Submittal Data

— PERFORMANCE DATA
— CERTIFIED DIMENSION PRINTS
— CERTIFIED ROOF CURB DIMENSION PRINTS
— SERVICE OPTION DIMENSION PRINTS
DESCRIPTION

48TC units are high-efficiency, single-packaged electric cooling, gas heating units that are pre-wired and pre-charged with Puron® (R-410A) HFC refrigerant. The units are factory tested in both heating and cooling modes. 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 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 and gas entry capability
- Single point gas and 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

**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%
- 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 Warranty**
- 10-year heat exchanger
- 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

ELECTRICAL DATA

Power Supply to Unit __________________ Volts __________________ Phase ______________ Hz
Minimum Circuit Amps ________________ Maximum Overcurrent Protection ________________

SUBMITTAL DATA

Job Name______________________________
Architect______________________________
Engineer______________________________
Contractor____________________________
Unit Designation________________________
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 for gas and electric conduit/piping
- Stainless steel gas heat exchanger (includes tubes, vestibule plate and collector box)
- 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

OPTIONAL WARRANTIES

- 15-year heat exchanger
- 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
- 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 only
- Thru-the-bottom connections-electrical and gas
- Condenser coil grille
- 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)
- 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
### ROOF CURB DETAILS

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<th>ROOFCURB ACCESSORY</th>
<th>UNIT SIZE</th>
<th>A UNIT SIZE</th>
<th>B UNIT SIZE</th>
<th>C UNIT SIZE</th>
<th>D UNIT SIZE</th>
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**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 GAUGE 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 CR8THPR001A01 AND 2A01 ARE FOR THRU-THE-CURB GAS TYPE. PACKAGES CR8THPR003A01 AND 4A01 ARE FOR THE THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

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**Diagram:**
- View "A-A" showing unit installation details.
- View "B-B" showing roof insulation and typical sides.
- Section "C-C" showing scale 1:4 details.

**Note:** Carriermount "Snap-Lock" corner fastening device is acceptable alternate construction.