



*ComfortLink™*

**48HGD/E/F/K/L/M014-028  
50HG014-028**

**SINGLE-PACKAGE COOLING UNITS WITH  
FACTORY-INSTALLED GAS HEAT**

**SINGLE-PACKAGE COOLING UNITS WITH  
OPTIONAL ELECTRIC HEAT**

- PERFORMANCE DATA
- CERTIFIED DIMENSION PRINT
- ROOF CURB DIMENSION PRINT



|                                |             |  |           |               |
|--------------------------------|-------------|--|-----------|---------------|
| Date:                          | Supersedes: | <b>48/50HG014-028</b><br><b>SINGLE-PACKAGE COOLING UNIT</b><br><b>WITH OPTIONAL ELECTRIC HEAT AND</b><br><b>COOLING UNIT WITH GAS HEAT</b> | 48/50HG   | Rev.:<br>-3SB |
| JOB NAME:                      |             | LOCATION:  |           |               |
| BUYER:                         |             | BUYER P.O. #   | CARRIER # |               |
| UNIT NUMBER:                   |             | MODEL NUMBER:  |           |               |
| PERFORMANCE DATA CERTIFIED BY: |             |  | DATE:     |               |



ARI STANDARD  
360



**DESCRIPTION**

48HG units are one-piece ultra-high efficiency rooftop cooling units with gas heat. All units are pre-wired and pre-charged with R-22 at the factory. 50HG units are one-piece ultra-high efficiency cooling units with optional electric heat. Units are factory tested in both heating and cooling modes. The unit is rated in accordance with ARI Standard 360, tested in accordance with UL Standard 1995 and listed by UL and UL, Canada.

The 48HGD model is low heat, the 48HGE is medium heat, and the 48HGF model is high heat. The 48HGK model is low heat with stainless steel heat exchangers, the 48HGL is medium heat with stainless steel heat exchangers, and the 48HGM model is high heat with stainless steel heat exchangers. The 48/50HG is available in vertical airflow or side by side horizontal airflow models.

All HG units use the *ComfortLink™* controller.

**STANDARD UNIT — FEATURES**

- Standard one-year product warranty.
- Ten-year warranty on Alumagard™ coated Turbo-tubular™ gas heat exchanger. Five-year warranty on electric heaters.
- Five-year warranty on all compressors.
- EERs up to 11.6. IPLVs up to 13.7.
- Size 016, 020, and 024 models utilize three electronically and mechanically independent refrigerant circuits, sizes 014 and 028 utilize two electronically and mechanically independent refrigerant circuits.
- Refrigerant metering devices for each circuit are TXVs (thermostatic expansion valves) with removable power heads.
- Compressor protection includes high and low pressure cutouts and over-temperature protection.
- Crankcase heaters are standard on all models.
- Freeze protection on all circuits with liquid line filter driers.
- Internally sloped condensate pan.
- Fit up to installed Carrier DP, DR, TJ, or HJ roof curbs.
- Two-in. or optional 30% pleated, disposable-type fiberglass return-air filters.
- Dedicated vertical or side by side horizontal airflow units.
- Vertical airflow units are field convertible to side by side horizontal airflow with accessory kit.
- ComfortLink* Controller has the following features:
  - Communications (via stand-alone thermostat or CCN)
  - Scrolling Marquee Display
  - Time Schedule
  - Reverse Rotation Protection for Compressors
  - Space Temperature Sensor capability
  - Service Diagnostics, alarms, and alarm history

- Service Run Test capability
- Unit run time and compressor cycles history
- CO<sub>2</sub> sensor capability for Demand Control Ventilation
- Hinged Service Access Panels with double wall construction and tie backs.
- Indoor fan deck slides out for added service convenience.
- 0° to 125 F ambient cooling operation.
- Low outdoor sound levels of 8.2 bel (014-024) or 8.4 bel (028).
- Single point electrical service entry. Through-the-basepan electrical connection available.
- Condenser fan motors are internally protected with shaft down design.
- Cabinet made of pre-painted, galvanized steel with baked enamel finish and insulated with neoprene-coated fiberglass.
- Gear driven economizer, smoke detector, CO<sub>2</sub> sensor, power exhaust, convenience outlet, disconnect and more available as factory-installed options.
- Alternate motor and alternate drives are available.
- Electric heaters are available as a factory-installed option or as a field-installed accessory (50HG only).
- Gas Heating (48HG Only)**
- Induced draft combustion system used for reliability and safety.
- Reliable IGC (integrated gas unit controller) provides system evaluation and troubleshooting via onboard LED indicator.
- Direct Spark Ignition.
- Alumagard Coated Turbo-tubular Heat Exchangers.
- Two-stage capacity control
- Single point gas connection

**PERFORMANCE DATA**

Unit Operating Weight \_\_\_\_\_ lb

**COOLING**

Gross Total Capacity \_\_\_\_\_ Btuh  
@ 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 \_\_\_\_\_

**OPTIONS AND ACCESSORIES**

**FACTORY-INSTALLED OPTIONS**

- Manual 25% Outdoor-Air Damper
- Fully Integrated Gear Driven Economizer
- Multi-Stage Power Exhaust
- Barometric Relief
- Low/Medium/High Gas Heat (48HG only)
- Low/Medium/High Electric Heat (50HG only)
- Pre-Coated Condenser Coils
- E-Coated Condenser Coils
- Copper Condenser Coil
- Copper Evaporator Coil
- Copper Evaporator Coil with E-Coat
- Non-Fused Disconnect
- GFI 115-V Convenience Outlet (Factory Powered)
- 30% Efficiency Filters
- Standard Motor with Optional Drive
- Alternate Motor with Standard Drive
- Alternate Motor with Optional Drive
- CO<sub>2</sub> Sensor
- Return Air Smoke Detector
- Plugged Filter Indicator
- Horizontal Airflow
- Stainless Steel Gas Heat Exchanger
- 4-in. Filter Capability (shipped with 2-in. filter)

**FIELD-INSTALLED ACCESSORIES**

- Solid-State Enthalpy Control
- Differential Enthalpy Control
- Roof Curb (14 in.)
- Roof Curb (24 in.)
- Fully Integrated Gear Driven Economizer
- Multi-Stage Power Exhaust
- Barometric Relief
- Thermostat and Subbase
- T-55 Space Temperature Sensor with Override
- T-55 Space Temperature Sensor and CO<sub>2</sub> Sensor with Override
- T-56 Space Temperature Sensor with Override and Set Point Adjust
- T-56 Space Temperature Sensor and CO<sub>2</sub> Sensor with Override and Set Point Adjust
- T-58 CCN Communicating Space Temperature Sensor with Override and Set Point Adjust
- Condenser Coil Hail Guard
- Horizontal Airflow Kit
- Return Air Smoke Detector
- Two-Position Damper
- Electric Heat (50HG Only)
- CO<sub>2</sub> Sensor
- Plugged Filter Indicator
- Fan Status Indicator
- Roof Curb Drip Edge

**OTHER SPECIAL ITEMS**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

# CERTIFIED DIMENSION PRINT

**UNITED TECHNOLOGIES STRATCOSE, NY**  
CARRIER

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| UNIT SIZE | OPERATING WEIGHT LOW |        |        | UNIT WEIGHT |        |       | CORNER WEIGHT |    |     |       |
|-----------|----------------------|--------|--------|-------------|--------|-------|---------------|----|-----|-------|
|           | GAS (LBS.)           | (LBS.) | (LBS.) | A           | B      | C     | D             | E  | F   |       |
| HG028     | 2526                 | (1146) | (1781) | 68          | 34-1/2 | (876) | 62            | 33 | 434 | (260) |

| UNIT SIZE | OPERATING WEIGHT LOW |        |        | UNIT WEIGHT |        |       | CORNER WEIGHT |    |     |       |
|-----------|----------------------|--------|--------|-------------|--------|-------|---------------|----|-----|-------|
|           | GAS (LBS.)           | (LBS.) | (LBS.) | A           | B      | C     | D             | E  | F   |       |
| HG014     | 2102                 | (953)  | (1664) | 68          | 34-1/2 | (876) | 62            | 33 | 434 | (260) |
| HG016     | 2196                 | (996)  | (1749) | 68          | 34-1/2 | (876) | 62            | 33 | 434 | (260) |
| HG020     | 2224                 | (1008) | (1771) | 68          | 34-1/2 | (876) | 62            | 33 | 434 | (260) |
| HG024     | 2272                 | (1030) | (1811) | 68          | 34-1/2 | (876) | 62            | 33 | 434 | (260) |

**NOTES:**

- WEIGHTS SHOWN ARE FOR 48HG (LOW HEAT) UNIT WITH MANUAL 25X OUTDOOR AIR OPTION, ALUMINUM COILS, AND STANDARD DRIVE. WEIGHTS FOR OPTIONAL HEAVY DUTY DRIVE ARE SHOWN IN PARENTHESIS.
- DO NOT LOCATE ADJACENT UNIT WITH FLUE DISCHARGE FACING ECONOMIZER INLET.
- MIN. CLEARANCES TO BE:
- ADJACENT UNITS: 15'-0" (4572)
- CONDENSER AIR FLOW: 4'-0" (1219)
- TO COMBUSTIBLE SURFACES: ALL FOUR SIDES (INCLUDES BETWEEN UNITS)
- ECONOMIZER AIR FLOW: 30" (762)
- FRONT SIDE: 8'-0" (2438) FOR PROPER SERVICE ACCESS AND COIL REMOVAL
- REAR SIDE: 6'-0" (1829) FOR ECONOMIZER TOP: 6'-0" (1829) TO ASSURE PROPER CONDENSER FAN OPERATION.
- CONDENSER FAN OPERATION: BOTTOM: 14" (356) TO COMBUSTIBLE SURFACES
- FOR WHEN TO USING CURB OPERATIONAL CLEARANCES.
- CONTACT CARRIER FOR OPERATIONAL CLEARANCES.
- DOWN SHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. IF UNIT IS MOUNTED SIDE SUPPLY, IT MUST BE ATTACHED TO ACCESSORY ROOF CURB.
- CROSS BRACES ARE DONE ON ACCESSORY ROOF CURB DIMENSIONS IN 1 ARE IN MILLIMETERS OR KILOGRAMS.
- WITH THE EXCEPTION OF CLEARANCE FOR THE CONDENSER COIL REMOVAL, DIMENSIONS ARE SHOWN IN NOTE #2. A MINIMUM CLEARANCE OF 6" (152) IS REQUIRED.
- ALLOW 0-5/16 (8) ON EACH SIDE FOR TOP COVER DRIP EDGE.

**FRONT**

**RIGHT SIDE**

**LEFT SIDE**

**VIEW A-A**

\*DUCT SIZE

**TOP**

**BOTTOM**

**DAMPER MOTOR ACCESS PANEL**

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

**CERTIFIED DIMENSION PRINT**

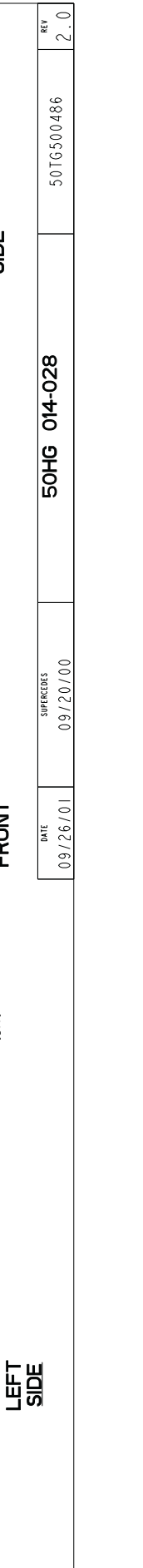
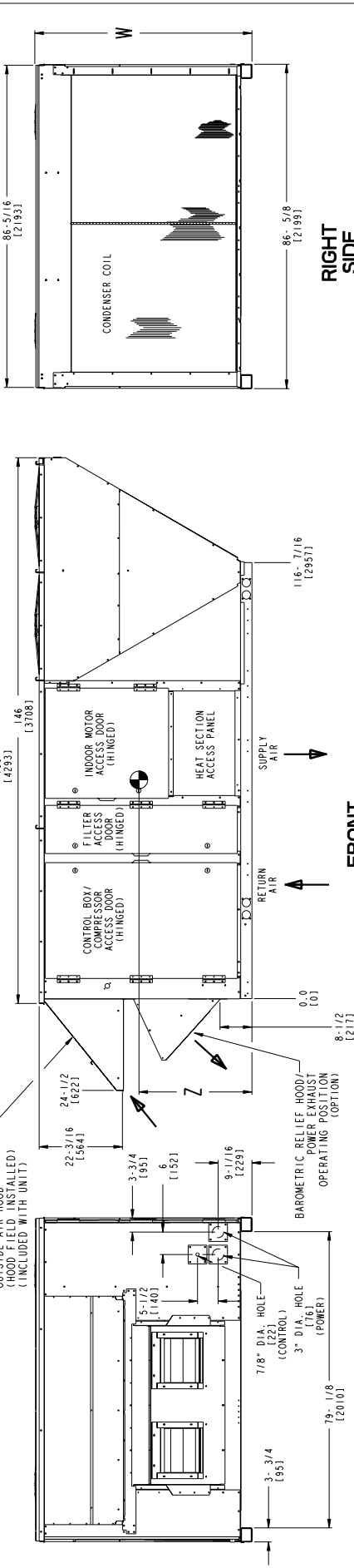
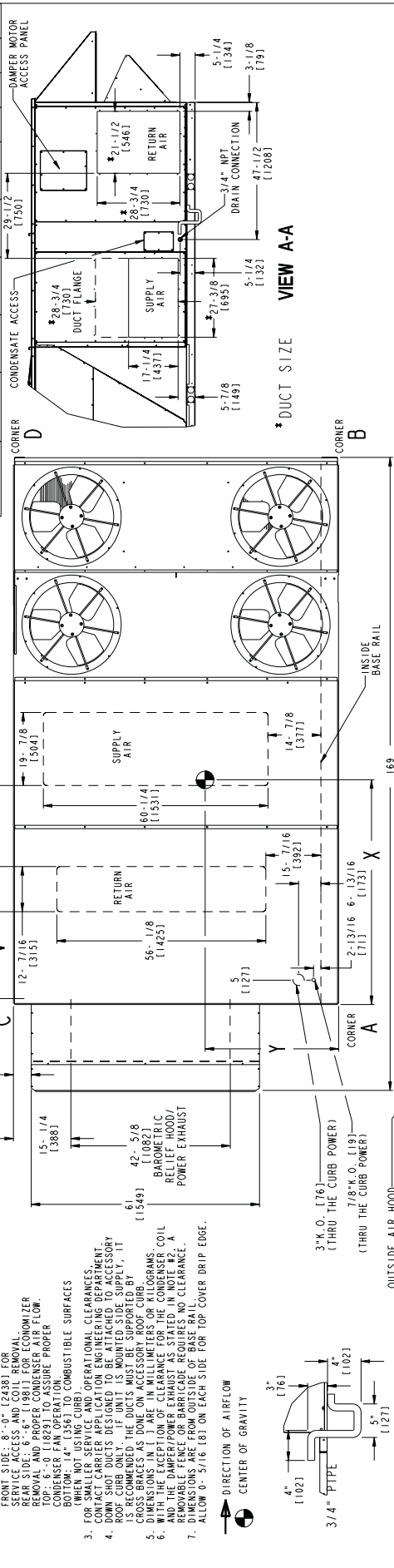
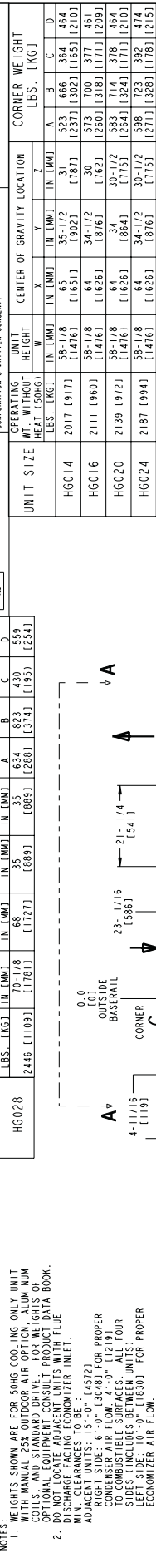
| UNIT SIZE | OPERATING WT. WITHOUT HEAT (50HG) LBS. [KG] | UNIT HEIGHT   |              |               |             | CORNER WEIGHT LBS. [KG] |           |            |           |
|-----------|---|---------------|--------------|---------------|-------------|-------------------------|-----------|------------|-----------|
|           |   | IN [MM]       | W [MM]       | C [MM]        | D [MM]      | A [MM]                  | B [MM]    | C [MM]     | D [MM]    |
| HG028     | 2446 [1109]                                 | 70-7/8 [1783] | 15-1/4 [388] | 4-11/16 [119] | 2446 [1109] | 288 [1172]              | 374 [950] | 430 [1067] | 486 [224] |

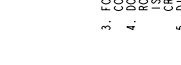
| UNIT SIZE | OPERATING WT. WITHOUT HEAT (50HG) LBS. [KG] | CENTER OF GRAVITY LOCATION |              |          |            | CORNER WEIGHT LBS. [KG] |           |            |           |
|-----------|---|----------------------------|--------------|----------|------------|-------------------------|-----------|------------|-----------|
|           |   | X [MM]                     | Y [MM]       | Z [MM]   | A [MM]     | B [MM]                  | C [MM]    | D [MM]     |           |
| HG014     | 2017 [917]                                  | 65 [1651]                  | 35-1/2 [902] | 31 [787] | 2017 [917] | 288 [1172]              | 374 [950] | 430 [1067] | 486 [224] |
| HG016     | 2111 [960]                                  | 64 [1626]                  | 34-1/2 [876] | 30 [762] | 2111 [960] | 288 [1172]              | 374 [950] | 430 [1067] | 486 [224] |
| HG020     | 2139 [972]                                  | 64 [1626]                  | 34 [864]     | 34 [864] | 2139 [972] | 288 [1172]              | 374 [950] | 430 [1067] | 486 [224] |
| HG024     | 2187 [994]                                  | 64 [1626]                  | 34-1/2 [876] | 34 [864] | 2187 [994] | 288 [1172]              | 374 [950] | 430 [1067] | 486 [224] |

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- NOTES:**
- WEIGHTS SHOWN ARE FOR 50HG COOLING ONLY UNIT WITH MANUAL 25 OUTDOOR AIR OPTION, ALUMINUM COILS, AND STANDARD DRIVE. FOR WEIGHTS OF OPTIONAL EQUIPMENT CONSULT PRODUCT DATA BOOK.
  - DISCHARGE FROM ECONOMIZER MUST BE TO OUTSIDE AIR (NOT TO RECYCLE AIR). MIN. CLEARANCES TO BE: ADJACENT UNITS: 15'-0" (4572); RIGHT SIDE: 6'-0" (1829); FRONT: 14'-0" (4267); TO COMBUSTIBLE SURFACES: ALL FOUR SIDES (INCLUDES BETWEEN UNITS); LEFT SIDE: 10'-0" (3048); FOR PROPER FRONT SERVICE ACCESS AND COIL REMOVAL: REAR SIDE: 6'-6" (1981); FOR ECONOMIZER REMOVAL AND PROPER CONDENSER AIR FLOW: CONDENSER FAN OPERATION: 14'-0" (4267); BOTTOM: 14" (356) TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB); OPERATIONAL CLEARANCES: CONFACT CARRIER APPLICATION ENGINEERING DEPARTMENT; DOWN SHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. IF UNIT IS MOUNTED SIDE SUPPLY, IT MUST BE ATTACHED TO THE CURB; DIMENSIONS IN 3" ARE IN MILLIMETERS OR KILOGRAMS; WITH THE EXCEPTION OF CLEARANCE FOR THE CONDENSER COIL AND THE DAMPER/POWER EXHAUST AS STATED IN NOTE #2; A DIMENSIONS ARE FROM OUTSIDE OF FRONT PANEL; DIMENSIONS ARE FROM OUTSIDE OF FRONT PANEL; ALLOW 0'-5/16" (8) ON EACH SIDE FOR TOP COVER DRIP EDGE.

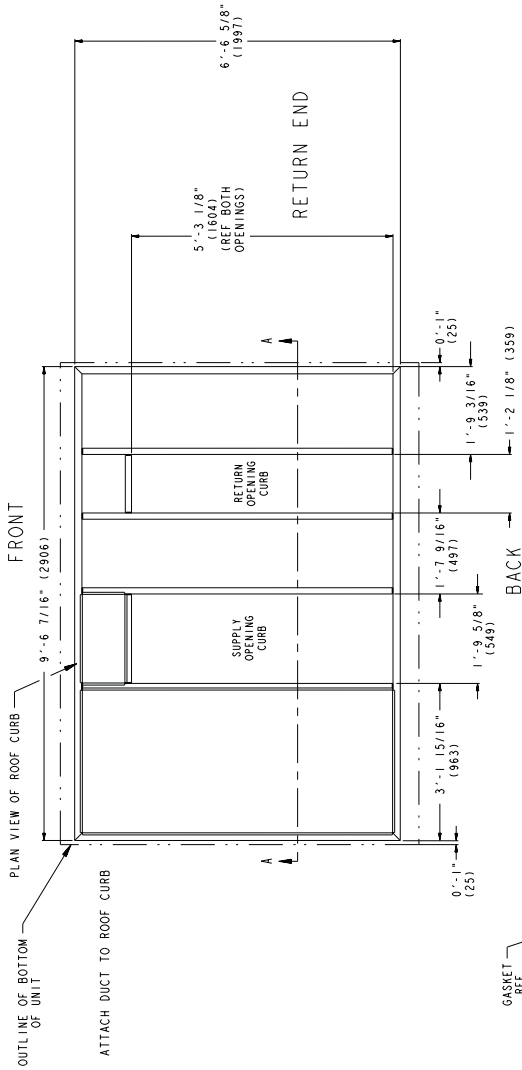


|      |          |           |          |              |            |     |     |
|------|----------|-----------|----------|--------------|------------|-----|-----|
| DATE | 09/26/01 | SUPERCEDS | 09/20/00 | 50HG 014-028 | 50TG500486 | REV | 2.0 |
|------|----------|-----------|----------|--------------|------------|-----|-----|

# FULL PERIMETER ROOF CURB DIMENSION PRINT

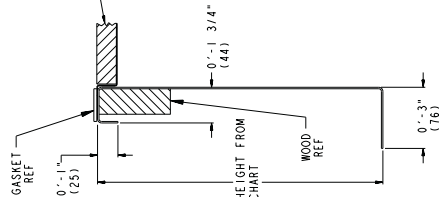
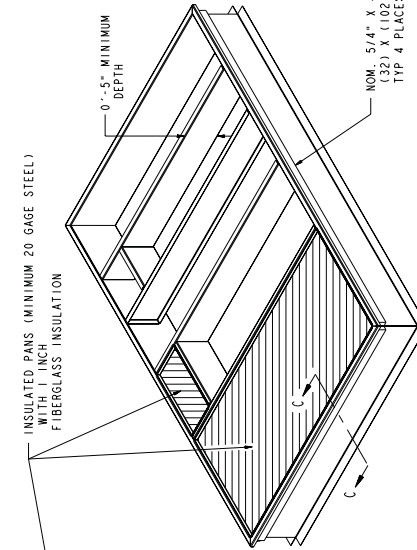
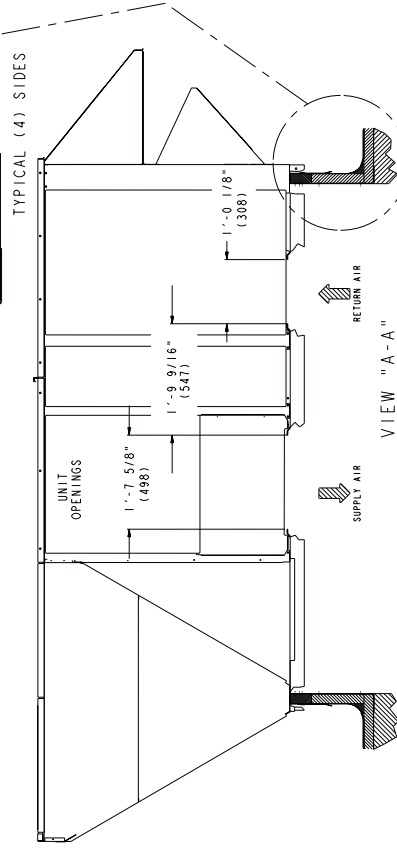
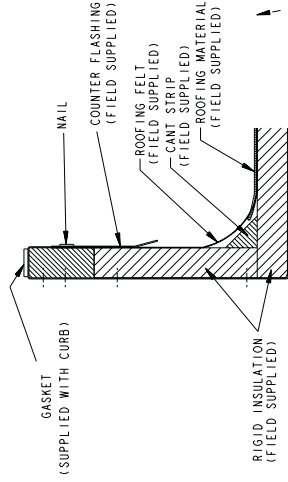
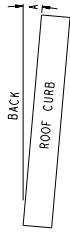
| ROOF CURB ACCESSORY | CURB HEIGHT    | DESCRIPTION           |
|---------------------|----------------|-----------------------|
| CRRFCURB018B00      | 1'-2"<br>(356) | ROOF CURB<br>14" HIGH |
| CRRFCURB019B00      | 2'-0"<br>(610) | ROOF CURB<br>24" HIGH |

- NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
  2. DIMENSIONS IN ( ) ARE IN MILLIMETERS.
  3. DIRECTION OF AIRFLOW.
  4. ROOF CURB: 16 GA. (WA03-56) STEEL.
  5. TO PREVENT THE HAZARD OF STAGNANT WATER BUILD-UP IN THE UNIT DO NOT EXCEED CURB LEVELING TOLERANCES.
  6. CLEARANCE BETWEEN UNIT BASE RAIL AND CURB FLANGE IS 1/4-IN. (6 MM) ON EACH SIDE.



MAX CURB LEVELING TOLERANCES:

| UNIT     | A        | B        |
|----------|----------|----------|
| DEG. IN. | DEG. IN. | DEG. IN. |
| ALL      | .28      | .57      |
|          | .28      | .42      |



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|      |          |            |          |                           |            |     |     |
|------|----------|------------|----------|---------------------------|------------|-----|-----|
| DATE | 04/25/01 | SUPERSEDES | 04/23/01 | 48/50HG 014-028 ROOF CURB | 50TG500546 | REV | 3.0 |
|------|----------|------------|----------|---------------------------|------------|-----|-----|

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

### RETROFIT ROOF CURB DIMENSION PRINT



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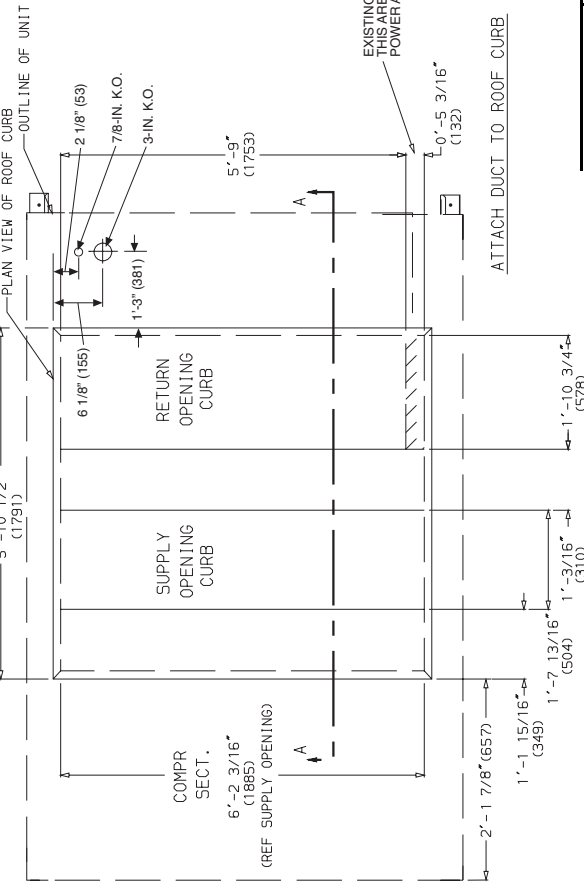
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DATE

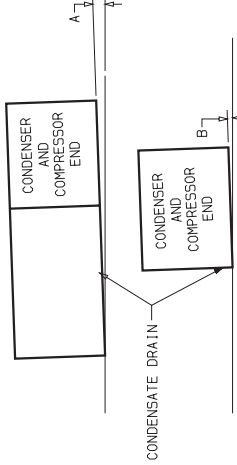
SUPERSEDES

### ROOF CURB (BOTTOM SUPPLY /RETURN UNITS)

REV



- NOTES:
1. Roof curb accessory is shipped disassembled.
  2. Insulated panels: 1 in. thick neoprene coated 1 1/2 lb density.
  3. Dimensions in ( ) are in millimeters.
  4. Direction of airflow.
  5. Roof curb: 16 ga. (VA03-56) sill.
- NOTE: To prevent the hazard of stagnant water build-up in the drain pan of the indoor section, unit can only be pitched as shown.



DIMENSIONS\* (degrees and inches)

| UNIT | A    |     | B    |     |
|------|------|-----|------|-----|
|      | DEG. | IN. | DEG. | IN. |
| ALL  | .28  | .45 | .28  | .43 |

| PKG NO. REF.   | CURB HEIGHT             | DESCRIPTION   |
|----------------|-------------------------|---|
| CRRFCURB010A00 | 1'-2" (305)<br>14" High | Standard Curb                                       |
| CRRFCURB011A00 | 2'-0" (610)             | Standard Curb for Units Requiring High Installation |

UNIT LEVELING TOLERANCES  
\*From edge of unit to horizontal.

