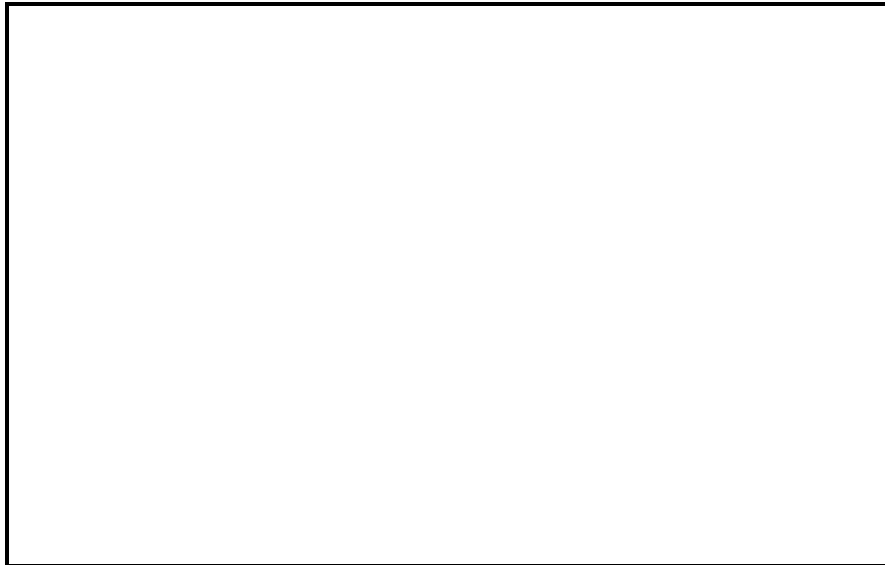


50HC EnergyX[®] System
Factory Installed Energy Recovery
Single—Package Rooftop
Cooling Only, with Optional Electric Heat
Sizes 07—14 with Puron[®] (R—410A) Refrigerant



Submittal Data

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

50HC 6 to 12.5 ton units with the Energy X system are high-efficiency, single-packaged electric cooling, electric heating units. The factory installed and integrated Energy Recovery Ventilator (ERV) provides total integration for optimum performance. The units are factory tested in all heating and cooling modes.

STANDARD FEATURES

Base Unit

- Puron (R-410A) HFC refrigerant
- IEER's up to 13.2 with single speed indoor fan motor
- IEER's up to 14.5 with 2-speed/VFD indoor fan motor
- EER's up to 12.4
- Combined Efficiency Factors (CEF) up to 18.0 +
- Exceeds ASHRAE 90.1 energy efficiency standard and Energy Star qualified
- Rated in accordance with AHRI Standards 340/360
- Energy recovery rated and certified in accordance with AHRI Standard 1060-2000.
- Helps reduce mechanical cooling load at design temperatures up to 4 tons per 1000 cfm of outside air.
- Helps reduce mechanical heating load up to 2.5 ton per 1000 cfm of outside air.
- Designed in accordance with Underwriters' Laboratories Std 1995 and listed by UL and UL, Canada
- Single-stage cooling capacity control on 07 models
- Two-stage cooling capacity control on 08 to 14 models
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Cooling operating range up to 125°F (52°C), and down to 35°F (2°C) standard. Field installable accessory extends the minimum down to -20°F (-29°C)
- Dedicated vertical airflow models available. Horizontal curb kit available as a field installed accessory.
- Two-inch disposable return air filters on slide out track. Four inch track available as field installed accessory.
- Thru-the-bottom power entry capability
- Single point electric connections
- 24-volt control circuit protected with resettable circuit breaker
- Belt drive evaporator-fan motor and pulley combinations available on all models

- Direct drive (multi-speed/torque) ECM indoor 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 facilitating simple safety circuit troubleshooting and simplified control box arrangement
- ComfortLink Controls that provide:
 - Scrolling Marquee Display
 - Time schedule and Service run test
 - Service diagnostics, alarms and alarm history
 - Sensor or Thermostat sensor capabilities
- Outside air and exhaust air CFM monitoring and display capabilities
- Variable speed energy recovery fans for Demand Control Ventilation

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

- TXV refrigerant metering device with removable power element on each circuit
- Liquid line filter drier
- Scroll compressors with internal line-break overload protection
- Copper tube, aluminum fin coils with optional corrosion resistant coils
- Removable gauge line plugs for reading refrigerant pressure with unit panels in place

Standard Limited Parts Warranty

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

PERFORMANCE DATA

Unit Operating 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 _____ CFM External Static Pressure _____ in.wg

Indoor Fan Motor Size _____ Hp

Exhaust Fan Motor Size _____ Hp

Curb Weight _____ lb

Heating

Heating Capacity:

Stage 1 _____ Btuh

Stage 2 _____ Btuh

Heating Capacity Total _____ Btuh

Stage 1 _____ kW

Stage 2 _____ kW

Heating Capacity Total _____ kW

EnergyX

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)

- ☐ Energy Recover wheel bypass Enthalpy economizer
- ☐ Through the base connectors electric conduit
- ☐ HACR Breaker or Non-Fused Disconnect
- ☐ Powered 115-volt convenience outlet
- ☐ Non-powered 115-volt convenience outlet
- ☐ High static evaporator fan motor
- ☐ Return Air smoke detector (08-13 size only)
- ☐ Supply Air smoke detector
- ☐ CO₂ sensor
- ☐ Condenser hail guard - louvered style
- ☐ Special coating protection for evaporator and condenser coils
- ☐ Hinged access panels
- ☐ Foil faced insulation throughout entire cabinet
- ☐ Staged Air Volume (SAV™) system utilizes a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor for 2-speed control. Conforms to ASHRAE 90.1 2010 standard - section 6.4.3 10b single zone variable air volume (SZ-VAV) guidelines. Available on only 08-14 sizes.

FIELD INSTALLED ACCESSORIES

- ☐ Electric heater(s)
- ☐ Standard Roofcurb - 14 inch (356mm) tall
- ☐ Standard Roofcurb - 24 inch (610mm) tall
- ☐ Horizontal Roofcurb adapts to standard base unit and directs airflow horizontally
- ☐ 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)
- ☐ Thermostats and Sensors
- ☐ Filter status indicator switch
- ☐ Motor status indicator switch

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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.

CERTIFIED DIMENSION DRAWING

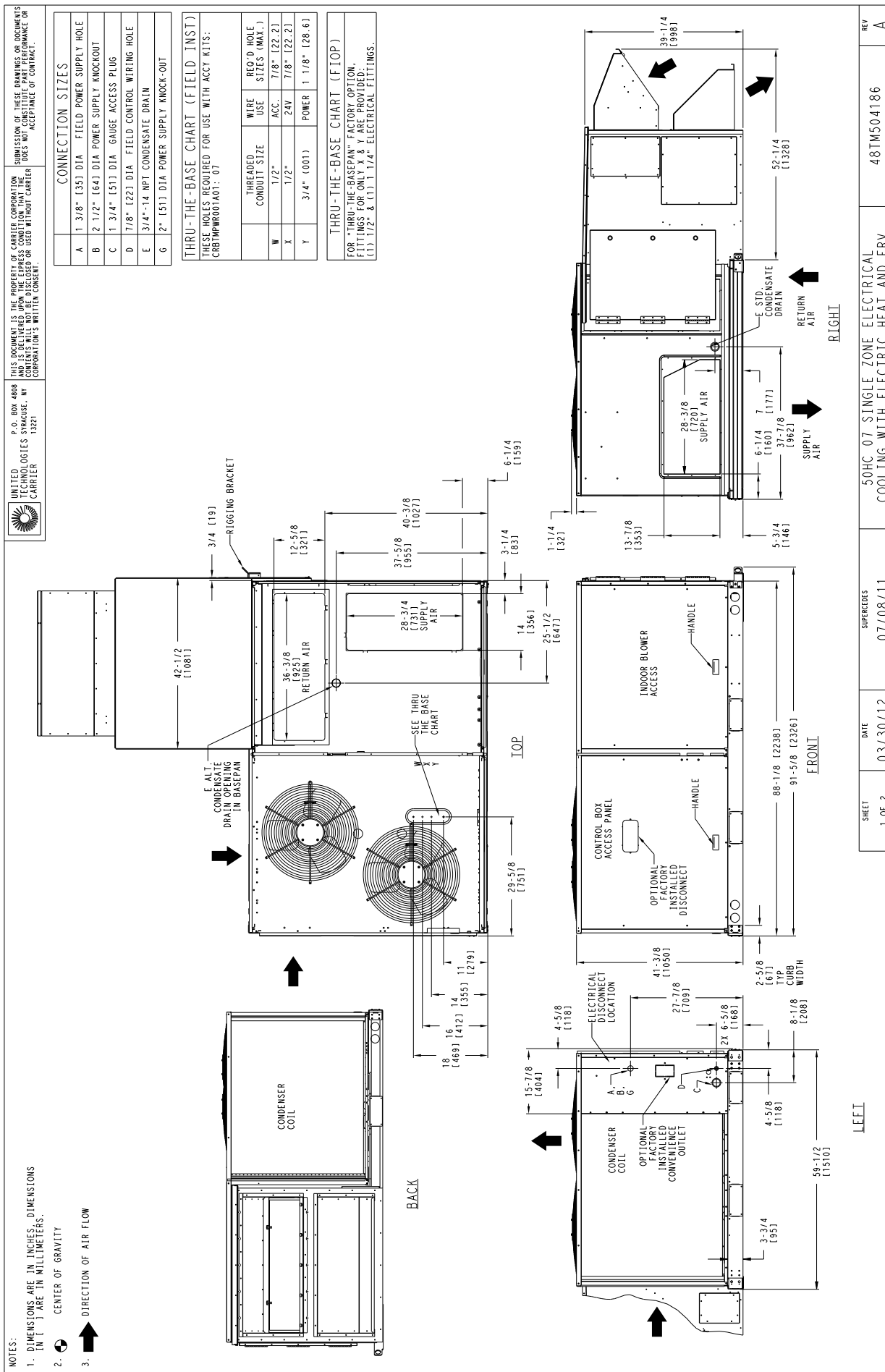


Fig. 1 - 50HC-07 Single Zone Electric Cooling with Gas Heat and ERV (Sheet 1 of 2)

CERTIFIED DIMENSION DRAWINGS

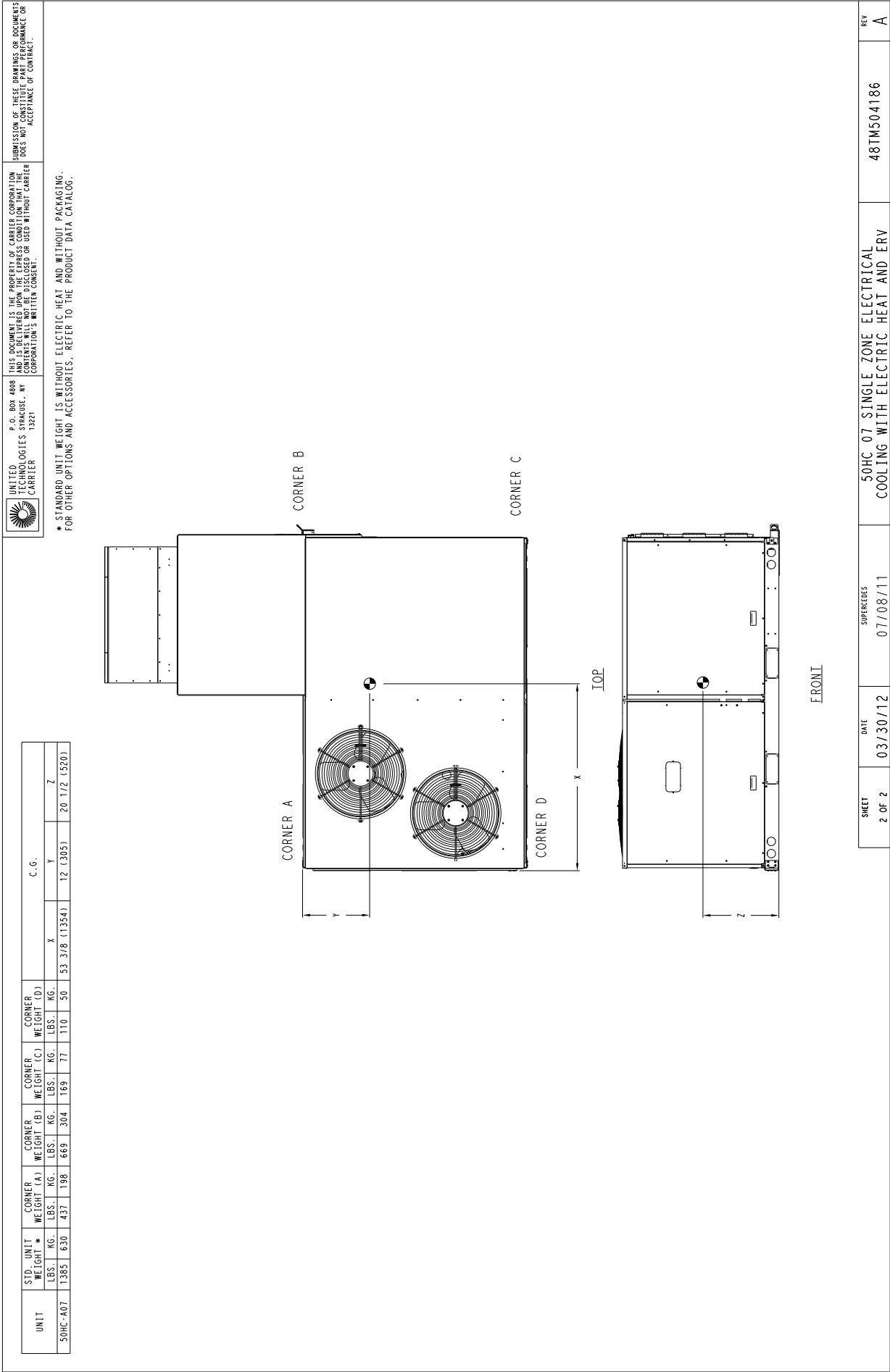


Fig. 2 - 50HC-07 Single Zone Electric Cooling with Gas Heat and ERV (Sheet 2 of 2)

CERTIFIED DIMENSION DRAWING

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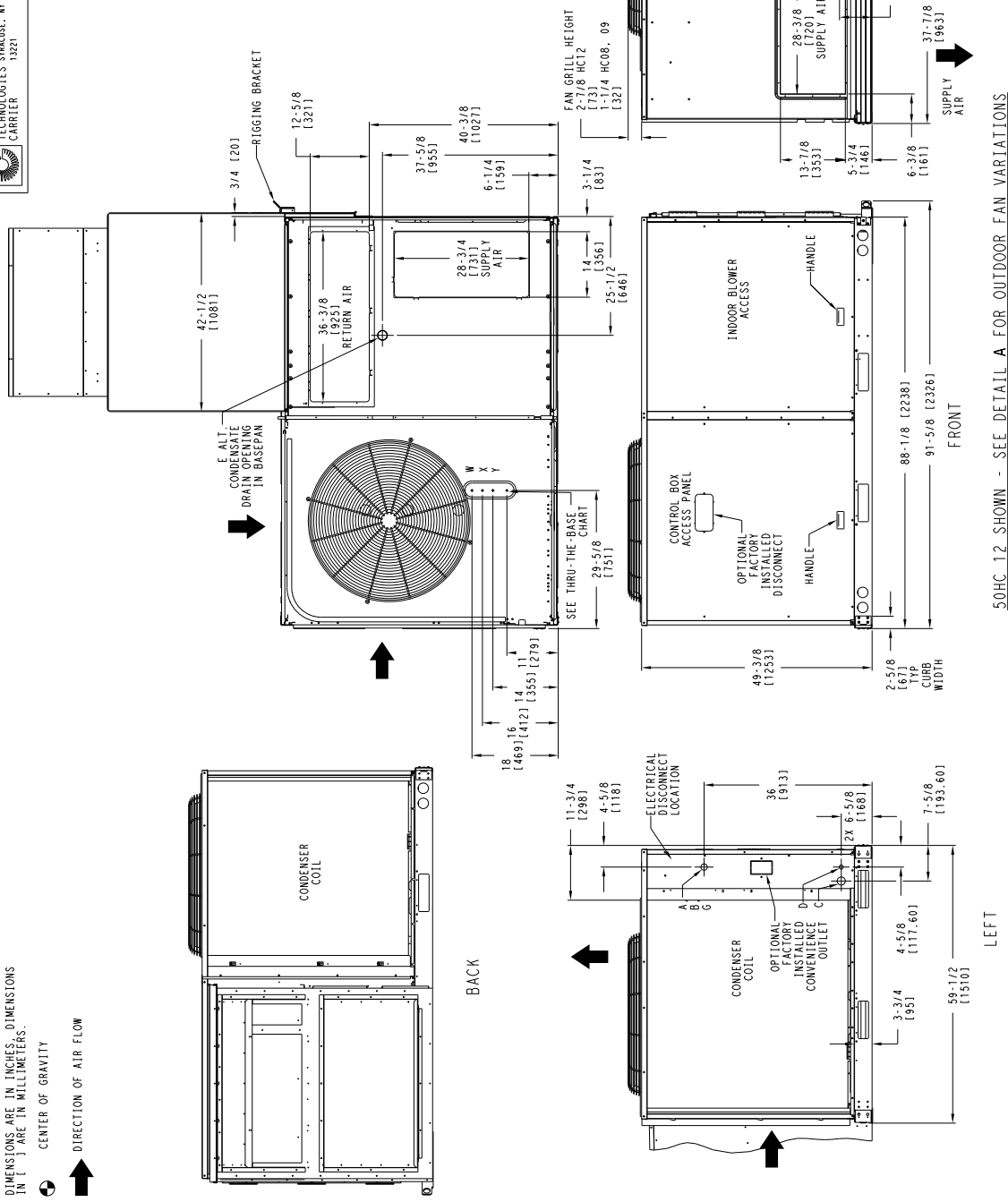
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NOTES:
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN () ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW

CONNECTION SIZES	
A	1 3/8" [33] 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"-1.4 NPT CONDENSATE DRAIN
G	2" [51] DIA. POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBIMPW002A01		
WIRE THREADED CONDUIT SIZE	REQ'D HOLE USE SIZES (MAX.)	
1/2"	ACC. 7/8" [22.2]	
1/2"	ACC. 7/8" [22.2]	
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	SUPERCEDS	50HC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT AND ERV	REV
1 of 2	03/30/12	06/08/11		A

Fig. 3 - 50HC-08-12 Single Zone Electric Cooling with Gas Heat and ERV (Sheet 1 of 2)



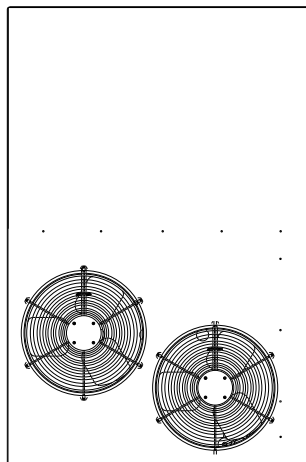
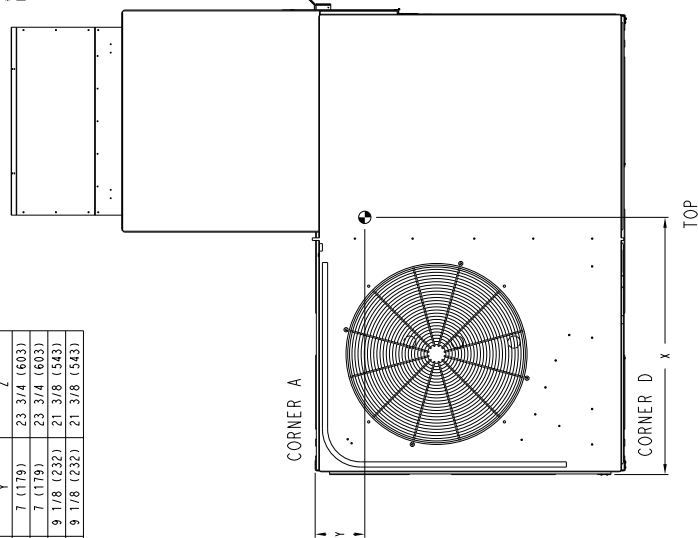
CERTIFIED DIMENSION DRAWINGS

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.	X	Y	
50MC-008	1729	786	584	270	931	423	125	57	80	36	53 7/8 (1367)	7 (179)	23 3/4 (603)
50MC-009	1729	786	584	270	931	423	125	57	80	36	53 7/8 (1367)	7 (179)	23 3/4 (603)
50MC-010	1884	861	772	351	1054	479	140	64	90	45 3/4 (1161)	9 1/8 (232)	21 3/8 (543)	
50MC-012	1884	861	772	351	1054	479	140	64	90	45 3/4 (1161)	9 1/8 (232)	21 3/8 (543)	

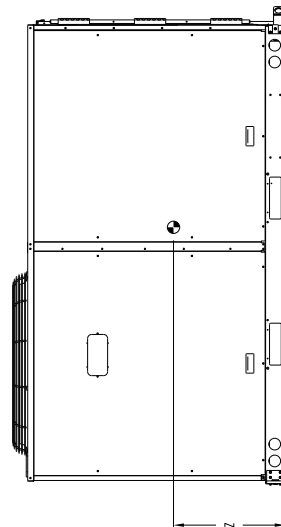
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13221

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



DETAIL A
50HC 08.09



FRONT

50HC 12 SHOWN - SEE DETAIL A FOR OUTDOOR FAN VARIATIONS

SHEET	DATE	SUPERSEDES	REV
2 OF 2	03/30/12	06/08/11	A
50HC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT AND ERV			48TM504188

Fig. 4 - 50HC-08-12 Single Zone Electric Cooling with Gas Heat and ERV (Sheet 2 of 2)

CERTIFIED DIMENSION DRAWING



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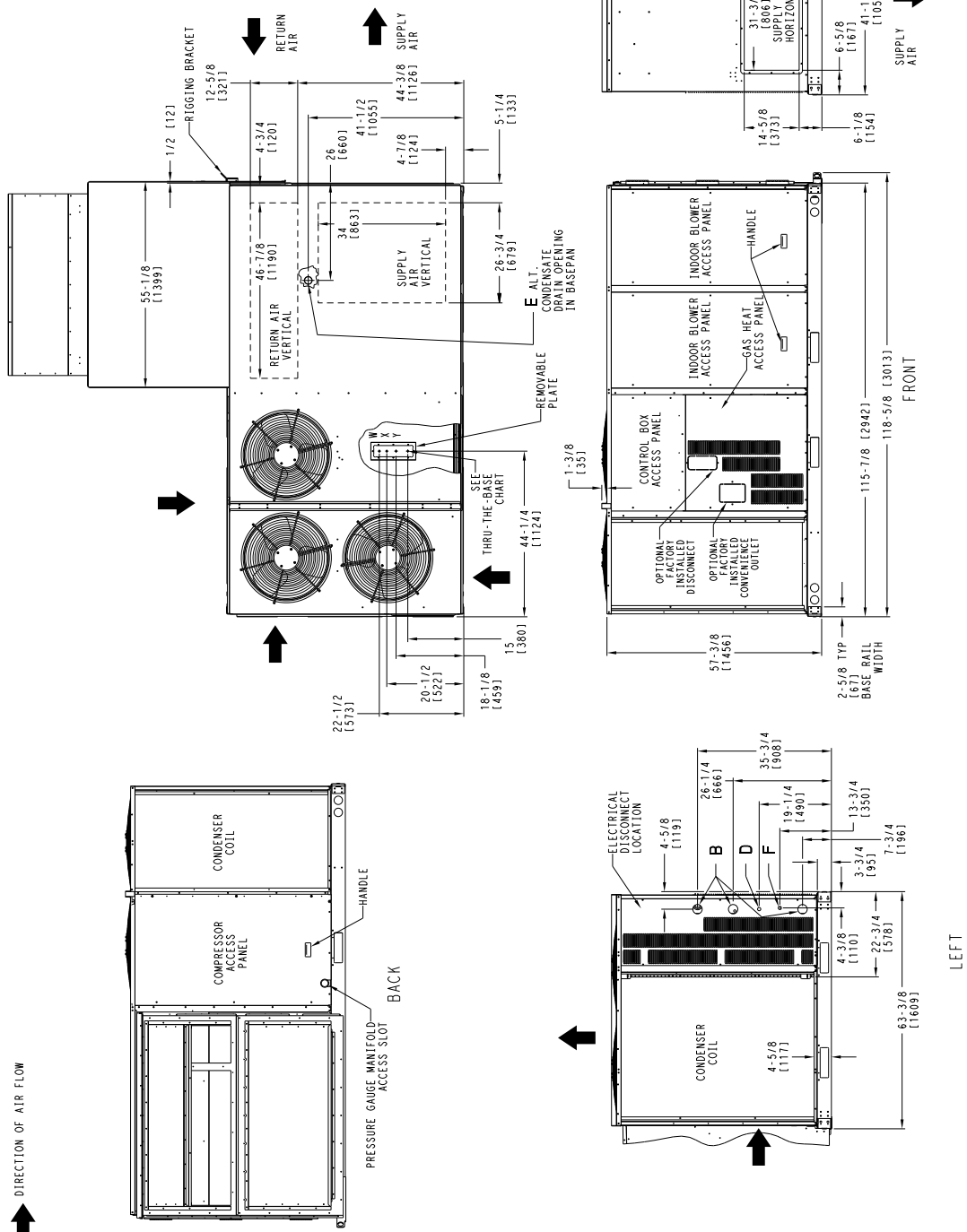
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- NOTES:
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
 2. CENTER OF GRAVITY
 3. DIRECTION OF AIR FLOW

CONNECTION SIZES	
B	2 1/2" (64) DIA POWER SUPPLY HOLE
D	7/8" (22) DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	7/8" (22) DIA FIELD CONVENIENCE OUTLET HOLE

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CARRIER PART NO. 006A00.007A00				
ACCESSORY NO.	THREADED CONDUIT SIZE	WIRE USE	REQ'D. HOLE SIZES (MAX.)	
005	W 1/2"	ACC.	7/8" (22.2)	
	X 24V	ACC.	7/8" (22.2)	
	Y 1 1/4"	POWER	1 1/2" (38.1)	
006	W 1/2"	ACC.	7/8" (22.2)	
	X 24V	ACC.	7/8" (22.2)	
	Y 1 1/2"	POWER	2" (50.8)	
007	W 1/2"	ACC.	7/8" (22.2)	
	X 24V	ACC.	7/8" (22.2)	
	Y 2"	POWER	2 1/2" (63.5)	

FOR "THRU-THE-BASE" FACTORY OPTION, FITTINGS ARE PROVIDED AS SPECIFIED ON "006".



DATE	SUPERCEDS	50HCD 14 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT AND ERV	50TM501670	REV
03/30/12	07/07/11			A

Fig. 5 - 50HC-14 Single Zone Electric Cooling with Gas Heat and ERV (Sheet 1 of 2)



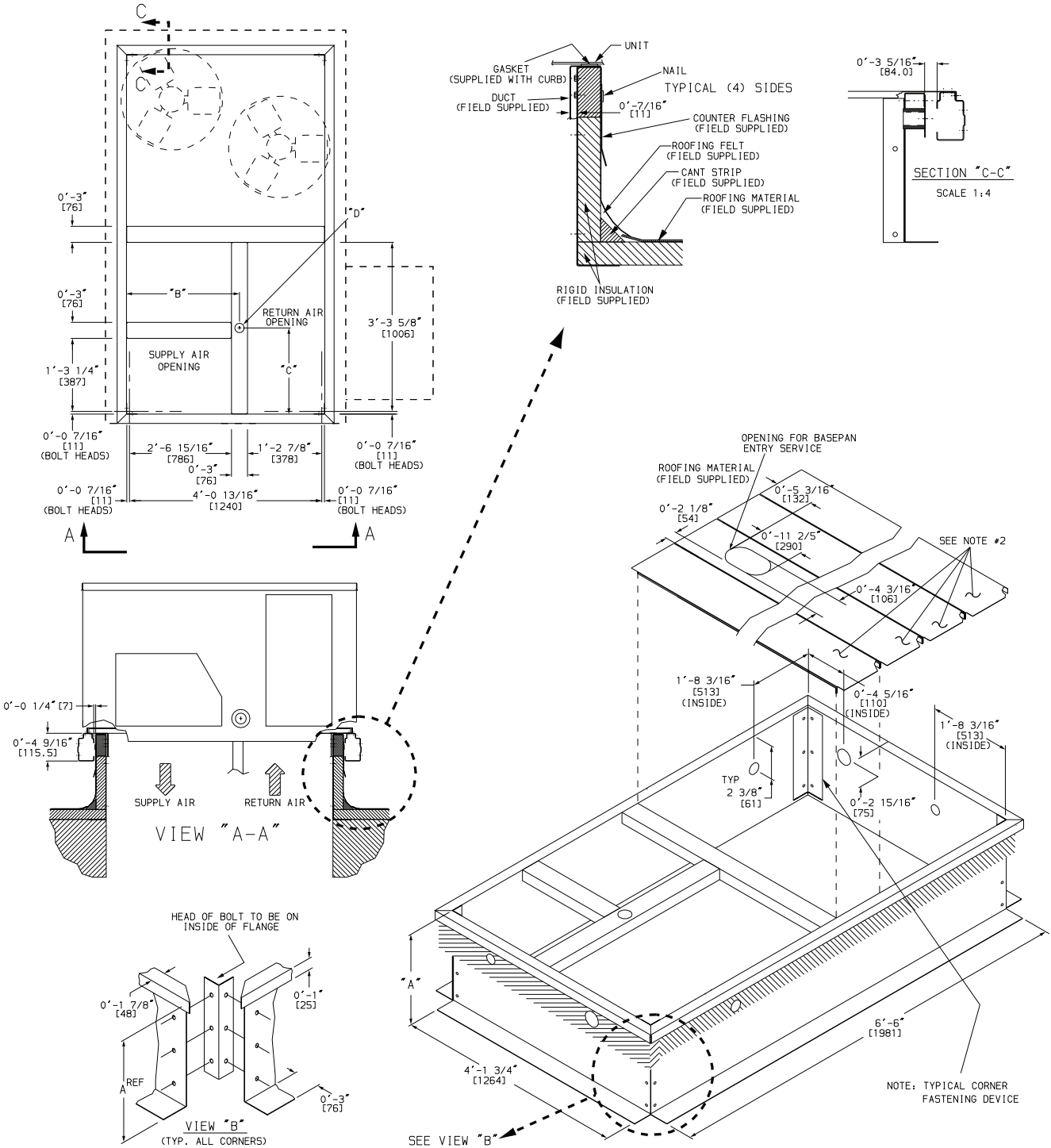
ROOF CURB DETAILS — SIZE 07 - 09 UNITS

ROOFCURB ACCESSORY	A	UNIT SIZE
CRRFCURB003A01	1'-2" [356]	50HC-*07-09
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
CRBTMPWR002A01	2'-8 7/16" [827]	1'-10 15/16" [583]	1 3/4" [44.5]	1 1/4 [31.7]	1/2" [12.7] NPT	1/2" [12.7] NPT
CRBTMPWR004A01						



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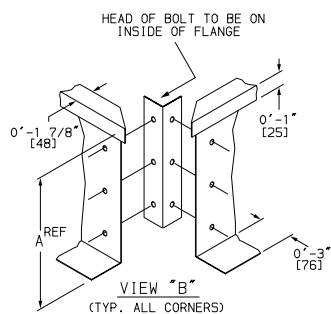
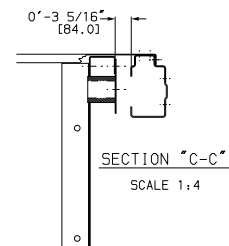
EnergyX

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.

Figure 1 is an elevation view of a wall assembly. The diagram shows a central vertical section with a 'SUPPLY AIR OPENING' and a 'RETURN AIR OPENING'. The wall is defined by dashed lines. Dimensions are provided in feet and inches, with corresponding values in brackets. Key features include 'C' (top left), 'D' (top right), 'B' (middle left), 'C' (middle right), 'D' (bottom right), 'A' (bottom left), and 'A' (bottom right). Dimensions are given in feet and inches, with corresponding values in brackets. Key features include 'SUPPLY AIR OPENING' and 'RETURN AIR OPENING'.

Dimension	Value	Value in Brackets
Top Left	0'-3"	[76]
Top Right	0'-3"	[76]
Bottom Left	1'-3 1/4"	[387]
Bottom Right	3'-3 5/8"	[1006]
Left Side (Top)	0'-0 7/16"	[111] (BOLT HEADS)
Left Side (Bottom)	0'-0 7/16"	[111] (BOLT HEADS)
Right Side (Top)	0'-0 7/16"	[111] (BOLT HEADS)
Right Side (Bottom)	0'-0 7/16"	[111] (BOLT HEADS)
Center (Top)	2'-6 15/16"	[786]
Center (Bottom)	4'-0 13/16"	[1240]
Center (Left)	0'-3"	[76]
Center (Right)	1'-2 7/8"	[378]



ROOF CURB DETAILS — SIZE 14 UNITS

