

# TECHNICAL GUIDE



## Heating and Air Conditioning

# PREDATOR<sup>®</sup>

### MID EFFICIENCY

### SINGLE PACKAGE AIR CONDITIONERS AND

### SINGLE PACKAGE GAS/ELECTRIC UNITS

DF 078, 090, 102 and 120

6-1/2, 7-1/2, 8-1/2 and 10 NOMINAL TONS

10.4 EER



### DESCRIPTION

#### ASHRAE 90.1 COMPLIANT

YORK<sup>®</sup> DF Predator<sup>®</sup> units are convertible single packages with a common footprint cabinet and common roof curb for all 6-1/2 through 10 ton models. All units have two compressors with independent refrigeration circuits to provide 2 stages of cooling. The units were designed for light commercial applications and can be easily installed on a roof curb, slab, or frame.

All DF Predator<sup>®</sup> units are self-contained and assembled on rigid full perimeter base rails allowing for 3-way forklift access and overhead rigging. Every unit is completely charged, wired, piped, and tested at the factory to provide a quick and easy field installation.

All units are convertible between side and down airflow. Independent economizer designs are used on side and down discharge applications, as well as all tonnage sizes.

Predator<sup>®</sup> units are available in the following configurations: cooling only, cooling with electric heat, and cooling with gas heat. Electric heaters are available as factory-installed options and field-installed accessories.

*Tested in accordance with:*



## TABLE OF CONTENTS

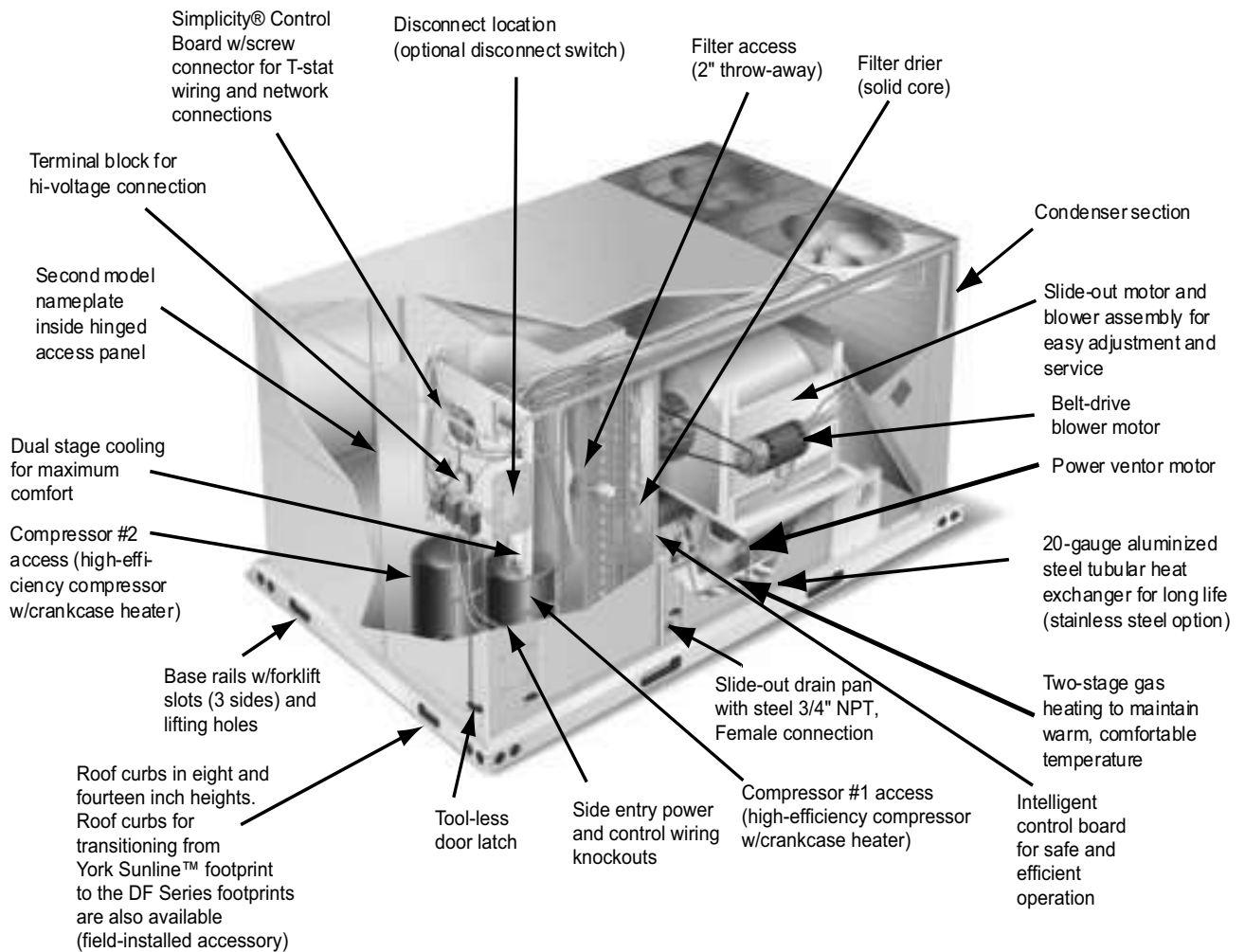
| DESCRIPTION .....                        | Tbl. # | Pg. #     |
|------------------------------------------|--------|-----------|
| <b>DESCRIPTION .....</b>                 |        | <b>1</b>  |
| <b>FEATURES .....</b>                    |        | <b>3</b>  |
| <b>FACTORY INSTALLED OPTIONS .....</b>   |        | <b>5</b>  |
| <b>FIELD INSTALLED ACCESSORIES .....</b> |        | <b>6</b>  |
| <b>NOMENCLATURE .....</b>                |        | <b>10</b> |
| <b>GUIDE SPECIFICATIONS .....</b>        |        | <b>44</b> |

### LIST OF FIGURES

| Fig. #                                                           | Pg. # |
|------------------------------------------------------------------|-------|
| 1 PREDATOR® COMPONENT LOCATION (DF120 SHOWN) .....               | 3     |
| 2 POWER EXHAUST ACCESSORY DOWNFLOW APPLICATION .....             | 35    |
| 3 POWER EXHAUST ACCESSORY HORIZONTAL APPLICATION .....           | 35    |
| 4 UNIT 4 POINT LOAD .....                                        | 36    |
| 5 UNIT CENTER OF GRAVITY .....                                   | 36    |
| 6 UNIT 6 POINT LOAD .....                                        | 36    |
| 7 UNIT DIMENSIONS .....                                          | 37    |
| 8 PREDATOR® ROOF CURB DIMENSIONS .....                           | 38    |
| 9 SUNLINE™ TO PREDATOR® TRANSITION ROOF CURBS .....              | 38    |
| 10 BOTTOM DUCT OPENINGS .....                                    | 39    |
| 11 REAR DUCT DIMENSIONS .....                                    | 39    |
| 12 DOWNFLOW ECONOMIZER HOOD DETAIL .....                         | 40    |
| 13 COOLING UNIT WITH GAS HEAT WIRING 230 VOLT DIAGRAM .....      | 41    |
| 14 COOLING UNIT WITH/WITHOUT ELECTRIC HEAT WIRING DIAGRAM .....  | 42    |
| 15 COOLING UNIT WITH GAS HEAT WIRING 460, 575 VOLT DIAGRAM ..... | 43    |

### LIST OF TABLES

| Tbl. #                                                                                 | Pg. # |
|----------------------------------------------------------------------------------------|-------|
| 1 ACCESSORIES .....                                                                    | 8     |
| 2 DF PHYSICAL DATA .....                                                               | 14    |
| 3 DF CAPACITY RATINGS .....                                                            | 15    |
| 4 UNIT VOLTAGE LIMITATIONS .....                                                       | 15    |
| 5 COOLING CAPACITY DF078 (6-1/2 TON) UNIT .....                                        | 16    |
| 6 COOLING CAPACITY DF090 (7-1/2 TON) UNIT .....                                        | 17    |
| 7 COOLING CAPACITY DF102 (8-1/2 TON) UNIT .....                                        | 18    |
| 8 COOLING CAPACITY DF120 (10 TON) UNIT .....                                           | 19    |
| 9 ELECTRICAL DATA DF078 (6-1/2 TON) MID EFFICIENCY W/O PWRD CONVENIENCE OUTLET .....   | 20    |
| 10 ELECTRICAL DATA DF078 (6-1/2 TON) MID EFFICIENCY WITH PWRD CONVENIENCE OUTLET ..... | 20    |
| 11 ELECTRICAL DATA DF090 (7-1/2 TON) MID EFFICIENCY W/O PWRD CONVENIENCE OUTLET .....  | 21    |
| 12 ELECTRICAL DATA DF090 (7-1/2 TON) MID EFFICIENCY WITH PWRD CONVENIENCE OUTLET ..... | 21    |
| 13 ELECTRICAL DATA DF102 (8-1/2 TON) MID EFFICIENCY W/O PWRD CONVENIENCE OUTLET .....  | 22    |
| 14 ELECTRICAL DATA DF102 (8-1/2 TON) MID EFFICIENCY WITH PWRD CONVENIENCE OUTLET ..... | 22    |
| 15 ELECTRICAL DATA DF120 (10 TON) MID EFFICIENCY W/O PWRD CONVENIENCE OUTLET .....     | 23    |
| 16 ELECTRICAL DATA DF120 (10 TON) MID EFFICIENCY WITH PWRD CONVENIENCE OUTLET .....    | 23    |
| 17 ELECTRIC HEAT MULTIPLIERS .....                                                     | 24    |
| 18 DF078 (6-1/2 TON) SIDE SHOT BLOWER PERFORMANCE .....                                | 25    |
| 19 DF090 (7-1/2 TON) SIDE SHOT BLOWER PERFORMANCE .....                                | 26    |
| 20 DF102 (8-1/2 TON) SIDE SHOT BLOWER PERFORMANCE .....                                | 27    |
| 21 DF120 (10 TON) SIDE SHOT BLOWER PERFORMANCE .....                                   | 28    |
| 22 DF078 (6-1/2 TON) DOWN SHOT BLOWER PERFORMANCE .....                                | 29    |
| 23 DF090 (7-1/2 TON) DOWN SHOT BLOWER PERFORMANCE .....                                | 30    |
| 24 DF102 (8-1/2 TON) DOWN SHOT BLOWER PERFORMANCE .....                                | 31    |
| 25 DF120 (10 TON) DOWN SHOT BLOWER PERFORMANCE .....                                   | 32    |
| 26 ADDITIONAL STATIC RESISTANCE DF078, 120 .....                                       | 33    |
| 27 ADDITIONAL STATIC RESISTANCE DF090, 102 .....                                       | 33    |
| 28 ELECTRIC HEAT MINIMUM SUPPLY AIR CFM .....                                          | 34    |
| 29 INDOOR BLOWER SPECIFICATIONS .....                                                  | 34    |
| 30 POWER EXHAUST SPECIFICATIONS .....                                                  | 34    |
| 31 4 POINT LOAD WEIGHT .....                                                           | 36    |
| 32 6 POINT LOAD WEIGHT .....                                                           | 36    |
| 33 UNIT WEIGHT .....                                                                   | 36    |
| 34 UNIT HEIGHT .....                                                                   | 37    |
| 35 UNIT CLEARANCES .....                                                               | 37    |



**FIGURE 1 - PREDATOR® COMPONENT LOCATION (DF120 SHOWN)**

## FEATURES

- **Mid Efficiency** - Mid efficiency units reach as high as 10.4 EER. Gas/electric units have electronic spark ignition and power vented combustion with steady state efficiencies of 80%. These efficiencies exceed all legislated minimum levels and provide low operating costs.
- **Service Friendly** - The Predator® incorporates a number of enhancements which improve serviceability.

The motor and blower slide out of the unit as a common assembly. This facilitates greater access to all the indoor airflow components, thus simplifying maintenance and adjustment.

Service time is reduced through the use of hinged, toolless panels. Such panels provide access to frequently inspected components and areas, including the control box, compressors, filters, indoor motor & blower,

and the heating section. The panels are screwed in place at the factory to prevent access by children or other unauthorized persons. It is recommended that the panels be secured with screws once service is complete.

Service windows have been placed in both condenser section walls. Rotation of the cover allows easy access to the condenser coils for cleaning or inspection.

Both the unit control board and ignition control board utilize flash codes to aid in diagnosis of unit malfunctions. Unique alarm codes quickly identify the source of the unit alarm.

All units use the same standard filter size. This standardization removes any confusion on which filter sizes are needed for replacement.

The non-corrosive drain pan slides out of the unit to permit easy cleaning. The drain pan is accessed by removing the drain pan cover plate on the rear of the unit. Once the plate is removed, the drain pan slides out through the rear of the unit.

All Predator® units have a second model nameplate located inside the control access door. This is to prevent deterioration of the nameplate through weathering.

- **Environmentally Aware** - For improved Indoor Air Quality, foil faced insulation is used exclusively throughout the units.
- **Balanced Heating** - The Predator® offers "Ultimate Heating Comfort" with a balance between 1<sup>st</sup> and 2<sup>nd</sup> stage gas heating. The first stage of a gas heat Predator® unit provides 60% of the heating capacity. Balanced heating allows the unit to better maintain desired temperatures.
- **Convertible Airflow Design** - The side duct openings are covered when they leave the factory. If a side supply/return is desired, the installer simply removes the two side duct covers from the outside of the unit and installs them over the down shot openings. No panel cutting is required. Convertible airflow design allows maximum field flexibility and minimum inventory.
- **System Protection** - Suction line freezestats are supplied on all units to protect against loss of charge and coil frosting when the economizer operates at low outdoor air temperatures while the compressors are running. Every unit has solid-core liquid line filter-driers and high and low-pressure switches. Internal compressor protection is standard on all compressors. Crankcase heaters are standard on reciprocating compressors. Scroll compressors do not require crankcase heaters. Phase Monitors are standard on units with scroll compressors. This accessory monitors the incoming power to the unit and protects the unit from phase loss and reversed phase rotation.
- **Advanced Controls** - Simplicity™ control boards have standardized a number of features previously available only as options or by utilizing additional controls.
  - **Low Ambient** - An integrated low-ambient control allows all units to operate in the cooling mode down to 0°F outdoor ambient without additional assistance. Optionally, the control board can be programmed to lockout the compressors when the outdoor air temperature is low or when free cooling is available.
  - **Anti-Short Cycle Protection** - To aid compressor life, an anti-short cycle delay is incorporated into the standard controls. Compressor reliability is further ensured by programmable minimum run times. For testing, the anti-short cycle delay can be temporarily overridden with the push of a button.
- **Fan Delays** - Fan on and fan off delays are fully programmable. Furthermore, the heating and cooling fan delay times are independent of one another. All units are programmed with default values based upon their configuration of cooling and heat.
- **Safety Monitoring** - The control board monitors the high and low-pressure switches, the freezestats, the gas valve, if applicable, and the temperature limit switch on gas and electric heat units. The unit control board will alarm on ignition failures, compressor lockouts and repeated limit switch trips.
- **Nuisance Trip Protection and Strikes** - To prevent nuisance trouble calls, the control board uses a "three times, you're out" philosophy. The high and low-pressure switches and the freezestats must trip three times within two hours before the unit control board will lock out the associated compressor.
- **On Board Diagnostics** - Each alarm will energize a trouble light on the thermostat, if so equipped, and flash an alarm code on the control board LED. Each high and low-pressure switch alarm as well as each freezestat alarm has its own flash code. The control board saves the five most recent alarms in memory, and these alarms can be reviewed at any time. Alarms and programmed values are retained through the loss of power.
- **Reliable** - From the beginning - All units undergo computer automated testing before they leave the factory. Units are tested for refrigerant charge and pressure, unit amperage, and 100% functionality. For the long term - All Predator® units are painted with a long lasting, powder paint that stands up over the life of the unit. The paint used has been proven by a 1000 hour salt spray test.
- **Flexible Placement** - All models and configurations share the same cabinet/footprint and thus the same roof curb. You have the flexibility to set one curb and choose the correct tonnage size and heating option after the internal loads have been determined.

To further simplify planning and installation, Predator® cabinets are designed to fit your roof. With the optional roof curb, the unit ductwork is designed to fit around 24" on-center joists or between 48" on-center joists.

The drain pan can be rotated to drain to either the front or the rear of the unit. Additionally, the drain pan can be fitted to drain through the roof curb. As it is sometimes difficult to have a level installation, the drain pan features a generous slope to ensure proper drainage.

- **Full Perimeter Base Rails** - The permanently attached base rails provide a solid foundation for the entire unit and protect the unit during shipment. The rails offer fork-lift access from 3 sides, and rigging holes are available so that an overhead crane can be used to place the units on a roof.

- **Easy Installation** - Gas and electric utility knockouts are supplied in the unit underside as well as the side of the unit. A clearly identified location is provided to mount a field supplied electrical disconnect switch. Utility connections can be made quickly and with a minimum amount of field labor.

All units are shipped with 2" throw-away filters installed.

- **Wide Range of Indoor Airflows** - All indoor fan motors are belt-drive type providing maximum flexibility to handle most airflow requirements. For high static applications, factory installed alternate indoor fan motors are available. With the optional indoor fan motor, all units can supply nominal airflow at a minimum of 1.5" ESP.
- **Warranty** - All models include a 1-year limited warranty on the complete unit. Compressors and electric heater elements each carry a 5-year warranty. Aluminized steel and stainless steel tubular heat exchangers carry a 10-year warranty.

## FACTORY INSTALLED OPTIONS

YORK® offers several equipment options factory installed, for the Predator® line.

- **Downflow Economizer - (With barometric relief)** - The economizer is provided with a single enthalpy input. The economizer is 2% low leakage type, and is shipped installed and wired. The installer needs only to assemble and mount the outdoor air hood (Provided). The economizer has spring return, fully modulating damper actuators and is capable of introducing up to 100% outdoor air. As the outdoor air intake dampers open, the return air dampers close. The changeover from mechanical refrigeration to economizer operation is regulated by the standard single enthalpy input. There is an optional input dual dry bulb available. To meet regulated air standards, the economizer control accepts an optional CO<sub>2</sub> input for demand ventilation. With single enthalpy input, the economizer control monitors outdoor air. The dual enthalpy kit provides a second input used to monitor the return air. With a dual input kit installed, the economizer control compares the values of the two enthalpy or temperature inputs and positions the dampers to provide the maximum efficiency possible.
- **Horizontal Economizer - (Without barometric relief)** - All features of the downflow economizer exist except you must order the duct mount barometric relief separately. **You must order a 1EH0408 if you are installing a power exhaust. You can order a 1RD0411 Barometric Relief for horizontal flow economizers only.**
- **BAS Ready Economizer -(With barometric relief)** - The economizer is provided with a Belimo actuator that requires a 0-10V DC input from an external source (i.e., field installed building automation system controller). Power exhaust options are available. The economizer is 2% low leakage type with spring return and fully modulating dampers capable of introducing up to 100% outside air. Also include 2" pleated filters.
- **Slab Economizer for Energy Recovery Ventilators-(With barometric relief and Fresh Air Hood)** - The economizer is provided with a single enthalpy input. The economizer is 2% low leakage type, and is shipped installed and wired. The economizer has spring return, fully modulating damper actuators and is capable of introducing up to 100% outdoor air. As the outdoor air intake dampers open, the return air dampers close. The changeover from mechanical refrigeration to economizer operation is regulated by the standard single enthalpy input. There is an optional input dual dry bulb available. To meet regulated air standards, the economizer control accepts an optional CO<sub>2</sub> input for demand ventilation. With single enthalpy input, the economizer control monitors outdoor air. The dual enthalpy kit provides a second input used to monitor the return air. With a dual input kit installed, the economizer control compares the values of the two enthalpy or temperature inputs and positions the dampers to provide the maximum efficiency possible.
- **Power Exhaust (Downflow only)** - This accessory installs in the unit with a down flow economizer.
- **Motorized Outdoor Air Damper** - The motorized outdoor air damper includes a slide-in/plug-in damper assembly with an outdoor air hood and filters. The outdoor air dampers open to the preset position when the indoor fan motor is energized. The damper has a range of 0% to 100% outdoor air entry. Factory installed option or field installed accessory.
- **Alternate Indoor Blower Motor** - For applications with high static restrictions, units are offered with optional indoor motors that provide higher static output and/or higher airflow, depending upon the installer's needs.
- **Aluminized Steel Gas Heat Exchanger** - For applications in non-corrosive environments.
- **Stainless Steel Gas Heat Exchanger** - For applications in corrosive environments, this option provides a full stainless steel heat exchanger assembly.
- **Stainless Steel Drain Pan** - An optional rust-proof stainless steel drain pan is available to provide years of trouble-free operation in corrosive environments.
- **Electric Heaters** - The electric heaters range from 9kW to 54kW and are available in all the voltage options of the base units. All heaters are dual staged. All heaters are intended for single point power supply.
- **Disconnect Switch** - For gas heat units and cooling units with electric heat, a HACR breaker sized to the unit is provided. For cooling only units, a switch sized to the largest electric heat available for the particular unit is provided. Factory installed option only.
- **Convenience Outlet - (Non-Powered / Powered)** - This option locates a 120V single-phase GFCI outlet with cover, on the corner of the unit housing adjacent to the compressors. The "Non-powered" option requires the installer to provide the 120V single-phase power source and wiring. The "Powered" option is powered by a step-down transformer in the unit. Factory installed option only.

- **Smoke Detectors** - The smoke detectors stop operation of the unit by interrupting power to the control board if smoke is detected within the air compartment. Available for both the supply and/or return air.
- **Phase Monitors** - Designed to prevent unit damage. The phase monitor will shut the unit down in an out-of-phase condition. **(Standard on units with Scroll Compressors.)**
- **Coil Guard** - Customers can purchase a coil guard kit to protect the condenser coil from damage. Additionally, this kit stops animals and foreign objects from entering the space between the inner condenser coil and the main cabinet. This is not a hail guard kit.
- **Dirty Filter Switch** - This kit includes a differential pressure switch that energizes the fault light on the unit thermostat, indicating that there is an abnormally high pressure drop across the filters. Factory installed option or field installed accessory.
- **Technicoat Condenser Coils** - The condenser coils are coated with a phenolic coating for protection against corrosion due to harsh environments.
- **Technicoat Evaporator Coil** - The evaporator coils are coated with a phenolic coating for protection against corrosion due to harsh environments.
- **BAS - Building Automation System Controls Simplicity™ INTELLI-Comfort™ Control** - The York® Simplicity™ INTELLI-Comfort™ control is factory installed. It includes a supply air sensor, a return air sensor, and an outside air sensor. There are provisions for a field installed dirty filter indicator switch, an air-proving switch, an Outside Air Humidity sensor, a Return Air Humidity sensor, an Inside IAQ sensor, and an Outside Air IAQ sensor. Construction mode operation, 365-day real time clock with 7 day programming plus holiday scheduling is built-in. Two different modes of demand ventilation are achieved through the INTELLI-Comfort™ using CO<sub>2</sub> sensors. It uses an inside CO<sub>2</sub> sensor to perform Demand Ventilation. It can also use an Outside CO<sub>2</sub> sensor to perform Differential Demand Ventilation. It uses a Patented Comfort Ventilation algorithm to provide comfortable ventilation air temperature. The patented economizer-loading algorithm will protect the equipment when harsh operating conditions exist. Humidity in the occupied space or return duct can be monitored and controlled via humidity sensors and the on-board connection for hot gas re-heat system. It uses the INTELLI-Start™ algorithm to maximize energy savings by recovering the building from the Unoccupied Setpoints to the Occupied Setpoints just in time for the Occupied Time Period to begin. The Simplicity™ INTELLI-Comfort™ balances space temperature, ventilation air temperature, CO<sub>2</sub> and humidity for ultimate comfort.
- **Simplicity™ INTELLI-Comfort™ with ModLINC Control** - The York® Simplicity™ INTELLI-Comfort™ with ModLINC control is factory installed. It includes all

the features of the INTELLI-Comfort™ control with an additional control to translate communications from MODBUS to the BACnet MSTP protocol.

- **Novar® BAS Control** - The Novar® ETC-3 building automation system controller is factory installed. Includes supply air sensor, return air sensor, dirty filter indicator switch, and air proving switch.
- **Johnson Controls BAS Control** - The Johnson Control YK-UNT-1126 building automation system controller is factory installed. Includes supply air sensor, return air sensor, dirty filter indicator switch, and air proving switch.
- **CPC BAS Control** - The Computer Process Controls Model 810-3060 ARTC Advanced Rooftop building automation system controller is factory installed. Includes supply air sensor, return air sensor, dirty filter indicator switch and air proving switch.
- **Honeywell BAS Control** - The Honeywell W7750C building automation system controller is factory installed. Includes air supply sensor, return air sensor, dirty filter indicator switch, and air proving switch.

## FIELD INSTALLED ACCESSORIES

YORK® offers several equipment accessories for field installation, for the Predator® line.

- **Downflow Economizer - (With barometric relief)** - The economizer is provided with a single enthalpy input. The economizer is 2% low leakage type. The economizer has spring return, fully modulating damper actuators and is capable of introducing up to 100% outdoor air. As the outdoor air intake dampers open, the return air dampers close. The changeover from mechanical refrigeration to economizer operation is regulated by the standard single enthalpy input. There is an optional input dual dry bulb available. To meet regulated air standards, the economizer control accepts an optional CO<sub>2</sub> input for demand ventilation. With single enthalpy input, the economizer control monitors outdoor air. The dual enthalpy kit provides a second input used to monitor the return air. With a dual input kit installed, the economizer control compares the values of the two enthalpy or temperature inputs and positions the dampers to provide the maximum efficiency possible
- **Horizontal Economizer - (Without barometric relief)** - All features of the downflow economizer exist except you must order the duct mount barometric relief separately. **You must order a 1EH0408 if you are installing a power exhaust. You can order a 1RD0411 Barometric Relief for horizontal flow economizers only.**
- **Slab Economizer for Energy Recovery Ventilator - (Without barometric relief or Fresh Air Hood)** - The economizer is provided with a single enthalpy input. The economizer is 2% low leakage type. The economizer has spring return, fully modulating damper actuators and is capable of introducing up to 100% outdoor air. As the outdoor air intake dampers open, the return air dampers

close. The changeover from mechanical refrigeration to economizer operation is regulated by the standard single enthalpy input. There is an optional input dual dry bulb available. To meet regulated air standards, the economizer control accepts an optional CO<sub>2</sub> input for demand ventilation. With single enthalpy input, the economizer control monitors outdoor air. The dual enthalpy kit provides a second input used to monitor the return air. With a dual input kit installed, the economizer control compares the values of the two enthalpy or temperature inputs and positions the dampers to provide the maximum efficiency possible.

**You can order 1EH0409 Barometric Relief/FA Hood for field installations without an ERV.**

- **Dual Enthalpy Control, Accessory** - This kit contains the required components to convert a single enthalpy economizer to dual enthalpy.
- **Barometric Relief Damper** - Zero to 100% capacity barometric relief dampers for use with horizontal flow, or field installed slab economizers.
- **Power Exhaust** - This accessory installs in the unit with a down flow economizer. Power exhaust plugs into the connector in the unit bulkhead. **You must purchase 1EH0408 barometric relief when applying to a horizontal flow application.**
- **Manual Outdoor Air Damper** - Like the motorized outdoor air damper, each manual outdoor air damper includes a slide-in damper assembly with an outdoor air hood and filters. Customers have a choice of dampers with ranges of 0% to 100% or 0% to 35% outdoor air entry.
- **Motorized Outdoor Air Damper** - The motorized outdoor air damper includes a slide-in/plug-in damper assembly with an outdoor air hood and filters. The outdoor air dampers open to the preset position when the indoor fan motor is energized. The damper has a range of 0% to 100% outdoor air entry. Factory installed option or field installed accessory.
- **Smoke Detectors** - The smoke detectors stop operation of the unit by interrupting power to the control board if smoke is detected within the air compartment.
- **CO<sub>2</sub> Sensor** - Senses CO<sub>2</sub> levels and automatically overrides the economizer when levels rise above the preset limits.
- **Dirty Filter Switch** - This kit includes a differential pressure switch that energizes the fault light on the unit thermostat, indicating that there is an abnormally high pressure drop across the filters.
- **Coil Guard** - Field installed decorative wire coil guard.
- **Hail Guard** - This kit includes a sloped hood which installs over the outside condenser coil and prevents damage to the coil fins from hail strikes. Field installed accessory only.
- **Electric Heaters** - The electric heaters range from 9 kW to 54kW and are available in all the voltage options of the base units. All heaters are dual staged. Cooling units include an adapter panel for easy installation of the electric heaters. Necessary hardware and connectors are included with the heaters. All heaters are intended for single point power supply.
- **Metal Frame Filter Kit** - Metal frame with polyester filter medium.
- **Permanent Filters** - Permanent filters are available.
- **Roof Curbs** - The roof curbs have insulated decks and are shipped disassembled. The roof curbs are available in 8" and 14" heights. For applications with security concerns, burglar bars are available for the duct openings of the roof curbs.
- **Roof Curb Transition** - Single Piece Adapter (10" High) - Roof curbs for transitioning from Sunline™ units to Predator® units. Fits 7.5 to 12.5 Sunline™ roof curbs only.
- **Burglar Bars** - Mount in the supply and return openings to prevent entry into the duct work.
- **Thermostat** - The units are designed to operate with 24-volt electronic and electro-mechanical thermostats. All units (with or without an economizer) operate with two-stage heat/two-stage cool or two-stage cooling only thermostats, depending upon unit configuration.

**TABLE 1: ACCESSORIES**

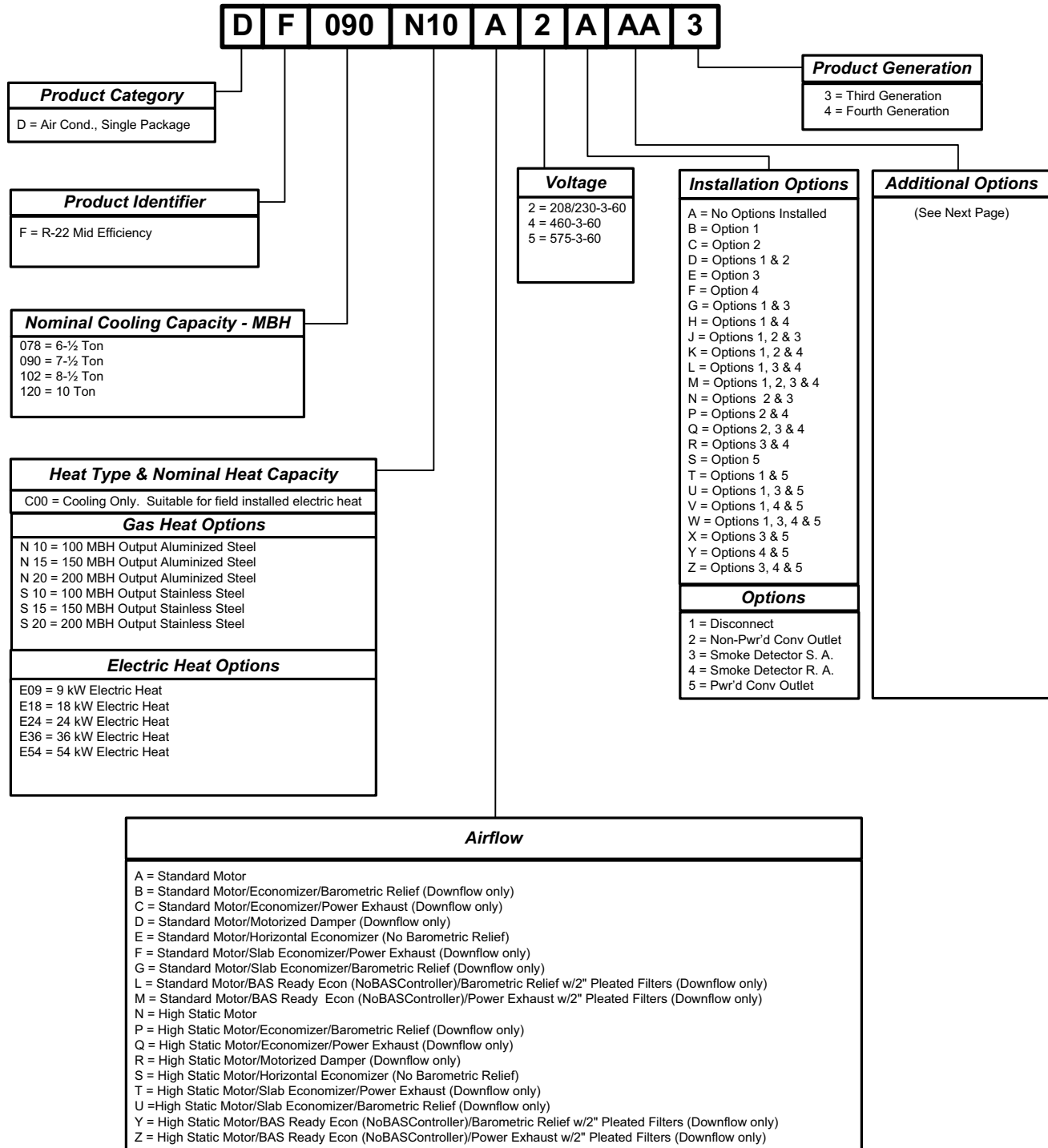
| Part Number | Description                                                                                              | Weight   |
|-------------|----------------------------------------------------------------------------------------------------------|----------|
| 1RC0470     | Roof Curb, 8" Height                                                                                     | -        |
| 1RC0471     | Roof Curb, 14" Height                                                                                    | -        |
| 1RC0472     | Roof Curb, Transition (7.5 T through 12.5 T)                                                             | -        |
| 1BD0408     | Burglar Bars, Downflow                                                                                   | -        |
| 2TP04520925 | Electric Heat 9kW 230V                                                                                   | -        |
| 2TP04521825 | Electric Heat 18kW 230V                                                                                  | -        |
| 2TP04522425 | Electric Heat 24kW 230V                                                                                  | -        |
| 2TP04523625 | Electric Heat 36kW 230V                                                                                  | -        |
| 2TP04525425 | Electric Heat 54kW 230V                                                                                  | -        |
| 2TP04520946 | Electric Heat 9kW 460V                                                                                   | -        |
| 2TP04521846 | Electric Heat 18kW 460V                                                                                  | -        |
| 2TP04522446 | Electric Heat 24kW 460V                                                                                  | -        |
| 2TP04523646 | Electric Heat 36kW 460V                                                                                  | -        |
| 2TP04525446 | Electric Heat 54kW 460V                                                                                  | -        |
| 2TP04520958 | Electric Heat 9kW 575V                                                                                   | -        |
| 2TP04521858 | Electric Heat 18kW 575V                                                                                  | -        |
| 2TP04522458 | Electric Heat 24kW 575V                                                                                  | -        |
| 2TP04523658 | Electric Heat 36kW 575V                                                                                  | -        |
| 2TP04525458 | Electric Heat 54kW 575V                                                                                  | -        |
| 2TP04540925 | Electric Heat 9kW 230V, 42" Tall Cabinet                                                                 | -        |
| 2TP04541825 | Electric Heat 18kW 230V, 42" Tall Cabinet                                                                | -        |
| 2TP04542425 | Electric Heat 24kW 230V, 42" Tall Cabinet                                                                | -        |
| 2TP04543625 | Electric Heat 36kW 230V, 42" Tall Cabinet                                                                | -        |
| 2TP04540946 | Electric Heat 9kW 460V, 42" Tall Cabinet                                                                 | -        |
| 2TP04541846 | Electric Heat 18kW 460V, 42" Tall Cabinet                                                                | -        |
| 2TP04542446 | Electric Heat 24kW 460V, 42" Tall Cabinet                                                                | -        |
| 2TP04543646 | Electric Heat 36kW 460V, 42" Tall Cabinet                                                                | -        |
| 2TP04540958 | Electric Heat 9kW 575V, 42" Tall Cabinet                                                                 | -        |
| 2TP04541858 | Electric Heat 18kW 575V, 42" Tall Cabinet                                                                | -        |
| 2TP04542458 | Electric Heat 24kW 575V, 42" Tall Cabinet                                                                | -        |
| 2TP04543658 | Electric Heat 36kW 575V, 42" Tall Cabinet                                                                | -        |
| 1FA0411     | Manual Outside Air Damper 0-35%, Downflow (Incl. Hood, Damper & Filters, No Barometric Relief)           | -        |
| 1FA0412     | Manual Outside Air Damper 0-100%, Downflow (Incl. Hood, Damper & Filters, No Barometric Relief)          | -        |
| 2MD04702724 | Motorized Damper, Downflow (Incl. Hood, Damper & Filter, no Barometric Relief)                           | -        |
| 2MD04703324 | Motorized Damper, Horizontal (Incl. Hood, Damper & Filter, no Barometric Relief)                         | -        |
| 2EE04705424 | Economizer, Downflow (Incl. Barometric Relief & All Hoods)                                               | 124 lbs. |
| 2EE04705524 | Economizer, Horizontal (Incl. Dampers & Hoods, no Barometric Relief)                                     | 97 lbs.  |
| 2EE04705224 | Economizer, Slab, Downflow (Incl. Dampers only no Hoods or Barometric Relief)                            | -        |
| 2EE04705624 | "Downflow Economizer, Slab type for ERV (no Barometric Relief or FA hood)", 42" Tall Cabinet             | -        |
| 2PE04703225 | Power Exhaust, Downflow, 230V (For Units with Economizer only)                                           | -        |
| 2PE04703246 | Power Exhaust, Downflow, 460V (For Units with Economizer only)                                           | -        |
| 2PE04703258 | Power Exhaust, Downflow, 580V (For Units with Economizer only)                                           | -        |
| 2EC04700924 | Dual Enthalpy Control (Use with Single Enthalpy Economizer)                                              | -        |
| 1EH0407     | Hood Kit, Downflow Economizer (Included with all Downflow Economizers)                                   | -        |
| 1RD0411     | Barometric Relief Kit, Ductmount for Horizontal Application (Incl. Damper & Hood)                        | -        |
| 1EH0408     | Barometric Relief Kit, Ductmount for Horizontal Application w/Power Exhaust (Incl. Damper & Hood)        | 25 lbs.  |
| 1EH0409     | Barometric Relief / Hood Kit, for Field Installed Slab Econ. w/o ERV (Incl. Barometric Relief & FA Hood) | -        |
| 2AQ04700424 | CO2 Detector Unit Mount                                                                                  | -        |
| 2AQ04700324 | CO2 Detector Space Mount                                                                                 | -        |
| 2SD04700424 | Smoke Detector, Supply or Return (Return Not Available with Horizontal Economizer)                       | -        |
| 2MK04700624 | Low Limit / Compressor Lockout Kit                                                                       | -        |
| 1CG0419     | Coil Guard (Electric / Electric & HP models)                                                             | -        |
| 1CG0420     | Coil Guard (Gas / Electric models)                                                                       | -        |
| 1CG0427     | Coil Guard (Electric / Electric & HP Models), 42" Tall Cabinet                                           | -        |
| 1CG0428     | Coil Guard (Gas / Electric Models), 42" Tall Cabinet                                                     | -        |

**TABLE 1: ACCESSORIES (CONTINUED)**

| <b>Part Number</b> | <b>Description</b>                                             | <b>Weight</b> |
|--------------------|----------------------------------------------------------------|---------------|
| 1HG0411            | Hail Guard Kit                                                 | -             |
| 1HG0415            | Hail Guard Kit, 42" Tall Cabinet                               | -             |
| 1GP0405            | Gas Piping Kit                                                 | -             |
| 1NP0442            | Propane Conversion Kit                                         | -             |
| 1HA0442            | High Altitude Kit for Natural Gas                              | -             |
| 1HA0443            | High Altitude Kit for Propane                                  | -             |
| 1FE0412            | Flue Exhaust Extension Kit                                     | -             |
| 2BC04700106        | Gas Heat Kit, -60 deg F, 230V                                  | -             |
| 2BC04700151        | Gas Heat Kit, -60 deg F, 460V                                  | -             |
| 2BC04700154        | Gas Heat Kit, -60 deg F, 575V                                  | -             |
| 1FL0402            | Permanent Filter (Includes (4) Four Filters)                   | -             |
| 1FL0423            | Permanent Filter (Includes (4) Four Filters), 42" Tall Cabinet | -             |
| 2DF0401            | Dirty Filter Switch                                            | -             |
| 1FF0410            | Filter Frame Kit, Metal                                        | -             |
| 1FF0411            | Metal Filter Frame Kit, 42" Tall Cabinet                       | -             |

# NOMENCLATURE

## 6½ - 12½ Ton Predator Model Number Nomenclature



**NOMENCLATURE ADDITIONAL OPTIONS**

| Additional Options |                                                                                                             |
|--------------------|-------------------------------------------------------------------------------------------------------------|
| AA                 | None                                                                                                        |
| AB                 | Phase Monitor                                                                                               |
| AC                 | Coil Guard                                                                                                  |
| AD                 | Dirty Filter Switch                                                                                         |
| AE                 | Phase Monitor & Coil Guard                                                                                  |
| AF                 | Phase Monitor & Dirty Filter Switch                                                                         |
| AG                 | Coil Guard & Dirty Filter Switch                                                                            |
| AH                 | Phase Monitor, Coil Guard, & Dirty Filter Switch                                                            |
| AJ                 | SS Drain Pan                                                                                                |
| AK                 | SS Drain Pan & Phase Monitor                                                                                |
| AL                 | SS Drain Pan & Coil Guard                                                                                   |
| AM                 | SS Drain Pan & Dirty Filter Switch                                                                          |
| AN                 | SS Drain Pan, Phase Monitor, Coil Guard & Dirty Filter Switch                                               |
| CA                 | CPC Controller with Dirty Filter Switch & Air Proving Switch                                                |
| CB                 | CPC Controller, DFS, APS & Phase Monitor                                                                    |
| CC                 | CPC Controller, DFS, APS & Coil Guard                                                                       |
| CD                 | CPC Controller, DFS, APS, Phase Monitor, & Coil Guard                                                       |
| CE                 | CPC Controller, DFS, APS & Technicoat Cond. Coil                                                            |
| CF                 | CPC Controller, DFS, APS, Technicoat Cond. Coil, & Phase Monitor                                            |
| CG                 | CPC Controller, DFS, APS, Technicoat Cond. Coil, & Coil Guard                                               |
| CH                 | CPC Controller, DFS, APS, Technicoat Cond. Coil, Phase Monitor, & Coil Guard                                |
| CJ                 | CPC Controller, DFS, APS & Technicoat Evap. Coil                                                            |
| CK                 | CPC Controller, DFS, APS, Technicoat Evap. Coil, & Phase Monitor                                            |
| CL                 | CPC Controller, DFS, APS, Technicoat Evap. Coil, & Coil Guard                                               |
| CM                 | CPC Controller, DFS, APS, Technicoat Evap. Coil, Phase Monitor, & Coil Guard                                |
| CN                 | CPC Controller, DFS, APS & Technicoat Evap. & Cond Coils                                                    |
| CP                 | CPC Controller, DFS, APS, Technicoat Evap. & Cond Coils, & Phase Monitor                                    |
| CQ                 | CPC Controller, DFS, APS, Technicoat Evap. & Cond Coils, & Coil Guard                                       |
| CR                 | CPC Controller, DFS, APS, Technicoat Evap. & Cond Coils, Phase Monitor, & Coil Guard                        |
| CS                 | CPC Controller, DFS, APS, SS Drain Pan                                                                      |
| CT                 | CPC Controller, DFS, APS, SS Drain Pan, Phase Monitor, & Coil Guard                                         |
| CU                 | CPC Controller, DFS, APS, SS Drain Pan, & Technicoat Cond Coils                                             |
| CV                 | CPC Controller, DFS, APS, SS Drain Pan, & Technicoat Evap Coil                                              |
| CW                 | CPC Controller, DFS, APS, SS Drain Pan, & Technicoat Evap and Cond Coils                                    |
| CX                 | CPC Controller, DFS, APS, SS Drain Pan, Phase Monitor, Coil Guard, & Technicoat Evap and Cond Coils         |
| JA                 | Johnson UNT Controller with Dirty Filter Switch & Air Proving Switch                                        |
| JB                 | Johnson UNT Controller, DFS, APS & Phase Monitor                                                            |
| JC                 | Johnson UNT Controller, DFS, APS & Coil Guard                                                               |
| JD                 | Johnson UNT Controller, DFS, APS, Phase Monitor, & Coil Guard                                               |
| JE                 | Johnson UNT Controller, DFS, APS & Technicoat Cond. Coil                                                    |
| JF                 | Johnson UNT Controller, DFS, APS, Technicoat Cond. Coil, & Phase Monitor                                    |
| JG                 | Johnson UNT Controller, DFS, APS, Technicoat Cond. Coil, & Coil Guard                                       |
| JH                 | Johnson UNT Controller, DFS, APS, Technicoat Cond. Coil, Phase Monitor, & Coil Guard                        |
| JJ                 | Johnson UNT Controller, DFS, APS & Technicoat Evap. Coil                                                    |
| JK                 | Johnson UNT Controller, DFS, APS, Technicoat Evap. Coil, & Phase Monitor                                    |
| JL                 | Johnson UNT Controller, DFS, APS, Technicoat Evap. Coil, & Coil Guard                                       |
| JM                 | Johnson UNT Controller, DFS, APS, Technicoat Evap. Coil, Phase Monitor, & Coil Guard                        |
| JN                 | Johnson UNT Controller, DFS, APS & Technicoat Evap. & Cond Coils                                            |
| JP                 | Johnson UNT Controller, DFS, APS, Technicoat Evap. & Cond Coils, & Phase Monitor                            |
| JQ                 | Johnson UNT Controller, DFS, APS, Technicoat Evap. & Cond Coils, & Coil Guard                               |
| JR                 | Johnson UNT Controller, DFS, APS, Technicoat Evap. & Cond Coils, Phase Monitor, & Coil Guard                |
| JS                 | Johnson UNT Controller, DFS, APS, SS Drain Pan                                                              |
| JT                 | Johnson UNT Controller, DFS, APS, SS Drain Pan, Phase Monitor, & Coil Guard                                 |
| JU                 | Johnson UNT Controller, DFS, APS, SS Drain Pan, & Technicoat Cond Coils                                     |
| JV                 | Johnson UNT Controller, DFS, APS, SS Drain Pan, & Technicoat Evap Coil                                      |
| JW                 | Johnson UNT Controller, DFS, APS, SS Drain Pan, & Technicoat Evap and Cond Coils                            |
| JX                 | Johnson UNT Controller, DFS, APS, SS Drain Pan, Phase Monitor, Coil Guard, & Technicoat Evap and Cond Coils |

| Additional Options |                                                                                                                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------|
| HA                 | Honeywell Excel 10 Controller with Dirty Filter Switch & Air Proving Switch                                        |
| HB                 | Honeywell Excel 10 Controller, DFS, APS & Phase Monitor                                                            |
| HC                 | Honeywell Excel 10 Controller, DFS, APS & Coil Guard                                                               |
| HD                 | Honeywell Excel 10 Controller, DFS, APS, Phase Monitor, & Coil Guard                                               |
| HE                 | Honeywell Excel 10 Controller, DFS, APS & Technicoat Cond. Coil                                                    |
| HF                 | Honeywell Excel 10 Controller, DFS, APS, Technicoat Cond. Coil, & Phase Monitor                                    |
| HG                 | Honeywell Excel 10 Controller, DFS, APS, Technicoat Cond. Coil, & Coil Guard                                       |
| HH                 | Honeywell Excel 10 Controller, DFS, APS, Technicoat Cond. Coil, Phase Monitor, & Coil Guard                        |
| HJ                 | Honeywell Excel 10 Controller, DFS, APS & Technicoat Evap. Coil                                                    |
| HK                 | Honeywell Excel 10 Controller, DFS, APS, Technicoat Evap. Coil, & Phase Monitor                                    |
| HL                 | Honeywell Excel 10 Controller, DFS, APS, Technicoat Evap. Coil, & Coil Guard                                       |
| HM                 | Honeywell Excel 10 Controller, DFS, APS, Technicoat Evap. Coil, Phase Monitor, & Coil Guard                        |
| HN                 | Honeywell Excel 10 Controller, DFS, APS & Technicoat Evap. & Cond Coils                                            |
| HP                 | Honeywell Excel 10 Controller, DFS, APS, Technicoat Evap. & Cond Coils, & Phase Monitor                            |
| HQ                 | Honeywell Excel 10 Controller, DFS, APS, Technicoat Evap. & Cond Coils, & Coil Guard                               |
| HR                 | Honeywell Excel 10 Controller, DFS, APS, Technicoat Evap. & Cond Coils, Phase Monitor, & Coil Guard                |
| HS                 | Honeywell Excel 10 Controller, DFS, APS, SS Drain Pan                                                              |
| HT                 | Honeywell Excel 10 Controller, DFS, APS, SS Drain Pan, Phase Monitor, & Coil Guard                                 |
| HU                 | Honeywell Excel 10 Controller, DFS, APS, SS Drain Pan, & Technicoat Cond Coils                                     |
| HV                 | Honeywell Excel 10 Controller, DFS, APS, SS Drain Pan, & Technicoat Evap Coil                                      |
| HW                 | Honeywell Excel 10 Controller, DFS, APS, SS Drain Pan, & Technicoat Evap and Cond Coils                            |
| HX                 | Honeywell Excel 10 Controller, DFS, APS, SS Drain Pan, Phase Monitor, Coil Guard, & Technicoat Evap and Cond Coils |
| WA                 | Intelli-Comfort w/ModLINC Controller                                                                               |
| WB                 | Intelli-Comfort w/ModLINC Controller, & Phase Monitor                                                              |
| WC                 | Intelli-Comfort w/ModLINC Controller, & Coil Guard                                                                 |
| WD                 | Intelli-Comfort w/ModLINC Controller, Phase Monitor, & Coil Guard                                                  |
| WE                 | Intelli-Comfort w/ModLINC Controller, & Technicoat Cond. Coil                                                      |
| WF                 | Intelli-Comfort w/ModLINC Controller, Technicoat Cond. Coil, & Phase Monitor                                       |
| WG                 | Intelli-Comfort w/ModLINC Controller, Technicoat Cond. Coil, & Coil Guard                                          |
| WH                 | Intelli-Comfort w/ModLINC Controller, Technicoat Cond. Coil, Phase Monitor, & Coil Guard                           |
| WJ                 | Intelli-Comfort w/ModLINC Controller, & Technicoat Evap. Coil                                                      |
| WK                 | Intelli-Comfort w/ModLINC Controller, Technicoat Evap. Coil, & Phase Monitor                                       |
| WL                 | Intelli-Comfort w/ModLINC Controller, Technicoat Evap. Coil, & Coil Guard                                          |
| WM                 | Intelli-Comfort w/ModLINC Controller, Technicoat Evap. Coil, Phase Monitor, & Coil Guard                           |
| WN                 | Intelli-Comfort w/ModLINC Controller, & Technicoat Evap. & Cond Coils                                              |
| WP                 | Intelli-Comfort w/ModLINC Controller, Technicoat Evap. & Cond Coils, & Phase Monitor                               |
| WQ                 | Intelli-Comfort w/ModLINC Controller, Technicoat Evap. & Cond Coils, & Coil Guard                                  |
| WR                 | Intelli-Comfort w/ModLINC Controller, Technicoat Evap. & Cond Coils, Phase Monitor, & Coil Guard                   |
| WS                 | Intelli-Comfort w/ModLINC Controller, SS Drain Pan                                                                 |
| WT                 | Intelli-Comfort w/ModLINC Controller, SS Drain Pan, Phase Monitor, & Coil Guard                                    |
| WU                 | Intelli-Comfort w/ModLINC Controller, SS Drain Pan, & Technicoat Cond Coils                                        |
| WV                 | Intelli-Comfort w/ModLINC Controller, SS Drain Pan, & Technicoat Evap Coil                                         |
| WW                 | Intelli-Comfort w/ModLINC Controller, SS Drain Pan, & Technicoat Evap and Cond Coils                               |
| WX                 | Intelli-Comfort w/ModLINC Controller, SS Drain Pan, Phase Monitor, Coil Guard, & Technicoat Evap and Cond Coils    |
| NA                 | Novar ETC-3 Controller with Dirty Filter Switch & Air Proving Switch                                               |
| NB                 | Novar ETC-3 Controller, DFS, APS & Phase Monitor                                                                   |
| NC                 | Novar ETC-3 Controller, DFS, APS & Coil Guard                                                                      |
| ND                 | Novar ETC-3 Controller, DFS, APS, Phase Monitor, & Coil Guard                                                      |
| NE                 | Novar ETC-3 Controller, DFS, APS & Technicoat Cond. Coil                                                           |
| NF                 | Novar ETC-3 Controller, DFS, APS, Technicoat Cond. Coil, & Phase Monitor                                           |
| NG                 | Novar ETC-3 Controller, DFS, APS, Technicoat Cond. Coil, & Coil Guard                                              |
| NH                 | Novar ETC-3 Controller, DFS, APS, Technicoat Cond. Coil, Phase Monitor, & Coil Guard                               |
| NJ                 | Novar ETC-3 Controller, DFS, APS & Technicoat Evap. Coil                                                           |
| NK                 | Novar ETC-3 Controller, DFS, APS, Technicoat Evap. Coil, & Phase Monitor                                           |
| NL                 | Novar ETC-3 Controller, DFS, APS, Technicoat Evap. Coil, & Coil Guard                                              |
| NM                 | Novar ETC-3 Controller, DFS, APS, Technicoat Evap. Coil, Phase Monitor, & Coil Guard                               |
| NN                 | Novar ETC-3 Controller, DFS, APS & Technicoat Evap. & Cond Coils                                                   |
| NP                 | Novar ETC-3 Controller, DFS, APS, Technicoat Evap. & Cond Coils, & Phase Monitor                                   |
| NQ                 | Novar ETC-3 Controller, DFS, APS, Technicoat Evap. & Cond Coils, & Coil Guard                                      |

| Additional Options |                                                                                                                  |
|--------------------|------------------------------------------------------------------------------------------------------------------|
| NR                 | Novar ETC-3 Controller, DFS, APS, Technicoat Evap. & Cond Coils, Phase Monitor, & Coil Guard                     |
| NS                 | Novar ETC-3 Controller, DFS, APS, SS Drain Pan                                                                   |
| NT                 | Novar ETC-3 Controller, DFS, APS, SS Drain Pan, Phase Monitor, & Coil Guard                                      |
| NU                 | Novar ETC-3 Controller, DFS, APS, SS Drain Pan, & Technicoat Cond Coils                                          |
| NV                 | Novar ETC-3 Controller, DFS, APS, SS Drain Pan, & Technicoat Evap Coil                                           |
| NW                 | Novar ETC-3, DFS, APS, SS Drain Pan, & Technicoat Evap and Cond Coils                                            |
| NX                 | Novar ETC-3 Controller, DFS, APS, SS Drain Pan, Phase Monitor, Coil Guard, & Technicoat Evap and Cond Coils      |
| LA                 | Simplicity Intelli-Comfort Controller                                                                            |
| LB                 | Simplicity Intelli-Comfort Controller, & Phase Monitor                                                           |
| LC                 | Simplicity Intelli-Comfort Controller, & Coil Guard                                                              |
| LD                 | Simplicity Intelli-Comfort Controller, Phase Monitor, & Coil Guard                                               |
| LE                 | Simplicity Intelli-Comfort Controller, & Technicoat Cond. Coil                                                   |
| LF                 | Simplicity Intelli-Comfort Controller, Technicoat Cond. Coil, & Phase Monitor                                    |
| LG                 | Simplicity Intelli-Comfort Controller, Technicoat Cond. Coil, & Coil Guard                                       |
| LH                 | Simplicity Intelli-Comfort Controller, Technicoat Cond. Coil, Phase Monitor, & Coil Guard                        |
| LJ                 | Simplicity Intelli-Comfort Controller, & Technicoat Evap. Coil                                                   |
| LK                 | Simplicity Intelli-Comfort Controller, Technicoat Evap. Coil, & Phase Monitor                                    |
| LL                 | Simplicity Intelli-Comfort Controller, Technicoat Evap. Coil, & Coil Guard                                       |
| LM                 | Simplicity Intelli-Comfort Controller, Technicoat Evap. Coil, Phase Monitor, & Coil Guard                        |
| LN                 | Simplicity Intelli-Comfort Controller, & Technicoat Evap. & Cond Coils                                           |
| LP                 | Simplicity Intelli-Comfort Controller, Technicoat Evap. & Cond Coils, & Phase Monitor                            |
| LQ                 | Simplicity Intelli-Comfort Controller, Technicoat Evap. & Cond Coils, & Coil Guard                               |
| LR                 | Simplicity Intelli-Comfort Controller, Technicoat Evap. & Cond Coils, Phase Monitor, & Coil Guard                |
| LS                 | Simplicity Intelli-Comfort Controller, SS Drain Pan                                                              |
| LT                 | Simplicity Intelli-Comfort Controller, SS Drain Pan, Phase Monitor, & Coil Guard                                 |
| LU                 | Simplicity Intelli-Comfort Controller, SS Drain Pan, & Technicoat Cond Coils                                     |
| LV                 | Simplicity Intelli-Comfort Controller, SS Drain Pan, & Technicoat Evap Coil                                      |
| LW                 | Simplicity Intelli-Comfort Controller, SS Drain Pan, & Technicoat Evap and Cond Coils                            |
| LX                 | Simplicity Intelli-Comfort Controller, SS Drain Pan, Phase Monitor, Coil Guard, & Technicoat Evap and Cond Coils |
| TA                 | Technicoat Condenser Coil                                                                                        |
| TB                 | Technicoat Condenser Coil & Phase Monitor                                                                        |
| TC                 | Technicoat Condenser Coil & Coil Guard                                                                           |
| TD                 | Technicoat Condenser Coil & Dirty Filter Switch                                                                  |
| TE                 | Technicoat Condenser Coil, Phase Monitor, & Coil Guard                                                           |
| TF                 | Technicoat Condenser Coil, Phase Monitor, & Dirty Filter Switch                                                  |
| TG                 | Technicoat Condenser Coil, Coil Guard, & Dirty Filter Switch                                                     |
| TH                 | Technicoat Condenser Coil, Phase Monitor, Coil Guard, & Dirty Filter Switch                                      |
| TJ                 | Technicoat Evaporator Coil                                                                                       |
| TK                 | Technicoat Evaporator Coil & Phase Monitor                                                                       |
| TL                 | Technicoat Evaporator Coil & Coil Guard                                                                          |
| TM                 | Technicoat Evaporator Coil & Dirty Filter Switch                                                                 |
| TN                 | Technicoat Evaporator Coil, Phase Monitor, & Coil Guard                                                          |
| TP                 | Technicoat Evaporator Coil, Phase Monitor, & Dirty Filter Switch                                                 |
| TQ                 | Technicoat Evaporator Coil, Coil Guard, & Dirty Filter Switch                                                    |
| TR                 | Technicoat Evaporator Coil, Phase Monitor, Coil Guard, & Dirty Filter Switch                                     |
| TS                 | Technicoat Evaporator & Condenser Coils                                                                          |
| TT                 | Technicoat Evaporator & Condenser Coils & Phase Monitor                                                          |
| TU                 | Technicoat Evaporator & Condenser Coils & Coil Guard                                                             |
| TV                 | Technicoat Evaporator & Condenser Coils & Dirty Filter Switch                                                    |
| TW                 | Technicoat Evaporator & Condenser Coils, Phase Monitor, & Coil Guard                                             |
| TX                 | Technicoat Evaporator & Condenser Coils, Phase Monitor, & Dirty Filter Switch                                    |
| TY                 | Technicoat Evaporator & Condenser Coils, Coil Guard, & Dirty Filter Switch                                       |
| TZ                 | Technicoat Evaporator & Condenser Coils, Phase Monitor, Coil Guard, & Dirty Filter Switch                        |
| T1                 | Technicoat Condenser & SS Drain Pan                                                                              |
| T3                 | Technicoat Condenser Coil, SS Drain Pan, Phase Monitor, Coil Guard, & Dirty Filter Switch                        |
| T4                 | Technicoat Evaporator & SS Drain Pan                                                                             |
| T6                 | Technicoat Evaporator Coil, SS Drain Pan, Phase Monitor, Coil Guard, & Dirty Filter Switch                       |
| T7                 | Technicoat Evaporator & Condenser Coils & SS Drain Pan                                                           |
| T9                 | Technicoat Evaporator & Condenser Coils, SS Drain Pan, Phase Monitor, Coil Guard, & Dirty Filter Switch          |

TABLE 2: DF PHYSICAL DATA

| Component                      |                                      | Models  |         |              |         |
|--------------------------------|--------------------------------------|---------|---------|--------------|---------|
|                                |                                      | 078     | 090     | 102          | 120     |
| Evaporator Blower              | Blower, Centrifugal (Dia. X Wd. in.) | 15 x 15 | 12 x 12 | 12 x 12      | 15 x 15 |
|                                | Motor, Standard (HP)                 | 1.5     | 2       | 3            | 2       |
|                                | Motor, Optional (HP)                 | 2       | 3       | 3            | 3       |
| Evaporator Coil                | Rows                                 | 3       | 3       | 3            | 4       |
|                                | Fins per Inch                        | 15      | 15      | 15           | 15      |
|                                | Height (in.)                         | 32      | 32      | 32           | 40      |
|                                | Face Area (ft. <sup>2</sup> )        | 10.67   | 10.67   | 10.67        | 13.2    |
| Condenser Fan<br>(2 per Unit)  | Propeller Dia. (in.)                 | 24      | 24      | 24           | 24      |
|                                | Motor (HP, each)                     | 1/3     | 1/3     | 3/4          | 3/4     |
|                                | CFM, Nominal (each)                  | 1700    | 1700    | 2200         | 2200    |
| Condenser Coil<br>(2 per unit) | Rows                                 | 1       | 1       | Sys 1: 2 Row | 2       |
|                                |                                      |         |         | Sys 2: 1 Row |         |
|                                | Fins per Inch                        | 20      | 20      | 20           | 20      |
|                                | Height (in.)                         | 44      | 36      | 36           | 44      |
| Refrigerant Charge             | System 1 (lb/oz)                     | 6/12    | 5/4     | 9/12         | 11/1    |
|                                | System 2 (lb/oz)                     | 6/4     | 5/0     | 5/6          | 11/1    |
| Compressors                    | Quantity                             | 2       | 2       | 2            | 2       |
|                                | Type                                 | Recip   | Recip   | Recip        | Recip   |
| Air Filters                    | Size (Wd. x Ht. x Thickness in.)     | 25x20x2 | 25x16x2 | 25x16x2      | 25x20x2 |
|                                | Number Per Unit                      | 4       | 4       | 4            | 4       |

**TABLE 3: DF CAPACITY RATINGS**

| Size<br>(Tons)         | Model            | Cooling Capacity<br>ARI Ratings* |      |       | CFM  | Sound<br>Rating<br>(dB) <sup>†</sup> | Nominal<br>Electric<br>Heat<br>Capacity <sup>‡</sup><br>(kW) | Gas Heat Capacity |                 |                               |                       | Gas<br>Line<br>Size<br>(in. OD) |
|------------------------|------------------|----------------------------------|------|-------|------|--------------------------------------|--------------------------------------------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------------------------|
|                        |                  | MBH                              | EER  | IPLV  |      |                                      |                                                              | Input<br>(MBH)    | Output<br>(MBH) | Seasonal<br>Efficiency<br>(%) | Temp.<br>Rise<br>(°F) |                                 |
| <b>078<br/>(6-1/2)</b> | Cooling<br>Only  | 75                               | 10.4 | 11.0  | 2600 | 84                                   | -                                                            | -                 | -               | -                             | -                     | -                               |
|                        | Electric<br>Heat |                                  |      |       |      |                                      | 9, 18, 24,<br>36                                             | -                 | -               | -                             | -                     | -                               |
|                        | Gas Heat         |                                  |      |       |      |                                      | -                                                            | 120               | 96              | 80                            | 20-50                 | 3/4                             |
|                        | Gas Heat         |                                  |      |       |      |                                      | -                                                            | 180               | 144             | 80                            | 35-65                 | 3/4                             |
| <b>090<br/>(7-1/2)</b> | Cooling<br>Only  | 87                               | 10.5 | 11.6  | 2516 | 84                                   | -                                                            | -                 | -               | -                             | -                     | -                               |
|                        | Electric<br>Heat |                                  |      |       |      |                                      | 18, 36                                                       | -                 | -               | -                             | -                     | -                               |
|                        | Gas Heat         |                                  |      |       |      |                                      | -                                                            | 120               | 96              | 80                            | 15-45                 | 3/4                             |
|                        | Gas Heat         |                                  |      |       |      |                                      | -                                                            | 180               | 144             | 80                            | 30-60                 | 3/4                             |
| <b>102<br/>(8-1/2)</b> | Cooling<br>Only  | 99                               | 10.4 | 10.39 | 3055 | 84                                   | -                                                            | -                 | -               | -                             | -                     | -                               |
|                        | Electric<br>Heat |                                  |      |       |      |                                      | 9, 18, 24,<br>36                                             | -                 | -               | -                             | -                     | -                               |
|                        | Gas Heat         |                                  |      |       |      |                                      | -                                                            | 120               | 96              | 80                            | 15-45                 | 3/4                             |
|                        | Gas Heat         |                                  |      |       |      |                                      | -                                                            | 180               | 144             | 80                            | 30-60                 | 3/4                             |
| <b>120<br/>(10)</b>    | Cooling<br>Only  | 115                              | 10.4 | 10.0  | 4000 | 90                                   | -                                                            | -                 | -               | -                             | -                     | -                               |
|                        | Electric<br>Heat |                                  |      |       |      |                                      | 18, 24, 36,<br>54                                            | -                 | -               | -                             | -                     | -                               |
|                        | Gas Heat         |                                  |      |       |      |                                      | -                                                            | 180               | 144             | 80                            | 20-50                 | 3/4                             |
|                        | Gas Heat         |                                  |      |       |      |                                      | -                                                            | 240               | 192             | 80                            | 35-65                 | 3/4                             |

\* Rated at 95°F ambient 80°F dry bulb and 67°F wet bulb.

† Rated in accordance with ARI 270 standard.

‡ See Table 17.

**TABLE 4: UNIT VOLTAGE LIMITATIONS**

| POWER RATING        | MIN. | MAX. |
|---------------------|------|------|
| <b>208/230-3-60</b> | 187  | 252  |
| <b>460-3-60</b>     | 432  | 504  |
| <b>575-3-60</b>     | 540  | 630  |

\* The capacities are gross ratings. For net capacity, deduct indoor blower motor, MBH=3.415 x kW. Refer to the appropriate Blower Performance table for the kW of the supply air blower motor.

† Input power includes the condenser and compressor motors but not the indoor blower motor.

**TABLE 5: COOLING CAPACITY DF078 (6-1/2 TON) UNIT**

| Return Air |            | Outdoor Ambient Temperature 85°F  |                                     |                                                            |      |      |      |      |      |                         | Outdoor Ambient Temperature 95°F    |                                                            |      |      |      |      |      |      |      |
|------------|------------|-----------------------------------|-------------------------------------|------------------------------------------------------------|------|------|------|------|------|-------------------------|-------------------------------------|------------------------------------------------------------|------|------|------|------|------|------|------|
| CFM        | WB<br>(°F) | Gross<br>Cap.*<br>(MBH)           | Input <sup>†</sup><br>Power<br>(kW) | Gross Sensible Capacity (MBH)*<br>Return Air Dry Bulb (°F) |      |      |      |      |      | Gross<br>Cap.*<br>(MBH) | Input <sup>†</sup><br>Power<br>(kW) | Gross Sensible Capacity (MBH)*<br>Return Air Dry Bulb (°F) |      |      |      |      |      |      |      |
|            |            |                                   |                                     | 86                                                         | 83   | 80   | 77   | 74   | 71   |                         |                                     | 68                                                         | 86   | 83   | 80   | 77   | 74   | 71   | 68   |
| 1950       | 72         | 84.1                              | 5.92                                | 50.0                                                       | 44.4 | 38.8 | 33.3 | 27.7 | -    | -                       | 80.2                                | 6.37                                                       | 48.3 | 42.7 | 37.2 | 31.6 | 26.1 | -    | -    |
|            | 67         | 77.4                              | 5.78                                | 62.7                                                       | 57.1 | 51.6 | 46.0 | 40.5 | 34.9 | 29.3                    | 71.8                                | 6.20                                                       | 60.1 | 54.6 | 49.0 | 43.4 | 37.9 | 32.3 | 26.8 |
|            | 62         | 70.9                              | 5.65                                | 70.9                                                       | 67.9 | 62.4 | 56.8 | 51.3 | 45.7 | 40.1                    | 64.4                                | 6.05                                                       | 64.4 | 63.9 | 58.4 | 52.8 | 47.3 | 41.7 | 36.1 |
|            | 57         | 68.2                              | 5.63                                | 68.2                                                       | 68.2 | 62.7 | 57.2 | 51.6 | 46.0 | 40.5                    | 59.5                                | 5.99                                                       | 59.5 | 59.5 | 53.9 | 48.4 | 42.8 | 37.3 | 31.7 |
| 2275       | 72         | 87.3                              | 5.96                                | 55.3                                                       | 48.7 | 42.1 | 35.5 | 29.0 | -    | -                       | 83.4                                | 6.42                                                       | 53.9 | 47.3 | 40.7 | 34.1 | 27.6 | -    | -    |
|            | 67         | 80.3                              | 5.82                                | 69.0                                                       | 62.5 | 55.9 | 49.3 | 42.8 | 36.2 | 29.6                    | 74.7                                | 6.26                                                       | 66.8 | 60.2 | 53.7 | 47.1 | 40.5 | 33.9 | 27.4 |
|            | 62         | 73.5                              | 5.69                                | 73.5                                                       | 72.0 | 67.6 | 61.1 | 54.5 | 47.9 | 41.3                    | 66.9                                | 6.10                                                       | 66.9 | 66.7 | 63.9 | 57.4 | 50.8 | 44.2 | 37.7 |
|            | 57         | 70.7                              | 5.67                                | 70.7                                                       | 70.7 | 68.0 | 61.4 | 54.8 | 48.3 | 41.7                    | 61.8                                | 6.05                                                       | 61.8 | 61.8 | 59.1 | 52.5 | 45.9 | 39.4 | 32.8 |
| 2600       | 72         | 90.4                              | 6.01                                | 60.5                                                       | 53.0 | 45.4 | 37.8 | 30.2 | -    | -                       | 86.6                                | 6.48                                                       | 59.4 | 51.8 | 44.3 | 36.7 | 29.1 | -    | -    |
|            | 67         | 83.2                              | 5.87                                | 75.4                                                       | 67.8 | 60.2 | 52.7 | 45.1 | 37.5 | 29.9                    | 77.6                                | 6.31                                                       | 73.5 | 65.9 | 58.3 | 50.7 | 43.2 | 35.6 | 28.0 |
|            | 62         | 76.1                              | 5.74                                | 76.1                                                       | 76.1 | 72.9 | 65.3 | 57.7 | 50.1 | 42.5                    | 69.5                                | 6.15                                                       | 69.5 | 69.5 | 69.5 | 61.9 | 54.3 | 46.8 | 39.2 |
|            | 57         | 73.2                              | 5.72                                | 73.2                                                       | 73.2 | 73.2 | 65.7 | 58.1 | 50.5 | 42.9                    | 64.2                                | 6.10                                                       | 64.2 | 64.2 | 64.2 | 56.6 | 49.1 | 41.5 | 33.9 |
| 2925       | 72         | 91.6                              | 6.05                                | 65.0                                                       | 56.3 | 47.7 | 39.1 | 30.4 | -    | -                       | 87.4                                | 6.54                                                       | 64.1 | 55.5 | 46.8 | 38.2 | 29.6 | -    | -    |
|            | 67         | 84.4                              | 5.91                                | 80.5                                                       | 72.0 | 63.3 | 54.7 | 46.1 | 37.4 | 28.8                    | 78.3                                | 6.37                                                       | 76.2 | 70.3 | 61.7 | 53.1 | 44.4 | 35.8 | 27.2 |
|            | 62         | 77.2                              | 5.78                                | 77.2                                                       | 77.2 | 75.6 | 66.9 | 58.3 | 49.6 | 41.0                    | 70.1                                | 6.21                                                       | 70.1 | 70.1 | 70.1 | 61.5 | 52.9 | 44.2 | 35.6 |
|            | 57         | 74.3                              | 5.76                                | 74.3                                                       | 74.3 | 74.3 | 65.6 | 57.0 | 48.4 | 39.7                    | 64.8                                | 6.15                                                       | 64.8 | 64.8 | 64.8 | 56.2 | 47.5 | 38.9 | 30.3 |
| 3250       | 72         | 92.9                              | 6.09                                | 69.4                                                       | 59.7 | 50.0 | 40.4 | 30.7 | -    | -                       | 88.2                                | 6.59                                                       | 68.8 | 59.1 | 49.4 | 39.7 | 30.0 | -    | -    |
|            | 67         | 85.5                              | 5.95                                | 85.5                                                       | 76.1 | 66.4 | 56.7 | 47.1 | 37.4 | 27.7                    | 79.0                                | 6.42                                                       | 79.0 | 74.8 | 65.1 | 55.4 | 45.7 | 36.0 | 26.3 |
|            | 62         | 78.2                              | 5.81                                | 78.2                                                       | 78.2 | 78.2 | 68.6 | 58.9 | 49.2 | 39.5                    | 70.8                                | 6.26                                                       | 70.8 | 70.8 | 70.8 | 61.1 | 51.4 | 41.7 | 32.0 |
|            | 57         | 75.3                              | 5.80                                | 75.3                                                       | 75.3 | 75.3 | 65.6 | 55.9 | 46.2 | 36.5                    | 65.4                                | 6.21                                                       | 65.4 | 65.4 | 65.4 | 55.7 | 46.0 | 36.3 | 26.7 |
|            |            | Outdoor Ambient Temperature 105°F |                                     |                                                            |      |      |      |      |      |                         | Outdoor Ambient Temperature 115°F   |                                                            |      |      |      |      |      |      |      |
| 1950       | 72         | 74.0                              | 6.84                                | 46.1                                                       | 40.5 | 35.0 | 29.4 | 23.9 | -    | -                       | 67.8                                | 7.31                                                       | 43.9 | 38.3 | 32.8 | 27.2 | 21.6 | -    | -    |
|            | 67         | 64.9                              | 6.62                                | 57.4                                                       | 51.8 | 46.3 | 40.7 | 35.1 | 29.6 | 24.0                    | 58.0                                | 7.03                                                       | 54.6 | 49.1 | 43.5 | 38.0 | 32.4 | 26.8 | 21.3 |
|            | 62         | 57.5                              | 6.45                                | 57.5                                                       | 57.3 | 51.8 | 46.2 | 40.7 | 35.1 | 29.5                    | 50.6                                | 6.86                                                       | 50.6 | 50.6 | 45.2 | 39.6 | 34.0 | 28.5 | 22.9 |
|            | 57         | 56.1                              | 6.52                                | 56.1                                                       | 56.1 | 50.5 | 45.0 | 39.4 | 33.8 | 28.3                    | 52.8                                | 7.05                                                       | 52.8 | 52.6 | 47.1 | 41.5 | 36.0 | 30.4 | 24.8 |
| 2275       | 72         | 76.5                              | 6.90                                | 51.4                                                       | 44.8 | 38.2 | 31.7 | 25.1 | -    | -                       | 69.6                                | 7.37                                                       | 48.9 | 42.3 | 35.8 | 29.2 | 22.6 | -    | -    |
|            | 67         | 67.1                              | 6.67                                | 62.3                                                       | 57.1 | 50.6 | 44.0 | 37.4 | 30.9 | 24.3                    | 59.5                                | 7.09                                                       | 57.9 | 54.1 | 47.5 | 40.9 | 34.4 | 27.8 | 21.2 |
|            | 62         | 59.5                              | 6.51                                | 59.5                                                       | 59.4 | 56.6 | 50.0 | 43.5 | 36.9 | 30.3                    | 52.0                                | 6.92                                                       | 52.0 | 52.0 | 49.3 | 42.7 | 36.1 | 29.6 | 23.0 |
|            | 57         | 58.0                              | 6.58                                | 58.0                                                       | 58.0 | 55.2 | 48.7 | 42.1 | 35.5 | 28.9                    | 54.2                                | 7.11                                                       | 54.2 | 54.2 | 51.4 | 44.8 | 38.2 | 31.7 | 25.1 |
| 2600       | 72         | 79.0                              | 6.96                                | 56.7                                                       | 49.1 | 41.5 | 33.9 | 26.3 | -    | -                       | 71.5                                | 7.43                                                       | 53.9 | 46.3 | 38.8 | 31.2 | 23.6 | -    | -    |
|            | 67         | 69.3                              | 6.73                                | 67.3                                                       | 62.5 | 54.9 | 47.3 | 39.7 | 32.2 | 24.6                    | 61.1                                | 7.15                                                       | 61.1 | 59.1 | 51.5 | 43.9 | 36.3 | 28.7 | 21.1 |
|            | 62         | 61.5                              | 6.56                                | 61.5                                                       | 61.5 | 61.5 | 53.9 | 46.3 | 38.7 | 31.1                    | 53.4                                | 6.98                                                       | 53.4 | 53.4 | 53.4 | 45.8 | 38.3 | 30.7 | 23.1 |
|            | 57         | 59.9                              | 6.63                                | 59.9                                                       | 59.9 | 59.9 | 52.4 | 44.8 | 37.2 | 29.6                    | 55.7                                | 7.16                                                       | 55.7 | 55.7 | 55.7 | 48.1 | 40.5 | 32.9 | 25.4 |
| 2925       | 72         | 79.7                              | 7.02                                | 61.3                                                       | 52.7 | 44.1 | 35.4 | 26.8 | -    | -                       | 72.0                                | 7.50                                                       | 58.6 | 49.9 | 41.3 | 32.7 | 24.0 | -    | -    |
|            | 67         | 69.9                              | 6.79                                | 68.9                                                       | 65.4 | 58.3 | 49.7 | 41.0 | 32.4 | 23.8                    | 61.6                                | 7.22                                                       | 61.6 | 60.5 | 54.9 | 46.2 | 37.6 | 29.0 | 20.3 |
|            | 62         | 62.0                              | 6.63                                | 62.0                                                       | 62.0 | 62.0 | 53.3 | 44.7 | 36.1 | 27.4                    | 53.8                                | 7.04                                                       | 53.8 | 53.8 | 53.8 | 45.2 | 36.5 | 27.9 | 19.3 |
|            | 57         | 60.4                              | 6.69                                | 60.4                                                       | 60.4 | 60.4 | 51.8 | 43.2 | 34.5 | 25.9                    | 56.1                                | 7.23                                                       | 56.1 | 56.1 | 56.1 | 47.4 | 38.8 | 30.2 | 21.5 |
| 3250       | 72         | 80.4                              | 7.09                                | 66.0                                                       | 56.3 | 46.6 | 36.9 | 27.3 | -    | -                       | 72.5                                | 7.58                                                       | 63.3 | 53.6 | 43.9 | 34.2 | 24.5 | -    | -    |
|            | 67         | 70.5                              | 6.85                                | 70.5                                                       | 68.4 | 61.7 | 52.0 | 42.3 | 32.6 | 22.9                    | 62.0                                | 7.29                                                       | 62.0 | 62.0 | 58.3 | 48.6 | 38.9 | 29.2 | 19.5 |
|            | 62         | 62.5                              | 6.69                                | 62.5                                                       | 62.5 | 62.5 | 52.8 | 43.1 | 33.4 | 23.7                    | 54.2                                | 7.11                                                       | 54.2 | 54.2 | 54.2 | 44.5 | 34.8 | 25.1 | 15.4 |
|            | 57         | 60.9                              | 6.76                                | 60.9                                                       | 60.9 | 60.9 | 51.3 | 41.6 | 31.9 | 22.2                    | 56.5                                | 7.31                                                       | 56.5 | 56.5 | 56.5 | 46.8 | 37.1 | 27.4 | 17.7 |
|            |            | Outdoor Ambient Temperature 125°F |                                     |                                                            |      |      |      |      |      |                         |                                     |                                                            |      |      |      |      |      |      |      |
| 1950       | 72         | 61.6                              | 7.8                                 | 41.7                                                       | 36.1 | 30.6 | 25.0 | 19.4 | -    | -                       |                                     |                                                            |      |      |      |      |      |      |      |
|            | 67         | 51.0                              | 7.4                                 | 51.0                                                       | 46.3 | 40.8 | 35.2 | 29.7 | 24.1 | 18.5                    |                                     |                                                            |      |      |      |      |      |      |      |
|            | 62         | 43.8                              | 7.3                                 | 43.8                                                       | 43.8 | 38.6 | 33.0 | 27.4 | 21.9 | 16.3                    |                                     |                                                            |      |      |      |      |      |      |      |
|            | 57         | 49.4                              | 7.6                                 | 49.4                                                       | 49.2 | 43.6 | 38.1 | 32.5 | 27.0 | 21.4                    |                                     |                                                            |      |      |      |      |      |      |      |
| 2275       | 72         | 62.7                              | 7.8                                 | 46.4                                                       | 39.8 | 33.3 | 26.7 | 20.1 | -    | -                       |                                     |                                                            |      |      |      |      |      |      |      |
|            | 67         | 52.0                              | 7.5                                 | 52.0                                                       | 51.0 | 44.4 | 37.8 | 31.3 | 24.7 | 18.1                    |                                     |                                                            |      |      |      |      |      |      |      |
|            | 62         | 44.6                              | 7.3                                 | 44.6                                                       | 44.6 | 42.0 | 35.4 | 28.8 | 22.3 | 15.7                    |                                     |                                                            |      |      |      |      |      |      |      |
|            | 57         | 50.4                              | 7.6                                 | 50.4                                                       | 50.3 | 47.5 | 41.0 | 34.4 | 27.8 | 21.2                    |                                     |                                                            |      |      |      |      |      |      |      |
| 2600       | 72         | 63.9                              | 7.9                                 | 51.2                                                       | 43.6 | 36.0 | 28.4 | 20.8 | -    | -                       |                                     |                                                            |      |      |      |      |      |      |      |
|            | 67         | 52.9                              | 7.6                                 | 52.9                                                       | 52.9 | 48.1 | 40.5 | 32.9 | 25.3 | 17.7                    |                                     |                                                            |      |      |      |      |      |      |      |
|            | 62         | 45.4                              | 7.4                                 | 45.4                                                       | 45.4 | 45.4 | 37.8 | 30.2 | 22.6 | 15.1                    |                                     |                                                            |      |      |      |      |      |      |      |
|            | 57         | 51.4                              | 7.7                                 | 51.4                                                       | 51.4 | 51.4 | 43.8 | 36.2 | 28.7 | 21.1                    |                                     |                                                            |      |      |      |      |      |      |      |
| 2925       | 72         | 64.3                              | 8.0                                 | 55.8                                                       | 47.2 | 38.6 | 29.9 | 21.3 | -    | -                       |                                     |                                                            |      |      |      |      |      |      |      |
|            | 67         | 53.2                              | 7.6                                 | 53.2                                                       | 53.2 | 51.5 | 42.8 | 34.2 | 25.6 | 16.9                    |                                     |                                                            |      |      |      |      |      |      |      |
|            | 62         | 45.6                              | 7.5                                 | 45.6                                                       | 45.6 | 45.6 | 37.0 | 28.4 | 19.7 | 11.1                    |                                     |                                                            |      |      |      |      |      |      |      |
|            | 57         | 51.7                              | 7.8                                 | 51.7                                                       | 51.7 | 51.7 | 43.1 | 34.4 | 25.8 | 17.2                    |                                     |                                                            |      |      |      |      |      |      |      |
| 3250       | 72         | 64.7                              | 8.1                                 | 60.5                                                       | 50.8 | 41.1 | 31.4 | 21.7 | -    | -                       |                                     |                                                            |      |      |      |      |      |      |      |
|            | 67         | 53.5                              | 7.7                                 | 53.5                                                       | 53.5 | 53.5 | 45.2 | 35.5 | 25.8 | 16.1                    |                                     |                                                            |      |      |      |      |      |      |      |
|            | 62         | 45.9                              | 7.5                                 | 45.9                                                       | 45.9 | 45.9 | 36.2 | 26.5 | 16.8 | 7.1                     |                                     |                                                            |      |      |      |      |      |      |      |
|            | 57         | 52.0                              | 7.9                                 | 52.0                                                       | 52.0 | 52.0 | 42.3 | 32.6 | 22.9 | 13.2                    |                                     |                                                            |      |      |      |      |      |      |      |

**TABLE 6: COOLING CAPACITY DF090 (7-1/2 TON) UNIT**

| Air on Evaporator Coil |         | Temperature of Air on Condenser Coil |                   |                                                  |       |       |      |      |      |      |                   |                   |                                                  |      |      |      |      |      |      |
|------------------------|---------|--------------------------------------|-------------------|--------------------------------------------------|-------|-------|------|------|------|------|-------------------|-------------------|--------------------------------------------------|------|------|------|------|------|------|
|                        |         | 75°F                                 |                   |                                                  |       |       |      |      |      |      | 85°F              |                   |                                                  |      |      |      |      |      |      |
| CFM                    | WB (°F) | Total Cap.* (MBH)                    | Total† Input (kW) | Sensible Capacity (MBH)*<br>Return Dry Bulb (°F) |       |       |      |      |      |      | Total Cap.* (MBH) | Total† Input (kW) | Sensible Capacity (MBH)*<br>Return Dry Bulb (°F) |      |      |      |      |      |      |
|                        |         |                                      |                   | 86                                               | 83    | 80    | 77   | 74   | 71   | 68   |                   |                   | 86                                               | 83   | 80   | 77   | 74   | 71   | 68   |
| 2250                   | 72      | 106.1                                | 6.5               | 61.2                                             | 54.8  | 48.4  | 42.0 | 35.5 | -    | -    | 100.7             | 7.1               | 58.8                                             | 52.4 | 46.0 | 39.6 | 33.1 | -    | -    |
|                        | 67      | 99.1                                 | 6.3               | 75.8                                             | 69.4  | 63.0  | 56.5 | 50.1 | 43.7 | 37.3 | 92.8              | 6.9               | 73.5                                             | 67.0 | 60.6 | 54.2 | 47.8 | 41.4 | 35.0 |
|                        | 62      | 91.8                                 | 6.2               | 91.8                                             | 85.0  | 78.6  | 72.2 | 65.8 | 59.3 | 52.9 | 85.7              | 6.8               | 85.7                                             | 81.0 | 74.6 | 68.2 | 61.7 | 55.3 | 48.9 |
|                        | 57      | 89.3                                 | 6.2               | 89.3                                             | 89.0  | 82.6  | 76.2 | 69.8 | 63.4 | 57.0 | 84.7              | 6.8               | 84.7                                             | 83.7 | 77.3 | 70.9 | 64.5 | 58.1 | 51.7 |
| 2625                   | 72      | 110.1                                | 6.6               | 67.2                                             | 59.7  | 52.1  | 44.5 | 36.9 | -    | -    | 104.3             | 7.2               | 64.9                                             | 57.3 | 49.7 | 42.1 | 34.5 | -    | -    |
|                        | 67      | 102.8                                | 6.4               | 82.9                                             | 75.3  | 67.8  | 60.2 | 52.6 | 45.0 | 37.4 | 96.2              | 7.0               | 80.7                                             | 73.1 | 65.5 | 57.9 | 50.4 | 42.8 | 35.2 |
|                        | 62      | 95.3                                 | 6.3               | 95.3                                             | 91.9  | 84.6  | 77.0 | 69.4 | 61.9 | 54.3 | 88.7              | 6.8               | 88.7                                             | 86.4 | 80.6 | 73.0 | 65.4 | 57.9 | 50.3 |
|                        | 57      | 92.7                                 | 6.3               | 92.7                                             | 92.6  | 89.0  | 81.4 | 73.8 | 66.2 | 58.6 | 87.7              | 6.8               | 87.7                                             | 87.2 | 83.6 | 76.0 | 68.4 | 60.8 | 53.3 |
| 3000                   | 72      | 114.1                                | 6.6               | 73.3                                             | 64.5  | 55.8  | 47.0 | 38.3 | -    | -    | 107.9             | 7.2               | 70.9                                             | 62.2 | 53.4 | 44.7 | 35.9 | -    | -    |
|                        | 67      | 106.6                                | 6.4               | 90.1                                             | 81.3  | 72.6  | 63.8 | 55.1 | 46.3 | 37.6 | 99.5              | 7.1               | 87.9                                             | 79.2 | 70.4 | 61.7 | 52.9 | 44.2 | 35.4 |
|                        | 62      | 98.8                                 | 6.3               | 98.8                                             | 98.8  | 90.6  | 81.9 | 73.1 | 64.4 | 55.6 | 91.8              | 6.9               | 91.8                                             | 91.8 | 86.6 | 77.9 | 69.1 | 60.4 | 51.6 |
|                        | 57      | 96.1                                 | 6.3               | 96.1                                             | 96.1  | 95.3  | 86.6 | 77.8 | 69.1 | 60.3 | 90.7              | 6.9               | 90.7                                             | 90.7 | 89.8 | 81.1 | 72.3 | 63.6 | 54.9 |
| 3375                   | 72      | 115.3                                | 6.7               | 78.5                                             | 68.6  | 58.6  | 48.7 | 38.7 | -    | -    | 109.2             | 7.3               | 76.3                                             | 66.3 | 56.4 | 46.4 | 36.4 | -    | -    |
|                        | 67      | 107.7                                | 6.5               | 98.1                                             | 86.2  | 76.3  | 66.3 | 56.3 | 46.4 | 36.4 | 100.7             | 7.1               | 94.2                                             | 84.3 | 74.3 | 64.4 | 54.4 | 44.4 | 34.5 |
|                        | 62      | 99.8                                 | 6.4               | 99.8                                             | 99.8  | 95.8  | 85.8 | 75.8 | 65.9 | 55.9 | 92.9              | 6.9               | 92.9                                             | 92.9 | 90.3 | 80.4 | 70.4 | 60.5 | 50.5 |
|                        | 57      | 97.1                                 | 6.4               | 97.1                                             | 97.1  | 96.7  | 86.8 | 76.8 | 66.8 | 56.9 | 91.9              | 6.9               | 91.9                                             | 91.9 | 91.4 | 81.5 | 71.5 | 61.5 | 51.6 |
| 3750                   | 72      | 116.5                                | 6.8               | 83.8                                             | 72.6  | 61.5  | 50.3 | 39.1 | -    | -    | 110.6             | 7.3               | 81.7                                             | 70.5 | 59.3 | 48.1 | 36.9 | -    | -    |
|                        | 67      | 108.8                                | 6.6               | 106.0                                            | 91.1  | 79.9  | 68.8 | 57.6 | 46.4 | 35.2 | 101.9             | 7.1               | 100.5                                            | 89.4 | 78.2 | 67.0 | 55.8 | 44.7 | 33.5 |
|                        | 62      | 100.9                                | 6.4               | 100.9                                            | 100.9 | 100.9 | 89.7 | 78.5 | 67.4 | 56.2 | 94.0              | 7.0               | 94.0                                             | 94.0 | 94.0 | 82.9 | 71.7 | 60.5 | 49.3 |
|                        | 57      | 98.1                                 | 6.4               | 98.1                                             | 98.1  | 98.1  | 86.9 | 75.8 | 64.6 | 53.4 | 93.0              | 7.0               | 93.0                                             | 93.0 | 93.0 | 81.8 | 70.6 | 59.5 | 48.3 |
|                        |         | 95°F                                 |                   |                                                  |       |       |      |      |      |      | 105°F             |                   |                                                  |      |      |      |      |      |      |
| 2250                   | 72      | 95.3                                 | 7.7               | 56.4                                             | 50.0  | 43.6  | 37.2 | 30.8 | -    | -    | 87.9              | 8.3               | 53.5                                             | 47.1 | 40.7 | 34.3 | 27.9 | -    | -    |
|                        | 67      | 86.6                                 | 7.5               | 71.1                                             | 64.7  | 58.3  | 51.9 | 45.5 | 39.1 | 32.6 | 79.1              | 8.1               | 67.9                                             | 61.5 | 55.1 | 48.6 | 42.2 | 35.8 | 29.4 |
|                        | 62      | 79.5                                 | 7.3               | 79.5                                             | 77.0  | 70.6  | 64.1 | 57.7 | 51.3 | 44.9 | 73.2              | 7.9               | 73.2                                             | 70.9 | 64.5 | 58.0 | 51.6 | 45.2 | 38.8 |
|                        | 57      | 80.1                                 | 7.3               | 80.1                                             | 78.5  | 72.0  | 65.6 | 59.2 | 52.8 | 46.4 | 74.2              | 7.9               | 74.2                                             | 72.5 | 66.1 | 59.6 | 53.2 | 46.8 | 40.4 |
| 2625                   | 72      | 98.5                                 | 7.8               | 62.5                                             | 54.9  | 47.3  | 39.7 | 32.2 | -    | -    | 90.7              | 8.4               | 59.5                                             | 52.0 | 44.4 | 36.8 | 29.2 | -    | -    |
|                        | 67      | 89.5                                 | 7.6               | 78.5                                             | 70.9  | 63.3  | 55.7 | 48.1 | 40.6 | 33.0 | 81.6              | 8.1               | 74.3                                             | 67.6 | 60.1 | 52.5 | 44.9 | 37.3 | 29.7 |
|                        | 62      | 82.1                                 | 7.4               | 82.1                                             | 80.9  | 76.6  | 69.0 | 61.4 | 53.9 | 46.3 | 75.5              | 7.9               | 75.5                                             | 74.3 | 70.3 | 62.7 | 55.1 | 47.6 | 40.0 |
|                        | 57      | 82.7                                 | 7.4               | 82.7                                             | 81.9  | 78.2  | 70.6 | 63.0 | 55.5 | 47.9 | 76.5              | 8.0               | 76.5                                             | 75.7 | 72.1 | 64.5 | 56.9 | 49.3 | 41.7 |
| 3000                   | 72      | 101.7                                | 7.9               | 68.5                                             | 59.8  | 51.1  | 42.3 | 33.6 | -    | -    | 93.4              | 8.4               | 65.6                                             | 56.8 | 48.1 | 39.3 | 30.6 | -    | -    |
|                        | 67      | 92.4                                 | 7.7               | 85.8                                             | 77.0  | 68.3  | 59.5 | 50.8 | 42.0 | 33.3 | 84.1              | 8.2               | 80.8                                             | 73.8 | 65.1 | 56.3 | 47.6 | 38.8 | 30.1 |
|                        | 62      | 84.8                                 | 7.5               | 84.8                                             | 84.8  | 82.6  | 73.9 | 65.1 | 56.4 | 47.6 | 77.7              | 8.0               | 77.7                                             | 77.7 | 76.2 | 67.4 | 58.7 | 49.9 | 41.2 |
|                        | 57      | 85.4                                 | 7.4               | 85.4                                             | 85.4  | 84.4  | 75.6 | 66.9 | 58.1 | 49.4 | 78.9              | 8.0               | 78.9                                             | 78.9 | 78.1 | 69.3 | 60.6 | 51.8 | 43.1 |
| 3375                   | 72      | 103.2                                | 7.9               | 74.0                                             | 64.1  | 54.1  | 44.1 | 34.2 | -    | -    | 94.8              | 8.5               | 71.1                                             | 61.2 | 51.2 | 41.2 | 31.3 | -    | -    |
|                        | 67      | 93.7                                 | 7.7               | 90.4                                             | 82.3  | 72.4  | 62.4 | 52.4 | 42.5 | 32.5 | 85.4              | 8.3               | 83.7                                             | 78.4 | 69.3 | 59.3 | 49.4 | 39.4 | 29.4 |
|                        | 62      | 86.0                                 | 7.5               | 86.0                                             | 86.0  | 84.9  | 75.0 | 65.0 | 55.0 | 45.1 | 78.9              | 8.0               | 78.9                                             | 78.9 | 78.1 | 68.2 | 58.2 | 48.3 | 38.3 |
|                        | 57      | 86.6                                 | 7.5               | 86.6                                             | 86.6  | 86.1  | 76.2 | 66.2 | 56.2 | 46.3 | 80.1              | 8.1               | 80.1                                             | 80.1 | 79.7 | 69.7 | 59.7 | 49.8 | 39.8 |
| 3750                   | 72      | 104.6                                | 7.9               | 79.5                                             | 68.3  | 57.1  | 46.0 | 34.8 | -    | -    | 96.3              | 8.5               | 76.7                                             | 65.5 | 54.3 | 43.1 | 31.9 | -    | -    |
|                        | 67      | 95.1                                 | 7.7               | 95.1                                             | 87.6  | 76.4  | 65.3 | 54.1 | 42.9 | 31.7 | 86.7              | 8.3               | 86.7                                             | 83.0 | 73.5 | 62.3 | 51.1 | 40.0 | 28.8 |
|                        | 62      | 87.2                                 | 7.5               | 87.2                                             | 87.2  | 87.2  | 76.0 | 64.9 | 53.7 | 42.5 | 80.1              | 8.1               | 80.1                                             | 80.1 | 80.1 | 68.9 | 57.8 | 46.6 | 35.4 |
|                        | 57      | 87.9                                 | 7.5               | 87.9                                             | 87.9  | 87.9  | 76.7 | 65.5 | 54.3 | 43.2 | 81.3              | 8.1               | 81.3                                             | 81.3 | 81.3 | 70.1 | 58.9 | 47.7 | 36.6 |
|                        |         | 115°F                                |                   |                                                  |       |       |      |      |      |      | 125°F             |                   |                                                  |      |      |      |      |      |      |
| 2250                   | 72      | 80.5                                 | 8.9               | 50.6                                             | 44.2  | 37.8  | 31.4 | 25.0 | -    | -    | 73.0              | 9.4               | 47.7                                             | 41.3 | 34.9 | 28.5 | 22.1 | -    | -    |
|                        | 67      | 71.7                                 | 8.6               | 64.6                                             | 58.2  | 51.8  | 45.4 | 39.0 | 32.6 | 26.2 | 64.2              | 9.2               | 61.4                                             | 55.0 | 48.6 | 42.1 | 35.7 | 29.3 | 22.9 |
|                        | 62      | 66.9                                 | 8.4               | 66.9                                             | 64.8  | 58.4  | 51.9 | 45.5 | 39.1 | 32.7 | 60.6              | 9.0               | 60.6                                             | 58.7 | 52.2 | 45.8 | 39.4 | 33.0 | 26.6 |
|                        | 57      | 68.3                                 | 8.5               | 68.3                                             | 66.5  | 60.1  | 53.7 | 47.2 | 40.8 | 34.4 | 62.5              | 9.1               | 62.5                                             | 60.5 | 54.1 | 47.7 | 41.3 | 34.8 | 28.4 |
| 2625                   | 72      | 82.8                                 | 8.9               | 56.6                                             | 49.0  | 41.5  | 33.9 | 26.3 | -    | -    | 74.9              | 9.5               | 53.7                                             | 46.1 | 38.5 | 30.9 | 23.4 | -    | -    |
|                        | 67      | 73.7                                 | 8.7               | 70.2                                             | 64.4  | 56.8  | 49.3 | 41.7 | 34.1 | 26.5 | 65.8              | 9.3               | 65.8                                             | 61.2 | 53.6 | 46.0 | 38.4 | 30.9 | 23.3 |
|                        | 62      | 68.8                                 | 8.5               | 68.8                                             | 67.7  | 64.0  | 56.4 | 48.8 | 41.3 | 33.7 | 62.1              | 9.0               | 62.1                                             | 61.2 | 57.7 | 50.1 | 42.6 | 35.0 | 27.4 |
|                        | 57      | 70.3                                 | 8.6               | 70.3                                             | 69.4  | 65.9  | 58.3 | 50.7 | 43.2 | 35.6 | 64.1              | 9.2               | 64.1                                             | 63.1 | 59.7 | 52.2 | 44.6 | 37.0 | 29.4 |
| 3000                   | 72      | 85.1                                 | 9.0               | 62.6                                             | 53.9  | 45.1  | 36.4 | 27.6 | -    | -    | 76.8              | 9.6               | 59.6                                             | 50.9 | 42.2 | 33.4 | 24.7 | -    | -    |
|                        | 67      | 75.8                                 | 8.8               | 75.8                                             | 70.6  | 61.9  | 53.1 | 44.4 | 35.6 | 26.9 | 67.5              | 9.4               | 67.5                                             | 67.4 | 58.7 | 49.9 | 41.2 | 32.4 | 23.7 |
|                        | 62      | 70.7                                 | 8.6               | 70.7                                             | 70.7  | 69.7  | 60.9 | 52.2 | 43.4 | 34.7 | 63.7              | 9.1               | 63.7                                             | 63.7 | 63.2 | 54.4 | 45.7 | 36.9 | 28.2 |
|                        | 57      | 72.3                                 | 8.7               | 72.3                                             | 72.3  | 71.7  | 63.0 | 54.2 | 45.5 | 36.7 | 65.8              | 9.3               | 65.8                                             | 65.8 | 65.4 | 56.7 | 47.9 | 39.2 | 30.4 |
| 3375                   | 72      | 86.5                                 | 9.1               | 68.2                                             | 58.2  | 48.3  | 38.3 | 28.4 | -    | -    | 78.2              | 9.6               | 65.3                                             | 55.3 | 45.4 | 35.4 | 25.4 | -    | -    |
|                        | 67      | 77.1                                 | 8.8               | 77.1                                             | 74.4  | 66.2  | 56.2 | 46.3 | 36.3 | 26.3 | 68.7              | 9.4               | 68.7                                             | 68.7 | 63.1 | 53.2 | 43.2 | 33.2 | 23.3 |
|                        | 62      | 71.9                                 | 8.6               | 71.9                                             | 71.9  | 71.4  | 61.4 | 51.4 | 41.5 | 31.5 | 64.8              | 9.1               | 64.8                                             | 64.8 | 64.6 | 54.6 | 44.6 | 34.7 | 24.7 |
|                        | 57      | 73.5                                 | 8.7               | 73.5                                             | 73.5  | 73.2  | 63.2 | 53.3 | 43.3 | 33.3 | 66.9              | 9.3               | 66.9                                             | 66.9 | 66.7 | 56.8 | 46.8 | 36.8 | 26.9 |
| 3750                   | 72      | 87.9                                 | 9.1               | 73.8                                             | 62.6  | 51.4  | 40.3 | 29.1 | -    | -    | 79.5              | 9.7               | 70.9                                             | 59.8 | 48.6 | 37.4 | 26.2 | -    | -    |
|                        | 67      | 78.3                                 | 8.8               | 78.3                                             | 78.3  | 70.5  | 59.4 | 48.2 | 37.0 | 25.8 | 69.9              | 9.4               | 69.9                                             | 69.9 | 67.6 | 56.4 | 45.2 | 34.1 | 22.9 |
|                        | 62      | 73.0                                 | 8.6               | 73.0                                             | 73.0  | 73.0  | 61.9 | 50.7 | 39.5 | 28.3 | 66.0              | 9.2               | 66.0                                             | 66.0 | 66.0 | 54.8 | 43.6 | 32.4 | 21.2 |
|                        | 57      | 74.7                                 | 8.7               | 74.7                                             | 74.7  | 74.7  | 63.5 | 52.3 | 41.1 | 30.0 | 68.1              | 9.3               | 68.1                                             | 68.1 | 68.1 | 56.9 | 45.7 | 34.5 | 23.4 |

\* The capacities are gross ratings. For net capacity, deduct indoor blower motor, MBH=3.415 x kW. Refer to the appropriate Blower Performance table for the kW of the supply air blower motor.

† These ratings include the condensate fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

TABLE 7: COOLING CAPACITY DF102 (8-1/2 TON) UNIT

| Air on Evaporator Coil |         | Temperature of Air on Condenser Coil |                   |                                                  |       |       |       |      |      |      |                   |                   |                                                  |       |       |      |      |      |      |
|------------------------|---------|--------------------------------------|-------------------|--------------------------------------------------|-------|-------|-------|------|------|------|-------------------|-------------------|--------------------------------------------------|-------|-------|------|------|------|------|
|                        |         | 75°F                                 |                   |                                                  |       |       |       |      |      |      | 85°F              |                   |                                                  |       |       |      |      |      |      |
| CFM                    | WB (°F) | Total Cap.* (MBH)                    | Total† Input (kW) | Sensible Capacity (MBH)*<br>Return Dry Bulb (°F) |       |       |       |      |      |      | Total Cap.* (MBH) | Total† Input (kW) | Sensible Capacity (MBH)*<br>Return Dry Bulb (°F) |       |       |      |      |      |      |
|                        |         |                                      |                   | 86                                               | 83    | 80    | 77    | 74   | 71   | 68   |                   |                   | 86                                               | 83    | 80    | 77   | 74   | 71   | 68   |
| 2550                   | 72      | 120.3                                | 7.1               | 67.8                                             | 60.5  | 53.3  | 46.0  | 38.7 | -    | -    | 114.1             | 7.8               | 64.6                                             | 57.3  | 50.1  | 42.8 | 35.5 | -    | -    |
|                        | 67      | 114.8                                | 7.1               | 85.5                                             | 78.2  | 71.0  | 63.7  | 56.4 | 49.2 | 41.9 | 106.9             | 7.7               | 82.0                                             | 74.7  | 67.4  | 60.2 | 52.9 | 45.6 | 38.4 |
|                        | 62      | 105.5                                | 7.0               | 105.5                                            | 97.4  | 90.1  | 82.8  | 75.6 | 68.3 | 61.0 | 98.6              | 7.6               | 98.6                                             | 91.9  | 84.7  | 77.4 | 70.1 | 62.9 | 55.6 |
|                        | 57      | 103.6                                | 6.9               | 103.6                                            | 103.9 | 96.7  | 89.4  | 82.1 | 74.8 | 67.6 | 96.3              | 7.5               | 96.3                                             | 96.3  | 89.1  | 81.8 | 74.5 | 67.3 | 60.0 |
| 2975                   | 72      | 122.9                                | 7.1               | 73.8                                             | 65.2  | 56.6  | 48.0  | 39.4 | -    | -    | 116.6             | 7.8               | 70.8                                             | 62.2  | 53.6  | 45.0 | 36.5 | -    | -    |
|                        | 67      | 117.3                                | 7.1               | 92.6                                             | 84.0  | 75.4  | 66.8  | 58.2 | 49.6 | 41.0 | 109.2             | 7.7               | 89.5                                             | 80.9  | 72.3  | 63.7 | 55.1 | 46.5 | 37.9 |
|                        | 62      | 107.7                                | 7.0               | 107.7                                            | 103.7 | 95.7  | 87.1  | 78.5 | 69.9 | 61.4 | 100.7             | 7.6               | 100.7                                            | 97.3  | 90.7  | 82.1 | 73.5 | 64.9 | 56.4 |
|                        | 57      | 105.8                                | 6.9               | 105.8                                            | 106.0 | 102.7 | 94.1  | 85.5 | 76.9 | 68.3 | 98.4              | 7.6               | 98.4                                             | 98.4  | 95.5  | 86.9 | 78.3 | 69.7 | 61.1 |
| 3400                   | 72      | 125.5                                | 7.2               | 79.7                                             | 69.8  | 59.9  | 50.0  | 40.1 | -    | -    | 119.0             | 7.9               | 77.1                                             | 67.1  | 57.2  | 47.3 | 37.4 | -    | -    |
|                        | 67      | 119.7                                | 7.1               | 99.6                                             | 89.7  | 79.8  | 69.9  | 59.9 | 50.0 | 40.1 | 111.4             | 7.8               | 96.9                                             | 87.0  | 77.1  | 67.2 | 57.3 | 47.4 | 37.4 |
|                        | 62      | 110.0                                | 7.0               | 110.0                                            | 110.0 | 101.3 | 91.4  | 81.5 | 71.6 | 61.7 | 102.8             | 7.6               | 102.8                                            | 102.8 | 96.8  | 86.9 | 77.0 | 67.0 | 57.1 |
|                        | 57      | 108.0                                | 6.9               | 108.0                                            | 108.0 | 108.8 | 98.9  | 88.9 | 79.0 | 69.1 | 100.4             | 7.6               | 100.4                                            | 100.4 | 101.8 | 91.9 | 82.0 | 72.1 | 62.2 |
| 3825                   | 72      | 129.6                                | 7.2               | 84.8                                             | 73.5  | 62.2  | 50.9  | 39.7 | -    | -    | 121.9             | 7.9               | 82.5                                             | 71.2  | 59.9  | 48.7 | 37.4 | -    | -    |
|                        | 67      | 123.7                                | 7.1               | 106.4                                            | 94.2  | 82.9  | 71.6  | 60.3 | 49.0 | 37.7 | 114.2             | 7.8               | 103.3                                            | 92.1  | 80.8  | 69.5 | 58.2 | 46.9 | 35.6 |
|                        | 62      | 113.6                                | 7.0               | 113.6                                            | 113.6 | 107.4 | 96.2  | 84.9 | 73.6 | 62.3 | 105.3             | 7.7               | 105.3                                            | 105.3 | 101.4 | 90.1 | 78.8 | 67.5 | 56.2 |
|                        | 57      | 111.6                                | 6.9               | 111.6                                            | 111.6 | 111.9 | 100.6 | 89.4 | 78.1 | 66.8 | 102.9             | 7.6               | 102.9                                            | 102.9 | 103.6 | 92.3 | 81.0 | 69.7 | 58.4 |
| 4250                   | 72      | 133.8                                | 7.2               | 89.9                                             | 77.3  | 64.6  | 51.9  | 39.2 | -    | -    | 124.9             | 7.9               | 88.0                                             | 75.3  | 62.7  | 50.0 | 37.3 | -    | -    |
|                        | 67      | 127.6                                | 7.1               | 113.3                                            | 98.6  | 86.0  | 73.3  | 60.6 | 48.0 | 35.3 | 116.9             | 7.8               | 109.8                                            | 97.1  | 84.4  | 71.8 | 59.1 | 46.4 | 33.8 |
|                        | 62      | 117.3                                | 7.0               | 117.3                                            | 117.3 | 113.6 | 100.9 | 88.2 | 75.6 | 62.9 | 107.8             | 7.7               | 107.8                                            | 107.8 | 106.0 | 93.3 | 80.6 | 68.0 | 55.3 |
|                        | 57      | 115.1                                | 6.9               | 115.1                                            | 115.1 | 115.1 | 102.4 | 89.8 | 77.1 | 64.4 | 105.4             | 7.6               | 105.4                                            | 105.4 | 105.4 | 92.7 | 80.1 | 67.4 | 54.7 |
|                        |         | 95°F                                 |                   |                                                  |       |       |       |      |      |      | 105°F             |                   |                                                  |       |       |      |      |      |      |
| 2550                   | 72      | 108.0                                | 8.5               | 61.4                                             | 54.1  | 46.8  | 39.6  | 32.3 | -    | -    | 99.8              | 9.2               | 58.0                                             | 50.8  | 43.5  | 36.2 | 29.0 | -    | -    |
|                        | 67      | 98.9                                 | 8.3               | 78.5                                             | 71.2  | 63.9  | 56.6  | 49.4 | 42.1 | 34.8 | 89.3              | 8.9               | 74.4                                             | 67.1  | 59.9  | 52.6 | 45.3 | 38.0 | 30.8 |
|                        | 62      | 91.6                                 | 8.2               | 91.6                                             | 86.5  | 79.2  | 71.9  | 64.7 | 57.4 | 50.1 | 82.3              | 8.8               | 82.3                                             | 79.7  | 73.3  | 66.0 | 58.8 | 51.5 | 44.2 |
|                        | 57      | 89.1                                 | 8.2               | 89.1                                             | 88.8  | 81.5  | 74.2  | 66.9 | 59.7 | 52.4 | 82.4              | 8.8               | 82.4                                             | 81.1  | 73.8  | 66.5 | 59.3 | 52.0 | 44.7 |
| 2975                   | 72      | 110.2                                | 8.5               | 67.9                                             | 59.3  | 50.7  | 42.1  | 33.5 | -    | -    | 101.7             | 9.2               | 64.5                                             | 55.9  | 47.3  | 38.7 | 30.1 | -    | -    |
|                        | 67      | 101.0                                | 8.4               | 86.4                                             | 77.8  | 69.2  | 60.6  | 52.0 | 43.4 | 34.8 | 90.9              | 9.0               | 81.3                                             | 73.6  | 65.1  | 56.5 | 47.9 | 39.3 | 30.7 |
|                        | 62      | 93.6                                 | 8.2               | 93.6                                             | 91.0  | 85.7  | 77.1  | 68.5 | 60.0 | 51.4 | 83.9              | 8.8               | 83.9                                             | 82.6  | 79.7  | 71.1 | 62.5 | 53.9 | 45.3 |
|                        | 57      | 91.0                                 | 8.2               | 91.0                                             | 90.8  | 88.2  | 79.6  | 71.0 | 62.4 | 53.8 | 84.0              | 8.9               | 84.0                                             | 83.3  | 80.2  | 71.6 | 63.0 | 54.4 | 45.8 |
| 3400                   | 72      | 112.5                                | 8.6               | 74.4                                             | 64.5  | 54.6  | 44.6  | 34.7 | -    | -    | 103.5             | 9.3               | 70.9                                             | 61.0  | 51.1  | 41.2 | 31.2 | -    | -    |
|                        | 67      | 103.1                                | 8.4               | 94.3                                             | 84.4  | 74.4  | 64.5  | 54.6 | 44.7 | 34.8 | 92.6              | 9.1               | 88.2                                             | 80.2  | 70.3  | 60.3 | 50.4 | 40.5 | 30.6 |
|                        | 62      | 95.5                                 | 8.3               | 95.5                                             | 95.5  | 92.3  | 82.3  | 72.4 | 62.5 | 52.6 | 85.4              | 8.9               | 85.4                                             | 85.4  | 86.0  | 76.1 | 66.2 | 56.3 | 46.4 |
|                        | 57      | 92.9                                 | 8.3               | 92.9                                             | 92.9  | 94.9  | 85.0  | 75.1 | 65.2 | 55.2 | 85.5              | 8.9               | 85.5                                             | 85.5  | 86.6  | 76.7 | 66.8 | 56.9 | 46.9 |
| 3825                   | 72      | 114.2                                | 8.6               | 80.2                                             | 68.9  | 57.6  | 46.4  | 35.1 | -    | -    | 105.7             | 9.3               | 77.0                                             | 65.7  | 54.4  | 43.1 | 31.8 | -    | -    |
|                        | 67      | 104.7                                | 8.5               | 100.3                                            | 89.9  | 78.7  | 67.4  | 56.1 | 44.8 | 33.5 | 94.5              | 9.1               | 92.3                                             | 85.6  | 74.8  | 63.5 | 52.2 | 40.9 | 29.6 |
|                        | 62      | 96.9                                 | 8.3               | 96.9                                             | 96.9  | 95.3  | 84.0  | 72.7 | 61.5 | 50.2 | 87.2              | 9.0               | 87.2                                             | 87.2  | 87.5  | 76.2 | 64.9 | 53.6 | 42.3 |
|                        | 57      | 94.3                                 | 8.3               | 94.3                                             | 94.3  | 95.3  | 84.0  | 72.7 | 61.4 | 50.1 | 87.3              | 9.0               | 87.3                                             | 87.3  | 87.8  | 76.5 | 65.2 | 54.0 | 42.7 |
| 4250                   | 72      | 115.9                                | 8.7               | 86.1                                             | 73.4  | 60.7  | 48.1  | 35.4 | -    | -    | 107.8             | 9.4               | 83.0                                             | 70.3  | 57.7  | 45.0 | 32.3 | -    | -    |
|                        | 67      | 106.2                                | 8.5               | 106.2                                            | 95.5  | 82.9  | 70.2  | 57.5 | 44.9 | 32.2 | 96.4              | 9.1               | 96.4                                             | 91.1  | 79.4  | 66.7 | 54.0 | 41.3 | 28.7 |
|                        | 62      | 98.4                                 | 8.4               | 98.4                                             | 98.4  | 98.4  | 85.7  | 73.1 | 60.4 | 47.7 | 88.9              | 9.0               | 88.9                                             | 88.9  | 88.9  | 76.2 | 63.6 | 50.9 | 38.2 |
|                        | 57      | 95.7                                 | 8.4               | 95.7                                             | 95.7  | 95.7  | 83.0  | 70.3 | 57.7 | 45.0 | 89.1              | 9.0               | 89.1                                             | 89.1  | 89.1  | 76.4 | 63.7 | 51.0 | 38.4 |
|                        |         | 115°F                                |                   |                                                  |       |       |       |      |      |      | 125°F             |                   |                                                  |       |       |      |      |      |      |
| 2550                   | 72      | 91.7                                 | 9.9               | 54.7                                             | 47.4  | 40.2  | 32.9  | 25.6 | -    | -    | 83.6              | 10.5              | 51.4                                             | 44.1  | 36.8  | 29.6 | 22.3 | -    | -    |
|                        | 67      | 79.6                                 | 9.5               | 70.3                                             | 63.1  | 55.8  | 48.5  | 41.2 | 34.0 | 26.7 | 69.9              | 10.2              | 66.3                                             | 59.0  | 51.7  | 44.4 | 37.2 | 29.9 | 22.6 |
|                        | 62      | 73.0                                 | 9.4               | 73.0                                             | 73.0  | 67.4  | 60.1  | 52.9 | 45.6 | 38.3 | 63.7              | 10.0              | 63.7                                             | 63.7  | 61.5  | 54.2 | 46.9 | 39.7 | 32.4 |
|                        | 57      | 75.8                                 | 9.4               | 75.8                                             | 73.4  | 66.1  | 58.8  | 51.6 | 44.3 | 37.0 | 69.1              | 10.0              | 69.1                                             | 65.7  | 58.4  | 51.2 | 43.9 | 36.6 | 29.4 |
| 2975                   | 72      | 93.2                                 | 9.9               | 61.1                                             | 52.5  | 43.9  | 35.3  | 26.7 | -    | -    | 84.6              | 10.6              | 57.6                                             | 49.1  | 40.5  | 31.9 | 23.3 | -    | -    |
|                        | 67      | 80.8                                 | 9.6               | 76.2                                             | 69.5  | 60.9  | 52.3  | 43.7 | 35.2 | 26.6 | 70.7              | 10.2              | 70.7                                             | 65.4  | 56.8  | 48.2 | 39.6 | 31.0 | 22.4 |
|                        | 62      | 74.2                                 | 9.5               | 74.2                                             | 74.2  | 73.6  | 65.0  | 56.4 | 47.8 | 39.2 | 64.5              | 10.1              | 64.5                                             | 64.5  | 64.5  | 59.0 | 50.4 | 41.8 | 33.2 |
|                        | 57      | 77.0                                 | 9.5               | 77.0                                             | 75.8  | 72.2  | 63.6  | 55.0 | 46.4 | 37.8 | 70.0              | 10.1              | 70.0                                             | 68.3  | 64.2  | 55.6 | 47.0 | 38.4 | 29.9 |
| 3400                   | 72      | 94.6                                 | 10.0              | 67.4                                             | 57.5  | 47.6  | 37.7  | 27.8 | -    | -    | 85.6              | 10.7              | 63.9                                             | 54.0  | 44.1  | 34.2 | 24.3 | -    | -    |
|                        | 67      | 82.1                                 | 9.7               | 82.1                                             | 76.0  | 66.1  | 56.2  | 46.2 | 36.3 | 26.4 | 71.6              | 10.3              | 71.6                                             | 71.6  | 61.9  | 52.0 | 42.1 | 32.1 | 22.2 |
|                        | 62      | 75.3                                 | 9.5               | 75.3                                             | 75.3  | 79.8  | 69.9  | 60.0 | 50.1 | 40.2 | 65.2              | 10.2              | 65.2                                             | 65.2  | 65.2  | 63.7 | 53.8 | 43.9 | 34.0 |
|                        | 57      | 78.2                                 | 9.5               | 78.2                                             | 78.2  | 78.3  | 68.4  | 58.5 | 48.6 | 38.7 | 70.8              | 10.2              | 70.8                                             | 70.8  | 70.0  | 60.1 | 50.2 | 40.3 | 30.4 |
| 3825                   | 72      | 97.2                                 | 10.0              | 73.7                                             | 62.4  | 51.1  | 39.8  | 28.5 | -    | -    | 88.7              | 10.7              | 70.4                                             | 59.1  | 47.8  | 36.5 | 25.2 | -    | -    |
|                        | 67      | 84.3                                 | 9.7               | 84.3                                             | 81.3  | 71.0  | 59.7  | 48.4 | 37.1 | 25.8 | 74.1              | 10.4              | 74.1                                             | 74.1  | 67.1  | 55.8 | 44.5 | 33.2 | 21.9 |
|                        | 62      | 77.4                                 | 9.6               | 77.4                                             | 77.4  | 79.6  | 68.3  | 57.0 | 45.7 | 34.5 | 67.6              | 10.2              | 67.6                                             | 67.6  | 67.6  | 60.5 | 49.2 | 37.9 | 26.6 |
|                        | 57      | 80.3                                 | 9.6               | 80.3                                             | 80.3  | 80.4  | 69.1  | 57.8 | 46.5 | 35.2 | 73.3              | 10.2              | 73.3                                             | 73.3  | 72.9  | 61.6 | 50.3 | 39.0 | 27.7 |
| 4250                   | 72      | 99.8                                 | 10.1              | 79.9                                             | 67.3  | 54.6  | 41.9  | 29.3 | -    | -    | 91.7              | 10.8              | 76.9                                             | 64.2  | 51.5  | 38.9 | 26.2 | -    | -    |
|                        | 67      | 86.6                                 | 9.8               | 86.6                                             | 86.6  | 75.8  | 63.2  | 50.5 | 37.8 | 25.2 | 76.7              | 10.4              | 76.7                                             | 76.7  | 72.3  | 59.6 | 47.0 | 34.3 | 21.6 |
|                        | 62      | 79.4                                 | 9.7               | 79.4                                             | 79.4  | 79.4  | 66.8  | 54.1 | 41.4 | 28.7 | 69.9              | 10.3              | 69.9                                             | 69.9  | 69.9  | 57.3 | 44.6 | 31.9 | 19.3 |
|                        | 57      | 82.4                                 | 9.6               | 82.4                                             | 82.4  | 82.4  | 69.8  | 57.1 | 44.4 | 31.8 | 75.8              | 10.3              | 75.8                                             | 75.8  | 75.8  | 63.1 | 50.5 | 37.8 | 25.1 |

\* The capacities are gross ratings. For net capacity, deduct indoor blower motor, MBH=3.415 x kW. Refer to the appropriate Blower Performance table for the kW of the supply air blower motor.

† These ratings include the condensate fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

**TABLE 8: COOLING CAPACITY DF120 (10 TON) UNIT**

| Return Air |            | Outdoor Ambient Temperature 85°F  |                                     |                                                            |       |       |      |      |      |                         | Outdoor Ambient Temperature 95°F                                                                                                                                                                  |                                                            |       |      |      |      |      |      |      |
|------------|------------|-----------------------------------|-------------------------------------|------------------------------------------------------------|-------|-------|------|------|------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------|------|------|------|------|------|------|
| CFM        | WB<br>(°F) | Gross<br>Cap.*<br>(MBH)           | Input <sup>†</sup><br>Power<br>(kW) | Gross Sensible Capacity (MBH)*<br>Return Air Dry Bulb (°F) |       |       |      |      |      | Gross<br>Cap.*<br>(MBH) | Input <sup>†</sup><br>Power<br>(kW)                                                                                                                                                               | Gross Sensible Capacity (MBH)*<br>Return Air Dry Bulb (°F) |       |      |      |      |      |      |      |
|            |            |                                   |                                     | 86                                                         | 83    | 80    | 77   | 74   | 71   |                         |                                                                                                                                                                                                   | 68                                                         | 86    | 83   | 80   | 77   | 74   | 71   | 68   |
| 3000       | 72         | 119.5                             | 8.47                                | 73.6                                                       | 65.1  | 56.5  | 48.0 | 39.4 | -    | -                       | 119.3                                                                                                                                                                                             | 9.31                                                       | 73.2  | 64.7 | 56.1 | 47.6 | 39.0 | -    | -    |
|            | 67         | 116.6                             | 8.49                                | 94.8                                                       | 86.2  | 77.7  | 69.1 | 60.5 | 52.0 | 43.4                    | 114.0                                                                                                                                                                                             | 9.25                                                       | 94.3  | 85.7 | 77.2 | 68.6 | 60.1 | 51.5 | 43.0 |
|            | 62         | 112.6                             | 8.43                                | 112.                                                       | 106.  | 98.3  | 89.8 | 81.2 | 72.7 | 64.1                    | 109.4                                                                                                                                                                                             | 9.11                                                       | 109.  | 105. | 97.0 | 88.4 | 79.9 | 71.3 | 62.8 |
|            | 57         | 109.2                             | 8.41                                | 109.                                                       | 109.  | 101.  | 93.0 | 84.4 | 75.9 | 67.3                    | 109.1                                                                                                                                                                                             | 9.16                                                       | 108.  | 100. | 91.6 | 83.0 | 74.4 | 65.9 | 57.3 |
| 3500       | 72         | 122.4                             | 8.52                                | 80.0                                                       | 69.9  | 59.8  | 49.7 | 39.6 | -    | -                       | 122.0                                                                                                                                                                                             | 9.34                                                       | 80.0  | 69.9 | 59.8 | 49.6 | 39.5 | -    | -    |
|            | 67         | 119.4                             | 8.54                                | 102.                                                       | 92.3  | 82.2  | 72.1 | 62.0 | 51.9 | 41.7                    | 116.6                                                                                                                                                                                             | 9.28                                                       | 102.  | 92.3 | 82.2 | 72.1 | 61.9 | 51.8 | 41.7 |
|            | 62         | 115.3                             | 8.47                                | 115.                                                       | 112.  | 104.  | 94.0 | 83.9 | 73.8 | 63.6                    | 111.9                                                                                                                                                                                             | 9.13                                                       | 111.9 | 110. | 103. | 93.1 | 83.0 | 72.9 | 62.8 |
|            | 57         | 111.8                             | 8.45                                | 111.8                                                      | 111.8 | 107.  | 97.3 | 87.2 | 77.1 | 67.0                    | 111.6                                                                                                                                                                                             | 9.19                                                       | 111.4 | 107. | 97.5 | 87.3 | 77.2 | 67.1 | 57.0 |
| 4000       | 72         | 125.2                             | 8.56                                | 86.4                                                       | 74.8  | 63.1  | 51.4 | 39.8 | -    | -                       | 124.7                                                                                                                                                                                             | 9.37                                                       | 86.7  | 75.0 | 63.4 | 51.7 | 40.0 | -    | -    |
|            | 67         | 122.1                             | 8.59                                | 110.                                                       | 98.4  | 86.7  | 75.0 | 63.4 | 51.7 | 40.1                    | 119.2                                                                                                                                                                                             | 9.31                                                       | 110.  | 98.8 | 87.1 | 75.5 | 63.8 | 52.1 | 40.5 |
|            | 62         | 118.0                             | 8.52                                | 118.                                                       | 118.  | 109.  | 98.2 | 86.5 | 74.8 | 63.2                    | 114.4                                                                                                                                                                                             | 9.16                                                       | 114.  | 114. | 109. | 97.8 | 86.2 | 74.5 | 62.8 |
|            | 57         | 114.4                             | 8.50                                | 114.                                                       | 114.  | 113.  | 101. | 90.0 | 78.4 | 66.7                    | 114.1                                                                                                                                                                                             | 9.22                                                       | 114.  | 114. | 103. | 91.7 | 80.0 | 68.4 | 56.7 |
| 4500       | 72         | 125.5                             | 8.56                                | 91.5                                                       | 78.2  | 64.9  | 51.6 | 38.3 | -    | -                       | 125.8                                                                                                                                                                                             | 9.41                                                       | 92.6  | 79.3 | 66.0 | 52.8 | 39.5 | -    | -    |
|            | 67         | 122.4                             | 8.59                                | 115.                                                       | 102.  | 89.2  | 75.9 | 62.6 | 49.3 | 36.1                    | 120.2                                                                                                                                                                                             | 9.35                                                       | 115.  | 104. | 90.8 | 77.5 | 64.2 | 50.9 | 37.7 |
|            | 62         | 118.3                             | 8.52                                | 118.                                                       | 118.  | 113.  | 99.7 | 86.4 | 73.1 | 59.8                    | 115.4                                                                                                                                                                                             | 9.20                                                       | 115.  | 115. | 112. | 99.7 | 86.4 | 73.1 | 59.8 |
|            | 57         | 114.7                             | 8.50                                | 114.                                                       | 114.  | 114.  | 100. | 87.6 | 74.3 | 61.0                    | 115.1                                                                                                                                                                                             | 9.25                                                       | 115.  | 115. | 107. | 94.8 | 81.1 | 67.8 | 54.6 |
| 5000       | 72         | 125.8                             | 8.56                                | 96.5                                                       | 81.6  | 66.7  | 51.8 | 36.9 | -    | -                       | 126.9                                                                                                                                                                                             | 9.45                                                       | 98.5  | 83.6 | 68.7 | 53.8 | 38.9 | -    | -    |
|            | 67         | 122.7                             | 8.59                                | 121.                                                       | 106.  | 91.7  | 76.8 | 61.9 | 47.0 | 32.1                    | 121.3                                                                                                                                                                                             | 9.38                                                       | 121.  | 109. | 94.5 | 79.6 | 64.6 | 49.7 | 34.8 |
|            | 62         | 118.5                             | 8.52                                | 118.                                                       | 118.  | 116.  | 101. | 86.3 | 71.4 | 56.5                    | 116.4                                                                                                                                                                                             | 9.24                                                       | 116.  | 116. | 116. | 101. | 86.6 | 71.7 | 56.8 |
|            | 57         | 115.0                             | 8.50                                | 115.                                                       | 115.  | 115.  | 100. | 85.2 | 70.3 | 55.3                    | 116.0                                                                                                                                                                                             | 9.29                                                       | 116.  | 116. | 112. | 97.1 | 82.2 | 67.3 | 52.4 |
|            |            | Outdoor Ambient Temperature 105°F |                                     |                                                            |       |       |      |      |      |                         | Outdoor Ambient Temperature 115°F                                                                                                                                                                 |                                                            |       |      |      |      |      |      |      |
| 3000       | 72         | 113.3                             | 10.02                               | 71.2                                                       | 62.6  | 54.1  | 45.5 | 37.0 | -    | -                       | 107.2                                                                                                                                                                                             | 10.74                                                      | 69.1  | 60.5 | 52.0 | 43.4 | 34.9 | -    | -    |
|            | 67         | 106.2                             | 9.85                                | 91.5                                                       | 82.9  | 74.4  | 65.8 | 57.3 | 48.7 | 40.2                    | 98.5                                                                                                                                                                                              | 10.44                                                      | 88.7  | 80.1 | 71.6 | 63.0 | 54.5 | 45.9 | 37.4 |
|            | 62         | 103.6                             | 9.74                                | 103.                                                       | 97.2  | 88.7  | 80.1 | 71.6 | 63.0 | 54.4                    | 97.8                                                                                                                                                                                              | 10.37                                                      | 97.4  | 88.9 | 80.3 | 71.8 | 63.2 | 54.7 | 46.1 |
|            | 57         | 103.3                             | 9.75                                | 102.                                                       | 93.9  | 85.3  | 76.8 | 68.2 | 59.7 | 51.1                    | 97.6                                                                                                                                                                                              | 10.34                                                      | 96.2  | 87.7 | 79.1 | 70.6 | 62.0 | 53.5 | 44.9 |
| 3500       | 72         | 117.0                             | 10.10                               | 78.6                                                       | 68.5  | 58.4  | 48.2 | 38.1 | -    | -                       | 111.9                                                                                                                                                                                             | 10.85                                                      | 77.2  | 67.1 | 57.0 | 46.8 | 36.7 | -    | -    |
|            | 67         | 109.7                             | 9.92                                | 100.                                                       | 90.4  | 80.3  | 70.2 | 60.1 | 50.0 | 39.9                    | 102.8                                                                                                                                                                                             | 10.55                                                      | 97.9  | 88.5 | 78.4 | 68.3 | 58.2 | 48.1 | 38.0 |
|            | 62         | 107.0                             | 9.81                                | 106.                                                       | 103.  | 95.6  | 85.5 | 75.4 | 65.3 | 55.2                    | 102.1                                                                                                                                                                                             | 10.48                                                      | 101.  | 97.7 | 88.0 | 77.9 | 67.8 | 57.7 | 47.6 |
|            | 57         | 106.7                             | 9.82                                | 106.                                                       | 102.  | 92.1  | 82.0 | 71.9 | 61.8 | 51.6                    | 101.9                                                                                                                                                                                             | 10.45                                                      | 101.  | 96.8 | 86.7 | 76.6 | 66.5 | 56.4 | 46.3 |
| 4000       | 72         | 120.7                             | 10.17                               | 86.0                                                       | 74.3  | 62.6  | 51.0 | 39.3 | -    | -                       | 116.6                                                                                                                                                                                             | 10.96                                                      | 85.3  | 73.6 | 61.9 | 50.3 | 38.6 | -    | -    |
|            | 67         | 113.2                             | 9.99                                | 108.                                                       | 97.9  | 86.2  | 74.5 | 62.9 | 51.2 | 39.5                    | 107.1                                                                                                                                                                                             | 10.66                                                      | 107.  | 96.9 | 85.3 | 73.6 | 61.9 | 50.3 | 38.6 |
|            | 62         | 110.4                             | 9.87                                | 110.                                                       | 110.  | 102.  | 90.9 | 79.3 | 67.6 | 55.9                    | 106.4                                                                                                                                                                                             | 10.59                                                      | 106.  | 106. | 95.7 | 84.0 | 72.4 | 60.7 | 49.0 |
|            | 57         | 110.1                             | 9.89                                | 110.                                                       | 110.  | 108.8 | 87.2 | 75.5 | 63.8 | 52.2                    | 106.2                                                                                                                                                                                             | 10.56                                                      | 106.  | 105. | 94.3 | 82.6 | 71.0 | 59.3 | 47.6 |
| 4500       | 72         | 121.9                             | 10.22                               | 92.5                                                       | 79.2  | 65.9  | 52.6 | 39.3 | -    | -                       | 117.9                                                                                                                                                                                             | 11.03                                                      | 92.3  | 79.1 | 65.8 | 52.5 | 39.2 | -    | -    |
|            | 67         | 114.3                             | 10.04                               | 112.                                                       | 103.  | 90.7  | 77.4 | 64.1 | 50.8 | 37.5                    | 108.3                                                                                                                                                                                             | 10.73                                                      | 108.  | 103. | 90.6 | 77.3 | 64.0 | 50.7 | 37.4 |
|            | 62         | 111.5                             | 9.93                                | 111.5                                                      | 111.5 | 107.  | 94.0 | 80.7 | 67.4 | 54.1                    | 107.7                                                                                                                                                                                             | 10.65                                                      | 107.  | 107. | 101. | 88.4 | 75.1 | 61.8 | 48.5 |
|            | 57         | 111.2                             | 9.94                                | 111.2                                                      | 111.2 | 103.  | 90.6 | 77.3 | 64.1 | 50.8                    | 107.4                                                                                                                                                                                             | 10.62                                                      | 107.  | 107. | 100. | 86.9 | 73.6 | 60.3 | 47.0 |
| 5000       | 72         | 123.1                             | 10.27                               | 99.0                                                       | 84.1  | 69.2  | 54.3 | 39.3 | -    | -                       | 119.3                                                                                                                                                                                             | 11.10                                                      | 99.4  | 84.5 | 69.6 | 54.7 | 39.8 | -    | -    |
|            | 67         | 115.4                             | 10.09                               | 115.                                                       | 109.  | 95.2  | 80.3 | 65.3 | 50.4 | 35.5                    | 109.6                                                                                                                                                                                             | 10.79                                                      | 109.  | 109. | 95.9 | 81.0 | 66.1 | 51.1 | 36.2 |
|            | 62         | 112.6                             | 9.98                                | 112.                                                       | 112.  | 112.  | 97.1 | 82.2 | 67.3 | 52.4                    | 108.9                                                                                                                                                                                             | 10.72                                                      | 108.  | 108. | 107. | 92.7 | 77.8 | 62.9 | 48.0 |
|            | 57         | 112.3                             | 9.99                                | 112.                                                       | 112.  | 109.  | 94.1 | 79.2 | 64.3 | 49.4                    | 108.6                                                                                                                                                                                             | 10.68                                                      | 108.  | 108. | 106. | 91.1 | 76.2 | 61.3 | 46.4 |
|            |            | Outdoor Ambient Temperature 125°F |                                     |                                                            |       |       |      |      |      |                         |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
| 3000       | 72         | 101.1                             | 11.4                                | 67.0                                                       | 58.5  | 49.9  | 41.3 | 32.8 | -    | -                       | * The capacities are gross ratings. For net capacity, deduct indoor blower motor, MBH=3.415 x kW.<br>Refer to the appropriate Blower Performance table for the kW of the supply air blower motor. |                                                            |       |      |      |      |      |      |      |
|            | 67         | 90.7                              | 11.0                                | 85.9                                                       | 77.3  | 68.8  | 60.2 | 51.7 | 43.1 | 34.6                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 62         | 92.0                              | 11.0                                | 91.4                                                       | 80.5  | 72.0  | 63.4 | 54.9 | 46.3 | 37.8                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 57         | 91.8                              | 10.9                                | 90.0                                                       | 81.5  | 72.9  | 64.4 | 55.8 | 47.3 | 38.7                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
| 3500       | 72         | 106.8                             | 11.6                                | 75.8                                                       | 65.7  | 55.6  | 45.4 | 35.3 | -    | -                       | † Input power includes the condenser and compressor motors but not the indoor blower motor.                                                                                                       |                                                            |       |      |      |      |      |      |      |
|            | 67         | 95.9                              | 11.2                                | 95.7                                                       | 86.7  | 76.6  | 66.4 | 56.3 | 46.2 | 36.1                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 62         | 97.2                              | 11.2                                | 96.9                                                       | 91.5  | 80.4  | 70.3 | 60.2 | 50.1 | 40.0                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 57         | 97.0                              | 11.1                                | 96.1                                                       | 91.7  | 81.3  | 71.2 | 61.1 | 51.0 | 40.9                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
| 4000       | 72         | 112.6                             | 11.8                                | 84.5                                                       | 72.9  | 61.2  | 49.5 | 37.9 | -    | -                       |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 67         | 101.1                             | 11.3                                | 101.                                                       | 96.0  | 84.3  | 72.7 | 61.0 | 49.4 | 37.7                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 62         | 102.5                             | 11.3                                | 102.                                                       | 102.  | 88.8  | 77.1 | 65.5 | 53.8 | 42.1                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 57         | 102.2                             | 11.2                                | 102.                                                       | 101.  | 89.7  | 78.1 | 66.4 | 54.8 | 43.1                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
| 4500       | 72         | 114.0                             | 11.8                                | 92.2                                                       | 78.9  | 65.6  | 52.4 | 39.1 | -    | -                       |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 67         | 102.4                             | 11.4                                | 102.                                                       | 102.  | 90.5  | 77.2 | 63.9 | 50.6 | 37.3                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 62         | 103.8                             | 11.4                                | 103.                                                       | 103.  | 96.0  | 82.7 | 69.4 | 56.1 | 42.9                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 57         | 103.5                             | 11.3                                | 103.                                                       | 103.  | 96.4  | 83.1 | 69.8 | 56.5 | 43.2                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
| 5000       | 72         | 115.4                             | 11.9                                | 99.9                                                       | 85.0  | 70.1  | 55.2 | 40.3 | -    | -                       |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 67         | 103.7                             | 11.5                                | 103.                                                       | 103.  | 96.6  | 81.7 | 66.8 | 51.8 | 36.9                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 62         | 105.1                             | 11.5                                | 105.                                                       | 105.  | 103.  | 88.3 | 73.4 | 58.5 | 43.6                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |
|            | 57         | 104.8                             | 11.4                                | 104.                                                       | 104.  | 103.  | 88.1 | 73.2 | 58.2 | 43.3                    |                                                                                                                                                                                                   |                                                            |       |      |      |      |      |      |      |

**TABLE 9: ELECTRICAL DATA DF078 (6-1/2 TON) MID EFFICIENCY W/O PWRD CONVENIENCE OUTLET**

| Voltage | Compressors |         | OD Fan Motors | Supply Blower Motor FLA |      | Pwr Exh Motor | Pwr Conv Outlet | Electric Heater Model No. | Actual KW | Heater Amps | Min. Circuit Ampacity (Amps) |       | MCA w/Power Exhaust (Amps) |       | Max Fuse* Size (Amps) |      | Max Fuse* Size w/Power Exhaust (Amps) |      |
|---------|-------------|---------|---------------|-------------------------|------|---------------|-----------------|---------------------------|-----------|-------------|------------------------------|-------|----------------------------|-------|-----------------------|------|---------------------------------------|------|
|         | RLA ea.     | LRA ea. | FLA ea.       | 1.5 HP                  | 2 HP | FLA           | FLA             |                           |           |             | 1.5 HP                       | 2 HP  | 1.5 HP                     | 2 HP  | 1.5 HP                | 2 HP | 1.5 HP                                | 2 HP |
| 208     | 10.6        | 78.0    | 1.5           | 6.2                     | 8.2  | 5.5           | 0.0             | None                      | --        | --          | 33.1                         | 35.1  | 38.6                       | 40.6  | 40                    | 45   | 45                                    | 50   |
|         |             |         |               |                         |      |               |                 | 2TP04520925               | 6.8       | 18.9        | 33.1                         | 35.1  | 38.6                       | 40.7  | 40                    | 45   | 45                                    | 50   |
|         |             |         |               |                         |      |               |                 | 2TP04521825               | 13.5      | 37.5        | 54.6                         | 57.1  | 61.5                       | 64.0  | 60                    | 60   | 70                                    | 70   |
|         |             |         |               |                         |      |               |                 | 2TP04522425               | 18.0      | 50.0        | 70.2                         | 72.7  | 77.1                       | 79.6  | 80                    | 80   | 80                                    | 80   |
|         |             |         |               |                         |      |               |                 | 2TP04523625               | 25.5      | 70.8        | 96.2                         | 98.7  | 103.1                      | 105.6 | 100                   | 100  | 110                                   | 110  |
| 230     | 10.6        | 78.0    | 1.5           | 6.2                     | 8.2  | 5.5           | 0.0             | None                      | --        | --          | 33.1                         | 35.1  | 38.6                       | 40.6  | 40                    | 45   | 45                                    | 50   |
|         |             |         |               |                         |      |               |                 | 2TP04520925               | 9.0       | 21.7        | 34.8                         | 37.3  | 41.7                       | 44.2  | 40                    | 45   | 45                                    | 50   |
|         |             |         |               |                         |      |               |                 | 2TP04521825               | 18.0      | 43.3        | 61.9                         | 64.4  | 68.8                       | 71.3  | 70                    | 70   | 70                                    | 80   |
|         |             |         |               |                         |      |               |                 | 2TP04522425               | 24.0      | 57.7        | 79.9                         | 82.4  | 86.8                       | 89.3  | 80                    | 90   | 90                                    | 90   |
|         |             |         |               |                         |      |               |                 | 2TP04523625               | 34.0      | 81.8        | 110.0                        | 112.5 | 116.9                      | 119.4 | 110                   | 125  | 125                                   | 125  |
| 460     | 5.2         | 40.0    | 0.8           | 3.1                     | 4.1  | 2.2           | 0.0             | None                      | --        | --          | 16.4                         | 17.4  | 18.6                       | 19.6  | 20                    | 20   | 20                                    | 20   |
|         |             |         |               |                         |      |               |                 | 2TP04520946               | 9         | 11.3        | 17.4                         | 18.7  | 20.2                       | 21.4  | 20                    | 20   | 25                                    | 25   |
|         |             |         |               |                         |      |               |                 | 2TP04521846               | 18        | 22.6        | 30.9                         | 32.2  | 33.7                       | 34.9  | 35                    | 35   | 35                                    | 35   |
|         |             |         |               |                         |      |               |                 | 2TP04522446               | 24        | 30.1        | 40                           | 41.2  | 42.7                       | 44    | 40                    | 45   | 45                                    | 45   |
|         |             |         |               |                         |      |               |                 | 2TP04523646               | 34        | 42.7        | 55                           | 56.2  | 57.7                       | 59    | 60                    | 60   | 60                                    | 60   |
| 575     | 4.1         | 32.0    | 0.6           | 2.4                     | 3.6  | 1.8           | 0.0             | None                      | --        | --          | 12.8                         | 14    | 14.6                       | 15.8  | 15                    | 15   | 15                                    | 20   |
|         |             |         |               |                         |      |               |                 | 2TP04520958               | 9         | 9.0         | 13.8                         | 15.3  | 16.1                       | 17.6  | 15                    | 20   | 20                                    | 20   |
|         |             |         |               |                         |      |               |                 | 2TP04521858               | 18        | 18.1        | 24.7                         | 26.2  | 26.9                       | 28.4  | 25                    | 30   | 30                                    | 30   |
|         |             |         |               |                         |      |               |                 | 2TP04522458               | 24        | 24.1        | 31.9                         | 33.4  | 34.1                       | 35.6  | 35                    | 35   | 35                                    | 40   |
|         |             |         |               |                         |      |               |                 | 2TP04523658               | 34        | 34.1        | 43.9                         | 45.4  | 46.1                       | 47.6  | 45                    | 50   | 50                                    | 50   |

\* Maximum HACR breaker of the same AMP size is applicable.

**TABLE 10: ELECTRICAL DATA DF078 (6-1/2 TON) MID EFFICIENCY WITH PWRD CONVENIENCE OUTLET**

| Voltage | Compressors |         | OD Fan Motors | Supply Blower Motor FLA |      | Pwr Exh Motor | Pwr Conv Outlet | Electric Heater Model No. | Actual KW | Heater Amps | Min. Circuit Ampacity (Amps) |       | MCA w/Power Exhaust (Amps) |       | Max Fuse* Size (Amps) |      | Max Fuse* Size w/Power Exhaust (Amps) |      |
|---------|-------------|---------|---------------|-------------------------|------|---------------|-----------------|---------------------------|-----------|-------------|------------------------------|-------|----------------------------|-------|-----------------------|------|---------------------------------------|------|
|         | RLA ea.     | LRA ea. | FLA ea.       | 1.5 HP                  | 2 HP | FLA           | FLA             |                           |           |             | 1.5 HP                       | 2 HP  | 1.5 HP                     | 2 HP  | 1.5 HP                | 2 HP | 1.5 HP                                | 2 HP |
| 208     | 10.6        | 78.0    | 1.5           | 6.2                     | 8.2  | 5.5           | 10.0            | None                      | --        | --          | 43.1                         | 45.1  | 48.6                       | 50.6  | 50                    | 50   | 50                                    | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04520925               | 6.8       | 18.9        | 43.8                         | 46.3  | 50.7                       | 53.2  | 50                    | 50   | 60                                    | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04521825               | 13.5      | 37.5        | 67.1                         | 69.6  | 74.0                       | 76.5  | 70                    | 70   | 80                                    | 80   |
|         |             |         |               |                         |      |               |                 | 2TP04522425               | 18.0      | 50.0        | 82.7                         | 85.2  | 89.6                       | 92.1  | 90                    | 90   | 90                                    | 100  |
|         |             |         |               |                         |      |               |                 | 2TP04523625               | 25.5      | 70.8        | 108.7                        | 111.2 | 115.6                      | 118.1 | 110                   | 125  | 125                                   | 125  |
| 230     | 10.6        | 78.0    | 1.5           | 6.2                     | 8.2  | 5.5           | 10.0            | None                      | --        | --          | 43.1                         | 45.1  | 48.6                       | 50.6  | 50                    | 50   | 50                                    | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04520925               | 9.0       | 21.7        | 47.3                         | 49.8  | 54.2                       | 56.7  | 50                    | 50   | 60                                    | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04521825               | 18.0      | 43.3        | 74.4                         | 76.9  | 81.3                       | 83.8  | 80                    | 80   | 90                                    | 90   |
|         |             |         |               |                         |      |               |                 | 2TP04522425               | 24.0      | 57.7        | 92.4                         | 94.9  | 99.3                       | 101.8 | 100                   | 100  | 100                                   | 110  |
|         |             |         |               |                         |      |               |                 | 2TP04523625               | 34.0      | 81.8        | 122.5                        | 125.0 | 129.4                      | 131.9 | 125                   | 125  | 150                                   | 150  |
| 460     | 5.2         | 40.0    | 0.8           | 3.1                     | 4.1  | 2.2           | 5.0             | None                      | --        | --          | 21.4                         | 22.4  | 23.6                       | 24.6  | 25                    | 25   | 25                                    | 25   |
|         |             |         |               |                         |      |               |                 | 2TP04520946               | 9         | 11.3        | 23.7                         | 24.9  | 26.4                       | 27.7  | 25                    | 25   | 30                                    | 30   |
|         |             |         |               |                         |      |               |                 | 2TP04521846               | 18        | 22.6        | 37.2                         | 38.4  | 39.9                       | 41.2  | 40                    | 40   | 40                                    | 45   |
|         |             |         |               |                         |      |               |                 | 2TP04522446               | 24        | 30.1        | 46.2                         | 47.5  | 49                         | 50.2  | 50                    | 50   | 50                                    | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04523646               | 34        | 42.7        | 61.2                         | 62.5  | 64                         | 65.2  | 70                    | 70   | 70                                    | 70   |
| 575     | 4.1         | 32.0    | 0.6           | 2.4                     | 3.6  | 1.8           | 4.0             | None                      | --        | --          | 16.8                         | 18    | 18.6                       | 19.8  | 20                    | 20   | 20                                    | 20   |
|         |             |         |               |                         |      |               |                 | 2TP04520958               | 9         | 9.0         | 18.8                         | 20.3  | 21.1                       | 22.6  | 20                    | 25   | 25                                    | 25   |
|         |             |         |               |                         |      |               |                 | 2TP04521858               | 18        | 18.1        | 29.7                         | 31.2  | 31.9                       | 33.4  | 30                    | 35   | 35                                    | 35   |
|         |             |         |               |                         |      |               |                 | 2TP04522458               | 24        | 24.1        | 36.9                         | 38.4  | 39.1                       | 40.6  | 40                    | 40   | 40                                    | 45   |
|         |             |         |               |                         |      |               |                 | 2TP04523658               | 34        | 34.1        | 48.9                         | 50.4  | 51.1                       | 52.6  | 50                    | 60   | 60                                    | 60   |

\* Maximum HACR breaker of the same AMP size is applicable.

**TABLE 11: ELECTRICAL DATA DF090 (7-1/2 TON) MID EFFICIENCY W/O PWRD CONVENIENCE OUTLET**

| Voltage | Compressors |      | OD Fan Motors | Supply Blower Motor FLA |      | Pwr Exh Motor | Pwr Conv Outlet | Electric Heater Model No. | Actual KW | Heater Amps | Min. Circuit Ampacity (Amps) |       | MCA w/Power Exhaust (Amps) |       | Max Fuse* Size (Amps) |      | Max Fuse Size w/Power Exhaust (Amps) |      |
|---------|-------------|------|---------------|-------------------------|------|---------------|-----------------|---------------------------|-----------|-------------|------------------------------|-------|----------------------------|-------|-----------------------|------|--------------------------------------|------|
|         | RLA         | LRA  | FLA           | 2 HP                    | 3 HP | FLA           | FLA             |                           |           |             | 2 HP                         | 3 HP  | 2 HP                       | 3 HP  | 2 HP                  | 3 HP | 2 HP                                 | 3 HP |
|         | ea.         | ea.  | ea.           |                         |      |               |                 |                           |           |             |                              |       |                            |       |                       |      |                                      |      |
| 208     | 12.8        | 84.0 | 1.5           | 8.2                     | 10.9 | 5.5           | 0.0             | None                      | --        | --          | 40.0                         | 42.7  | 45.5                       | 48.2  | 50                    | 50   | 50                                   | 60   |
|         |             |      |               |                         |      |               |                 | 2TP04540925               | 6.8       | 18.9        | 40.0                         | 42.7  | 45.5                       | 48.2  | 50                    | 50   | 50                                   | 60   |
|         |             |      |               |                         |      |               |                 | 2TP04541825               | 13.5      | 37.5        | 57.1                         | 60.5  | 64.0                       | 67.3  | 60                    | 70   | 70                                   | 70   |
|         |             |      |               |                         |      |               |                 | 2TP04542425               | 18.0      | 50.0        | 72.7                         | 76.1  | 79.6                       | 83.0  | 80                    | 80   | 80                                   | 90   |
|         |             |      |               |                         |      |               |                 | 2TP04543625               | 25.5      | 70.8        | 98.7                         | 102.1 | 105.6                      | 109.0 | 100                   | 110  | 110                                  | 110  |
| 230     | 12.8        | 84.0 | 1.5           | 8.2                     | 10.9 | 5.5           | 0.0             | None                      | --        | --          | 40.0                         | 42.7  | 45.5                       | 48.2  | 50                    | 50   | 50                                   | 60   |
|         |             |      |               |                         |      |               |                 | 2TP04540925               | 9.0       | 21.7        | 40.0                         | 42.7  | 45.5                       | 48.2  | 50                    | 50   | 50                                   | 60   |
|         |             |      |               |                         |      |               |                 | 2TP04541825               | 18.0      | 43.3        | 64.4                         | 67.8  | 71.3                       | 74.6  | 70                    | 70   | 80                                   | 80   |
|         |             |      |               |                         |      |               |                 | 2TP04542425               | 24.0      | 57.7        | 82.4                         | 85.8  | 89.3                       | 92.7  | 90                    | 90   | 90                                   | 100  |
|         |             |      |               |                         |      |               |                 | 2TP04543625               | 34.0      | 81.8        | 112.5                        | 115.9 | 119.4                      | 122.7 | 125                   | 125  | 125                                  | 125  |
| 460     | 5.8         | 42.0 | 0.8           | 4.1                     | 5.3  | 2.2           | 0.0             | None                      | --        | --          | 18.8                         | 20    | 21                         | 22.2  | 20                    | 25   | 25                                   | 25   |
|         |             |      |               |                         |      |               |                 | 2TP04540946               | 9         | 11.3        | 18.8                         | 20.2  | 21.4                       | 22.9  | 20                    | 25   | 25                                   | 25   |
|         |             |      |               |                         |      |               |                 | 2TP04541846               | 18        | 22.6        | 32.2                         | 33.7  | 34.9                       | 36.4  | 35                    | 35   | 35                                   | 40   |
|         |             |      |               |                         |      |               |                 | 2TP04542446               | 24        | 30.1        | 41.2                         | 42.7  | 44                         | 45.5  | 45                    | 45   | 45                                   | 50   |
|         |             |      |               |                         |      |               |                 | 2TP04543646               | 34        | 42.7        | 56.2                         | 57.7  | 59                         | 60.5  | 60                    | 60   | 60                                   | 70   |
| 575     | 5.1         | 34.0 | 0.6           | 3.6                     | 4.1  | 1.8           | 0.0             | None                      | --        | --          | 16.3                         | 16.8  | 18.1                       | 18.6  | 20                    | 20   | 20                                   | 20   |
|         |             |      |               |                         |      |               |                 | 2TP04540958               | 9         | 9.0         | 16.3                         | 16.8  | 18.1                       | 18.6  | 20                    | 20   | 20                                   | 20   |
|         |             |      |               |                         |      |               |                 | 2TP04541858               | 18        | 18.1        | 26.2                         | 26.8  | 28.4                       | 29    | 30                    | 30   | 30                                   | 30   |
|         |             |      |               |                         |      |               |                 | 2TP04542458               | 24        | 24.1        | 33.4                         | 34    | 35.6                       | 36.2  | 35                    | 35   | 40                                   | 40   |
|         |             |      |               |                         |      |               |                 | 2TP04543658               | 34        | 34.1        | 45.4                         | 46    | 47.6                       | 48.3  | 50                    | 50   | 50                                   | 50   |

**TABLE 12: ELECTRICAL DATA DF090 (7-1/2 TON) MID EFFICIENCY WITH PWRD CONVENIENCE OUTLET**

| Voltage | Compressors |      | OD Fan Motors | Supply Blower Motor FLA |      | Pwr Exh Motor | Pwr Conv Outlet | Electric Heater Model No. | Actual KW | Heater Amps | Min. Circuit Ampacity (Amps) |       | MCA w/Power Exhaust (Amps) |       | Max Fuse* Size (Amps) |     | Max Fuse Size w/Power Exhaust (Amps) |     |
|---------|-------------|------|---------------|-------------------------|------|---------------|-----------------|---------------------------|-----------|-------------|------------------------------|-------|----------------------------|-------|-----------------------|-----|--------------------------------------|-----|
|         | RLA         | LRA  | FLA           | 2                       | 3    | FLA           | FLA             |                           |           |             | 2                            | 3     | 2                          | 3     | 2                     | 3   | 2                                    | 3   |
|         | ea.         | ea.  | ea.           | HP                      | HP   |               |                 |                           |           |             | HP                           | HP    | HP                         | HP    | HP                    | HP  | HP                                   | HP  |
| 208     | 12.8        | 84.0 | 1.5           | 8.2                     | 10.9 | 5.5           | 10.0            | None                      | --        | --          | 51.1                         | 53.8  | 56.6                       | 59.3  | 60                    | 60  | 60                                   | 70  |
|         |             |      |               |                         |      |               |                 | 2TP04540925               | 6.8       | 18.9        | 51.1                         | 53.8  | 56.6                       | 59.3  | 60                    | 60  | 60                                   | 70  |
|         |             |      |               |                         |      |               |                 | 2TP04541825               | 13.5      | 37.5        | 69.6                         | 73.0  | 76.5                       | 79.8  | 70                    | 80  | 80                                   | 80  |
|         |             |      |               |                         |      |               |                 | 2TP04542425               | 18.0      | 50.0        | 85.2                         | 88.6  | 92.1                       | 95.5  | 90                    | 90  | 100                                  | 100 |
|         |             |      |               |                         |      |               |                 | 2TP04543625               | 25.5      | 70.8        | 111.2                        | 114.6 | 118.1                      | 121.5 | 125                   | 125 | 125                                  | 125 |
| 230     | 12.8        | 84.0 | 1.5           | 8.2                     | 10.9 | 5.5           | 10.0            | None                      | --        | --          | 51.1                         | 53.8  | 56.6                       | 59.3  | 60                    | 60  | 60                                   | 70  |
|         |             |      |               |                         |      |               |                 | 2TP04540925               | 9.0       | 21.7        | 51.1                         | 53.8  | 56.7                       | 60.1  | 60                    | 60  | 60                                   | 70  |
|         |             |      |               |                         |      |               |                 | 2TP04541825               | 18.0      | 43.3        | 76.9                         | 80.3  | 83.8                       | 87.1  | 80                    | 90  | 90                                   | 90  |
|         |             |      |               |                         |      |               |                 | 2TP04542425               | 24.0      | 57.7        | 94.9                         | 98.3  | 101.8                      | 105.2 | 100                   | 100 | 110                                  | 110 |
|         |             |      |               |                         |      |               |                 | 2TP04543625               | 34.0      | 81.8        | 125.0                        | 128.4 | 131.9                      | 135.2 | 125                   | 150 | 150                                  | 150 |
| 460     | 5.8         | 42.0 | 0.8           | 4.1                     | 5.3  | 2.2           | 5.0             | None                      | --        | --          | 26.7                         | 27.9  | 28.9                       | 30.1  | 30                    | 30  | 35                                   | 35  |
|         |             |      |               |                         |      |               |                 | 2TP04540946               | 9         | 11.3        | 26.7                         | 27.9  | 28.9                       | 30.1  | 30                    | 30  | 35                                   | 35  |
|         |             |      |               |                         |      |               |                 | 2TP04541846               | 18        | 22.6        | 38.4                         | 39.9  | 41.2                       | 42.7  | 40                    | 40  | 45                                   | 45  |
|         |             |      |               |                         |      |               |                 | 2TP04542446               | 24        | 30.1        | 47.5                         | 49    | 50.2                       | 51.7  | 50                    | 50  | 60                                   | 60  |
|         |             |      |               |                         |      |               |                 | 2TP04543646               | 34        | 42.7        | 62.5                         | 64    | 65.2                       | 66.7  | 70                    | 70  | 70                                   | 70  |
| 575     | 5.1         | 34.0 | 0.6           | 3.6                     | 4.1  | 1.8           | 4.0             | None                      | --        | --          | 21.7                         | 22.2  | 23.5                       | 24    | 25                    | 25  | 25                                   | 25  |
|         |             |      |               |                         |      |               |                 | 2TP04540958               | 9         | 9.0         | 21.7                         | 22.2  | 23.5                       | 24    | 25                    | 25  | 25                                   | 25  |
|         |             |      |               |                         |      |               |                 | 2TP04541858               | 18        | 18.1        | 31.2                         | 31.8  | 33.4                       | 34    | 35                    | 35  | 35                                   | 35  |
|         |             |      |               |                         |      |               |                 | 2TP04542458               | 24        | 24.1        | 38.4                         | 39    | 40.6                       | 41.2  | 40                    | 40  | 45                                   | 45  |
|         |             |      |               |                         |      |               |                 | 2TP04543658               | 34        | 34.1        | 50.4                         | 51    | 52.6                       | 53.3  | 60                    | 60  | 60                                   | 60  |

**TABLE 13: ELECTRICAL DATA DF102 (8-1/2 TON) MID EFFICIENCY W/O PWRD CONVENIENCE OUTLET**

| Voltage | Compressors |         | OD Fan Motors | Supply Blower Motor FLA |      | Pwr Exh Motor | Pwr Conv Outlet | Electric Heater Model No. | Actual KW | Heater Amps | Min. Circuit Ampacity (Amps) |       | MCA w/Power Exhaust (Amps) |       | Max Fuse* Size (Amps) |      | Max Fuse Size w/Power Exhaust (Amps) |      |
|---------|-------------|---------|---------------|-------------------------|------|---------------|-----------------|---------------------------|-----------|-------------|------------------------------|-------|----------------------------|-------|-----------------------|------|--------------------------------------|------|
|         | RLA ea.     | LRA ea. | FLA ea.       | 3 HP                    | 3 HP | FLA           | FLA             |                           |           |             | 3 HP                         | 3 HP  | 3 HP                       | 3 HP  | 3 HP                  | 3 HP | 3 HP                                 | 3 HP |
| 208     | 11.7        | 88.0    | 3.5           | 10.9                    | 10.9 | 5.5           | 0.0             | None                      | --        | --          | 44.2                         | 44.2  | 49.7                       | 49.7  | 50                    | 50   | 60                                   | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04540925               | 6.8       | 18.9        | 44.2                         | 44.2  | 49.7                       | 49.7  | 50                    | 50   | 60                                   | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04541825               | 13.5      | 37.5        | 60.5                         | 60.5  | 67.3                       | 67.3  | 70                    | 70   | 70                                   | 70   |
|         |             |         |               |                         |      |               |                 | 2TP04542425               | 18        | 50.0        | 76.1                         | 76.1  | 83.0                       | 83.0  | 80                    | 80   | 90                                   | 90   |
|         |             |         |               |                         |      |               |                 | 2TP04543625               | 25.5      | 70.8        | 102.1                        | 102.1 | 109.0                      | 109.0 | 110                   | 110  | 110                                  | 110  |
| 230     | 11.7        | 88.0    | 3.5           | 10.9                    | 10.9 | 5.5           | 0.0             | None                      | --        | --          | 44.2                         | 44.2  | 50.4                       | 50.4  | 50                    | 50   | 60                                   | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04540925               | 9         | 21.7        | 44.2                         | 44.2  | 50.4                       | 50.4  | 50                    | 50   | 60                                   | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04541825               | 18        | 43.3        | 67.8                         | 67.8  | 74.6                       | 74.6  | 70                    | 70   | 80                                   | 80   |
|         |             |         |               |                         |      |               |                 | 2TP04542425               | 24        | 57.7        | 85.8                         | 85.8  | 92.7                       | 92.7  | 90                    | 90   | 100                                  | 100  |
|         |             |         |               |                         |      |               |                 | 2TP04543625               | 34        | 81.8        | 115.9                        | 115.9 | 122.7                      | 122.7 | 125                   | 125  | 125                                  | 125  |
| 460     | 6.4         | 42.0    | 1.6           | 5.3                     | 5.3  | 2.2           | 0.0             | None                      | --        | --          | 22.9                         | 22.9  | 25.1                       | 25.1  | 25                    | 25   | 30                                   | 30   |
|         |             |         |               |                         |      |               |                 | 2TP04540946               | 9         | 11.3        | 22.9                         | 22.9  | 25.1                       | 25.1  | 25                    | 25   | 30                                   | 30   |
|         |             |         |               |                         |      |               |                 | 2TP04541846               | 18        | 22.6        | 33.7                         | 33.7  | 36.4                       | 36.4  | 35                    | 35   | 40                                   | 40   |
|         |             |         |               |                         |      |               |                 | 2TP04542446               | 24        | 30.1        | 42.7                         | 42.7  | 45.5                       | 45.5  | 45                    | 45   | 50                                   | 50   |
|         |             |         |               |                         |      |               |                 | 2TP04543646               | 34        | 42.7        | 57.7                         | 57.7  | 60.5                       | 60.5  | 60                    | 60   | 70                                   | 70   |
| 575     | 5.1         | 36.0    | 1.3           | 4.1                     | 4.1  | 1.8           | 0.0             | None                      | --        | --          | 18.2                         | 18.2  | 20                         | 20    | 20                    | 20   | 25                                   | 25   |
|         |             |         |               |                         |      |               |                 | 2TP04540958               | 9         | 9.0         | 18.2                         | 18.2  | 20                         | 20    | 20                    | 20   | 25                                   | 25   |
|         |             |         |               |                         |      |               |                 | 2TP04541858               | 18        | 18.1        | 26.8                         | 26.8  | 29                         | 29    | 30                    | 30   | 30                                   | 30   |
|         |             |         |               |                         |      |               |                 | 2TP04542458               | 24        | 24.1        | 34                           | 34    | 36.2                       | 36.2  | 35                    | 35   | 40                                   | 40   |
|         |             |         |               |                         |      |               |                 | 2TP04543658               | 34        | 34.1        | 46                           | 46    | 48.3                       | 48.3  | 50                    | 50   | 50                                   | 50   |

**TABLE 14: ELECTRICAL DATA DF102 (8-1/2 TON) MID EFFICIENCY WITH PWRD CONVENIENCE OUTLET**

| Voltage | Compressors |         | OD Fan Motors | Supply Blower Motor FLA |      | Pwr Exh Motor | Pwr Conv Outlet | Electric Heater Model No. | Actual KW | Heater Amps | Min. Circuit Ampacity (Amps) |       | MCA w/Power Exhaust (Amps) |       | Max Fuse* Size (Amps) |      | Max Fuse Size w/Power Exhaust (Amps) |      |
|---------|-------------|---------|---------------|-------------------------|------|---------------|-----------------|---------------------------|-----------|-------------|------------------------------|-------|----------------------------|-------|-----------------------|------|--------------------------------------|------|
|         | RLA ea.     | LRA ea. | FLA ea.       | 3 HP                    | 3 HP | FLA           | FLA             |                           |           |             | 3 HP                         | 3 HP  | 3 HP                       | 3 HP  | 3 HP                  | 3 HP | 3 HP                                 | 3 HP |
| 208     | 11.7        | 88.0    | 3.5           | 10.9                    | 10.9 | 5.5           | 10.0            | None                      | --        | --          | 54.2                         | 54.2  | 59.7                       | 59.7  | 60                    | 60   | 70                                   | 70   |
|         |             |         |               |                         |      |               |                 | 2TP04540925               | 6.8       | 18.9        | 54.2                         | 54.2  | 59.7                       | 59.7  | 60                    | 60   | 70                                   | 70   |
|         |             |         |               |                         |      |               |                 | 2TP04541825               | 13.5      | 37.5        | 73.0                         | 73.0  | 79.8                       | 79.8  | 80                    | 80   | 80                                   | 80   |
|         |             |         |               |                         |      |               |                 | 2TP04542425               | 18        | 50.0        | 88.6                         | 88.6  | 95.5                       | 95.5  | 90                    | 90   | 100                                  | 100  |
|         |             |         |               |                         |      |               |                 | 2TP04543625               | 25.5      | 70.8        | 114.6                        | 114.6 | 121.5                      | 121.5 | 125                   | 125  | 125                                  | 125  |
| 230     | 11.7        | 88.0    | 3.5           | 10.9                    | 10.9 | 5.5           | 10.0            | None                      | --        | --          | 54.2                         | 54.2  | 59.7                       | 59.7  | 60                    | 60   | 70                                   | 70   |
|         |             |         |               |                         |      |               |                 | 2TP04540925               | 9         | 21.7        | 54.2                         | 54.2  | 59.7                       | 59.7  | 60                    | 60   | 70                                   | 70   |
|         |             |         |               |                         |      |               |                 | 2TP04541825               | 18        | 43.3        | 80.3                         | 80.3  | 87.1                       | 87.1  | 90                    | 90   | 90                                   | 90   |
|         |             |         |               |                         |      |               |                 | 2TP04542425               | 24        | 57.7        | 98.3                         | 98.3  | 105.2                      | 105.2 | 100                   | 100  | 110                                  | 110  |
|         |             |         |               |                         |      |               |                 | 2TP04543625               | 34        | 81.8        | 128.4                        | 128.4 | 135.2                      | 135.2 | 150                   | 150  | 150                                  | 150  |
| 460     | 6.4         | 42.0    | 1.6           | 5.3                     | 5.3  | 2.2           | 10.0            | None                      | --        | --          | 27.9                         | 27.9  | 30.1                       | 30.1  | 30                    | 30   | 35                                   | 35   |
|         |             |         |               |                         |      |               |                 | 2TP04540946               | 9         | 11.3        | 27.9                         | 27.9  | 30.1                       | 30.1  | 30                    | 30   | 35                                   | 35   |
|         |             |         |               |                         |      |               |                 | 2TP04541846               | 18        | 22.6        | 39.9                         | 39.9  | 42.7                       | 42.7  | 40                    | 40   | 45                                   | 45   |
|         |             |         |               |                         |      |               |                 | 2TP04542446               | 24        | 30.1        | 49                           | 49    | 51.7                       | 51.7  | 50                    | 50   | 60                                   | 60   |
|         |             |         |               |                         |      |               |                 | 2TP04543646               | 34        | 42.7        | 64                           | 64    | 66.7                       | 66.7  | 70                    | 70   | 70                                   | 70   |
| 575     | 5.1         | 36.0    | 1.3           | 4.1                     | 4.1  | 1.8           | 10.0            | None                      | --        | --          | 22.2                         | 22.2  | 24                         | 24    | 25                    | 25   | 25                                   | 25   |
|         |             |         |               |                         |      |               |                 | 2TP04540958               | 9         | 9.0         | 22.2                         | 22.2  | 24                         | 24    | 25                    | 25   | 25                                   | 25   |
|         |             |         |               |                         |      |               |                 | 2TP04541858               | 18        | 18.1        | 31.8                         | 31.8  | 34                         | 34    | 35                    | 35   | 35                                   | 35   |
|         |             |         |               |                         |      |               |                 | 2TP04542458               | 24        | 24.1        | 39                           | 39    | 41.2                       | 41.2  | 40                    | 40   | 45                                   | 45   |
|         |             |         |               |                         |      |               |                 | 2TP04543658               | 34        | 34.1        | 51                           | 51    | 53.3                       | 53.3  | 60                    | 60   | 60                                   | 60   |

**TABLE 15: ELECTRICAL DATA DF120 (10 TON) MID EFFICIENCY W/O PWRD CONVENIENCE OUTLET**

| Voltage | Compressors |         | OD Fan Motors | Supply Blower Motor FLA |      | Pwr Exh Motor FLA | Pwr Conv Outlet FLA | Electric Heater Model No. | Actual KW | Heater Amps | Min. Circuit Ampacity (Amps) |       | MCA w/Power Exhaust (Amps) |       | Max Fuse* Size (Amps) |      | Max Fuse* Size w/Power Exhaust (Amps) |      |
|---------|-------------|---------|---------------|-------------------------|------|-------------------|---------------------|---------------------------|-----------|-------------|------------------------------|-------|----------------------------|-------|-----------------------|------|---------------------------------------|------|
|         | RLA ea.     | LRA ea. |               | 2 HP                    | 3 HP |                   |                     |                           |           |             | 2 HP                         | 3 HP  | 2 HP                       | 3 HP  | 2 HP                  | 3 HP | 2 HP                                  | 3 HP |
| 208     | 16.0        | 137.0   | 3.5           | 8.2                     | 10.9 | 5.5               | 0.0                 | None                      | --        | --          | 51.2                         | 53.9  | 56.7                       | 59.4  | 60                    | 60   | 70                                    | 70   |
|         |             |         |               |                         |      |                   |                     | 2TP04521825               | 13.5      | 37.5        | 57.1                         | 60.5  | 64.0                       | 67.3  | 60                    | 70   | 70                                    | 70   |
|         |             |         |               |                         |      |                   |                     | 2TP04522425               | 18.0      | 50.0        | 72.7                         | 76.1  | 79.6                       | 83.0  | 80                    | 80   | 80                                    | 90   |
|         |             |         |               |                         |      |                   |                     | 2TP04523625               | 25.5      | 70.8        | 98.7                         | 102.1 | 105.6                      | 109.0 | 100                   | 110  | 110                                   | 110  |
|         |             |         |               |                         |      |                   |                     | 2TP04525425               | 40.6      | 112.7       | 151.1                        | 154.5 | 158.0                      | 161.4 | 175                   | 175  | 175                                   | 175  |
| 230     | 16.0        | 137.0   | 3.5           | 8.2                     | 10.9 | 5.5               | 0.0                 | None                      | --        | --          | 51.2                         | 53.9  | 56.7                       | 59.4  | 60                    | 60   | 70                                    | 70   |
|         |             |         |               |                         |      |                   |                     | 2TP04521825               | 18.0      | 43.3        | 64.4                         | 67.8  | 71.3                       | 74.6  | 70                    | 70   | 80                                    | 80   |
|         |             |         |               |                         |      |                   |                     | 2TP04522425               | 24.0      | 57.7        | 82.4                         | 85.8  | 89.3                       | 92.7  | 90                    | 90   | 90                                    | 100  |
|         |             |         |               |                         |      |                   |                     | 2TP04523625               | 34.0      | 81.8        | 112.5                        | 115.9 | 119.4                      | 122.7 | 125                   | 125  | 125                                   | 125  |
|         |             |         |               |                         |      |                   |                     | 2TP04525425               | 54.0      | 129.9       | 140.2                        | 143.5 | 147.0                      | 150.4 | 150                   | 175  | 175                                   | 175  |
| 460     | 8.3         | 69.0    | 1.6           | 4.1                     | 5.3  | 2.2               | 0.0                 | None                      | --        | --          | 26                           | 27.2  | 28.2                       | 29.4  | 30                    | 35   | 35                                    | 35   |
|         |             |         |               |                         |      |                   |                     | 2TP04521846               | 18        | 22.6        | 32.2                         | 33.7  | 34.9                       | 36.4  | 35                    | 35   | 35                                    | 40   |
|         |             |         |               |                         |      |                   |                     | 2TP04522446               | 24        | 30.1        | 41.2                         | 42.7  | 44                         | 45.5  | 45                    | 45   | 45                                    | 50   |
|         |             |         |               |                         |      |                   |                     | 2TP04523646               | 34        | 42.7        | 56.2                         | 57.7  | 59                         | 60.5  | 60                    | 60   | 60                                    | 70   |
|         |             |         |               |                         |      |                   |                     | 2TP04525446               | 54        | 67.8        | 70.1                         | 71.6  | 72.8                       | 74.3  | 80                    | 80   | 80                                    | 80   |
| 575     | 6.4         | 58.0    | 1.3           | 3.6                     | 4.1  | 1.8               | 0.0                 | None                      | --        | --          | 20.6                         | 21.1  | 22.4                       | 22.9  | 25                    | 25   | 25                                    | 25   |
|         |             |         |               |                         |      |                   |                     | 2TP04521858               | 18        | 18.1        | 26.2                         | 26.8  | 28.4                       | 29    | 30                    | 30   | 30                                    | 30   |
|         |             |         |               |                         |      |                   |                     | 2TP04522458               | 24        | 24.1        | 33.4                         | 34    | 35.6                       | 36.2  | 35                    | 35   | 40                                    | 40   |
|         |             |         |               |                         |      |                   |                     | 2TP04523658               | 34        | 34.1        | 45.4                         | 46    | 47.6                       | 48.3  | 50                    | 50   | 50                                    | 50   |
|         |             |         |               |                         |      |                   |                     | 2TP04525458               | 54        | 54.2        | 56.5                         | 57.1  | 58.7                       | 59.3  | 70                    | 70   | 70                                    | 70   |

\* Maximum HACR breaker of the same AMP size is applicable.

**TABLE 16: ELECTRICAL DATA DF120 (10 TON) MID EFFICIENCY WITH PWRD CONVENIENCE OUTLET**

| Voltage | Compressors |         | OD Fan Motors | Supply Blower Motor FLA |      | Pwr Exh Motor FLA | Pwr Conv Outlet FLA | Electric Heater Model No. | Actual KW | Heater Amps | Min. Circuit Ampacity (Amps) |       | MCA w/Power Exhaust (Amps) |       | Max Fuse* Size (Amps) |      | Max Fuse* Size w/Power Exhaust (Amps) |      |
|---------|-------------|---------|---------------|-------------------------|------|-------------------|---------------------|---------------------------|-----------|-------------|------------------------------|-------|----------------------------|-------|-----------------------|------|---------------------------------------|------|
|         | RLA ea.     | LRA ea. |               | 2 HP                    | 3 HP |                   |                     |                           |           |             | 2 HP                         | 3 HP  | 2 HP                       | 3 HP  | 2 HP                  | 3 HP | 2 HP                                  | 3 HP |
| 208     | 16.0        | 137.0   | 3.5           | 8.2                     | 10.9 | 5.5               | 10.0                | None                      | --        | --          | 61.2                         | 63.9  | 66.7                       | 69.4  | 70                    | 70   | 80                                    | 80   |
|         |             |         |               |                         |      |                   |                     | 2TP04521825               | 13.5      | 37.5        | 69.6                         | 73.0  | 76.5                       | 79.8  | 70                    | 80   | 80                                    | 80   |
|         |             |         |               |                         |      |                   |                     | 2TP04522425               | 18.0      | 50.0        | 85.2                         | 88.6  | 92.1                       | 95.5  | 90                    | 90   | 100                                   | 100  |
|         |             |         |               |                         |      |                   |                     | 2TP04523625               | 25.5      | 70.8        | 111.2                        | 114.6 | 118.1                      | 121.5 | 125                   | 125  | 125                                   | 125  |
|         |             |         |               |                         |      |                   |                     | 2TP04525425               | 40.6      | 112.7       | 163.6                        | 167.0 | 170.5                      | 173.9 | 175                   | 175  | 175                                   | 175  |
| 230     | 16.0        | 137.0   | 3.5           | 8.2                     | 10.9 | 5.5               | 10.0                | None                      | --        | --          | 61.2                         | 63.9  | 66.7                       | 69.4  | 70                    | 70   | 80                                    | 80   |
|         |             |         |               |                         |      |                   |                     | 2TP04521825               | 18.0      | 43.3        | 76.9                         | 80.3  | 83.8                       | 87.1  | 80                    | 90   | 90                                    | 90   |
|         |             |         |               |                         |      |                   |                     | 2TP04522425               | 24.0      | 57.7        | 94.9                         | 98.3  | 101.8                      | 105.2 | 100                   | 100  | 110                                   | 110  |
|         |             |         |               |                         |      |                   |                     | 2TP04523625               | 34.0      | 81.8        | 125.0                        | 128.4 | 131.9                      | 135.2 | 125                   | 150  | 150                                   | 150  |
|         |             |         |               |                         |      |                   |                     | 2TP04525425               | 54.0      | 129.9       | 152.7                        | 156.0 | 159.5                      | 162.9 | 175                   | 175  | 175                                   | 175  |
| 460     | 8.3         | 69.0    | 1.6           | 4.1                     | 5.3  | 2.2               | 5.0                 | None                      | --        | --          | 31                           | 32.2  | 33.2                       | 34.4  | 35                    | 40   | 40                                    | 40   |
|         |             |         |               |                         |      |                   |                     | 2TP04521846               | 18        | 22.6        | 38.4                         | 39.9  | 41.2                       | 42.7  | 40                    | 40   | 45                                    | 45   |
|         |             |         |               |                         |      |                   |                     | 2TP04522446               | 24        | 30.1        | 47.5                         | 49    | 50.2                       | 51.7  | 50                    | 50   | 60                                    | 60   |
|         |             |         |               |                         |      |                   |                     | 2TP04523646               | 34        | 42.7        | 62.5                         | 64    | 65.2                       | 66.7  | 70                    | 70   | 70                                    | 70   |
|         |             |         |               |                         |      |                   |                     | 2TP04525446               | 54        | 67.8        | 76.3                         | 77.8  | 79.1                       | 80.6  | 90                    | 90   | 90                                    | 90   |
| 575     | 6.4         | 58.0    | 1.3           | 3.6                     | 4.1  | 1.8               | 4.0                 | None                      | --        | --          | 24.6                         | 25.1  | 26.4                       | 26.9  | 30                    | 30   | 30                                    | 30   |
|         |             |         |               |                         |      |                   |                     | 2TP04521858               | 18        | 18.1        | 31.2                         | 31.8  | 33.4                       | 34    | 35                    | 35   | 35                                    | 35   |
|         |             |         |               |                         |      |                   |                     | 2TP04522458               | 24        | 24.1        | 38.4                         | 39    | 40.6                       | 41.2  | 40                    | 40   | 45                                    | 45   |
|         |             |         |               |                         |      |                   |                     | 2TP04523658               | 34        | 34.1        | 50.4                         | 51    | 52.6                       | 53.3  | 60                    | 60   | 60                                    | 60   |
|         |             |         |               |                         |      |                   |                     | 2TP04525458               | 54        | 54.2        | 61.5                         | 62.1  | 63.7                       | 64.3  | 70                    | 70   | 70                                    | 70   |

\* Maximum HACR breaker of the same AMP size is applicable.

**TABLE 17: ELECTRIC HEAT MULTIPLIERS**

| VOLTAGE |        | kW Cap. Multiplier |
|---------|--------|--------------------|
| NOMINAL | RATING |                    |
| 240     | 208    | 0.75               |
|         | 230    | 0.92               |
| 480     | 460    | 0.92               |
| 600     | 575    | 0.92               |

**NOTE:** Electric heaters are rated at nominal voltage. Use this table to determine the electric heat capacity for heaters supplied at lower voltages.

**NOTES FOR TABLES 18 THROUGH TABLE 25:**

- Blower performance includes dry coil and 2" throwaway filters.
- Blower performance for gas heat includes the maximum number of heat tubes available for each tonnage.

ESP (External Static Pressure) given is that available for the supply and return air duct system. All internal resistances have been deducted from the total static pressure of the blower.

TABLE 18: DF078 (6-1/2 TON) SIDE SHOT BLOWER PERFORMANCE

| CFM  |      | External Static Pressure |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |      |      |      |
|------|------|--------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|------|------|------|
|      |      | 0.2                      |      | 0.4   |      | 0.6  |       | 0.8  |      | 1.0   |      | 1.2  |       | 1.4  |      | 1.6   |      | 1.8  |       |      |      |       |      |      |      |      |      |
|      |      | RPM                      | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts |      |      |      |      |      |
| 1900 | ---- | ----                     | ---- | ----  | 687  | 0.69 | 641   | 764  | 0.81 | 758   | 839  | 0.95 | 884   | 893  | 1.18 | 1097  | 957  | 1.34 | 1252  | 1013 | 1.42 | 1324  | 1062 | 1.59 | 1484 |      |      |
| 2000 | ---- | ----                     | ---- | ----  | 697  | 0.72 | 676   | 772  | 0.84 | 782   | 846  | 1.01 | 940   | 900  | 1.22 | 1137  | 963  | 1.39 | 1299  | 1019 | 1.48 | 1377  | 1067 | 1.65 | 1541 |      |      |
| 2100 | ---- | ----                     | ---- | ----  | 707  | 0.76 | 712   | 781  | 0.87 | 810   | 854  | 1.07 | 997   | 907  | 1.26 | 1179  | 970  | 1.44 | 1346  | 1024 | 1.53 | 1430  | 1073 | 1.71 | 1599 |      |      |
| 2200 | ---- | ----                     | ---- | ----  | 608  | 0.61 | 572   | 717  | 0.80 | 750   | 789  | 0.90 | 843   | 861  | 1.13 | 1055  | 913  | 1.31 | 1223  | 976  | 1.50 | 1395  | 1030 | 1.59 | 1485 |      |      |
| 2300 | ---- | ----                     | ---- | ----  | 623  | 0.66 | 614   | 727  | 0.85 | 790   | 798  | 0.94 | 880   | 869  | 1.19 | 1113  | 920  | 1.36 | 1269  | 983  | 1.55 | 1444  | 1035 | 1.65 | 1541 |      |      |
| 2400 | ---- | ----                     | ---- | ----  | 639  | 0.71 | 659   | 736  | 0.89 | 832   | 807  | 0.99 | 922   | 876  | 1.26 | 1172  | 927  | 1.41 | 1318  | 989  | 1.60 | 1493  | 1041 | 1.71 | 1597 |      |      |
| 2500 | 602  | 0.59                     | 550  | 654   | 0.76 | 705  | 746   | 0.94 | 877  | 815   | 1.04 | 968  | 884   | 1.32 | 1232 | 934   | 1.47 | 1369 | 996   | 1.66 | 1544 | 1046  | 1.78 | 1655 | 1094 | 1.96 | 1827 |
| 2600 | 612  | 0.64                     | 600  | 669   | 0.81 | 755  | 756   | 0.99 | 923  | 824   | 1.09 | 1019 | 891   | 1.39 | 1292 | 940   | 1.53 | 1423 | 1002  | 1.71 | 1595 | 1051  | 1.84 | 1713 | 1099 | 2.02 | 1884 |
| 2700 | 622  | 0.70                     | 652  | 684   | 0.86 | 806  | 766   | 1.04 | 971  | 832   | 1.15 | 1074 | 899   | 1.45 | 1353 | 947   | 1.59 | 1479 | 1008  | 1.77 | 1647 | 1057  | 1.90 | 1773 | 1104 | 2.08 | 1941 |
| 2800 | 632  | 0.76                     | 707  | 699   | 0.92 | 860  | 776   | 1.10 | 1022 | 841   | 1.22 | 1133 | 906   | 1.52 | 1414 | 954   | 1.65 | 1537 | 1015  | 1.82 | 1700 | 1062  | 1.97 | 1833 | 1109 | 2.14 | 1999 |
| 2900 | 642  | 0.82                     | 764  | 715   | 0.98 | 917  | 786   | 1.15 | 1074 | 850   | 1.28 | 1197 | 914   | 1.58 | 1476 | 960   | 1.71 | 1597 | 1021  | 1.88 | 1753 | 1068  | 2.03 | 1894 |      |      |      |
| 3000 | 652  | 0.88                     | 823  | 730   | 1.05 | 976  | 795   | 1.21 | 1129 | 858   | 1.36 | 1266 | 921   | 1.65 | 1539 | 967   | 1.78 | 1660 | 1028  | 1.94 | 1807 | 1073  | 2.10 | 1956 |      |      |      |
| 3100 | 662  | 0.95                     | 885  | 745   | 1.11 | 1037 | 805   | 1.27 | 1185 | 867   | 1.44 | 1339 | 929   | 1.72 | 1602 | 974   | 1.85 | 1725 | 1034  | 2.00 | 1862 |       |      |      |      |      |      |
| 3200 | 672  | 1.02                     | 949  | 760   | 1.18 | 1100 | 815   | 1.33 | 1244 | 876   | 1.52 | 1417 | 936   | 1.79 | 1666 | 981   | 1.92 | 1793 | 1041  | 2.06 | 1918 |       |      |      |      |      |      |
| 3300 | 682  | 1.09                     | 1016 | 776   | 1.25 | 1166 | 825   | 1.40 | 1305 | 884   | 1.61 | 1499 | 944   | 1.86 | 1731 | 987   | 2.00 | 1862 | 1047  | 2.12 | 1974 |       |      |      |      |      |      |

High Horsepower Option Required

TABLE 19: DF090 (7-1/2 TON) SIDE SHOT BLOWER PERFORMANCE

| CFM  |      | External Static Pressure        |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |
|------|------|---------------------------------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|-----|-------|--|-----|--|--|--|---|--|
|      |      | 0.2                             |      |      |       | 0.4  |      |       |      | 0.6  |       |      |      | 0.8   |      |      |       | 1.0  |      |       |      | 1.2  |       |      |      | 1.4   |      |      |       | 1.6  |     |       |  | 1.8 |  |  |  | 2 |  |
| RPM  | BHP  | Watts                           | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP | Watts |  |     |  |  |  |   |  |
| 2000 | 745  | 0.31                            | 292  | 811  | 0.51  | 478  | 876  | 0.71  | 658  | 939  | 0.89  | 827  | 1001 | 1.05  | 980  | 1061 | 1.19  | 1113 | 1118 | 1.31  | 1221 | 1174 | 1.46  | 1361 | 1227 | 1.59  | 1486 | 1278 | 1.74  | 1622 |     |       |  |     |  |  |  |   |  |
| 2100 | 759  | 0.38                            | 359  | 825  | 0.58  | 545  | 890  | 0.78  | 725  | 954  | 0.96  | 894  | 1015 | 1.12  | 1047 | 1075 | 1.27  | 1180 | 1133 | 1.38  | 1288 | 1188 | 1.54  | 1434 | 1241 | 1.67  | 1559 | 1292 | 1.82  | 1695 |     |       |  |     |  |  |  |   |  |
| 2200 | 774  | 0.46                            | 429  | 841  | 0.66  | 615  | 906  | 0.85  | 795  | 969  | 1.03  | 964  | 1031 | 1.20  | 1117 | 1090 | 1.34  | 1251 | 1148 | 1.46  | 1359 | 1204 | 1.62  | 1508 | 1257 | 1.75  | 1633 | 1307 | 1.90  | 1769 |     |       |  |     |  |  |  |   |  |
| 2300 | 791  | 0.54                            | 504  | 857  | 0.74  | 690  | 922  | 0.93  | 870  | 985  | 1.11  | 1039 | 1047 | 1.28  | 1192 | 1107 | 1.42  | 1325 | 1164 | 1.54  | 1433 | 1220 | 1.70  | 1584 | 1273 | 1.83  | 1709 | 1324 | 1.98  | 1845 |     |       |  |     |  |  |  |   |  |
| 2400 | 808  | 0.62                            | 582  | 874  | 0.82  | 768  | 939  | 1.02  | 948  | 1002 | 1.20  | 1117 | 1064 | 1.36  | 1270 | 1124 | 1.51  | 1403 | 1182 | 1.62  | 1511 | 1237 | 1.78  | 1664 | 1290 | 1.92  | 1789 | 1341 | 2.06  | 1925 |     |       |  |     |  |  |  |   |  |
| 2500 | 826  | 0.71                            | 664  | 892  | 0.91  | 850  | 957  | 1.11  | 1030 | 1020 | 1.29  | 1199 | 1082 | 1.45  | 1353 | 1142 | 1.59  | 1486 | 1200 | 1.71  | 1594 | 1255 | 1.87  | 1746 | 1308 | 2.01  | 1871 | 1359 | 2.15  | 2007 |     |       |  |     |  |  |  |   |  |
| 2600 | 845  | 0.81                            | 750  | 911  | 1.00  | 936  | 976  | 1.20  | 1116 | 1039 | 1.38  | 1285 | 1101 | 1.54  | 1438 | 1161 | 1.69  | 1571 | 1219 | 1.80  | 1680 | 1274 | 1.97  | 1832 | 1327 | 2.10  | 1957 | 1378 | 2.25  | 2093 |     |       |  |     |  |  |  |   |  |
| 2700 | 865  | 0.90                            | 840  | 931  | 1.10  | 1026 | 996  | 1.29  | 1206 | 1059 | 1.47  | 1375 | 1121 | 1.64  | 1528 | 1181 | 1.78  | 1661 | 1238 | 1.90  | 1769 | 1294 | 2.06  | 1922 | 1347 | 2.20  | 2046 | 1398 | 2.34  | 2183 |     |       |  |     |  |  |  |   |  |
| 2800 | 885  | 1.00                            | 933  | 952  | 1.20  | 1119 | 1016 | 1.39  | 1299 | 1080 | 1.58  | 1468 | 1141 | 1.74  | 1621 | 1201 | 1.88  | 1755 | 1259 | 2.00  | 1863 | 1314 | 2.16  | 2015 | 1368 | 2.30  | 2140 | 1418 | 2.44  | 2276 |     |       |  |     |  |  |  |   |  |
| 2900 | 907  | 1.11                            | 1030 | 973  | 1.30  | 1216 | 1038 | 1.50  | 1396 | 1101 | 1.68  | 1565 | 1163 | 1.84  | 1718 | 1222 | 1.99  | 1851 | 1280 | 2.10  | 1960 | 1336 | 2.27  | 2113 | 1389 | 2.40  | 2238 | 1439 | 2.55  | 2374 |     |       |  |     |  |  |  |   |  |
| 3000 | 929  | 1.21                            | 1131 | 995  | 1.41  | 1317 | 1060 | 1.61  | 1497 | 1123 | 1.79  | 1666 | 1185 | 1.95  | 1819 | 1244 | 2.09  | 1952 | 1302 | 2.21  | 2060 | 1358 | 2.38  | 2214 | 1411 | 2.51  | 2339 | 1461 | 2.66  | 2475 |     |       |  |     |  |  |  |   |  |
| 3100 | 951  | 1.32                            | 1235 | 1017 | 1.52  | 1421 | 1082 | 1.72  | 1601 | 1146 | 1.90  | 1769 | 1207 | 2.06  | 1923 | 1267 | 2.21  | 2056 | 1325 | 2.32  | 2164 | 1380 | 2.49  | 2320 | 1434 | 2.62  | 2445 | 1484 | 2.77  | 2581 |     |       |  |     |  |  |  |   |  |
| 3200 | 975  | 1.44                            | 1342 | 1041 | 1.64  | 1528 | 1106 | 1.83  | 1708 | 1169 | 2.01  | 1877 | 1231 | 2.18  | 2030 | 1290 | 2.32  | 2163 | 1348 | 2.48  | 2311 | 1404 | 2.61  | 2431 | 1457 | 2.74  | 2555 | 1507 | 2.89  | 2691 |     |       |  |     |  |  |  |   |  |
| 3300 | 999  | 1.56                            | 1453 | 1065 | 1.76  | 1639 | 1130 | 1.95  | 1819 | 1193 | 2.13  | 1987 | 1255 | 2.30  | 2141 | 1314 | 2.47  | 2304 | 1372 | 2.60  | 2425 | 1428 | 2.73  | 2545 | 1481 | 2.86  | 2670 | 1531 | 3.01  | 2806 |     |       |  |     |  |  |  |   |  |
| 3400 | 1023 | 1.68                            | 1567 | 1089 | 1.88  | 1753 | 1154 | 2.07  | 1932 | 1218 | 2.25  | 2101 | 1279 | 2.46  | 2293 | 1339 | 2.60  | 2422 | 1397 | 2.73  | 2544 | 1452 | 2.86  | 2664 | 1505 | 2.99  | 2789 | 1556 | 3.14  | 2925 |     |       |  |     |  |  |  |   |  |
| 3500 | 1048 | 1.81                            | 1684 | 1115 | 2.01  | 1870 | 1179 | 2.20  | 2049 | 1243 | 2.44  | 2273 | 1304 | 2.59  | 2416 | 1364 | 2.73  | 2546 | 1422 | 2.86  | 2667 | 1478 | 2.99  | 2787 | 1531 | 3.12  | 2912 | 1581 | 3.27  | 3048 |     |       |  |     |  |  |  |   |  |
| 3600 | 1074 | 1.94                            | 1804 | 1140 | 2.13  | 1990 | 1205 | 2.33  | 2170 | 1269 | 2.58  | 2401 | 1330 | 2.73  | 2544 | 1390 | 2.87  | 2673 | 1448 | 3.00  | 2794 | 1503 | 3.13  | 2914 | 1556 | 3.26  | 3039 |      |       |      |     |       |  |     |  |  |  |   |  |
| 3700 | 1101 | 2.07                            | 1927 | 1167 | 2.27  | 2113 | 1232 | 2.54  | 2369 | 1295 | 2.72  | 2532 | 1357 | 2.87  | 2676 | 1416 | 3.01  | 2805 | 1474 | 3.14  | 2926 | 1530 | 3.27  | 3046 | 1583 | 3.40  | 3171 |      |       |      |     |       |  |     |  |  |  |   |  |
| 3800 | 1127 | 2.20                            | 2053 | 1194 | 2.48  | 2315 | 1258 | 2.69  | 2505 | 1322 | 2.86  | 2669 | 1383 | 3.02  | 2812 | 1443 | 3.15  | 2941 | 1501 | 3.29  | 3062 |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |
| 3900 | 1155 | 2.39                            | 2232 | 1221 | 2.63  | 2455 | 1286 | 2.84  | 2645 | 1349 | 3.01  | 2809 | 1411 | 3.17  | 2952 | 1471 | 3.31  | 3081 |      |       |      |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |
| 4000 | 1183 | 2.55                            | 2377 | 1249 | 2.79  | 2600 | 1314 | 2.99  | 2790 | 1377 | 3.17  | 2953 | 1439 | 3.32  | 3097 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |
| 4100 | 1211 | 2.71                            | 2525 | 1277 | 2.95  | 2748 | 1342 | 3.15  | 2939 | 1406 | 3.33  | 3102 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |
| 4200 | 1240 | 2.87                            | 2678 | 1306 | 3.11  | 2901 | 1371 | 3.32  | 3091 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |
| 4300 | 1269 | 3.04                            | 2835 | 1336 | 3.28  | 3058 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |
| 4400 | 1299 | 3.21                            | 2996 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |
| 4500 | 1329 | 3.39                            | 3161 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |
|      |      | High Horsepower Option Required |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |  |     |  |  |  |   |  |

High Horsepower Option Required

TABLE 20: DF102 (8-1/2 TON) SIDE SHOT BLOWER PERFORMANCE

| CFM                     |  | External Static Pressure |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|-------------------------|--|--------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
|                         |  | 0.2                      |      |       |      | 0.4  |       |      |      | 0.6   |      |      |       | 0.8  |      |       |      |
|                         |  | RPM                      | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  |
| 2000                    |  | 802                      | 0.31 | 288   | 866  | 0.55 | 510   | 923  | 0.75 | 700   | 1025 | 1.08 | 1007  | 1074 | 1.22 | 1137  | 1178 |
| 2100                    |  | 813                      | 0.38 | 354   | 877  | 0.62 | 576   | 934  | 0.82 | 766   | 1036 | 1.15 | 1074  | 1085 | 1.29 | 1203  | 1189 |
| 2200                    |  | 825                      | 0.45 | 423   | 889  | 0.69 | 646   | 946  | 0.90 | 836   | 1048 | 1.23 | 1143  | 1097 | 1.37 | 1273  | 1201 |
| 2300                    |  | 838                      | 0.53 | 497   | 902  | 0.77 | 719   | 959  | 0.98 | 909   | 1061 | 1.30 | 1216  | 1110 | 1.44 | 1346  | 1214 |
| 2400                    |  | 852                      | 0.62 | 573   | 916  | 0.85 | 796   | 973  | 1.06 | 986   | 1075 | 1.39 | 1293  | 1124 | 1.53 | 1423  | 1228 |
| 2500                    |  | 867                      | 0.70 | 654   | 931  | 0.94 | 877   | 988  | 1.14 | 1067  | 1090 | 1.47 | 1374  | 1139 | 1.61 | 1504  | 1243 |
| 2600                    |  | 882                      | 0.79 | 739   | 946  | 1.03 | 962   | 1004 | 1.24 | 1152  | 1105 | 1.57 | 1459  | 1154 | 1.70 | 1589  | 1258 |
| 2700                    |  | 899                      | 0.89 | 829   | 963  | 1.13 | 1051  | 1020 | 1.33 | 1241  | 1122 | 1.66 | 1548  | 1170 | 1.80 | 1678  | 1274 |
| 2800                    |  | 916                      | 0.99 | 922   | 980  | 1.23 | 1145  | 1037 | 1.43 | 1335  | 1139 | 1.76 | 1642  | 1187 | 1.90 | 1771  | 1292 |
| 2900                    |  | 934                      | 1.09 | 1020  | 998  | 1.33 | 1243  | 1055 | 1.54 | 1433  | 1156 | 1.87 | 1740  | 1205 | 2.01 | 1869  | 1309 |
| 3000                    |  | 952                      | 1.20 | 1122  | 1016 | 1.44 | 1345  | 1073 | 1.65 | 1535  | 1175 | 1.98 | 1842  | 1224 | 2.12 | 1972  | 1315 |
| 3100                    |  | 971                      | 1.32 | 1229  | 1035 | 1.56 | 1451  | 1092 | 1.76 | 1641  | 1194 | 2.09 | 1949  | 1243 | 2.23 | 2078  | 1329 |
| 3200                    |  | 991                      | 1.44 | 1340  | 1055 | 1.68 | 1562  | 1112 | 1.88 | 1752  | 1214 | 2.21 | 2059  | 1263 | 2.35 | 2189  | 1343 |
| 3300                    |  | 1012                     | 1.56 | 1455  | 1076 | 1.80 | 1677  | 1133 | 2.00 | 1867  | 1234 | 2.33 | 2175  | 1283 | 2.47 | 2304  | 1355 |
| 3400                    |  | 1033                     | 1.69 | 1574  | 1097 | 1.93 | 1797  | 1154 | 2.13 | 1987  | 1256 | 2.46 | 2294  | 1304 | 2.60 | 2424  | 1377 |
| 3500                    |  | 1054                     | 1.82 | 1698  | 1118 | 2.06 | 1921  | 1176 | 2.26 | 2111  | 1277 | 2.59 | 2418  | 1322 | 2.77 | 2578  | 1399 |
| 3600                    |  | 1077                     | 1.96 | 1826  | 1141 | 2.20 | 2048  | 1198 | 2.40 | 2238  | 1300 | 2.73 | 2546  | 1345 | 2.92 | 2720  | 1421 |
| 3700                    |  | 1100                     | 2.10 | 1958  | 1164 | 2.34 | 2180  | 1221 | 2.54 | 2370  | 1318 | 2.91 | 2711  | 1369 | 3.07 | 2865  | 1444 |
| 3800                    |  | 1123                     | 2.25 | 2094  | 1187 | 2.49 | 2316  | 1244 | 2.69 | 2506  | 1334 | 3.07 | 2861  | 1393 | 3.23 | 3015  | 1468 |
| 3900                    |  | 1147                     | 2.40 | 2234  | 1211 | 2.64 | 2457  | 1268 | 2.84 | 2647  | 1367 | 3.23 | 3014  | 1417 | 3.40 | 3168  | 1488 |
| 4000                    |  | 1171                     | 2.55 | 2378  | 1236 | 2.79 | 2601  | 1293 | 2.99 | 2791  | 1392 | 3.40 | 3171  |      |      |       |      |
| 4100                    |  | 1197                     | 2.71 | 2526  | 1261 | 2.95 | 2749  | 1311 | 3.18 | 2966  | 1365 | 3.39 | 3160  |      |      |       |      |
| 4200                    |  | 1222                     | 2.87 | 2678  | 1286 | 3.11 | 2900  | 1337 | 3.36 | 3129  |      |      |       |      |      |       |      |
| 4300                    |  | 1248                     | 3.04 | 2834  | 1306 | 3.30 | 3075  |      |      |       |      |      |       |      |      |       |      |
| 4400                    |  | 1275                     | 3.21 | 2993  |      |      |       |      |      |       |      |      |       |      |      |       |      |
| 4500                    |  | 1302                     | 3.39 | 3156  |      |      |       |      |      |       |      |      |       |      |      |       |      |
| Optional Drive Required |  |                          |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |

TABLE 21: DF120 (10 TON) SIDE SHOT BLOWER PERFORMANCE

| CFM  | External Static Pressure |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------|--------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|      | 0.2                      |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       | 1.2  |      |       |
|      | RPM                      | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts |
| 3000 | ----                     | ---- | ----  | ---- | ---- | ----  | 741  | 1.20 | 1122  | 816  | 1.35 | 1256  | 865  | 1.46 | 1365  | 923  | 1.69 | 1571  |
| 3100 | ----                     | ---- | ----  | 705  | 1.13 | 1049  | 755  | 1.25 | 1167  | 828  | 1.41 | 1314  | 876  | 1.54 | 1431  | 933  | 1.75 | 1628  |
| 3200 | ----                     | ---- | ----  | 719  | 1.18 | 1100  | 769  | 1.31 | 1218  | 840  | 1.48 | 1376  | 887  | 1.61 | 1501  | 943  | 1.81 | 1691  |
| 3300 | ----                     | ---- | ----  | 733  | 1.24 | 1156  | 783  | 1.37 | 1274  | 851  | 1.55 | 1443  | 899  | 1.69 | 1575  | 952  | 1.89 | 1760  |
| 3400 | 694                      | 1.18 | 1102  | 747  | 1.30 | 1216  | 797  | 1.43 | 1336  | 863  | 1.62 | 1514  | 910  | 1.77 | 1653  | 962  | 1.97 | 1834  |
| 3500 | 707                      | 1.25 | 1161  | 761  | 1.37 | 1281  | 811  | 1.51 | 1404  | 874  | 1.70 | 1589  | 922  | 1.86 | 1735  | 972  | 2.05 | 1915  |
| 3600 | 720                      | 1.31 | 1224  | 775  | 1.45 | 1351  | 825  | 1.59 | 1477  | 886  | 1.79 | 1669  | 933  | 1.95 | 1821  | 982  | 2.15 | 2001  |
| 3700 | 733                      | 1.38 | 1290  | 789  | 1.53 | 1426  | 839  | 1.67 | 1556  | 897  | 1.88 | 1753  | 944  | 2.05 | 1911  | 992  | 2.24 | 2092  |
| 3800 | 746                      | 1.46 | 1361  | 803  | 1.61 | 1505  | 853  | 1.76 | 1641  | 909  | 1.98 | 1841  | 956  | 2.15 | 2005  | 1002 | 2.35 | 2190  |
| 3900 | 759                      | 1.54 | 1435  | 817  | 1.70 | 1589  | 867  | 1.86 | 1731  | 920  | 2.07 | 1934  | 967  | 2.26 | 2103  | 1012 | 2.46 | 2293  |
| 4000 | 772                      | 1.62 | 1513  | 831  | 1.80 | 1678  | 881  | 1.96 | 1827  | 932  | 2.18 | 2031  | 979  | 2.37 | 2205  | 1022 | 2.58 | 2402  |
| 4100 | 784                      | 1.71 | 1595  | 845  | 1.90 | 1771  | 895  | 2.07 | 1928  | 943  | 2.29 | 2132  | 990  | 2.48 | 2311  | 1032 | 2.70 | 2516  |
| 4200 | 797                      | 1.80 | 1680  | 859  | 2.01 | 1869  | 909  | 2.18 | 2035  | 955  | 2.40 | 2238  | 1001 | 2.60 | 2422  | 1042 | 2.83 | 2637  |
| 4300 | 810                      | 1.90 | 1770  | 873  | 2.12 | 1972  | 923  | 2.30 | 2148  | 966  | 2.52 | 2348  | 1013 | 2.72 | 2536  | 1052 | 2.96 | 2763  |
| 4400 | 823                      | 2.00 | 1863  | 887  | 2.23 | 2079  | 937  | 2.43 | 2266  | 978  | 2.64 | 2463  | 1024 | 2.85 | 2654  | 1062 | 3.11 | 2895  |
| 4500 | 836                      | 2.10 | 1960  | 901  | 2.35 | 2191  | 951  | 2.56 | 2390  | 989  | 2.77 | 2581  | 1036 | 2.98 | 2776  | 1072 | 3.25 | 3032  |
| 4600 | 849                      | 2.21 | 2061  | 915  | 2.48 | 2308  | 965  | 2.70 | 2519  | 1001 | 2.90 | 2705  | 1047 | 3.11 | 2902  | 1082 | 3.41 | 3175  |
| 4700 | 862                      | 2.32 | 2166  | 929  | 2.61 | 2430  | 979  | 2.85 | 2654  | 1012 | 3.04 | 2832  | 1058 | 3.25 | 3032  |      |      |       |
| 4800 | 875                      | 2.44 | 2274  | 943  | 2.74 | 2556  | 993  | 3.00 | 2795  | 1024 | 3.18 | 2964  | 1070 | 3.40 | 3166  |      |      |       |
| 4900 | 888                      | 2.56 | 2387  | 957  | 2.88 | 2687  | 1007 | 3.15 | 2941  | 1036 | 3.33 | 3100  |      |      |       |      |      |       |
| 5000 | 901                      | 2.69 | 2503  | 971  | 3.03 | 2823  | 1021 | 3.32 | 3093  |      |      |       |      |      |       |      |      |       |

High Horsepower Option Required

TABLE 22: DF078 (6-1/2 TON) DOWN SHOT BLOWER PERFORMANCE

| CFM  | External Static Pressure |       |       |       |       |       |     |      |       |     |      |       |     |      |       |       |       |       |       |       |       |       |       |       |
|------|--------------------------|-------|-------|-------|-------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|      | 0.2                      |       |       | 0.4   |       |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       | 1.2   |       |       | 1.4   |       |       | 1.6   |       |       |
|      | RPM                      | BHP   | Watts | RPM   | BHP   | Watts | RPM | BHP  | Watts | RPM | BHP  | Watts | RPM | BHP  | Watts | RPM   | BHP   | Watts | RPM   | BHP   | Watts | RPM   | BHP   | Watts |
| 1900 | -----                    | ----- | ----- | ----- | ----- | ----- | 733 | 0.75 | 698   | 804 | 0.9  | 825   | 881 | 1.03 | 963   | 931   | 1.21  | 1124  | 980   | 1.37  | 1279  | 1019  | 1.51  | 1409  |
| 2000 | -----                    | ----- | ----- | ----- | ----- | ----- | 745 | 0.8  | 742   | 814 | 0.94 | 872   | 885 | 1.09 | 1017  | 939   | 1.27  | 1181  | 987   | 1.43  | 1336  | 1025  | 1.57  | 1465  |
| 2100 | -----                    | ----- | ----- | ----- | ----- | ----- | 756 | 0.85 | 789   | 824 | 0.99 | 922   | 889 | 1.15 | 1073  | 946   | 1.33  | 1240  | 993   | 1.5   | 1395  | 1031  | 1.63  | 1521  |
| 2200 | -----                    | ----- | ----- | ----- | ----- | ----- | 767 | 0.9  | 839   | 835 | 1.05 | 975   | 894 | 1.21 | 1131  | 954   | 1.4   | 1301  | 1000  | 1.56  | 1454  | 1036  | 1.69  | 1578  |
| 2300 | -----                    | ----- | ----- | 720   | 0.75  | 699   | 778 | 0.96 | 891   | 845 | 1.1  | 1030  | 898 | 1.28 | 1191  | 962   | 1.46  | 1363  | 1006  | 1.63  | 1515  | 1042  | 1.76  | 1636  |
| 2400 | -----                    | ----- | ----- | 732   | 0.82  | 763   | 789 | 1.01 | 946   | 855 | 1.17 | 1088  | 902 | 1.34 | 1253  | 969   | 1.53  | 1426  | 1013  | 1.69  | 1577  | 1047  | 1.82  | 1695  |
| 2500 | -----                    | ----- | ----- | 743   | 0.9   | 828   | 801 | 1.08 | 1003  | 865 | 1.23 | 1148  | 906 | 1.41 | 1317  | 977   | 1.6   | 1491  | 1019  | 1.76  | 1641  | 1053  | 1.88  | 1755  |
| 2600 | -----                    | ----- | ----- | 755   | 0.96  | 895   | 812 | 1.14 | 1063  | 875 | 1.3  | 1211  | 910 | 1.48 | 1384  | 985   | 1.67  | 1558  | 1026  | 1.83  | 1705  | 1059  | 1.95  | 1816  |
| 2700 | 728                      | 0.76  | 709   | 767   | 1.03  | 964   | 823 | 1.21 | 1125  | 886 | 1.37 | 1276  | 914 | 1.56 | 1452  | 992   | 1.75  | 1627  | 1032  | 1.9   | 1771  | 1064  | 2.01  | 1878  |
| 2800 | 739                      | 0.86  | 801   | 778   | 1.11  | 1035  | 834 | 1.28 | 1190  | 896 | 1.44 | 1344  | 918 | 1.63 | 1523  | 1000  | 1.82  | 1697  | 1039  | 1.97  | 1838  | ----- | ----- | ----- |
| 2900 | 750                      | 0.96  | 894   | 790   | 1.19  | 1107  | 846 | 1.35 | 1257  | 906 | 1.52 | 1414  | 923 | 1.71 | 1596  | 1008  | 1.9   | 1769  | 1045  | 2.04  | 1906  | ----- | ----- | ----- |
| 3000 | 761                      | 1.06  | 987   | 801   | 1.27  | 1182  | 857 | 1.42 | 1327  | 916 | 1.59 | 1487  | 927 | 1.79 | 1671  | 1015  | 1.98  | 1842  | ----- | ----- | ----- | ----- | ----- | ----- |
| 3100 | 772                      | 1.16  | 1080  | 813   | 1.35  | 1258  | 868 | 1.5  | 1400  | 926 | 1.68 | 1562  | 931 | 1.87 | 1748  | 1023  | 2.06  | 1917  | ----- | ----- | ----- | ----- | ----- | ----- |
| 3200 | 784                      | 1.26  | 1175  | 825   | 1.43  | 1336  | 879 | 1.58 | 1475  | 937 | 1.76 | 1640  | 935 | 1.96 | 1827  | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| 3300 | 795                      | 1.36  | 1269  | 836   | 1.52  | 1417  | 890 | 1.67 | 1552  | 947 | 1.85 | 1721  | 939 | 2.05 | 1908  | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |

High Horsepower Option Required

Motor Efficiency 0.8

Std HP Motor 1.5

TABLE 23: DF090 (7-1/2 TON) DOWN SHOT BLOWER PERFORMANCE

| CFM                             |  | External Static Pressure |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------|--|--------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                                 |  | 0.2                      |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       | 1.2  |      |       |
|                                 |  | RPM                      | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts |
| 2000                            |  | 814                      | 0.52 | 488   | 888  | 0.71 | 665   | 960  | 0.89 | 834   | 1030 | 1.06 | 984   | 1103 | 1.18 | 1104  | 1179 | 1.27 | 1185  |
| 2100                            |  | 831                      | 0.60 | 558   | 905  | 0.79 | 735   | 977  | 0.97 | 904   | 1047 | 1.13 | 1054  | 1120 | 1.26 | 1174  | 1196 | 1.35 | 1255  |
| 2200                            |  | 849                      | 0.68 | 633   | 924  | 0.87 | 810   | 995  | 1.05 | 979   | 1066 | 1.21 | 1129  | 1138 | 1.34 | 1249  | 1214 | 1.43 | 1330  |
| 2300                            |  | 869                      | 0.77 | 713   | 943  | 0.95 | 890   | 1015 | 1.14 | 1059  | 1086 | 1.30 | 1208  | 1158 | 1.43 | 1329  | 1234 | 1.51 | 1410  |
| 2400                            |  | 890                      | 0.86 | 798   | 964  | 1.05 | 975   | 1036 | 1.23 | 1143  | 1106 | 1.39 | 1293  | 1179 | 1.52 | 1414  | 1255 | 1.60 | 1495  |
| 2500                            |  | 911                      | 0.95 | 887   | 986  | 1.14 | 1063  | 1057 | 1.32 | 1232  | 1128 | 1.48 | 1382  | 1201 | 1.61 | 1503  | 1277 | 1.70 | 1584  |
| 2600                            |  | 934                      | 1.05 | 980   | 1009 | 1.24 | 1157  | 1080 | 1.42 | 1325  | 1151 | 1.58 | 1475  | 1223 | 1.71 | 1596  | 1299 | 1.80 | 1677  |
| 2700                            |  | 958                      | 1.16 | 1077  | 1032 | 1.35 | 1254  | 1104 | 1.53 | 1422  | 1175 | 1.69 | 1572  | 1247 | 1.82 | 1693  | 1323 | 1.90 | 1774  |
| 2800                            |  | 982                      | 1.26 | 1178  | 1057 | 1.45 | 1355  | 1128 | 1.63 | 1524  | 1199 | 1.80 | 1674  | 1271 | 1.92 | 1794  | 1348 | 2.01 | 1875  |
| 2900                            |  | 1007                     | 1.38 | 1283  | 1082 | 1.57 | 1460  | 1153 | 1.75 | 1629  | 1224 | 1.91 | 1779  | 1297 | 2.04 | 1899  | 1373 | 2.12 | 1980  |
| 3000                            |  | 1033                     | 1.49 | 1392  | 1108 | 1.68 | 1569  | 1179 | 1.86 | 1737  | 1250 | 2.02 | 1887  | 1322 | 2.15 | 2008  | 1399 | 2.24 | 2089  |
| 3100                            |  | 1060                     | 1.61 | 1504  | 1134 | 1.80 | 1681  | 1206 | 1.98 | 1850  | 1277 | 2.15 | 1999  | 1349 | 2.27 | 2120  | 1400 | 2.49 | 2319  |
| 3200                            |  | 1087                     | 1.74 | 1620  | 1162 | 1.93 | 1797  | 1233 | 2.11 | 1965  | 1304 | 2.27 | 2115  | 1357 | 2.47 | 2303  | 1426 | 2.62 | 2443  |
| 3300                            |  | 1115                     | 1.87 | 1739  | 1189 | 2.06 | 1916  | 1261 | 2.24 | 2084  | 1318 | 2.46 | 2291  | 1383 | 2.61 | 2433  | 1451 | 2.76 | 2572  |
| 3400                            |  | 1143                     | 2.00 | 1861  | 1218 | 2.19 | 2038  | 1279 | 2.44 | 2270  | 1344 | 2.60 | 2426  | 1409 | 2.75 | 2568  | 1478 | 2.90 | 2707  |
| 3500                            |  | 1172                     | 2.13 | 1986  | 1246 | 2.32 | 2163  | 1306 | 2.59 | 2411  | 1371 | 2.75 | 2566  | 1436 | 2.91 | 2708  | 1505 | 3.06 | 2848  |
| 3600                            |  | 1201                     | 2.27 | 2114  | 1267 | 2.55 | 2377  | 1334 | 2.74 | 2557  | 1398 | 2.91 | 2713  | 1464 | 3.06 | 2855  | 1532 | 3.21 | 2994  |
| 3700                            |  | 1223                     | 2.48 | 2314  | 1295 | 2.71 | 2530  | 1361 | 2.91 | 2710  | 1426 | 3.07 | 2865  | 1491 | 3.23 | 3007  | 1560 | 3.38 | 3147  |
| 3800                            |  | 1251                     | 2.65 | 2473  | 1323 | 2.88 | 2688  | 1389 | 3.08 | 2868  | 1454 | 3.24 | 3023  | 1519 | 3.40 | 3165  |      |      |       |
| 3900                            |  | 1280                     | 2.83 | 2636  | 1351 | 3.06 | 2852  | 1418 | 3.25 | 3032  |      |      |       |      |      |       |      |      |       |
| 4000                            |  | 1308                     | 3.01 | 2806  | 1380 | 3.24 | 3021  | 1446 | 3.43 | 3201  |      |      |       |      |      |       |      |      |       |
| High Horsepower Option Required |  |                          |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |

TABLE 24: DF102 (8-1/2 TON) DOWN SHOT BLOWER PERFORMANCE

| CFM                     |      |       | External Static Pressure |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       | 1.8  |      |       |      |      |       |      |     |       |
|-------------------------|------|-------|--------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|-----|-------|
|                         |      |       | 0.2                      |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       | 1.2  |      |       |      |      |       | 1.4  |      |       | 1.6  |     |       |
| RPM                     | BHP  | Watts | RPM                      | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP | Watts |
| 2000                    | 842  | 0.46  | 431                      | 913  | 0.69  | 647  | 980  | 0.89  | 827  | 1044 | 1.05  | 982  | 1110 | 1.21  | 1124 | 1178 | 1.36  | 1263 | 1253 | 1.51  | 1411 | 1335 | 1.69  | 1577 | 1429 | 1.90  | 1773 |     |       |
| 2100                    | 856  | 0.55  | 513                      | 927  | 0.78  | 728  | 993  | 0.97  | 908  | 1058 | 1.14  | 1064 | 1123 | 1.29  | 1206 | 1192 | 1.44  | 1345 | 1266 | 1.60  | 1492 | 1349 | 1.78  | 1658 | 1443 | 1.99  | 1854 |     |       |
| 2200                    | 871  | 0.64  | 595                      | 942  | 0.87  | 810  | 1009 | 1.06  | 990  | 1074 | 1.23  | 1146 | 1139 | 1.38  | 1288 | 1207 | 1.53  | 1427 | 1282 | 1.69  | 1574 | 1364 | 1.87  | 1741 | 1458 | 2.08  | 1936 |     |       |
| 2300                    | 888  | 0.73  | 679                      | 959  | 0.96  | 894  | 1026 | 1.15  | 1074 | 1091 | 1.32  | 1230 | 1156 | 1.47  | 1372 | 1224 | 1.62  | 1511 | 1299 | 1.78  | 1658 | 1381 | 1.96  | 1824 | 1475 | 2.17  | 2020 |     |       |
| 2400                    | 906  | 0.82  | 765                      | 978  | 1.05  | 980  | 1044 | 1.24  | 1160 | 1109 | 1.41  | 1316 | 1174 | 1.56  | 1458 | 1243 | 1.71  | 1597 | 1317 | 1.87  | 1745 | 1400 | 2.05  | 1911 | 1493 | 2.26  | 2107 |     |       |
| 2500                    | 926  | 0.92  | 855                      | 997  | 1.15  | 1070 | 1064 | 1.34  | 1250 | 1129 | 1.51  | 1406 | 1194 | 1.66  | 1548 | 1262 | 1.81  | 1687 | 1340 | 2.02  | 1883 | 1415 | 2.13  | 1990 | 1494 | 2.21  | 2063 |     |       |
| 2600                    | 947  | 1.02  | 948                      | 1018 | 1.25  | 1164 | 1085 | 1.44  | 1344 | 1149 | 1.61  | 1499 | 1215 | 1.76  | 1641 | 1283 | 1.91  | 1780 | 1362 | 2.13  | 1990 | 1436 | 2.25  | 2096 | 1515 | 2.33  | 2170 |     |       |
| 2700                    | 969  | 1.12  | 1046                     | 1040 | 1.35  | 1261 | 1106 | 1.55  | 1441 | 1171 | 1.71  | 1597 | 1236 | 1.87  | 1739 | 1305 | 2.02  | 1878 | 1384 | 2.26  | 2102 | 1459 | 2.37  | 2209 | 1538 | 2.45  | 2282 |     |       |
| 2800                    | 991  | 1.23  | 1149                     | 1062 | 1.46  | 1364 | 1129 | 1.66  | 1544 | 1194 | 1.82  | 1700 | 1259 | 1.98  | 1842 | 1328 | 2.13  | 1981 | 1408 | 2.38  | 2221 | 1483 | 2.50  | 2328 | 1562 | 2.58  | 2401 |     |       |
| 2900                    | 1015 | 1.35  | 1256                     | 1086 | 1.58  | 1471 | 1152 | 1.77  | 1651 | 1217 | 1.94  | 1807 | 1283 | 2.09  | 1949 | 1362 | 2.37  | 2207 | 1434 | 2.52  | 2346 | 1508 | 2.63  | 2452 | 1587 | 2.71  | 2526 |     |       |
| 3000                    | 1039 | 1.47  | 1369                     | 1110 | 1.70  | 1584 | 1177 | 1.89  | 1764 | 1241 | 2.06  | 1920 | 1307 | 2.21  | 2062 | 1388 | 2.51  | 2338 | 1460 | 2.66  | 2477 | 1534 | 2.77  | 2583 | 1613 | 2.85  | 2657 |     |       |
| 3100                    | 1064 | 1.60  | 1487                     | 1135 | 1.83  | 1702 | 1201 | 2.02  | 1882 | 1266 | 2.19  | 2038 | 1345 | 2.47  | 2307 | 1415 | 2.66  | 2475 | 1487 | 2.80  | 2614 | 1561 | 2.92  | 2721 | 1641 | 3.00  | 2794 |     |       |
| 3200                    | 1089 | 1.73  | 1611                     | 1160 | 1.96  | 1826 | 1227 | 2.15  | 2006 | 1292 | 2.32  | 2161 | 1373 | 2.63  | 2450 | 1443 | 2.81  | 2619 | 1515 | 2.96  | 2757 | 1590 | 3.07  | 2864 | 1669 | 3.15  | 2937 |     |       |
| 3300                    | 1115 | 1.87  | 1740                     | 1186 | 2.10  | 1955 | 1253 | 2.29  | 2135 | 1318 | 2.46  | 2291 | 1402 | 2.79  | 2600 | 1472 | 2.97  | 2768 | 1544 | 3.12  | 2907 | 1619 | 3.23  | 3013 | 1698 | 3.31  | 3087 |     |       |
| 3400                    | 1142 | 2.01  | 1875                     | 1213 | 2.24  | 2090 | 1279 | 2.44  | 2270 | 1361 | 2.74  | 2558 | 1432 | 2.96  | 2755 | 1502 | 3.14  | 2924 | 1574 | 3.29  | 3062 | 1648 | 3.40  | 3169 |      |       |      |     |       |
| 3500                    | 1168 | 2.16  | 2016                     | 1240 | 2.39  | 2231 | 1306 | 2.59  | 2411 | 1392 | 2.92  | 2720 | 1462 | 3.13  | 2917 | 1533 | 3.31  | 3086 |      |       |      |      |       |      |      |       |      |     |       |
| 3600                    | 1196 | 2.32  | 2162                     | 1267 | 2.55  | 2377 | 1351 | 2.86  | 2663 | 1423 | 3.10  | 2887 | 1494 | 3.31  | 3085 |      |       |      |      |       |      |      |       |      |      |       |      |     |       |
| 3700                    | 1223 | 2.48  | 2314                     | 1295 | 2.71  | 2530 | 1383 | 3.04  | 2837 | 1455 | 3.28  | 3061 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |
| 3800                    | 1251 | 2.65  | 2473                     | 1341 | 2.97  | 2767 | 1416 | 3.24  | 3016 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |
| 3900                    | 1280 | 2.83  | 2636                     | 1374 | 3.17  | 2952 | 1450 | 3.43  | 3202 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |
| 4000                    | 1328 | 3.08  | 2870                     | 1408 | 3.37  | 3143 |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |
| 4100                    | 1363 | 3.29  | 3067                     |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |
| Optional Drive Required |      |       |                          |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |     |       |

TABLE 25: DF120 (10 TON) DOWN SHOT BLOWER PERFORMANCE

| CFM  | External Static Pressure |      |       |      |      |       |      |      |       |      |      |       |
|------|--------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|      | 0.2                      |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       |
|      | RPM                      | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts | RPM  | BHP  | Watts |
| 3000 | 741                      | 1.21 | 1128  | 814  | 1.34 | 1248  | 880  | 1.50 | 1400  | 935  | 1.68 | 1564  |
| 3100 | 758                      | 1.26 | 1178  | 829  | 1.41 | 1312  | 892  | 1.58 | 1473  | 945  | 1.76 | 1643  |
| 3200 | 775                      | 1.32 | 1234  | 843  | 1.48 | 1381  | 904  | 1.66 | 1550  | 956  | 1.85 | 1726  |
| 3300 | 792                      | 1.39 | 1298  | 858  | 1.56 | 1456  | 916  | 1.75 | 1632  | 966  | 1.94 | 1812  |
| 3400 | 809                      | 1.47 | 1369  | 872  | 1.65 | 1537  | 929  | 1.84 | 1719  | 976  | 2.04 | 1902  |
| 3500 | 826                      | 1.55 | 1447  | 887  | 1.74 | 1623  | 941  | 1.94 | 1810  | 986  | 2.14 | 1995  |
| 3600 | 843                      | 1.64 | 1532  | 901  | 1.84 | 1715  | 953  | 2.04 | 1905  | 997  | 2.24 | 2092  |
| 3700 | 860                      | 1.74 | 1624  | 916  | 1.94 | 1812  | 965  | 2.15 | 2005  | 1007 | 2.35 | 2193  |
| 3800 | 877                      | 1.85 | 1723  | 930  | 2.05 | 1915  | 977  | 2.26 | 2109  | 1017 | 2.46 | 2297  |
| 3900 | 894                      | 1.96 | 1829  | 945  | 2.17 | 2023  | 990  | 2.38 | 2218  | 1027 | 2.58 | 2405  |
| 4000 | 911                      | 2.08 | 1943  | 959  | 2.29 | 2138  | 1002 | 2.50 | 2331  | 1038 | 2.70 | 2516  |
| 4100 | 928                      | 2.21 | 2063  | 974  | 2.42 | 2257  | 1014 | 2.63 | 2449  | 1048 | 2.82 | 2631  |
| 4200 | 945                      | 2.35 | 2190  | 988  | 2.56 | 2383  | 1026 | 2.76 | 2571  | 1058 | 2.95 | 2749  |
| 4300 | 962                      | 2.49 | 2324  | 1003 | 2.70 | 2514  | 1038 | 2.89 | 2697  | 1068 | 3.08 | 2871  |
| 4400 | 979                      | 2.65 | 2466  | 1017 | 2.84 | 2650  | 1050 | 3.03 | 2828  | 1079 | 3.21 | 2996  |
| 4500 | 996                      | 2.80 | 2614  | 1032 | 3.00 | 2792  | 1063 | 3.18 | 2963  | 1090 | 3.34 | 3123  |
| 4600 | 1013                     | 2.97 | 2770  | 1046 | 3.15 | 2940  | 1075 | 3.33 | 3103  | 1101 | 3.47 | 3253  |
| 4700 | 1030                     | 3.15 | 2932  | 1061 | 3.32 | 3094  | 1090 | 3.48 | 3248  | 1112 | 3.60 | 3383  |
| 4800 | 1047                     | 3.33 | 3102  | 1075 | 3.49 | 3253  | 1101 | 3.60 | 3383  | 1123 | 3.73 | 3513  |
| 4900 | 1065                     | 3.52 | 3278  | 1090 | 3.67 | 3428  | 1112 | 3.73 | 3513  | 1134 | 3.86 | 3643  |
| 5000 | 1082                     | 3.71 | 3462  | 1101 | 3.80 | 3602  | 1123 | 3.86 | 3643  | 1145 | 3.99 | 3773  |

High Horsepower Option Required

Motor Efficiency 0.8

Std HP Motor2

**TABLE 26: ADDITIONAL STATIC RESISTANCE DF078, 120**

| CFM  | Cooling Only* | Economizer† ‡ | Electric Heat KW† |      |      |      |      |
|------|---------------|---------------|-------------------|------|------|------|------|
|      |               |               | 9                 | 18   | 24   | 36   | 54   |
| 1900 | 0.06          | 0.02          | 0.05              | 0.06 | 0.07 | 0.08 | 0.10 |
| 2100 | 0.07          | 0.02          | 0.06              | 0.07 | 0.08 | 0.09 | 0.11 |
| 2300 | 0.08          | 0.02          | 0.07              | 0.08 | 0.09 | 0.10 | 0.13 |
| 2500 | 0.09          | 0.02          | 0.08              | 0.09 | 0.10 | 0.11 | 0.14 |
| 2700 | 0.11          | 0.03          | 0.09              | 0.10 | 0.12 | 0.13 | 0.16 |
| 2900 | 0.12          | 0.03          | 0.10              | 0.11 | 0.13 | 0.14 | 0.18 |
| 3100 | 0.14          | 0.03          | 0.12              | 0.13 | 0.15 | 0.16 | 0.20 |
| 3300 | 0.16          | 0.03          | 0.13              | 0.14 | 0.17 | 0.18 | 0.22 |
| 3500 | 0.18          | 0.04          | 0.15              | 0.16 | 0.19 | 0.20 | 0.24 |
| 3700 | 0.20          | 0.04          | 0.17              | 0.18 | 0.21 | 0.22 | 0.26 |
| 3900 | 0.23          | 0.04          | 0.19              | 0.20 | 0.23 | 0.24 | 0.28 |
| 4100 | 0.25          | 0.04          | 0.21              | 0.22 | 0.25 | 0.26 | 0.31 |
| 4300 | 0.28          | 0.05          | 0.23              | 0.24 | 0.28 | 0.29 | 0.34 |
| 4500 | 0.30          | 0.05          | 0.25              | 0.26 | 0.30 | 0.31 | 0.37 |
| 4700 | 0.33          | 0.05          | 0.28              | 0.29 | 0.33 | 0.34 | 0.40 |
| 4900 | 0.36          | 0.05          | 0.30              | 0.31 | 0.35 | 0.37 | 0.43 |
| 5100 | 0.39          | 0.06          | 0.33              | 0.34 | 0.38 | 0.40 | 0.46 |

\* Add these resistance values to the available static resistance in the respective Blower Performance Tables.

† Deduct these resistance values from the available external static pressure shown in the respective Blower Performance Table.

‡ The pressure drop through the economizer is greater for 100% outdoor air than for 100% return air. If the resistance of the return air duct system is less than 0.25 IWG, the unit will deliver less CFM during full economizer operation.

**TABLE 27: ADDITIONAL STATIC RESISTANCE DF090, 102**

| CFM  | Cooling Only* | Economizer† ‡ | Electric Heat KW† |      |      |      |      |
|------|---------------|---------------|-------------------|------|------|------|------|
|      |               |               | 9                 | 18   | 24   | 36   | 54   |
| 1900 | -0.004        | 0.07          | 0.05              | 0.06 | 0.07 | 0.08 | 0.1  |
| 2100 | 0.01          | 0.09          | 0.06              | 0.07 | 0.08 | 0.09 | 0.11 |
| 2300 | 0.01          | 0.11          | 0.07              | 0.08 | 0.09 | 0.1  | 0.13 |
| 2500 | 0.02          | 0.13          | 0.08              | 0.09 | 0.1  | 0.11 | 0.14 |
| 2700 | 0.03          | 0.16          | 0.09              | 0.1  | 0.12 | 0.13 | 0.16 |
| 2900 | 0.04          | 0.18          | 0.1               | 0.11 | 0.13 | 0.14 | 0.18 |
| 3100 | 0.05          | 0.20          | 0.12              | 0.13 | 0.15 | 0.16 | 0.2  |
| 3300 | 0.06          | 0.22          | 0.13              | 0.14 | 0.17 | 0.18 | 0.22 |
| 3500 | 0.07          | 0.24          | 0.15              | 0.16 | 0.19 | 0.2  | 0.24 |
| 3700 | 0.08          | 0.27          | 0.17              | 0.18 | 0.21 | 0.22 | 0.26 |
| 3900 | 0.09          | 0.29          | 0.19              | 0.2  | 0.23 | 0.24 | 0.28 |
| 4100 | 0.09          | 0.31          | 0.21              | 0.22 | 0.25 | 0.26 | 0.31 |
| 4300 | 0.10          | 0.33          | 0.23              | 0.24 | 0.28 | 0.29 | 0.34 |

\* Deduct these resistance values to the available static resistance in the respective Blower Performance Tables.

† Deduct these resistance values from the available external static pressure shown in the respective Blower Performance Table.

‡ The pressure drop through the economizer is greater for 100% outdoor air than for 100% return air. If the resistance of the return air duct system is less than 0.25 IWG, the unit will deliver less CFM during full economizer operation.

**TABLE 28: ELECTRIC HEAT MINIMUM SUPPLY AIR CFM**

| HEATER |         | UNIT MODEL SIZE (NOMINAL TONS) |           |           |          |
|--------|---------|--------------------------------|-----------|-----------|----------|
| kW     | VOLTAGE | 078 (6.5)                      | 090 (7.5) | 102 (8.5) | 120 (10) |
|        |         | MINIMUM SUPPLY AIR CFM         |           |           |          |
| 9      | 208/230 | 1950                           | 2250      | 2550      | N/A      |
| 18     |         | 1950                           | 2250      | 2550      | 3000     |
| 24     |         | 1950                           | 2250      | 2550      | 3000     |
| 36     |         | 1950                           | 2250      | 2550      | 3000     |
| 54     |         | N/A                            | N/A       | N/A       | 3500     |
| 9      | 480     | 1950                           | 2250      | 2550      | N/A      |
| 18     |         | 1950                           | 2250      | 2550      | 3000     |
| 24     |         | 1950                           | 2250      | 2550      | 3000     |
| 36     |         | 1950                           | 2250      | 2550      | 3000     |
| 54     |         | N/A                            | N/A       | N/A       | 3000     |
| 9      | 600     | 1950                           | 2250      | 2550      | N/A      |
| 18     |         | 1950                           | 2250      | 2550      | 3000     |
| 24     |         | 1950                           | 2250      | 2550      | 3000     |
| 36     |         | 1950                           | 2250      | 2550      | 3000     |
| 54     |         | N/A                            | N/A       | N/A       | 3500     |

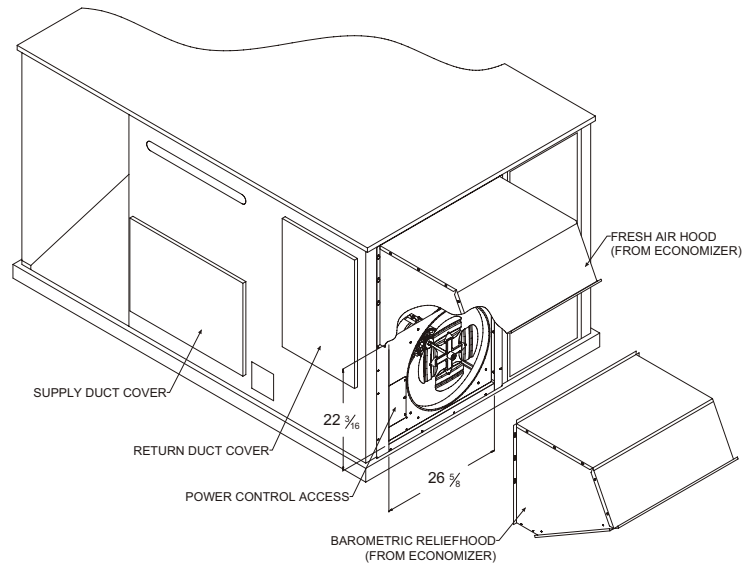
**TABLE 29: INDOOR BLOWER SPECIFICATIONS**

| MODEL | MOTOR |      |      |      |       | MOTOR SHEAVE     |            |       | BLOWER SHEAVE    |            |       | BELT |
|-------|-------|------|------|------|-------|------------------|------------|-------|------------------|------------|-------|------|
|       | HP    | RPM  | Eff. | SF   | Frame | Datum Dia. (in.) | Bore (in.) | Model | Datum Dia. (in.) | Bore (in.) | Model |      |
| DF078 | 1-1/2 | 1725 | 80%  | 1.15 | 56    | 3.4 - 4.4        | 7/8        | 1VM50 | 9.5              | 1          | AK99  | A58  |
|       | 2     | 1725 | 80%  | 1.15 | 56    | 3.4 - 4.4        | 7/8        | 1VM50 | 7.5              | 1          | AK79  | A55  |
| DF090 | 2     | 1725 | 80%  | 1.15 | 56    | 3.4 - 4.4        | 7/8        | 1VM50 | 6.5              | 1          | AK69  | A49  |
|       | 3     | 1725 | 80%  | 1.15 | 56    | 3.4 - 4.4        | 7/8        | 1VM50 | 6.0              | 1          | AK64  | A49  |
| DF102 | 3     | 1725 | 80%  | 1.15 | 56    | 3.4 - 4.4        | 7/8        | 1VM50 | 6.0              | 1          | AK64  | A49  |
|       | 3     | 1725 | 80%  | 1.15 | 56    | 3.4 - 4.4        | 7/8        | 1VM50 | 5.7              | 1          | AK61  | A49  |
| DF120 | 2     | 1725 | 80%  | 1.15 | 56    | 3.4 - 4.4        | 7/8        | 1VM50 | 8.5              | 1          | AK89  | A56  |
|       | 3     | 1725 | 80%  | 1.15 | 56    | 3.4 - 4.4        | 7/8        | 1VM50 | 7.0              | 1          | AK74  | A54  |

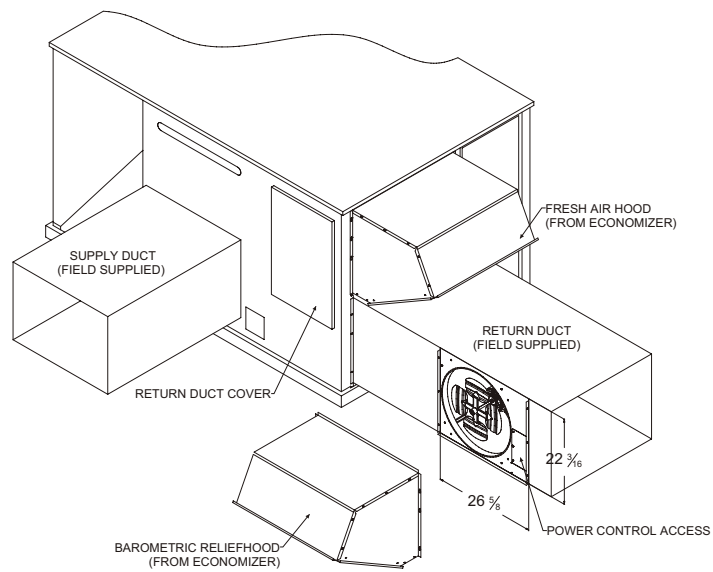
**TABLE 30: POWER EXHAUST SPECIFICATIONS**

| POWER EXHAUST MODEL | VOLT    | PHASE | MOTOR |      |     | ELECTRICAL |     |     | FUSE SIZE | CFM@ 0.1 ESP |
|---------------------|---------|-------|-------|------|-----|------------|-----|-----|-----------|--------------|
|                     |         |       | HP    | RPM* | QTY | LRA        | FLA | MCA |           |              |
| 2PE0473225          | 208/230 | 1     | 0.75  | 1075 | 1   | 24.9       | 5.0 | 6.3 | 10        | 3,800        |
| 2PE0473246          | 460     | 1     |       |      |     | N/A        | 2.2 | 2.8 | 5         |              |
| 2PE0473258          | 575     | 1     |       | 1050 |     |            | 1.5 | 1.9 | 4         |              |

\* Motors are multi-tapped and factory wired for high speed.



**FIGURE 2 - POWER EXHAUST ACCESSORY DOWNFLOW APPLICATION**



**FIGURE 3 - POWER EXHAUST ACCESSORY HORIZONTAL APPLICATION**

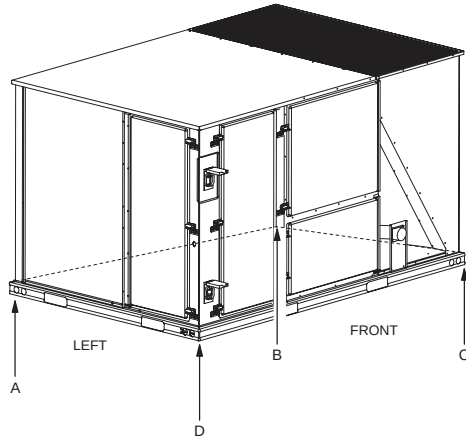
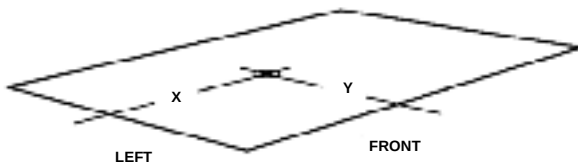


FIGURE 4 - UNIT 4 POINT LOAD

TABLE 31: 4 POINT LOAD WEIGHT

| Model | Location (lbs.)* |     |     |     |
|-------|------------------|-----|-----|-----|
|       | A                | B   | C   | D   |
| DF078 | 231              | 197 | 288 | 337 |
| DF090 | 195              | 146 | 228 | 306 |
| DF102 | 197              | 147 | 230 | 309 |
| DF120 | 260              | 222 | 324 | 379 |

\* Weights include largest heating option.



| Unit Model Number | X      | Y      |
|-------------------|--------|--------|
| DF078             | 47 1/2 | 25 1/2 |
| DF090             | 38     | 23     |
| DF102             | 38     | 23     |
| DF120             | 47 1/2 | 25 1/2 |

FIGURE 5 - UNIT CENTER OF GRAVITY

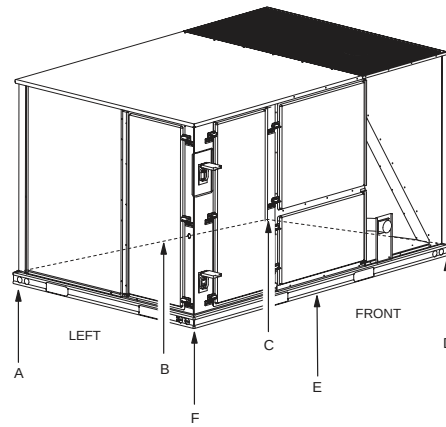


FIGURE 6 - UNIT 6 POINT LOAD

TABLE 32: 6 POINT LOAD WEIGHT

| Model | Locations (lbs.) |     |     |     |     |     |
|-------|------------------|-----|-----|-----|-----|-----|
|       | A                | B   | C   | D   | E   | F   |
| DF078 | 158              | 142 | 128 | 187 | 207 | 231 |
| DF090 | 137              | 112 | 93  | 145 | 175 | 214 |
| DF102 | 138              | 113 | 93  | 146 | 176 | 216 |
| DF120 | 178              | 160 | 144 | 210 | 233 | 260 |

TABLE 33: UNIT WEIGHT

| Model       | Shipping*<br>Weight (lbs.) | Operating<br>Weight (lbs.) |
|-------------|----------------------------|----------------------------|
| DF078       | 1058                       | 1053                       |
| DF090       | 875                        | 870                        |
| DF102       | 888                        | 883                        |
| DF120       | 1190                       | 1185                       |
| ECON.       | 85                         | 84                         |
| PE          | 150                        | 148                        |
| GAS HEAT†   | 110                        | 100                        |
| ELEC. HEAT‡ | 49                         | 49                         |

\* Weights include largest heating option.

† 8 tube gas section.

‡ 54kW heater.

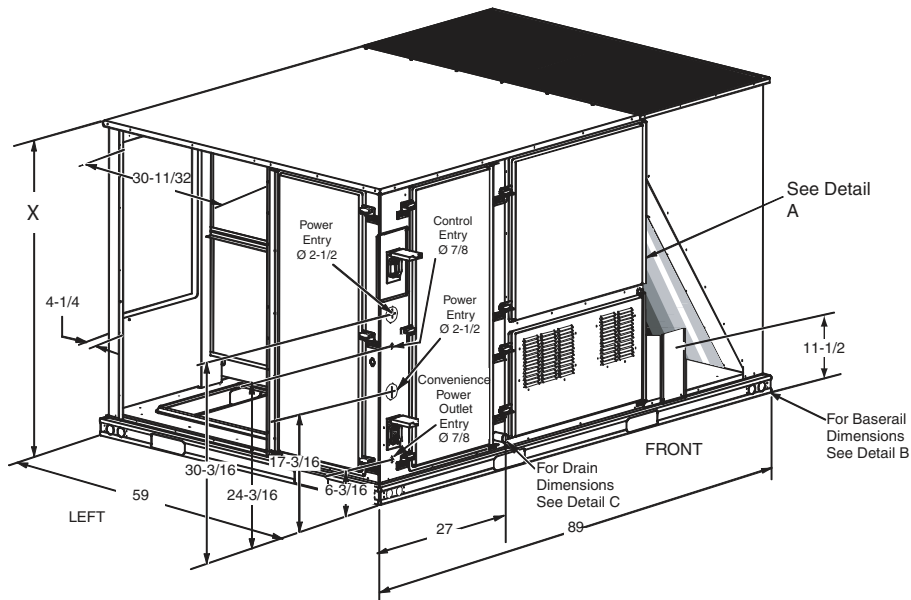
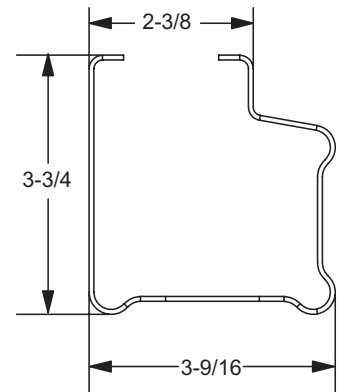


FIGURE 7 - UNIT DIMENSIONS

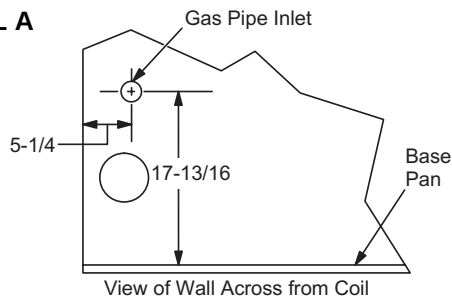
TABLE 34: UNIT HEIGHT

| Unit Model Number | X      |
|-------------------|--------|
| DF078             | 50 3/4 |
| DF090             | 42     |
| DF102             | 42     |
| DF120             | 50 3/4 |

DETAIL B



DETAIL A



DETAIL C

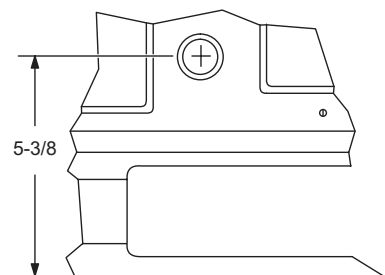


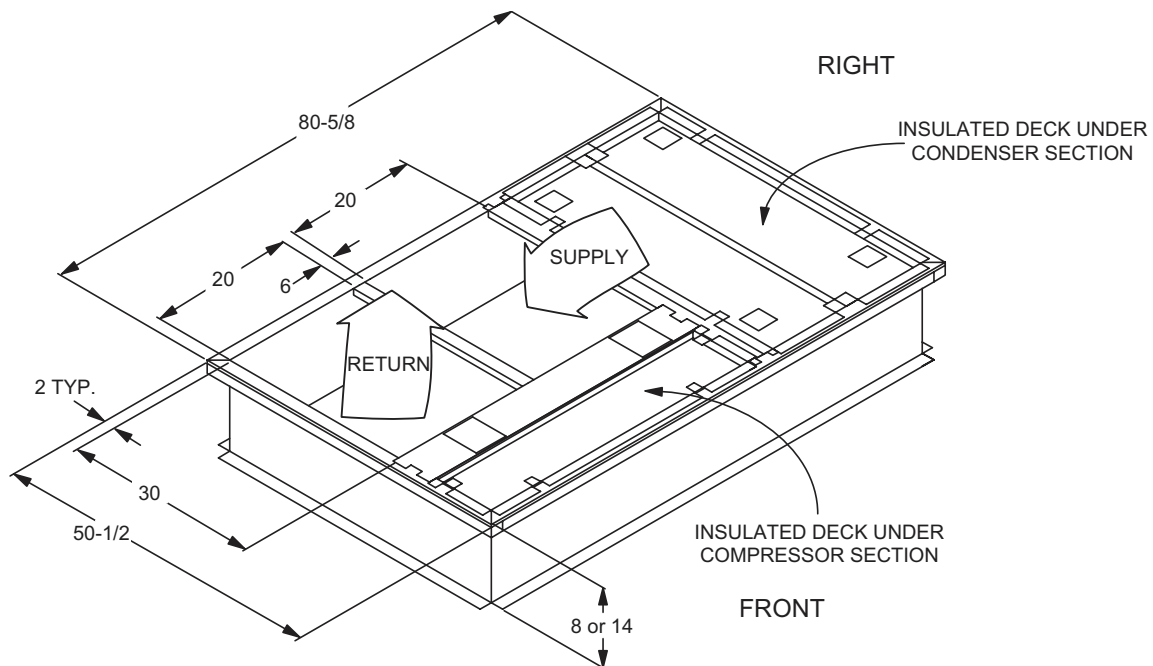
TABLE 35: UNIT CLEARANCES

| Top*  | 72" | Right   | 12" |
|-------|-----|---------|-----|
| Front | 36" | Left    | 36" |
| Rear† | 36" | Bottom‡ | 0"  |

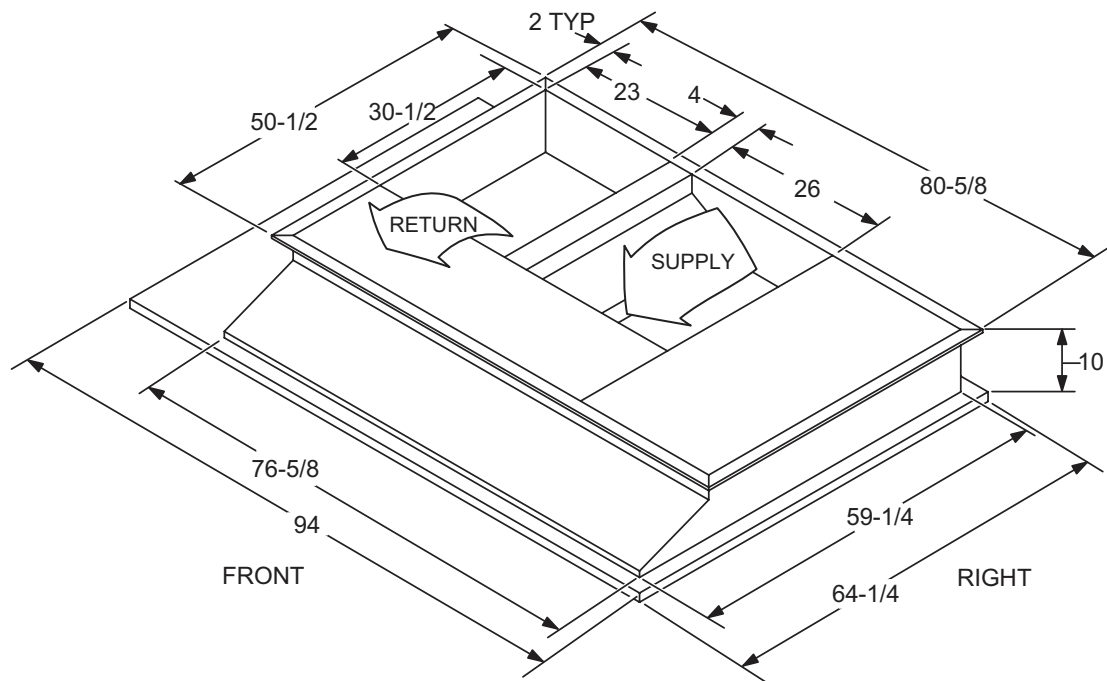
\* Units must be installed outdoors. Overhanging structure or shrubs should not obstruct condenser air discharge outlet.

† To remove the slide-out drain pan, a rear clearance of 60" is required. If space is unavailable, the drain pan can be removed through the front by separating the corner wall.

‡ Units may be installed on combustible floors made from wood or class A, B or C roof covering materials.



**FIGURE 8 - PREDATOR® ROOF CURB DIMENSIONS**



**FIGURE 9 - SUNLINE™ TO PREDATOR® TRANSITION ROOF CURBS**

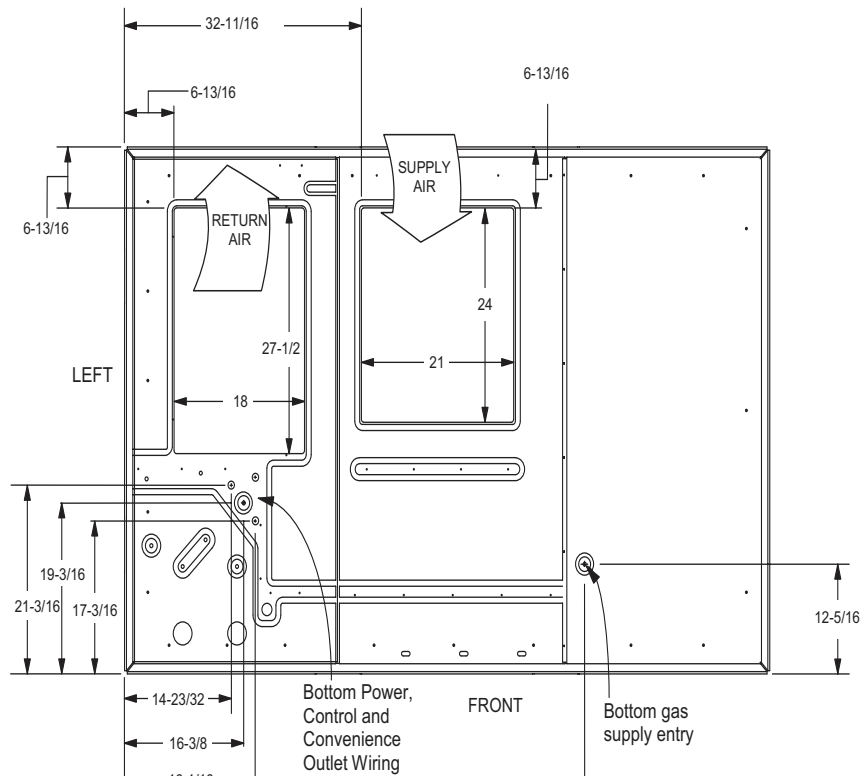


FIGURE 10 - BOTTOM DUCT OPENINGS (FROM ABOVE)

REAR DUCT DIMENSIONS

| CABINET SIZE | DIMENSION |         |        |
|--------------|-----------|---------|--------|
|              | "A"       | "B"     | "C"    |
| 50 3/4"      | 28 1/4    | 18 1/16 | 28 1/4 |
| 42"          | 27 3/4    | 12 1/16 | 27 1/2 |

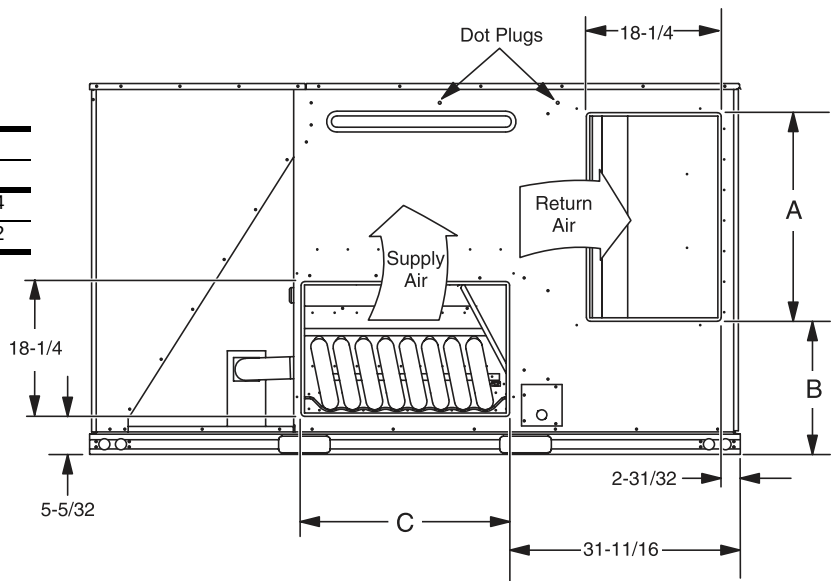
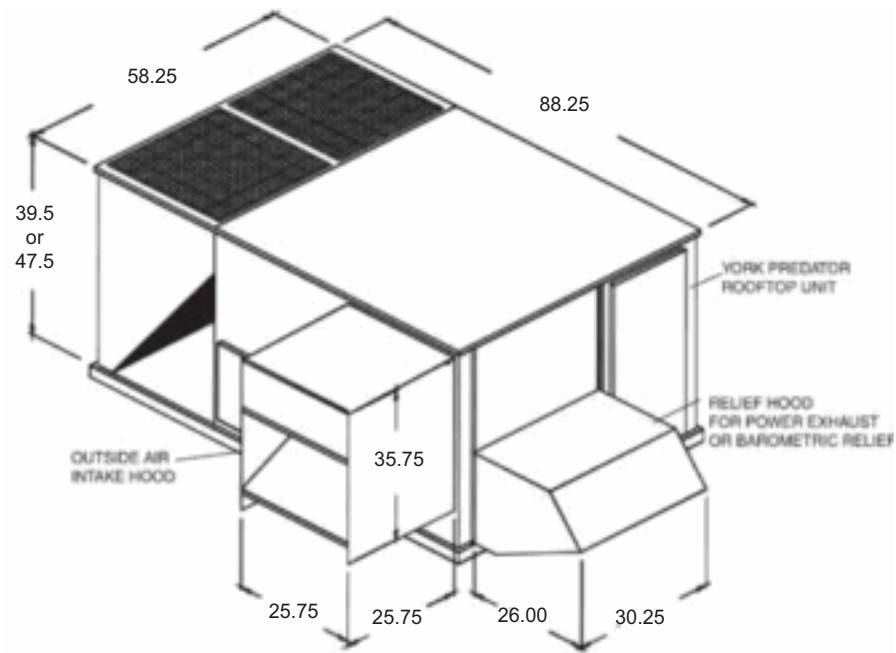


FIGURE 11 - REAR DUCT DIMENSIONS



**FIGURE 12 - DOWNFLOW ECONOMIZER HOOD DETAIL**

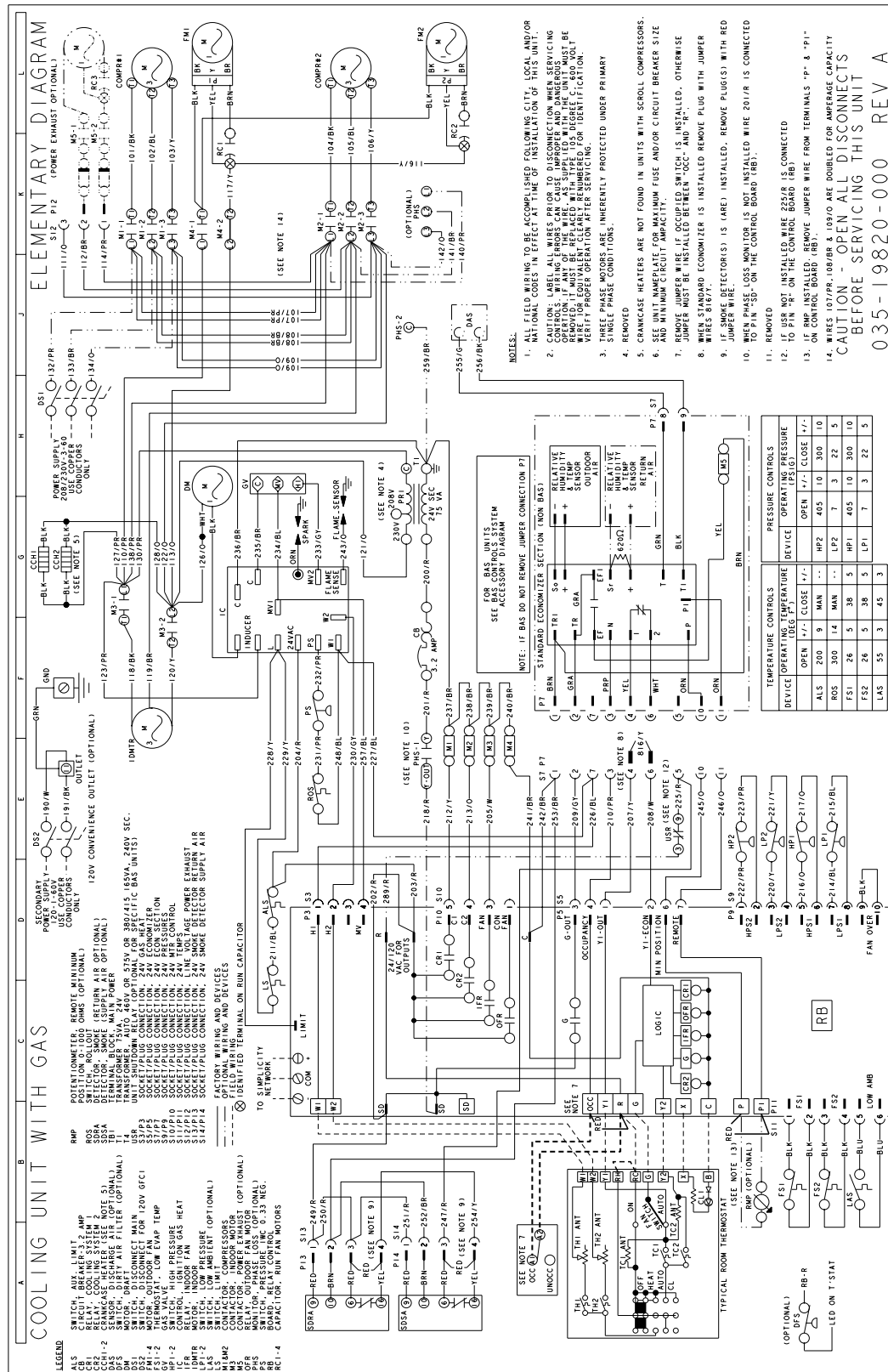


FIGURE 13 - COOLING UNIT WITH GAS HEAT WIRING 230 VOLT DIAGRAM

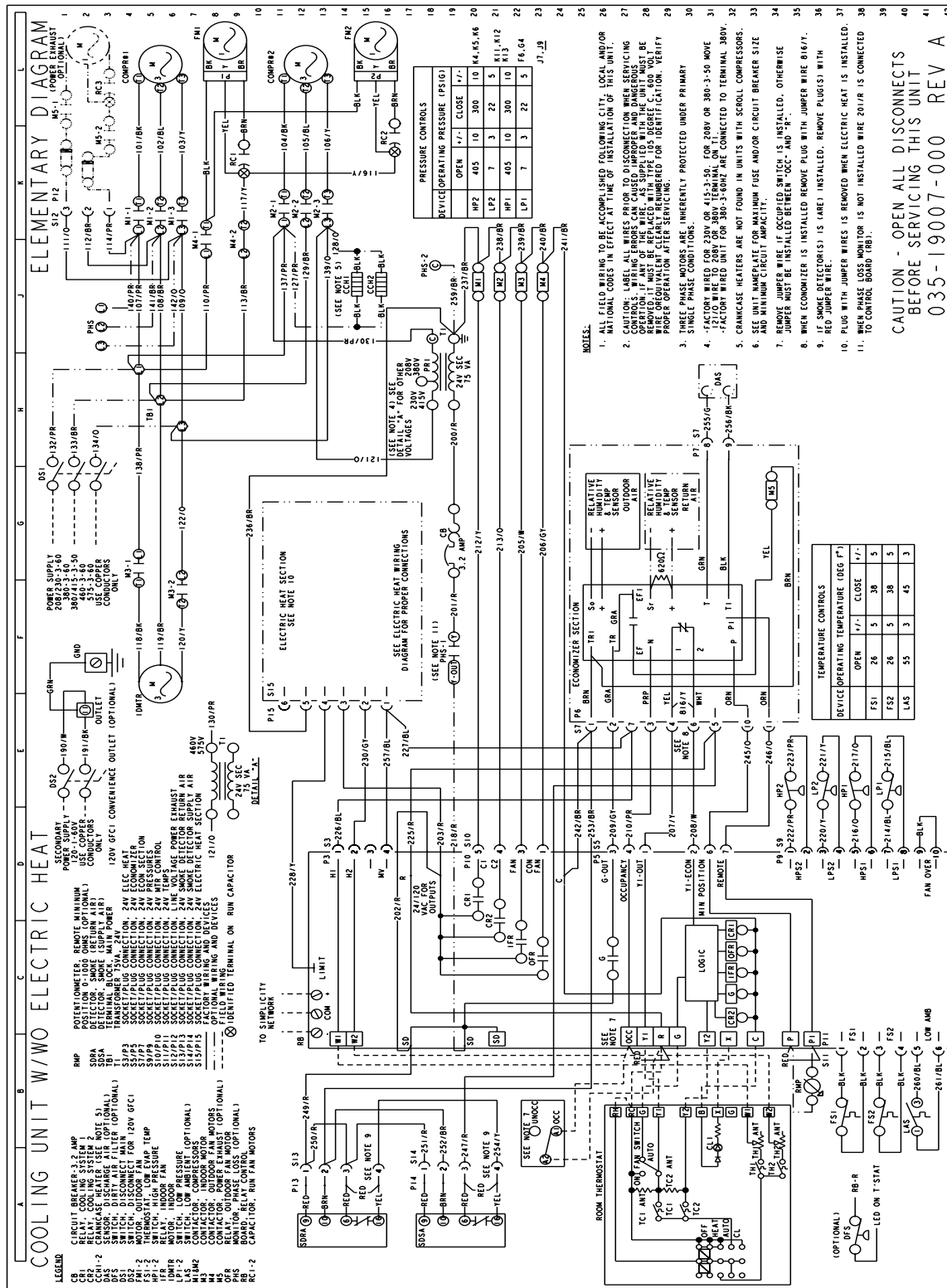


FIGURE 14 - COOLING UNIT WITH/WITHOUT ELECTRIC HEAT WIRING DIAGRAM



## GUIDE SPECIFICATIONS

### PREDATOR® DF 078, 090, 102 & 120 10.4 EER

#### GENERAL

Units shall be manufactured by York International Unitary Products Group in an ISO 9001 certified facility. YORK® DF Predator® units are convertible single packages with a common footprint cabinet and common roof curb for all 6-1/2 through 10 ton models. All units have two compressors with independent refrigeration circuits to provide 2 stages of cooling. The units were designed for light commercial applications and can be easily installed on a roof curb, slab, or frame. All Predator® units are self-contained and assembled on rigid full perimeter base rails allowing for 3-way forklift access and overhead rigging. Every unit is completely charged, wired, piped, and tested at the factory to provide a quick and easy field installation. All units are convertible between side and down airflow. Independent economizer designs are used on side and down discharge applications, as well as all tonnage sizes. Predator® units are available in the following configurations: cooling only, cooling with electric heat, and cooling with gas heat. Electric heaters are available as factory-installed options or field-installed accessories.

#### DESCRIPTION

Units shall be factory assembled, single package, (Elec/Elec, Gas/Elec), designed for outdoor installation. Units shall have a minimum EER of 10.4. They shall have built in field convertible duct connections for down discharge supply/return or horizontal discharge supply/return and be available with factory installed options or field installed accessories. The units shall be factory wired, piped and charged with R-22 refrigerant and factory tested prior to shipment. All unit wiring shall be both numbered and color coded. The cooling performance shall be rated in accordance with DOE and ARI test procedures. Units shall be CSA certified to ANSI Z21.47 and UL 1995/CAN/CSA No. 236-M90 standards.

#### UNIT CABINET

Unit cabinet shall be constructed of G90 galvanized steel with exterior surfaces coated with a non-chalking, powder paint finish, certified at 1000 hours salt spray test per ASTM-B117 standards. Indoor blower sections shall be insulated with up to 1" thick insulation coated on the airside. Aluminum foil faced insulation shall be used in the unit's compartments and be fastened to prevent insulation from entering the air stream. Cabinet doors shall be hinged with toolless access for easy servicing and maintenance. Full perimeter base rails shall be provided to assure reliable transit of equipment, overhead rigging, fork truck access and proper sealing on roof curb applications. Disposable 2" filters shall be furnished and be accessible through hinged access door. Fan performance measuring ports shall be provided on the outside of the cabinet to allow accurate air measurements of evaporator

fan performance without removing panels or creating bypass of the coils. Condensate pan shall be slide out design, constructed of a non corrosive material, internally sloped and conforming to ASHRAE 62-B9 standards. Condensate connection shall be a minimum of 3/4" I.D. female and be rigid mount connection.

#### INDOOR (EVAPORATOR) FAN ASSEMBLY

Fan shall be a belt drive assembly and include an adjustable pitch motor pulley. Job site selected brake horsepower shall not exceed the motors nameplate horsepower rating plus the service factor. Units shall be designed to operate within the service factor. Fan wheel shall be double inlet type with forward curve blades, dynamically balanced to operate smoothly throughout the entire range of operation. Airflow design shall be constant volume. Bearings shall be sealed and permanently lubricated for longer life and no maintenance. Entire blower assembly and motor shall be slide out design.

#### OUTDOOR (CONDENSER) FAN ASSEMBLY

The outdoor fans shall be of the direct drive type, discharge air vertically, have aluminum blades riveted to corrosion resistant steel spider brackets and shall be dynamically balanced for smooth operation. The outdoor fan motors shall have permanently lubricated bearings internally protected against overload conditions and staged independently. A cleaning window shall be provided on two sides of the units for coil cleaning.

#### REFRIGERANT COMPONENTS

##### Compressors:

- A. Shall be fully hermetic type, direct drive, internally protected with internal high-pressure relief and over temperature protection. The hermetic motor shall be suction gas cooled and have a voltage range of + or - 10% of the unit nameplate voltage.
- B. Shall have internal spring isolation and sound muffling to minimize vibration and noise, and be externally isolated on a dedicated, independent mounting.

##### Coils:

- A. Evaporator and condenser coils shall have aluminum plate fins mechanically bonded to seamless internally enhanced copper tubes with all joints brazed. Special Phenolic coating shall be available as a factory option.
- B. Evaporator and condenser coils shall be of the direct expansion, draw-thru design.

Refrigerant Circuit and Refrigerant Safety Components shall include:

- A. Independent fixed-orifice or thermally operated expansion devices.
- B. Solid core filter drier/strainer to eliminate any moisture or foreign matter.
- C. Accessible service gage connections on both suction and discharge lines to charge, evacuate, and measure refrigerant pressure during any necessary servicing or troubleshooting, without losing charge.
- D. The unit shall have two independent refrigerant circuits, equally split in 50% capacity increments.

#### Unit Controls:

- A. Unit shall be complete with self-contained low-voltage control circuit protected by a resettable circuit breaker on the 24-volt transformer side.
- B. Unit shall incorporate a lockout circuit which provides reset capability at the space thermostat or base unit should any of the following standard safety devices trip and shut off compressor:
  - (1) High-pressure switch.
  - (2) Freeze-protection thermostat, evaporator coil. If any of the above safety devices trip, an LED (light-emitting diode) indicator shall flash a diagnostic code that indicates which safety switch has tripped.
- D. Unit shall incorporate "AUTO RESET" compressor over temperature, over current protection.
- E. Unit shall operate with conventional thermostat designs and have a low voltage terminal strip for easy hook-up.
- F. Unit control board shall have on-board diagnostics and fault code display.
- G. Standard controls shall include anti-short cycle and low voltage protection, and permit cooling operation down to 0 °F.
- H. Control board shall monitor each refrigerant safety switch independently.
- I. Control board shall retain last 5 fault codes in non-volatile memory, which will not be lost in the event of a power loss.

#### **GAS HEATING SECTION (IF EQUIPPED)**

Heat exchanger and exhaust system shall be constructed of aluminized steel and shall be designed with induced draft combustion with post purge logic, energy saving direct spark ignition, and redundant main gas valve. The heat exchanger shall be of the tubular type, constructed of T1-40 aluminized steel for corrosion resistance and allowing minimum mixed air entering temperature of 40 °F. Burners shall be of the in-

shot type, constructed of aluminum-coated steel. All gas piping shall enter the unit cabinet at a single location, through either the side or bottom, without any field modifications. An integrated control board shall provide timed control of evaporator fan functioning and burner ignition. Heating section shall be provided with the following minimum protection:

- A. Primary and auxiliary high-temperature limit switches.
- B. Induced draft pressure sensor.
- C. Flame roll out switch (manual reset).
- D. Flame proving controls. Unit shall have two independent stages of capacity (60% 1<sup>st</sup> stage, 100% 2<sup>nd</sup> stage).

#### **ELECTRIC HEATING SECTION (IF EQUIPPED)**

An electric heating section, with nickel chromium elements, shall be provided in a range of 9 thru 54 KW, offering two states of capacity all sizes. The heating section shall have a primary limit control(s) (automatic reset) to prevent the heating element system from operating at an excessive temperature. The Heating Section assembly shall slide out of the unit for easy maintenance and service. Units with Electric Heating Sections shall be wired for a single point power supply with branch circuit fusing (where required).

#### **UNIT OPERATING CHARACTERISTICS**

Unit shall be capable of starting and running at 125 °F outdoor temperature, exceeding maximum load criteria of ARI Standard 210/240. The compressor, with standard controls, shall be capable of operation down to 0 °F outdoor temperature. Unit shall be provided with fan time delay to prevent cold air delivery before heat exchanger warms up. (Gas heat only)

**ELECTRICAL REQUIREMENTS** - All unit power wiring shall enter unit cabinet at a single factory provided location and be capable of side or bottom entry to minimize roof penetrations and avoid unit field modifications. Separate side and bottom openings shall be provided for the control wiring.

**STANDARD LIMITED WARRANTIES** - Compressor - 5 Years, Heat Exchanger - 10 Years, Elect. Heat Elem. - 5 Years, Parts - 1 Year

**FACTORY INSTALLED OPTIONAL OUTDOOR AIR** (Shall be made available by either/or):

1. **ELECTRONIC ENTHALPY AUTOMATIC ECONOMIZER** - Outdoor and return air dampers that are interlocked and positioned by a fully-modulating, spring-return damper actuator. The maximum leakage rate for the outdoor air intake dampers shall not exceed 2% when dampers are fully closed and operating against a pressure differential of 0.5 IWG. A unit-mounted potentiometer shall be provided to adjust the outdoor and return air damper assembly to take in outdoor air to meet the minimum ventilation requirement of the conditioned space during normal operation. During economizer operation, a mixed-air temperature control shall modulate the

outdoor and return air damper assembly to prevent the supply air temperature from dropping below 55 °F. Changeover from compressor to economizer operation shall be provided by an integral electronic enthalpy control that feeds input into the basic module. The outdoor intake opening shall be covered with a rain hood that matches the exterior of the unit. Water eliminator/filters shall be provided. Simultaneous economizer/compressor operation is also possible. Dampers shall fully close on power loss. Available with barometric relief or power exhaust.

2. **MOTORIZED OUTDOOR AIR DAMPERS** - Outdoor and return air dampers that are interlocked and positioned by a 2-position, spring-return damper actuator. The maximum leakage rate for the outdoor air intake dampers shall not exceed 2% when dampers are fully closed and operating against a pressure differential of 0.5 IWG. A unit-mounted potentiometer shall be provided to adjust the outdoor and return air damper assembly to take in the design CFM of outdoor air to meet the ventilation requirements of the conditioned space during normal operation. Whenever the indoor fan motor is energized, the dampers open up to one of two pre-selected positions - regardless of the outdoor air enthalpy. Dampers return to the fully closed position when the indoor fan motor is de-energized. Dampers shall fully close on power loss.

#### ADDITIONAL FACTORY INSTALLED OPTIONS

- **ALTERNATE INDOOR BLOWER MOTOR** - For applications with high restrictions, units are available with optional indoor blower motors that provide higher static output and/or higher airflow.
- **CONVENIENCE OUTLET (POWERED/NON-POWERED)** - Unit can be provided with an optional 120VAC GFCI outlet with cover on the corner of the unit housing the compressors.
- **ELECTRIC HEAT** - Electric heaters range from 9kW to 54 kW and are available in all the voltage options of the base unit.
- **PHASE MONITOR** - Designed to prevent damage in out-of-phase condition.
- **COIL GUARD** - Designed to prevent condenser coil damage.
- **BAS CONTROLS** - Include supply air sensor, return air sensor, dirty filter indicator and air proving switch.
- **DIRTY FILTER SWITCH** - This kit includes a differential pressure switch that energizes the fault light on the unit thermostat, indicating that there is an abnormally high-pressure drop across the filters.
- **BREAKER** - An HACR breaker can be factory installed on gas heat units or cooling units with electric heaters.
- **DISCONNECT SWITCH** - A disconnect can be factory installed on cooling only units, sized for the largest electric heat available.
- **STAINLESS STEEL HEAT EXCHANGER** - For applications in a corrosive environment, this option provides a full stainless steel heat exchanger assembly.
- **STAINLESS STEEL DRAIN PAN** - Provides years of trouble free operation in corrosive environments.
- **SMOKE DETECTOR** - A smoke detector can be factory mounted and wired in the supply and/or return air compartments.

#### OTHER PRE-ENGINEERED ACCESSORIES AVAILABLE

- **ROOF CURB** - 14" and 8" high, full perimeter knockdown curb, with hinged design for quick assembly.
- **BAROMETRIC RELIEF DAMPER** - (Unit Mounted - Downflow, Duct Mounted - Horizontal flow) - Contains a rain hood, air inlet screen, exhaust damper and mounting hardware. Used to relieve internal air pressure through the unit during economizer operation.
- **PROPANE CONVERSION KIT** - Contains new orifices and gas valve springs to convert from natural to L.P. gas.
- **-60 °F GAS HEAT KIT** - Provides an electric heat kit for the gas compartment for use in extreme low ambient conditions.
- **ECONOMIZER** (Downflow and Horizontal flow)
- **POWER EXHAUST** - (Unit mount - Downflow, Duct mount - Horizontal flow)
- **DUAL ENTHALPY KIT** - Provides a second input to economizer to monitor return air.



