-board diagnostics, anti-cycle protection, LED error code designation, burner control logic and energy saving indoor fan motor delay
- Gas efficiencies up to 82%
- Designed in accordance with ANSI Z21.47 (design and test standard for gas furnaces) and ANSI Z233.1 (National Fuel Gas code relating to appliance installation requirements)
- Induced draft combustion
- Redundant gas valve, with up to 2 stages of heating
- Flame roll-out safety protector
- Solid-state electronic direct spark ignition system

STANDARD FEATURES (cont.)

Standard Parts Warranty

- 15-year gas heat exchanger parts - Stainless Steel
- 10-year gas heat exchanger parts - Aluminized
- 5-year compressor parts
- 3-year NOVATION™ condenser coil parts
- 1-year Round Tube/Plate Fin (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

48TC

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)

- ☐ RTU Open protocol controller communicates to. LON, MODBUS, BACNET and Johnson N2 protocols.
- ☐ CCN Direct Digital Control (DDC) - PremierLink™
- ☐ Through the base connectors for gas and electric conduit/piping
- ☐ Stainless steel gas heat exchanger (includes tubes, vestibule plate and collector box)
- ☐ Humidi-MiZer® adaptive dehumidification system (RTPF condenser coil units only)
- ☐ Economizer with dry bulb sensing and barometric relief
- ☐ Economizer with enthalpy sensing and barometric relief
- ☐ 2 position motorized outdoor air damper
- ☐ Non-fused disconnect
- ☐ Powered 115-volt convenience outlet
- ☐ Non-powered 115-volt convenience outlet
- ☐ High static evaporator fan motor
- ☐ Return Air smoke detector
- ☐ Supply Air smoke detector
- ☐ CO₂ sensor
- ☐ Condenser hail guard - louvered style
- ☐ Special coating protection for evaporator and condenser coils

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

- ☐ Economi\$er™ IV-electromechanical, gear driven with Belimo actuator (2-10v DC signal) and controller
- ☐ Economi\$er™ 2-compatible with DDC controls; gear driven with Belimo actuator (4-20mA) signal and no controller
- ☐ Power exhaust
- ☐ Two-position motorized outdoor air damper
- ☐ Manual outside air damper 25%
- ☐ Manual outside air damper 50%
- ☐ Roofcurb - 14 inch (356mm) tall
- ☐ Roofcurb - 24 inch (610mm) tall
- ☐ Thru-the-bottom connections-electrical only
- ☐ Thru-the-bottom connections-electrical and gas
- ☐ Condenser hail guard - louvered style
- ☐ Flue shield
- ☐ Flue discharge deflector
- ☐ Liquid propane (LP) conversion kit
- ☐ High altitude conversion kit
- ☐ 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
- ☐ Return Air smoke detector
- ☐ Supply Air smoke detector
- ☐ Thermostats and Sensors
- ☐ Supply duct kit (size 16 units only)
- ☐ Disconnect switch bracket (size 16 units only)

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

48TC

3. DIRECTION OF AIR FLOW

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	1/2" - 14 NPT	GAS CONNECTION
G	2" [51]	DIA POWER SUPPLY KNOCK-OUT

HRU-THE-BASE CHART (FIELD INST)

	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	ACC.	7/8" (122.2)
X	1/2"	24V	7/8" (122.2)
Y	1 1/4" (002, 004)	POWER	1 3/4" (44.4)
Z *	(004) 3/4" FPT	GAS	1 3/4" (44.4)

(002) PROVIDES 3/4" FPT THRU CURB
* FLANGE & FITTING. 2" (50.8)

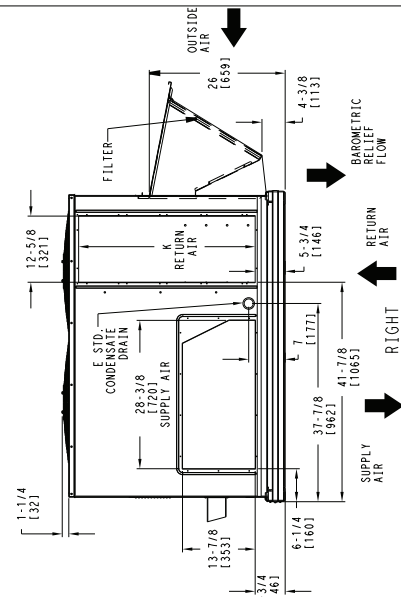
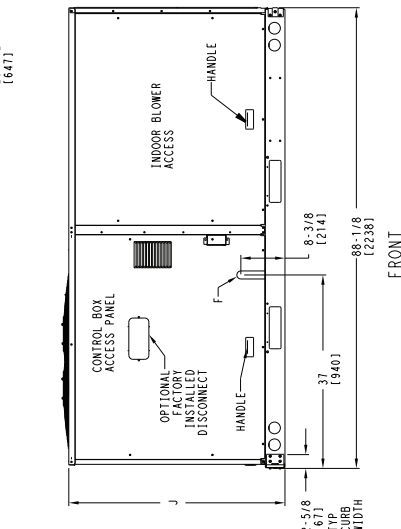
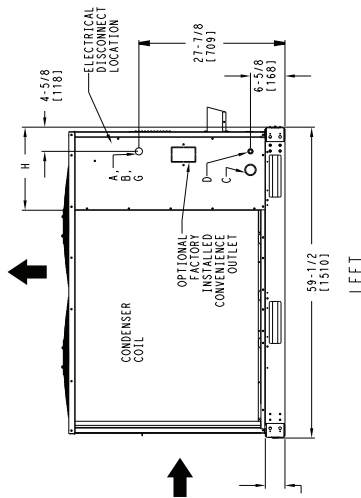
THRU-THE-BASE CHART (FIOP)

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

FOR BELOW LISTED MODELS, A FIELD
SUPPLIED 1/2" ADAPTER IS REQUIRED
BETWEEN BASE PAN FITTING AND GAS VALVE.

**

172" SUPPLIED BETWEEN BASE P



SHEET	DATE	SUPERCEDS	REV
1 OF 2	10-01-10	48TC 08-12 SINGLE ZONE ELECTRICAL COALING WITH GAS HEAT	48TW500985

C10292A

CERTIFIED DIMENSION 48TC**08 - 12

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

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
48TC-A08	R1PF	780 354	178 81	158 72	209 95	236 107	41 1/2 (1054) 33 7/8 (860) 20 1/2 (521)
48TC-A09	R1PF	920 418	212 96	183 83	243 110	282 128	40 7/8 (1038) 34 (864) 23 1/8 (587)
48TC-A12	R1PF	930 422	216 98	196 89	247 112	272 123	42 (1067) 33 1/8 (841) 24 1/4 (616)
48TC-008	R1PF	835 379	164 74.5	170 77.2	255 115.8	246 111.7	44 7/8 (1140) 35 5/8 (905) 19 3/8 (492)
48TC-009	R1PF	930 422	228 103.5	187 85	232 105.3	283 128.5	39 3/4 (1010) 32 7/8 (835) 18 5/8 (473)
48TC-012	R1PF	940 427	231 104.9	189 85.8	234 106.2	286 129.8	39 3/4 (1010) 33 (838) 18 1/2 (470)
48TC-008	MCHX	805 365.5	160 72.6	153 69.5	240 109	260 118	43 (1092) 36 3/8 (924) 20 3/8 (517)
48TC-012	MCHX	895 406.3	185 84	176 79.9	260 118	274 124.4	42 7/8 (1089) 35 1/2 (902) 22 7/8 (581)
R1PF - ROUND TUBE, PLATE FIN (COPPER/ALUM)							
MCHX - NOVAION (ALUM/ALUM)							

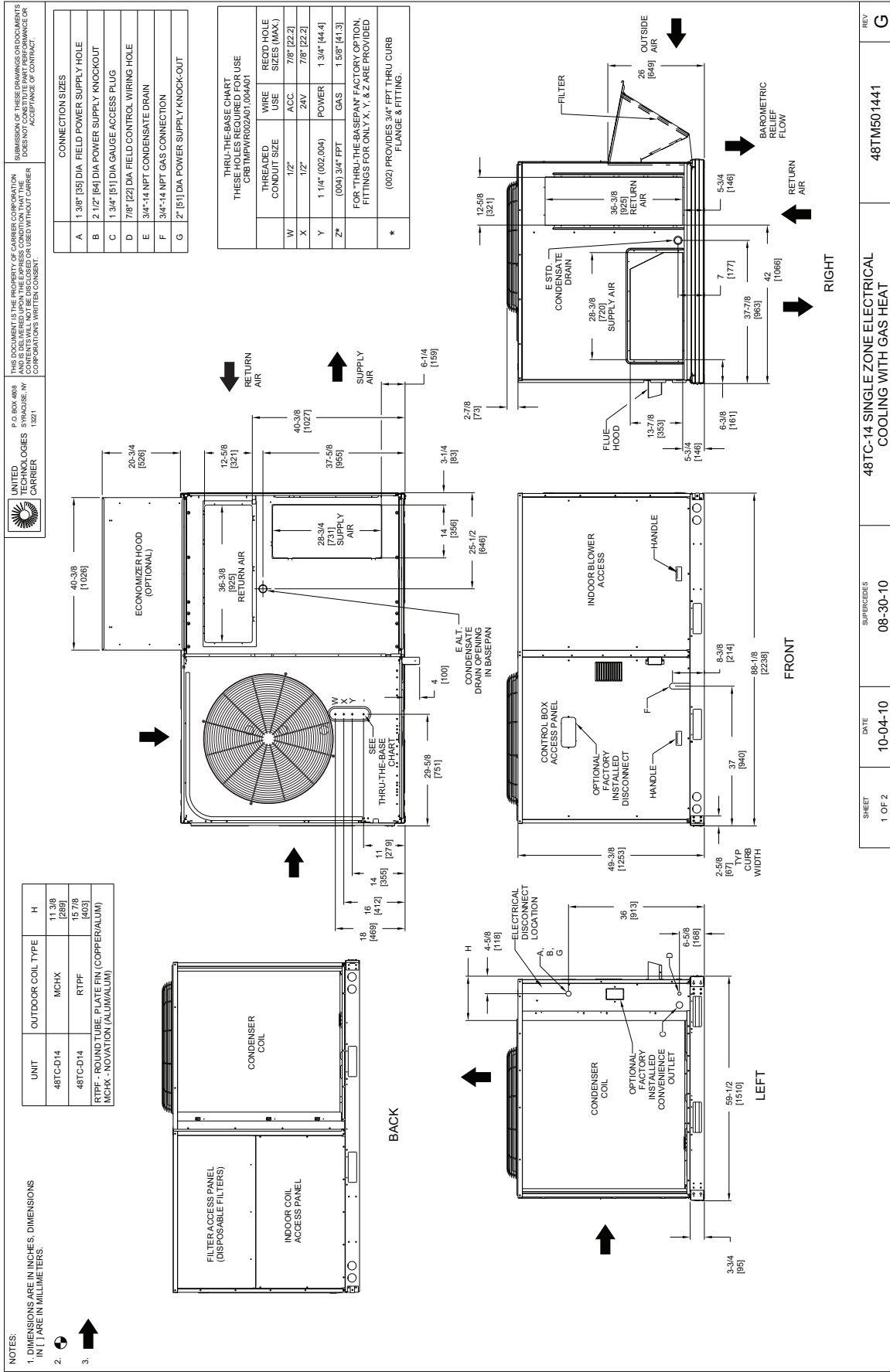
CORNER B

CORNER C

FRONT

SHEET	DATE	SUPERCEDES	48TC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	REV
2 OF 2	10-01-10	11-24-08	48TW500985	F

CERTIFIED DIMENSION 48TC**14



CERTIFIED DIMENSION 48TC**14



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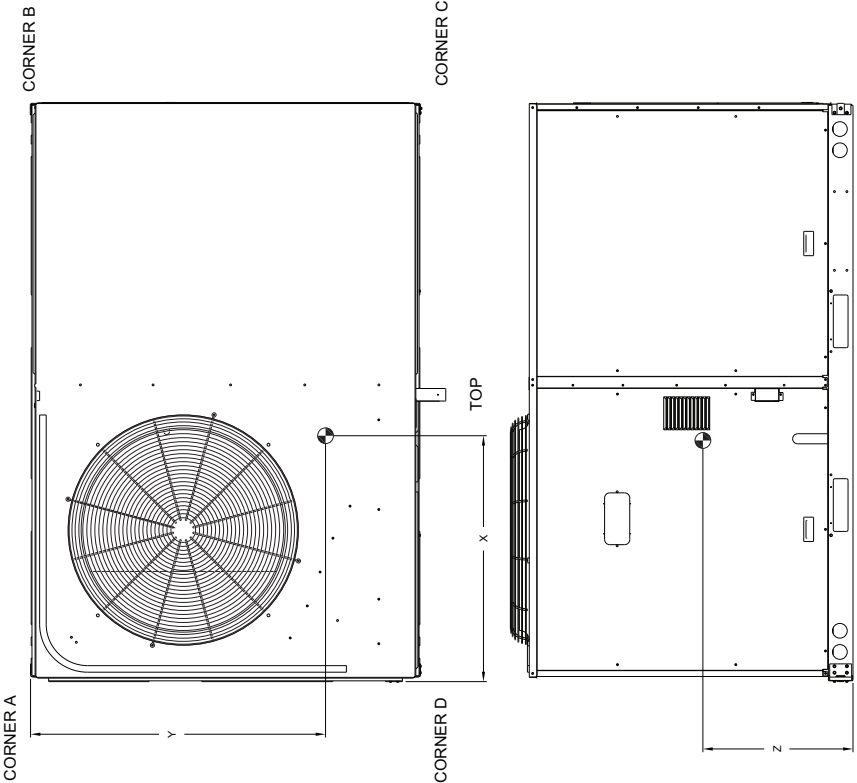
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UNIT	OUTDOOR COIL TYPE	STD. UNIT WEIGHT**		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
48TC-D14	MCHX	1116	506	297	135	157	71	229	104	434	197	29 1/2 [749]	34 1/4 [870]	20 1/4 [514]
48TC-D14	RTPF	1187	530	349	159	167	76	211	96	440	200	31 3/8 [797]	34 3/4 [883]	21 7/8 [556]

RTPF - ROUND TUBE FIN (COPPER/ALUM)
MCHX - MICROCHANNEL (ALUM/ALUM)

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



CORNER A CORNER B CORNER C CORNER D

TOP

FRONT

X Y Z

SHEET
2 OF 2

DATE
10-04-10

SUPERCEDS
08-30-10

48TC-14 SINGLE ZONE ELECTRICAL
COOLING WITH GAS HEAT

48TM501441

REV
G

C10326B

48TC



CERTIFIED DIMENSION 48TC**16

UNIT	STD UNIT WEIGHT LBS. KG.	CORNER WEIGHT (A) LBS. KG.	CORNER WEIGHT (B) LBS. KG.	CORNER WEIGHT (C) LBS. KG.	CORNER WEIGHT (D) LBS. KG.	C.G.		
						X	Y	Z
48HCD 14	1430 649	342 155	377 171	372 169	338 153	60 3/4 [1543]	31 1/2 [800]	20 5/8 [524]

STANDARD UNIT WEIGHT IS WITHOUT MAX. GAS HEAT & WITHOUT PACKAGING.
FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



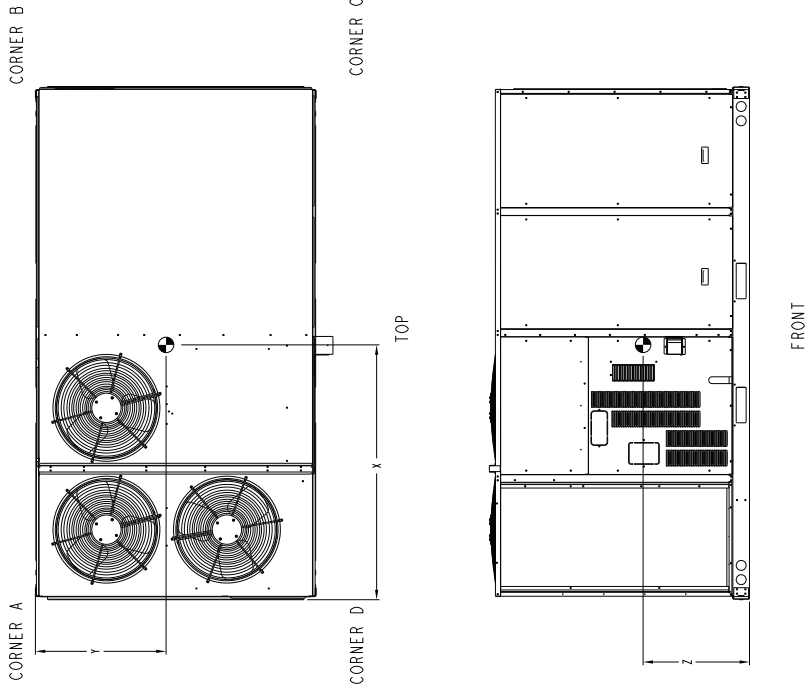
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HORIZONTAL ECONOMIZER

DATE	SUPERCEDS	48TC 16 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	50TM501221	REV
11/02/10	-			B

C101142

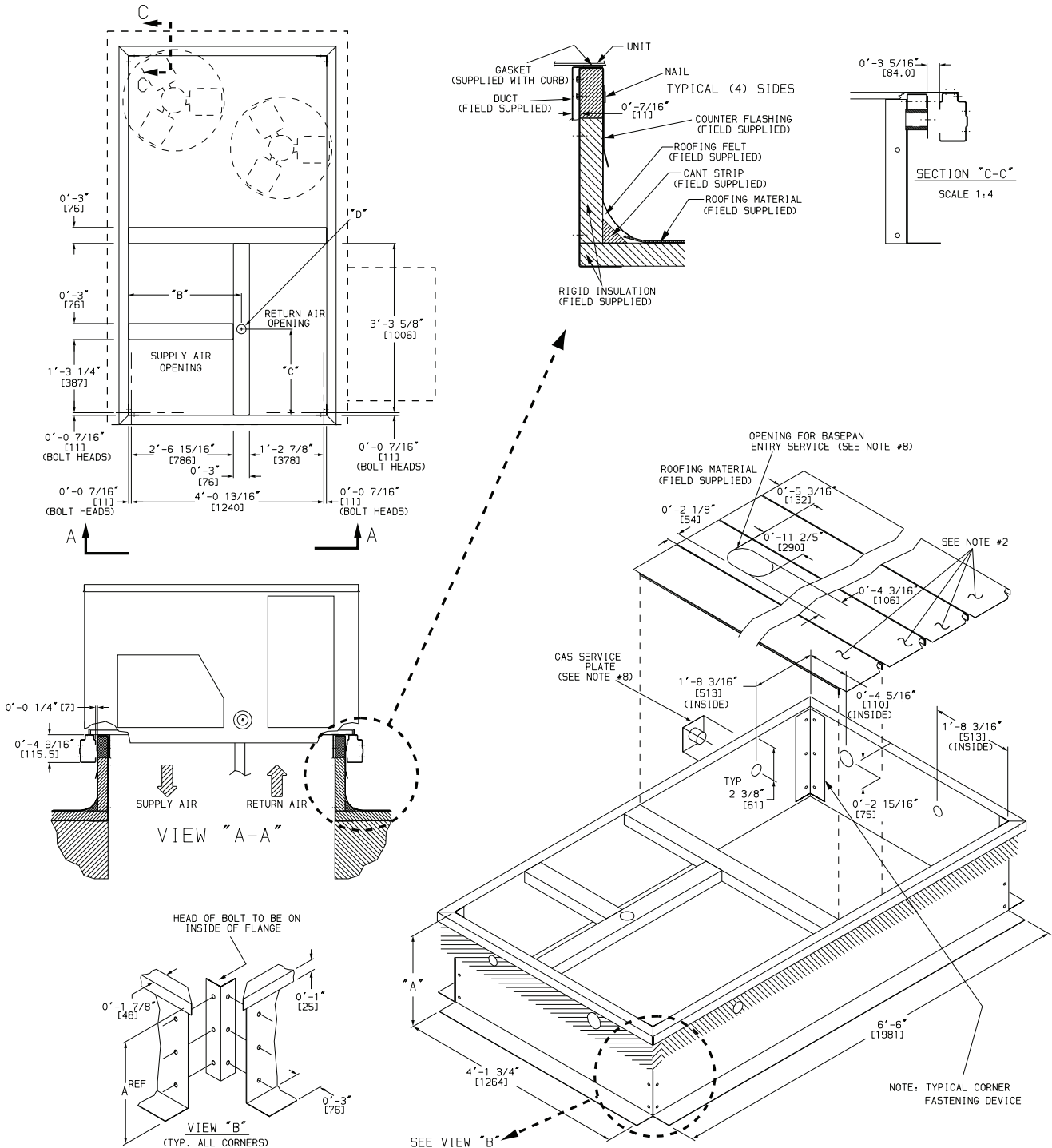
ROOF CURB DETAILS — SIZES 08 - 14

ROOFCURB ACCESSORY	A	UNIT SIZE
CRRFCURB003A01	1'-2" [356]	48TC**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.
8. CONNECTOR PACKAGE CRBTMPWR002A01 IS FOR THRU-THE-CURB GAS TYPE.
CONNECTOR PACKAGE CRBTMPWR004A01 IS FOR THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

CONNECTOR PKG. ACC.	B	C	D ALT DRAIN HOLE	GAS	POWER	CONTROL	ACCESSORY PWR
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
CRBTMPWR004A01							



48TC

ROOF CURB DETAILS — SIZE 16

48TC

