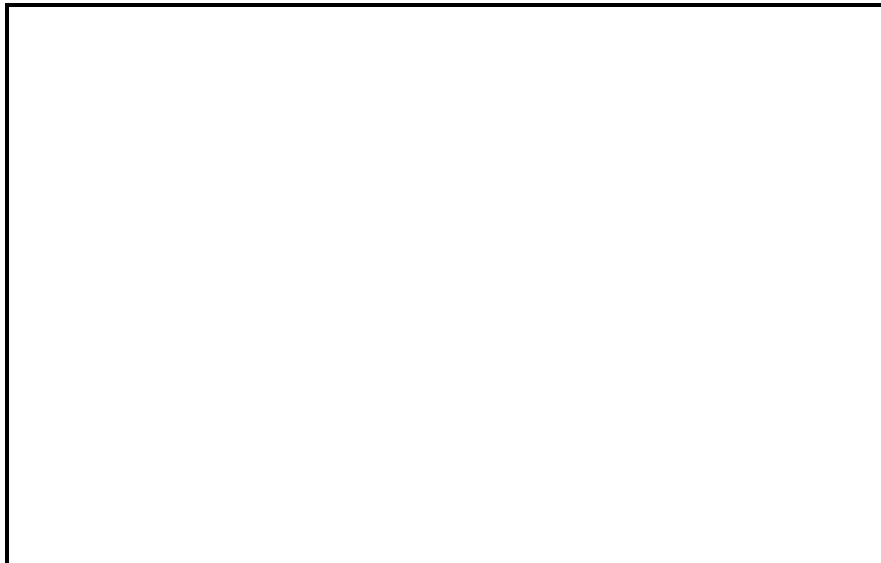


**48LC WeatherExpert™ Series**  
**Ultra High Efficient**  
**Single Package Rooftop and Single Zone VAV**  
**Gas Heating/Electric Cooling Unit**  
**Sizes 14 – 26 with Puron® (R-410A) Refrigerant**



## **Advanced Submittal Data**

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



*Advanced product data, subject to change without notice.*

Job Data: \_\_\_\_\_ Location: \_\_\_\_\_  
 Buyer: \_\_\_\_\_ Buyer P.O.#: \_\_\_\_\_ Carrier: \_\_\_\_\_  
 Unit Number: \_\_\_\_\_ Model Number: \_\_\_\_\_  
 Unit Designation: \_\_\_\_\_  
 Performance Data Certified By: \_\_\_\_\_

## DESCRIPTION

48LC units are ultra high-efficiency, single-packaged electric cooling, gas heating units. Units utilize three stages of cooling capacity control with matching indoor fan motor speed control. All models are available with belt drive indoor fan motors with Variable Frequency Drive (VFD) speed controller and Direct Drive - ECM outdoor fan motor.

Models use DDC electrical controls with Carrier's Comfort Control Logic.

All units are factory tested in both heating and cooling modes, and rated in accordance with AHRI Standards 340/360.

## STANDARD FEATURES

### Base Unit

- Puron (R-410A) HFC refrigerant
- IEER's up to 19.1 with with EER's up to 12.5
- ASHRAE 90.1 compliant and Energy Star qualified
- Meets or exceeds CEE tier II levels
- Rated in accordance with AHRI Standards 340/360
- Designed in accordance with Underwriters' Laboratories Std 1995
- Listed by ETL
- 3-stage cooling capacity control with crankcase heaters
- Belt drive indoor fan and pulley system with Variable Frequency Drive (VFD) controller
- High efficient ECM outdoor fan motor
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE 62 Standard, sloping design; side or center drain
- Standard ambient cooling operation down to 40°F (4°C) with lower operation with integrated economizer. All units operate up to 125°F (52°C)
- Dedicated vertical and horizontal airflow models available ordered as factory option. No special kits required.
- Proven Tandem Scroll compressors with internal line-break overload protection
- Single refrigerant circuit design with full face activated evaporator coil
- Two-inch disposable return air filters on slide out track. Four inch track available as field installed accessory.
- Provisions for thru-the-bottom power entry capability as standard
- Single point gas and electric connections
- 24-volt control circuit protected with resettable circuit breaker
- Permanently lubricated evaporator-fan motor
- Totally enclosed condenser motors with permanently lubricated bearings

- Low-pressure and high-pressure switch protection
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- Sound levels as low as 86 dB

### Cabinet

- Innovative, easy starting, no-strip screw feature on unit access panels
- Access panels with easy grip handles and tool-less filter access door
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet with foil faced insulation

### Refrigerant System

- Precision sized TXV refrigerant metering device
- High capacity liquid line filter drier
- High performance internally enhanced copper tube, aluminum fin coils with optional corrosion resistant coils

### Gas Heat

- Exclusive 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%
- Inducted draft gas heat combustion
- Redundant gas valves with up to two stages of heating
- Flame roll-out safety protector
- Solid-state electronic direct spark ignition system

### Standard Limited Parts Warranty

- 15-year gas heat exchanger parts - Stainless Steel
- 10-year gas heat exchanger parts - Aluminized
- 5-year compressor parts
- 1-year parts

## 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**

Total Heating Capacity:

#### INPUT

Stage 1 \_\_\_\_\_ Btuh

Stage 2 \_\_\_\_\_ Btuh

#### OUTPUT

Stage 1 \_\_\_\_\_ kW

Stage 2 \_\_\_\_\_ kW

Thermal Efficiency State \_\_\_\_\_ %

48LC

## ELECTRICAL DATA

Power Supply to Unit \_\_\_\_\_ Volts \_\_\_\_\_ Phase \_\_\_\_\_ Hz

Minimum Circuit Amps \_\_\_\_\_ Maximum Overcurrent Protection \_\_\_\_\_

## SUBMITTAL DATA

Job Name \_\_\_\_\_

Architect \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor \_\_\_\_\_

Unit Designation \_\_\_\_\_



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahridirectory.org](http://www.ahridirectory.org).



**Certified to ISO 9001**

## OPTIONS AND ACCESSORIES

### FACTORY-INSTALLED OPTIONS (FIOPs)

- Stainless steel gas heat exchanger (includes tubes, vestibule plate and collector box)
- EconoMiSer™ X – Ultra Low Leak electromechanical, gear driven with Honeywell W7220 digital controller.
- Non-fused disconnect
- HACR Breaker
- Powered 115-volt convenience outlet
- Non-powered 115-volt convenience outlet
- Return Air smoke detector
- Supply Air smoke detector
- CO<sub>2</sub> sensor
- Condenser hail guard - louvered style
- Special coating protection for evaporator and condenser coils
- Hinged access panels

### OPTIONAL EXTENDED 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.

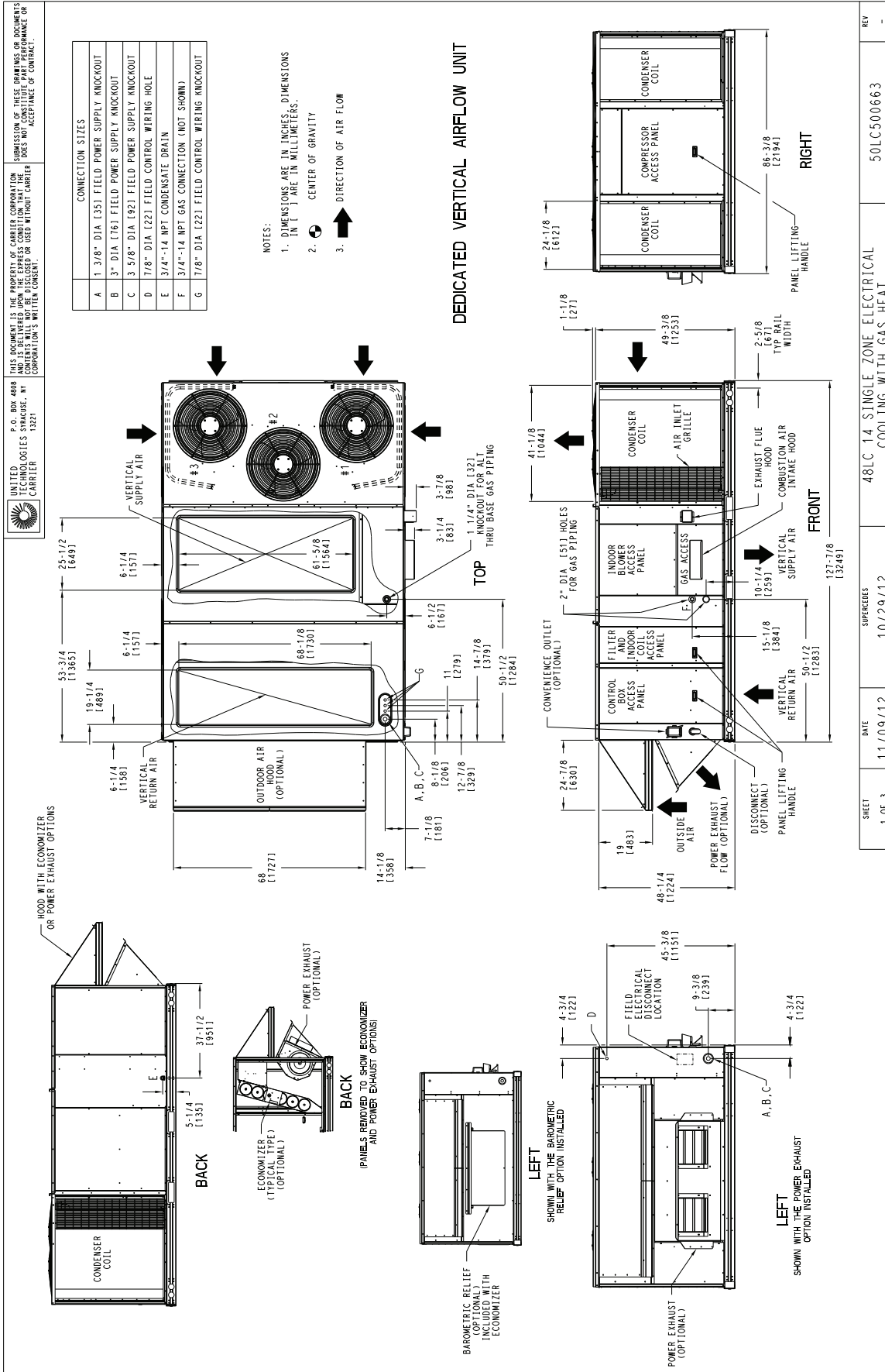
### FIELD INSTALLED ACCESSORIES

- EconoMiSer™ X – Ultra Low Leak electromechanical, gear driven with Honeywell W7220 digital controller.
- Display Kit for Variable Frequency Drive (VFD). Allows additional set up and diagnostics of the VFD controller. Kit includes display, cable, and mounting bracket. Kit can be used on size 07 thru 26 LC units with VFD.
- Power exhaust - prop fan design
- Roofcurb - 14 inch (356mm) tall
- Roofcurb - 24 inch (610mm) tall
- Adapter Curb (available for sizes 14-20 only)
- Barometric Relief Hood for Horizontal Economizer applications
- Condenser hail guard - louvered style
- Flue discharge deflector
- Liquid propane (LP) conversion kit
- High altitude conversion kit
- Phase monitor (loss of phase/phase reversal)
- Time Guard II compressor anti-cycle protection
- 4-Inch Filter Track upgrade kit
- Thermostats and Sensors

#### Economizer Sensors

- Single Dry bulb control
- Differential Dry bulb control
- Single enthalpy control
- Differential enthalpy control
- CO<sub>2</sub> - wall mounted
- CO<sub>2</sub> - duct mounted
- CO<sub>2</sub> - unit mounted

# CERTIFIED DIMENSION 48LC14




SHEET	DATE	SUPERCEDES	REV
1 OF 3	11/09/12	10/29/12	-
48LC 14 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT			50LC500663

**48LC**

C18057



# CERTIFIED DIMENSION 48LC14

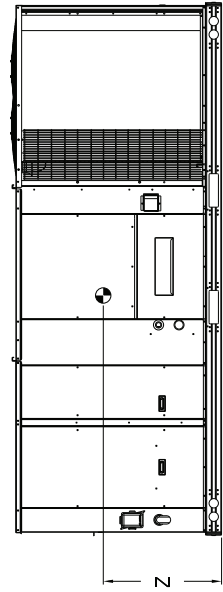
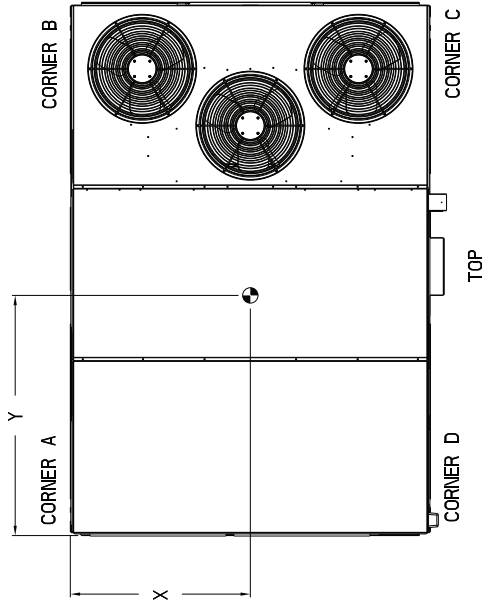

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UNIT	BASE UNIT		CORNER		CORNER		CORNER		CORNER		C.G.					
	WEIGHT	WEIGHT	WEIGHT (A)	WEIGHT (B)	WEIGHT (C)	WEIGHT (D)	WEIGHT (E)	WEIGHT (F)	WEIGHT (G)	WEIGHT (H)	X	Y				
48LC14	1853	842.3	457.5	208.0	532.4	242.0	487.3	218.8	413.6	188.0	40.2	29.32 [1039.02]	68.2	21.32 [1743.87]	16.1	1/2 [419.1]

\* BASE UNIT WEIGHT IS WITH LOW GAS HEAT, STD ID FAN MOTOR, AND WITHOUT PACKAGING.  
 FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



SHEET	DATE	SUPERSEDES	REV
3 OF 3	11/09/12	10/29/12	-

48LC 14 SINGLE ZONE ELECTRICAL  
COOLING WITH GAS HEAT

50LC500663

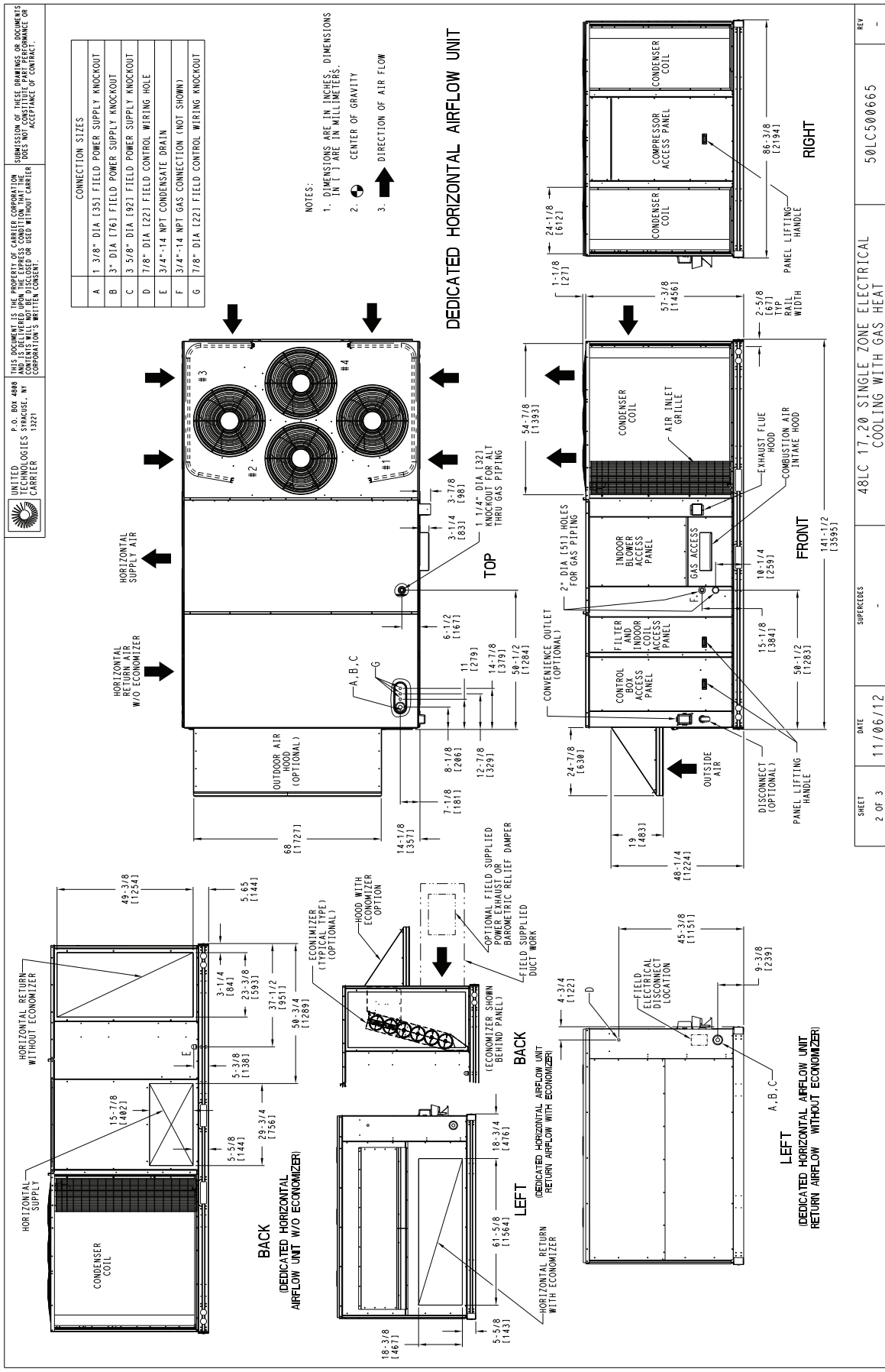
C18059

48LC





# CERTIFIED DIMENSION 48LC17, 20



SHEET	2 OF 3	DATE	11/06/12	SUPERCEDS		48LC 17, 20 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	REV	
						50LC500665		

48LC

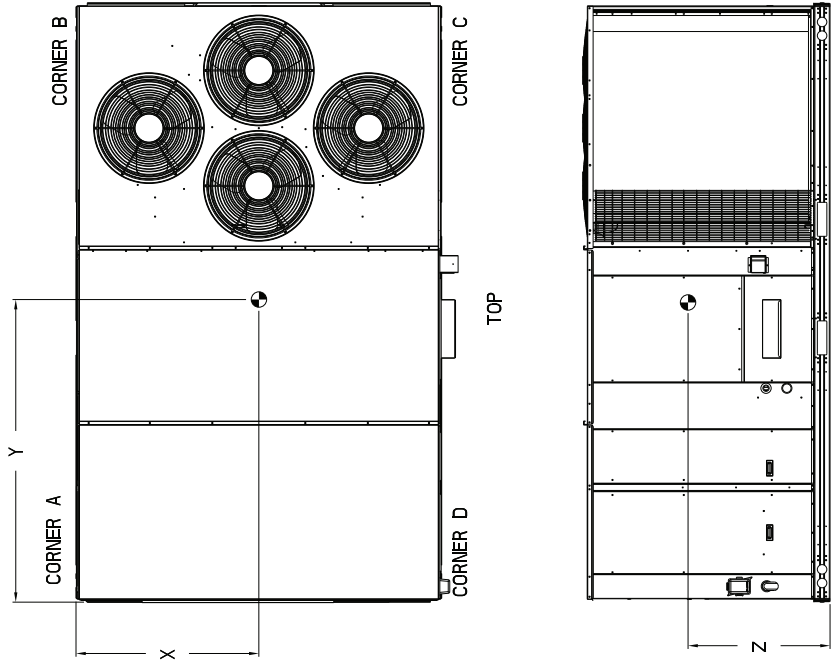
C180033

# CERTIFIED DIMENSION 48LC17, 20

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UNIT	STD UNIT WEIGHT *		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.	
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Z
48LC17	2085	952.3	1543.6	700.1	519.4	236.1	107.3	48.2	219.6	99.6	38 1/2	19 1/2
48LC20	2281	1034.7	1664.5	755.3	382.1	173.6	78.8	35.5	161.1	72.7	38 1/2	19 1/2

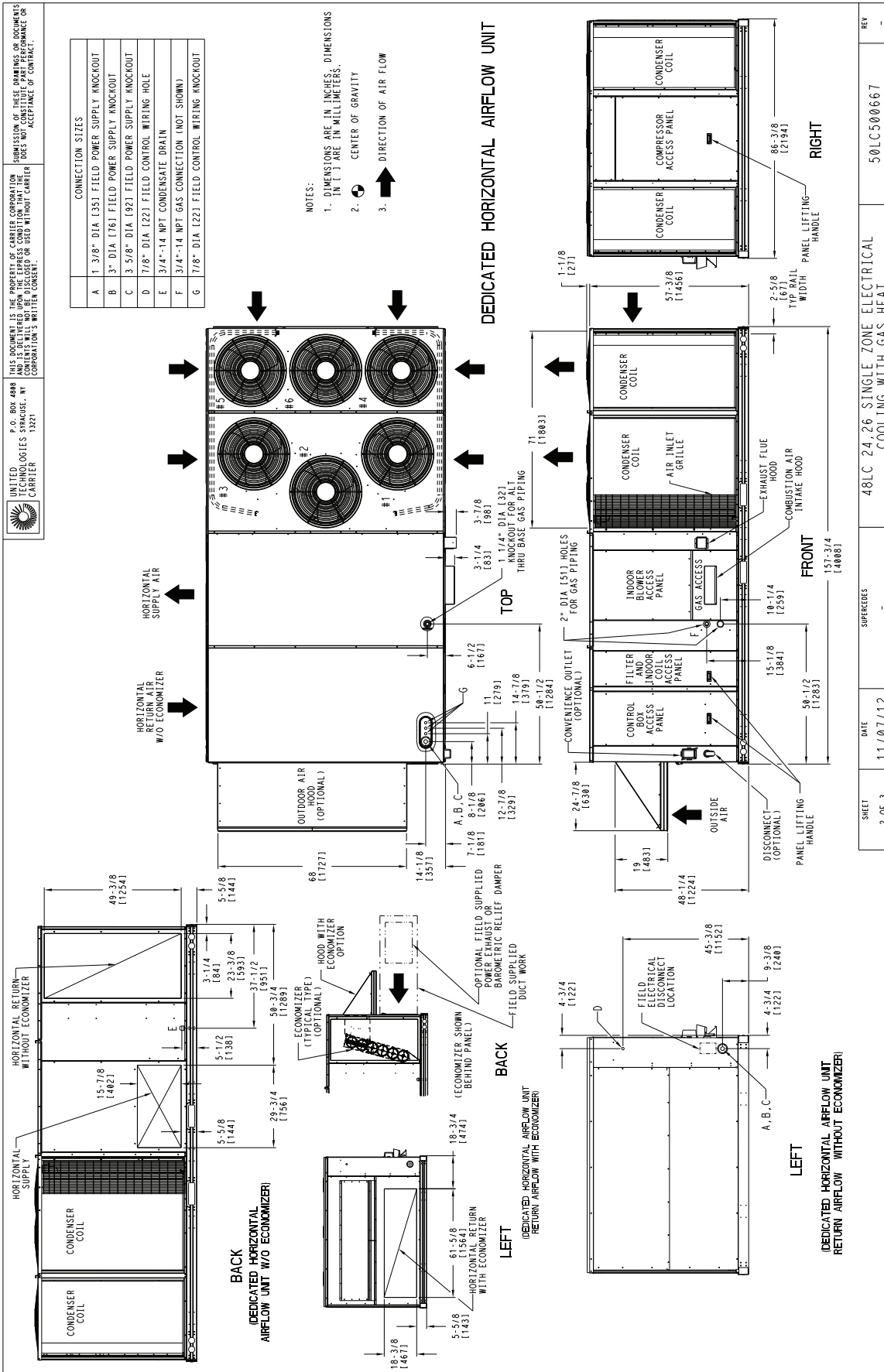
\* STANDARD UNIT WEIGHT IS WITH LOW GAS HEAT AND WITHOUT PACKAGING.  
 FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



SHEET 3 OF 3	DATE 11/06/12	SUPERSEDES -	48LC 17, 20 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	50LC500665	REV -
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CERTIFIED DIMENSION 48LC24, 26




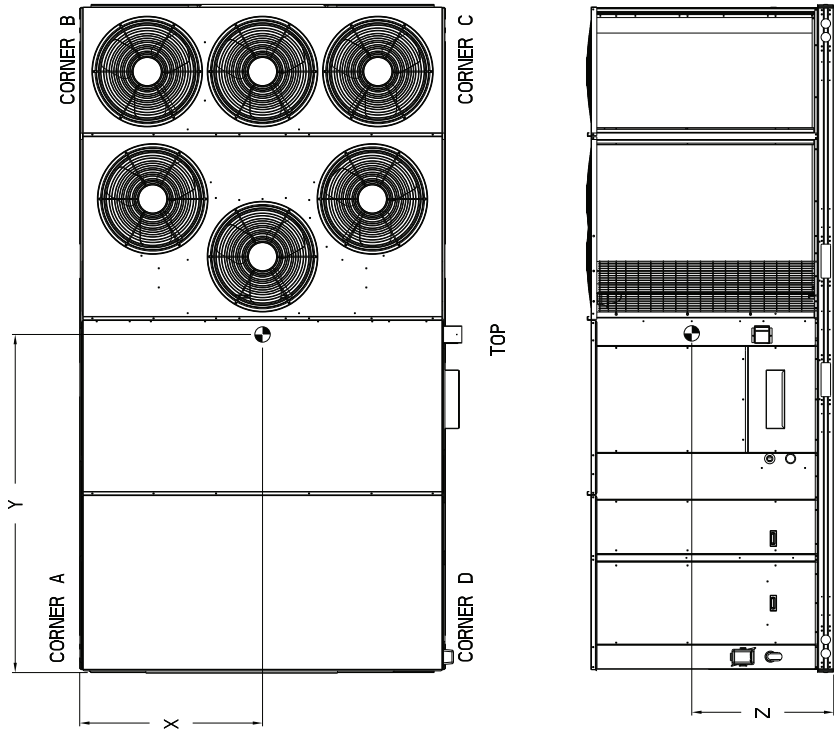
UNITED TECHNOLOGIES SYRACUSE, NY CORPORATION CARRIER	P.O. BOX 4888 SYRACUSE, NY 13221	THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS TO BE RETURNED TO THE COMPANY IN ORIGINAL CONDITION. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN CONSENT OF CARRIER CORPORATION.	REVISIONS	REV
			48LC 24, 26 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	50LC500667
SUPERSEDES			DATE	
SHEET			11/07/12	
2 OF 3				

# CERTIFIED DIMENSION 48LC24, 26

UNIT	CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.								
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z						
48LC24	2347	1067.0	465.0	228.4	568.8	258.5	715.5	325.2	610.1	277.3	48	11219.281	85	1732	2159.791	19	482.6
48LC26	2492	1132.6	563.2	256.0	627.7	285.3	782.4	319.3	630.3	286.5	45	1155.781	85	1732	2108.991	19	482.6

\* STANDARD UNIT WEIGHT IS WITH LOW GAS HEAT AND WITHOUT PACKAGING.  
 FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.


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FRONT

SHEET	DATE	SUPERCEDES	48LC 24, 26 SINGLE ZONE ELECTRICAL	50LC500667	REV
3 OF 3	11/07/12	-	COOLING WITH GAS HEAT	-	-

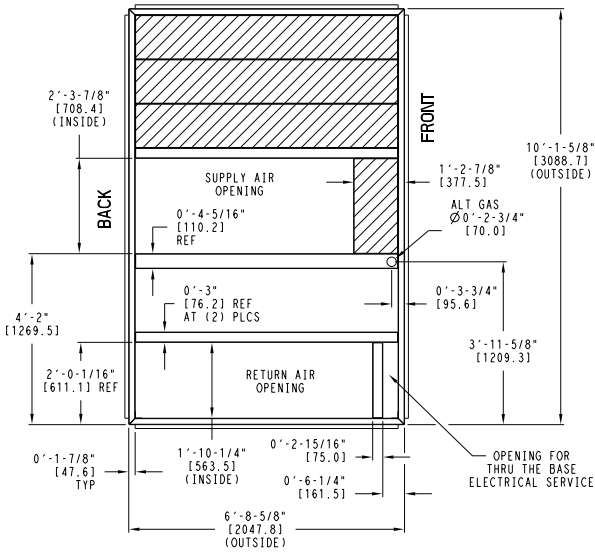
C18040

48LC

# ROOF CURB DETAILS—SIZE 14 UNITS

UNIT SIZE	"A"	ROOF CURB ACCESSORY
14	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB045A00 CRRFCURB046A00

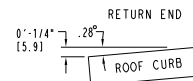
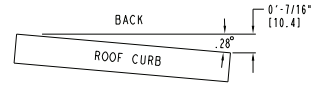
48LC



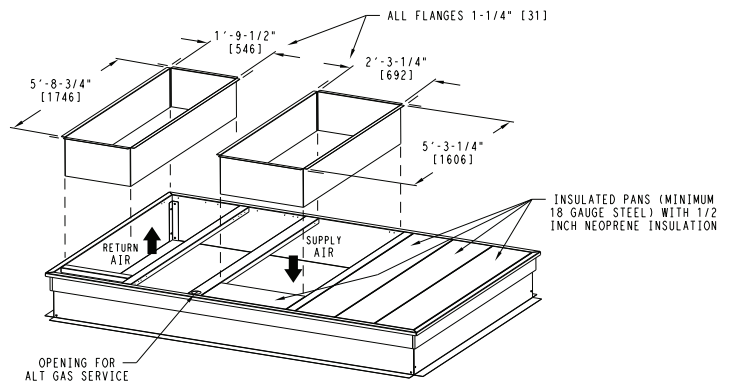
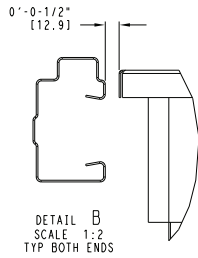
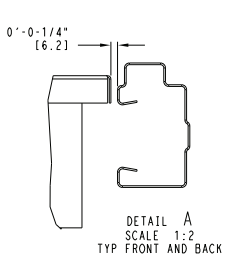
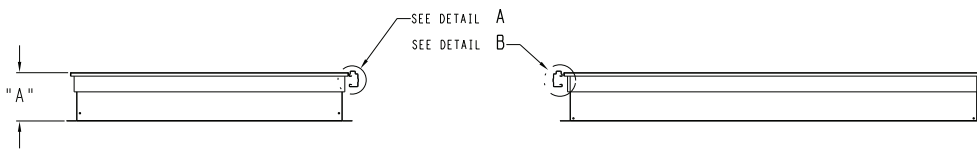
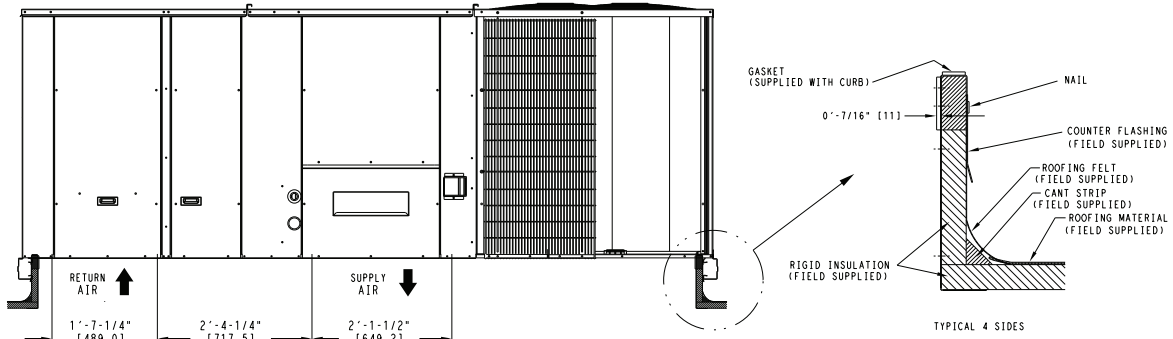
**NOTES:**

- 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
- 2 DIMENSIONS IN ( ) ARE IN MILLIMETERS.
- 3 ROOF CURB GALVANIZED STEEL.
- 4 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
- 5 SERVICE CLEARANCE 4 FT ON EACH SIDE

➔ DIRECTION OF AIR FLOW



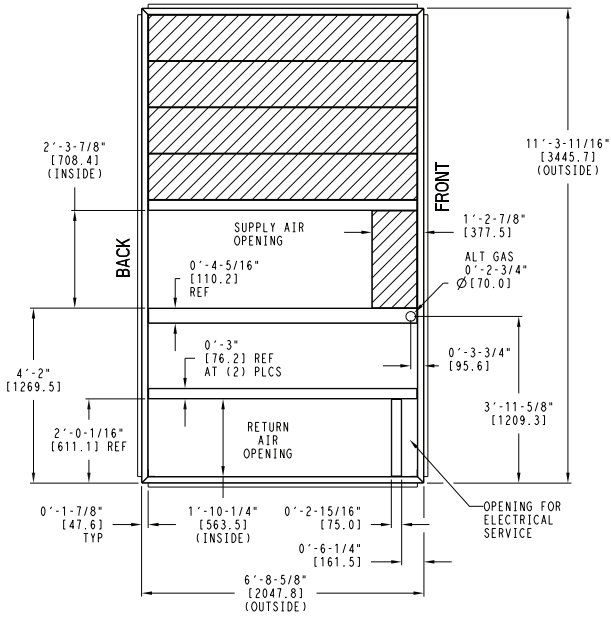
**MAX CURB LEVELING TOLERANCES**



C13054

# ROOF CURB DETAILS—SIZE 17, 20 UNITS

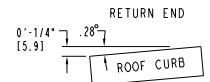
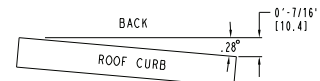
UNIT SIZE	"A"	ROOF CURB ACCESSORY
17, 20	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB047A00 CRRFCURB048A00



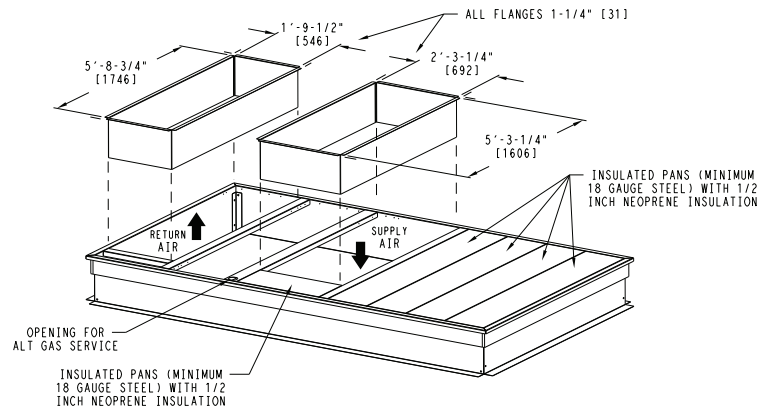
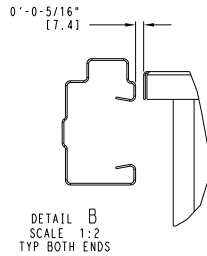
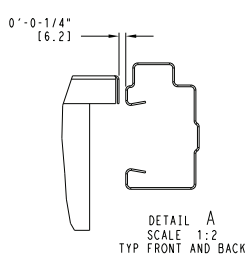
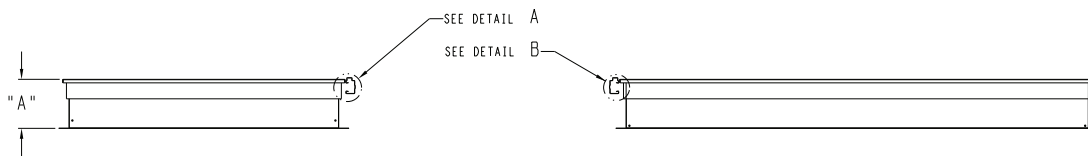
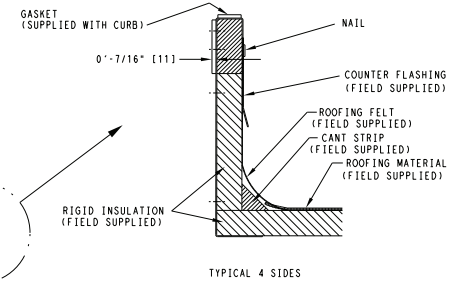
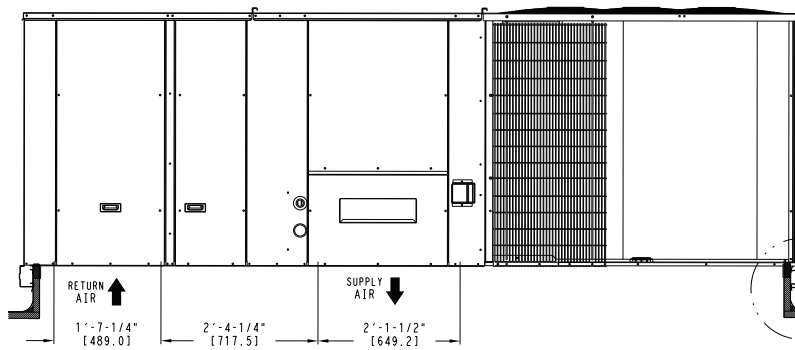
NOTES:

- 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
- 2 DIMENSIONS IN [ ] ARE IN MILLIMETERS.
- 3 ROOF CURB GALVANIZED STEEL.
- 4 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
- 5 SERVICE CLEARANCE 4 FT ON EACH SIDE

➔ DIRECTION OF AIR FLOW



MAX CURB LEVELING TOLERANCES

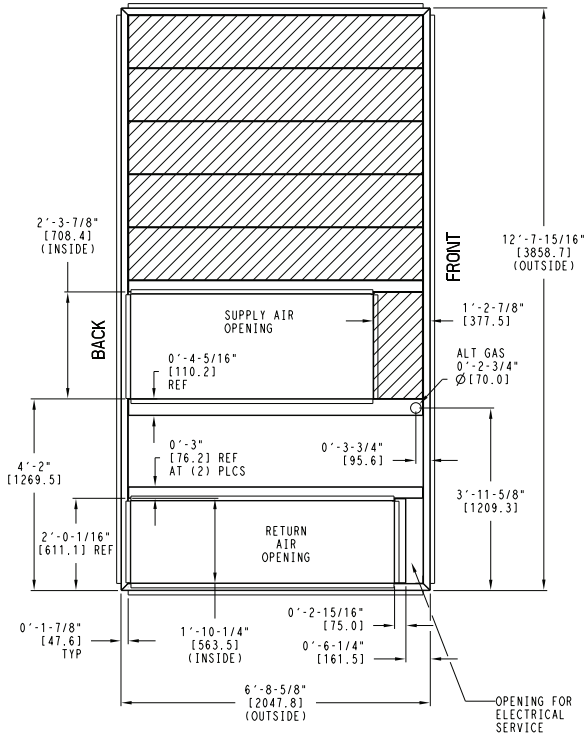


48LC

# ROOF CURB DETAILS—SIZE 24, 26 UNITS

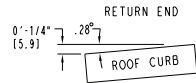
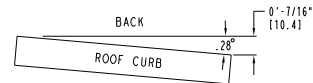
UNIT SIZE	"A"	ROOF CURB ACCESSORY
24, 26	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB049A00 CRRFCURB050A00

**48LC**

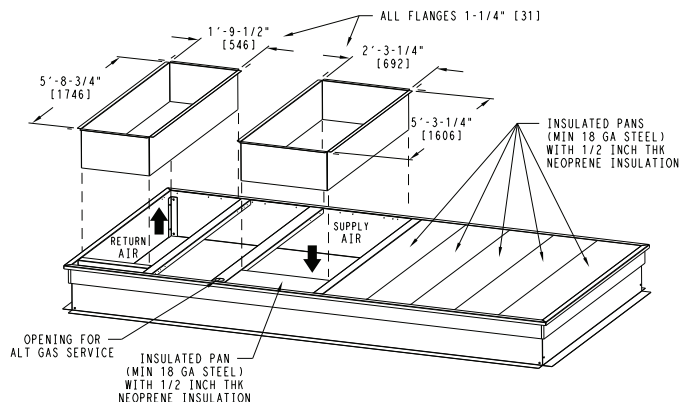
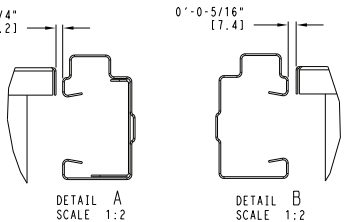
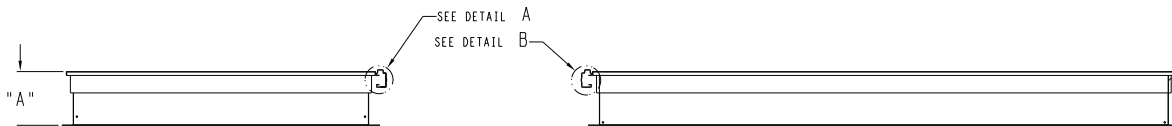
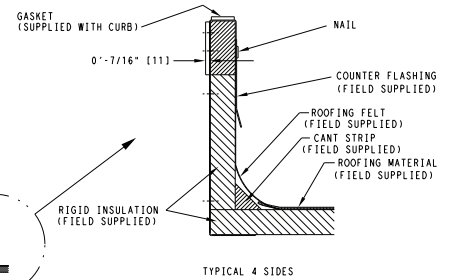
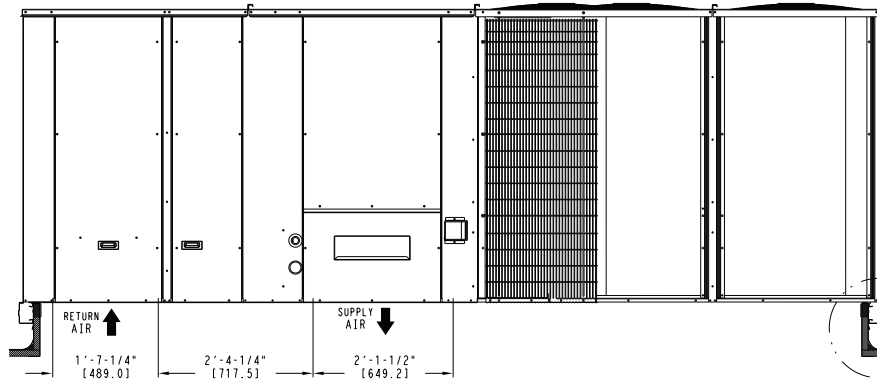


- NOTES:
- 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
  - 2 BOLT HEADS TO BE ON INSIDE OF FLANGE. CLEARANCE IS [11] 0-0-7/16" TYP ALL CORNERS.
  - 3 DIMENSIONS IN [ ] ARE IN MILLIMETERS.
  - 4 ROOF CURB GALVANIZED STEEL.
  - 5 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
  - 6 SERVICE CLEARANCE 4 FT ON EACH SIDE
  - 7 GAS SERVICE PLATE IS PART OF A SEPERATELY SHIPPED ACCESSORY PACKAGE.
  - 8 GAS SERVICE PLATE CAN BE USED WITH EITHER ACCESSORY ROOFCURB.

➔ DIRECTION OF AIR FLOW



MAX CURB LEVELING TOLERANCES



C13056