

50TC
Single Package Rooftop
Cooling Only
Sizes 08–12 with Puron® (R–410A) Refrigerant

Carrier[®]

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: _____

50TC



This product has been designed and manufactured to meet Energy Star® criteria for energy efficiency. However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow all manufacturer's refrigerant charging and air flow instructions. **Failure to confirm proper charge and air flow may reduce energy efficiency and shorten equipment life.**



DESCRIPTION

50TC units are high-efficiency, single-packaged electric cooling only units that are pre-wired and pre-charged with environmentally sound Puron® (R-410A) HFC refrigerant. Electric heat is available as a field-installed accessory. The units are factory tested in the cooling mode. These units meet the ASHRAE 90.1-2004 and Energy Star minimum efficiency levels.

STANDARD FEATURES

Base Unit

- Puron (R-410A) HFC refrigerant
- ARI certified efficiency levels up to 11.2 EER
- Rated in accordance with ARI Standard 360
- Designed in accordance with Underwriters' Laboratories Std 1995 and listed by UL and UL, Canada
- Single-stage capacity control
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Cooling operating range from 40°F up to 115°F. Below 40°F requires Winter Start Kit
- 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
- 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

Cabinet

- Access panels with easy grip handles and NO-STRIP screw devices
- 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 coils with optional corrosion resistant coils
- Removable gauge line plugs for reading refrigerant pressure with unit panels in place

Standard Warranty

- 5-year electric heater (field-installed)
- 5-year compressor
- 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 _____ 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

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 Direct Digital Control (DDC).
 LON, MODBUS, BACNET and Johnson N2 protocols.
- CCN Direct Digital Control (DDC)
- Through the base connectors electric conduit/piping
- Economizer
- Non-fused disconnect
- Powered convenience outlet
- Non-powered convenience outlet
- High static evaporator fan motor
- Return Air smoke detector
- Supply Air smoke detector
- CO₂ sensor
- 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

50TC

OPTIONAL WARRANTIES

- 10-year compressor
- 10-year parts

FIELD INSTALLED ACCESSORIES

- EconoMi\$er IV-electromechanical, gear driven with Belimo actuator (2-10v DC signal) and controller
- EconoMi\$er2-compatible with DDC controls; gear driven with Belimo actuator (4-20mA) signal and no controller
- Electric heater(s)
- Single point kit
- Power exhaust
- Barometric relief
- Two-position motorized outside air damper
- Manual outside air damper
- Roofcurb - 14 inch tall
- Roofcurb - 24 inch tall
- Thru-the-bottom connections-electrical
- Condenser coil grille
- Condenser hail guard - louvered style
- Phase monitor (loss of phase/phase reversal)
- Fan/Filter status switch
- Low ambient head pressure controller-down to 0°F
- Low ambient head pressure controller-down to -20°F
- Winter start kit
- Time Guard II compressor anti-cycle protection

Economizer Sensors

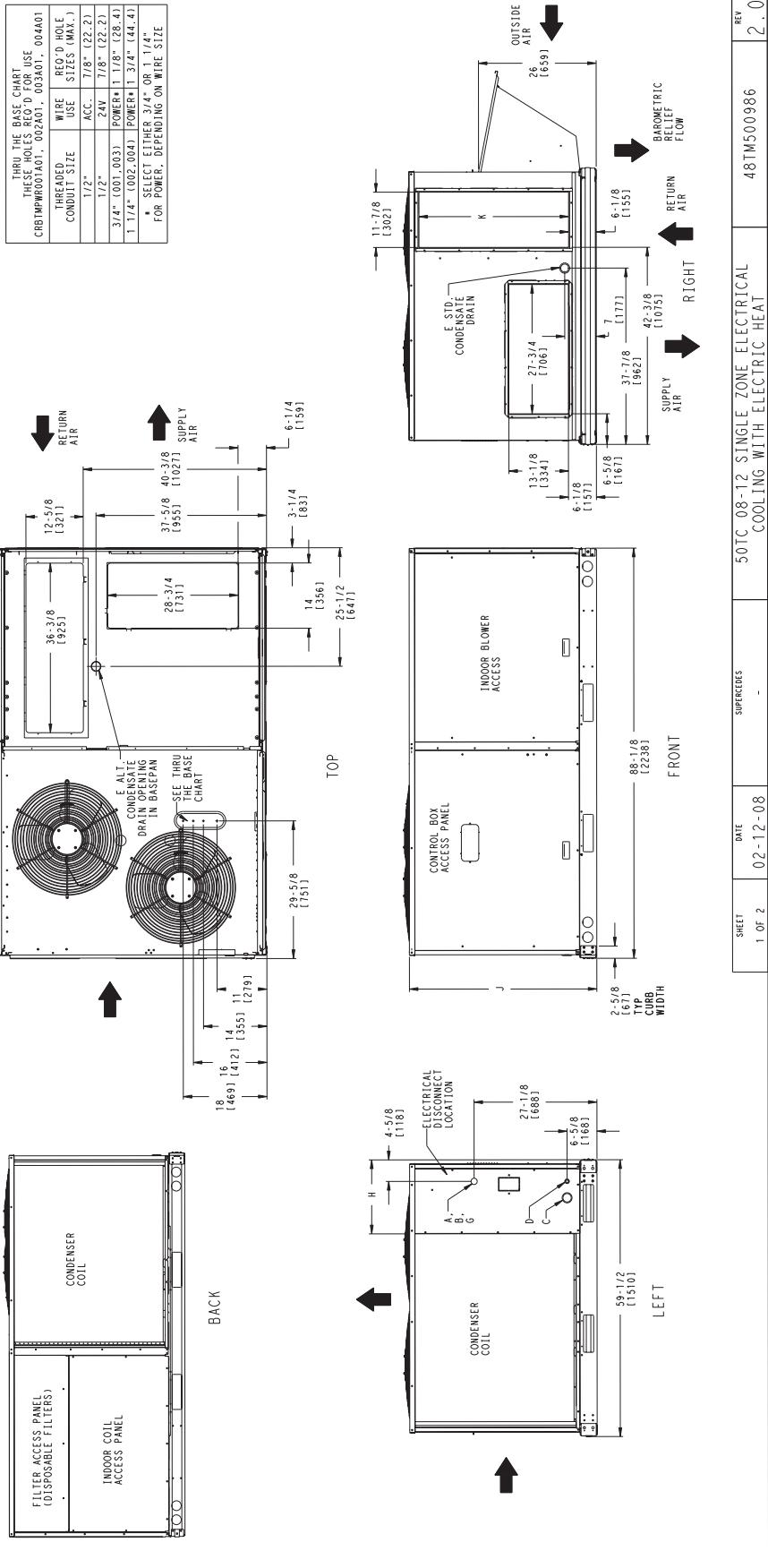
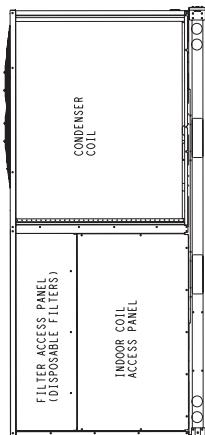
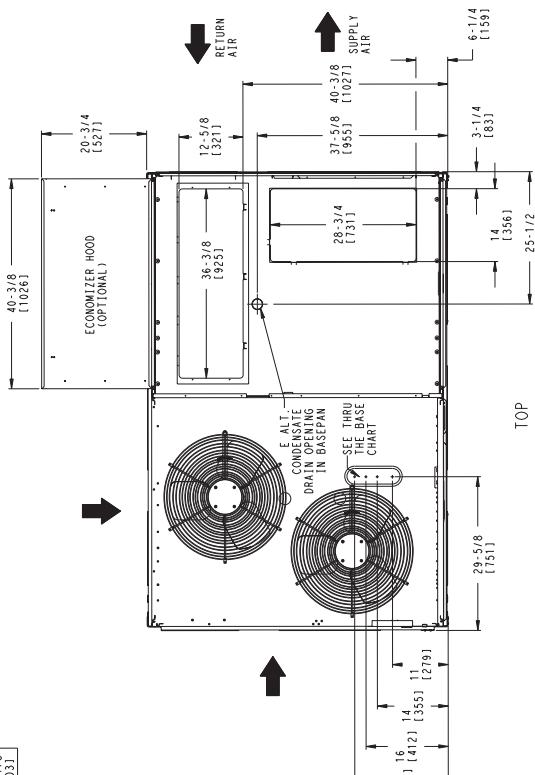
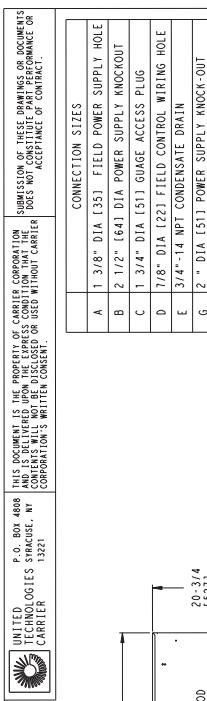
- Single Dry bulb control
- Differential Dry bulb control
- Single enthalpy control
- Differential enthalpy control
- CO₂ - wall mounted
- CO₂ - duct mounted
- CO₂ - unit mounted
- UV-C lights

CERTIFIED DIMENSION 50TC08-12

NOTES:

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

UNIT	J	K	H
50TC-08	41 7/4 [1068]	33 [838]	15 7/8 [4035]
50TC-09	45 7/8 [1233]	31 7/4 [846]	13 7/8 [3463]
50TC-12	48 7/8 [1253]	31 7/4 [946]	15 7/8 [4035]



SHEET	DATE	SUPERSEDES	50TC 08-12 SINGLE ZONE ELECTRICAL	481M500986	REV
1 of 2	02-12-08	-	COOLING WITH ELECTRIC HEAT	2.0	

CERTIFIED DIMENSION 50TC08-12

ROOF CURB DETAILS

ROOFCURB ACCESSORY	A	UNIT SIZE
CRRFCURB003A01	1' - 2" (356)	48TC08-12
CRRFCURB004A01	2' - 0" (610)	50TC08-12

NOTES:

1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS: 1 1/2" 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 THRU-THE-CURB GAS TYPE. PACKAGES CRBTMPWR003A01 AND 4A01 ARE FOR THE THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

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

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