**558J**
**SINGLE PACKAGE ROOFTOP COOLING UNIT**
**3 TO 6 NOMINAL TONS**

# Product Data

LEGACY™ LINE


ENERGY STAR PARTNER

Puron™
the environmentally sound refrigerant

This product has been designed and manufactured to meet Energy Star® criteria for energy efficiency. However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow all manufacturer's refrigerant charging and air flow instructions. **Failure to confirm proper charge and air flow may reduce energy efficiency and shorten equipment life.**

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bryant®

Heating & Cooling Systems

Your Bryant rooftop unit (RTU) was designed by customers for customers. With “no-strip” screw collars, handled access panels, and more we’ve made your unit easy to install, easy to maintain, easy to use, and easy to love.

## Easy to install:

All 558J units are horizontal. No special adapter curbs are necessary. Convertible airflow design makes it easy to adjust to unexpected job-site complications. Lighter units make easy replacement. Bryant 3-6 ton 558J rooftops fit on existing Bryant curbs. Also, our large control box gives you room to work and room to mount Bryant accessory controls.

## Easy to maintain:

Bryant’s easy access handles 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. Take accurate pressure readings by reading condenser pressure with panels on. Simply remove the black, composite plug, route your gauge line(s) through the hole, and connect them to the refrigeration service valve(s). Now, you can take refrigeration system pressure readings without affecting the condenser airflow.

## Easy to use:

Bryant rooftops have high and low pressure switches, a filter drier, and 2” filters standard. Bryant’s terminal board puts all your connections and troubleshooting points in one place, standard. Most low voltage connections are made to the same board and make it easy to find what you’re looking for and easy to access it.

# FEATURES AND BENEFITS

- Up to 28% lighter than similar industry units. Lighter rooftops make easier replacement jobs.
- 3-6 ton units fit on existing Bryant small rooftop curb. This saves time and money on replacement jobs.
- Standardized components and layout. Standardized components and controls make service and stocking parts easier.
- Scroll compressors on all units. This makes service, stocking parts, replacement, and trouble-shooting easier.
- Field convertible airflow (3-6 tons). Being able to convert a unit from vertical airflow to horizontal makes it easy to overcome job site complications.
- Easy-adjust, belt-drive motor available. Bryant provides a factory solution for most points in the fan performance table. There's no need for field-supplied drives or motors.
- Provisions for bottom or side condensate drain.
- Capable of thru-the-base or thru-the-curb electrical routing.
- Single-point electrical connection.
- Sloped, composite drain pan. Sloped, composite drain pan sheds water; and won't rust.
- Standardized controls and control box layout. Standardized components and controls make stocking parts and service easier.
- Clean, easy to use control box.
- Color-coded wiring.
- Large, laminated wiring and power drawings which are affixed to unit make troubleshooting easy.
- Single, central terminal board for test and wiring connections.
- Fast-access, handled, panels for easy access to the blower and blower motor, control box, and compressors.
- "No-strip" screw system guides screws into the panel and captures them tightly without stripping the screw, the panel, or the unit.
- Exclusive, newly-design indoor refrigerant header for easier maintenance and replacement.
- Mechanical cooling (115°F - 25°F / 46°C -4°C) on Direct Digital Controller (DDC) (RTU-MP controller).
- Mechanical cooling (115°F - 25°F / 46°C -4°C) on Electro-Mechanical (E/M) models, with winter start kit.
- Bryant's naturally draining heat exchanger, unlike positive pressure heat exchangers, do not need to be periodically, manually drained. This saves labor and maintenance expense.
- 2" throw away filters on all units.
- Refrigerant filter-drier.
- High and low pressure switches. Added reliability with high pressure switch and low pressure switch.

ENERGY STAR PARTNER

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## MODEL NUMBER NOMENCLATURE

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 5 | 8 | J | E | 0 | 6 | A | 0 | 0 | 0 | A | 1 | A | 0 | A | A | A |

**Unit Type**
558J = Std Efficiency RTU

**Voltage**
E = 460–3–60
J = 208/230–1–60
P = 208/230–3–60
T = 575–3–60

**Cooling Tons**
04 = 3 Ton
05 = 4 Ton
06 = 5 Ton
07 = 6 Ton

**Refrig. System**
A = Standard refrig system coil/Nat gas heat

**Heat Level**
(Field installed electric heaters available
000 = No heat

**Coil Options (Indoor Coil – Outdoor Coil)**
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

**Indoor Fan Options**
1 = Standard static option
2 = Medium static option
3 = High static option

**Outdoor Air Options**
A = None
B = Temp econo w/ baro relief
E = Temp econo w/ baro relief & $CO_2$
H = Enthalpy econo w/ baro relief
L = Enthalpy econo w/ baro relief & $CO_2$
Q = Motorized 2 pos damper w/ baro relief

**Factory Installed Options**

**Packaging**
A = Standard
B = LTL

**Design Revision**
A = First Revision

## Table 1 – FACTORY-INSTALLED OPTIONS AND FIELD-INSTALLED ACCESSORIES

| CATEGORY | ITEM | FACTORY INSTALLED OPTION | FIELD INSTALLED ACCESSORY |
|---|---|---|---|
| **Cabinet** | Thru–the–base electrical connections | X | X |
| **Coil Options** | Cu/Cu indoor and/or outdoor coils | X | |
| | Pre–coated outdoor coils | X | |
| | Premium, E–coated outdoor coils | X | |
| **Condenser Protection** | Condenser coil hail guard (louvered design) | X | X |
| | Condenser coil hail guard (hood design) | | X |
| **Controls** | Thermostats, temperature sensors, and subbases | | X |
| | RTU–MP open–protocol controller | X | |
| | Smoke detector (supply and/or return air) | X | X |
| | Time Guard II compressor delay control circuit | | X |
| | Filter status switch[1] | | X |
| | Fan status switch[1] | | X |
| **Economizers & Outdoor Air Dampers** | EconoMi$er IV (for electro–mechanical controlled RTUs) | X | X |
| | EconoMi$er2 (for DDC controlled RTUs) | X | X |
| | Motorized 2 position outdoor–air damper | X | X |
| | Manual outdoor–air damper | | X |
| | Barometric relief[2] | X | X |
| | Power exhaust | | X |
| **Economizer Sensors & IAQ Devices** | Single dry bulb temperature sensors[3] | X | X |
| | Differential dry bulb temperature sensors[3] | | X |
| | Single enthalpy sensors[3] | X | X |
| | Differential enthalpy sensors[3] | | X |
| | $CO_2$ sensor (wall, duct, or unit mounted)[3] | X | X |
| | UV–C lights | | X |
| **Indoor Motor & Drive** | Multiple motor and drive packages | X | |
| **Low Ambient Control** | Winter start kit[4] | | X |
| | Motormaster® head pressure controller[4] | | X |
| **Power Options** | Convenience outlet (powered) | X | |
| | Convenience outlet (unpowered) | X | |
| | Non–fused disconnect | X | |
| **Roof Curbs** | Roof curb 14” (356mm) | | X |
| | Roof curb 24” (610mm) | | X |

**NOTES**:
1. Use in conjunction with specialized thermostat or controls device.
2. Included with economizer.
3. Sensors for optimizing economizer.
4. See application data for assistance.

# FACTORY OPTIONS AND/OR ACCESSORIES

## 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. There are also models for electromechanical as well as direct digital controllers. Additional sensors are available as accessories to optimize the economizers.



## $CO_2$ Sensor

Improves productivity and saves money by working 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 Control Ventilation (DCV) reduces the overall load on the rooftop, saving money.

## Smoke Detectors

Trust the experts. Smoke detectors make your application safer and your job easier. Bryant's 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.

## Louvered Hail Guards

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

## Convenience Outlet (powered or un-powered)

Lower service bills by including a convenience outlet in your specification. Bryant will install this service feature at our factory, powered. Provides a convenient, 15 amp, 115v GFCI receptacle.

## Non-fused Disconnect

This OSHA-compliant, factory-installed, safety switch allows a service technician to locally secure power to the rooftop.

## Barometric Relief

Gravity controlled, barometric relief equalizes building pressure and ambient air pressures. This can be a cast effective solution to prevent building pressurization.

## Power Exhaust with Barometric Relief.

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

## RTU-MP, Multi-protocol Controller

Connect the rooftop to an existing BAS without needing complicated translators or adapter modules using the RTU-MP controller. This new controller speaks the 4 most common building automation system languages (Bacnet, Modbus, N2, and Lonworks). Use this controller when you have an existing BAS.

## 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 PC, RTU-MP, or authorized commercial thermostats.

## Filter or Fan Status Switches

Use these differential pressure switches to detect a filter clog or indoor fan motor failure. When used in conjunction with a compatible unit controller/thermostat, the switches will activate an alarm to warn the appropriate personnel.

## Motorized 2-Position Damper

Bryant's new, 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.

## Manual OA Damper

Manual outdoor air dampers are an economical way to bring in ventilation air.

## Motormaster Head Pressure Controller

The Motormaster motor controller is a low ambient, 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 not when economizer usage is either not appropriate or desired. The Motormaster will either cycle the outdoor-fan motors or operate them at reduced speed to maintain the unit operation, depending on the model.

## Winter Start Kit

Bryant's winter start kit extends the low ambient limit of your rooftop to 25°F (-9°C). The kit bypasses the low pressure switch, preventing nuisance tripping of the low pressure switch. Other low ambient precautions may still be prudent.

## UV-C Lights

Bryant's commercial rooftop ultra-violet germicidal lamps are designed to kill odor causing mold and fungus that may develop in the cool and damp evaporator section of an HVAC unit. The high output, low temperature germicidal lamps are installed in the evaporator section of the HVAC unit, and shine directly on the evaporator coil

and condensate pan. The short wave length ultra-violet band light inhibits and kills mold, fungus, and microbial growth.

## Alternate Motors and Drives

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

## Thru-the-Base Connections

Thru-the-base connections, available as either an accessory or as a factory option, are necessary to ensure proper connection and seal when routing wire and piping through the rooftop's basepan and curb. These couplings eliminate roof penetration and should be considered for gas lines, main power lines, as well as control power.

## Electric Heaters

Bryant offers a full-line of accessory heaters. The heaters are very easy to use and install.

## Table 2 – ARI COOLING RATING TABLES

| UNIT | NOM. CAPACITY (TONS) | NET COOLING CAPACITY (KBTU / HR) | TOTAL POWER (KW) | SEER | EER | IPLV | IEER |
|---|---|---|---|---|---|---|---|
| 04 | 3 | 34.6 | 3.1 | 13.0 | 11.0 | N/A | N/A |
| 05 | 4 | 45.0 | 4.0 | 13.0 | 11.0 | N/A | N/A |
| 06 | 5 | 59.0 | 5.5 | 13.0 | 10.8 | N/A | N/A |
| 07 | 6 | 70.0 | 6.4 | N/A | 11.0 | N/A | 11.4 |

**LEGEND**

ARI – Air–Conditioning & Refrigeration Institute
ASHRAE – American Society of Heating, Refrigerating and Air Conditioning, Inc.
EER – Energy Efficiency Ratio
IEER – Integrated Energy Efficiency Ratio
SEER – Seasonal Energy Efficiency Ratio
IPLV – Integrated Part Load Value

**NOTES**

1. Rated and certified under ARI Standard 210/240–06 or 360/360–04, as appropriate.
2. Ratings are based on:
   **Cooling Standard:** 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 95°F (35°C) db outdoor air temp.
   **IPLV Standard**: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 80°F (27°C) db outdoor air temp.
   **IEER Standard**: Procedure described in ARI Standard 340/360.
3. All 558J units comply with ASHRAE 90.1 2001, 2004 Energy Standard for minimum SEER and EER requirements.
4. Where appropriate, 558J units comply with US Energy Policy Act (2005). Refer to state and local codes or visit the following website: http://bcap–energy. org to determine if compliance with this standard pertains to your state, territory, or municipality.

ARI Standard 210/240 UAC

ARI Standard 340/360

ASHRAE 90.1 COMPLIANT

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**Table 3 – MINIMUM - MAXIMUM AIRFLOWS ELECTRIC HEAT**

| UNIT | COOLING | | ELECTRIC HEATERS | |
|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum |
| 04 | 900 | 1500 | 900 | 1500 |
| 05 | 1200 | 2000 | 1200 | 2000 |
| 06 | 1500 | 2500 | 1500 | 2500 |
| 07 | 1800 | 3000 | 1800 | 3000 |

## Table 4 – SOUND PERFORMANCE TABLE

| UNIT | OUTDOOR SOUND (dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A–Weighted | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 04 | 80 | 90.6 | 80.9 | 80.2 | 76.0 | 74.6 | 71.3 | 68.5 | 63.9 |
| 05 | 81 | 90.9 | 84.6 | 79.5 | 77.9 | 76.5 | 71.1 | 66.9 | 62.5 |
| 06 | 78 | 84.0 | 82.2 | 76.3 | 74.8 | 72.5 | 68.8 | 65.6 | 61.8 |
| 07 | 78 | 88.8 | 81.8 | 76.9 | 74.4 | 73.3 | 69.8 | 66.3 | 62.7 |

**LEGEND**

dB – Decibel

**NOTES:**

1. Outdoor sound data is measure in accordance with ARI standard 270–95.
2. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure accounts for specific environmental factors which do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
3. A–weighted sound ratings filter out very high and very low frequencies, to better approximate the response of “average” human ear. Bryant’s A–weighted measurements are taken in accordance with 270–95.

## Table 5 – PHYSICAL DATA (COOLING) 3 - 6 TONS

| | | 558J*04 | 558J*05 | 558J*06 | 558J*07 |
|---|---|---|---|---|---|
| **Refrigeration System** | | | | | |
| | # Circuits / # Comp. / Type | 1 / 1 / Scroll | 1 / 1 / Scroll | 1 / 1 / Scroll | 1 / 1 / Scroll |
| | Puron (R–410a) charge A/B (lbs) | 5.6 | 8.5 | 10.7 | 14.1 |
| | Oil A/B (oz) | 25 | 42 | 42 | 56 |
| | Metering Device | Acutrol | Acutrol | Acutrol | Acutrol |
| | High–press. Trip / Reset (psig) | 630 / 505 | 630 / 505 | 630 / 505 | 630 / 505 |
| | Low–press. Trip / Reset (psig) | 54 / 117 | 54 / 117 | 54 / 117 | 54 / 117 |
| **Evap. Coil** | | | | | |
| | Material | Cu / Al | Cu / Al | Cu / Al | Cu / Al |
| | Coil type | 3/8" RTPF | 3/8" RTPF | 3/8" RTPF | 3/8" RTPF |
| | Rows / FPI | 2 / 15 | 2 / 15 | 4 / 15 | 4 / 15 |
| | Total Face Area ($ft^2$) | 5.5 | 5.5 | 5.5 | 7.3 |
| | Condensate Drain Conn. Size | 3/4" | 3/4" | 3/4" | 3/4" |
| **Evap. Fan and Motor** | | | | | |
| Standard Static 1 phase | Motor Qty / Drive Type | 1 / Belt | 1 / Belt | 1 / Belt | N/A |
| | Max BHP | 1.2 | 1.2 | 1.2 | N/A |
| | RPM Range | 568–853 | 568–853 | 771–1157 | N/A |
| | Motor Frame Size | 48 | 48 | 48 | N/A |
| | Fan Qty / Type | 1 / Centrifugal | 1 / Centrifugal | 1 / Centrifugal | N/A |
| | Fan Diameter (in) | 10 x 10 | 10 x 10 | 10 x 10 | N/A |
| Standard Static 3 phase | Motor Qty / Drive Type | 1 / Belt | 1 / Belt | 1 / Belt | 1 / Belt |
| | Max BHP | 1.2 | 1.2 | 2.4 | 2.4 |
| | RPM Range | 568–853 | 568–853 | 771–1157 | 908–1211 |
| | Motor Frame Size | 48 | 48 | 48 | 56 |
| | Fan Qty / Type | 1 / Centrifugal | 1 / Centrifugal | 1 / Centrifugal | 1 / Centrifugal |
| | Fan Diameter (in) | 10 x 10 | 10 x 10 | 10 x 10 | 10 x 10 |
| Medium Static 1 phase | Motor Qty / Drive Type | 1 / Belt | 1 / Belt | 1 / Belt | N/A |
| | Max BHP | 1.2 | 1.2 | 1.5 | N/A |
| | RPM Range | 771–1157 | 771–1157 | 1068–1479 | N/A |
| | Motor Frame Size | 48 | 56 | 56 | N/A |
| | Fan Qty / Type | 1 / Centrifugal | 1 / Centrifugal | 1 / Centrifugal | N/A |
| | Fan Diameter (in) | 10 x 10 | 10 x 10 | 10 x 10 | N/A |
| Medium Static 3 phase | Motor Qty / Drive Type | 1 / Belt | 1 / Belt | 1 / Belt | 1 / Belt |
| | Max BHP | 1.2 | 1.2 | 2.4 | 2.9 |
| | RPM Range | 771–1157 | 771–1157 | 1068–1479 | 1194–1526 |
| | Motor Frame Size | 48 | 48 | 56 | 56 |
| | Fan Qty / Type | 1 / Centrifugal | 1 / Centrifugal | 1 / Centrifugal | 1 / Centrifugal |
| | Fan Diameter (in) | 10 x 10 | 10 x 10 | 10 x 10 | 10 x 10 |
| High Static 3 phase | Motor Qty / Drive Type | 1 / Belt | 1 / Belt | 1 / Belt | 1 / Belt |
| | Max BHP | 2.4 | 2.4 | 2.9 | 3.7 |
| | RPM Range | 1068–1479 | 1068–1479 | 1321–1688 | 1483–1786 |
| | Motor Frame Size | 56 | 56 | 56 | 56 |
| | Fan Qty / Type | 1 / Centrifugal | 1 / Centrifugal | 1 / Centrifugal | 1 / Centrifugal |
| | Fan Diameter (in) | 10 x 10 | 10 x 10 | 10 x 10 | 10 x 10 |
| **Cond. Coil** | | | | | |
| | Material | Cu / Al | Cu / Al | Cu / Al | Cu / Al |
| | Coil type | 3/8" RTPF | 3/8" RTPF | 3/8" RTPF | 3/8" RTPF |
| | Rows / FPI | 1 / 17 | 2 / 17 | 2 / 17 | 2 / 17 |
| | Total Face Area ($ft^2$) | 14.6 | 12.6 | 16.5 | 21.3 |
| **Cond. fan / motor** | | | | | |
| | Qty / Motor Drive Type | 1/ Direct | 1/ Direct | 1/ Direct | 1/ 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 # / Size (in) | 2 / 16 x 25 x 2 | 2 / 16 x 25 x 2 | 2 / 16 x 25 x 2 | 4 / 16 x 16 x 2 |
| | OA inlet screen # / Size (in) | 1 / 20 x 24 x 1 | 1 / 20 x 24 x 1 | 1 / 20 x 24 x 1 | 1 / 20 x 24 x 1 |

## Table 6 – ELECTRIC HEAT - ELECTRICAL DATA 3 - 6 TONS

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX | NOMINAL POWER (kW) | APPLICATION POWER (kW) | SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLE***A00 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | NO C.O. or UNPWRD C.O. | | w/PWRD C.O. | |
| | | | | | | NO P.E. | w/ P.E. (pwrd fr/unit) | NO P.E. | w/ P.E. (pwrd fr/unit) |
| 558J*04 | 208/230–1–60 | STD | 101A00 | 4.4 | 3.3/4.0 | – | – | – | – |
| | | | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | 040 | 040 | 040 | 040 |
| | | | 102A00,102A00 | 13.0 | 9.8/11.9 | 040 | 040 | 040 | 040 |
| | | MED | 101A00 | 4.4 | 3.3/4.0 | – | – | – | – |
| | | | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | 040 | 040 | 040 | 040 |
| | | | 102A00,102A00 | 13.0 | 9.8/11.9 | 040 | 040 | 040 | 040 |
| | 208/230–3–60 | STD | 101A00 | 4.4 | 3.3/4.0 | – | – | – | – |
| | | | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | MED | 101A00 | 4.4 | 3.3/4.0 | – | – | – | – |
| | | | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | HIGH | 101A00 | 4.4 | 3.3/4.0 | – | – | – | – |
| | | | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | 460–3–60 | STD | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 107A00 | 8.8 | 8.1 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | MED | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 107A00 | 8.8 | 8.1 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | HIGH | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 107A00 | 8.8 | 8.1 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |

**LEGEND:**

CO – Convenient outlet
DISC – Disconnect
FLA – Full load amps
IFM – Indoor fan motor
LRA – Locked rotor amps
MCA – Minimum circuit amps
MOCP – Maximum over current protection
PE – Power exhaust
UNPWRD CO – Unpowered convenient outlet

## Table 6 - ELECTRIC HEAT - ELECTRICAL DATA 3 - 6 TONS (CONT)

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX | NOMINAL POWER (kW) | APPLICATION POWER (kW) | SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLE***A00 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | NO C.O. or UNPWRD C.O. | | w/PWRD C.O. | |
| | | | | | | NO P.E. | w/ P.E. (pwrd fr/unit) | NO P.E. | w/ P.E. (pwrd fr/unit) |
| 558J*05 | 208/230–1–60 | STD | 101A00 | 4.4 | 3.3/4.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 102A00,102A00 | 13.0 | 9.8/11.9 | 040 | 040 | 040 | 040 |
| | | | 103B00,103B00 | 17.4 | 13.1/16.0 | 040 | 040 | 040 | 040 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 040 | 040 | 040 | 040 |
| | | MED | 101A00 | 4.4 | 3.3/4.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 102A00,102A00 | 13.0 | 9.8/11.9 | 040 | 040 | 040 | 040 |
| | | | 103B00,103B00 | 17.4 | 13.1/16.0 | 040 | 040 | 040 | 040 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 040 | 040 | 040 | 040 |
| | 208/230–3–60 | STD | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 038 | 038 | 038 | 038 |
| | | MED | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 038 | 038 | 038 | 038 |
| | | HIGH | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 038 | 038 | 038 | 038 |
| | 460–3–60 | STD | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | | 108A00,108A00 | 23.0 | 21.1 | – | – | – | – |
| | | MED | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | | 108A00,108A00 | 23.0 | 21.1 | – | – | – | – |
| | | HIGH | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | | 108A00,108A00 | 23.0 | 21.1 | – | – | – | – |

**LEGEND:**

CO – Convenient outlet
DISC – Disconnect
FLA – Full load amps
IFM – Indoor fan motor
LRA – Locked rotor amps
MCA – Minimum circuit amps
MOCP – Maximum over current protection
PE – Power exhaust
UNPWRD CO – Unpowered convenient outlet

## Table 6 - ELECTRIC HEAT - ELECTRICAL DATA 3 - 6 TONS (CONT)

| UNIT | V-PH-HZ | IFM TYPE | ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX | NOMINAL POWER (kW) | APPLICATION POWER (kW) | SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLE***A00 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | NO C.O. or UNPWRD C.O. | | w/PWRD C.O. | |
| | | | | | | NO P.E. | w/ P.E. (pwrd fr/unit) | NO P.E. | w/ P.E. (pwrd fr/unit) |
| 558J*06 | 208/230-1-60 | STD | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | – | – |
| | | | 102A00,102A00 | 13.0 | 9.8/11.9 | 040 | 040 | 040 | 040 |
| | | | 103B00,103B00 | 17.4 | 13.1/16.0 | 040 | 040 | 040 | 040 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 040 | 040 | 040 | 040 |
| | | MED | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 103B00 | 8.7 | 6.5/8.0 | – | – | 040 | 040 |
| | | | 102A00,102A00 | 13.0 | 9.8/11.9 | 040 | 040 | 040 | 040 |
| | | | 103B00,103B00 | 17.4 | 13.1/16.0 | 040 | 040 | 040 | 040 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 040 | 040 | 040 | 040 |
| | 208/230-3-60 | STD | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 038 | 038 | 038 | 038 |
| | | | 104B00,105A00 | 26.5 | 19.9/24.3 | 038 | 038 | 038 | 038 |
| | | MED | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 038 | 038 | 038 | 038 |
| | | | 104B00,105A00 | 26.5 | 19.9/24.3 | 038 | 038 | 038 | 038 |
| | | HIGH | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 038 | 038 | 038 | 038 |
| | | | 104B00,105A00 | 26.5 | 19.9/24.3 | 038 | 038 | 038 | 038 |
| | 460-3-60 | STD | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | | 108A00,108A00 | 23.0 | 21.1 | – | – | – | – |
| | | | 108A00,109A00 | 25.5 | 23.4 | – | – | – | – |
| | | MED | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | | 108A00,108A00 | 23.0 | 21.1 | – | – | – | – |
| | | | 108A00,109A00 | 25.5 | 23.4 | – | – | – | – |
| | | HIGH | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | | 108A00,108A00 | 23.0 | 21.1 | – | – | – | – |
| | | | 108A00,109A00 | 25.5 | 23.4 | – | – | – | – |

**LEGEND:**

CO – Convenient outlet
DISC – Disconnect
FLA – Full load amps
IFM – Indoor fan motor
LRA – Locked rotor amps
MCA – Minimum circuit amps
MOCP – Maximum over current protection
PE – Power exhaust
UNPWRD CO – Unpowered convenient outlet

## Table 6 - ELECTRIC HEAT - ELECTRICAL DATA 3 - 6 TONS (CONT)

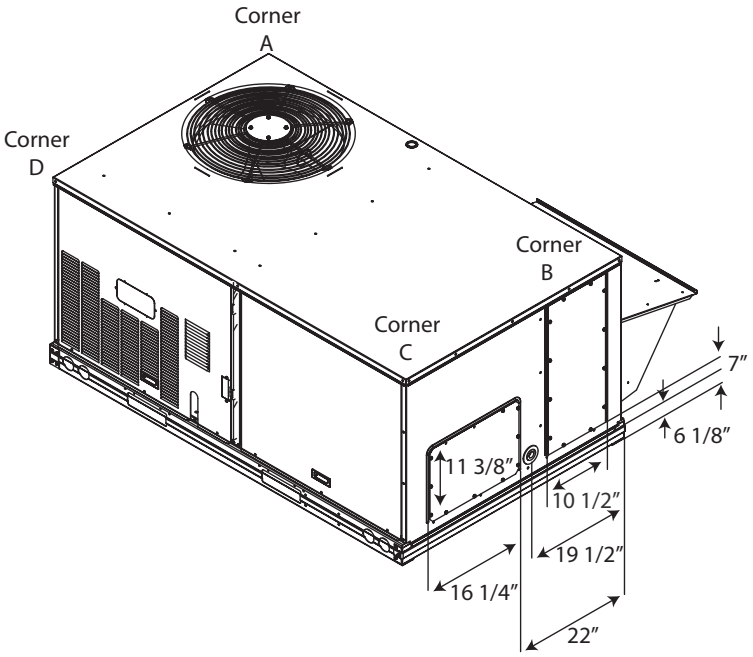
| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX | NOMINAL POWER (kW) | APPLICATION POWER (kW) | SINGLE POINT OR JUNCTION KIT PART NUMBER CRSINGLE***A00 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | NO C.O. or UNPWRD C.O. | | w/PWRD C.O. | |
| | | | | | | NO P.E. | w/ P.E. (pwrd fr/unit) | NO P.E. | w/ P.E. (pwrd fr/unit) |
| 558J*07 | 208/230–3–60 | STD | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 038 | 038 | 038 | 038 |
| | | | 104B00,105A00 | 26.5 | 19.9/24.3 | 038 | 038 | 038 | 038 |
| | | MED | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 038 | 038 | 038 | 038 |
| | | | 104B00,105A00 | 26.5 | 19.9/24.3 | 038 | 038 | 038 | 038 |
| | | HIGH | 102A00 | 6.5 | 4.9/6.0 | – | – | – | – |
| | | | 104B00 | 10.5 | 7.9/9.6 | – | – | – | – |
| | | | 105A00 | 16.0 | 12.0/14.7 | – | – | 038 | 038 |
| | | | 104B00,104B00 | 21.0 | 15.8/19.3 | 038 | 038 | 038 | 038 |
| | | | 104B00,105A00 | 26.5 | 19.9/24.3 | 038 | 038 | 038 | 038 |
| | 460–3–60 | STD | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | | 108A00,108A00 | 23.0 | 21.1 | – | – | – | – |
| | | | 108A00,109A00 | 25.5 | 23.4 | – | – | – | – |
| | | MED | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | | 108A00,108A00 | 23.0 | 21.1 | – | – | – | – |
| | | | 108A00,109A00 | 25.5 | 23.4 | – | – | – | – |
| | | HIGH | 106A00 | 6.0 | 5.5 | – | – | – | – |
| | | | 108A00 | 11.5 | 10.6 | – | – | – | – |
| | | | 109A00 | 14.0 | 12.9 | – | – | – | – |
| | | | 108A00,108A00 | 23.0 | 21.1 | – | – | – | – |
| | | | 108A00,109A00 | 25.5 | 23.4 | – | – | – | – |

**LEGEND:**

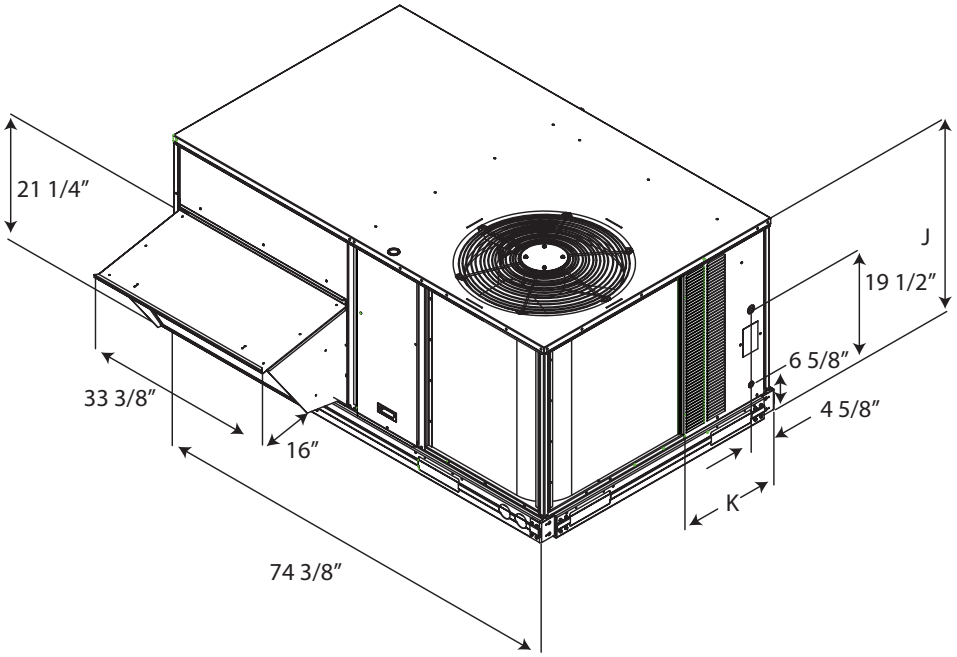
CO – Convenient outlet
DISC – Disconnect
FLA – Full load amps
IFM – Indoor fan motor
LRA – Locked rotor amps
MCA – Minimum circuit amps
MOCP – Maximum over current protection
PE – Power exhaust
UNPWRD CO – Unpowered convenient outlet

# CURBS & WEIGHTS DIMENSIONS - CHASSIS 1






C08001



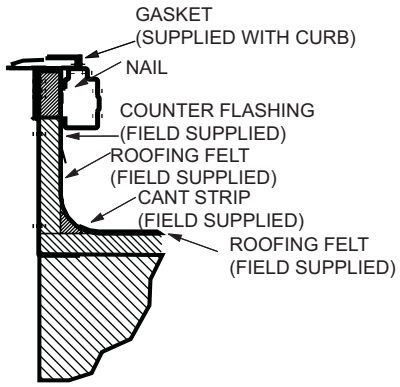

C08000

## Table 7 – BASE UNIT DIMENSIONS - CHASSIS 1

| UNIT | OPERATING WGT (LB) | SHIPPING WGT (LB) | J | CORNER WEIGHTS (LB) | | | | CENTER OF GRAVITY (IN) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | A | B | C | D | X | Y | HEIGHT |
| 04 | 438 | 475 | 33 5/16” | 108 | 115 | 110 | 104 | 38 | 23 | 17 1/4 |
| 05 | 494 | 530 | 33 5/16” | 122 | 130 | 125 | 117 | 38 | 23 | 17 1/2 |
| 06 | 524 | 560 | 33 5/16” | 130 | 138 | 132 | 124 | 38 | 23 | 17 3/4 |
| 07 | 607 | 645 | 41 5/16” | 150 | 160 | 153 | 144 | 38 | 23 | 20 3/4 |

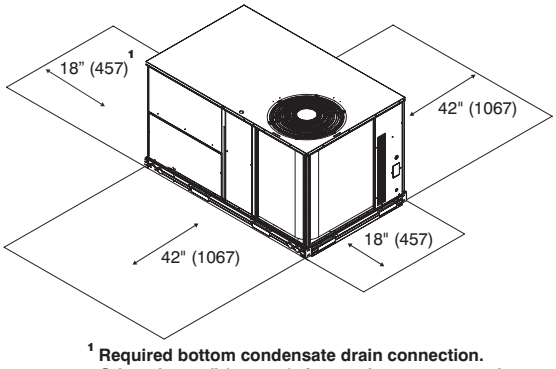
**NOTES**:

1. If one side has at least 36” (914mm) of clearance, the opposite side can be reduced to 12” (305mm). Make sure to plan for OA handler, if equipped.
2. Clearance of 0” requires use of an alternate drain connection.
3. Maintain 36” (914mm) between control box and grounded surface or 42” (1067mm) between control box and ungrounded surfaces (concrete or block wall).
4. Keep combustible material at 36” (914mm) away from the flue discharge. Accessory flue discharge deflector may allow smaller clearance.
5. Units shown with optional economizer.
6. Local codes and jurisdictions may prevail.
7. Height is measured from bottom of base rail.




C07457

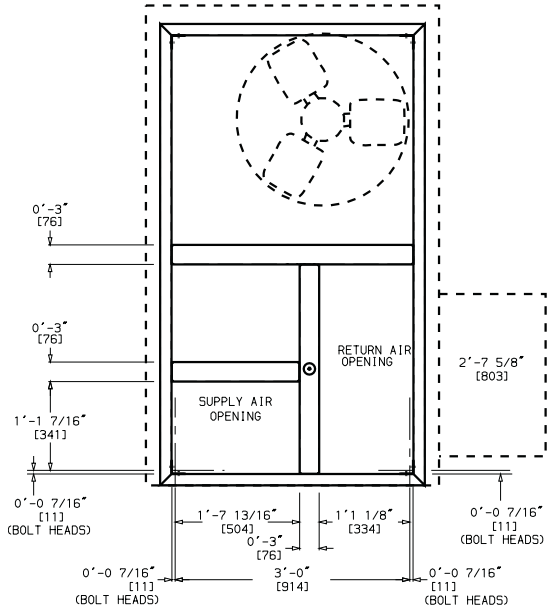
**Fig. 1 - Curb Installation Detail (Typical)**




[1] Required bottom condensate drain connection. Otherwise, 36" (914mm) for condensate connection.

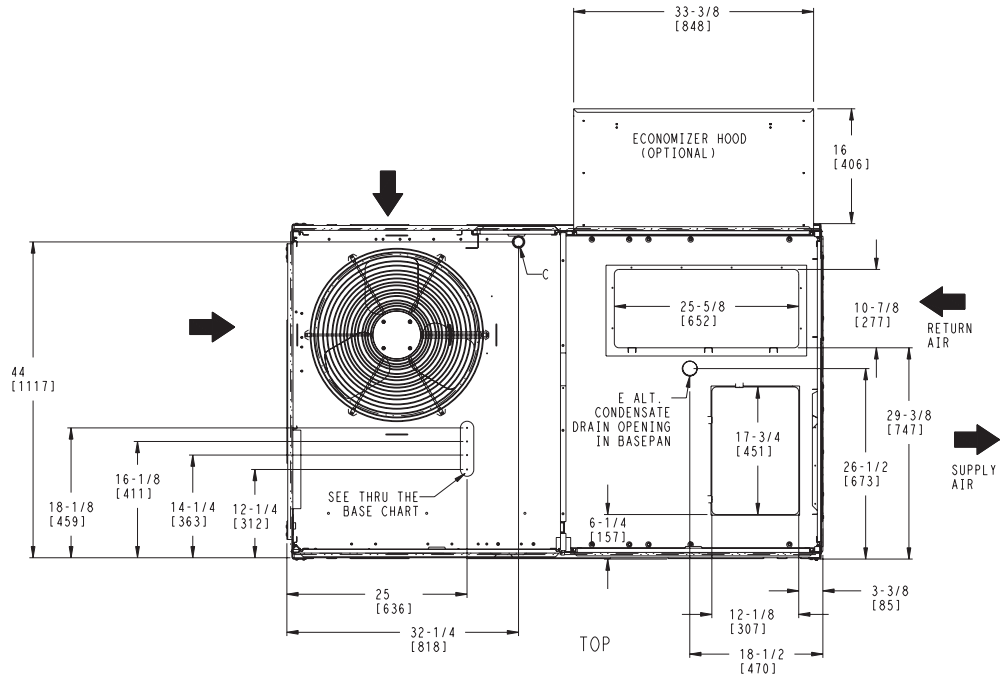
C07459

**Fig. 2 - Service Clearance**




C07458

**Fig. 3 - Curb Dimensions**




C07461

**Fig. 4 - Basepan Detail**

# APPLICATION DATA



## Min operating ambient temp (cooling):

In mechanical cooling mode, your Bryant rooftop can safely operate down to an outdoor ambient temperature of 25°F (-4°C), with an accessory winter start kit. It is possible to provide cooling at lower outdoor ambient temperatures by using less outside air, economizers, and/or accessory low ambient kits.

## Max operating ambient temp (cooling):

The maximum operating ambient temperature for cooling mode is 115°F (46°C). While cooling operation above 115°F (46°C) may be possible, it could cause either a reduction in performance, reliability, or a protective action by the unit's internal safety devices.

## Min and max airflow (cooling mode):

To maintain safe and reliable operation of your rooftop, operate within the cooling airflow limits. 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.

## Airflow:

All units are draw-though in cooling 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 Bryant representative for assistance.

## Motor limits, break horsepower (BHP):

Due to Bryant's internal unit design, air path, and specially designed motors, the full horsepower (maximum continuous BHP) band, as listed in Table 5, can be used with the utmost confidence. There is no need for extra safety factors, as Bryant's motors are designed and rigorously tested to use the entire, listed BHP range without either nuisance tripping or premature motor failure.

## Sizing a rooftop

Bigger isn't necessarily better. While an air conditioner needs to have enough capacity to meet the load, it doesn't need excess capacity. In fact, having excess capacity is often bad.

Using higher design temperatures than ASHRAE recommends for your location, adding "safety factors" to the calculated load, and rounding up to the next largest unit, are all signs of oversizing air conditioners. Oversizing can cause short-cycling, and short cycling leads to poor humidity control, reduced efficiency, higher utility bills, drastic indoor temperature swings, excessive noise, and increased wear and tear on the air conditioner.

Rather than oversizing an air conditioner, wise contractors and engineers "right-size" or even slightly undersize air conditioners. Correctly sizing an air conditioner controls humidity better; promotes efficiency; reduces utility bills; extends equipment life, and maintains even, comfortable temperatures.

## Low ambient applications

When equipped with a Bryant economizer, your rooftop unit can 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 Bryant rooftop can operate to ambient temperatures down to -40°F (-40°C) using the recommended accessory Motormaster low ambient controller.

## Winter start

Bryant's winter start kit 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.

# SELECTION PROCEDURE (WITH 558J*07 EXAMPLE)

**I. Determine cooling and heating loads.**

Given:

| | |
|---|---|
| Mixed Air Drybulb | 80°F (27°C) |
| Mixed Air Wetbulb | 67°F (19°C) |
| Ambient Drybulb | 95°F (35°C) |
| $THC_{Load}$ | 69.0 MBH |
| $SHC_{Load}$ | 51.0 MBH |
| Supply Air | 2100 CFM |
| Heating Load | 85.0 MBH |
| External Static Pressure | 0.67 in.wg |
| Electrical Characteristics | 230-3-60 |

**II. Make an initial guess at cooling tons.**

Refrig. tons = $THC_{Load}$ / 12 MBH per ton
Refrig. tons = 69.0 / 12 = 5.75 tons
In this case, start by looking at the 558J*07.

**III. Look up the rooftop's THC and SHC.**

Table 11 shows that, at the application's supply air CFM, mixed air and ambient temperatures, the 558J*07 supplies:
$THC_{Load}$ = 73.7 MBH
$SHC_{Load}$ = 54.3 MBH.

**IV. Calculate the building Latent Heat Load.**

$LHC_{Load} = THC_{Load} - SHC_{Load}$
$LHC_{Load}$ = 692.0 MBH - 51.0 MBH = 18.0 MBH

**V. Calculate RTU Latent Heat Capacity**

LHC = THC - SHC
LHC = 73.7 MBH - 54.3 MBH = 19.4 MBH

**VI. Compare RTU capacities to loads. [2]**

Compare the rooftop's SHC and LHC to the building's Sensible and Latent Heat Loads.

**VII. Select factory options (FIOP)**

Local code requires an economizer for any unit with THC less than 65.0 MBH.

**VIII. Calculate the total static pressure.**

| | |
|---|---|
| External static pressure | 0.67 in. wg |
| Sum of FIOP/Accessory static | +0.13 in. wg |
| Total Static Pressure | 0.80 in. wg |

**IX. Look up the Indoor Fan RPM & BHP.**

Table 26 shows, at 2100 CFM & ESP= 0.8,
RPM = 1268 & BHP = 1.52

**X. Convert BHP (Step VIII) into Fan Motor Heat.**

Fan Motor Heat = 2.546* BHP/Motor Eff.[3]
Fan Motor Heat = 4.8 MBH

**XI. Determine electrical requirements**

Table 32 shows the MCA and MOCP of a 558J*07 (without convenience outlet) as:
MCA = 32.8 amps & MOCP = 50 amps
Min. Disconnect Size: FLA = 32 & LRA = 72.

**LEGEND**

**THC** — Total Heat Capacity
**SHC** — Sensible Heat Capacity
**LHC** — Latent Heat Capacity
**RPM** — Revolutions Per Minute
**RTU** — Rooftop Unit
**BHP** — Break Horsepower
**MCA** — Min. Circuit Ampacity
**MOCP** — Max. Over–current Protection
**FLA** — Full Load Amps
**RLA** — Rated Load Amps

**NOTES**:

1. Bryant's selection software saves time by performing many of the steps above. Contact your Bryant sales representative for assistance.
2. Selecting a unit with a SHC slightly lower than the $SHC_{Load}$ is often better than oversizing. Slightly lower SHC's will help control indoor humidity, and prevent temperature swings.
3. Indoor Fan Motor efficiency is available in Table 13–26. Use the decimal form in the equation eg. 80% =.8.

## Table 8 – COOLING CAPACITIES 3 TONS

| 558J*04 | | | | AMBIENT TEMPERATURE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 EAT (dB) | | | 95 EAT (dB) | | | 105 EAT (dB) | | | 115 EAT (dB) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 900 Cfm | EAT (wB) | 58 | THC | 28.1 | 28.1 | 31.7 | 26.3 | 26.3 | 29.8 | 24.5 | 24.5 | 27.7 | 22.6 | 22.6 | 25.5 |
| | | | SHC | 24.4 | 28.1 | 31.7 | 22.9 | 26.3 | 29.8 | 21.3 | 24.5 | 27.7 | 19.6 | 22.6 | 25.5 |
| | | 62 | THC | 30.3 | 30.3 | 31.0 | 27.8 | 27.8 | 29.8 | 25.1 | 25.1 | 28.4 | 22.6 | 22.6 | 26.5 |
| | | | SHC | 22.6 | 26.8 | 31.0 | 21.5 | 25.7 | 29.8 | 20.2 | 24.3 | 28.4 | 18.7 | 22.6 | 26.5 |
| | | 67 | THC | 35.5 | 35.5 | 35.5 | 33.1 | 33.1 | 33.1 | 30.5 | 30.5 | 30.5 | 27.5 | 27.5 | 27.5 |
| | | | SHC | 19.5 | 23.7 | 27.9 | 18.5 | 22.7 | 26.9 | 17.4 | 21.6 | 25.8 | 16.2 | 20.4 | 24.6 |
| | | 72 | THC | 39.0 | 39.0 | 39.0 | 37.1 | 37.1 | 37.1 | 35.1 | 35.1 | 35.1 | 32.7 | 32.7 | 32.7 |
| | | | SHC | 15.3 | 19.5 | 23.7 | 14.5 | 18.8 | 23.0 | 13.7 | 17.9 | 22.2 | 12.9 | 17.1 | 21.3 |
| | | 76 | THC | – | 41.4 | 41.4 | – | 39.6 | 39.6 | – | 37.6 | 37.6 | – | 35.4 | 35.4 |
| | | | SHC | – | 16.0 | 21.0 | – | 15.4 | 20.2 | – | 14.6 | 19.3 | – | 13.8 | 18.3 |
| 1050 Cfm | EAT (wB) | 58 | THC | 30.2 | 30.2 | 34.2 | 28.4 | 28.4 | 32.2 | 26.5 | 26.5 | 30.0 | 24.5 | 24.5 | 27.7 |
| | | | SHC | 26.3 | 30.2 | 34.2 | 24.7 | 28.4 | 32.2 | 23.1 | 26.5 | 30.0 | 21.3 | 24.5 | 27.7 |
| | | 62 | THC | 31.9 | 31.9 | 34.2 | 29.4 | 29.4 | 32.8 | 26.7 | 26.7 | 31.2 | 24.5 | 24.5 | 28.8 |
| | | | SHC | 24.6 | 29.4 | 34.2 | 23.4 | 28.1 | 32.8 | 22.0 | 26.6 | 31.2 | 20.3 | 24.5 | 28.8 |
| | | 67 | THC | 36.7 | 36.7 | 36.7 | 34.8 | 34.8 | 34.8 | 32.2 | 32.2 | 32.2 | 29.1 | 29.1 | 29.1 |
| | | | SHC | 20.6 | 25.4 | 30.2 | 19.8 | 24.6 | 29.4 | 18.8 | 23.6 | 28.4 | 17.6 | 22.4 | 27.2 |
| | | 72 | THC | 40.1 | 40.1 | 40.1 | 38.2 | 38.2 | 38.2 | 36.1 | 36.1 | 36.1 | 33.7 | 33.7 | 33.7 |
| | | | SHC | 15.7 | 20.5 | 25.3 | 15.0 | 19.8 | 24.6 | 14.2 | 19.0 | 23.8 | 13.4 | 18.2 | 23.0 |
| | | 76 | THC | – | 42.4 | 42.4 | – | 40.6 | 40.6 | – | 38.5 | 38.5 | – | 36.2 | 36.2 |
| | | | SHC | – | 16.6 | 22.2 | – | 15.9 | 21.3 | – | 15.2 | 20.4 | – | 14.4 | 19.5 |
| 1200 Cfm | EAT (wB) | 58 | THC | 32.2 | 32.2 | 36.4 | 30.4 | 30.4 | 34.3 | 28.4 | 28.4 | 32.1 | 26.3 | 26.3 | 29.7 |
| | | | SHC | 28.0 | 32.2 | 36.4 | 26.4 | 30.4 | 34.3 | 24.7 | 28.4 | 32.1 | 22.8 | 26.3 | 29.7 |
| | | 62 | THC | 33.3 | 33.3 | 37.0 | 30.8 | 30.8 | 35.5 | 28.4 | 28.4 | 33.4 | 26.3 | 26.3 | 30.9 |
| | | | SHC | 26.4 | 31.7 | 37.0 | 25.1 | 30.3 | 35.5 | 23.4 | 28.4 | 33.4 | 21.7 | 26.3 | 30.9 |
| | | 67 | THC | 37.7 | 37.7 | 37.7 | 35.6 | 35.6 | 35.6 | 33.4 | 33.4 | 33.4 | 30.4 | 30.4 | 30.4 |
| | | | SHC | 21.7 | 27.0 | 32.4 | 20.9 | 26.3 | 31.6 | 20.0 | 25.4 | 30.8 | 18.8 | 24.2 | 29.6 |
| | | 72 | THC | 40.9 | 40.9 | 40.9 | 39.0 | 39.0 | 39.0 | 36.9 | 36.9 | 36.9 | 34.4 | 34.4 | 34.4 |
| | | | SHC | 16.1 | 21.5 | 26.8 | 15.4 | 20.8 | 26.1 | 14.7 | 20.0 | 25.4 | 13.8 | 19.2 | 24.5 |
| | | 76 | THC | – | 43.1 | 43.1 | – | 41.3 | 41.3 | – | 39.1 | 39.1 | – | 36.8 | 36.8 |
| | | | SHC | – | 17.1 | 23.1 | – | 16.4 | 22.3 | – | 15.7 | 21.4 | – | 14.9 | 20.5 |
| 1350 Cfm | EAT (wB) | 58 | THC | – | – | – | 32.1 | 32.1 | 36.3 | 30.0 | 30.0 | 34.0 | 27.9 | 27.9 | 31.5 |
| | | | SHC | – | – | – | 27.9 | 32.1 | 36.3 | 26.1 | 30.0 | 34.0 | 24.2 | 27.9 | 31.5 |
| | | 62 | THC | 28.4 | 28.4 | 30.5 | 32.2 | 32.2 | 37.8 | 30.1 | 30.1 | 35.3 | 27.9 | 27.9 | 32.8 |
| | | | SHC | 17.6 | 24.1 | 30.5 | 26.6 | 32.2 | 37.8 | 24.8 | 30.1 | 35.3 | 23.0 | 27.9 | 32.8 |
| | | 67 | THC | 33.2 | 33.2 | 33.2 | 36.4 | 36.4 | 36.4 | 34.1 | 34.1 | 34.1 | 31.5 | 31.5 | 32.0 |
| | | | SHC | 15.0 | 21.4 | 27.9 | 21.9 | 27.8 | 33.7 | 21.0 | 26.9 | 32.9 | 20.0 | 26.0 | 32.0 |
| | | 72 | THC | 37.5 | 37.5 | 37.5 | 39.7 | 39.7 | 39.7 | 37.5 | 37.5 | 37.5 | 35.0 | 35.0 | 35.0 |
| | | | SHC | 11.8 | 18.3 | 24.8 | 15.8 | 21.7 | 27.5 | 15.0 | 20.9 | 26.8 | 14.2 | 20.1 | 26.0 |
| | | 76 | THC | – | 40.1 | 40.1 | – | 41.8 | 41.8 | – | 39.6 | 39.6 | – | 37.3 | 37.3 |
| | | | SHC | – | 15.3 | 22.7 | – | 16.8 | 23.2 | – | 16.1 | 22.3 | – | 15.3 | 21.5 |
| 1500 Cfm | EAT (wB) | 58 | THC | 28.1 | 28.1 | 34.2 | 33.7 | 33.7 | 38.1 | 31.6 | 31.6 | 35.7 | 29.3 | 29.3 | 33.2 |
| | | | SHC | 21.9 | 28.1 | 34.2 | 29.3 | 33.7 | 38.1 | 27.4 | 31.6 | 35.7 | 25.5 | 29.3 | 33.2 |
| | | 62 | THC | 30.3 | 30.3 | 33.8 | 33.7 | 33.7 | 39.6 | 31.6 | 31.6 | 37.1 | 29.4 | 29.4 | 34.5 |
| | | | SHC | 19.8 | 26.8 | 33.8 | 27.8 | 33.7 | 39.6 | 26.1 | 31.6 | 37.1 | 24.2 | 29.4 | 34.5 |
| | | 67 | THC | 35.5 | 35.5 | 35.5 | 36.9 | 36.9 | 36.9 | 34.6 | 34.6 | 34.9 | 32.0 | 32.0 | 34.0 |
| | | | SHC | 16.7 | 23.7 | 30.7 | 22.8 | 29.2 | 35.7 | 21.9 | 28.4 | 34.9 | 21.0 | 27.5 | 34.0 |
| | | 72 | THC | 39.0 | 39.0 | 39.0 | 40.2 | 40.2 | 40.2 | 38.0 | 38.0 | 38.0 | 35.5 | 35.5 | 35.5 |
| | | | SHC | 12.4 | 19.5 | 26.6 | 16.1 | 22.5 | 28.8 | 15.4 | 21.7 | 28.1 | 14.6 | 21.0 | 27.4 |
| | | 76 | THC | – | 41.4 | 41.4 | – | 42.2 | 42.2 | – | 40.0 | 40.0 | – | – | – |
| | | | SHC | – | 16.0 | 24.3 | – | 17.2 | 24.0 | – | 16.5 | 23.2 | – | – | – |

**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)
N/A – Not applicable, dry bulb temperature (db) is higher than wet bulb temperature (wb).
SHC – Sensible heat capacity
THC – Total heat capacity

## Table 9 – COOLING CAPACITIES 4 TONS

| 558J*05 | | | | AMBIENT TEMPERATURE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 EAT (dB) | | | 95 EAT (dB) | | | 105 EAT (dB) | | | 115 EAT (dB) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 1200 Cfm | EAT (wB) | 58 | THC | – | – | – | – | – | – | 36.1 | 36.1 | 40.7 | 34.3 | 34.3 | 38.6 |
| | | | SHC | – | – | – | – | – | – | 31.5 | 36.1 | 40.7 | 29.9 | 34.3 | 38.6 |
| | | 62 | THC | 43.1 | 43.1 | 43.1 | 40.8 | 40.8 | 40.8 | 38.4 | 38.4 | 39.4 | 35.9 | 35.9 | 38.2 |
| | | | SHC | 31.2 | 36.4 | 41.7 | 30.1 | 35.3 | 40.6 | 28.9 | 34.1 | 39.4 | 27.8 | 33.0 | 38.2 |
| | | 67 | THC | 47.4 | 47.4 | 47.4 | 45.2 | 45.2 | 45.2 | 42.9 | 42.9 | 42.9 | 40.3 | 40.3 | 40.3 |
| | | | SHC | 25.9 | 31.2 | 36.4 | 25.0 | 30.2 | 35.5 | 23.9 | 29.2 | 34.4 | 22.9 | 28.2 | 33.4 |
| | | 72 | THC | 51.1 | 51.1 | 51.1 | 49.1 | 49.1 | 49.1 | 46.8 | 46.8 | 46.8 | 43.9 | 43.9 | 43.9 |
| | | | SHC | 20.1 | 25.5 | 30.9 | 19.4 | 24.7 | 30.1 | 18.4 | 23.7 | 29.0 | 17.4 | 22.7 | 28.0 |
| | | 76 | THC | – | 53.3 | 53.3 | – | 51.5 | 51.5 | – | 49.2 | 49.2 | – | 45.9 | 45.9 |
| | | | SHC | – | 20.8 | 27.4 | – | 20.2 | 26.8 | – | 19.3 | 25.7 | – | 18.3 | 24.6 |
| 1400 cfm | EAT (wB) | 58 | THC | 41.9 | 41.9 | 47.3 | 40.1 | 40.1 | 45.3 | 38.2 | 38.2 | 43.2 | 36.3 | 36.3 | 41.0 |
| | | | SHC | 36.6 | 41.9 | 47.3 | 35.0 | 40.1 | 45.3 | 33.3 | 38.2 | 43.2 | 31.7 | 36.3 | 41.0 |
| | | 62 | THC | 44.6 | 44.6 | 45.4 | 42.3 | 42.3 | 44.2 | 39.8 | 39.8 | 42.9 | 37.3 | 37.3 | 41.6 |
| | | | SHC | 33.4 | 39.4 | 45.4 | 32.3 | 38.3 | 44.2 | 31.0 | 37.0 | 42.9 | 29.8 | 35.7 | 41.6 |
| | | 67 | THC | 48.7 | 48.7 | 48.7 | 46.6 | 46.6 | 46.6 | 44.2 | 44.2 | 44.2 | 41.4 | 41.4 | 41.4 |
| | | | SHC | 27.3 | 33.2 | 39.2 | 26.4 | 32.3 | 38.3 | 25.3 | 31.3 | 37.3 | 24.2 | 30.2 | 36.2 |
| | | 72 | THC | 52.2 | 52.2 | 52.2 | 50.3 | 50.3 | 50.3 | 47.8 | 47.8 | 47.8 | 44.8 | 44.8 | 44.8 |
| | | | SHC | 20.6 | 26.7 | 32.7 | 19.9 | 25.9 | 32.0 | 18.9 | 24.9 | 30.9 | 17.9 | 23.8 | 29.7 |
| | | 76 | THC | – | 54.1 | 54.1 | – | 52.3 | 52.3 | – | 49.9 | 49.9 | – | 46.4 | 46.4 |
| | | | SHC | – | 21.5 | 29.0 | – | 20.8 | 28.0 | – | 19.9 | 26.9 | – | 18.8 | 25.7 |
| 1600 Cfm | EAT (wB) | 58 | THC | 44.0 | 44.0 | 49.6 | 42.1 | 42.1 | 47.4 | 40.1 | 40.1 | 45.2 | 38.1 | 38.1 | 43.0 |
| | | | SHC | 38.3 | 44.0 | 49.6 | 36.7 | 42.1 | 47.4 | 34.9 | 40.1 | 45.2 | 33.2 | 38.1 | 43.0 |
| | | 62 | THC | 45.7 | 45.7 | 48.6 | 43.5 | 43.5 | 47.5 | 41.0 | 41.0 | 46.0 | 38.5 | 38.5 | 44.4 |
| | | | SHC | 35.3 | 42.0 | 48.6 | 34.2 | 40.8 | 47.5 | 32.9 | 39.4 | 46.0 | 31.6 | 38.0 | 44.4 |
| | | 67 | THC | 49.8 | 49.8 | 49.8 | 47.6 | 47.6 | 47.6 | 45.1 | 45.1 | 45.1 | 42.3 | 42.3 | 42.3 |
| | | | SHC | 28.4 | 35.0 | 41.6 | 27.6 | 34.2 | 40.9 | 26.5 | 33.2 | 39.9 | 25.4 | 32.1 | 38.7 |
| | | 72 | THC | 53.0 | 53.0 | 53.0 | 51.1 | 51.1 | 51.1 | 48.6 | 48.6 | 48.6 | 45.4 | 45.4 | 45.4 |
| | | | SHC | 21.0 | 27.6 | 34.3 | 20.3 | 27.0 | 33.6 | 19.4 | 26.0 | 32.6 | 18.3 | 24.8 | 31.3 |
| | | 76 | THC | – | 54.6 | 54.6 | – | 52.8 | 52.8 | – | 50.4 | 50.4 | – | 46.8 | 46.8 |
| | | | SHC | – | 22.0 | 29.9 | – | 21.3 | 29.0 | – | 20.3 | 27.9 | – | 19.2 | 26.6 |
| 1800 Cfm | EAT (wB) | 58 | THC | 44.0 | 44.0 | 50.3 | 42.1 | 42.1 | 48.1 | 40.1 | 40.1 | 45.9 | 38.0 | 38.0 | 43.5 |
| | | | SHC | 37.6 | 44.0 | 50.3 | 36.0 | 42.1 | 48.1 | 34.3 | 40.1 | 45.9 | 32.6 | 38.0 | 43.5 |
| | | 62 | THC | 45.7 | 45.7 | 49.5 | 43.5 | 43.5 | 48.3 | 41.0 | 41.0 | 46.8 | 38.4 | 38.4 | 45.2 |
| | | | SHC | 34.5 | 42.0 | 49.5 | 33.4 | 40.8 | 48.3 | 32.1 | 39.4 | 46.8 | 30.8 | 38.0 | 45.2 |
| | | 67 | THC | 49.8 | 49.8 | 49.8 | 47.6 | 47.6 | 47.6 | 45.1 | 45.1 | 45.1 | 42.3 | 42.3 | 42.3 |
| | | | SHC | 27.6 | 35.0 | 42.5 | 26.8 | 34.2 | 41.7 | 25.7 | 33.2 | 40.7 | 24.6 | 32.1 | 39.5 |
| | | 72 | THC | 53.0 | 53.0 | 53.0 | 51.1 | 51.1 | 51.1 | 48.6 | 48.6 | 48.6 | 45.4 | 45.4 | 45.4 |
| | | | SHC | 20.2 | 27.6 | 35.1 | 19.5 | 27.0 | 34.4 | 18.5 | 26.0 | 33.4 | 17.5 | 24.8 | 32.1 |
| | | 76 | THC | – | 54.6 | 54.6 | – | 52.8 | 52.8 | – | 50.4 | 50.4 | – | 46.8 | 46.8 |
| | | | SHC | – | 22.0 | 30.9 | – | 21.3 | 30.0 | – | 20.3 | 28.9 | – | 19.2 | 27.5 |
| 2000 Cfm | EAT (wB) | 58 | THC | 46.9 | 46.9 | 52.9 | 45.0 | 45.0 | 50.8 | 42.9 | 42.9 | 48.4 | 40.7 | 40.7 | 45.9 |
| | | | SHC | 40.9 | 46.9 | 52.9 | 39.3 | 45.0 | 50.8 | 37.4 | 42.9 | 48.4 | 35.5 | 40.7 | 45.9 |
| | | 62 | THC | 47.5 | 47.5 | 54.0 | 45.3 | 45.3 | 52.5 | 43.0 | 43.0 | 50.3 | 40.7 | 40.7 | 47.7 |
| | | | SHC | 38.5 | 46.3 | 54.0 | 37.3 | 44.9 | 52.5 | 35.6 | 43.0 | 50.3 | 33.8 | 40.7 | 47.7 |
| | | 67 | THC | 51.2 | 51.2 | 51.2 | 49.1 | 49.1 | 49.1 | 46.5 | 46.5 | 46.5 | 43.5 | 43.5 | 43.5 |
| | | | SHC | 30.5 | 38.3 | 46.0 | 29.8 | 37.6 | 45.5 | 28.7 | 36.6 | 44.5 | 27.5 | 35.4 | 43.2 |
| | | 72 | THC | 54.0 | 54.0 | 54.0 | 52.1 | 52.1 | 52.1 | 49.7 | 49.7 | 49.7 | 46.2 | 46.2 | 46.2 |
| | | | SHC | 21.7 | 29.2 | 36.8 | 21.1 | 28.7 | 36.4 | 20.1 | 27.8 | 35.4 | 18.9 | 26.4 | 33.9 |
| | | 76 | THC | – | 55.2 | 55.2 | – | 53.5 | 53.5 | – | 51.0 | 51.0 | – | 47.3 | 47.3 |
| | | | SHC | – | 22.7 | 31.4 | – | 22.0 | 30.6 | – | 21.1 | 29.6 | – | 19.9 | 28.1 |

**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)
N/A – Not applicable, dry bulb temperature (db) is higher than wet bulb temperature (wb).
SHC – Sensible heat capacity
THC – Total heat capacity

## Table 10 – COOLING CAPACITIES 5 TONS

| 558J*06 | | | | AMBIENT TEMPERATURE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 EAT (dB) | | | 95 EAT (dB) | | | 105 EAT (dB) | | | 115 EAT (dB) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 1500 Cfm | EAT (wB) | 58 | THC | 52.9 | 52.9 | 60.0 | 49.9 | 49.9 | 56.6 | 46.6 | 46.6 | 52.9 | 43.1 | 43.1 | 48.9 |
| | | | SHC | 45.8 | 52.9 | 60.0 | 43.2 | 49.9 | 56.6 | 40.4 | 46.6 | 52.9 | 37.3 | 43.1 | 48.9 |
| | | 62 | THC | 56.2 | 56.2 | 57.6 | 52.2 | 52.2 | 55.7 | 47.8 | 47.8 | 53.5 | 43.2 | 43.2 | 51.0 |
| | | | SHC | 41.8 | 49.7 | 57.6 | 39.9 | 47.8 | 55.7 | 37.8 | 45.6 | 53.5 | 35.5 | 43.2 | 51.0 |
| | | 67 | THC | 62.4 | 62.4 | 62.4 | 58.8 | 58.8 | 58.8 | 54.4 | 54.4 | 54.4 | 49.5 | 49.5 | 49.5 |
| | | | SHC | 34.8 | 42.8 | 50.7 | 33.2 | 41.2 | 49.1 | 31.4 | 39.3 | 47.3 | 29.4 | 37.3 | 45.3 |
| | | 72 | THC | 68.2 | 68.2 | 68.2 | 64.8 | 64.8 | 64.8 | 60.8 | 60.8 | 60.8 | 56.2 | 56.2 | 56.2 |
| | | | SHC | 27.2 | 35.2 | 43.2 | 25.9 | 33.9 | 41.9 | 24.4 | 32.4 | 40.4 | 22.6 | 30.6 | 38.6 |
| | | 76 | THC | – | 71.1 | 71.1 | – | 69.0 | 69.0 | – | 65.4 | 65.4 | – | 60.9 | 60.9 |
| | | | SHC | – | 28.4 | 36.6 | – | 27.6 | 35.9 | – | 26.3 | 34.6 | – | 24.8 | 33.0 |
| 1750 Cfm | EAT (wB) | 58 | THC | 56.5 | 56.5 | 64.0 | 53.3 | 53.3 | 60.4 | 49.8 | 49.8 | 56.5 | 46.1 | 46.1 | 52.3 |
| | | | SHC | 48.9 | 56.5 | 64.0 | 46.1 | 53.3 | 60.4 | 43.1 | 49.8 | 56.5 | 39.9 | 46.1 | 52.3 |
| | | 62 | THC | 58.5 | 58.5 | 63.4 | 54.4 | 54.4 | 61.3 | 49.9 | 49.9 | 58.9 | 46.1 | 46.1 | 54.4 |
| | | | SHC | 45.2 | 54.3 | 63.4 | 43.2 | 52.2 | 61.3 | 41.0 | 49.9 | 58.9 | 37.9 | 46.1 | 54.4 |
| | | 67 | THC | 64.3 | 64.3 | 64.3 | 60.5 | 60.5 | 60.5 | 56.2 | 56.2 | 56.2 | 51.3 | 51.3 | 51.3 |
| | | | SHC | 36.9 | 46.1 | 55.2 | 35.3 | 44.5 | 53.7 | 33.6 | 42.8 | 51.9 | 31.6 | 40.8 | 49.9 |
| | | 72 | THC | 69.5 | 69.5 | 69.5 | 66.5 | 66.5 | 66.5 | 62.4 | 62.4 | 62.4 | 57.7 | 57.7 | 57.7 |
| | | | SHC | 27.8 | 36.9 | 45.9 | 26.7 | 35.9 | 45.1 | 25.2 | 34.5 | 43.7 | 23.5 | 32.8 | 42.0 |
| | | 76 | THC | – | 72.2 | 72.2 | – | 70.1 | 70.1 | – | 66.6 | 66.6 | – | – | – |
| | | | SHC | – | 29.3 | 38.9 | – | 28.6 | 38.2 | – | 27.4 | 36.8 | – | – | – |
| 2000 Cfm | EAT (wB) | 58 | THC | 59.3 | 59.3 | 67.3 | 56.1 | 56.1 | 63.6 | 52.5 | 52.5 | 59.5 | 48.6 | 48.6 | 55.1 |
| | | | SHC | 51.4 | 59.3 | 67.3 | 48.6 | 56.1 | 63.6 | 45.4 | 52.5 | 59.5 | 42.1 | 48.6 | 55.1 |
| | | 62 | THC | 60.1 | 60.1 | 68.5 | 56.2 | 56.2 | 66.3 | 52.5 | 52.5 | 62.0 | 48.7 | 48.7 | 57.4 |
| | | | SHC | 48.1 | 58.3 | 68.5 | 46.2 | 56.2 | 66.3 | 43.1 | 52.5 | 62.0 | 39.9 | 48.7 | 57.4 |
| | | 67 | THC | 65.7 | 65.7 | 65.7 | 61.9 | 61.9 | 61.9 | 57.5 | 57.5 | 57.5 | 52.6 | 52.6 | 54.4 |
| | | | SHC | 38.8 | 49.1 | 59.5 | 37.3 | 47.7 | 58.1 | 35.6 | 46.0 | 56.4 | 33.6 | 44.0 | 54.4 |
| | | 72 | THC | 70.1 | 70.1 | 70.1 | 67.6 | 67.6 | 67.6 | 63.6 | 63.6 | 63.6 | 58.9 | 58.9 | 58.9 |
| | | | SHC | 28.3 | 38.1 | 48.0 | 27.4 | 37.7 | 48.0 | 26.0 | 36.4 | 46.7 | 24.3 | 34.7 | 45.2 |
| | | 76 | THC | – | 72.9 | 72.9 | – | 70.8 | 70.8 | – | 67.4 | 67.4 | – | – | – |
| | | | SHC | – | 30.1 | 40.7 | – | 29.3 | 39.9 | – | 28.2 | 38.7 | – | – | – |
| 2250 Cfm | EAT (wB) | 58 | THC | 61.5 | 61.5 | 69.8 | 58.4 | 58.4 | 66.2 | 54.8 | 54.8 | 62.1 | 50.8 | 50.8 | 57.6 |
| | | | SHC | 53.2 | 61.5 | 69.8 | 50.5 | 58.4 | 66.2 | 47.4 | 54.8 | 62.1 | 43.9 | 50.8 | 57.6 |
| | | 62 | THC | 61.6 | 61.6 | 72.6 | 58.4 | 58.4 | 68.9 | 54.8 | 54.8 | 64.6 | 50.8 | 50.8 | 59.9 |
| | | | SHC | 50.6 | 61.6 | 72.6 | 47.9 | 58.4 | 68.9 | 45.0 | 54.8 | 64.6 | 41.7 | 50.8 | 59.9 |
| | | 67 | THC | 66.8 | 66.8 | 66.8 | 63.0 | 63.0 | 63.0 | 58.5 | 58.5 | 60.6 | 53.6 | 53.6 | 58.6 |
| | | | SHC | 40.5 | 52.0 | 63.4 | 39.1 | 50.7 | 62.3 | 37.4 | 49.0 | 60.6 | 35.5 | 47.0 | 58.6 |
| | | 72 | THC | 70.8 | 70.8 | 70.8 | 68.5 | 68.5 | 68.5 | 64.5 | 64.5 | 64.5 | 59.8 | 59.8 | 59.8 |
| | | | SHC | 28.7 | 39.5 | 50.2 | 28.0 | 39.3 | 50.5 | 26.7 | 38.1 | 49.6 | 25.0 | 36.6 | 48.1 |
| | | 76 | THC | – | 73.4 | 73.4 | – | 71.2 | 71.2 | – | 67.9 | 67.9 | – | – | – |
| | | | SHC | – | 30.7 | 42.1 | – | 30.0 | 41.4 | – | 28.9 | 40.4 | – | – | – |
| 2500 Cfm | EAT (wB) | 58 | THC | 63.3 | 63.3 | 71.8 | 60.1 | 60.1 | 68.2 | 56.5 | 56.5 | 64.1 | 52.6 | 52.6 | 59.6 |
| | | | SHC | 54.8 | 63.3 | 71.8 | 52.1 | 60.1 | 68.2 | 49.0 | 56.5 | 64.1 | 45.5 | 52.6 | 59.6 |
| | | 62 | THC | 63.4 | 63.4 | 74.7 | 60.2 | 60.2 | 71.0 | 56.6 | 56.6 | 66.7 | 52.6 | 52.6 | 62.1 |
| | | | SHC | 52.0 | 63.4 | 74.7 | 49.4 | 60.2 | 71.0 | 46.5 | 56.6 | 66.7 | 43.2 | 52.6 | 62.1 |
| | | 67 | THC | 67.6 | 67.6 | 67.6 | 63.8 | 63.8 | 66.2 | 59.3 | 59.3 | 64.6 | 54.4 | 54.4 | 62.5 |
| | | | SHC | 42.1 | 54.6 | 67.1 | 40.9 | 53.5 | 66.2 | 39.2 | 51.9 | 64.6 | 37.2 | 49.8 | 62.5 |
| | | 72 | THC | 71.3 | 71.3 | 71.3 | 69.0 | 69.0 | 69.0 | 65.1 | 65.1 | 65.1 | 60.4 | 60.4 | 60.4 |
| | | | SHC | 29.1 | 40.7 | 52.2 | 28.5 | 40.7 | 52.9 | 27.3 | 39.7 | 52.2 | 25.7 | 38.3 | 50.9 |
| | | 76 | THC | – | 73.8 | 73.8 | – | 71.4 | 71.4 | – | 68.3 | 68.3 | – | – | – |
| | | | SHC | – | 31.2 | 43.3 | – | 30.5 | 42.6 | – | 29.6 | 41.9 | – | – | – |

**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)
N/A – Not applicable, dry bulb temperature (db) is higher than wet bulb temperature (wb).
SHC – Sensible heat capacity
THC – Total heat capacity

## Table 11 – COOLING CAPACITIES 6 TONS

| 558J*07 | | | | AMBIENT TEMPERATURE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 85 EAT (dB) | | | 95 EAT (dB) | | | 105 EAT (dB) | | | 115 EAT (dB) | | |
| | | | | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 | 75 | 80 | 85 |
| 1800 Cfm | EAT (wB) | 58 | THC | 64.9 | 64.9 | 73.3 | 62.1 | 62.1 | 70.0 | 58.9 | 58.9 | 66.4 | 55.6 | 55.6 | 62.7 |
| | | | SHC | 56.6 | 64.9 | 73.3 | 54.1 | 62.1 | 70.0 | 51.4 | 58.9 | 66.4 | 48.5 | 55.6 | 62.7 |
| | | 62 | THC | 68.7 | 68.7 | 70.3 | 64.9 | 64.9 | 68.5 | 60.8 | 60.8 | 66.4 | 56.4 | 56.4 | 64.0 |
| | | | SHC | 51.7 | 61.0 | 70.3 | 49.9 | 59.2 | 68.5 | 47.9 | 57.2 | 66.4 | 45.7 | 54.9 | 64.0 |
| | | 67 | THC | 75.6 | 75.6 | 75.6 | 71.7 | 71.7 | 71.7 | 67.4 | 67.4 | 67.4 | 62.5 | 62.5 | 62.5 |
| | | | SHC | 42.8 | 52.2 | 61.5 | 41.2 | 50.5 | 59.8 | 39.3 | 48.6 | 58.0 | 37.2 | 46.5 | 55.8 |
| | | 72 | THC | 82.6 | 82.6 | 82.6 | 78.5 | 78.5 | 78.5 | 73.7 | 73.7 | 73.7 | 67.8 | 67.8 | 67.8 |
| | | | SHC | 33.5 | 42.8 | 52.2 | 31.9 | 41.3 | 50.6 | 30.0 | 39.3 | 48.6 | 27.8 | 36.9 | 45.9 |
| | | 76 | THC | – | 87.5 | 87.5 | – | 83.3 | 83.3 | – | 77.7 | 77.7 | – | 70.9 | 70.9 |
| | | | SHC | – | 35.0 | 44.9 | – | 33.5 | 43.4 | – | 31.6 | 41.5 | – | 29.3 | 39.1 |
| 2100 Cfm | EAT (wB) | 58 | THC | 68.9 | 68.9 | 77.7 | 65.9 | 65.9 | 74.3 | 62.5 | 62.5 | 70.5 | 58.7 | 58.7 | 66.2 |
| | | | SHC | 60.1 | 68.9 | 77.7 | 57.4 | 65.9 | 74.3 | 54.5 | 62.5 | 70.5 | 51.2 | 58.7 | 66.2 |
| | | 62 | THC | 70.9 | 70.9 | 76.9 | 67.1 | 67.1 | 75.0 | 63.0 | 63.0 | 72.5 | 58.7 | 58.7 | 68.7 |
| | | | SHC | 55.6 | 66.3 | 76.9 | 53.8 | 64.4 | 75.0 | 51.6 | 62.1 | 72.5 | 48.7 | 58.7 | 68.7 |
| | | 67 | THC | 77.8 | 77.8 | 77.8 | 73.7 | 73.7 | 73.7 | 69.2 | 69.2 | 69.2 | 64.0 | 64.0 | 64.0 |
| | | | SHC | 45.4 | 56.1 | 66.8 | 43.7 | 54.4 | 65.2 | 41.8 | 52.5 | 63.2 | 39.6 | 50.2 | 60.7 |
| | | 72 | THC | 84.5 | 84.5 | 84.5 | 80.3 | 80.3 | 80.3 | 75.1 | 75.1 | 75.1 | 68.8 | 68.8 | 68.8 |
| | | | SHC | 34.5 | 45.2 | 55.9 | 32.9 | 43.5 | 54.2 | 30.9 | 41.4 | 52.0 | 28.5 | 38.7 | 48.9 |
| | | 76 | THC | – | 89.2 | 89.2 | – | 84.7 | 84.7 | – | 78.8 | 78.8 | – | 71.6 | 71.6 |
| | | | SHC | – | 36.3 | 47.8 | – | 34.7 | 46.0 | – | 32.6 | 43.7 | – | 30.1 | 40.9 |
| 2400 Cfm | EAT (wB) | 58 | THC | 72.0 | 72.0 | 81.2 | 68.7 | 68.7 | 77.5 | 65.2 | 65.2 | 73.5 | 61.1 | 61.1 | 68.9 |
| | | | SHC | 62.8 | 72.0 | 81.2 | 60.0 | 68.7 | 77.5 | 56.9 | 65.2 | 73.5 | 53.3 | 61.1 | 68.9 |
| | | 62 | THC | 72.8 | 72.8 | 82.8 | 68.9 | 68.9 | 80.7 | 65.2 | 65.2 | 76.4 | 61.2 | 61.2 | 71.6 |
| | | | SHC | 59.1 | 71.0 | 82.8 | 57.2 | 68.9 | 80.7 | 54.1 | 65.2 | 76.4 | 50.7 | 61.2 | 71.6 |
| | | 67 | THC | 79.4 | 79.4 | 79.4 | 75.2 | 75.2 | 75.2 | 70.5 | 70.5 | 70.5 | 65.1 | 65.1 | 65.3 |
| | | | SHC | 47.7 | 59.8 | 71.8 | 46.0 | 58.1 | 70.2 | 44.0 | 56.0 | 68.1 | 41.6 | 53.5 | 65.3 |
| | | 72 | THC | 86.0 | 86.0 | 86.0 | 81.6 | 81.6 | 81.6 | 76.1 | 76.1 | 76.1 | 69.6 | 69.6 | 69.6 |
| | | | SHC | 35.3 | 47.2 | 59.2 | 33.7 | 45.6 | 57.5 | 31.7 | 43.3 | 55.0 | 29.1 | 40.3 | 51.4 |
| | | 76 | THC | – | 90.3 | 90.3 | – | 85.7 | 85.7 | – | 79.6 | 79.6 | – | 72.1 | 72.1 |
| | | | SHC | – | 37.3 | 49.8 | – | 35.6 | 48.0 | – | 33.5 | 45.6 | – | 30.8 | 42.5 |
| 2700 Cfm | EAT (wB) | 58 | THC | 60.3 | 60.3 | 74.1 | 71.1 | 71.1 | 80.2 | 67.4 | 67.4 | 76.0 | 63.0 | 63.0 | 71.1 |
| | | | SHC | 46.4 | 60.3 | 74.1 | 62.0 | 71.1 | 80.2 | 58.8 | 67.4 | 76.0 | 55.0 | 63.0 | 71.1 |
| | | 62 | THC | 65.4 | 65.4 | 69.3 | 71.2 | 71.2 | 83.3 | 67.5 | 67.5 | 79.0 | 63.1 | 63.1 | 73.8 |
| | | | SHC | 41.0 | 55.1 | 69.3 | 59.0 | 71.2 | 83.3 | 55.9 | 67.5 | 79.0 | 52.3 | 63.1 | 73.8 |
| | | 67 | THC | 72.7 | 72.7 | 72.7 | 76.3 | 76.3 | 76.3 | 71.5 | 71.5 | 72.6 | 65.8 | 65.8 | 69.4 |
| | | | SHC | 33.8 | 48.0 | 62.2 | 48.2 | 61.6 | 74.9 | 46.1 | 59.3 | 72.6 | 43.5 | 56.5 | 69.4 |
| | | 72 | THC | 79.7 | 79.7 | 79.7 | 82.5 | 82.5 | 82.5 | 76.9 | 76.9 | 76.9 | 70.1 | 70.1 | 70.1 |
| | | | SHC | 25.8 | 40.2 | 54.6 | 34.5 | 47.5 | 60.5 | 32.3 | 45.0 | 57.7 | 29.7 | 41.7 | 53.8 |
| | | 76 | THC | – | 85.1 | 85.1 | – | 86.4 | 86.4 | – | 80.2 | 80.2 | – | 72.5 | 72.5 |
| | | | SHC | – | 33.5 | 48.4 | – | 36.5 | 49.9 | – | 34.3 | 47.3 | – | 31.5 | 44.0 |
| 3000 Cfm | EAT (wB) | 58 | THC | 64.9 | 64.9 | 78.8 | 73.1 | 73.1 | 82.5 | 69.2 | 69.2 | 78.0 | 64.5 | 64.5 | 72.7 |
| | | | SHC | 51.1 | 64.9 | 78.8 | 63.8 | 73.1 | 82.5 | 60.3 | 69.2 | 78.0 | 56.2 | 64.5 | 72.7 |
| | | 62 | THC | 68.7 | 68.7 | 76.5 | 73.2 | 73.2 | 85.7 | 69.2 | 69.2 | 81.0 | 64.5 | 64.5 | 75.5 |
| | | | SHC | 45.5 | 61.0 | 76.5 | 60.7 | 73.2 | 85.7 | 57.4 | 69.2 | 81.0 | 53.5 | 64.5 | 75.5 |
| | | 67 | THC | 75.6 | 75.6 | 75.6 | 77.2 | 77.2 | 79.4 | 72.2 | 72.2 | 76.8 | 66.3 | 66.3 | 73.0 |
| | | | SHC | 36.6 | 52.2 | 67.7 | 50.2 | 64.8 | 79.4 | 48.0 | 62.4 | 76.8 | 45.1 | 59.1 | 73.0 |
| | | 72 | THC | 82.6 | 82.6 | 82.6 | 83.3 | 83.3 | 83.3 | 77.5 | 77.5 | 77.5 | 70.5 | 70.5 | 70.5 |
| | | | SHC | 27.2 | 42.8 | 58.5 | 35.1 | 49.2 | 63.3 | 32.9 | 46.6 | 60.3 | 30.2 | 43.0 | 55.9 |
| | | 76 | THC | – | 87.5 | 87.5 | – | 86.9 | 86.9 | – | 80.6 | 80.6 | – | 72.8 | 72.8 |
| | | | SHC | – | 35.0 | 51.5 | – | 37.3 | 51.6 | – | 35.0 | 48.9 | – | 32.1 | 45.3 |

**LEGEND:**

– – Do not operate in this region
Cfm – Cubic feet per minute (supply air)
EAT(db) – Entering air temperature (dry bulb)
EAT(wb) – Entering air temperature (wet bulb)
N/A – Not applicable, dry bulb temperature (db) is higher than wet bulb temperature (wb).
SHC – Sensible heat capacity
THC – Total heat capacity

**Table 12 – STATIC PRESSURE ADDERS (Factory Options and/or Accessories)**

| CFM | 600 | 800 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vertical Economizer | 0.01 | 0.02 | 0.035 | 0.045 | 0.065 | 0.08 | 0.12 | 0.145 | 0.175 | 0.22 | 0.255 |
| Horizontal Economizer | – | – | – | – | – | 0.1 | 0.125 | 0.15 | 0.18 | 0.225 | 0.275 |

| CFM | 600 | 900 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 Electric Heater Module | 0.03 | 0.05 | 0.07 | 0.09 | 0.09 | 0.1 | 0.11 | 0.11 | 0.12 | 0.13 |
| 2 Electric Heater Modules | 0.14 | 0.15 | 0.16 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | 0.18 | 0.18 |

## 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, and wet coils. Factory options and accessories may add static pressure losses, as shown in Table 12. Selection software is available, through your salesperson, to help you select the best motor/drive combination for your application.
4. The Fan Performance tables offer motor/drive recommendations. In cases when two motor/drive combinations would work, Bryant recommended the lower horsepower option.
5. For information on the electrical properties of Bryant's motors, please see the Electrical information section of this book.
6. For more information on the performance limits of Bryant's motors, see the application data section of this book.

# FAN PERFORMANCE

## Table 13 – 558J*04 1 PHASE 3 TON HORIZONTAL SUPPLY

| 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 |
| | Field–Supplied Drive[1] | | Standard Static Option | | | | Medium Static Option | | | |
| 900 | **554** | **0.14** | 681 | 0.22 | 783 | 0.32 | 870 | 0.42 | 947 | 0.53 |
| 975 | 575 | 0.16 | 701 | 0.25 | 801 | 0.35 | 888 | 0.45 | 965 | 0.57 |
| 1050 | 597 | 0.18 | 721 | 0.28 | 821 | 0.38 | 906 | 0.49 | 983 | 0.61 |
| 1125 | 620 | 0.21 | 741 | 0.31 | 840 | 0.42 | 925 | 0.54 | 1001 | 0.66 |
| 1200 | 643 | 0.23 | 762 | 0.35 | 860 | 0.46 | 944 | 0.58 | 1020 | 0.71 |
| 1275 | 666 | 0.27 | 784 | 0.38 | 880 | 0.50 | 964 | 0.63 | 1039 | 0.76 |
| 1350 | 690 | 0.30 | 805 | 0.42 | 900 | 0.55 | 983 | 0.68 | 1058 | 0.82 |
| 1425 | 714 | 0.34 | 827 | 0.47 | 921 | 0.60 | 1003 | 0.74 | 1077 | 0.88 |
| 1500 | 738 | 0.38 | 849 | 0.52 | 942 | 0.66 | 1024 | 0.80 | 1097 | 0.95 |

| 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 |
| | Medium Static Option | | | | | | Field–Supplied Drive[2] | | | |
| 900 | 1017 | 0.64 | 1082 | 0.76 | 1143 | 0.88 | **1200** | **1.01** | **1254** | **1.14** |
| 975 | 1035 | 0.68 | 1100 | 0.81 | **1160** | **0.93** | **1217** | **1.07** | **1271** | **1.20** |
| 1050 | 1053 | 0.73 | 1117 | 0.86 | **1177** | **0.99** | **1234** | **1.13** | – | – |
| 1125 | 1071 | 0.78 | 1135 | 0.92 | **1195** | **1.05** | **1251** | **1.19** | – | – |
| 1200 | 1089 | 0.84 | 1153 | 0.98 | **1212** | **1.12** | – | – | – | – |
| 1275 | 1107 | 0.90 | **1171** | **1.04** | **1230** | **1.19** | – | – | – | – |
| 1350 | 1126 | 0.96 | **1189** | **1.11** | – | – | – | – | – | – |
| 1425 | 1145 | 1.03 | **1208** | **1.18** | – | – | – | – | – | – |
| 1500 | **1164** | **1.10** | – | – | – | – | – | – | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied fan pulley (part number KR11AZ712) and belt (part number KR30AE039).
2. Recommend using field–supplied motor pulley (part number KR11HY161) and belt (part number KR30AE035).

## Table 14 – 558J*04 1 PHASE 3 TON VERTICAL SUPPLY

| 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 |
| | Field–Supplied Drive[1] | | Standard Static Option | | | | Medium Static Option | | | |
| 900 | **566** | **0.14** | 690 | 0.23 | 791 | 0.32 | 879 | 0.42 | 957 | 0.52 |
| 975 | 590 | 0.17 | 711 | 0.26 | 811 | 0.36 | 897 | 0.46 | 975 | 0.57 |
| 1050 | 615 | 0.19 | 733 | 0.29 | 831 | 0.39 | 916 | 0.50 | 993 | 0.62 |
| 1125 | 640 | 0.22 | 755 | 0.33 | 851 | 0.43 | 936 | 0.55 | 1012 | 0.67 |
| 1200 | 666 | 0.25 | 778 | 0.36 | 873 | 0.48 | 956 | 0.60 | 1031 | 0.72 |
| 1275 | 692 | 0.29 | 802 | 0.41 | 894 | 0.53 | 976 | 0.65 | 1051 | 0.78 |
| 1350 | 719 | 0.33 | 825 | 0.45 | 916 | 0.58 | 997 | 0.71 | 1071 | 0.84 |
| 1425 | 746 | 0.37 | 850 | 0.50 | 939 | 0.63 | 1019 | 0.77 | 1091 | 0.91 |
| 1500 | 774 | 0.42 | 875 | 0.55 | 962 | 0.69 | 1041 | 0.83 | 1112 | 0.98 |

| 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 |
| | Medium Static Option | | | | | | Field–Supplied Drive[2] | | | |
| 900 | 1029 | 0.63 | 1095 | 0.75 | 1157 | 0.86 | **1216** | **0.99** | **1272** | **1.11** |
| 975 | 1046 | 0.68 | 1112 | 0.80 | **1174** | **0.92** | **1232** | **1.05** | **1287** | **1.18** |
| 1050 | 1064 | 0.73 | 1129 | 0.86 | **1190** | **0.98** | **1248** | **1.11** | – | – |
| 1125 | 1082 | 0.79 | 1147 | 0.92 | **1208** | **1.05** | **1265** | **1.18** | – | – |
| 1200 | 1100 | 0.85 | **1165** | **0.98** | **1225** | **1.12** | – | – | – | – |
| 1275 | 1119 | 0.91 | **1183** | **1.05** | **1243** | **1.19** | – | – | – | – |
| 1350 | 1139 | 0.98 | **1202** | **1.12** | – | – | – | – | – | – |
| 1425 | **1159** | **1.05** | **1221** | **1.20** | – | – | – | – | – | – |
| 1500 | **1179** | **1.13** | – | – | – | – | – | – | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied fan pulley (part number KR11AZ712) and belt (part number KR30AE039).
2. Recommend using field–supplied motor pulley (part number KR11HY161) and belt (part number KR30AE035).

# FAN PERFORMANCE (cont.)

## Table 15 – 558J*04 3 PHASE 3 TON HORIZONTAL SUPPLY

| 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 |
| | Field–Supplied Drive[1] | | Standard Static Option | | | | Medium Static Option | | | |
| 900 | **554** | **0.14** | 681 | 0.22 | 783 | 0.32 | 870 | 0.42 | 947 | 0.53 |
| 975 | 575 | 0.16 | 701 | 0.25 | 801 | 0.35 | 888 | 0.45 | 965 | 0.57 |
| 1050 | 597 | 0.18 | 721 | 0.28 | 821 | 0.38 | 906 | 0.49 | 983 | 0.61 |
| 1125 | 620 | 0.21 | 741 | 0.31 | 840 | 0.42 | 925 | 0.54 | 1001 | 0.66 |
| 1200 | 643 | 0.23 | 762 | 0.35 | 860 | 0.46 | 944 | 0.58 | 1020 | 0.71 |
| 1275 | 666 | 0.27 | 784 | 0.38 | 880 | 0.50 | 964 | 0.63 | 1039 | 0.76 |
| 1350 | 690 | 0.30 | 805 | 0.42 | 900 | 0.55 | 983 | 0.68 | 1058 | 0.82 |
| 1425 | 714 | 0.34 | 827 | 0.47 | 921 | 0.60 | 1003 | 0.74 | 1077 | 0.88 |
| 1500 | 738 | 0.38 | 849 | 0.52 | 942 | 0.66 | 1024 | 0.80 | 1097 | 0.95 |

| 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 |
| | Medium Static Option | | | | | | High Static Option | | | |
| 900 | 1017 | 0.64 | 1082 | 0.76 | 1143 | 0.88 | 1200 | 1.01 | 1254 | 1.14 |
| 975 | 1035 | 0.68 | 1100 | 0.81 | 1160 | 0.93 | 1217 | 1.07 | 1271 | 1.20 |
| 1050 | 1053 | 0.73 | 1117 | 0.86 | 1177 | 0.99 | 1234 | 1.13 | 1288 | 1.27 |
| 1125 | 1071 | 0.78 | 1135 | 0.92 | 1195 | 1.05 | 1251 | 1.19 | 1305 | 1.34 |
| 1200 | 1089 | 0.84 | 1153 | 0.98 | 1212 | 1.12 | 1269 | 1.26 | 1322 | 1.41 |
| 1275 | 1107 | 0.90 | 1171 | 1.04 | 1230 | 1.19 | 1286 | 1.33 | 1340 | 1.49 |
| 1350 | 1126 | 0.96 | 1189 | 1.11 | 1249 | 1.26 | 1304 | 1.41 | 1357 | 1.57 |
| 1425 | 1145 | 1.03 | 1208 | 1.18 | 1267 | 1.33 | 1323 | 1.49 | 1375 | 1.66 |
| 1500 | 1164 | 1.10 | 1227 | 1.25 | 1285 | 1.41 | 1341 | 1.58 | 1394 | 1.75 |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied fan pulley (part number KR11AZ712) and belt (part number KR30AE039).

## Table 16 – 558J*04 3 PHASE 3 TON VERTICAL SUPPLY

| 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 |
| | | | Standard Static Option | | | | Medium Static Option | | | |
| 900 | 566 | 0.14 | 690 | 0.23 | 791 | 0.32 | 879 | 0.42 | 957 | 0.52 |
| 975 | 590 | 0.17 | 711 | 0.26 | 811 | 0.36 | 897 | 0.46 | 975 | 0.57 |
| 1050 | 615 | 0.19 | 733 | 0.29 | 831 | 0.39 | 916 | 0.50 | 993 | 0.62 |
| 1125 | 640 | 0.22 | 755 | 0.33 | 851 | 0.43 | 936 | 0.55 | 1012 | 0.67 |
| 1200 | 666 | 0.25 | 778 | 0.36 | 873 | 0.48 | 956 | 0.60 | 1031 | 0.72 |
| 1275 | 692 | 0.29 | 802 | 0.41 | 894 | 0.53 | 976 | 0.65 | 1051 | 0.78 |
| 1350 | 719 | 0.33 | 825 | 0.45 | 916 | 0.58 | 997 | 0.71 | 1071 | 0.84 |
| 1425 | 746 | 0.37 | 850 | 0.50 | 939 | 0.63 | 1019 | 0.77 | 1091 | 0.91 |
| 1500 | 774 | 0.42 | 875 | 0.55 | 962 | 0.69 | 1041 | 0.83 | 1112 | 0.98 |

| 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 |
| | Medium Static Option | | | | | | High Static Option | | | |
| 900 | 1029 | 0.63 | 1095 | 0.75 | 1157 | 0.86 | 1216 | 0.99 | 1272 | 1.11 |
| 975 | 1046 | 0.68 | 1112 | 0.80 | 1174 | 0.92 | 1232 | 1.05 | 1287 | 1.18 |
| 1050 | 1064 | 0.73 | 1129 | 0.86 | 1190 | 0.98 | 1248 | 1.11 | 1304 | 1.25 |
| 1125 | 1082 | 0.79 | 1147 | 0.92 | 1208 | 1.05 | 1265 | 1.18 | 1320 | 1.32 |
| 1200 | 1100 | 0.85 | 1165 | 0.98 | 1225 | 1.12 | 1282 | 1.26 | 1337 | 1.40 |
| 1275 | 1119 | 0.91 | 1183 | 1.05 | 1243 | 1.19 | 1300 | 1.34 | 1354 | 1.49 |
| 1350 | 1139 | 0.98 | 1202 | 1.12 | 1262 | 1.27 | 1318 | 1.42 | 1372 | 1.57 |
| 1425 | 1159 | 1.05 | 1221 | 1.20 | 1280 | 1.35 | 1336 | 1.51 | 1390 | 1.66 |
| 1500 | 1179 | 1.13 | 1241 | 1.28 | 1300 | 1.44 | 1355 | 1.60 | 1408 | 1.76 |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied fan pulley (part number KR11AZ712) and belt (part number KR30AE039).

# FAN PERFORMANCE (cont.)

## Table 17 – 558J*05 1 PHASE 4 TON HORIZONTAL SUPPLY

| 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 |
| | Standard Static Option | | | | Medium Static Option | | | | | |
| 1200 | 643 | 0.23 | 762 | 0.35 | 860 | 0.46 | 944 | 0.58 | 1020 | 0.71 |
| 1300 | 674 | 0.28 | 791 | 0.40 | 887 | 0.52 | 970 | 0.65 | 1045 | 0.78 |
| 1400 | 706 | 0.33 | 820 | 0.45 | 914 | 0.59 | 997 | 0.72 | 1071 | 0.86 |
| 1500 | 738 | 0.38 | 849 | 0.52 | 942 | 0.66 | 1024 | 0.80 | 1097 | 0.95 |
| 1600 | 771 | 0.44 | 879 | 0.59 | 971 | 0.74 | 1051 | 0.89 | 1124 | 1.04 |
| 1700 | 804 | 0.51 | 910 | 0.66 | 1000 | 0.82 | 1079 | 0.98 | 1151 | 1.14 |
| 1800 | 837 | 0.59 | 941 | 0.75 | 1029 | 0.91 | 1107 | 1.08 | – | – |
| 1900 | 871 | 0.67 | 972 | 0.84 | 1059 | 1.02 | 1136 | 1.19 | – | – |
| 2000 | 906 | 0.76 | 1004 | 0.94 | 1089 | 1.12 | – | – | – | – |

| 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 |
| | Medium Static Option | | | | Field–Supplied Drive[1] | | | | | |
| 1200 | 1089 | 0.84 | 1153 | 0.98 | **1212** | **1.12** | – | – | – | – |
| 1300 | 1114 | 0.92 | **1177** | **1.06** | – | – | – | – | – | – |
| 1400 | 1139 | 1.01 | **1202** | **1.15** | – | – | – | – | – | – |
| 1500 | **1164** | **1.10** | – | – | – | – | – | – | – | – |
| 1600 | **1190** | **1.20** | – | – | – | – | – | – | – | – |
| 1700 | – | – | – | – | – | – | – | – | – | – |
| 1800 | – | – | – | – | – | – | – | – | – | – |
| 1900 | – | – | – | – | – | – | – | – | – | – |
| 2000 | – | – | – | – | – | – | – | – | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied motor pulley (part number KR11HY161) and belt (part number KR30AE035).

## Table 18 – 558J*05 1 PHASE 4 TON VERTICAL SUPPLY

| 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 |
| | Standard Static Option | | | | Medium Static Option | | | | | |
| 1200 | 666 | 0.25 | 778 | 0.36 | 873 | 0.48 | 956 | 0.60 | 1031 | 0.72 |
| 1300 | 701 | 0.30 | 809 | 0.42 | 902 | 0.54 | 983 | 0.67 | 1057 | 0.80 |
| 1400 | 737 | 0.36 | 842 | 0.48 | 932 | 0.61 | 1012 | 0.75 | 1085 | 0.89 |
| 1500 | 774 | 0.42 | 875 | 0.55 | 962 | 0.69 | 1041 | 0.83 | 1112 | 0.98 |
| 1600 | 811 | 0.49 | 909 | 0.63 | 994 | 0.78 | 1071 | 0.93 | 1141 | 1.08 |
| 1700 | 849 | 0.57 | 943 | 0.72 | 1026 | 0.87 | 1101 | 1.03 | **1170** | **1.19** |
| 1800 | 887 | 0.65 | 978 | 0.81 | 1059 | 0.98 | 1133 | 1.14 | – | – |
| 1900 | 926 | 0.75 | 1014 | 0.92 | 1092 | 1.09 | – | – | – | – |
| 2000 | 965 | 0.86 | 1050 | 1.03 | – | – | – | – | – | – |

| 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 |
| | Medium Static Option | | Field–Supplied Drive[1] | | | | | | | |
| 1200 | 1100 | 0.85 | **1165** | **0.98** | **1225** | **1.12** | – | – | – | – |
| 1300 | 1126 | 0.94 | **1189** | **1.07** | – | – | – | – | – | – |
| 1400 | 1152 | 1.03 | **1215** | **1.17** | – | – | – | – | – | – |
| 1500 | **1179** | **1.13** | – | – | – | – | – | – | – | – |
| 1600 | **1206** | **1.24** | – | – | – | – | – | – | – | – |
| 1700 | **1235** | **1.36** | – | – | – | – | – | – | – | – |
| 1800 | **1264** | **1.48** | – | – | – | – | – | – | – | – |
| 1900 | **1293** | **1.62** | – | – | – | – | – | – | – | – |
| 2000 | **1324** | **1.77** | – | – | – | – | – | – | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied motor pulley (part number KR11HY161) and belt (part number KR30AE035).

# FAN PERFORMANCE (cont.)

## Table 19 – 558J*05 3 PHASE 4 TON HORIZONTAL SUPPLY

| 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 |
| | Standard Static Option | | | | Medium Static Option | | | | | |
| 1200 | 643 | 0.23 | 762 | 0.35 | 860 | 0.46 | 944 | 0.58 | 1020 | 0.71 |
| 1300 | 674 | 0.28 | 791 | 0.40 | 887 | 0.52 | 970 | 0.65 | 1045 | 0.78 |
| 1400 | 706 | 0.33 | 820 | 0.45 | 914 | 0.59 | 997 | 0.72 | 1071 | 0.86 |
| 1500 | 738 | 0.38 | 849 | 0.52 | 942 | 0.66 | 1024 | 0.80 | 1097 | 0.95 |
| 1600 | 771 | 0.44 | 879 | 0.59 | 971 | 0.74 | 1051 | 0.89 | 1124 | 1.04 |
| 1700 | 804 | 0.51 | 910 | 0.66 | 1000 | 0.82 | 1079 | 0.98 | 1151 | 1.14 |
| 1800 | 837 | 0.59 | 941 | 0.75 | 1029 | 0.91 | 1107 | 1.08 | 1178 | 1.25 |
| 1900 | 871 | 0.67 | 972 | 0.84 | 1059 | 1.02 | 1136 | 1.19 | 1206 | 1.37 |
| 2000 | 906 | 0.76 | 1004 | 0.94 | 1089 | 1.12 | 1165 | 1.31 | 1234 | 1.49 |

| 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 |
| | Medium Static Option | | | | High Static Option | | | | | |
| 1200 | 1089 | 0.84 | 1153 | 0.98 | 1212 | 1.12 | 1269 | 1.26 | 1322 | 1.41 |
| 1300 | 1114 | 0.92 | 1177 | 1.06 | 1236 | 1.21 | 1292 | 1.36 | 1346 | 1.52 |
| 1400 | 1139 | 1.01 | 1202 | 1.15 | 1261 | 1.31 | 1316 | 1.47 | 1369 | 1.63 |
| 1500 | 1164 | 1.10 | 1227 | 1.25 | 1285 | 1.41 | 1341 | 1.58 | 1394 | 1.75 |
| 1600 | 1190 | 1.20 | 1252 | 1.36 | 1311 | 1.53 | 1366 | 1.70 | 1418 | 1.87 |
| 1700 | 1217 | 1.31 | 1278 | 1.48 | 1336 | 1.65 | 1391 | 1.83 | 1443 | 2.01 |
| 1800 | 1244 | 1.42 | 1305 | 1.60 | 1362 | 1.78 | 1416 | 1.97 | 1468 | 2.15 |
| 1900 | 1271 | 1.55 | 1331 | 1.73 | 1388 | 1.92 | 1442 | 2.11 | **1494** | **2.31** |
| 2000 | 1298 | 1.68 | 1358 | 1.87 | 1415 | 2.07 | 1468 | 2.27 | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied fan pulley (part no. KR11AZ506), motor pulley (part no. KR11HY181 and belt (part no. KR30AE041).

## Table 20 – 558J*05 3 PHASE 4 TON VERTICAL SUPPLY

| 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 |
| | Standard Static Option | | | | Medium Static Option | | | | | |
| 1200 | 666 | 0.25 | 778 | 0.36 | 873 | 0.48 | 956 | 0.60 | 1031 | 0.72 |
| 1300 | 701 | 0.30 | 809 | 0.42 | 902 | 0.54 | 983 | 0.67 | 1057 | 0.80 |
| 1400 | 737 | 0.36 | 842 | 0.48 | 932 | 0.61 | 1012 | 0.75 | 1085 | 0.89 |
| 1500 | 774 | 0.42 | 875 | 0.55 | 962 | 0.69 | 1041 | 0.83 | 1112 | 0.98 |
| 1600 | 811 | 0.49 | 909 | 0.63 | 994 | 0.78 | 1071 | 0.93 | 1141 | 1.08 |
| 1700 | 849 | 0.57 | 943 | 0.72 | 1026 | 0.87 | 1101 | 1.03 | 1170 | 1.19 |
| 1800 | 887 | 0.65 | 978 | 0.81 | 1059 | 0.98 | 1133 | 1.14 | 1200 | 1.31 |
| 1900 | 926 | 0.75 | 1014 | 0.92 | 1092 | 1.09 | 1164 | 1.26 | 1231 | 1.44 |
| 2000 | 965 | 0.86 | 1050 | 1.03 | 1127 | 1.21 | 1197 | 1.39 | 1262 | 1.58 |

| 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 |
| | Medium Static Option | | High Static Option | | | | | | | |
| 1200 | 1100 | 0.85 | 1165 | 0.98 | 1225 | 1.12 | 1282 | 1.26 | 1337 | 1.40 |
| 1300 | 1126 | 0.94 | 1189 | 1.07 | 1249 | 1.22 | 1306 | 1.36 | 1360 | 1.51 |
| 1400 | 1152 | 1.03 | 1215 | 1.17 | 1274 | 1.32 | 1330 | 1.48 | 1384 | 1.63 |
| 1500 | 1179 | 1.13 | 1241 | 1.28 | 1300 | 1.44 | 1355 | 1.60 | 1408 | 1.76 |
| 1600 | 1206 | 1.24 | 1268 | 1.40 | 1326 | 1.56 | 1381 | 1.73 | 1433 | 1.90 |
| 1700 | 1235 | 1.36 | 1295 | 1.52 | 1352 | 1.69 | 1407 | 1.87 | 1459 | 2.04 |
| 1800 | 1264 | 1.48 | 1323 | 1.66 | 1380 | 1.84 | 1434 | 2.02 | **1485** | **2.20** |
| 1900 | 1293 | 1.62 | 1352 | 1.80 | 1408 | 1.99 | 1461 | 2.17 | **1512** | **2.37** |
| 2000 | 1324 | 1.77 | 1381 | 1.96 | 1436 | 2.15 | **1489** | **2.34** | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied fan pulley (part no. KR11AZ506), motor pulley (part no. KR11HY181 and belt (part no. KR30AE041).

# FAN PERFORMANCE (cont.)

## Table 21 – 558J*06 1 PHASE 5 TON HORIZONTAL SUPPLY

| 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 |
| | Field–Supplied Drive[1] | | Standard Static Option | | | | | | | |
| 1500 | **724** | **0.33** | 837 | 0.45 | 937 | 0.59 | 1028 | 0.74 | 1111 | 0.91 |
| 1625 | **765** | **0.40** | 873 | 0.53 | 969 | 0.67 | 1056 | 0.83 | 1137 | 1.00 |
| 1750 | 806 | 0.48 | 909 | 0.61 | 1002 | 0.76 | 1087 | 0.92 | 1165 | 1.10 |
| 1875 | 849 | 0.57 | 947 | 0.71 | 1036 | 0.86 | 1118 | 1.03 | 1195 | 1.21 |
| 2000 | 892 | 0.67 | 986 | 0.82 | 1072 | 0.98 | 1151 | 1.15 | 1226 | 1.33 |
| 2125 | 935 | 0.79 | 1025 | 0.94 | 1108 | 1.11 | 1185 | 1.29 | 1258 | 1.47 |
| 2250 | 980 | 0.92 | 1066 | 1.08 | 1146 | 1.25 | 1220 | 1.43 | – | – |
| 2375 | 1024 | 1.06 | 1107 | 1.23 | 1184 | 1.41 | – | – | – | – |
| 2500 | 1069 | 1.22 | 1149 | 1.39 | – | – | – | – | – | – |

| 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 |
| | Medium Static Option | | | | | | | | | |
| 1500 | 1188 | 1.09 | 1261 | 1.29 | 1330 | 1.49 | – | – | – | – |
| 1625 | 1213 | 1.18 | 1284 | 1.38 | – | – | – | – | – | – |
| 1750 | 1239 | 1.28 | 1309 | 1.49 | – | – | – | – | – | – |
| 1875 | 1267 | 1.40 | – | – | – | – | – | – | – | – |
| 2000 | – | – | – | – | – | – | – | – | – | – |
| 2125 | – | – | – | – | – | – | – | – | – | – |
| 2250 | – | – | – | – | – | – | – | – | – | – |
| 2375 | – | – | – | – | – | – | – | – | – | – |
| 2500 | – | – | – | – | – | – | – | – | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied motor pulley (part number KR11HY171) and belt (part number KR30AE039).

## Table 22 – 558J*06 1 PHASE 5 TON VERTICAL SUPPLY

| 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 |
| | Standard Static Option | | | | | | | | | |
| 1500 | 790 | 0.40 | 897 | 0.53 | 991 | 0.68 | 1075 | 0.83 | 1152 | 1.00 |
| 1625 | 837 | 0.48 | 940 | 0.62 | 1030 | 0.77 | 1112 | 0.94 | 1187 | 1.11 |
| 1750 | 885 | 0.58 | 983 | 0.73 | 1070 | 0.89 | 1150 | 1.06 | 1223 | 1.24 |
| 1875 | 934 | 0.69 | 1027 | 0.85 | 1112 | 1.01 | 1189 | 1.19 | 1260 | 1.38 |
| 2000 | 983 | 0.81 | 1073 | 0.98 | 1154 | 1.16 | 1229 | 1.34 | – | – |
| 2125 | 1033 | 0.95 | 1119 | 1.13 | 1198 | 1.31 | 1270 | 1.50 | – | – |
| 2250 | 1084 | 1.11 | 1166 | 1.29 | 1242 | 1.49 | – | – | – | – |
| 2375 | 1134 | 1.28 | 1214 | 1.48 | – | – | – | – | – | – |
| 2500 | 1185 | 1.48 | – | – | – | – | – | – | – | – |

| 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 |
| | Medium Static Option | | | | | | | | | |
| 1500 | 1224 | 1.18 | 1291 | 1.36 | – | – | – | – | – | – |
| 1625 | 1257 | 1.30 | 1323 | 1.49 | – | – | – | – | – | – |
| 1750 | 1292 | 1.43 | – | – | – | – | – | – | – | – |
| 1875 | – | – | – | – | – | – | – | – | – | – |
| 2000 | – | – | – | – | – | – | – | – | – | – |
| 2125 | – | – | – | – | – | – | – | – | – | – |
| 2250 | – | – | – | – | – | – | – | – | – | – |
| 2375 | – | – | – | – | – | – | – | – | – | – |
| 2500 | – | – | – | – | – | – | – | – | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied motor pulley (part number KR11HY171) and belt (part number KR30AE039).

# FAN PERFORMANCE (cont.)

## Table 23 – 558J*06 3 PHASE 5 TON HORIZONTAL SUPPLY

| 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 |
| | Field–Supplied Drive[1] | | Standard Static Option | | | | | | | |
| 1500 | **724** | **0.33** | 837 | 0.45 | 937 | 0.59 | 1028 | 0.74 | 1111 | 0.91 |
| 1625 | **765** | **0.40** | 873 | 0.53 | 969 | 0.67 | 1056 | 0.83 | 1137 | 1.00 |
| 1750 | 806 | 0.48 | 909 | 0.61 | 1002 | 0.76 | 1087 | 0.92 | 1165 | 1.10 |
| 1875 | 849 | 0.57 | 947 | 0.71 | 1036 | 0.86 | 1118 | 1.03 | 1195 | 1.21 |
| 2000 | 892 | 0.67 | 986 | 0.82 | 1072 | 0.98 | 1151 | 1.15 | 1226 | 1.33 |
| 2125 | 935 | 0.79 | 1025 | 0.94 | 1108 | 1.11 | 1185 | 1.29 | 1258 | 1.47 |
| 2250 | 980 | 0.92 | 1066 | 1.08 | 1146 | 1.25 | 1220 | 1.43 | 1291 | 1.63 |
| 2375 | 1024 | 1.06 | 1107 | 1.23 | 1184 | 1.41 | 1256 | 1.60 | 1325 | 1.79 |
| 2500 | 1069 | 1.22 | 1149 | 1.39 | 1223 | 1.58 | 1293 | 1.77 | 1360 | 1.98 |

| 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 |
| | Medium Static Option | | | | | | | | | |
| 1500 | 1188 | 1.09 | 1261 | 1.29 | 1330 | 1.49 | 1395 | 1.71 | 1457 | 1.95 |
| 1625 | 1213 | 1.18 | 1284 | 1.38 | 1352 | 1.59 | 1416 | 1.81 | 1478 | 2.04 |
| 1750 | 1239 | 1.28 | 1309 | 1.49 | 1375 | 1.70 | 1439 | 1.92 | 1499 | 2.16 |
| 1875 | 1267 | 1.40 | 1335 | 1.60 | 1400 | 1.82 | 1462 | 2.04 | 1522 | 2.28 |
| 2000 | 1296 | 1.53 | 1363 | 1.74 | 1427 | 1.95 | 1488 | 2.18 | 1546 | 2.42 |
| 2125 | 1326 | 1.67 | 1392 | 1.88 | 1454 | 2.11 | 1514 | 2.34 | 1571 | 2.58 |
| 2250 | 1358 | 1.83 | 1421 | 2.05 | 1483 | 2.27 | 1541 | 2.51 | 1598 | 2.75 |
| 2375 | 1390 | 2.00 | 1452 | 2.22 | 1512 | 2.45 | 1570 | 2.69 | 1625 | 2.94 |
| 2500 | 1424 | 2.19 | 1484 | 2.42 | 1543 | 2.65 | 1599 | 2.89 | 1654 | 3.15 |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied motor pulley (part number KR11HY191) and belt (part number KR30AE042).

## Table 24 – 558J*06 3 PHASE 5 TON VERTICAL SUPPLY

| 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 |
| | Standard Static Option | | | | | | | | | |
| 1500 | 790 | 0.40 | 897 | 0.53 | 991 | 0.68 | 1075 | 0.83 | 1152 | 1.00 |
| 1625 | 837 | 0.48 | 940 | 0.62 | 1030 | 0.77 | 1112 | 0.94 | 1187 | 1.11 |
| 1750 | 885 | 0.58 | 983 | 0.73 | 1070 | 0.89 | 1150 | 1.06 | 1223 | 1.24 |
| 1875 | 934 | 0.69 | 1027 | 0.85 | 1112 | 1.01 | 1189 | 1.19 | 1260 | 1.38 |
| 2000 | 983 | 0.81 | 1073 | 0.98 | 1154 | 1.16 | 1229 | 1.34 | 1299 | 1.53 |
| 2125 | 1033 | 0.95 | 1119 | 1.13 | 1198 | 1.31 | 1270 | 1.50 | 1338 | 1.71 |
| 2250 | 1084 | 1.11 | 1166 | 1.29 | 1242 | 1.49 | 1312 | 1.69 | 1379 | 1.89 |
| 2375 | 1134 | 1.28 | 1214 | 1.48 | 1287 | 1.68 | 1355 | 1.89 | 1420 | 2.10 |
| 2500 | 1185 | 1.48 | 1262 | 1.68 | 1333 | 1.89 | 1399 | 2.10 | 1462 | 2.33 |

| 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 |
| | Medium Static Option | | | | | | | | | |
| 1500 | 1224 | 1.18 | 1291 | 1.36 | 1354 | 1.56 | 1414 | 1.77 | 1472 | 1.98 |
| 1625 | 1257 | 1.30 | 1323 | 1.49 | 1385 | 1.69 | 1445 | 1.90 | 1501 | 2.12 |
| 1750 | 1292 | 1.43 | 1356 | 1.63 | 1418 | 1.83 | 1476 | 2.05 | 1532 | 2.27 |
| 1875 | 1327 | 1.57 | 1391 | 1.78 | 1451 | 1.99 | 1509 | 2.21 | 1564 | 2.44 |
| 2000 | 1364 | 1.74 | 1427 | 1.95 | 1486 | 2.17 | 1542 | 2.39 | 1596 | 2.63 |
| 2125 | 1402 | 1.92 | 1463 | 2.13 | 1521 | 2.36 | 1577 | 2.59 | 1630 | 2.83 |
| 2250 | 1441 | 2.11 | 1501 | 2.34 | 1558 | 2.57 | 1612 | 2.81 | – | – |
| 2375 | 1481 | 2.33 | 1539 | 2.56 | 1595 | 2.80 | – | – | – | – |
| 2500 | 1522 | 2.56 | 1579 | 2.80 | – | – | – | – | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied motor pulley (part number KR11HY191) and belt (part number KR30AE042).

# FAN PERFORMANCE (cont.)

## Table 25 – 558J*07 3 PHASE 6 TON HORIZONTAL SUPPLY

| 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 |
| | Field–Supplied Drive[1] | | Standard Static Option | | | | | | | |
| 1800 | 822 | 0.51 | 927 | 0.66 | 1018 | 0.82 | 1100 | 0.98 | 1174 | 1.15 |
| 1950 | 872 | 0.62 | 973 | 0.79 | 1061 | 0.95 | 1140 | 1.13 | 1213 | 1.31 |
| 2100 | 923 | 0.75 | 1019 | 0.92 | 1104 | 1.10 | 1182 | 1.29 | 1253 | 1.48 |
| 2250 | 974 | 0.90 | 1067 | 1.08 | 1149 | 1.27 | 1224 | 1.46 | 1294 | 1.66 |
| 2400 | 1026 | 1.06 | 1115 | 1.26 | 1195 | 1.46 | 1268 | 1.66 | 1336 | 1.87 |
| 2550 | 1079 | 1.25 | 1164 | 1.46 | 1241 | 1.67 | 1312 | 1.88 | 1379 | 2.10 |
| 2700 | 1132 | 1.46 | 1214 | 1.67 | 1289 | 1.90 | 1358 | 2.12 | 1422 | 2.35 |
| 2850 | 1186 | 1.69 | 1264 | 1.92 | 1336 | 2.15 | 1404 | 2.39 | 1467 | 2.63 |
| 3000 | 1240 | 1.94 | 1315 | 2.18 | 1385 | 2.43 | 1451 | 2.68 | 1512 | 2.93 |

| 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 |
| | Medium Static Option | | | | | | | | | |
| 1800 | 1244 | 1.33 | 1308 | 1.51 | 1369 | 1.70 | 1427 | 1.90 | 1483 | 2.10 |
| 1950 | 1281 | 1.49 | 1345 | 1.68 | 1405 | 1.88 | 1462 | 2.09 | 1517 | 2.30 |
| 2100 | 1320 | 1.67 | 1382 | 1.87 | 1441 | 2.08 | 1498 | 2.29 | 1552 | 2.51 |
| 2250 | 1359 | 1.87 | 1420 | 2.08 | 1479 | 2.29 | 1534 | 2.51 | 1587 | 2.74 |
| 2400 | 1400 | 2.09 | 1460 | 2.31 | 1517 | 2.53 | 1572 | 2.76 | 1624 | 2.99 |
| 2550 | 1441 | 2.33 | 1500 | 2.55 | 1557 | 2.79 | 1610 | 3.03 | 1662 | 3.27 |
| 2700 | 1483 | 2.59 | 1541 | 2.83 | 1597 | 3.07 | 1650 | 3.32 | 1701 | 3.57 |
| 2850 | 1527 | 2.87 | 1583 | 3.12 | 1638 | 3.37 | 1690 | 3.63 | – | – |
| 3000 | 1571 | 3.18 | 1626 | 3.44 | 1680 | 3.70 | – | – | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied fan pulley (part no. KR11AZ002), motor pulley (part no. KR11HY191) and belt (part no. KR30AE042).

## Table 26 – 558J*07 3 PHASE 6 TON VERTICAL SUPPLY

| 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 |
| | Field–Supplied Drive[1] | | Standard Static Option | | | | | | Medium Static Option | |
| 1800 | **907** | **0.63** | 1006 | 0.80 | 1092 | 0.97 | 1169 | 1.14 | 1239 | 1.32 |
| 1950 | 965 | 0.77 | 1060 | 0.95 | 1143 | 1.13 | 1218 | 1.32 | 1287 | 1.51 |
| 2100 | 1024 | 0.93 | 1115 | 1.12 | 1195 | 1.32 | 1268 | 1.52 | 1335 | 1.72 |
| 2250 | 1083 | 1.11 | 1170 | 1.32 | 1248 | 1.53 | 1319 | 1.74 | 1385 | 1.96 |
| 2400 | 1143 | 1.32 | 1227 | 1.54 | 1302 | 1.76 | 1371 | 1.99 | 1435 | 2.22 |
| 2550 | 1203 | 1.55 | 1284 | 1.78 | 1357 | 2.02 | 1424 | 2.26 | 1487 | 2.50 |
| 2700 | 1264 | 1.81 | 1342 | 2.06 | 1412 | 2.31 | 1478 | 2.56 | 1539 | 2.82 |
| 2850 | 1326 | 2.09 | 1400 | 2.36 | 1469 | 2.62 | 1532 | 2.89 | 1592 | 3.16 |
| 3000 | 1387 | 2.41 | 1459 | 2.69 | 1525 | 2.97 | 1587 | 3.25 | 1646 | 3.53 |

| 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 |
| | Medium Static Option | | | | | | | | High Static Option | |
| 1800 | 1304 | 1.51 | 1365 | 1.69 | 1422 | 1.88 | 1477 | 2.08 | 1528 | 2.28 |
| 1950 | 1350 | 1.71 | 1410 | 1.91 | 1467 | 2.11 | 1520 | 2.31 | 1572 | 2.52 |
| 2100 | 1398 | 1.93 | 1457 | 2.14 | 1512 | 2.35 | 1565 | 2.57 | 1616 | 2.79 |
| 2250 | 1446 | 2.18 | 1504 | 2.40 | 1559 | 2.62 | 1611 | 2.85 | 1661 | 3.09 |
| 2400 | 1496 | 2.45 | 1552 | 2.68 | 1606 | 2.92 | 1658 | 3.16 | 1707 | 3.40 |
| 2550 | 1546 | 2.75 | 1601 | 2.99 | 1654 | 3.24 | 1705 | 3.50 | – | – |
| 2700 | 1597 | 3.07 | 1651 | 3.33 | 1703 | 3.59 | – | – | – | – |
| 2850 | 1648 | 3.43 | 1702 | 3.70 | – | – | – | – | – | – |
| 3000 | – | – | – | – | – | – | – | – | – | – |

**NOTE**: For more information, see General Fan Performance Notes on page 23.
**Boldface** indicates field–supplied drive is required.
1. Recommend using field–supplied fan pulley (part no. KR11AZ002), motor pulley (part no. KR11HY191) and belt (part no. KR30AE042).

# FAN PERFORMANCE (cont.)

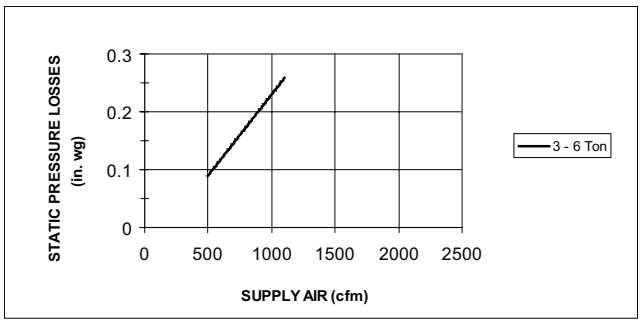
## Table 27 – PULLEY ADJUSTMENT

| UNIT | | MOTOR/DRIVE COMBO | MOTOR PULLEY TURNS OPEN | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 |
| 04 | 1 phase | Standard Static | 854 | 825 | 795 | 766 | 736 | 707 | 678 | 648 | 619 | 589 | 560 |
| | | Medium Static | 1175 | 1135 | 1094 | 1054 | 1013 | 973 | 932 | 892 | 851 | 811 | 770 |
| | | High Static | – | – | – | – | – | – | – | – | – | – | – |
| | 3 phase | Standard Static | 854 | 825 | 795 | 766 | 736 | 707 | 678 | 648 | 619 | 589 | 560 |
| | | Medium Static | 1175 | 1135 | 1094 | 1054 | 1013 | 973 | 932 | 892 | 851 | 811 | 770 |
| | | High Static | 1466 | 1423 | 1380 | 1337 | 1294 | 1251 | 1207 | 1164 | 1121 | 1078 | 1035 |
| 05 | 1 phase | Standard Static | 854 | 825 | 795 | 766 | 736 | 707 | 678 | 648 | 619 | 589 | 560 |
| | | Medium Static | 1175 | 1135 | 1094 | 1054 | 1013 | 973 | 932 | 892 | 851 | 811 | 770 |
| | | High Static | – | – | – | – | – | – | – | – | – | – | – |
| | 3 phase | Standard Static | 854 | 825 | 795 | 766 | 736 | 707 | 678 | 648 | 619 | 589 | 560 |
| | | Medium Static | 1175 | 1135 | 1094 | 1054 | 1013 | 973 | 932 | 892 | 851 | 811 | 770 |
| | | High Static | 1466 | 1423 | 1380 | 1337 | 1294 | 1251 | 1207 | 1164 | 1121 | 1078 | 1035 |
| 06 | 1 phase | Standard Static | 1175 | 1135 | 1094 | 1054 | 1013 | 973 | 932 | 892 | 851 | 811 | 770 |
| | | Medium Static | 1466 | 1423 | 1380 | 1337 | 1294 | 1251 | 1207 | 1164 | 1121 | 1078 | 1035 |
| | | High Static | – | – | – | – | – | – | – | – | – | – | – |
| | 3 phase | Standard Static | 1175 | 1135 | 1094 | 1054 | 1013 | 973 | 932 | 892 | 851 | 811 | 770 |
| | | Medium Static | 1466 | 1423 | 1380 | 1337 | 1294 | 1251 | 1207 | 1164 | 1121 | 1078 | 1035 |
| | | High Static | 1687 | 1649 | 1610 | 1572 | 1533 | 1495 | 1457 | 1418 | 1380 | 1341 | 1303 |
| 07 | 3 phase | Standard Static | 1457 | 1419 | 1380 | 1342 | 1303 | 1265 | 1227 | 1188 | 1150 | 1111 | 1073 |
| | | Medium Static | 1518 | 1484 | 1449 | 1415 | 1380 | 1346 | 1311 | 1277 | 1242 | 1208 | 1173 |
| | | High Static | 1788 | 1757 | 1725 | 1694 | 1662 | 1631 | 1600 | 1568 | 1537 | 1505 | 1474 |

**NOTE**: Do not adjust pulley further than 5 turns open.

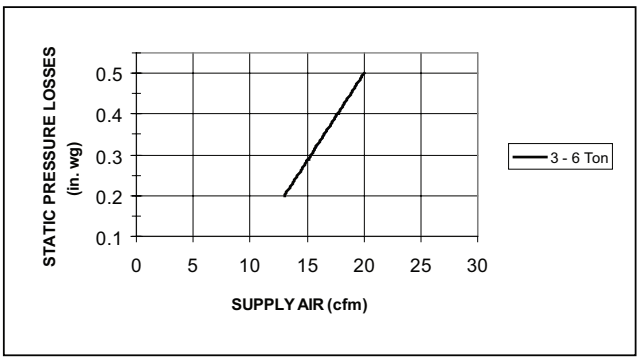
– Factory settings

# ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE



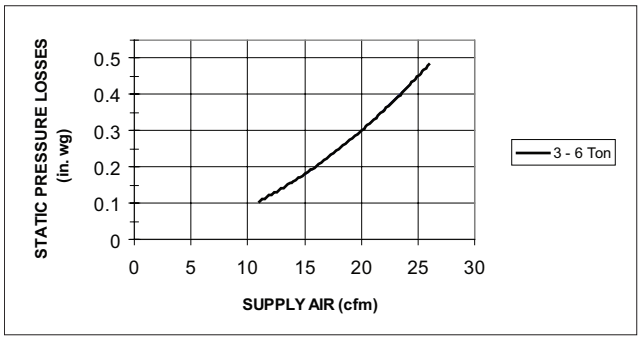

C08006

**Fig. 5 - Barometric Relief Flow Capacity**



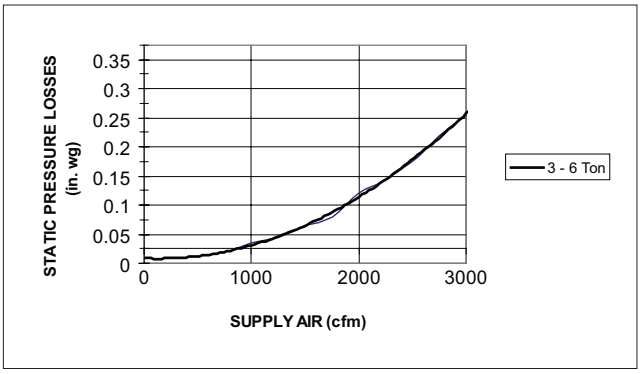

C08010

**Fig. 9 - Outdoor Air Damper Leakage**



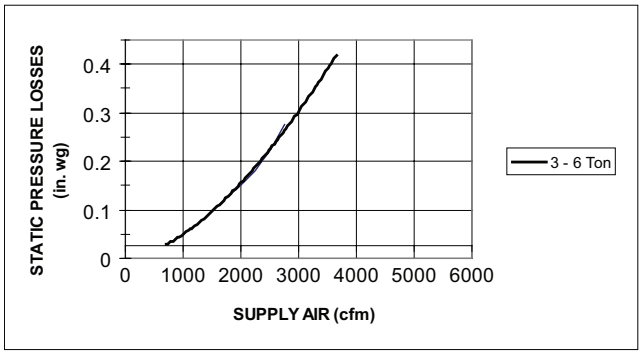

C08007

**Fig. 6 - Outdoor Air Damper Leakage**



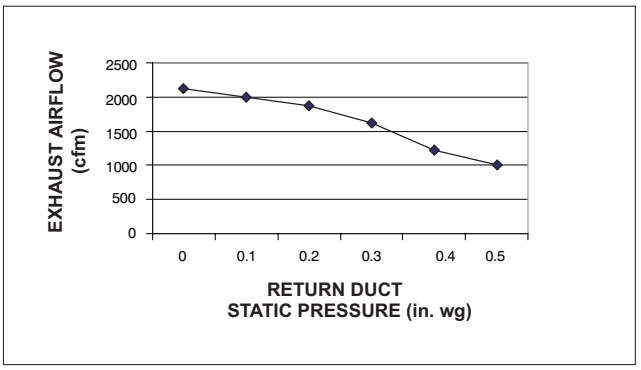

C08011

**Fig. 10 - Return Air Pressure Drop**



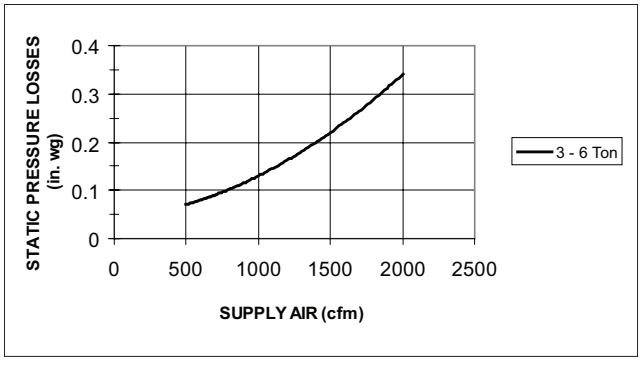

C08008

**Fig. 7 - Return Air Pressure Drop**



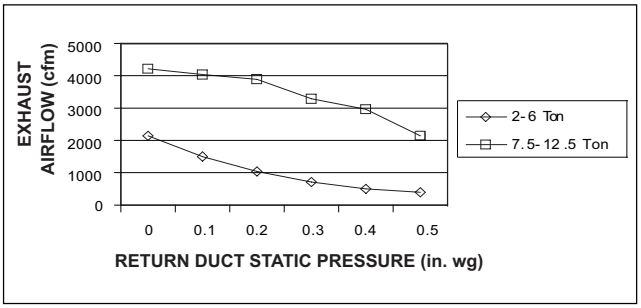

C08012

**Fig. 11 - Power Exhaust Performance**




C08009

**Fig. 8 - Barometric Relief Flow Capacity**




C08013

**Fig. 12 - Power Exhaust Performance**

# ELECTRICAL INFORMATION



**Table 28 – 558J*04** **3 TONS**

| V–Ph–Hz | VOLTAGE RANGE | | COMP (ea) | | OFM (ea) | | IFM | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | MAX | RLA | LRA | WATTS | FLA | TYPE | Max WATTS | Max AMP Draw | EFF at Full Load | FLA |
| 208–1–60 | 187 | 253 | 16.6 | 79 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1000 | 5.1 | 70% | 4.9 |
| 230–1–60 | 187 | 253 | 16.6 | 79 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1000 | 5.1 | 70% | 4.9 |
| 208–3–60 | 187 | 253 | 10.4 | 73 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | High Static | 2120 | 5.5 | 80% | 5.2 |
| 230–3–60 | 187 | 253 | 10.4 | 73 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | High Static | 2120 | 5.5 | 80% | 5.2 |
| 460–3–60 | 414 | 506 | 5.8 | 38 | 325 | 0.8 | Std Static | 1000 | 2.2 | 70% | 2.1 |
| | | | | | | | Med Static | 2120 | 2.7 | 80% | 2.6 |
| | | | | | | | High Static | 2120 | 2.7 | 80% | 2.6 |
| 575–3–60 | 518 | 633 | 3.8 | 37 | 325 | 0.6 | Std Static | 1000 | 2.0 | 71% | 1.9 |
| | | | | | | | Med Static | 2120 | 2.1 | 80% | 2.0 |
| | | | | | | | High Static | 2120 | 2.1 | 80% | 2.0 |

**Table 29 – 558J*05** **4 TONS**

| V–Ph–Hz | VOLTAGE RANGE | | COMP (ea) | | OFM (ea) | | IFM | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | MAX | RLA | LRA | WATTS | FLA | TYPE | Max WATTS | Max AMP Draw | EFF at Full Load | FLA |
| 208–1–60 | 187 | 253 | 21.8 | 117 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1850 | 7.4 | 78% | 7.0 |
| 230–1–60 | 187 | 253 | 21.8 | 117 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1850 | 7.4 | 78% | 7.0 |
| 208–3–60 | 187 | 253 | 13.7 | 83 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | High Static | 2120 | 5.5 | 80% | 5.2 |
| 230–3–60 | 187 | 253 | 13.7 | 83 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | High Static | 2120 | 5.5 | 80% | 5.2 |
| 460–3–60 | 414 | 506 | 6.2 | 41 | 325 | 0.8 | Std Static | 1000 | 2.2 | 70% | 2.1 |
| | | | | | | | Med Static | 2120 | 2.7 | 80% | 2.6 |
| | | | | | | | High Static | 2120 | 2.7 | 80% | 2.6 |
| 575–3–60 | 518 | 633 | 3.8 | 37 | 325 | 0.6 | Std Static | 1000 | 2.0 | 71% | 1.9 |
| | | | | | | | Med Static | 2120 | 2.1 | 80% | 2.0 |
| | | | | | | | High Static | 2120 | 2.1 | 80% | 2.0 |

# ELECTRICAL INFORMATION (CONT)

**Table 30 – 558J*06** **5 TONS**

| V–PH–HZ | VOLTAGE RANGE | | COMP (ea) | | OFM (ea) | | IFM | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | MAX | RLA | LRA | WATTS | FLA | TYPE | Max WATTS | Max AMP Draw | EFF at Full Load | FLA |
| 208–1–60 | 187 | 253 | 26.2 | 134 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1850 | 7.4 | 78% | 7.0 |
| 230–1–60 | 187 | 253 | 26.2 | 134 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 1850 | 7.4 | 78% | 7.0 |
| 208–3–60 | 187 | 253 | 15.6 | 110 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 2120 | 5.5 | 80% | 5.2 |
| | | | | | | | High Static | 2615 | 7.9 | 81% | 7.5 |
| 230–3–60 | 187 | 253 | 15.6 | 110 | 325 | 1.5 | Std Static | 1000 | 5.1 | 70% | 4.9 |
| | | | | | | | Med Static | 2120 | 5.5 | 80% | 5.2 |
| | | | | | | | High Static | 2615 | 7.9 | 81% | 7.5 |
| 460–3–60 | 414 | 506 | 7.7 | 52 | 325 | 0.8 | Std Static | 2120 | 2.7 | 80% | 2.6 |
| | | | | | | | Med Static | 2615 | 3.6 | 81% | 3.4 |
| | | | | | | | High Static | 2615 | 3.6 | 81% | 3.4 |
| 575–3–60 | 518 | 633 | 5.8 | 39 | 325 | 0.6 | Std Static | 2120 | 2.1 | 80% | 2.0 |
| | | | | | | | Med Static | 3775 | 2.9 | 81% | 2.8 |
| | | | | | | | High Static | 3775 | 2.9 | 81% | 2.8 |

**Table 31 – 558J*07** **6 TONS**

| V–PH–HZ | VOLTAGE RANGE | | COMP (ea) | | OFM (ea) | | IFM | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | MAX | RLA | LRA | WATTS | FLA | TYPE | Max WATTS | Max AMP Draw | EFF at Full Load | FLA |
| 208–3–60 | 187 | 253 | 19.0 | 12 | 325 | 1.5 | Std Static | 2120 | 5.5 | 80% | 5.2 |
| | | | | | | | Med Static | 2615 | 7.9 | 81% | 7.5 |
| | | | | | | | High Static | 3775 | 10.7 | 81% | 10.2 |
| 230–3–60 | 187 | 253 | 19.0 | 12 | 325 | 1.5 | Std Static | 2120 | 5.5 | 80% | 5.2 |
| | | | | | | | Med Static | 2615 | 7.9 | 81% | 7.5 |
| | | | | | | | High Static | 3775 | 10.7 | 81% | 10.2 |
| 460–3–60 | 414 | 506 | 9.7 | 62 | 325 | 0.8 | Std Static | 2120 | 2.7 | 80% | 2.6 |
| | | | | | | | Med Static | 2615 | 3.6 | 81% | 3.4 |
| | | | | | | | High Static | 3775 | 5.0 | 81% | 4.8 |
| 575–3–60 | 518 | 633 | 7.4 | 50 | 325 | 0.6 | Std Static | 2120 | 2.1 | 80% | 2.0 |
| | | | | | | | Med Static | 3775 | 2.9 | 81% | 2.8 |
| | | | | | | | High Static | 3775 | 2.9 | 81% | 2.8 |

## Table 32 – MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O.

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER | | NO C.O. or UNPWRD C.O. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NO P.E. | | | | w/ P.E. (pwrd fr/unit) | | | |
| | | | kW | FLA | MCA | MOCP | DISC. SIZE | | MCA | MOCP | DISC. SIZE | |
| | | | | | | | FLA | LRA | | | FLA | LRA |
| 558J*04 | 208/230–1–60 | STD | – | – | 27.2 | 40 | 26 | 95 | 29.1 | 45 | 29 | 97 |
| | | | 3.3/4.4 | 15.9/18.3 | 27.2/29.0 | 40/40 | 26/27 | 95/95 | 29.1/31.4 | 45/45 | 29/29 | 97/97 |
| | | | 4.9/6.5 | 23.5/27.1 | 35.5/40.0 | 40/45 | 33/37 | 95/95 | 37.9/42.4 | 45/45 | 35/39 | 97/97 |
| | | | 6.5/8.7 | 31.4/36.3 | 45.4/51.5 | 50/60 | 42/47 | 95/95 | 47.8/53.9 | 50/60 | 44/50 | 97/97 |
| | | | 7.9/10.5 | 37.9/43.8 | 53.5/60.9 | 60/70 | 49/56 | 95/95 | 55.9/63.3 | 60/70 | 51/58 | 97/97 |
| | | | 9.8/13.0 | 46.9/54.2 | 64.8/73.9 | 70/80 | 60/68 | 95/95 | 67.1/76.3 | 70/80 | 62/70 | 97/97 |
| | | MED | – | – | 27.2 | 40 | 26 | 95 | 29.1 | 45 | 29 | 97 |
| | | | 3.3/4.4 | 15.9/18.3 | 27.2/29.0 | 40/40 | 26/27 | 95/95 | 29.1/31.4 | 45/45 | 29/29 | 97/97 |
| | | | 4.9/6.5 | 23.5/27.1 | 35.5/40.0 | 40/45 | 33/37 | 95/95 | 37.9/42.4 | 45/45 | 35/39 | 97/97 |
| | | | 6.5/8.7 | 31.4/36.3 | 45.4/51.5 | 50/60 | 42/47 | 95/95 | 47.8/53.9 | 50/60 | 44/50 | 97/97 |
| | | | 7.9/10.5 | 37.9/43.8 | 53.5/60.9 | 60/70 | 49/56 | 95/95 | 55.9/63.3 | 60/70 | 51/58 | 97/97 |
| | | | 9.8/13.0 | 46.9/54.2 | 64.8/73.9 | 70/80 | 60/68 | 95/95 | 67.1/76.3 | 70/80 | 62/70 | 97/97 |
| | 208/230–3–60 | STD | – | – | 19.4 | 25 | 19 | 89 | 21.3 | 30 | 22 | 91 |
| | | | 3.3/4.4 | 9.2/10.6 | 19.4/19.4 | 25/25 | 19/19 | 89/89 | 21.3/21.8 | 30/30 | 22/22 | 91/91 |
| | | | 4.9/6.5 | 13.6/15.6 | 23.1/25.6 | 25/30 | 21/24 | 89/89 | 25.5/28.0 | 30/30 | 23/26 | 91/91 |
| | | | 6.5/8.7 | 18.1/20.9 | 28.8/32.3 | 30/35 | 26/30 | 89/89 | 31.1/34.6 | 35/35 | 29/32 | 91/91 |
| | | | 7.9/10.5 | 21.9/25.3 | 33.5/37.8 | 35/40 | 31/35 | 89/89 | 35.9/40.1 | 40/45 | 33/37 | 91/91 |
| | | | 12.0/16.0 | 33.4/38.5 | 47.9/54.3 | 50/60 | 44/50 | 89/89 | 50.3/56.6 | 60/60 | 46/52 | 91/91 |
| | | MED | – | – | 19.4 | 25 | 19 | 89 | 21.3 | 30 | 22 | 91 |
| | | | 3.3/4.4 | 9.2/10.6 | 19.4/19.4 | 25/25 | 19/19 | 89/89 | 21.3/21.8 | 30/30 | 22/22 | 91/91 |
| | | | 4.9/6.5 | 13.6/15.6 | 23.1/25.6 | 25/30 | 21/24 | 89/89 | 25.5/28.0 | 30/30 | 23/26 | 91/91 |
| | | | 6.5/8.7 | 18.1/20.9 | 28.8/32.3 | 30/35 | 26/30 | 89/89 | 31.1/34.6 | 35/35 | 29/32 | 91/91 |
| | | | 7.9/10.5 | 21.9/25.3 | 33.5/37.8 | 35/40 | 31/35 | 89/89 | 35.9/40.1 | 40/45 | 33/37 | 91/91 |
| | | | 12.0/16.0 | 33.4/38.5 | 47.9/54.3 | 50/60 | 44/50 | 89/89 | 50.3/56.6 | 60/60 | 46/52 | 91/91 |
| | | HIGH | – | – | 19.7 | 30 | 20 | 107 | 21.6 | 30 | 22 | 109 |
| | | | 3.3/4.4 | 9.2/10.6 | 19.7/19.8 | 30/30 | 20/20 | 107/107 | 21.6/22.1 | 30/30 | 22/22 | 109/109 |
| | | | 4.9/6.5 | 13.6/15.6 | 23.5/26.0 | 30/30 | 22/24 | 107/107 | 25.9/28.4 | 30/30 | 24/26 | 109/109 |
| | | | 6.5/8.7 | 18.1/20.9 | 29.1/32.6 | 30/35 | 27/30 | 107/107 | 31.5/35.0 | 35/40 | 29/32 | 109/109 |
| | | | 7.9/10.5 | 21.9/25.3 | 33.9/38.1 | 35/40 | 31/35 | 107/107 | 36.3/40.5 | 40/45 | 33/37 | 109/109 |
| | | | 12.0/16.0 | 33.4/38.5 | 48.3/54.6 | 50/60 | 44/50 | 107/107 | 50.6/57.0 | 60/60 | 47/52 | 109/109 |
| | 460–3–60 | STD | – | – | 10.2 | 15 | 10 | 46 | 11.2 | 15 | 11 | 47 |
| | | | 6.0 | 7.2 | 11.6 | 15 | 11 | 46 | 12.9 | 15 | 12 | 47 |
| | | | 8.8 | 10.6 | 15.9 | 20 | 15 | 46 | 17.1 | 20 | 16 | 47 |
| | | | 11.5 | 13.8 | 19.9 | 20 | 18 | 46 | 21.1 | 25 | 19 | 47 |
| | | | 14.0 | 16.8 | 23.6 | 25 | 22 | 46 | 24.9 | 25 | 23 | 47 |
| | | MED | – | – | 10.2 | 15 | 10 | 46 | 11.2 | 15 | 11 | 47 |
| | | | 6.0 | 7.2 | 11.6 | 15 | 11 | 46 | 12.9 | 15 | 12 | 47 |
| | | | 8.8 | 10.6 | 15.9 | 20 | 15 | 46 | 17.1 | 20 | 16 | 47 |
| | | | 11.5 | 13.8 | 19.9 | 20 | 18 | 46 | 21.1 | 25 | 19 | 47 |
| | | | 14.0 | 16.8 | 23.6 | 25 | 22 | 46 | 24.9 | 25 | 23 | 47 |
| | | HIGH | – | – | 10.7 | 15 | 11 | 55 | 11.7 | 15 | 12 | 56 |
| | | | 6.0 | 7.2 | 12.3 | 15 | 11 | 55 | 13.5 | 15 | 12 | 56 |
| | | | 8.8 | 10.6 | 16.5 | 20 | 15 | 55 | 17.8 | 20 | 16 | 56 |
| | | | 11.5 | 13.8 | 20.5 | 25 | 19 | 55 | 21.8 | 25 | 20 | 56 |
| | | | 14.0 | 16.8 | 24.3 | 25 | 22 | 55 | 25.5 | 30 | 23 | 56 |
| | 575–3–60 | STD | – | – | 7.3 | 15 | 7 | 44 | 9.2 | 15 | 9 | 46 |
| | | MED | – | – | 7.3 | 15 | 7 | 44 | 9.2 | 15 | 9 | 46 |
| | | HIGH | – | – | 7.4 | 15 | 7 | 50 | 9.3 | 15 | 10 | 52 |

**LEGEND:**

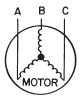
| | | |
|---|---|---|
| CO | – | Convenient outlet |
| DISC | – | Disconnect |
| FLA | – | Full load amps |
| IFM | – | Indoor fan motor |
| LRA | – | Locked rotor amps |
| MCA | – | Minimum circuit amps |
| MOCP | – | Maximum over current protection |
| PE | – | Power exhaust |
| UNPWRD CO | – | Unpowered convenient outlet |

**NOTES**:

1. In compliance with NEC requirements for multimotor 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. **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 — Maximum deviation is 4 v.

(BC) 231 – 227 = 4 v — Determine percent of voltage imbalance.

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

$$= 1.76\%$$

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.

## Table 33 – MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O.

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER | | NO C.O. or UNPWRD C.O. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NO P.E. | | | | w/ P.E. (pwrd fr/unit) | | | |
| | | | kW | FLA | MCA | MOCP | DISC. SIZE | | MCA | MOCP | DISC. SIZE | |
| | | | | | | | FLA | LRA | | | FLA | LRA |
| 558J*05 | 208/230–1–60 | STD | – | – | 33.7 | 50 | 32 | 133 | 35.6 | 50 | 35 | 135 |
| | | | 3.3/4.4 | 15.9/18.3 | 33.7/33.7 | 50/50 | 32/32 | 133/133 | 35.6/35.6 | 50/50 | 35/35 | 135/135 |
| | | | 6.5/8.7 | 31.4/36.3 | 45.4/51.5 | 50/60 | 42/47 | 133/133 | 47.8/53.9 | 50/60 | 44/50 | 135/135 |
| | | | 9.8/13.0 | 46.9/54.2 | 64.8/73.9 | 70/80 | 60/68 | 133/133 | 67.1/76.3 | 70/80 | 62/70 | 135/135 |
| | | | 13.1/17.4 | 62.8/72.5 | 84.6/96.8 | 90/100 | 78/89 | 133/133 | 87.0/99.1 | 90/100 | 80/91 | 135/135 |
| | | | 15.8/21.0 | 75.8/87.5 | 100.9/115.5 | 110/125 | 93/106 | 133/133 | 103.3/117.9 | 110/125 | 95/108 | 135/135 |
| | | MED | – | – | 33.7 | 50 | 32 | 133 | 35.6 | 50 | 35 | 135 |
| | | | 3.3/4.4 | 15.9/18.3 | 33.7/33.7 | 50/50 | 32/32 | 133/133 | 35.6/35.6 | 50/50 | 35/35 | 135/135 |
| | | | 6.5/8.7 | 31.4/36.3 | 45.4/51.5 | 50/60 | 42/47 | 133/133 | 47.8/53.9 | 50/60 | 44/50 | 135/135 |
| | | | 9.8/13.0 | 46.9/54.2 | 64.8/73.9 | 70/80 | 60/68 | 133/133 | 67.1/76.3 | 70/80 | 62/70 | 135/135 |
| | | | 13.1/17.4 | 62.8/72.5 | 84.6/96.8 | 90/100 | 78/89 | 133/133 | 87.0/99.1 | 90/100 | 80/91 | 135/135 |
| | | | 15.8/21.0 | 75.8/87.5 | 100.9/115.5 | 110/125 | 93/106 | 133/133 | 103.3/117.9 | 110/125 | 95/108 | 135/135 |
| | 208/230–3–60 | STD | – | – | 23.5 | 30 | 23 | 99 | 25.4 | 30 | 25 | 101 |
| | | | 4.9/6.5 | 13.6/15.6 | 23.5/25.6 | 30/30 | 23/24 | 99/99 | 25.5/28.0 | 30/30 | 25/26 | 101/101 |
| | | | 6.5/8.7 | 18.1/20.9 | 28.8/32.3 | 30/35 | 26/30 | 99/99 | 31.1/34.6 | 35/35 | 29/32 | 101/101 |
| | | | 12.0/16.0 | 33.4/38.5 | 47.9/54.3 | 50/60 | 44/50 | 99/99 | 50.3/56.6 | 60/60 | 46/52 | 101/101 |
| | | | 15.8/21.0 | 43.8/50.5 | 60.9/69.3 | 70/70 | 56/64 | 99/99 | 63.3/71.6 | 70/80 | 58/66 | 101/101 |
| | | MED | – | – | 23.5 | 30 | 23 | 99 | 25.4 | 30 | 25 | 101 |
| | | | 4.9/6.5 | 13.6/15.6 | 23.5/25.6 | 30/30 | 23/24 | 99/99 | 25.5/28.0 | 30/30 | 25/26 | 101/101 |
| | | | 6.5/8.7 | 18.1/20.9 | 28.8/32.3 | 30/35 | 26/30 | 99/99 | 31.1/34.6 | 35/35 | 29/32 | 101/101 |
| | | | 12.0/16.0 | 33.4/38.5 | 47.9/54.3 | 50/60 | 44/50 | 99/99 | 50.3/56.6 | 60/60 | 46/52 | 101/101 |
| | | | 15.8/21.0 | 43.8/50.5 | 60.9/69.3 | 70/70 | 56/64 | 99/99 | 63.3/71.6 | 70/80 | 58/66 | 101/101 |
| | | HIGH | – | – | 23.8 | 30 | 23 | 117 | 25.7 | 30 | 26 | 119 |
| | | | 4.9/6.5 | 13.6/15.6 | 23.8/26.0 | 30/30 | 23/24 | 117/117 | 25.9/28.4 | 30/30 | 26/26 | 119/119 |
| | | | 6.5/8.7 | 18.1/20.9 | 29.1/32.6 | 30/35 | 27/30 | 117/117 | 31.5/35.0 | 35/40 | 29/32 | 119/119 |
| | | | 12.0/16.0 | 33.4/38.5 | 48.3/54.6 | 50/60 | 44/50 | 117/117 | 50.6/57.0 | 60/60 | 47/52 | 119/119 |
| | | | 15.8/21.0 | 43.8/50.5 | 61.3/69.6 | 70/70 | 56/64 | 117/117 | 63.6/72.0 | 70/80 | 59/66 | 119/119 |
| | 460–3–60 | STD | – | – | 10.7 | 15 | 10 | 49 | 11.7 | 15 | 12 | 50 |
| | | | 6.0 | 7.2 | 11.6 | 15 | 11 | 49 | 12.9 | 15 | 12 | 50 |
| | | | 11.5 | 13.8 | 19.9 | 20 | 18 | 49 | 21.1 | 25 | 19 | 50 |
| | | | 14.0 | 16.8 | 23.6 | 25 | 22 | 49 | 24.9 | 25 | 23 | 50 |
| | | | 23.0 | 27.7 | 37.3 | 40 | 34 | 49 | 38.5 | 40 | 35 | 50 |
| | | MED | – | – | 10.7 | 15 | 10 | 49 | 11.7 | 15 | 12 | 50 |
| | | | 6.0 | 7.2 | 11.6 | 15 | 11 | 49 | 12.9 | 15 | 12 | 50 |
| | | | 11.5 | 13.8 | 19.9 | 20 | 18 | 49 | 21.1 | 25 | 19 | 50 |
| | | | 14.0 | 16.8 | 23.6 | 25 | 22 | 49 | 24.9 | 25 | 23 | 50 |
| | | | 23.0 | 27.7 | 37.3 | 40 | 34 | 49 | 38.5 | 40 | 35 | 50 |
| | | HIGH | – | – | 11.2 | 15 | 11 | 58 | 12.2 | 15 | 12 | 59 |
| | | | 6.0 | 7.2 | 12.3 | 15 | 11 | 58 | 13.5 | 15 | 12 | 59 |
| | | | 11.5 | 13.8 | 20.5 | 25 | 19 | 58 | 21.8 | 25 | 20 | 59 |
| | | | 14.0 | 16.8 | 24.3 | 25 | 22 | 58 | 25.5 | 30 | 23 | 59 |
| | | | 23.0 | 27.7 | 37.9 | 40 | 35 | 58 | 39.1 | 40 | 36 | 59 |
| | 575–3–60 | STD | – | – | 7.3 | 15 | 7 | 44 | 9.2 | 15 | 9 | 46 |
| | | MED | – | – | 7.3 | 15 | 7 | 44 | 9.2 | 15 | 9 | 46 |
| | | HIGH | – | – | 7.4 | 15 | 7 | 50 | 9.3 | 15 | 10 | 52 |

**LEGEND:**

| | | |
|---|---|---|
| CO | – | Convenient outlet |
| DISC | – | Disconnect |
| FLA | – | Full load amps |
| IFM | – | Indoor fan motor |
| LRA | – | Locked rotor amps |
| MCA | – | Minimum circuit amps |
| MOCP | – | Maximum over current protection |
| PE | – | Power exhaust |
| UNPWRD CO | – | Unpowered convenient outlet |

**NOTES**:

1. In compliance with NEC requirements for multimotor 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. **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
Maximum deviation is 4 v.
Determine percent of voltage imbalance.

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

$$= 1.76\%$$

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.

## Table 34 – MCA/MOCP DETERMINATION W/ PWRD C.O.

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER | | NO C.O. or UNPWRD C.O. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NO P.E. | | | | w/ P.E. (pwrd fr/unit) | | | |
| | | | kW | FLA | MCA | MOCP | DISC. SIZE | | MCA | MOCP | DISC. SIZE | |
| | | | | | | | FLA | LRA | | | FLA | LRA |
| 558J*06 | 208/230–1–60 | STD | – | – | 39.2 | 60 | 37 | 150 | 41.1 | 60 | 40 | 152 |
| | | | 4.9/6.5 | 23.5/27.1 | 39.2/40.0 | 60/60 | 37/37 | 150/150 | 41.1/42.4 | 60/60 | 40/40 | 152/152 |
| | | | 6.5/8.7 | 31.4/36.3 | 45.4/51.5 | 60/60 | 42/47 | 150/150 | 47.8/53.9 | 60/60 | 44/50 | 152/152 |
| | | | 9.8/13.0 | 46.9/54.2 | 64.8/73.9 | 70/80 | 60/68 | 150/150 | 67.1/76.3 | 70/80 | 62/70 | 152/152 |
| | | | 13.1/17.4 | 62.8/72.5 | 84.6/96.8 | 90/100 | 78/89 | 150/150 | 87.0/99.1 | 90/100 | 80/91 | 152/152 |
| | | | 15.8/21.0 | 75.8/87.5 | 100.9/115.5 | 110/125 | 93/106 | 150/150 | 103.3/117.9 | 110/125 | 95/108 | 152/152 |
| | | MED | – | – | 41.3 | 60 | 40 | 175 | 43.2 | 60 | 42 | 177 |
| | | | 4.9/6.5 | 23.5/27.1 | 41.3/42.6 | 60/60 | 40/40 | 175/175 | 43.2/45.0 | 60/60 | 42/42 | 177/177 |
| | | | 6.5/8.7 | 31.4/36.3 | 48.0/54.1 | 60/60 | 44/50 | 175/175 | 50.4/56.5 | 60/60 | 46/52 | 177/177 |
| | | | 9.8/13.0 | 46.9/54.2 | 67.4/76.5 | 70/80 | 62/70 | 175/175 | 69.8/78.9 | 70/80 | 64/73 | 177/177 |
| | | | 13.1/17.4 | 62.8/72.5 | 87.3/99.4 | 90/100 | 80/91 | 175/175 | 89.6/101.8 | 90/110 | 82/94 | 177/177 |
| | | | 15.8/21.0 | 75.8/87.5 | 103.5/118.1 | 110/125 | 95/109 | 175/175 | 105.9/120.5 | 110/125 | 97/111 | 177/177 |
| | 208/230–3–60 | STD | – | – | 25.9 | 30 | 25 | 126 | 27.8 | 40 | 27 | 128 |
| | | | 4.9/6.5 | 13.6/15.6 | 25.9/25.9 | 30/30 | 25/25 | 126/126 | 27.8/28.0 | 40/40 | 27/27 | 128/128 |
| | | | 7.9/10.5 | 21.9/25.3 | 33.5/37.8 | 40/40 | 31/35 | 126/126 | 35.9/40.1 | 40/45 | 33/37 | 128/128 |
| | | | 12.0/16.0 | 33.4/38.5 | 47.9/54.3 | 50/60 | 44/50 | 126/126 | 50.3/56.6 | 60/60 | 46/52 | 128/128 |
| | | | 15.8/21.0 | 43.8/50.5 | 60.9/69.3 | 70/70 | 56/64 | 126/126 | 63.3/71.6 | 70/80 | 58/66 | 128/128 |
| | | | 19.9/26.5 | 55.2/63.8 | 75.1/85.9 | 80/90 | 69/79 | 126/126 | 77.5/88.3 | 80/90 | 71/81 | 128/128 |
| | | MED | – | – | 26.2 | 40 | 26 | 144 | 28.1 | 40 | 28 | 146 |
| | | | 4.9/6.5 | 13.6/15.6 | 26.2/26.2 | 40/40 | 26/26 | 144/144 | 28.1/28.4 | 40/40 | 28/28 | 146/146 |
| | | | 7.9/10.5 | 21.9/25.3 | 33.9/38.1 | 40/40 | 31/35 | 144/144 | 36.3/40.5 | 40/45 | 33/37 | 146/146 |
| | | | 12.0/16.0 | 33.4/38.5 | 48.3/54.6 | 50/60 | 44/50 | 144/144 | 50.6/57.0 | 60/60 | 47/52 | 146/146 |
| | | | 15.8/21.0 | 43.8/50.5 | 61.3/69.6 | 70/70 | 56/64 | 144/144 | 63.6/72.0 | 70/80 | 59/66 | 146/146 |
| | | | 19.9/26.5 | 55.2/63.8 | 75.5/86.3 | 80/90 | 69/79 | 144/144 | 77.9/88.6 | 80/90 | 72/82 | 146/146 |
| | | HIGH | – | – | 28.5 | 40 | 28 | 170 | 30.4 | 45 | 30 | 172 |
| | | | 4.9/6.5 | 13.6/15.6 | 28.5/28.9 | 40/40 | 28/28 | 170/170 | 30.4/31.3 | 45/45 | 30/30 | 172/172 |
| | | | 7.9/10.5 | 21.9/25.3 | 36.8/41.0 | 40/45 | 34/38 | 170/170 | 39.1/43.4 | 45/45 | 36/40 | 172/172 |
| | | | 12.0/16.0 | 33.4/38.5 | 51.1/57.5 | 60/60 | 47/53 | 170/170 | 53.5/59.9 | 60/60 | 49/55 | 172/172 |
| | | | 15.8/21.0 | 43.8/50.5 | 64.1/72.5 | 70/80 | 59/67 | 170/170 | 66.5/74.9 | 70/80 | 61/69 | 172/172 |
| | | | 19.9/26.5 | 55.2/63.8 | 78.4/89.1 | 80/90 | 72/82 | 170/170 | 80.8/91.5 | 90/100 | 74/84 | 172/172 |
| | 460–3–60 | STD | – | – | 12.5 | 20 | 12 | 60 | 13.5 | 20 | 13 | 61 |
| | | | 6.0 | 7.2 | 12.5 | 20 | 12 | 60 | 13.5 | 20 | 13 | 61 |
| | | | 11.5 | 13.8 | 19.9 | 20 | 18 | 60 | 21.1 | 25 | 19 | 61 |
| | | | 14.0 | 16.8 | 23.6 | 25 | 22 | 60 | 24.9 | 25 | 23 | 61 |
| | | | 23.0 | 27.7 | 37.3 | 40 | 34 | 60 | 38.5 | 40 | 35 | 61 |
| | | | 25.5 | 30.7 | 41.0 | 45 | 38 | 60 | 42.3 | 45 | 39 | 61 |
| | | MED | – | – | 13.0 | 20 | 13 | 69 | 14.0 | 20 | 14 | 70 |
| | | | 6.0 | 7.2 | 13.0 | 20 | 13 | 69 | 14.0 | 20 | 14 | 70 |
| | | | 11.5 | 13.8 | 20.5 | 25 | 19 | 69 | 21.8 | 25 | 20 | 70 |
| | | | 14.0 | 16.8 | 24.3 | 25 | 22 | 69 | 25.5 | 30 | 23 | 70 |
| | | | 23.0 | 27.7 | 37.9 | 40 | 35 | 69 | 39.1 | 40 | 36 | 70 |
| | | | 25.5 | 30.7 | 41.6 | 45 | 38 | 69 | 42.9 | 45 | 39 | 70 |
| | | HIGH | – | – | 13.8 | 20 | 14 | 82 | 14.8 | 20 | 15 | 83 |
| | | | 6.0 | 7.2 | 13.8 | 20 | 14 | 82 | 14.8 | 20 | 15 | 83 |
| | | | 11.5 | 13.8 | 21.5 | 25 | 20 | 82 | 22.8 | 25 | 21 | 83 |
| | | | 14.0 | 16.8 | 25.3 | 30 | 23 | 82 | 26.5 | 30 | 24 | 83 |
| | | | 23.0 | 27.7 | 38.9 | 40 | 36 | 82 | 40.1 | 45 | 37 | 83 |
| | | | 25.5 | 30.7 | 42.6 | 45 | 39 | 82 | 43.9 | 45 | 40 | 83 |
| | 575–3–60 | STD | – | – | 9.8 | 15 | 10 | 46 | 11.7 | 15 | 12 | 48 |
| | | MED | – | – | 10.7 | 15 | 11 | 63 | 12.6 | 15 | 13 | 65 |
| | | HIGH | – | – | 10.7 | 15 | 11 | 63 | 12.6 | 15 | 13 | 65 |

**LEGEND:**

| | | |
|---|---|---|
| CO | – | Convenient outlet |
| DISC | – | Disconnect |
| FLA | – | Full load amps |
| IFM | – | Indoor fan motor |
| LRA | – | Locked rotor amps |
| MCA | – | Minimum circuit amps |
| MOCP | – | Maximum over current protection |
| PE | – | Power exhaust |
| UNPWRD CO | – | Unpowered convenient outlet |

**NOTES**:

1. In compliance with NEC requirements for multimotor 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. **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  Maximum deviation is 4 v.

(BC) 231 – 227 = 4 v  Determine percent of voltage imbalance.

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

$$= 1.76\%$$

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.

## Table 35 – MCA/MOCP DETERMINATION W/ PWRD C.O.

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER | | NO C.O. or UNPWRD C.O. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NO P.E. | | | | w/ P.E. (pwrd fr/unit) | | | |
| | | | kW | FLA | MCA | MOCP | DISC. SIZE | | MCA | MOCP | DISC. SIZE | |
| | | | | | | | FLA | LRA | | | FLA | LRA |
| 558J*07 | 208/230–3–60 | STD | – | – | 30.5 | 45 | 30 | 157 | 32.4 | 50 | 32 | 159 |
| | | | 4.9/6.5 | 13.6/15.6 | 30.5/30.5 | 45/45 | 30/30 | 157/157 | 32.4/32.4 | 50/50 | 32/32 | 159/159 |
| | | | 7.9/10.5 | 21.9/25.3 | 33.9/38.1 | 45/45 | 31/35 | 157/157 | 36.3/40.5 | 50/50 | 33/37 | 159/159 |
| | | | 12.0/16.0 | 33.4/38.5 | 48.3/54.6 | 50/60 | 44/50 | 157/157 | 50.6/57.0 | 60/60 | 47/52 | 159/159 |
| | | | 15.8/21.0 | 43.8/50.5 | 61.3/69.6 | 70/70 | 56/64 | 157/157 | 63.6/72.0 | 70/80 | 59/66 | 159/159 |
| | | | 19.9/26.5 | 55.2/63.8 | 75.5/86.3 | 80/90 | 69/79 | 157/157 | 77.9/88.6 | 80/90 | 72/82 | 159/159 |
| | | MED | – | – | 32.8 | 50 | 32 | 183 | 34.7 | 50 | 34 | 185 |
| | | | 4.9/6.5 | 13.6/15.6 | 32.8/32.8 | 50/50 | 32/32 | 183/183 | 34.7/34.7 | 50/50 | 34/34 | 185/185 |
| | | | 7.9/10.5 | 21.9/25.3 | 36.8/41.0 | 50/50 | 34/38 | 183/183 | 39.1/43.4 | 50/50 | 36/40 | 185/185 |
| | | | 12.0/16.0 | 33.4/38.5 | 51.1/57.5 | 60/60 | 47/53 | 183/183 | 53.5/59.9 | 60/60 | 49/55 | 185/185 |
| | | | 15.8/21.0 | 43.8/50.5 | 64.1/72.5 | 70/80 | 59/67 | 183/183 | 66.5/74.9 | 70/80 | 61/69 | 185/185 |
| | | | 19.9/26.5 | 55.2/63.8 | 78.4/89.1 | 80/90 | 72/82 | 183/183 | 80.8/91.5 | 90/100 | 74/84 | 185/185 |
| | | HIGH | – | – | 32.8 | 50 | 32 | 183 | 34.7 | 50 | 34 | 185 |
| | | | 4.9/6.5 | 13.6/15.6 | 32.8/32.8 | 50/50 | 32/32 | 183/183 | 34.7/34.7 | 50/50 | 34/34 | 185/185 |
| | | | 7.9/10.5 | 21.9/25.3 | 36.8/41.0 | 50/50 | 34/38 | 183/183 | 39.1/43.4 | 50/50 | 36/40 | 185/185 |
| | | | 12.0/16.0 | 33.4/38.5 | 51.1/57.5 | 60/60 | 47/53 | 183/183 | 53.5/59.9 | 60/60 | 49/55 | 185/185 |
| | | | 15.8/21.0 | 43.8/50.5 | 64.1/72.5 | 70/80 | 59/67 | 183/183 | 66.5/74.9 | 70/80 | 61/69 | 185/185 |
| | | | 19.9/26.5 | 55.2/63.8 | 78.4/89.1 | 80/90 | 72/82 | 183/183 | 80.8/91.5 | 90/100 | 74/84 | 185/185 |
| | 460–3–60 | STD | – | – | 15.5 | 25 | 15 | 79 | 16.5 | 25 | 16 | 80 |
| | | | 6.0 | 7.2 | 15.5 | 25 | 15 | 79 | 16.5 | 25 | 16 | 80 |
| | | | 11.5 | 13.8 | 20.5 | 25 | 19 | 79 | 21.8 | 25 | 20 | 80 |
| | | | 14.0 | 16.8 | 24.3 | 25 | 22 | 79 | 25.5 | 30 | 23 | 80 |
| | | | 23.0 | 27.7 | 37.9 | 40 | 35 | 79 | 39.1 | 40 | 36 | 80 |
| | | | 25.5 | 30.7 | 41.6 | 45 | 38 | 79 | 42.9 | 45 | 39 | 80 |
| | | MED | – | – | 16.3 | 25 | 16 | 92 | 17.3 | 25 | 17 | 93 |
| | | | 6.0 | 7.2 | 16.3 | 25 | 16 | 92 | 17.3 | 25 | 17 | 93 |
| | | | 11.5 | 13.8 | 21.5 | 25 | 20 | 92 | 22.8 | 25 | 21 | 93 |
| | | | 14.0 | 16.8 | 25.3 | 30 | 23 | 92 | 26.5 | 30 | 24 | 93 |
| | | | 23.0 | 27.7 | 38.9 | 40 | 36 | 92 | 40.1 | 45 | 37 | 93 |
| | | | 25.5 | 30.7 | 42.6 | 45 | 39 | 92 | 43.9 | 45 | 40 | 93 |
| | | HIGH | – | – | 17.3 | 25 | 17 | 101 | 18.3 | 25 | 18 | 102 |
| | | | 6.0 | 7.2 | 17.3 | 25 | 17 | 101 | 18.3 | 25 | 18 | 102 |
| | | | 11.5 | 13.8 | 22.8 | 25 | 21 | 101 | 24.0 | 25 | 22 | 102 |
| | | | 14.0 | 16.8 | 26.5 | 30 | 24 | 101 | 27.8 | 30 | 26 | 102 |
| | | | 23.0 | 27.7 | 40.1 | 45 | 37 | 101 | 41.4 | 45 | 38 | 102 |
| | | | 25.5 | 30.7 | 43.9 | 45 | 40 | 101 | 45.1 | 50 | 42 | 102 |
| | 575–3–60 | STD | – | – | 11.9 | 15 | 12 | 63 | 13.8 | 20 | 14 | 65 |
| | | MED | – | – | 12.7 | 20 | 12 | 74 | 14.6 | 20 | 15 | 76 |
| | | HIGH | – | – | 12.7 | 20 | 12 | 74 | 14.6 | 20 | 15 | 76 |

**LEGEND:**

| | | |
|---|---|---|
| CO | – | Convenient outlet |
| DISC | – | Disconnect |
| FLA | – | Full load amps |
| IFM | – | Indoor fan motor |
| LRA | – | Locked rotor amps |
| MCA | – | Minimum circuit amps |
| MOCP | – | Maximum over current protection |
| PE | – | Power exhaust |
| UNPWRD CO | – | Unpowered convenient outlet |

**NOTES**:

1. In compliance with NEC requirements for multimotor 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. **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

Maximum deviation is 4 v.
Determine percent of voltage imbalance.

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

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.

## Table 36 – MCA/MOCP DETERMINATION W/ PWRD C.O.

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER | | w/ PWRD C.O. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NO P.E. | | | | w/ P.E. (pwrd fr/unit) | | | |
| | | | kW | FLA | MCA | MOCP | DISC. SIZE | | MCA | MOCP | DISC. SIZE | |
| | | | | | | | FLA | LRA | | | FLA | LRA |
| 558J*04 | 208/230–1–60 | STD | – | – | 32.0 | 45 | 32 | 100 | 33.9 | 50 | 34 | 102 |
| | | | 3.3/4.4 | 15.9/18.3 | 32.0/35.0 | 45/45 | 32/32 | 100/100 | 34.4/37.4 | 50/50 | 34/34 | 102/102 |
| | | | 4.9/6.5 | 23.5/27.1 | 41.5/46.0 | 45/50 | 38/42 | 100/100 | 43.9/48.4 | 50/50 | 40/45 | 102/102 |
| | | | 6.5/8.7 | 31.4/36.3 | 51.4/57.5 | 60/60 | 47/53 | 100/100 | 53.8/59.9 | 60/60 | 49/55 | 102/102 |
| | | | 7.9/10.5 | 37.9/43.8 | 59.5/66.9 | 60/70 | 55/62 | 100/100 | 61.9/69.3 | 70/70 | 57/64 | 102/102 |
| | | | 9.8/13.0 | 46.9/54.2 | 70.8/79.9 | 80/80 | 65/73 | 100/100 | 73.1/82.3 | 80/90 | 67/76 | 102/102 |
| | | MED | – | – | 32.0 | 45 | 32 | 100 | 33.9 | 50 | 34 | 102 |
| | | | 3.3/4.4 | 15.9/18.3 | 32.0/35.0 | 45/45 | 32/32 | 100/100 | 34.4/37.4 | 50/50 | 34/34 | 102/102 |
| | | | 4.9/6.5 | 23.5/27.1 | 41.5/46.0 | 45/50 | 38/42 | 100/100 | 43.9/48.4 | 50/50 | 40/45 | 102/102 |
| | | | 6.5/8.7 | 31.4/36.3 | 51.4/57.5 | 60/60 | 47/53 | 100/100 | 53.8/59.9 | 60/60 | 49/55 | 102/102 |
| | | | 7.9/10.5 | 37.9/43.8 | 59.5/66.9 | 60/70 | 55/62 | 100/100 | 61.9/69.3 | 70/70 | 57/64 | 102/102 |
| | | | 9.8/13.0 | 46.9/54.2 | 70.8/79.9 | 80/80 | 65/73 | 100/100 | 73.1/82.3 | 80/90 | 67/76 | 102/102 |
| | 208/230–3–60 | STD | – | – | 24.2 | 30 | 25 | 94 | 26.1 | 30 | 27 | 96 |
| | | | 3.3/4.4 | 9.2/10.6 | 24.2/25.4 | 30/30 | 25/25 | 94/94 | 26.1/27.8 | 30/30 | 27/27 | 96/96 |
| | | | 4.9/6.5 | 13.6/15.6 | 29.1/31.6 | 30/35 | 27/29 | 94/94 | 31.5/34.0 | 35/35 | 29/31 | 96/96 |
| | | | 6.5/8.7 | 18.1/20.9 | 34.8/38.3 | 35/40 | 32/35 | 94/94 | 37.1/40.6 | 40/45 | 34/37 | 96/96 |
| | | | 7.9/10.5 | 21.9/25.3 | 39.5/43.8 | 40/45 | 36/40 | 94/94 | 41.9/46.1 | 45/50 | 39/42 | 96/96 |
| | | | 12.0/16.0 | 33.4/38.5 | 53.9/60.3 | 60/70 | 50/55 | 94/94 | 56.3/62.6 | 60/70 | 52/58 | 96/96 |
| | | MED | – | – | 24.2 | 30 | 25 | 94 | 26.1 | 30 | 27 | 96 |
| | | | 3.3/4.4 | 9.2/10.6 | 24.2/25.4 | 30/30 | 25/25 | 94/94 | 26.1/27.8 | 30/30 | 27/27 | 96/96 |
| | | | 4.9/6.5 | 13.6/15.6 | 29.1/31.6 | 30/35 | 27/29 | 94/94 | 31.5/34.0 | 35/35 | 29/31 | 96/96 |
| | | | 6.5/8.7 | 18.1/20.9 | 34.8/38.3 | 35/40 | 32/35 | 94/94 | 37.1/40.6 | 40/45 | 34/37 | 96/96 |
| | | | 7.9/10.5 | 21.9/25.3 | 39.5/43.8 | 40/45 | 36/40 | 94/94 | 41.9/46.1 | 45/50 | 39/42 | 96/96 |
| | | | 12.0/16.0 | 33.4/38.5 | 53.9/60.3 | 60/70 | 50/55 | 94/94 | 56.3/62.6 | 60/70 | 52/58 | 96/96 |
| | | HIGH | – | – | 24.5 | 30 | 25 | 112 | 26.4 | 30 | 27 | 114 |
| | | | 3.3/4.4 | 9.2/10.6 | 24.5/25.8 | 30/30 | 25/25 | 112/112 | 26.4/28.1 | 30/30 | 27/27 | 114/114 |
| | | | 4.9/6.5 | 13.6/15.6 | 29.5/32.0 | 30/35 | 27/29 | 112/112 | 31.9/34.4 | 35/35 | 29/32 | 114/114 |
| | | | 6.5/8.7 | 18.1/20.9 | 35.1/38.6 | 40/40 | 32/36 | 112/112 | 37.5/41.0 | 40/45 | 35/38 | 114/114 |
| | | | 7.9/10.5 | 21.9/25.3 | 39.9/44.1 | 40/45 | 37/41 | 112/112 | 42.3/46.5 | 45/50 | 39/43 | 114/114 |
| | | | 12.0/16.0 | 33.4/38.5 | 54.3/60.6 | 60/70 | 50/56 | 112/112 | 56.6/63.0 | 60/70 | 52/58 | 114/114 |
| | 460–3–60 | STD | – | – | 12.4 | 15 | 13 | 48 | 13.4 | 15 | 14 | 49 |
| | | | 6.0 | 7.2 | 14.4 | 15 | 13 | 48 | 15.6 | 20 | 14 | 49 |
| | | | 8.8 | 10.6 | 18.6 | 20 | 17 | 48 | 19.9 | 20 | 18 | 49 |
| | | | 11.5 | 13.8 | 22.6 | 25 | 21 | 48 | 23.9 | 25 | 22 | 49 |
| | | | 14.0 | 16.8 | 26.4 | 30 | 24 | 48 | 27.6 | 30 | 25 | 49 |
| | | MED | – | – | 12.4 | 15 | 13 | 48 | 13.4 | 15 | 14 | 49 |
| | | | 6.0 | 7.2 | 14.4 | 15 | 13 | 48 | 15.6 | 20 | 14 | 49 |
| | | | 8.8 | 10.6 | 18.6 | 20 | 17 | 48 | 19.9 | 20 | 18 | 49 |
| | | | 11.5 | 13.8 | 22.6 | 25 | 21 | 48 | 23.9 | 25 | 22 | 49 |
| | | | 14.0 | 16.8 | 26.4 | 30 | 24 | 48 | 27.6 | 30 | 25 | 49 |
| | | HIGH | – | – | 12.9 | 15 | 13 | 57 | 13.9 | 20 | 14 | 58 |
| | | | 6.0 | 7.2 | 15.0 | 15 | 14 | 57 | 16.3 | 20 | 15 | 58 |
| | | | 8.8 | 10.6 | 19.3 | 20 | 18 | 57 | 20.5 | 25 | 19 | 58 |
| | | | 11.5 | 13.8 | 23.3 | 25 | 21 | 57 | 24.5 | 25 | 23 | 58 |
| | | | 14.0 | 16.8 | 27.0 | 30 | 25 | 57 | 28.3 | 30 | 26 | 58 |
| | 575–3–60 | STD | – | – | 9.0 | 15 | 9 | 46 | 10.9 | 15 | 11 | 48 |
| | | MED | – | – | 9.0 | 15 | 9 | 46 | 10.9 | 15 | 11 | 48 |
| | | HIGH | – | – | 9.1 | 15 | 9 | 52 | 11.0 | 15 | 12 | 54 |

**LEGEND:**

| | | |
|---|---|---|
| CO | – | Convenient outlet |
| DISC | – | Disconnect |
| FLA | – | Full load amps |
| IFM | – | Indoor fan motor |
| LRA | – | Locked rotor amps |
| MCA | – | Minimum circuit amps |
| MOCP | – | Maximum over current protection |
| PE | – | Power exhaust |
| UNPWRD CO | – | Unpowered convenient outlet |

**NOTES**:

1. In compliance with NEC requirements for multimotor 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. **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  Maximum deviation is 4 v.

(BC) 231 – 227 = 4 v  Determine percent of voltage imbalance.

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

$$= 1.76\%$$

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.

## Table 37 – MCA/MOCP DETERMINATION W/ PWRD C.O.

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER | | w/ PWRD C.O. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NO P.E. | | | | w/ P.E. (pwrd fr/unit) | | | |
| | | | kW | FLA | MCA | MOCP | DISC. SIZE | | MCA | MOCP | DISC. SIZE | |
| | | | | | | | FLA | LRA | | | FLA | LRA |
| 558J*05 | 208/230–1–60 | STD | – | – | 44.0 | 60 | 43 | 155 | 45.9 | 60 | 45 | 157 |
| | | | 4.9/6.5 | 23.5/27.1 | 44.0/46.0 | 60/60 | 43/43 | 155/155 | 45.9/48.4 | 60/60 | 45/45 | 157/157 |
| | | | 6.5/8.7 | 31.4/36.3 | 51.4/57.5 | 60/60 | 47/53 | 155/155 | 53.8/59.9 | 60/60 | 49/55 | 157/157 |
| | | | 9.8/13.0 | 46.9/54.2 | 70.8/79.9 | 80/80 | 65/73 | 155/155 | 73.1/82.3 | 80/90 | 67/76 | 157/157 |
| | | | 13.1/17.4 | 62.8/72.5 | 90.6/102.8 | 100/110 | 83/95 | 155/155 | 93.0/105.1 | 100/110 | 86/97 | 157/157 |
| | | | 15.8/21.0 | 75.8/87.5 | 106.9/121.5 | 110/125 | 98/112 | 155/155 | 109.3/123.9 | 110/125 | 101/114 | 157/157 |
| | | MED | – | – | 46.1 | 60 | 45 | 180 | 48.0 | 60 | 48 | 182 |
| | | | 4.9/6.5 | 23.5/27.1 | 46.1/48.6 | 60/60 | 45/45 | 180/180 | 48.0/51.0 | 60/60 | 48/48 | 182/182 |
| | | | 6.5/8.7 | 31.4/36.3 | 54.0/60.1 | 60/70 | 50/55 | 180/180 | 56.4/62.5 | 60/70 | 52/58 | 182/182 |
| | | | 9.8/13.0 | 46.9/54.2 | 73.4/82.5 | 80/90 | 68/76 | 180/180 | 75.8/84.9 | 80/90 | 70/78 | 182/182 |
| | | | 13.1/17.4 | 62.8/72.5 | 93.3/105.4 | 100/110 | 86/97 | 180/180 | 95.6/107.8 | 100/110 | 88/99 | 182/182 |
| | | | 15.8/21.0 | 75.8/87.5 | 109.5/124.1 | 110/125 | 101/114 | 180/180 | 111.9/126.5 | 125/150 | 103/116 | 182/182 |
| | 208/230–3–60 | STD | – | – | 30.7 | 45 | 31 | 131 | 32.6 | 45 | 33 | 133 |
| | | | 4.9/6.5 | 13.6/15.6 | 30.7/31.6 | 45/45 | 31/31 | 131/131 | 32.6/34.0 | 45/45 | 33/33 | 133/133 |
| | | | 7.9/10.5 | 21.9/25.3 | 39.5/43.8 | 45/45 | 36/40 | 131/131 | 41.9/46.1 | 45/50 | 39/42 | 133/133 |
| | | | 12.0/16.0 | 33.4/38.5 | 53.9/60.3 | 60/70 | 50/55 | 131/131 | 56.3/62.6 | 60/70 | 52/58 | 133/133 |
| | | | 15.8/21.0 | 43.8/50.5 | 66.9/75.3 | 70/80 | 62/69 | 131/131 | 69.3/77.6 | 70/80 | 64/71 | 133/133 |
| | | | 19.9/26.5 | 55.2/63.8 | 81.1/91.9 | 90/100 | 75/85 | 131/131 | 83.5/94.3 | 90/100 | 77/87 | 133/133 |
| | | MED | – | – | 31.0 | 45 | 31 | 149 | 32.9 | 45 | 33 | 151 |
| | | | 4.9/6.5 | 13.6/15.6 | 31.0/32.0 | 45/45 | 31/31 | 149/149 | 32.9/34.4 | 45/45 | 33/33 | 151/151 |
| | | | 7.9/10.5 | 21.9/25.3 | 39.9/44.1 | 45/45 | 37/41 | 149/149 | 42.3/46.5 | 45/50 | 39/43 | 151/151 |
| | | | 12.0/16.0 | 33.4/38.5 | 54.3/60.6 | 60/70 | 50/56 | 149/149 | 56.6/63.0 | 60/70 | 52/58 | 151/151 |
| | | | 15.8/21.0 | 43.8/50.5 | 67.3/75.6 | 70/80 | 62/70 | 149/149 | 69.6/78.0 | 70/80 | 64/72 | 151/151 |
| | | | 19.9/26.5 | 55.2/63.8 | 81.5/92.3 | 90/100 | 75/85 | 149/149 | 83.9/94.6 | 90/100 | 77/87 | 151/151 |
| | | HIGH | – | – | 33.3 | 45 | 34 | 175 | 35.2 | 50 | 36 | 177 |
| | | | 4.9/6.5 | 13.6/15.6 | 33.3/34.9 | 45/45 | 34/34 | 175/175 | 35.2/37.3 | 50/50 | 36/36 | 177/177 |
| | | | 7.9/10.5 | 21.9/25.3 | 42.8/47.0 | 45/50 | 39/43 | 175/175 | 45.1/49.4 | 50/50 | 42/45 | 177/177 |
| | | | 12.0/16.0 | 33.4/38.5 | 57.1/63.5 | 60/70 | 53/58 | 175/175 | 59.5/65.9 | 60/70 | 55/61 | 177/177 |
| | | | 15.8/21.0 | 43.8/50.5 | 70.1/78.5 | 80/80 | 65/72 | 175/175 | 72.5/80.9 | 80/90 | 67/74 | 177/177 |
| | | | 19.9/26.5 | 55.2/63.8 | 84.4/95.1 | 90/100 | 78/88 | 175/175 | 86.8/97.5 | 90/100 | 80/90 | 177/177 |
| | 460–3–60 | STD | – | – | 14.7 | 20 | 15 | 62 | 15.7 | 20 | 16 | 63 |
| | | | 6.0 | 7.2 | 14.7 | 20 | 15 | 62 | 15.7 | 20 | 16 | 63 |
| | | | 11.5 | 13.8 | 22.6 | 25 | 21 | 62 | 23.9 | 25 | 22 | 63 |
| | | | 14.0 | 16.8 | 26.4 | 30 | 24 | 62 | 27.6 | 30 | 25 | 63 |
| | | | 23.0 | 27.7 | 40.0 | 45 | 37 | 62 | 41.3 | 45 | 38 | 63 |
| | | | 25.5 | 30.7 | 43.8 | 45 | 40 | 62 | 45.0 | 50 | 41 | 63 |
| | | MED | – | – | 15.2 | 20 | 15 | 71 | 16.2 | 20 | 16 | 72 |
| | | | 6.0 | 7.2 | 15.2 | 20 | 15 | 71 | 16.3 | 20 | 16 | 72 |
| | | | 11.5 | 13.8 | 23.3 | 25 | 21 | 71 | 24.5 | 25 | 23 | 72 |
| | | | 14.0 | 16.8 | 27.0 | 30 | 25 | 71 | 28.3 | 30 | 26 | 72 |
| | | | 23.0 | 27.7 | 40.6 | 45 | 37 | 71 | 41.9 | 45 | 39 | 72 |
| | | | 25.5 | 30.7 | 44.4 | 45 | 41 | 71 | 45.6 | 50 | 42 | 72 |
| | | HIGH | – | – | 16.0 | 20 | 16 | 84 | 17.0 | 20 | 17 | 85 |
| | | | 6.0 | 7.2 | 16.0 | 20 | 16 | 84 | 17.3 | 20 | 17 | 85 |
| | | | 11.5 | 13.8 | 24.3 | 25 | 22 | 84 | 25.5 | 30 | 23 | 85 |
| | | | 14.0 | 16.8 | 28.0 | 30 | 26 | 84 | 29.3 | 30 | 27 | 85 |
| | | | 23.0 | 27.7 | 41.6 | 45 | 38 | 84 | 42.9 | 45 | 39 | 85 |
| | | | 25.5 | 30.7 | 45.4 | 50 | 42 | 84 | 46.6 | 50 | 43 | 85 |
| | 575–3–60 | STD | – | – | 11.5 | 15 | 12 | 48 | 13.4 | 15 | 14 | 50 |
| | | MED | – | – | 12.4 | 15 | 13 | 65 | 14.3 | 20 | 15 | 67 |
| | | HIGH | – | – | 12.4 | 15 | 13 | 65 | 14.3 | 20 | 15 | 67 |

**LEGEND:**

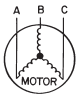
| | | |
|---|---|---|
| CO | – | Convenient outlet |
| DISC | – | Disconnect |
| FLA | – | Full load amps |
| IFM | – | Indoor fan motor |
| LRA | – | Locked rotor amps |
| MCA | – | Minimum circuit amps |
| MOCP | – | Maximum over current protection |
| PE | – | Power exhaust |
| UNPWRD CO | – | Unpowered convenient outlet |

**NOTES**:

1. In compliance with NEC requirements for multimotor 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. **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

Maximum deviation is 4 v.
Determine percent of voltage imbalance.

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

$$= 1.76\%$$

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.

## Table 38 – MCA/MOCP DETERMINATION W/ PWRD C.O.

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER | | w/ PWRD C.O. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NO P.E. | | | | w/ P.E. (pwrd fr/unit) | | | |
| | | | kW | FLA | MCA | MOCP | DISC. SIZE | | MCA | MOCP | DISC. SIZE | |
| | | | | | | | FLA | LRA | | | FLA | LRA |
| 558J*06 | 208/230–3–60 | STD | – | – | 35.3 | 50 | 35 | 162 | 37.2 | 50 | 37 | 164 |
| | | | 4.9/6.5 | 13.6/15.6 | 35.3/35.3 | 50/50 | 35/35 | 162/162 | 37.2/37.2 | 50/50 | 37/37 | 164/164 |
| | | | 7.9/10.5 | 21.9/25.3 | 39.9/44.1 | 50/50 | 37/41 | 162/162 | 42.3/46.5 | 50/50 | 39/43 | 164/164 |
| | | | 12.0/16.0 | 33.4/38.5 | 54.3/60.6 | 60/70 | 50/56 | 162/162 | 56.6/63.0 | 60/70 | 52/58 | 164/164 |
| | | | 15.8/21.0 | 43.8/50.5 | 67.3/75.6 | 70/80 | 62/70 | 162/162 | 69.6/78.0 | 70/80 | 64/72 | 164/164 |
| | | | 19.9/26.5 | 55.2/63.8 | 81.5/92.3 | 90/100 | 75/85 | 162/162 | 83.9/94.6 | 90/100 | 77/87 | 164/164 |
| | | MED | – | – | 37.6 | 50 | 38 | 188 | 39.5 | 50 | 40 | 190 |
| | | | 4.9/6.5 | 13.6/15.6 | 37.6/37.6 | 50/50 | 38/38 | 188/188 | 39.5/39.5 | 50/50 | 40/40 | 190/190 |
| | | | 7.9/10.5 | 21.9/25.3 | 42.8/47.0 | 50/50 | 39/43 | 188/188 | 45.1/49.4 | 50/50 | 42/45 | 190/190 |
| | | | 12.0/16.0 | 33.4/38.5 | 57.1/63.5 | 60/70 | 53/58 | 188/188 | 59.5/65.9 | 60/70 | 55/61 | 190/190 |
| | | | 15.8/21.0 | 43.8/50.5 | 70.1/78.5 | 80/80 | 65/72 | 188/188 | 72.5/80.9 | 80/90 | 67/74 | 190/190 |
| | | | 19.9/26.5 | 55.2/63.8 | 84.4/95.1 | 90/100 | 78/88 | 188/188 | 86.8/97.5 | 90/100 | 80/90 | 190/190 |
| | | HIGH | – | – | 37.6 | 50 | 38 | 188 | 39.5 | 50 | 40 | 190 |
| | | | 4.9/6.5 | 13.6/15.6 | 37.6/37.6 | 50/50 | 38/38 | 188/188 | 39.5/39.5 | 50/50 | 40/40 | 190/190 |
| | | | 7.9/10.5 | 21.9/25.3 | 42.8/47.0 | 50/50 | 39/43 | 188/188 | 45.1/49.4 | 50/50 | 42/45 | 190/190 |
| | | | 12.0/16.0 | 33.4/38.5 | 57.1/63.5 | 60/70 | 53/58 | 188/188 | 59.5/65.9 | 60/70 | 55/61 | 190/190 |
| | | | 15.8/21.0 | 43.8/50.5 | 70.1/78.5 | 80/80 | 65/72 | 188/188 | 72.5/80.9 | 80/90 | 67/74 | 190/190 |
| | | | 19.9/26.5 | 55.2/63.8 | 84.4/95.1 | 90/100 | 78/88 | 188/188 | 86.8/97.5 | 90/100 | 80/90 | 190/190 |
| | 460–3–60 | STD | – | – | 17.7 | 25 | 18 | 81 | 18.7 | 25 | 19 | 82 |
| | | | 6.0 | 7.2 | 17.7 | 25 | 18 | 81 | 18.7 | 25 | 19 | 82 |
| | | | 11.5 | 13.8 | 23.3 | 25 | 21 | 81 | 24.5 | 25 | 23 | 82 |
| | | | 14.0 | 16.8 | 27.0 | 30 | 25 | 81 | 28.3 | 30 | 26 | 82 |
| | | | 23.0 | 27.7 | 40.6 | 45 | 37 | 81 | 41.9 | 45 | 39 | 82 |
| | | | 25.5 | 30.7 | 44.4 | 45 | 41 | 81 | 45.6 | 50 | 42 | 82 |
| | | MED | – | – | 18.5 | 25 | 19 | 94 | 19.5 | 25 | 20 | 95 |
| | | | 6.0 | 7.2 | 18.5 | 25 | 19 | 94 | 19.5 | 25 | 20 | 95 |
| | | | 11.5 | 13.8 | 24.3 | 25 | 22 | 94 | 25.5 | 30 | 23 | 95 |
| | | | 14.0 | 16.8 | 28.0 | 30 | 26 | 94 | 29.3 | 30 | 27 | 95 |
| | | | 23.0 | 27.7 | 41.6 | 45 | 38 | 94 | 42.9 | 45 | 39 | 95 |
| | | | 25.5 | 30.7 | 45.4 | 50 | 42 | 94 | 46.6 | 50 | 43 | 95 |
| | | HIGH | – | – | 19.5 | 25 | 20 | 103 | 20.5 | 30 | 21 | 104 |
| | | | 6.0 | 7.2 | 19.5 | 25 | 20 | 103 | 20.5 | 30 | 21 | 104 |
| | | | 11.5 | 13.8 | 25.5 | 30 | 23 | 103 | 26.8 | 30 | 25 | 104 |
| | | | 14.0 | 16.8 | 29.3 | 30 | 27 | 103 | 30.5 | 35 | 28 | 104 |
| | | | 23.0 | 27.7 | 42.9 | 45 | 39 | 103 | 44.1 | 45 | 41 | 104 |
| | | | 25.5 | 30.7 | 46.6 | 50 | 43 | 103 | 47.9 | 50 | 44 | 104 |
| | 575–3–60 | STD | – | – | 13.6 | 20 | 13 | 65 | 15.5 | 20 | 16 | 67 |
| | | MED | – | – | 14.4 | 20 | 14 | 76 | 16.3 | 20 | 17 | 78 |
| | | HIGH | – | – | 14.4 | 20 | 14 | 76 | 16.3 | 20 | 17 | 78 |

**LEGEND:**

| | | |
|---|---|---|
| CO | – | Convenient outlet |
| DISC | – | Disconnect |
| FLA | – | Full load amps |
| IFM | – | Indoor fan motor |
| LRA | – | Locked rotor amps |
| MCA | – | Minimum circuit amps |
| MOCP | – | Maximum over current protection |
| PE | – | Power exhaust |
| UNPWRD CO | – | Unpowered convenient outlet |

**NOTES**:

1. In compliance with NEC requirements for multimotor 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. **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  Maximum deviation is 4 v.

(BC) 231 – 227 = 4 v  Determine percent of voltage imbalance.

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

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.

## Table 39 – MCA/MOCP DETERMINATION W/ PWRD C.O.

| UNIT | V–PH–HZ | IFM TYPE | ELECTRIC HEATER | | w/ PWRD C.O. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NO P.E. | | | | w/ P.E. (pwrd fr/unit) | | | |
| | | | kW | FLA | MCA | MOCP | DISC. SIZE | | MCA | MOCP | DISC. SIZE | |
| | | | | | | | FLA | LRA | | | FLA | LRA |
| 558J*07 | 208/230–1–60 | STD | – | – | 38.5 | 60 | 38 | 138 | 40.4 | 60 | 40 | 140 |
| | | | 3.3/4.4 | 15.9/18.3 | 38.5/38.5 | 60/60 | 38/38 | 138/138 | 40.4/40.4 | 60/60 | 40/40 | 140/140 |
| | | | 6.5/8.7 | 31.4/36.3 | 51.4/57.5 | 60/60 | 47/53 | 138/138 | 53.8/59.9 | 60/60 | 49/55 | 140/140 |
| | | | 9.8/13.0 | 46.9/54.2 | 70.8/79.9 | 80/80 | 65/73 | 138/138 | 73.1/82.3 | 80/90 | 67/76 | 140/140 |
| | | | 13.1/17.4 | 62.8/72.5 | 90.6/102.8 | 100/110 | 83/95 | 138/138 | 93.0/105.1 | 100/110 | 86/97 | 140/140 |
| | | | 15.8/21.0 | 75.8/87.5 | 106.9/121.5 | 110/125 | 98/112 | 138/138 | 109.3/123.9 | 110/125 | 101/114 | 140/140 |
| | | MED | – | – | 38.5 | 60 | 38 | 138 | 40.4 | 60 | 40 | 140 |
| | | | 3.3/4.4 | 15.9/18.3 | 38.5/38.5 | 60/60 | 38/38 | 138/138 | 40.4/40.4 | 60/60 | 40/40 | 140/140 |
| | | | 6.5/8.7 | 31.4/36.3 | 51.4/57.5 | 60/60 | 47/53 | 138/138 | 53.8/59.9 | 60/60 | 49/55 | 140/140 |
| | | | 9.8/13.0 | 46.9/54.2 | 70.8/79.9 | 80/80 | 65/73 | 138/138 | 73.1/82.3 | 80/90 | 67/76 | 140/140 |
| | | | 13.1/17.4 | 62.8/72.5 | 90.6/102.8 | 100/110 | 83/95 | 138/138 | 93.0/105.1 | 100/110 | 86/97 | 140/140 |
| | | | 15.8/21.0 | 75.8/87.5 | 106.9/121.5 | 110/125 | 98/112 | 138/138 | 109.3/123.9 | 110/125 | 101/114 | 140/140 |
| | 208/230–3–60 | STD | – | – | 28.3 | 40 | 29 | 104 | 30.2 | 40 | 31 | 106 |
| | | | 4.9/6.5 | 13.6/15.6 | 29.1/31.6 | 40/40 | 29/29 | 104/104 | 31.5/34.0 | 40/40 | 31/31 | 106/106 |
| | | | 6.5/8.7 | 18.1/20.9 | 34.8/38.3 | 40/40 | 32/35 | 104/104 | 37.1/40.6 | 40/45 | 34/37 | 106/106 |
| | | | 12.0/16.0 | 33.4/38.5 | 53.9/60.3 | 60/70 | 50/55 | 104/104 | 56.3/62.6 | 60/70 | 52/58 | 106/106 |
| | | | 15.8/21.0 | 43.8/50.5 | 66.9/75.3 | 70/80 | 62/69 | 104/104 | 69.3/77.6 | 70/80 | 64/71 | 106/106 |
| | | MED | – | – | 28.3 | 40 | 29 | 104 | 30.2 | 40 | 31 | 106 |
| | | | 4.9/6.5 | 13.6/15.6 | 29.1/31.6 | 40/40 | 29/29 | 104/104 | 31.5/34.0 | 40/40 | 31/31 | 106/106 |
| | | | 6.5/8.7 | 18.1/20.9 | 34.8/38.3 | 40/40 | 32/35 | 104/104 | 37.1/40.6 | 40/45 | 34/37 | 106/106 |
| | | | 12.0/16.0 | 33.4/38.5 | 53.9/60.3 | 60/70 | 50/55 | 104/104 | 56.3/62.6 | 60/70 | 52/58 | 106/106 |
| | | | 15.8/21.0 | 43.8/50.5 | 66.9/75.3 | 70/80 | 62/69 | 104/104 | 69.3/77.6 | 70/80 | 64/71 | 106/106 |
| | | HIGH | – | – | 28.6 | 40 | 29 | 122 | 30.5 | 40 | 31 | 124 |
| | | | 4.9/6.5 | 13.6/15.6 | 29.5/32.0 | 40/40 | 29/29 | 122/122 | 31.9/34.4 | 40/40 | 31/32 | 124/124 |
| | | | 6.5/8.7 | 18.1/20.9 | 35.1/38.6 | 40/40 | 32/36 | 122/122 | 37.5/41.0 | 40/45 | 35/38 | 124/124 |
| | | | 12.0/16.0 | 33.4/38.5 | 54.3/60.6 | 60/70 | 50/56 | 122/122 | 56.6/63.0 | 60/70 | 52/58 | 124/124 |
| | | | 15.8/21.0 | 43.8/50.5 | 67.3/75.6 | 70/80 | 62/70 | 122/122 | 69.6/78.0 | 70/80 | 64/72 | 124/124 |
| | 460–3–60 | STD | – | – | 12.9 | 15 | 13 | 51 | 13.9 | 20 | 14 | 52 |
| | | | 6.0 | 7.2 | 14.4 | 15 | 13 | 51 | 15.6 | 20 | 14 | 52 |
| | | | 11.5 | 13.8 | 22.6 | 25 | 21 | 51 | 23.9 | 25 | 22 | 52 |
| | | | 14.0 | 16.8 | 26.4 | 30 | 24 | 51 | 27.6 | 30 | 25 | 52 |
| | | | 23.0 | 27.7 | 40.0 | 45 | 37 | 51 | 41.3 | 45 | 38 | 52 |
| | | MED | – | – | 12.9 | 15 | 13 | 51 | 13.9 | 20 | 14 | 52 |
| | | | 6.0 | 7.2 | 14.4 | 15 | 13 | 51 | 15.6 | 20 | 14 | 52 |
| | | | 11.5 | 13.8 | 22.6 | 25 | 21 | 51 | 23.9 | 25 | 22 | 52 |
| | | | 14.0 | 16.8 | 26.4 | 30 | 24 | 51 | 27.6 | 30 | 25 | 52 |
| | | | 23.0 | 27.7 | 40.0 | 45 | 37 | 51 | 41.3 | 45 | 38 | 52 |
| | | HIGH | – | – | 13.4 | 15 | 14 | 60 | 14.4 | 20 | 15 | 61 |
| | | | 6.0 | 7.2 | 15.0 | 15 | 14 | 60 | 16.3 | 20 | 15 | 61 |
| | | | 11.5 | 13.8 | 23.3 | 25 | 21 | 60 | 24.5 | 25 | 23 | 61 |
| | | | 14.0 | 16.8 | 27.0 | 30 | 25 | 60 | 28.3 | 30 | 26 | 61 |
| | | | 23.0 | 27.7 | 40.6 | 45 | 37 | 60 | 41.9 | 45 | 39 | 61 |
| | 575–3–60 | STD | – | – | 9.0 | 15 | 9 | 46 | 10.9 | 15 | 11 | 48 |
| | | MED | – | – | 9.0 | 15 | 9 | 46 | 10.9 | 15 | 11 | 48 |
| | | HIGH | – | – | 9.1 | 15 | 9 | 52 | 11.0 | 15 | 12 | 54 |



**LEGEND:**

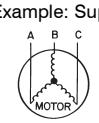
| | | |
|---|---|---|
| CO | – | Convenient outlet |
| DISC | – | Disconnect |
| FLA | – | Full load amps |
| IFM | – | Indoor fan motor |
| LRA | – | Locked rotor amps |
| MCA | – | Minimum circuit amps |
| MOCP | – | Maximum over current protection |
| PE | – | Power exhaust |
| UNPWRD CO | – | Unpowered convenient outlet |

**NOTES**:

1. In compliance with NEC requirements for multimotor 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. **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  Maximum deviation is 4 v.

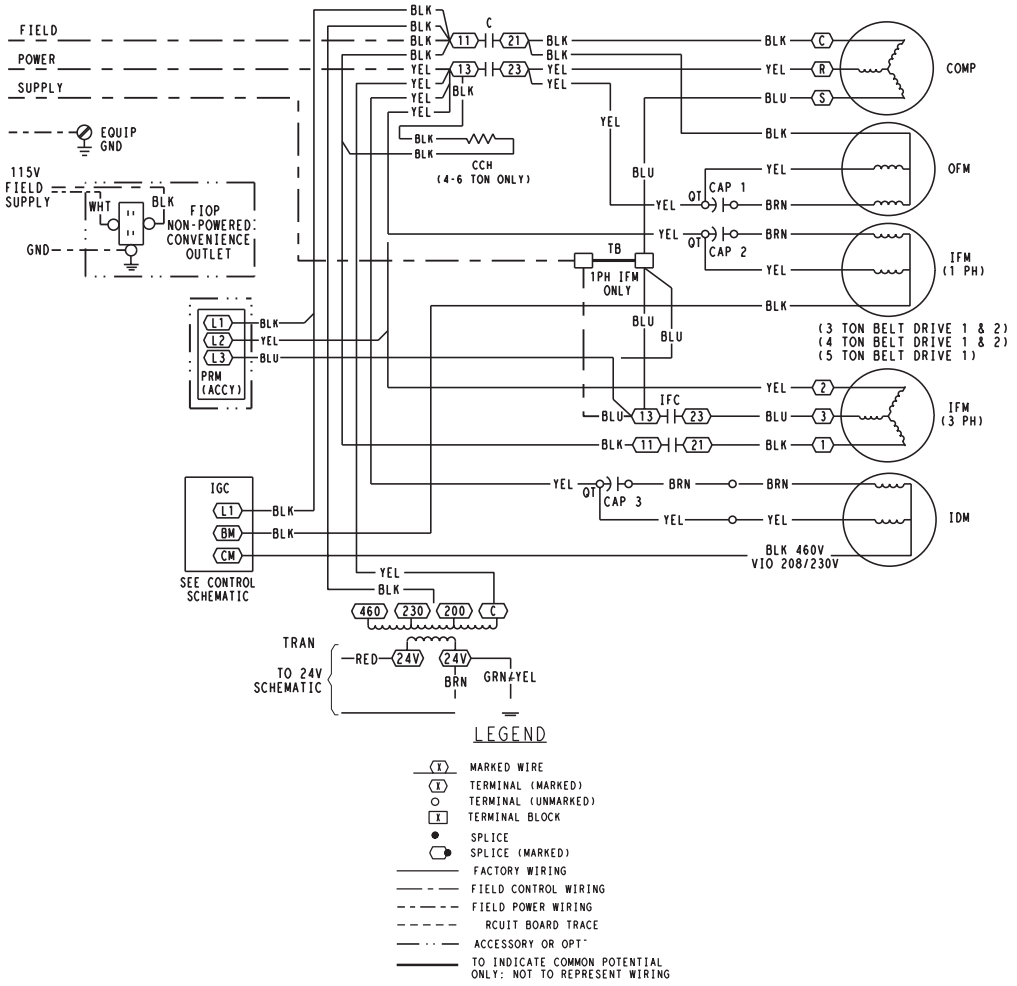
(BC) 231 – 227 = 4 v  Determine percent of voltage imbalance.

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

$$= 1.76\%$$

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.




C08054

**Fig. 13 – Typical Power Diagram**

**LEGEND**

| | | |
|---|---|---|
| C | – | Contactor, compressor |
| CAP | – | Capacitor |
| CB | – | Circuit breaker |
| CCH | – | Crankcase heater |
| COMP | – | Compressor motor |
| DDC | – | Direct digital control |
| FU | – | Fuse |
| GND | – | Ground |
| HPS | – | High pressure switch |
| IAQ | – | Indoor air quality sensors |
| IFC | – | Indoor fan motor |
| IFM | – | Indoor fan motor |
| LA | – | Low ambient lockout |
| LPS | – | Low pressure switch |
| LSM | – | Limit switch (manual reset) |
| MGV | – | Main gas valve |
| OAT | – | Outdoor air temp sensor |
| OFM | – | Outdoor fan motor |
| OLR | – | Overload relay |
| PL | – | Plug assembly |
| POT | – | Potentiometer |
| PMR | – | Phase monitor relay |
| QT | – | Quadruple terminal |
| R | – | Relay |
| RAT | – | Return air temp sensor |
| SAT | – | Supply air temp sensor |
| TDR | – | Time delay relay |
| TRAN | – | Transformer |

**NOTES**:

1. If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
2. Compressor and fan motors are thermally protected. Three phase motors are protected against primary single phasing conditions.
3. On 208/230V units, transformer is wired for 230V. If unit is to be run with 208V power supply, disconnect black wire from 230V tap and connect to 200V tap. 230V, 200V taps on transformer do not appear on 575V transformer and 575V tap does not appear on 208/23/460V transformer.
4. Use copper, copper clad, aluminum or aluminum connectors.
5. Use copper conductor only.

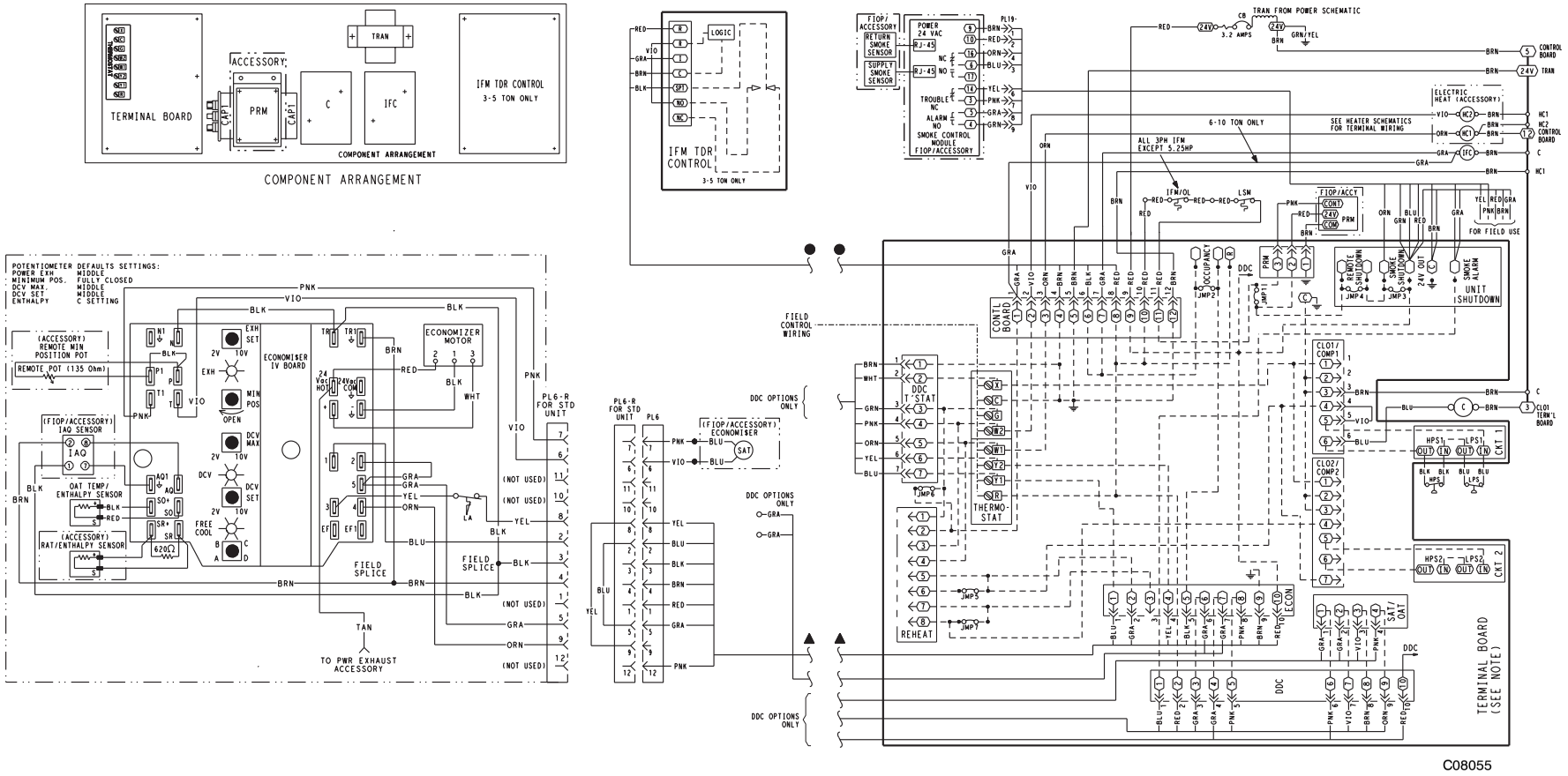



**Fig. 14 - Typical Wiring Diagram**

**NOTES**:

Terminal board schematic layout does not match actual terminal board to simplify circuit traces.

Ensure designated jumpers on terminal board are cut when adding smoke detectors, phase loss relay and remote shutdown.

**ECONOMIZER NOTES:**

1. 620 ohm, 1 watt, 5% resister should be removed only when using differential enthalpy or dry bulb.
2. If a separate field–supplied 24V transformer is used for the IAQ sensor power supply, it cannot have the secondary of the transformer grounded.
3. For field–installed remote minimum position POT, remove black wire jumper between P and P1 and set control minimum position POT to the minimum position.

# SEQUENCE OF OPERATION

## General

The sequence below describes the sequence of operation for an electro-mechanical unit with and without a factory installed EconoMi$er IV (called “economizer” in this sequence). 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 —**

When the thermostat calls for cooling, terminals G and Y1 are energized. As a result, the indoor-fan contactor (IFC) and the compressor contactor (C1) are energized, causing the indoor-an motor (IFM), compressor #1, and outdoor fan to start. If the unit has 2 stages of cooling, the thermostat will additionally energize Y2. The Y2 signal will energize compressor contactor #2 (C2), causing compressor #2 to start. Regardless of the number of stages, the outdoor-an motor runs continuously while unit is cooling.

**Heating**

**NOTE**: The 558J is sold as cooling only. If electric heaters are required, use only factory-approved electric heaters. They will operate as described below.

Units have either 1 or 2 stages of electric heat. When the thermostat calls for heating, power is applied to the W1 terminal 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.

### Electro-mechanical units with an economizer

**Cooling —**

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 EconoMi$er IV 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 CO2 sensors are connected to the EconoMi$er IV control, a demand controlled ventilation strategy will begin to operate. As the CO2 level in the zone increases above the CO2 set point, the minimum position of the damper will be increased proportionally. As the CO2 level decreases because of the increase in fresh air, the outdoor-air damper will be proportionally closed. For EconoMi$er IV 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 EconoMi$er IV control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the EconoMi$er IV damper to the minimum position.

On the initial power to the EconoMi$er IV control, it will take the damper up to 2 1/2 minutes before it begins to position itself. After the initial power-up, further changes in damper position can take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between 1 1/2 and 2 1/2 minutes. If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed-air temperature set point at 50°F (10°C) to 55°F (13°C). If there is a further demand for cooling (cooling second stage - Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed-air temperature set point. The EconoMi$er IV damper will be open at maximum position. EconoMi$er IV operation is limited to a single compressor.

**Heating**

The sequence of operation for the heating is the same as an electromechanical 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.

Note about this specification:

Bryant wrote this specification in the 2004 version of the "Masterformat" as published by the Construction Specification Institute. Please feel free to copy this specification directly into your building spec.

## HVAC Guide Specifications

**Size Range:** **3 to 6 Nominal Tons**

ENERGY STAR PARTNER

This product has been designed and manufactured to meet Energy Star® criteria for energy efficiency. However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow all manufacturer's refrigerant charging and air flow instructions. **Failure to confirm proper charge and air flow may reduce energy efficiency and shorten equipment life.**

Puron™ the environmentally sound refrigerant



**Section** **Description**

**23 06 80 Schedules for Decentralized HVAC Equipment**

**23 06 80.13 Decentralized Unitary HVAC Equipment Schedule**

23 06 80.13.A. Rooftop unit schedule

1. Schedule is per the project specification requirements.

**23 07 16 HVAC Equipment Insulation**

**23 07 16.13 Decentralized, Rooftop Units:**

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.

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.

**23 09 13 Instrumentation and Control Devices for HVAC**

**23 09 13.23 Sensors and Transmitters**

23 09 13.23.A, Thermostats

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

**23 09 23 Direct-digital Control system for HVAC**

**23 09 23.13 Decentralized, Rooftop Units:**

23 09 23.13.A. N/A

23 09 23.13.B. Open protocol, direct digital controller:

1. Shall be ASHRAE 62-2001 compliant.
2. Shall accept 18-30VAC, 50-60Hz, and consumer 15VA or less power.
3. Shall have an operating temperature range from -40°F (-40°C) to 130°F (54°C), 10% - 90% RH (non-condensing).
4. Shall include built-in protocol for BACNET (MS/TP and PTP modes), Modbus (RTU and ASCII), Johnson N2 and LonWorks. LonWorks Echelon processor required for all Lon applications shall be contained in separate communication board.
5. Shall allow access of up to 62 network variables (SNVT). Shall be compatible with all open controllers
6. Baud rate Controller shall be selectable using a dipswitch.

7. Shall have an LED display independently showing the status of serial communication, running, errors, power, all digital outputs, and all analog inputs.
8. Shall accept the following inputs: Space temperature, Set point adjustment, Outdoor Air temperature, indoor Air quality, outdoor air quality, compressor lock-out, fire shutdown, enthalpy switch, and fan status/filter status/ humidity/ remote occupancy.
9. Shall provide the following outputs: Economizer, fan, cooling stage 1, cooling stage 2, heat stage 1, heat stage 2, heat stage 3/ exhaust/ reversing valve.
10. Shall have built-in surge protection circuitry through solid state polyswitches. Polyswitches shall be used on incoming power and network connections. Polyswitches will return to normal when the "trip" condition clears.
11. Shall have a battery back-up capable of a minimum of 10,000 hours of data and time clock retention during power outages.
12. Shall have built-in support for Bryant service tool.
13. Shall include an EIA-485 protocol communication port, an access port for connection of either a computer or a Bryant service tool, an EIA-485 port for network communication to intelligent space sensors and displays, and a port to connect an optional LonWorks communications card.
14. Software upgrades will be accomplished by either local or remote download. No software upgrades through chip replacements are allowed.



**23 09 33 Electric and Electronic Control System for HVAC**

**23 09 33.13 Decentralized, Rooftop Units:**

23 09 33.13.A. General:

1. Shall be complete with self-contained low-voltage control circuit protected by a fuse on the 24-v transformer side (04-07 units have a resettable circuit breaker).
2. Shall utilize color-coded wiring.
3. Unit shall be include self-contained low-voltage control circuit protected by a fuse on the 24-v transformer side with a resettable circuit breaker.
4. The heat exchanger shall be controlled by an integrated gas controller (IGC) microprocessor. See heat exchanger section of this specification.
5. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.

23 09 33.23.B, Safeties:

1. Compressor over-temperature, over current.
2. Low-pressure switch.
   a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 Low and High Pressure switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
   b. Low pressure switch shall use different color wire than the high pressure switch. The purpose is to assist the installer and service person to correctly wire and or troubleshoot the rooftop unit.
3. High-pressure switch.
   a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 Low and High Pressure switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
   b. High pressure switch shall use different color wire than the low pressure switch. The purpose is to assist the installer and service person to correctly wire and or troubleshoot the rooftop unit.
4. Automatic reset, motor thermal overload protector.
5. N/A

**23 09 93 Sequence of Operations for HVAC Controls**

**23 09 93.13 Decentralized, Rooftop Units:**

23 09 93.13 INSERT SEQUENCE OF OPERATION

**23 40 13 Panel Air Filters**

**23 40 13.13 Decentralized, Rooftop Units:**

23 40 13.13.A. Standard filter section shall

1. Shall consist of factory-installed, low velocity, throwaway 2-in. thick fiberglass filters of commercially available sizes.
2. Unit shall use only one filter size. Multiple sizes are not acceptable.
3. Filter face velocity shall not exceed 365 fpm at nominal airflows.

4. Filters shall be accessible through an access panel with “no-tool” removal as described in the unit cabinet section of this specification (23 81 19.13.H).

## 23 81 19 Self-Contained Air Conditioners

### 23 81 19.13 Small-Capacity Self-Contained Air Conditioners (558J*04-07)

23 81 19.13.A. General

1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing a(n) hermetic scroll compressor(s) 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 environmentally safe, Puron 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.

23 81 19.13.B. Quality Assurance

1. Unit meets ASHRAE 90.1-2004 minimum efficiency requirements.
2. 3 phase units are Energy Star qualified.
3. Unit shall be rated in accordance with ARI Standards 210 and 360.
4. Unit shall be designed to conform to ASHRAE 15, 2001.
5. 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.
6. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
7. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
8. Unit casing shall be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 5000-hour salt spray.
9. Unit shall be designed in accordance with ISO 9001:2000, and shall be manufactured in a facility registered by ISO 9001:2000.
10. Roof curb shall be designed to conform to NRCA Standards.
11. 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.
12. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
13. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
14. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.

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.

23 81 19.13.D. Project Conditions

1. As specified in the contract.

23 81 19.13.E. Project Conditions

1. As specified in the contract.

23 81 19.13.F. Operating Characteristics

1. Unit shall be capable of starting and running at 115°F (46°C) ambient outdoor temperature, meeting maximum load criteria of ARI Standard 210/240 or 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 below 40° (4°C).
3. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
4. Unit shall be factory configured for vertical supply & return configurations.
5. Unit shall be field convertible from vertical to horizontal configuration
6. Unit shall be capable of mixed operation: vertical supply with horizontal return or horizontal supply with vertical return.

23 81 19.13.G. Electrical Requirements

1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.

23 81 19.13.H. Unit Cabinet

1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a pre-painted 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 ARI Standards 210 or 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 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 gauge thickness.
6. Condensate pan and connections:
   a. Shall be a sloped condensate drain pan made of a non-corrosive material.
   b. Shall comply with ASHRAE Standard 62.
   c. Shall use a 3/4" -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 single piece top panel.
8. N/A
9. Electrical Connections
   a. All unit power wiring shall enter unit cabinet at a single, factory-prepared, knockout location.
   b. Thru-the-base capability
      i. Standard unit shall have a thru-the-base electrical location(s) using a raised, embossed portion of the unit basepan.
      ii. Optional, factory-approved, water-tight connection method must be used for thru-the-base electrical connections.
      iii. 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 one factory installed, tool-less, removable, filter access panel.
   c. Panels covering control box, indoor fan, indoor fan motor, gas components (where applicable), and compressors shall have a molded composite handles.
   d. Handles shall be UV modified, composite. They shall be permanently attached, and recessed into the panel.
   e. Screws on the vertical portion of all removable access panel shall engage into heat resistant, molded composite collars.
   f. Collars shall be removable and easily replaceable using manufacturer recommended parts.

23 81 19.13.I. N/A

23 81 19.13.J. Coils

1. Standard Aluminum/Copper 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 and condenser coils shall be leak tested to 150 psig, pressure tested to 400 psig, and qualified to UL 1995 burst test at 2,200 psi.
2. Optional Pre-coated aluminum-fin 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.

3. Optional Copper-fin 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 coils shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.
   a. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.
   b. Color shall be high gloss black with gloss per ASTM D523-89.
   c. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges
   d. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.
   e. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93).
   f. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).
   g. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.
5. Optional E-coated copper-fin coils
   a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.
   b. Galvanized steel tube sheets shall not be acceptable.
   c. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between coil and pan.
   d. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.
   e. Color shall be high gloss black with gloss per ASTM D523-89.
   f. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges
   g. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.
   h. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93).
   i. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).
   j. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

23 81 19.13.K. Refrigerant Components

1. Refrigerant circuit shall include the following control, safety, and maintenance features:
   a. Fixed orifice metering system shall prevent mal-distribution of two-phase refrigerant by including multiple fixed orifice devices in each refrigeration circuit. Each orifice is to be optimized to the coil circuit it serves.
   b. Refrigerant filter drier.
   c. Service gauge connections on suction and discharge lines.
   d. Pressure gauge access through a specially designed access port in the top panel of the unit.
2. There shall be gauge line access port in the skin of the rooftop, covered by a black, removable plug.
   a. The plug shall be easy to remove and replace.
   b. When the plug is removed, the gauge access port shall enable maintenance personnel to route their pressure gauge lines.
   c. This gauge access port shall facilitate correct and accurate condenser pressure readings by enabling the reading with the compressor access panel on.
   d. The plug shall be made of a leak proof, UV-resistant, composite material.
3. Compressors
   a. Unit shall use one fully hermetic, scroll compressor for each independent refrigeration circuit.
   b. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
   c. Compressors shall be internally protected from high discharge temperature conditions using a Thermal Overload Disk (TOD) installed at the muffler plate on 04-06 sizes and at the fixed scroll discharge gas outlet on 07.

d. Compressors shall be protected from an over-temperature and over-amperage conditions by an internal, motor overload device.
e. Compressor shall be factory mounted on rubber grommets.
f. Compressor motors shall have internal line break thermal and current overload protection.
g. Crankcase heaters shall not be required for normal operating range.

23 81 19.13.L. 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. Filter face velocity shall not exceed 320 fpm at nominal airflows.
5. Filters shall be standard, commercially available sizes.
6. Only one size filter per unit is allowed.

23 81 19.13.M. Evaporator Fan and Motor



1. Evaporator fan motor:
   a. Shall have permanently lubricated bearings
   b. Shall have inherent automatic-reset thermal overload protection.
   c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
2. Belt-driven Evaporator Fan:
   a. Belt drive shall include an adjustable-pitch motor pulley.
   b. Shall use sealed, permanently lubricated ball-bearing type.
   c. Blower fan shall be double-inlet type with forward-curved blades.
   d. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.

23 81 19.13.N. 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. Shaft-up designs including those with “rain-slinger devices” shall not be allowed.
2. Condenser Fans shall:
   a. Shall be a direct-driven propeller type fan
   b. Shall have aluminum blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.

23 81 19.13.O. Special Features

1. Integrated Economizers:
   a. Integrated, gear-driven parallel modulating blade design type capable of simultaneous economizer and compressor operation.
   b. Independent modules for vertical or horizontal return configurations shall be available. Vertical return modules shall be available as a factory installed option.
   c. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
   d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
   e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
   f. Shall be equipped with low-leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.
   g. Shall be capable of introducing up to 100% outdoor air.
   h. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air.
   i. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
   j. Dry bulb outdoor-air temperature sensor shall be provided as standard. Outdoor air sensor set point shall be adjustable and shall range from 40 to 100°F / 4 to 38°C. Additional sensor options shall be available as accessories.
   k. 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%.

l. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy. A remote potentiometer may be used to override the damper set point.

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

n. Economizer controller shall accept a 2-10Vdc CO2 sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor-air damper to provide ventilation based on the sensor input.

o. Compressor lockout sensor shall open at 35°F (2°C) and close closes at 50°F (10°C).

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

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

2. Two-Position Damper

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 economizer 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. Design shall incorporate inherent barometric relief capabilities for barometric relief of rooftop unit return air.

h. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.

i. Outside air hood shall include aluminum water entrainment filter

3. Manual damper

a. Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 50% outdoor air for year round ventilation.

4. Head Pressure 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 -20°F (-29°C).

5. Condenser Coil Hail Guard Assembly

a. Shall protect against damage from hail.

b. Shall be either hood style or louvered.

6. 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.

7. Convenience Outlet:

a. Powered convenience outlet.

b. Outlet shall be powered from main line power to the rooftop unit.

c. 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.

d. Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.

e. Outlet shall include 15 amp GFI receptacles with independent fuse protection.

f. Voltage required to operate convenience outlet shall be provided by a factory-installed step-down transformer.

g. Outlet shall be accessible from outside the unit.

h. Non-Powered convenience outlet.

i. Outlet shall be powered from a separate 115-120v power source.

j. A transformer shall not be included.

k. Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.

l. Outlet shall include 15 amp GFI receptacles with independent fuse protection.

m. Outlet shall be accessible from outside the unit.

8. Thru-the-Base Connectors:
   a. Kits shall provide connectors to permit gas and electrical connections to be brought to the unit through the unit basepan.
   b. Minimum of four connection locations per unit.
9. Fan/Filter Status Switch:
   a. Switch shall provide status of indoor evaporator fan (ON/OFF) or filter (CLEAN/DIRTY).
   b. Status shall be displayed either over communication bus (when used with direct digital controls) or with an indicator light at the thermostat.
10. Propeller Power Exhaust:
    a. Power exhaust shall be used in conjunction with an integrated economizer.
    b. Independent modules for vertical or horizontal return configurations shall be available.
    c. Horizontal power exhaust is shall be mounted in return ductwork.
    d. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0-100% adjustable setpoint on the economizer control.
11. Ultraviolet Germicidal Lamps:
    a. Ultraviolet germicidal lamps are designed to eliminate odor causing mold and fungus that may develop in the wet area of the evaporator section of the unit.
    b. Shall be installed in the indoor blower section of the unit and shine on the evaporator and condensate pan.
    c. Shall be specifically designed and optimized for 40°F (4°C) to 45°F (7°C), high-humidity operation in a moving air stream inside an HVAC unit.
    d. The germicidal lamps shall have an output rating at 45°F (7°C) in 400 fpm airflow of 120 microwatts/cm2 at 1 meter.
12. Roof Curbs (Vertical):
    a. Full perimeter roof curb with exhaust capability providing separate airstreams 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. Head Pressure Control Package:
    a. Consists of solid-state control and condenser-coil temperature sensor to maintain condensing temperature between 90°F and 110°F (32°C and 43°C) at outdoor ambient temperatures down to -20°F (-29°C) by condenser-fan speed modulation or condenser-fan cycling and wind baffles.
14. Flue Shield:
    a. Provides added safety protection from the hot sides of the gas flue hood.
15. Condenser Coil Hail Guard Assembly:
    a. Hail guard shall protect against damage from hail and flying debris.
16. Unit-Mounted, Non-Fused Disconnect Switch:
    a. Shall be factory-installed, internally mounted, NEC and UL approved non-fused switch shall provide unit power shutoff.
    b. Shall be accessible from outside the unit and shall provide power off lockout capability. (80 amp maximum).
17. Convenience Outlet:
    a. Shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
    b. Shall include 15-amp GFI receptacle with independent fuse protection.
    c. Voltage required to operate convenience outlet shall be provided by a factory-installed step-down transformer.
    d. Shall be accessible from outside the unit.
18. High-Static Indoor Fan Motor(s) and Drive(s) (004-12):
    a. High-static motor(s) and drive(s) shall be factory-installed to provide additional performance range.
19. Flue Discharge Deflector:
    a. Flue discharge deflector directs unit exhaust vertically instead of horizontally.
20. Condenser Coil Grille:
    a. The grille protects the condenser coil from damage by large objects without increasing unit clearances.
21. Thru-the-Bottom Utility Connectors:

a. Kit shall provide connectors to permit gas and electrical connections to be brought to the unit through the basepan.

22. Fan/Filter Status Switch:
    a. Provides status of indoor (evaporator) fan (ON/ OFF) or filter (CLEAN/DIRTY). Status shall be displayed over communication bus when used with direct digital controls or with an indicator light at the thermostat.
23. 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.
24. 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.
25. Indoor Air Quality (CO2) 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 set point shall have adjustment capability.
26. Hinged Panel Option:
    a. Hinged panel option provides hinged access panels for the filter, compressor, evaporator fan, and control box areas.
    b. Filter hinged panels permit tool-less entry for changing filters.
    c. Each hinged panel is permanently attached to the rooftop unit.
27. 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:
        i. One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel
        ii. Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment
        iii. One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station
        iv. Capable of direct connection to two individual detector modules
        v. Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications
28. Winter start kit
    a. Shall contain a bypass device around the low pressure switch.
    b. Shall be required when mechanical cooling below an outdoor ambient of 40°F (4°C).
    c. Shall not be required to operate an equipped economizer when below an outdoor ambient of 40°F (4°C).
29. Barometric relief
    a. Shall include damper, seals, hard-ware, and hoods to relieve excess building pressure.
    b. Damper shall gravity-close upon unit shutdown.
30. 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.



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