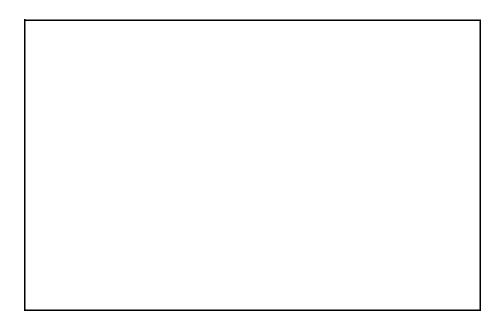


48FC 04-07 WEATHERMAKER® SERIES WITH ECOBLUE™ TECHNOLOGY SINGLE PACKAGE ROOFTOP GAS HEAT/ELECTRIC COOLING UNITS

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



JOB NAME:	LOCATION:		
BUYER:	BUYER PO #:	CARRIER#:	
UNIT NUMBER:	MODEL NUMBER:		
PERFORMANCE DATA CERTIFIED BY:			

DESCRIPTION

48FC units are single-packaged electric cooling, gas heating unit that are pre-wired and pre-charged with Puron® (R-410A) HFC refrigerant. The units are factory tested in both heating and cooling modes. Sizes 04-06 models use single-stage cooling capacity control. Size 07 models use two-stage cooling capacity control.

FEATURES

Standard Base Unit

- Puron (R-410A) HFC refrigerant
- 14.0 SEER and 15.2 IEER on 3-phase products and 13.8 SEER2 on single-phase products
- IEER of 15 0
- Meets or exceeds ASHRAE 90.1 energy efficiency levels
- Rated in accordance with AHRI Standards 210/240 for sizes 04 to 06 and 340/360 for size 07
- Designed in accordance with Underwriters Laboratories Std 1995
- Listed by UL and UL-Canada
- Single-stage cooling capacity control on 04 to 06 models, two-stage on 07 models
- Corrosive resistant 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)
- Field convertible from vertical to horizontal airflow for slab mounting — no special kits required
- 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
- Direct Drive EcoBlue[™] technology indoor fan system uses vane axial fan design and electronically commutated motor
 - Shall have inherent automatic-reset thermal overload protection
 - Shall require no fan/motor belts for operation, adjustments, and/or initial fan speed setup
 - Shall be internally protected from electrical phase reversal and loss
 - Shall have slow ramp up to speed control capabilities to help reduce sound and comfort issues
 - Shall be a slide-out design with two screw removal
 - On 07 size model with two stage cooling capacity control, the indoor fan speed is automatically controlled to meet the code compliant 66% low fan speed and 100% at full fan speed
- 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
- New unit control board with intuitive quick fan speed adjustment

Cabinet

- Access panels with easy grip handles
- Innovative, easy starting, no-strip screw feature on unit access panels
- 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 on 04 to 06 models, TXV on 07 models
- Liquid line filter drier
- Scroll compressors with internal line-break overload protection (one-stage on 04 to 06 models, two-stage on 07 models)
- Copper tube, aluminum fin coils with optional corrosion resistant coils
- Top cover removable gage 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 81%
- Induced draft combustion
- Redundant gas valve, with 2 stages of heating
- Flame roll-out safety protector
- Solid-state electronic direct spark ignition system
- Dedicated 3 to 5 ton "low NOx" models available that meet California Air Quality Management NOx requirement of 40 nanograms/joule. Low NOx models include stainless steel heat exchangers.

Standard Limited Parts Warranty

- 15-year gas heat exchanger parts Stainless Steel
- 10-year gas heat exchanger parts Aluminized
- 5-year compressor parts
- 5-year factory installed Ultra Low Leak Economizer
- 3-year SystemVuTM controls
- 1-year parts

PERFORMANCE DATA					
Unit Operating Weight	lb	Exhaust Fan Motor Size	HP		
COOLING		Curb Weight	lb		
Gross Total Capacity	Btuh	HEATING (GAS)			
at Condenser Air Temperature	°F	Heating Capacity:			
Gross Sensible Capacity	Btuh	Stage 1	Btuh		
Compressor Power Input	kW	Stage 2	Btuh		
Indoor Entering: db °F / wb	°F	Heating Capacity Total	Btuh		
Airflow CFM External Static Pressure	in. wg	Stage 1	kW		
Indoor Fan Motor Size	HP	Stage 2	kW		
Indoor Fan Motor Setting	Vdc	Heating Capacity Total	kW		

ELECTRICAL DATA

Power Supply to Unit	
Volts	
Phase	Hz
Maximum Circuit Amps	
Maximum Overcurrent Protection	
SUBMITTAL D)ATA
Job Name	
Architect	
Engineer	
Contractor	

Unit Designation















FACTORY-INSTALLED OPTIONS

☐ Economizer with DRY BULB Sensing and Barometric Relief (04-06 sizes)

Low Leak Air Dampers –

- Models with W7212 controller provide standard non-diagnostic control (EconoMi\$er® IV system).
- Models with W7220 controller meet California Title 24 (Section 120.2), IECC, and ASHRAE 90.1 for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er X system).
- Models with RTU Open controller meet California Title 24 (Section 120.2), IECC, and ASHRAE 90.1 for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er 2 system).

☐ Economizer with ENTHALPY Sensing and Barometric Relief (04-06 sizes)

Low Leak Air Dampers —

- Models with W7212 controller provide standard non-diagnostic control (EconoMi\$er® IV system).
- Models with W7220 controller meet California Title 24 (Section 120.2), IECC, and ASHRAE 90.1 for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er X system).
- Models with RTU Open controller meet California Title 24 (Section 120.2), IECC, and ASHRAE 90.1 for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er 2 system).

☐ Economizer with DRY BULB Sensing and Barometric Relief (04-07 sizes)

ULTRA LOW LEAK Air Dampers —

O Models with W7220 controller meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage, etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. **Economizers** ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC 2012 section C402.4.5.2 and IECC 2015 sections C403.2.4.3 and C403.3.3.5 and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited

parts warranty (EconoMi\$er X system).

O Models with RTU Open and SystemVu meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage, etc.) and mandatory section 120.2.i for Fault Detection and Diagnostic requirements. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. Economizers meet IECC 2012 section C402.4.5.2 and IECC 2015 sections C403.2.4.3 and C403.3.3.5 for outside air, return air, and relief air damper leakage requirements and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must

be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMi\$er 2 system).

☐ Economizer with ENTHALPY Sensing and Barometric Relief (04-07 sizes)

ULTRA LOW LEAK Air Dampers —

O Models with W7220 controller meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage, etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC 2012 section C402.4.5.2 and IECC 2015 sections C403.2.4.3 and C403.3.3.5 and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMi\$er X system).

Models with RTU Open and SystemVu meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage, etc.) and mandatory section 120.2.i for Fault Detection and Diagnostic requirements. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. Economizers meet IECC 2012 section C402.4.5.2 and IECC 2015 sections C403.2.4.3 and C403.3.3.5 for outside air, return air, and relief air damper leakage requirements and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMi\$er 2 system).

FACTORY-INSTALLED OPTIONS (CONT)				
Standard Base Unit		Two-position motorized outdoor air damper		
☐ SystemVu TM controls that include:		(04-06 sizes)		
Large full text - multi-line display		Non-fused disconnect		
 USB flash port for data transfer 		Powered 115-volt convenience outlet		
 Built in i-Vu[®], CCN, and BACnet[™] 		Non-powered 115-volt convenience outlet		
 Refrigerant pressure from display 		High static evaporator fan motor		
 Quick LED status — Run, Alert, Fault 		Return air smoke detector		
 Conventional slat or sensor capabilities 		Supply air smoke detector		
 Historical component runtime and starts 		CO ₂ sensor		
Supply air tempering		Condenser hail guard - louvered style		
 Equipment Touch[™] / System Touch[™] compatibility 		Special coating protection for evaporator and condenser coils		
 Demand limiting and ZS sensor compatibility 		Hinged access doors		
☐ RTU Open multi-protocol controller communicates		Condensate overflow switch		
to BACnet [™] 1, Modbus [®] 1, LonWorks [®] 1, and John-		MERV-8 return air filters		
son N2 protocols.		Phase Monitor Protection (3-Phase models only)		
Through the base connectors for gas and electric	Op	tional Warranties		
conduit/piping		Complete unit parts only, up to 5 years		
☐ Stainless steel gas heat exchanger (includes tubes, vestibule plate and collector box)		Complete unit parts and labor, up to 5 years		
Humidi-MiZer® adaptive dehumidification system (This option should also include low ambient controls)		Many other optional warranties are available. See the Commercial Start-Up and Optional Extended Warranty Price pages for further information.		
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FIELD-INSTALLED ACCESSORIES

NOTE: 48FC 07 models use two-speed indoor fan logic, the W7212 controller is designed for single-speed motor control. See Application Tip "ROOFTOP-18-01" for further guidance when using this unit.

☐ Economizer with DRY BULB Sensing and Barometric Relief

Low Leak Air Dampers —

- Models with W7212 controller provide standard non-diagnostic control (EconoMi\$er® IV system).
- Models with W7220 controller meet California Title 24 (Section 120.2), IECC, and ASHRAE 90.1 for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er X system).
- Models with RTU Open controller meet California Title 24 (Section 120.2), IECC, and ASHRAE 90.1 for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er 2 system).

☐ Economizer with ENTHALPY Sensing and Barometric Relief

Low Leak Air Dampers —

- Models with W7212 controller provide standard non-diagnostic control (EconoMi\$er IV system.)
- Models with W7220 controller meet California Title 24 (Section 120.2), IECC, and ASHRAE 90.1 for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er X system).
- Models with RTU Open controller meet California Title 24 (Section 120.2), IECC, and ASHRAE 90.1 for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er 2 system).

☐ Economizer with DRY BULB Sensing and Barometric Relief

ULTRA LOW LEAK Air Dampers —

O Models with W7220 controller meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage, etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC 2012 section C402.4.5.2 and IECC 2015 sections C403.2.4.3 and C403.3.3.5 and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated.

Models with RTU Open meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage, etc.) and mandatory section 120.2.i for Fault Detection and Diagnostic requirements. Economizers meet ASHRAE 90.1-2013 / 2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. Economizers meet IECC 2012 section C402.4.5.2 and IECC 2015 sections C403.2.4.3 and C403.3.3.5 for outside air, return air, and relief air damper leakage requirements and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must

be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMi\$er 2 system).

☐ Economizer with ENTHALPY Sensing and Barometric Relief

ULTRA LOW LEAK Air Dampers —

Models with W7220 controller meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage, etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC 2012 section C402.4.5.2 and IECC 2015 sections C403.2.4.3 and C403.3.3.5 and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated.

O Models with RTU Open meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage, etc.) and mandatory section 120.2.i for Fault Detection and Diagnostic requirements. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. Economizers meet IECC 2012 section C402.4.5.2 and IECC 2015 sections C403.2.4.3 and C403.3.3.5 for outside air, return air, and relief air damper leakage requirements and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must

be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMi\$er 2 system).

FIELD-INSTALLED ACCESSORIES (CONT)

NOTE: 48FC 07 models use two-speed indoor fan logic, the two-position damper and manual dampers are designed for single-speed motor control. See Application Tip "ROOFTOP-18-01" for further guidance when using this unit.

Power exhaust — prop fan design Two-position motorized outdoor air damper Manual outside air damper 50% Roof curb — 14 inch (356mm) tall Roof curb — 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) Fan/Filter status switch 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 Thermostats and sensors NOTE: Size 07 model has two-stage cooling thermostat; use appropriate thermostat. Condensate overflow switch Non-powered 115-volt (20 amp) convenience outlet Side access hinged filter door kit Horn/Strobe annunciator conomizer 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 PRINT

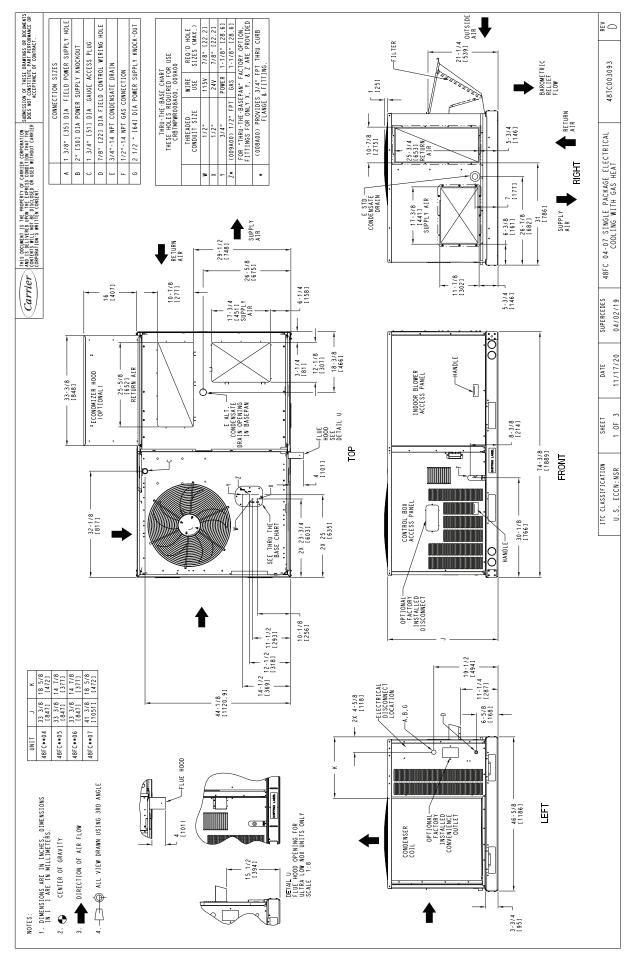


Fig. 1 — 48FC**04-07 Dimensional Drawing

CERTIFIED DIMENSIONS PRINT

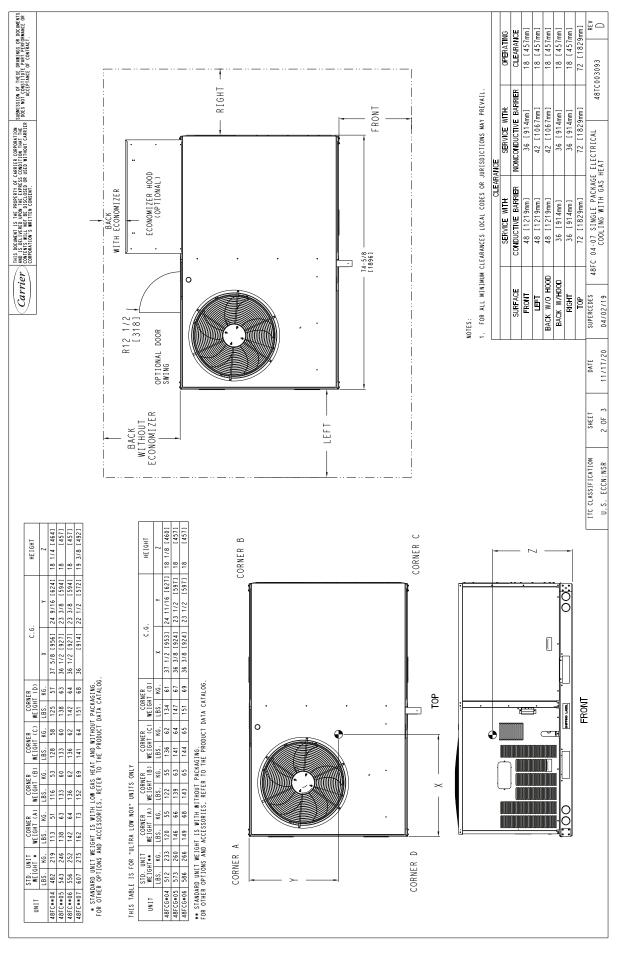


Fig. 1 — 48FC**04-07 Dimensional Drawing (cont)

CERTIFIED DIMENSION PRINT

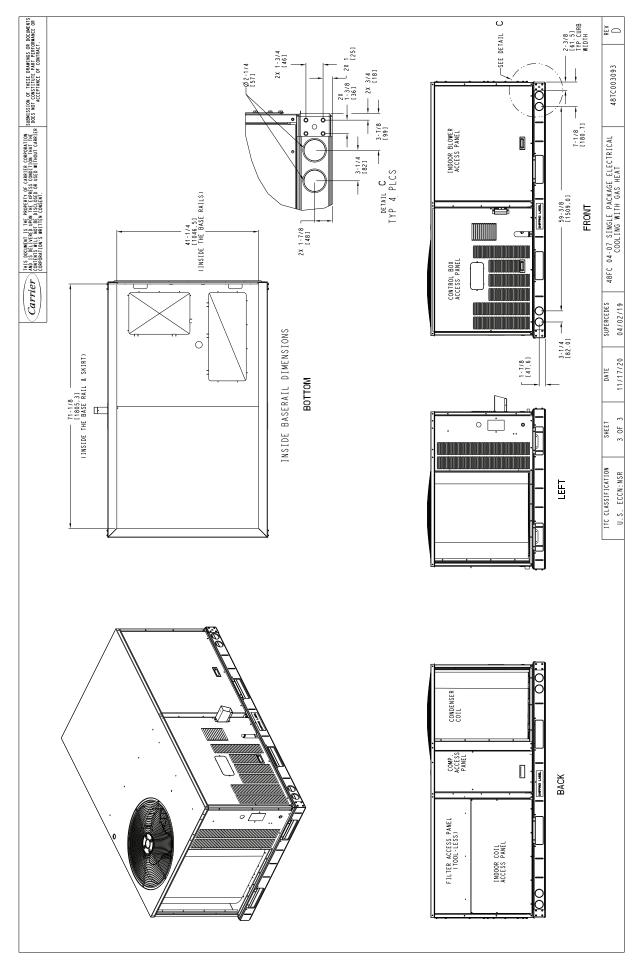


Fig. 1 — 48FC**04-07 Dimensional Drawing (cont)

CONTROL WIRING ACCESSORY CONVENIENCE FITTING OUTLET WIRING CONNECTOR 48TC400427 -SEE NOTE #2 1/2" [12.7] NPT 5'7-3/8" 1/2" [12.7] NPT - 2-3/8" [61] POWER WIRING FITTING RETURN AIR 3/4" [19] NPT 1'4-13/16" [427] INSIDE 11 3/4"[298.5] WIDE INSULATED DECK PANELS GAS FITTING 1/2" [12.7] NPT 3/4" [19] NPT 8 9/16*[217.5] WIDE — INSULATED DECK PANEL GAS CONNECTION TYPE SUPPLY AIR THRU THE BOTTOM SEE VIEW "B" THRU THE CURB GAS SERVICE PLATE -THRU THE CURB DRILL HOLE Ø 2" [50.8] @ ASSEMBLY (IF REQUIRED) (SEE NOTE #8) - 1.00" [25.4] CONNECTOR PKG. ACC. | --- | 1-34" | [44.4] | SECTION E-E SCALE 0.250 CRBTMPWR001A01 CRBTMPWR003A01 -ROOFING MATERIAL (FIELD SUPPLIED) —ROOFING FELT (FIELD SUPPLIED) —CANT STRIP (FIELD SUPPLIED) 1-3/4" [44.5] COUNTER FLASHING (FIELD SUPPLIED) -NAIL (FIELD SUPPLIED) TYPICAL (4) SIDES NOTES: 1. ROOCEURB ACCESSORY IS SHIPPED DISASSEMBLED. 1. ROOCEURB ACCESSORY IS SHIPPED DISASSEMBLED. 2. DIMBALSHOS IN I. JAREN IMILIMETERS. 3. DIMBALSHOS IN I. JAREN IMILIMETERS. 4. ROOCURB: 18 GAGE STEEL. 5. ATTACH DUCTWORKTO CURB. (FANGES OF DUCT REST ON CURB.). 5. RENVICE CLEARANCE 4 FEET ON EACH SIDE. 7. ROOZED. DIRECTION OF AIR FLOW. 7. ROOZED. DIRECTION OF AIR FLOW. 8. CONNECTIOR PACKAGE CRBITMPWROMANI IS FOR THRU-THE-CURB GAS TYPE PACKAGE CRBITMPWROMANI IS FOR THRU-THE-CURB GAS CONNECTIONS. RIGID INSULATION FIELD SUPPLIED) 7/16" [11] VIEW "B" CORNER DETAIL DUCF— (FIELD SUPPLIED) GASKET (SUPPLIED WITH CURB) 70.87" [1800.2] 32.19" [817.6] ш 🖛 RETURN AIR OPENING - 3.00" [76.2] - 13.78" [350.0] 14" [356] 24" [610] **(** -- 40.69" [1033.5] SUPPLY AIR OPENING CRRFCURB001A01 -21.84" [554.7] CRRFCURB002A01 ROOF CURB ACCESSORY # 11.96" [303.8] Ø1/3/4"[44.5] -20.41" [518.3] 5.42" [137.7] 3.00" 21.74" [552.2] 1/4" [7.0] 1.75" [44.5] 4.96" [126.0] 49/16"

ROOF CURB DETIALS

Fig. 2 — 48FC**04-07 Roof Curb Accessory Details

