

50HCQ WeatherMaster® Series
High Efficient Single Package Rooftop,
Heat Pump
With Field-Installed Electric Heat
Sizes 07 – 12 with Puron® (R-410A) Refrigerant



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

50HCQ units are high-efficiency single-packaged heat pump units that are pre-wired and pre-charged with PURON® refrigerant. Electric heat is available as a field-installed accessory. The units are fully factory tested and agency certified. These units have field convertible supply and return openings and are intended for installation on a roof curb accessory (ordered separately), or for slab mounting (for horizontal duct connections). Units may be ordered with various factory-installed options. Field-installed accessories are also available.

STANDARD FEATURES

Base Unit

- Puron (R-410A) HFC refrigerant
- EERs up to 12.3
- IEERs:
 - up to 13.0 with single speed indoor fan motor
 - up to 13.7 with 2-speed/VFD indoor fan motor
- COP's up to 3.5
- ASHRAE 90.1 compliant and Energy Star qualified
- Rated in accordance with AHRI Standards 340/360
- Designed in accordance with Underwriters' Laboratories Std 1995 and listed by UL and UL, Canada
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Single stage cooling capacity control on 07 models
- Two-stage cooling capacity control on 08 to 12 models
- Cooling operating range from 30°F up to 125°F (-1°C up to 52°C). Field installed 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 on field-installed electric heat units
- 24-volt control circuit protected with resettable circuit breaker and 75-VA transformer
- Belt drive, constant torque, permanently lubricated evaporator-fan motor on all size units.
- Totally enclosed condenser motors with permanently lubricated bearings
- State-of-the-art defrost control board, easily configured for defrost cycles of 30, 60, 90, or 120 minutes.

- Centralized Terminal Board facilitating simple safety circuit troubleshooting and simplified control box arrangement.
- Loss of Charge, High-Pressure, and Freeze Protection switches
- Full perimeter base rail with built-in rigging adapters and fork truck slots.

Cabinet

- Access panels with easy grip handles and replaceable 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 system
- Liquid line filter drier
- Scroll compressors with internal line-break overload protection
- Indoor and outdoor coils constructed of aluminum fins mechanically bonded to seamless copper tubes.
- Removable gauge line plugs for reading refrigerant pressure with unit panels in place
- Four-way reversing valve operation
- Suction Line Accumulator standard - prevents excessive liquid flood back of refrigerant to the compressor even during the start of the defrost cycle.

Standard Limited Parts Warranty

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

PERFORMANCE DATA

Unit Operating Weight _____ lb

Cooling

Net Total Capacity _____ Btuh

Net Sensible Capacity _____ Btuh

Compressor Power Input _____ kW

at Outdoor Air Temperature _____ °F

Indoor Entering Air db: _____ °F wb _____ °F

Airflow _____ CFM External Static Pressure _____ in.wg

Curb Weight _____ lb

Heating

Power Input to Unit _____ kW

Integrated Capacity _____ Btuh

Indoor Operating Air Temperature _____ °F db

Outdoor Air Temperature _____ °F (Winter Design)

Rating at 70% R.H. Outdoors _____ kW Heater Selected

_____ Heat/Cool Ratio

Electrical Capacity Required _____ Btuh

50HCQ

ELECTRICAL DATA

Power Supply to Unit _____ Volts _____ Phase _____ Hz

Minimum Circuit Amps _____ Maximum Overcurrent Protection (Fuse Only) _____

SUBMITTAL DATA

Job Name _____

Architect _____

Engineer _____

Contractor _____

Unit Designation _____

OPTIONS AND ACCESSORIES

FACTORY-INSTALLED OPTIONS (FIOPs)

- ☐ Staged Air Volume (SAV™) system utilizes a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor for 2 speed indoor fan motor control. Conforms to ASHRAE 90.1 2010 Standard – section 6.4.3.10.b. Available on 08 to 12 models with two stage cooling control.
- ☐ RTU Open protocol RTU Direct Digital Control (DDC) LON, MODBUS, BACNET and Johnson N2 protocols.
- ☐ PremierLink CCN control
- ☐ Through the base connectors electric conduit
- ☐ Standard Economizer with dry bulb sensing and barometric relief
- ☐ Standard Economizer with enthalpy sensing and barometric relief
- ☐ Ultra Low Leak economizer with maximum leakage rate equal or less than 4.0 cfm/sq. ft. at 1.0 in. w.g. Available on models with Staged Air Volume (SAV) 2 speed indoor fan motor only.
- ☐ Two-position motorized outdoor air damper
- ☐ Non-fused disconnect switch (80 A Max)
- ☐ Powered 115-volt convenience outlet
- ☐ Non-powered 115-volt convenience outlet
- ☐ High static indoor fan motor and drive
- ☐ Return Air smoke detector
- ☐ Supply Air smoke detector
- ☐ Smoke detectors — return and supply air
- ☐ Pre-coated Al/Cu condenser coil
- ☐ E-coated Al/Cu condenser coil
- ☐ E-coated Al/Cu condenser and evaporator coil
- ☐ Cu/Cu condenser coil
- ☐ Cu/Cu condenser coil and evaporator coil
- ☐ Condenser hail guard — louvered style
- ☐ CO₂ Sensor
- ☐ Hinged access panels

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.

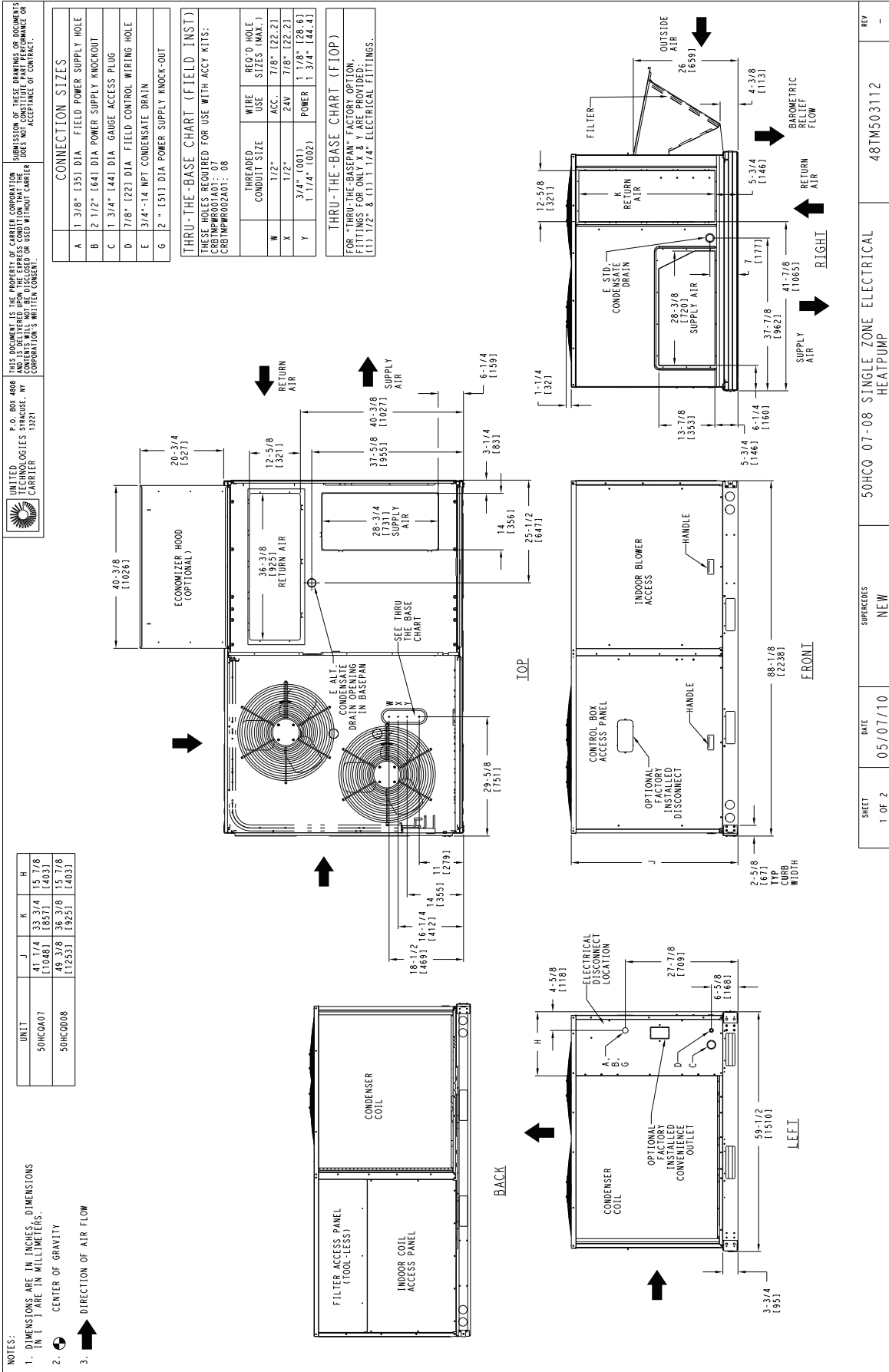
FIELD INSTALLED ACCESSORIES

- ☐ EconoMiSer™ X – Ultra Low Leak electromechanical, gear driven with Honeywell W7220 digital controller. Used with 2 speed Staged Air Volume (SAV) systems only.
- ☐ Display Kit for Variable Frequency Drive (VFD), Staged Air Volume System. Allows additional set up and diagnostics of the unit VFD controller. Can be unit mounted or used with any other VFD model as a reusable device.
- ☐ EconoMiSer IV with controls and barometric relief — vertical or horizontal
- ☐ EconoMiSer2 with 4-20 mA actuator, barometric relief, and no microprocessor — vertical or horizontal
- ☐ Power Exhaust — vertical or horizontal
- ☐ PremierLink CCN controller
- ☐ Electric heat
- ☐ Single point kit
- ☐ 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 utility connection kit
- ☐ Thru-the-curb utility connection kit
- ☐ Time Guard II compressor anti-cycle control
- ☐ Outdoor coil hail guard — louvered style
- ☐ Low ambient head pressure controller, down to -20°F (-29°C)
- ☐ Programmable setback thermostat
- ☐ Phase Monitor
- ☐ Thermostats and Sensors

Economizer Sensors

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

CERTIFIED DIMENSION 50HCQ*07 - 08



50HCQ

C10586

CERTIFIED DIMENSION 50HCQ*07 - 08



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UNIT	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
50HCQ007	710	322	162	73.5	129	58.5	186	84.4	234	106	38 5/8 (981)	34 1/8 (867)	21 1/4 (540)
50HCQ008	875	397	190	86.2	160	72.6	253	114.8	284	128.8	40 (1016)	34 5/8 (879)	24 3/8 (619)

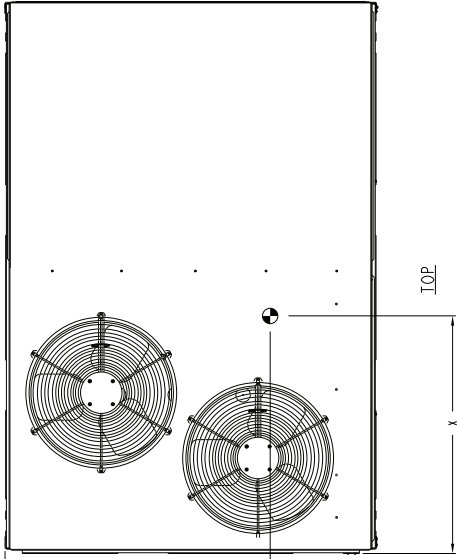
* STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.
FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.

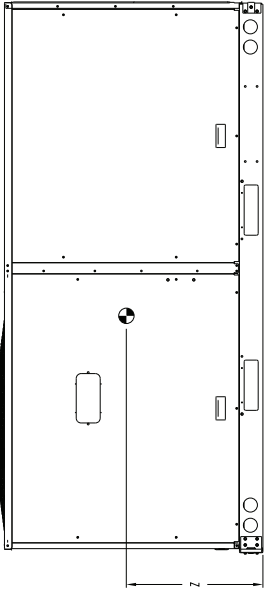
CORNER A

CORNER B

CORNER C

CORNER D





SHEET 2 OF 2	DATE 05/07/10	SUPERSEDES NEW	50HCQ 07-08, SINGLE ZONE ELECTRICAL HEATPUMP WITH ELECTRIC HEAT	48TM503112	REV -
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C10587

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NOTES:

1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN [] ARE IN MILLIMETERS.

UNIT	H	J	J	K
-----	15.7/8	4.9	3.9	3.6 3/8

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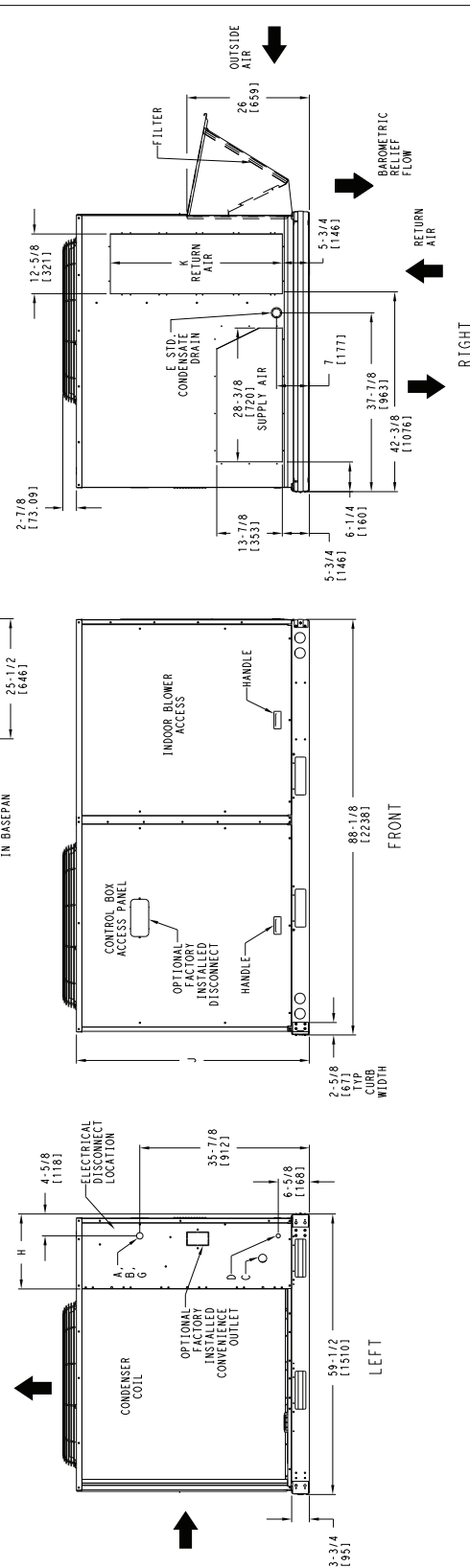
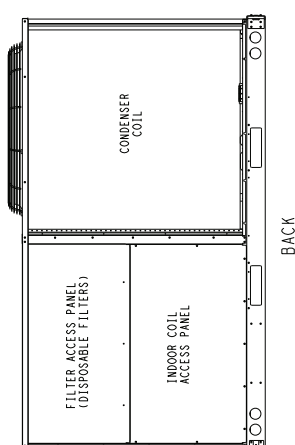
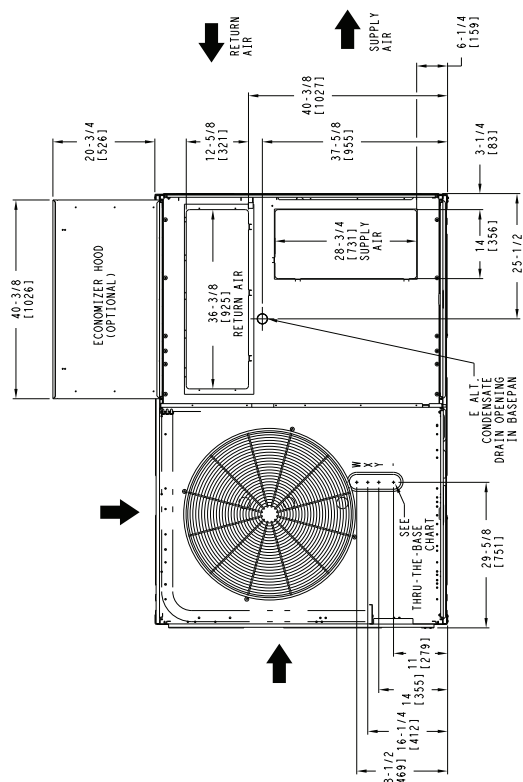
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CONNECTION SIZES	
A	1 3/8" [35] DIA FIELD POWER SUPPLY HOLE
B	2 1/2" [64] DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [44] DIA GAUGE ACCESS PLUG
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
G	2" [51] DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTWPR002A01			
	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	ACC.	7/8" x 7/8" (122-21)
X	1 1/2"	24V	7/8" x 1 1/2" (122-21)
Y	1 1/4"	POWER	1 3/4" x 1 1/4" (144-41)

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



SHEET	DATE	SUPERSERIES	REV
1 OF 2	05/07/10	NEW	48TM503115

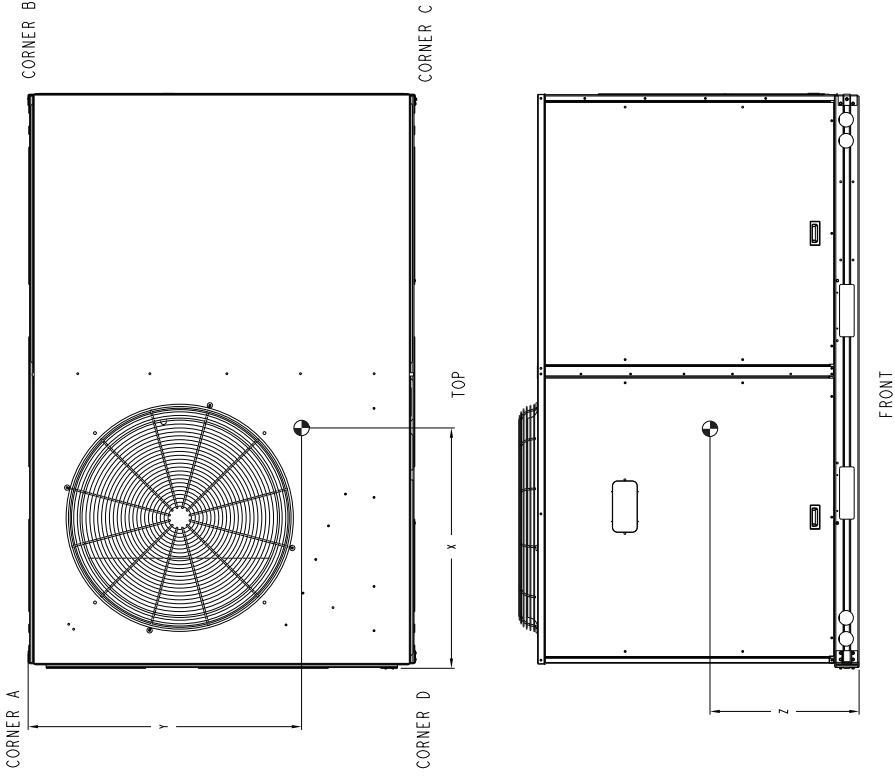
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50HCQ

CERTIFIED DIMENSION 50HCQ*09

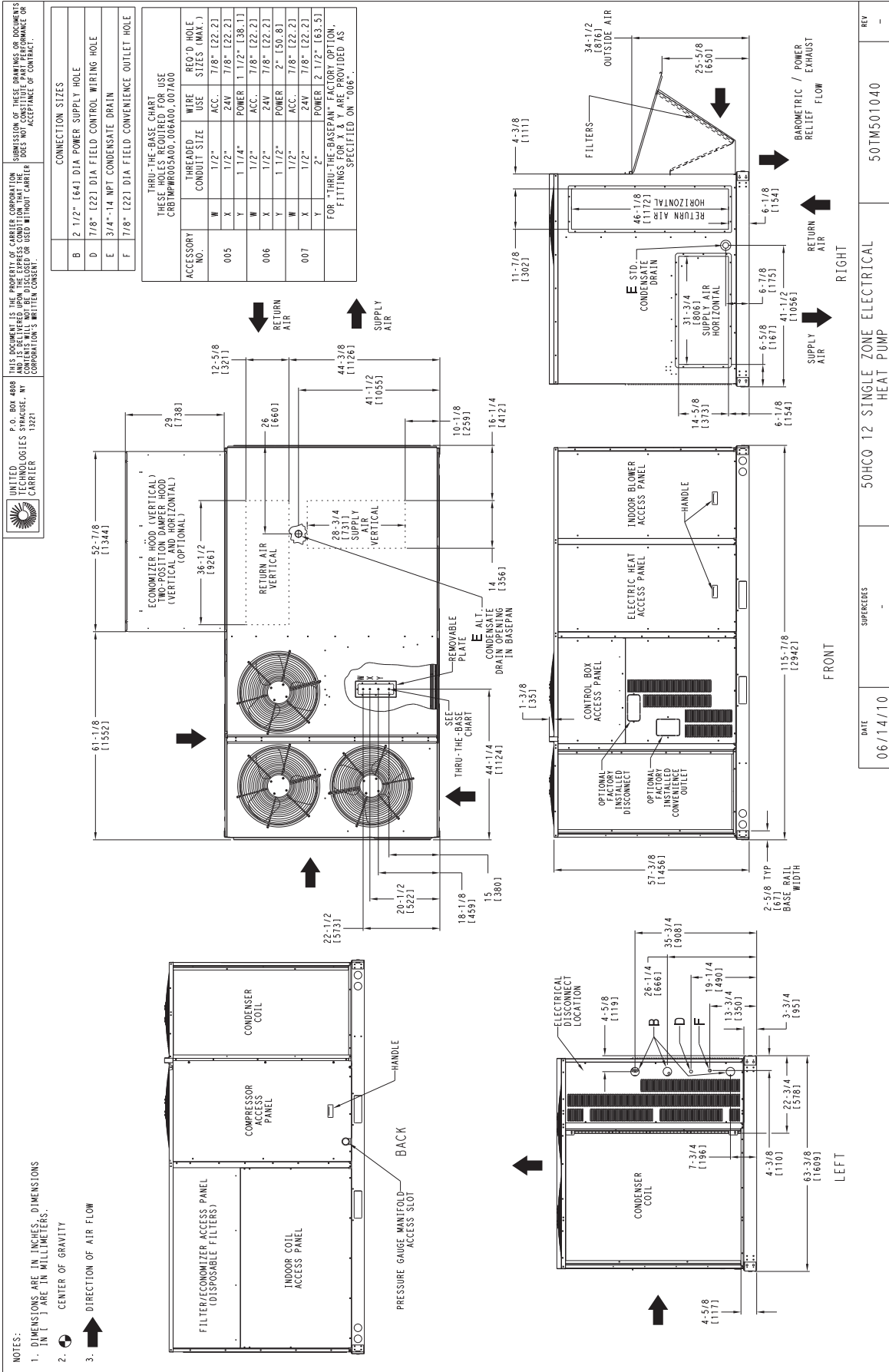
UNIT	STD. UNIT WEIGHT*		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C. G.						
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z				
50HC0009	1020	463	255	115.7	109	90.3	248	112.5	318	144.2	38	1/4	[972]	32	[813]	24	[610]

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



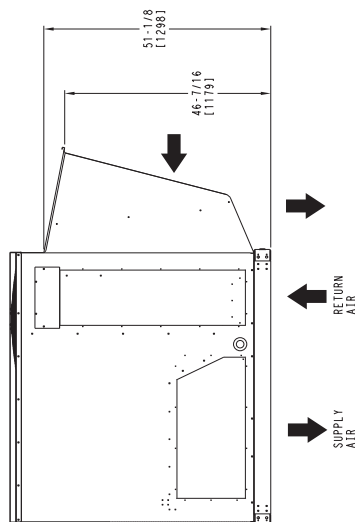
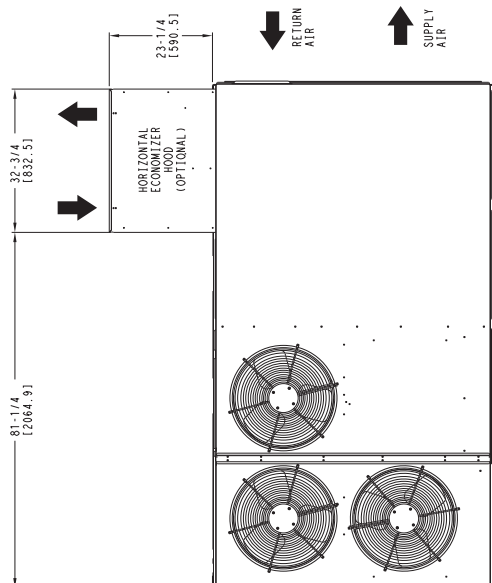
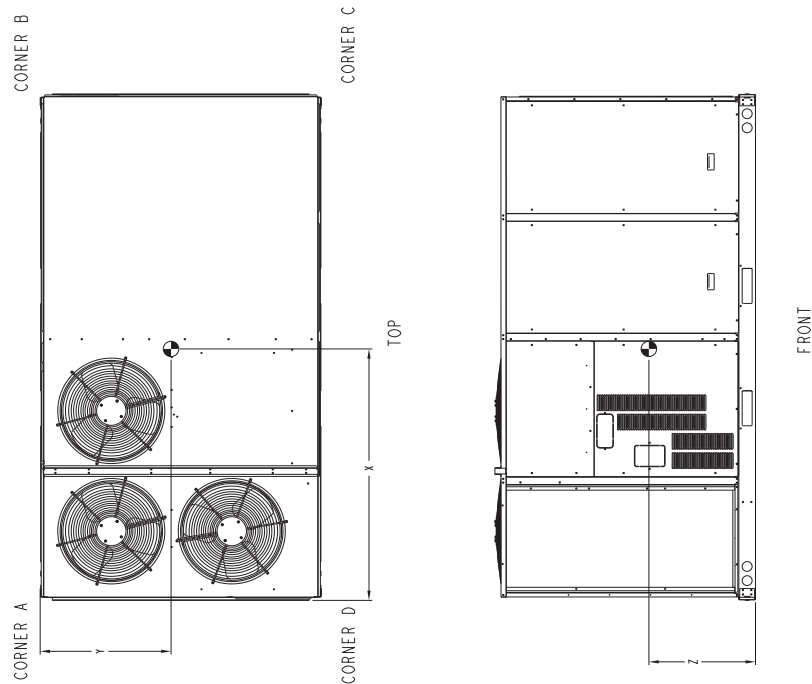
SHEET	DATE	SUPERCEDES	REV
2 of 2	05/07/10	NEW	48TW503115

CERTIFIED DIMENSION 50HCQ*12



UNIT	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	
50HC0012	1390	632	356	162	344	156	339	154	351	160	57	11448	31 1/2 (800)	21 1/8 (537)

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



HORIZONTAL ECONOMIZER

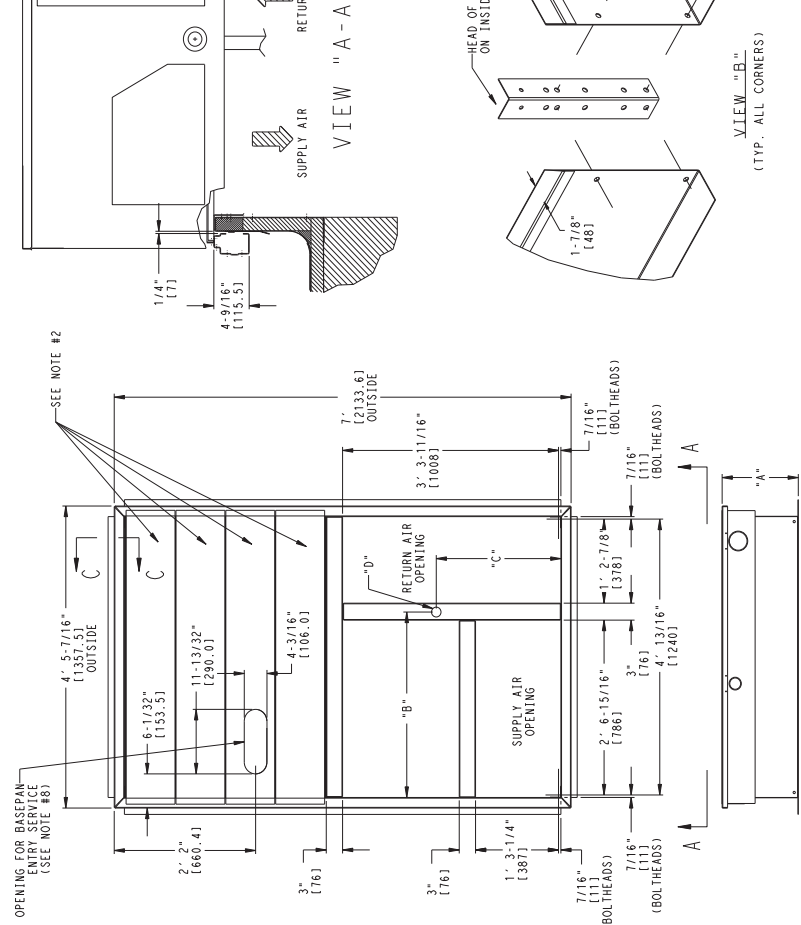
DATE	SUPERSEDES	REV
06/14/10	-	50TM501040

ROOF CURB DETAILS — SIZES 07, 08 & 09

- 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 PACKAGES CRBTMPWR001A01 AND 2A01 ARE FOR THROUGH THE CURB CONNECTIONS. PACKAGES CRBTMPWR003A01 AND 4A01 ARE FOR THRU-THE-BOTTOM TYPE CONNECTIONS.

ROOF CURB ACCESSORY #	A	UNIT SIZE
CRRCURB003A02	1'-2" [356]	50HCQ407-09
CRRCURB004A02	2'-0" [610]	

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



ROOF CURB DETAILS — SIZE 12

50HCQ

