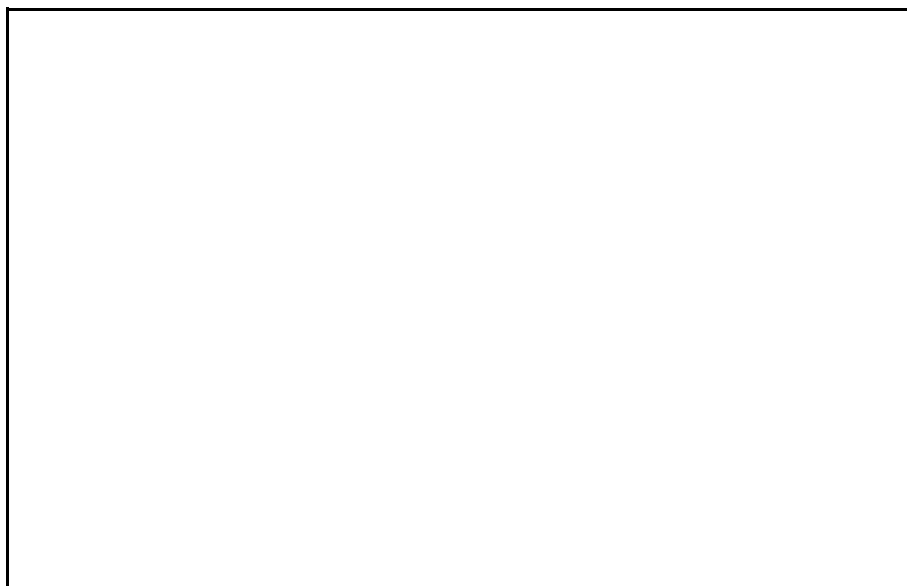




**50FC 08-14 WEATHERMAKER® SERIES
WITH ECOBLUE TECHNOLOGY
ELECTRIC COOLING ROOFTOP UNITS WITH
OPTIONAL ELECTRIC HEAT
AND PURON® REFRIGERANT (R-410A)**



- 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

50FC 08-14 size units are single-packaged electric cooling, units with optional field installed electric heat, or cooling only units that are pre-wired and pre-charged with Puron® (R-410A) HFC refrigerant. The units are fully factory tested. These units meet the upcoming DOE-2023 (Department of Energy) and ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 90.1 Minimum Efficiencies. Models use Carriers leading Ecoblue™ Vane Axial Indoor Fan System with built in speed control and no fan belts or pullies. All models have two-stage cooling and single circuit design to provide maximum efficiency and comfort control.

FEATURES

Standard Base Unit

- Puron (R-410A) HFC refrigerant
- Two-stage/single-circuit cooling capacity control on all models
- IEER up to 15.2
- Exceeds current DOE IEER efficiencies while meeting DOE's new stringent 2023 IEER efficiency requirements
- DOE, ASHRAE 90.1, and IECC energy compliant
- NEW Direct Drive - EcoBlue™ Technology Indoor fan system uses Vane Axial fan design and electronically commutated motor. Indoor fan motor also delivers Staged Air Volume (SAV) fan speed control.
- Non-corrosive composite condensate pan in accordance with ASHRAE 62 Standard, sloping design; side or center drain
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Insulated cabinet
- Standard cooling operating range up to 125°F (52°C), except 14 size models with 115°F (46°C) and down to 40°F (-4°C). Low Ambient kits allows cooling operation down to 0°F (-18°C).
- Rated in accordance with AHRI Standards 340/360
- Designed in accordance with UL Standard 1995
- Listed by UL and CUL-Canada or ETL and ETL-Canada
- Two-inch disposable return air filters
- Tool-less filter access door
- 24-volt control circuit protected with resettable circuit breaker and 75va transformer
- Direct Drive - EcoBlue™ 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 phase loss
 - Shall have slow ramp up to speed control capabilities to help reduce sound and comfort issues
 - Shall be a slide-out design with simple screw removal
 - Shall not require VFD fan speed control

- Central terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement
- Low pressure and high-pressure switch protection
- Mixed air temperature switch protects the compressors when a combination of outdoor air and return falls below unsafe compressor limits
- Permanently lubricated evaporator-fan motor
- Totally enclosed condenser motors with permanently lubricated bearings
- Large access panels with easy grip handles
- Innovative, easy starting, no-strip screw feature on unit access panels
- New Vane Axial evaporator-fan system has no fan belts, pullies, blower shaft and blower bearings with slide out design
- Field convertible from vertical to horizontal airflow configuration on all models.
- Provisions for thru-the-bottom power entry capability as standard
- Single point electric connections
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- Highly protected tandem scroll compressors with internal line-break overload protection

Refrigerant System (All)

- TXV refrigerant metering system on all models
- Liquid line filter drier on each circuit
- Tandem scroll compressors with internal line-break overload protection
- Copper tube, aluminum fin evaporator coils
- Round Tube/Plate Fin (RTPF) coils on all models

Standard Limited Parts Warranty

- 5-year compressor parts
- 5-year electric heater
- 1-year parts
- 3-year parts SystemVu™ controller

PERFORMANCE DATA

Unit Operating Weight _____ lb

Curb 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 _____ CFM External Static Pressure _____ in. wg

Indoor Fan Motor Size _____ HP

Exhaust Fan Motor Size _____ HP

HEATING (ELECTRIC)

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

Maximum Circuit Amps _____

Maximum Overcurrent Protection _____

SUBMITTAL DATA

Job Name _____

Architect _____

Engineer _____

Contractor _____

Unit Designation _____



FACTORY-INSTALLED OPTIONS

☐ **Economizer with DRY BULB Sensing and Barometric Relief**

Low Leak Air Dampers —

- Models with W7220 controller meet California Title 24-2016 (Section 120.2) for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er X system).
- Models with SystemVu controller meet California Title 24-2016 (Section 120.2) Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er 2 system).

☐ **Economizer with ENTHALPY Sensing and Barometric Relief**

Low Leak Air Dampers —

- Models with W7220 controller meet California Title 24-2016 (Section 120.2) Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er X system).
- Models with SystemVu controller meet California Title 24-2016 (Section 120.2) Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er 2 system).

☐ **Economizer with DRY BULB Sensing and Barometric Relief**

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 perspective 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 — plus 5 year limited parts warranty (EconoMi\$er X system).

- Models with SystemVu meet California Energy Commission Title 24-2016 perspective 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**

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 perspective 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.

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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

Factory Options

- ☐ SystemVu™ controls that include:
 - Large full text - multi line display
 - USB Flash Port for data transfer
 - Built in i-Vu®, CCN and BACnet¹
 - Refrigerant pressure from display
 - Quick LED Status - Run, Alert, Fault
 - Conventional stat or sensor capabilities
 - Historical component runtime and starts
 - Supply air tempering
 - Equipment Touch™/System Touch™ compatibility
 - Demand limiting and ZS sensor compatibility

- ☐ Through the base connectors for gas and electric conduit/piping
- ☐ Humidi-MiZer® adaptive dehumidification system
- ☐ 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
- ☐ Special coating protection for evaporator and condenser coils
- ☐ Hinged access doors
- ☐ Condensate overflow switch

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 pages for further information.

1. BACnet is a trademark of ASHRAE.

FIELD-INSTALLED ACCESSORIES

❑ Economizer with DRY BULB Sensing and Barometric Relief

Standard Leak Air Dampers —

- Models with W7212 controller provide standard non-diagnostic control. EconoMiSer® IV.
- Models with W7220 controller meet California Title 24-2016 Section 120.2.i for Fault Detection and Diagnostic (FDD) requirements. EconoMiSer X.
- Models with SystemVu controller meet California Title 24-2016 Section 120.2.i Fault Detection and Diagnostic (FDD) requirements. EconoMiSer 2.

❑ Economizer with ENTHALPY Sensing and Barometric Relief

Standard Leak Air Dampers —

- Models with W7212 controller provide standard non-diagnostic control. EconoMiSer IV.
- Models with W7220 controller meet California Title 24-2016 Section 120.2.i Fault Detection and Diagnostic (FDD) requirements. EconoMiSer X.
- Models with SystemVu controller meet California Title 24-2016 Section 120.2.i Fault Detection and Diagnostic (FDD) requirements. EconoMiSer 2.

❑ Economizer with DRY BULB Sensing and Barometric Relief

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 perspective 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.

- Models with SystemVu meet California Energy Commission Title 24-2016 perspective 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.
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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.

FIELD-INSTALLED ACCESSORIES (CONT)

- ☐ Prop fan power exhaust
- ☐ Two-position motorized outdoor air damper
- ☐ Manual outside air damper 25%
- ☐ Manual outside air damper 50%
- ☐ Roof Curb — 14 inch (356 mm) tall
- ☐ Roof Curb — 24 inch (610 mm) tall
- ☐ Thru-the-bottom connections (electrical only)
- ☐ Electric heat and single point kits
- ☐ Condenser hail guard (louvered style)
- ☐ Phase monitor (loss of phase/phase reversal)
- ☐ Winter start kit, down to 0°F (−18°C)
- ☐ Low ambient head pressure controller, down to 0°F (−18°C)
- ☐ Time Guard II compressor anti-cycle protection
- ☐ Thermostats and Sensors

- ☐ Condensate overflow switch
- ☐ Non-powered 115-volt (20 amp) convenience outlet
- ☐ Side access hinged filter door kit
- ☐ Horn/strobe annunciator

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 PRINT

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NOTES:

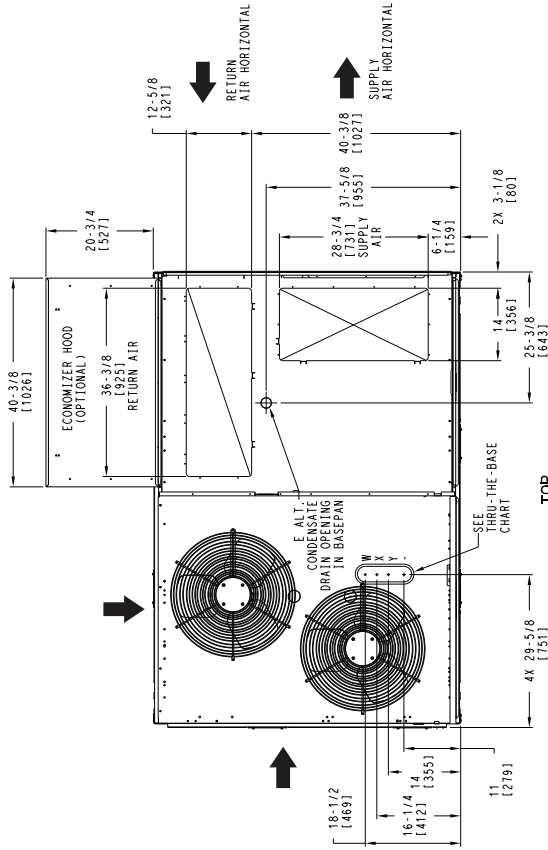
- DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
- CENTER OF GRAVITY
- DIRECTION OF AIR FLOW
- ALL VIEW DRAWN USING 3RD ANGLE

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" [51] 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 (FIELD INST.)
 THESE HOLES REQUIRED FOR USE WITH ACCY KITS:
 C881MWR002A01

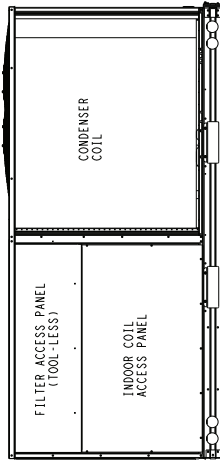
	THREADED CONDUIT SIZE	WIRE USE SIZES (MAX.)
W	1/2"	ACC. 7/8" [22.2]
X	1/2"	24V 7/8" [22.2]
Y	1 1/4" (002)	POWER 1 3/4" [44.4]

THRU-THE-BASE CHART (FOP)
 FOR "THRU-THE-BASEPAN" FACTORY OPTION,
 FITTINGS FOR ONLY X & Y ARE PROVIDED:
 (1) 1/2" & (1) 1 1/4" ELECTRICAL FITTINGS.

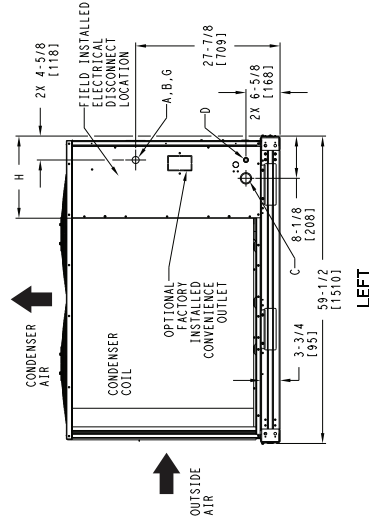


UNIT	OUTDOOR COIL TYPE	J	K	H
50FC-M08	RTPF	41 1/4 [1048]	32 3/4 [827]	15 7/8 [403]
50FC-M09	RTPF	49 3/8 [1253]	36 3/8 [925]	15 7/8 [403]
50FC-M12	RTPF	49 3/8 [1253]	36 3/8 [925]	15 7/8 [403]

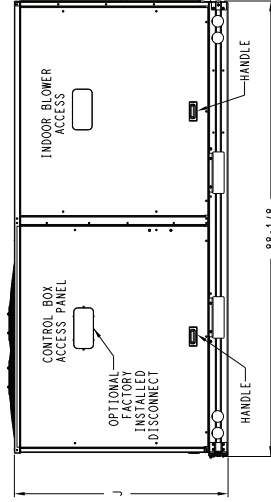
RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)



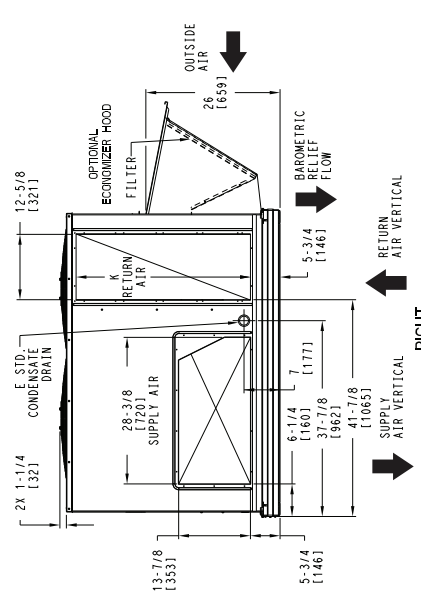
BACK



LEFT



FRONT



RIGHT

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	REV
U.S. EECN: NSR	1 OF 3	03/12/21		

Fig. 1 — 50FC**08-12 Dimensional Drawing

CERTIFIED DIMENSION PRINT

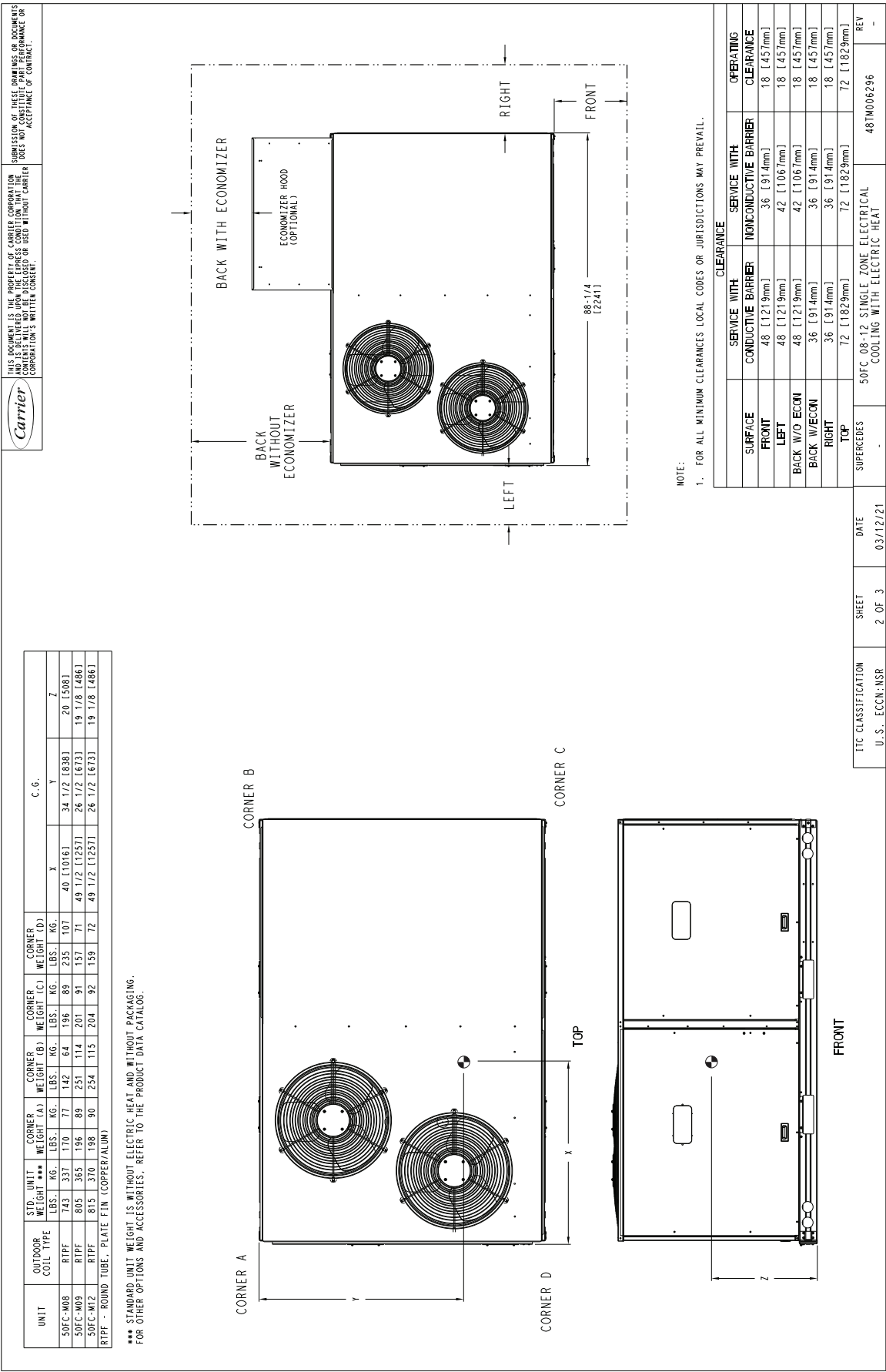


Fig. 1 — 50FC**08-12 Dimensional Drawing (cont)

CERTIFIED DIMENSION PRINT

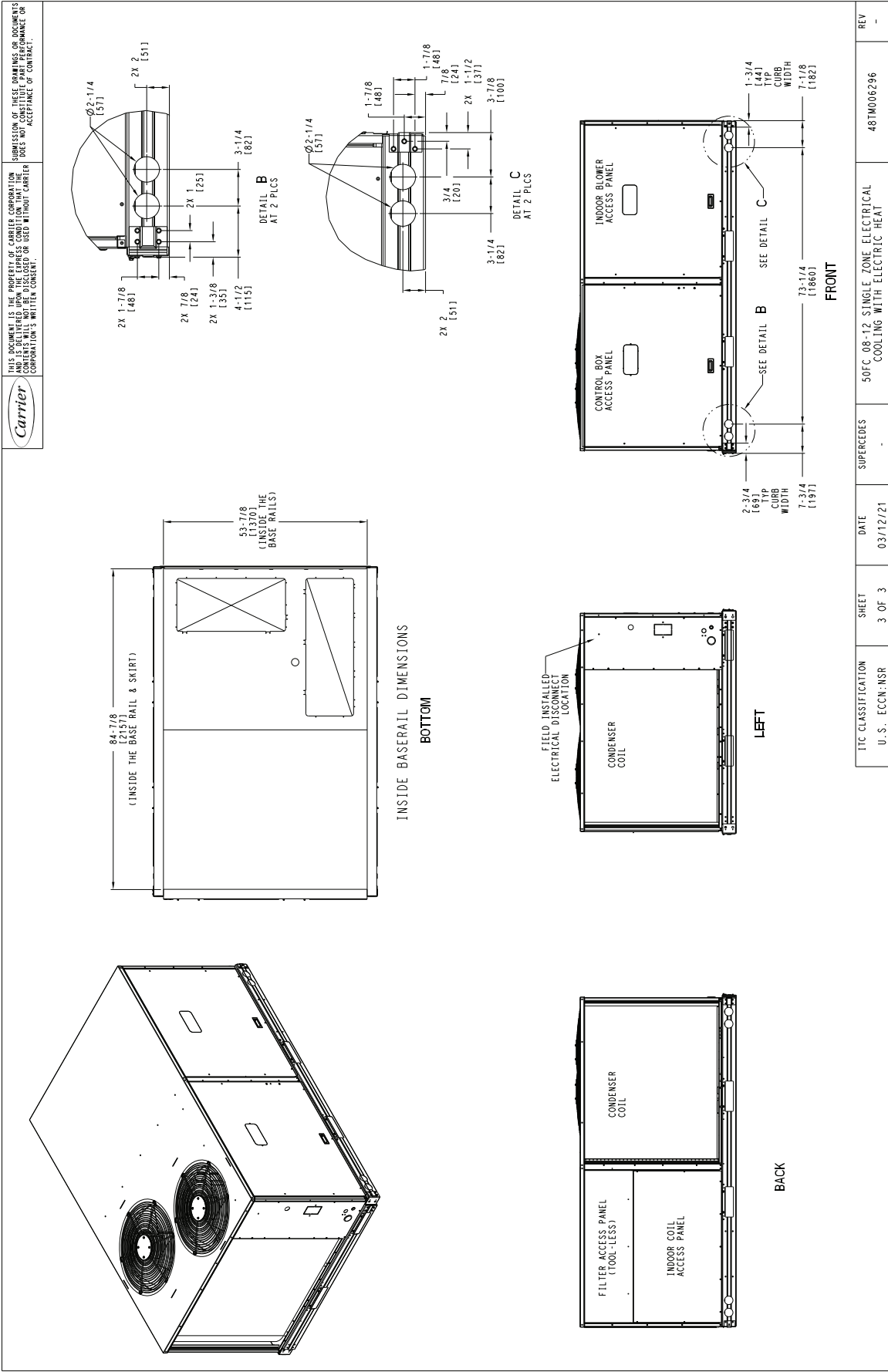


Fig. 1 — 50FC**08-12 Dimensional Drawing (cont)

NOTES:

1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW
4. ALL VIEW DRAWN USING 3RD ANGLE

FRONT

TOP

LEFT

BACK

CONNECTION SIZES

	A	B	C	D	E	G
1	3/8"	[35]	DIA. FIELD POWER SUPPLY HOLE			
2	1/2"	[64]	DIA. POWER SUPPLY KNOCKOUT			
3	3/4"	[51]	DIA. GAUGE ACCESS PLUG			
4	7/8"	[22]	DIA. FIELD CONTROL WIRING HOLE			
5	3/4"	[14]	NPT CONDENSATE DRAIN			
6	2"	[51]	DIA. POWER SUPPLY KNOCK-OUT			

THRU-THE-BASE CHART

WIRE CONDUIT SIZE	WIRE USE	RED 'D' HOLE SIZES (MAX.)
1/2"	ACC.	7/8" [22.2]
1/2"	24V	7/8" [22.2]
1 1/4" (002)	POWER	1 3/4" [44.4]

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

UNIT

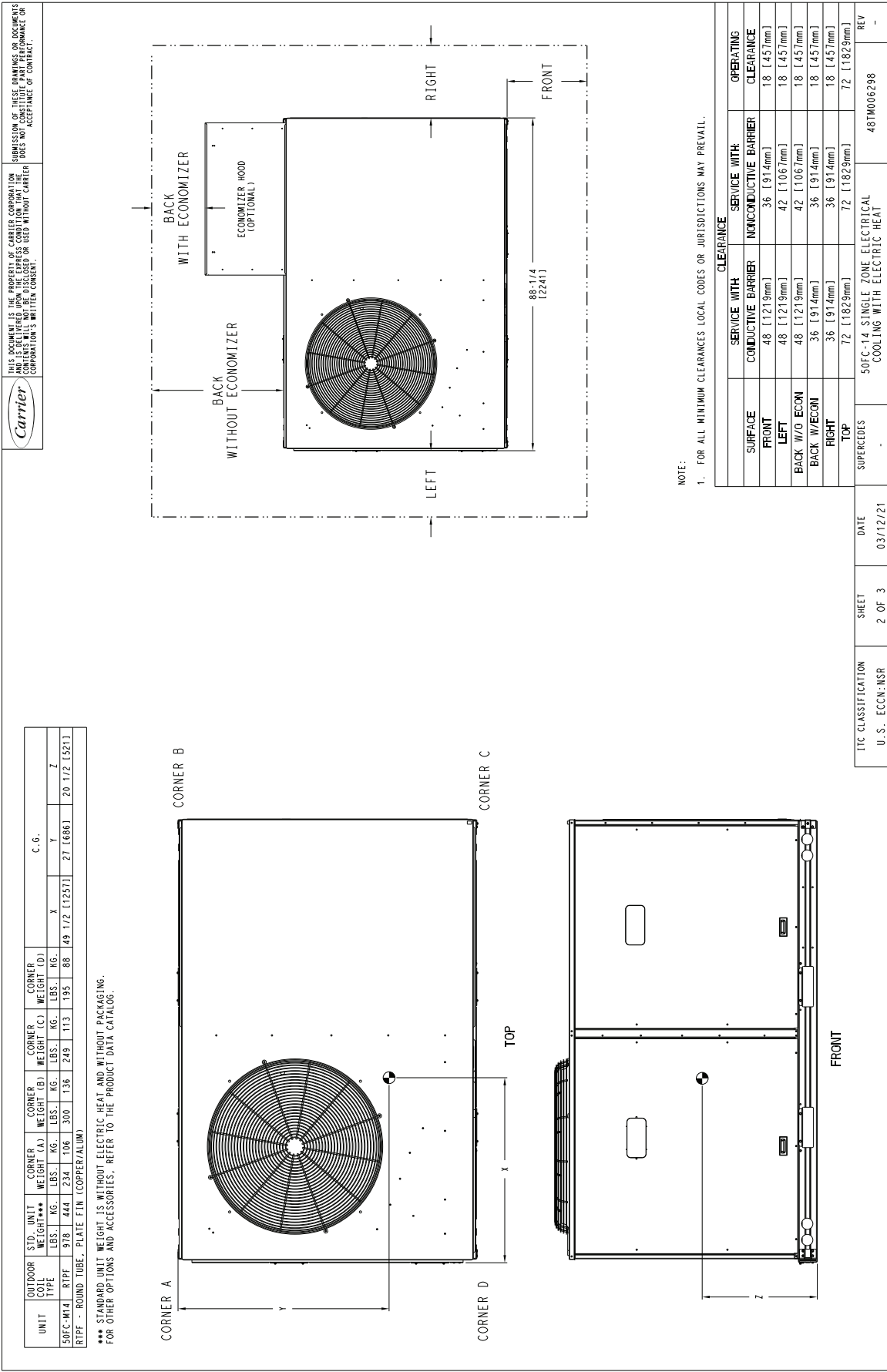
50FC-M14

RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM.)

UNIT	OUTDOOR COIL TYPE	H
50FC-M14	RTPF	15 7/8 [403]

11

CERTIFIED DIMENSION PRINT



CERTIFIED DIMENSION PRINT

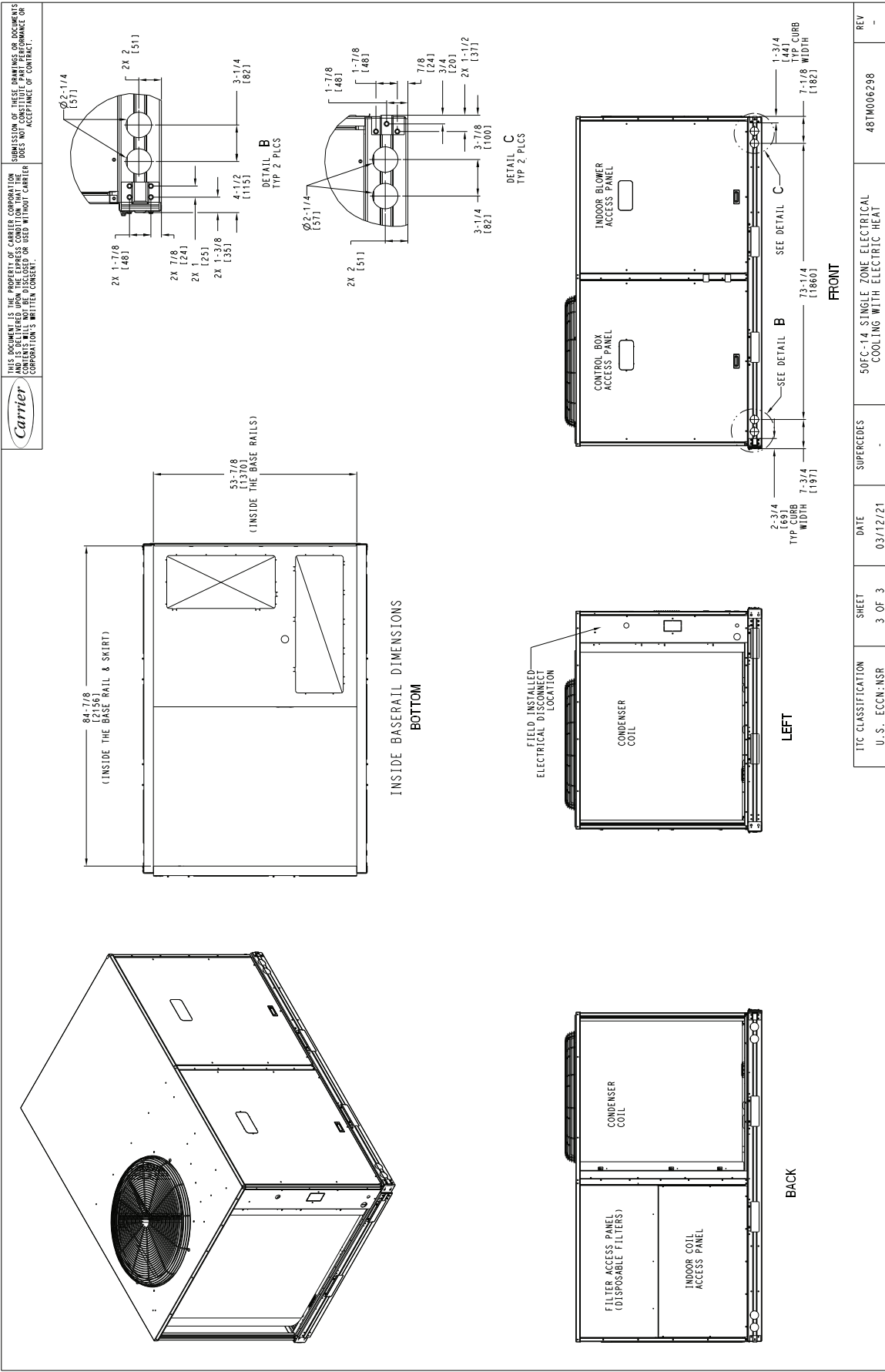


Fig. 2 — 50FC**14 Dimensional Drawing (cont)

CERTIFIED ROOF CURB DETAILS

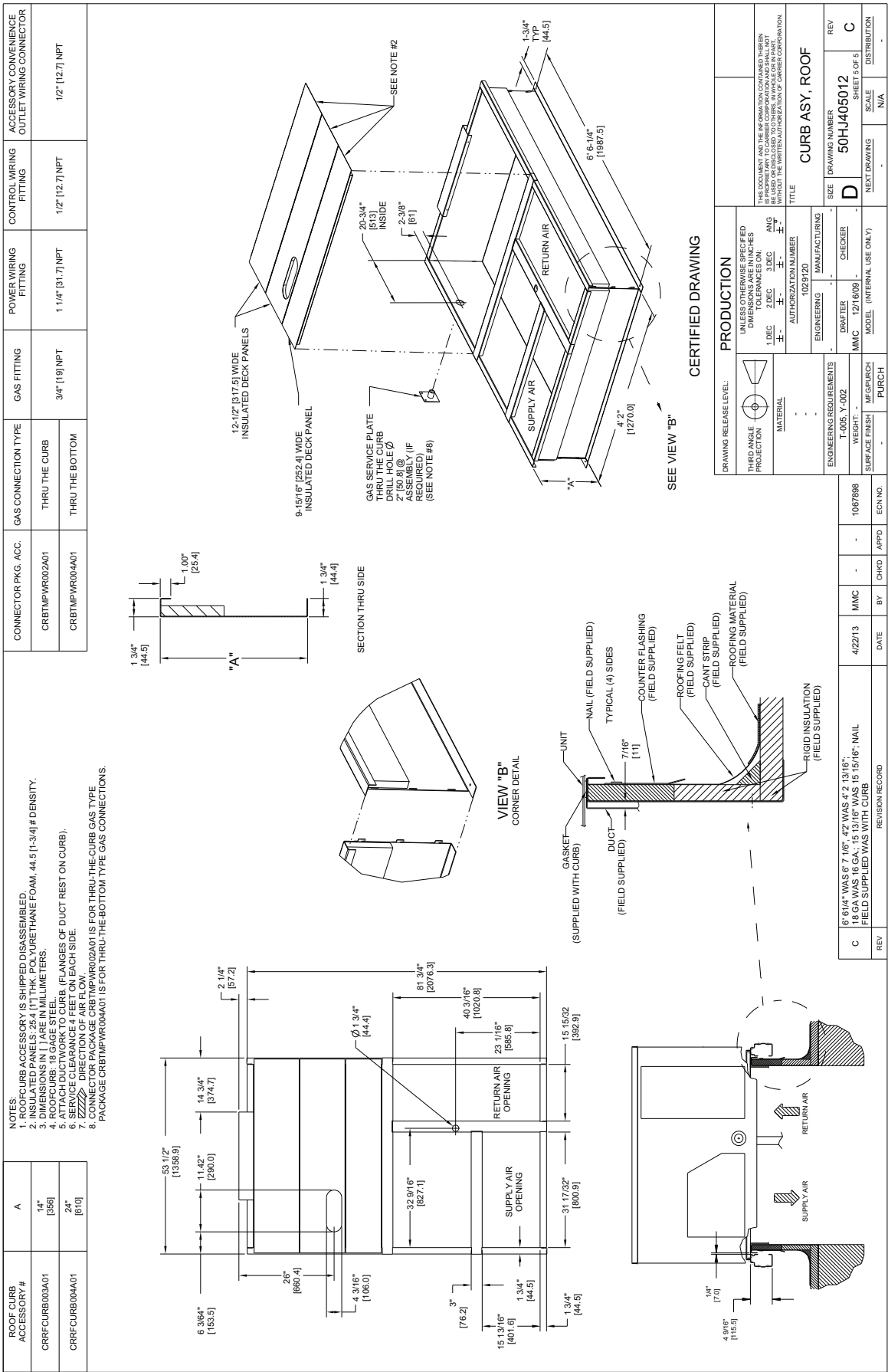


Fig. 3 — 50FC**08-14 Roof Curb Details