Submittal Data

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

48TC*D units are high-efficiency, single-packaged electric cooling, gas heating units that are pre-wired and pre-charged with Puron® (R-410A) HFC refrigerant. Units utilize an all aluminum flat micro-channel tube with louvered fins condenser coil—NOVATION™. The units are factory tested in both heating and cooling modes. These units meet the ASHRAE 90.1-2007 and Energy Star minimum efficiency levels as well as also meeting 2010 efficiency standards.

STANDARD FEATURES

**Base Unit**
- Puron (R-410A) HFC refrigerant
- ARI certified efficiency levels up to 11.1 EER
- Rated in accordance with ARI Standard 360
- Designed in accordance with Underwriters’ Laboratories Std 1995 and listed by UL and UL, Canada
- Two-stage cooling capacity control
- 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).
- 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 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
- Centralized 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
- NOVATION all aluminum condenser 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 Warranty
- 15-year gas heat exchanger - Stainless Steel
- 10-year gas heat exchanger - Aluminized
- 5-year compressor
- 3-year NOVATION condenser coil
- 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-MP 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)
- 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

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

- Economizer™ IV-electromechanical, gear driven with Belimo actuator (2-10v DC signal) and controller
- Economizer™ 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

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
CERTIFIED DIMENSION 48TC*D14

NOTES:
1. DIMENSIONS ARE IN INCHES, DIMENSIONS TO 1/8" ARE MILLIMETERS
2. ▲ CENTER OF GRAVITY
3. ● DIRECTION OF AIR FLOW
## ROOF CURB DETAILS

### NOTES:
1. ROOF CURB ACCESSORY IS SHIPPED DISASSEMBLED. 
2. INSULATED PANELS: 1" THE POLYURETHANE FOAM, 1-3/4" DENSITY. 
3. DIMENSIONS IN [ ] ARE IN MILLIMETERS. 
4. ROOF CURB, 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 CRRFCURB003A01 AND 2A01 ARE FOR 
THRU-THE-BOTTOM TYPE. PACKAGES CRRFCURB003A01 AND 4A01 
ARE FOR THE THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

### TABLE 1: ROOF CURB ACCESSORY

<table>
<thead>
<tr>
<th>ROOF CURB ACCESSORY</th>
<th>A</th>
<th>UNIT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRRFCURB003A01</td>
<td>1'-2&quot;</td>
<td>48TC*D08, 12, 14</td>
</tr>
<tr>
<td>CRRFCURB004A01</td>
<td>2'-0&quot;</td>
<td>(610)</td>
</tr>
</tbody>
</table>

### TABLE 2: CONNECTOR PKG. ACC.

<table>
<thead>
<tr>
<th>CONNECTOR PKG. ACC.</th>
<th>B</th>
<th>C</th>
<th>D ALT DRAIN HOLE</th>
<th>G</th>
<th>POWER</th>
<th>CONTROL</th>
<th>ACCESSORY PKG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRRFCURB003A01</td>
<td>1'-10 15/16&quot;</td>
<td>1 3/4&quot;</td>
<td>1 3/4&quot; [44.5]</td>
<td>3/4&quot; [19]</td>
<td>[NPT]</td>
<td>[NPT]</td>
<td>1/2&quot; [12.7] [NPT]</td>
</tr>
<tr>
<td>CRRFCURB004A01</td>
<td>0&quot;</td>
<td>0&quot;</td>
<td>0&quot;</td>
<td>0&quot;</td>
<td>0&quot;</td>
<td>0&quot;</td>
<td>1 1/4&quot; [31.7]</td>
</tr>
</tbody>
</table>

### DIAGRAMS

- **View "A-A"**
- **View "B"**

- **Section "C-C"**

- **Diagram for Thru-Bottom Type**

- **Diagram for Alternate Construction**

- **Diagram for Thru-Bottom Type**

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