Product Data

# WeatherMaster®
# Single Packaged Rooftop

15 to 25 Nominal Tons

ecoblue™ technology


48/50GC**17, 20, 24, 28
48GC: Single-Package Gas Heating/Electric Cooling Rooftop Units
50GC: Electric Cooling Rooftop Units with Optional Electric Heat
with Puron® Refrigerant (R-410A) and EcoBlue Technology



Form 48-50GC-17-28-01PD Rev. B

# Features/Benefits

**The New Carrier WeatherMaster® rooftop units (RTU) with EcoBlue™ Technology were designed by customers with integrated new technology to provide value added benefits never seen in this type of equipment before.**

New major design features include:

- Patented, industry's first efficient indoor fan system using Vane Axial fan with electronically commutated variable speed motor. As compared to today's typically used belt drive with forward curve fans, system provides reliable operation with:
  - 75% fewer moving parts
  - No fan belts, pulleys, shaft, and shaft bearings
  - 40% more efficient than traditional belt drive forward curve fans
  - Slow ramp up capability for better sound and comfort control
  - Internal protection from phase reversal and phase loss situations
  - High external static capability
  - Slide out blower assembly design
- Reliable 2 stage cooling with tandem scroll compressors technology, fully active evaporator coil, and mixed air temperature protection on all models
- New unit control board with intuitive indoor fan adjustment that uses simple dial and switch adjustments
- Reliable copper tube/aluminum fin condenser coil with 5/16 in. tubing to help reduce refrigerant charge and reduce weight versus prior designs

48/50GC WeatherMaster® units up to 25 tons are specifically designed for dedicated factory-supplied vertical air flow or horizontal air flow. No special field kits are required. Designed to fit on pre-installed curbs by other manufacturer, these units can also fit on some of Carrier's past installed roof curbs.

Two-speed staged air volume (SAV) Vane Axial indoor fan speed control helps deliver IEERs up to 16.7.

With "no-strip" screw collars, handled access panels, and more, the unit is easy to install, easy to maintain, and easy to use. Your new 15 to 25 ton Carrier WeatherMaster rooftop unit (RTU) provides optimum comfort and control from a packaged rooftop.

Value-added features include:

- optional Humidi-MiZer® adaptive dehumidification system for improved part load humidity performance
- SystemVu™ intuitive intelligent controls option that provides:
  - Large full text – multi line display
  - USB Flash Port for data transfer
  - Built in i-Vu®, CCN and BACnet®[1]
  - Read refrigerant pressures from display – no gauges
  - Quick LED Status – Run, Alert, Fault
  - Conventional thermostat or sensor capabilities
  - Historical component runtime and starts
  - Supply air tempering
  - Navigator™ and Network Service Tool compatible
- Single point gas and electrical connections
- All 15 to 25 ton models use fixed TXV refrigerant metering devices
- Scroll compressors with internal line-break overload protection
- Units come with an easy access tool-less filter door. Filter track tilts out for filter removal and replacement. All filters are the same size in each unit.

1. Third-party trademarks and logos are the property of their respective owners.

## Installation ease

Lighter units make for easy replacement and aid in the structural approval process. Units have simple, fast plug-in connections to the standard integrated unit control board (UCB). Clearly labeled connections points to reduce installation time. Also, a large control box provides room to work and room to mount Carrier accessory controls.

## Easy to maintain

With the new EcoBlue Vane Axial fan system and direct drive ECM motor, there is no longer a need to adjust or replace belts or pulleys as in past designs. This frees up maintenance, installation and commissioning time.

Easy access handles by Carrier provide quick and easy access to all normally serviced components. Our "no-strip" screw system has superior holding power and guides screws into position while preventing the screw from stripping the unit's metal.

Sloped, corrosion resistant composite drain pan sheds water; and won't rust.

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# Features/Benefits (cont)

## Easy to use

The newly re-designed Unit Control Board by Carrier puts all connections and troubleshooting points in one convenient place. Most low voltage connections are made to the same board and make it easy to access it. Setting up the fan is simple by an intuitive switch and rotary dial arrangement.

Carrier rooftops have high and low pressure switches, a new mixed air temperature switch, a filter drier, and 2-in. filters standard.

## EcoBlue™ Technology

Direct drive EcoBlue Technology indoor fan system uses Vane Axial fan design and electronically commutated motors.

This new Vane Axial design over past belt drive systems has 75% fewer moving parts, uses up to 40% less energy and has no fan belts, blower bearings and shaft. Full fan and motor assembly also slides out for easier maintenance and service.

## Streamlined control and integration

Carrier controllers make connecting WeatherMaster® rooftops into existing building automation systems easy. The units are compatible with conventional thermostat controls or SystemVu™ controls for greater comfort, diagnostics and building network integration.

## Operating efficiency and flexibility

These 48/50GC packaged rooftops meet the Department of Energy (DOE) 2023 efficiency standard, as well as the latest ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 90.1 and IECC®[1] (International Energy Conservation Code) minimum IEER efficiency requirements.

## Comfort control

Carrier's patented Humidi-MiZer® adaptive dehumidification system is an all-inclusive factory-installed option on gas heating/electric cooling and electric cooling/electric heat models. This system provides reliable, flexible operation to meet indoor part load sensible and latent requirements as well as multiple gas heat and electric heat sized to fit an array of applications.

1. Third-party trademarks and logos are the property of their respective owners.

# Model number nomenclature

## 48GC Model Number Nomenclature

| Position: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Example: | 4 | 8 | G | C | E | M | 2 | 0 | A | 2 | A | 5 | - | 0 | A | 0 | A | 0 |

**Unit Type**
48 - Gas Heat/Electric Cooling Unit

**Model Series - WeatherMaster®**
GC - High Efficiency Packaged RTU
with EcoBlue™ Technology

**Heat Options**
D = Low Heat
E = Medium Heat
F = High Heat
S = Low Heat w/ Stainless Steel Heat Exchanger
R = Medium Heat w/ Stainless Steel Heat Exchanger
T = High Heat w/ Stainless Steel Heat Exchanger

**Refrigerant Systems Options**
M = Single Circuit/Two Stage Cooling
N = Single Circuit/Two Stage Cooling w/ Humidi-MiZer® System
P = Single Circuit/Two Stage Cooling w/ Low Ambient Control

**Tonnage**
17 = 15.0 tons
20 = 17.5 tons
24 = 20.0 tons
28 = 25.0 tons

**Sensor Options**
A = None
B = Return Air Smoke Detector (RA)
C = Supply Air Smoke Detector (SA)
D = RA + SA Smoke Detector
E = $CO_2$ Sensor
F = RA Smoke Detector + $CO_2$ Sensor
G = SA Smoke Detector + $CO_2$ Sensor
H = RA + SA Smoke Detector + $CO_2$ Sensor
J = Condensate Overflow Switch (COFS)
K = Condensate Overflow Switch + RA Smoke Detector
L = Condensate Overflow Switch + RA and SA Smoke Detectors
M = Condensate Overflow Switch + SA Smoke Detector
N = Condensate Overflow Switch + $CO_2$ Sensor
P = Condensate Overflow Switch + RA Smoke and $CO_2$ Sensor
Q = Condensate Overflow Switch + SA Smoke and $CO_2$ Sensor
R = Condensate Overflow Switch + RA and SA Smoke and $CO_2$ Sensor

**Fan Options**
2 = Standard/Medium Static – EcoBlue Vane Axial Fan
3 = High Static – EcoBlue Vane Axial Fan
5 = Standard/Medium Static – EcoBlue Vane Axial Fan + Filter Status Switch
6 = High Static – EcoBlue Vane Axial Fan + Filter Status Switch
J = High Static – Horizontal Supply – EcoBlue Vane Axial Fan
L = High Static – Horizontal Supply – EcoBlue Vane Axial Fan + Filter Status Switch

**RTPF Coil Options – (Outdoor – Indoor – Hail Guard)**
A = Al/Cu – Al/Cu
B = Precoat Al/Cu – Al/Cu
C = E-coat Al/Cu – Al/Cu
D = E-coat Al/Cu – E-coat Al/Cu
E = Cu/Cu – Al/Cu
F = Cu/Cu – Cu/Cu
M = Al/Cu – Al/Cu – Louvered Hail Guard
N = Precoat Al/Cu – Al/Cu – Louvered Hail Guard
P = E-coat Al/Cu – Al/Cu – Louvered Hail Guard
Q = E-coat Al/Cu – E-coat Al/Cu – Louvered Hail Guard
R = Cu/Cu – Al/Cu – Louvered Hail Guard
S = Cu/Cu – Cu/Cu – Louvered Hail Guard

**Voltage**
1 = 575/3/60
5 = 208-230/3/60
6 = 460/3/60

**Unit Controls**
0 = Electromechanical Controller
(For use with field installed economizers)
3 = SystemVu™ Controls
8 = Electromechanical Controls with POL224 EconomizerONE (includes FDD[b])

**Design Revision**
- = Factory Design Revision

**Intake / Exhaust Options**
A = None
B = Standard Leak Economizer with Barometric Relief
D = Standard Leak Economizer with Power Exhaust (cent) Vertical Only (Electromechanical Only)
F = Standard Leak Enthalpy Economizer with Barometric Relief
H = Standard Leak Enthalpy Economizer with Power Exhaust (cent) Vertical Only (Electromechanical Only)
U = ULL (Ultra Low Leak) Temperature Economizer with Barometric Relief
V = ULL Temperature Economizer with Power Exhaust (cent) Vertical Only
W = ULL Enthalpy Economizer with Barometric Relief
X = ULL Enthalpy Economizer with Power Exhaust (cent) Vertical Only

**Service Options**
0 = None
1 = Unpowered Convenience Outlet (NPCO)
2 = Powered Convenience Outlet (PCO)
3 = Hinged Panels (HP)
4 = Hinged Panels + NPCO
5 = Hinged Access Panels + PCO
6 = MERV-13 Filters (M13)
7 = NPCO + MERV-13 Filters
8 = PCO + MERV-13 Filters
9 = Hinged Panels + MERV-13 Filters
A = HP + NPCO + MERV-13 Filters
B = HP + PCO + MERV-13 Filters
C = Foil Faced Insulation (FF)
D = Foil Faced Insulation + NPCO
E = Foil Faced Insulation + PCO
F = Foil Faced Insulation + Hinged Panels
G = FF + HP + NPCO
H = FF + HP + PCO
J = Foil Faced Insulation + MERV-13 Filters
K = FF + NPCO + MERV-13 Filters
L = FF + PCO + MERV-13 Filters
M = FF + HP + MERV-13 Filters
N = FF + HP + NPCO + MERV-13 Filters
P = FF + HP + PCO + MERV-13 Filters

**Electrical Options**
A = None
B = HACR Breaker
C = Non-Fused Disconnect (NFDC)
N = Phase Monitor Protection (PMR)
P = PMR + HACR
Q = PMR + NFDC
1 = HSCCR[a] (High Short Circuit Current Rating)

**Packaging Compliance**
0 = Standard

NOTE(S):
[a] Not available on the following models/options: 575V, Low Ambient/Head Pressure Control, Phase Loss Monitor, Non-Fused Disconnect, HACR, Powered Convenience Outlet.
[b] FDD (Fault Detection and Diagnostic) capability per California Title 24 section 120.2

# Model number nomenclature (cont)

## 50GC Model Number Nomenclature

| Position: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Example: | 5 | 0 | G | C | - | M | 2 | 0 | A | 2 | A | 5 | - | 0 | A | 0 | A | 0 |

**Unit Type**
50 — Cooling with Optional Electric Heat

**Model Series - WeatherMaker®**
GC — High Efficiency Packaged RTU with EcoBlue™ Technology

**Electric Heat Size**
- = No Heat
A = Low Electric Heat
B = Medium Electric Heat
C = High Electric Heat

**Refrigerant Systems Options**
M = Single Circuit/Two Stage Cooling
N = Single Circuit/Two Stage Cooling with Humidi-MiZer® System
P = Single Circuit/Two Stage Cooling with Low Ambient Control

**Tonnage**
17 = 15.0 tons
20 = 17.5 tons
24 = 20.0 tons
28 = 25.0 tons

**Sensor Options**
A = None
B = RA Smoke Detector
C = SA Smoke Detector
D = RA + SA Smoke Detector
E = $CO_2$
F = RA Smoke Detector and $CO_2$
G = SA Smoke Detector and $CO_2$
H = RA + SA Smoke Detector and $CO_2$
J = Condensate Overflow Switch
K = Condensate Overflow Switch + RA Smoke Detectors
L = Condensate Overflow Switch + RA and SA Smoke Detectors
M = Condensate Overflow Switch + SA Smoke Detector
N = Condensate Overflow Switch + $CO_2$
P = Condensate Overflow Switch + RA Smoke Detector and $CO_2$
Q = Condensate Overflow Switch + SA Smoke Detector and $CO_2$
R = Condensate Overflow Switch + RA and SA Smoke Detector and $CO_2$

**Fan Options**
2 = Standard/Medium Static – EcoBlue Vane Axial Fan
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A = Al/Cu – Al/Cu
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D = E-coat Al/Cu – E-coat Al/Cu
E = Cu/Cu – Al/Cu
F = Cu/Cu – Cu/Cu
M = Al/Cu – Al/Cu – Louvered Hail Guard
N = Precoat Al/Cu – Al/Cu – Louvered Hail Guard
P = E-coat Al/Cu – Al/Cu – Louvered Hail Guard
Q = E-coat Al/Cu – E-coat Al/Cu – Louvered Hail Guard
R = Cu/Cu – Al/Cu – Louvered Hail Guard
S = Cu/Cu – Cu/Cu – Louvered Hail Guard

**Voltage**
1 = 575-3-60
5 = 208/230-3-60
6 = 460-3-60

**Packaging Compliance**
0 = Standard

**Electrical Options**
A = None
B = HACR Breaker
C = Non-Fused Disconnect (NFDC)
N = Phase Monitor Protection (PMR)
P = PMR + HACR
Q = PMR + NFDC
1 = HSCCR[a] (High Short Circuit Current Rating)

**Service Options**
0 = None
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2 = Powered Convenience Outlet (PCO)
3 = Hinged Panels (HP)
4 = Hinged Panels + NPCO
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6 = MERV-13 Filters (M13)
7 = NPCO + MERV-13 Filters
8 = PCO + MERV-13 Filters
9 = Hinged Panels + MERV-13 Filters
A = HP + NPCO + MERV-13 Filters
B = HP + PCO + MERV-13 Filters
C = Foil Faced Insulation (FF)
D = Foil Faced Insulation + NPCO
E = Foil Faced Insulation + PCO
F = Foil Faced Insulation + Hinged Panels
G = FF + HP + NPCO
H = FF + HP + PCO
J = Foil Faced Insulation + MERV-13 Filters
K = FF + NPCO + MERV-13 Filters
L = FF + PCO + MERV-13 Filters
M = FF + HP + MERV-13 Filters
N = FF + HP + NPCO + MERV-13 Filters
P = FF + HP + PCO + MERV-13 Filters

**Intake / Exhaust Options**
A = None
B = Standard Leak Economizer with Barometric Relief
D = Standard Leak Economizer with Power Exhaust (cent) Vertical Only (Electromechanical Only)
F = Standard Leak Enthalpy Economizer with Barometric Relief
H = Standard Leak Enthalpy Economizer with Power Exhaust (cent) Vertical Only (Electromechanical Only)
U = ULL (Ultra Low Leak) Temperature Economizer with Barometric Relief
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**Unit Controls**
0 = Electromechanical Controller (For use with field installed economizers)
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8 = Electromechanical Controls with POL224 EconomizerONE (includes FDD[b])

**Design Revision**
- = Factory Design Revision

NOTE(S):
[a] Not available on the following models/options: 575V, Low Ambient/Head Pressure Control, Phase Loss Monitor, Non-Fused Disconnect, HACR, Powered Convenience Outlet.
[b] FDD (Fault Detection and Diagnostic) capability per California Title 24 section 120.2

# Capacity ratings

## 48GC AHRI Ratings[a,b,c,d]

| UNITS | COOLING STAGES | NOMINAL CAPACITY (TONS) | NET COOLING CAPACITY (MBH) | TOTAL POWER (kW) | EER | IEER WITH 2-SPEED INDOOR FAN MOTOR | AHRI RATING CFM |
|---|---|---|---|---|---|---|---|
| **VERTICAL AIR FLOW UNITS[e]** | | | | | | | |
| **48GC**17** | 2 | 15.0 | 170.0 | 14.4 | 11.8 | 16.5 | 6000 |
| **48GC**20** | 2 | 17.5 | 198.0 | 16.8 | 11.8 | 16.3 | 6250 |
| **48GC**24** | 2 | 20.0 | 234.0 | 20.5 | 11.4 | 16.4 | 7500 |
| **48GC**28** | 2 | 25.0 | 294.0 | 27.7 | 10.6 | 15.0 | 10000 |
| **HORIZONTAL AIR FLOW UNITS[e]** | | | | | | | |
| **48GC**17** | 2 | 15.0 | 170.0 | 14.4 | 11.8 | 16.4 | 6000 |
| **48GC**20** | 2 | 17.5 | 198.0 | 16.8 | 11.8 | 16.1 | 6250 |
| **48GC**24** | 2 | 20.0 | 232.0 | 20.7 | 11.2 | 16.0 | 7500 |
| **48GC**28** | 2 | 25.0 | 292.0 | 28.3 | 10.3 | 14.4 | 10000 |

NOTE(S):

a. Rated in accordance with AHRI Standards 340/360.
b. Rating are based on:
**Cooling Standard:** 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
**IEER Standard:** A measure that expresses cooling part-load EER efficiency for commercial unitary air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
c. All 48GC units comply with ASHRAE 90.1-2019 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum IEER requirements.
d. 48GC units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.
e. See position 10 in the 48GC 17-28 model number nomenclature to determine if the unit is a Vertical or Horizontal air flow unit.

LEGEND

**AHRI** — Air-Conditioning, Heating and Refrigeration Institute
**EER** — Energy Efficiency Ratio
**IEER** — Integrated Energy Efficiency Ratio

## 50GC AHRI Ratings[a,b,c,d]

| UNITS | COOLING STAGES | NOMINAL CAPACITY (TONS) | NET COOLING CAPACITY (MBH) | TOTAL POWER (kW) | EER | IEER WITH 2-SPEED INDOOR FAN MOTOR | AHRI RATING CFM |
|---|---|---|---|---|---|---|---|
| **VERTICAL AIR FLOW UNITS[e]** | | | | | | | |
| **50GC-*17** | 2 | 15.0 | 170.0 | 14.2 | 12.0 | 16.7 | 6000 |
| **50GC-*20** | 2 | 17.5 | 198.0 | 16.5 | 12.0 | 16.5 | 6250 |
| **50GC-*24** | 2 | 20.0 | 234.0 | 20.2 | 11.6 | 16.6 | 7500 |
| **50GC-*28** | 2 | 25.0 | 294.0 | 27.2 | 10.8 | 15.2 | 10000 |
| **HORIZONTAL AIR FLOW UNITS[e]** | | | | | | | |
| **50GC-*17** | 2 | 15.0 | 170.0 | 14.2 | 12.0 | 16.6 | 6000 |
| **50GC-*20** | 2 | 17.5 | 198.0 | 16.5 | 12.0 | 16.3 | 6250 |
| **50GC-*24** | 2 | 20.0 | 232.0 | 20.4 | 11.4 | 16.2 | 7500 |
| **50GC-*28** | 2 | 25.0 | 292.0 | 27.8 | 10.5 | 14.6 | 10000 |

NOTE(S):

a. Rated in accordance with AHRI Standards 340/360.
b. Rating are based on:
**Cooling Standard:** 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
**IEER Standard:** A measure that expresses cooling part-load EER efficiency for commercial unitary air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
c. All 50GC units comply with ASHRAE 90.1-2019 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum IEER requirements.
d. 50GC units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.
e. See position 10 in the 50GC 17-28 model number nomenclature to determine if the unit is a Vertical or Horizontal air flow unit.

LEGEND

**AHRI** — Air-Conditioning, Heating and Refrigeration Institute
**EER** — Energy Efficiency Ratio
**IEER** — Integrated Energy Efficiency Ratio

# Capacity ratings (cont)

## Sound Ratings Table[a,b,c]

| 48/50GC UNIT | COOLING STAGES | OUTDOOR SOUND (dB) at 60 Hz | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A-WEIGHTED | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| **17** | 2 | 84.1 | 92.2 | 83.9 | 80.4 | 81.8 | 78.7 | 76.5 | 72.2 | 65.4 |
| **20** | 2 | 84.1 | 92.2 | 83.9 | 80.4 | 81.8 | 78.7 | 76.5 | 72.2 | 65.4 |
| **24** | 2 | 86.5 | 95.6 | 87.5 | 84.2 | 84.2 | 81.7 | 77.9 | 73.2 | 66.3 |
| **30** | 2 | 85.9 | 97.1 | 88.3 | 84.4 | 83.3 | 80.7 | 77.4 | 73.4 | 67.3 |

NOTE(S):

a. Outdoor sound data is measured in accordance with AHRI.
b. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
c. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of “average” human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI.

LEGEND

**dB** — Decibel

# Capacity ratings (cont)

### Minimum - Maximum Airflow Ratings (cfm) — Natural Gas and Propane

| UNIT | HEAT LEVEL | COOLING | | | HEATING[a] | |
|---|---|---|---|---|---|---|
| | | MINIMUM 2-SPEED AIRFLOW (LOW SPEED) | MINIMUM 2-SPEED AIRFLOW (HIGH SPEED) | MAXIMUM AIRFLOW CFM | MINIMUM AIRFLOW CFM | MAXIMUM AIRFLOW CFM |
| **48GC**17** | LOW | 2700 | 4500 | 8750 | 3000 | 11000 |
| | MED | | | | 3880 | 9300 |
| | HIGH | | | | 4620 | 10000 |
| **48GC**20** | LOW | 3150 | 5250 | 8750 | 3000 | 11000 |
| | MED | | | | 3880 | 11630 |
| | HIGH | | | | 4620 | 10000 |
| **48GC**24** | LOW | 3600 | 6000 | 10000 | 3000 | 16500 |
| | MED | | | | 3880 | 15500 |
| | HIGH | | | | 4620 | 15000 |
| **48GC**28** | LOW | 4500 | 7500 | 12500 | 3000 | 16500 |
| | MED | | | | 3880 | 15500 |
| | HIGH | | | | 4620 | 15000 |

NOTE(S):

a. Heating rating values are identical for aluminum heat exchangers and stainless steel heat exchangers.

### Minimum - Maximum Airflow Ratings (cfm) — Cooling Units and Accessory Electric Heat

| UNIT | COOLING | | | ELECTRIC HEAT[a] | |
|---|---|---|---|---|---|
| | MINIMUM 2-SPEED AIRFLOW (LOW SPEED) | MINIMUM 2-SPEED AIRFLOW (HIGH SPEED) | MAXIMUM AIRFLOW CFM | MINIMUM AIRFLOW CFM | MAXIMUM AIRFLOW CFM |
| **50GC**17** | 2700 | 4500 | 8750 | 4500 | 8750 |
| **50GC**20** | 3150 | 5250 | 8750 | 5250 | 8750 |
| **50GC**24** | 3600 | 6000 | 10000 | 6000 | 10000 |
| **50GC**28** | 4500 | 7500 | 12500 | 7500 | 12500 |

NOTE(S):

a. Electric heat modules and single point kits are available as field installed accessories for 50GC units.

# Capacity ratings (cont)

### Heat Rating Table — Natural Gas and Propane

| UNIT | GAS HEAT | AL/SS HEAT EXCHANGER | | TEMPERATURE RISE (°F) | THERMAL EFFICIENCY (%) |
|---|---|---|---|---|---|
| | | INPUT/OUTPUT STAGE 1 (MBH) | INPUT/OUTPUT STAGE 2 (MBH) | | |
| **48GC**17** | LOW | 176 / 142 | 220 / 178 | 20-45 | 81 |
| | MED | 248 / 200 | 310 / 251 | 30-55 | 81 |
| | HIGH | 320 / 260 | 400 / 324 | 35-60 | 81 |
| **48GC**20** | LOW | 176 / 142 | 220 / 178 | 15-45 | 81 |
| | MED | 248 / 200 | 310 / 251 | 25-55 | 81 |
| | HIGH | 320 / 260 | 400 / 324 | 30-60 | 81 |
| **48GC**24** | LOW | 176 / 142 | 220 / 178 | 15-45 | 81 |
| | MED | 248 / 200 | 310 / 251 | 20-55 | 81 |
| | HIGH | 320 / 260 | 400 / 324 | 30-60 | 81 |
| **48GC**28** | LOW | 176 / 142 | 220 / 178 | 10-45 | 81 |
| | MED | 248 / 200 | 310 / 251 | 15-55 | 81 |
| | HIGH | 320 / 260 | 400 / 324 | 20-60 | 81 |

LEGEND

**MBH** — Btuh in thousands

# Physical data

## 48/50GC 17 to 20 Physical Data

| 48/50GC UNIT | 48/50GC*M17 | 48/50GC*N17 | 48/50GC*M20 | 48/50GC*N20 |
|---|---|---|---|---|
| NOMINAL TONS | 15.0 | 15.0 | 17.5 | 17.5 |
| BASE UNIT OPERATING WT (lb) 48GC/50GC[a] | 1771/1644 | 1771/1644 | 2008/1880 | 2008/1880 |
| REFRIGERATION SYSTEM | | | | |
| No. Circuits/No. Compressors/Type | 1/2/Scroll | 1/2/Scroll | 1/2/Scroll | 1/2/Scroll |
| Puron® (R-410A) Charge (lb-oz) | 29-5 | — | 37-11 | — |
| Humidi-MiZer® Puron (R-410A) Charge (lb-oz) | — | 40-2 | — | 50-0 |
| Metering Device | TXV | — | TXV | — |
| Humidi-MiZer Metering Device | — | TXV | — | TXV |
| High-Pressure Trip/Reset (psig) | 630/505 | 630/505 | 630/505 | 630/505 |
| Low-Pressure Trip/Reset (psig) | 54/117 | 54/117 | 54/117 | 54/117 |
| EVAPORATOR COIL | | | | |
| Material (Tube/Fin) | Cu/Al | Cu/Al | Cu/Al | Cu/Al |
| Coil Type | 3/8 in. RTPF | 3/8 in. RTPF | 3/8 in. RTPF | 3/8 in. RTPF |
| Rows/FPI | 4/15 | 4/15 | 4/15 | 4/15 |
| Total Face Area ($ft^2$) | 22 | 22 | 22 | 22 |
| Condensate Drain Connection Size | 3/4 in. | 3/4 in. | 3/4 in. | 3/4 in. |
| CONDENSER COIL | | | | |
| Material (Tube/Fin) | Cu/Al | Cu/Al | Cu/Al | Cu/Al |
| Coil Type | 5/16 in. RTPF | 5/16 in. RTPF | 5/16 in. RTPF | 5/16 in. RTPF |
| Rows/FPI | 2/18 | 2/18 | 2/18 | 2/18 |
| Total Face Area ($ft^2$) | 19.6 | 19.6 | 25.1 | 25.1 |
| HUMIDI-MIZER COIL | | | | |
| Material | — | Cu/Al | — | Cu/Al |
| Coil Type | — | 5/16 in. RTPF | — | 5/16 in. RTPF |
| Rows/FPI | — | 1/18 | — | 1/18 |
| Total Face Area ($ft^2$) | — | 21.4 | — | 21.4 |
| EVAPORATOR FAN AND MOTOR | | | | |
| Vertical Standard Static 3 Phase | | | | |
| Motor Qty / Drive Type | 2 / Direct | 2 / Direct | 2 / Direct | 2 / Direct |
| Max Cont bhp (per motor) | 2.4 | 2.4 | 2.4 | 2.4 |
| Range (rpm) | 250-2000 | 250-2000 | 250-2000 | 250-2000 |
| Fan Qty / Type | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial |
| Fan Diameter (in.) | 22 | 22 | 22 | 22 |
| Vertical High Static 3 Phase | | | | |
| Motor Qty / Drive Type | 2 / Direct | 2 / Direct | 2 / Direct | 2 / Direct |
| Max Cont bhp (per motor) | 3 | 3 | 3 | 3 |
| Range (rpm) | 250-2200 | 250-2200 | 250-2200 | 250-2200 |
| Fan Qty / Type | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial |
| Fan Diameter (in.) | 22 | 22 | 22 | 22 |
| Horizontal High Static 3 Phase | | | | |
| Motor Qty / Drive Type | 2 / Direct | 2 / Direct | 2 / Direct | 2 / Direct |
| Max Cont bhp (per motor) | 5 | 5 | 5 | 5 |
| Range (rpm) | 250-2200 | 250-2200 | 250-2200 | 250-2200 |
| Fan Qty / Type | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial |
| Fan Diameter (in.) | 22 | 22 | 22 | 22 |
| CONDENSER FAN AND MOTOR | | | | |
| Qty / Motor Drive Type | 3 / direct | 3 / direct | 4 / direct | 4 / direct |
| Motor hp / rpm | 1/4 / 1100 | 1/4 / 1100 | 1/4 / 1100 | 1/4 / 1100 |
| Fan Diameter (in.) | 22 | 22 | 22 | 22 |
| Filters | | | | |
| RA Filter Qty / Size (in.) | 6 / 20x25x2 | 6 / 20x25x2 | 6 / 20x25x2 | 6 / 20x25x2 |
| OA Inlet Screen Qty / Size (in.) | 4 / 16x25x1 | 4 / 16x25x1 | 4 / 16x25x1 | 4 / 16x25x1 |

NOTE(S):

a. Base unit operating weight does not include weight of options.

LEGEND

**bhp** — Brake Horsepower
**FPI** — Fins Per Inch
**OA** — Outdoor Air
**RA** — Return Air

# Physical data (cont)

## 48/50GC 24 to 28 Physical Data

| 48/50GC UNIT | 48/50GC*M24 | 48/50GC*N24 | 48/50GC*M28 | 48/50GC*N28 |
|---|---|---|---|---|
| NOMINAL TONS | 20 | 20 | 25 | 25 |
| BASE UNIT OPERATING WT (lb) 48GC/50GC[a] | 2240/2203 | 2240/2203 | 2423/2296 | 2423/2296 |
| REFRIGERATION SYSTEM | | | | |
| No. Circuits/No. Compressors/Type | 1/2/Scroll | 1/2/Scroll | 1/2/Scroll | 1/2/Scroll |
| Puron® (R-410A) Charge (lb-oz) | 39-0 | — | 43-2 | — |
| Humidi-MiZer® Puron (R-410A) Charge (lb-oz) | — | 52-0 | — | 60-3 |
| Metering Device | TXV | — | TXV | — |
| Humidi-MiZer Metering Device | — | TXV | — | TXV |
| High-Pressure Trip/Reset (psig) | 630/505 | 630/505 | 630/505 | 630/505 |
| Low-Pressure Trip/Reset (psig) | 54/117 | 54/117 | 54/117 | 54/117 |
| EVAPORATOR COIL | | | | |
| Material (Tube/Fin) | Cu/Al | Cu/Al | Cu/Al | Cu/Al |
| Coil Type | 3/8 in. RTPF | 3/8 in. RTPF | 3/8 in. RTPF | 3/8 in. RTPF |
| Rows/FPI | 4/15 | 4/15 | 4/15 | 4/15 |
| Total Face Area ($ft^2$) | 26 | 26 | 26 | 26 |
| Condensate Drain Connection Size | 3/4 in. | 3/4 in. | 3/4 in. | 3/4 in. |
| CONDENSER COIL | | | | |
| Material (Tube/Fin) | Cu/Al | Cu/Al | Cu/Al | Cu/Al |
| Coil Type | 5/16 in. RTPF | 5/16 in. RTPF | 5/16 in. RTPF | 5/16 in. RTPF |
| Rows/FPI | 2/18 | 2/18 | 3/18 | 3/18 |
| Total Face Area ($ft^2$) | 29.6 | 29.6 | 35.4 | 35.4 |
| HUMIDI-MIZER COIL | | | | |
| Material | — | Cu/Al | — | Cu/Al |
| Coil Type | — | 5/16 in. RTPF | — | 5/16 in. RTPF |
| Rows/FPI | — | 1/18 | — | 1/18 |
| Total Face Area ($ft^2$) | — | 25.3 | — | 25.3 |
| EVAPORATOR FAN AND MOTOR | | | | |
| Vertical Standard Static 3 Phase | | | | |
| Motor Qty / Drive Type | 2 / Direct | 2 / Direct | 2 / Direct | 2 / Direct |
| Max Cont bhp (per motor) | 2.4 | 2.4 | 3 | 3 |
| Range (rpm) | 250-2000 | 250-2000 | 250-2200 | 250-2200 |
| Fan Qty / Type | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial |
| Fan Diameter (in.) | 22 | 22 | 22 | 22 |
| Vertical High Static 3 Phase | | | | |
| Motor Qty / Drive Type | 2 / Direct | 2 / Direct | 2 / Direct | 2 / Direct |
| Max Cont bhp (per motor) | 5 | 5 | 5 | 5 |
| Range (rpm) | 250-2200 | 250-2200 | 250-2200 | 250-2200 |
| Fan Qty / Type | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial |
| Fan Diameter (in.) | 22 | 22 | 22 | 22 |
| Horizontal High Static 3 Phase | | | | |
| Motor Qty / Drive Type | 2 / Direct | 2 / Direct | 2 / Direct | 2 / Direct |
| Max Cont bhp (per motor) | 5 | 5 | 5 | 5 |
| Range (rpm) | 250-2200 | 250-2200 | 250-2200 | 250-2200 |
| Fan Qty / Type | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial | 2 / Vane Axial |
| Fan Diameter (in.) | 22 | 22 | 22 | 22 |
| CONDENSER FAN AND MOTOR | | | | |
| Qty / Motor Drive Type | 4 / direct | 4 / direct | 6 / direct | 6 / direct |
| Motor hp / rpm | 1/4 / 1100 | 1/4 / 1100 | 1/4 / 1100 | 1/4 / 1100 |
| Fan Diameter (in.) | 22 | 22 | 22 | 22 |
| Filters | | | | |
| RA Filter Qty / Size (in.) | 9 / 20x25x2 | 9 / 20x25x2 | 9 / 20x25x2 | 9 / 20x25x2 |
| OA Inlet Screen Qty / Size (in.) | 4 / 16x25x1 | 4 / 16x25x1 | 4 / 16x25x1 | 4 / 16x25x1 |

NOTE(S):

a. Base unit operating weight does not include weight of options.

LEGEND

**bhp** — Brake Horsepower
**FPI** — Fins Per Inch
**OA** — Outdoor Air
**RA** — Return Air

# Physical data (cont)

## 48GC 17 to 28 Gas Heat Data

| 48GC UNIT | 48GC**17 | 48GC**20 | 48GC**24 | 48GC**28 |
|---|---|---|---|---|
| NOMINAL TONS | 15.0 | 17.5 | 20.0 | 25.0 |
| GAS CONNECTION | | | | |
| No. of Gas Valves | 1 | 1 | 1 | 1 |
| Natural Gas Supply Line Pressure (in. wg)/(psig) | 5-13 / 0.18-0.47 | 5-13 / 0.18-0.47 | 5-13 / 0.18-0.47 | 5-13 / 0.18-0.47 |
| Liquid Propane Supply Line Pressure (in. wg)/(psig) | 11-13 / 0.40-0.47 | 11-13 / 0.40-0.47 | 11-13 / 0.40-0.47 | 11-13 / 0.40-0.47 |
| HEAT ANTICIPATOR SETTING (AMPS) | | | | |
| First Stage | 0.14 | 0.14 | 0.14 | 0.14 |
| Second Stage | 0.14 | 0.14 | 0.14 | 0.14 |
| NATURAL GAS HEAT | | | | |
| LOW | | | | |
| No. of Stages / No. of Burners (total) | 2 / 5 | 2 / 5 | 2 / 5 | 2 / 5 |
| Connection Size | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT |
| Rollout Switch Opens / Closes (°F) | 195 / 115 | 195 / 115 | 195 / 115 | 195 / 115 |
| Temperature Rise (°F) | 20-45 | 15-45 | 15-45 | 10-45 |
| MEDIUM | | | | |
| No. of Stages / No. of Burners (total) | 2 / 7 | 2 / 7 | 2 / 7 | 2 / 7 |
| Connection Size | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT |
| Rollout Switch Opens / Closes (°F) | 195 / 115 | 195 / 115 | 195 / 115 | 195 / 115 |
| Temperature Rise (°F) | 30-55 | 25-55 | 20-55 | 15-55 |
| HIGH | | | | |
| No. of Stages / No. of Burners (total) | 2 / 9 | 2 / 9 | 2 / 9 | 2 / 9 |
| Connection Size | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT |
| Rollout Switch Opens / Closes (°F) | 195 / 115 | 195 / 115 | 195 / 115 | 195 / 115 |
| Temperature Rise (°F) | 35-60 | 30-60 | 30-60 | 20-60 |
| LIQUID PROPANE HEAT | | | | |
| LOW | | | | |
| No. of Stages / No. of Burners (total) | 2 / 5 | 2 / 5 | 2 / 5 | 2 / 5 |
| Connection Size | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT |
| Rollout Switch Opens / Closes (°F) | 195 / 115 | 195 / 115 | 195 / 115 | 195 / 115 |
| Temperature Rise (°F) | 20-45 | 15-45 | 15-45 | 10-45 |
| MEDIUM | | | | |
| No. of Stages / No. of Burners (total) | 2 / 7 | 2 / 7 | 2 / 7 | 2 / 7 |
| Connection Size | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT |
| Rollout Switch Opens / Closes (°F) | 195 / 115 | 195 / 115 | 195 / 115 | 195 / 115 |
| Temperature Rise (°F) | 30-55 | 25-55 | 20-55 | 15-55 |
| HIGH | | | | |
| No. of Stages / No. of Burners (total) | 2 / 9 | 2 / 9 | 2 / 9 | 2 / 9 |
| Connection Size | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT | 3/4 in. NPT |
| Rollout Switch Opens / Closes (°F) | 195 / 115 | 195 / 115 | 195 / 115 | 195 / 115 |
| Temperature Rise (°F) | 35-60 | 30-60 | 30-60 | 20-60 |

# Options and accessories

| ITEM | OPTION[a] | ACCESSORY[b] |
|---|---|---|
| **GAS HEAT (48GC units only)** | | |
| Low, Medium or High Gas Heat — Aluminized Heat Exchanger | X | |
| Low, Medium or High Gas Heat — Stainless Steel Heat Exchanger | X | |
| Propane Conversion Kit | | X |
| High Altitude Conversion Kit | | X |
| Flue Discharge Deflector | | X |
| **ELECTRIC HEAT (50GC units only)** | | |
| Electric Resistance Heaters | X | X |
| Single Point Kits | | X |
| **CABINET** | | |
| Hinged Access Panels | X | |
| MERV-13, 4 in. Filters | X | |
| MERV-13, 2 in. Filters | | X |
| MERV-8, 2 in. Filters | | X |
| 4 in. Filter Rack (filters not included) | | X |
| **COIL OPTIONS** | | |
| Cu/Cu indoor and/or outdoor coils | X | |
| Pre-coated outdoor coils | X | |
| Premium, E-coated outdoor coils | X | |
| **HUMIDITY CONTROL** | | |
| Humidi-MiZer® Adaptive Dehumidification System | X | |
| **CONDENSER PROTECTION** | | |
| Condenser coil hail guard (louvered design) | X | X |
| **CONTROLS** | | |
| Thermostats, temperature sensors, and subbases | | X |
| SystemVu™ DDC communicating controller | X | |
| Smoke detector (supply and/or return air) | X | X |
| Horn Strobe Annunciator[c] | | X |
| Time Guard II compressor delay control circuit | | X |
| Phase Monitor | X | X |
| **ECONOMIZERS AND OUTDOOR AIR DAMPERS** | | |
| EconomizerONE for electro-mechanical controls, complies with FDD (Low and Ultra Low Leak damper models)[d] | X | X |
| Wi-Fi Stick for EconomizerONE | | X |
| EconoMi$er2 for DDC controls (Standard and Ultra Low Leak air damper models)[d] | X | X |
| Motorized 2-position outdoor-air damper | | X |
| Manual outdoor-air damper (25% and 50%) | | X |
| Barometric relief[e] | X | X |
| Power exhaust - centrifugal design | X | X |
| Condensate Overflow switch | X | X |

| ITEM | OPTION[a] | ACCESSORY[b] |
|---|---|---|
| **ECONOMIZER SENSORS AND IAQ DEVICES** | | |
| Single dry bulb temperature sensors[f] | X | X |
| Differential dry bulb temperature sensors[f] | | X |
| Differential enthalpy sensors[f] | | X |
| $CO_2$ sensor (wall, duct, or unit mounted)[f] | X | X |
| **INDOOR MOTOR AND DRIVE** | | |
| Multiple motor and drive packages | X | |
| **LOW AMBIENT CONTROLS** | | |
| Winter start kit[g] | | X |
| Low Ambient controller to 0°F (–18°C)[g] | X | X |
| **POWER OPTIONS** | | |
| Convenience outlet (powered) | X | |
| Convenience outlet (unpowered) | X | |
| Convenience outlet, 20 amp (unpowered) | | X |
| Non-fused disconnect[h] | X | |
| High SCCR Protection[i] | X | |
| **ROOF CURBS** | | |
| Roof curb 14 in. (356 mm) | | X |
| Roof curb 24 in. (610 mm) | | X |

NOTE(S):

a. Factory-installed option.
b. Field-installed accessory.
c. Requires a field-supplied 24V transformer for each application. See price pages for details.
d. Models with SystemVu controls comply with California Title 24 Fault Detection and Diagnostic (FDD).
e. Included with economizer.
f. Sensors used to optimize economizer performance.
g. See application data for assistance.
h. Non-fused disconnect switch cannot be used when unit FLA electrical rating exceeds 200 amps (all voltages).
i. High SCCR (Short Circuit Current Rating) is not available on the following: units with Humidi-MiZer system, Low Ambient controls, Phase loss monitor, Non-fused disconnect, Powered convenience outlet, and 575V models

# Options and accessories (cont)

## Factory-installed options

### Economizer (dry-bulb or enthalpy)

Economizers save money. They bring in fresh, outside air for ventilation; and provide cool, outside air to cool your building. This is the preferred method of low-ambient cooling. When coupled to $CO_2$ sensors, economizers can provide even more savings by coupling the ventilation air to only that amount required.

Economizers are available, installed and tested by the factory, with either enthalpy or dry-bulb temperature inputs. Additional sensors are available as accessories to optimize the economizers. Economizers include a powered exhaust system to help equalize building pressures.

Economizers can be factory-installed or easily field-installed.

### Unit mounted $CO_2$ sensor

The $CO_2$ sensor works with the economizer to intake only the correct amount of outside air for ventilation. As occupants fill your building, the $CO_2$ sensor detects their presence through increasing $CO_2$ levels, and opens the economizer appropriately. When the occupants leave, the $CO_2$ levels decrease, and the sensor appropriately closes the economizer. This intelligent control of the ventilation air, called demand controlled ventilation (DCV), reduces the overall load on the rooftop, saving money. It is also available as a field-installed accessory.

### Smoke detector (supply and/or return air)

Trust the experts. Smoke detectors make your application safer and your job easier. Carrier smoke detectors immediately shut down the rooftop unit when smoke is detected. They are available, installed by the factory, for supply air, return air, or both.

### Electric heaters

Carrier offers a full-line of factory or field-installed accessory heaters. The heaters are pre-engineered and certified, easy to install, and easy to use.

### Optional Humidi-MiZer® adaptive dehumidification system

Carrier's Humidi-MiZer adaptive dehumidification system is an all-inclusive factory-installed option that can be ordered with any WeatherMaster® 48/50GC*17-28 rooftop unit.

This system expands the envelope of operation of Carrier's WeatherMaster rooftop products to provide unprecedented flexibility to meet year round comfort conditions.

The Humidi-MiZer adaptive dehumidification system has a unique dual operational mode setting. The Humidi-MiZer system provides greater dehumidification of the occupied space by two modes of dehumidification operations in addition to its normal design cooling mode.

The WeatherMaster 48/50GC*17-28 rooftop coupled with the Humidi-MiZer system is capable of operating in normal design cooling mode, sub-cooling mode, and hot gas reheat mode. Normal design cooling mode is when the unit will operate under its normal sequence of operation by cycling compressors to maintain comfort conditions.

Sub-cooling mode will operate to satisfy part load type conditions when the space requires combined sensible and a higher proportion of latent load control. Hot Gas Reheat mode will operate when outdoor temperatures diminish and the need for latent capacity is required for sole humidity control Hot Gas Reheat mode will provide neutral air for maximum dehumidification operation.

NOTE: Humidi-MiZer system includes Low Ambient controller.

### Filter maintenance indicator

When the optional factory-installed filter maintenance indicator is used, a factory-installed differential pressure switch measures pressure drop across the outside air filter and activates a field-supplied dry contact indicator when the pressure differential exceeds the adjustable switch setpoint.

### Hinged access panels

Allows access to unit's major components with specifically designed hinged access panels. Panels are filter, control box access indoor fan motor access.

### Cu/Cu (indoor) coils

Copper fins and copper tubes are mechanically bonded to copper tubes and copper tube sheets. A polymer strip prevents coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

### E-coated (outdoor and indoor) coils

A flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.

### Pre-coated outdoor coils

A durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments. The coating minimizes galvanic action between dissimilar metals. Coating is applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube.

### Condenser coil hail guard

Sleek, louvered panels protect the condenser coil from hail damage, foreign objects, and incidental contact.

### Stainless steel heat exchanger (48GC units only)

The stainless steel heat exchanger option provides the tubular heat exchanger be made out of a minimum 20 gage type 409 stainless steel for applications where the mixed air to the heat exchanger is expected to drop below 45°F (7°C). Stainless steel may be specified on applications where the presence of airborne contaminants require its use (applications such as paper mills) or in area with very high outdoor humidity that may result in severe condensation in the heat exchanger during cooling operation.

### Convenience outlet (powered or un-powered)

Reduce service and/or installation costs by including a convenience outlet in your specification. Carrier will install this service feature at our factory. Provides a convenient, 15 amp, 115v GFCI receptacle with "Wet in Use" cover. The "powered" option allows the installer to power the outlet from the line side of the disconnect or load side as required by code. The "unpowered" option is to be powered from a separate 115/120v power source.

The unpowered convenience outlet is available as a 15 amp factory-installed option or a 20 amp field-installed accessory.

# Options and accessories (cont)

### Non-fused disconnect

This OSHA-compliant, factory-installed, safety switch allows a service technician to locally secure power to the rooftop. When selecting a factory-installed non-fused disconnect, note they are sized for the unit as ordered from the factory. The sizing of these do not accommodate field-installed items such as power exhaust devices, etc. If field installing electric heat with factory-installed non-fused disconnect switch, a single point kit may or may not be required.

### SystemVu™ controller

Carrier's SystemVu controller is an optional factory-installed and tested controller.

This controller takes on a whole new approach to provide an intuitive, intelligent controller that not only monitors and controls the unit, but also provides linkage to multiple building automation systems.

Each SystemVu controller makes it easy to set up, service, troubleshoot, gain historical data, generate reports and provide comfort only Carrier is noted for.

*Key features include:*

- Easy to read back lit four line text screen for superior visibility.
- Quick operational condition LEDs of: Run, Alert, and Fault.
- Simple navigation with large keypad buttons of: Navigation arrows, Test, Back, Enter and Menu.
- Capable of being controlled with a conventional thermostat, space sensor or build automation system.
- Service capabilities include:
  - Auto run test
  - Manual run test
  - Component run hours and starts
  - Commissioning reports
  - Data logging
- Full range of diagnosis:
  - Read refrigerant pressures without the need of gages
  - Sensor faults
  - Compressor reverse rotation
  - Economizer diagnostics that meet California Title 24 requirements
- Quick data transfer via USB port:
  - Unit configuration uploading/downloading
  - Data logging
  - Software upgrades
- Built in capacity for:
  - i-Vu® open systems
  - BACnet systems
  - CCN systems
- Configuration and alarm point capability:
  - Contain over 100 alarm codes
  - Contain over 260 status, troubleshooting, diagnostic and maintenance points
  - Contain over 270 control configuration setpoints

### Condensate overflow switch

This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:

- Indicator light – solid red (more than 10 seconds on water contact – compressors disabled), blinking red (sensor disconnected)
- 10-second delay to break – eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping)
- Disables the compressors operation when condensate plug is detected, but still allows fans to run for economizer.

### Power exhaust with barometric relief

Superior internal building pressure control. This field-installed accessory may eliminate the need for costly, external pressure control fans.

### MERV-13 4 in. return air filters

This factory option upgrades the return air filters from standard unit filters to high efficiency MERV-13 filters. Non-woven MERV-13 filter media with high strength, moisture-resistant frame. Filter media is securely fasted inside the filter frame on all four sides.

### High Short Circuit Current Rating (SCCR) protection

This factory-installed option provides high short circuit current protection to each compressor, plus all indoor and outdoor fan motors of 60 kA (for 208/230-3-60 units) and 65 kA (for 460-3-60 units) against high potential fault current situations.

Standard unit comes with 5 kA rating.

This option is not available with factory installed Non-Fused Disconnect, Humidi-MiZer system, Low Ambient controls, Phase loss monitor/protection, Powered convenience outlet, and 575 Volt models.

# Options and accessories (cont)

## Field-installed accessories

### Condenser coil hail guard

Sleek, louvered panels protect the condenser coil from hail damage, foreign objects, and incidental contact. This can be purchased as a factory-installed option or as a field-installed accessory.

### Differential enthalpy sensor

The differential enthalpy sensor is comprised of an outdoor and return air enthalpy sensors to provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.

### Wall or duct mounted $CO_2$ sensor

The IAQ sensor shall be available in duct or wall mount. The sensor provides demand ventilation indoor air quality (IAQ) control.

### Propane conversion kit (48GC units only)

Convert your gas heat rooftop from standard natural gas operation to Propane using this field-installed kit.

### High altitude conversion kit (48GC units only)

High altitudes have less oxygen, which affects the fuel/air mixture in heat exchangers. In order to maintain a proper fuel/air mixture, heat exchangers operating in altitudes above 2000 ft (610 m) require different orifices. To select the correct burner orifices or determine the heat capacity for a high altitude application, use either the selection software, or the unit's service manual. High altitudes have less oxygen, which means heat exchangers need less fuel. The new gas orifices in this field-installed kit make the necessary adjustment for high altitude applications. They restore the optimal fuel to air mixture and maintain healthy combustion on altitudes above 2000 ft (610 m).

NOTE: Typical natural gas heating value ranges from 975 to 1050 Btu/ft$^3$ at sea level nationally. The heating value goes down approximately 1.7% per every thousand feet elevation. Standard factory orifices can typically be used up to 2000 ft (610 m) elevation without any operational issues.

### Flue discharge deflector (48GC units only)

The flue discharge deflector is a useful accessory when flue gas recirculation is a concern. By venting the flue discharge upwards, the deflector minimizes the chance for a neighboring unit to intake the flue exhaust.

### 4 in. filter rack kit

The 4 in. filter rack accessory kit is designed to hold 4 in. MERV-8 or MERV-13 filters. Filters not included in kit.

### MERV-13 2 in. return air filters

This kit includes MERV-13 2 in. filters (qty 4) to accommodate unit filter rack size.

### MERV-8 2 in. return air filters

This kit includes MERV-8 2 in. filters (qty 4) to accommodate unit filter rack size.

### Phase monitor protection

The Phase Monitor Control will monitor the sequence of three phase electrical system to provide a phase reversal protection; and monitor the three phase voltage inputs to provide a phase loss protection for the three phase device. It will work on either a Delta or Wye power connection.

### Winter start kit

The winter start kit by Carrier extends the low ambient limit of your rooftop to 25°F (–4°C). The kit bypasses the low pressure switch, preventing nuisance tripping of the low pressure switch. Other low ambient precautions may still be prudent.

### Low ambient controller

The low ambient controller is a head pressure controller kit that is designed to maintain the unit's condenser head pressure during periods of low ambient cooling operation. This device should be used as an alternative to economizer free cooling when economizer usage is either not appropriate or desired. The low ambient controller will either cycle the outdoor fan motors or operate them at reduced speed to maintain the unit operation, depending on the model. This controller allows cooling operation down to 0°F (–18°C) ambient conditions.

### Roof curb (14 in./356 mm or 24 in./610 mm)

Full perimeter roof curb with exhaust capability provides separate air streams for energy recovery from the exhaust air without supply air contamination.

### Filter status indicator accessory

Monitors static pressure across supply and exhaust filters and provides indication when filters become clogged.

### Power exhaust

Superior internal building pressure control. This field-installed accessory may eliminate the need for costly, external pressure control fans.

### Manual OA damper

Manual outdoor air dampers are an economical way to bring in ventilation air. The dampers are available in 25% and 50% versions.

NOTE: See application tip "ROOFTOP-18-01" prior to use of this damper on 17-28 size models.

### Motorized 2-Position damper

The Carrier 2-position, motorized outdoor air damper admits up to 100% outside air. Using reliable, gear-driven technology, the 2-position damper opens to allow ventilation air and closes when the rooftop stops, stopping unwanted infiltration.

NOTE: See application tip "ROOFTOP-18-01" prior to use of this damper on 17-28 size models.

### Time Guard II control circuit

This accessory protects your compressor by preventing short-cycling in the event of some other failure, prevents the compressor from restarting for 30 seconds after stopping. Not required with SystemVu™ controller or authorized commercial thermostats.

### Wi-Fi Stick for EconomizerONE (optional)

The accessory Wi-Fi/WLAN stick can be connected to the EconomizerONE POL224 economizer controller via the USB host interface. The Wi-Fi stick enables a wireless connection to be made between a smartphone and the economizer controller via the Climatix™[1] mobile app for

1. Third-party trademarks and logos are the property of their respective owners.

# Options and accessories (cont)

commissioning, troubleshooting, and maintenance operations. The Wi-Fi stick is required to utilize the mobile app.

*Climatix™ mobile application*

The Climatix™ mobile app offers a best-in-class user interface and a simple step-by-step commissioning workflow using a mobile device. The user interface walks users through the setup of the controller and allows users to view the operating mode and parameters. Users can adjust setpoints, initiate damper tests, and save the final configuration as a favorite to expedite setup in the future.

The application is available on Android™[1] and Apple iOS®[1] platforms. The Wi-Fi stick for the EconomizerONE is required to join the Siemens-WiFi-Stick network and setup the controller on a smartphone.

**Options and Accessory Weights[a]**

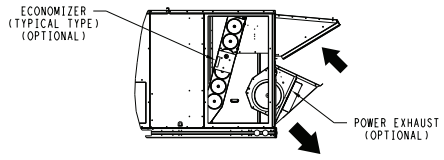
| OPTION / ACCESSORY NAME | 48/50GC UNIT WEIGHT | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 17 | | 20 | | 24 | | 28 | |
| | lb | kg | lb | kg | lb | kg | lb | kg |
| Humidi-MiZer® System[b] | 82 | 37 | 82 | 37 | 82 | 37 | 90 | 41 |
| Power Exhaust | 198 | 90 | 198 | 90 | 198 | 90 | 198 | 90 |
| EconomizerONE or EconoMi$er®2 | 293 | 133 | 293 | 133 | 304 | 138 | 304 | 138 |
| 2-Position Damper | 50 | 23 | 50 | 23 | 50 | 23 | 65 | 29 |
| Manual Damper | 35 | 16 | 35 | 16 | 35 | 16 | 40 | 18 |
| Medium Gas Heat (48GC units only) | 21 | 10 | 21 | 10 | 21 | 10 | 21 | 10 |
| High Gas Heat (48GC units only) | 42 | 19 | 42 | 19 | 42 | 19 | 42 | 19 |
| Hail Guard (louvered) | 90 | 41 | 90 | 41 | 100 | 46 | 100 | 46 |
| Cu/Cu Condenser Coil | 166 | 76 | 203 | 92 | 244 | 111 | 278 | 126 |
| Cu/Cu Evaporator Coil | 128 | 58 | 128 | 58 | 163 | 74 | 163 | 74 |
| Roof Curb (14 in. curb) | 240 | 109 | 255 | 116 | 255 | 116 | 255 | 116 |
| Roof Curb (24 in. curb) | 340 | 154 | 355 | 161 | 355 | 161 | 355 | 161 |
| $CO_2$ Sensor | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 3 |
| Flue Discharge Deflector | 7 | 3 | 7 | 3 | 7 | 3 | 7 | 3 |
| Optional Indoor Motor[c] | 30 | 14 | 30 | 14 | 0 | 0 | 0 | 0 |
| Low Ambient Controller | 9 | 4 | 9 | 4 | 9 | 4 | 9 | 4 |
| Winter Start Kit | 5 | 2 | 5 | 2 | 5 | 2 | 5 | 2 |
| Return Air Smoke Detector | 7 | 3 | 7 | 3 | 7 | 3 | 7 | 3 |
| Supply Air Smoke Detector | 7 | 3 | 7 | 3 | 7 | 3 | 7 | 3 |
| Fan Filter Switch | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |
| Non-Fused Disconnect | 15 | 7 | 15 | 7 | 15 | 7 | 15 | 7 |
| Powered Convenience Outlet | 36 | 16 | 36 | 16 | 36 | 16 | 36 | 16 |
| Unpowered Convenience Outlet | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 2 |
| Enthalpy Sensor | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |
| Differential Enthalpy Sensor | 3 | 1 | 3 | 1 | 3 | 1 | 3 | 1 |
| 4 in. MERV 13 Filters | 22 | 10 | 22 | 10 | 22 | 10 | 22 | 10 |

NOTE(S):

a. Where multiple variations are available, the heaviest combination is listed.
b. For Humidi-MiZer system, add Low Ambient controller weight.
c. Add the Optional Indoor Motor weight to the weight of the base unit.

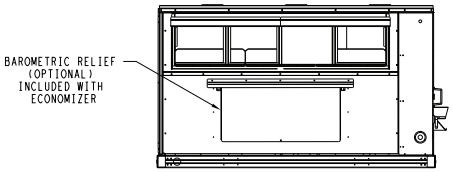
# 48GC**17 Base Unit Dimensions





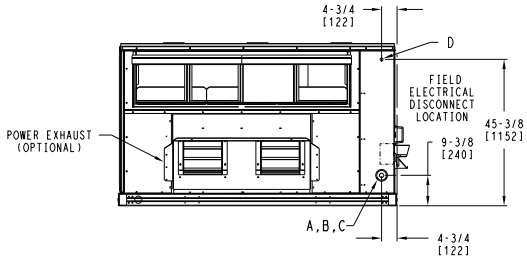

BACK

(PANELS REMOVED TO SHOW ECONOMIZER AND POWER EXHAUST OPTIONS)



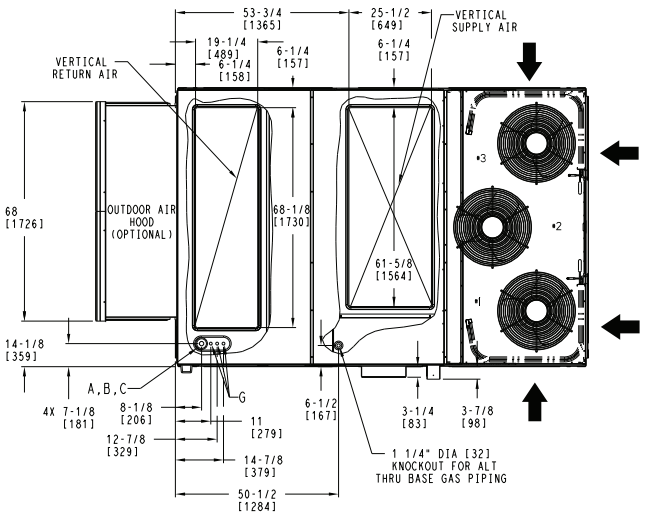

LEFT

SHOWN WITH THE BAROMETRIC RELIEF OPTION INSTALLED




LEFT

SHOWN WITH THE POWER EXHAUST OPTION INSTALLED

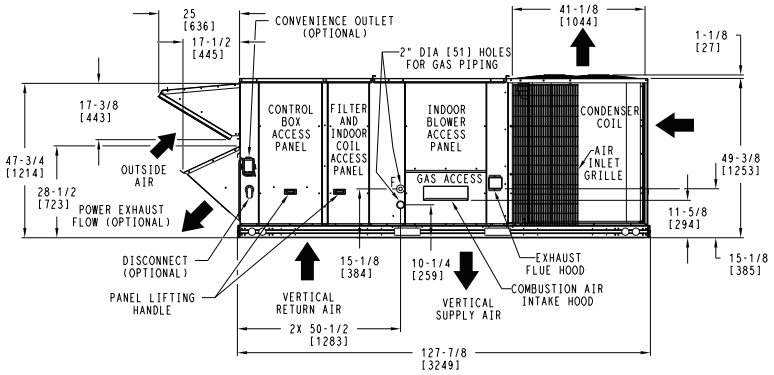



TOP

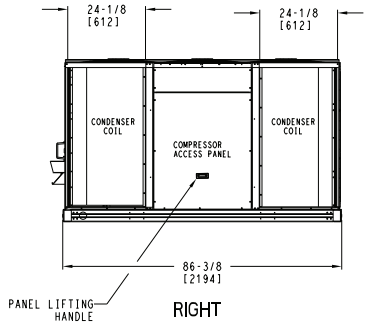
| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| F | 3/4"-14 NPT GAS CONNECTION (NOT SHOWN) |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

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



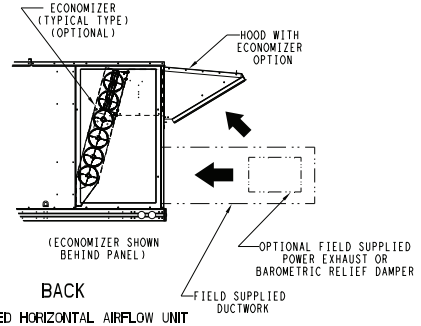

RIGHT

DEDICATED VERTICAL AIRFLOW UNIT
17 SIZE

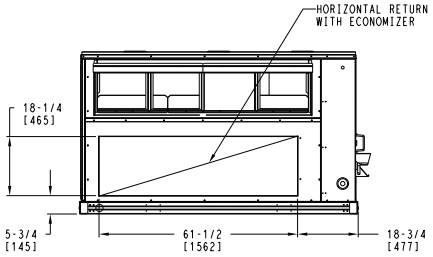
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 1 OF 5 | 04/20/23 | - | 48GC 17 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006820 | - |

# 48GC**17 Base Unit Dimensions (cont)

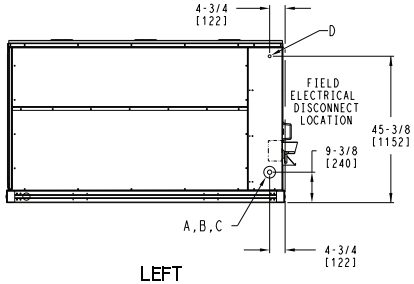




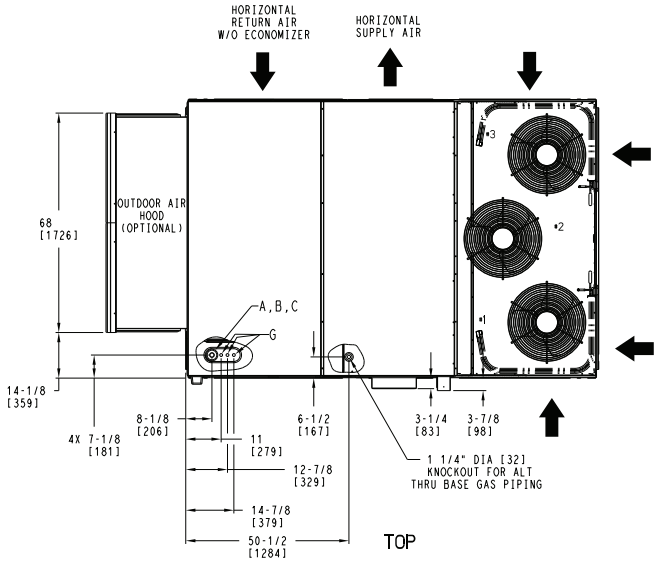

(DEDICATED HORIZONTAL AIRFLOW UNIT RETURN AIRFLOW WITH ECONOMIZER)




(DEDICATED HORIZONTAL AIRFLOW UNIT RETURN AIRFLOW WITH ECONOMIZER)



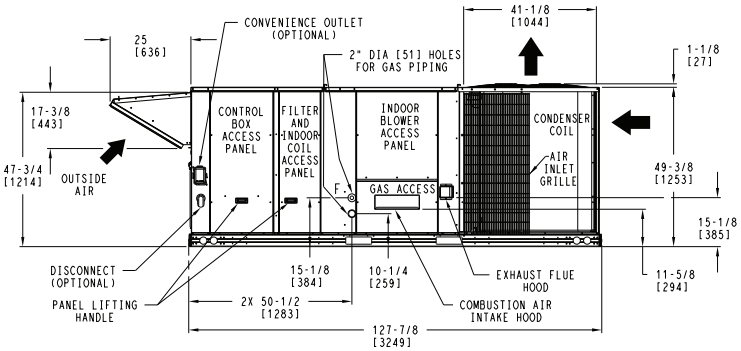

(DEDICATED HORIZONTAL AIRFLOW UNIT RETURN AIRFLOW WITHOUT ECONOMIZER)

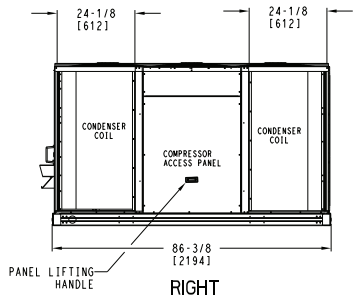



| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| F | 3/4"-14 NPT GAS CONNECTION (NOT SHOWN) |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

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



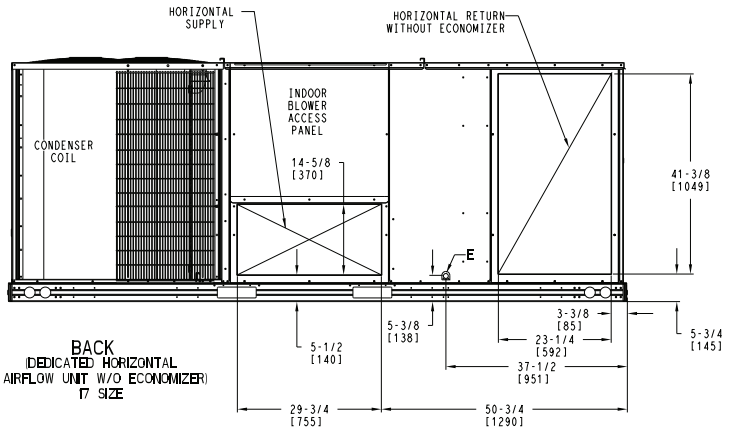

DEDICATED HORIZONTAL AIRFLOW UNIT
17 SIZE

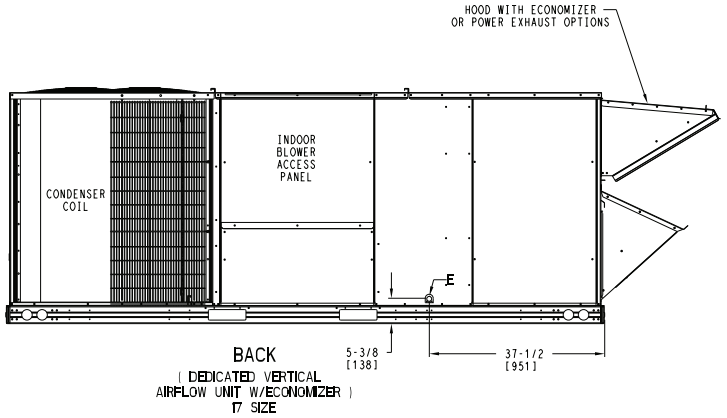
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | |
|---|---|---|---|---|---|
| U.S. ECCN:NSR | 2 OF 5 | 04/20/23 | - | 48GC 17 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006820 | REV - |

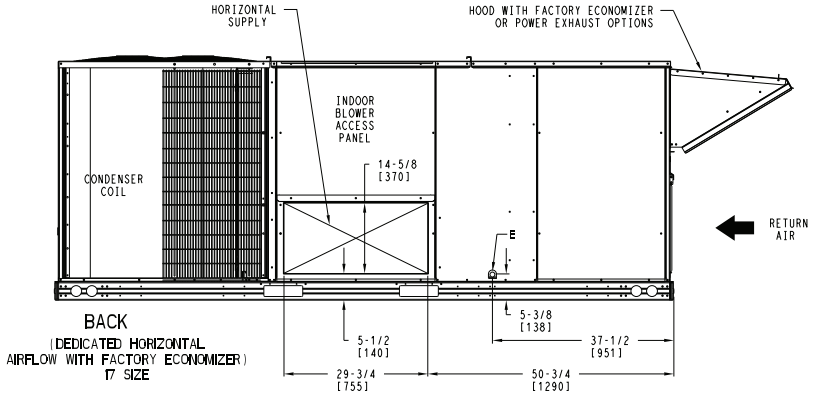
# 48GC**17 Base Unit Dimensions (cont)

| | CONNECTION SIZES |
|---|---|
| E | 3/4"-14 NPT CONDENSATE DRAIN |





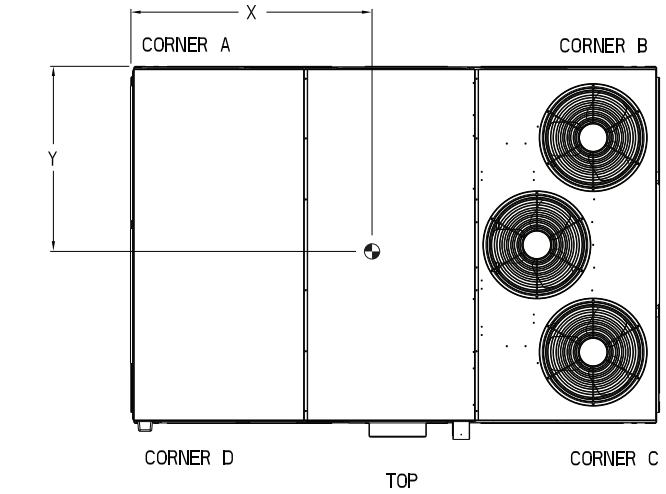

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 3 OF 5 | 04/20/2023 | - | 48GC 17 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006820 | - |

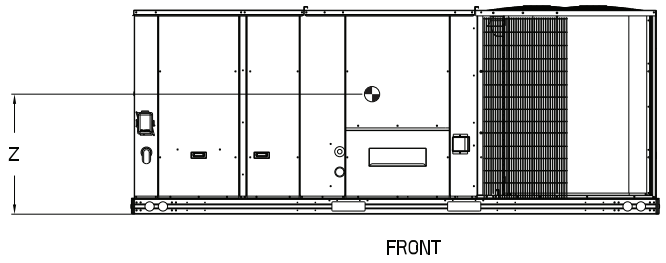
# 48GC**17 Base Unit Dimensions (cont)

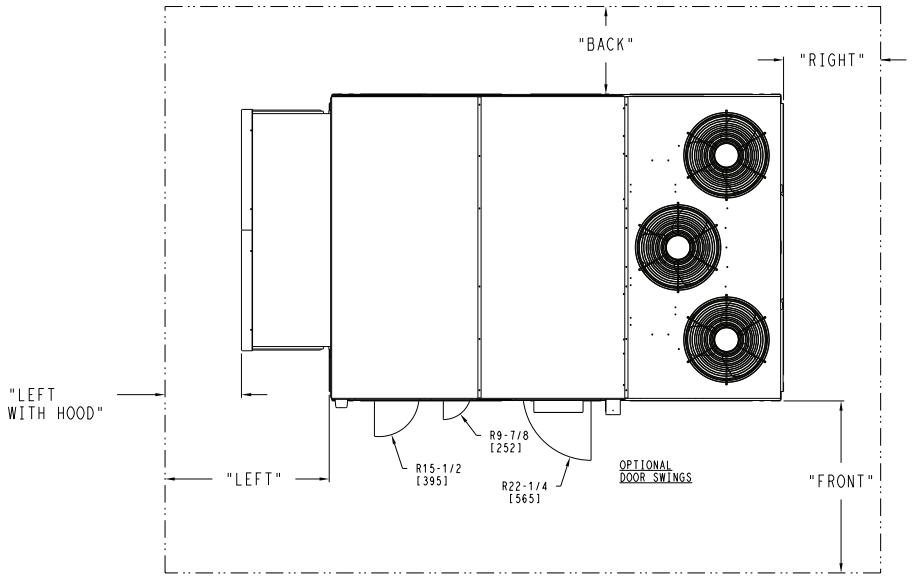
| UNIT | STD UNIT WEIGHT * | | CORNER WEIGHT (A) | | CORNER WEIGHT (B) | | CORNER WEIGHT (C) | | CORNER WEIGHT (D) | | C.G. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | X | Y | Z |
| 48GC17 | 1771 | 804 | 377 | 171 | 471 | 214 | 512 | 232 | 410 | 186 | 71 [1803] | 45 [1143] | 16 1/2 [419] |



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




NOTES:

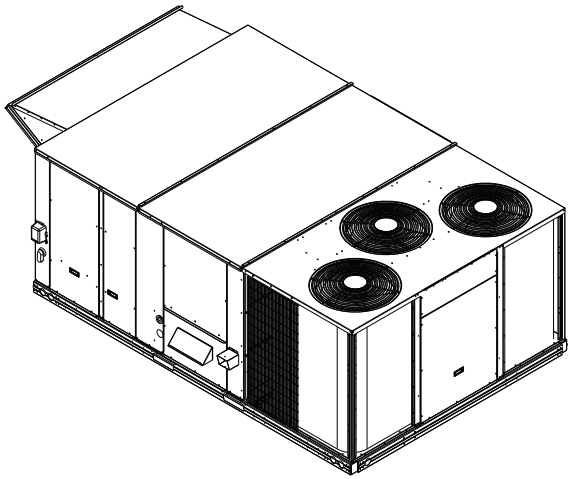
1. CLEARANCE ABOVE THE UNIT TO BE 72"
2. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

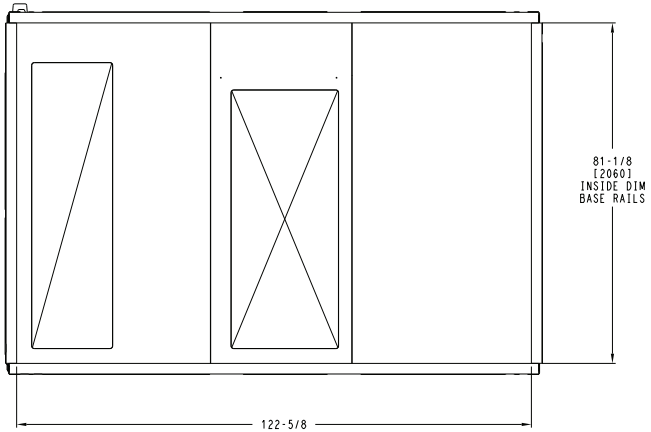
| | CLEARANCE | | |
|---|---|---|---|
| | SERVICE WITH: | SERVICE WITH: | OPERATING |
| SURFACE | CONDUCTIVE BARRIER | NONCONDUCTIVE BARRIER | CLEARANCE |
| FRONT | 48 [1219mm] | 36 [914mm] | 18 [457mm] |
| LEFT | 48 [1219mm] | 42 [1067mm] | 18 [457mm] |
| BACK | 42 [1067mm] | 36 [914mm] | 18 [457mm] |
| LEFT WITH HOOD | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| RIGHT | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| TOP | 72 [1829mm] | 72 [1829mm] | 72 [1829mm] |

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 4 OF 5 | 04/20/23 | - | 48GC 17 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006820 | - |

## 48GC**17 Base Unit Dimensions (cont)

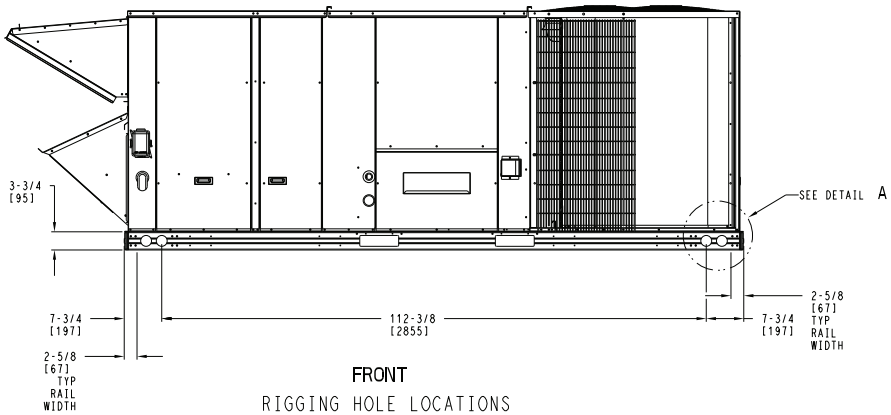






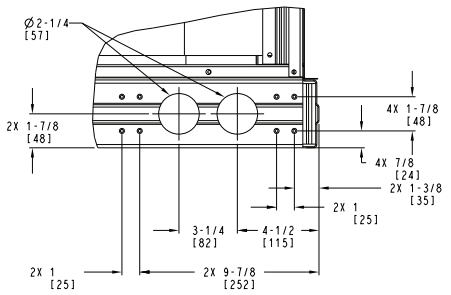

BOTTOM

INSIDE BASERAIL DIMENSIONS




FRONT

RIGGING HOLE LOCATIONS

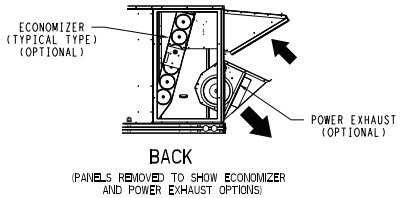


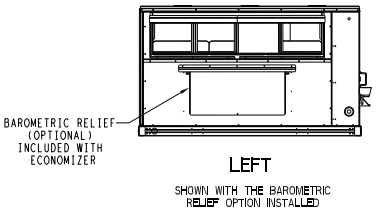

DETAIL A
TYP 4 PLCS

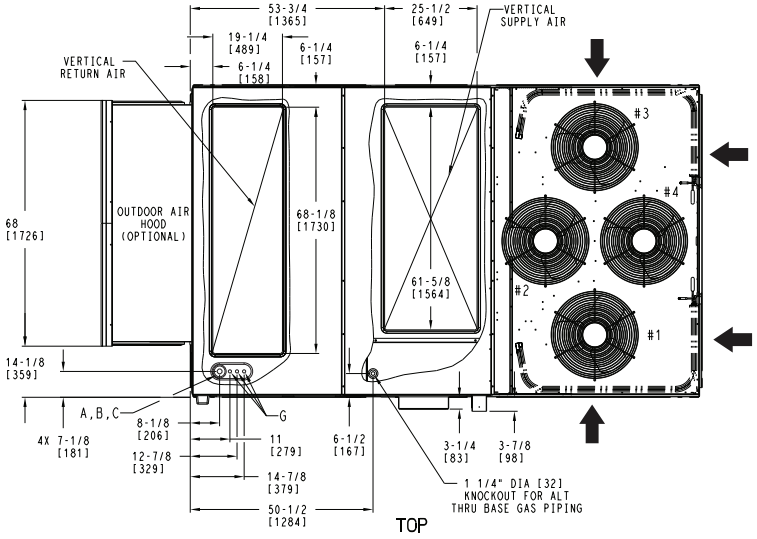
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 5 OF 5 | 04/20/23 | - | 48GC 17 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006820 | - |

# 48GC**20-24 Base Unit Dimensions





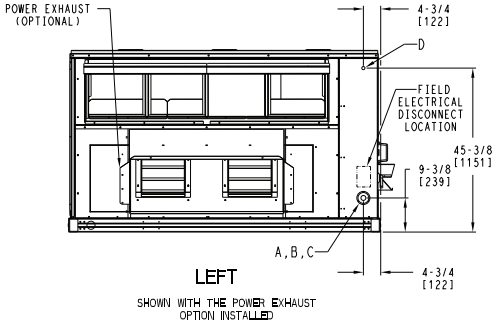



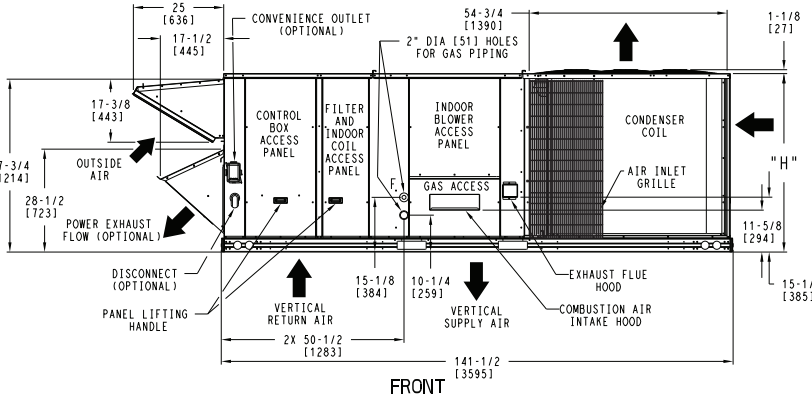

| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| F | 3/4"-14 NPT GAS CONNECTION (NOT SHOWN) |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

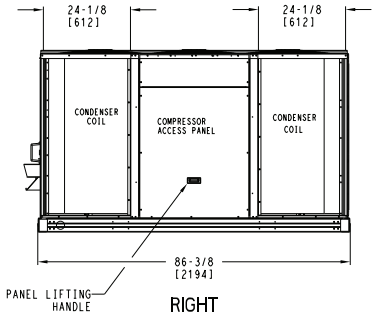
| UNIT | H |
|---|---|
| 20 SIZE | 49-3/8 [1253] |
| 24 SIZE | 57-3/8 [1456] |

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



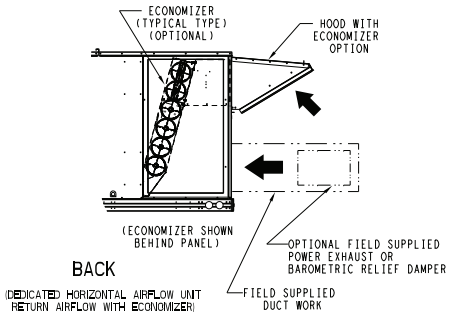



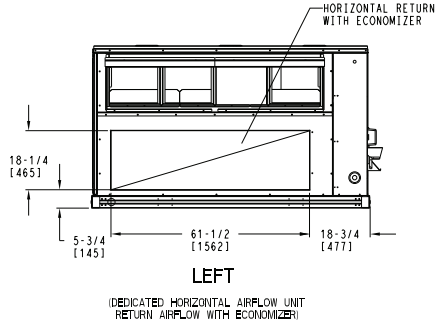

DEDICATED VERTICAL AIRFLOW UNIT
20,24 SIZE

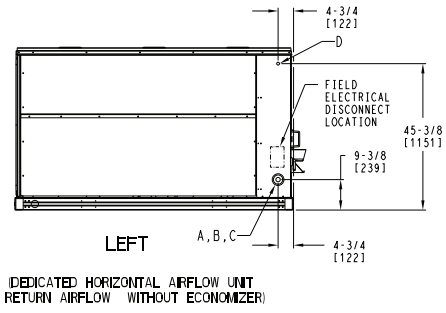
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | 48GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006821 | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 1 OF 5 | 04/20/23 | - | | | - |

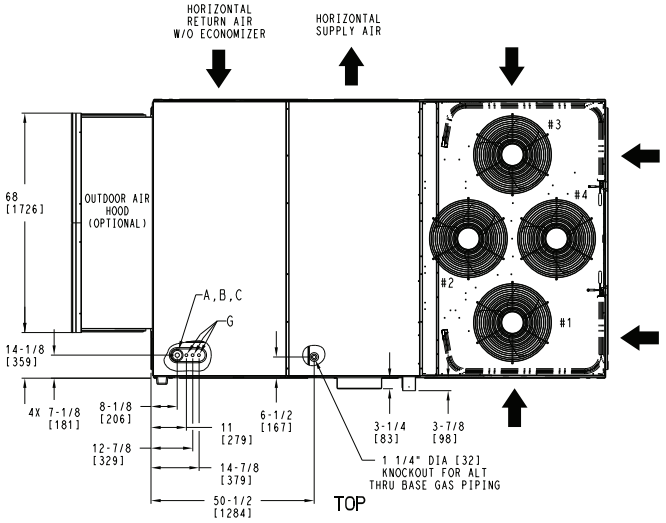
# 48GC**20-24 Base Unit Dimensions (cont)






| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
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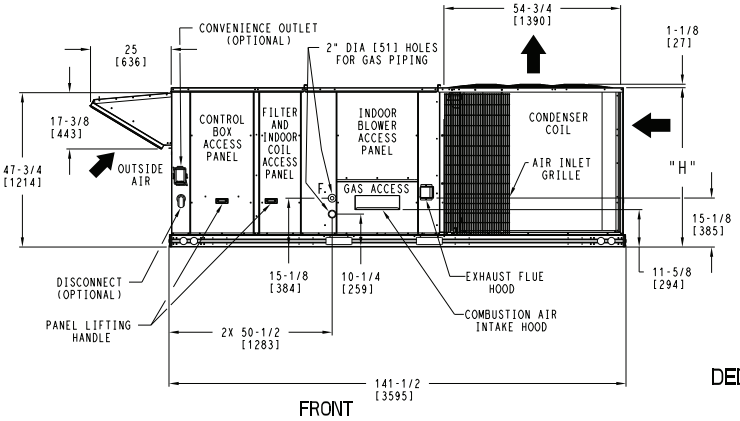
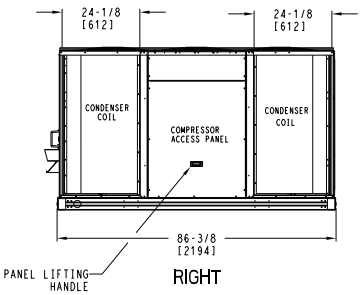
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| F | 3/4"-14 NPT GAS CONNECTION (NOT SHOWN) |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

| UNIT | H |
|---|---|
| 20 SIZE | 49-3/8 [1253] |
| 24 SIZE | 57-3/8 [1456] |

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




DEDICATED HORIZONTAL AIRFLOW UNIT
20,24 SIZE

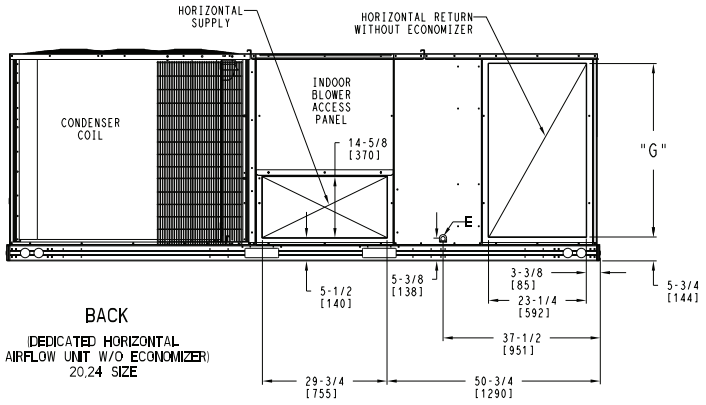
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | 48GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006821 | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 2 OF 5 | 04/20/23 | - | | | - |

# 48GC**20-24 Base Unit Dimensions (cont)

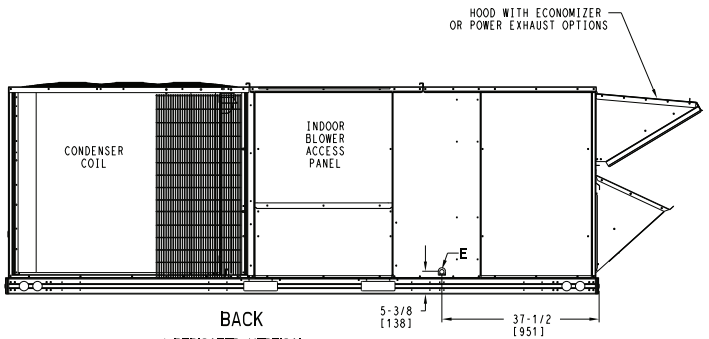
| | CONNECTION SIZES |
|---|---|
| E | 3/4"-14 NPT CONDENSATE DRAIN |



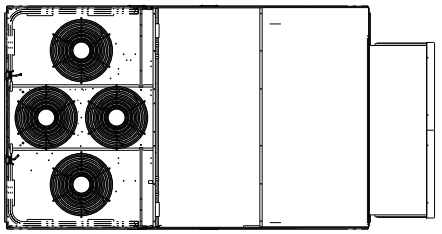
| UNIT | G |
|---|---|
| 20 SIZE | 41-3/8 [1049] |
| 24 SIZE | 49-1/4 [1251] |



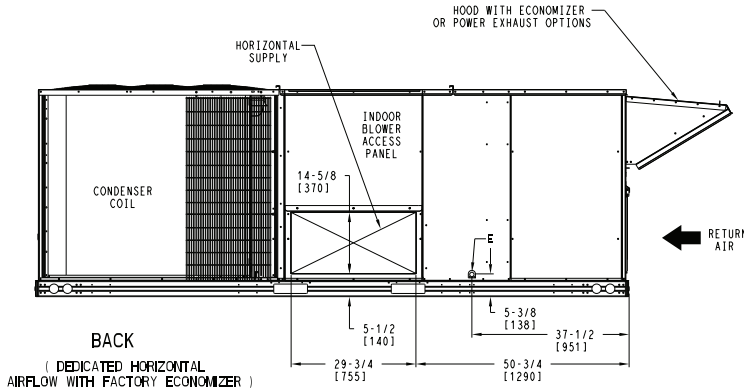

BACK
(DEDICATED HORIZONTAL AIRFLOW UNIT W/O ECONOMIZER)
20,24 SIZE



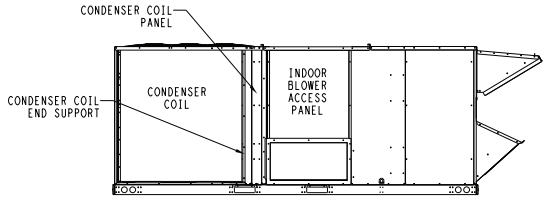

BACK
( DEDICATED VERTICAL AIRFLOW UNIT W/ECONOMIZER )
20,24 SIZE



24 SIZE CONDENSER COIL TOP VIEW




BACK
( DEDICATED HORIZONTAL AIRFLOW WITH FACTORY ECONOMIZER )
20,24 SIZE




24 SIZE CONDENSER COIL END BRACKET SUPPORT

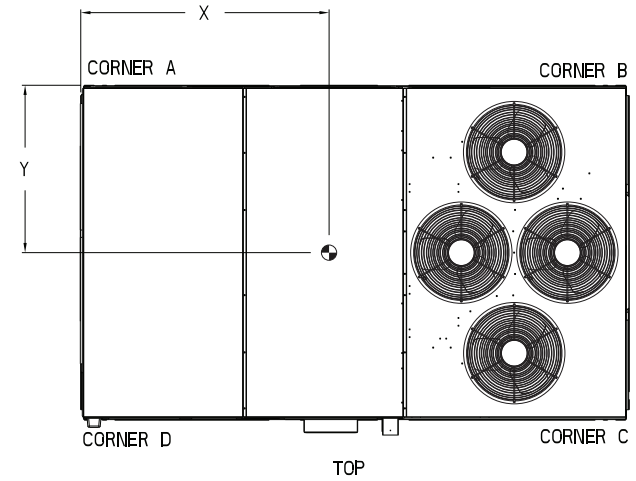
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | 48GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 3 OF 5 | 04/20/23 | - | | 50HE006821 | - |

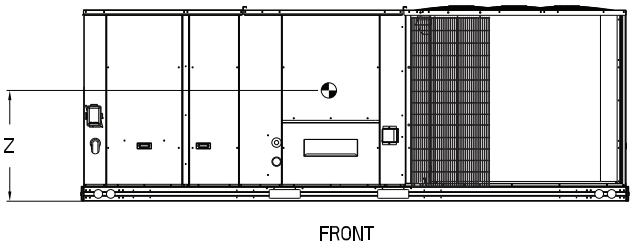
# 48GC**20-24 Base Unit Dimensions (cont)

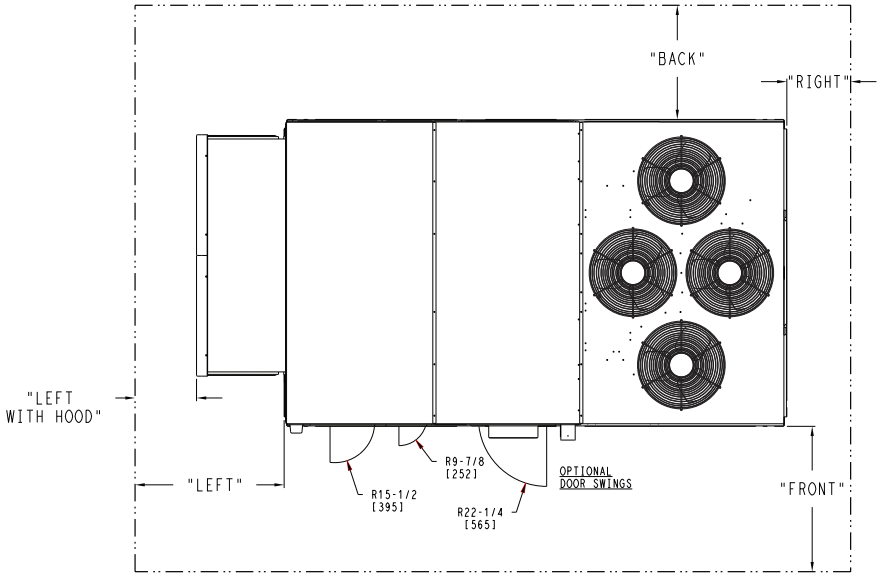
| UNIT | STD UNIT WEIGHT * | | CORNER WEIGHT (A) | | CORNER WEIGHT (B) | | CORNER WEIGHT (C) | | CORNER WEIGHT (D) | | C.G. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | X | Y | Z |
| 48GC20 | 2008 | 911 | 449 | 204 | 536 | 243 | 557 | 252 | 466 | 211 | 77 [1956] | 44 [1118] | 16 1/2 [419] |
| 48GC24 | 2240 | 1016 | 530 | 240 | 530 | 240 | 590 | 268 | 590 | 268 | 70 3/4 [1797] | 45 1/2 [1156] | 16 1/2 [419] |



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




NOTES:

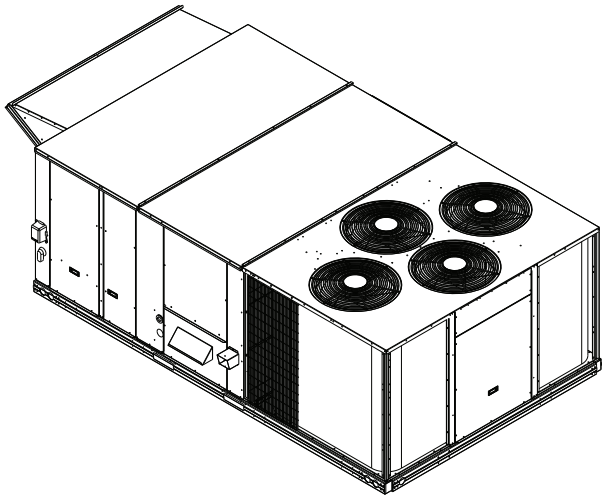
1. CLEARANCE ABOVE THE UNIT TO BE 72"
2. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

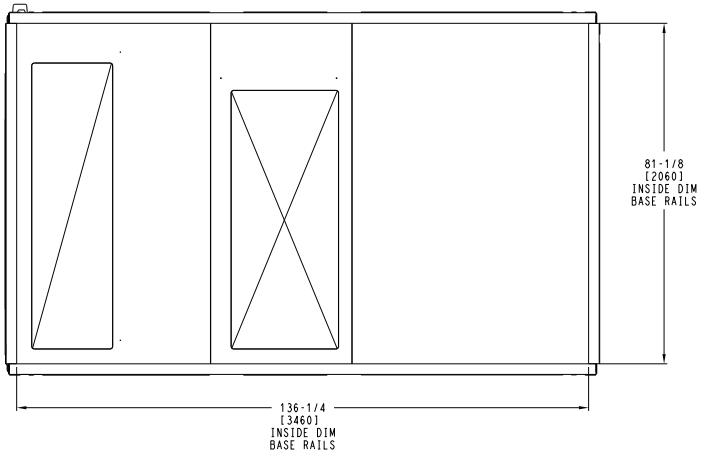
| | CLEARANCE | | |
|---|---|---|---|
| | SERVICE WITH: | SERVICE WITH: | OPERATING |
| SURFACE | CONDUCTIVE BARRIER | NONCONDUCTIVE BARRIER | CLEARANCE |
| FRONT | 48 [1219mm] | 36 [914mm] | 18 [457mm] |
| LEFT | 48 [1219mm] | 42 [1067mm] | 18 [457mm] |
| BACK | 42 [1067mm] | 36 [914mm] | 18 [457mm] |
| LEFT WITH HOOD | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| RIGHT | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| TOP | 72 [1829mm] | 72 [1829mm] | 72 [1829mm] |

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 4 OF 5 | 04/20/23 | - | 48GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006821 | - |

# 48GC**20-24 Base Unit Dimensions (cont)

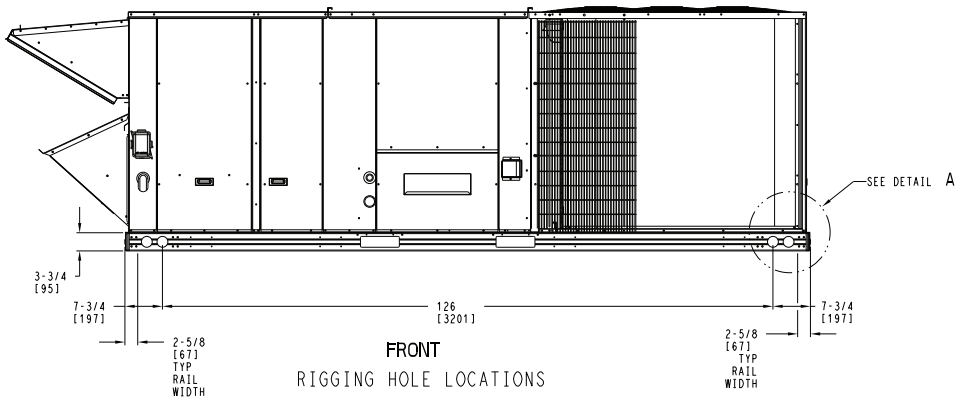






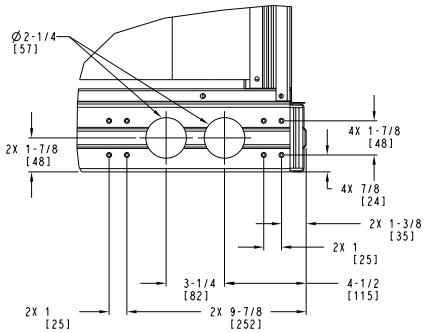

BOTTOM

INSIDE BASERAIL DIMENSIONS




FRONT

RIGGING HOLE LOCATIONS

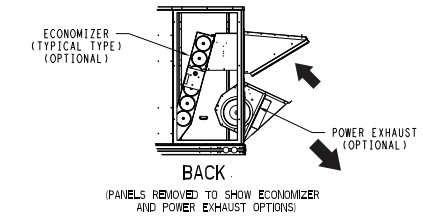


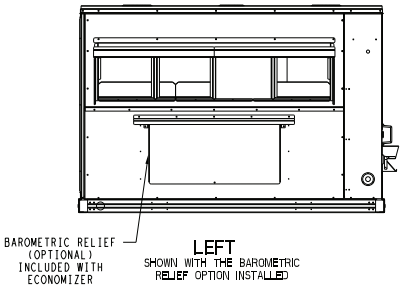

DETAIL A
TYP 4 PLCS

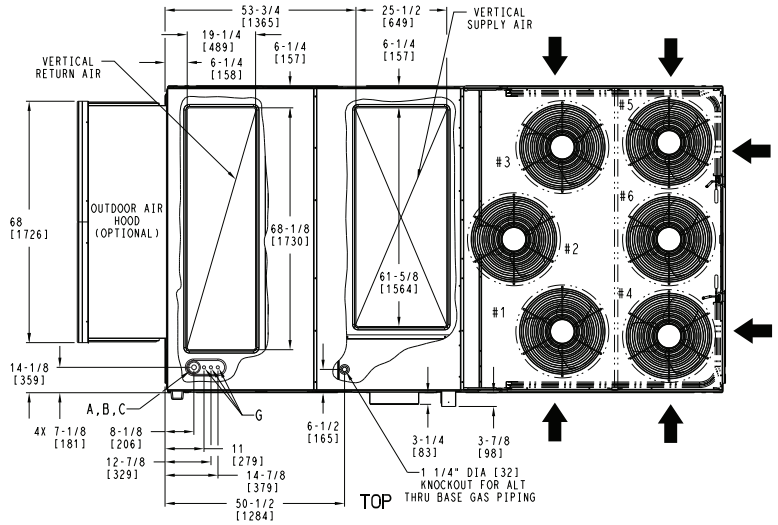
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 5 OF 5 | 04/20/23 | - | 48GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006821 | - |

# 48GC**28 Base Unit Dimensions





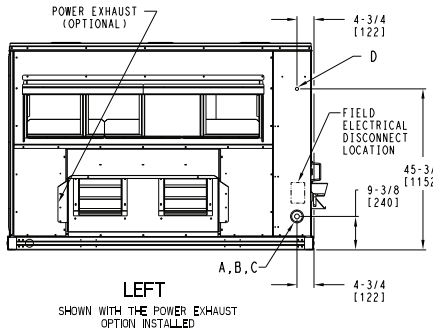



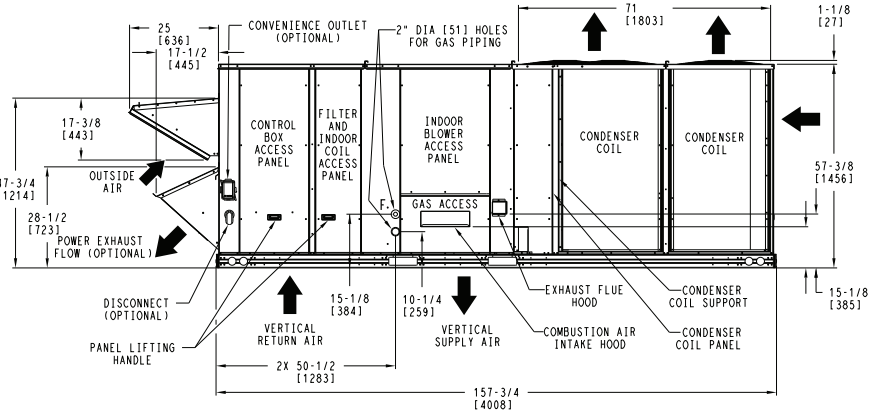



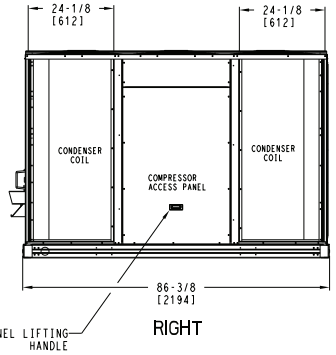

| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| F | 3/4"-14 NPT GAS CONNECTION (NOT SHOWN) |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

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



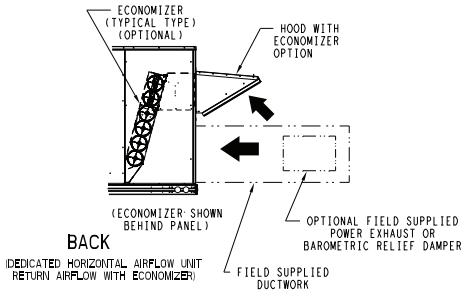



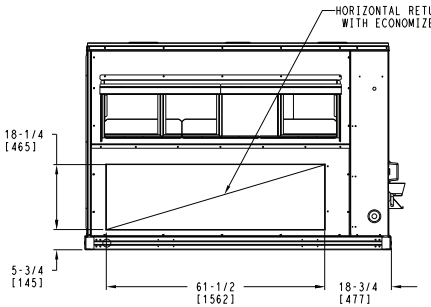

DEDICATED VERTICAL AIRFLOW UNIT
28 SIZE

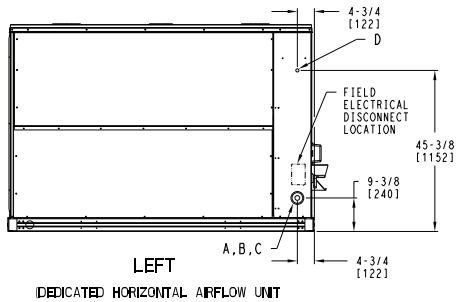
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 1 OF 5 | 04/21/23 | - | 48GC 28 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006822 | - |

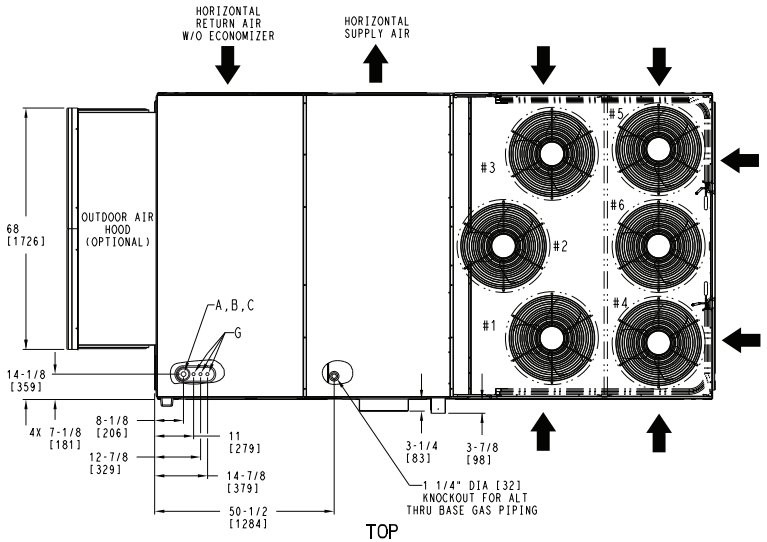
# 48GC**28 Base Unit Dimensions (cont)





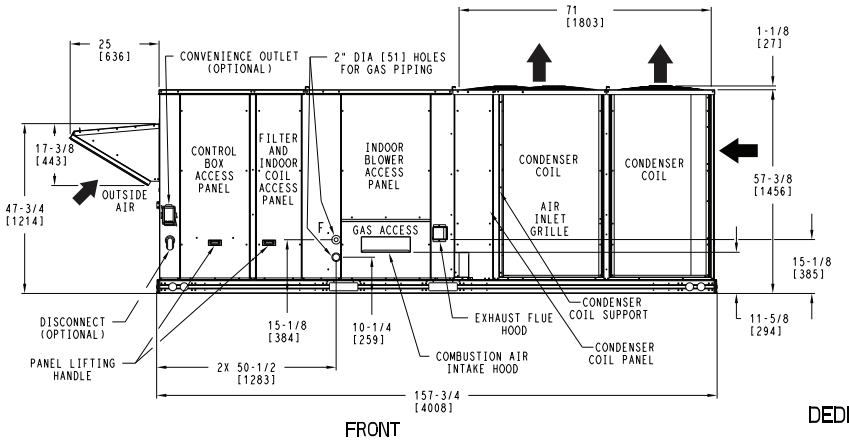



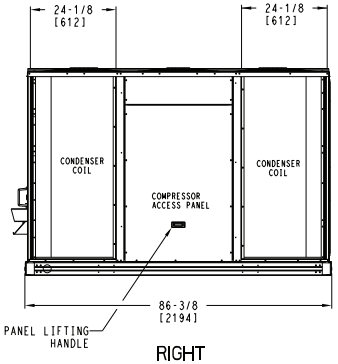




| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| F | 3/4"-14 NPT GAS CONNECTION (NOT SHOWN) |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

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



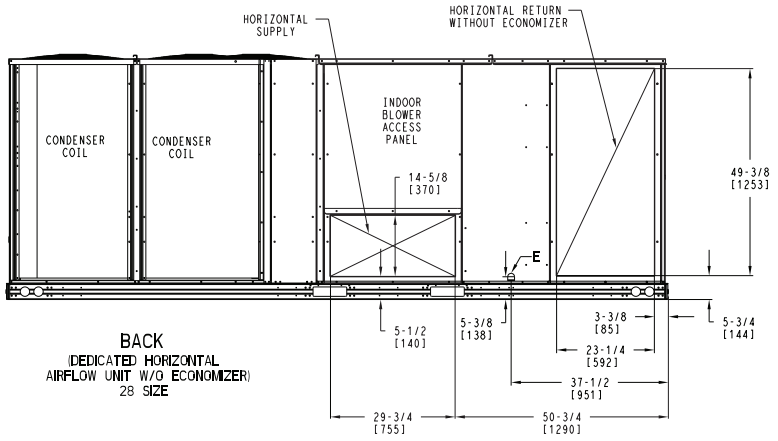

DEDICATED HORIZONTAL AIRFLOW UNIT
28 SIZE

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | 48GC 28 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 2 OF 5 | 04/21/23 | - | | 50HE006822 | - |

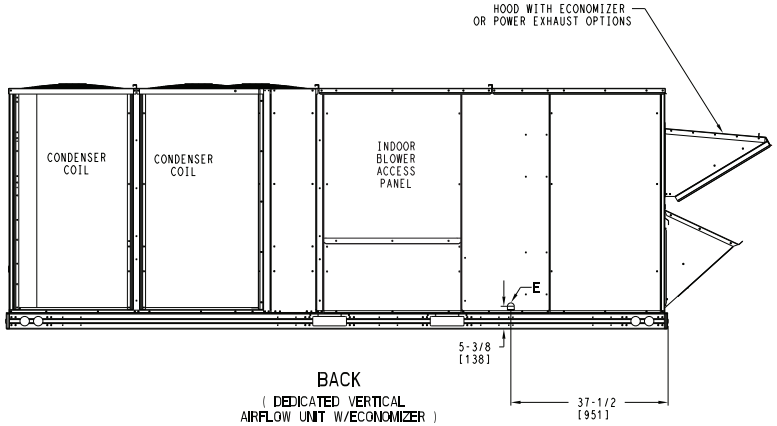
# 48GC**28 Base Unit Dimensions (cont)

| | CONNECTION SIZES |
|---|---|
| E | 3/4"-14 NPT CONDENSATE DRAIN |

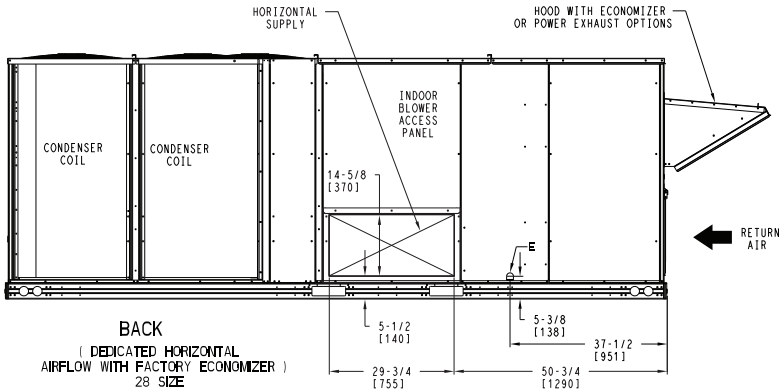





BACK
(DEDICATED HORIZONTAL AIRFLOW UNIT W/O ECONOMIZER)
28 SIZE




BACK
( DEDICATED VERTICAL AIRFLOW UNIT W/ECONOMIZER )
28 SIZE




BACK
( DEDICATED HORIZONTAL AIRFLOW WITH FACTORY ECONOMIZER )
28 SIZE

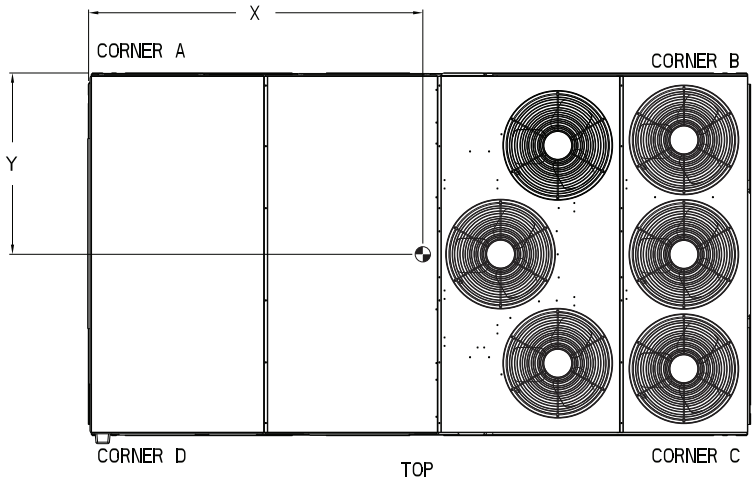
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | |
|---|---|---|---|---|---|
| U.S. ECCN:NSR | 3 OF 5 | 04/21/23 | - | 48GC 28 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006822 | REV - |

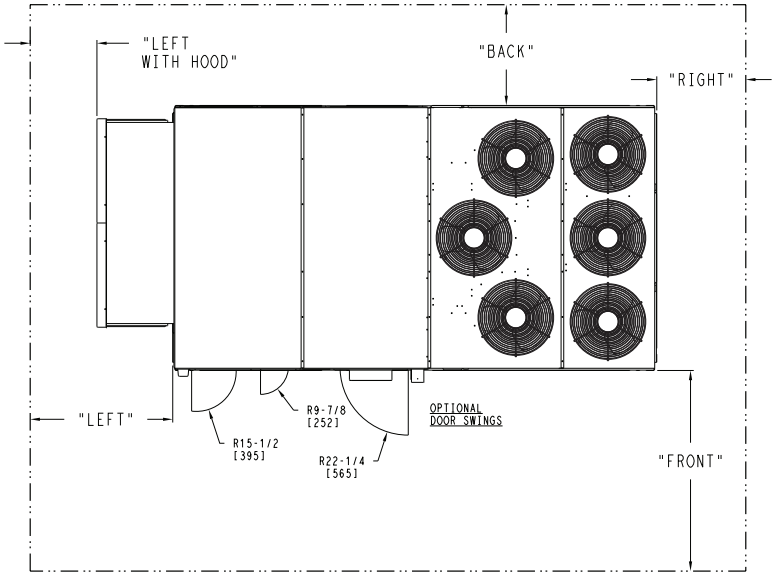
# 48GC**28 Base Unit Dimensions (cont)

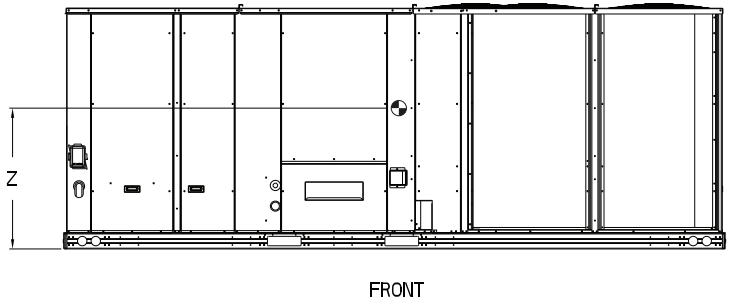
| UNIT | STD UNIT WEIGHT * | | CORNER WEIGHT (A) | | CORNER WEIGHT (B) | | CORNER WEIGHT (C) | | CORNER WEIGHT (D) | | C.G. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | X | Y | Z |
| 48GC28 | 2423 | 1099 | 503 | 228 | 615 | 279 | 717 | 325 | 587 | 266 | 86 3/4 [2203] | 46 1/2 [1181] | 19 [483] |

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






NOTES:

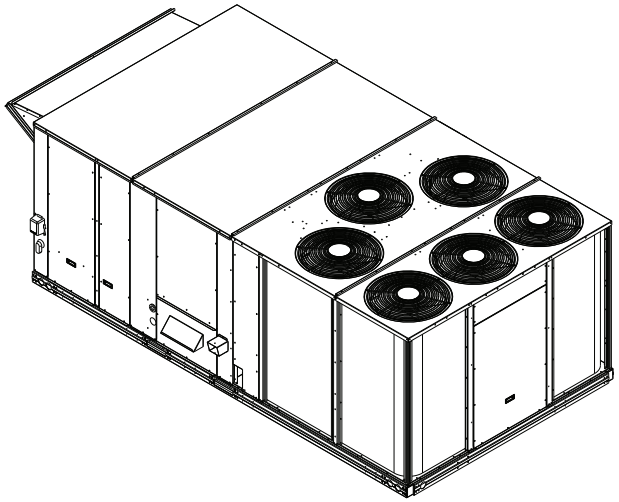
1. CLEARANCE ABOVE THE UNIT TO BE 72"
2. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

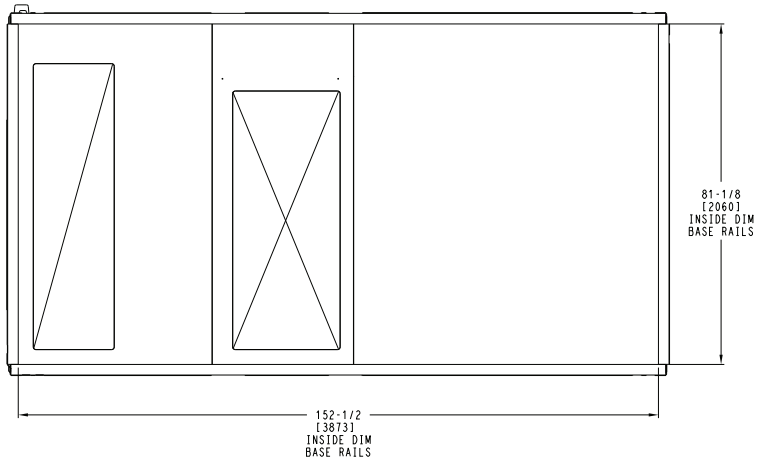
| | CLEARANCE | | |
|---|---|---|---|
| | SERVICE WITH: | SERVICE WITH: | OPERATING |
| SURFACE | CONDUCTIVE BARRIER | NONCONDUCTIVE BARRIER | CLEARANCE |
| FRONT | 48 [1219mm] | 36 [914mm] | 18 [457mm] |
| LEFT | 48 [1219mm] | 42 [1067mm] | 18 [457mm] |
| BACK | 42 [1067mm] | 36 [914mm] | 18 [457mm] |
| LEFT WITH HOOD | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| RIGHT | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| TOP | 72 [1829mm] | 72 [1829mm] | 72 [1829mm] |

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 4 OF 5 | 04/21/23 | - | 48GC 28 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006822 | - |

# 48GC**28 Base Unit Dimensions (cont)

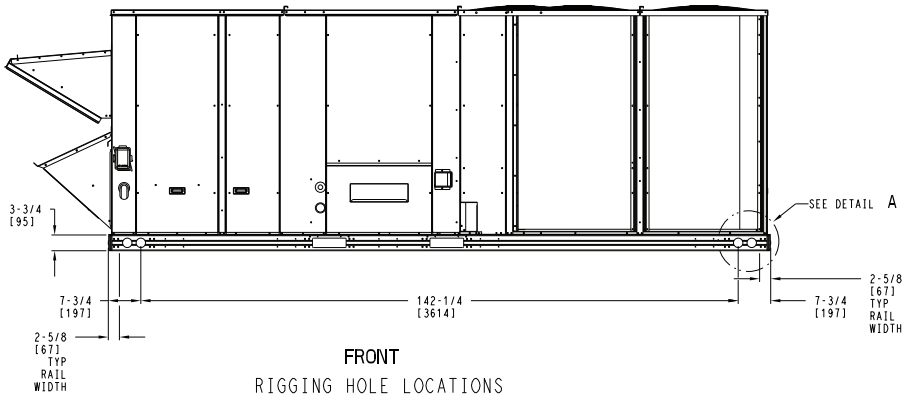






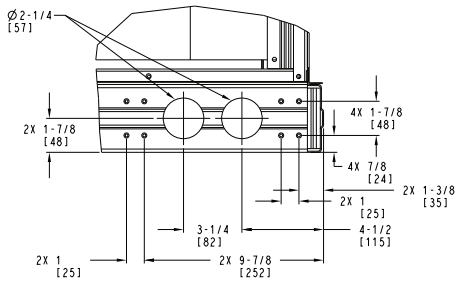

BOTTOM

INSIDE BASERAIL DIMENSIONS




FRONT

RIGGING HOLE LOCATIONS

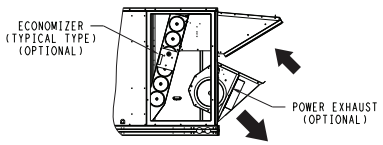



DETAIL A
TYP 4 PLCS

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 5 OF 5 | 04/21/23 | - | 48GC 28 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT | 50HE006822 | - |

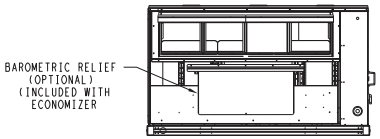
# 50GC**17 Base Unit Dimensions





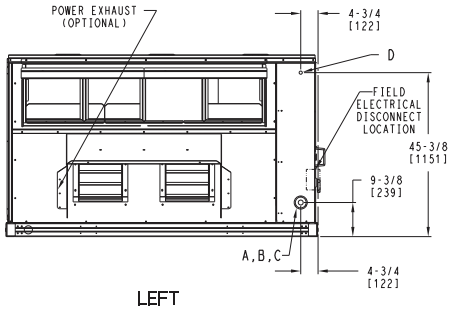

BACK

(PANELS REMOVED TO SHOW ECONOMIZER AND POWER EXHAUST OPTIONS)



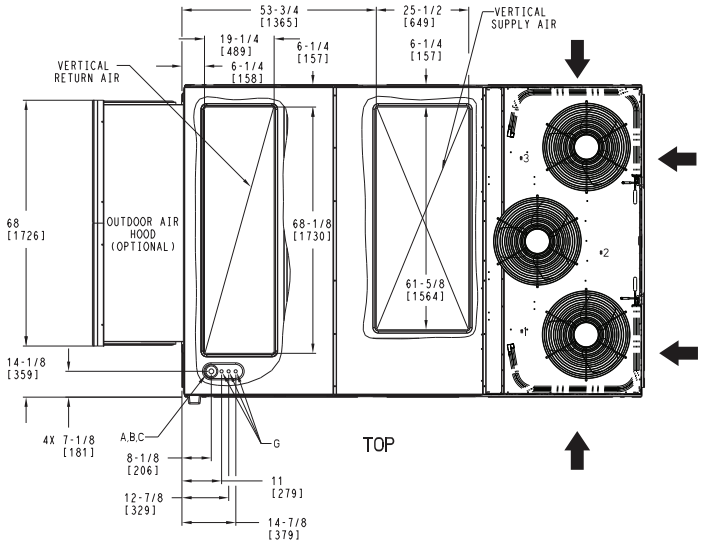

LEFT

SHOWN WITH THE BAROMETRIC RELIEF OPTION INSTALLED




LEFT

SHOWN WITH THE POWER EXHAUST OPTION INSTALLED

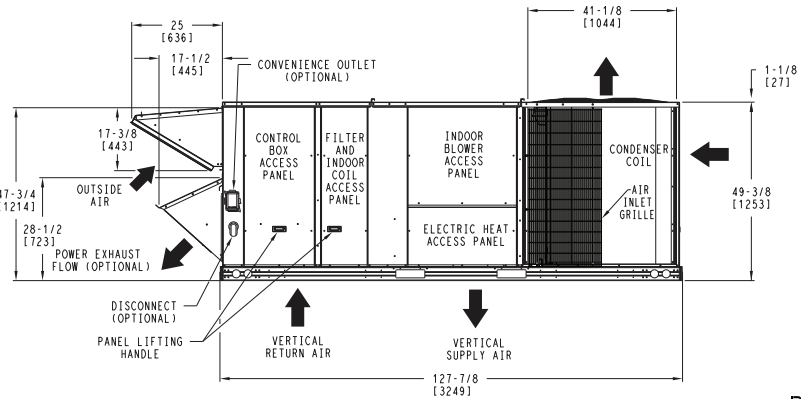



TOP

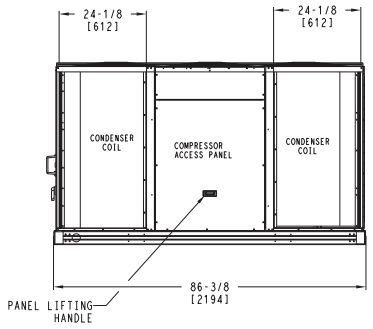
| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

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



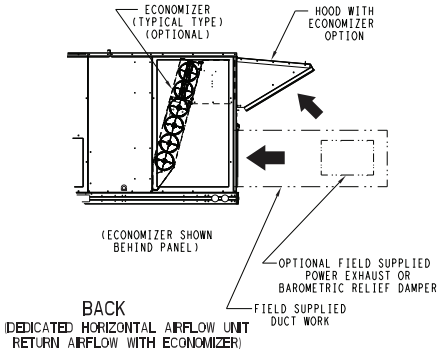

RIGHT

DEDICATED VERTICAL AIRFLOW UNIT
17 SIZE

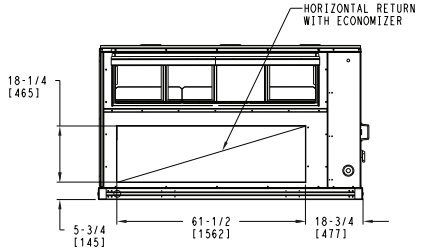
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 1 OF 5 | 04/20/23 | - | 50GC 17 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006829 | - |

# 50GC**17 Base Unit Dimensions (cont)

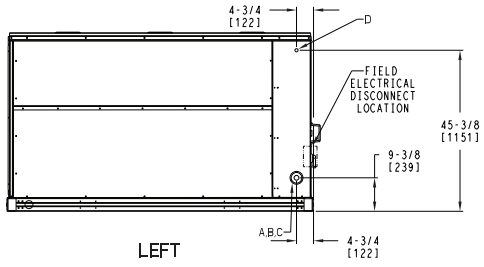




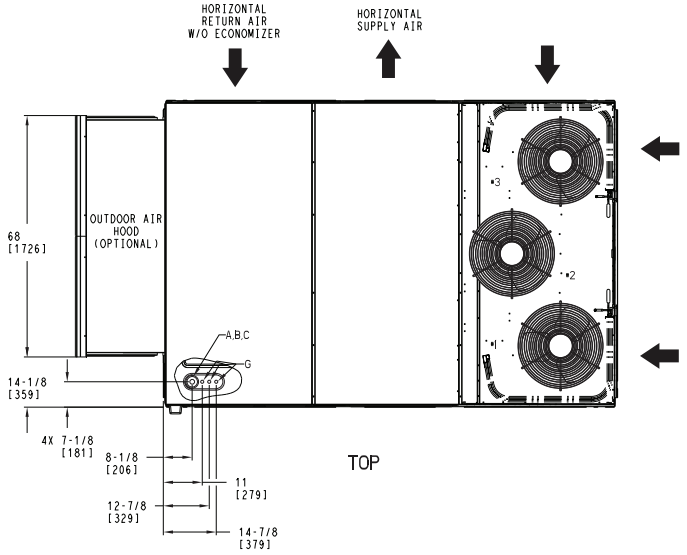

BACK
(DEDICATED HORIZONTAL AIRFLOW UNIT RETURN AIRFLOW WITH ECONOMIZER)




LEFT
(DEDICATED HORIZONTAL AIRFLOW UNIT RETURN AIRFLOW WITH ECONOMIZER)



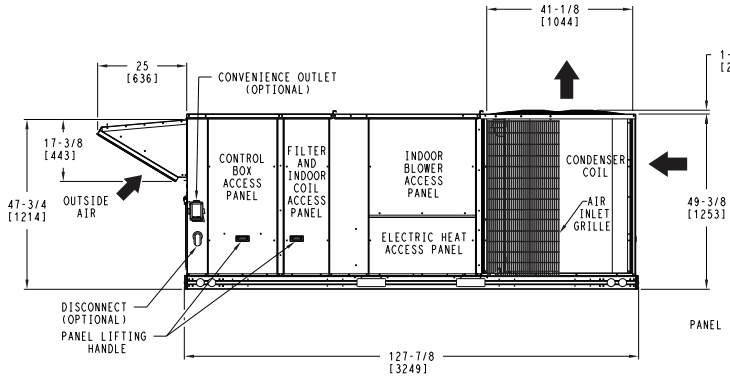

LEFT
(DEDICATED HORIZONTAL AIRFLOW UNIT RETURN AIRFLOW WITHOUT ECONOMIZER)



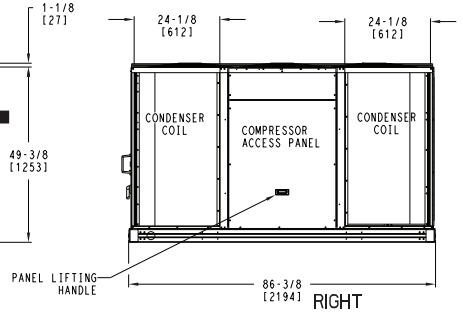

TOP

| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

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




RIGHT

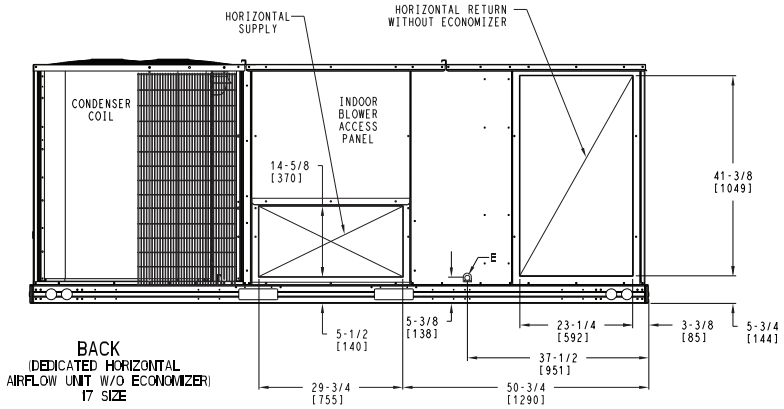
DEDICATED HORIZONTAL AIRFLOW UNIT
17 SIZE

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 2 OF 5 | 04/20/23 | - | 50GC 17 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006829 | - |

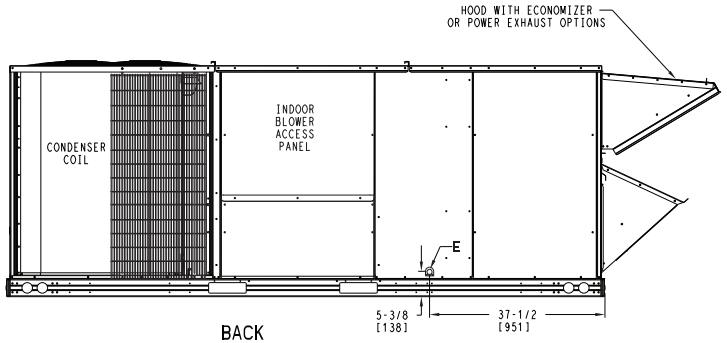
# 50GC**17 Base Unit Dimensions (cont)

| | CONNECTION SIZES |
|---|---|
| E | 3/4"-14 NPT CONDENSATE DRAIN |

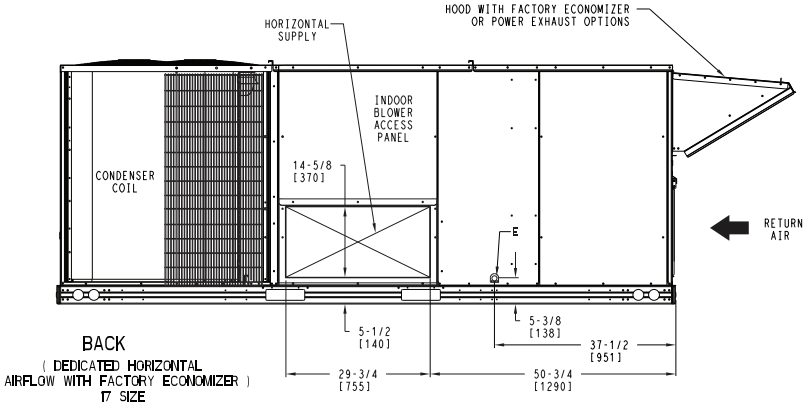





BACK
(DEDICATED HORIZONTAL AIRFLOW UNIT W/O ECONOMIZER)
17 SIZE




BACK
( DEDICATED VERTICAL AIRFLOW UNIT W/ECONOMIZER )
17 SIZE




BACK
( DEDICATED HORIZONTAL AIRFLOW WITH FACTORY ECONOMIZER )
17 SIZE

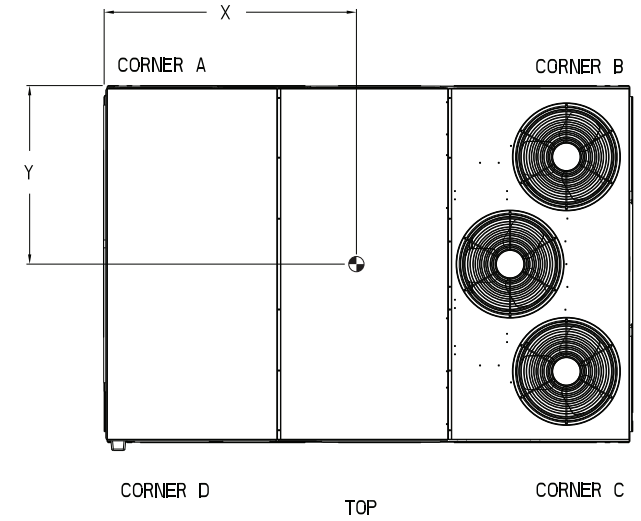
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 3 OF 5 | 04/20/23 | - | 50GC 17 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006829 | - |

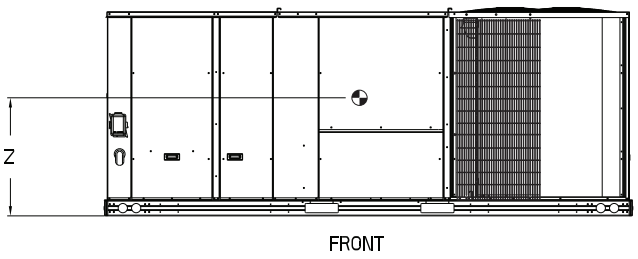
# 50GC**17 Base Unit Dimensions (cont)

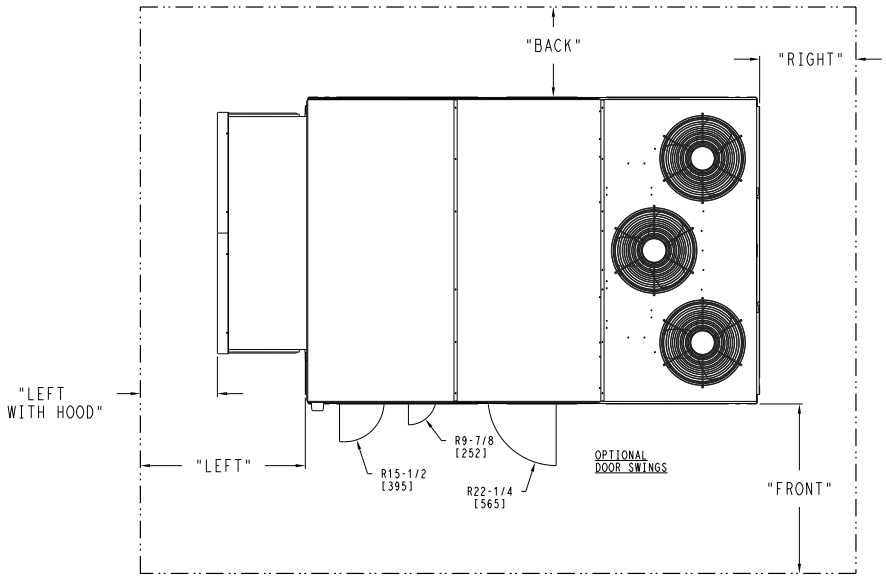
| UNIT | STD UNIT WEIGHT * | | CORNER WEIGHT (A) | | CORNER WEIGHT (B) | | CORNER WEIGHT (C) | | CORNER WEIGHT (D) | | C.G. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | X | Y | Z |
| 50GC17 | 1644 | 746 | 350 | 159 | 437 | 198 | 476 | 216 | 381 | 173 | 71 [1803] | 45 [1143] | 16 1/2 [419] |



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




NOTES:

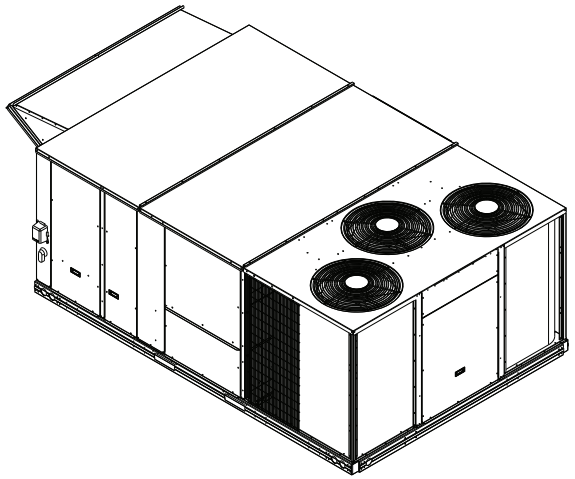
1. CLEARANCE ABOVE THE UNIT TO BE 72"
2. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

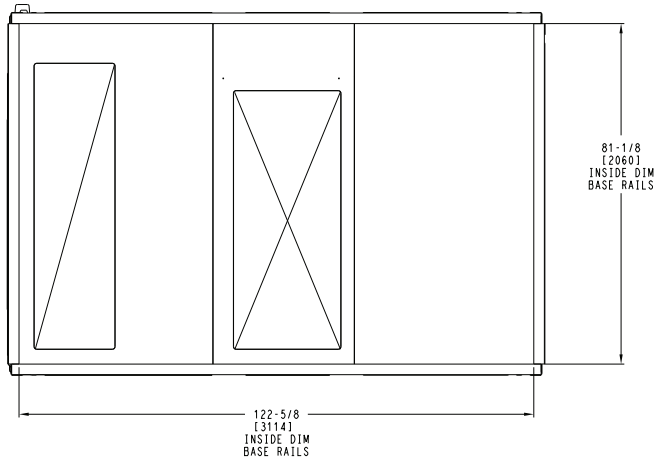
| | CLEARANCE | | |
|---|---|---|---|
| | SERVICE WITH: | SERVICE WITH: | OPERATING |
| SURFACE | CONDUCTIVE BARRIER | NONCONDUCTIVE BARRIER | CLEARANCE |
| FRONT | 48 [1219mm] | 36 [914mm] | 18 [457mm] |
| LEFT | 48 [1219mm] | 42 [1067mm] | 18 [457mm] |
| BACK | 42 [1067mm] | 36 [914mm] | 18 [457mm] |
| LEFT WITH HOOD | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| RIGHT | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| TOP | 72 [1829mm] | 72 [1829mm] | 72 [1829mm] |

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 4 OF 5 | 04/20/23 | - | 50GC 17 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006829 | - |

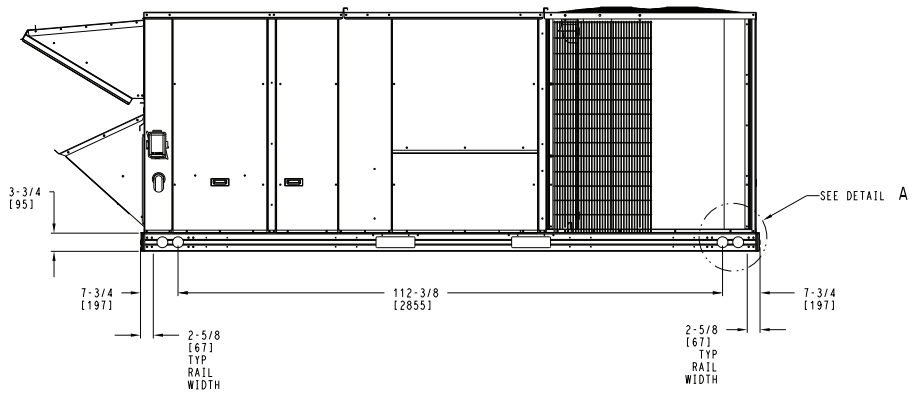
# 50GC**17 Base Unit Dimensions (cont)



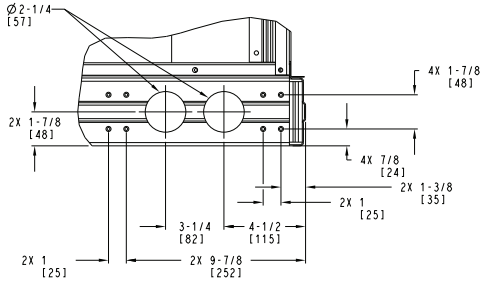





BOTTOM
INSIDE BASERAIL DIMENSIONS




FRONT
RIGGING HOLE LOCATIONS

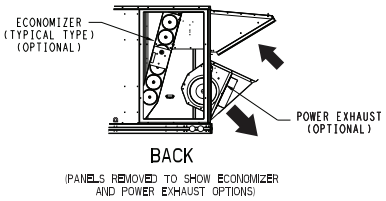


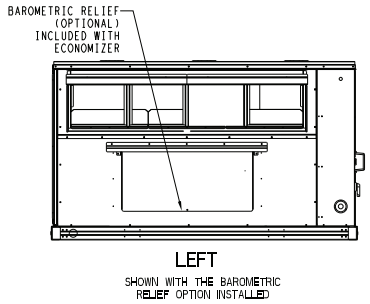

DETAIL A
TYP 4 PLCS

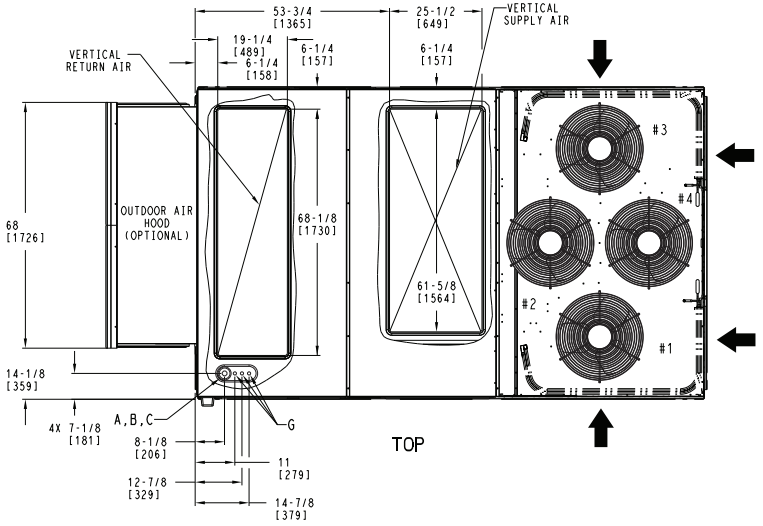
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 5 OF 5 | 04/20/23 | - | 50GC 17 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006829 | - |

# 50GC**20-24 Base Unit Dimensions





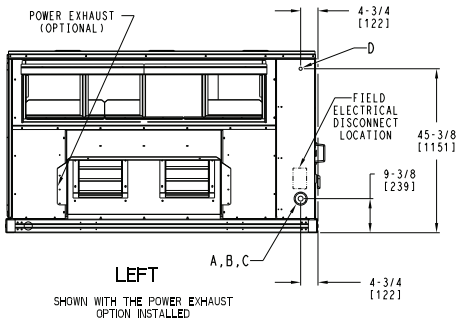



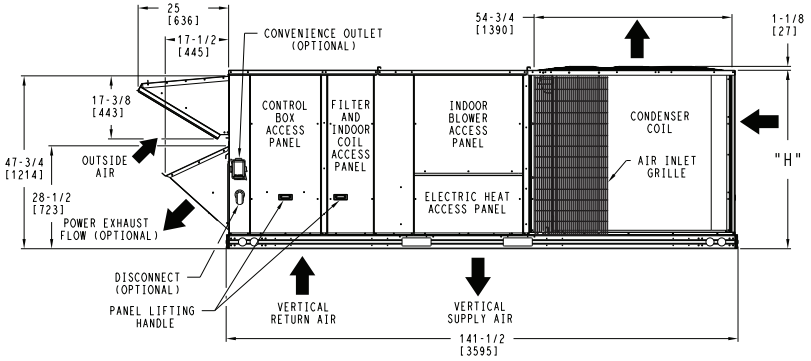

| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

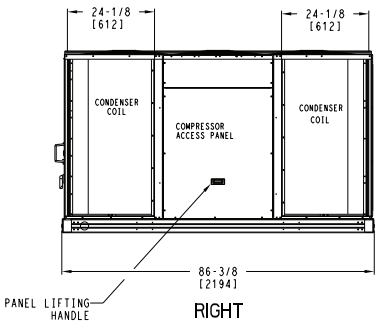
| UNIT | H |
|---|---|
| 20 SIZE | 49-3/8 [1253] |
| 24 SIZE | 57-3/8 [1456] |

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



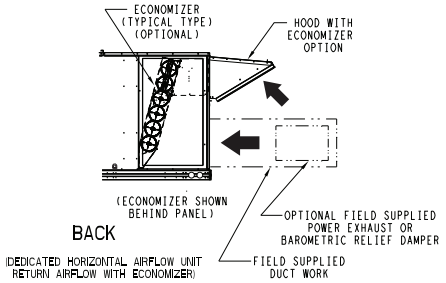



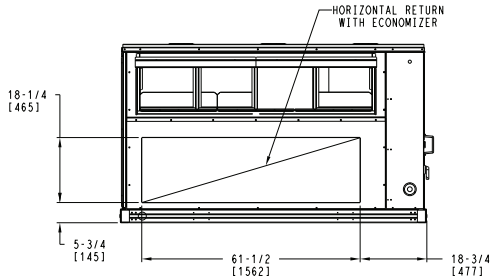

DEDICATED VERTICAL AIRFLOW UNIT
20,24 SIZE

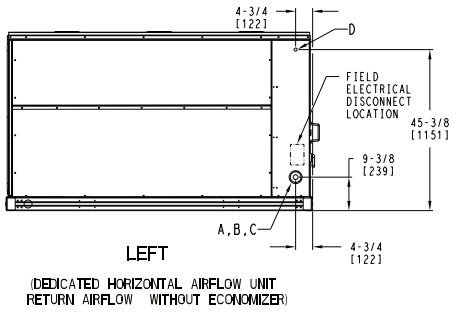
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 1 OF 5 | 04/20/23 | - | 50GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006830 | - |

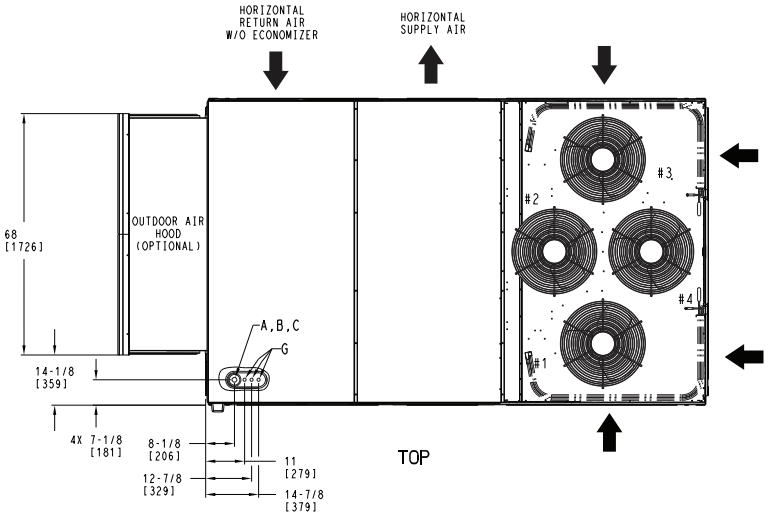
# 50GC**20-24 Base Unit Dimensions (cont)

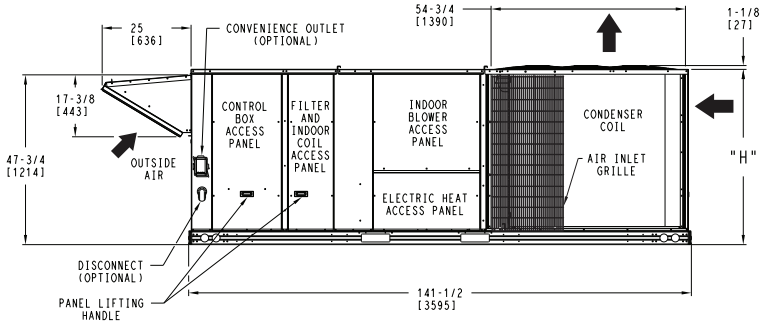


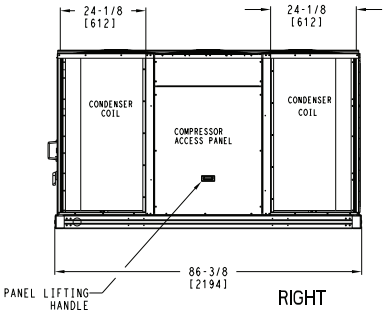



| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

| UNIT | H |
|---|---|
| 24 SIZE | 49-3/8 [1253] |
| 28 SIZE | 57-3/8 [1456] |

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

DEDICATED HORIZONTAL AIRFLOW UNIT 20,24 SIZE

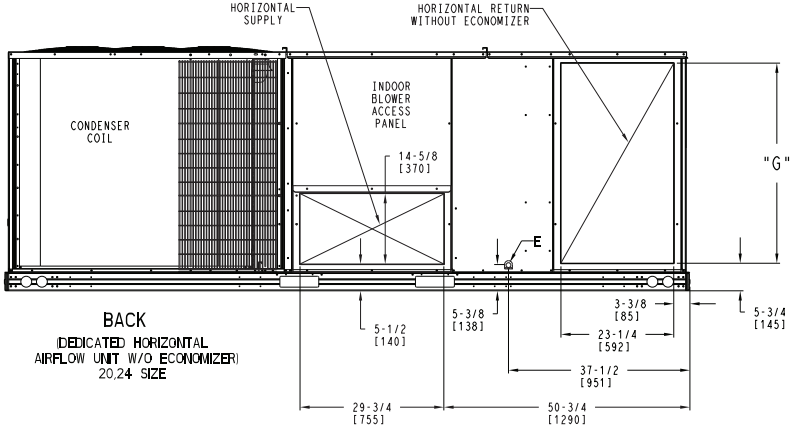
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | 50GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006830 | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 2 OF 5 | 04/20/23 | - | | | - |

# 50GC**20-24 Base Unit Dimensions (cont)

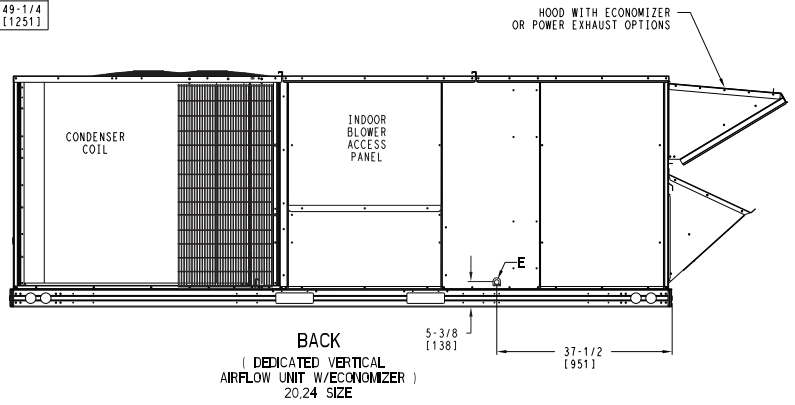
| | CONNECTION SIZES |
|---|---|
| E | 3/4"-14 NPT CONDENSATE DRAIN |

| UNIT | G |
|---|---|
| 20 SIZE | 41-3/8 [1049] |
| 24 SIZE | 49-1/4 [1251] |

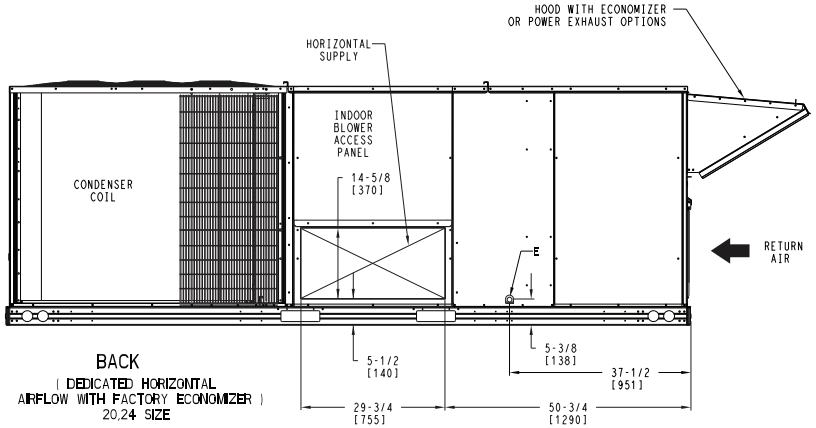




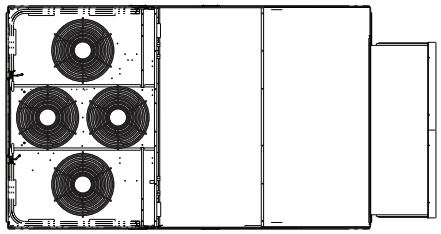

BACK
(DEDICATED HORIZONTAL AIRFLOW UNIT W/O ECONOMIZER)
20,24 SIZE



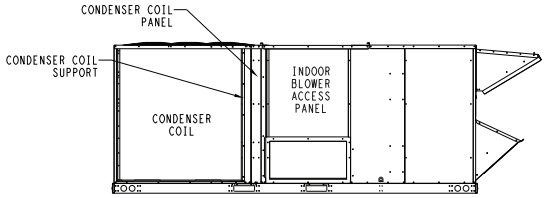

BACK
( DEDICATED VERTICAL AIRFLOW UNIT W/ECONOMIZER )
20,24 SIZE




BACK
( DEDICATED HORIZONTAL AIRFLOW WITH FACTORY ECONOMIZER )
20,24 SIZE



24 SIZE CONDENSER COIL TOP VIEW




24 SIZE CONDENSER COIL END BRACKET SUPPORT

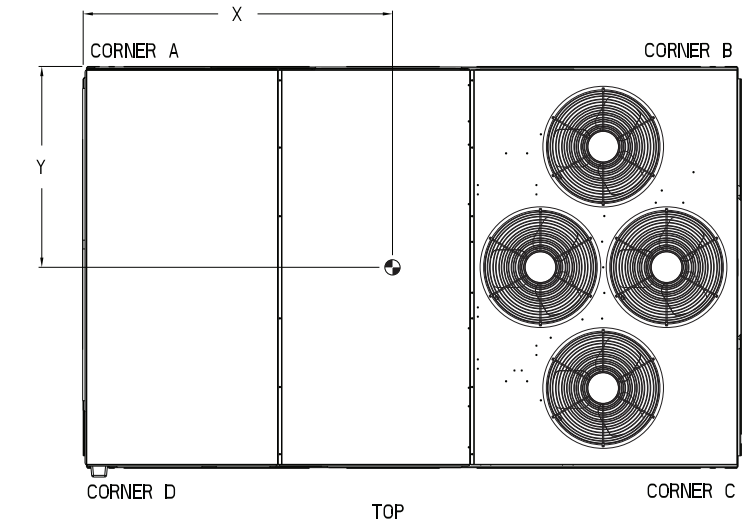
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | |
|---|---|---|---|---|---|
| U.S. ECCN:NSR | 3 OF 5 | 04/20/23 | - | 50GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006830 | REV - |

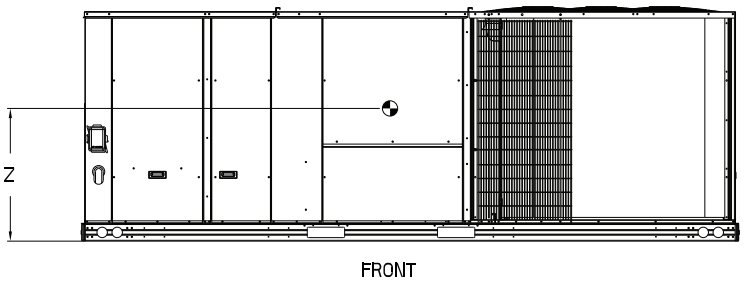
# 50GC**20-24 Base Unit Dimensions (cont)

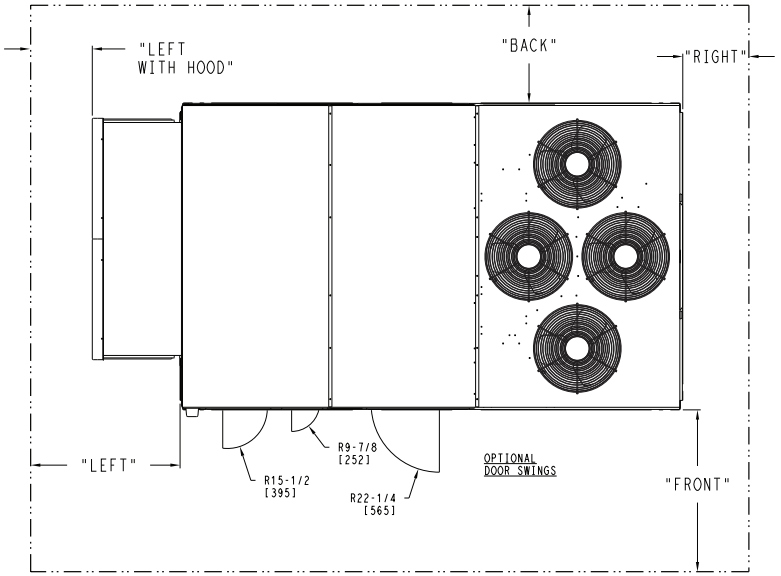
| UNIT | STD. UNIT WEIGHT * | | CORNER WEIGHT (A) | | CORNER WEIGHT (B) | | CORNER WEIGHT (C) | | CORNER WEIGHT (D) | | C.G. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | X | Y | Z |
| 50GC20 | 1880 | 853 | 420 | 191 | 502 | 228 | 521 | 236 | 437 | 198 | 77 [1956] | 44 [1118] | 16 1/2 [419] |
| 50GC24 | 2203 | 999 | 521 | 236 | 521 | 236 | 580 | 263 | 580 | 263 | 70 3/4 [1797] | 45 1/2 [1156] | 16 1/2 [419] |



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




NOTES:

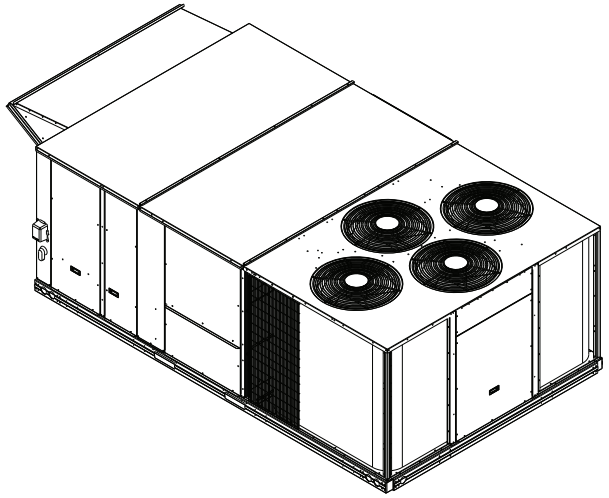
1. CLEARANCE ABOVE THE UNIT TO BE 72"
2. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

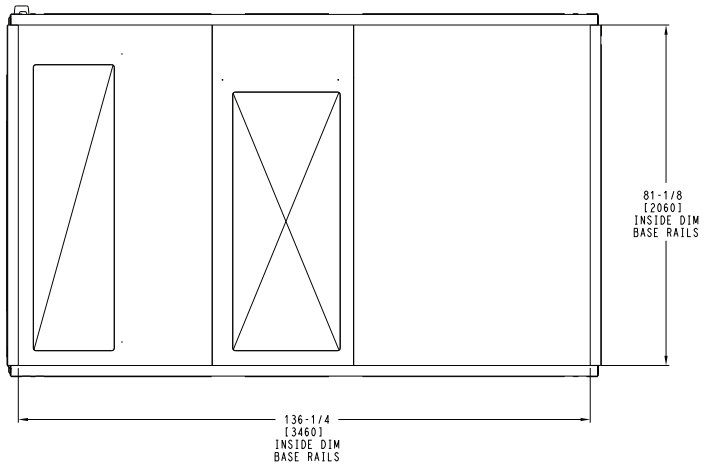
| | CLEARANCE | | |
|---|---|---|---|
| | SERVICE WITH: | SERVICE WITH: | OPERATING |
| SURFACE | CONDUCTIVE BARRIER | NONCONDUCTIVE BARRIER | CLEARANCE |
| FRONT | 48 [1219mm] | 36 [914mm] | 18 [457mm] |
| LEFT | 48 [1219mm] | 42 [1067mm] | 18 [457mm] |
| BACK | 42 [1067mm] | 36 [914mm] | 18 [457mm] |
| LEFT WITH HOOD | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| RIGHT | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| TOP | 72 [1829mm] | 72 [1829mm] | 72 [1829mm] |

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 4 OF 5 | 04/20/23 | - | 50GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006830 | - |

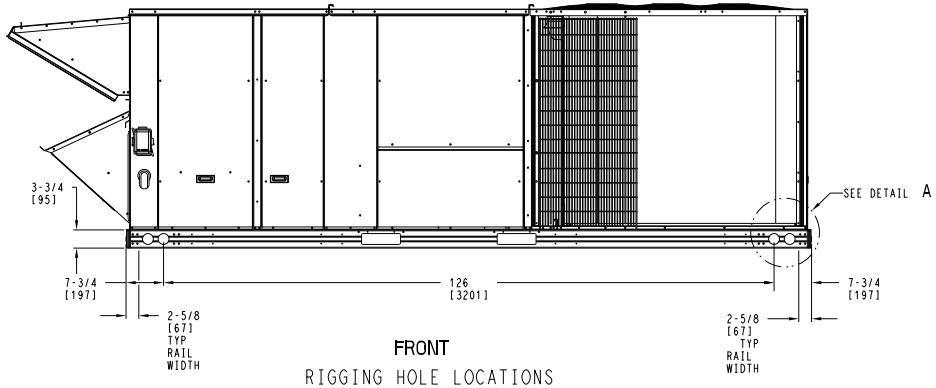
## 50GC**20-24 Base Unit Dimensions (cont)



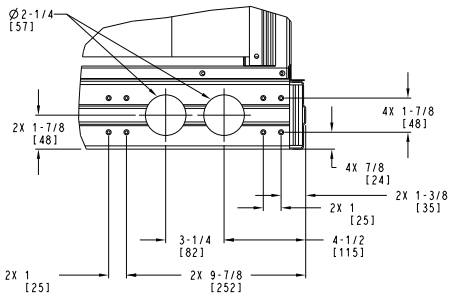





BOTTOM
INSIDE BASERAIL DIMENSIONS




FRONT
RIGGING HOLE LOCATIONS

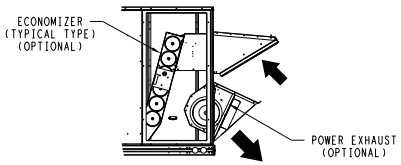



DETAIL A
TYP 4 PLCS

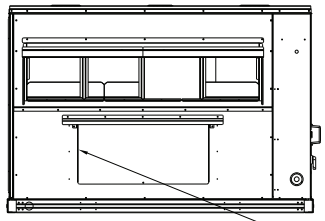
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 5 OF 5 | 04/20/23 | - | 50GC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006830 | - |

# 50GC**28 Base Unit Dimensions



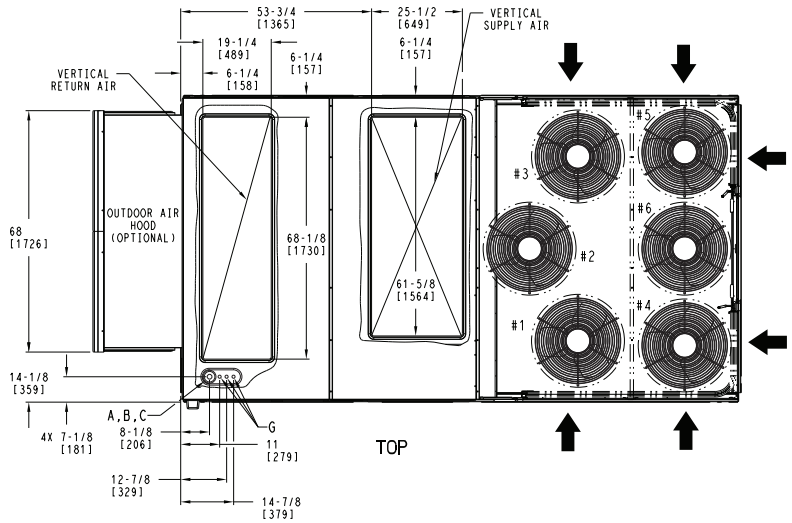



BACK
(PANELS REMOVED TO SHOW ECONOMIZER AND POWER EXHAUST OPTIONS)



LEFT
SHOWN WITH THE BAROMETRIC RELIEF OPTION INSTALLED

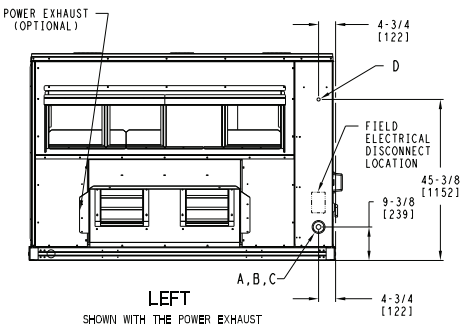
BAROMETRIC RELIEF (OPTIONAL) INCLUDED WITH ECONOMIZER



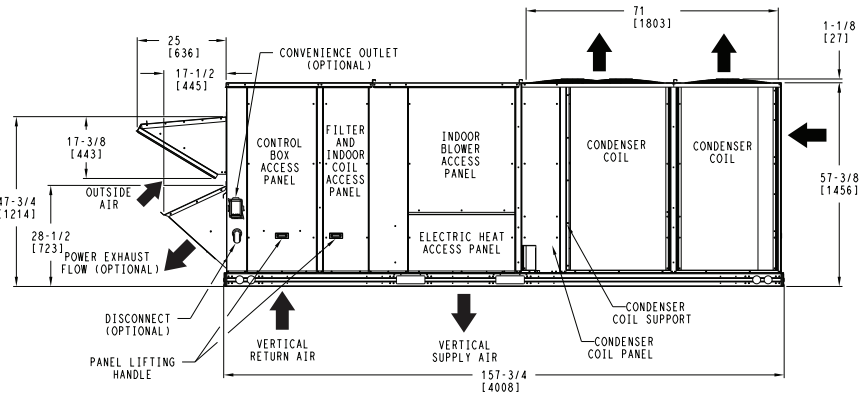

TOP

| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

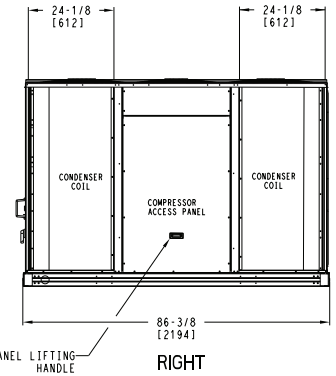
NOTES:
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW
4. ALL VIEW DRAWN USING 3RD ANGLE




LEFT
SHOWN WITH THE POWER EXHAUST OPTION INSTALLED




FRONT



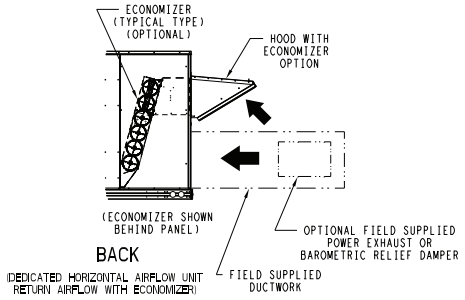

RIGHT

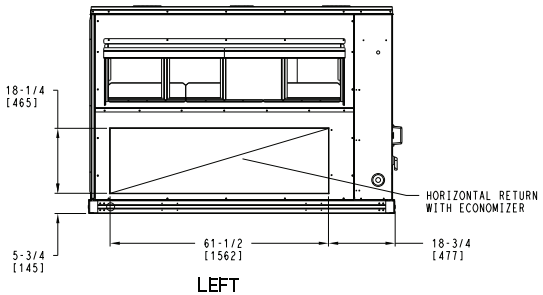
DEDICATED VERTICAL AIRFLOW UNIT
28 SIZE

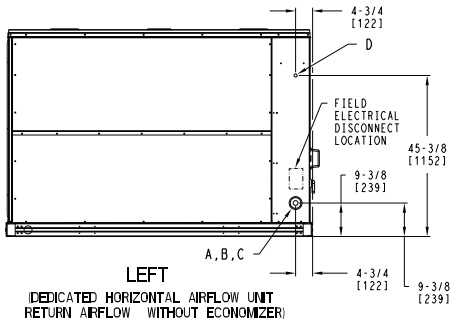
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 1 OF 5 | 04/20/23 | - | 50GC 28 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006831 | - |

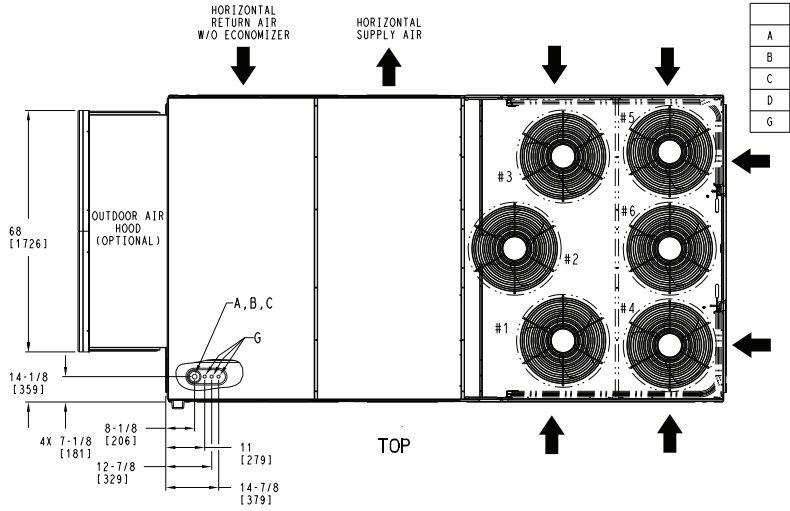
# 50GC**28 Base Unit Dimensions (cont)





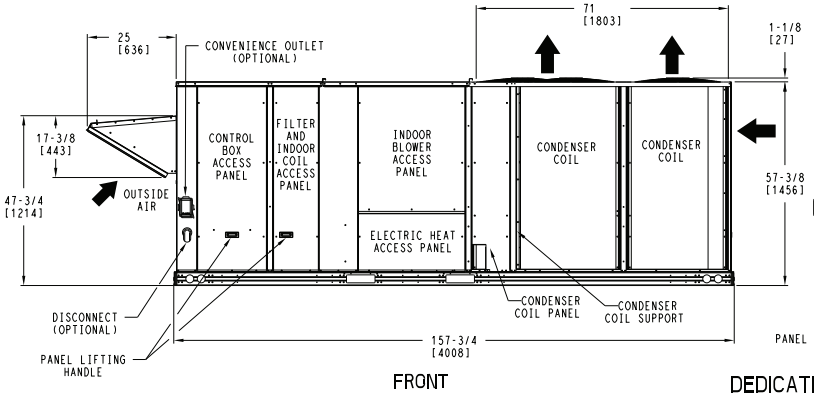



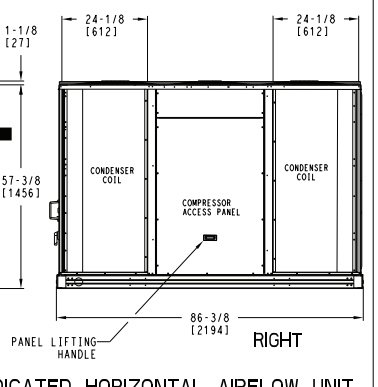




| | CONNECTION SIZES |
|---|---|
| A | 1 3/8" DIA [35] FIELD POWER SUPPLY KNOCKOUT |
| B | 3" DIA [76] FIELD POWER SUPPLY KNOCKOUT |
| C | 3 5/8" DIA [92] FIELD POWER SUPPLY KNOCKOUT |
| D | 7/8" DIA [22] FIELD CONTROL WIRING HOLE |
| G | 7/8" DIA [22] FIELD CONTROL WIRING KNOCKOUT |

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



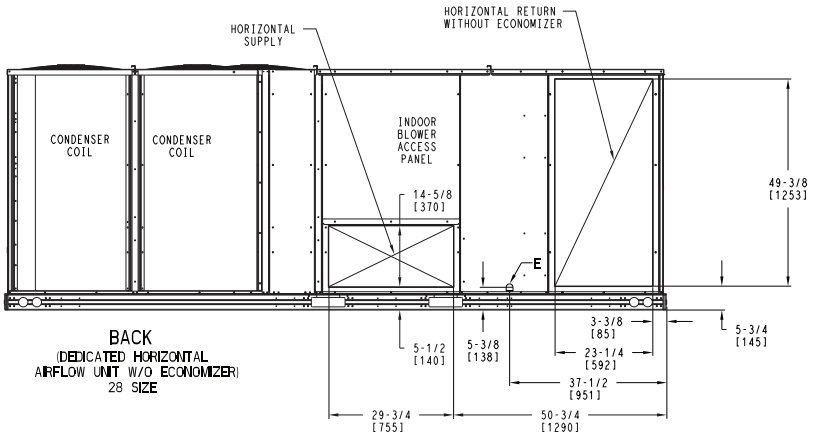

DEDICATED HORIZONTAL AIRFLOW UNIT
28 SIZE

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 2 OF 5 | 04/20/23 | - | 50GC 28 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006831 | - |

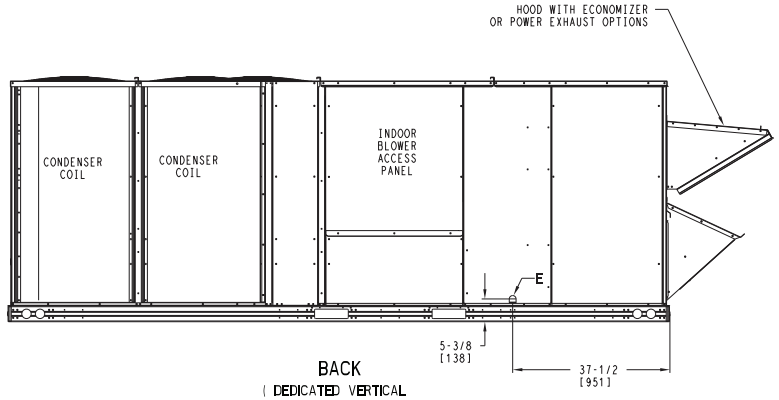
# 50GC**28 Base Unit Dimensions (cont)

| | CONNECTION SIZES |
|---|---|
| E | 3/4"-14 NPT CONDENSATE DRAIN |

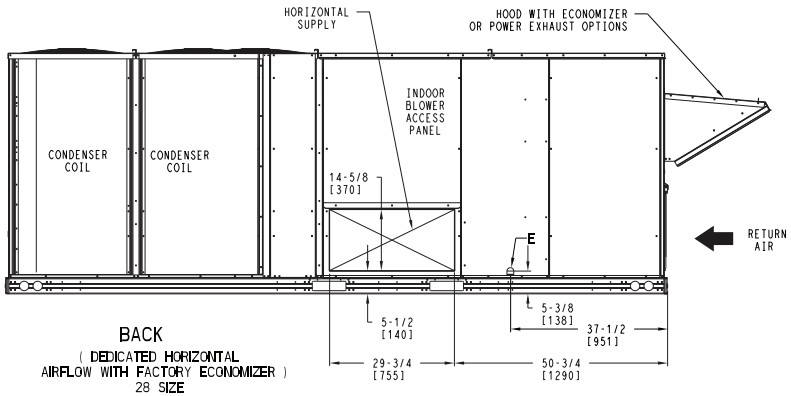





BACK
(DEDICATED HORIZONTAL AIRFLOW UNIT W/O ECONOMIZER)
28 SIZE




BACK
( DEDICATED VERTICAL AIRFLOW UNIT W/ECONOMIZER )
28 SIZE




BACK
( DEDICATED HORIZONTAL AIRFLOW WITH FACTORY ECONOMIZER )
28 SIZE

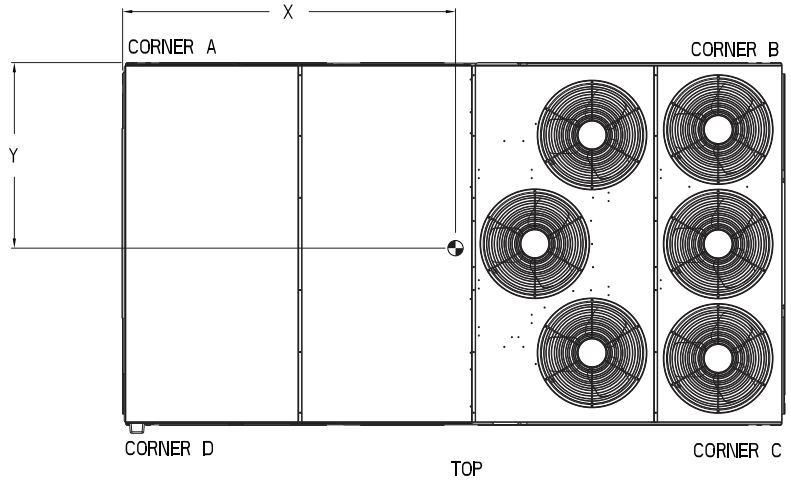
| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 3 OF 5 | 04/20/23 | - | 50GC 28 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006831 | - |

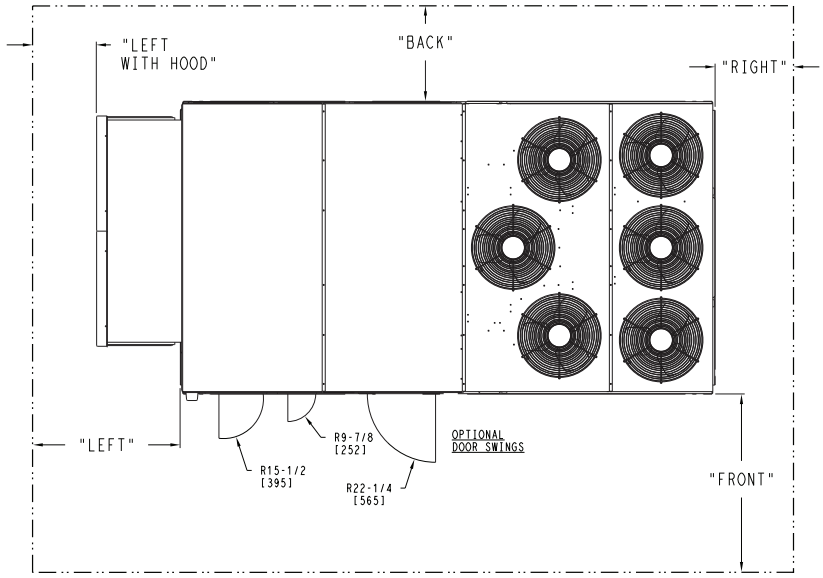
# 50GC**28 Base Unit Dimensions (cont)

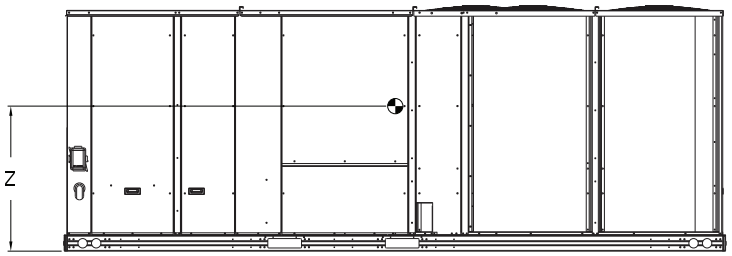
| UNIT | STD UNIT WEIGHT * | | CORNER WEIGHT (A) | | CORNER WEIGHT (B) | | CORNER WEIGHT (C) | | CORNER WEIGHT (D) | | C.G. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | LBS. | KG. | X | Y | Z |
| 50GC28 | 2296 | 1041 | 477 | 216 | 583 | 264 | 680 | 308 | 556 | 252 | 86 3/4 [2203] | 46 1/2 [1181] | 19 [483] |

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






NOTES:

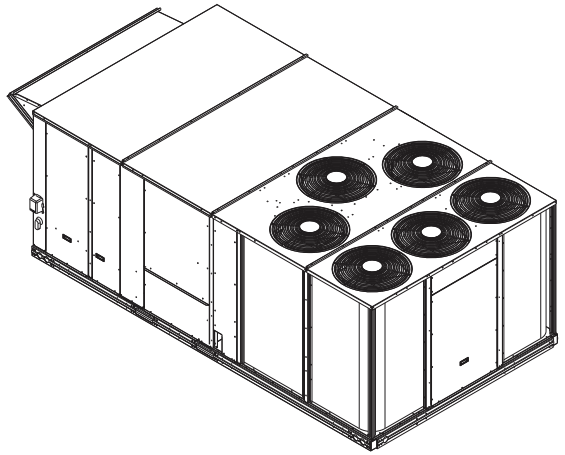
1. CLEARANCE ABOVE THE UNIT TO BE 72"
2. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

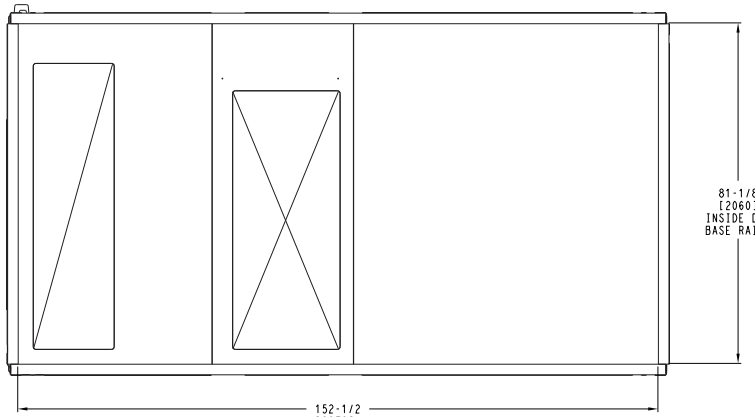
| | CLEARANCE | | |
|---|---|---|---|
| | SERVICE WITH: | SERVICE WITH: | OPERATING |
| SURFACE | CONDUCTIVE BARRIER | NONCONDUCTIVE BARRIER | CLEARANCE |
| FRONT | 48 [1219mm] | 36 [914mm] | 18 [457mm] |
| LEFT | 48 [1219mm] | 42 [1067mm] | 18 [457mm] |
| BACK | 42 [1067mm] | 36 [914mm] | 18 [457mm] |
| LEFT WITH HOOD | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| RIGHT | 36 [914mm] | 36 [914mm] | 18 [457mm] |
| TOP | 72 [1829mm] | 72 [1829mm] | 72 [1829mm] |

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 4 OF 5 | 04/20/23 | - | 50GC 28 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006831 | - |

# 50GC**28 Base Unit Dimensions (cont)

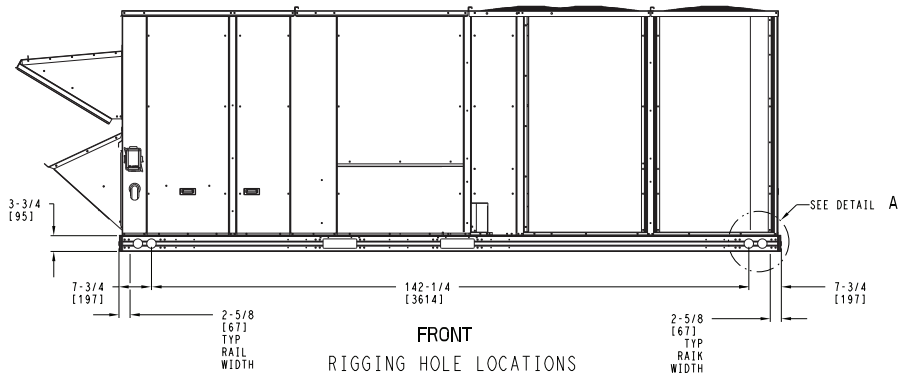






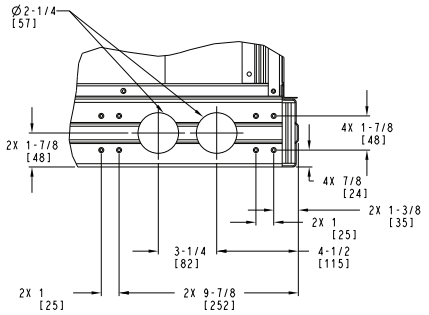

BOTTOM

INSIDE BASERAIL DIMENSIONS




FRONT

RIGGING HOLE LOCATIONS

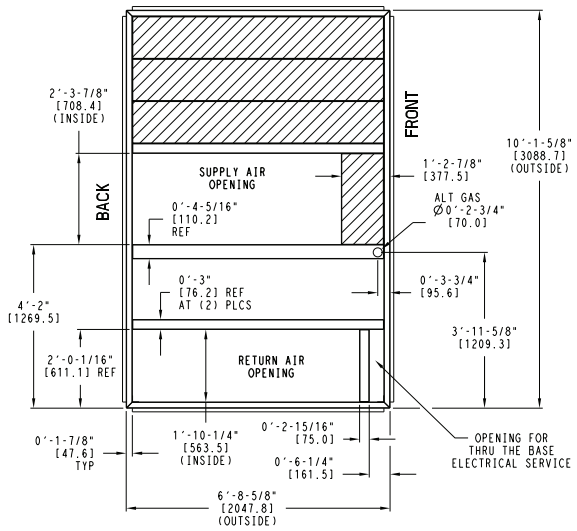



DETAIL A
TYP 4 PLCS

| ITC CLASSIFICATION | SHEET | DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|---|---|
| U.S. ECCN:NSR | 5 OF 5 | 04/20/23 | - | 50GC 28 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT | 50HE006831 | - |

## Roof Curb Dimensions — 48/50GC 17

| "A" | ROOF CURB ACCESSORY |
|---|---|
| 1′-2" [356.0] | CRRFCURB045A00 |
| 2′-0" [610.0] | CRRFCURB046A00 |




NOTES:

1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.

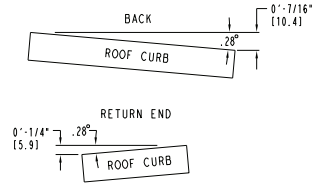
2 DIMENSIONS IN [ ] ARE IN MILLIMETERS.

3 ROOF CURB GALVANIZED STEEL.

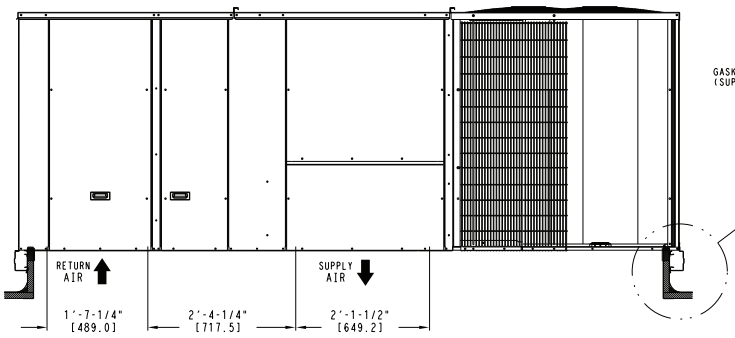
4 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)

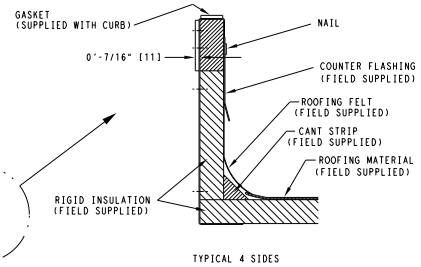
5 SERVICE CLEARANCE 4 ft ON EACH SIDE

➡ DIRECTION OF AIR FLOW

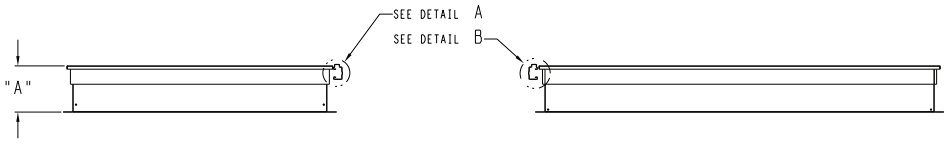


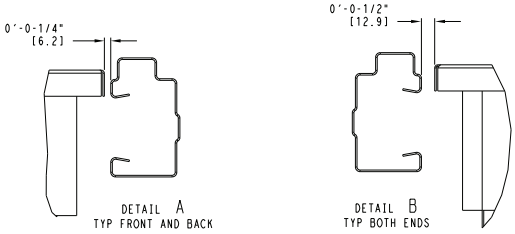

MAX CURB LEVELING TOLERANCES

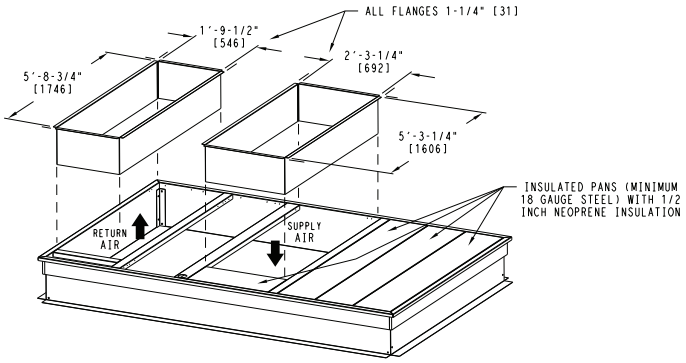



TYPICAL 4 SIDES



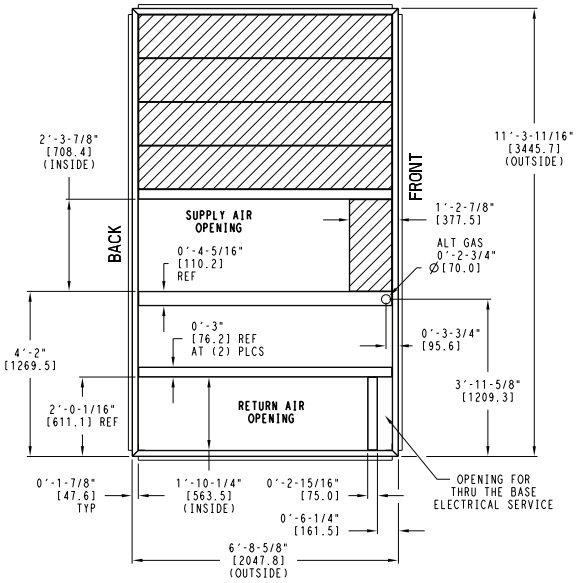



# Accessory dimensions (cont)

## Roof Curb Dimensions — 48/50GC 20-24

| "A" | ROOF CURB ACCESSORY |
|---|---|
| 1′-2" [356.0] | CRRFCURB047A00 |
| 2′-0" [610.0] | CRRFCURB048A00 |




NOTES:

1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.

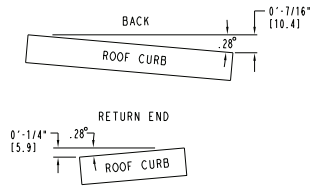
2 DIMENSIONS IN [ ] ARE IN MILLIMETERS.

3 ROOF CURB GALVANIZED STEEL.

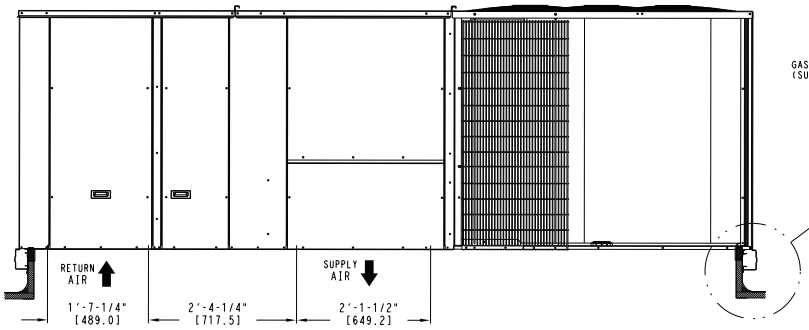
4 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)

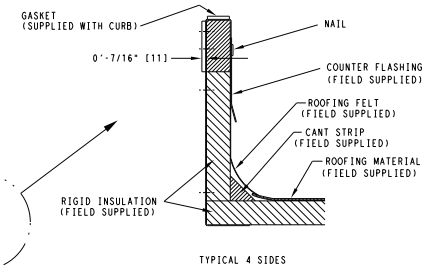
5 SERVICE CLEARANCE 4 ft ON EACH SIDE

➡ DIRECTION OF AIR FLOW

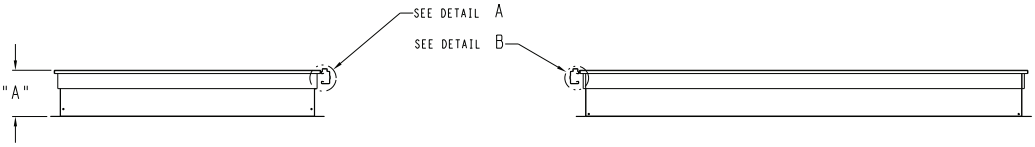


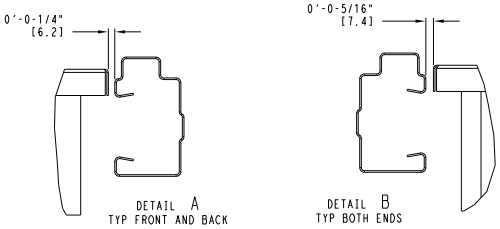

MAX CURB LEVELING TOLERANCES

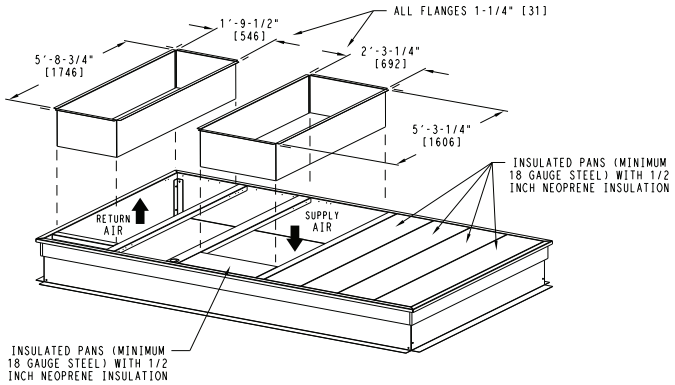



TYPICAL 4 SIDES



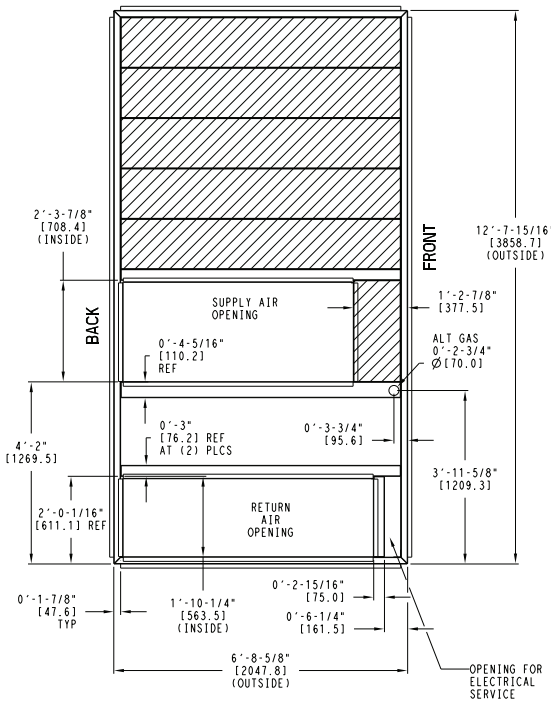



# Accessory dimensions (cont)

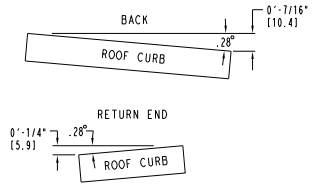
## Roof Curb Dimensions — 48/50GC 28

| "A" | ROOF CURB ACCESSORY |
|---|---|
| 1′-2" [356.0] | CRRFCURB049A00 |
| 2′-0" [610.0] | CRRFCURB050A00 |

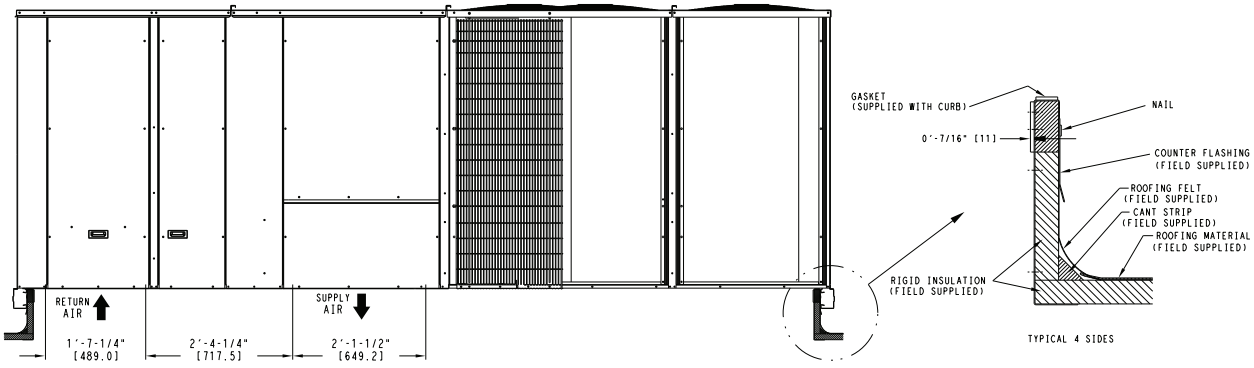


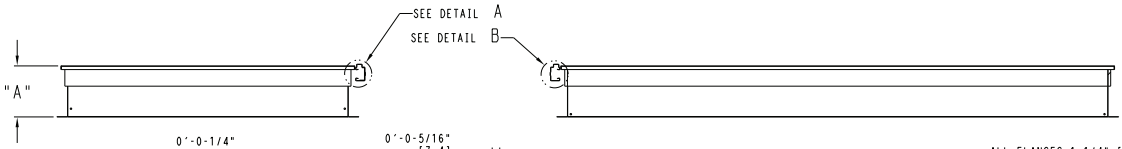

NOTES:
1. ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
2. BOLT HEADS TO BE ON INSIDE OF FLANGE. CLEARANCE IS [11] 0-0-7/16" TYP ALL CORNERS.
3. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
4. ROOF CURB GALVANIZED STEEL.
5. ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
6. SERVICE CLEARANCE 4 ft ON EACH SIDE

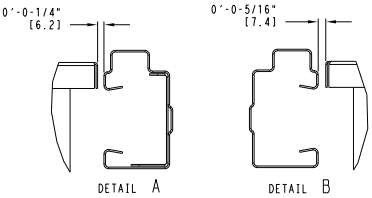
➡ DIRECTION OF AIR FLOW

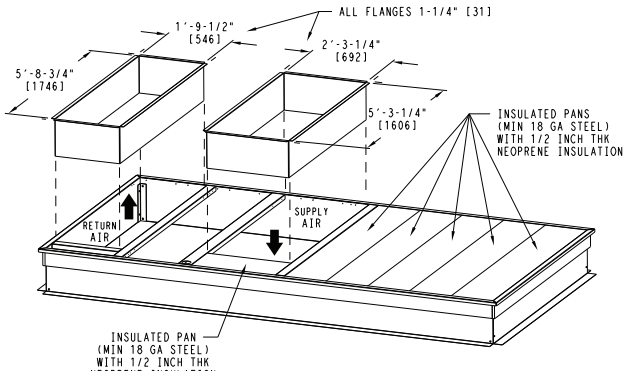



MAX CURB LEVELING TOLERANCES



## 48/50GC**17 Two Stage Cooling Capacities

| 48/50GC**17 | | | | AMBIENT TEMPERATURE (F) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 | | | 95 | | | 105 | | | 115 | | | 125 | | |
| | | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 4500 cfm | EAT (wb) | 58 | TC | 161.1 | 161.1 | 182.5 | 153.3 | 153.3 | 173.9 | 145.1 | 145.1 | 165.0 | 136.4 | 136.4 | 155.3 | 127.1 | 127.1 | 145.0 |
| | | | SHC | 139.7 | 161.1 | 182.5 | 132.7 | 153.3 | 173.9 | 125.3 | 145.1 | 165.0 | 117.5 | 136.4 | 155.3 | 109.1 | 127.1 | 145.0 |
| | | 62 | TC | 169.5 | 169.5 | 173.8 | 159.9 | 159.9 | 168.3 | 149.8 | 149.8 | 162.6 | 139.2 | 139.2 | 156.6 | 128.0 | 128.0 | 150.0 |
| | | | SHC | 126.1 | 149.9 | 173.8 | 120.6 | 144.4 | 168.3 | 115.0 | 138.8 | 162.6 | 109.1 | 132.8 | 156.6 | 102.8 | 126.4 | 150.0 |
| | | 67 | TC | 187.2 | 187.2 | 187.2 | 176.9 | 176.9 | 176.9 | 166.2 | 166.2 | 166.2 | 154.8 | 154.8 | 154.8 | 142.6 | 142.6 | 142.6 |
| | | | SHC | 103.0 | 126.9 | 150.8 | 97.6 | 121.5 | 145.4 | 92.1 | 116.0 | 139.9 | 86.3 | 110.2 | 134.1 | 80.3 | 104.2 | 128.1 |
| | | 72 | TC | 206.6 | 206.6 | 206.6 | 195.5 | 195.5 | 195.5 | 184.0 | 184.0 | 184.0 | 171.8 | 171.8 | 171.8 | 158.8 | 158.8 | 158.8 |
| | | | SHC | 79.5 | 103.4 | 127.3 | 74.2 | 98.0 | 121.9 | 68.6 | 92.5 | 116.3 | 62.9 | 86.8 | 110.6 | 57.0 | 80.8 | 104.6 |
| | | 76 | TC | — | 223.1 | 223.1 | — | 211.3 | 211.3 | — | 199.1 | 199.1 | — | 186.3 | 186.3 | — | 172.6 | 172.6 |
| | | | SHC | — | 84.1 | 107.3 | — | 78.8 | 102.0 | — | 73.3 | 96.5 | — | 67.6 | 90.9 | — | 61.7 | 85.1 |
| 5250 cfm | EAT (wb) | 58 | TC | 170.7 | 170.7 | 193.3 | 162.4 | 162.4 | 184.2 | 153.8 | 153.8 | 174.6 | 144.5 | 144.5 | 164.4 | 134.6 | 134.6 | 153.4 |
| | | | SHC | 148.2 | 170.7 | 193.3 | 140.7 | 162.4 | 184.2 | 132.9 | 153.8 | 174.6 | 124.6 | 144.5 | 164.4 | 115.8 | 134.6 | 153.4 |
| | | 62 | TC | 175.2 | 175.2 | 192.0 | 165.2 | 165.2 | 186.2 | 154.9 | 154.9 | 179.9 | 148.0 | 148.0 | 161.1 | 134.8 | 134.8 | 159.9 |
| | | | SHC | 136.9 | 164.4 | 192.0 | 131.3 | 158.7 | 186.2 | 125.3 | 152.6 | 179.9 | 113.5 | 137.3 | 161.1 | 109.6 | 134.8 | 159.9 |
| | | 67 | TC | 193.1 | 193.1 | 193.1 | 182.3 | 182.3 | 182.3 | 171.0 | 171.0 | 171.0 | 159.1 | 159.1 | 159.1 | 146.5 | 146.5 | 146.5 |
| | | | SHC | 110.1 | 137.8 | 165.4 | 104.6 | 132.2 | 159.9 | 98.9 | 126.6 | 154.2 | 93.0 | 120.7 | 148.3 | 87.0 | 114.6 | 142.2 |
| | | 72 | TC | 212.7 | 212.7 | 212.7 | 201.0 | 201.0 | 201.0 | 189.0 | 189.0 | 189.0 | 176.3 | 176.3 | 176.3 | 162.7 | 162.7 | 162.7 |
| | | | SHC | 82.6 | 110.2 | 137.8 | 77.1 | 104.7 | 132.3 | 71.5 | 99.1 | 126.6 | 65.7 | 93.3 | 120.9 | 59.7 | 87.2 | 114.8 |
| | | 76 | TC | — | 229.3 | 229.3 | — | 217.0 | 217.0 | — | 204.2 | 204.2 | — | 190.9 | 190.9 | — | — | — |
| | | | SHC | — | 87.7 | 114.6 | — | 82.2 | 109.2 | — | 76.6 | 103.6 | — | 70.9 | 97.9 | — | — | — |
| 6000 cfm | EAT (wb) | 58 | TC | 178.8 | 178.8 | 202.3 | 170.1 | 170.1 | 192.7 | 160.9 | 160.9 | 182.6 | 151.1 | 151.1 | 171.8 | 140.8 | 140.8 | 160.3 |
| | | | SHC | 155.3 | 178.8 | 202.3 | 147.5 | 170.1 | 192.7 | 139.2 | 160.9 | 182.6 | 130.5 | 151.1 | 171.8 | 121.2 | 140.8 | 160.3 |
| | | 62 | TC | 180.0 | 180.0 | 208.5 | 170.3 | 170.3 | 200.5 | 161.1 | 161.1 | 190.0 | 151.3 | 151.3 | 178.9 | 140.9 | 140.9 | 167.0 |
| | | | SHC | 146.8 | 177.6 | 208.5 | 140.1 | 170.3 | 200.5 | 132.1 | 161.1 | 190.0 | 123.7 | 151.3 | 178.9 | 114.8 | 140.9 | 167.0 |
| | | 67 | TC | 197.5 | 197.5 | 197.5 | 186.4 | 186.4 | 186.4 | 174.7 | 174.7 | 174.7 | 162.5 | 162.5 | 162.5 | 149.4 | 149.4 | 155.8 |
| | | | SHC | 116.7 | 148.1 | 179.5 | 111.1 | 142.4 | 173.8 | 105.4 | 136.7 | 168.0 | 99.5 | 130.8 | 162.0 | 93.3 | 124.6 | 155.8 |
| | | 72 | TC | 217.2 | 217.2 | 217.2 | 205.1 | 205.1 | 205.1 | 192.6 | 192.6 | 192.6 | 179.6 | 179.6 | 179.6 | 165.7 | 165.7 | 165.7 |
| | | | SHC | 85.2 | 116.5 | 147.8 | 79.7 | 110.9 | 142.2 | 74.0 | 105.3 | 136.5 | 68.2 | 99.4 | 130.7 | 62.1 | 93.3 | 124.6 |
| | | 76 | TC | — | 234.0 | 234.0 | — | 221.3 | 221.3 | — | 208.1 | 208.1 | — | — | — | — | — | — |
| | | | SHC | — | 90.8 | 121.3 | — | 85.3 | 115.9 | — | 79.6 | 110.2 | — | — | — | — | — | — |
| 6750 cfm | EAT (wb) | 58 | TC | 185.7 | 185.7 | 210.0 | 176.5 | 176.5 | 199.9 | 166.9 | 166.9 | 189.3 | 156.8 | 156.8 | 178.1 | 145.9 | 145.9 | 166.1 |
| | | | SHC | 161.4 | 185.7 | 210.0 | 153.2 | 176.5 | 199.9 | 144.6 | 166.9 | 189.3 | 135.5 | 156.8 | 178.1 | 125.8 | 145.9 | 166.1 |
| | | 62 | TC | 189.8 | 189.8 | 204.3 | 176.7 | 176.7 | 208.0 | 167.1 | 167.1 | 197.0 | 157.0 | 157.0 | 185.4 | 146.1 | 146.1 | 173.0 |
| | | | SHC | 146.8 | 175.5 | 204.3 | 145.5 | 176.7 | 208.0 | 137.2 | 167.1 | 197.0 | 128.5 | 157.0 | 185.4 | 119.1 | 146.1 | 173.0 |
| | | 67 | TC | 201.1 | 201.1 | 201.1 | 189.5 | 189.5 | 189.5 | 177.6 | 177.6 | 181.4 | 165.1 | 165.1 | 175.3 | 151.8 | 151.8 | 168.9 |
| | | | SHC | 123.0 | 158.0 | 192.9 | 117.4 | 152.3 | 187.2 | 111.6 | 146.5 | 181.4 | 105.7 | 140.5 | 175.3 | 99.5 | 134.2 | 168.9 |
| | | 72 | TC | 220.7 | 220.7 | 220.7 | 208.4 | 208.4 | 208.4 | 195.6 | 195.6 | 195.6 | 182.2 | 182.2 | 182.2 | 168.1 | 168.1 | 168.1 |
| | | | SHC | 87.6 | 122.5 | 157.4 | 82.0 | 116.9 | 151.8 | 76.3 | 111.2 | 146.1 | 70.5 | 105.3 | 140.1 | 64.4 | 99.2 | 134.0 |
| | | 76 | TC | — | 237.7 | 237.7 | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | SHC | — | 93.6 | 127.8 | — | — | — | — | — | — | — | — | — | — | — | — |
| 7500 cfm | EAT (wb) | 58 | TC | 191.6 | 191.6 | 216.6 | 182.1 | 182.1 | 206.1 | 172.2 | 172.2 | 195.2 | 161.6 | 161.6 | 183.5 | 150.3 | 150.3 | 171.0 |
| | | | SHC | 166.6 | 191.6 | 216.6 | 158.0 | 182.1 | 206.1 | 149.2 | 172.2 | 195.2 | 139.7 | 161.6 | 183.5 | 129.6 | 150.3 | 171.0 |
| | | 62 | TC | 191.8 | 191.8 | 225.2 | 182.3 | 182.3 | 214.4 | 172.3 | 172.3 | 203.1 | 161.7 | 161.7 | 191.0 | 150.4 | 150.4 | 178.0 |
| | | | SHC | 158.4 | 191.8 | 225.2 | 150.2 | 182.3 | 214.4 | 141.6 | 172.3 | 203.1 | 132.5 | 161.7 | 191.0 | 122.8 | 150.4 | 178.0 |
| | | 67 | TC | 203.9 | 203.9 | 206.0 | 192.2 | 192.2 | 200.3 | 180.0 | 180.0 | 194.4 | 167.2 | 167.2 | 188.2 | 153.7 | 153.7 | 181.6 |
| | | | SHC | 129.1 | 167.6 | 206.0 | 123.4 | 161.9 | 200.3 | 117.6 | 156.0 | 194.4 | 111.7 | 149.9 | 188.2 | 105.4 | 143.5 | 181.6 |
| | | 72 | TC | 223.6 | 223.6 | 223.6 | 211.0 | 211.0 | 211.0 | 198.0 | 198.0 | 198.0 | 184.3 | 184.3 | 184.3 | 169.9 | 169.9 | 169.9 |
| | | | SHC | 89.8 | 128.3 | 166.8 | 84.2 | 122.7 | 161.1 | 78.5 | 116.9 | 155.3 | 72.6 | 111.0 | 149.3 | 66.5 | 104.9 | 143.2 |
| | | 76 | TC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | SHC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

LEGEND

— — Do Not Operate
**cfm** — Cubic Feet Per Minute (Supply Air)
**EAT (db)** — Entering Air Temperature (dry bulb)
**EAT (wb)** — Entering Air Temperature (wet bulb)
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

NOTE: See minimum-maximum airflow ratings on page 8.

# Performance data (cont)

## 48/50GC**17 Single Stage Cooling Capacities

| 48/50GC**17 | | | | AMBIENT TEMPERATURE (F) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 | | | 95 | | | 105 | | | 115 | | | 125 | | |
| | | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 2700 cfm | EAT (wb) | 58 | TC | 96.5 | 96.5 | 109.7 | 91.1 | 91.1 | 103.8 | 85.5 | 85.5 | 97.8 | 79.7 | 79.7 | 91.4 | 73.6 | 73.6 | 84.7 |
| | | | SHC | 83.3 | 96.5 | 109.7 | 78.4 | 91.1 | 103.8 | 73.3 | 85.5 | 97.8 | 68.1 | 79.7 | 91.4 | 62.4 | 73.6 | 84.7 |
| | | 62 | TC | 102.5 | 102.5 | 104.1 | 95.7 | 95.7 | 100.0 | 88.9 | 88.9 | 95.9 | 81.8 | 81.8 | 91.7 | 74.3 | 74.3 | 87.3 |
| | | | SHC | 75.0 | 89.6 | 104.1 | 70.9 | 85.4 | 100.0 | 66.8 | 81.4 | 95.9 | 62.6 | 77.2 | 91.7 | 58.3 | 72.8 | 87.3 |
| | | 67 | TC | 114.5 | 114.5 | 114.5 | 107.2 | 107.2 | 107.2 | 99.8 | 99.8 | 99.8 | 92.2 | 92.2 | 92.2 | 84.2 | 84.2 | 84.2 |
| | | | SHC | 61.5 | 76.1 | 90.7 | 57.3 | 71.9 | 86.5 | 53.2 | 67.8 | 82.4 | 49.0 | 63.6 | 78.2 | 44.7 | 59.3 | 73.9 |
| | | 72 | TC | 127.7 | 127.7 | 127.7 | 119.7 | 119.7 | 119.7 | 111.8 | 111.8 | 111.8 | 103.6 | 103.6 | 103.6 | 95.1 | 95.1 | 95.1 |
| | | | SHC | 47.7 | 62.3 | 76.9 | 43.6 | 58.2 | 72.7 | 39.4 | 54.0 | 68.6 | 35.2 | 49.8 | 64.4 | 30.9 | 45.5 | 60.0 |
| | | 76 | TC | — | 139.0 | 139.0 | — | 130.5 | 130.5 | — | 122.0 | 122.0 | — | 113.3 | 113.3 | — | — | — |
| | | | SHC | — | 51.1 | 65.3 | — | 46.9 | 61.2 | — | 42.7 | 57.0 | — | 38.5 | 52.8 | — | — | — |
| 3150 cfm | EAT (wb) | 58 | TC | 103.2 | 103.2 | 117.2 | 97.3 | 97.3 | 110.8 | 91.4 | 91.4 | 104.3 | 85.2 | 85.2 | 97.5 | 78.6 | 78.6 | 90.3 |
| | | | SHC | 89.2 | 103.2 | 117.2 | 83.9 | 97.3 | 110.8 | 78.5 | 91.4 | 104.3 | 72.9 | 85.2 | 97.5 | 66.9 | 78.6 | 90.3 |
| | | 62 | TC | 106.4 | 106.4 | 115.9 | 99.3 | 99.3 | 111.6 | 92.3 | 92.3 | 107.3 | 85.6 | 85.6 | 101.2 | 78.8 | 78.8 | 94.4 |
| | | | SHC | 82.1 | 99.0 | 115.9 | 77.9 | 94.7 | 111.6 | 73.6 | 90.4 | 107.3 | 68.6 | 84.9 | 101.2 | 63.1 | 78.8 | 94.4 |
| | | 67 | TC | 118.7 | 118.7 | 118.7 | 111.0 | 111.0 | 111.0 | 103.2 | 103.2 | 103.2 | 95.2 | 95.2 | 95.2 | 86.9 | 86.9 | 86.9 |
| | | | SHC | 66.2 | 83.2 | 100.1 | 62.0 | 78.9 | 95.9 | 57.8 | 74.7 | 91.7 | 53.5 | 70.4 | 87.4 | 49.1 | 66.0 | 83.0 |
| | | 72 | TC | 132.1 | 132.1 | 132.1 | 123.7 | 123.7 | 123.7 | 115.3 | 115.3 | 115.3 | 106.7 | 106.7 | 106.7 | 97.8 | 97.8 | 97.8 |
| | | | SHC | 50.1 | 67.1 | 84.0 | 45.8 | 62.7 | 79.7 | 41.6 | 58.5 | 75.4 | 37.3 | 54.2 | 71.1 | 32.9 | 49.8 | 66.7 |
| | | 76 | TC | — | 143.6 | 143.6 | — | 134.6 | 134.6 | — | — | — | — | — | — | — | — | — |
| | | | SHC | — | 53.8 | 70.4 | — | 49.5 | 66.1 | — | — | — | — | — | — | — | — | — |
| 3600 cfm | EAT (wb) | 58 | TC | 108.8 | 108.8 | 123.5 | 102.6 | 102.6 | 116.7 | 96.3 | 96.3 | 109.8 | 89.8 | 89.8 | 102.6 | 82.8 | 82.8 | 95.0 |
| | | | SHC | 94.2 | 108.8 | 123.5 | 88.5 | 102.6 | 116.7 | 82.8 | 96.3 | 109.8 | 76.9 | 89.8 | 102.6 | 70.6 | 82.8 | 95.0 |
| | | 62 | TC | 109.7 | 109.7 | 127.0 | 103.5 | 103.5 | 119.9 | 96.4 | 96.4 | 114.4 | 89.9 | 89.9 | 107.1 | 83.0 | 83.0 | 99.2 |
| | | | SHC | 88.7 | 107.9 | 127.0 | 83.2 | 101.5 | 119.9 | 78.4 | 96.4 | 114.4 | 72.7 | 89.9 | 107.1 | 66.7 | 83.0 | 99.2 |
| | | 67 | TC | 121.9 | 121.9 | 121.9 | 113.8 | 113.8 | 113.8 | 105.8 | 105.8 | 105.8 | 97.5 | 97.5 | 97.5 | 89.0 | 89.0 | 91.7 |
| | | | SHC | 70.7 | 90.0 | 109.2 | 66.3 | 85.6 | 104.9 | 62.1 | 81.3 | 100.6 | 57.8 | 77.0 | 96.3 | 53.3 | 72.5 | 91.7 |
| | | 72 | TC | 135.4 | 135.4 | 135.4 | 126.7 | 126.7 | 126.7 | 118.0 | 118.0 | 118.0 | 109.1 | 109.1 | 109.1 | 99.9 | 99.9 | 99.9 |
| | | | SHC | 52.2 | 71.4 | 90.7 | 47.8 | 67.1 | 86.3 | 43.5 | 62.7 | 82.0 | 39.2 | 58.4 | 77.7 | 34.8 | 54.0 | 73.2 |
| | | 76 | TC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | SHC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 4050 cfm | EAT (wb) | 58 | TC | 113.7 | 113.7 | 128.9 | 107.1 | 107.1 | 121.7 | 100.5 | 100.5 | 114.4 | 93.6 | 93.6 | 106.9 | 86.4 | 86.4 | 99.0 |
| | | | SHC | 98.5 | 113.7 | 128.9 | 92.5 | 107.1 | 121.7 | 86.5 | 100.5 | 114.4 | 80.3 | 93.6 | 106.9 | 73.8 | 86.4 | 99.0 |
| | | 62 | TC | 113.8 | 113.8 | 134.1 | 107.2 | 107.2 | 126.7 | 100.6 | 100.6 | 119.3 | 93.7 | 93.7 | 111.5 | 86.5 | 86.5 | 103.3 |
| | | | SHC | 93.5 | 113.8 | 134.1 | 87.7 | 107.2 | 126.7 | 81.9 | 100.6 | 119.3 | 76.0 | 93.7 | 111.5 | 69.7 | 86.5 | 103.3 |
| | | 67 | TC | 124.5 | 124.5 | 124.5 | 116.1 | 116.1 | 116.1 | 107.8 | 107.8 | 109.3 | 99.4 | 99.4 | 104.9 | 90.6 | 90.6 | 100.3 |
| | | | SHC | 74.9 | 96.5 | 118.1 | 70.5 | 92.1 | 113.7 | 66.2 | 87.8 | 109.3 | 61.8 | 83.4 | 104.9 | 57.3 | 78.8 | 100.3 |
| | | 72 | TC | 138.1 | 138.1 | 138.1 | 129.1 | 129.1 | 129.1 | 120.1 | 120.1 | 120.1 | 111.0 | 111.0 | 111.0 | 101.5 | 101.5 | 101.5 |
| | | | SHC | 54.1 | 75.6 | 97.2 | 49.7 | 71.2 | 92.7 | 45.3 | 66.8 | 88.4 | 41.0 | 62.5 | 84.0 | 36.5 | 58.0 | 79.5 |
| | | 76 | TC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | SHC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 4500 cfm | EAT (wb) | 58 | TC | 117.8 | 117.8 | 133.5 | 111.0 | 111.0 | 126.0 | 104.0 | 104.0 | 118.4 | 96.9 | 96.9 | 110.6 | 89.4 | 89.4 | 102.4 |
| | | | SHC | 102.1 | 117.8 | 133.5 | 95.9 | 111.0 | 126.0 | 89.7 | 104.0 | 118.4 | 83.2 | 96.9 | 110.6 | 76.5 | 89.4 | 102.4 |
| | | 62 | TC | 118.0 | 118.0 | 138.9 | 111.1 | 111.1 | 131.2 | 104.2 | 104.2 | 123.4 | 97.0 | 97.0 | 115.3 | 89.6 | 89.6 | 106.9 |
| | | | SHC | 97.0 | 118.0 | 138.9 | 91.0 | 111.1 | 131.2 | 85.0 | 104.2 | 123.4 | 78.7 | 97.0 | 115.3 | 72.2 | 89.6 | 106.9 |
| | | 67 | TC | 126.6 | 126.6 | 126.6 | 118.0 | 118.0 | 122.2 | 109.5 | 109.5 | 117.8 | 100.9 | 100.9 | 113.3 | 91.9 | 91.9 | 108.6 |
| | | | SHC | 79.0 | 102.8 | 126.6 | 74.6 | 98.4 | 122.2 | 70.2 | 94.0 | 117.8 | 65.8 | 89.5 | 113.3 | 61.2 | 84.9 | 108.6 |
| | | 72 | TC | 140.3 | 140.3 | 140.3 | 130.9 | 130.9 | 130.9 | 121.8 | 121.8 | 121.8 | 112.5 | 112.5 | 112.5 | — | — | — |
| | | | SHC | 55.9 | 79.7 | 103.5 | 51.4 | 75.2 | 99.1 | 47.0 | 70.8 | 94.5 | 42.6 | 66.4 | 90.2 | — | — | — |
| | | 76 | TC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | SHC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

LEGEND

— — Do Not Operate
**cfm** — Cubic Feet Per Minute (Supply Air)
**EAT (db)** — Entering Air Temperature (dry bulb)
**EAT (wb)** — Entering Air Temperature (wet bulb)
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

NOTE: See minimum-maximum airflow ratings on page 8.

# Performance data (cont)

## 48/50GC*N17 — Unit with Humidi-MiZer® System in Subcooling Mode — Cooling Capacities

| TEMP (F) AIR ENTERING CONDENSER (Edb) | | AIR ENTERING EVAPORATOR — SCFM/BF (80°F db) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 4500/0.10 | | | 6000/0.13 | | | 7500/0.16 | | |
| | | Air Entering Evaporator — Ewb (F) | | | | | | | | |
| | | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 |
| 75 | TC | 199.5 | 172.4 | 161.4 | 212.1 | 182.6 | 173.3 | 219.5 | 189.4 | 182.4 |
| | SHC | 86.1 | 100.8 | 129.1 | 99.9 | 119.4 | 156.0 | 111.5 | 136.7 | 172.1 |
| | kW | 10.1 | 9.5 | 9.5 | 10.3 | 9.6 | 9.7 | 10.4 | 9.6 | 9.8 |
| 85 | TC | 175.5 | 167.1 | 150.7 | 195.4 | 178.7 | 161.6 | 205.4 | 181.8 | 168.4 |
| | SHC | 63.1 | 96.2 | 118.9 | 84.2 | 116.2 | 145.0 | 98.6 | 129.9 | 168.4 |
| | kW | 10.8 | 10.9 | 10.7 | 11.4 | 11.1 | 10.9 | 11.6 | 11.1 | 11.0 |
| 95 | TC | 173.6 | 156.0 | 139.9 | 184.8 | 165.5 | 149.5 | 191.3 | 172.7 | 155.9 |
| | SHC | 62.0 | 85.7 | 108.9 | 74.5 | 103.8 | 133.7 | 85.4 | 121.7 | 155.9 |
| | kW | 12.5 | 12.3 | 12.0 | 12.8 | 12.4 | 12.2 | 12.9 | 12.6 | 12.3 |
| 105 | TC | 161.4 | 144.0 | 128.5 | 171.1 | 153.3 | 137.6 | 177.0 | 159.2 | 143.5 |
| | SHC | 50.6 | 74.5 | 98.2 | 61.8 | 92.5 | 122.5 | 72.1 | 109.1 | 143.5 |
| | kW | 14.1 | 13.7 | 13.5 | 14.2 | 13.9 | 13.6 | 14.3 | 14.0 | 13.8 |
| 115 | TC | 148.4 | 131.6 | 117.0 | 157.4 | 140.4 | 125.3 | 131.2 | 144.3 | 130.0 |
| | SHC | 38.5 | 63.0 | 87.6 | 49.0 | 80.5 | 111.2 | 131.2 | 95.3 | 130.0 |
| | kW | 15.6 | 15.3 | 15.0 | 15.8 | 15.5 | 15.2 | 15.3 | 15.5 | 15.3 |
| 125 | TC | 134.0 | 118.1 | 104.3 | 142.1 | 125.9 | 111.8 | 146.8 | 130.9 | 117.4 |
| | SHC | 25.4 | 50.7 | 76.1 | 35.1 | 67.4 | 99.0 | 44.3 | 83.1 | 117.4 |
| | kW | 17.4 | 17.0 | 16.8 | 17.5 | 17.2 | 16.9 | 17.6 | 17.3 | 17.0 |

## 48/50GC*N17 — Unit with Humidi-MiZer System in Hot Gas Reheat Mode — Cooling Capacities

| TEMP (F) AIR ENTERING CONDENSER (Edb) | | AIR ENTERING EVAPORATOR — Ewb (F) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 75 Dry Bulb 62.5 Wet Bulb (50% Relative) | | | 75 Dry Bulb 64 Wet Bulb (56% Relative) | | | 75 Dry Bulb 65.3 Wet Bulb (60% Relative) | | |
| | | Air Entering Evaporator — cfm | | | | | | | | |
| | | 4500 | 6000 | 7500 | 4500 | 6000 | 7500 | 4500 | 6000 | 7500 |
| 80 | TC | 69.6 | 102.9 | 106.7 | 72.6 | 72.6 | 73.3 | 75.3 | 77.8 | 78.5 |
| | SHC | 11.5 | 4.4 | –6.0 | 12.0 | 3.1 | –4.1 | 12.5 | 3.3 | –4.4 |
| | kW | 10.0 | 9.9 | 9.9 | 10.1 | 9.9 | 9.9 | 10.2 | 10.2 | 10.3 |
| 75 | TC | 73.3 | 74.8 | 77.1 | 73.3 | 76.2 | 77.1 | 79.7 | 79.5 | 80.5 |
| | SHC | 14.8 | 15.6 | 0.5 | 14.8 | 15.9 | 0.5 | 16.1 | 16.6 | 0.5 |
| | kW | 9.9 | 9.8 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |
| 70 | TC | 76.8 | 78.4 | 83.6 | 76.8 | 79.8 | 80.8 | 80.2 | 83.2 | 84.3 |
| | SHC | 18.3 | 19.2 | 11.3 | 18.3 | 19.6 | 10.9 | 19.1 | 20.4 | 11.4 |
| | kW | 9.9 | 9.9 | 10.0 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |
| 60 | TC | 83.3 | 86.4 | 87.4 | 83.5 | 86.8 | 87.9 | 86.9 | 90.3 | 91.4 |
| | SHC | 4.0 | 26.4 | 17.6 | 4.0 | 26.5 | 17.7 | 4.2 | 27.6 | 18.4 |
| | kW | 9.9 | 9.9 | 10.0 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |
| 50 | TC | 90.1 | 93.5 | 94.7 | 89.9 | 93.4 | 94.8 | 93.4 | 97.0 | 98.4 |
| | SHC | 10.7 | 33.2 | 24.4 | 10.7 | 33.2 | 24.4 | 11.1 | 34.5 | 25.3 |
| | kW | 9.9 | 9.9 | 10.0 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |
| 40 | TC | 96.7 | 100.3 | 101.8 | 102.0 | 99.7 | 101.2 | 99.6 | 103.4 | 104.9 |
| | SHC | 17.2 | 43.2 | 30.9 | 18.2 | 42.9 | 30.7 | 17.7 | 44.5 | 31.8 |
| | kW | 9.9 | 9.9 | 10.0 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |

LEGEND

**Edb** — Entering Dry Bulb
**Ewb** — Entering Wet Bulb
**kW** — Compressor Power Input
**SCFM/BF** — Standard Cubic Feet per Minute/Bypass Factor
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

# Performance data (cont)

## 48/50GC**20 Two Stage Cooling Capacities

| 48/50GC**20 | | | | AMBIENT TEMPERATURE (F) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 | | | 95 | | | 105 | | | 115 | | | 125 | | |
| | | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 5350 cfm | EAT (wb) | 58 | TC | 181.0 | 181.0 | 204.7 | 173.1 | 173.1 | 196.0 | 164.9 | 164.9 | 186.9 | 156.1 | 156.1 | 177.2 | 146.8 | 146.8 | 166.9 |
| | | | SHC | 157.3 | 181.0 | 204.7 | 150.2 | 173.1 | 196.0 | 142.9 | 164.9 | 186.9 | 135.0 | 156.1 | 177.2 | 126.7 | 146.8 | 166.9 |
| | | 62 | TC | 190.9 | 190.9 | 195.4 | 181.1 | 181.1 | 189.9 | 170.7 | 170.7 | 184.2 | 159.8 | 159.8 | 178.1 | 148.5 | 148.5 | 171.3 |
| | | | SHC | 142.4 | 168.9 | 195.4 | 136.9 | 163.4 | 189.9 | 131.3 | 157.8 | 184.2 | 125.4 | 151.7 | 178.1 | 119.1 | 145.2 | 171.3 |
| | | 67 | TC | 210.8 | 210.8 | 210.8 | 200.2 | 200.2 | 200.2 | 189.0 | 189.0 | 189.0 | 177.2 | 177.2 | 177.2 | 164.8 | 164.8 | 164.8 |
| | | | SHC | 116.4 | 143.1 | 169.7 | 111.1 | 137.7 | 164.3 | 105.5 | 132.1 | 158.7 | 99.8 | 126.4 | 153.0 | 93.9 | 120.4 | 147.0 |
| | | 72 | TC | 232.7 | 232.7 | 232.7 | 221.2 | 221.2 | 221.2 | 209.2 | 209.2 | 209.2 | 196.5 | 196.5 | 196.5 | 183.0 | 183.0 | 183.0 |
| | | | SHC | 90.0 | 116.5 | 143.0 | 84.7 | 111.2 | 137.7 | 79.2 | 105.6 | 132.1 | 73.4 | 99.9 | 126.4 | 67.5 | 94.0 | 120.4 |
| | | 76 | TC | — | 251.4 | 251.4 | — | 239.1 | 239.1 | — | 226.3 | 226.3 | — | 212.8 | 212.8 | — | 198.4 | 198.4 |
| | | | SHC | — | 94.9 | 120.3 | — | 89.5 | 115.1 | — | 84.0 | 109.7 | — | 78.3 | 104.1 | — | 72.4 | 98.3 |
| 6150 cfm | EAT (wb) | 58 | TC | 191.6 | 191.6 | 216.6 | 183.3 | 183.3 | 207.4 | 174.4 | 174.4 | 197.6 | 165.0 | 165.0 | 187.2 | 155.0 | 155.0 | 176.1 |
| | | | SHC | 166.6 | 191.6 | 216.6 | 159.2 | 183.3 | 207.4 | 151.2 | 174.4 | 197.6 | 142.8 | 165.0 | 187.2 | 134.0 | 155.0 | 176.1 |
| | | 62 | TC | 197.4 | 197.4 | 215.2 | 187.0 | 187.0 | 209.2 | 176.3 | 176.3 | 202.6 | 169.1 | 169.1 | 181.0 | 159.0 | 159.0 | 169.4 |
| | | | SHC | 154.2 | 184.7 | 215.2 | 148.5 | 178.8 | 209.2 | 142.4 | 172.5 | 202.6 | 129.0 | 155.0 | 181.0 | 120.4 | 144.9 | 169.4 |
| | | 67 | TC | 217.4 | 217.4 | 217.4 | 206.2 | 206.2 | 206.2 | 194.5 | 194.5 | 194.5 | 182.2 | 182.2 | 182.2 | 169.2 | 169.2 | 169.2 |
| | | | SHC | 124.4 | 155.1 | 185.8 | 118.9 | 149.6 | 180.3 | 113.2 | 143.9 | 174.6 | 107.4 | 138.0 | 168.6 | 101.3 | 131.9 | 162.5 |
| | | 72 | TC | 239.6 | 239.6 | 239.6 | 227.6 | 227.6 | 227.6 | 214.9 | 214.9 | 214.9 | 201.6 | 201.6 | 201.6 | 187.6 | 187.6 | 187.6 |
| | | | SHC | 93.7 | 124.3 | 154.9 | 88.3 | 118.8 | 149.4 | 82.7 | 113.2 | 143.7 | 76.8 | 107.4 | 137.9 | 70.8 | 101.3 | 131.8 |
| | | 76 | TC | — | 258.5 | 258.5 | — | 245.7 | 245.7 | — | 232.2 | 232.2 | — | 218.1 | 218.1 | — | 203.1 | 203.1 |
| | | | SHC | — | 99.2 | 128.7 | — | 93.7 | 123.4 | — | 88.1 | 117.9 | — | 82.3 | 112.1 | — | 76.3 | 106.2 |
| 7000 cfm | EAT (wb) | 58 | TC | 200.2 | 200.2 | 226.2 | 191.3 | 191.3 | 216.4 | 181.9 | 181.9 | 206.0 | 172.0 | 172.0 | 195.0 | 161.5 | 161.5 | 183.4 |
| | | | SHC | 174.1 | 200.2 | 226.2 | 166.2 | 191.3 | 216.4 | 157.8 | 181.9 | 206.0 | 149.0 | 172.0 | 195.0 | 139.6 | 161.5 | 183.4 |
| | | 62 | TC | 202.4 | 202.4 | 231.7 | 195.4 | 195.4 | 210.7 | 184.5 | 184.5 | 205.3 | 175.3 | 175.3 | 191.1 | 161.7 | 161.7 | 190.9 |
| | | | SHC | 164.1 | 197.9 | 231.7 | 151.2 | 180.9 | 210.7 | 145.6 | 175.5 | 205.3 | 135.8 | 163.4 | 191.1 | 132.5 | 161.7 | 190.9 |
| | | 67 | TC | 222.2 | 222.2 | 222.2 | 210.6 | 210.6 | 210.6 | 198.5 | 198.5 | 198.5 | 185.8 | 185.8 | 185.8 | 172.5 | 172.5 | 176.4 |
| | | | SHC | 131.3 | 165.8 | 200.3 | 125.8 | 160.2 | 194.6 | 120.0 | 154.4 | 188.8 | 114.1 | 148.4 | 182.7 | 107.9 | 142.1 | 176.4 |
| | | 72 | TC | 244.6 | 244.6 | 244.6 | 232.1 | 232.1 | 232.1 | 219.1 | 219.1 | 219.1 | 205.3 | 205.3 | 205.3 | 190.8 | 190.8 | 190.8 |
| | | | SHC | 96.9 | 131.2 | 165.5 | 91.3 | 125.6 | 159.9 | 85.6 | 119.9 | 154.2 | 79.8 | 114.0 | 148.3 | 73.7 | 107.9 | 142.1 |
| | | 76 | TC | — | 263.6 | 263.6 | — | 250.4 | 250.4 | — | 236.4 | 236.4 | — | 221.8 | 221.8 | — | 206.5 | 206.5 |
| | | | SHC | — | 102.9 | 136.2 | — | 97.4 | 130.7 | — | 91.7 | 125.1 | — | 85.8 | 119.3 | — | 79.8 | 113.2 |
| 7900 cfm | EAT (wb) | 58 | TC | 207.8 | 207.8 | 234.8 | 198.5 | 198.5 | 224.5 | 188.7 | 188.7 | 213.6 | 178.3 | 178.3 | 202.1 | 167.3 | 167.3 | 189.8 |
| | | | SHC | 180.9 | 207.8 | 234.8 | 172.5 | 198.5 | 224.5 | 163.8 | 188.7 | 213.6 | 154.5 | 178.3 | 202.1 | 144.7 | 167.3 | 189.8 |
| | | 62 | TC | 212.1 | 212.1 | 227.9 | 201.5 | 201.5 | 221.9 | 192.2 | 192.2 | 208.1 | 178.5 | 178.5 | 210.2 | 167.4 | 167.4 | 197.6 |
| | | | SHC | 164.3 | 196.1 | 227.9 | 158.5 | 190.2 | 221.9 | 148.8 | 178.4 | 208.1 | 146.7 | 178.5 | 210.2 | 137.3 | 167.4 | 197.6 |
| | | 67 | TC | 226.3 | 226.3 | 226.3 | 214.4 | 214.4 | 214.4 | 202.0 | 202.0 | 203.1 | 188.9 | 188.9 | 196.8 | 175.2 | 175.2 | 190.3 |
| | | | SHC | 138.3 | 176.6 | 214.9 | 132.7 | 170.9 | 209.2 | 126.8 | 165.0 | 203.1 | 120.7 | 158.8 | 196.8 | 114.5 | 152.4 | 190.3 |
| | | 72 | TC | 248.8 | 248.8 | 248.8 | 235.9 | 235.9 | 235.9 | 222.4 | 222.4 | 222.4 | 208.4 | 208.4 | 208.4 | 193.6 | 193.6 | 193.6 |
| | | | SHC | 99.9 | 138.1 | 176.2 | 94.3 | 132.4 | 170.6 | 88.5 | 126.6 | 164.7 | 82.6 | 120.7 | 158.8 | 76.5 | 114.5 | 152.5 |
| | | 76 | TC | — | 267.9 | 267.9 | — | 254.3 | 254.3 | — | 240.0 | 240.0 | — | 225.0 | 225.0 | — | 209.2 | 209.2 |
| | | | SHC | — | 106.5 | 143.7 | — | 101.0 | 138.2 | — | 95.3 | 132.4 | — | 89.3 | 126.5 | — | 83.2 | 120.4 |
| 8750 cfm | EAT (wb) | 58 | TC | 213.9 | 213.9 | 241.7 | 204.3 | 204.3 | 230.9 | 194.0 | 194.0 | 219.6 | 183.3 | 183.3 | 207.6 | 171.8 | 171.8 | 194.9 |
| | | | SHC | 186.2 | 213.9 | 241.7 | 177.6 | 204.3 | 230.9 | 168.5 | 194.0 | 219.6 | 158.9 | 183.3 | 207.6 | 148.7 | 171.8 | 194.9 |
| | | 62 | TC | 214.6 | 214.6 | 251.7 | 207.7 | 207.7 | 225.8 | 194.2 | 194.2 | 228.3 | 183.4 | 183.4 | 216.0 | 172.0 | 172.0 | 202.8 |
| | | | SHC | 177.5 | 214.6 | 251.7 | 161.9 | 193.8 | 225.8 | 160.1 | 194.2 | 228.3 | 150.9 | 183.4 | 216.0 | 141.1 | 172.0 | 202.8 |
| | | 67 | TC | 228.3 | 228.3 | 228.3 | 217.3 | 217.3 | 222.2 | 204.6 | 204.6 | 216.1 | 191.3 | 191.3 | 209.7 | 177.4 | 177.4 | 203.0 |
| | | | SHC | 138.6 | 174.8 | 211.1 | 138.8 | 180.5 | 222.2 | 132.9 | 174.5 | 216.1 | 126.8 | 168.2 | 209.7 | 120.4 | 161.7 | 203.0 |
| | | 72 | TC | 251.9 | 251.9 | 251.9 | 238.8 | 238.8 | 238.8 | 225.1 | 225.1 | 225.1 | 210.8 | 210.8 | 210.8 | 195.7 | 195.7 | 195.7 |
| | | | SHC | 102.6 | 144.3 | 186.0 | 97.0 | 138.6 | 180.3 | 91.2 | 132.8 | 174.4 | 85.2 | 126.8 | 168.3 | 79.0 | 120.5 | 162.0 |
| | | 76 | TC | — | 271.3 | 271.3 | — | 257.3 | 257.3 | — | 242.7 | 242.7 | — | 227.4 | 227.4 | — | 211.3 | 211.3 |
| | | | SHC | — | 109.8 | 150.5 | — | 104.2 | 144.9 | — | 98.5 | 139.1 | — | 92.5 | 133.1 | — | 86.3 | 126.9 |

LEGEND

**—** — Do Not Operate
**cfm** — Cubic Feet Per Minute (Supply Air)
**EAT (db)** — Entering Air Temperature (dry bulb)
**EAT (wb)** — Entering Air Temperature (wet bulb)
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

NOTE: See minimum-maximum airflow ratings on page 8.

# Performance data (cont)

## 48/50GC**20 Single Stage Cooling Capacities

| 48/50GC**20 | | | | AMBIENT TEMPERATURE (F) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 | | | 95 | | | 105 | | | 115 | | | 125 | | |
| | | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 3150 cfm | EAT (wb) | 58 | TC | 109.5 | 109.5 | 124.2 | 104.2 | 104.2 | 118.3 | 98.6 | 98.6 | 112.2 | 92.6 | 92.6 | 105.6 | 86.3 | 86.3 | 98.7 |
| | | | SHC | 94.9 | 109.5 | 124.2 | 90.1 | 104.2 | 118.3 | 85.0 | 98.6 | 112.2 | 79.6 | 92.6 | 105.6 | 74.0 | 86.3 | 98.7 |
| | | 62 | TC | 115.5 | 115.5 | 118.7 | 108.9 | 108.9 | 114.8 | 101.9 | 101.9 | 110.8 | 94.6 | 94.6 | 106.6 | 87.0 | 87.0 | 102.0 |
| | | | SHC | 85.7 | 102.2 | 118.7 | 81.8 | 98.3 | 114.8 | 77.9 | 94.3 | 110.8 | 73.8 | 90.2 | 106.6 | 69.4 | 85.7 | 102.0 |
| | | 67 | TC | 128.5 | 128.5 | 128.5 | 121.4 | 121.4 | 121.4 | 113.9 | 113.9 | 113.9 | 106.0 | 106.0 | 106.0 | 97.7 | 97.7 | 97.7 |
| | | | SHC | 69.7 | 86.2 | 102.8 | 65.8 | 82.4 | 98.9 | 61.9 | 78.4 | 94.9 | 57.8 | 74.3 | 90.8 | 53.6 | 70.1 | 86.6 |
| | | 72 | TC | 142.7 | 142.7 | 142.7 | 135.1 | 135.1 | 135.1 | 127.1 | 127.1 | 127.1 | 118.7 | 118.7 | 118.7 | 109.8 | 109.8 | 109.8 |
| | | | SHC | 53.5 | 70.0 | 86.5 | 49.6 | 66.1 | 82.6 | 45.6 | 62.1 | 78.6 | 41.5 | 58.0 | 74.4 | 37.3 | 53.8 | 70.2 |
| | | 76 | TC | — | 154.8 | 154.8 | — | 146.7 | 146.7 | — | 138.3 | 138.3 | — | 129.4 | 129.4 | — | 120.0 | 120.0 |
| | | | SHC | — | 56.7 | 72.5 | — | 52.8 | 68.7 | — | 48.8 | 64.8 | — | 44.7 | 60.7 | — | 40.5 | 56.5 |
| 3700 cfm | EAT (wb) | 58 | TC | 116.8 | 116.8 | 132.3 | 111.0 | 111.0 | 126.0 | 105.0 | 105.0 | 119.4 | 98.7 | 98.7 | 112.4 | 91.9 | 91.9 | 105.0 |
| | | | SHC | 101.3 | 116.8 | 132.3 | 96.1 | 111.0 | 126.0 | 90.6 | 105.0 | 119.4 | 84.9 | 98.7 | 112.4 | 78.9 | 91.9 | 105.0 |
| | | 62 | TC | 119.8 | 119.8 | 131.9 | 112.9 | 112.9 | 127.7 | 105.8 | 105.8 | 123.2 | 98.9 | 98.9 | 117.0 | 92.1 | 92.1 | 109.5 |
| | | | SHC | 93.7 | 112.8 | 131.9 | 89.7 | 108.7 | 127.7 | 85.4 | 104.3 | 123.2 | 80.4 | 98.7 | 117.0 | 74.6 | 92.1 | 109.5 |
| | | 67 | TC | 132.9 | 132.9 | 132.9 | 125.5 | 125.5 | 125.5 | 117.6 | 117.6 | 117.6 | 109.4 | 109.4 | 109.4 | 100.8 | 100.8 | 100.8 |
| | | | SHC | 75.1 | 94.3 | 113.5 | 71.1 | 90.3 | 109.5 | 67.1 | 86.3 | 105.5 | 62.9 | 82.1 | 101.3 | 58.6 | 77.8 | 96.9 |
| | | 72 | TC | 147.4 | 147.4 | 147.4 | 139.3 | 139.3 | 139.3 | 130.9 | 130.9 | 130.9 | 122.1 | 122.1 | 122.1 | 112.8 | 112.8 | 112.8 |
| | | | SHC | 56.0 | 75.2 | 94.3 | 52.1 | 71.2 | 90.4 | 48.0 | 67.1 | 86.2 | 43.9 | 63.0 | 82.1 | 39.6 | 58.7 | 77.8 |
| | | 76 | TC | — | 159.6 | 159.6 | — | 151.2 | 151.2 | — | 142.3 | 142.3 | — | 133.0 | 133.0 | — | 123.1 | 123.1 |
| | | | SHC | — | 59.6 | 78.3 | — | 55.7 | 74.3 | — | 51.6 | 70.2 | — | 47.5 | 66.1 | — | 43.1 | 61.8 |
| 4200 cfm | EAT (wb) | 58 | TC | 122.3 | 122.3 | 138.4 | 116.2 | 116.2 | 131.8 | 109.9 | 109.9 | 124.9 | 103.3 | 103.3 | 117.5 | 96.2 | 96.2 | 109.7 |
| | | | SHC | 106.1 | 122.3 | 138.4 | 100.7 | 116.2 | 131.8 | 95.0 | 109.9 | 124.9 | 89.0 | 103.3 | 117.5 | 82.6 | 96.2 | 109.7 |
| | | 62 | TC | 123.2 | 123.2 | 142.7 | 116.4 | 116.4 | 137.2 | 110.2 | 110.2 | 129.8 | 103.4 | 103.4 | 122.5 | 96.3 | 96.3 | 114.4 |
| | | | SHC | 100.3 | 121.5 | 142.7 | 95.6 | 116.4 | 137.2 | 90.0 | 109.9 | 129.8 | 84.3 | 103.4 | 122.5 | 78.2 | 96.3 | 114.4 |
| | | 67 | TC | 136.1 | 136.1 | 136.1 | 128.4 | 128.4 | 128.4 | 120.3 | 120.3 | 120.3 | 111.8 | 111.8 | 111.8 | 102.9 | 102.9 | 106.0 |
| | | | SHC | 79.6 | 101.2 | 122.8 | 75.6 | 97.2 | 118.8 | 71.5 | 93.1 | 114.6 | 67.3 | 88.8 | 110.3 | 63.0 | 84.5 | 106.0 |
| | | 72 | TC | 150.6 | 150.6 | 150.6 | 142.3 | 142.3 | 142.3 | 133.6 | 133.6 | 133.6 | 124.5 | 124.5 | 124.5 | 115.0 | 115.0 | 115.0 |
| | | | SHC | 58.1 | 79.6 | 101.2 | 54.1 | 75.6 | 97.1 | 50.0 | 71.5 | 93.0 | 45.8 | 67.3 | 88.8 | 41.5 | 63.0 | 84.4 |
| | | 76 | TC | — | 163.0 | 163.0 | — | 154.3 | 154.3 | — | 145.1 | 145.1 | — | 135.4 | 135.4 | — | 125.3 | 125.3 |
| | | | SHC | — | 62.0 | 83.0 | — | 58.1 | 79.0 | — | 54.0 | 74.9 | — | 49.7 | 70.7 | — | 45.4 | 66.3 |
| 4750 cfm | EAT (wb) | 58 | TC | 127.5 | 127.5 | 144.2 | 121.2 | 121.2 | 137.3 | 114.5 | 114.5 | 130.0 | 107.5 | 107.5 | 122.3 | 100.1 | 100.1 | 114.1 |
| | | | SHC | 110.7 | 127.5 | 144.2 | 105.0 | 121.2 | 137.3 | 99.0 | 114.5 | 130.0 | 92.7 | 107.5 | 122.3 | 86.1 | 100.1 | 114.1 |
| | | 62 | TC | 127.5 | 127.5 | 150.0 | 121.3 | 121.3 | 142.9 | 114.7 | 114.7 | 135.4 | 107.6 | 107.6 | 127.4 | 100.2 | 100.2 | 118.9 |
| | | | SHC | 105.1 | 127.5 | 150.0 | 99.7 | 121.3 | 142.9 | 94.0 | 114.7 | 135.4 | 87.9 | 107.6 | 127.4 | 81.5 | 100.2 | 118.9 |
| | | 67 | TC | 138.9 | 138.9 | 138.9 | 130.9 | 130.9 | 130.9 | 122.6 | 122.6 | 124.4 | 114.5 | 114.5 | 114.5 | 104.8 | 104.8 | 115.5 |
| | | | SHC | 84.4 | 108.6 | 132.7 | 80.3 | 104.5 | 128.6 | 76.2 | 100.3 | 124.4 | 67.2 | 89.3 | 111.4 | 67.6 | 91.5 | 115.5 |
| | | 72 | TC | 153.4 | 153.4 | 153.4 | 144.9 | 144.9 | 144.9 | 136.1 | 136.1 | 136.1 | 126.7 | 126.7 | 126.7 | 117.0 | 117.0 | 117.0 |
| | | | SHC | 60.2 | 84.3 | 108.4 | 56.2 | 80.3 | 104.3 | 52.1 | 76.1 | 100.2 | 47.9 | 71.8 | 95.8 | 43.5 | 67.5 | 91.5 |
| | | 76 | TC | — | 165.9 | 165.9 | — | 156.9 | 156.9 | — | 147.5 | 147.5 | — | 137.6 | 137.6 | — | 127.2 | 127.2 |
| | | | SHC | — | 64.5 | 88.0 | — | 60.5 | 84.0 | — | 56.4 | 79.8 | — | 52.1 | 75.5 | — | 47.7 | 71.0 |
| 5250 cfm | EAT (wb) | 58 | TC | 131.5 | 131.5 | 148.8 | 125.0 | 125.0 | 141.6 | 118.1 | 118.1 | 134.0 | 110.9 | 110.9 | 126.0 | 103.2 | 103.2 | 117.6 |
| | | | SHC | 114.3 | 131.5 | 148.8 | 108.4 | 125.0 | 141.6 | 102.2 | 118.1 | 134.0 | 95.7 | 110.9 | 126.0 | 88.8 | 103.2 | 117.6 |
| | | 62 | TC | 131.7 | 131.7 | 154.7 | 125.1 | 125.1 | 147.3 | 118.2 | 118.2 | 139.5 | 111.0 | 111.0 | 131.3 | 103.3 | 103.3 | 122.5 |
| | | | SHC | 108.6 | 131.7 | 154.7 | 102.9 | 125.1 | 147.3 | 97.0 | 118.2 | 139.5 | 90.7 | 111.0 | 131.3 | 84.1 | 103.3 | 122.5 |
| | | 67 | TC | 141.0 | 141.0 | 141.4 | 132.8 | 132.8 | 137.3 | 124.3 | 124.3 | 133.0 | 115.5 | 115.5 | 128.5 | 106.1 | 106.1 | 123.8 |
| | | | SHC | 88.5 | 115.0 | 141.4 | 84.5 | 110.9 | 137.3 | 80.3 | 106.6 | 133.0 | 76.0 | 102.2 | 128.5 | 71.5 | 97.7 | 123.8 |
| | | 72 | TC | 155.6 | 155.6 | 155.6 | 146.9 | 146.9 | 146.9 | 137.7 | 137.7 | 137.7 | 128.3 | 128.3 | 128.3 | 118.3 | 118.3 | 118.3 |
| | | | SHC | 62.0 | 88.5 | 114.9 | 58.0 | 84.4 | 110.7 | 53.8 | 80.2 | 106.5 | 49.6 | 75.9 | 102.2 | 45.2 | 71.4 | 97.7 |
| | | 76 | TC | — | 168.1 | 168.1 | — | 158.9 | 158.9 | — | 149.3 | 149.3 | — | 139.1 | 139.1 | — | 128.5 | 128.5 |
| | | | SHC | — | 66.7 | 92.4 | — | 62.6 | 88.3 | — | 58.5 | 84.1 | — | 54.1 | 79.7 | — | 49.7 | 75.2 |

LEGEND

— — Do Not Operate
**cfm** — Cubic Feet Per Minute (Supply Air)
**EAT (db)** — Entering Air Temperature (dry bulb)
**EAT (wb)** — Entering Air Temperature (wet bulb)
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

NOTE: See minimum-maximum airflow ratings on page 8.

# Performance data (cont)

## 48/50GC*N20 — Unit with Humidi-MiZer® System in Subcooling Mode — Cooling Capacities

| TEMP (F) AIR ENTERING CONDENSER (Edb) | | AIR ENTERING EVAPORATOR — SCFM/BF (80°F db) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 5250/0.07 | | | 7000 /0.09 | | | 8750/0.12 | | |
| | | Air Entering Evaporator — Ewb (F) | | | | | | | | |
| | | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 |
| 75 | TC | 241.0 | 216.5 | 193.9 | 251.0 | 231.2 | 208.2 | 266.0 | 240.6 | 217.7 |
| | SHC | 106.3 | 131.5 | 156.2 | 129.1 | 156.1 | 188.8 | 136.8 | 178.4 | 217.7 |
| | kW | 11.7 | 11.4 | 11.1 | 11.9 | 11.6 | 11.3 | 12.1 | 11.7 | 11.4 |
| 85 | TC | 225.9 | 202.0 | 180.3 | 235.1 | 215.7 | 193.6 | 248.9 | 224.4 | 202.8 |
| | SHC | 92.3 | 117.9 | 143.4 | 114.4 | 141.6 | 175.1 | 120.8 | 163.3 | 202.8 |
| | kW | 12.9 | 12.6 | 12.3 | 13.1 | 12.8 | 12.5 | 13.3 | 12.9 | 12.6 |
| 95 | TC | 210.2 | 187.2 | 166.4 | 217.8 | 199.8 | 178.8 | 231.2 | 207.8 | 187.5 |
| | SHC | 77.8 | 104.1 | 130.3 | 98.2 | 126.8 | 161.2 | 104.4 | 147.8 | 187.5 |
| | kW | 14.3 | 13.9 | 13.6 | 14.4 | 14.1 | 13.8 | 14.6 | 14.3 | 13.9 |
| 105 | TC | 193.9 | 171.9 | 152.1 | 205.6 | 183.5 | 163.5 | 213.2 | 190.8 | 171.8 |
| | SHC | 62.8 | 89.9 | 116.9 | 75.5 | 111.6 | 146.8 | 87.6 | 132.0 | 171.8 |
| | kW | 15.8 | 15.4 | 15.1 | 16.0 | 15.6 | 15.3 | 16.1 | 15.8 | 15.5 |
| 115 | TC | 177.1 | 156.3 | 137.4 | 187.1 | 166.7 | 147.7 | 194.6 | 172.8 | 155.6 |
| | SHC | 47.4 | 75.4 | 103.2 | 58.4 | 95.9 | 132.1 | 70.3 | 115.0 | 155.6 |
| | kW | 10.2 | 17.1 | 16.8 | 17.6 | 17.3 | 17.0 | 17.8 | 17.4 | 17.1 |
| 125 | TC | 159.8 | 140.1 | 122.2 | 169.5 | 149.5 | 131.5 | 175.0 | 154.8 | 138.7 |
| | SHC | 31.4 | 60.3 | 89.0 | 42.0 | 79.9 | 117.0 | 51.9 | 98.3 | 138.7 |
| | kW | 19.3 | 18.9 | 18.6 | 19.5 | 19.1 | 18.8 | 19.6 | 19.2 | 18.9 |

## 48/50GC*N20 — Unit with Humidi-MiZer System in Hot Gas Reheat Mode — Cooling Capacities

| TEMP (F) AIR ENTERING CONDENSER (Edb) | | AIR ENTERING EVAPORATOR — Ewb (F) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 75 Dry Bulb 62.5 Wet Bulb (50% Relative) | | | 75 Dry Bulb 64 Wet Bulb (56% Relative) | | | 75 Dry Bulb 65.3 Wet Bulb (60% Relative) | | |
| | | Air Entering Evaporator — cfm | | | | | | | | |
| | | 5250 | 7000 | 8750 | 5250 | 7000 | 8750 | 5250 | 7000 | 8750 |
| 80 | TC | 75.2 | 78.1 | 78.9 | 79.4 | 82.2 | 83.2 | 83.8 | 86.2 | 87.1 |
| | SHC | 8.8 | 0.6 | 0.0 | 9.3 | 0.6 | 0.0 | 9.8 | 0.6 | 0.0 |
| | kW | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 12.0 | 11.7 | 11.7 |
| 75 | TC | 79.5 | 82.6 | 83.6 | 83.7 | 86.9 | 89.3 | 87.6 | 90.8 | 91.7 |
| | SHC | 13.1 | 4.7 | -2.0 | 13.8 | 5.0 | -2.1 | 14.4 | 5.2 | -2.2 |
| | kW | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.6 | 11.7 | 11.7 |
| 70 | TC | 83.9 | 87.1 | 88.2 | 88.0 | 91.3 | 92.4 | 92.0 | 95.2 | 96.3 |
| | SHC | 17.4 | 8.8 | 1.9 | 18.2 | 9.2 | 2.0 | 19.1 | 9.6 | 2.1 |
| | kW | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.6 | 11.6 | 11.7 |
| 60 | TC | 92.5 | 96.0 | 97.4 | 96.7 | 100.3 | 101.7 | 100.7 | 104.2 | 105.6 |
| | SHC | 25.9 | 17.2 | 9.9 | 27.0 | 18.0 | 10.4 | 28.2 | 18.7 | 10.8 |
| | kW | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.6 | 11.6 | 11.7 |
| 50 | TC | 100.6 | 104.5 | 106.1 | 104.9 | 108.9 | 110.5 | 109.0 | 112.9 | 114.5 |
| | SHC | 33.9 | 25.3 | 17.8 | 35.4 | 26.4 | 18.5 | 36.8 | 27.3 | 19.2 |
| | kW | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.6 | 11.6 | 11.7 |
| 40 | TC | 108.6 | 112.9 | 114.6 | 113.0 | 117.3 | 119.0 | 117.0 | 121.3 | 123.1 |
| | SHC | 41.9 | 33.3 | 25.5 | 43.6 | 34.6 | 26.5 | 45.1 | 35.8 | 27.4 |
| | kW | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.6 | 11.6 | 11.7 |

LEGEND

**Edb** — Entering Dry Bulb
**Ewb** — Entering Wet Bulb
**kW** — Compressor Power Input
**SCFM/BF** — Standard Cubic Feet per Minute/Bypass Factor
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

# Performance data (cont)

## 48/50GC**24 Two Stage Cooling Capacities

| 48/50GC**24 | | | | AMBIENT TEMPERATURE (F) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 | | | 95 | | | 105 | | | 115 | | | 125 | | |
| | | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 6000 cfm | EAT (wb) | 58 | TC | 209.5 | 209.5 | 224.9 | 192.4 | 192.4 | 220.3 | 178.8 | 178.8 | 205.6 | 164.4 | 164.4 | 190.0 | 149.1 | 149.1 | 173.3 |
| | | | SHC | 172.1 | 198.5 | 224.9 | 164.5 | 192.4 | 220.3 | 152.0 | 178.8 | 205.6 | 138.9 | 164.4 | 190.0 | 124.8 | 149.1 | 173.3 |
| | | 62 | TC | 220.6 | 220.6 | 220.6 | 204.9 | 204.9 | 209.7 | 188.5 | 188.5 | 199.2 | 171.0 | 171.0 | 188.2 | 152.4 | 152.4 | 176.5 |
| | | | SHC | 157.9 | 189.0 | 220.0 | 147.6 | 178.7 | 209.7 | 137.2 | 168.2 | 199.2 | 126.3 | 157.2 | 188.2 | 114.8 | 145.7 | 176.5 |
| | | 67 | TC | 246.6 | 246.6 | 246.6 | 229.8 | 229.8 | 229.8 | 212.2 | 212.2 | 212.2 | 193.6 | 193.6 | 193.6 | 173.8 | 173.8 | 173.8 |
| | | | SHC | 129.5 | 160.7 | 191.9 | 119.2 | 150.4 | 181.6 | 108.7 | 139.9 | 171.1 | 97.9 | 129.0 | 160.2 | 86.7 | 117.8 | 149.0 |
| | | 72 | TC | 275.1 | 275.1 | 275.1 | 257.1 | 257.1 | 257.1 | 238.3 | 238.3 | 238.3 | 218.5 | 218.5 | 218.5 | 197.4 | 197.4 | 197.4 |
| | | | SHC | 100.6 | 131.6 | 162.7 | 90.3 | 121.3 | 152.3 | 79.7 | 110.8 | 141.8 | 68.9 | 99.9 | 131.0 | 57.7 | 88.7 | 119.8 |
| | | 76 | TC | — | 299.4 | 299.4 | — | 280.4 | 280.4 | — | 260.5 | 260.5 | — | 239.6 | 239.6 | — | 217.4 | 217.4 |
| | | | SHC | — | 107.8 | 136.8 | — | 97.5 | 127.0 | — | 86.9 | 116.8 | — | 76.1 | 106.2 | — | 65.0 | 95.2 |
| 7000 cfm | EAT (wb) | 58 | TC | 219.7 | 219.7 | 250.2 | 205.9 | 205.9 | 235.3 | 191.4 | 191.4 | 219.6 | 176.2 | 176.2 | 203.1 | 159.9 | 159.9 | 185.3 |
| | | | SHC | 189.2 | 219.7 | 250.2 | 176.5 | 205.9 | 235.3 | 163.3 | 191.4 | 219.6 | 149.3 | 176.2 | 203.1 | 134.5 | 159.9 | 185.3 |
| | | 62 | TC | 229.4 | 229.4 | 244.1 | 212.9 | 212.9 | 233.3 | 203.7 | 203.7 | 203.7 | 178.0 | 178.0 | 210.2 | 163.8 | 163.8 | 182.8 |
| | | | SHC | 172.6 | 208.3 | 244.1 | 162.0 | 197.7 | 233.3 | 141.1 | 170.1 | 199.1 | 139.7 | 175.0 | 210.2 | 121.0 | 151.9 | 182.8 |
| | | 67 | TC | 255.7 | 255.7 | 255.7 | 238.0 | 238.0 | 238.0 | 219.6 | 219.6 | 219.6 | 200.3 | 200.3 | 200.3 | 179.6 | 179.6 | 179.6 |
| | | | SHC | 139.1 | 175.1 | 211.1 | 128.6 | 164.6 | 200.6 | 117.9 | 153.9 | 189.8 | 106.9 | 142.8 | 178.7 | 95.5 | 131.4 | 167.3 |
| | | 72 | TC | 284.5 | 284.5 | 284.5 | 265.6 | 265.6 | 265.6 | 245.9 | 245.9 | 245.9 | 225.3 | 225.3 | 225.3 | 203.3 | 203.3 | 203.3 |
| | | | SHC | 105.0 | 140.8 | 176.6 | 94.4 | 130.3 | 166.1 | 83.7 | 119.5 | 155.3 | 72.7 | 108.5 | 144.3 | 61.2 | 97.1 | 132.9 |
| | | 76 | TC | — | 309.1 | 309.1 | — | 289.1 | 289.1 | — | 268.4 | 268.4 | — | 246.6 | 246.6 | — | 223.5 | 223.5 |
| | | | SHC | — | 112.7 | 147.1 | — | 102.2 | 136.8 | — | 91.4 | 126.1 | — | 80.4 | 115.3 | — | 69.0 | 104.0 |
| 8000 cfm | EAT (wb) | 58 | TC | 231.7 | 231.7 | 263.5 | 217.2 | 217.2 | 247.8 | 202.1 | 202.1 | 231.4 | 186.0 | 186.0 | 214.0 | 168.9 | 168.9 | 195.3 |
| | | | SHC | 199.9 | 231.7 | 263.5 | 186.5 | 217.2 | 247.8 | 172.7 | 202.1 | 231.4 | 158.1 | 186.0 | 214.0 | 142.5 | 168.9 | 195.3 |
| | | 62 | TC | 236.4 | 236.4 | 266.3 | 219.6 | 219.6 | 254.9 | 207.3 | 207.3 | 225.7 | 190.8 | 190.8 | 208.6 | 169.2 | 169.2 | 204.4 |
| | | | SHC | 186.0 | 226.2 | 266.3 | 175.1 | 215.0 | 254.9 | 155.8 | 190.8 | 225.7 | 141.9 | 175.2 | 208.6 | 133.9 | 169.2 | 204.4 |
| | | 67 | TC | 262.6 | 262.6 | 262.6 | 244.3 | 244.3 | 244.3 | 225.3 | 225.3 | 225.3 | 205.3 | 205.3 | 205.3 | 184.2 | 184.2 | 184.7 |
| | | | SHC | 148.0 | 188.6 | 229.2 | 137.3 | 177.9 | 218.5 | 126.5 | 167.1 | 207.6 | 115.3 | 155.9 | 196.4 | 103.8 | 144.3 | 184.7 |
| | | 72 | TC | 291.7 | 291.7 | 291.7 | 272.1 | 272.1 | 272.1 | 251.8 | 251.8 | 251.8 | 230.4 | 230.4 | 230.4 | 207.7 | 207.7 | 207.7 |
| | | | SHC | 108.6 | 149.0 | 189.5 | 97.9 | 138.4 | 178.8 | 87.0 | 127.5 | 167.9 | 75.8 | 116.3 | 156.8 | 64.2 | 104.7 | 145.2 |
| | | 76 | TC | — | 316.4 | 316.4 | — | 295.8 | 295.8 | — | 274.3 | 274.3 | — | 251.9 | 251.9 | — | 228.1 | 228.1 |
| | | | SHC | — | 116.7 | 155.9 | — | 106.0 | 145.3 | — | 95.1 | 134.5 | — | 84.0 | 123.5 | — | 72.4 | 112.1 |
| 9000 cfm | EAT (wb) | 58 | TC | 241.9 | 241.9 | 274.9 | 226.9 | 226.9 | 258.6 | 211.1 | 211.1 | 241.4 | 194.3 | 194.3 | 223.2 | 176.5 | 176.5 | 203.8 |
| | | | SHC | 209.0 | 241.9 | 274.9 | 195.2 | 226.9 | 258.6 | 180.7 | 211.1 | 241.4 | 165.5 | 194.3 | 223.2 | 149.3 | 176.5 | 203.8 |
| | | 62 | TC | 247.5 | 247.5 | 268.8 | 232.5 | 232.5 | 250.0 | 215.8 | 215.8 | 235.4 | 194.6 | 194.6 | 233.1 | 176.8 | 176.8 | 213.1 |
| | | | SHC | 190.1 | 229.4 | 268.8 | 175.6 | 212.8 | 250.0 | 163.0 | 199.2 | 235.4 | 156.0 | 194.6 | 233.1 | 140.4 | 176.8 | 213.1 |
| | | 67 | TC | 268.2 | 268.2 | 268.2 | 249.4 | 249.4 | 249.4 | 229.9 | 229.9 | 229.9 | 209.5 | 209.5 | 213.3 | 187.8 | 187.8 | 201.5 |
| | | | SHC | 156.3 | 201.4 | 246.6 | 145.5 | 190.7 | 235.8 | 134.6 | 179.7 | 224.7 | 123.4 | 168.3 | 213.3 | 111.8 | 156.7 | 201.5 |
| | | 72 | TC | 297.3 | 297.3 | 297.3 | 277.1 | 277.1 | 277.1 | 256.2 | 256.2 | 256.2 | 234.5 | 234.5 | 234.5 | 211.4 | 211.4 | 211.4 |
| | | | SHC | 111.6 | 156.7 | 201.7 | 100.8 | 145.9 | 190.9 | 89.8 | 134.8 | 179.9 | 78.5 | 123.6 | 168.6 | 66.9 | 111.9 | 157.0 |
| | | 76 | TC | — | 322.3 | 322.3 | — | 301.1 | 301.1 | — | 279.1 | 279.1 | — | 256.1 | 256.1 | — | 231.7 | 231.7 |
| | | | SHC | — | 120.1 | 163.9 | — | 109.3 | 153.1 | — | 98.3 | 142.2 | — | 87.0 | 131.1 | — | 75.3 | 119.5 |
| 10000 cfm | EAT (wb) | 58 | TC | 250.7 | 250.7 | 284.6 | 235.1 | 235.1 | 267.7 | 218.7 | 218.7 | 249.9 | 201.4 | 201.4 | 231.1 | 183.0 | 183.0 | 210.9 |
| | | | SHC | 216.8 | 250.7 | 284.6 | 202.5 | 235.1 | 267.7 | 187.6 | 218.7 | 249.9 | 171.8 | 201.4 | 231.1 | 155.1 | 183.0 | 210.9 |
| | | 62 | TC | 254.9 | 254.9 | 282.7 | 240.3 | 240.3 | 259.4 | 219.0 | 219.0 | 260.6 | 201.7 | 201.7 | 241.2 | 183.2 | 183.2 | 220.5 |
| | | | SHC | 199.2 | 240.9 | 282.7 | 182.4 | 220.9 | 259.4 | 177.4 | 219.0 | 260.6 | 162.1 | 201.7 | 241.2 | 145.9 | 183.2 | 220.5 |
| | | 67 | TC | 272.7 | 272.7 | 272.7 | 253.6 | 253.6 | 253.6 | 233.7 | 233.7 | 241.2 | 212.9 | 212.9 | 229.8 | 190.7 | 190.7 | 217.8 |
| | | | SHC | 164.2 | 213.8 | 263.4 | 153.4 | 202.9 | 252.4 | 142.3 | 191.8 | 241.2 | 131.1 | 180.5 | 229.8 | 119.5 | 168.7 | 217.8 |
| | | 72 | TC | 301.8 | 301.8 | 301.8 | 281.3 | 281.3 | 281.3 | 260.1 | 260.1 | 260.1 | 237.8 | 237.8 | 237.8 | 214.3 | 214.3 | 214.3 |
| | | | SHC | 114.2 | 163.7 | 213.2 | 103.3 | 152.8 | 202.4 | 92.2 | 141.8 | 191.3 | 80.9 | 130.5 | 180.0 | 69.2 | 118.8 | 168.3 |
| | | 76 | TC | — | 327.1 | 327.1 | — | 305.4 | 305.4 | — | 282.9 | 282.9 | — | 259.5 | 259.5 | — | 234.7 | 234.7 |
| | | | SHC | — | 122.9 | 171.2 | — | 112.0 | 160.3 | — | 100.8 | 149.3 | — | 89.4 | 138.0 | — | 77.6 | 126.3 |

LEGEND

**—** — Do Not Operate
**cfm** — Cubic Feet Per Minute (Supply Air)
**EAT (db)** — Entering Air Temperature (dry bulb)
**EAT (wb)** — Entering Air Temperature (wet bulb)
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

NOTE: See minimum-maximum airflow ratings on page 8.

# Performance data (cont)

## 48/50GC**24 Single Stage Cooling Capacities

| 48/50GC**24 | | | | AMBIENT TEMPERATURE (F) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 | | | 95 | | | 105 | | | 115 | | | 125 | | |
| | | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 3600 cfm | EAT (wb) | 58 | TC | 117.5 | 117.5 | 135.2 | 107.9 | 107.9 | 125.0 | 97.9 | 97.9 | 114.3 | 87.3 | 87.3 | 103.1 | 76.3 | 76.3 | 91.2 |
| | | | SHC | 99.8 | 117.5 | 135.2 | 90.8 | 107.9 | 125.0 | 81.4 | 97.9 | 114.3 | 71.6 | 87.3 | 103.1 | 61.4 | 76.3 | 91.2 |
| | | 62 | TC | 127.2 | 127.2 | 127.5 | 115.8 | 115.8 | 119.3 | 103.8 | 103.8 | 111.0 | 91.3 | 91.3 | 102.4 | 78.2 | 78.2 | 93.5 |
| | | | SHC | 89.1 | 108.3 | 127.5 | 81.0 | 100.2 | 119.3 | 72.7 | 91.8 | 111.0 | 64.2 | 83.3 | 102.4 | 55.4 | 74.5 | 93.5 |
| | | 67 | TC | 144.6 | 144.6 | 144.6 | 132.5 | 132.5 | 132.5 | 119.9 | 119.9 | 119.9 | 106.6 | 106.6 | 106.6 | 92.7 | 92.7 | 92.7 |
| | | | SHC | 72.9 | 92.1 | 111.3 | 64.8 | 84.0 | 103.1 | 56.5 | 75.6 | 94.8 | 47.9 | 67.1 | 86.3 | 39.2 | 58.4 | 77.5 |
| | | 72 | TC | 163.5 | 163.5 | 163.5 | 150.7 | 150.7 | 150.7 | 137.4 | 137.4 | 137.4 | 123.4 | 123.4 | 123.4 | 108.6 | 108.6 | 108.6 |
| | | | SHC | 56.4 | 75.6 | 94.7 | 48.3 | 67.4 | 86.6 | 39.9 | 59.1 | 78.3 | 31.4 | 50.6 | 69.7 | 22.7 | 41.8 | 61.0 |
| | | 76 | TC | — | 179.8 | 179.8 | — | 166.4 | 166.4 | — | 152.4 | 152.4 | — | 137.7 | 137.7 | — | 122.2 | 122.2 |
| | | | SHC | — | 62.1 | 80.4 | — | 53.9 | 72.5 | — | 45.6 | 64.2 | — | 37.1 | 55.8 | — | 28.3 | 47.1 |
| 4200 cfm | EAT (wb) | 58 | TC | 127.2 | 127.2 | 145.9 | 117.0 | 117.0 | 135.0 | 106.3 | 106.3 | 123.7 | 95.2 | 95.2 | 111.8 | 83.5 | 83.5 | 99.2 |
| | | | SHC | 108.4 | 127.2 | 145.9 | 98.9 | 117.0 | 135.0 | 89.0 | 106.3 | 123.7 | 78.7 | 95.2 | 111.8 | 67.8 | 83.5 | 99.2 |
| | | 62 | TC | 133.0 | 133.0 | 143.1 | 121.1 | 121.1 | 134.7 | 108.7 | 108.7 | 125.9 | 95.9 | 95.9 | 116.7 | 83.7 | 83.7 | 104.6 |
| | | | SHC | 98.7 | 120.9 | 143.1 | 90.4 | 112.6 | 134.7 | 81.9 | 103.9 | 125.9 | 73.0 | 94.8 | 116.7 | 62.7 | 83.7 | 104.6 |
| | | 67 | TC | 150.6 | 150.6 | 150.6 | 138.0 | 138.0 | 138.0 | 124.8 | 124.8 | 124.8 | 111.0 | 111.0 | 111.0 | 96.5 | 96.5 | 96.5 |
| | | | SHC | 79.4 | 101.7 | 123.9 | 71.1 | 93.3 | 115.6 | 62.6 | 84.8 | 107.1 | 53.9 | 76.1 | 98.3 | 45.0 | 67.2 | 89.4 |
| | | 72 | TC | 169.8 | 169.8 | 169.8 | 156.5 | 156.5 | 156.5 | 142.5 | 142.5 | 142.5 | 127.9 | 127.9 | 127.9 | 112.5 | 112.5 | 112.5 |
| | | | SHC | 59.8 | 82.0 | 104.2 | 51.5 | 73.6 | 95.8 | 42.9 | 65.1 | 87.3 | 34.2 | 56.4 | 78.6 | 25.3 | 47.5 | 69.7 |
| | | 76 | TC | — | 186.4 | 186.4 | — | 172.4 | 172.4 | — | 157.8 | 157.8 | — | 142.5 | 142.5 | — | 126.4 | 126.4 |
| | | | SHC | — | 65.9 | 87.5 | — | 57.6 | 79.2 | — | 49.0 | 70.7 | — | 40.3 | 62.1 | — | 31.4 | 53.2 |
| 4800 cfm | EAT (wb) | 58 | TC | 135.3 | 135.3 | 154.9 | 124.6 | 124.6 | 143.5 | 113.5 | 113.5 | 131.6 | 101.8 | 101.8 | 119.1 | 89.6 | 89.6 | 105.9 |
| | | | SHC | 115.7 | 135.3 | 154.9 | 105.7 | 124.6 | 143.5 | 95.4 | 113.5 | 131.6 | 84.6 | 101.8 | 119.1 | 73.3 | 89.6 | 105.9 |
| | | 62 | TC | 137.7 | 137.7 | 157.7 | 125.6 | 125.6 | 148.7 | 113.7 | 113.7 | 137.8 | 102.0 | 102.0 | 125.0 | 89.7 | 89.7 | 111.5 |
| | | | SHC | 107.7 | 132.7 | 157.7 | 99.1 | 123.9 | 148.7 | 89.5 | 113.6 | 137.8 | 79.0 | 102.0 | 125.0 | 68.0 | 89.7 | 111.5 |
| | | 67 | TC | 155.3 | 155.3 | 155.3 | 142.3 | 142.3 | 142.3 | 128.7 | 128.7 | 128.7 | 114.4 | 114.4 | 114.4 | 99.4 | 99.4 | 100.7 |
| | | | SHC | 85.5 | 110.7 | 135.9 | 77.0 | 102.3 | 127.5 | 68.4 | 93.6 | 118.8 | 59.5 | 84.7 | 109.9 | 50.5 | 75.6 | 100.7 |
| | | 72 | TC | 174.7 | 174.7 | 174.7 | 160.8 | 160.8 | 160.8 | 146.4 | 146.4 | 146.4 | 131.4 | 131.4 | 131.4 | 115.6 | 115.6 | 115.6 |
| | | | SHC | 62.7 | 87.8 | 113.0 | 54.2 | 79.4 | 104.5 | 45.5 | 70.7 | 95.9 | 36.7 | 61.9 | 87.0 | 27.6 | 52.8 | 78.0 |
| | | 76 | TC | — | 191.4 | 191.4 | — | 177.0 | 177.0 | — | 161.9 | 161.9 | — | 146.1 | 146.1 | — | 129.5 | 129.5 |
| | | | SHC | — | 69.2 | 93.8 | — | 60.8 | 85.4 | — | 52.1 | 76.8 | — | 43.3 | 68.0 | — | 34.2 | 59.0 |
| 5400 cfm | EAT (wb) | 58 | TC | 142.2 | 142.2 | 162.6 | 131.1 | 131.1 | 150.7 | 119.6 | 119.6 | 138.3 | 107.5 | 107.5 | 125.3 | 94.7 | 94.7 | 111.6 |
| | | | SHC | 121.9 | 142.2 | 162.6 | 111.6 | 131.1 | 150.7 | 100.8 | 119.6 | 138.3 | 89.7 | 107.5 | 125.3 | 77.9 | 94.7 | 111.6 |
| | | 62 | TC | 142.5 | 142.5 | 169.6 | 131.4 | 131.4 | 157.4 | 119.8 | 119.8 | 144.8 | 107.7 | 107.7 | 131.5 | 94.9 | 94.9 | 117.4 |
| | | | SHC | 115.3 | 142.4 | 169.6 | 105.2 | 131.3 | 157.4 | 94.7 | 119.8 | 144.8 | 83.8 | 107.7 | 131.5 | 72.4 | 94.9 | 117.4 |
| | | 67 | TC | 159.1 | 159.1 | 159.1 | 145.7 | 145.7 | 145.7 | 131.7 | 131.7 | 131.7 | 117.1 | 117.1 | 121.1 | 101.8 | 101.8 | 111.8 |
| | | | SHC | 91.2 | 119.4 | 147.5 | 82.6 | 110.8 | 138.9 | 73.9 | 102.0 | 130.1 | 64.9 | 93.0 | 121.1 | 55.8 | 83.8 | 111.8 |
| | | 72 | TC | 178.5 | 178.5 | 178.5 | 164.4 | 164.4 | 164.4 | 149.6 | 149.6 | 149.6 | 134.2 | 134.2 | 134.2 | 117.9 | 117.9 | 117.9 |
| | | | SHC | 65.2 | 93.4 | 121.5 | 56.6 | 84.8 | 112.9 | 47.9 | 76.0 | 104.2 | 39.0 | 67.1 | 95.2 | 29.8 | 57.9 | 86.0 |
| | | 76 | TC | — | 195.5 | 195.5 | — | 180.7 | 180.7 | — | 165.2 | 165.2 | — | 149.0 | 149.0 | — | 132.0 | 132.0 |
| | | | SHC | — | 72.2 | 99.8 | — | 63.6 | 91.2 | — | 54.9 | 82.5 | — | 45.9 | 73.6 | — | 36.7 | 64.4 |
| 6000 cfm | EAT (wb) | 58 | TC | 148.3 | 148.3 | 169.2 | 136.8 | 136.8 | 157.0 | 124.8 | 124.8 | 144.1 | 112.4 | 112.4 | 130.7 | 99.1 | 99.1 | 116.4 |
| | | | SHC | 127.3 | 148.3 | 169.2 | 116.6 | 136.8 | 157.0 | 105.5 | 124.8 | 144.1 | 94.0 | 112.4 | 130.7 | 81.8 | 99.1 | 116.4 |
| | | 62 | TC | 148.5 | 148.5 | 176.5 | 137.0 | 137.0 | 163.9 | 125.0 | 125.0 | 150.8 | 112.5 | 112.5 | 137.0 | 99.3 | 99.3 | 122.4 |
| | | | SHC | 120.5 | 148.5 | 176.5 | 110.1 | 137.0 | 163.9 | 99.2 | 125.0 | 150.8 | 88.0 | 112.5 | 137.0 | 76.2 | 99.3 | 122.4 |
| | | 67 | TC | 162.2 | 162.2 | 162.2 | 148.5 | 148.5 | 150.0 | 134.2 | 134.2 | 141.1 | 119.3 | 119.3 | 132.0 | 103.7 | 103.7 | 122.5 |
| | | | SHC | 96.6 | 127.7 | 158.7 | 88.0 | 119.0 | 150.0 | 79.2 | 110.1 | 141.1 | 70.1 | 101.0 | 132.0 | 60.9 | 91.7 | 122.5 |
| | | 72 | TC | 181.7 | 181.7 | 181.7 | 167.3 | 167.3 | 167.3 | 152.2 | 152.2 | 152.2 | 136.5 | 136.5 | 136.5 | 119.9 | 119.9 | 119.9 |
| | | | SHC | 67.6 | 98.6 | 129.7 | 58.9 | 90.0 | 121.0 | 50.0 | 81.1 | 112.2 | 41.0 | 72.1 | 103.1 | 31.7 | 62.8 | 93.8 |
| | | 76 | TC | — | 198.8 | 198.8 | — | 183.7 | 183.7 | — | 167.9 | 167.9 | — | 151.4 | 151.4 | — | 134.0 | 134.0 |
| | | | SHC | — | 74.9 | 105.4 | — | 66.2 | 96.7 | — | 57.4 | 87.9 | — | 48.3 | 78.9 | — | 39.0 | 69.6 |

LEGEND

**—** — Do Not Operate
**cfm** — Cubic Feet Per Minute (Supply Air)
**EAT (db)** — Entering Air Temperature (dry bulb)
**EAT (wb)** — Entering Air Temperature (wet bulb)
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

NOTE: See minimum-maximum airflow ratings on page 8.

# Performance data (cont)

## 48/50GC*N24 — Unit with Humidi-MiZer® System in Subcooling Mode — Cooling Capacities

| TEMP (F) AIR ENTERING CONDENSER (Edb) | | AIR ENTERING EVAPORATOR — SCFM/BF (80°F db) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 6000/0.08 | | | 8000 /0.10 | | | 10000/0.13 | | |
| | | Air Entering Evaporator — Ewb (F) | | | | | | | | |
| | | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 |
| 75 | TC | 282.9 | 253.9 | 227.7 | 301.2 | 271.9 | 245.1 | 313.2 | 283.3 | 256.6 |
| | SHC | 121.7 | 150.4 | 179.0 | 139.6 | 178.2 | 216.1 | 155.7 | 203.3 | 248.5 |
| | kW | 14.7 | 14.2 | 13.8 | 15.0 | 14.5 | 14.1 | 15.2 | 14.8 | 14.3 |
| 85 | TC | 264.7 | 237.0 | 211.9 | 281.9 | 253.8 | 228.2 | 292.7 | 264.3 | 239.1 |
| | SHC | 104.5 | 134.3 | 163.6 | 121.4 | 161.0 | 200.0 | 136.3 | 185.3 | 231.6 |
| | kW | 16.2 | 15.7 | 15.4 | 16.5 | 16.0 | 15.6 | 16.7 | 16.2 | 15.8 |
| 95 | TC | 246.2 | 219.8 | 196.1 | 262.1 | 235.4 | 211.1 | 272.0 | 245.0 | 221.2 |
| | SHC | 87.0 | 117.8 | 148.7 | 102.6 | 143.4 | 183.6 | 116.5 | 166.9 | 214.5 |
| | kW | 17.8 | 17.3 | 16.9 | 18.1 | 17.6 | 17.2 | 18.3 | 17.8 | 17.4 |
| 105 | TC | 227.7 | 202.0 | 179.5 | 241.7 | 216.3 | 193.3 | 250.8 | 225.2 | 202.6 |
| | SHC | 69.5 | 101.1 | 133.0 | 83.3 | 125.4 | 166.8 | 96.3 | 148.1 | 196.8 |
| | kW | 19.7 | 19.2 | 18.7 | 20.0 | 19.5 | 19.0 | 20.2 | 19.7 | 19.2 |
| 115 | TC | 207.3 | 183.5 | 162.1 | 220.5 | 196.4 | 174.8 | 228.7 | 204.6 | 183.4 |
| | SHC | 50.5 | 83.7 | 116.8 | 63.3 | 106.8 | 149.6 | 75.5 | 128.7 | 178.6 |
| | kW | 21.7 | 21.2 | 20.7 | 22.0 | 21.5 | 21.0 | 22.2 | 21.7 | 21.2 |
| 125 | TC | 186.5 | 164.1 | 144.0 | 198.4 | 175.7 | 155.3 | 205.7 | 183.0 | 163.1 |
| | SHC | 31.3 | 65.8 | 100.2 | 42.7 | 87.6 | 131.8 | 53.9 | 108.7 | 159.8 |
| | kW | 23.8 | 23.3 | 22.9 | 24.1 | 23.6 | 23.2 | 24.3 | 23.8 | 23.4 |

## 48/50GC*N24 — Unit with Humidi-MiZer System in Hot Gas Reheat Mode — Cooling Capacities

| TEMP (F) AIR ENTERING CONDENSER (Edb) | | AIR ENTERING EVAPORATOR — Ewb (F) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 75 Dry Bulb 62.5 Wet Bulb (50% Relative) | | | 75 Dry Bulb 64 Wet Bulb (56% Relative) | | | 75 Dry Bulb 65.3 Wet Bulb (60% Relative) | | |
| | | Air Entering Evaporator — cfm | | | | | | | | |
| | | 6000 | 8000 | 10000 | 6000 | 8000 | 10000 | 6000 | 8000 | 10000 |
| 80 | TC | 113.7 | 119.0 | 121.0 | 120.4 | 126.0 | 128.1 | 126.5 | 132.3 | 134.7 |
| | SHC | 32.7 | 24.1 | 16.7 | 34.7 | 25.5 | 17.7 | 36.4 | 26.8 | 18.6 |
| | kW | 13.5 | 13.6 | 13.6 | 13.5 | 13.6 | 13.6 | 13.6 | 13.6 | 13.7 |
| 75 | TC | 118.5 | 123.9 | 126.1 | 125.4 | 131.2 | 133.5 | 131.3 | 137.2 | 139.7 |
| | SHC | 37.4 | 28.8 | 21.0 | 39.6 | 30.5 | 22.3 | 41.5 | 31.9 | 23.3 |
| | kW | 13.5 | 13.6 | 13.6 | 13.5 | 13.6 | 13.6 | 13.6 | 13.6 | 13.7 |
| 70 | TC | 123.2 | 128.9 | 131.2 | 129.9 | 135.8 | 138.2 | 136.0 | 142.0 | 144.5 |
| | SHC | 42.0 | 33.2 | 25.4 | 44.2 | 35.0 | 26.8 | 46.3 | 36.6 | 28.0 |
| | kW | 13.5 | 13.6 | 13.6 | 13.5 | 13.6 | 13.6 | 13.6 | 13.6 | 13.7 |
| 60 | TC | 131.7 | 137.8 | 140.3 | 138.4 | 144.7 | 147.2 | 144.7 | 151.1 | 153.8 |
| | SHC | 50.3 | 41.6 | 33.6 | 52.9 | 43.6 | 35.3 | 55.3 | 45.6 | 36.9 |
| | kW | 13.5 | 13.6 | 13.6 | 13.5 | 13.6 | 13.6 | 13.6 | 13.6 | 13.7 |
| 50 | TC | 139.9 | 146.0 | 148.5 | 146.5 | 153.0 | 155.7 | 153.0 | 159.6 | 162.6 |
| | SHC | 59.1 | 50.3 | 42.2 | 61.9 | 52.7 | 44.3 | 64.6 | 55.0 | 46.2 |
| | kW | 13.5 | 13.6 | 13.6 | 13.5 | 13.6 | 13.6 | 13.6 | 13.6 | 13.7 |
| 40 | TC | 147.5 | 154.0 | 156.6 | 154.5 | 161.2 | 164.1 | 160.9 | 167.7 | 170.9 |
| | SHC | 66.7 | 58.1 | 49.8 | 69.9 | 60.8 | 52.2 | 72.8 | 63.3 | 54.4 |
| | kW | 13.5 | 13.6 | 13.6 | 13.5 | 13.6 | 13.6 | 13.6 | 13.6 | 13.7 |

LEGEND

**Edb** — Entering Dry Bulb
**Ewb** — Entering Wet Bulb
**kW** — Compressor Power Input
**SCFM/BF** — Standard Cubic Feet per Minute/Bypass Factor
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

# Performance data (cont)

## 48/50GC**28 Two Stage Cooling Capacities

| 48/50GC**28 | | | | AMBIENT TEMPERATURE (F) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 | | | 95 | | | 105 | | | 115 | | | 125 | | |
| | | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 7500 cfm | EAT (wb) | 58 | TC | 265.9 | 265.9 | 300.4 | 255.4 | 255.4 | 289.1 | 243.3 | 243.3 | 275.6 | 230.6 | 230.6 | 261.6 | 216.1 | 216.1 | 245.4 |
| | | | SHC | 231.0 | 265.7 | 300.4 | 221.8 | 255.4 | 289.1 | 210.9 | 243.3 | 275.6 | 199.6 | 230.6 | 261.6 | 186.7 | 216.1 | 245.4 |
| | | 62 | TC | 285.2 | 285.2 | 285.2 | 271.1 | 271.1 | 272.0 | 256.1 | 256.1 | 263.6 | 239.4 | 239.4 | 254.9 | 221.4 | 221.4 | 245.1 |
| | | | SHC | 206.3 | 243.0 | 279.8 | 198.6 | 235.3 | 272.0 | 190.4 | 227.0 | 263.6 | 181.8 | 218.3 | 254.9 | 172.4 | 208.8 | 245.1 |
| | | 67 | TC | 313.8 | 313.8 | 313.8 | 298.3 | 298.3 | 298.3 | 282.6 | 282.6 | 282.6 | 264.6 | 264.6 | 264.6 | 244.4 | 244.4 | 244.4 |
| | | | SHC | 168.9 | 205.7 | 242.5 | 161.0 | 197.8 | 234.6 | 153.2 | 190.1 | 226.9 | 144.6 | 181.4 | 218.1 | 135.1 | 171.8 | 208.5 |
| | | 72 | TC | 345.3 | 345.3 | 345.3 | 327.2 | 327.2 | 327.2 | 311.2 | 311.2 | 311.2 | 291.7 | 291.7 | 291.7 | 270.4 | 270.4 | 270.4 |
| | | | SHC | 130.9 | 167.5 | 204.2 | 122.6 | 159.3 | 196.0 | 115.1 | 151.8 | 188.4 | 106.4 | 143.0 | 179.6 | 97.2 | 133.7 | 170.3 |
| | | 76 | TC | — | 371.9 | 371.9 | — | 353.7 | 353.7 | — | 334.3 | 334.3 | — | 313.3 | 313.3 | — | 281.8 | 281.8 |
| | | | SHC | — | 136.5 | 170.9 | — | 128.6 | 163.7 | — | 120.3 | 155.8 | — | 111.6 | 147.3 | — | 96.6 | 133.2 |
| 8750 cfm | EAT (wb) | 58 | TC | 281.7 | 281.7 | 318.4 | 269.7 | 269.7 | 305.1 | 256.7 | 256.7 | 290.6 | 242.6 | 242.6 | 275.0 | 227.2 | 227.2 | 257.9 |
| | | | SHC | 245.0 | 281.7 | 318.4 | 234.3 | 269.7 | 305.1 | 222.7 | 256.7 | 290.6 | 210.2 | 242.6 | 275.0 | 196.5 | 227.2 | 257.9 |
| | | 62 | TC | 294.8 | 294.8 | 306.3 | 279.9 | 279.9 | 298.0 | 255.7 | 255.7 | 269.6 | 246.9 | 246.9 | 279.9 | 227.9 | 227.9 | 269.0 |
| | | | SHC | 222.4 | 264.4 | 306.3 | 214.3 | 256.2 | 298.0 | 184.2 | 226.9 | 269.6 | 196.9 | 238.4 | 279.9 | 186.8 | 227.9 | 269.0 |
| | | 67 | TC | 323.6 | 323.6 | 323.6 | 307.6 | 307.6 | 307.6 | 290.6 | 290.6 | 290.6 | 271.0 | 271.0 | 271.0 | 250.3 | 250.3 | 250.3 |
| | | | SHC | 179.6 | 221.8 | 264.0 | 171.7 | 213.9 | 256.1 | 163.6 | 205.7 | 247.9 | 154.5 | 196.6 | 238.7 | 145.2 | 187.2 | 229.3 |
| | | 72 | TC | 345.4 | 345.4 | 345.4 | 338.0 | 338.0 | 338.0 | 319.4 | 319.4 | 319.4 | 298.0 | 298.0 | 298.0 | 276.0 | 276.0 | 276.0 |
| | | | SHC | 124.9 | 167.6 | 210.3 | 128.1 | 170.0 | 211.9 | 119.8 | 161.7 | 203.5 | 110.6 | 152.5 | 194.5 | 101.4 | 143.2 | 185.1 |
| | | 76 | TC | — | 382.6 | 382.6 | — | 363.1 | 363.1 | — | 344.2 | 344.2 | — | 322.1 | 322.1 | — | 297.7 | 297.7 |
| | | | SHC | — | 142.4 | 182.9 | — | 134.2 | 175.1 | — | 126.2 | 167.1 | — | 117.3 | 158.2 | — | 107.7 | 148.7 |
| 10000 cfm | EAT (wb) | 58 | TC | 294.3 | 294.3 | 332.5 | 281.5 | 281.5 | 318.3 | 268.3 | 268.3 | 303.7 | 253.3 | 253.3 | 287.1 | 236.6 | 236.6 | 268.4 |
| | | | SHC | 256.1 | 294.3 | 332.5 | 244.7 | 281.5 | 318.3 | 232.9 | 268.3 | 303.7 | 219.6 | 253.3 | 287.1 | 204.7 | 236.6 | 268.4 |
| | | 62 | TC | 302.4 | 302.4 | 331.1 | 286.8 | 286.8 | 321.9 | 271.3 | 271.3 | 312.1 | 257.6 | 257.6 | 280.1 | 236.8 | 236.8 | 279.3 |
| | | | SHC | 237.3 | 284.2 | 331.1 | 228.7 | 275.3 | 321.9 | 219.8 | 265.9 | 312.1 | 199.3 | 239.7 | 280.1 | 194.3 | 236.8 | 279.3 |
| | | 67 | TC | 331.5 | 331.5 | 331.5 | 314.2 | 314.2 | 314.2 | 295.9 | 295.9 | 295.9 | 276.2 | 276.2 | 276.2 | 255.4 | 255.4 | 255.4 |
| | | | SHC | 189.7 | 237.1 | 284.5 | 181.5 | 228.8 | 276.2 | 172.9 | 220.2 | 267.5 | 163.9 | 211.1 | 258.3 | 154.6 | 201.8 | 248.9 |
| | | 72 | TC | 363.4 | 363.4 | 363.4 | 344.9 | 344.9 | 344.9 | 318.5 | 318.5 | 318.5 | 304.9 | 304.9 | 304.9 | 281.9 | 281.9 | 281.9 |
| | | | SHC | 140.5 | 187.6 | 234.6 | 132.3 | 179.3 | 226.3 | 113.5 | 161.4 | 209.3 | 115.3 | 162.3 | 209.3 | 105.8 | 152.7 | 199.7 |
| | | 76 | TC | — | 390.4 | 390.4 | — | 370.6 | 370.6 | — | 349.4 | 349.4 | — | 326.7 | 326.7 | — | 297.4 | 297.4 |
| | | | SHC | — | 147.6 | 193.3 | — | 139.4 | 185.2 | — | 130.8 | 176.8 | — | 121.9 | 167.9 | — | 107.6 | 154.6 |
| 11250 cfm | EAT (wb) | 58 | TC | 304.8 | 304.8 | 344.3 | 291.4 | 291.4 | 329.5 | 276.9 | 276.9 | 313.3 | 262.1 | 262.1 | 296.9 | 245.1 | 245.1 | 278.0 |
| | | | SHC | 265.4 | 304.8 | 344.3 | 253.4 | 291.4 | 329.5 | 240.5 | 276.9 | 313.3 | 227.4 | 262.1 | 296.9 | 212.3 | 245.1 | 278.0 |
| | | 62 | TC | 312.1 | 312.1 | 335.3 | 292.5 | 292.5 | 343.4 | 296.9 | 296.9 | 296.9 | 262.2 | 262.2 | 308.6 | 244.9 | 244.9 | 288.7 |
| | | | SHC | 241.7 | 288.5 | 335.3 | 241.6 | 292.5 | 343.4 | 139.8 | 201.7 | 263.6 | 215.8 | 262.2 | 308.6 | 201.1 | 244.9 | 288.7 |
| | | 67 | TC | 337.5 | 337.5 | 337.5 | 319.8 | 319.8 | 319.8 | 302.3 | 302.3 | 302.3 | 276.6 | 276.6 | 276.6 | 255.5 | 255.5 | 255.5 |
| | | | SHC | 198.9 | 251.2 | 303.6 | 190.6 | 242.9 | 295.2 | 182.5 | 234.7 | 286.9 | 158.0 | 211.0 | 264.0 | 148.6 | 201.5 | 254.4 |
| | | 72 | TC | 369.7 | 369.7 | 369.7 | 350.8 | 350.8 | 350.8 | 330.1 | 330.1 | 330.1 | 309.2 | 309.2 | 309.2 | 285.6 | 285.6 | 285.6 |
| | | | SHC | 144.7 | 196.8 | 248.9 | 136.5 | 188.6 | 240.7 | 127.8 | 179.8 | 231.9 | 119.2 | 171.2 | 223.3 | 109.6 | 161.5 | 213.5 |
| | | 76 | TC | — | 397.1 | 397.1 | — | 376.5 | 376.5 | — | 354.9 | 354.9 | — | 332.7 | 332.7 | — | 306.4 | 306.4 |
| | | | SHC | — | 152.5 | 203.2 | — | 144.2 | 195.0 | — | 135.7 | 186.6 | — | 127.0 | 178.0 | — | 117.1 | 168.1 |
| 12500 cfm | EAT (wb) | 58 | TC | 314.4 | 314.4 | 355.1 | 300.0 | 300.0 | 339.1 | 285.0 | 285.0 | 322.4 | 268.6 | 268.6 | 304.1 | 244.2 | 244.2 | 280.6 |
| | | | SHC | 273.8 | 314.4 | 355.1 | 261.0 | 300.0 | 339.1 | 247.6 | 285.0 | 322.4 | 233.0 | 268.6 | 304.1 | 207.8 | 244.2 | 280.6 |
| | | 62 | TC | 314.7 | 314.7 | 368.9 | 317.0 | 317.0 | 317.0 | 305.0 | 305.0 | 305.0 | 269.8 | 269.8 | 317.4 | 244.7 | 244.7 | 293.3 |
| | | | SHC | 260.4 | 314.7 | 368.9 | 125.4 | 194.2 | 262.9 | 132.3 | 201.1 | 269.8 | 222.1 | 269.8 | 317.4 | 196.0 | 244.7 | 293.3 |
| | | 67 | TC | 342.6 | 342.6 | 342.6 | 324.4 | 324.4 | 324.4 | 306.0 | 306.0 | 306.0 | 281.1 | 281.1 | 282.9 | 262.8 | 262.8 | 285.2 |
| | | | SHC | 207.8 | 265.0 | 322.1 | 199.5 | 256.6 | 313.6 | 191.1 | 248.2 | 305.2 | 167.2 | 225.0 | 282.9 | 172.0 | 228.6 | 285.2 |
| | | 72 | TC | 374.6 | 374.6 | 374.6 | 355.1 | 355.1 | 355.1 | 334.1 | 334.1 | 334.1 | 313.1 | 313.1 | 313.1 | 310.2 | 310.2 | 310.2 |
| | | | SHC | 148.5 | 205.5 | 262.5 | 140.2 | 197.2 | 254.2 | 131.5 | 188.5 | 245.4 | 122.9 | 179.7 | 236.6 | 65.9 | 121.7 | 177.5 |
| | | 76 | TC | — | 402.4 | 402.4 | — | 381.2 | 381.2 | — | 358.9 | 358.9 | — | 336.5 | 336.5 | — | 306.4 | 306.4 |
| | | | SHC | — | 157.2 | 212.7 | — | 148.9 | 204.5 | — | 140.1 | 195.9 | — | 131.5 | 187.3 | — | 117.1 | 173.8 |

LEGEND

**—** — Do Not Operate
**cfm** — Cubic Feet Per Minute (Supply Air)
**EAT (db)** — Entering Air Temperature (dry bulb)
**EAT (wb)** — Entering Air Temperature (wet bulb)
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

NOTE: See minimum-maximum airflow ratings on page 8.

# Performance data (cont)

## 48/50GC**28 Single Stage Cooling Capacities

| 48/50GC**28 | | | | AMBIENT TEMPERATURE (F) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 | | | 95 | | | 105 | | | 115 | | | 125 | | |
| | | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | | EAT (db) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 4500 cfm | EAT (wb) | 58 | TC | 159.2 | 159.2 | 181.2 | 150.2 | 150.2 | 171.4 | 140.6 | 140.6 | 160.9 | 130.6 | 130.6 | 150.0 | 119.7 | 119.7 | 138.1 |
| | | | SHC | 137.3 | 159.2 | 181.2 | 129.1 | 150.2 | 171.4 | 120.3 | 140.6 | 160.9 | 111.2 | 130.6 | 150.0 | 101.3 | 119.7 | 138.1 |
| | | 62 | TC | 169.8 | 169.8 | 171.1 | 158.5 | 158.5 | 164.1 | 146.8 | 146.8 | 156.9 | 134.5 | 134.5 | 149.4 | 121.4 | 121.4 | 141.5 |
| | | | SHC | 123.3 | 147.2 | 171.1 | 116.3 | 140.2 | 164.1 | 109.2 | 133.0 | 156.9 | 101.8 | 125.6 | 149.4 | 94.1 | 117.8 | 141.5 |
| | | 67 | TC | 189.5 | 189.5 | 189.5 | 177.2 | 177.2 | 177.2 | 164.1 | 164.1 | 164.1 | 151.5 | 151.5 | 151.5 | 137.3 | 137.3 | 137.3 |
| | | | SHC | 101.1 | 125.1 | 149.0 | 94.1 | 118.0 | 141.9 | 86.7 | 110.7 | 134.6 | 79.6 | 103.5 | 127.3 | 72.0 | 95.9 | 119.8 |
| | | 72 | TC | 211.5 | 211.5 | 211.5 | 198.3 | 198.3 | 198.3 | 184.3 | 184.3 | 184.3 | 170.2 | 170.2 | 170.2 | 154.7 | 154.7 | 154.7 |
| | | | SHC | 78.9 | 102.8 | 126.7 | 71.7 | 95.6 | 119.5 | 64.4 | 88.3 | 112.2 | 57.1 | 80.9 | 104.8 | 49.4 | 73.4 | 97.4 |
| | | 76 | TC | — | 230.4 | 230.4 | — | 215.8 | 215.8 | — | 201.4 | 201.4 | — | 186.3 | 186.3 | — | 169.9 | 169.9 |
| | | | SHC | — | 84.5 | 107.4 | — | 77.1 | 100.3 | — | 70.0 | 93.2 | — | 62.6 | 85.9 | — | 54.9 | 78.3 |
| 5250 cfm | EAT (wb) | 58 | TC | 170.2 | 170.2 | 193.4 | 160.3 | 160.3 | 182.6 | 150.2 | 150.2 | 171.6 | 139.3 | 139.3 | 159.7 | 127.7 | 127.7 | 147.0 |
| | | | SHC | 147.0 | 170.2 | 193.4 | 138.0 | 160.3 | 182.6 | 128.8 | 150.2 | 171.6 | 118.9 | 139.3 | 159.7 | 108.4 | 127.7 | 147.0 |
| | | 62 | TC | 176.5 | 176.5 | 189.9 | 164.2 | 164.2 | 182.5 | 152.2 | 152.2 | 175.0 | 148.9 | 148.9 | 148.9 | 127.9 | 127.9 | 153.6 |
| | | | SHC | 134.7 | 162.3 | 189.9 | 127.4 | 155.0 | 182.5 | 120.1 | 147.5 | 175.0 | 96.7 | 114.0 | 131.3 | 102.1 | 127.9 | 153.6 |
| | | 67 | TC | 196.1 | 196.1 | 196.1 | 183.6 | 183.6 | 183.6 | 170.2 | 170.2 | 170.2 | 156.4 | 156.4 | 156.4 | 141.6 | 141.6 | 141.6 |
| | | | SHC | 108.8 | 136.5 | 164.2 | 101.7 | 129.4 | 157.1 | 94.3 | 122.0 | 149.7 | 86.8 | 114.5 | 142.2 | 79.0 | 106.7 | 134.3 |
| | | 72 | TC | 218.8 | 218.8 | 218.8 | 204.7 | 204.7 | 204.7 | 190.3 | 190.3 | 190.3 | 175.3 | 175.3 | 175.3 | 159.2 | 159.2 | 159.2 |
| | | | SHC | 82.7 | 110.4 | 138.2 | 75.4 | 103.1 | 130.7 | 68.0 | 95.7 | 123.4 | 60.5 | 88.1 | 115.6 | 52.6 | 80.3 | 107.9 |
| | | 76 | TC | — | 237.7 | 237.7 | — | 223.1 | 223.1 | — | 207.9 | 207.9 | — | 191.6 | 191.6 | — | — | — |
| | | | SHC | — | 88.8 | 115.7 | — | 81.6 | 108.6 | — | 74.2 | 101.3 | — | 66.6 | 93.7 | — | — | — |
| 6000 cfm | EAT (wb) | 58 | TC | 178.5 | 178.5 | 202.6 | 168.8 | 168.8 | 192.1 | 158.0 | 158.0 | 180.2 | 146.6 | 146.6 | 167.8 | 134.5 | 134.5 | 154.5 |
| | | | SHC | 154.4 | 178.5 | 202.6 | 145.5 | 168.8 | 192.1 | 135.7 | 158.0 | 180.2 | 125.4 | 146.6 | 167.8 | 114.4 | 134.5 | 154.5 |
| | | 62 | TC | 181.7 | 181.7 | 207.4 | 169.2 | 169.2 | 199.2 | 157.9 | 157.9 | 187.7 | 146.7 | 146.7 | 175.1 | 134.7 | 134.7 | 161.5 |
| | | | SHC | 145.2 | 176.3 | 207.4 | 137.5 | 168.3 | 199.2 | 128.2 | 157.9 | 187.7 | 118.4 | 146.7 | 175.1 | 107.9 | 134.7 | 161.5 |
| | | 67 | TC | 201.4 | 201.4 | 201.4 | 188.3 | 188.3 | 188.3 | 174.4 | 174.4 | 174.4 | 159.7 | 159.7 | 159.7 | 144.9 | 144.9 | 148.4 |
| | | | SHC | 116.0 | 147.4 | 178.9 | 108.7 | 140.2 | 171.6 | 101.3 | 132.7 | 164.1 | 93.5 | 124.8 | 156.2 | 85.7 | 117.0 | 148.4 |
| | | 72 | TC | 224.5 | 224.5 | 224.5 | 209.8 | 209.8 | 209.8 | 194.7 | 194.7 | 194.7 | 179.1 | 179.1 | 179.1 | 162.6 | 162.6 | 162.6 |
| | | | SHC | 86.2 | 117.6 | 149.1 | 78.7 | 110.0 | 141.4 | 71.2 | 102.5 | 133.9 | 63.6 | 95.0 | 126.4 | 55.6 | 86.9 | 118.2 |
| | | 76 | TC | — | 244.3 | 244.3 | — | 228.3 | 228.3 | — | 212.2 | 212.2 | — | — | — | — | — | — |
| | | | SHC | — | 93.1 | 123.7 | — | 85.5 | 116.2 | — | 78.0 | 108.7 | — | — | — | — | — | — |
| 6750 cfm | EAT (wb) | 58 | TC | 186.9 | 186.9 | 211.9 | 176.1 | 176.1 | 200.2 | 164.4 | 164.4 | 187.4 | 152.8 | 152.8 | 174.7 | 140.1 | 140.1 | 160.8 |
| | | | SHC | 161.8 | 186.9 | 211.9 | 152.0 | 176.1 | 200.2 | 141.4 | 164.4 | 187.4 | 130.9 | 152.8 | 174.7 | 119.4 | 140.1 | 160.8 |
| | | 62 | TC | 187.2 | 187.2 | 220.8 | 176.4 | 176.4 | 208.6 | 164.7 | 164.7 | 195.4 | 153.1 | 153.1 | 182.4 | 140.3 | 140.3 | 167.9 |
| | | | SHC | 153.7 | 187.2 | 220.8 | 144.2 | 176.4 | 208.6 | 133.9 | 164.7 | 195.4 | 123.7 | 153.1 | 182.4 | 112.7 | 140.3 | 167.9 |
| | | 67 | TC | 205.9 | 205.9 | 205.9 | 191.8 | 191.8 | 191.8 | 177.9 | 177.9 | 177.9 | 163.0 | 163.0 | 170.0 | 147.5 | 147.5 | 161.9 |
| | | | SHC | 122.8 | 157.9 | 192.9 | 115.3 | 150.4 | 185.5 | 107.9 | 142.9 | 177.9 | 100.1 | 135.0 | 170.0 | 92.1 | 127.0 | 161.9 |
| | | 72 | TC | 229.1 | 229.1 | 229.1 | 213.8 | 213.8 | 213.8 | 198.2 | 198.2 | 198.2 | 182.4 | 182.4 | 182.4 | 165.4 | 165.4 | 165.4 |
| | | | SHC | 89.4 | 124.4 | 159.4 | 81.8 | 116.8 | 151.8 | 74.1 | 109.1 | 144.1 | 66.4 | 101.2 | 136.1 | 58.4 | 93.3 | 128.3 |
| | | 76 | TC | — | 248.8 | 248.8 | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | SHC | — | 96.8 | 131.1 | — | — | — | — | — | — | — | — | — | — | — | — |
| 7500 cfm | EAT (wb) | 58 | TC | 193.5 | 193.5 | 219.4 | 182.6 | 182.6 | 207.4 | 170.5 | 170.5 | 194.2 | 158.2 | 158.2 | 180.8 | 145.0 | 145.0 | 166.3 |
| | | | SHC | 167.7 | 193.5 | 219.4 | 157.7 | 182.6 | 207.4 | 146.8 | 170.5 | 194.2 | 135.7 | 158.2 | 180.8 | 123.7 | 145.0 | 166.3 |
| | | 62 | TC | 193.7 | 193.7 | 228.3 | 182.7 | 182.7 | 215.9 | 170.7 | 170.7 | 202.4 | 158.4 | 158.4 | 188.5 | 145.1 | 145.1 | 173.5 |
| | | | SHC | 159.2 | 193.7 | 228.3 | 149.5 | 182.7 | 215.9 | 139.0 | 170.7 | 202.4 | 128.2 | 158.4 | 188.5 | 116.7 | 145.1 | 173.5 |
| | | 67 | TC | 209.3 | 209.3 | 209.3 | 195.7 | 195.7 | 199.1 | 181.0 | 181.0 | 191.3 | 165.5 | 165.5 | 183.3 | 149.5 | 149.5 | 174.7 |
| | | | SHC | 129.5 | 168.3 | 207.1 | 122.0 | 160.5 | 199.1 | 114.3 | 152.8 | 191.3 | 106.4 | 144.9 | 183.3 | 98.1 | 136.4 | 174.7 |
| | | 72 | TC | 232.4 | 232.4 | 232.4 | 216.6 | 216.6 | 216.6 | 201.0 | 201.0 | 201.0 | 184.7 | 184.7 | 184.7 | 167.4 | 167.4 | 167.4 |
| | | | SHC | 92.1 | 130.7 | 169.3 | 84.4 | 123.1 | 161.7 | 76.9 | 115.5 | 154.1 | 69.1 | 107.6 | 146.2 | 60.9 | 99.4 | 137.9 |
| | | 76 | TC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | SHC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

LEGEND

— — Do Not Operate
**cfm** — Cubic Feet Per Minute (Supply Air)
**EAT (db)** — Entering Air Temperature (dry bulb)
**EAT (wb)** — Entering Air Temperature (wet bulb)
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

NOTE: See minimum-maximum airflow ratings on page 8.

# Performance data (cont)

## 48/50GC*N28 — Unit with Humidi-MiZer® System in Subcooling Mode — Cooling Capacities

| TEMP (F) AIR ENTERING CONDENSER (Edb) | | AIR ENTERING EVAPORATOR — SCFM/BF (80°F db) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 7500/0.11 | | | 10000 /0.15 | | | 12500/0.18 | | |
| | | Air Entering Evaporator — Ewb (F) | | | | | | | | |
| | | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 |
| 75 | TC | 342.3 | 304.9 | 271.1 | 359.5 | 328.0 | 293.7 | 381.7 | 343.4 | 308.8 |
| | SHC | 144.7 | 177.2 | 209.6 | 160.2 | 210.4 | 253.9 | 185.5 | 240.3 | 293.0 |
| | kW | 18.8 | 18.2 | 17.6 | 18.9 | 18.6 | 18.0 | 19.5 | 18.8 | 18.3 |
| 85 | TC | 317.0 | 281.1 | 248.7 | 338.3 | 302.6 | 269.7 | 353.3 | 316.6 | 283.6 |
| | SHC | 120.6 | 154.2 | 188.0 | 140.2 | 186.0 | 230.7 | 158.3 | 214.5 | 268.7 |
| | kW | 20.6 | 20.0 | 19.4 | 20.9 | 20.4 | 19.8 | 21.3 | 20.6 | 20.1 |
| 95 | TC | 291.2 | 256.7 | 225.7 | 311.2 | 276.5 | 245.0 | 324.1 | 289.4 | 257.9 |
| | SHC | 96.1 | 130.8 | 165.7 | 114.4 | 161.0 | 207.1 | 130.4 | 188.5 | 244.0 |
| | kW | 22.6 | 22.0 | 21.4 | 23.0 | 22.4 | 21.8 | 23.3 | 22.6 | 22.1 |
| 105 | TC | 264.3 | 231.5 | 202.0 | 282.3 | 249.5 | 219.6 | 294.3 | 261.2 | 231.3 |
| | SHC | 70.8 | 106.9 | 143.1 | 87.0 | 135.4 | 182.9 | 101.9 | 161.6 | 218.7 |
| | kW | 24.9 | 24.3 | 23.7 | 25.2 | 24.6 | 24.1 | 25.5 | 24.9 | 24.3 |
| 115 | TC | 238.2 | 205.5 | 177.4 | 252.9 | 221.6 | 193.3 | 263.3 | 231.9 | 203.8 |
| | SHC | 46.4 | 82.4 | 119.9 | 59.4 | 109.0 | 158.2 | 72.5 | 134.0 | 192.7 |
| | kW | 27.5 | 26.8 | 26.2 | 27.8 | 27.2 | 26.6 | 28.0 | 27.4 | 26.9 |
| 125 | TC | 209.5 | 178.3 | 151.7 | 222.1 | 192.5 | 165.8 | 231.0 | 201.5 | 175.1 |
| | SHC | 19.9 | 57.0 | 96.0 | 30.6 | 81.8 | 132.6 | 42.0 | 105.4 | 165.8 |
| | kW | 30.2 | 29.5 | 29.0 | 30.5 | 29.9 | 29.3 | 30.7 | 30.1 | 29.6 |

## 48/50GC*N28 — Unit with Humidi-MiZer System in Hot Gas Reheat Mode — Cooling Capacities

| TEMP (F) AIR ENTERING CONDENSER (Edb) | | AIR ENTERING EVAPORATOR — Ewb (F) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 75 Dry Bulb 62.5 Wet Bulb (50% Relative) | | | 75 Dry Bulb 64 Wet Bulb (56% Relative) | | | 75 Dry Bulb 65.3 Wet Bulb (60% Relative) | | |
| | | Air Entering Evaporator — cfm | | | | | | | | |
| | | 7500 | 10000 | 12500 | 7500 | 10000 | 12500 | 7500 | 10000 | 12500 |
| 80 | TC | 128.9 | 133.0 | 134.2 | 136.9 | 141.1 | 141.4 | 141.9 | 149.1 | 148.7 |
| | SHC | 26.0 | 15.3 | 4.4 | 27.6 | 16.2 | 4.6 | 28.6 | 17.1 | 4.9 |
| | kW | 17.9 | 18.0 | 18.1 | 18.0 | 18.1 | 18.2 | 18.2 | 18.2 | 18.2 |
| 75 | TC | 135.9 | 141.0 | 141.0 | 143.3 | 149.0 | 149.0 | 150.3 | 155.8 | 156.6 |
| | SHC | 32.8 | 21.5 | 12.6 | 34.5 | 22.7 | 13.4 | 36.2 | 23.8 | 14.0 |
| | kW | 17.9 | 18.0 | 18.1 | 18.0 | 18.1 | 18.2 | 18.0 | 18.2 | 18.2 |
| 70 | TC | 142.6 | 148.2 | 148.3 | 150.4 | 156.0 | 156.5 | 157.4 | 163.3 | 164.2 |
| | SHC | 39.4 | 28.2 | 18.8 | 41.5 | 29.7 | 19.9 | 43.4 | 31.1 | 20.9 |
| | kW | 17.9 | 18.0 | 18.1 | 18.0 | 18.1 | 18.2 | 18.0 | 18.1 | 18.2 |
| 60 | TC | 156.4 | 162.0 | 162.7 | 164.0 | 170.1 | 171.0 | 171.0 | 177.7 | 178.6 |
| | SHC | 52.9 | 41.2 | 31.2 | 55.4 | 43.3 | 32.8 | 57.8 | 45.2 | 34.3 |
| | kW | 17.9 | 18.0 | 18.1 | 18.0 | 18.1 | 18.2 | 18.0 | 18.1 | 18.2 |
| 50 | TC | 169.2 | 175.8 | 176.6 | 177.0 | 183.8 | 185.2 | 184.5 | 191.2 | 192.8 |
| | SHC | 65.5 | 54.0 | 43.7 | 68.5 | 56.5 | 45.8 | 71.4 | 58.7 | 47.7 |
| | kW | 17.9 | 18.0 | 18.1 | 18.0 | 18.1 | 18.2 | 18.0 | 18.1 | 18.2 |
| 40 | TC | 182.1 | 188.9 | 190.2 | 190.0 | 197.0 | 198.6 | 197.2 | 204.5 | 206.1 |
| | SHC | 78.2 | 66.7 | 55.8 | 81.6 | 69.6 | 58.3 | 84.7 | 72.2 | 60.5 |
| | kW | 17.9 | 18.0 | 18.1 | 18.0 | 18.1 | 18.2 | 18.0 | 18.1 | 18.2 |

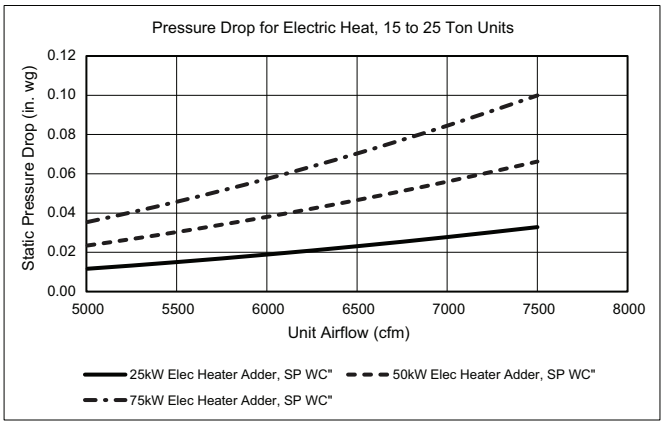
LEGEND

**Edb** — Entering Dry Bulb
**Ewb** — Entering Wet Bulb
**kW** — Compressor Power Input
**SCFM/BF** — Standard Cubic Feet per Minute/Bypass Factor
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross
**TC** — Total Capacity (1000 Btuh) Gross

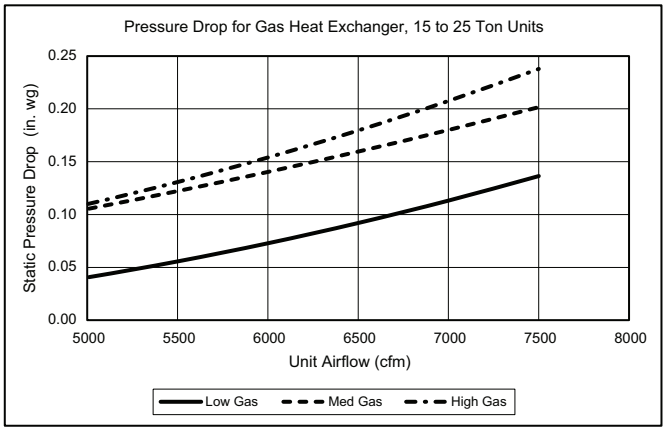
# Performance data (cont)

## Pressure Drop — Heating

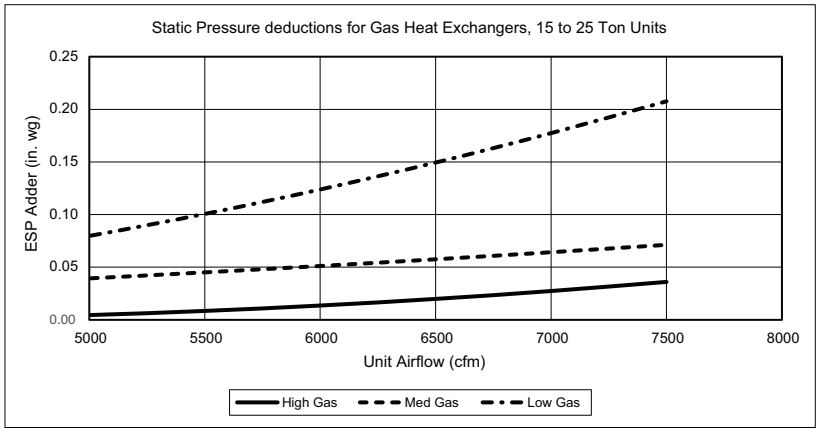
### 15 to 25 Ton Electric Heat Units




### 15 to 25 Ton Gas Heat Units



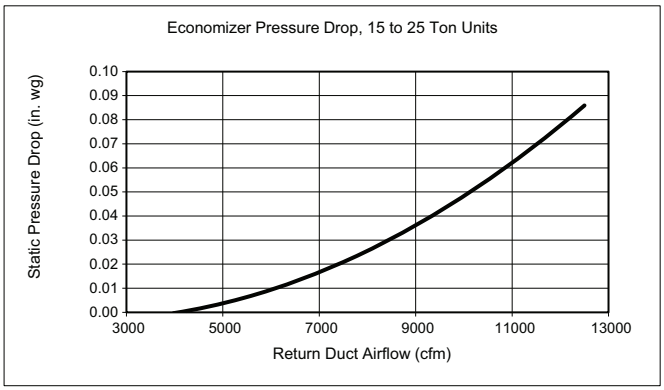

### Static Pressure 15 to 25 Ton Units



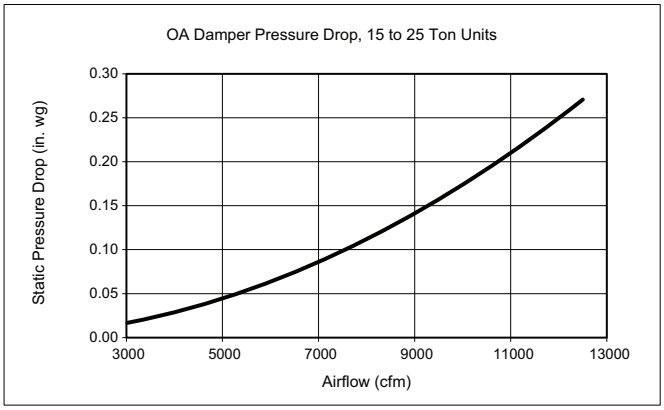
# Performance data (cont)

## Pressure Drops for Options and Accessories

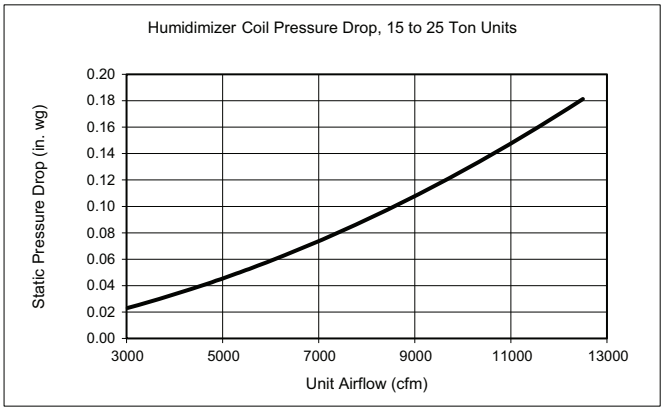
### Economizer Pressure Drop –15 to 25 Ton Units




### Outside Air Damper Pressure Drop –15 to 25 Ton Units




### Humidi-MiZer Coil Pressure Drop –15 to 25 Ton Units



## GENERAL FAN PERFORMANCE NOTES

1. Interpolation is permissible. Do not extrapolate.
2. External static pressure is the static pressure difference between the return duct and the supply duct plus the static pressure caused by any FIOPs or accessories.
3. Tabular data accounts for pressure loss due to clean filters, unit casing, wet coils, and highest gas heat exchanger (when gas heat unit).
4. Factory options and accessories may effect static pressure losses. Gas heat unit fan tables assume highest gas heat models; for fan selections with low or medium heat models, the user must deduct low and medium heat static pressures. Selection software is available, through your salesperson, to help you select the best motor/drive combination for your application.
5. The fan performance tables offer motor/drive recommendations. In cases when two motor/drive combinations would work, the lower horsepower option is recommended.
6. For information on the electrical properties of the fan motors, please see the Electrical information section of this book.
7. For more information on the performance limits of the fan motors, see the application data section of this book.
8. The EPACT (Energy Policy Act of 1992) regulates energy requirements for specific types of indoor fan motors. Motors regulated by EPACT include any general purpose, T-frame (three-digit, 143 and larger), single-speed, foot mounted, polyphase, squirrel cage induction motors of NEMA (National Electrical Manufacturers Association) design A and B, manufactured for use in the United States. Ranging from 1 to 200 Hp, these continuous-duty motors operate on 230 and 460 volt, 60 Hz power. If a motor does not fit into these specifications, the motor does not have to be replaced by an EPACT compliant energy-efficient motor. Variable-speed motors are exempt from EPACT compliance requirements.

# Fan data (cont)

## 48GCFM17 — 15 Ton Vertical Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 4500 | 977 | 0.70 | 1102 | 1.00 | 1213 | 1.34 | 1314 | 1.70 | 1408 | 2.09 |
| 4875 | 1037 | 0.84 | 1155 | 1.15 | 1263 | 1.51 | 1360 | 1.88 | 1451 | 2.29 |
| 5250 | 1099 | 1.00 | 1210 | 1.33 | 1313 | 1.70 | 1408 | 2.10 | 1496 | 2.51 |
| 5625 | 1162 | 1.18 | 1267 | 1.53 | 1366 | 1.92 | 1457 | 2.33 | 1543 | 2.76 |
| 6000 | 1225 | 1.38 | 1325 | 1.75 | 1419 | 2.15 | 1508 | 2.58 | 1591 | 3.03 |
| 6375 | 1290 | 1.61 | 1384 | 1.99 | 1474 | 2.41 | 1560 | 2.85 | 1641 | 3.32 |
| 6750 | 1355 | 1.86 | 1443 | 2.25 | 1530 | 2.68 | 1613 | 3.14 | 1692 | 3.62 |
| 7125 | 1421 | 2.13 | 1504 | 2.52 | 1588 | 2.97 | 1668 | 3.44 | 1744 | 3.94 |
| 7500 | 1488 | 2.42 | 1567 | 2.82 | 1646 | 3.27 | 1723 | 3.75 | 1797 | 4.26 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 4500 | 1496 | 2.51 | 1579 | 2.95 | 1658 | 3.41 | 1732 | 3.89 | 1803 | 4.39 |
| 4875 | 1537 | 2.72 | 1618 | 3.17 | 1695 | 3.65 | 1768 | 4.14 | 1838 | 4.65 |
| 5250 | 1579 | 2.96 | 1658 | 3.42 | 1733 | 3.91 | 1805 | 4.42 | 1875 | 4.95 |
| 5625 | 1623 | 3.22 | 1700 | 3.70 | 1774 | 4.20 | 1844 | 4.72 | 1912 | 5.26 |
| 6000 | 1670 | 3.51 | 1745 | 4.00 | 1816 | 4.51 | 1885 | 5.04 | 1952 | 5.60 |
| 6375 | 1717 | 3.80 | 1790 | 4.31 | 1860 | 4.83 | 1928 | 5.38 | 1993 | 5.95 |
| 6750 | 1766 | 4.12 | 1837 | 4.64 | 1906 | 5.18 | 1972 | 5.74 | 2035 | 6.30 |
| 7125 | 1817 | 4.45 | 1886 | 4.98 | 1953 | 5.53 | 2017 | 6.09 | — | — |
| 7500 | 1868 | 4.78 | 1936 | 5.33 | 2001 | 5.88 | — | — | — | — |

Std/Med Static 997-2000 rpm, 4.8 Max bhp (2.4 Max bhp per fan motor)

High Static 997-2200 rpm, 6.0 Max bhp (3.0 Max bhp per fan motor)

## 48GCFM17 – Standard/Medium Static — 15 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 977 | 4.7 | 1102 | 5.4 | 1213 | 6.0 | 1314 | 6.5 | 1408 | 7.0 |
| 4875 | 1037 | 5.0 | 1155 | 5.7 | 1263 | 6.2 | 1360 | 6.7 | 1451 | 7.2 |
| 5250 | 1099 | 5.4 | 1210 | 5.9 | 1313 | 6.5 | 1408 | 7.0 | 1496 | 7.4 |
| 5625 | 1162 | 5.7 | 1267 | 6.2 | 1366 | 6.7 | 1457 | 7.2 | 1543 | 7.6 |
| 6000 | 1225 | 6.0 | 1325 | 6.5 | 1419 | 7.0 | 1508 | 7.5 | 1591 | 7.9 |
| 6375 | 1290 | 6.3 | 1384 | 6.8 | 1474 | 7.3 | 1560 | 7.7 | 1641 | 8.2 |
| 6750 | 1355 | 6.7 | 1443 | 7.1 | 1530 | 7.6 | 1613 | 8.0 | 1692 | 8.4 |
| 7125 | 1421 | 7.0 | 1504 | 7.4 | 1588 | 7.9 | 1668 | 8.3 | 1744 | 8.7 |
| 7500 | 1488 | 7.4 | 1567 | 7.8 | 1646 | 8.2 | 1723 | 8.6 | 1797 | 9.0 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 1496 | 7.4 | 1579 | 7.8 | 1658 | 8.2 | 1732 | 8.6 | 1803 | 9.0 |
| 4875 | 1537 | 7.6 | 1618 | 8.0 | 1695 | 8.4 | 1768 | 8.8 | 1838 | 9.2 |
| 5250 | 1579 | 7.8 | 1658 | 8.2 | 1733 | 8.6 | 1805 | 9.0 | 1875 | 9.4 |
| 5625 | 1623 | 8.1 | 1700 | 8.5 | 1774 | 8.8 | 1844 | 9.2 | — | — |
| 6000 | 1670 | 8.3 | 1745 | 8.7 | 1816 | 9.1 | 1885 | 9.4 | — | — |
| 6375 | 1717 | 8.5 | 1790 | 8.9 | 1860 | 9.3 | — | — | — | — |
| 6750 | 1766 | 8.8 | 1837 | 9.2 | — | — | — | — | — | — |
| 7125 | 1817 | 9.1 | 1886 | 9.4 | — | — | — | — | — | — |
| 7500 | 1868 | 9.3 | — | — | — | — | — | — | — | — |

Std/Med Static 977-2000 rpm

# Fan data (cont)

## 48GCFM17 – High Static — 15 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 977 | 4.4 | 1102 | 4.9 | 1213 | 5.4 | 1314 | 5.9 | 1408 | 6.3 |
| 4875 | 1037 | 4.6 | 1155 | 5.2 | 1263 | 5.7 | 1360 | 6.1 | 1451 | 6.5 |
| 5250 | 1099 | 4.9 | 1210 | 5.4 | 1313 | 5.9 | 1408 | 6.3 | 1496 | 6.8 |
| 5625 | 1162 | 5.2 | 1267 | 5.7 | 1366 | 6.2 | 1457 | 6.6 | 1543 | 7.0 |
| 6000 | 1225 | 5.5 | 1325 | 6.0 | 1419 | 6.4 | 1508 | 6.8 | 1591 | 7.2 |
| 6375 | 1290 | 5.8 | 1384 | 6.2 | 1474 | 6.6 | 1560 | 7.0 | 1641 | 7.4 |
| 6750 | 1355 | 6.1 | 1443 | 6.5 | 1530 | 6.9 | 1613 | 7.3 | 1692 | 7.7 |
| 7125 | 1421 | 6.4 | 1504 | 6.8 | 1588 | 7.2 | 1668 | 7.5 | 1744 | 7.9 |
| 7500 | 1488 | 6.7 | 1567 | 7.1 | 1646 | 7.4 | 1723 | 7.8 | 1797 | 8.1 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 1496 | 6.8 | 1579 | 7.1 | 1658 | 7.5 | 1732 | 7.8 | 1803 | 8.2 |
| 4875 | 1537 | 6.9 | 1618 | 7.3 | 1695 | 7.7 | 1768 | 8.0 | 1838 | 8.3 |
| 5250 | 1579 | 7.1 | 1658 | 7.5 | 1733 | 7.8 | 1805 | 8.2 | 1875 | 8.5 |
| 5625 | 1623 | 7.3 | 1700 | 7.7 | 1774 | 8.0 | 1844 | 8.4 | 1912 | 8.7 |
| 6000 | 1670 | 7.6 | 1745 | 7.9 | 1816 | 8.2 | 1885 | 8.5 | 1952 | 8.9 |
| 6375 | 1717 | 7.8 | 1790 | 8.1 | 1860 | 8.4 | 1928 | 8.7 | 1993 | 9.0 |
| 6750 | 1766 | 8.0 | 1837 | 8.3 | 1906 | 8.6 | 1972 | 8.9 | 2035 | 9.2 |
| 7125 | 1817 | 8.2 | 1886 | 8.6 | 1953 | 8.9 | 2017 | 9.2 | — | — |
| 7500 | 1868 | 8.5 | 1936 | 8.8 | 2001 | 9.1 | — | — | — | — |

High Static 977-2200 rpm

# Fan data (cont)

## 48GCFM20 — 17.5 Ton Vertical Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 5250 | 1099 | 1.00 | 1210 | 1.33 | 1313 | 1.70 | 1408 | 2.10 | 1496 | 2.51 |
| 5690 | 1173 | 1.21 | 1277 | 1.57 | 1375 | 1.96 | 1466 | 2.37 | 1551 | 2.81 |
| 6125 | 1247 | 1.46 | 1344 | 1.83 | 1438 | 2.24 | 1525 | 2.67 | 1607 | 3.12 |
| 6565 | 1323 | 1.74 | 1414 | 2.12 | 1503 | 2.55 | 1587 | 3.00 | 1666 | 3.47 |
| 7000 | 1399 | 2.04 | 1484 | 2.43 | 1568 | 2.87 | 1649 | 3.34 | 1726 | 3.83 |
| 7440 | 1477 | 2.37 | 1557 | 2.78 | 1637 | 3.23 | 1714 | 3.70 | 1789 | 4.21 |
| 7875 | 1555 | 2.72 | 1629 | 3.13 | 1705 | 3.59 | 1779 | 4.07 | 1851 | 4.59 |
| 8315 | 1634 | 3.09 | 1704 | 3.50 | 1776 | 3.97 | 1847 | 4.46 | 1916 | 4.98 |
| 8750 | 1712 | 3.46 | 1778 | 3.88 | 1847 | 4.35 | 1915 | 4.84 | 1981 | 5.36 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 5250 | 1579 | 2.96 | 1658 | 3.42 | 1733 | 3.91 | 1805 | 4.42 | 1875 | 4.95 |
| 5690 | 1631 | 3.26 | 1708 | 3.75 | 1781 | 4.25 | 1851 | 4.77 | 1919 | 5.32 |
| 6125 | 1685 | 3.60 | 1759 | 4.09 | 1830 | 4.61 | 1899 | 5.15 | 1965 | 5.71 |
| 6565 | 1742 | 3.96 | 1814 | 4.48 | 1883 | 5.01 | 1949 | 5.55 | 2014 | 6.13 |
| 7000 | 1800 | 4.34 | 1870 | 4.87 | 1937 | 5.41 | 2002 | 5.97 | — | — |
| 7440 | 1860 | 4.73 | 1928 | 5.27 | 1993 | 5.82 | 2056 | 6.39 | — | — |
| 7875 | 1920 | 5.12 | 1986 | 5.67 | 2050 | 6.23 | — | — | — | — |
| 8315 | 1983 | 5.52 | 2047 | 6.07 | — | — | — | — | — | — |
| 8750 | 2046 | 5.91 | — | — | — | — | — | — | — | — |

Std/Med Static 1099-2000 rpm, 4.8 Max bhp (2.4 Max bhp per fan motor)

High Static 1099-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 48GCFM20 – Standard/Medium Static — 17.5 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1099 | 5.4 | 1210 | 5.9 | 1313 | 6.5 | 1408 | 7.0 | 1496 | 7.4 |
| 5690 | 1173 | 5.7 | 1277 | 6.3 | 1375 | 6.8 | 1466 | 7.3 | 1551 | 7.7 |
| 6125 | 1247 | 6.1 | 1344 | 6.6 | 1438 | 7.1 | 1525 | 7.6 | 1607 | 8.0 |
| 6565 | 1323 | 6.5 | 1414 | 7.0 | 1503 | 7.4 | 1587 | 7.9 | 1666 | 8.3 |
| 7000 | 1399 | 6.9 | 1484 | 7.3 | 1568 | 7.8 | 1649 | 8.2 | 1726 | 8.6 |
| 7440 | 1477 | 7.3 | 1557 | 7.7 | 1637 | 8.1 | 1714 | 8.5 | 1789 | 8.9 |
| 7875 | 1555 | 7.7 | 1629 | 8.1 | 1705 | 8.5 | 1779 | 8.9 | 1851 | 9.2 |
| 8315 | 1634 | 8.1 | 1704 | 8.5 | 1776 | 8.8 | 1847 | 9.2 | 1916 | 9.6 |
| 8750 | 1712 | 8.5 | 1778 | 8.9 | 1847 | 9.2 | 1915 | 9.6 | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1579 | 7.8 | 1658 | 8.2 | 1733 | 8.6 | 1805 | 9.0 | 1875 | 9.4 |
| 5690 | 1631 | 8.1 | 1708 | 8.5 | 1781 | 8.9 | 1851 | 9.2 | — | — |
| 6125 | 1685 | 8.4 | 1759 | 8.8 | 1830 | 9.1 | — | — | — | — |
| 6565 | 1742 | 8.7 | 1814 | 9.0 | 1883 | 9.4 | — | — | — | — |
| 7000 | 1800 | 9.0 | 1870 | 9.3 | — | — | — | — | — | — |
| 7440 | 1860 | 9.3 | — | — | — | — | — | — | — | — |
| 7875 | — | — | — | — | — | — | — | — | — | — |
| 8315 | — | — | — | — | — | — | — | — | — | — |
| 8750 | — | — | — | — | — | — | — | — | — | — |

Std/Med Static 1099-2000 rpm

# Fan data (cont)

## 48GCFM20 – High Static — 17.5 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1099 | 4.9 | 1210 | 5.4 | 1313 | 5.9 | 1408 | 6.3 | 1496 | 6.8 |
| 5690 | 1173 | 5.3 | 1277 | 5.7 | 1375 | 6.2 | 1466 | 6.6 | 1551 | 7.0 |
| 6125 | 1247 | 5.6 | 1344 | 6.0 | 1438 | 6.5 | 1525 | 6.9 | 1607 | 7.3 |
| 6565 | 1323 | 6.0 | 1414 | 6.4 | 1503 | 6.8 | 1587 | 7.2 | 1666 | 7.5 |
| 7000 | 1399 | 6.3 | 1484 | 6.7 | 1568 | 7.1 | 1649 | 7.5 | 1726 | 7.8 |
| 7440 | 1477 | 6.7 | 1557 | 7.0 | 1637 | 7.4 | 1714 | 7.8 | 1789 | 8.1 |
| 7875 | 1555 | 7.0 | 1629 | 7.4 | 1705 | 7.7 | 1779 | 8.1 | 1851 | 8.4 |
| 8315 | 1634 | 7.4 | 1704 | 7.7 | 1776 | 8.0 | 1847 | 8.4 | 1916 | 8.7 |
| 8750 | 1712 | 7.7 | 1778 | 8.1 | 1847 | 8.4 | 1915 | 8.7 | 1981 | 9.0 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1579 | 7.1 | 1658 | 7.5 | 1733 | 7.8 | 1805 | 8.2 | 1875 | 8.5 |
| 5690 | 1631 | 7.4 | 1708 | 7.7 | 1781 | 8.1 | 1851 | 8.4 | 1919 | 8.7 |
| 6125 | 1685 | 7.6 | 1759 | 8.0 | 1830 | 8.3 | 1899 | 8.6 | 1965 | 8.9 |
| 6565 | 1742 | 7.9 | 1814 | 8.2 | 1883 | 8.5 | 1949 | 8.8 | 2014 | 9.1 |
| 7000 | 1800 | 8.2 | 1870 | 8.5 | 1937 | 8.8 | 2002 | 9.1 | — | — |
| 7440 | 1860 | 8.4 | 1928 | 8.7 | 1993 | 9.0 | 2056 | 9.3 | — | — |
| 7875 | 1920 | 8.7 | 1986 | 9.0 | 2050 | 9.3 | — | — | — | — |
| 8315 | 1983 | 9.0 | 2047 | 9.3 | — | — | — | — | — | — |
| 8750 | 2046 | 9.3 | — | — | — | — | — | — | — | — |

High Static1099-2200 rpm

# Fan data (cont)

## 48GCFM24 — 20 Ton Vertical Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 6000 | 1107 | 1.02 | 1212 | 1.34 | 1313 | 1.70 | 1411 | 2.11 | 1504 | 2.56 |
| 6500 | 1182 | 1.24 | 1280 | 1.57 | 1374 | 1.95 | 1467 | 2.37 | 1556 | 2.83 |
| 7000 | 1258 | 1.48 | 1350 | 1.83 | 1438 | 2.21 | 1525 | 2.64 | 1610 | 3.11 |
| 7500 | 1335 | 1.75 | 1421 | 2.11 | 1504 | 2.50 | 1586 | 2.93 | 1667 | 3.40 |
| 8000 | 1412 | 2.03 | 1494 | 2.40 | 1573 | 2.80 | 1650 | 3.23 | 1726 | 3.70 |
| 8500 | 1490 | 2.32 | 1568 | 2.70 | 1643 | 3.11 | 1716 | 3.54 | 1788 | 4.00 |
| 9000 | 1569 | 2.62 | 1643 | 3.01 | 1714 | 3.41 | 1783 | 3.84 | 1852 | 4.31 |
| 9500 | 1647 | 2.92 | 1719 | 3.32 | 1786 | 3.72 | 1852 | 4.15 | 1918 | 4.61 |
| 10000 | 1726 | 3.23 | 1795 | 3.64 | 1860 | 4.05 | 1923 | 4.47 | 1985 | 4.92 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 6000 | 1592 | 3.04 | 1674 | 3.53 | 1750 | 4.03 | 1821 | 4.54 | 1888 | 5.06 |
| 6500 | 1641 | 3.32 | 1721 | 3.83 | 1797 | 4.35 | 1869 | 4.90 | 1936 | 5.45 |
| 7000 | 1692 | 3.61 | 1770 | 4.13 | 1845 | 4.68 | 1916 | 5.24 | 1984 | 5.81 |
| 7500 | 1745 | 3.90 | 1821 | 4.43 | 1894 | 4.99 | 1964 | 5.56 | 2032 | 6.16 |
| 8000 | 1801 | 4.20 | 1874 | 4.73 | 1945 | 5.29 | 2014 | 5.88 | 2080 | 6.47 |
| 8500 | 1859 | 4.50 | 1929 | 5.03 | 1998 | 5.59 | 2065 | 6.17 | 2129 | 6.76 |
| 9000 | 1920 | 4.80 | 1987 | 5.32 | 2053 | 5.87 | 2117 | 6.43 | 2180 | 7.03 |
| 9500 | 1982 | 5.09 | 2046 | 5.60 | 2110 | 6.14 | 2172 | 6.70 | — | — |
| 10000 | 2047 | 5.40 | 2108 | 5.89 | 2169 | 6.42 | — | — | — | — |

Std/Med Static 1107-2000 rpm, 6.0 Max bhp (3.0 Max bhp per fan motor)

High Static 1107-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 48GCFM24 – Standard/Medium Static — 20 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1107 | 5.4 | 1212 | 5.9 | 1313 | 6.5 | 1411 | 7.0 | 1504 | 7.4 |
| 6500 | 1182 | 5.8 | 1280 | 6.3 | 1374 | 6.8 | 1467 | 7.3 | 1556 | 7.7 |
| 7000 | 1258 | 6.2 | 1350 | 6.7 | 1438 | 7.1 | 1525 | 7.6 | 1610 | 8.0 |
| 7500 | 1335 | 6.6 | 1421 | 7.0 | 1504 | 7.4 | 1586 | 7.9 | 1667 | 8.3 |
| 8000 | 1412 | 7.0 | 1494 | 7.4 | 1573 | 7.8 | 1650 | 8.2 | 1726 | 8.6 |
| 8500 | 1490 | 7.4 | 1568 | 7.8 | 1643 | 8.2 | 1716 | 8.5 | 1788 | 8.9 |
| 9000 | 1569 | 7.8 | 1643 | 8.2 | 1714 | 8.5 | 1783 | 8.9 | 1852 | 9.2 |
| 9500 | 1647 | 8.2 | 1719 | 8.6 | 1786 | 8.9 | 1852 | 9.2 | 1918 | 9.6 |
| 10000 | 1726 | 8.6 | 1795 | 8.9 | 1860 | 9.3 | 1923 | 9.6 | 1985 | 9.9 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1592 | 7.9 | 1674 | 8.3 | 1750 | 8.7 | 1821 | 9.1 | 1888 | 9.4 |
| 6500 | 1641 | 8.2 | 1721 | 8.6 | 1797 | 9.0 | 1869 | 9.3 | — | — |
| 7000 | 1692 | 8.4 | 1770 | 8.8 | 1845 | 9.2 | — | — | — | — |
| 7500 | 1745 | 8.7 | 1821 | 9.1 | 1894 | 9.5 | — | — | — | — |
| 8000 | 1801 | 9.0 | 1874 | 9.4 | — | — | — | — | — | — |
| 8500 | 1859 | 9.3 | 1929 | 9.6 | — | — | — | — | — | — |
| 9000 | 1920 | 9.6 | — | — | — | — | — | — | — | — |
| 9500 | 1982 | 9.9 | — | — | — | — | — | — | — | — |
| 10000 | — | — | — | — | — | — | — | — | — | — |

Std/Med Static 1107-2000 rpm

# Fan data (cont)

## 48GCFM24 – High Static — 20 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1107 | 5.0 | 1212 | 5.4 | 1313 | 5.9 | 1411 | 6.4 | 1504 | 6.8 |
| 6500 | 1182 | 5.3 | 1280 | 5.8 | 1374 | 6.2 | 1467 | 6.6 | 1556 | 7.0 |
| 7000 | 1258 | 5.7 | 1350 | 6.1 | 1438 | 6.5 | 1525 | 6.9 | 1610 | 7.3 |
| 7500 | 1335 | 6.0 | 1421 | 6.4 | 1504 | 6.8 | 1586 | 7.2 | 1667 | 7.5 |
| 8000 | 1412 | 6.4 | 1494 | 6.7 | 1573 | 7.1 | 1650 | 7.5 | 1726 | 7.8 |
| 8500 | 1490 | 6.7 | 1568 | 7.1 | 1643 | 7.4 | 1716 | 7.8 | 1788 | 8.1 |
| 9000 | 1569 | 7.1 | 1643 | 7.4 | 1714 | 7.8 | 1783 | 8.1 | 1852 | 8.4 |
| 9500 | 1647 | 7.4 | 1719 | 7.8 | 1786 | 8.1 | 1852 | 8.4 | 1918 | 8.7 |
| 10000 | 1726 | 7.8 | 1795 | 8.1 | 1860 | 8.4 | 1923 | 8.7 | 1985 | 9.0 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1592 | 7.2 | 1674 | 7.6 | 1750 | 7.9 | 1821 | 8.3 | 1888 | 8.6 |
| 6500 | 1641 | 7.4 | 1721 | 7.8 | 1797 | 8.1 | 1869 | 8.5 | 1936 | 8.8 |
| 7000 | 1692 | 7.7 | 1770 | 8.0 | 1845 | 8.4 | 1916 | 8.7 | 1984 | 9.0 |
| 7500 | 1745 | 7.9 | 1821 | 8.3 | 1894 | 8.6 | 1964 | 8.9 | 2032 | 9.2 |
| 8000 | 1801 | 8.2 | 1874 | 8.5 | 1945 | 8.8 | 2014 | 9.1 | 2080 | 9.4 |
| 8500 | 1859 | 8.4 | 1929 | 8.7 | 1998 | 9.1 | 2065 | 9.4 | 2129 | 9.7 |
| 9000 | 1920 | 8.7 | 1987 | 9.0 | 2053 | 9.3 | 2117 | 9.6 | 2180 | 9.9 |
| 9500 | 1982 | 9.0 | 2046 | 9.3 | 2110 | 9.6 | 2172 | 9.9 | — | — |
| 10000 | 2047 | 9.3 | 2108 | 9.6 | 2169 | 9.9 | — | — | — | — |

High Static 1107-2200 rpm

# Fan data (cont)

## 48GCFM28 — 25 Ton Vertical Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7500 | 1177 | 1.57 | 1260 | 1.92 | 1347 | 2.35 | 1437 | 2.85 | 1524 | 3.40 |
| 8125 | 1263 | 1.95 | 1337 | 2.31 | 1417 | 2.75 | 1499 | 3.26 | 1581 | 3.82 |
| 8750 | 1349 | 2.38 | 1418 | 2.77 | 1490 | 3.21 | 1565 | 3.72 | 1642 | 4.30 |
| 9375 | 1437 | 2.88 | 1500 | 3.27 | 1566 | 3.72 | 1635 | 4.24 | 1706 | 4.82 |
| 10000 | 1525 | 3.41 | 1583 | 3.81 | 1644 | 4.27 | 1708 | 4.79 | 1774 | 5.37 |
| 10625 | 1613 | 3.97 | 1668 | 4.39 | 1724 | 4.85 | 1784 | 5.37 | 1845 | 5.94 |
| 11250 | 1702 | 4.57 | 1753 | 4.99 | 1806 | 5.46 | 1861 | 5.97 | 1918 | 6.54 |
| 11875 | 1791 | 5.22 | 1839 | 5.66 | 1889 | 6.13 | 1941 | 6.65 | 1994 | 7.21 |
| 12500 | 1880 | 6.00 | 1926 | 6.46 | 1973 | 6.94 | 2021 | 7.46 | 2071 | 8.03 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7500 | 1607 | 3.98 | 1686 | 4.60 | 1760 | 5.23 | 1830 | 5.88 | 1897 | 6.55 |
| 8125 | 1661 | 4.43 | 1738 | 5.07 | 1811 | 5.74 | 1880 | 6.42 | 1947 | 7.13 |
| 8750 | 1718 | 4.92 | 1792 | 5.59 | 1863 | 6.28 | 1932 | 7.00 | 1997 | 7.73 |
| 9375 | 1778 | 5.45 | 1849 | 6.13 | 1918 | 6.84 | 1984 | 7.57 | 2049 | 8.34 |
| 10000 | 1841 | 6.00 | 1908 | 6.68 | 1974 | 7.40 | 2039 | 8.15 | 2102 | 8.93 |
| 10625 | 1907 | 6.56 | 1970 | 7.23 | 2033 | 7.95 | 2096 | 8.71 | 2157 | 9.50 |
| 11250 | 1976 | 7.15 | 2036 | 7.82 | 2095 | 8.52 | 2155 | 9.28 | — | — |
| 11875 | 2048 | 7.81 | 2104 | 8.47 | 2160 | 9.17 | — | — | — | — |
| 12500 | 2122 | 8.63 | 2175 | 9.30 | — | — | — | — | — | — |

Std/Med Static 1177-2200 rpm, 6.0 Max bhp (3.0 Max bhp per fan motor)

High Static 1177-2200 rpm, 10.0 Max bhp (5 Max bhp per fan motor)

## 48GCFM28 – Standard/Medium Static — 25 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1177 | 5.3 | 1260 | 5.7 | 1347 | 6.1 | 1437 | 6.5 | 1524 | 6.9 |
| 8125 | 1263 | 5.7 | 1337 | 6.0 | 1417 | 6.4 | 1499 | 6.8 | 1581 | 7.1 |
| 8750 | 1349 | 6.1 | 1418 | 6.4 | 1490 | 6.7 | 1565 | 7.1 | 1642 | 7.4 |
| 9375 | 1437 | 6.5 | 1500 | 6.8 | 1566 | 7.1 | 1635 | 7.4 | 1706 | 7.7 |
| 10000 | 1525 | 6.9 | 1583 | 7.2 | 1644 | 7.4 | 1708 | 7.7 | 1774 | 8.0 |
| 10625 | 1613 | 7.3 | 1668 | 7.5 | 1724 | 7.8 | 1784 | 8.1 | 1845 | 8.4 |
| 11250 | 1702 | 7.7 | 1753 | 7.9 | 1806 | 8.2 | 1861 | 8.4 | — | — |
| 11875 | 1791 | 8.1 | 1839 | 8.3 | 1889 | 8.6 | — | — | — | — |
| 12500 | 1880 | 8.5 | — | — | — | — | — | — | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1607 | 7.3 | 1686 | 7.6 | 1760 | 8.0 | 1830 | 8.3 | — | — |
| 8125 | 1661 | 7.5 | 1738 | 7.9 | 1811 | 8.2 | — | — | — | — |
| 8750 | 1718 | 7.8 | 1792 | 8.1 | 1863 | 8.4 | — | — | — | — |
| 9375 | 1778 | 8.1 | 1849 | 8.4 | — | — | — | — | — | — |
| 10000 | 1841 | 8.3 | — | — | — | — | — | — | — | — |
| 10625 | — | — | — | — | — | — | — | — | — | — |
| 11250 | — | — | — | — | — | — | — | — | — | — |
| 11875 | — | — | — | — | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

Std/Med Static 1177-2200 rpm

# Fan data (cont)

## 48GCFM28 – High Static — 25 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1177 | 5.3 | 1260 | 5.7 | 1347 | 6.1 | 1437 | 6.5 | 1524 | 6.9 |
| 8125 | 1263 | 5.7 | 1337 | 6.0 | 1417 | 6.4 | 1499 | 6.8 | 1581 | 7.1 |
| 8750 | 1349 | 6.1 | 1418 | 6.4 | 1490 | 6.7 | 1565 | 7.1 | 1642 | 7.4 |
| 9375 | 1437 | 6.5 | 1500 | 6.8 | 1566 | 7.1 | 1635 | 7.4 | 1706 | 7.7 |
| 10000 | 1525 | 6.9 | 1583 | 7.2 | 1644 | 7.4 | 1708 | 7.7 | 1774 | 8.0 |
| 10625 | 1613 | 7.3 | 1668 | 7.5 | 1724 | 7.8 | 1784 | 8.1 | 1845 | 8.4 |
| 11250 | 1702 | 7.7 | 1753 | 7.9 | 1806 | 8.2 | 1861 | 8.4 | 1918 | 8.7 |
| 11875 | 1791 | 8.1 | 1839 | 8.3 | 1889 | 8.6 | 1941 | 8.8 | 1994 | 9.0 |
| 12500 | 1880 | 8.5 | 1926 | 8.7 | 1973 | 9.0 | 2021 | 9.2 | 2071 | 9.4 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1607 | 7.3 | 1686 | 7.6 | 1760 | 8.0 | 1830 | 8.3 | 1897 | 8.6 |
| 8125 | 1661 | 7.5 | 1738 | 7.9 | 1811 | 8.2 | 1880 | 8.5 | 1947 | 8.8 |
| 8750 | 1718 | 7.8 | 1792 | 8.1 | 1863 | 8.4 | 1932 | 8.8 | 1997 | 9.1 |
| 9375 | 1778 | 8.1 | 1849 | 8.4 | 1918 | 8.7 | 1984 | 9.0 | 2049 | 9.3 |
| 10000 | 1841 | 8.3 | 1908 | 8.7 | 1974 | 9.0 | 2039 | 9.3 | 2102 | 9.5 |
| 10625 | 1907 | 8.6 | 1970 | 8.9 | 2033 | 9.2 | 2096 | 9.5 | 2157 | 9.8 |
| 11250 | 1976 | 9.0 | 2036 | 9.2 | 2095 | 9.5 | 2155 | 9.8 | — | — |
| 11875 | 2048 | 9.3 | 2104 | 9.6 | 2160 | 9.8 | — | — | — | — |
| 12500 | 2122 | 9.6 | 2175 | 9.9 | — | — | — | — | — | — |

High Static 1177-2200 rpm

# Fan data (cont)

## 48GCFM17 — 15 Ton Horizontal Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 4500 | 1092 | 0.79 | 1205 | 1.06 | 1311 | 1.36 | 1409 | 1.69 | 1500 | 2.04 |
| 4875 | 1164 | 0.95 | 1270 | 1.23 | 1370 | 1.55 | 1464 | 1.89 | 1552 | 2.25 |
| 5250 | 1237 | 1.14 | 1337 | 1.43 | 1432 | 1.76 | 1522 | 2.11 | 1607 | 2.49 |
| 5625 | 1311 | 1.34 | 1405 | 1.65 | 1496 | 2.00 | 1582 | 2.36 | 1664 | 2.75 |
| 6000 | 1386 | 1.58 | 1475 | 1.90 | 1561 | 2.25 | 1643 | 2.62 | 1722 | 3.02 |
| 6375 | 1461 | 1.83 | 1546 | 2.16 | 1627 | 2.52 | 1706 | 2.91 | 1782 | 3.31 |
| 6750 | 1538 | 2.10 | 1618 | 2.45 | 1696 | 2.82 | 1771 | 3.21 | 1844 | 3.62 |
| 7125 | 1614 | 2.39 | 1691 | 2.75 | 1765 | 3.13 | 1837 | 3.53 | 1907 | 3.94 |
| 7500 | 1691 | 2.71 | 1764 | 3.07 | 1835 | 3.46 | 1904 | 3.86 | 1972 | 4.29 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 4500 | 1585 | 2.40 | 1667 | 2.79 | 1744 | 3.20 | 1819 | 3.88 | 1892 | 4.37 |
| 4875 | 1635 | 2.63 | 1714 | 3.03 | 1790 | 3.45 | 1862 | 3.88 | 1932 | 4.65 |
| 5250 | 1688 | 2.88 | 1764 | 3.29 | 1837 | 3.72 | 1908 | 4.17 | 1976 | 4.98 |
| 5625 | 1742 | 3.15 | 1816 | 3.57 | 1888 | 4.01 | 1956 | 4.46 | 2023 | 5.34 |
| 6000 | 1798 | 3.44 | 1870 | 3.87 | 1940 | 4.32 | 2007 | 4.78 | 2072 | 5.74 |
| 6375 | 1855 | 3.74 | 1926 | 4.18 | 1994 | 4.64 | 2059 | 5.11 | 2122 | 6.16 |
| 6750 | 1915 | 4.06 | 1983 | 4.50 | 2049 | 4.97 | 2113 | 5.45 | 2175 | 6.64 |
| 7125 | 1976 | 4.39 | 2042 | 4.84 | 2106 | 5.31 | 2168 | 5.80 | — | — |
| 7500 | 2038 | 4.74 | 2102 | 5.20 | 2164 | 5.67 | — | — | — | — |

High Static 1092-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 48GCFM17 – High Static — 15 ton Horizontal Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 1092 | 4.9 | 1205 | 5.4 | 1311 | 5.9 | 1409 | 6.3 | 1500 | 6.8 |
| 4875 | 1164 | 5.2 | 1270 | 5.7 | 1370 | 6.2 | 1464 | 6.6 | 1552 | 7.0 |
| 5250 | 1237 | 5.6 | 1337 | 6.0 | 1432 | 6.5 | 1522 | 6.9 | 1607 | 7.3 |
| 5625 | 1311 | 5.9 | 1405 | 6.3 | 1496 | 6.8 | 1582 | 7.1 | 1664 | 7.5 |
| 6000 | 1386 | 6.2 | 1475 | 6.7 | 1561 | 7.1 | 1643 | 7.4 | 1722 | 7.8 |
| 6375 | 1461 | 6.6 | 1546 | 7.0 | 1627 | 7.4 | 1706 | 7.7 | 1782 | 8.1 |
| 6750 | 1538 | 6.9 | 1618 | 7.3 | 1696 | 7.7 | 1771 | 8.0 | 1844 | 8.4 |
| 7125 | 1614 | 7.3 | 1691 | 7.7 | 1765 | 8.0 | 1837 | 8.3 | 1907 | 8.6 |
| 7500 | 1691 | 7.7 | 1764 | 8.0 | 1835 | 8.3 | 1904 | 8.6 | 1972 | 8.9 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 1585 | 7.2 | 1667 | 7.5 | 1744 | 7.9 | 1819 | 8.2 | 1892 | 8.6 |
| 4875 | 1635 | 7.4 | 1714 | 7.8 | 1790 | 8.1 | 1862 | 8.4 | 1932 | 8.8 |
| 5250 | 1688 | 7.6 | 1764 | 8.0 | 1837 | 8.3 | 1908 | 8.7 | 1976 | 9.0 |
| 5625 | 1742 | 7.9 | 1816 | 8.2 | 1888 | 8.6 | 1956 | 8.9 | 2023 | 9.2 |
| 6000 | 1798 | 8.1 | 1870 | 8.5 | 1940 | 8.8 | 2007 | 9.1 | 2072 | 9.4 |
| 6375 | 1855 | 8.4 | 1926 | 8.7 | 1994 | 9.0 | 2059 | 9.3 | 2122 | 9.6 |
| 6750 | 1915 | 8.7 | 1983 | 9.0 | 2049 | 9.3 | 2113 | 9.6 | 2175 | 9.9 |
| 7125 | 1976 | 9.0 | 2042 | 9.3 | 2106 | 9.6 | 2168 | 9.9 | — | — |
| 7500 | 2038 | 9.3 | 2102 | 9.5 | 2164 | 9.8 | — | — | — | — |

High Static 1092-2200 rpm

# Fan data (cont)

## 48GCFM20 — 17.5 Ton Horizontal Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 5250 | 1237 | 1.14 | 1337 | 1.43 | 1432 | 1.76 | 1522 | 2.11 | 1607 | 2.49 |
| 5690 | 1324 | 1.38 | 1417 | 1.69 | 1507 | 2.04 | 1592 | 2.40 | 1674 | 2.79 |
| 6125 | 1411 | 1.66 | 1499 | 1.99 | 1583 | 2.34 | 1664 | 2.72 | 1742 | 3.12 |
| 6565 | 1500 | 1.96 | 1582 | 2.30 | 1662 | 2.67 | 1739 | 3.06 | 1813 | 3.47 |
| 7000 | 1589 | 2.29 | 1666 | 2.64 | 1742 | 3.02 | 1815 | 3.42 | 1886 | 3.84 |
| 7440 | 1679 | 2.66 | 1752 | 3.02 | 1824 | 3.41 | 1893 | 3.81 | 1961 | 4.23 |
| 7875 | 1768 | 3.04 | 1838 | 3.42 | 1906 | 3.81 | 1973 | 4.23 | 2038 | 4.66 |
| 8315 | 1859 | 3.46 | 1926 | 3.85 | 1991 | 4.25 | 2054 | 4.67 | 2116 | 5.11 |
| 8750 | 1950 | 3.91 | 2013 | 4.30 | 2075 | 4.71 | 2136 | 5.14 | 2196 | 5.59 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 5250 | 1688 | 2.88 | 1764 | 3.29 | 1837 | 3.72 | 1908 | 4.17 | 1976 | 4.63 |
| 5690 | 1751 | 3.20 | 1826 | 3.63 | 1897 | 4.07 | 1965 | 4.52 | 2031 | 4.99 |
| 6125 | 1817 | 3.54 | 1889 | 3.97 | 1958 | 4.43 | 2024 | 4.89 | 2088 | 5.37 |
| 6565 | 1885 | 3.89 | 1955 | 4.34 | 2022 | 4.81 | 2086 | 5.28 | 2149 | 5.77 |
| 7000 | 1955 | 4.27 | 2022 | 4.73 | 2087 | 5.20 | 2150 | 5.68 | — | — |
| 7440 | 2028 | 4.68 | 2092 | 5.14 | 2155 | 5.62 | — | — | — | — |
| 7875 | 2101 | 5.10 | 2163 | 5.57 | — | — | — | — | — | — |
| 8315 | 2177 | 5.56 | — | — | — | — | — | — | — | — |
| 8750 | — | — | — | — | — | — | — | — | — | — |

High Static 1237-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 48GCFM20 – High Static — 17.5 Ton Horizontal Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1237 | 5.6 | 1337 | 6.0 | 1432 | 6.5 | 1522 | 6.9 | 1607 | 7.3 |
| 5690 | 1324 | 6.0 | 1417 | 6.4 | 1507 | 6.8 | 1592 | 7.2 | 1674 | 7.6 |
| 6125 | 1411 | 6.4 | 1499 | 6.8 | 1583 | 7.2 | 1664 | 7.5 | 1742 | 7.9 |
| 6565 | 1500 | 6.8 | 1582 | 7.1 | 1662 | 7.5 | 1739 | 7.9 | 1813 | 8.2 |
| 7000 | 1589 | 7.2 | 1666 | 7.5 | 1742 | 7.9 | 1815 | 8.2 | 1886 | 8.6 |
| 7440 | 1679 | 7.6 | 1752 | 7.9 | 1824 | 8.3 | 1893 | 8.6 | 1961 | 8.9 |
| 7875 | 1768 | 8.0 | 1838 | 8.3 | 1906 | 8.6 | 1973 | 9.0 | 2038 | 9.3 |
| 8315 | 1859 | 8.4 | 1926 | 8.7 | 1991 | 9.0 | 2054 | 9.3 | 2116 | 9.6 |
| 8750 | 1950 | 8.8 | 2013 | 9.1 | 2075 | 9.4 | 2136 | 9.7 | 2196 | 10.0 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1688 | 7.6 | 1764 | 8.0 | 1837 | 8.3 | 1908 | 8.7 | 1976 | 9.0 |
| 5690 | 1751 | 7.9 | 1826 | 8.3 | 1897 | 8.6 | 1965 | 8.9 | 2031 | 9.2 |
| 6125 | 1817 | 8.2 | 1889 | 8.6 | 1958 | 8.9 | 2024 | 9.2 | 2088 | 9.5 |
| 6565 | 1885 | 8.5 | 1955 | 8.9 | 2022 | 9.2 | 2086 | 9.5 | 2149 | 9.8 |
| 7000 | 1955 | 8.9 | 2022 | 9.2 | 2087 | 9.5 | 2150 | 9.8 | — | — |
| 7440 | 2028 | 9.2 | 2092 | 9.5 | 2155 | 9.8 | — | — | — | — |
| 7875 | 2101 | 9.5 | 2163 | 9.8 | — | — | — | — | — | — |
| 8315 | 2177 | 9.9 | — | — | — | — | — | — | — | — |
| 8750 | — | — | — | — | — | — | — | — | — | — |

High Static 1237-2200 rpm

# Fan data (cont)

## 48GCFM24 — 20 Ton Horizontal Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 6000 | 1326 | 1.38 | 1417 | 1.68 | 1505 | 2.01 | 1589 | 2.37 | 1670 | 2.75 |
| 6500 | 1421 | 1.67 | 1506 | 1.99 | 1589 | 2.34 | 1668 | 2.70 | 1745 | 3.09 |
| 7000 | 1518 | 2.00 | 1597 | 2.33 | 1674 | 2.68 | 1750 | 3.06 | 1823 | 3.46 |
| 7500 | 1615 | 2.36 | 1689 | 2.70 | 1762 | 3.06 | 1833 | 3.45 | 1903 | 3.86 |
| 8000 | 1713 | 2.75 | 1783 | 3.10 | 1852 | 3.48 | 1919 | 3.87 | 1985 | 4.28 |
| 8500 | 1811 | 3.17 | 1877 | 3.53 | 1943 | 3.92 | 2007 | 4.32 | 2069 | 4.73 |
| 9000 | 1910 | 3.63 | 1973 | 4.00 | 2035 | 4.39 | 2095 | 4.79 | 2155 | 5.21 |
| 9500 | 2010 | 4.12 | 2069 | 4.50 | 2128 | 4.89 | 2186 | 5.30 | — | — |
| 10000 | 2109 | 4.64 | 2166 | 5.03 | — | — | — | — | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 6000 | 1748 | 3.16 | 1823 | 3.58 | 1894 | 4.02 | 1963 | 4.47 | 2030 | 4.94 |
| 6500 | 1819 | 3.50 | 1891 | 3.94 | 1960 | 4.38 | 2027 | 4.85 | 2092 | 5.33 |
| 7000 | 1893 | 3.88 | 1962 | 4.32 | 2029 | 4.78 | 2093 | 5.24 | 2156 | 5.73 |
| 7500 | 1970 | 4.28 | 2036 | 4.73 | 2100 | 5.19 | 2162 | 5.66 | — | — |
| 8000 | 2049 | 4.71 | 2112 | 5.16 | 2174 | 5.62 | — | — | — | — |
| 8500 | 2131 | 5.17 | 2191 | 5.62 | — | — | — | — | — | — |
| 9000 | — | — | — | — | — | — | — | — | — | — |
| 9500 | — | — | — | — | — | — | — | — | — | — |
| 10000 | — | — | — | — | — | — | — | — | — | — |

High Static 1326-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 48GCFM24 –High Static — 20 Ton Horizontal Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1326 | 6.0 | 1417 | 6.4 | 1505 | 6.8 | 1589 | 7.2 | 1670 | 7.6 |
| 6500 | 1421 | 6.4 | 1506 | 6.8 | 1589 | 7.2 | 1668 | 7.5 | 1745 | 7.9 |
| 7000 | 1518 | 6.9 | 1597 | 7.2 | 1674 | 7.6 | 1750 | 7.9 | 1823 | 8.3 |
| 7500 | 1615 | 7.3 | 1689 | 7.6 | 1762 | 8.0 | 1833 | 8.3 | 1903 | 8.6 |
| 8000 | 1713 | 7.8 | 1783 | 8.1 | 1852 | 8.4 | 1919 | 8.7 | 1985 | 9.0 |
| 8500 | 1811 | 8.2 | 1877 | 8.5 | 1943 | 8.8 | 2007 | 9.1 | 2069 | 9.4 |
| 9000 | 1910 | 8.7 | 1973 | 9.0 | 2035 | 9.2 | 2095 | 9.5 | 2155 | 9.8 |
| 9500 | 2010 | 9.1 | 2069 | 9.4 | 2128 | 9.7 | 2186 | 9.9 | — | — |
| 10000 | 2109 | 9.6 | 2166 | 9.8 | — | — | — | — | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1748 | 7.9 | 1823 | 8.3 | 1894 | 8.6 | 1963 | 8.9 | 2030 | 9.2 |
| 6500 | 1819 | 8.2 | 1891 | 8.6 | 1960 | 8.9 | 2027 | 9.2 | 2092 | 9.5 |
| 7000 | 1893 | 8.6 | 1962 | 8.9 | 2029 | 9.2 | 2093 | 9.5 | 2156 | 9.8 |
| 7500 | 1970 | 8.9 | 2036 | 9.2 | 2100 | 9.5 | 2162 | 9.8 | — | — |
| 8000 | 2049 | 9.3 | 2112 | 9.6 | 2174 | 9.9 | — | — | — | — |
| 8500 | 2131 | 9.7 | 2191 | 10.0 | — | — | — | — | — | — |
| 9000 | — | — | — | — | — | — | — | — | — | — |
| 9500 | — | — | — | — | — | — | — | — | — | — |
| 10000 | — | — | — | — | — | — | — | — | — | — |

High Static 1326-2200 rpm

# Fan data (cont)

## 48GCFM28 — 25 Ton Horizontal Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7500 | 1486 | 2.49 | 1562 | 2.89 | 1639 | 3.34 | 1714 | 3.82 | 1786 | 4.32 |
| 8125 | 1597 | 3.08 | 1668 | 3.51 | 1739 | 3.98 | 1809 | 4.48 | 1877 | 5.00 |
| 8750 | 1709 | 3.75 | 1775 | 4.20 | 1841 | 4.69 | 1907 | 5.21 | 1971 | 5.75 |
| 9373 | 1822 | 4.50 | 1884 | 4.97 | 1945 | 5.47 | 2007 | 6.01 | 2067 | 6.56 |
| 10000 | 1936 | 5.31 | 1994 | 5.81 | 2051 | 6.32 | 2109 | 6.87 | 2166 | 7.44 |
| 10625 | 2050 | 6.19 | 2104 | 6.69 | 2159 | 7.23 | — | — | — | — |
| 11250 | 2164 | 7.09 | — | — | — | — | — | — | — | — |
| 11875 | — | — | — | — | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7500 | 1856 | 4.85 | 1923 | 5.39 | 1988 | 5.96 | 2050 | 6.53 | 2110 | 7.12 |
| 8125 | 1944 | 5.55 | 2008 | 6.12 | 2071 | 6.71 | 2131 | 7.32 | 2189 | 7.93 |
| 8750 | 2034 | 6.32 | 2096 | 6.92 | 2156 | 7.53 | — | — | — | — |
| 9373 | 2127 | 7.15 | 2186 | 7.76 | — | — | — | — | — | — |
| 10000 | — | — | — | — | — | — | — | — | — | — |
| 10625 | — | — | — | — | — | — | — | — | — | — |
| 11250 | — | — | — | — | — | — | — | — | — | — |
| 11875 | — | — | — | — | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

High Static 1486-2200 rpm, 10.0 Max bhp (Max bhp 5.0 per fan motor)

## 48GCFM28 – High Static — 25 Ton Horizontal Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1486 | 6.7 | 1562 | 7.1 | 1639 | 7.4 | 1714 | 7.8 | 1786 | 8.1 |
| 8125 | 1597 | 7.2 | 1668 | 7.5 | 1739 | 7.9 | 1809 | 8.2 | 1877 | 8.5 |
| 8750 | 1709 | 7.7 | 1775 | 8.0 | 1841 | 8.3 | 1907 | 8.6 | 1971 | 8.9 |
| 9373 | 1822 | 8.3 | 1884 | 8.5 | 1945 | 8.8 | 2007 | 9.1 | 2067 | 9.4 |
| 10000 | 1936 | 8.8 | 1994 | 9.0 | 2051 | 9.3 | 2109 | 9.6 | 2166 | 9.8 |
| 10625 | 2050 | 9.3 | 2104 | 9.6 | 2159 | 9.8 | — | — | — | — |
| 11250 | 2164 | 9.8 | — | — | — | — | — | — | — | — |
| 11875 | — | — | — | — | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1856 | 8.4 | 1923 | 8.7 | 1988 | 9.0 | 2050 | 9.3 | 2110 | 9.6 |
| 8125 | 1944 | 8.8 | 2008 | 9.1 | 2071 | 9.4 | 2131 | 9.7 | 2189 | 9.9 |
| 8750 | 2034 | 9.2 | 2096 | 9.5 | 2156 | 9.8 | — | — | — | — |
| 9373 | 2127 | 9.7 | 2186 | 9.9 | — | — | — | — | — | — |
| 10000 | — | — | — | — | — | — | — | — | — | — |
| 10625 | — | — | — | — | — | — | — | — | — | — |
| 11250 | — | — | — | — | — | — | — | — | — | — |
| 11875 | — | — | — | — | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

High Static 1486-2200 rpm

# Fan data (cont)

## 50GC-M17 — 15 Ton Vertical Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 4500 | 936 | 0.61 | 1065 | 0.90 | 1180 | 1.23 | 1285 | 1.59 | 1380 | 1.97 |
| 4875 | 991 | 0.73 | 1112 | 1.03 | 1224 | 1.37 | 1325 | 1.74 | 1418 | 2.14 |
| 5250 | 1048 | 0.86 | 1161 | 1.18 | 1268 | 1.53 | 1366 | 1.91 | 1457 | 2.32 |
| 5625 | 1106 | 1.02 | 1211 | 1.34 | 1314 | 1.71 | 1410 | 2.11 | 1498 | 2.53 |
| 6000 | 1166 | 1.19 | 1263 | 1.52 | 1362 | 1.90 | 1454 | 2.31 | 1540 | 2.75 |
| 6375 | 1226 | 1.38 | 1317 | 1.72 | 1410 | 2.11 | 1499 | 2.53 | 1584 | 2.99 |
| 6750 | 1287 | 1.59 | 1371 | 1.93 | 1460 | 2.33 | 1546 | 2.76 | 1628 | 3.23 |
| 7125 | 1349 | 1.82 | 1428 | 2.16 | 1511 | 2.56 | 1594 | 3.01 | 1674 | 3.48 |
| 7500 | 1412 | 2.07 | 1485 | 2.40 | 1563 | 2.80 | 1643 | 3.26 | 1721 | 3.74 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 4500 | 1470 | 2.38 | 1554 | 2.81 | 1634 | 3.27 | 1710 | 3.74 | 1782 | 4.24 |
| 4875 | 1505 | 2.55 | 1588 | 3.00 | 1666 | 3.46 | 1741 | 3.95 | 1812 | 4.46 |
| 5250 | 1542 | 2.75 | 1623 | 3.21 | 1700 | 3.69 | 1773 | 4.18 | 1844 | 4.71 |
| 5625 | 1581 | 2.97 | 1660 | 3.44 | 1735 | 3.93 | 1807 | 4.44 | 1876 | 4.97 |
| 6000 | 1622 | 3.21 | 1699 | 3.69 | 1772 | 4.19 | 1843 | 4.71 | 1911 | 5.25 |
| 6375 | 1663 | 3.46 | 1739 | 3.95 | 1811 | 4.46 | 1880 | 4.99 | 1946 | 5.54 |
| 6750 | 1706 | 3.71 | 1780 | 4.22 | 1850 | 4.74 | 1918 | 5.28 | 1983 | 5.83 |
| 7125 | 1750 | 3.98 | 1822 | 4.49 | 1891 | 5.02 | 1958 | 5.57 | 2022 | 6.14 |
| 7500 | 1794 | 4.24 | 1866 | 4.77 | 1933 | 5.30 | 1999 | 5.86 | — | — |

Std/Med Static 936-2000 rpm, 4.8 Max bhp (2.4 Max bhp per fan motor)

High Static 936-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 50GC-M17 – Standard/Medium Static — 15 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 936 | 4.5 | 1065 | 5.2 | 1180 | 5.8 | 1285 | 6.3 | 1380 | 6.8 |
| 4875 | 991 | 4.8 | 1112 | 5.4 | 1224 | 6.0 | 1325 | 6.5 | 1418 | 7.0 |
| 5250 | 1048 | 5.1 | 1161 | 5.7 | 1268 | 6.2 | 1366 | 6.7 | 1457 | 7.2 |
| 5625 | 1106 | 5.4 | 1211 | 5.9 | 1314 | 6.5 | 1410 | 7.0 | 1498 | 7.4 |
| 6000 | 1166 | 5.7 | 1263 | 6.2 | 1362 | 6.7 | 1454 | 7.2 | 1540 | 7.6 |
| 6375 | 1226 | 6.0 | 1317 | 6.5 | 1410 | 7.0 | 1499 | 7.4 | 1584 | 7.9 |
| 6750 | 1287 | 6.3 | 1371 | 6.8 | 1460 | 7.2 | 1546 | 7.7 | 1628 | 8.1 |
| 7125 | 1349 | 6.7 | 1428 | 7.1 | 1511 | 7.5 | 1594 | 7.9 | 1674 | 8.3 |
| 7500 | 1412 | 7.0 | 1485 | 7.4 | 1563 | 7.8 | 1643 | 8.2 | 1721 | 8.6 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 1470 | 7.3 | 1554 | 7.7 | 1634 | 8.1 | 1710 | 8.5 | 1782 | 8.9 |
| 4875 | 1505 | 7.5 | 1588 | 7.9 | 1666 | 8.3 | 1741 | 8.7 | 1812 | 9.0 |
| 5250 | 1542 | 7.6 | 1623 | 8.1 | 1700 | 8.5 | 1773 | 8.8 | 1844 | 9.2 |
| 5625 | 1581 | 7.8 | 1660 | 8.3 | 1735 | 8.6 | 1807 | 9.0 | 1876 | 9.4 |
| 6000 | 1622 | 8.1 | 1699 | 8.5 | 1772 | 8.8 | 1843 | 9.2 | — | — |
| 6375 | 1663 | 8.3 | 1739 | 8.7 | 1811 | 9.0 | 1880 | 9.4 | — | — |
| 6750 | 1706 | 8.5 | 1780 | 8.9 | 1850 | 9.2 | — | — | — | — |
| 7125 | 1750 | 8.7 | 1822 | 9.1 | 1891 | 9.4 | — | — | — | — |
| 7500 | 1794 | 8.9 | 1866 | 9.3 | — | — | — | — | — | — |

Std/Med Static 936-2000 rpm

# Fan data (cont)

## 50GC-M17 – High Static — 15 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 936 | 4.2 | 1065 | 4.8 | 1180 | 5.3 | 1285 | 5.8 | 1380 | 6.2 |
| 4875 | 991 | 4.4 | 1112 | 5.0 | 1224 | 5.5 | 1325 | 6.0 | 1418 | 6.4 |
| 5250 | 1048 | 4.7 | 1161 | 5.2 | 1268 | 5.7 | 1366 | 6.2 | 1457 | 6.6 |
| 5625 | 1106 | 5.0 | 1211 | 5.4 | 1314 | 5.9 | 1410 | 6.4 | 1498 | 6.8 |
| 6000 | 1166 | 5.2 | 1263 | 5.7 | 1362 | 6.1 | 1454 | 6.6 | 1540 | 7.0 |
| 6375 | 1226 | 5.5 | 1317 | 5.9 | 1410 | 6.4 | 1499 | 6.8 | 1584 | 7.2 |
| 6750 | 1287 | 5.8 | 1371 | 6.2 | 1460 | 6.6 | 1546 | 7.0 | 1628 | 7.4 |
| 7125 | 1349 | 6.1 | 1428 | 6.4 | 1511 | 6.8 | 1594 | 7.2 | 1674 | 7.6 |
| 7500 | 1412 | 6.4 | 1485 | 6.7 | 1563 | 7.1 | 1643 | 7.4 | 1721 | 7.8 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 1470 | 6.6 | 1554 | 7.0 | 1634 | 7.4 | 1710 | 7.7 | 1782 | 8.1 |
| 4875 | 1505 | 6.8 | 1588 | 7.2 | 1666 | 7.5 | 1741 | 7.9 | 1812 | 8.2 |
| 5250 | 1542 | 7.0 | 1623 | 7.3 | 1700 | 7.7 | 1773 | 8.0 | 1844 | 8.4 |
| 5625 | 1581 | 7.1 | 1660 | 7.5 | 1735 | 7.9 | 1807 | 8.2 | 1876 | 8.5 |
| 6000 | 1622 | 7.3 | 1699 | 7.7 | 1772 | 8.0 | 1843 | 8.4 | 1911 | 8.7 |
| 6375 | 1663 | 7.5 | 1739 | 7.9 | 1811 | 8.2 | 1880 | 8.5 | 1946 | 8.8 |
| 6750 | 1706 | 7.7 | 1780 | 8.1 | 1850 | 8.4 | 1918 | 8.7 | 1983 | 9.0 |
| 7125 | 1750 | 7.9 | 1822 | 8.3 | 1891 | 8.6 | 1958 | 8.9 | 2022 | 9.2 |
| 7500 | 1794 | 8.1 | 1866 | 8.5 | 1933 | 8.8 | 1999 | 9.1 | — | — |

High Static 936-2200 rpm

# Fan data (cont)

## 50GC-M20 — 17.5 Ton Vertical Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 5250 | 1048 | 0.86 | 1162 | 1.18 | 1268 | 1.53 | 1366 | 1.91 | 1457 | 2.32 |
| 5690 | 1116 | 1.05 | 1220 | 1.37 | 1322 | 1.74 | 1417 | 2.14 | 1505 | 2.56 |
| 6125 | 1185 | 1.25 | 1281 | 1.58 | 1377 | 1.96 | 1469 | 2.39 | 1555 | 2.83 |
| 6565 | 1257 | 1.49 | 1344 | 1.82 | 1435 | 2.22 | 1523 | 2.65 | 1606 | 3.11 |
| 7000 | 1329 | 1.75 | 1409 | 2.08 | 1494 | 2.48 | 1578 | 2.92 | 1658 | 3.39 |
| 7440 | 1402 | 2.03 | 1476 | 2.36 | 1555 | 2.77 | 1635 | 3.21 | 1713 | 3.70 |
| 7875 | 1475 | 2.32 | 1543 | 2.66 | 1617 | 3.06 | 1693 | 3.51 | 1768 | 4.00 |
| 8315 | 1549 | 2.63 | 1613 | 2.97 | 1682 | 3.37 | 1753 | 3.81 | 1825 | 4.30 |
| 8750 | 1623 | 2.95 | 1682 | 3.28 | 1747 | 3.68 | 1815 | 4.12 | 1883 | 4.61 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 5250 | 1543 | 2.76 | 1623 | 3.21 | 1700 | 3.69 | 1773 | 4.18 | 1844 | 4.71 |
| 5690 | 1588 | 3.01 | 1667 | 3.49 | 1741 | 3.97 | 1813 | 4.48 | 1882 | 5.02 |
| 6125 | 1635 | 3.29 | 1712 | 3.78 | 1785 | 4.28 | 1855 | 4.80 | 1922 | 5.34 |
| 6565 | 1685 | 3.59 | 1759 | 4.08 | 1830 | 4.60 | 1899 | 5.14 | 1965 | 5.69 |
| 7000 | 1735 | 3.89 | 1808 | 4.40 | 1877 | 4.92 | 1944 | 5.47 | 2009 | 6.04 |
| 7440 | 1787 | 4.20 | 1858 | 4.72 | 1926 | 5.25 | 1992 | 5.81 | 2055 | 6.38 |
| 7875 | 1840 | 4.51 | 1909 | 5.03 | 1976 | 5.58 | 2040 | 6.14 | — | — |
| 8315 | 1895 | 4.82 | 1962 | 5.35 | 2028 | 5.90 | — | — | — | — |
| 8750 | 1951 | 5.12 | 2016 | 5.65 | 2080 | 6.21 | — | — | — | — |

Std/Med Static 1048-2000 rpm, 4.8 Max bhp (2.4 Max bhp per fan motor)

High Static 1166-2200 rpm, 6.0 Max bhp (3.0 Max bhp per fan motor)

## 50GC-M20 – Standard/Medium Static — 17.5 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1048 | 5.1 | 1162 | 5.7 | 1268 | 6.2 | 1366 | 6.7 | 1457 | 7.2 |
| 5690 | 1116 | 5.5 | 1220 | 6.0 | 1322 | 6.5 | 1417 | 7.0 | 1505 | 7.5 |
| 6125 | 1185 | 5.8 | 1281 | 6.3 | 1377 | 6.8 | 1469 | 7.3 | 1555 | 7.7 |
| 6565 | 1257 | 6.2 | 1344 | 6.6 | 1435 | 7.1 | 1523 | 7.5 | 1606 | 8.0 |
| 7000 | 1329 | 6.5 | 1409 | 7.0 | 1494 | 7.4 | 1578 | 7.8 | 1658 | 8.2 |
| 7440 | 1402 | 6.9 | 1476 | 7.3 | 1555 | 7.7 | 1635 | 8.1 | 1713 | 8.5 |
| 7875 | 1475 | 7.3 | 1543 | 7.6 | 1617 | 8.0 | 1693 | 8.4 | 1768 | 8.8 |
| 8315 | 1549 | 7.7 | 1613 | 8.0 | 1682 | 8.4 | 1753 | 8.7 | 1825 | 9.1 |
| 8750 | 1623 | 8.1 | 1682 | 8.4 | 1747 | 8.7 | 1815 | 9.0 | 1883 | 9.4 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1543 | 7.6 | 1623 | 8.1 | 1700 | 8.5 | 1773 | 8.8 | 1844 | 9.2 |
| 5690 | 1588 | 7.9 | 1667 | 8.3 | 1741 | 8.7 | 1813 | 9.0 | 1882 | 9.4 |
| 6125 | 1635 | 8.1 | 1712 | 8.5 | 1785 | 8.9 | 1855 | 9.3 | — | — |
| 6565 | 1685 | 8.4 | 1759 | 8.8 | 1830 | 9.1 | — | — | — | — |
| 7000 | 1735 | 8.6 | 1808 | 9.0 | 1877 | 9.4 | — | — | — | — |
| 7440 | 1787 | 8.9 | 1858 | 9.3 | — | — | — | — | — | — |
| 7875 | 1840 | 9.2 | 1909 | 9.5 | — | — | — | — | — | — |
| 8315 | 1895 | 9.5 | — | — | — | — | — | — | — | — |
| 8750 | — | — | — | — | — | — | — | — | — | — |

Std/Med Static 1048-2000 rpm

# Fan data (cont)

## 50GC-M20 – High Static — 17.5 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1048 | 4.7 | 1162 | 5.2 | 1268 | 5.7 | 1366 | 6.2 | 1457 | 6.6 |
| 5690 | 1116 | 5.0 | 1220 | 5.5 | 1322 | 5.9 | 1417 | 6.4 | 1505 | 6.8 |
| 6125 | 1185 | 5.3 | 1281 | 5.8 | 1377 | 6.2 | 1469 | 6.6 | 1555 | 7.0 |
| 6565 | 1257 | 5.6 | 1344 | 6.0 | 1435 | 6.5 | 1523 | 6.9 | 1606 | 7.3 |
| 7000 | 1329 | 6.0 | 1409 | 6.3 | 1494 | 6.7 | 1578 | 7.1 | 1658 | 7.5 |
| 7440 | 1402 | 6.3 | 1476 | 6.7 | 1555 | 7.0 | 1635 | 7.4 | 1713 | 7.8 |
| 7875 | 1475 | 6.7 | 1543 | 7.0 | 1617 | 7.3 | 1693 | 7.7 | 1768 | 8.0 |
| 8315 | 1549 | 7.0 | 1613 | 7.3 | 1682 | 7.6 | 1753 | 7.9 | 1825 | 8.3 |
| 8750 | 1623 | 7.3 | 1682 | 7.6 | 1747 | 7.9 | 1815 | 8.2 | 1883 | 8.5 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1543 | 7.0 | 1623 | 7.3 | 1700 | 7.7 | 1773 | 8.0 | 1844 | 8.4 |
| 5690 | 1588 | 7.2 | 1667 | 7.5 | 1741 | 7.9 | 1813 | 8.2 | 1882 | 8.5 |
| 6125 | 1635 | 7.4 | 1712 | 7.7 | 1785 | 8.1 | 1855 | 8.4 | 1922 | 8.7 |
| 6565 | 1685 | 7.6 | 1759 | 8.0 | 1830 | 8.3 | 1899 | 8.6 | 1965 | 8.9 |
| 7000 | 1735 | 7.9 | 1808 | 8.2 | 1877 | 8.5 | 1944 | 8.8 | 2009 | 9.1 |
| 7440 | 1787 | 8.1 | 1858 | 8.4 | 1926 | 8.7 | 1992 | 9.0 | 2055 | 9.3 |
| 7875 | 1840 | 8.3 | 1909 | 8.7 | 1976 | 9.0 | 2040 | 9.3 | — | — |
| 8315 | 1895 | 8.6 | 1962 | 8.9 | 2028 | 9.2 | — | — | — | — |
| 8750 | 1951 | 8.9 | 2016 | 9.2 | 2080 | 9.4 | — | — | — | — |

High Static 1048-2200 rpm

# Fan data (cont)

## 50GC-M24 — 20 Ton Vertical Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 6000 | 1038 | 0.84 | 1148 | 1.14 | 1251 | 1.47 | 1351 | 1.86 | 1448 | 2.28 |
| 6500 | 1103 | 1.01 | 1207 | 1.32 | 1304 | 1.66 | 1398 | 2.05 | 1490 | 2.48 |
| 7000 | 1169 | 1.19 | 1269 | 1.52 | 1360 | 1.87 | 1448 | 2.26 | 1535 | 2.69 |
| 7500 | 1234 | 1.38 | 1332 | 1.74 | 1418 | 2.09 | 1501 | 2.48 | 1583 | 2.91 |
| 8000 | 1299 | 1.58 | 1395 | 1.95 | 1478 | 2.32 | 1557 | 2.72 | 1634 | 3.14 |
| 8500 | 1364 | 1.78 | 1459 | 2.18 | 1540 | 2.56 | 1615 | 2.95 | 1689 | 3.37 |
| 9000 | 1427 | 1.97 | 1524 | 2.40 | 1602 | 2.79 | 1674 | 3.18 | 1745 | 3.60 |
| 9500 | 1491 | 2.17 | 1589 | 2.62 | 1665 | 3.02 | 1735 | 3.41 | 1802 | 3.83 |
| 10000 | 1553 | 2.36 | 1653 | 2.84 | 1729 | 3.25 | 1797 | 3.65 | 1862 | 4.06 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 6000 | 1539 | 2.74 | 1624 | 3.22 | 1703 | 3.72 | 1777 | 4.22 | 1847 | 4.74 |
| 6500 | 1578 | 2.95 | 1662 | 3.44 | 1741 | 3.96 | 1816 | 4.49 | 1887 | 5.04 |
| 7000 | 1619 | 3.16 | 1701 | 3.66 | 1779 | 4.19 | 1854 | 4.74 | 1924 | 5.30 |
| 7500 | 1663 | 3.38 | 1742 | 3.88 | 1818 | 4.41 | 1892 | 4.97 | 1962 | 5.55 |
| 8000 | 1711 | 3.60 | 1786 | 4.10 | 1859 | 4.62 | 1931 | 5.18 | 2000 | 5.76 |
| 8500 | 1761 | 3.83 | 1832 | 4.31 | 1903 | 4.83 | 1972 | 5.37 | 2039 | 5.94 |
| 9000 | 1813 | 4.04 | 1882 | 4.52 | 1949 | 5.02 | 2015 | 5.55 | 2081 | 6.11 |
| 9500 | 1868 | 4.26 | 1933 | 4.72 | 1998 | 5.21 | 2061 | 5.72 | 2124 | 6.27 |
| 10000 | 1925 | 4.49 | 1987 | 4.94 | 2049 | 5.41 | 2110 | 5.91 | 2170 | 6.43 |

Std/Med Static 1038-2000 rpm, 4.8 Max bhp (2.4 Max bhp per fan motor)

High Static 1105-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 50GC-M24 – Standard/Medium Static — 20 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1038 | 5.1 | 1148 | 5.6 | 1251 | 6.1 | 1351 | 6.7 | 1448 | 7.2 |
| 6500 | 1103 | 5.4 | 1207 | 5.9 | 1304 | 6.4 | 1398 | 6.9 | 1490 | 7.4 |
| 7000 | 1169 | 5.7 | 1269 | 6.2 | 1360 | 6.7 | 1448 | 7.2 | 1535 | 7.6 |
| 7500 | 1234 | 6.1 | 1332 | 6.6 | 1418 | 7.0 | 1501 | 7.4 | 1583 | 7.9 |
| 8000 | 1299 | 6.4 | 1395 | 6.9 | 1478 | 7.3 | 1557 | 7.7 | 1634 | 8.1 |
| 8500 | 1364 | 6.7 | 1459 | 7.2 | 1540 | 7.6 | 1615 | 8.0 | 1689 | 8.4 |
| 9000 | 1427 | 7.1 | 1524 | 7.6 | 1602 | 8.0 | 1674 | 8.3 | 1745 | 8.7 |
| 9500 | 1491 | 7.4 | 1589 | 7.9 | 1665 | 8.3 | 1735 | 8.6 | 1802 | 9.0 |
| 10000 | 1553 | 7.7 | 1653 | 8.2 | 1729 | 8.6 | 1797 | 9.0 | 1862 | 9.3 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1539 | 7.6 | 1624 | 8.1 | 1703 | 8.5 | 1777 | 8.9 | 1847 | 9.2 |
| 6500 | 1578 | 7.8 | 1662 | 8.3 | 1741 | 8.7 | 1816 | 9.1 | 1887 | 9.4 |
| 7000 | 1619 | 8.0 | 1701 | 8.5 | 1779 | 8.9 | 1854 | 9.2 | — | — |
| 7500 | 1663 | 8.3 | 1742 | 8.7 | 1818 | 9.1 | 1892 | 9.4 | — | — |
| 8000 | 1711 | 8.5 | 1786 | 8.9 | 1859 | 9.3 | — | — | — | — |
| 8500 | 1761 | 8.8 | 1832 | 9.1 | 1903 | 9.5 | — | — | — | — |
| 9000 | 1813 | 9.0 | 1882 | 9.4 | 1949 | 9.7 | — | — | — | — |
| 9500 | 1868 | 9.3 | 1933 | 9.7 | — | — | — | — | — | — |
| 10000 | 1925 | 9.6 | 1987 | 9.9 | — | — | — | — | — | — |

Std/Med Static 1038-2000 rpm

# Fan data (cont)

## 50GC-M24 – High Static — 20 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1038 | 4.6 | 1148 | 5.1 | 1251 | 5.6 | 1351 | 6.1 | 1448 | 6.5 |
| 6500 | 1103 | 4.9 | 1207 | 5.4 | 1304 | 5.9 | 1398 | 6.3 | 1490 | 6.7 |
| 7000 | 1169 | 5.2 | 1269 | 5.7 | 1360 | 6.1 | 1448 | 6.5 | 1535 | 6.9 |
| 7500 | 1234 | 5.5 | 1332 | 6.0 | 1418 | 6.4 | 1501 | 6.8 | 1583 | 7.2 |
| 8000 | 1299 | 5.8 | 1395 | 6.3 | 1478 | 6.7 | 1557 | 7.0 | 1634 | 7.4 |
| 8500 | 1364 | 6.1 | 1459 | 6.6 | 1540 | 7.0 | 1615 | 7.3 | 1689 | 7.6 |
| 9000 | 1427 | 6.4 | 1524 | 6.9 | 1602 | 7.2 | 1674 | 7.6 | 1745 | 7.9 |
| 9500 | 1491 | 6.7 | 1589 | 7.2 | 1665 | 7.5 | 1735 | 7.9 | 1802 | 8.2 |
| 10000 | 1553 | 7.0 | 1653 | 7.5 | 1729 | 7.8 | 1797 | 8.1 | 1862 | 8.4 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1539 | 6.9 | 1624 | 7.3 | 1703 | 7.7 | 1777 | 8.0 | 1847 | 8.4 |
| 6500 | 1578 | 7.1 | 1662 | 7.5 | 1741 | 7.9 | 1816 | 8.2 | 1887 | 8.6 |
| 7000 | 1619 | 7.3 | 1701 | 7.7 | 1779 | 8.1 | 1854 | 8.4 | 1924 | 8.7 |
| 7500 | 1663 | 7.5 | 1742 | 7.9 | 1818 | 8.2 | 1892 | 8.6 | 1962 | 8.9 |
| 8000 | 1711 | 7.7 | 1786 | 8.1 | 1859 | 8.4 | 1931 | 8.8 | 2000 | 9.1 |
| 8500 | 1761 | 8.0 | 1832 | 8.3 | 1903 | 8.6 | 1972 | 8.9 | 2039 | 9.3 |
| 9000 | 1813 | 8.2 | 1882 | 8.5 | 1949 | 8.8 | 2015 | 9.1 | 2081 | 9.5 |
| 9500 | 1868 | 8.5 | 1933 | 8.8 | 1998 | 9.1 | 2061 | 9.4 | 2124 | 9.6 |
| 10000 | 1925 | 8.7 | 1987 | 9.0 | 2049 | 9.3 | 2110 | 9.6 | 2170 | 9.9 |

High Static 1038-2200 rpm

# Fan data (cont)

## 50GC-M28 — 25 Ton Vertical Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7500 | 1099 | 1.27 | 1174 | 1.55 | 1256 | 1.90 | 1343 | 2.32 | 1433 | 2.82 |
| 8125 | 1177 | 1.58 | 1246 | 1.87 | 1319 | 2.22 | 1397 | 2.64 | 1479 | 3.13 |
| 8750 | 1256 | 1.92 | 1319 | 2.23 | 1385 | 2.58 | 1456 | 3.00 | 1530 | 3.48 |
| 9375 | 1337 | 2.32 | 1394 | 2.63 | 1455 | 2.99 | 1519 | 3.40 | 1586 | 3.87 |
| 10000 | 1417 | 2.74 | 1471 | 3.06 | 1526 | 3.42 | 1585 | 3.83 | 1646 | 4.29 |
| 10625 | 1498 | 3.18 | 1548 | 3.51 | 1600 | 3.88 | 1654 | 4.28 | 1710 | 4.73 |
| 11250 | 1579 | 3.65 | 1626 | 3.98 | 1675 | 4.36 | 1725 | 4.76 | 1777 | 5.20 |
| 11875 | 1661 | 4.17 | 1705 | 4.51 | 1751 | 4.88 | 1798 | 5.29 | 1846 | 5.72 |
| 12500 | 1743 | 4.78 | 1785 | 5.14 | 1828 | 5.52 | 1872 | 5.93 | 1917 | 6.37 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7500 | 1521 | 3.38 | 1604 | 3.96 | 1683 | 4.58 | 1757 | 5.21 | 1828 | 5.86 |
| 8125 | 1561 | 3.68 | 1642 | 4.28 | 1720 | 4.92 | 1794 | 5.58 | 1864 | 6.26 |
| 8750 | 1606 | 4.02 | 1683 | 4.63 | 1758 | 5.28 | 1830 | 5.95 | 1900 | 6.66 |
| 9375 | 1655 | 4.40 | 1727 | 5.00 | 1798 | 5.64 | 1869 | 6.33 | 1937 | 7.05 |
| 10000 | 1710 | 4.81 | 1776 | 5.39 | 1843 | 6.02 | 1910 | 6.70 | 1976 | 7.42 |
| 10625 | 1769 | 5.24 | 1829 | 5.79 | 1891 | 6.40 | 1954 | 7.06 | 2018 | 7.78 |
| 11250 | 1831 | 5.69 | 1887 | 6.23 | 1944 | 6.81 | 2003 | 7.45 | 2063 | 8.14 |
| 11875 | 1896 | 6.20 | 1948 | 6.72 | 2001 | 7.29 | 2056 | 7.90 | 2111 | 8.56 |
| 12500 | 1964 | 6.85 | 2012 | 7.36 | 2061 | 7.91 | 2112 | 8.51 | 2164 | 9.16 |

Std/Med Static 1099-2200 rpm, 6.0 Max bhp (3.0 Max bhp per fan motor)

High Static 1099-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 50GC-M28 – Standard/Medium Static — 25 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1099 | 4.9 | 1174 | 5.3 | 1256 | 5.6 | 1343 | 6.0 | 1433 | 6.5 |
| 8125 | 1177 | 5.3 | 1246 | 5.6 | 1319 | 5.9 | 1397 | 6.3 | 1479 | 6.7 |
| 8750 | 1256 | 5.6 | 1319 | 5.9 | 1385 | 6.2 | 1456 | 6.6 | 1530 | 6.9 |
| 9375 | 1337 | 6.0 | 1394 | 6.3 | 1455 | 6.6 | 1519 | 6.9 | 1586 | 7.2 |
| 10000 | 1417 | 6.4 | 1471 | 6.6 | 1526 | 6.9 | 1585 | 7.2 | 1646 | 7.4 |
| 10625 | 1498 | 6.8 | 1548 | 7.0 | 1600 | 7.2 | 1654 | 7.5 | 1710 | 7.7 |
| 11250 | 1579 | 7.1 | 1626 | 7.4 | 1675 | 7.6 | 1725 | 7.8 | 1777 | 8.0 |
| 11875 | 1661 | 7.5 | 1705 | 7.7 | 1751 | 7.9 | 1798 | 8.1 | 1846 | 8.4 |
| 12500 | 1743 | 7.9 | 1785 | 8.1 | 1828 | 8.3 | 1872 | 8.5 | 1917 | 8.7 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1521 | 6.9 | 1604 | 7.2 | 1683 | 7.6 | 1757 | 8.0 | 1828 | 8.3 |
| 8125 | 1561 | 7.1 | 1642 | 7.4 | 1720 | 7.8 | 1794 | 8.1 | 1864 | 8.4 |
| 8750 | 1606 | 7.3 | 1683 | 7.6 | 1758 | 8.0 | 1830 | 8.3 | — | — |
| 9375 | 1655 | 7.5 | 1727 | 7.8 | 1798 | 8.1 | 1869 | 8.5 | — | — |
| 10000 | 1710 | 7.7 | 1776 | 8.0 | 1843 | 8.4 | — | — | — | — |
| 10625 | 1769 | 8.0 | 1829 | 8.3 | 1891 | 8.6 | — | — | — | — |
| 11250 | 1831 | 8.3 | 1887 | 8.6 | — | — | — | — | — | — |
| 11875 | 1896 | 8.6 | — | — | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

Std/Med Static 1099-2200 rpm

# Fan data (cont)

## 50GC-M28 – High Static — 25 Ton Vertical Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1099 | 4.9 | 1174 | 5.3 | 1256 | 5.6 | 1343 | 6.0 | 1433 | 6.5 |
| 8125 | 1177 | 5.3 | 1246 | 5.6 | 1319 | 5.9 | 1397 | 6.3 | 1479 | 6.7 |
| 8750 | 1256 | 5.6 | 1319 | 5.9 | 1385 | 6.2 | 1456 | 6.6 | 1530 | 6.9 |
| 9375 | 1337 | 6.0 | 1394 | 6.3 | 1455 | 6.6 | 1519 | 6.9 | 1586 | 7.2 |
| 10000 | 1417 | 6.4 | 1471 | 6.6 | 1526 | 6.9 | 1585 | 7.2 | 1646 | 7.4 |
| 10625 | 1498 | 6.8 | 1548 | 7.0 | 1600 | 7.2 | 1654 | 7.5 | 1710 | 7.7 |
| 11250 | 1579 | 7.1 | 1626 | 7.4 | 1675 | 7.6 | 1725 | 7.8 | 1777 | 8.0 |
| 11875 | 1661 | 7.5 | 1705 | 7.7 | 1751 | 7.9 | 1798 | 8.1 | 1846 | 8.4 |
| 12500 | 1743 | 7.9 | 1785 | 8.1 | 1828 | 8.3 | 1872 | 8.5 | 1917 | 8.7 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1521 | 6.9 | 1604 | 7.2 | 1683 | 7.6 | 1757 | 8.0 | 1828 | 8.3 |
| 8125 | 1561 | 7.1 | 1642 | 7.4 | 1720 | 7.8 | 1794 | 8.1 | 1864 | 8.4 |
| 8750 | 1606 | 7.3 | 1683 | 7.6 | 1758 | 8.0 | 1830 | 8.3 | 1900 | 8.6 |
| 9375 | 1655 | 7.5 | 1727 | 7.8 | 1798 | 8.1 | 1869 | 8.5 | 1937 | 8.8 |
| 10000 | 1710 | 7.7 | 1776 | 8.0 | 1843 | 8.4 | 1910 | 8.7 | 1976 | 9.0 |
| 10625 | 1769 | 8.0 | 1829 | 8.3 | 1891 | 8.6 | 1954 | 8.9 | 2018 | 9.2 |
| 11250 | 1831 | 8.3 | 1887 | 8.6 | 1944 | 8.8 | 2003 | 9.1 | 2063 | 9.4 |
| 11875 | 1896 | 8.6 | 1948 | 8.8 | 2001 | 9.1 | 2056 | 9.3 | 2111 | 9.6 |
| 12500 | 1964 | 8.9 | 2012 | 9.1 | 2061 | 9.4 | 2112 | 9.6 | 2164 | 9.8 |

High Static 1099-2200 rpm

# Fan data (cont)

## 50GC-M17 — 15 Ton Horizontal Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 4500 | 1055 | 0.71 | 1171 | 0.97 | 1279 | 1.26 | 1379 | 1.58 | 1472 | 1.92 |
| 4875 | 1122 | 0.85 | 1231 | 1.12 | 1334 | 1.43 | 1430 | 1.76 | 1520 | 2.11 |
| 5250 | 1190 | 1.01 | 1293 | 1.30 | 1390 | 1.61 | 1482 | 1.95 | 1569 | 2.32 |
| 5625 | 1259 | 1.19 | 1356 | 1.49 | 1448 | 1.81 | 1536 | 2.16 | 1621 | 2.54 |
| 6000 | 1329 | 1.39 | 1420 | 1.69 | 1508 | 2.03 | 1592 | 2.39 | 1674 | 2.78 |
| 6375 | 1399 | 1.60 | 1486 | 1.92 | 1570 | 2.26 | 1650 | 2.63 | 1728 | 3.02 |
| 6750 | 1470 | 1.83 | 1553 | 2.16 | 1632 | 2.51 | 1710 | 2.89 | 1785 | 3.28 |
| 7125 | 1541 | 2.08 | 1620 | 2.42 | 1696 | 2.77 | 1770 | 3.15 | 1842 | 3.56 |
| 7500 | 1612 | 2.34 | 1688 | 2.69 | 1761 | 3.06 | 1832 | 3.44 | 1902 | 3.85 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 4500 | 1560 | 2.29 | 1642 | 2.67 | 1721 | 3.29 | 1796 | 3.74 | 1870 | 4.22 |
| 4875 | 1605 | 2.49 | 1685 | 2.88 | 1762 | 3.29 | 1835 | 3.99 | 1906 | 4.47 |
| 5250 | 1652 | 2.70 | 1730 | 3.10 | 1805 | 3.53 | 1877 | 4.27 | 1946 | 4.75 |
| 5625 | 1701 | 2.94 | 1777 | 3.35 | 1850 | 3.78 | 1920 | 4.57 | 1988 | 5.07 |
| 6000 | 1751 | 3.18 | 1826 | 3.60 | 1897 | 4.04 | 1966 | 4.90 | 2032 | 5.41 |
| 6375 | 1803 | 3.43 | 1876 | 3.86 | 1945 | 4.31 | 2013 | 5.26 | 2078 | 5.79 |
| 6750 | 1857 | 3.70 | 1927 | 4.13 | 1995 | 4.59 | 2061 | 5.65 | 2125 | 6.19 |
| 7125 | 1913 | 3.98 | 1981 | 4.42 | 2047 | 4.88 | 2111 | 6.07 | 2173 | 6.62 |
| 7500 | 1969 | 4.27 | 2035 | 4.72 | 2099 | 5.18 | 2162 | 6.52 | — | — |

High Static 1055-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 50GC-M17 – High Static — 15 Ton Horizontal Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 1055 | 4.7 | 1171 | 5.3 | 1279 | 5.7 | 1379 | 6.2 | 1472 | 6.6 |
| 4875 | 1122 | 5.0 | 1231 | 5.5 | 1334 | 6.0 | 1430 | 6.4 | 1520 | 6.9 |
| 5250 | 1190 | 5.3 | 1293 | 5.8 | 1390 | 6.3 | 1482 | 6.7 | 1569 | 7.1 |
| 5625 | 1259 | 5.7 | 1356 | 6.1 | 1448 | 6.5 | 1536 | 6.9 | 1621 | 7.3 |
| 6000 | 1329 | 6.0 | 1420 | 6.4 | 1508 | 6.8 | 1592 | 7.2 | 1674 | 7.6 |
| 6375 | 1399 | 6.3 | 1486 | 6.7 | 1570 | 7.1 | 1650 | 7.5 | 1728 | 7.8 |
| 6750 | 1470 | 6.6 | 1553 | 7.0 | 1632 | 7.4 | 1710 | 7.7 | 1785 | 8.1 |
| 7125 | 1541 | 7.0 | 1620 | 7.3 | 1696 | 7.7 | 1770 | 8.0 | 1842 | 8.3 |
| 7500 | 1612 | 7.3 | 1688 | 7.6 | 1761 | 8.0 | 1832 | 8.3 | 1902 | 8.6 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 4500 | 1560 | 7.0 | 1642 | 7.4 | 1721 | 7.8 | 1796 | 8.1 | 1870 | 8.5 |
| 4875 | 1605 | 7.3 | 1685 | 7.6 | 1762 | 8.0 | 1835 | 8.3 | 1906 | 8.6 |
| 5250 | 1652 | 7.5 | 1730 | 7.8 | 1805 | 8.2 | 1877 | 8.5 | 1946 | 8.8 |
| 5625 | 1701 | 7.7 | 1777 | 8.0 | 1850 | 8.4 | 1920 | 8.7 | 1988 | 9.0 |
| 6000 | 1751 | 7.9 | 1826 | 8.3 | 1897 | 8.6 | 1966 | 8.9 | 2032 | 9.2 |
| 6375 | 1803 | 8.2 | 1876 | 8.5 | 1945 | 8.8 | 2013 | 9.1 | 2078 | 9.4 |
| 6750 | 1857 | 8.4 | 1927 | 8.7 | 1995 | 9.1 | 2061 | 9.4 | 2125 | 9.7 |
| 7125 | 1913 | 8.7 | 1981 | 9.0 | 2047 | 9.3 | 2111 | 9.6 | 2173 | 9.9 |
| 7500 | 1969 | 8.9 | 2035 | 9.2 | 2099 | 9.5 | 2162 | 9.8 | — | — |

High Static 1055-2200 rpm

# Fan data (cont)

## 50GC-M20 — 17.5 Ton Horizontal Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 5250 | 1190 | 1.01 | 1293 | 1.30 | 1390 | 1.61 | 1482 | 1.95 | 1569 | 2.32 |
| 5690 | 1271 | 1.22 | 1367 | 1.52 | 1458 | 1.85 | 1546 | 2.20 | 1630 | 2.58 |
| 6125 | 1352 | 1.46 | 1442 | 1.77 | 1528 | 2.10 | 1612 | 2.47 | 1692 | 2.86 |
| 6565 | 1435 | 1.72 | 1520 | 2.04 | 1601 | 2.39 | 1680 | 2.76 | 1757 | 3.15 |
| 7000 | 1517 | 2.00 | 1597 | 2.33 | 1675 | 2.69 | 1750 | 3.06 | 1823 | 3.46 |
| 7440 | 1601 | 2.30 | 1677 | 2.65 | 1751 | 3.01 | 1822 | 3.39 | 1892 | 3.80 |
| 7875 | 1684 | 2.63 | 1757 | 2.98 | 1827 | 3.36 | 1895 | 3.74 | 1962 | 4.16 |
| 8315 | 1769 | 2.98 | 1838 | 3.35 | 1905 | 3.73 | 1971 | 4.13 | 2035 | 4.54 |
| 8750 | 1853 | 3.36 | 1920 | 3.73 | 1984 | 4.12 | 2046 | 4.52 | 2108 | 4.94 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 5250 | 1652 | 2.70 | 1730 | 3.10 | 1805 | 3.53 | 1876 | 3.96 | 1946 | 4.42 |
| 5690 | 1709 | 2.97 | 1785 | 3.39 | 1858 | 3.82 | 1928 | 4.27 | 1995 | 4.73 |
| 6125 | 1769 | 3.26 | 1842 | 3.69 | 1913 | 4.13 | 1981 | 4.58 | 2047 | 5.06 |
| 6565 | 1831 | 3.57 | 1902 | 4.00 | 1971 | 4.45 | 2037 | 4.91 | 2101 | 5.39 |
| 7000 | 1894 | 3.88 | 1963 | 4.33 | 2029 | 4.78 | 2094 | 5.25 | 2157 | 5.74 |
| 7440 | 1960 | 4.22 | 2026 | 4.67 | 2091 | 5.13 | 2154 | 5.61 | — | — |
| 7875 | 2027 | 4.58 | 2091 | 5.03 | 2154 | 5.50 | — | — | — | — |
| 8315 | 2097 | 4.97 | 2159 | 5.42 | — | — | — | — | — | — |
| 8750 | 2168 | 5.38 | — | — | — | — | — | — | — | — |

High Static 1190-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 50GC-M20 – High Static — 17.5 Ton Horizontal Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1190 | 5.3 | 1293 | 5.8 | 1390 | 6.3 | 1482 | 6.7 | 1569 | 7.1 |
| 5690 | 1271 | 5.7 | 1367 | 6.2 | 1458 | 6.6 | 1546 | 7.0 | 1630 | 7.4 |
| 6125 | 1352 | 6.1 | 1442 | 6.5 | 1528 | 6.9 | 1612 | 7.3 | 1692 | 7.7 |
| 6565 | 1435 | 6.5 | 1520 | 6.9 | 1601 | 7.2 | 1680 | 7.6 | 1757 | 8.0 |
| 7000 | 1517 | 6.8 | 1597 | 7.2 | 1675 | 7.6 | 1750 | 7.9 | 1823 | 8.3 |
| 7440 | 1601 | 7.2 | 1677 | 7.6 | 1751 | 7.9 | 1822 | 8.3 | 1892 | 8.6 |
| 7875 | 1684 | 7.6 | 1757 | 8.0 | 1827 | 8.3 | 1895 | 8.6 | 1962 | 8.9 |
| 8315 | 1769 | 8.0 | 1838 | 8.3 | 1905 | 8.6 | 1971 | 8.9 | 2035 | 9.2 |
| 8750 | 1853 | 8.4 | 1920 | 8.7 | 1984 | 9.0 | 2046 | 9.3 | 2108 | 9.6 |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 5250 | 1652 | 7.5 | 1730 | 7.8 | 1805 | 8.2 | 1876 | 8.5 | 1946 | 8.8 |
| 5690 | 1709 | 7.7 | 1785 | 8.1 | 1858 | 8.4 | 1928 | 8.7 | 1995 | 9.1 |
| 6125 | 1769 | 8.0 | 1842 | 8.3 | 1913 | 8.7 | 1981 | 9.0 | 2047 | 9.3 |
| 6565 | 1831 | 8.3 | 1902 | 8.6 | 1971 | 8.9 | 2037 | 9.2 | 2101 | 9.5 |
| 7000 | 1894 | 8.6 | 1963 | 8.9 | 2029 | 9.2 | 2094 | 9.5 | 2157 | 9.8 |
| 7440 | 1960 | 8.9 | 2026 | 9.2 | 2091 | 9.5 | 2154 | 9.8 | — | — |
| 7875 | 2027 | 9.2 | 2091 | 9.5 | 2154 | 9.8 | — | — | — | — |
| 8315 | 2097 | 9.5 | 2159 | 9.8 | — | — | — | — | — | — |
| 8750 | 2168 | 9.9 | — | — | — | — | — | — | — | — |

High Static 1190-2200 rpm

# Fan data (cont)

## 50GC-M24 — 20 Ton Horizontal Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 6000 | 1267 | 1.20 | 1361 | 1.49 | 1451 | 1.81 | 1538 | 2.15 | 1621 | 2.52 |
| 6500 | 1356 | 1.45 | 1443 | 1.75 | 1527 | 2.07 | 1609 | 2.43 | 1688 | 2.80 |
| 7000 | 1446 | 1.73 | 1527 | 2.04 | 1606 | 2.37 | 1683 | 2.73 | 1758 | 3.11 |
| 7500 | 1537 | 2.03 | 1612 | 2.35 | 1687 | 2.69 | 1760 | 3.05 | 1831 | 3.44 |
| 8000 | 1628 | 2.36 | 1699 | 2.68 | 1769 | 3.03 | 1838 | 3.40 | 1906 | 3.79 |
| 8500 | 1719 | 2.71 | 1786 | 3.04 | 1853 | 3.40 | 1918 | 3.77 | 1983 | 4.16 |
| 9000 | 1811 | 3.09 | 1875 | 3.43 | 1938 | 3.79 | 2000 | 4.17 | 2061 | 4.56 |
| 9500 | 1904 | 3.50 | 1964 | 3.85 | 2024 | 4.21 | 2083 | 4.59 | 2142 | 4.99 |
| 10000 | 1997 | 3.94 | 2054 | 4.29 | 2111 | 4.66 | 2167 | 5.04 | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 6000 | 1700 | 2.90 | 1777 | 3.32 | 1850 | 3.74 | 1921 | 4.19 | 1989 | 4.65 |
| 6500 | 1764 | 3.20 | 1838 | 3.62 | 1909 | 4.05 | 1977 | 4.50 | 2043 | 4.97 |
| 7000 | 1831 | 3.51 | 1901 | 3.93 | 1970 | 4.37 | 2036 | 4.83 | 2100 | 5.30 |
| 7500 | 1900 | 3.84 | 1968 | 4.27 | 2033 | 4.71 | 2098 | 5.17 | 2160 | 5.64 |
| 8000 | 1972 | 4.20 | 2037 | 4.63 | 2100 | 5.07 | 2162 | 5.53 | — | — |
| 8500 | 2046 | 4.57 | 2108 | 5.00 | 2169 | 5.45 | — | — | — | — |
| 9000 | 2122 | 4.97 | 2181 | 5.40 | — | — | — | — | — | — |
| 9500 | 2199 | 5.40 | — | — | — | — | — | — | — | — |
| 10000 | — | — | — | — | — | — | — | — | — | — |

High Static 1267-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 50GC-M24 – High Static — 20 Ton Horizontal Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1267 | 5.7 | 1361 | 6.1 | 1451 | 6.5 | 1538 | 6.9 | 1621 | 7.3 |
| 6500 | 1356 | 6.1 | 1443 | 6.5 | 1527 | 6.9 | 1609 | 7.3 | 1688 | 7.6 |
| 7000 | 1446 | 6.5 | 1527 | 6.9 | 1606 | 7.3 | 1683 | 7.6 | 1758 | 8.0 |
| 7500 | 1537 | 6.9 | 1612 | 7.3 | 1687 | 7.6 | 1760 | 8.0 | 1831 | 8.3 |
| 8000 | 1628 | 7.4 | 1699 | 7.7 | 1769 | 8.0 | 1838 | 8.3 | 1906 | 8.6 |
| 8500 | 1719 | 7.8 | 1786 | 8.1 | 1853 | 8.4 | 1918 | 8.7 | 1983 | 9.0 |
| 9000 | 1811 | 8.2 | 1875 | 8.5 | 1938 | 8.8 | 2000 | 9.1 | 2061 | 9.4 |
| 9500 | 1904 | 8.6 | 1964 | 8.9 | 2024 | 9.2 | 2083 | 9.5 | 2142 | 9.7 |
| 10000 | 1997 | 9.1 | 2054 | 9.3 | 2111 | 9.6 | 2167 | 9.8 | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 6000 | 1700 | 7.7 | 1777 | 8.0 | 1850 | 8.4 | 1921 | 8.7 | 1989 | 9.0 |
| 6500 | 1764 | 8.0 | 1838 | 8.3 | 1909 | 8.7 | 1977 | 9.0 | 2043 | 9.3 |
| 7000 | 1831 | 8.3 | 1901 | 8.6 | 1970 | 8.9 | 2036 | 9.2 | 2100 | 9.5 |
| 7500 | 1900 | 8.6 | 1968 | 8.9 | 2033 | 9.2 | 2098 | 9.5 | 2160 | 9.8 |
| 8000 | 1972 | 8.9 | 2037 | 9.2 | 2100 | 9.5 | 2162 | 9.8 | — | — |
| 8500 | 2046 | 9.3 | 2108 | 9.6 | 2169 | 9.9 | — | — | — | — |
| 9000 | 2122 | 9.6 | 2181 | 9.9 | — | — | — | — | — | — |
| 9500 | 2199 | 10.0 | — | — | — | — | — | — | — | — |
| 10000 | — | — | — | — | — | — | — | — | — | — |

High Static 1267-2200 rpm

# Fan data (cont)

## 50GC-M28 — 25 Ton Horizontal Supply (rpm - bhp)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7500 | 1406 | 2.11 | 1483 | 2.47 | 1559 | 2.87 | 1636 | 3.32 | 1711 | 3.80 |
| 8125 | 1509 | 2.60 | 1580 | 2.98 | 1651 | 3.40 | 1722 | 3.86 | 1792 | 4.35 |
| 8750 | 1614 | 3.16 | 1679 | 3.56 | 1744 | 3.98 | 1810 | 4.45 | 1876 | 4.96 |
| 9375 | 1719 | 3.78 | 1779 | 4.19 | 1840 | 4.63 | 1902 | 5.11 | 1963 | 5.62 |
| 10000 | 1824 | 4.44 | 1880 | 4.87 | 1938 | 5.33 | 1995 | 5.81 | 2053 | 6.34 |
| 10625 | 1930 | 5.16 | 1983 | 5.60 | 2036 | 6.06 | 2091 | 6.56 | 2145 | 7.09 |
| 11250 | 2036 | 5.91 | 2086 | 6.35 | 2137 | 6.83 | 2187 | 7.32 | — | — |
| 11875 | 2143 | 6.67 | 2190 | 7.12 | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7500 | 1783 | 4.30 | 1853 | 4.82 | 1921 | 5.37 | 1986 | 5.94 | 2048 | 6.51 |
| 8125 | 1861 | 4.87 | 1928 | 5.42 | 1993 | 5.98 | 2055 | 6.56 | 2116 | 7.16 |
| 8750 | 1941 | 5.49 | 2005 | 6.05 | 2067 | 6.63 | 2128 | 7.24 | 2187 | 7.86 |
| 9375 | 2024 | 6.16 | 2085 | 6.74 | 2144 | 7.33 | — | — | — | — |
| 10000 | 2111 | 6.89 | 2168 | 7.46 | — | — | — | — | — | — |
| 10625 | 2199 | 7.63 | — | — | — | — | — | — | — | — |
| 11250 | — | — | — | — | — | — | — | — | — | — |
| 11875 | — | — | — | — | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

High Static 1406-2200 rpm, 10.0 Max bhp (5.0 Max bhp per fan motor)

## 50GC-M28 – High Static — 25 Ton Horizontal Supply (rpm - vdc)

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | | 0.4 | | 0.6 | | 0.8 | | 1.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1406 | 6.3 | 1483 | 6.7 | 1559 | 7.0 | 1636 | 7.4 | 1711 | 7.7 |
| 8125 | 1509 | 6.8 | 1580 | 7.1 | 1651 | 7.5 | 1722 | 7.8 | 1792 | 8.1 |
| 8750 | 1614 | 7.3 | 1679 | 7.6 | 1744 | 7.9 | 1810 | 8.2 | 1876 | 8.5 |
| 9375 | 1719 | 7.8 | 1779 | 8.1 | 1840 | 8.3 | 1902 | 8.6 | 1963 | 8.9 |
| 10000 | 1824 | 8.3 | 1880 | 8.5 | 1938 | 8.8 | 1995 | 9.1 | 2053 | 9.3 |
| 10625 | 1930 | 8.8 | 1983 | 9.0 | 2036 | 9.2 | 2091 | 9.5 | 2145 | 9.7 |
| 11250 | 2036 | 9.2 | 2086 | 9.5 | 2137 | 9.7 | 2187 | 9.9 | — | — |
| 11875 | 2143 | 9.7 | 2190 | 10.0 | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

| CFM | AVAILABLE EXTERNAL STATIC PRESSURE (in. wg) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2 | | 1.4 | | 1.6 | | 1.8 | | 2.0 | |
| | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc | rpm | vdc |
| 7500 | 1783 | 8.1 | 1853 | 8.4 | 1921 | 8.7 | 1986 | 9.0 | 2048 | 9.3 |
| 8125 | 1861 | 8.4 | 1928 | 8.7 | 1993 | 9.0 | 2055 | 9.3 | 2116 | 9.6 |
| 8750 | 1941 | 8.8 | 2005 | 9.1 | 2067 | 9.4 | 2128 | 9.7 | 2187 | 9.9 |
| 9375 | 2024 | 9.2 | 2085 | 9.5 | 2144 | 9.7 | — | — | — | — |
| 10000 | 2111 | 9.6 | 2168 | 9.9 | — | — | — | — | — | — |
| 10625 | 2199 | 10.0 | — | — | — | — | — | — | — | — |
| 11250 | — | — | — | — | — | — | — | — | — | — |
| 11875 | — | — | — | — | — | — | — | — | — | — |
| 12500 | — | — | — | — | — | — | — | — | — | — |

High Static 1406-2200 rpm

## Legend and Notes

### Applicable for Electrical Data Tables on pages 91 to 109

LEGEND

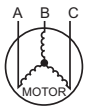
**BRKR** — Circuit Breaker
**C.O.** — Convenience Outlet
**FLA** — Full Load Amps
**IFM** — Indoor Fan Motor
**LRA** — Locked Rotor Amps
**MCA** — Minimum Circuit Amps
**P.E.** — Power Exhaust
**PWRD C.O.** — Powered Convenience Outlet
**RLA** — Rated Load Amps
**SCCR** — Short Circuit Current Rating
**UNPWR C.O.** — Unpowered Convenience Outlet

NOTES:

1. In compliance with NEC requirements for multi-motor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
2. For 208/230 v units, where one value is show it is the same for either 208 or 230 volts.
3. **Unbalanced 3-Phase Supply Voltage:** Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance.

$$\text{\% Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 230-3-60




AB = 224-v
BC = 231-v
AC = 226-v

$$\text{Average Voltage} = \frac{(224 + 231 + 226)}{3} = \frac{681}{3} = 227$$

Determine maximum deviation from average voltage.
(AB) 227-224 = 3-v
(BC) 231-227 = 4-v
(AC) 227-226 = 1-v
Maximum deviation is 4-v.
Determine percent of voltage imbalance.

$$\text{\% Voltage Imbalance} = 100x \frac{4}{227} = 1.76\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

# Electrical data (cont)

## 48/50GC**17-28 Cooling Electrical Data

| 48/50GC UNIT SIZE | V-Ph-Hz | UNIT VOLTAGE RANGE MIN | UNIT VOLTAGE RANGE MAX | STD SCCR kA | HIGH SCCR kA[a] | COMP 1 RLA | COMP 1 LRA | COMP 2 RLA | COMP 2 LRA | OFM (EA) WATTS | OFM (EA) FLA | IFM TYPE | IFM EFFCY AT FULL LOAD | IFM FLA | COMBUSTION FAN MOTOR (48 SERIES ONLY) FLA | POWER EXHAUST MOTOR QTY | POWER EXHAUST FLA (EA MOTOR) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 Vertical | 208-3-60 | 187 | 253 | 5 | 60 | 27.2 | 191 | 19.6 | 136 | 350 | 1.5 | STD/MED | 90.0% | 6.4 | 0.52 | 2 | 5.9 |
| | | | | | | | | | | | | HIGH | | 7.5 | | | |
| | 230-3-60 | 187 | 253 | 5 | 60 | 27.2 | 191 | 19.6 | 136 | 350 | 1.5 | STD/MED | 90.0% | 6.4 | 0.52 | 2 | 5.9 |
| | | | | | | | | | | | | HIGH | | 7.5 | | | |
| | 460-3-60 | 414 | 506 | 5 | 65 | 12.8 | 100 | 8.2 | 66 | 277 | 0.9 | STD/MED | 90.0% | 3.0 | 0.30 | 2 | 3.1 |
| | | | | | | | | | | | | HIGH | | 3.5 | | | |
| | 575-3-60 | 518 | 633 | 5 | — | 9.6 | 78 | 6.6 | 55 | 397 | 0.6 | STD/MED | 90.0% | 2.5 | 0.24 | 2 | 2.4 |
| | | | | | | | | | | | | HIGH | | 3.0 | | | |
| 20 Vertical | 208-3-60 | 187 | 253 | 5 | 60 | 28.2 | 240 | 23.2 | 164 | 350 | 1.5 | STD/MED | 90.0% | 6.4 | 0.52 | 2 | 5.9 |
| | | | | | | | | | | | | HIGH | | 7.5 | | | |
| | 230-3-60 | 187 | 253 | 5 | 60 | 28.2 | 240 | 23.2 | 164 | 350 | 1.5 | STD/MED | 90.0% | 6.4 | 0.52 | 2 | 5.9 |
| | | | | | | | | | | | | HIGH | | 7.5 | | | |
| | 460-3-60 | 414 | 506 | 5 | 65 | 14.7 | 130 | 11.2 | 75 | 277 | 0.9 | STD/MED | 90.0% | 3.0 | 0.30 | 2 | 3.1 |
| | | | | | | | | | | | | HIGH | | 3.5 | | | |
| | 575-3-60 | 518 | 633 | 5 | — | 11.3 | 94 | 7.9 | 54 | 397 | 0.6 | STD/MED | 90.0% | 2.5 | 0.24 | 2 | 2.4 |
| | | | | | | | | | | | | HIGH | | 3.0 | | | |
| 24 Vertical | 208-3-60 | 187 | 253 | 5 | 60 | 34.0 | 240 | 27.6 | 191 | 350 | 1.5 | STD/MED | 90.0% | 6.4 | 0.52 | 2 | 5.9 |
| | | | | | | | | | | | | HIGH | | 12.6 | | | |
| | 230-3-60 | 187 | 253 | 5 | 60 | 34.0 | 240 | 27.6 | 191 | 350 | 1.5 | STD/MED | 90.0% | 6.4 | 0.52 | 2 | 5.9 |
| | | | | | | | | | | | | HIGH | | 12.6 | | | |
| | 460-3-60 | 414 | 506 | 5 | 65 | 16.0 | 140 | 12.8 | 100 | 277 | 0.9 | STD/MED | 90.0% | 3.0 | 0.30 | 2 | 3.1 |
| | | | | | | | | | | | | HIGH | | 5.6 | | | |
| | 575-3-60 | 518 | 633 | 5 | — | 12.9 | 108 | 9.6 | 78 | 397 | 0.6 | STD/MED | 90.0% | 2.5 | 0.24 | 2 | 2.4 |
| | | | | | | | | | | | | HIGH | | 4.6 | | | |
| 28 Vertical | 208-3-60 | 187 | 253 | 5 | 60 | 51.3 | 300 | 34.0 | 240 | 350 | 1.5 | STD/MED | 90.0% | 7.5 | 0.52 | 2 | 5.9 |
| | | | | | | | | | | | | HIGH | | 12.6 | | | |
| | 230-3-60 | 187 | 253 | 5 | 60 | 51.3 | 300 | 34.0 | 240 | 350 | 1.5 | STD/MED | 90.0% | 7.5 | 0.52 | 2 | 5.9 |
| | | | | | | | | | | | | HIGH | | 12.6 | | | |
| | 460-3-60 | 414 | 506 | 5 | 65 | 22.4 | 150 | 16.0 | 140 | 277 | 0.9 | STD/MED | 90.0% | 3.5 | 0.30 | 2 | 3.1 |
| | | | | | | | | | | | | HIGH | | 5.6 | | | |
| | 575-3-60 | 518 | 633 | 5 | — | 19.9 | 109 | 12.9 | 108 | 397 | 0.6 | STD/MED | 90.0% | 3.0 | 0.24 | 2 | 2.4 |
| | | | | | | | | | | | | HIGH | | 4.6 | | | |
| 17 Horizontal | 208-3-60 | 187 | 253 | 5 | 60 | 27.6 | 191 | 19.6 | 136 | 350 | 1.5 | HIGH | 90.0% | 12.6 | 0.52 | — | — |
| | 230-3-60 | 187 | 253 | 5 | 60 | 27.6 | 191 | 19.6 | 136 | 350 | 1.5 | HIGH | 90.0% | 12.6 | 0.52 | — | — |
| | 460-3-60 | 414 | 506 | 5 | 65 | 12.8 | 100 | 8.2 | 66 | 277 | 0.9 | HIGH | 90.0% | 5.6 | 0.30 | — | — |
| | 575-3-60 | 518 | 633 | 5 | — | 9.6 | 78 | 6.6 | 55 | 397 | 0.6 | HIGH | 90.0% | 4.6 | 0.24 | — | — |
| 20 Horizontal | 208-3-60 | 187 | 253 | 5 | 60 | 28.2 | 240 | 23.2 | 164 | 350 | 1.5 | HIGH | 90.0% | 12.6 | 0.52 | — | — |
| | 230-3-60 | 187 | 253 | 5 | 60 | 28.2 | 240 | 23.2 | 164 | 350 | 1.5 | HIGH | 90.0% | 12.6 | 0.52 | — | — |
| | 460-3-60 | 414 | 506 | 5 | 65 | 14.7 | 130 | 11.2 | 75 | 277 | 0.9 | HIGH | 90.0% | 5.6 | 0.30 | — | — |
| | 575-3-60 | 518 | 633 | 5 | — | 11.3 | 94 | 7.9 | 54 | 397 | 0.6 | HIGH | 90.0% | 4.6 | 0.24 | — | — |
| 24 Horizontal | 208-3-60 | 187 | 253 | 5 | 60 | 34.0 | 240 | 27.6 | 191 | 350 | 1.5 | HIGH | 90.0% | 12.6 | 0.52 | — | — |
| | 230-3-60 | 187 | 253 | 5 | 60 | 34.0 | 240 | 27.6 | 191 | 350 | 1.5 | HIGH | 90.0% | 12.6 | 0.52 | — | — |
| | 460-3-60 | 414 | 506 | 5 | 65 | 16.0 | 140 | 12.8 | 100 | 277 | 0.9 | HIGH | 90.0% | 5.6 | 0.30 | — | — |
| | 575-3-60 | 518 | 633 | 5 | — | 12.9 | 108 | 9.6 | 78 | 397 | 0.6 | HIGH | 90.0% | 4.6 | 0.24 | — | — |
| 28 Horizontal | 208-3-60 | 187 | 253 | 5 | 60 | 51.3 | 300 | 34.0 | 240 | 350 | 1.5 | HIGH | 90.0% | 12.6 | 0.52 | — | — |
| | 230-3-60 | 187 | 253 | 5 | 60 | 51.3 | 300 | 34.0 | 240 | 350 | 1.5 | HIGH | 90.0% | 12.6 | 0.52 | — | — |
| | 460-3-60 | 414 | 506 | 5 | 65 | 22.4 | 150 | 16.0 | 140 | 277 | 0.9 | HIGH | 90.0% | 5.6 | 0.30 | — | — |
| | 575-3-60 | 518 | 633 | 5 | — | 19.9 | 109 | 12.9 | 108 | 397 | 0.6 | HIGH | 90.0% | 4.6 | 0.24 | — | — |

NOTE(S):

a. High SCCR (Short Circuit Current Rating) is not available on the following: units with Humidi-MiZer system, Low Ambient controls, Phase loss monitor, Non-fused disconnect, Powered convenience outlet, and 575V models.

# Electrical data (cont)

## 48GC**17-28 MCA MOCP Electrical Data

| 48GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | HIGH SCCR kA[a] | NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | | MCA | FUSE OR HACR BREAKER | DISCONNECT SIZE | | MCA | FUSE OR HACR BREAKER | DISCONNECT SIZE | |
| | | | | | | | FLA | LRA | | | FLA | LRA |
| 48GC**17 Vertical | 208/230-3-60 | STD/MED | 5 | 60 | 71 | 90 | 74 | 354 | 83 | 100 | 88 | 374 |
| | | HIGH | | | 74 | 100 | 77 | 358 | 85 | 100 | 90 | 378 |
| | 460-3-60 | STD/MED | 5 | 65 | 33 | 45 | 34 | 180 | 39 | 50 | 41 | 192 |
| | | HIGH | | | 34 | 45 | 35 | 182 | 40 | 50 | 42 | 194 |
| | 575-3-60 | STD/MED | 5 | — | 25 | 30 | 26 | 147 | 30 | 35 | 32 | 155 |
| | | HIGH | | | 26 | 30 | 28 | 147 | 31 | 40 | 33 | 155 |
| 48GC**20 Vertical | 208/230-3-60 | STD/MED | 5 | 60 | 77 | 100 | 81 | 434 | 89 | 100 | 94 | 454 |
| | | HIGH | | | 80 | 100 | 83 | 438 | 91 | 100 | 97 | 458 |
| | 460-3-60 | STD/MED | 5 | 65 | 39 | 50 | 41 | 221 | 45 | 60 | 48 | 233 |
| | | HIGH | | | 40 | 50 | 42 | 223 | 46 | 60 | 49 | 235 |
| | 575-3-60 | STD/MED | 5 | — | 29 | 40 | 31 | 164 | 34 | 45 | 36 | 172 |
| | | HIGH | | | 30 | 40 | 32 | 164 | 35 | 45 | 37 | 172 |
| 48GC**24 Vertical | 208/230-3-60 | STD/MED | 5 | 60 | 89 | 100 | 92 | 461 | 101 | 125 | 106 | 481 |
| | | HIGH | | | 101 | 125 | 107 | 479 | 113 | 125 | 120 | 499 |
| | 460-3-60 | STD/MED | 5 | 65 | 42 | 50 | 44 | 256 | 49 | 60 | 51 | 268 |
| | | HIGH | | | 48 | 60 | 50 | 264 | 54 | 60 | 57 | 276 |
| | 575-3-60 | STD/MED | 5 | — | 33 | 45 | 34 | 202 | 38 | 50 | 40 | 210 |
| | | HIGH | | | 37 | 50 | 39 | 206 | 42 | 50 | 45 | 214 |
| 48GC**28 Vertical | 208/230-3-60 | STD/MED | 5 | 60 | 122 | 150 | 126 | 580 | 134 | 175 | 139 | 600 |
| | | HIGH | | | 132 | 175 | 137 | 594 | 144 | 175 | 151 | 614 |
| | 460-3-60 | STD/MED | 5 | 65 | 56 | 70 | 58 | 312 | 63 | 80 | 66 | 324 |
| | | HIGH | | | 61 | 80 | 63 | 318 | 67 | 80 | 70 | 330 |
| | 575-3-60 | STD/MED | 5 | — | 47 | 60 | 49 | 237 | 52 | 60 | 54 | 245 |
| | | HIGH | | | 51 | 60 | 52 | 241 | 55 | 70 | 58 | 249 |
| 48GC**17 Horizontal | 208/230-3-60 | HIGH | 5 | 60 | 84 | 100 | 88 | 372 | 96 | 110 | 102 | 392 |
| | 460-3-60 | HIGH | 5 | 65 | 38 | 50 | 40 | 188 | 44 | 50 | 47 | 200 |
| | 575-3-60 | HIGH | 5 | — | 30 | 35 | 31 | 151 | 34 | 40 | 37 | 159 |
| 48GC**20 Horizontal | 208/230-3-60 | HIGH | 5 | 60 | 90 | 100 | 95 | 452 | 102 | 125 | 109 | 472 |
| | 460-3-60 | HIGH | 5 | 65 | 44 | 50 | 47 | 229 | 51 | 60 | 54 | 241 |
| | 575-3-60 | HIGH | 5 | — | 34 | 40 | 35 | 168 | 38 | 45 | 41 | 176 |
| 48GC**24 Horizontal | 208/230-3-60 | HIGH | 5 | 60 | 101 | 125 | 107 | 479 | 113 | 125 | 120 | 499 |
| | 460-3-60 | HIGH | 5 | 65 | 48 | 60 | 50 | 264 | 54 | 60 | 57 | 276 |
| | 575-3-60 | HIGH | 5 | — | 37 | 50 | 39 | 206 | 42 | 50 | 45 | 214 |
| 48GC**28 Horizontal | 208/230-3-60 | HIGH | 5 | 60 | 132 | 175 | 137 | 594 | 144 | 175 | 151 | 614 |
| | 460-3-60 | HIGH | 5 | 65 | 61 | 80 | 63 | 318 | 67 | 80 | 70 | 330 |
| | 575-3-60 | HIGH | 5 | — | 51 | 60 | 52 | 241 | 55 | 70 | 58 | 249 |

NOTE(S):

a. High SCCR (Short Circuit Current Rating) is not available on the following: units with Humidi-MiZer system, Low Ambient controls, Phase loss monitor, Non-fused disconnect, and 575V models.

# Electrical data (cont)

## 48GC**17-28 MCA MOCP Electrical Data (cont)

| 48GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | w/ POWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | MCA | FUSE OR HACR BREAKER | DISCONNECT SIZE | | MCA | FUSE OR HACR BREAKER | DISCONNECT SIZE | |
| | | | | | | FLA | LRA | | | FLA | LRA |
| 48GC**17 Vertical | 208/230-3-60 | STD/MED | 5 | 76 | 100 | 80 | 359 | 88 | 100 | 93 | 379 |
| | | HIGH | | 78 | 100 | 82 | 363 | 90 | 100 | 96 | 383 |
| | 460-3-60 | STD/MED | 5 | 35 | 45 | 37 | 182 | 41 | 50 | 44 | 194 |
| | | HIGH | | 36 | 45 | 38 | 184 | 42 | 50 | 45 | 196 |
| | 575-3-60 | STD/MED | 5 | 27 | 30 | 28 | 149 | 32 | 40 | 34 | 157 |
| | | HIGH | | 28 | 35 | 30 | 149 | 33 | 40 | 35 | 157 |
| 48GC**20 Vertical | 208/230-3-60 | STD/MED | 5 | 82 | 100 | 86 | 439 | 94 | 110 | 100 | 459 |
| | | HIGH | | 84 | 100 | 89 | 443 | 96 | 110 | 102 | 463 |
| | 460-3-60 | STD/MED | 5 | 41 | 50 | 43 | 223 | 48 | 60 | 50 | 235 |
| | | HIGH | | 42 | 50 | 45 | 225 | 49 | 60 | 52 | 237 |
| | 575-3-60 | STD/MED | 5 | 31 | 40 | 33 | 166 | 36 | 45 | 38 | 174 |
| | | HIGH | | 32 | 40 | 34 | 166 | 37 | 45 | 39 | 174 |
| 48GC**24 Vertical | 208/230-3-60 | STD/MED | 5 | 94 | 125 | 98 | 466 | 106 | 125 | 112 | 486 |
| | | HIGH | | 106 | 125 | 112 | 484 | 118 | 150 | 126 | 504 |
| | 460-3-60 | STD/MED | 5 | 45 | 60 | 47 | 258 | 51 | 60 | 54 | 270 |
| | | HIGH | | 50 | 60 | 53 | 266 | 56 | 70 | 60 | 278 |
| | 575-3-60 | STD/MED | 5 | 35 | 45 | 36 | 204 | 40 | 50 | 42 | 212 |
| | | HIGH | | 39 | 50 | 41 | 208 | 44 | 50 | 47 | 216 |
| 48GC**28 Vertical | 208/230-3-60 | STD/MED | 5 | 127 | 175 | 131 | 585 | 139 | 175 | 145 | 605 |
| | | HIGH | | 137 | 175 | 143 | 599 | 149 | 200 | 157 | 619 |
| | 460-3-60 | STD/MED | 5 | 59 | 80 | 61 | 314 | 65 | 80 | 68 | 326 |
| | | HIGH | | 63 | 80 | 66 | 320 | 69 | 90 | 73 | 332 |
| | 575-3-60 | STD/MED | 5 | 49 | 60 | 51 | 239 | 54 | 60 | 56 | 247 |
| | | HIGH | | 52 | 60 | 54 | 243 | 57 | 70 | 60 | 251 |
| 48GC**17 Horizontal | 208/230-3-60 | HIGH | 5 | 89 | 100 | 94 | 377 | 100 | 125 | 108 | 397 |
| | 460-3-60 | HIGH | 5 | 40 | 50 | 43 | 190 | 47 | 50 | 50 | 202 |
| | 575-3-60 | HIGH | 5 | 31 | 40 | 33 | 153 | 36 | 45 | 39 | 161 |
| 48GC**20 Horizontal | 208/230-3-60 | HIGH | 5 | 94 | 110 | 101 | 457 | 106 | 125 | 114 | 477 |
| | 460-3-60 | HIGH | 5 | 47 | 60 | 49 | 231 | 53 | 60 | 56 | 243 |
| | 575-3-60 | HIGH | 5 | 35 | 45 | 37 | 170 | 40 | 50 | 43 | 178 |
| 48GC**24 Horizontal | 208/230-3-60 | HIGH | 5 | 106 | 125 | 112 | 484 | 118 | 150 | 126 | 504 |
| | 460-3-60 | HIGH | 5 | 50 | 60 | 53 | 266 | 56 | 70 | 60 | 278 |
| | 575-3-60 | HIGH | 5 | 39 | 50 | 41 | 208 | 44 | 50 | 47 | 216 |
| 48GC**28 Horizontal | 208/230-3-60 | HIGH | 5 | 137 | 175 | 143 | 599 | 149 | 200 | 157 | 619 |
| | 460-3-60 | HIGH | 5 | 63 | 80 | 66 | 320 | 69 | 90 | 73 | 332 |
| | 575-3-60 | HIGH | 5 | 52 | 60 | 54 | 243 | 57 | 70 | 60 | 251 |

# Electrical data (cont)

## 50GC**17 MCA MOCP Electrical Data

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | HIGH SCCR kA[a] | ELECTRIC HEATER | | | | NO CONVENIENCE OUTLET or UNPOWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | | STD SCCR CRHEATER ****00 | HIGH SCCR CRHEATER ****00 | NOM (kW) | FLA | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | |
| | | | | | | | | | | | FLA | LRA | | | FLA | LRA |
| 50GC**17 Vertical | 208/230-3-60 | STD/MED | 5 | 60 | — | — | — | — | 71 | 90 | 74 | 354 | 83 | 100 | 88 | 374 |
| | | | | | 454A | 454A | 18.8/25.0 | 52.1/60.1 | 81/91 | 90/100 | 75/84 | 354/354 | 96/106 | 100/110 | 88/97 | 374/374 |
| | | | | | 455A | 455A | 37.6/50.0 | 104.2/120.3 | 146/136 | 150/150 | 135/153 | 354/354 | 161/151 | 175/175 | 148/167 | 374/374 |
| | | | | | 456A | 456A | 56.3/75.0 | 156.4/180.4 | 172/196 | 200/225 | 195/222 | 354/354 | 187/211 | 200/225 | 208/236 | 374/374 |
| | | HIGH | 5 | 60 | — | — | — | — | 74 | 100 | 77 | 358 | 85 | 100 | 90 | 378 |
| | | | | | 454A | 454A | 18.8/25.0 | 52.1/60.1 | 84/94 | 100/100 | 77/86 | 358/358 | 99/109 | 100/110 | 91/100 | 378/378 |
| | | | | | 455A | 455A | 37.6/50.0 | 104.2/120.3 | 149/139 | 150/150 | 137/156 | 358/358 | 164/154 | 175/175 | 151/169 | 378/378 |
| | | | | | 456A | 456A | 56.3/75.0 | 156.4/180.4 | 175/199 | 200/225 | 197/225 | 358/358 | 190/214 | 200/225 | 211/238 | 378/378 |
| | 460-3-60 | STD/MED | 5 | 65 | — | — | — | — | 33 | 45 | 34 | 180 | 39 | 50 | 41 | 192 |
| | | | | | 457A | 457A | 25.0 | 30.1 | 45 | 50 | 42 | 180 | 53 | 60 | 49 | 192 |
| | | | | | 458A | 458A | 50.0 | 60.1 | 68 | 70 | 76 | 180 | 75 | 80 | 83 | 192 |
| | | | | | 459A | 459A | 75.0 | 90.2 | 98 | 100 | 111 | 180 | 106 | 110 | 118 | 192 |
| | | HIGH | 5 | 65 | — | — | — | — | 34 | 45 | 35 | 182 | 40 | 50 | 42 | 194 |
| | | | | | 457A | 457A | 25.0 | 30.1 | 46 | 50 | 43 | 182 | 54 | 60 | 50 | 194 |
| | | | | | 458A | 458A | 50.0 | 60.1 | 69 | 80 | 77 | 182 | 77 | 80 | 84 | 194 |
| | | | | | 459A | 459A | 75.0 | 90.2 | 99 | 100 | 112 | 182 | 107 | 110 | 119 | 194 |
| | 575-3-60 | STD/MED | 5 | — | — | — | — | — | 25 | 30 | 26 | 147 | 30 | 35 | 32 | 155 |
| | | | | | 460A | — | 24.8 | 23.9 | 36 | 40 | 33 | 147 | 42 | 45 | 39 | 155 |
| | | | | | 461A | — | 49.6 | 47.7 | 66 | 70 | 61 | 147 | 72 | 80 | 66 | 155 |
| | | | | | 462A | — | 74.4 | 71.6 | 78 | 80 | 88 | 147 | 84 | 90 | 94 | 155 |
| | | HIGH | 5 | — | — | — | — | — | 26 | 30 | 28 | 147 | 31 | 40 | 33 | 155 |
| | | | | | 460A | — | 24.8 | 23.9 | 37 | 40 | 34 | 147 | 43 | 45 | 40 | 155 |
| | | | | | 461A | — | 49.6 | 47.7 | 67 | 70 | 62 | 147 | 73 | 80 | 67 | 155 |
| | | | | | 462A | — | 74.4 | 71.6 | 79 | 90 | 89 | 147 | 85 | 90 | 95 | 155 |
| 50GC**17 Horizontal | 208/230-3-60 | HIGH | 5 | 60 | — | — | — | — | 84 | 100 | 88 | 372 | 96 | 110 | 102 | 392 |
| | | | | | 463A | 463A | 18.8/25.0 | 52.1/60.1 | 97/107 | 100/110 | 89/98 | 372/372 | 111/121 | 125/125 | 102/112 | 392/392 |
| | | | | | 464A | 464A | 37.6/50.0 | 104.2/120.3 | 162/152 | 175/175 | 149/167 | 372/372 | 176/167 | 200/175 | 162/181 | 392/392 |
| | | | | | 465A | 465A | 56.3/75.0 | 156.4/180.4 | 188/212 | 200/225 | 209/236 | 372/372 | 203/227 | 225/250 | 222/250 | 392/392 |
| | 460-3-60 | HIGH | 5 | 65 | — | — | — | — | 38 | 50 | 40 | 188 | 44 | 50 | 47 | 200 |
| | | | | | 466A | 466A | 25.0 | 30.1 | 52 | 60 | 47 | 188 | 59 | 60 | 55 | 200 |
| | | | | | 467A | 467A | 50.0 | 60.1 | 74 | 80 | 82 | 188 | 82 | 90 | 89 | 200 |
| | | | | | 468A | 468A | 75.0 | 90.2 | 104 | 110 | 117 | 188 | 112 | 125 | 124 | 200 |
| | 575-3-60 | HIGH | 5 | — | — | — | — | — | 30 | 35 | 31 | 151 | 34 | 40 | 37 | 159 |
| | | | | | 469A | — | 24.8 | 23.9 | 41 | 45 | 38 | 151 | 47 | 50 | 44 | 159 |
| | | | | | 470A | — | 49.6 | 47.7 | 71 | 80 | 65 | 151 | 77 | 80 | 71 | 159 |
| | | | | | 471A | — | 74.4 | 71.6 | 83 | 90 | 93 | 151 | 89 | 90 | 98 | 159 |

NOTE(S):

a. High SCCR (Short Circuit Current Rating) is not available on the following: units with Humidi-MiZer system, Low Ambient controls, Phase loss monitor, Non-fused disconnect, and 575V models.

# Electrical data (cont)

## 50GC**17 MCA MOCP Electrical Data (cont)

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | ELECTRIC HEATER | | | w/ POWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | STD SCCR CRHEATER ****00 | NOM (kW) | FLA | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | |
| | | | | | | | | | FLA | LRA | | | FLA | LRA |
| 50GC**17 Vertical | 208/230-3-60 | STD/MED | 5 | — | — | — | 76 | 100 | 80 | 359 | 88 | 100 | 93 | 379 |
| | | | | 454A | 18.8/25.0 | 52.1/60.1 | 87/97 | 100/100 | 80/89 | 359/359 | 102/112 | 110/125 | 94/103 | 379/379 |
| | | | | 455A | 37.6/50.0 | 104.2/120.3 | 152/142 | 175/150 | 140/159 | 359/359 | 167/157 | 175/175 | 154/172 | 379/379 |
| | | | | 456A | 56.3/75.0 | 156.4/180.4 | 178/202 | 200/225 | 200/228 | 359/359 | 193/217 | 200/225 | 214/241 | 379/379 |
| | | HIGH | 5 | — | — | — | 78 | 100 | 82 | 363 | 90 | 100 | 96 | 383 |
| | | | | 454A | 18.8/25.0 | 52.1/60.1 | 90/100 | 100/100 | 83/92 | 363/363 | 105/115 | 110/125 | 96/105 | 383/383 |
| | | | | 455A | 37.6/50.0 | 104.2/120.3 | 155/145 | 175/150 | 143/161 | 363/363 | 170/160 | 175/175 | 156/175 | 383/383 |
| | | | | 456A | 56.3/75.0 | 156.4/180.4 | 181/205 | 200/225 | 203/230 | 363/363 | 196/220 | 200/225 | 216/244 | 383/383 |
| | 460-3-60 | STD/MED | 5 | — | — | — | 35 | 45 | 37 | 182 | 41 | 50 | 44 | 194 |
| | | | | 457A | 25.0 | 30.1 | 48 | 50 | 44 | 182 | 56 | 60 | 51 | 194 |
| | | | | 458A | 50.0 | 60.1 | 70 | 80 | 79 | 182 | 78 | 80 | 86 | 194 |
| | | | | 459A | 75.0 | 90.2 | 100 | 110 | 113 | 182 | 108 | 110 | 120 | 194 |
| | | HIGH | 5 | — | — | — | 36 | 45 | 38 | 184 | 42 | 50 | 45 | 196 |
| | | | | 457A | 25.0 | 30.1 | 49 | 50 | 45 | 184 | 57 | 60 | 52 | 196 |
| | | | | 458A | 50.0 | 60.1 | 72 | 80 | 80 | 184 | 79 | 80 | 87 | 196 |
| | | | | 459A | 75.0 | 90.2 | 102 | 110 | 114 | 184 | 110 | 110 | 121 | 196 |
| | 575-3-60 | STD/MED | 5 | — | — | — | 27 | 30 | 28 | 149 | 32 | 40 | 34 | 157 |
| | | | | 460A | 24.8 | 23.9 | 38 | 40 | 35 | 149 | 44 | 45 | 41 | 157 |
| | | | | 461A | 49.6 | 47.7 | 68 | 70 | 63 | 149 | 74 | 80 | 68 | 157 |
| | | | | 462A | 74.4 | 71.6 | 80 | 90 | 90 | 149 | 86 | 90 | 96 | 157 |
| | | HIGH | 5 | — | — | — | 28 | 35 | 30 | 149 | 33 | 40 | 35 | 157 |
| | | | | 460A | 24.8 | 23.9 | 40 | 40 | 36 | 149 | 46 | 50 | 42 | 157 |
| | | | | 461A | 49.6 | 47.7 | 69 | 70 | 64 | 149 | 75 | 80 | 69 | 157 |
| | | | | 462A | 74.4 | 71.6 | 81 | 90 | 91 | 149 | 87 | 90 | 97 | 157 |
| 50GC**17 Horizontal | 208/230-3-60 | HIGH | 5 | — | — | — | 89 | 100 | 94 | 377 | 100 | 125 | 108 | 397 |
| | | | | 463A | 18.8/25.0 | 52.1/60.1 | 103/113 | 110/125 | 94/104 | 377/377 | 117/127 | 125/150 | 108/117 | 397/397 |
| | | | | 464A | 37.6/50.0 | 104.2/120.3 | 168/158 | 175/175 | 154/173 | 377/377 | 182/173 | 200/175 | 168/186 | 397/397 |
| | | | | 465A | 56.3/75.0 | 156.4/180.4 | 194/218 | 200/250 | 214/242 | 377/377 | 209/233 | 225/250 | 228/256 | 397/397 |
| | 460-3-60 | HIGH | 5 | — | — | — | 40 | 50 | 43 | 190 | 46 | 50 | 50 | 202 |
| | | | | 466A | 25.0 | 30.1 | 54 | 60 | 50 | 190 | 62 | 70 | 57 | 202 |
| | | | | 467A | 50.0 | 60.1 | 77 | 80 | 85 | 190 | 85 | 90 | 92 | 202 |
| | | | | 468A | 75.0 | 90.2 | 107 | 125 | 119 | 190 | 115 | 125 | 126 | 202 |
| | 575-3-60 | HIGH | 5 | — | — | — | 31 | 40 | 33 | 153 | 36 | 45 | 39 | 161 |
| | | | | 469A | 24.8 | 23.9 | 44 | 45 | 40 | 153 | 50 | 50 | 46 | 161 |
| | | | | 470A | 49.6 | 47.7 | 73 | 80 | 67 | 153 | 79 | 80 | 73 | 161 |
| | | | | 471A | 74.4 | 71.6 | 85 | 90 | 95 | 153 | 91 | 100 | 100 | 161 |

# Electrical data (cont)

## 50GC**20 MCA MOCP Electrical Data

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | HIGH SCCR kA[a] | ELECTRIC HEATER | | | | NO CONVENIENCE OUTLET or UNPOWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | | STD SCCR CRHEATER ****00 | HIGH SCCR CRHEATER ****00 | NOM (kW) | FLA | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | |
| | | | | | | | | | | | FLA | LRA | | | FLA | LRA |
| 50GC**20 Vertical | 208/230-3-60 | STD/MED | 5 | 60 | — | — | — | — | 77 | 100 | 81 | 434 | 89 | 100 | 94 | 454 |
| | | | 5 | 60 | 454A | 454A | 18.8/25.0 | 52.1/60.1 | 81/91 | 100/100 | 81/84 | 434/434 | 96/106 | 100/110 | 94/97 | 454/454 |
| | | | 5 | 60 | 455A | 455A | 37.6/50.0 | 104.2/120.3 | 146/136 | 150/150 | 135/153 | 434/434 | 161/151 | 175/175 | 148/167 | 454/454 |
| | | | 5 | 60 | 456A | 456A | 56.3/75.0 | 156.4/180.4 | 172/196 | 200/225 | 195/222 | 434/434 | 187/211 | 200/225 | 208/236 | 454/454 |
| | | HIGH | 5 | 60 | — | — | — | — | 80 | 100 | 83 | 438 | 91 | 100 | 97 | 458 |
| | | | 5 | 60 | 454A | 454A | 18.8/25.0 | 52.1/60.1 | 84/94 | 100/100 | 83/86 | 438/438 | 99/109 | 100/110 | 97/100 | 458/458 |
| | | | 5 | 60 | 455A | 455A | 37.6/50.0 | 104.2/120.3 | 149/139 | 150/150 | 137/156 | 438/438 | 164/154 | 175/175 | 151/169 | 458/458 |
| | | | 5 | 60 | 456A | 456A | 56.3/75.0 | 156.4/180.4 | 175/199 | 200/225 | 197/225 | 438/438 | 190/214 | 200/225 | 211/238 | 458/458 |
| | 460-3-60 | STD/MED | 5 | 65 | — | — | — | — | 39 | 50 | 41 | 221 | 45 | 60 | 48 | 233 |
| | | | 5 | 65 | 457A | 457A | 25.0 | 30.1 | 45 | 50 | 42 | 221 | 53 | 60 | 49 | 233 |
| | | | 5 | 65 | 458A | 458A | 50.0 | 60.1 | 68 | 70 | 76 | 221 | 75 | 80 | 83 | 233 |
| | | | 5 | 65 | 459A | 459A | 75.0 | 90.2 | 98 | 100 | 111 | 221 | 106 | 110 | 118 | 233 |
| | | HIGH | 5 | 65 | — | — | — | — | 40 | 50 | 42 | 223 | 46 | 60 | 49 | 235 |
| | | | 5 | 65 | 457A | 457A | 25.0 | 30.1 | 46 | 50 | 43 | 223 | 54 | 60 | 50 | 235 |
| | | | 5 | 65 | 458A | 458A | 50.0 | 60.1 | 69 | 80 | 77 | 223 | 77 | 80 | 84 | 235 |
| | | | 5 | 65 | 459A | 459A | 75.0 | 90.2 | 99 | 100 | 112 | 223 | 107 | 110 | 119 | 235 |
| | 575-3-60 | STD/MED | 5 | — | — | — | — | — | 29 | 40 | 31 | 164 | 34 | 45 | 36 | 172 |
| | | | 5 | — | 460A | — | 24.8 | 23.9 | 36 | 40 | 33 | 164 | 42 | 45 | 39 | 172 |
| | | | 5 | — | 461A | — | 49.6 | 47.7 | 66 | 70 | 61 | 164 | 72 | 80 | 66 | 172 |
| | | | 5 | — | 462A | — | 74.4 | 71.6 | 78 | 80 | 88 | 164 | 84 | 90 | 94 | 172 |
| | | HIGH | 5 | — | — | — | — | — | 30 | 40 | 32 | 164 | 35 | 45 | 37 | 172 |
| | | | 5 | — | 460A | — | 24.8 | 23.9 | 37 | 40 | 34 | 164 | 43 | 45 | 40 | 172 |
| | | | 5 | — | 461A | — | 49.6 | 47.7 | 67 | 70 | 62 | 164 | 73 | 80 | 67 | 172 |
| | | | 5 | — | 462A | — | 74.4 | 71.6 | 79 | 90 | 89 | 164 | 85 | 90 | 95 | 172 |
| 50GC**20 Horizontal | 208/230-3-60 | HIGH | 5 | 60 | — | — | — | — | 90 | 100 | 95 | 452 | 102 | 125 | 109 | 472 |
| | | | 5 | 60 | 463A | 463A | 18.8/25.0 | 52.1/60.1 | 97/107 | 100/110 | 95/98 | 452/452 | 111/121 | 125/125 | 109/112 | 472/472 |
| | | | 5 | 60 | 464A | 464A | 37.6/50.0 | 104.2/120.3 | 162/152 | 175/175 | 149/167 | 452/452 | 176/167 | 200/175 | 162/181 | 472/472 |
| | | | 5 | 60 | 465A | 465A | 56.3/75.0 | 156.4/180.4 | 188/212 | 200/225 | 209/236 | 452/452 | 203/227 | 225/250 | 222/250 | 472/472 |
| | 460-3-60 | HIGH | 5 | 65 | — | — | — | — | 44 | 50 | 47 | 229 | 51 | 60 | 54 | 241 |
| | | | 5 | 65 | 466A | 466A | 25.0 | 30.1 | 52 | 60 | 47 | 229 | 59 | 60 | 55 | 241 |
| | | | 5 | 65 | 467A | 467A | 50.0 | 60.1 | 74 | 80 | 82 | 229 | 82 | 90 | 89 | 241 |
| | | | 5 | 65 | 468A | 468A | 75.0 | 90.2 | 104 | 110 | 117 | 229 | 112 | 125 | 124 | 241 |
| | 575-3-60 | HIGH | 5 | — | — | — | — | — | 34 | 40 | 35 | 168 | 38 | 45 | 41 | 176 |
| | | | 5 | — | 469A | — | 24.8 | 23.9 | 41 | 45 | 38 | 168 | 47 | 50 | 44 | 176 |
| | | | 5 | — | 470A | — | 49.6 | 47.7 | 71 | 80 | 65 | 168 | 77 | 80 | 71 | 176 |
| | | | 5 | — | 471A | — | 74.4 | 71.6 | 83 | 90 | 93 | 168 | 89 | 90 | 98 | 176 |

NOTE(S):

a. High SCCR (Short Circuit Current Rating) is not available on the following: units with Humidi-MiZer system, Low Ambient controls, Phase loss monitor, Non-fused disconnect, and 575V models.

# Electrical data (cont)

## 50GC**20 MCA MOCP Electrical Data (cont)

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | ELECTRIC HEATER | | | w/ POWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | STD SCCR CRHEATER ****00 | NOM (kW) | FLA | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | |
| | | | | | | | | | FLA | LRA | | | FLA | LRA |
| 50GC**20 Vertical | 208/230-3-60 | STD/MED | 5 | — | — | — | 82 | 100 | 86 | 439 | 94 | 110 | 100 | 459 |
| | | | 5 | 454A | 18.8/25.0 | 52.1/60.1 | 87/97 | 100/100 | 86/89 | 439/439 | 102/112 | 110/125 | 100/103 | 459/459 |
| | | | 5 | 455A | 37.6/50.0 | 104.2/120.3 | 152/142 | 175/150 | 140/159 | 439/439 | 167/157 | 175/175 | 154/172 | 459/459 |
| | | | 5 | 456A | 56.3/75.0 | 156.4/180.4 | 178/202 | 200/225 | 200/228 | 439/439 | 193/217 | 200/225 | 214/241 | 459/459 |
| | | HIGH | 5 | — | — | — | 84 | 100 | 89 | 443 | 96 | 110 | 102 | 463 |
| | | | 5 | 454A | 18.8/25.0 | 52.1/60.1 | 90/100 | 100/100 | 89/92 | 443/443 | 105/115 | 110/125 | 102/105 | 463/463 |
| | | | 5 | 455A | 37.6/50.0 | 104.2/120.3 | 155/145 | 175/150 | 143/161 | 443/443 | 170/160 | 175/175 | 156/175 | 463/463 |
| | | | 5 | 456A | 56.3/75.0 | 156.4/180.4 | 181/205 | 200/225 | 203/230 | 443/443 | 196/220 | 200/225 | 216/244 | 463/463 |
| | 460-3-60 | STD/MED | 5 | — | — | — | 41 | 50 | 43 | 223 | 48 | 60 | 50 | 235 |
| | | | 5 | 457A | 25.0 | 30.1 | 48 | 50 | 44 | 223 | 56 | 60 | 51 | 235 |
| | | | 5 | 458A | 50.0 | 60.1 | 70 | 80 | 79 | 223 | 78 | 80 | 86 | 235 |
| | | | 5 | 459A | 75.0 | 90.2 | 100 | 110 | 113 | 223 | 108 | 110 | 120 | 235 |
| | | HIGH | 5 | — | — | — | 42 | 50 | 45 | 225 | 49 | 60 | 52 | 237 |
| | | | 5 | 457A | 25.0 | 30.1 | 49 | 50 | 45 | 225 | 57 | 60 | 52 | 237 |
| | | | 5 | 458A | 50.0 | 60.1 | 72 | 80 | 80 | 225 | 79 | 80 | 87 | 237 |
| | | | 5 | 459A | 75.0 | 90.2 | 102 | 110 | 114 | 225 | 110 | 110 | 121 | 237 |
| | 575-3-60 | STD/MED | 5 | — | — | — | 31 | 40 | 33 | 166 | 36 | 45 | 38 | 174 |
| | | | 5 | 460A | 24.8 | 23.9 | 38 | 40 | 35 | 166 | 44 | 45 | 41 | 174 |
| | | | 5 | 461A | 49.6 | 47.7 | 68 | 70 | 63 | 166 | 74 | 80 | 68 | 174 |
| | | | 5 | 462A | 74.4 | 71.6 | 80 | 90 | 90 | 166 | 86 | 90 | 96 | 174 |
| | | HIGH | 5 | — | — | — | 32 | 40 | 34 | 166 | 37 | 45 | 39 | 174 |
| | | | 5 | 460A | 24.8 | 23.9 | 40 | 40 | 36 | 166 | 46 | 50 | 42 | 174 |
| | | | 5 | 461A | 49.6 | 47.7 | 69 | 70 | 64 | 166 | 75 | 80 | 69 | 174 |
| | | | 5 | 462A | 74.4 | 71.6 | 81 | 90 | 91 | 166 | 87 | 90 | 97 | 174 |
| 50GC**20 Horizontal | 208/230-3-60 | HIGH | 5 | — | — | — | 84 | 100 | 88 | 372 | 96 | 110 | 102 | 392 |
| | | | 5 | 463A | 18.8/25.0 | 52.1/60.1 | 94 | 110 | 101 | 457 | 106 | 125 | 114 | 477 |
| | | | 5 | 464A | 37.6/50.0 | 104.2/120.3 | 103/113 | 110/125 | 101/104 | 457/457 | 117/127 | 125/150 | 114/117 | 477/477 |
| | | | 5 | 465A | 56.3/75.0 | 156.4/180.4 | 168/158 | 175/175 | 154/173 | 457/457 | 182/173 | 200/175 | 168/186 | 477/477 |
| | 460-3-60 | HIGH | 5 | — | — | — | 194/218 | 200/250 | 214/242 | 457/457 | 209/233 | 225/250 | 228/256 | 477/477 |
| | | | 5 | 466A | 25.0 | 30.1 | 47 | 60 | 49 | 231 | 53 | 60 | 56 | 243 |
| | | | 5 | 467A | 50.0 | 60.1 | 54 | 60 | 50 | 231 | 62 | 70 | 57 | 243 |
| | | | 5 | 468A | 75.0 | 90.2 | 77 | 80 | 85 | 231 | 85 | 90 | 92 | 243 |
| | 575-3-60 | HIGH | 5 | — | — | — | 107 | 125 | 119 | 231 | 115 | 125 | 126 | 243 |
| | | | 5 | 469A | 24.8 | 23.9 | 35 | 45 | 37 | 170 | 40 | 50 | 43 | 178 |
| | | | 5 | 470A | 49.6 | 47.7 | 44 | 45 | 40 | 170 | 50 | 50 | 46 | 178 |
| | | | 5 | 471A | 74.4 | 71.6 | 73 | 80 | 67 | 170 | 79 | 80 | 73 | 178 |

# Electrical data (cont)

## 50GC**24 MCA MOCP Electrical Data

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | HIGH SCCR kA[a] | ELECTRIC HEATER | | | | NO CONVENIENCE OUTLET or UNPOWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | | STD SCCR CRHEATER ****00 | HIGH SCCR CRHEATER ****00 | NOM (kW) | FLA | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | |
| | | | | | | | | | | | FLA | LRA | | | FLA | LRA |
| 50GC**24 Vertical | 208/230-3-60 | STD/MED | 5 | 60 | — | — | — | — | 89 | 100 | 92 | 461 | 101 | 125 | 106 | 481 |
| | | | | | 454A | 454A | 18.8/25.0 | 52.1/60.1 | 89/91 | 100/100 | 92/92 | 461/461 | 101/106 | 125/125 | 106/106 | 481/481 |
| | | | | | 455A | 455A | 37.6/50.0 | 104.2/120.3 | 146/136 | 150/150 | 135/153 | 461/461 | 161/151 | 175/175 | 148/167 | 481/481 |
| | | | | | 456A | 456A | 56.3/75.0 | 156.4/180.4 | 172/196 | 200/225 | 195/222 | 461/461 | 187/211 | 200/225 | 208/236 | 481/481 |
| | | HIGH | 5 | 60 | — | — | — | — | 101 | 125 | 107 | 479 | 113 | 125 | 120 | 499 |
| | | | | | 454A | 454A | 18.8/25.0 | 52.1/60.1 | 101/107 | 125/125 | 107/107 | 479/479 | 113/121 | 125/125 | 120/120 | 499/499 |
| | | | | | 455A | 455A | 37.6/50.0 | 104.2/120.3 | 162/152 | 175/175 | 149/167 | 479/479 | 176/167 | 200/175 | 162/181 | 499/499 |
| | | | | | 456A | 456A | 56.3/75.0 | 156.4/180.4 | 188/212 | 200/225 | 209/236 | 479/479 | 203/227 | 225/250 | 222/250 | 499/499 |
| | 460-3-60 | STD/MED | 5 | 65 | — | — | — | — | 42 | 50 | 44 | 256 | 49 | 60 | 51 | 268 |
| | | | | | 457A | 457A | 25.0 | 30.1 | 45 | 50 | 44 | 256 | 53 | 60 | 51 | 268 |
| | | | | | 458A | 458A | 50.0 | 60.1 | 68 | 70 | 76 | 256 | 75 | 80 | 83 | 268 |
| | | | | | 459A | 459A | 75.0 | 90.2 | 98 | 100 | 111 | 256 | 106 | 110 | 118 | 268 |
| | | HIGH | 5 | 65 | — | — | — | — | 48 | 60 | 50 | 264 | 54 | 60 | 57 | 276 |
| | | | | | 457A | 457A | 25.0 | 30.1 | 52 | 60 | 50 | 264 | 59 | 60 | 57 | 276 |
| | | | | | 458A | 458A | 50.0 | 60.1 | 74 | 80 | 82 | 264 | 82 | 90 | 89 | 276 |
| | | | | | 459A | 459A | 75.0 | 90.2 | 104 | 110 | 117 | 264 | 112 | 125 | 124 | 276 |
| | 575-3-60 | STD/MED | 5 | — | — | — | — | — | 33 | 45 | 34 | 202 | 38 | 50 | 40 | 210 |
| | | | | | 460A | — | 24.8 | 23.9 | 36 | 45 | 34 | 202 | 42 | 50 | 40 | 210 |
| | | | | | 461A | — | 49.6 | 47.7 | 66 | 70 | 61 | 202 | 72 | 80 | 66 | 210 |
| | | | | | 462A | — | 74.4 | 71.6 | 78 | 80 | 88 | 202 | 84 | 90 | 94 | 210 |
| | | HIGH | 5 | — | — | — | — | — | 37 | 50 | 39 | 206 | 42 | 50 | 45 | 214 |
| | | | | | 460A | — | 24.8 | 23.9 | 41 | 50 | 39 | 206 | 47 | 50 | 45 | 214 |
| | | | | | 461A | — | 49.6 | 47.7 | 71 | 80 | 65 | 206 | 77 | 80 | 71 | 214 |
| | | | | | 462A | — | 74.4 | 71.6 | 83 | 90 | 93 | 206 | 89 | 90 | 98 | 214 |
| 50GC**24 Horizontal | 208/230-3-60 | HIGH | 5 | 60 | — | — | — | — | 101 | 125 | 107 | 479 | 113 | 125 | 120 | 499 |
| | | | | | 463A | 463A | 18.8/25.0 | 52.1/60.1 | 101/107 | 125/125 | 107/107 | 479/479 | 113/121 | 125/125 | 120/120 | 499/499 |
| | | | | | 464A | 464A | 37.6/50.0 | 104.2/120.3 | 162/152 | 175/175 | 149/167 | 479/479 | 176/167 | 200/175 | 162/181 | 499/499 |
| | | | | | 465A | 465A | 56.3/75.0 | 156.4/180.4 | 188/212 | 200/225 | 209/236 | 479/479 | 203/227 | 225/250 | 222/250 | 499/499 |
| | 460-3-60 | HIGH | 5 | 65 | — | — | — | — | 48 | 60 | 50 | 264 | 54 | 60 | 57 | 276 |
| | | | | | 466A | 466A | 25.0 | 30.1 | 52 | 60 | 50 | 264 | 59 | 60 | 57 | 276 |
| | | | | | 467A | 467A | 50.0 | 60.1 | 74 | 80 | 82 | 264 | 82 | 90 | 89 | 276 |
| | | | | | 468A | 468A | 75.0 | 90.2 | 104 | 110 | 117 | 264 | 112 | 125 | 124 | 276 |
| | 575-3-60 | HIGH | 5 | — | — | — | — | — | 37 | 50 | 39 | 206 | 42 | 50 | 45 | 214 |
| | | | | | 469A | — | 24.8 | 23.9 | 41 | 50 | 39 | 206 | 47 | 50 | 45 | 214 |
| | | | | | 470A | — | 49.6 | 47.7 | 71 | 80 | 65 | 206 | 77 | 80 | 71 | 214 |
| | | | | | 471A | — | 74.4 | 71.6 | 83 | 90 | 93 | 206 | 89 | 90 | 98 | 214 |

NOTE(S):

a. High SCCR (Short Circuit Current Rating) is not available on the following: units with Humidi-MiZer system, Low Ambient controls, Phase loss monitor, Non-fused disconnect, and 575V models.

# Electrical data (cont)

## 50GC**24 MCA MOCP Electrical Data (cont)

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | ELECTRIC HEATER | | | w/ POWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | | | | | | DISCONNECT SIZE | | | | DISCONNECT SIZE | |
| | | | | STD SCCR CRHEATER ****00 | NOM (kW) | FLA | MCA | FUSE OR HACR BRKR | FLA | LRA | MCA | FUSE OR HACR BRKR | FLA | LRA |
| 50GC**24 Vertical | 208/230-3-60 | STD/MED | 5 | — | — | — | 94 | 125 | 98 | 466 | 106 | 125 | 112 | 486 |
| | | | | 454A | 18.8/25.0 | 52.1/60.1 | 94/97 | 125/125 | 98/98 | 466/466 | 106/112 | 125/125 | 112/112 | 486/486 |
| | | | | 455A | 37.6/50.0 | 104.2/120.3 | 152/142 | 175/150 | 140/159 | 466/466 | 167/157 | 175/175 | 154/172 | 486/486 |
| | | | | 456A | 56.3/75.0 | 156.4/180.4 | 178/202 | 200/225 | 200/228 | 466/466 | 193/217 | 200/225 | 214/241 | 486/486 |
| | | HIGH | 5 | — | — | — | 106 | 125 | 112 | 484 | 118 | 150 | 126 | 504 |
| | | | | 454A | 18.8/25.0 | 52.1/60.1 | 106/113 | 125/125 | 112/112 | 484/484 | 118/127 | 150/150 | 126/126 | 504/504 |
| | | | | 455A | 37.6/50.0 | 104.2/120.3 | 168/158 | 175/175 | 154/173 | 484/484 | 182/173 | 200/175 | 168/186 | 504/504 |
| | | | | 456A | 56.3/75.0 | 156.4/180.4 | 194/218 | 200/250 | 214/242 | 484/484 | 209/233 | 225/250 | 228/256 | 504/504 |
| | 460-3-60 | STD/MED | 5 | — | — | — | 45 | 60 | 47 | 258 | 51 | 60 | 54 | 270 |
| | | | | 457A | 25.0 | 30.1 | 48 | 60 | 47 | 258 | 56 | 60 | 54 | 270 |
| | | | | 458A | 50.0 | 60.1 | 70 | 80 | 79 | 258 | 78 | 80 | 86 | 270 |
| | | | | 459A | 75.0 | 90.2 | 100 | 110 | 113 | 258 | 108 | 110 | 120 | 270 |
| | | HIGH | 5 | — | — | — | 50 | 60 | 53 | 266 | 56 | 70 | 60 | 278 |
| | | | | 457A | 25.0 | 30.1 | 54 | 60 | 53 | 266 | 62 | 70 | 60 | 278 |
| | | | | 458A | 50.0 | 60.1 | 77 | 80 | 85 | 266 | 85 | 90 | 92 | 278 |
| | | | | 459A | 75.0 | 90.2 | 107 | 125 | 119 | 266 | 115 | 125 | 126 | 278 |
| | 575-3-60 | STD/MED | 5 | — | — | — | 35 | 45 | 36 | 204 | 40 | 50 | 42 | 212 |
| | | | | 460A | 24.8 | 23.9 | 38 | 45 | 36 | 204 | 44 | 50 | 42 | 212 |
| | | | | 461A | 49.6 | 47.7 | 68 | 70 | 63 | 204 | 74 | 80 | 68 | 212 |
| | | | | 462A | 74.4 | 71.6 | 80 | 90 | 90 | 204 | 86 | 90 | 96 | 212 |
| | | HIGH | 5 | — | — | — | 39 | 50 | 41 | 208 | 44 | 50 | 47 | 216 |
| | | | | 460A | 24.8 | 23.9 | 44 | 50 | 41 | 208 | 50 | 50 | 47 | 216 |
| | | | | 461A | 49.6 | 47.7 | 73 | 80 | 67 | 208 | 79 | 80 | 73 | 216 |
| | | | | 462A | 74.4 | 71.6 | 85 | 90 | 95 | 208 | 91 | 100 | 100 | 216 |
| 50GC**24 Horizontal | 208/230-3-60 | HIGH | 5 | — | — | — | 106 | 125 | 112 | 484 | 118 | 150 | 126 | 504 |
| | | | | 463A | 18.8/25.0 | 52.1/60.1 | 106/113 | 125/125 | 112/112 | 484/484 | 118/127 | 150/150 | 126/126 | 504/504 |
| | | | | 464A | 37.6/50.0 | 104.2/120.3 | 168/158 | 175/175 | 154/173 | 484/484 | 182/173 | 200/175 | 168/186 | 504/504 |
| | | | | 465A | 56.3/75.0 | 156.4/180.4 | 194/218 | 200/250 | 214/242 | 484/484 | 209/233 | 225/250 | 228/256 | 504/504 |
| | 460-3-60 | HIGH | 5 | — | — | — | 50 | 60 | 53 | 266 | 56 | 70 | 60 | 278 |
| | | | | 466A | 25.0 | 30.1 | 54 | 60 | 53 | 266 | 62 | 70 | 60 | 278 |
| | | | | 467A | 50.0 | 60.1 | 77 | 80 | 85 | 266 | 85 | 90 | 92 | 278 |
| | | | | 468A | 75.0 | 90.2 | 107 | 125 | 119 | 266 | 115 | 125 | 126 | 278 |
| | 575-3-60 | HIGH | 5 | — | — | — | 39 | 50 | 41 | 208 | 44 | 50 | 47 | 216 |
| | | | | 469A | 24.8 | 23.9 | 44 | 50 | 41 | 208 | 50 | 50 | 47 | 216 |
| | | | | 470A | 49.6 | 47.7 | 73 | 80 | 67 | 208 | 79 | 80 | 73 | 216 |
| | | | | 471A | 74.4 | 71.6 | 85 | 90 | 95 | 208 | 91 | 100 | 100 | 216 |

# Electrical data (cont)

## 50GC**28 MCA MOCP Electrical Data

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | HIGH SCCR kA[a] | ELECTRIC HEATER | | | | NO CONVENIENCE OUTLET or UNPOWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | | STD SCCR CRHEATER ****00 | HIGH SCCR CRHEATER ****00 | NOM (kW) | FLA | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | |
| | | | | | | | | | | | FLA | LRA | | | FLA | LRA |
| 50GC**28 Vertical | 208/230-3-60 | STD/MED | 5 | 60 | — | — | — | — | 122 | 150 | 126 | 580 | 134 | 175 | 139 | 600 |
| | | | | | 454A | 454A | 18.8/25.0 | 52.1/60.1 | 122/122 | 150/150 | 126/126 | 580/580 | 134/134 | 175/175 | 139/139 | 600/600 |
| | | | | | 455A | 455A | 37.6/50.0 | 104.2/120.3 | 149/139 | 150/150 | 137/156 | 580/580 | 164/154 | 175/175 | 151/169 | 600/600 |
| | | | | | 456A | 456A | 56.3/75.0 | 156.4/180.4 | 175/199 | 200/225 | 197/225 | 580/580 | 190/214 | 200/225 | 211/238 | 600/600 |
| | | HIGH | 5 | 60 | — | — | — | — | 132 | 175 | 137 | 594 | 144 | 175 | 151 | 614 |
| | | | | | 454A | 454A | 18.8/25.0 | 52.1/60.1 | 132/132 | 175/175 | 137/137 | 594/594 | 144/144 | 175/175 | 151/151 | 614/614 |
| | | | | | 455A | 455A | 37.6/50.0 | 104.2/120.3 | 162/152 | 175/175 | 149/167 | 594/594 | 176/167 | 200/175 | 162/181 | 614/614 |
| | | | | | 456A | 456A | 56.3/75.0 | 156.4/180.4 | 188/212 | 200/225 | 209/236 | 594/594 | 203/227 | 225/250 | 222/250 | 614/614 |
| | 460-3-60 | STD/MED | 5 | 65 | — | — | — | — | 56 | 70 | 58 | 312 | 63 | 80 | 66 | 324 |
| | | | | | 457A | 457A | 25.0 | 30.1 | 56 | 70 | 58 | 312 | 63 | 80 | 66 | 324 |
| | | | | | 458A | 458A | 50.0 | 60.1 | 69 | 80 | 77 | 312 | 77 | 80 | 84 | 324 |
| | | | | | 459A | 459A | 75.0 | 90.2 | 99 | 100 | 112 | 312 | 107 | 110 | 119 | 324 |
| | | HIGH | 5 | 65 | — | — | — | — | 61 | 80 | 63 | 318 | 67 | 80 | 70 | 330 |
| | | | | | 457A | 457A | 25.0 | 30.1 | 61 | 80 | 63 | 318 | 67 | 80 | 70 | 330 |
| | | | | | 458A | 458A | 50.0 | 60.1 | 74 | 80 | 82 | 318 | 82 | 90 | 89 | 330 |
| | | | | | 459A | 459A | 75.0 | 90.2 | 104 | 110 | 117 | 318 | 112 | 125 | 124 | 330 |
| | 575-3-60 | STD/MED | 5 | — | — | — | — | — | 47 | 60 | 49 | 237 | 52 | 60 | 54 | 245 |
| | | | | | 460A | — | 24.8 | 23.9 | 47 | 60 | 49 | 237 | 52 | 60 | 54 | 245 |
| | | | | | 461A | — | 49.6 | 47.7 | 67 | 70 | 62 | 237 | 73 | 80 | 67 | 245 |
| | | | | | 462A | — | 74.4 | 71.6 | 79 | 90 | 89 | 237 | 85 | 90 | 95 | 245 |
| | | HIGH | 5 | — | — | — | — | — | 51 | 60 | 52 | 241 | 55 | 70 | 58 | 249 |
| | | | | | 460A | — | 24.8 | 23.9 | 51 | 60 | 52 | 241 | 55 | 70 | 58 | 249 |
| | | | | | 461A | — | 49.6 | 47.7 | 71 | 80 | 65 | 241 | 77 | 80 | 71 | 249 |
| | | | | | 462A | — | 74.4 | 71.6 | 83 | 90 | 93 | 241 | 89 | 90 | 98 | 249 |
| 50GC**28 Horizontal | 208/230-3-60 | HIGH | 5 | 60 | — | — | — | — | 132 | 175 | 137 | 594 | 144 | 175 | 151 | 614 |
| | | | | | 463A | 463A | 18.8/25.0 | 52.1/60.1 | 132/132 | 175/175 | 137/137 | 594/594 | 144/144 | 175/175 | 151/151 | 614/614 |
| | | | | | 464A | 464A | 37.6/50.0 | 104.2/120.3 | 162/152 | 175/175 | 149/167 | 594/594 | 176/167 | 200/175 | 162/181 | 614/614 |
| | | | | | 465A | 465A | 56.3/75.0 | 156.4/180.4 | 188/212 | 200/225 | 209/236 | 594/594 | 203/227 | 225/250 | 222/250 | 614/614 |
| | 460-3-60 | HIGH | 5 | 65 | — | — | — | — | 61 | 80 | 63 | 318 | 67 | 80 | 70 | 330 |
| | | | | | 466A | 466A | 25.0 | 30.1 | 61 | 80 | 63 | 318 | 67 | 80 | 70 | 330 |
| | | | | | 467A | 467A | 50.0 | 60.1 | 74 | 80 | 82 | 318 | 82 | 90 | 89 | 330 |
| | | | | | 468A | 468A | 75.0 | 90.2 | 104 | 110 | 117 | 318 | 112 | 125 | 124 | 330 |
| | 575-3-60 | HIGH | 5 | — | — | — | — | — | 51 | 60 | 52 | 241 | 55 | 70 | 58 | 249 |
| | | | | | 469A | — | 24.8 | 23.9 | 51 | 60 | 52 | 241 | 55 | 70 | 58 | 249 |
| | | | | | 470A | — | 49.6 | 47.7 | 71 | 80 | 65 | 241 | 77 | 80 | 71 | 249 |
| | | | | | 471A | — | 74.4 | 71.6 | 83 | 90 | 93 | 241 | 89 | 90 | 98 | 249 |

NOTE(S):

a. High SCCR (Short Circuit Current Rating) is not available on the following: units with Humidi-MiZer system, Low Ambient controls, Phase loss monitor, Non-fused disconnect, and 575V models.

# Electrical data (cont)

## 50GC**28 MCA MOCP Electrical Data (cont)

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | ELECTRIC HEATER | | | w/ POWERED CONVENIENCE OUTLET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | NO POWER EXHAUST | | | | w/ POWER EXHAUST (powered from unit) | | | |
| | | | | STD SCCR CRHEATER ****00 | NOM (kW) | FLA | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | | MCA | FUSE OR HACR BRKR | DISCONNECT SIZE | |
| | | | | | | | | | FLA | LRA | | | FLA | LRA |
| 50GC**28 Vertical | 208/230-3-60 | STD/MED | 5 | — | — | — | 127 | 175 | 131 | 585 | 139 | 175 | 145 | 605 |
| | | | | 454A | 18.8/25.0 | 52.1/60.1 | 127/127 | 175/175 | 131/131 | 585/585 | 139/139 | 175/175 | 145/145 | 605/605 |
| | | | | 455A | 37.6/50.0 | 104.2/120.3 | 155/145 | 175/175 | 143/161 | 585/585 | 170/160 | 175/175 | 156/175 | 605/605 |
| | | | | 456A | 56.3/75.0 | 156.4/180.4 | 181/205 | 200/225 | 203/230 | 585/585 | 196/220 | 200/225 | 216/244 | 605/605 |
| | | HIGH | 5 | — | — | — | 137 | 175 | 143 | 599 | 149 | 200 | 157 | 619 |
| | | | | 454A | 18.8/25.0 | 52.1/60.1 | 137/137 | 175/175 | 143/143 | 599/599 | 149/149 | 200/200 | 157/157 | 619/619 |
| | | | | 455A | 37.6/50.0 | 104.2/120.3 | 168/158 | 175/175 | 154/173 | 599/599 | 182/173 | 200/200 | 168/186 | 619/619 |
| | | | | 456A | 56.3/75.0 | 156.4/180.4 | 194/218 | 200/250 | 214/242 | 599/599 | 209/233 | 225/250 | 228/256 | 619/619 |
| | 460-3-60 | STD/MED | 5 | — | — | — | 59 | 80 | 61 | 314 | 65 | 80 | 68 | 326 |
| | | | | 457A | 25.0 | 30.1 | 59 | 80 | 61 | 314 | 65 | 80 | 68 | 326 |
| | | | | 458A | 50.0 | 60.1 | 72 | 80 | 80 | 314 | 79 | 80 | 87 | 326 |
| | | | | 459A | 75.0 | 90.2 | 102 | 110 | 114 | 314 | 110 | 110 | 121 | 326 |
| | | HIGH | 5 | — | — | — | 63 | 80 | 66 | 320 | 69 | 90 | 73 | 332 |
| | | | | 457A | 25.0 | 30.1 | 63 | 80 | 66 | 320 | 69 | 90 | 73 | 332 |
| | | | | 458A | 50.0 | 60.1 | 77 | 80 | 85 | 320 | 85 | 90 | 92 | 332 |
| | | | | 459A | 75.0 | 90.2 | 107 | 125 | 119 | 320 | 115 | 125 | 126 | 332 |
| | 575-3-60 | STD/MED | 5 | — | — | — | 49 | 60 | 51 | 239 | 54 | 60 | 56 | 247 |
| | | | | 460A | 24.8 | 23.9 | 49 | 60 | 51 | 239 | 54 | 60 | 56 | 247 |
| | | | | 461A | 49.6 | 47.7 | 69 | 70 | 64 | 239 | 75 | 80 | 69 | 247 |
| | | | | 462A | 74.4 | 71.6 | 81 | 90 | 91 | 239 | 87 | 90 | 97 | 247 |
| | | HIGH | 5 | — | — | — | 52 | 60 | 54 | 243 | 57 | 70 | 60 | 251 |
| | | | | 460A | 24.8 | 23.9 | 52 | 60 | 54 | 243 | 57 | 70 | 60 | 251 |
| | | | | 461A | 49.6 | 47.7 | 73 | 80 | 67 | 243 | 79 | 80 | 73 | 251 |
| | | | | 462A | 74.4 | 71.6 | 85 | 90 | 95 | 243 | 91 | 100 | 100 | 251 |
| 50GC**28 Horizontal | 208/230-3-60 | HIGH | 5 | — | — | — | 137 | 175 | 143 | 599 | 149 | 200 | 157 | 619 |
| | | | | 463A | 18.8/25.0 | 52.1/60.1 | 137/137 | 175/175 | 143/143 | 599/599 | 149/149 | 200/200 | 157/157 | 619/619 |
| | | | | 464A | 37.6/50.0 | 104.2/120.3 | 168/158 | 175/175 | 154/173 | 599/599 | 182/173 | 200/200 | 168/186 | 619/619 |
| | | | | 465A | 56.3/75.0 | 156.4/180.4 | 194/218 | 200/250 | 214/242 | 599/599 | 209/233 | 225/250 | 228/256 | 619/619 |
| | 460-3-60 | HIGH | 5 | — | — | — | 63 | 80 | 66 | 320 | 69 | 90 | 73 | 332 |
| | | | | 466A | 25.0 | 30.1 | 63 | 80 | 66 | 320 | 69 | 90 | 73 | 332 |
| | | | | 467A | 50.0 | 60.1 | 77 | 80 | 85 | 320 | 85 | 90 | 92 | 332 |
| | | | | 468A | 75.0 | 90.2 | 107 | 125 | 119 | 320 | 115 | 125 | 126 | 332 |
| | 575-3-60 | HIGH | 5 | — | — | — | 52 | 60 | 54 | 243 | 57 | 70 | 60 | 251 |
| | | | | 469A | 24.8 | 23.9 | 52 | 60 | 54 | 243 | 57 | 70 | 60 | 251 |
| | | | | 470A | 49.6 | 47.7 | 73 | 80 | 67 | 243 | 79 | 80 | 73 | 251 |
| | | | | 471A | 74.4 | 71.6 | 85 | 90 | 95 | 243 | 91 | 100 | 100 | 251 |

# Electrical data (cont)

## 50GC**17 Electric Heat Data — Standard SCCR Unit

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | STD ELECTRIC HEATER PART NUMBER | NOMINAL (kW) | APPLICATION (kW) | APPLICATION OUTPUT (MBH) | STD SCCR SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLEXXXA00 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO C.O. OR UNPOWERED C.O. | | w/PWRD C.O. | |
| | | | | | | | | NO P.E. | w/P.E. (pwrd fr/unit) | NO P.E | w/P.E. (pwrd fr/unit) |
| 50GC-M17 Vertical | 208/230-3-60 | STD/MED | 5 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | | HIGH | 5 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | 460-3-60 | STD/MED | 5 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | — | 057 | 057 | 057 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | | HIGH | 5 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | 575-3-60 | STD/MED | 5 | CRHEATER460A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER461A00 | 49.6 | 45.6 | 155.4 | — | 057 | — | 057 |
| | | | | CRHEATER462A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |
| | | HIGH | 5 | CRHEATER460A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER461A00 | 49.6 | 45.6 | 155.4 | — | 057 | — | 057 |
| | | | | CRHEATER462A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |
| 50GC-M17 Horizontal | 208/230-3-60 | HIGH | 5 | CRHEATER463A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — | — | 056 |
| | | | | CRHEATER464A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER465A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | 460-3-60 | HIGH | 5 | CRHEATER466A00 | 25.0 | 23.0 | 78.3 | — | — | — | — |
| | | | | CRHEATER467A00 | 50.0 | 45.9 | 156.7 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER468A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | 575-3-60 | HIGH | 5 | CRHEATER469A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER470A00 | 49.6 | 45.6 | 155.4 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER471A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |

# Electrical data (cont)

## 50GC**17 Electric Heat Data — High SCCR Unit

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | HIGH SCCR kA | HIGH SCCR ELECTRIC HEATER PART NUMBER | NOMINAL (kW) | APPLICATION (kW) | APPLICATION OUTPUT (MBH) | HIGH SCCR SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLEXXXA00 | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO C.O. OR UNPOWERED C.O. | |
| | | | | | | | | NO P.E. | w/P.E. (pwrd fr/unit) |
| 50GC-M17 Vertical | 208/230-3-60 | STD/ MED | 60 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | | HIGH | 60 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | 460-3-60 | STD/ MED | 65 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | — | 059 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |
| | | HIGH | 65 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 059 | 059 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |
| 50GC-M17 Horizontal | 208/230-3-60 | HIGH | 60 | CRHEATER463A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — |
| | | | | CRHEATER464A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER465A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | 460-3-60 | HIGH | 65 | CRHEATER466A00 | 25.0 | 23.0 | 78.3 | — | — |
| | | | | CRHEATER467A00 | 50.0 | 45.9 | 156.7 | 059 | 059 |
| | | | | CRHEATER468A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |

# Electrical data (cont)

## 50GC**20 Electric Heat Data — Standard SCCR Unit

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | STD ELECTRIC HEATER PART NUMBER | NOMINAL (kW) | APPLICATION (kW) | APPLICATION OUTPUT (MBH) | STD SCCR SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLEXXXA00 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO C.O. OR UNPOWERED C.O. | | w/PWRD C.O. | |
| | | | | | | | | NO P.E. | w/P.E. (pwrd fr/unit) | NO P.E | w/P.E. (pwrd fr/unit) |
| 50GC-M20 Vertical | 208/230-3-60 | STD/MED | 5 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | | HIGH | 5 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | 460-3-60 | STD/MED | 5 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | — | 057 | 057 | 057 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | | HIGH | 5 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | 575-3-60 | STD/MED | 5 | CRHEATER460A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER461A00 | 49.6 | 45.6 | 155.4 | — | 057 | — | 057 |
| | | | | CRHEATER462A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |
| | | HIGH | 5 | CRHEATER460A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER461A00 | 49.6 | 45.6 | 155.4 | — | 057 | — | 057 |
| | | | | CRHEATER462A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |
| 50GC-M20 Horizontal | 208/230-3-60 | HIGH | 5 | CRHEATER463A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — | — | 056 |
| | | | | CRHEATER464A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER465A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | 460-3-60 | HIGH | 5 | CRHEATER466A00 | 25.0 | 23.0 | 78.3 | — | — | — | — |
| | | | | CRHEATER467A00 | 50.0 | 45.9 | 156.7 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER468A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | 575-3-60 | HIGH | 5 | CRHEATER469A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER470A00 | 49.6 | 45.6 | 155.4 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER471A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |

# Electrical data (cont)

## 50GC**20 Electric Heat Data — High SCCR Unit

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | HIGH SCCR kA | HIGH SCCR ELECTRIC HEATER PART NUMBER | NOMINAL (kW) | APPLICATION (kW) | APPLICATION OUTPUT (MBH) | HIGH SCCR SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLEXXXA00 | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO C.O. OR UNPOWERED C.O. | |
| | | | | | | | | NO P.E. | w/P.E. (pwrd fr/unit) |
| 50GC-M20 Vertical | 208/230-3-60 | STD/ MED | 60 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | | HIGH | 60 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | 460-3-60 | STD/ MED | 65 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | — | 059 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |
| | | HIGH | 65 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 059 | 059 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |
| 50GC-M20 Horizontal | 208/230-3-60 | HIGH | 60 | CRHEATER463A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — |
| | | | | CRHEATER464A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER465A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | 460-3-60 | HIGH | 65 | CRHEATER466A00 | 25.0 | 23.0 | 78.3 | — | — |
| | | | | CRHEATER467A00 | 50.0 | 45.9 | 156.7 | 059 | 059 |
| | | | | CRHEATER468A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |

# Electrical data (cont)

## 50GC**24 Electric Heat Data — Standard SCCR Unit

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | STD ELECTRIC HEATER PART NUMBER | NOMINAL (kW) | APPLICATION (kW) | APPLICATION OUTPUT (MBH) | STD SCCR SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLEXXXA00 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO C.O. OR UNPOWERED C.O. | | w/PWRD C.O. | |
| | | | | | | | | NO P.E. | w/P.E. (pwrd fr/unit) | NO P.E | w/P.E. (pwrd fr/unit) |
| 50GC-M24 Vertical | 208/230-3-60 | STD/MED | 5 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | | HIGH | 5 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — | — | 056 |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | 460-3-60 | STD/MED | 5 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | — | 057 | 057 | 057 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | | HIGH | 5 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | 575-3-60 | STD/MED | 5 | CRHEATER460A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER461A00 | 49.6 | 45.6 | 155.4 | — | 057 | — | 057 |
| | | | | CRHEATER462A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |
| | | HIGH | 5 | CRHEATER460A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER461A00 | 49.6 | 45.6 | 155.4 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER462A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |
| 50GC-M24 Horizontal | 208/230-3-60 | HIGH | 5 | CRHEATER463A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — | — | 056 |
| | | | | CRHEATER464A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER465A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | 460-3-60 | HIGH | 5 | CRHEATER466A00 | 25.0 | 23.0 | 78.3 | — | — | — | — |
| | | | | CRHEATER467A00 | 50.0 | 45.9 | 156.7 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER468A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | 575-3-60 | HIGH | 5 | CRHEATER469A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER470A00 | 49.6 | 45.6 | 155.4 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER471A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |

# Electrical data (cont)

## 50GC**24 Electric Heat Data — High SCCR Unit

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | HIGH SCCR kA | HIGH SCCR ELECTRIC HEATER PART NUMBER | NOMINAL (kW) | APPLICATION (kW) | APPLICATION OUTPUT (MBH) | HIGH SCCR SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLEXXXA00 | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO C.O. OR UNPOWERED C.O. | |
| | | | | | | | | NO P.E. | w/P.E. (pwrd fr/unit) |
| 50GC-M24 Vertical | 208/230-3-60 | STD/ MED | 60 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | | HIGH | 60 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | 460-3-60 | STD/ MED | 65 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | — | 059 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |
| | | HIGH | 65 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | — |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 059 | 059 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |
| 50GC-M24 Horizontal | 208/230-3-60 | HIGH | 60 | CRHEATER463A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | — | — |
| | | | | CRHEATER464A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER465A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | 460-3-60 | HIGH | 65 | CRHEATER466A00 | 25.0 | 23.0 | 78.3 | — | — |
| | | | | CRHEATER467A00 | 50.0 | 45.9 | 156.7 | 059 | 059 |
| | | | | CRHEATER468A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |

# Electrical data (cont)

## 50GC**28 Electric Heat Data — Standard SCCR Unit

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | STD SCCR kA | STD ELECTRIC HEATER PART NUMBER | NOMINAL (kW) | APPLICATION (kW) | APPLICATION OUTPUT (MBH) | STD SCCR SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLEXXXA00 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO C.O. OR UNPOWERED C.O. | | w/PWRD C.O. | |
| | | | | | | | | NO P.E. | w/P.E. (pwrd fr/unit) | NO P.E | w/P.E. (pwrd fr/unit) |
| 50GC-M28 Vertical | 208/230-3-60 | STD/MED | 5 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | | HIGH | 5 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | 460-3-60 | STD/MED | 5 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | 057 | 057 | 057 |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | | HIGH | 5 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | 575-3-60 | STD/MED | 5 | CRHEATER460A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER461A00 | 49.6 | 45.6 | 155.4 | — | 057 | — | 057 |
| | | | | CRHEATER462A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |
| | | HIGH | 5 | CRHEATER460A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER461A00 | 49.6 | 45.6 | 155.4 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER462A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |
| 50GC-M28 Horizontal | 208/230-3-60 | HIGH | 5 | CRHEATER463A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER464A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 056 | 056 | 056 | 056 |
| | | | | CRHEATER465A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 056 | 056 | 056 | 056 |
| | 460-3-60 | HIGH | 5 | CRHEATER466A00 | 25.0 | 23.0 | 78.3 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER467A00 | 50.0 | 45.9 | 156.7 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER468A00 | 75.0 | 68.9 | 235.0 | 057 | 057 | 057 | 057 |
| | 575-3-60 | HIGH | 5 | CRHEATER469A00 | 24.8 | 22.8 | 77.7 | — | — | — | — |
| | | | | CRHEATER470A00 | 49.6 | 45.6 | 155.4 | 057 | 057 | 057 | 057 |
| | | | | CRHEATER471A00 | 74.4 | 68.3 | 233.1 | 057 | 057 | 057 | 057 |

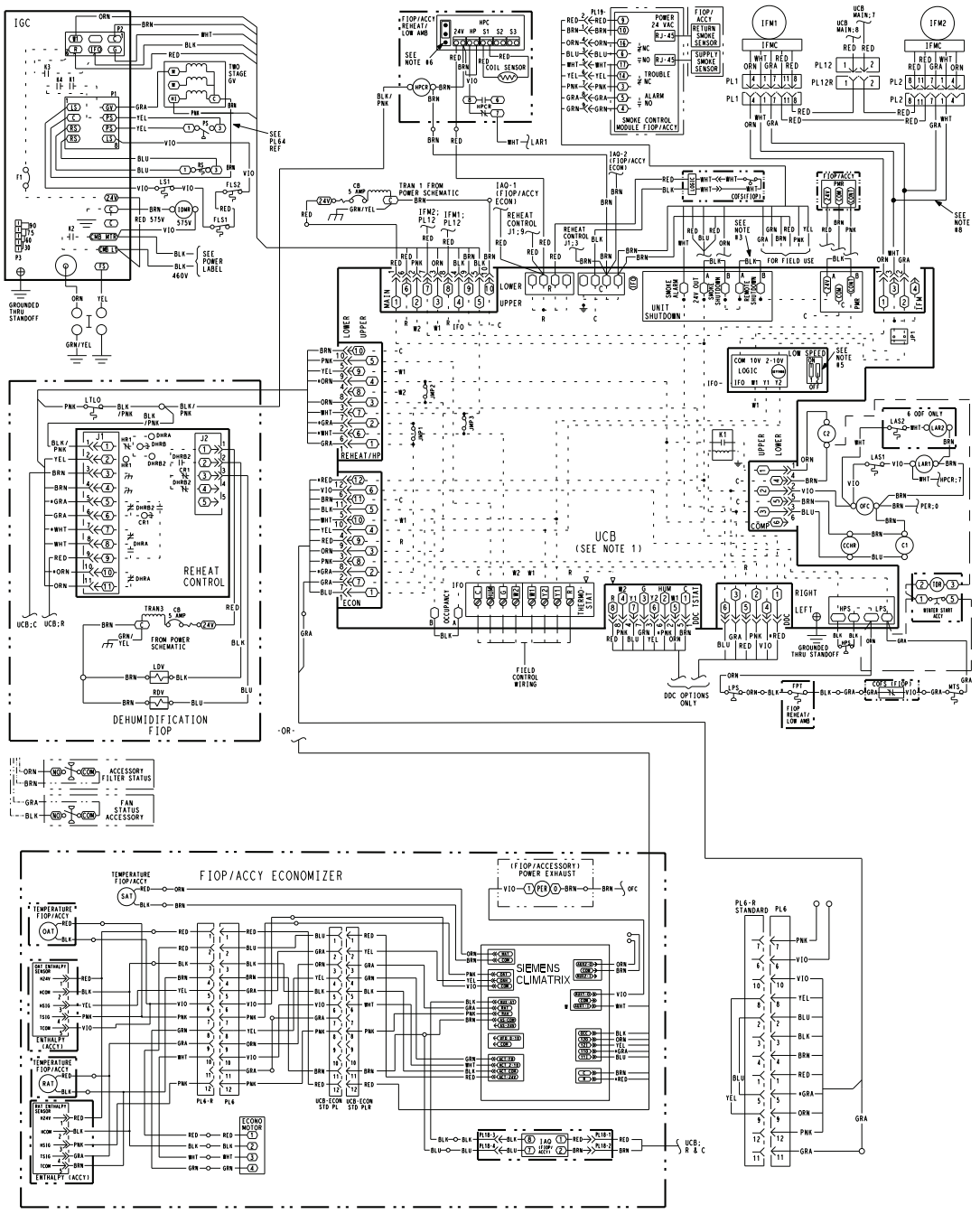
# Electrical data (cont)

## 50GC**28 Electric Heat Data — High SCCR Unit

| 50GC UNIT SIZE | NOM. V-Ph-Hz | IFM TYPE | HIGH SCCR kA | HIGH SCCR ELECTRIC HEATER PART NUMBER | NOMINAL (kW) | APPLICATION (kW) | APPLICATION OUTPUT (MBH) | HIGH SCCR SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLEXXXA00 | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | NO C.O. OR UNPOWERED C.O. | |
| | | | | | | | | NO P.E. | w/P.E. (pwrd fr/unit) |
| 50GC-M28 Vertical | 208/230-3-60 | STD/ MED | 60 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | 058 | 058 |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | | HIGH | 60 | CRHEATER454A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | 058 | 058 |
| | | | | CRHEATER455A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER456A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | 460-3-60 | STD/ MED | 65 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | — | 059 |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 059 | 059 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |
| | | HIGH | 65 | CRHEATER457A00 | 25.0 | 23.0 | 78.3 | 059 | 059 |
| | | | | CRHEATER458A00 | 50.0 | 45.9 | 156.7 | 059 | 059 |
| | | | | CRHEATER459A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |
| 50GC-M28 Horizontal | 208/230-3-60 | HIGH | 60 | CRHEATER463A00 | 25.0 | 18.8/23.0 | 64.1/78.3 | 058 | 058 |
| | | | | CRHEATER464A00 | 50.0 | 37.6/45.9 | 128.1/156.7 | 058 | 058 |
| | | | | CRHEATER465A00 | 75.0 | 56.3/68.9 | 192.2/235.0 | 058 | 058 |
| | 460-3-60 | HIGH | 65 | CRHEATER466A00 | 25.0 | 23.0 | 78.3 | 059 | 059 |
| | | | | CRHEATER467A00 | 50.0 | 45.9 | 156.7 | 059 | 059 |
| | | | | CRHEATER468A00 | 75.0 | 68.9 | 235.0 | 059 | 059 |

# Typical wiring diagrams

## Typical 48GC**17-28 Control Wiring Diagram, Electro-Mechanical with POL224 Controller




NOTES:
1. TERMINAL BOARD SCHEMATIC LAYOUT DOES NOT MATCH ACTUAL TERMINAL BOARD LAYOUT.
2. TERMINAL BOARD JUMPERS 1,2 AND 3 ARE CUT FOR REHEAT UNITS ONLY.
3. REMOVE DESIGNATED JUMPERS ON TERMINAL BOARD WHEN ADDING SMOKE DETECTORS, OCCUPANCY AND REMOTE SHUTDOWN.
4. USE ABC AS COARSE AND POT AS FINE ADJUSTMENTS FOR SETTING HIGH FAN SPEED. LOW SPEED IS AN OFFSET BASED ON DIP SWITCHES.
5. 2-PIN LOW SPEED DIP SWITCH POSITIONS ARE FACTORY SET AS SHOWN, EXCEPT FOR 25 TON. POSITIONS WILL BE 1:OFF AND 2:ON.
6. HARDSTART AND CUTOUT SET TO "MIN". JUMPER PIN ON TOP 2-PINS AS SHOWN.
7. THC = WIRE COLOR IS FOR DIFFERENTIATION WITHIN THIS SCHEMATIC.
8. ON HORIZONTAL SUPPLY UNITS, IFM2 GRA AND WHT WIRES WILL INCLUDE IN-LINE RESISTORS TO REDUCE IT'S SPEED.

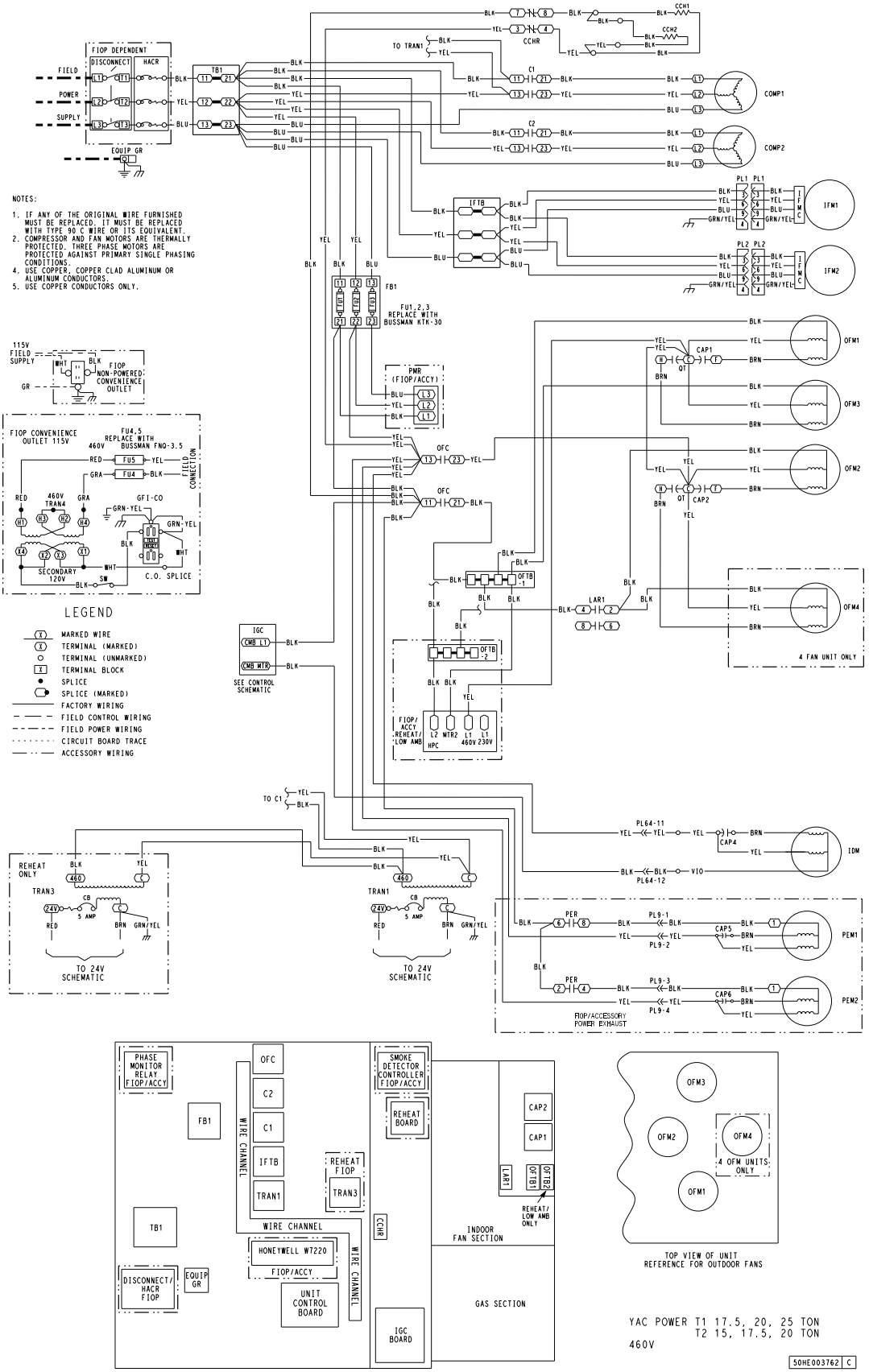
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ACCY | ACCESSORY | HS | HALL EFFECT SENSOR | OFM | OUTDOOR FAN MOTOR |
| AMB | AMBIENT | I | IGNITOR | OFR | OUTDOOR FAN RELAY |
| C | CONTACTOR,COMPRESSOR | IAQ | INDOOR AIR QUALITY SENSORS | OL | OVERLOAD |
| CAP | CAPACITOR | IDM | INDUCED DRAFT MOTOR | PER | POWER EXHAUST RELAY |
| CB | CIRCUIT BREAKER | IFCB | INDOOR FAN CIRCUIT BREAKER | PL | PLUG ASSEMBLY |
| CCH | CRANKCASE HEATER | IFM | INDOOR FAN MOTOR | POT | POTENTIOMETER |
| CCHR | CRANKCASE HEATER RELAY | IFMC | INDOOR FAN CONTROLLER | PMR | PHASE MONITOR RELAY |
| CMB | COMBUSTION | IGC | INTEGRATED GAS CONTROL | QT | QUADRUPLE TERMINAL |
| COFS | CONDENSATE OVERFLOW SWT | JMP | JUMPER | RARH | RETURN AIR RELATIVE HUMIDITY |
| COMP | COMPRESSOR MOTOR | LA | LOW AMBIENT | RAT | RETURN AIR TEMP. SENSOR |
| DDC | DIRECT DIGITAL CONTROL | LDV | LIQUID DIVERTER VALVE | RDV | REHEAT DISCHARGE VALVE |
| ERV | ENERGY RECOVERY VENTILATOR | LPS | LOW PRESSURE SWITCH | RS | ROLLOUT SWITCH |
| FIOP | FACTORY INSTALLED OPTION | LSM | LIMIT SWITCH (MANUAL RESET) | SAT | SUPPLY AIR TEMP. SENSOR |
| FLS | FAN LIMIT SWITCH | LS | LIMIT SWITCH | SEN | SENSOR |
| FPT | FREEZE PROTECTION THERMOSTAT | LTLO | LOW TEMPERATURE LOCKOUT | SPRH | SPACE RELATIVE HUMIDITY |
| FSD | FIRE SHUT DOWN | MGV | MAIN GAS VALVE | SPT | SPACE TEMPERATURE SENSOR |
| FS | FLAME SENSOR | MOV | MOTOR VOLTAGE RESTRICTOR | SPTO | SPACE TEMPERATURE OFFSET |
| FU | FUSE | MTR | MOTOR | STD | STANDARD |
| GND | GROUND | MTS | MIXED AIR TEMPERATURE SWITCH | TB | TERMINAL BLOCK |
| GVR | GAS VALVE RELAY | OAQ | OUTDOOR AIR QUALITY | TDR | TIME DELAY RELAY(WINTER START) |
| HPC | HEAD PRESSURE CONTROL | OARH | OUTSIDE AIR RELATIVE HUMIDITY | TRAN | TRANSFORMER |
| HPS | HIGH PRESSURE SWITCH | OAT | OUTDOOR AIR TEMP. SENSOR | UCB | UNIT CONTROL BOARD |

YAC CONTROL 460V , 575V T1 17.5-27.5 TON, T2 15-25 TON

50HE006333

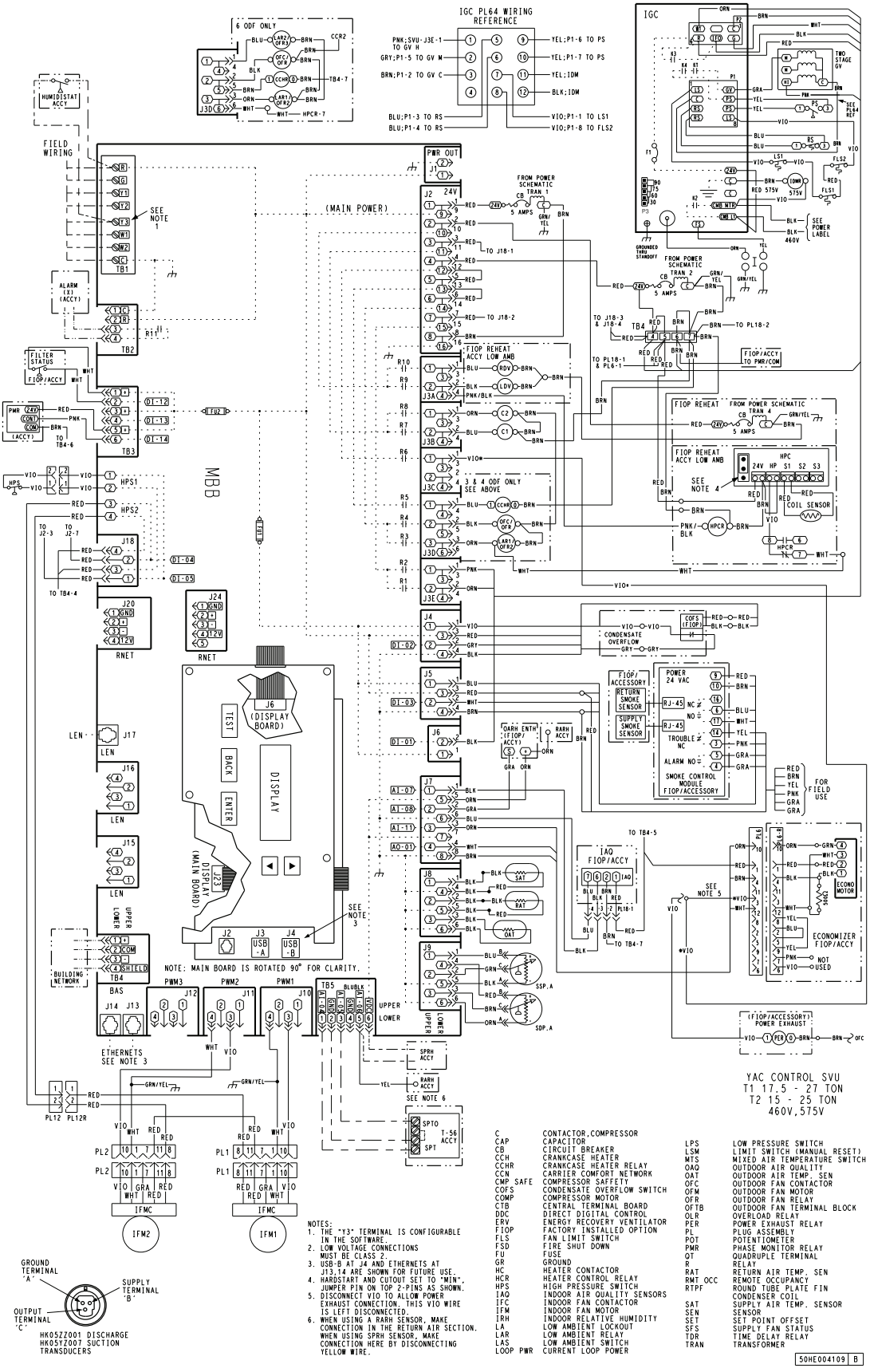
# Typical wiring diagrams (cont)

## 48GC**17-24 Power Wiring Diagram, Electro-Mechanical with POL224 Controller



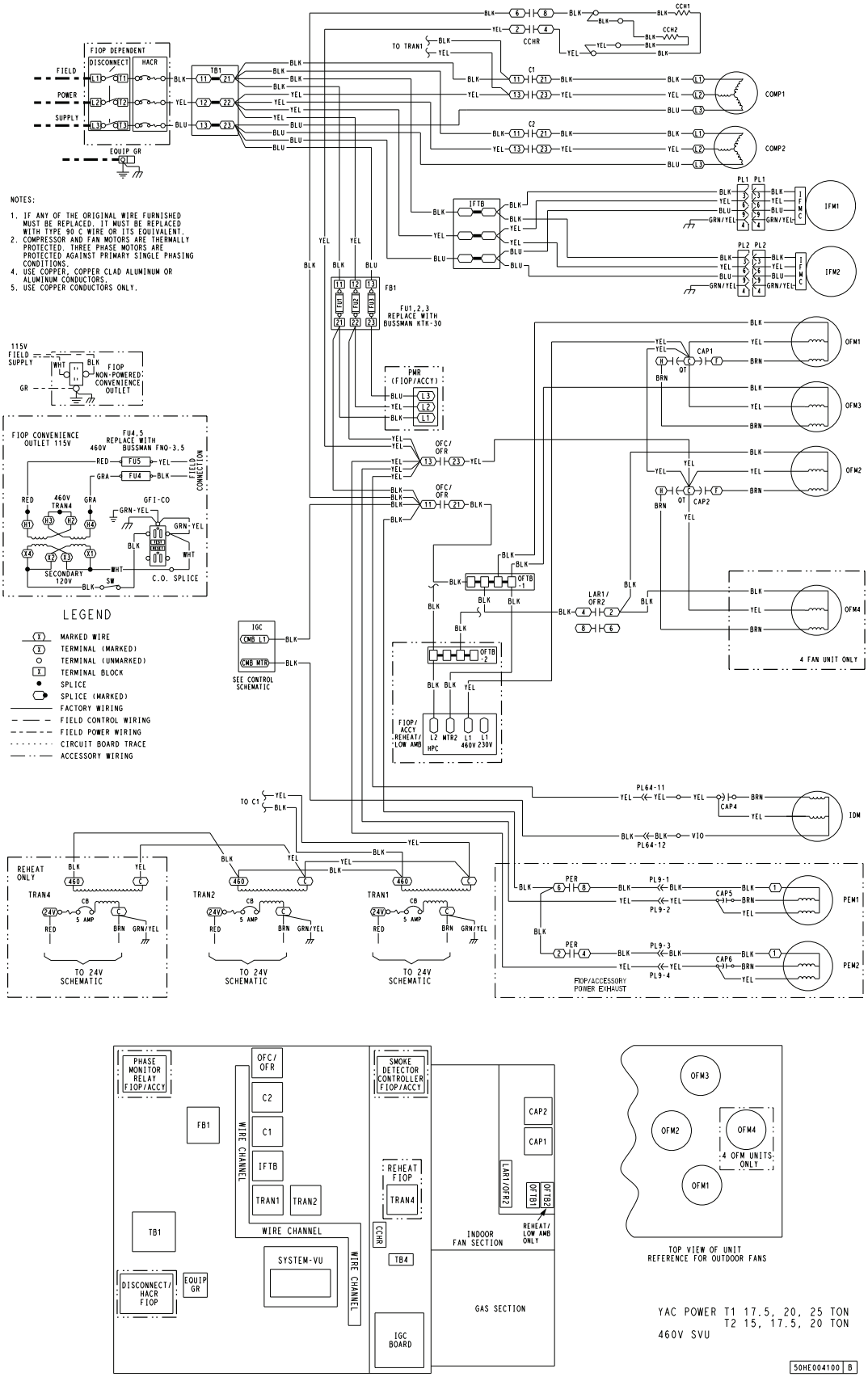
# Typical wiring diagrams (cont)

## 48GC**17-28 Control Wiring Diagram, SystemVu™ Controller



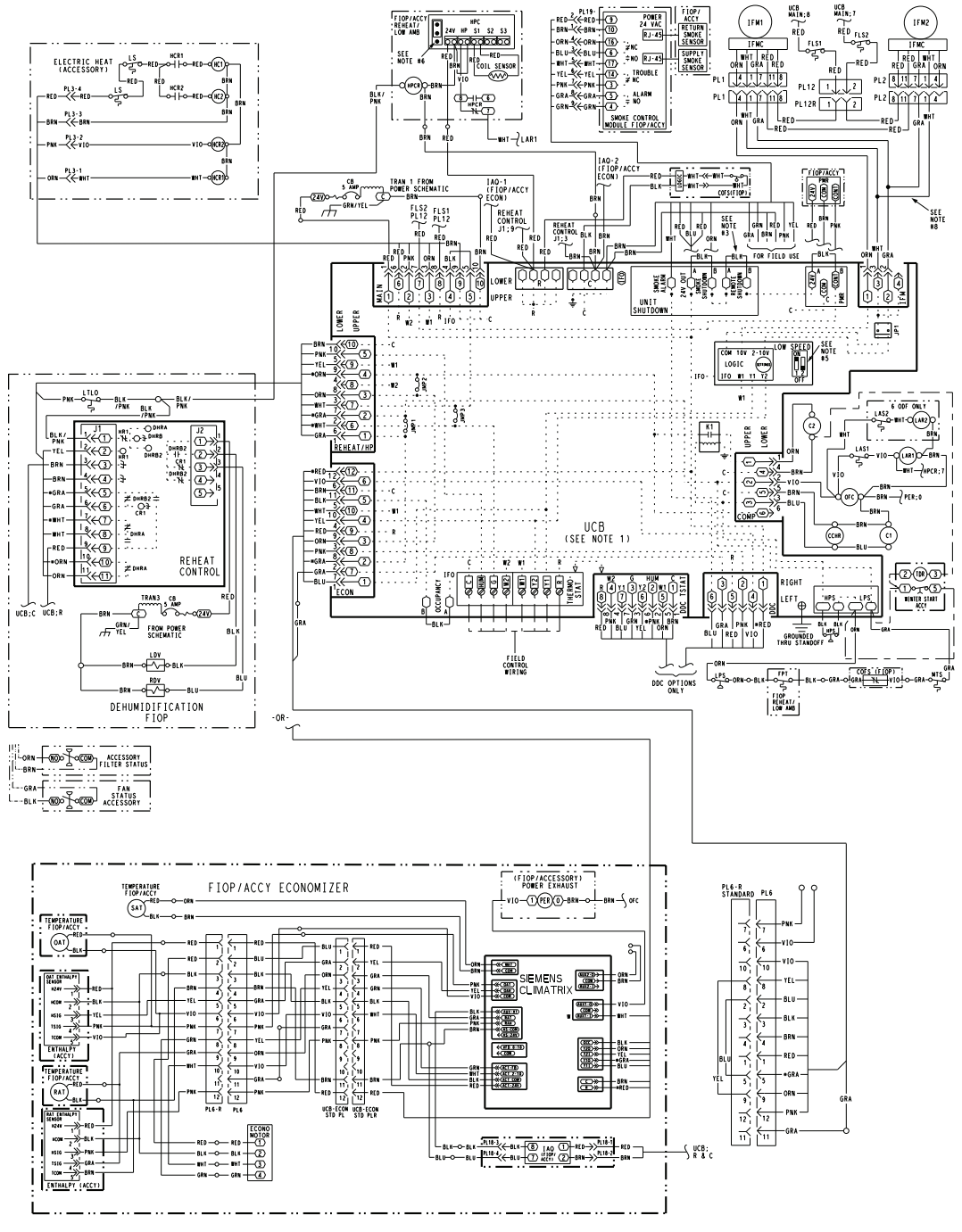
# Typical wiring diagrams (cont)

## 48GC**17-24 Power Wiring Diagram, SystemVu™ Controller



# Typical wiring diagrams (cont)

## 50GC-*17-28 Control Wiring Diagram, Electro-Mechanical with POL224 Controller

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6. HARDSTART AND CUTOUT SET TO "MIN". JUMPER PIN ON TOP 2-PINS AS SHOWN.
7. THE * WIRE COLOR IS FOR DIFFERENTIATION WITHIN THIS SCHEMATIC.
8. ON HORIZONTAL SUPPLY UNITS, IFM2 GRA AND WHT WIRES WILL INCLUDE IN-LINE RESISTORS TO REDUCE IT'S SPEED.

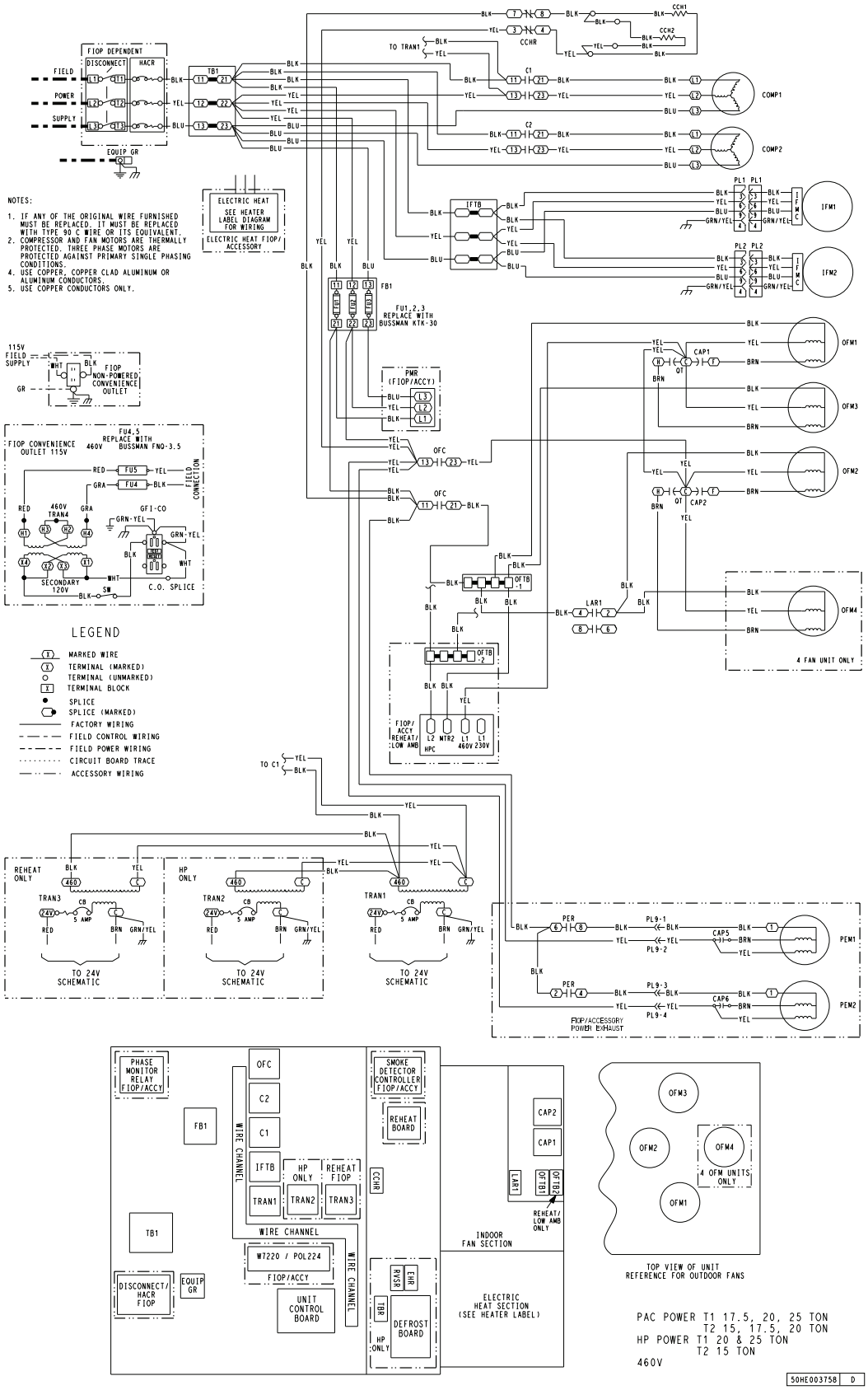
| | |
|---|---|
| ACCY | ACCESSORY |
| AMB | AMBIENT |
| C | CONTACTOR,COMPRESSOR |
| CAP | CAPACITOR |
| CB | CIRCUIT BREAKER |
| CH | CRANKCASE HEATER |
| CCHR | CRANKCASE HEATER RELAY |
| CMB | COMBUSTION |
| COFS | CONDENSATE OVERFLOW SWT |
| COMP | COMPRESSOR MOTOR |
| DDC | DIRECT DIGITAL CONTROL |
| ERV | ENERGY RECOVERY VENTILATOR |
| FIOP | FACTORY INSTALLED OPTION |
| FLS | FAN LIMIT SWITCH |
| FPT | FREEZE PROTECTION THERMOSTAT |
| FSD | FIRE SHUT DOWN |
| FS | FLAME SENSOR |
| FU | FUSE |
| GND | GROUND |
| GVR | GAS VALVE RELAY |
| HPC | HEAD PRESSURE CONTROL |
| HPS | HIGH PRESSURE SWITCH |
| HS | HALL EFFECT SENSOR |
| I | IGNITOR |
| IAQ | INDOOR AIR QUALITY SENSORS |
| IDM | INDUCED DRAFT MOTOR |
| IFCB | INDOOR FAN CIRCUIT BREAKER |
| IFM | INDOOR FAN MOTOR |
| IFMC | INDOOR FAN CONTROLLER |
| IGC | INTEGRATED GAS CONTROL |
| JMP | JUMPER |
| LA | LOW AMBIENT |
| LDV | LIQUID DIVERTER VALVE |
| LPS | LOW PRESSURE SWITCH |
| LSM | LIMIT SWITCH (MANUAL RESET) |
| LS | LIMIT SWITCH |
| LTLO | LOW TEMPERATURE LOCKOUT |
| MGV | MAIN GAS VALVE |
| MOV | VOLTAGE RESTRICTOR |
| MTR | MOTOR |
| MTS | MIXED AIR TEMPERATURE SWITCH |
| OAQ | OUTDOOR AIR QUALITY |
| OARH | OUTSIDE AIR RELATIVE HUMIDITY |
| OAT | OUTDOOR AIR TEMP. SENSOR |
| OFM | OUTDOOR FAN MOTOR |
| OFR | OUTDOOR FAN RELAY |
| OL | OVERLOAD |
| PER | POWER EXHAUST RELAY |
| PL | PLUG ASSEMBLY |
| POT | POTENTIOMETER |
| PMR | PHASE MONITOR RELAY |
| QT | QUADRUPLE TERMINAL |
| RARH | RETURN AIR RELATIVE HUMIDITY |
| RAT | RETURN AIR TEMP. SENSOR |
| RDV | REHEAT DISCHARGE VALVE |
| RS | ROLLOUT SWITCH |
| SAT | SUPPLY AIR TEMP. SENSOR |
| SEN | SENSOR |
| SPRH | SPACE RELATIVE HUMIDITY |
| SPT | SPACE TEMPERATURE SENSOR |
| SPTO | SPACE TEMPERATURE OFFSET |
| STD | STANDARD |
| TB | TERMINAL BLOCK |
| TDR | TIME DELAY RELAY (WINTER START) |
| TRAN | TRANSFORMER |
| UCB | UNIT CONTROL BOARD |

PAC CONTROL 460V, 575V T1 17.5-27.5 TON, T2 15-25 TON

50HE006330

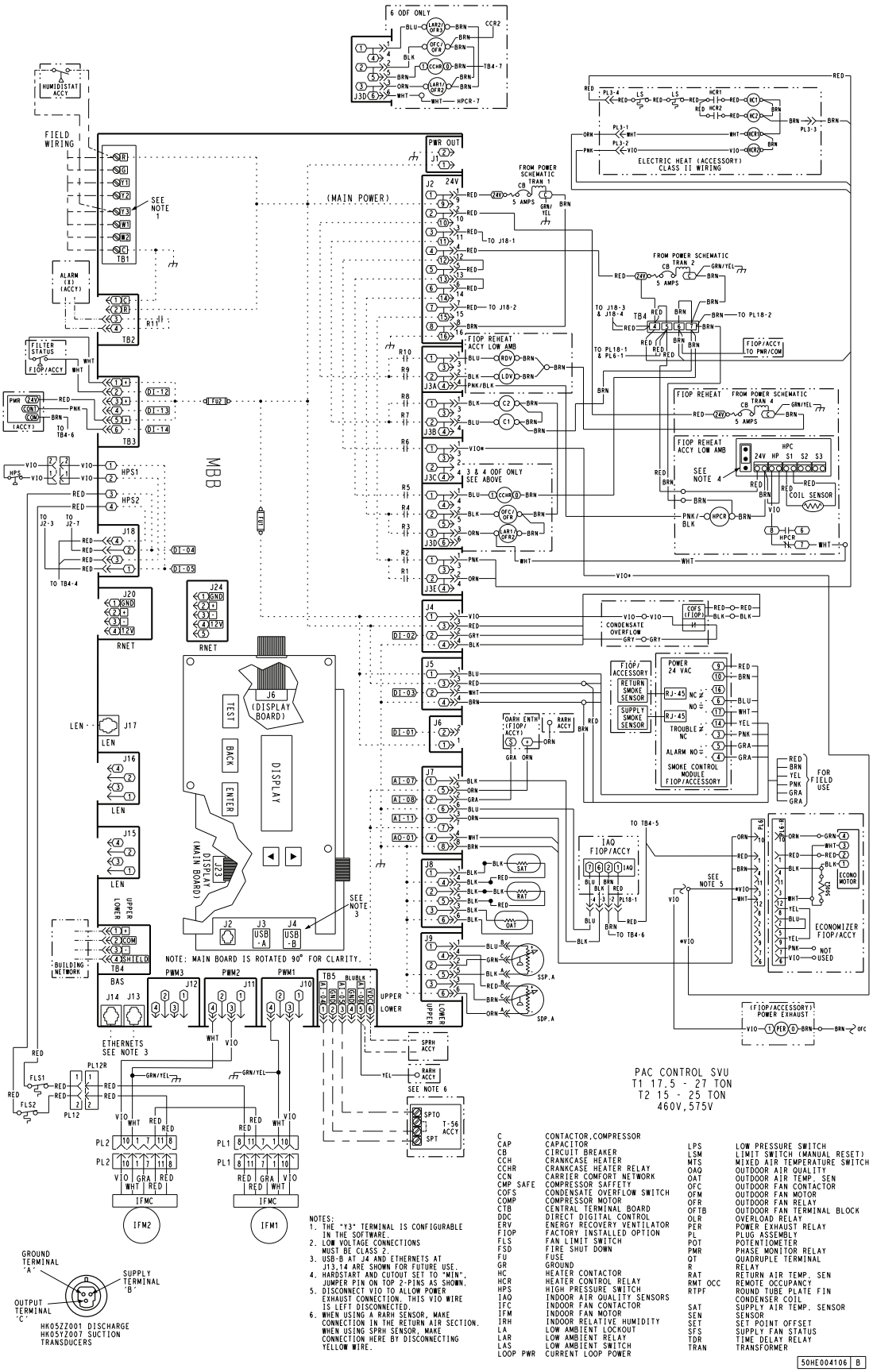
# Typical wiring diagrams (cont)

## 50GC-*17-24 Power Wiring Diagram, Electro-Mechanical with POL224 Controller



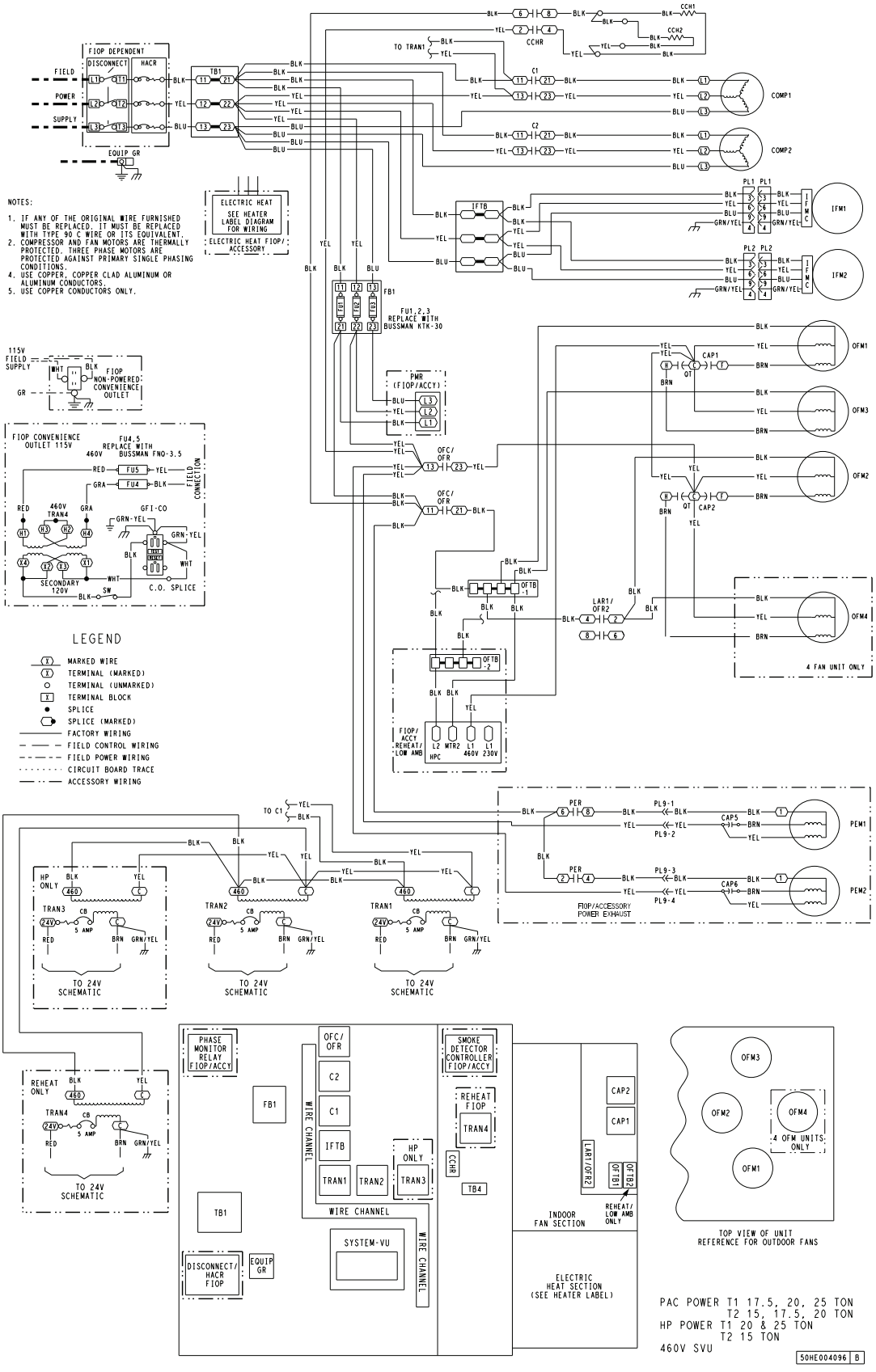
# Typical wiring diagrams (cont)

## 50GC-*17-28 Control Wiring Diagram, SystemVu™ Controller



# Typical wiring diagrams (cont)

## 50GC-*17-24 Power Wiring Diagram, SystemVu™ Controller



# Sequence of operation

## General

The sequence below describes the sequence of operation for an electro-mechanical unit with and without a factory-installed EconomizerONE (POL224 controller). For information regarding a direct digital controller, see the start-up, operations, and troubleshooting manual for the applicable controller.

## Electro-mechanical units with no economizer

### Cooling (two stage units)

When the thermostat calls for cooling, terminals G and Y1 are energized. The indoor fan will run at the low fan speed and the C1 compressor contactor (CC) is energized causing the compressor and outdoor fan to run. The low indoor fan speed is 60% or 66% of the user set fan speed depending on unit size.

If additional cooling is needed, the thermostat will add the call for Y2. This will increase the indoor fan speed to the user set fan speed and energize the C2 contactor and second compressor for full compressor capacity. The outdoor fan is the same speed for Y1 and Y2.

When the thermostat removes the call for Y2 but leaves the Y1, the indoor fan will slow to the reduced percentage of the user set fan speed, the C2 contactor will de-energize, the second compressor will turn off, and the outdoor fan will remain on. When the thermostat removes the call for Y1 the compressor contactor will de-energize shutting down the compressor and the outdoor fan. When the thermostat removes the call for G, the indoor fan will turn off after the specific unit fan off delay.

NOTE: Per ASHRAE 90.1-2019 and IECC-2018 standards, during the first stage cooling operation the Unit Control Board (UCB) will adjust the fan motor speed to provide 60% or 66% of the total cfm established for the unit.

### Gas heating (48GC units)

NOTE: WeatherMaster® units have 2 stages of gas heat.

When the thermostat calls for heating, power is sent to W on the Integrated Gas Controller (IGC) board. An LED (light-emitting diode) on the IGC board turns on and remains on during normal operation. A check is made to ensure that the roll-out switch and limit switch are closed. If the check was successful, the induced-draft motor is energized, and when its speed is satisfactory, as proven by the flue gas pressure switch, the ignition activation period begins. The burners will ignite within 5 seconds. If the burners do not light, there is a 22 second delay before another 5 second attempt. This sequence is repeated for 15 minutes or until the burners light. If, after the 15 minutes, the burners still have not lit, heating is locked out. To reset the control, break 24 V power to the thermostat.

When ignition occurs, the IGC board will continue to monitor the condition of the roll-out switch, the limit switches, the flue gas pressure switch, as well as the flame sensor. 45 seconds after ignition occurs, assuming the unit is controlled through a room thermostat set for fan auto, the indoor-fan motor will energize (and the outdoor-air dampers will open to their minimum position). If, for some reason, the over-temperature limit opens prior to the start of the indoor fan blower, the unit will shorten the 45 second delay to 5 seconds less than the time from initiation of heat to when the limit tripped. Gas will not be interrupted to the burners and heating will continue. Once the fan-on delay has been modified, it will not change back to 45 seconds until power is reset to the control. On units with 2 stages of heat, when additional heat is required, W2 closes and initiates power to the second stage of the main gas valve. When the thermostat is satisfied, W1 and W2 open and the gas valve closes, interrupting the flow of gas to the main burners. If the unit is controlled through a room thermostat set for fan auto, the indoor-fan motor will continue to operate for an additional 45 seconds then stop. A LED indicator is provided on the IGC to monitor operation.

### Electric heating (50GC units)

NOTE: 50GC units are sold as cooling only. If electric heaters are required, use only factory-approved heaters. They will operate as follows.

Units have either 1 or 2 stages of electric heat. When the thermostat calls for heating, power is applied to G and the W1 terminals at the unit. The unit control will energize the indoor fan contactor and the first stage of electric heat. On units with two-stage heating, when additional heating is required, the second stage of electric heat (if equipped) will be energized when power is applied at the W2 terminal on the unit.

IMPORTANT: The thermostat must be configured for Electric Heat so it will energize G with the W1 call.

## Electro-mechanical units with factory-installed EconomizerONE

When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor-air damper is modulated by the EconomizerONE control to provide a 50°F (10°C) to 55°F (13°C) mixed-air temperature into the zone. As the mixed air temperature fluctuates above 55°F (13°C) or below 50°F (10°C) dampers will be modulated (open or close) to bring the mixed-air temperature back within control. If mechanical cooling is utilized with free cooling, the outdoor-air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed-air temperature to drop below 45°F (7°C), then the outdoor-air damper position will be decreased to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Control returns to normal once the mixed-air temperature rises above 48°F (9°C). The power exhaust fans will be energized and de-energized, if installed, as the outdoor-air damper opens and closes.

If field-installed accessory $CO_2$ sensors are connected to the EconomizerONE control, a demand controlled ventilation strategy will begin to operate. As the $CO_2$ level in the zone increases above the $CO_2$ setpoint (on the EconomizerONE controller), the minimum position of the damper will be increased proportionally until the Maximum Ventilation setting is reached. As the $CO_2$ level decreases because of the increase in fresh air, the outdoor-air damper will follow the higher demand condition from either the DCV mode or from the free cooling mode. For EconomizerONE operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed.

When the EconomizerONE control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is

# Sequence of operation (cont)

on, then the control will open the EconomizerONE damper to the minimum position.

On the initial power to the EconomizerONE control, it will take the damper up to 2-1/2 minutes before it begins to position itself. After the initial power-up, further changes in damper position can take up to 90 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between 1-1/2 and 2-1/2 minutes. If free cooling can be used as determined from the appropriate changeover command (dry bulb, outdoor enthalpy, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open and closed to maintain the mixed-air temperature setpoint at 50°F (10°C) to 55°F (13°C). If there is a further demand for cooling (cooling second stage — Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed-air temperature setpoint. The EconomizerONE damper will be open at maximum position.

NOTE: For 2-speed units, the EconomizerONE controller will adjust the damper position as the Indoor Fan Speed changes, per its configured values.

### Heating

The sequence of operation for the heating is the same as an electro-mechanical unit with no economizer. The only difference is how the economizer acts. The economizer will stay at the Economizer Minimum Position while the evaporator fan is operating. The outdoor-air damper is closed when the indoor fan is not operating. Refer to Service and Maintenance Manual for further details.

## Optional Humidi-MiZer® dehumidification system

Units with the factory equipped Humidi-MiZer system option are capable of providing multiple modes of improved dehumidification as a variation of the normal cooling cycle. The Humidi-MiZer system option includes additional valves in the liquid line and discharge line of each refrigerant circuit, a small reheat condenser coil downstream of the evaporator, and variable-speed control of some or all outdoor fans. Operation of the revised refrigerant circuit for each mode is described below.

The Humidi-MiZer system provides three sub-modes of operation: Cool, Reheat1, and Reheat2.

Cool mode — Provides a normal ratio of Sensible and Latent Cooling effect from the evaporator coil.

Reheat1 — Provides increased Latent Cooling while slightly reducing the Sensible Cooling effect.

Reheat2 — Provides normal Latent Cooling but with null or minimum Sensible Cooling effect delivered to the space.

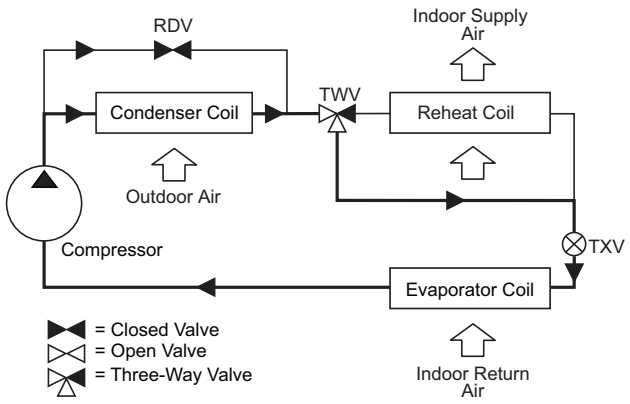
The Reheat1 and Reheat2 modes are available when the unit is not in a Heating mode and when the Low Ambient Lockout switch is closed.

Refer to the following figures for piping flow diagrams.

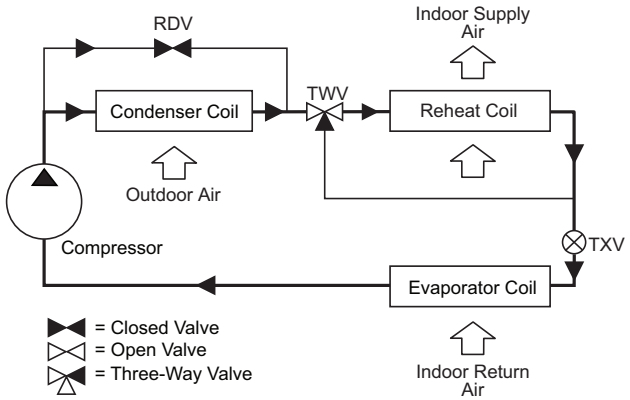
## SystemVu™ controller (factory option)

For details on operating 48/50GC units equipped with the factory-installed SystemVu controller option, refer to FC/GC Series Single Package Rooftop Units with SystemVu Controller Controls, Start-Up, Operation and Troubleshooting manual.

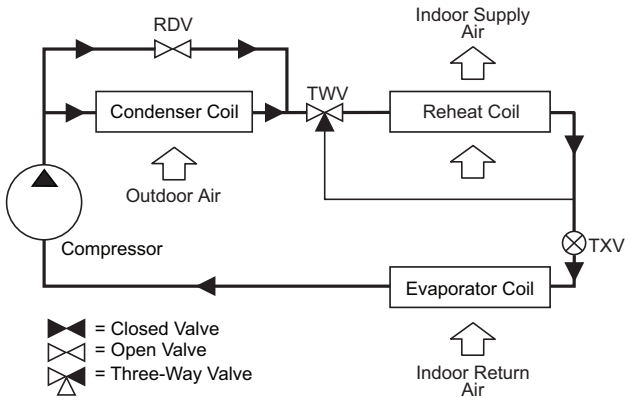
**Normal Cooling Mode**




**Subcooling Mode (Reheat1)**




**Hot Gas Reheat Mode (Reheat2)**




LEGEND

**RDV** — Reheat Discharge Valve
**TWV** — Three-Way Valve
**TXV** — Thermostatic Expansion Valve

# Application data

### Minimum operating ambient temperature (cooling)

In mechanical cooling mode, your Carrier rooftop unit can safely operate down to an outdoor ambient temperature of 40°F (4°C). It is possible to provide cooling at lower outdoor ambient temperatures by using less outside air, economizers, and/or accessory low ambient kits.

### Maximum operating ambient temperature (cooling)

The maximum operating ambient temperature for cooling mode is 125°F (52°C). While cooling operation above 125°F (52°C) may be possible, it could cause either a reduction in performance, reliability, or a protective action by the unit's internal safety devices.

### Multiple motor and drive packages

Some applications need larger horsepower motors, some need more airflow, and some need both. Regardless of the case, your Carrier expert has a factory installed combination to meet your application. A wide selection of motors are available, factory installed, to handle nearly any application.

### Stainless steel heat exchanger (48GC units only)

The stainless steel heat exchanger option provides the tubular heat exchanger be made out of a minimum 20 gage type 409 stainless steel for applications where the mixed air to the heat exchanger is expected to drop below 45°F (7°C). Stainless steel may be specified on applications where the presence of airborne contaminants require its use (applications such as paper mills) or in area with very high outdoor humidity that may result in severe condensation in the heat exchanger during cooling operation.

### Minimum mixed air temperature (heating) (48GC units only)

Using the factory settings, the minimum temperatures for the mixed air (the combined temperature of the warm return air and the cold outdoor air) entering the dimpled, gas heat exchangers are shown in the following table.

**Minimum Temperature for Mixed Air Temperature**

| ALUMINIZED | STAINLESS STEEL |
|---|---|
| 50°F (10°C) Continuous | 40°F (4°C) Continuous |
| 45°F (7°C) Intermittent | 35°F (2°C) Intermittent |

Operating at lower mixed-air temperatures may be possible, if a field-supplied, outdoor air thermostat initiates both heat stages when the temperature is less than the minimum temperatures listed above. Please contact your local Carrier representative for assistance.

### Minimum and maximum airflow (heating and cooling)

To maintain safe and reliable operation of your rooftop, operate within the heating airflow limits during heating mode and cooling airflow limits during cooling mode. Operating above the max may cause blow-off, undesired airflow noise, or airflow related problems with the rooftop unit. Operating below the min may cause problems with coil freeze-up and unsafe heating operation. Heating and cooling limitations differ when evaluating operating CFM, minimum value is the HIGHER of the cooling and heating minimum CFM values published on page 8 and the maximum value is the LOWER of the cooling and heating minimum values published on page 8.

### Heating-to-cooling changeover

Your unit will automatically change from heating to cooling mode when using a thermostat with an auto-changeover feature.

### Airflow

All units are draw-though in cooling mode and blow-through in heating mode.

### Outdoor air application strategies

Economizers reduce operating expenses and compressor run time by providing a free source of cooling and a means of ventilation to match application changing needs. In fact, they should be considered for most applications. Also, consider the various economizer control methods and their benefits, as well as sensors required to accomplish your application goals. Please contact your local Carrier representative for assistance.

### Motor limits, brake horsepower (bhp)

Due to internal design of Carrier units, the air path, and specially designed motors, the full horsepower (maximum continuous bhp) band, as listed in the Fan Performance tables, can be used with the utmost confidence. There is no need for extra safety factors, as Carrier motors are designed and rigorously tested to use the entire, listed bhp range without either nuisance tripping or premature motor failure.

### Propane heating (48GC units only)

Propane has different physical qualities than natural gas. As a result, propane requires different fuel to air mixture. To optimize the fuel/air mixture for propane, Carrier sells different burner orifices in an easy to install accessory kit. To select the correct burner orifices or determine the heat capacity for a propane application, use either the selection software, or the unit's service manual.

### High altitude heating

High altitudes have less oxygen, which affects the fuel/air mixture in heat exchangers. In order to maintain a proper fuel/air mixture, heat exchangers operating in altitudes above 2000 ft (610 m) require different orifices. To select the correct burner orifices or determine the heat capacity for a high altitude application, use either the selection software, or the unit's service manual.

High altitudes have less oxygen, which means heat exchangers need less fuel. The new gas orifices in this field-installed kit make the necessary adjustment for high altitude applications. They restore the optimal fuel to air mixture and maintain healthy combustion on altitudes above 2000 ft (610 m).

NOTE: Typical natural gas heating value ranges from 975 to 1050 Btu/ft$^3$ at sea level nationally. The heating value goes down approximately 1.7% per every thousand feet elevation. Standard factory orifices can typically be used up to 2000 ft (610 m) elevation without any operational issues.

### Sizing a rooftop

Bigger is not necessarily better. While an air conditioner needs to have enough capacity to meet the design loads, it does not need excess capacity. In fact, excess capacity typically results in very poor part load performance and humidity control.

# Application data (cont)

Using higher design temperatures than ASHRAE recommends for your location, adding "safety factors" to the calculated load, are all signs of oversizing air conditioners. Oversizing the air conditioner leads to poor humidity control, reduced efficiency, higher utility bills, larger indoor temperature swings, excessive noise, and increased wear and tear on the air conditioner.

Rather than oversizing an air conditioner, engineers should "right-size" or even slightly "under-size" air conditioners. Correctly sizing an air conditioner controls humidity better; promotes efficiency; reduces utility bills; extends equipment life, and maintains even, comfortable temperatures. Please contact your local Carrier representative for assistance.

**Low ambient applications**

The optional Carrier economizer can adequately cool your space by bringing in fresh, cool outside air. In fact, when so equipped, accessory low-ambient kit may not be necessary. In low ambient conditions, unless the outdoor air is excessively humid or contaminated, economizer-based "free cooling" is the preferred less costly and energy conscious method. In low ambient applications where outside air might not be desired (such as contaminated or excessively humid outdoor environments), your Carrier rooftop can operate to ambient temperatures down to 0°F (–18°C) using the recommended accessory low ambient controller.

Note about this specification:
This specification is in the "Masterformat" as published by the Construction Specification Institute. Please feel free to copy this specification directly into your building spec.

## Gas Heat/Electric Cooling Packaged Rooftop

### HVAC Guide Specifications

Size Range: **15 to 25 Nominal Tons**
Carrier Model Number: **48GC*17-28**

### Part 1 — (23 06 80) Schedules for Decentralized HVAC Equipment

1.01 (23 06 80.13) Decentralized Unitary HVAC Equipment Schedule

A. (23 06 80.13.A.) Rooftop unit (RTU) schedule:

1. Schedule is per the project specification requirements.

### Part 2 — (23 07 16) HVAC equipment insulation

2.01 (23 07 16.13) Decentralized, Rooftop Units:

A. (23 07 16.13.A.) Evaporator fan compartment:

1. Interior cabinet surfaces shall be insulated with a minimum 1/2 in. thick, minimum 1 1/2 lb density, flexible fiberglass insulation bonded with a phenolic binder, neoprene coated on the air side.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

B. (23 07 16.13.B.) Gas Heat Compartment:

1. Aluminum foil-faced fiberglass insulation shall be used.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

### Part 3 — (23 09 13) Instrumentation and control devices for HVAC

3.01 (23 09 13.23) Sensors and Transmitters

A. (23 09 13.23.A.) Thermostats

1. Thermostat must
   a. energize both "W" and "G" when calling for heat.
   b. have capability to energize 1 or 2 stages of cooling, and 2 different stages of heating.
   c. include capability for occupancy scheduling.

### Part 4 — (23 09 23) Direct Digital Control system for HVAC

4.01 (23 09 23.13) Decentralized, Rooftop Units:

A. (23 09 23.13.A.) SystemVu™ intelligent integrated Direct Digital Control (DDC) shall provide:

1. Integrated unit operation for comfort cooling, heating ventilation as well as all monitoring, recording and reporting capabilities. Controller shall also provide diagnostics and alarms of abnormal unit operation through the controller. Controller shall have an intuitive user display and be able to be used in a standalone operation or via building automation system (BAS).
2. Quick Unit Status LEDs of: RUN – meaning all systems are go, ALERT – that indicates there is currently a non-critical issue with the unit, like filters need to be replaced and FAULT – that indicates the unit has a critical issue and will possibly shut down.
3. Six large navigation keys for easy access. Navigation keys shall consist of: TEST, BACK, ENTER, and MENU along with UP and DOWN arrows.
4. Full back lit user display with 4 line by 30 character text capabilities. Display menu shall be designed to provide guided major menus and sub menus main menus provided below:
   a. Shutdown Unit
   b. Run Status
   c. Settings
   d. Alerts/Faults
   e. Service
   f. Inputs
   g. Outputs
   h. USB
5. The capability for standalone operation with conventional thermostat/sensor or use with building automation systems (BAS) of Carrier i-Vu®, BACnet MS/TP and Carrier Comfort Network® (CCN) systems. No special modules or boards are required for these capabilities. Has the capability to work with Equipment Touch™ and System Touch™ devices and ZS Sensors.
6. The ability to read refrigerant pressures at display or via BAS network of Discharge Pressure and Suction Pressure. The need for traditional refrigerant gages is not required.
7. USB Data Port for flash drive interaction. This will allow the transfer of data for uploads, downloads, perform software upgrades, back-up and restore data and file transfer data such as component number of starts and run hours.
8. Reverse Rotation Protection of compressors if field three phase wiring is misapplied.
9. Provide Service Capabilities of:
   a. Auto run test
   b. Manual run test
   c. Component run hours and starts
   d. Commissioning reports
   e. Data logging
   f. Alarm history

10. Economizer control and diagnostics. Set up economizer operation, receive feedback from actuator. Also meets the most recent California Title 24, ASHRAE 90.1 and IECC®[1] Fault Detection and Diagnostic (FDD) requirements.
11. Unit cooling operation down to 40°F (4°C).
12. Controller shall have easy access connections around the controller perimeter area and consist of Mate-N-Lok, terminal block and RJ style modular jack connections.
13. 365 day real time clock, 20 holiday schedules along with occupied and unoccupied scheduling.
14. Auto-Recognition for easy installation and commissioning of devices like economizers, space sensors etc.
15. A 5°F temperature difference between cooling and heating set points to meet the latest ASHRAE 90.1 Energy Standard.
16. Contains return air sensor, supply air sensor and outdoor air sensor to help monitor and provide data for the unit comfort operation, diagnostic and alarms.
17. Use of Carrier's field accessory hand-held Navigator™ display, Equipment Touch and System Touch devices.
18. Units with the factory-installed Humidi-MiZer® system option are capable of providing multiple modes of improved dehumidification as a variation of the normal cooling cycle.
19. Supply Air Tempering control operates the gas or electric heat to maintain a minimum supply air temperature during conditions where very cold outdoor air causes the supply air temperature to fall below the configured Supply Air Tempering Setpoint. This occurs during periods where DCV is active and increasing the amount of outdoor air or in cases where the system is operating at very low airflow and the calculated economizer position has increased to maintain a constant ventilation rate.
20. Demand limiting in units with SystemVu™ controller is achieved through set point expansion. The systems heating and cooling set points are expanded in steps or levels. The degree to which the set points may be expanded is defined by the 6 demand level offsets and the 2 commanded demand limit levels.
21. 3-year limited part warranty.

1. Third-party trademarks and logos are the property of their respective owners.

**Part 5 — (23 09 33) Electric and Electronic Control System for HVAC**

5.01 (23 09 33.13) Decentralized, Rooftop Units:

A. (23 09 33.13.A.) General:

1. Shall be complete with self-contained low-voltage control circuit protected by a resettable circuit breaker on the 24-v transformer side. Transformer shall have 75VA capability.
2. Shall utilize color-coded wiring.
3. Shall include a Unit Control Board to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, gas controller, economizer, thermostat, DDC control options, and low and high pressure switches. Controller shall also provide an intuitive means to adjust the indoor fan speed through a simple switch and pot adjustment design.
4. The heat exchanger shall be controlled by an integrated gas controller (IGC) microprocessor. See gas heat section of this specification.
5. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.

B. (23 09 33.13.B.) Safeties:

1. Compressor over-temperature, over-current. High internal pressure differential.
2. Low pressure switch.
   a. Low pressure switch shall use different color wire than the high pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
3. High pressure switch.
   a. High pressure switch shall use different color wire than the low pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
4. Mixed air auto re-set temperature switch.
   a. When return air temperatures get the critical point that can cause compressor reliability issues, this switch will shut down compression only until the temperature raise accordingly. Switch opens at 60°F (16°C) and closes at 65°F (18°C).
5. Automatic reset, motor thermal overload protector.
6. Heating section shall be provided with the following minimum protections:
   a. High temperature limit switches.
   b. Induced draft motor speed sensor.
   c. Flame rollout switch.
   d. Flame proving controls.

**Part 6 — (23 09 93) Sequence of Operation for HVAC Controls**

6.01 (23 09 93.13) Decentralized, Rooftop Units:

A. (23 09 93.13.A.) INSERT SEQUENCE OF OPERATION

**Part 7 — (23 40 13) Panel Air Filters**

7.01 (23 40 13.13) Decentralized, Rooftop Units:

A. (23 40 13.13.A.) Standard filter section:

1. Shall consist of factory installed, low velocity, disposable 2 in. thick fiberglass filters of commercially available sizes.
2. Unit shall use only one filter size. Multiple sizes are not acceptable.
3. Filters shall be accessible through a dedicated, weather tight access pane.
4. Four-inch filter capabilities shall be capable with pre-engineered and approved Carrier filter track field installed accessory. This kit requires field furnished filters.

**Part 8 — (23 81 19) Self-Contained Air Conditioners**

8.01 (23 81 19.13) Small-Capacity Self-Contained Air Conditioners:

A. (23 81 19.13.A.) General:

1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing a fully hermetic scroll compressors for cooling duty and gas combustion for heating duty.
2. Factory assembled, single-piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
3. Unit shall use Puron® (R-410A) refrigerant.
4. Unit shall be installed in accordance with the manufacturer's instructions.
5. Unit must be selected and installed in compliance with local, state, and federal codes.

B. (23 81 19.13.B.) Quality Assurance:

1. Unit meets ASHRAE 90.1 minimum efficiency requirements.
2. Unit shall be rated in accordance with AHRI Standards 340/360.
3. Unit shall be designed to conform to ASHRAE 15.
4. Unit shall be UL-tested and certified in accordance with ANSI Z21.47 Standards and UL-listed and certified under Canadian standards as a total package for safety requirements.
5. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
6. Unit casing shall be capable of withstanding 500 hour salt spray exposure per ASTM B117 (scribed specimen).
7. Unit shall be designed in accordance with ISO 9001, and shall be manufactured in a facility registered by ISO 9001:2015.
8. Roof curb shall be designed to conform to NRCA Standards.
9. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory, and must be available upon request.
10. Unit shall be designed in accordance with UL Standard 60335-2-40, including tested to withstand rain.
11. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
12. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.

C. (23 81 19.13.C.) Delivery, Storage, and Handling:

1. Unit shall be stored and handled per manufacturer's recommendations.
2. Lifted by crane requires either shipping top panel or spreader bars.
3. Unit shall only be stored or positioned in the upright position.

D. (23 81 19.13.D.) Project Conditions:

1. As specified in the contract.

E. (23 81 19.13.E.) Operating Characteristics:

1. Unit shall be capable of starting and running at 125°F (52°C) ambient outdoor temperature meeting maximum load criteria of AHRI Standard 340/360 at ±10% voltage.
2. Compressor with standard controls shall be capable of operation down to 40°F (4°C) ambient outdoor temperatures. Accessory winter start kit is necessary if mechanically cooling at ambient temperatures down to 25°F (–4°C) or 0°F (–18°C).
3. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
4. Unit shall be factory configured for vertical supply and return configurations or horizontal supply and return configurations. Dedicated models provided with no special air conversion kits required.

F. (23 81 19.13.F.) Electrical Requirements:

1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.
2. Standard Control Panel SCCR (short circuit current rating): 5kA RMS at Rated Symmetrical Voltage.

G. (23 81 19.13.G.) Unit Cabinet:

1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a prepainted baked enamel finish on all externally exposed surfaces.

2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 inches minimum, gloss (per ASTM D523, 60°F/16°C): 60, Hardness: H-2H Pencil hardness.
3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 1/2 in. thick, 1 lb density, flexible fiberglass insulation, neoprene coated on the air side. Aluminum foil-faced fiberglass insulation shall be used in the gas heat compartment.
4. Base of unit shall have a minimum of four locations for thru-the-base gas and electrical connections (factory-installed, standard).
5. Base Rail:
   a. Unit shall have base rails on a minimum of 2 sides.
   b. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
   c. Holes shall be provided in the base rail for moving the rooftop by fork truck.
   d. Base rail shall be a minimum of 16 gage thickness.
6. Condensate pan and connections:
   a. Shall be a sloped condensate drain pan made of a corrosion resistant material.
   b. Shall comply with ASHRAE Standard 62.
   c. Shall use a 3/4 in. 14 NPT drain connection, possible either through the bottom or side of the drain pan. Connection shall be made per manufacturer's recommendations.
7. Top panel:
   a. Shall be a multi-top panel linked with watertight flanges and locking systems.
8. Gas Connections:
   a. All gas piping connecting to unit gas valve shall enter the unit cabinet at a single location on side of unit (horizontal plane).
   b. Thru-the-base capability.
      1) Thru-the-base provisions/connections are available as standard with every unit. When bottom connections are required, field furnished couplings are require.
      2) No basepan penetration, other than those authorized by the manufacturer, is permitted.
9. Electrical Connections:
   a. All unit power wiring shall enter unit cabinet at a single, factory prepared, knockout location.
   b. Thru-the-base capability.
      1) Thru-the-base provisions/connections are available as standard with every unit. When bottom connections are required, field furnished couplings are require.
      2) No basepan penetration, other than those authorized by the manufacturer, is permitted.
10. Component access panels (standard):
    a. Cabinet panels shall be easily removable for servicing.
    b. Unit shall have large removable, filter access panel.
    c. Panels covering control box, indoor fan, indoor fan motor, gas components (where applicable), and compressors shall have molded composite handles. Handles shall be UV modified, composite. They shall be permanently attached, and recessed into the panel.
    d. Screws on the vertical portion of all removable access panel shall engage into heat resistant, molded composite collars.
    e. Collars shall be removable and easily replaceable using manufacturer recommended parts.

H. (23 81 19.13.H.) Gas Heat:
1. General:
   a. Heat exchanger shall be an induced draft design. Positive pressure heat exchanger designs shall not be allowed.
   b. Shall incorporate a direct-spark ignition system and redundant main gas valve.
   c. Gas supply pressure at the inlet to the rooftop unit gas valve must match that required by the manufacturer.
2. The heat exchanger shall be controlled by an integrated gas controller (IGC) microprocessor.
   a. IGC board shall notify users of fault using an LED (light-emitting diode).
   b. The LED shall be visible without removing the control box access panel.
   c. IGC board shall contain algorithms that modify evaporator fan operation to prevent future cycling on high temperature limit switch.
   d. Unit shall be equipped with anti-cycle protection with one short cycle on unit flame rollout switch or 4 continuous short cycles on the high temperature limit switch. Fault indication shall be made using an LED.
3. Standard Heat Exchanger construction:
   a. Heat exchanger shall be of the tubular-section type constructed of a minimum of 20-gage steel coated with a nominal 1.2 mil aluminum-silicone alloy for corrosion resistance.
   b. Burners shall be of the in-shot type constructed of aluminum-coated steel.

c. Burners shall incorporate orifices for rated heat output up to 2000 ft (610 m) elevation. Additional accessory kits may be required for applications above 2000 ft (610 m) elevation, depending on local gas supply conditions.

d. Each heat exchanger tube shall contain multiple dimples for increased heating effectiveness.

4. Optional Stainless Steel Heat Exchanger construction:

a. Use energy saving, direct-spark ignition system.

b. Use a redundant main gas valve.

c. Burners shall be of the in-shot type constructed of aluminum-coated steel.

d. All gas piping shall enter the unit cabinet at a single location on side of unit (horizontal plane).

e. The optional stainless steel heat exchanger shall be of the tubular-section type, constructed of a minimum of 20-gage type 409 stainless steel.

f. Type 409 stainless steel shall be used in heat exchanger tubes and vestibule plate.

g. Complete stainless steel heat exchanger allows for greater application flexibility.

5. Induced draft combustion motor and blower

a. Shall be a direct-drive, single inlet, forward-curved centrifugal type.

b. Shall be made from steel with a corrosion resistant finish.

c. Shall have permanently lubricated sealed bearings.

d. Shall have inherent thermal overload protection.

e. Shall have an automatic reset feature.

I. (23 81 19.13.I.) Coils:

1. Standard Aluminum Fin-Copper Tube Coils:

a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.

b. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.

c. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.

2. Optional Pre-coated aluminum-fin condenser coils:

a. Shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments.

b. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube.

c. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.

d. Corrosion durability of fin stock shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

e. Corrosion durability of fin stock shall be confirmed through testing to have no visible corrosion after 48 hour immersion in a room temperature solution of 5% salt, 1% acetic acid.

f. Fin stock coating shall pass 2000 hours of the following: one week exposure in the prohesion chamber followed by one week of accelerated ultraviolet light testing. Prohesion chamber: the solution shall contain 3.5% sodium chloride and 0.35% ammonium sulfate. The exposure cycle is one hour of salt fog application at ambient followed by one hour drying at 95°F (35°C).

3. Optional Copper-fin evaporator and condenser coils:

a. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.

b. Galvanized steel tube sheets shall not be acceptable.

c. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

4. Optional E-coated aluminum-fin evaporator and condenser coils:

a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.

b. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.

c. Color shall be high gloss black with gloss per ASTM D523-89.

d. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges.

e. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.

f. Impact resistance shall be up to 160 in. lb (ASTM D2794-93).

g. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).

h. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

J. (23 81 19.13.J.) Refrigerant Components:
   1. Refrigerant circuit shall include the following control, safety, and maintenance features:
      a. Thermostatic Expansion Valve (TXV) shall help provide optimum performance across the entire operating range. Shall contain removable power element to allow change out of power element and bulb without removing the valve body.
      b. Refrigerant filter drier – Solid core design.
      c. Service gage connections on suction and discharge lines.
   2. Compressors:
      a. Unit shall use two tandem scroll compressors on single independent refrigeration circuit.
      b. Units shall have single circuit and two stage cooling.
      c. Evaporator coils shall be a full active design to help better control comfort latent removal.
      d. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
      e. Compressors shall be internally protected from high discharge temperature conditions.
      f. Compressors shall be protected from an over-temperature and over-amperage conditions by an internal, motor overload device.
      g. Compressor shall be factory-mounted on rubber grommets.
      h. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
      i. Crankcase heaters shall not be required for normal operating range, unless required by the manufacturer due to refrigerant charge limits.

K. (23 81 19.13.K.) Return Air Filter Section:
   1. Filters access is specified in the unit cabinet section of this specification.
   2. Filters shall be held in place by a pivoting filter tray, facilitating easy removal and installation.
   3. Shall consist of factory installed, low velocity, throw-away 2 in. thick fiberglass filters.
   4. Filters shall be standard, commercially available sizes.
   5. Only one size filter per unit is allowed.

L. (23 81 19.13.L.) Evaporator Fan and Motor with EcoBlue™ Technology:
   1. Direct Drive Evaporator fan motor:
      a. Shall be a ECM motor design.
      b. Shall have permanently lubricated bearings.
      c. Shall have inherent automatic-reset thermal overload protection.
      d. Shall have slow ramp up to speed capabilities.
      e. Shall require no fan/motor belts for operation, adjustments and or initial fan speed set up.
      f. Fan DC voltage set up on Unit Control Board can eliminate the need of removal of blower access door, required on conventional belt drive systems.
      g. Shall be internally protected from electrical phase reversal and loss.
   2. Evaporator Fan:
      a. Shall be easily set with dedicated selection switch and adjustment pot on unit control board or through SystemVu™ controller.
      b. Shall provide 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 operation.
      c. Blower fan shall be a Vane Axial fan design with 75% less moving parts than a conventional belt drive system.
      d. Shall be constructed of a cast aluminum stator and high impact composite material on stator, rotor and air inlet casing.
      e. Shall be a patented design with a corrosion resistant material and dynamically balanced.
      f. Shall have slow ramp up to speed capabilities to help reduce sound and comfort issues typically associated with single speed belt drive systems.
      g. Units shall contain two separate vane axial fan assemblies.
      h. Shall be a slide out design with removal of a few support brackets.
   3. Shall include an easily accessible Unit Control Board to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, gas controller, economizer, thermostat, DDC control options, and low, high and mixed air temperature switches. Controller shall also provide an intuitive means to adjust the indoor fan speed through a simple switch and pot adjustment design.

M. (23 81 19.13.M.) Condenser Fans and Motors:
   1. Condenser fan motors:
      a. Shall be a totally enclosed motor.
      b. Shall use permanently lubricated bearings.
      c. Shall have inherent thermal overload protection with an automatic reset feature.
      d. Shall use a shaft-down design on all sizes.
   2. Condenser Fans:
      a. Shall be a direct-driven propeller type fan.

b. Shall have galvalum blades riveted to steel spider that have corrosion-resistant properties and shall be dynamically balanced.

N. (23 81 19.13.N.) Special Features Options and Accessories:

1. Integrated EconomizerONE and EconoMi$er2, Low Leak rate models.
   a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
   b. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
   c. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
   d. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
   e. Standard leak rate shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential.
   f. Economizer controller on EconomizerONE models shall be the Siemens POL224 that provides:
      1) One-line LCD interface screen for setup, configuration and troubleshooting.
      2) Optional configuration via WLAN stick and Siemens Climatix™[1] smartphone app for easy setup.
      3) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24, ASHRAE 90.1 and IECC.
      4) Sensor failure loss of communication identification.
      5) Capabilities for use with multiple-speed indoor fan systems.
      6) Utilize digital sensors: Dry bulb and Enthalpy.
   g. Economizer controller on EconoMi$er 2 models with SystemVu™ controls shall be a 4 to 20mA design controlled directly by the controller. SystemVu controller meets California Title 24, ASHRAE 90.1 and IECC Fault Detection and Diagnostic (FDD) requirements.
   h. Shall be capable of introducing up to 100% outdoor air.
   i. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1 requirements.
   j. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
   k. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available on factory-installed economizers only. Outdoor air sensor setpoint shall be adjustable and shall range from 40°F to 100°F (4°C to 38°C). Additional sensor options shall be available as accessories.
   l. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.
   m. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
   n. Dampers shall be completely closed when the unit is in the unoccupied mode.
   o. Economizer controller shall accept a 0 to 10 Vdc $CO_2$ sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.
   p. Compressor lockout temperature on POL224 control is adjustable from –45°F to 80°F (–43°C to 27°C), set at a factory default of 32°F (0°C).
   q. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
   r. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
2. Integrated EconomizerONE and EconoMi$er®2, and Ultra Low Leak rate models.
   a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
   b. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
   c. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
   d. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
   e. Ultra Low Leak design meets California Title 24 section 140.4 and ASHRAE 90.1 requirements for 4 cfm per sq. ft on the outside air dampers and 10 cfm per sq. ft on the return dampers.

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f. Economizer controller on EconomizerONE models shall be the Siemens POL224 that provides:
   1) One-line LCD interface screen for setup, configuration and troubleshooting.
   2) Optional configuration via WLAN stick and Siemens Climatix™[1] smartphone app for easy setup.
   3) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24, ASHRAE 90.1 and IECC.
   4) Sensor failure loss of communication identification.
   5) Capabilities for use with multiple-speed indoor fan systems.
   6) Utilize digital sensors: Dry bulb and Enthalpy.

g. Economizer controller on EconoMi$er 2 models with SystemVu™ controls shall be a 4-20mA design controlled directly by the controller. SystemVu controller meets California Title 24, ASHRAE 90.1 and IECC Fault Detection and Diagnostic (FDD) requirements.

h. Shall be capable of introducing up to 100% outdoor air.

i. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1 requirements.

j. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.

k. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available on factory-installed economizers only. Outdoor air sensor setpoint shall be adjustable and shall range from 40°F to 100°F (4°C to 38°C). Additional sensor options shall be available as accessories.

l. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.

m. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.

n. Dampers shall be completely closed when the unit is in the unoccupied mode.

o. Economizer controller shall accept a 0 to 10 vdc $CO_2$ sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.

p. Compressor lockout temperature on POL224control is adjustable from –45°F to 80°F (–43°C to 27°C), set at a factory default of 32°F (0°C).

q. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.

r. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.

3. Wi-Fi/WLAN Stick for EconomizerONE POL224 (Field-installed) allowing for use of the Siemens Climatix™ mobile application.

4. Two-Position Damper (Field-installed only):
   a. Damper shall be a Two-Position Damper. Damper travel shall be from the full closed position to the field adjustable %-open setpoint.
   b. Damper shall include adjustable damper travel from 25% to 100% (full open).
   c. Damper shall include single or dual blade, gear driven dampers and actuator motor.
   d. Actuator shall be direct coupled to damper gear. No linkage arms or control rods shall be acceptable.
   e. Damper will admit up to 100% outdoor air for applicable rooftop units.
   f. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.
   g. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.
   h. Outside air hood shall include aluminum water entrainment filter.

5. Manual Damper (Field-installed only):
   a. Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 25 or 50% outdoor air for year round ventilation.

6. Humidi-MiZer® Adaptive Dehumidification System:
   a. The Humidi-MiZer Adaptive Dehumidification System shall be factory installed and shall provide greater dehumidification of the occupied space by two modes of dehumidification operations in addition to its normal design cooling mode:
      1) Subcooling mode further sub cools the hot liquid refrigerant leaving the condenser coil when both temperature and humidity in the space are not satisfied.
      2) Hot gas reheat mode shall mix a portion of the hot gas from the discharge of the compressor with the hot liquid

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refrigerant leaving the condenser coil to create a two-phase heat transfer in the system, resulting in a neutral leaving air temperature when only humidity in the space is not satisfied.

3) Includes low ambient controller.

7. Low Ambient Control Package:
   a. Controller shall control coil head pressure by condenser fan speed modulation or condenser fan cycling and wind baffles.
   b. Shall consist of solid-state control and condenser coil temperature sensor to maintain condensing temperature between 90°F (32°C) and 110°F (43°C) at outdoor ambient temperatures down to 0°F (–18°C).
8. Propane Gas Conversion Kit:
   a. Package shall contain all the necessary hardware and instructions to convert a standard natural gas unit for use with liquefied propane, up to 2000 ft (610 m) elevation.
   b. Additional accessory kits may be required for applications above 2000 ft (610 m) elevation.
9. Condenser Coil Hail Guard Assembly:
   a. Shall protect against damage from hail.
   b. Shall be either hood style or louvered.
10. Unit-Mounted, Non-Fused Disconnect Switch:
   a. Switch shall be factory installed, internally mounted.
   b. National Electric Code (NEC) and UL approved non-fused switch shall provide unit power shutoff.
   c. Shall be accessible from outside the unit.
   d. Shall provide local shutdown and lockout capability.
   e. Sized only for the unit as ordered from the factory. Does not accommodate field-installed devices.
11. Convenience Outlet:
   a. Powered convenience outlet.
      1) Outlet shall be powered from main line power to the rooftop unit.
      2) Outlet shall be powered from line side or load side of disconnect by installing contractor, as required by code. If outlet is powered from load side of disconnect, unit electrical ratings shall be UL certified and rated for additional outlet amperage.
      3) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
      4) Outlet shall include 15 amp GFI receptacles with independent fuse protection.
      5) Voltage required to operate convenience outlet shall be provided by a factory installed step-down transformer.
      6) Outlet shall be accessible from outside the unit.
      7) Outlet shall include a field installed “Wet in Use” cover.
   b. Factory-Installed Non-Powered convenience outlet.
      1) Outlet shall be powered from a separate 115/120v power source.
      2) A transformer shall not be included.
      3) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
      4) Outlet shall include 15 amp GFI receptacles with independent fuse protection.
      5) Outlet shall be accessible from outside the unit.
      6) Outlet shall include a field installed “Wet in Use” cover.
   c. Field-Installed Non-Powered convenience outlet.
      1) Outlet shall be powered from a separate 115/120v power source.
      2) A transformer shall not be included.
      3) Outlet shall be field-installed and internally mounted with easily accessible 115-v female receptacle.
      4) Outlet shall include 20 amp GFI receptacles. This kit provides a flexible installation method which allows code compliance for height requirements of the GFCI outlet from the finished roof surface as well as the capability to relocate the outlet to a more convenient location.
      5) Outlet shall be accessible from outside the unit.
      6) Outlet shall include a field installed “Wet in Use” cover.
12. Flue Discharge Deflector:
   a. Flue discharge deflector shall direct unit exhaust vertically instead of horizontally.
   b. Deflector shall be defined as a “natural draft” device by the National Fuel and Gas (NFG) code.
13. Centrifugal Fan Power Exhaust:
   a. Power exhaust shall be used in conjunction with an integrated economizer.
   b. Horizontal power exhaust shall be mounted in return ductwork.
   c. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past

the 0 to 100% adjustable setpoint on the economizer control.

14. Roof Curbs (Vertical):
    a. Full perimeter roof curb with exhaust capability providing separate air streams for energy recovery from the exhaust air without supply air contamination.
    b. Formed galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
    c. Permits installation and securing of ductwork to curb prior to mounting unit on the curb.
15. High Altitude Gas Conversion Kit:
    a. Package shall contain all the necessary hardware and instructions to convert a standard natural gas unit to operate from 2000 to 7000 ft (610 to 2134 m) elevation with natural gas or from 0 to 7000 ft (0 to 2134 m) elevation with liquefied propane.
16. Outdoor Air Enthalpy Sensor:
    a. The outdoor air enthalpy sensor shall be used to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the unit will provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.
17. Return Air Enthalpy Sensor:
    a. The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.
18. Indoor Air Quality ($CO_2$) Sensor:
    a. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
    b. The IAQ sensor shall be available in duct mount, wall mount, or wall mount with LED display. The setpoint shall have adjustment capability.
19. Smoke Detectors:
    a. Shall be a Four-Wire Controller and Detector.
    b. Shall be environmental compensated with differential sensing for reliable, stable, and drift-free sensitivity.
    c. Shall use magnet-activated test/reset sensor switches.
    d. Shall have tool-less connection terminal access.
    e. Shall have a recessed momentary switch for testing and resetting the detector.
    f. Controller shall include:
        1) One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel.
        2) Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment.
        3) One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station.
        4) Capable of direct connection to two individual detector modules.
        5) Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.
20. Winter Start Kit:
    a. Shall contain a bypass device around the low pressure switch.
    b. Shall be required when mechanical cooling is required down to 25°F (–4°C).
    c. Shall not be required to operate on an economizer when below an outdoor ambient of 40°F (4°C).
21. Time Guard:
    a. Shall prevent compressor short-cycling by providing a 5-minute delay (±2 minutes) before restarting a compressor after shutdown for any reason.
    b. One device shall be required per compressor.
22. Hinged Access Panels:
    a. Shall provide easy access through integrated quarter turn latches.
    b. Shall be on major panels of: filter, control box, fan motor, and compressor.
23. 4 in. MERV-13 Return Air Filters:
    a. Factory option to upgrade standard unit filters to 4 in. MERV-13 filters. Filter media is securely fasted inside the filter frame on all four sides.
24. 4 in. Filter Rack Kit:
    a. The 4 in. filter rack accessory kit is designed to hold 4 in. MERV-8 or MERV-13 filters. Filters not included in kit.
25. 2 in. MERV-13 Return Air Filters:
    a. Accessory kit to field upgrade standard unit filters to 2 in. MERV-13 filters.
26. 2 in. MERV-8 Return Air Filters:
    a. Accessory kit to field upgrade standard unit filters to 2 in. MERV-8 filters.
27. Phase Monitor Control:
    a. Shall monitor the sequence of three phase electrical system to provide a phase reversal protection.
    b. Shall monitor the three phase voltage inputs to provide a phase loss protection for the three phase device.
    c. Will work on either a Delta or Wye power connection.

28. Condensate Overflow Switch:
    a. This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:
        1) Indicator light — solid red (more than 10 seconds on water contact – compressors disabled), blinking red (sensor disconnected).
        2) 10 second delay to break — eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping).
29. Horn/Strobe Annunciator:
    a. Provides an audible/visual signaling device for use with factory-installed option or field installed accessory smoke detectors.
        1) Requires installation of a field-supplied 24-v transformer suitable for 4.2 VA (AC) or 3.0 VA (DC) per horn/strobe accessory.
        2) Requires field-supplied electrical box, North American 1-gang box, 2 in. (51 mm) x 4 in. (102 mm).
        3) Shall have a clear colored lens.
30. High Short Circuit Current Rating (SCCR) protection:
    a. Factory-installed option provides high short circuit current protection to each compressor, plus all indoor and outdoor fan motors of 60 kA for 208/230-3-60 units and 65 kA for 460-3-60 units against high potential fault current situations. (Standard unit comes with 5 kA rating.)
    b. This option is not available with factory installed Non-Fused Disconnect, Humidi-MiZer system, Low Ambient controls, Phase loss monitor/protection and 575 Volt models.
31. HACR Breaker:
    a. These manual reset devices provide overload and short circuit protection for the unit. Factory wired and mounted with the units, with access cover to help provide environmental protection. On 575V applications, HACR breaker can only be used with WYE power distribution systems. Use on Delta power distribution systems is prohibited.
    b. Sized only for the unit as ordered from the factory. Does not accommodate field-installed devices.
32. Foil Faced Insulation:
    a. Throughout unit cabinet air stream, non-fibrous and cleanable foil faced insulation is used.

# Guide specifications — 50GC

Note about this specification:
This specification is in the "Masterformat" as published by the Construction Specification Institute. Please feel free to copy this specification directly into your building spec.

## Cooling Only/Electric Heat Packaged Rooftop

### HVAC Guide Specifications

Size Range: **15 to 25 Nominal Tons**
Carrier Model Number: **50GC*17-28**

### Part 1 — (23 06 80) Schedules for Decentralized HVAC Equipment

1.01 (23 06 80.13) Decentralized Unitary HVAC Equipment Schedule:

A. (23 06 80.13.A.) Rooftop unit (RTU) schedule:

1. Schedule is per the project specification requirements.

### Part 2 — (23 07 16) HVAC equipment insulation

2.01 (23 07 16.13) Decentralized, Rooftop Units:

A. (23 07 16.13.A.) Evaporator fan compartment:

1. Interior cabinet surfaces shall be insulated with a minimum 1/2 in. thick, minimum 1 1/2 lb density, flexible fiberglass insulation bonded with a phenolic binder, neoprene coated on the air side.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

B. (23 07 16.13.B.) Electric Heat Compartment:

1. Aluminum foil-faced fiberglass insulation shall be used.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

### Part 3 — (23 09 13) Instrumentation and control devices for HVAC

3.01 (23 09 13.23) Sensors and Transmitters:

A. (23 09 13.23.A.) Thermostats:

1. Thermostat must
   a. energize both "W" and "G" when calling for heat.
   b. have capability to energize 1 or 2 stages of cooling, and 2 different stages of heating.
   c. include capability for occupancy scheduling.

### Part 4 — (23 09 23) Direct Digital Control system for HVAC

4.01 (23 09 23.13) Decentralized, Rooftop Units:

A. (23 09 23.13.A.) SystemVu™ intelligent integrated Direct Digital Control (DDC) shall provide:

1. Integrated unit operation for comfort cooling, heating ventilation as well as all monitoring, recording and reporting capabilities. Controller shall also provide diagnostics and alarms of abnormal unit operation through the controller. Controller shall have an intuitive user display and be able to be used in a standalone operation or via building automation system (BAS).
2. Quick Unit Status LEDs of: RUN – meaning all systems are go, ALERT – that indicates there is currently a non-critical issue with the unit, like filters need to be replaced and FAULT – that indicates the unit has a critical issue and will possibly shut down.
3. Six large navigation keys for easy access. Navigation keys shall consist of: TEST, BACK, ENTER, and MENU along with UP and DOWN arrows.
4. Full back lit user display with 4 line by 30 character text capabilities. Display menu shall be designed to provide guided major menus and sub menus main menus provided below:
   a. Shutdown Unit
   b. Run Status
   c. Settings
   d. Alerts/Faults
   e. Service
   f. Inputs
   g. Outputs
   h. USB
5. The capability for standalone operation with conventional thermostat/sensor or use with building automation systems (BAS) of Carrier i-Vu®, BACnet MS/TP and Carrier Comfort Network® (CCN) systems. No special modules or boards are required for these capabilities. Has the capability to work with Equipment Touch™ and System Touch™ devices and ZS Sensors.
6. The ability to read refrigerant pressures at display or via BAS network of; Discharge Pressure and Suction Pressure. The need for traditional refrigerant gages is not required.
7. USB Data Port for flash drive interaction. This will allow the transfer of data for uploads, downloads, perform software upgrades, back-up and restore data and file transfer data such as component number of starts and run hours.
8. Reverse Rotation Protection of compressors if field three phase wiring is misapplied.
9. Provide Service Capabilities of:
   a. Auto run test
   b. Manual run test
   c. Component run hours and starts
   d. Commissioning reports
   e. Data logging
   f. Alarm history

10. Economizer control and diagnostics. Set up economizer operation, receive feedback from actuator. Also meets the most recent California Title 24, ASHRAE 90.1 and IECC®[1] Fault Detection and Diagnostic (FDD) requirements.
11. Unit cooling operation down to 40°F (4°C).
12. Controller shall have easy access connections around the controller perimeter area and consist of Mate-N-Lok, terminal block and RJ style modular jack connections.
13. 365 day real time clock, 20 holiday schedules along with occupied and unoccupied scheduling.
14. Auto-Recognition for easy installation and commissioning of devices like economizers, space sensors, etc.
15. A 5°F temperature difference between cooling and heating set points to meet the latest ASHRAE 90.1 Energy Standard.
16. Contains return air sensor, supply air sensor and outdoor air sensor to help monitor and provide data for the unit comfort operation, diagnostic and alarms.
17. Use of Carrier's field accessory hand-held Navigator™ display, Equipment Touch and System Touch devices.
18. Units with the factory-installed Humidi-MiZer® system option are capable of providing multiple modes of improved dehumidification as a variation of the normal cooling cycle.
19. Supply Air Tempering control operates the gas or electric heat to maintain a minimum supply air temperature during conditions where very cold outdoor air causes the supply air temperature to fall below the configured Supply Air Tempering Setpoint. This occurs during periods where DCV is active and increasing the amount of outdoor air or in cases where the system is operating at very low airflow and the calculated economizer position has increased to maintain a constant ventilation rate.
20. Demand limiting in units with SystemVu™ controller is achieved through set point expansion. The systems heating and cooling set points are expanded in steps or levels. The degree to which the set points may be expanded is defined by the 6 demand level offsets and the 2 commanded demand limit levels.
21. 3-year limited part warranty.

**Part 5 — (23 09 33) Electric and Electronic Control System for HVAC**

5.01 (23 09 33.13) Decentralized, Rooftop Units:

A. (23 09 33.13.A.) General:

1. Shall be complete with self-contained low-voltage control circuit protected by a resettable circuit breaker on the 24-v transformer side. Transformer shall have 75VA capability.
2. Shall utilize color-coded wiring.
3. Shall include a Unit Control Board to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, economizer, thermostat, DDC control options, and low and high pressure switches. Controller shall also provide an intuitive means to adjust the indoor fan speed through a simple switch and pot adjustment design.
4. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.

B. (23 09 33.13.B.) Safeties:

1. Compressor over-temperature, over-current. High internal pressure differential.
2. Low pressure switch.
   a. Low pressure switch shall use different color wire than the high pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
3. High pressure switch.
   a. High pressure switch shall use different color wire than the low pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
4. Mixed air auto re-set temperature switch
   a. When return air temperatures get the critical point that can cause compressor reliability issues, this switch will shut down compression only until the temperature raise accordingly. Switch opens at 60°F (16°C) and closes at 65°F (18°C).
5. Automatic reset, motor thermal overload protector.

**Part 6 — (23 09 93) Sequence of Operation for HVAC Controls**

6.01 (23 09 93.13) Decentralized, Rooftop Units:

A. (23 09 93.13.A.) INSERT SEQUENCE OF OPERATION

**Part 7 — (23 40 13) Panel Air Filters**

7.01 (23 40 13.13) Decentralized, Rooftop Units:

A. (23 40 13.13.A.) Standard filter section:

1. Shall consist of factory installed, low velocity, disposable 2 in. thick fiberglass filters of commercially available sizes.

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2. Unit shall use only one filter size. Multiple sizes are not acceptable.
3. Filters shall be accessible through a dedicated, weather tight access pane.
4. Four-inch filter capabilities shall be capable with pre-engineered and approved Carrier filter track field in-stalled accessory. This kit requires field furnished filters.

**Part 8 — (23 81 19) Self-Contained Air Conditioners**

8.01 (23 81 19.13) Small-Capacity Self-Contained Air Conditioners:

A. (23 81 19.13.A.) General:
1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing fully hermetic scroll compressors for cooling duty and optional electric heat for heating duty.
2. Factory assembled, single-piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
3. Unit shall use Puron® (R-410A) refrigerant.
4. Unit shall be installed in accordance with the manufacturer's instructions.
5. Unit must be selected and installed in compliance with local, state, and federal codes.

B. (23 81 19.13.B.) Quality Assurance:
1. Unit meets ASHRAE 90.1 minimum efficiency requirements.
2. Unit shall be rated in accordance with AHRI Standards 340/360.
3. Unit shall be designed to conform to ASHRAE 15.
4. Unit shall be UL-tested and certified in accordance with ANSI Z21.47 Standards and UL-listed and certified under Canadian standards as a total package for safety requirements.
5. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
6. Unit casing shall be capable of withstanding 500 hour salt spray exposure per ASTM B117 (scribed specimen).
7. Unit shall be designed in accordance with ISO 9001, and shall be manufactured in a facility registered by ISO 9001:2015.
8. Roof curb shall be designed to conform to NRCA Standards.
9. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory, and must be available upon request.
10. Unit shall be designed in accordance with UL Standard 60335-2-40, including tested to withstand rain.
11. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
12. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.

C. (23 81 19.13.C.) Delivery, Storage, and Handling:
1. Unit shall be stored and handled per manufacturer's recommendations.
2. Lifted by crane requires either shipping top panel or spreader bars.
3. Unit shall only be stored or positioned in the upright position.

D. (23 81 19.13.D.) Project Conditions:
1. As specified in the contract.

E. (23 81 19.13.E.) Operating Characteristics:
1. Unit shall be capable of starting and running at 125°F (52°C) ambient outdoor temperature meeting maximum load criteria of AHRI Standard 340/360 at ±10% voltage.
2. Compressor with standard controls shall be capable of operation down to 40°F (4°C) ambient outdoor temperatures. Accessory winter start kit is necessary if mechanically cooling at ambient temperatures down to 25°F (–4°C) or 0°F (–18°C).
3. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
4. Unit shall be factory configured for vertical supply and return configurations or horizontal supply and return configurations. Dedicated models provided with no special air conversion kits required.

F. (23 81 19.13.F.) Electrical Requirements:
1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.
2. Standard Control Panel SCCR (short circuit current rating): 5kA RMS at Rated Symmetrical Voltage.

G. (23 81 19.13.G.) Unit Cabinet:
1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a prepainted baked enamel finish on all externally exposed surfaces.
2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 in. minimum, gloss (per ASTM D523, 60°F/16°C): 60, Hardness: H-2H Pencil hardness.
3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 1/2 in. thick, 1 lb density, flexible fiberglass insulation, neoprene coated on the air side. Aluminum foil-faced fiberglass insulation shall be used in the heat compartment.

4. Base of unit shall have a minimum of four locations for thru-the-base gas and electrical connections (factory-installed or field-installed), standard.
5. Base Rail:
   a. Unit shall have base rails on a minimum of 2 sides.
   b. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
   c. Holes shall be provided in the base rail for moving the rooftop by fork truck.
   d. Base rail shall be a minimum of 16 gage thickness.
6. Condensate pan and connections:
   a. Shall be a sloped condensate drain pan made of a corrosion resistant material.
   b. Shall comply with ASHRAE Standard 62.
   c. Shall use a 3/4 in. 14 NPT drain connection, possible either through the bottom or side of the drain pan. Connection shall be made per manufacturer's recommendations.
7. Top panel:
   a. Shall be a multi-top panel with watertight flanges and locking systems.
8. Electrical Connections:
   a. All unit power wiring shall enter unit cabinet at a single, factory prepared, knockout location.
   b. Thru-the-base capability.
      1) Thru-the-base provisions/connections are available as standard with every unit. When bottom connections are required, field furnished couplings are required.
      2) No basepan penetration, other than those authorized by the manufacturer, is permitted.
9. Component access panels (standard):
   a. Cabinet panels shall be easily removable for servicing.
   b. Unit shall have large removable, filter access panel.
   c. Panels covering control box, indoor fan, indoor fan motor, gas components (where applicable), and compressors shall have molded composite handles. Handles shall be UV modified, composite. They shall be permanently attached, and recessed into the panel.
   d. Screws on the vertical portion of all removable access panel shall engage into heat resistant, molded composite collars.
   e. Collars shall be removable and easily replaceable using manufacturer recommended parts.

H. (23 81 19.13.H.) Coils:
1. Standard Aluminum Fin-Copper Tube Coils:
   a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
   b. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
   c. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.
2. Optional Pre-coated aluminum-fin condenser coils:
   a. Shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments.
   b. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube.
   c. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.
   d. Corrosion durability of fin stock shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.
   e. Corrosion durability of fin stock shall be confirmed through testing to have no visible corrosion after 48 hour immersion in a room temperature solution of 5% salt, 1% acetic acid.
   f. Fin stock coating shall pass 2000 hours of the following: one week exposure in the prohesion chamber followed by one week of accelerated ultraviolet light testing. Prohesion chamber: the solution shall contain 3.5% sodium chloride and 0.35% ammonium sulfate. The exposure cycle is one hour of salt fog application at ambient followed by one hour drying at 95°F (35°C).
3. Optional Copper-fin evaporator and condenser coils:
   a. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
   b. Galvanized steel tube sheets shall not be acceptable.
   c. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.
4. Optional E-coated aluminum-fin evaporator and condenser coils:
   a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.

b. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.
c. Color shall be high gloss black with gloss per ASTM D523-89.
d. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges.
e. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.
f. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93).
g. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).
h. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

I. (23 81 19.13.I.) Refrigerant Components:
1. Refrigerant circuit shall include the following control, safety, and maintenance features:
a. Thermostatic Expansion Valve (TXV) shall help provide optimum performance across the entire operating range. Shall contain removable power element to allow change out of power element and bulb without removing the valve body.
b. Refrigerant filter drier – Solid core design.
c. Service gage connections on suction and discharge lines.
2. Compressors:
a. Unit shall use two tandem scroll compressors on single independent refrigeration circuit.
b. Units shall have single circuit and two stage cooling.
c. Evaporator coils shall be a full active design to help better control comfort latent removal.
d. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
e. Compressors shall be internally protected from high discharge temperature conditions.
f. Compressors shall be protected from an over-temperature and over-amperage conditions by an internal, motor overload device.
g. Compressor shall be factory mounted on rubber grommets.
h. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
i. Crankcase heaters shall not be required for normal operating range, unless required by compressor manufacturer due to refrigerant charge limits.

J. (23 81 19.13.J.) Return Air Filter Section:
1. Filters access is specified in the unit cabinet section of this specification.
2. Filters shall be held in place by a pivoting filter tray, facilitating easy removal and installation.
3. Shall consist of factory installed, low velocity, throw-away 2 in. thick fiberglass filters.
4. Filters shall be standard, commercially available sizes.
5. Only one size filter per unit is allowed.

K. (23 81 19.13.K.) Evaporator Fan and Motor with EcoBlue™ Technology:
1. Direct Drive Evaporator fan motor:
a. Shall be a ECM motor design.
b. Shall have permanently lubricated bearings.
c. Shall have inherent automatic-reset thermal overload protection.
d. Shall have slow ramp up to speed capabilities.
e. Shall require no fan/motor belts for operation, adjustments and or initial fan speed set up.
f. Fan DC voltage set up on Unit Control Board can eliminate the need of removal of blower access door, required on conventional belt drive systems.
g. Shall be internally protected from electrical phase reversal and loss.
2. Evaporator Fan:
a. Shall be easily set with dedicated selection switch and adjustment pot on unit control board or through SystemVu™ controller.
b. Shall provide 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 operation.
c. Blower fan shall be a Vane Axial fan design with 75% less moving parts than a conventional belt drive system.
d. Shall be constructed of a cast aluminum stator and high impact composite material on stator, rotor and air inlet casing.
e. Shall be a patented design with a corrosion resistant material and dynamically balanced.
f. Shall have slow ramp up to speed capabilities to help reduce sound and comfort issues typically associated with single speed belt drive systems.
g. Units shall contain two separate vane axial fan assemblies.
h. Shall be a slide out design with removal of a few support brackets.

3. Shall include an easily accessible Unit Control Board to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, gas controller, economizer, thermostat, DDC control options, and low, high and mixed air temperature switches. Controller shall also provide an intuitive means to adjust the indoor fan speed through a simple switch and pot adjustment design.

L. (23 81 19.13.L.) Condenser Fans and Motors:

1. Condenser fan motors:
   a. Shall be a totally enclosed motor.
   b. Shall use permanently lubricated bearings.
   c. Shall have inherent thermal overload protection with an automatic reset feature.
   d. Shall use a shaft-down design on all sizes.
2. Condenser Fans:
   a. Shall be a direct-driven propeller type fan.
   b. Shall have galvalum blades riveted to steel spider that have corrosion-resistant properties and shall be dynamically balanced.

M. (23 81 19.13.M.) Special Features Options and Accessories:

1. Integrated EconomizerONE and EconoMi$er2, Low Leak rate models.
   a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
   b. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
   c. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
   d. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
   e. Standard leak rate shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential.
   f. Economizer controller on EconomizerONE models shall be the Siemens POL224 that provides:
      1) One-line LCD interface screen for setup, configuration and troubleshooting.
      2) Optional configuration via WLAN stick and Siemens Climatix™[1] smartphone app for easy setup.
      3) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24, ASHRAE 90.1 and IECC.
      4) Sensor failure loss of communication identification.
      5) Capabilities for use with multiple-speed indoor fan systems.
      6) Utilize digital sensors: Dry bulb and Enthalpy.
   g. Economizer controller on EconoMi$er 2 models with SystemVu™ controls shall be a 4 to 20mA design controlled directly by the controller. SystemVu controller meets California Title 24, ASHRAE 90.1 and IECC Fault Detection and Diagnostic (FDD) requirements.
   h. Shall be capable of introducing up to 100% outdoor air.
   i. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1 requirements.
   j. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
   k. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available on factory installed only. Outdoor air sensor setpoint shall be adjustable and shall range from 40°F to 100°F (4°C to 38°C). Additional sensor options shall be available as accessories.
   l. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.
   m. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
   n. Dampers shall be completely closed when the unit is in the unoccupied mode.
   o. Economizer controller shall accept a 0 to 10 vdc $CO_2$ sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.
   p. Compressor lockout temperature on POL224 control is adjustable from –45°F to 80°F (–43°C to 27°C), set at a factory default of 32°F (0°C).
   q. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
   r. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.

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2. Integrated EconomizerONE and EconoMi$er®2, Ultra Low Leak rate models.
   a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
   b. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
   c. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
   d. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
   e. Ultra Low Leak design meets California Title 24 section 140.4 and ASHRAE 90.1 requirements for 4 cfm per sq ft on the outside air dampers and 10 cfm per sq ft on the return dampers.
   f. Economizer controller on EconomizerONE models shall be the Siemens POL224 that provides:
      1) One-line LCD interface screen for setup, configuration and troubleshooting.
      2) Optional configuration via WLAN stick and Siemens Climatix™[1] smartphone app for easy setup.
      3) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24, ASHRAE 90.1 and IECC.
      4) Sensor failure loss of communication identification.
      5) Capabilities for use with multiple-speed indoor fan systems.
      6) Utilize digital sensors: Dry bulb and Enthalpy.
   g. Economizer controller on EconoMi$er 2 models with SystemVu™ controls shall be a 4-20mA design controlled directly by the controller. SystemVu controller meets California Title 24, ASHRAE 90.1 and IECC Fault Detection and Diagnostic (FDD) requirements.
   h. Shall be capable of introducing up to 100% outdoor air.
   i. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1 requirements.
   j. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
   k. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available on factory-installed economizers only. Outdoor air sensor setpoint shall be adjustable and shall range from 40°F to 100°F (4°C to 38°C). Additional sensor options shall be available as accessories.
   l. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.
   m. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
   n. Dampers shall be completely closed when the unit is in the unoccupied mode.
   o. Economizer controller shall accept a 0 to 10 vdc $CO_2$ sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.
   p. Compressor lockout temperature on POL224 control is adjustable from –45°F to 80°F (–43°C to 27°C), set at a factory default of 32°F (0°C).
   q. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
   r. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
3. Wi-Fi/WLAN Stick for EconomizerONE POL224 (Field installed) allowing for use of the Siemens Climatix™ mobile application.
4. Two-Position Damper (field-installed only):
   a. Damper shall be a Two-Position Damper. Damper travel shall be from the full closed position to the field adjustable %-open setpoint.
   b. Damper shall include adjustable damper travel from 25% to 100% (full open).
   c. Damper shall include single or dual blade, gear driven dampers and actuator motor.
   d. Actuator shall be direct coupled to damper gear. No linkage arms or control rods shall be acceptable.
   e. Damper will admit up to 100% outdoor air for applicable rooftop units.
   f. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.
   g. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.

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h. Outside air hood shall include aluminum water entrainment filter.

5. Manual Damper (field-installed only):
   a. Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 25% or 50% outdoor air for year round ventilation.
6. Humidi-MiZer® Adaptive Dehumidification System:
   a. The Humidi-MiZer Adaptive Dehumidification System shall be factory installed and shall provide greater dehumidification of the occupied space by two modes of dehumidification operations in addition to its normal design cooling mode:
      1) Subcooling mode further sub cools the hot liquid refrigerant leaving the condenser coil when both temperature and humidity in the space are not satisfied.
      2) Hot gas reheat mode shall mix a portion of the hot gas from the discharge of the compressor with the hot liquid refrigerant leaving the condenser coil to create a two-phase heat transfer in the system, resulting in a neutral leaving air temperature when only humidity in the space is not satisfied.
      3) Includes low ambient controller.
7. Low Ambient Control Package:
   a. Controller shall control coil head pressure by condenser fan speed modulation or condenser fan cycling and wind baffles.
   b. Shall consist of solid-state control and condenser coil temperature sensor to maintain condensing temperature between 90°F (32°C) and 110°F (43°C) at outdoor ambient temperatures down to 0°F (–18°C).
8. Condenser Coil Hail Guard Assembly:
   a. Shall protect against damage from hail.
   b. Shall be either hood style or louvered.
9. Unit-Mounted, Non-Fused Disconnect Switch:
   a. Switch shall be factory installed, internally mounted.
   b. National Electric Code (NEC) and UL approved non-fused switch shall provide unit power shutoff.
   c. Shall be accessible from outside the unit.
   d. Shall provide local shutdown and lockout capability.
   e. Sized only for the unit as ordered from the factory. Does not accommodate field-installed devices.
10. Convenience Outlet:
   a. Powered convenience outlet.
      1) Outlet shall be powered from main line power to the rooftop unit.
      2) Outlet shall be powered from line side or load side of disconnect by installing contractor, as required by code. If outlet is powered from load side of disconnect, unit electrical ratings shall be UL certified and rated for additional outlet amperage.
      3) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
      4) Outlet shall include 15 amp GFI receptacles with independent fuse protection.
      5) Voltage required to operate convenience outlet shall be provided by a factory installed step-down transformer.
      6) Outlet shall be accessible from outside the unit.
      7) Outlet shall include a field installed “Wet in Use” cover.
   b. Factory-Installed Non-Powered convenience outlet.
      1) Outlet shall be powered from a separate 115/120v power source.
      2) A transformer shall not be included.
      3) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
      4) Outlet shall include 15 amp GFI receptacles with independent fuse protection.
      5) Outlet shall be accessible from outside the unit.
      6) Outlet shall include a field installed “Wet in Use” cover.
   c. Field-Installed Non-Powered convenience outlet.
      1) Outlet shall be powered from a separate 115/120v power source.
      2) A transformer shall not be included.
      3) Outlet shall be field-installed and internally mounted with easily accessible 115-v female receptacle.
      4) Outlet shall include 20 amp GFI receptacles. This kit provides a flexible installation method which allows code compliance for height requirements of the GFCI outlet from the finished roof surface as well as the capability to relocate the outlet to a more convenient location.
      5) Outlet shall be accessible from outside the unit.

6) Outlet shall include a field installed "Wet in Use" cover.

11. Centrifugal Fan Power Exhaust:
    a. Power exhaust shall be used in conjunction with an integrated economizer.
    b. Horizontal power exhaust shall be mounted in return ductwork.
    c. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0 to 100% adjustable setpoint on the economizer control.
12. Roof Curbs (Vertical):
    a. Full perimeter roof curb with exhaust capability providing separate air streams for energy recovery from the exhaust air without supply air contamination.
    b. Formed galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
    c. Permits installation and securing of ductwork to curb prior to mounting unit on the curb.
13. Outdoor Air Enthalpy Sensor:
    a. The outdoor air enthalpy sensor shall be used to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the unit will provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.
14. Return Air Enthalpy Sensor:
    a. The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.
15. Indoor Air Quality ($CO_2$) Sensor:
    a. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
    b. The IAQ sensor shall be available in duct mount, wall mount, or wall mount with LED display. The setpoint shall have adjustment capability.
16. Smoke Detectors:
    a. Shall be a four-wire controller and detector.
    b. Shall be environmental compensated with differential sensing for reliable, stable, and drift-free sensitivity.
    c. Shall use magnet-activated test/reset sensor switches.
    d. Shall have tool-less connection terminal access.
    e. Shall have a recessed momentary switch for testing and resetting the detector.
    f. Controller shall include:
        1) One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel.
        2) Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment.
        3) One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station.
        4) Capable of direct connection to two individual detector modules.
        5) Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.
17. Winter Start Kit:
    a. Shall contain a bypass device around the low pressure switch.
    b. Shall be required when mechanical cooling is required down to 25°F (–4°C).
    c. Shall not be required to operate on an economizer when below an outdoor ambient of 40°F (4°C).
18. Time Guard:
    a. Shall prevent compressor short-cycling by providing a 5 minute delay (±2 minutes) before restarting a compressor after shutdown for any reason.
    b. One device shall be required per compressor.
19. Hinged Access Panels:
    a. Shall provide easy access through integrated quarter turn latches.
    b. Shall be on major panels of: filter, control box, fan motor, and compressor.
20. 4 in. MERV-13 Return Air Filters:
    a. Factory option to upgrade standard unit filters to 4 in. MERV-13 filters. Filter media is securely fasted inside the filter frame on all four sides.
21. 4 in. Filter Rack Kit:
    a. The 4 in. filter rack accessory kit is designed to hold 4 in. MERV-8 or MERV-13 filters. Filters not included in kit.
22. 2 in. MERV-13 Return Air Filters:
    a. Accessory kit to field upgrade standard unit filters to 2 in. MERV-13 filters.
23. 2 in. MERV-8 Return Air Filters:
    a. Accessory kit to field upgrade standard unit filters to 2 in. MERV-8 filters.
24. Phase Monitor Control:
    a. Shall monitor the sequence of three phase electrical system to provide a phase reversal protection.
    b. Shall monitor the three phase voltage inputs to provide a phase loss protection for the three phase device.

c. Will work on either a Delta or Wye power connection.

25. Condensate Overflow Switch:
    a. This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:
        1) Indicator light — solid red (more than 10 seconds on water contact – compressors disabled), blinking red (sensor disconnected).
        2) 10 second delay to break — eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping).
26. Horn/Strobe Annunciator:
    a. Provides an audible/visual signaling device for use with factory-installed option or field installed accessory smoke detectors.
        1) Requires installation of a field-supplied 24-v transformer suitable for 4.2 VA (AC) or 3.0 VA (DC) per horn/strobe accessory.
        2) Requires field-supplied electrical box, North American 1-gang box, 2 in. (51 mm) x 4 in. (102 mm).
        3) Shall have a clear colored lens.
27. Electric Heat (Factory or Field Installed):
    a. Heating Section:
        1) Heater element open coil resistance wire, nickel-chrome alloy, 0.29 inches inside diameter, strung through ceramic insulators mounted on metal frame. Coil ends are staked and welded to terminal screw slots.
        2) Heater assemblies are provided with integral fusing for protection of internal heater circuits not exceeding 48 amps each. Auto reset thermo limit controls, magnetic heater contactors (24 v coil) and terminal block all mounted in electric heater control box (minimum 18 ga (galvanized steel) attached to end of heater assembly.
28. High Short Circuit Current Rating (SCCR) protection:
    a. Factory-installed option provides high short circuit current protection to each compressor, plus all indoor and outdoor fan motors of 60 kA for 208/230-3-60 units and 65 kA for 460-3-60 units against high potential fault current situations. (Standard unit comes with 5 kA rating.)
    b. This option is not available with factory installed Non-Fused Disconnect, Humidi-MiZer system, Low Ambient controls, Phase loss monitor/protection and 575 Volt models.
29. HACR Breaker:
    a. These manual reset devices provide overload and short circuit protection for the unit. Factory wired and mounted with the units, with access cover to help provide environmental protection. On 575V applications, HACR breaker can only be used with WYE power distribution systems. Use on Delta power distribution systems is prohibited.
    b. Sized only for the unit as ordered from the factory. Does not accommodate field-installed devices.
30. Foil Faced Insulation:
    a. Throughout unit cabinet air stream, non-fibrous and cleanable foil faced insulation is used.

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