TECHNICAL GUIDE

PREDATOR®

HIGH EFFICIENCY

SINGLE PACKAGE AIR CONDITIONERS AND

SINGLE PACKAGE GAS/ELECTRIC UNITS

DH 078, 090, 102, 120 and 150

6-1/2, 7-1/2, 8-1/2, 10 and 12-1/2 NOMINAL TONS

10.0-11.5 EER

YORK® Heating and Air Conditioning

DESCRIPTION

ASHRAE 90.1 COMPLIANT

YORK® Predator® units are convertible single packages with a common footprint cabinet and common roof curb for all 6-1/2 through 12-1/2 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.

Tested in accordance with:

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

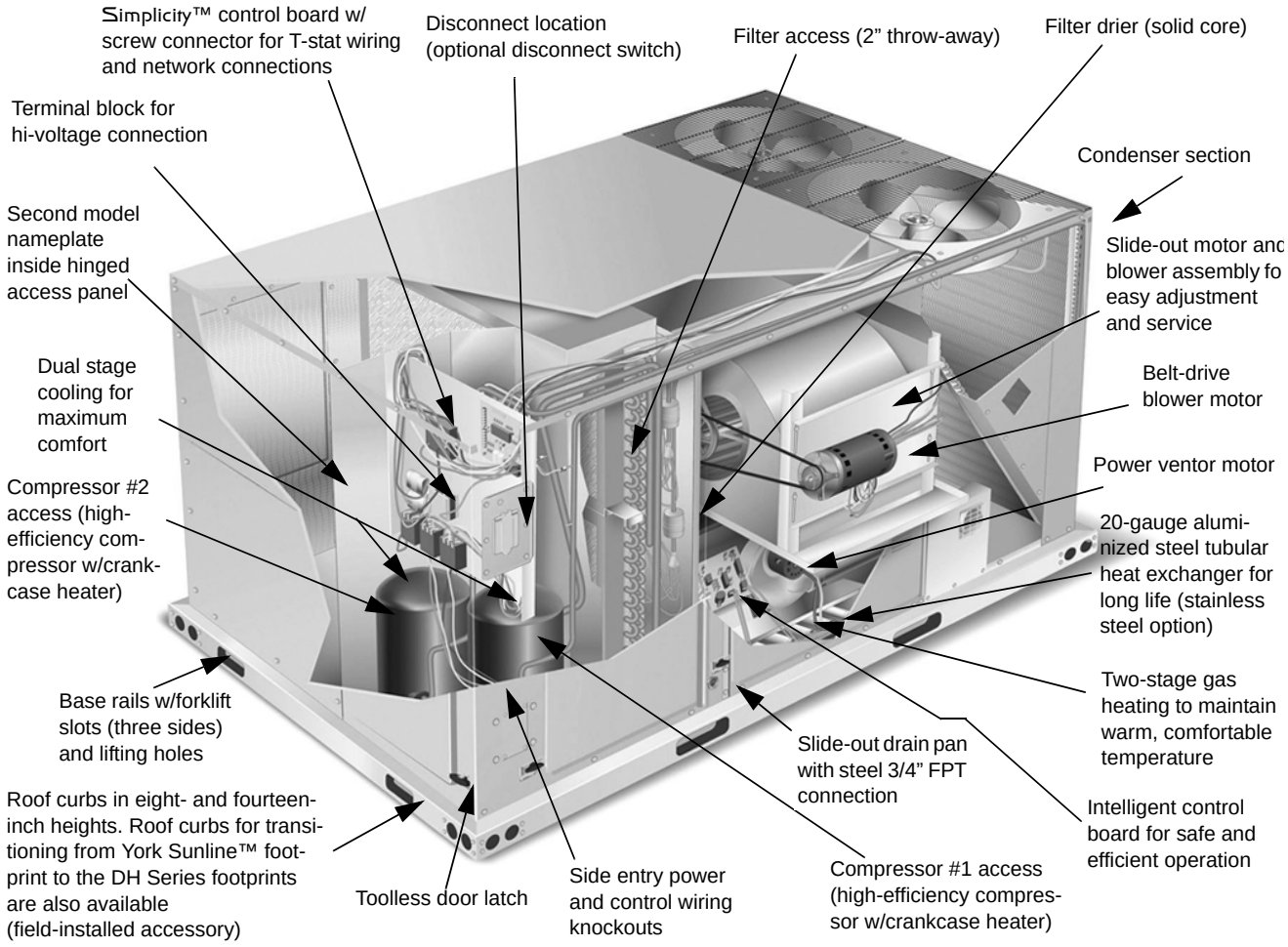


FIGURE 1 - PREDATOR® COMPONENT LOCATION (DH120 SHOWN)

FEATURES

- **High Efficiency** – High efficiency units reach as high as 11.5 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 1st and 2nd 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 forklift 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_2 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_2 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_2 sensors. It uses an inside CO_2 sensor to perform Demand Ventilation. It can also use an Outside CO_2 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_2 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. Incudes 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_2 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 economizer.**
- **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_2 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_2 Sensor** - Senses CO_2 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.
- **Flue Exhaust Extension Kit** - In locations with wind or weather conditions which may interfere with proper exhausting of furnace combustion products, this kit can be installed to prevent the flue exhaust from entering nearby fresh air intakes.
- **-60°F Gas Heat Kit** - For installations which require gas heat units to perform in low ambient temperatures, a gas section heating kit is available. This kit provides electric heat in the gas heat controls section to ensure the gas valve and controls will continue to function properly at extremely low temperatures.
- **Gas Heat High Altitude Kit** - This kit converts a gas heat unit to operate at high altitudes, 2,000 to 6,000 feet. Conversion kits are available for natural gas and propane.
- **Gas Heat Propane Conversion Kit** - This kit converts a gas-fired heater from natural gas to propane. It contains the main burner orifices and gas valve replacement springs.
- **Gas Piping Kit** - Contains pipe nipples, fittings and gas cock required for gas supply connection with external shut off.
- **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.
- **Low Limit / Compressor Lockout Kit**
  1. **Compressor Lockout (CLO):** To prevent mechanical (compressorized) operation of the unit during cold outdoor conditions where there is a risk of returning liquid refrigerant back to the compressors.
  2. **Low Limit Control (LLC):** To prevent the supply air from dropping below a specified setpoint by utilizing the units first stage heating means when there is a demand for cooling during cold outside conditions.
- **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

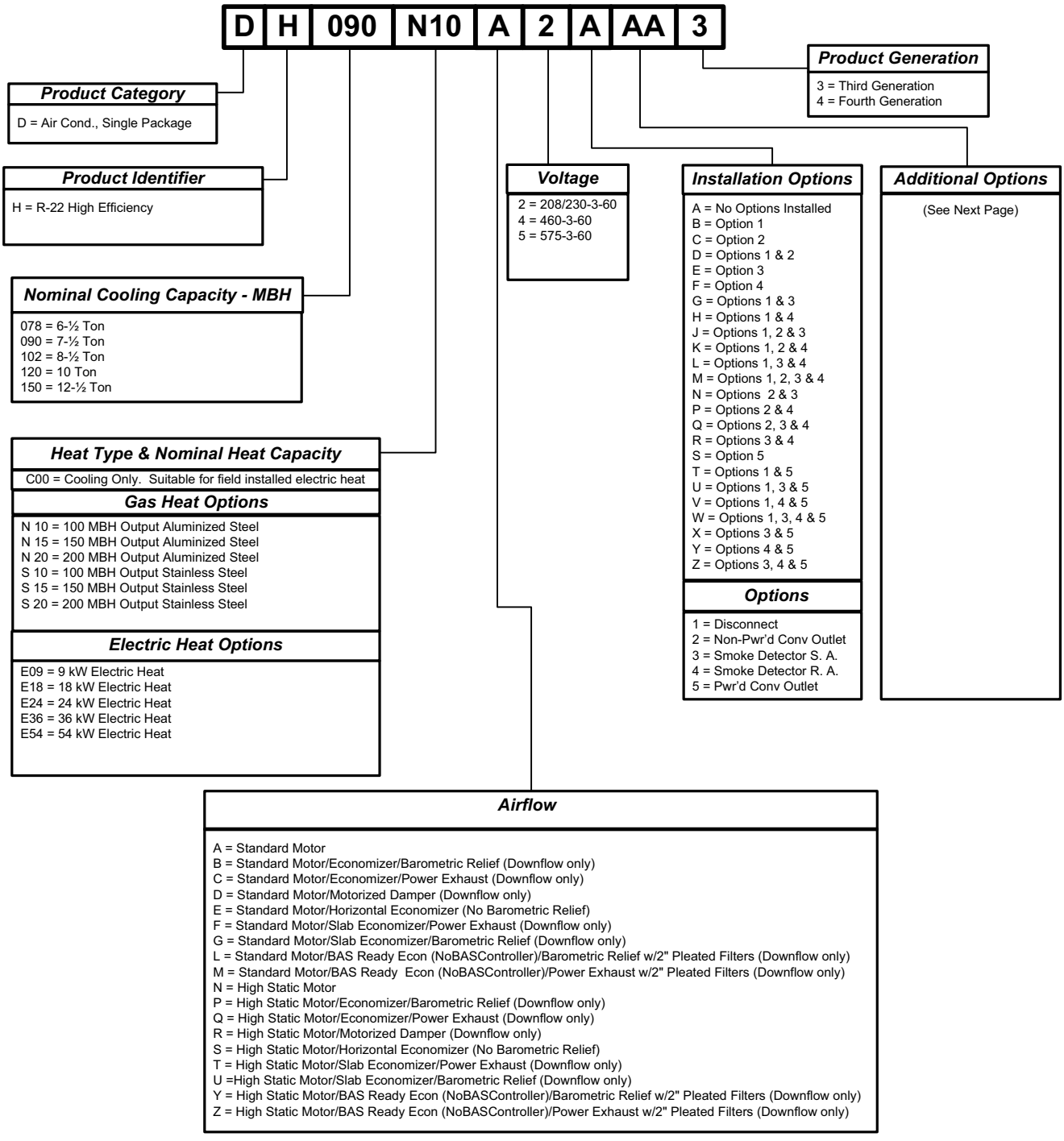
Part Number	Description	Weight
1RC0470	Roof Curb, 8" Height	-
1RC0471	Roof Curb, 14" Height	-
1RC0472	Roof Curb, Transition (7.5 T through 12.5 T)	-
1BD0408	Burglar Bars, Downflow	-
2TP04520925	Electric Heat 9kW 230V	-
2TP04521825	Electric Heat 18kW 230V	-
2TP04522425	Electric Heat 24kW 230V	-
2TP04523625	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)	-

TABLE 1: ACCESSORIES (CONTINUED)

Part Number	Description	Weight
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	-
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	-
1FE0411	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 Kit	-
1FL0423	Permanent Filter Kit, 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
HA	Honeywell Excel 10 Controller with Dirty Filter Switch & Air Proving Switch

Additional Options	
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
NR	Novar ETC-3 Controller, DFS, APS, Technicoat Evap. & Cond Coils, Phase Monitor, & Coil Guard

Additional Options	
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: DH PHYSICAL DATA

Component		Models				
		078	090	102	120	150
Evaporator Blower	Blower, Centrifugal (Dia. X Wd. in.)	15 x 15	12 x 12	15 x 15	15 x 15	15 x 15
	Motor, Standard (HP)	1-1/2	2	2	2	3
	Motor, Optional (HP)	2	3	3	3	5
Evaporator Coil	Rows	3	3	3	4	4
	Fins per Inch	15	15	15	15	15
	Height (in.)	32	32	40	40	40
	Face Area ($ft.^2$ each)	10.6	10.67	13.2	13.2	13.2
Condenser Fan (2 per Unit)	Propeller Dia. (in., each)	24	24	24	24	24
	Motor (HP, each)	1/3	1/3	1/3	3/4	3/4
	CFM, Nominal (each)	3400	3400	3400	4400	4400
Condenser Coil (2 per unit)	Rows (each)	1	2	2	2	2
	Fins per Inch	20	20	20	20	20
	Height (in., each)	44	36	44	44	44
	Face Area ($ft.^2$ each)	14.5	12	14.5	14.5	14.5
Refrigerant Charge	System 1 (lb./oz.)	6/4	7/4	10/0	12/0	9/14
	System 2 (lb./oz.)	5/12	6/12	9/8	11/0	9/4
Compressors	Quantity	2	2	2	2	2
	Type	Recip	Recip	Recip	Recip	Scroll
Air Filters	Size (Wd. x Ht. x Thickness in.)	25x20x2	25x16x2	25x20x2	25x20x2	25x20x2
	Number Per Unit	4	4	4	4	4

TABLE 3: DH CAPACITY RATINGS

Size (Tons)	Model	Cooling Capacity ARI Ratings[1]			CFM	Sound Rating (dB)[2]	Nominal Electric Heat Capacity[3] (kW)	Gas Heat Capacity				Gas Line Size (in. OD)
		MBH	EER	IPLV				Input (MBH)	Output (MBH)	Seasonal Efficiency (%)	Temp. Rise (°F)	
078 (6-1/2)	Cooling Only	75	11.5	11.95	2600	84	-	-	-	-	-	-
	Electric Heat						9, 18, 24, 36	-	-	-	-	-
	Gas Heat						-	120	96	80	20-50	3/4
	Gas Heat						-	180	144	80	35-65	3/4
090 (7-1/2)	Cooling Only	88	11.5	12.0	2633	84	-	-	-	-	-	-
	Electric Heat						18, 36	-	-	-	-	-
	Gas Heat						-	120	96	80	15-45	3/4
	Gas Heat						-	180	144	80	30-60	3/4
102 (8-1/2)	Cooling Only	99	11.5	12.50	3400	84	-	-	-	-	-	-
	Electric Heat						9, 18, 24, 36	-	-	-	-	-
	Gas Heat						-	120	96	80	15-45	3/4
	Gas Heat						-	180	144	80	10-40	3/4
120 (10)	Cooling Only	115	11.0	11.70	3840	90	-	-	-	-	-	-
	Electric Heat						18, 24, 36, 54	-	-	-	-	-
	Gas Heat						-	180	144	80	20-50	3/4
	Gas Heat						-	240	192	80	35-65	3/4
150 (12-1/2)	Cooling Only	146	10.0	10.70	4100	90	-	-	-	-	-	-
	Electric Heat						18, 24, 36, 54	-	-	-	-	-
	Gas Heat						-	180	144	80	10-40	3/4
	Gas Heat						-	240	192	80	25-55	3/4

1 Rated at 95°F ambient 80°F dry bulb and 67°F wet bulb.
2 Rated in accordance with ARI 270 standard.
3 See Table 20.

TABLE 4: UNIT VOLTAGE LIMITATIONS

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

TABLE 5: COOLING CAPACITY DH078 (6-1/2 TON) UNIT

Air On Evap. Coil		Temperature of Air on Condenser Coil 85°F									Temperature of Air on Condenser Coil 95°F								
CFM	WB (°F)	Tot. Cap.* (MBH)	Tot. Input† (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)							Tot. Cap.* (MBH)	Tot. Input† (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)						
				86	83	80	77	74	71	68			86	83	80	77	74	71	68
1950	72	84	5.4	50	45	39	33	28	-	-	80	5.8	48	42	37	31	26	-	-
	67	78	5.3	62	57	51	46	40	35	29	73	5.7	60	55	49	43	38	32	27
	62	71	5.3	71	68	63	57	51	46	40	68	5.6	68	65	59	53	48	42	37
	57	71	5.2	71	71	65	59	54	48	43	67	5.6	67	66	60	54	49	43	38
2275	72	87	5.4	55	48	42	35	29	-	-	83	5.8	53	47	40	34	27	-	-
	67	80	5.3	68	62	55	49	42	35	29	76	5.7	67	60	53	47	40	34	27
	62	73	5.3	73	71	67	61	54	48	41	70	5.6	70	68	64	58	51	45	38
	57	73	5.2	73	73	70	63	57	50	44	69	5.6	69	68	65	59	52	46	39
2600	72	89	5.4	60	52	45	37	30	-	-	85	5.8	59	51	43	36	28	-	-
	67	82	5.3	74	67	59	51	44	36	29	78	5.7	73	66	58	50	43	35	28
	62	75	5.3	75	75	72	64	57	49	42	72	5.6	72	72	70	62	55	47	40
	57	75	5.2	75	75	75	67	60	52	44	71	5.6	71	71	71	63	56	48	41
2925	72	91	5.4	65	56	48	39	30	-	-	87	5.8	64	55	46	38	29	-	-
	67	84	5.3	80	71	63	54	46	37	28	80	5.7	77	70	62	53	44	36	27
	62	77	5.3	77	77	75	67	58	49	41	73	5.7	73	73	72	64	55	47	38
	57	77	5.2	77	77	77	68	59	51	42	73	5.7	73	73	73	64	56	47	38
3250	72	94	5.4	70	60	51	41	31	-	-	89	5.9	68	59	49	39	30	-	-
	67	86	5.3	86	76	67	57	47	38	28	82	5.8	82	75	65	56	46	36	27
	62	78	5.3	78	78	78	69	59	49	40	75	5.7	75	75	75	65	56	46	36
	57	78	5.2	78	78	78	69	59	49	40	75	5.7	75	75	75	65	55	46	36
		Temperature of Air on Condenser Coil 105°F									Temperature of Air on Condenser Coil 115°F								
1950	72	75	6.2	46	40	35	29	24	-	-	70	6.6	44	39	33	27	22	-	-
	67	68	6.0	58	52	47	41	36	30	25	62	6.4	56	50	45	39	34	28	22
	62	64	6.0	64	61	55	50	44	39	33	60	6.3	60	57	51	46	40	35	29
	57	63	5.9	63	61	56	50	45	39	33	59	6.3	59	57	51	46	40	35	29
2275	72	78	6.2	51	45	38	32	25	-	-	72	6.6	49	43	36	30	23	-	-
	67	70	6.1	64	58	51	45	38	32	25	64	6.5	61	56	49	43	36	29	23
	62	65	6.0	65	64	60	54	47	41	34	61	6.4	61	60	57	50	43	37	30
	57	65	6.0	65	64	61	54	48	41	35	60	6.3	60	60	57	50	43	37	30
2600	72	80	6.3	57	49	41	34	26	-	-	74	6.7	55	47	39	32	24	-	-
	67	72	6.1	69	63	56	48	41	33	25	66	6.6	66	61	54	46	38	31	23
	62	67	6.0	67	67	66	58	51	43	35	63	6.4	63	63	62	54	46	39	31
	57	67	6.0	67	67	66	59	51	44	36	62	6.4	62	62	62	54	46	39	31
2925	72	81	6.3	61	53	44	36	27	-	-	76	6.7	59	51	42	34	25	-	-
	67	73	6.2	72	67	59	51	42	34	25	67	6.6	67	65	57	49	40	31	23
	62	69	6.1	69	69	68	59	51	42	33	64	6.5	64	64	63	55	46	38	29
	57	68	6.0	68	68	68	59	51	42	33	63	6.4	63	63	63	54	46	37	28
3250	72	83	6.3	66	57	47	37	28	-	-	77	6.8	64	55	45	35	26	-	-
	67	75	6.2	75	72	63	53	44	34	24	68	6.6	68	68	61	51	42	32	22
	62	70	6.1	70	70	70	60	51	41	31	65	6.5	65	65	65	56	46	36	27
	57	70	6.1	70	70	70	60	50	40	31	64	6.5	64	64	64	55	45	35	26
		Temperature of Air on Condenser Coil 125°F																	
1950	72	65	6.9	42	37	31	25	20	-	-									
	67	57	6.8	54	48	43	37	31	26	20									
	62	56	6.6	56	53	48	42	37	31	25									
	57	55	6.6	55	53	47	42	36	31	25									
2275	72	67	7.0	47	41	34	28	21	-	-									
	67	58	6.9	58	54	47	40	34	27	21									
	62	57	6.7	57	56	53	46	39	33	26									
	57	56	6.7	56	55	52	45	39	32	26									
2600	72	69	7.1	53	45	37	30	22	-	-									
	67	60	7.0	60	59	51	44	36	29	21									
	62	59	6.8	59	59	57	50	42	35	27									
	57	57	6.8	57	57	57	49	42	34	27									
2925	72	70	7.2	57	49	40	32	23	-	-									
	67	61	7.0	61	61	55	46	38	29	21									
	62	60	6.9	60	60	59	50	42	33	24									
	57	58	6.8	58	58	58	49	41	32	24									
3250	72	71	7.2	62	53	43	33	24	-	-									
	67	62	7.1	62	62	59	49	40	30	20									
	62	61	6.9	61	61	61	51	41	31	22									
	57	59	6.9	59	59	59	50	40	30	21									

* These capacities are gross ratings. For net capacity, deduct air 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 condenser fan motors and the compressor motors but not the supply air blower motor.

TABLE 6: COOLING CAPACITY DH090 (7-1/2 TON) UNIT

Air On Evap. Coil		Temperature of Air on Condenser Coil 75°F									Temperature of Air on Condenser Coil 85°F								
CFM	WB (°F)	Tot. Cap.[1] (MBH)	Tot. Input[2] (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)							Tot. Cap.[1] (MBH)	Tot. Input[2] (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)						
				86	83	80	77	74	71	68			86	83	80	77	74	71	68
2250	72	102.7	5.7	60.1	53.7	47.3	40.9	34.5	-	-	98.5	6.2	58.2	51.8	45.4	39.0	32.5	-	-
	67	98.7	5.6	75.6	69.2	62.8	56.4	50.0	43.5	37.1	93.0	6.1	73.4	67.0	60.5	54.1	47.7	41.3	34.9
	62	95.0	5.6	95.0	87.3	80.9	74.5	68.0	61.6	55.2	88.7	6.1	88.7	82.4	76.0	69.6	63.2	56.8	50.4
	57	96.7	5.5	96.7	90.6	84.1	77.7	71.3	64.9	58.5	88.4	6.0	88.4	84.3	77.9	71.5	65.0	58.6	52.2
2625	72	105.1	5.7	65.5	57.9	50.3	42.8	35.2	-	-	100.9	6.2	63.8	56.2	48.6	41.1	33.5	-	-
	67	101.0	5.6	82.0	74.4	66.8	59.2	51.6	44.0	36.5	95.2	6.1	80.1	72.5	64.9	57.3	49.7	42.2	34.6
	62	97.2	5.6	97.2	93.4	86.1	78.5	70.9	63.3	55.7	90.8	6.1	90.8	87.7	81.5	73.9	66.3	58.8	51.2
	57	98.9	5.5	98.9	95.9	89.6	82.0	74.4	66.8	59.2	90.5	6.1	90.5	88.5	83.5	75.9	68.3	60.7	53.2
3000	72	107.5	5.7	70.9	62.1	53.4	44.6	35.9	-	-	103.2	6.3	69.4	60.7	51.9	43.2	34.4	-	-
	67	103.3	5.6	88.3	79.5	70.8	62.0	53.3	44.5	35.8	97.4	6.2	86.8	78.0	69.3	60.5	51.8	43.0	34.3
	62	99.4	5.6	99.4	99.4	91.2	82.5	73.8	65.0	56.3	92.9	6.1	92.9	92.9	87.0	78.2	69.5	60.7	52.0
	57	101.2	5.5	101.2	101.2	95.0	86.2	77.5	68.7	60.0	92.6	6.1	92.6	92.6	89.1	80.3	71.6	62.8	54.1
3375	72	108.5	5.7	75.3	65.4	55.4	45.4	35.5	-	-	104.6	6.3	74.2	64.3	54.3	44.3	34.4	-	-
	67	104.3	5.6	94.8	83.4	73.5	63.5	53.6	43.6	33.6	98.7	6.2	92.4	82.4	72.5	62.5	52.5	42.6	32.6
	62	100.4	5.6	100.4	100.4	95.9	85.9	76.0	66.0	56.0	94.2	6.1	94.2	94.2	91.0	81.0	71.0	61.1	51.1
	57	102.2	5.5	102.2	102.2	99.1	89.2	79.2	69.2	59.3	93.9	6.1	93.9	93.9	92.1	82.1	72.2	62.2	52.3
3750	72	109.6	5.7	79.8	68.6	57.4	46.2	35.1	-	-	106.0	6.3	79.0	67.9	56.7	45.5	34.3	-	-
	67	105.4	5.6	101.3	87.3	76.2	65.0	53.8	42.6	31.5	100.1	6.2	98.0	86.8	75.6	64.5	53.3	42.1	30.9
	62	101.4	5.6	101.4	101.4	100.5	89.4	78.2	67.0	55.8	95.4	6.1	95.4	95.4	95.0	83.8	72.6	61.4	50.3
	57	103.3	5.5	103.3	103.3	103.3	92.1	80.9	69.7	58.6	95.1	6.1	95.1	95.1	95.1	83.9	72.8	61.6	50.4
		Temperature of Air on Condenser Coil 95°F									Temperature of Air on Condenser Coil 105°F								
2250	72	94.3	6.7	56.3	49.8	43.4	37.0	30.6	-	-	87.5	7.3	53.7	47.2	40.8	34.4	28.0	-	-
	67	87.3	6.7	71.1	64.7	58.3	51.9	45.5	39.1	32.7	79.7	7.2	67.8	61.4	55.0	48.6	42.2	35.8	29.4
	62	82.4	6.5	82.4	77.6	71.2	64.8	58.4	51.9	45.5	76.0	7.1	76.0	71.7	65.3	58.9	52.4	46.0	39.6
	57	80.1	6.5	80.1	78.0	71.6	65.2	58.8	52.4	46.0	74.0	7.1	74.0	72.0	65.6	59.2	52.7	46.3	39.9
2625	72	96.6	6.8	62.1	54.5	46.9	39.4	31.8	-	-	89.8	7.4	59.6	52.0	44.4	36.8	29.3	-	-
	67	89.4	6.7	78.2	70.6	63.0	55.4	47.9	40.3	32.7	81.8	7.2	74.3	67.4	59.9	52.3	44.7	37.1	29.5
	62	84.4	6.6	84.4	82.0	76.9	69.4	61.8	54.2	46.6	78.0	7.1	78.0	75.8	71.0	63.4	55.8	48.3	40.7
	57	82.1	6.6	82.1	81.0	77.4	69.8	62.2	54.7	47.1	75.9	7.1	75.9	74.9	71.3	63.8	56.2	48.6	41.0
3000	72	98.9	6.8	67.9	59.2	50.5	41.7	33.0	-	-	92.1	7.4	65.5	56.8	48.0	39.3	30.5	-	-
	67	91.5	6.7	85.2	76.5	67.7	59.0	50.2	41.5	32.8	83.8	7.3	80.7	73.5	64.7	56.0	47.2	38.5	29.7
	62	86.4	6.6	86.4	86.4	82.7	73.9	65.2	56.4	47.7	80.0	7.2	80.0	80.0	76.7	68.0	59.2	50.5	41.7
	57	84.0	6.6	84.0	84.0	83.2	74.4	65.7	57.0	48.2	77.8	7.2	77.8	77.8	77.1	68.3	59.6	50.8	42.1
3375	72	100.6	6.9	73.1	63.2	53.2	43.2	33.3	-	-	93.4	7.4	70.8	60.8	50.8	40.9	30.9	-	-
	67	93.1	6.8	90.0	81.4	71.4	61.5	51.5	41.5	31.6	85.1	7.3	83.5	77.8	68.5	58.6	48.6	38.6	28.7
	62	87.9	6.7	87.9	87.9	86.1	76.1	66.1	56.2	46.2	81.2	7.2	81.2	81.2	79.6	69.6	59.6	49.7	39.7
	57	85.5	6.6	85.5	85.5	85.1	75.1	65.2	55.2	45.2	79.0	7.2	79.0	79.0	78.6	68.7	58.7	48.7	38.8
3750	72	102.4	6.9	78.3	67.1	55.9	44.8	33.6	-	-	94.8	7.5	76.0	64.9	53.7	42.5	31.3	-	-
	67	94.7	6.8	94.7	86.3	75.1	63.9	52.8	41.6	30.4	86.4	7.3	86.4	82.2	72.4	61.2	50.0	38.8	27.6
	62	89.4	6.7	89.4	89.4	89.4	78.2	67.1	55.9	44.7	82.4	7.2	82.4	82.4	82.4	71.2	60.0	48.9	37.7
	57	87.0	6.7	87.0	87.0	87.0	75.8	64.6	53.4	42.2	80.2	7.2	80.2	80.2	80.2	69.0	57.8	46.6	35.5
		Temperature of Air on Condenser Coil 115°F									Temperature of Air on Condenser Coil 125°F								
2250	72	80.6	7.9	51.1	44.6	38.2	31.8	25.4	-	-	73.7	8.4	48.4	42.0	35.6	29.2	22.8	-	-
	67	72.0	7.7	64.6	58.1	51.7	45.3	38.9	32.5	26.1	64.4	8.2	61.3	54.8	48.4	42.0	35.6	29.2	22.8
	62	69.6	7.6	69.6	65.8	59.4	52.9	46.5	40.1	33.7	63.2	8.1	63.2	59.9	53.5	47.0	40.6	34.2	27.8
	57	67.8	7.6	67.8	66.0	59.5	53.1	46.7	40.3	33.9	61.6	8.2	61.6	59.9	53.5	47.1	40.7	34.3	27.8
2625	72	82.9	7.9	57.1	49.5	41.9	34.3	26.7	-	-	76.0	8.5	54.5	47.0	39.4	31.8	24.2	-	-
	67	74.1	7.7	70.3	64.3	56.7	49.1	41.5	34.0	26.4	66.4	8.2	66.4	61.1	53.5	46.0	38.4	30.8	23.2
	62	71.6	7.7	71.6	69.7	65.1	57.5	49.9	42.3	34.7	65.2	8.2	65.2	63.5	59.1	51.6	44.0	36.4	28.8
	57	69.7	7.7	69.7	68.8	65.3	57.7	50.1	42.5	34.9	63.5	8.2	63.5	62.7	59.2	51.6	44.0	36.4	28.9
3000	72	85.2	8.0	63.1	54.3	45.6	36.8	28.1	-	-	78.3	8.5	60.6	51.9	43.1	34.4	25.6	-	-
	67	76.1	7.8	76.1	70.4	61.7	52.9	44.2	35.4	26.7	68.4	8.3	68.4	67.4	58.6	49.9	41.1	32.4	23.6
	62	73.6	7.7	73.6	73.6	70.8	62.0	53.3	44.5	35.8	67.2	8.2	67.2	67.2	64.8	56.1	47.3	38.6	29.8
	57	71.6	7.7	71.6	71.6	71.0	62.2	53.5	44.7	36.0	65.4	8.3	65.4	65.4	64.9	56.1	47.4	38.6	29.9
3375	72	86.2	8.0	68.4	58.5	48.5	38.5	28.6	-	-	79.0	8.6	66.1	56.1	46.1	36.2	26.2	-	-
	67	77.1	7.8	77.1	74.2	65.6	55.7	45.7	35.7	25.8	69.0	8.4	69.0	69.0	62.7	52.8	42.8	32.8	22.9
	62	74.5	7.7	74.5	74.5	73.1	63.1	53.2	43.2	33.2	67.8	8.3	67.8	67.8	66.6	56.6	46.7	36.7	26.8
	57	72.5	7.8	72.5	72.5	72.2	62.2	52.3	42.3	32.3	66.0	8.3	66.0	66.0	65.8	55.8	45.8	35.9	25.9
3750	72	87.3	8.1	73.8	62.6	51.4	40.2	29.1	-	-	79.7	8.7	71.5	60.3	49.2	38.0	26.8	-	-
	67	78.0	7.9	78.0	78.0	69.6	58.4	47.2	36.1	24.9	69.7	8.4	69.7	69.7	66.8	55.6	44.5	33.3	22.1
	62	75.4	7.8	75.4	75.4	75.4	64.2	53.0	41.9	30.7	68.4	8.3	68.4	68.4	68.4	57.2	46.0	34.8	23.7
	57	73.4	7.8	73.4	73.4	73.4	62.2	51.0	39.9	28.7	66.6	8.4	66.6	66.6	66.6	55.4	44.3	33.1	21.9

1 These capacities are gross ratings. For net capacity, deduct air blower motor, MBh = 3.415 x kW. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

2 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 DH102 (8-1/2 TON) UNIT

Air On Evap. Coil		Temperature of Air on Condenser Coil 85°F									Temperature of Air on Condenser Coil 95°F								
CFM	WB (°F)	Tot. Cap.* (MBH)	Tot. Input† (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)							Tot. Cap.* (MBH)	Tot. Input† (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)						
				86	83	80	77	74	71	68			86	83	80	77	74	71	68
2550	72	117	7.1	67	60	53	46	38	-	-	110	7.6	64	57	50	43	35	-	-
	67	106	7.0	83	76	69	61	54	47	40	99	7.5	80	73	66	58	51	44	37
	62	97	6.9	97	91	84	77	69	62	55	91	7.3	91	86	79	72	64	57	50
	57	94	6.9	94	91	84	77	70	62	55	88	7.4	88	86	79	72	64	57	50
2975	72	121	7.2	75	66	57	49	40	-	-	113	7.7	72	63	54	46	37	-	-
	67	109	7.0	92	83	75	66	58	49	40	102	7.6	89	80	72	63	54	46	37
	62	99	6.9	99	97	91	83	74	66	57	94	7.4	94	91	86	77	69	60	52
	57	96	6.9	96	95	92	83	74	66	57	91	7.4	91	90	86	77	69	60	52
3400	72	124	7.2	82	72	62	52	42	-	-	116	7.7	79	69	59	49	39	-	-
	67	112	7.0	101	91	81	71	61	51	41	104	7.7	97	87	78	68	58	48	38
	62	102	6.9	102	102	99	89	79	69	59	96	7.5	96	96	93	83	73	63	53
	57	99	6.9	99	99	99	89	79	69	59	93	7.5	93	93	93	83	73	63	53
3825	72	126	7.2	87	76	65	54	43	-	-	118	7.7	83	72	61	50	40	-	-
	67	113	7.0	107	96	85	74	63	52	41	106	7.7	102	92	81	70	59	48	37
	62	104	7.0	104	104	102	91	80	69	58	98	7.5	98	98	96	85	74	64	53
	57	101	7.0	101	101	101	90	79	68	57	95	7.5	95	95	94	84	73	62	51
4250	72	128	7.3	92	80	68	57	45	-	-	120	7.7	88	76	64	52	40	-	-
	67	115	7.1	113	101	89	77	65	53	41	108	7.7	108	96	84	72	60	48	37
	62	105	7.0	105	105	105	94	82	70	58	100	7.5	100	100	100	88	76	64	52
	57	102	7.0	102	102	102	90	78	66	54	96	7.5	96	96	96	84	72	60	48
		Temperature of Air on Condenser Coil 105°F									Temperature of Air on Condenser Coil 115°F								
2550	72	102	8.2	61	54	47	40	32	-	-	94	8.9	58	51	44	36	29	-	-
	67	91	8.1	77	70	62	55	48	40	33	83	8.6	73	66	59	52	44	37	30
	62	84	7.8	84	80	73	66	58	51	44	77	8.4	77	74	67	60	53	45	38
	57	83	7.9	83	80	73	66	59	51	44	78	8.4	78	75	68	60	53	46	39
2975	72	104	8.3	68	60	51	43	34	-	-	96	9.0	65	56	48	39	31	-	-
	67	93	8.2	84	77	68	59	51	42	34	85	8.7	80	73	64	56	47	39	30
	62	86	7.9	86	84	80	71	63	54	45	79	8.4	79	77	74	65	56	48	39
	57	85	7.9	85	84	80	71	63	54	46	79	8.4	79	78	74	65	57	48	40
3400	72	107	8.4	75	65	55	46	36	-	-	98	9.1	72	62	52	42	32	-	-
	67	95	8.2	92	84	74	64	54	44	34	87	8.8	87	80	70	60	50	40	30
	62	88	8.0	88	88	86	77	67	57	47	80	8.5	80	80	80	70	60	50	40
	57	87	8.0	87	87	87	77	67	57	47	80	8.5	80	80	80	70	61	51	41
3825	72	109	8.4	80	69	58	47	36	-	-	99	9.1	77	66	55	44	33	-	-
	67	97	8.3	95	88	78	67	56	45	34	88	8.8	88	85	74	63	52	42	31
	62	90	8.0	90	90	89	78	67	56	45	81	8.6	81	81	81	70	59	48	38
	57	88	8.0	88	88	88	77	66	55	44	82	8.6	82	82	82	71	60	49	38
4250	72	110	8.5	85	73	61	49	37	-	-	101	9.2	82	70	58	46	35	-	-
	67	98	8.3	98	93	81	69	58	46	34	89	8.9	89	89	79	67	55	43	31
	62	91	8.0	91	91	91	79	67	55	43	83	8.6	83	83	83	71	59	47	35
	57	90	8.1	90	90	90	78	66	54	42	83	8.6	83	83	83	71	59	47	35
		Temperature of Air on Condenser Coil 125°F																	
2550	72	86	9.6	55	48	41	33	26	-	-									
	67	76	9.2	70	63	55	48	41	34	26									
	62	70	8.9	70	69	61	54	47	40	32									
	57	72	8.9	72	69	62	55	47	40	33									
2975	72	88	9.7	62	53	45	36	27	-	-									
	67	77	9.3	76	69	61	52	44	35	26									
	62	71	9.0	71	70	67	59	50	42	33									
	57	73	9.0	73	72	68	59	51	42	34									
3400	72	89	9.8	68	58	49	39	29	-	-									
	67	78	9.4	78	76	66	56	46	36	27									
	62	72	9.1	72	72	72	63	54	44	34									
	57	74	9.1	74	74	74	64	54	44	34									
3825	72	90	9.8	74	63	52	41	30	-	-									
	67	79	9.4	79	79	71	60	49	38	27									
	62	73	9.1	73	73	73	63	52	41	30									
	57	75	9.1	75	75	75	64	53	43	32									
4250	72	92	9.9	79	68	56	44	32	-	-									
	67	80	9.5	80	80	76	64	52	40	28									
	62	74	9.1	74	74	74	62	50	38	26									
	57	77	9.1	77	77	77	65	53	41	29									

* These capacities are gross ratings. For net capacity, deduct air 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 condenser fan motors and the compressor motors but not the supply air blower motor.

TABLE 8: COOLING CAPACITY DH120 (10 TON) UNIT

Air On Evap. Coil		Temperature of Air on Condenser Coil 85°F									Temperature of Air on Condenser Coil 95°F								
CFM	WB (°F)	Tot. Cap.* (MBH)	Tot. Input† (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)							Tot. Cap.* (MBH)	Tot. Input† (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)						
				86	83	80	77	74	71	68			86	83	80	77	74	71	68
3000	72	136	8.8	79	71	62	53	45	-	-	126	9.4	79	70	61	53	44	-	-
	67	122	8.6	99	90	82	73	64	56	47	114	9.1	96	88	79	70	62	53	45
	62	110	8.3	110	107	98	89	81	72	64	108	9.0	108	106	97	89	80	72	63
	57	109	8.7	109	105	97	88	80	71	63	103	9.1	103	102	93	84	76	67	59
3500	72	140	8.9	88	78	68	58	48	-	-	130	9.5	87	77	67	57	47	-	-
	67	126	8.7	110	100	89	79	69	59	49	118	9.1	106	96	86	76	66	56	46
	62	114	8.4	114	112	107	97	87	77	67	112	9.0	112	111	106	96	86	76	65
	57	112	8.7	112	110	106	96	86	76	66	106	9.1	106	106	101	91	81	71	61
4000	72	144	9.0	97	86	74	62	51	-	-	134	9.5	96	84	72	61	49	-	-
	67	129	8.8	121	109	97	86	74	62	51	122	9.2	116	105	93	81	70	58	46
	62	117	8.5	117	117	117	105	93	82	70	115	9.1	115	115	115	103	91	80	68
	57	115	8.8	115	115	115	104	92	80	69	110	9.2	110	110	110	98	86	75	63
4500	72	151	9.1	106	93	80	66	53	-	-	139	9.6	105	92	78	65	52	-	-
	67	135	8.9	131	118	105	91	78	65	52	126	9.3	124	114	101	87	74	61	48
	62	122	8.6	122	122	122	109	96	82	69	120	9.2	120	120	119	106	93	79	66
	57	121	8.9	121	121	121	107	94	81	67	114	9.3	114	114	114	100	87	74	61
5000	72	157	9.2	115	100	85	70	55	-	-	144	9.7	114	99	84	69	54	-	-
	67	141	9.0	141	127	112	97	82	67	53	131	9.4	131	123	108	93	78	63	49
	62	128	8.7	128	128	128	113	98	83	68	124	9.3	124	124	124	109	94	79	64
	57	126	9.1	126	126	126	111	96	81	66	118	9.4	118	118	118	103	88	73	58
		Temperature of Air on Condenser Coil 105°F									Temperature of Air on Condenser Coil 115°F								
3000	72	116	9.9	74	66	57	49	40	-	-	106	10.4	70	61	53	44	36	-	-
	67	106	9.6	92	84	75	67	58	50	41	97	10.1	89	80	72	63	55	46	37
	62	98	9.4	98	97	88	80	71	63	54	88	9.7	88	88	80	71	63	54	46
	57	96	9.5	96	95	87	78	69	61	52	88	10.0	88	88	80	72	63	54	46
3500	72	120	10.0	82	72	62	52	42	-	-	110	10.5	78	68	58	47	37	-	-
	67	109	9.7	101	92	82	72	62	52	42	100	10.2	96	88	78	68	58	48	38
	62	101	9.4	101	101	96	86	76	66	56	91	9.8	91	91	87	77	67	57	47
	57	99	9.6	99	99	94	84	74	64	54	91	10.1	91	91	87	77	67	57	47
4000	72	124	10.1	91	79	67	56	44	-	-	114	10.6	86	74	62	51	39	-	-
	67	113	9.7	110	100	89	77	65	54	42	104	10.3	104	96	84	73	61	49	38
	62	105	9.5	105	105	104	93	81	69	58	94	9.9	94	94	94	82	71	59	47
	57	102	9.7	102	102	102	90	79	67	55	94	10.2	94	94	94	83	71	59	48
4500	72	126	10.1	99	86	73	60	46	-	-	114	10.6	94	81	68	54	41	-	-
	67	115	9.8	114	107	96	83	70	56	43	104	10.3	104	100	92	78	65	52	39
	62	107	9.6	107	107	107	93	80	67	54	94	10.0	94	94	94	81	68	54	41
	57	104	9.8	104	104	104	91	78	64	51	95	10.3	95	95	95	81	68	55	42
5000	72	129	10.2	108	93	79	64	49	-	-	114	10.7	103	88	73	58	43	-	-
	67	117	9.9	117	114	104	89	74	59	44	104	10.4	104	104	99	84	69	54	39
	62	109	9.7	109	109	109	94	79	64	50	94	10.0	94	94	94	80	65	50	35
	57	106	9.8	106	106	106	91	77	62	47	95	10.3	95	95	95	80	65	50	35
		Temperature of Air on Condenser Coil 125°F																	
3000	72	97	10.8	66	57	48	40	31	-	-									
	67	88	10.5	85	77	68	59	51	42	34									
	62	78	10.1	78	78	71	63	54	45	37									
	57	81	10.4	81	81	74	65	57	48	39									
3500	72	100	11.0	73	63	53	43	33	-	-									
	67	92	10.7	91	84	74	64	54	44	34									
	62	81	10.2	81	81	77	67	57	47	37									
	57	84	10.6	84	84	80	70	60	50	40									
4000	72	104	11.1	80	69	57	46	34	-	-									
	67	95	10.8	95	92	80	68	57	45	33									
	62	83	10.3	83	83	83	72	61	49	37									
	57	87	10.7	87	87	87	75	63	52	40									
4500	72	101	11.1	89	76	62	49	36	-	-									
	67	93	10.9	93	93	87	74	61	47	34									
	62	82	10.4	82	82	82	69	55	42	29									
	57	85	10.8	85	85	85	72	59	45	32									
5000	72	99	11.2	97	82	67	52	38	-	-									
	67	91	10.9	91	91	91	79	65	50	35									
	62	80	10.4	80	80	80	65	50	35	20									
	57	83	10.8	83	83	83	68	54	39	24									

* These capacities are gross ratings. For net capacity, deduct air 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 condenser fan motors and the compressor motors but not the supply air blower motor.

TABLE 9: COOLING CAPACITY DH150 (12-1/2 TON) UNIT

Air On Evap. Coil		Temperature of Air on Condenser Coil 85°F								Temperature of Air on Condenser Coil 95°F							
CFM	WB (°F)	Tot. Cap.* (MBH)	Tot. Input† (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)							Tot. Cap.* (MBH)	Tot. Input† (kW)	Sensible Capacity (MBH)* Return Dry Bulb (°F)						
				86	83	80	77	74	71	68			86	83	80	77	74	71	68
3750	72	165	11.9	95	85	74	63	52	-	-	159	13.1	94	83	72	62	51	-	-
	67	158	11.8	124	114	103	92	82	71	60	151	13.0	121	111	100	89	79	68	57
	62	148	11.6	147	137	126	115	105	94	83	141	12.8	141	135	124	113	103	92	81
	57	138	11.5	138	135	124	113	103	92	81	132	12.8	132	130	120	109	98	87	77
4375	72	169	11.9	105	92	80	67	54	-	-	163	13.2	103	91	78	65	53	-	-
	67	161	11.8	136	124	111	98	86	73	61	155	13.1	133	121	108	95	83	70	57
	62	151	11.7	151	146	136	123	111	98	85	144	12.9	144	141	134	121	109	96	83
	57	141	11.5	141	139	134	121	109	96	83	135	12.8	135	134	129	116	104	91	78
5000	72	172	12.0	115	100	86	71	56	-	-	167	13.2	113	98	84	69	55	-	-
	67	165	11.9	148	134	119	105	90	76	61	159	13.1	145	131	116	101	87	72	58
	62	155	11.7	155	155	146	132	117	102	88	148	12.9	148	148	144	129	115	100	85
	57	144	11.6	144	144	144	129	115	100	86	139	12.9	139	139	139	124	109	95	80
5625	72	172	11.9	121	105	88	71	55	-	-	166	13.2	120	104	87	70	54	-	-
	67	164	11.8	156	139	122	106	89	73	56	158	13.1	151	137	120	104	87	71	54
	62	154	11.7	154	154	150	133	117	100	83	147	12.9	147	147	145	128	112	95	78
	57	143	11.5	143	143	143	127	110	94	77	138	12.8	138	138	138	121	104	88	71
6250	72	171	11.9	127	109	90	72	53	-	-	165	13.2	127	109	90	71	53	-	-
	67	164	11.8	163	144	126	107	88	70	51	157	13.1	157	143	125	106	88	69	50
	62	154	11.6	154	154	154	135	116	98	79	146	12.9	146	146	146	127	108	90	71
	57	143	11.5	143	143	143	124	106	87	68	137	12.8	137	137	137	118	99	81	62
		Temperature of Air on Condenser Coil 105°F									Temperature of Air on Condenser Coil 115°F								
3750	72	152	14.6	91	80	70	59	48	-	-	145	16.2	88	78	67	56	46	-	-
	67	143	14.5	118	107	97	86	75	64	54	135	15.9	114	104	93	82	72	61	50
	62	133	14.3	133	128	118	107	96	86	75	125	15.8	125	122	111	101	90	79	68
	57	124	14.2	124	122	111	100	90	79	68	116	15.7	116	113	103	92	81	71	60
4375	72	156	14.7	101	88	76	63	50	-	-	149	16.2	99	86	73	61	48	-	-
	67	147	14.5	130	118	105	92	80	67	54	138	15.9	127	114	102	89	77	64	51
	62	137	14.3	137	134	128	115	103	90	77	129	15.8	129	127	122	109	96	84	71
	57	127	14.3	127	126	121	108	95	83	70	119	15.7	119	118	112	100	87	75	62
5000	72	160	14.7	111	96	82	67	53	-	-	153	16.2	109	94	80	65	50	-	-
	67	150	14.5	142	128	113	99	84	70	55	142	15.9	140	125	111	96	81	67	52
	62	140	14.4	140	140	138	123	109	94	80	132	15.8	132	132	132	118	103	88	74
	57	130	14.3	130	130	130	116	101	87	72	122	15.8	122	122	122	108	93	78	64
5625	72	159	14.7	118	102	85	68	52	-	-	152	16.2	116	100	83	66	50	-	-
	67	149	14.5	145	134	118	101	85	68	51	141	15.9	140	132	115	99	82	66	49
	62	139	14.4	139	139	138	121	105	88	72	131	15.8	131	131	131	115	98	81	65
	57	129	14.3	129	129	129	113	96	80	63	121	15.8	121	121	121	105	88	71	55
6250	72	158	14.7	126	107	88	70	51	-	-	151	16.2	124	105	87	68	49	-	-
	67	148	14.5	148	141	122	104	85	67	48	140	15.9	140	139	120	102	83	64	46
	62	138	14.3	138	138	138	119	101	82	63	130	15.8	130	130	130	112	93	74	56
	57	128	14.3	128	128	128	110	91	72	54	120	15.8	120	120	120	102	83	64	46
		Temperature of Air on Condenser Coil 125°F																	
3750	72	138	17.7	86	75	64	54	43	-	-									
	67	126	17.3	111	100	90	79	68	58	47									
	62	118	17.2	118	116	105	94	83	73	62									
	57	108	17.2	108	105	94	84	73	62	52									
4375	72	142	17.7	96	84	71	58	46	-	-									
	67	130	17.3	124	111	99	86	73	61	48									
	62	121	17.2	121	120	116	103	90	78	65									
	57	111	17.2	111	109	104	91	79	66	54									
5000	72	146	17.7	107	92	78	63	48	-	-									
	67	133	17.4	133	122	108	93	79	64	50									
	62	124	17.2	124	124	124	112	97	83	68									
	57	114	17.2	114	114	114	99	85	70	56									
5625	72	145	17.7	114	98	81	65	48	-	-									
	67	132	17.4	132	130	113	96	80	63	46									
	62	123	17.3	123	123	123	108	91	75	58									
	57	113	17.2	113	113	113	96	80	63	47									
6250	72	144	17.7	122	103	85	66	47	-	-									
	67	131	17.4	131	131	118	99	81	62	43									
	62	122	17.3	122	122	122	104	85	67	48									
	57	112	17.2	112	112	112	93	75	56	38									

* These capacities are gross ratings. For net capacity, deduct air 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 condenser fan motors and the compressor motors but not the supply air blower motor.

TABLE 10: ELECTRICAL DATA DH078 (6-1/2 TON) HIGH 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	11.2	110.0	1.5	6.2	8.2	5.5	0.0	None	--	--	34.4	36.4	39.9	41.9	45	45	50	50
								2TP04520925	6.8	18.9	34.4	36.4	39.9	41.9	45	45	50	50
								2TP04521825	13.5	37.5	54.6	57.1	61.5	64.0	60	60	70	70
								2TP04522425	18	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	11.2	110.0	1.5	6.2	8.2	5.5	0.0	None	--	--	34.4	36.4	39.9	41.9	45	45	50	50
								2TP04520925	9	21.7	34.8	37.3	41.7	44.2	45	45	50	50
								2TP04521825	18	43.3	61.9	64.4	68.8	71.3	70	70	70	80
								2TP04522425	24	57.7	79.9	82.4	86.8	89.3	80	90	90	90
								2TP04523625	34	81.8	110.0	112.5	116.9	119.4	110	125	125	125
460	6.1	54.0	0.8	3.1	4.1	2.2	0.0	None	--	--	18.4	19.4	20.6	21.6	20	25	25	25
								2TP04520946	9	11.3	18.4	19.4	20.6	21.6	20	25	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	4.8	44.0	0.6	2.4	3.6	1.8	0.0	None	--	--	14.4	15.6	16.2	17.4	15	20	20	20
								2TP04520958	9	9.0	14.4	15.6	16.2	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 11: ELECTRICAL DATA DH078 (6-1/2 TON) HIGH 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	11.2	110.0	1.5	6.2	8.2	5.5	10.0	None	--	--	44.4	46.4	49.9	51.9	50	50	60	60
								2TP04520925	6.8	18.9	44.4	46.4	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	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	11.2	110.0	1.5	6.2	8.2	5.5	10.0	None	--	--	44.4	46.4	49.9	51.9	50	50	60	60
								2TP04520925	9	21.7	47.3	49.8	54.2	56.7	50	50	60	60
								2TP04521825	18	43.3	74.4	76.9	81.3	83.8	80	80	90	90
								2TP04522425	24	57.7	92.4	94.9	99.3	101.8	100	100	100	110
								2TP04523625	34	81.8	122.5	125.0	129.4	131.9	125	125	150	150
460	6.1	54.0	0.8	3.1	4.1	2.2	5.0	None	--	--	23.4	24.4	25.6	26.6	25	30	30	30
								2TP04520946	9	11.3	23.7	24.9	26.4	27.7	25	30	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	4.8	44.0	0.6	2.4	3.6	1.8	4.0	None	--	--	18.4	19.6	20.2	21.4	20	20	25	25
								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 12: ELECTRICAL DATA DH090 (7-1/2 TON) HIGH 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	11.5	84.0	1.5	8.2	10.9	5.5	0.0	None	--	--	37.1	39.8	42.6	45.3	45	50	50	50
								2TP04540925	6.8	18.9	37.1	39.8	42.6	45.3	45	50	50	50
								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	11.5	84.0	1.5	8.2	10.9	5.5	0.0	None	--	--	37.1	39.8	42.6	45.3	45	50	50	50
								2TP04540925	9.0	21.7	37.3	40.7	44.2	47.6	45	50	50	50
								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 13: ELECTRICAL DATA DH090 (7-1/2 TON) HIGH 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 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	11.5	84.0	1.5	8.2	10.9	5.5	10.0	None	--	--	47.1	49.8	52.6	55.3	50	60	60	60
								2TP04540925	6.8	18.9	47.1	49.8	53.2	56.6	50	60	60	60
								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	11.5	84.0	1.5	8.2	10.9	5.5	10.0	None	--	--	47.1	49.8	52.6	55.3	50	60	60	60
								2TP04540925	9.0	21.7	49.8	53.2	56.7	60.1	50	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	--	--	23.8	25	26	27.2	25	30	30	30
								2TP04540946	9	11.3	24.9	26.4	27.7	29.2	25	30	30	30
								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	--	--	20.3	20.8	22.1	22.6	25	25	25	25
								2TP04540958	9	9.0	20.3	21	22.6	23.2	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 14: ELECTRICAL DATA DH102 (8-1/2 TON) HIGH 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.	2 HP	3 HP	FLA	FLA				2 HP	3 HP	2 HP	3 HP	2 HP	3 HP	2 HP	3 HP
208	12.8	130.0	1.5	8.2	10.9	5.5	0.0	None	--	--	40.0	42.7	45.5	48.2	50	50	50	60
								2TP04520925	6.8	18.9	40.0	42.7	45.5	48.2	50	50	50	60
								2TP04521825	13.5	37.5	57.1	60.5	64.0	67.3	60	70	70	70
								2TP04522425	18	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
230	12.8	130.0	1.5	8.2	10.9	5.5	0.0	None	--	--	40.0	42.7	45.5	48.2	50	50	50	60
								2TP04520925	9	21.7	40.0	42.7	45.5	48.2	50	50	50	60
								2TP04521825	18	43.3	64.4	67.8	71.3	74.6	70	70	80	80
								2TP04522425	24	57.7	82.4	85.8	89.3	92.7	90	90	90	100
								2TP04523625	34	81.8	112.5	115.9	119.4	122.7	125	125	125	125
460	7.7	64.0	0.8	4.1	5.3	2.2	0.0	None	--	--	23	24.2	25.2	26.4	30	30	30	30
								2TP04520946	9	11.3	23	24.2	25.2	26.4	30	30	30	30
								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
575	6.1	52.0	0.6	3.6	4.1	1.8	0.0	None	--	--	18.5	19	20.3	20.8	20	25	25	25
								2TP04520958	9	9.0	18.5	19	20.3	20.8	20	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

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

TABLE 15: ELECTRICAL DATA DH102 (8-1/2 TON) HIGH 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.	2 HP	3 HP	FLA	FLA				2 HP	3 HP	2 HP	3 HP	2 HP	3 HP	2 HP	3 HP
208	12.8	130.0	1.5	8.2	10.9	5.5	10.0	None	--	--	50.0	52.7	55.5	58.2	60	60	60	70
								2TP04520925	6.8	18.9	50.0	52.7	55.5	58.2	60	60	60	70
								2TP04521825	13.5	37.5	69.6	73.0	76.5	79.8	70	80	80	80
								2TP04522425	18	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
230	12.8	130.0	1.5	8.2	10.9	5.5	10.0	None	--	--	50.0	52.7	55.5	58.2	60	60	60	70
								2TP04520925	9	21.7	50.0	53.2	56.7	60.1	60	60	60	70
								2TP04521825	18	43.3	76.9	80.3	83.8	87.1	80	90	90	90
								2TP04522425	24	57.7	94.9	98.3	101.8	105.2	100	100	110	110
								2TP04523625	34	81.8	125.0	128.4	131.9	135.2	125	150	150	150
460	7.7	64.0	0.8	4.1	5.3	2.2	5.0	None	--	--	28	29.2	30.2	31.4	35	35	35	35
								2TP04520946	9	11.3	28	29.2	30.2	31.4	35	35	35	35
								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
575	6.1	52.0	0.6	3.6	4.1	1.8	4.0	None	--	--	22.5	23	24.3	24.8	25	25	30	30
								2TP04520958	9	9.0	22.5	23	24.3	24.8	25	25	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

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

TABLE 16: ELECTRICAL DATA DH120 (10 TON) HIGH 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.	2 HP	3 HP	FLA	FLA				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	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	43.3	64.4	67.8	71.3	74.6	70	70	80	80
								2TP04522425	24	57.7	82.4	85.8	89.3	92.7	90	90	90	100
								2TP04523625	34	81.8	112.5	115.9	119.4	122.7	125	125	125	125
								2TP04525425	54	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 17: ELECTRICAL DATA DH120 (10 TON) HIGH 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.	2 HP	3 HP	FLA	FLA				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	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	43.3	76.9	80.3	83.8	87.1	80	90	90	90
								2TP04522425	24	57.7	94.9	98.3	101.8	105.2	100	100	110	110
								2TP04523625	34	81.8	125.0	128.4	131.9	135.2	125	150	150	150
								2TP04525425	54	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 18: ELECTRICAL DATA DH150 (12-1/2 TON) HIGH 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	5 HP	FLA	FLA				3 HP	5 HP	3 HP	5 HP	3 HP	5 HP	3 HP	5 HP
208	18.9	146.0	3.5	10.9	16.1	5.5	0.0	None	--	--	60.4	65.6	65.9	71.1	70	80	80	90
								2TP04521825	13.5	37.5	60.5	67.0	67.3	73.8	70	80	80	90
								2TP04522425	18	50.0	76.1	82.6	83.0	89.5	80	90	90	90
								2TP04523625	25.5	70.8	102.1	108.6	109.0	115.5	110	110	110	125
								2TP04525425	40.6	112.7	154.5	161.0	161.4	167.9	175	175	175	175
230	18.9	146.0	3.5	10.9	16.1	5.5	0.0	None	--	--	60.4	65.6	65.9	71.1	70	80	80	90
								2TP04521825	18	43.3	67.8	74.3	74.6	81.1	70	80	80	90
								2TP04522425	24	57.7	85.8	92.3	92.7	99.2	90	100	100	100
								2TP04523625	34	81.8	115.9	122.4	122.7	129.2	125	125	125	150
								2TP04525425	54	129.9	143.5	150.0	150.4	156.9	175	175	175	175
460	9.5	73.0	1.6	5.3	8.1	2.2	0.0	None	--	--	29.9	32.7	32.1	34.9	35	40	40	40
								2TP04521846	18	22.6	33.7	37.2	36.4	39.9	35	40	40	40
								2TP04522446	24	30.1	42.7	46.2	45.5	49	45	50	50	50
								2TP04523646	34	42.7	57.7	61.2	60.5	64	60	70	70	70
								2TP04525446	54	67.8	71.6	75.1	74.3	77.8	80	90	80	90
575	7.6	58.4	1.3	4.1	6.0	1.8	0.0	None	--	--	23.8	25.7	25.6	27.5	30	30	30	35
								2TP04521858	18	18.1	26.8	29.2	29	31.4	30	30	30	35
								2TP04522458	24	24.1	34	36.4	36.2	38.6	35	40	40	40
								2TP04523658	34	34.1	46	48.4	48.3	50.6	50	50	50	60
								2TP04525458	54	54.2	57.1	59.5	59.3	61.7	70	70	70	70

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

TABLE 19: ELECTRICAL DATA DH150 (12-1/2 TON) HIGH EFFICIENCY W/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	5 HP	FLA	FLA				3 HP	5 HP	3 HP	5 HP	3 HP	5 HP	3 HP	5 HP
208	18.9	146.0	3.5	10.9	16.1	5.5	10.0	None	--	--	70.4	75.6	75.9	81.1	80	90	90	100
								2TP04521825	13.5	37.5	73.0	79.5	79.8	86.3	80	90	90	100
								2TP04522425	18	50.0	88.6	95.1	95.5	102.0	90	100	100	110
								2TP04523625	25.5	70.8	114.6	121.1	121.5	128.0	125	125	125	150
								2TP04525425	40.6	112.7	167.0	173.5	173.9	180.4	175	175	175	200
230	18.9	146.0	3.5	10.9	16.1	5.5	10.0	None	--	--	70.4	75.6	75.9	81.1	80	90	90	100
								2TP04521825	18	43.3	80.3	86.8	87.1	93.6	90	90	90	100
								2TP04522425	24	57.7	98.3	104.8	105.2	111.7	100	110	110	125
								2TP04523625	34	81.8	128.4	134.9	135.2	141.7	150	150	150	150
								2TP04525425	54	129.9	156.0	162.5	162.9	169.4	175	175	175	175
460	9.5	73.0	1.6	5.3	8.1	2.2	5.0	None	--	--	34.9	37.7	37.1	39.9	40	45	45	45
								2TP04521846	18	22.6	39.9	43.4	42.7	46.2	40	45	45	50
								2TP04522446	24	30.1	49	52.5	51.7	55.2	50	60	60	60
								2TP04523646	34	42.7	64	67.5	66.7	70.2	70	70	70	80
								2TP04525446	54	67.8	77.8	81.3	80.6	84.1	90	90	90	90
575	7.6	58.4	1.3	4.1	6.0	1.8	4.0	None	--	--	27.8	29.7	29.6	31.5	35	35	35	35
								2TP04521858	18	18.1	31.8	34.2	34	36.4	35	35	35	40
								2TP04522458	24	24.1	39	41.4	41.2	43.6	40	45	45	45
								2TP04523658	34	34.1	51	53.4	53.3	55.6	60	60	60	60
								2TP04525458	54	54.2	62.1	64.5	64.3	66.7	70	70	70	70

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

TABLE 20: 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 21 THROUGH TABLE 32:

- 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 21: DH078 (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	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	1078	1.78	1656
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	1083	1.84	1713
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	1088	1.90	1770
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 22: DH090 (7-1/2 TON) STANDARD MOTOR SIDE SHOT BLOWER PERFORMANCE[1,2]

ESP[3]	TURNS OPEN[4]																							
	0 Turns				1 Turn				2 Turns				3 Turns				4 Turns				5 Turns			
	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP
0.2	-	-	-	-	-	-	-	-	3721	1108	1951	2.1	3495	1053	1684	1.8	3377	1006	1520	1.6	3124	957	1309	1.4
0.4	-	-	-	-	-	-	-	-	3446	1104	1831	2.0	3239	1055	1408	1.5	3058	1008	1388	1.5	2825	959	1182	1.3
0.6	-	-	-	-	3439	1152	1996	2.1	3198	1106	1697	1.8	2964	1057	1456	1.6	2772	1010	1268	1.4	2523	960	1090	1.2
0.8	3309	1202	2058	2.2	3178	1156	1847	2.0	2922	1109	1591	1.7	2688	1060	1336	1.4	2469	1012	1177	1.3	2177	963	975	1.0
1	3058	1206	1899	2.0	2918	1159	1714	1.8	2649	1111	1453	1.6	2385	1063	1241	1.3	2108	1015	1035	1.1	1746	965	851	0.9
1.2	2809	1209	1793	1.9	2645	1162	1595	1.7	2333	1115	1325	1.4	2002	1066	1114	1.2	1624	1017	886.2	1.0	-	-	-	-
1.4	2580	1212	1701	1.8	2340	1165	1455	1.6	1951	1118	1176	1.3	-	-	-	-	-	-	-	-	-	-	-	-

1. Blower performance for gas heat includes maximum number of heat tubes available for each tonnage.
2. Blower performance includes two-inch throwaway filters.
3. 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.
4. “Turns Open” refers to the setting of the variable pitch motor sheave, where “0 Turns Open” is fully closed.
5. W = Watts

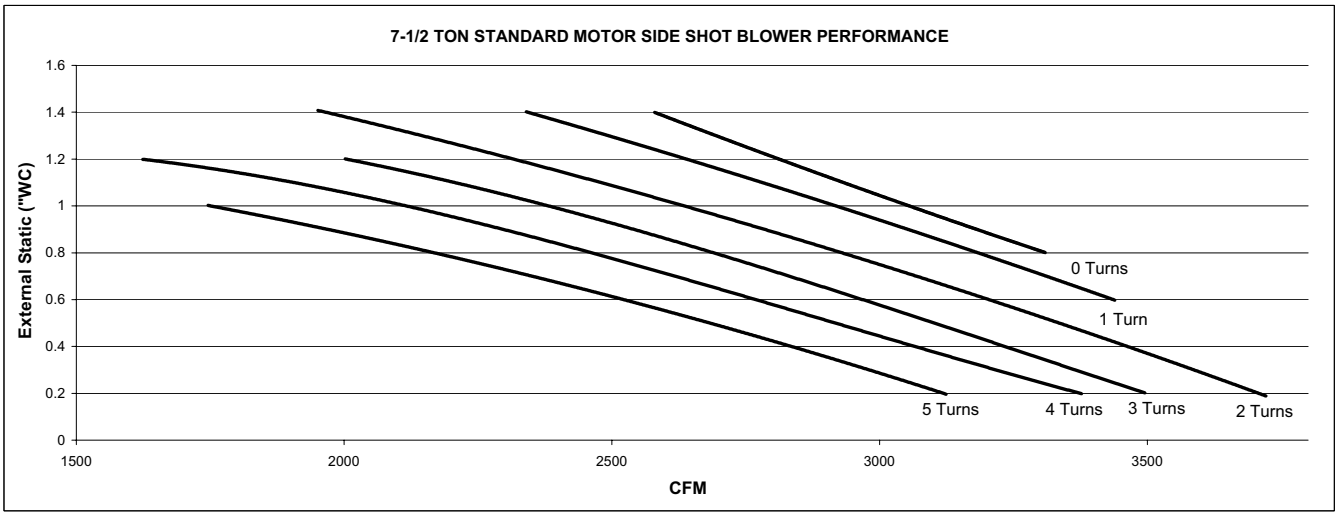


TABLE 23: DH090 (7-1/2 TON) OPTIONAL MOTOR SIDE SHOT BLOWER PERFORMANCE[1,2]

ESP[3]	TURNS OPEN[4]																							
	0 Turns				1 Turn				2 Turns				3 Turns				4 Turns				5 Turns			
	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP
0.2	4467	1295	3131	3.4	4316	1246	2800	3.0	4139	1195	2476	2.7	3886	1146	2178	2.3	3622	1092	1894	2.0	3413	1037	1644	1.8
0.4	4216	1299	3018	3.2	4058	1248	2708	2.9	3882	1199	2391	2.6	3612	1147	2048	2.2	3351	1217	1775	1.9	3139	1039	1550	1.7
0.6	4001	1425	2861	3.1	3825	1252	2534	2.7	3664	1201	2290	2.5	3369	1149	1915	2.1	3100	1097	1643	1.8	2869	1041	1408	1.5
0.8	3804	1304	2729	2.9	3652	1254	2426	2.6	3436	1204	2097	2.3	3118	1151	1816	1.9	2827	1099	1552	1.7	2583	1042	1307	1.4
1	3603	1308	2598	2.8	3442	1256	2306	2.5	3153	1207	2000	2.1	2840	1153	1644	1.8	2539	1100	1398	1.5	2259	1045	1173	1.3
1.2	3370	1310	2435	2.6	3225	1259	2173	2.3	2898	1209	1858	2.0	2560	1155	1554	1.7	2215	1103	1294	1.4	1828	1047	1027	1.1
1.4	3185	1312	2327	2.5	2970	1262	2049	2.2	2617	1212	1719	1.8	2216	1158	1417	1.5	1758	1105	1116	1.2	-	-	-	-
1.6	2928	1315	2173	2.3	2742	1266	1944	2.1	2251	1214	1555	1.7	-	-	-	-	-	-	-	-	-	-	-	-
1.8	2678	1319	2055	2.2	2294	1268	1687	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	2326	1354	1844	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

1. Blower performance for gas heat includes maximum number of heat tubes available for each tonnage.
2. Blower performance includes two-inch throwaway filters.
3. 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.
4. “Turns Open” refers to the setting of the variable pitch motor sheave, where “0 Turns Open” is fully closed.
5. W = Watts

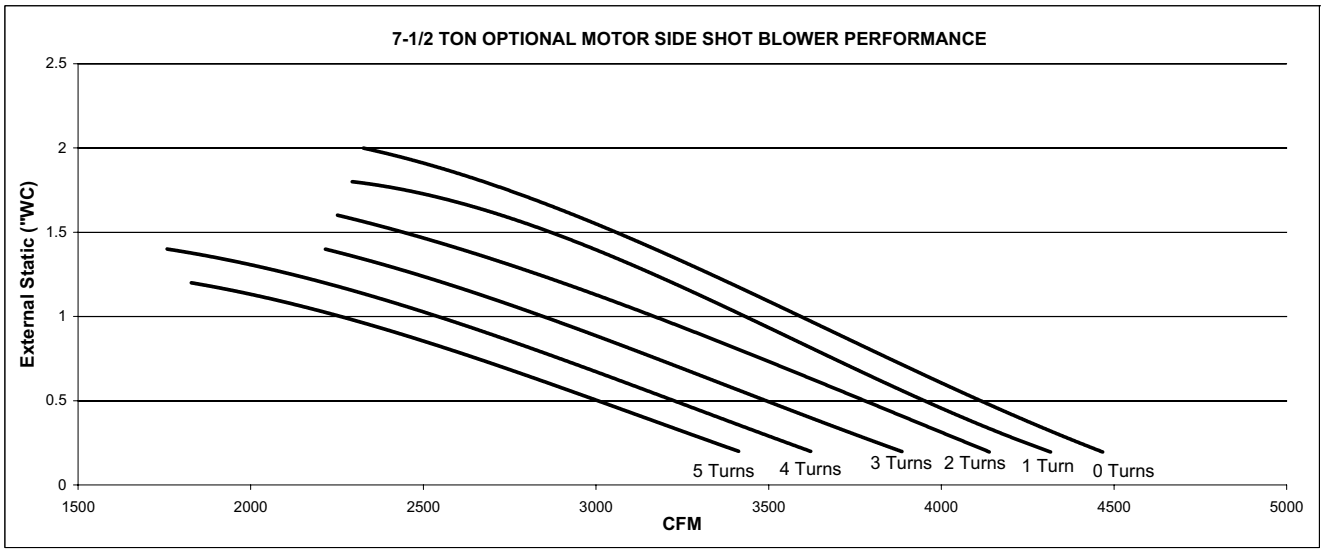


TABLE 24: DH102 (8-1/2 TON) SIDE SHOT BLOWER PERFORMANCE

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	RPM	BHP	Watts	RPM	BHP	Watts
2600	----	----	----	----	----	----	703	1.07	995	758	1.10	1023	831	1.26	1179	887.46	1.40	1302	947.16	1.57	1464	1003.3	1.72	1601	1080	1.89	1758
2700	----	----	----	----	----	----	716	1.09	1019	771	1.15	1072	841	1.31	1221	896.84	1.46	1359	955.17	1.63	1517	1010	1.78	1662	1083	1.97	1840
2800	----	----	----	654	0.99	927	729	1.12	1048	783	1.21	1125	851	1.36	1268	906.22	1.52	1419	963.18	1.69	1574	1016.7	1.85	1726	1086	2.06	1922
2900	----	----	----	669	1.04	968	741	1.16	1083	795	1.27	1181	861	1.42	1320	915.6	1.59	1482	971.19	1.75	1634	1023.4	1.92	1792	1090	2.15	2006
3000	----	----	----	683	1.09	1014	754	1.21	1124	807	1.33	1241	871	1.48	1377	924.98	1.66	1549	979.2	1.82	1698	1030	2.00	1861	1093	2.24	2091
3100	----	----	----	698	1.14	1063	767	1.26	1170	820	1.40	1305	882	1.54	1438	934.36	1.74	1618	987.21	1.89	1765	1036.7	2.07	1933	1097	2.34	2178
3200	652	1.04	968	713	1.20	1116	780	1.31	1223	832	1.47	1371	892	1.61	1505	943.74	1.81	1691	995.22	1.97	1836	1043.4	2.15	2007	1100	2.43	2266
3300	668	1.10	1024	728	1.26	1173	792	1.37	1281	844	1.55	1442	902	1.69	1576	953.12	1.89	1766	1003.2	2.05	1910	1050.1	2.24	2084	1104	2.53	2356
3400	684	1.16	1084	743	1.32	1234	805	1.44	1344	856	1.63	1516	912	1.77	1652	962.5	1.98	1845	1011.2	2.13	1987	1056.8	2.32	2164	1107	2.62	2446
3500	700	1.23	1148	758	1.39	1300	818	1.52	1414	869	1.71	1593	922	1.86	1733	971.88	2.07	1927	1019.3	2.22	2068	1063.5	2.41	2246	1110	2.72	2539
3600	716	1.30	1215	773	1.47	1369	831	1.60	1489	881	1.80	1674	933	1.95	1819	981.26	2.16	2012	1027.3	2.31	2152	1070.2	2.50	2331	1114	2.82	2632
3700	732	1.38	1287	788	1.55	1443	843	1.68	1569	893	1.89	1758	943	2.05	1910	990.64	2.25	2100	1035.3	2.40	2239	1076.9	2.59	2419	1117	2.93	2728
3800	748	1.46	1363	803	1.63	1520	856	1.78	1656	906	1.98	1846	953	2.15	2005	1000	2.35	2191	1043.3	2.50	2330	1083.6	2.69	2509	1121	3.03	2824
3900	764	1.55	1443	818	1.72	1602	869	1.88	1748	918	2.08	1937	963	2.26	2106	1009.4	2.45	2286	1051.3	2.60	2424	1090.3	2.79	2602	1124	3.13	2922
4000	780	1.64	1526	832	1.81	1687	882	1.98	1846	930	2.18	2032	974	2.37	2211	1018.8	2.56	2383	1059.3	2.71	2522	1096.9	2.89	2698	1127	3.24	3021
4100	796	1.73	1614	847	1.91	1777	894	2.09	1950	942	2.29	2131	984	2.49	2321	1028.2	2.66	2484	1067.3	2.81	2623	1103.6	3.00	2796	1131	3.35	3122
4200	812	1.83	1706	862	2.01	1870	907	2.21	2059	955	2.40	2233	994	2.61	2436	1037.5	2.78	2587	1075.3	2.93	2728	1110.3	3.11	2897	----	----	----
4300	828	1.93	1802	877	2.11	1968	920	2.33	2174	967	2.51	2338	1004	2.74	2556	1046.9	2.89	2694	1083.3	3.04	2836	1117	3.22	3001	----	----	----

High Horsepower Option Required

TABLE 25: DH120 (10 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	RPM	BHP	Watts	RPM	BHP	Watts
3000	----	----	----	----	----	----	741	1.20	1122	816	1.35	1256	865	1.46	1365	923	1.69	1571	971	1.91	1784	1035	2.04	1906	1092.2	2.26	2110
3100	----	----	----	705	1.13	1049	755	1.25	1167	828	1.41	1314	876	1.54	1431	933	1.75	1628	980	1.99	1851	1041	2.12	1976	1097.2	2.35	2190
3200	----	----	----	719	1.18	1100	769	1.31	1218	840	1.48	1376	887	1.61	1501	943	1.81	1691	988	2.06	1922	1048	2.20	2049	1102.2	2.44	2274
3300	----	----	----	733	1.24	1156	783	1.37	1274	851	1.55	1443	899	1.69	1575	952	1.89	1760	997	2.14	1997	1054	2.28	2125	1107.2	2.53	2360
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	1006	2.23	2076	1061	2.37	2205	1112.2	2.63	2448
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	1015	2.31	2158	1067	2.45	2287	1117.2	2.72	2540
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	1023	2.41	2244	1073	2.55	2373	1122.2	2.83	2634
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	1032	2.50	2334	1080	2.64	2462	1127.2	2.93	2732
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	1041	2.60	2427	1086	2.74	2554	1132.2	3.04	2832
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	1050	2.71	2524	1093	2.84	2649	1137.2	3.15	2934
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	1058	2.82	2625	1099	2.95	2747	1142.2	3.26	3040
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	1067	2.93	2729	1106	3.06	2848	1147.2	3.38	3148
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	1076	3.04	2838	1112	3.17	2953	----	----	----
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	1084	3.16	2949	1118	3.28	3061	----	----	----
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	1093	3.29	3065	1125	3.40	3171	----	----	----
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	1102	3.42	3184	----	----	----	----	----	----
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 26: DH150 (12-1/2 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			2.0		
	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
3700	----	----	----	----	----	----	----	----	----	874	1.93	1801	927	2.04	1906	984	2.27	2113	1037	2.41	2245	1089	2.57	2399	1138	2.68	2499	1178	2.82	2628
3800	----	----	----	----	----	----	840	1.82	1699	888	2.01	1871	941	2.14	1993	997	2.36	2202	1048	2.50	2334	1099	2.67	2485	1146	2.77	2586	1186	2.93	2728
3900	----	----	----	----	----	----	855	1.92	1786	903	2.09	1947	954	2.24	2085	1009	2.46	2295	1060	2.60	2427	1109	2.76	2576	1155	2.88	2680	1195	3.04	2834
4000	----	----	----	----	----	----	870	2.01	1877	917	2.18	2028	968	2.34	2182	1022	2.57	2392	1071	2.71	2524	1120	2.87	2672	1163	2.98	2780	1204	3.16	2947
4100	----	----	----	----	----	----	885	2.12	1973	932	2.27	2115	982	2.45	2283	1035	2.68	2494	1083	2.82	2626	1130	2.98	2774	1171	3.10	2887	1212	3.29	3066
4200	----	----	----	834	2.11	1970	900	2.22	2072	946	2.37	2207	996	2.56	2390	1048	2.79	2601	1094	2.93	2733	1140	3.09	2881	1179	3.22	3000	1221	3.42	3192
4300	----	----	----	851	2.19	2042	915	2.33	2175	961	2.47	2305	1009	2.68	2501	1061	2.91	2712	1106	3.05	2844	1150	3.21	2993	1188	3.35	3119	1230	3.57	3324
4400	----	----	----	868	2.28	2121	931	2.45	2283	975	2.58	2409	1023	2.81	2616	1074	3.03	2828	1117	3.18	2960	1160	3.34	3111	1196	3.48	3245	1239	3.71	3462
4500	822	2.13	1990	885	2.37	2208	946	2.57	2395	990	2.70	2518	1037	2.94	2736	1087	3.16	2948	1129	3.30	3080	1171	3.47	3234	1204	3.62	3377	1247	3.87	3607
4600	838	2.23	2083	901	2.47	2301	961	2.69	2511	1004	2.82	2633	1051	3.07	2862	1099	3.30	3072	1141	3.44	3204	1181	3.61	3362	1212	3.77	3515	1256	4.03	3758
4700	854	2.34	2184	918	2.58	2401	976	2.82	2631	1019	2.95	2753	1064	3.21	2991	1112	3.43	3201	1152	3.58	3333	1191	3.75	3496	1221	3.93	3659	1265	4.20	3916
4800	870	2.46	2291	935	2.69	2508	991	2.96	2755	1033	3.09	2879	1078	3.35	3126	1125	3.58	3335	1164	3.72	3467	1201	3.90	3635	1229	4.09	3810	1273	4.38	4080
4900	887	2.58	2406	952	2.81	2622	1007	3.09	2883	1048	3.23	3011	1092	3.50	3265	1138	3.73	3473	1175	3.87	3605	1211	4.05	3779	1237	4.26	3967	1282	4.56	4250
5000	903	2.71	2527	968	2.94	2744	1022	3.24	3016	1062	3.38	3148	1105	3.66	3409	1151	3.88	3616	1187	4.02	3748	1222	4.21	3929	1245	4.43	4131	1291	4.75	4427
5100	919	2.85	2656	985	3.08	2872	1037	3.38	3152	1077	3.53	3291	1119	3.82	3558	1164	4.04	3763	1198	4.18	3895	1232	4.38	4083	1254	4.61	4301	1300	4.95	4610
5200	936	2.99	2791	1002	3.23	3007	1052	3.53	3293	1091	3.69	3439	1133	3.98	3711	1177	4.20	3914	1210	4.34	4046	1242	4.55	4244	1262	4.80	4477	1308	5.15	4800
5300	952	3.15	2934	1018	3.38	3149	1067	3.69	3438	1106	3.85	3593	1147	4.15	3869	1189	4.37	4070	1221	4.51	4202	1252	4.73	4409	1270	5.00	4660	1317	5.36	4996
5400	968	3.31	3083	1035	3.54	3298	1083	3.85	3587	1120	4.03	3753	1160	4.33	4032	1202	4.54	4231	1233	4.68	4363	1262	4.91	4580	1278	5.20	4848	----	----	----
5500	984	3.48	3240	1052	3.71	3455	1098	4.01	3740	1135	4.20	3918	1174	4.51	4200	1215	4.72	4396	1244	4.86	4528	1273	5.10	4757	1286	5.41	5044	----	----	----
5600	1001	3.65	3403	1069	3.88	3618	1113	4.18	3897	1149	4.39	4089	1188	4.69	4372	1228	4.90	4566	1256	5.04	4698	1283	5.30	4938	----	----	----	----	----	----
5700	1017	3.83	3574	1085	4.06	3788	1128	4.35	4058	1164	4.58	4265	1201	4.88	4549	1241	5.08	4740	1267	5.23	4872	1293	5.50	5125	----	----	----	----	----	----
5800	1033	4.02	3751	1102	4.25	3965	1143	4.53	4224	1178	4.77	4447	1215	5.07	4731	1254	5.28	4918	1279	5.42	5050	----	----	----	----	----	----	----	----	----
5900	1050	4.22	3936	1119	4.45	4149	1159	4.71	4393	1193	4.97	4635	1229	5.27	4917	1267	5.47	5101	----	----	----	----	----	----	----	----	----	----	----	----
6000	1066	4.43	4127	1136	4.66	4341	1174	4.90	4567	1207	5.18	4828	1243	5.48	5108	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6100	1082	4.64	4326	1152	4.87	4539	1189	5.09	4745	1222	5.39	5027	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6200	1098	4.86	4531	1169	5.09	4744	1204	5.29	4927	1236	5.61	5231	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

High Horsepower Option Required

TABLE 27: DH078 (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 28: DH090 (7-1/2 TON) STANDARD MOTOR DOWN SHOT BLOWER PERFORMANCE[1,2]

ESP[3]	TURNS OPEN[4]																							
	0 Turns				1 Turn				2 Turns				3 Turns				4 Turns				5 Turns			
	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP
0.2	3619	1203	2148	2.3	3452	1156	1913	2.1	3272	1110	1696	1.8	3085	1063	1503	1.6	2932	1013	1299	1.4	2742	963	1123	1.2
0.4	3343	1204	1988	2.1	3189	1159	1781	1.9	2995	1113	1547	1.7	2798	1065	1360	1.5	2640	1014	1190	1.3	2421	965	1024	1.1
0.6	3100	1205	1857	2.0	2944	1162	1676	1.8	2746	1116	1440	1.5	2512	1068	1246	1.3	2340	1017	1067	1.1	2084	967	918	1.0
0.8	2846	1205	1712	1.8	2675	1166	1534	1.6	2448	1118	1326	1.4	2162	1071	1098	1.2	1956	1020	934	1.0	1606	969	781	0.8
1	2559	1207	1574	1.7	2335	1169	1364	1.5	2084	1119	1174	1.3	1712	1074	941	1.0	-	-	-	-	-	-	-	-
1.2	2219	1209	1435	1.5	1935	1174	1039	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

1. Blower performance for gas heat includes maximum number of heat tubes available for each tonnage.
2. Blower performance includes two-inch throwaway filters.
3. 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.
4. “Turns Open” refers to the setting of the variable pitch motor sheave, where “0 Turns Open” is fully closed.
5. W = Watts

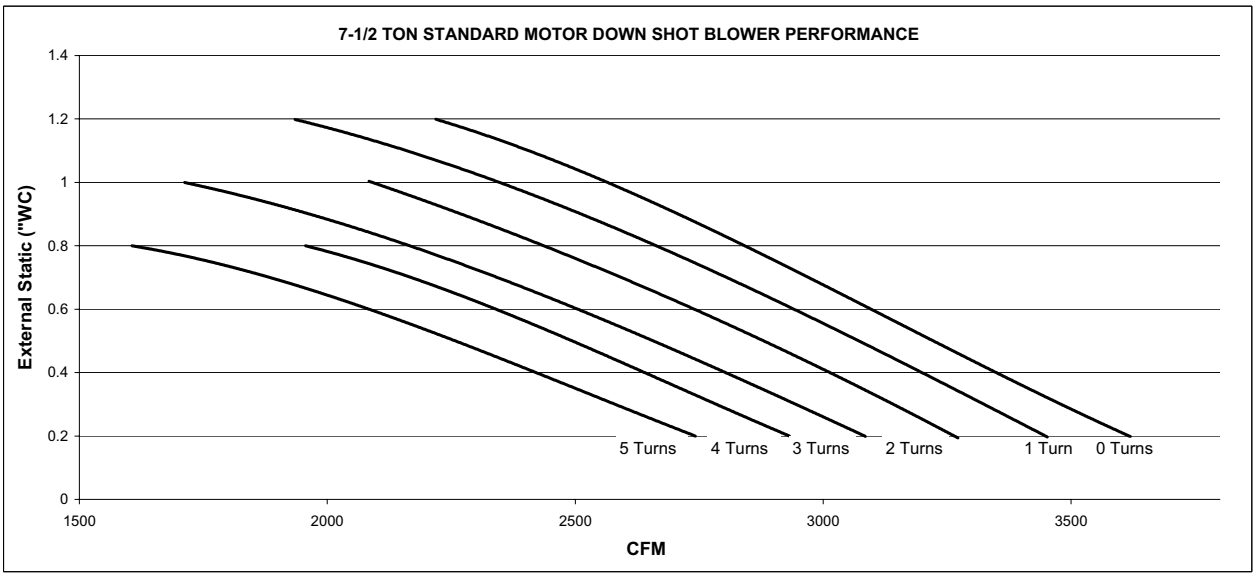


TABLE 29: DH090 (7-1/2 TON) OPTIONAL MOTOR DOWN SHOT BLOWER PERFORMANCE[1,2]

ESP[3]	TURNS OPEN[4]																							
	0 Turns				1 Turn				2 Turns				3 Turns				4 Turns				5 Turns			
	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP	CFM	RPM	W[5]	BHP
0.2	3995	1299	2790	3.0	3765	1249	2420	2.6	3619	1198	2147	2.3	3399	1144	1849	2.0	3223	1092	1630	1.7	3002	1038	1421	1.5
0.4	3718	1303	2580	2.8	3508	1252	2290	2.5	3353	1201	2010	2.2	3131	1147	1715	1.8	2945	1094	1525	1.6	2715	1039	1328	1.4
0.6	3506	1305	2440	2.6	3288	1255	2117	2.3	3107	1203	1862	2.0	2876	1149	1603	1.7	2666	1096	1368	1.5	2418	1042	1206	1.3
0.8	3290	1308	2290	2.5	3053	1258	1982	2.1	2858	1206	1712	1.8	2594	1152	1487	1.6	2334	1099	1248	1.3	2049	1044	1037	1.1
1	3065	1312	2167	2.3	2795	1261	1844	2.0	2558	1209	1602	1.7	2259	1155	1318	1.4	1954	1101	1095	1.2	-	-	-	-
1.2	2799	1315	1977	2.1	2458	1264	1675	1.8	2223	1212	1408	1.5	1780	1159	1084	1.2	-	-	-	-	-	-	-	-
1.4	2401	1320	1775	1.9	2098	1269	1487	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6	1940	1325	1514	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

1. Blower performance for gas heat includes maximum number of heat tubes available for each tonnage.
2. Blower performance includes two-inch throwaway filters.
3. 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.
4. “Turns Open” refers to the setting of the variable pitch motor sheave, where “0 Turns Open” is fully closed.
5. W = Watts

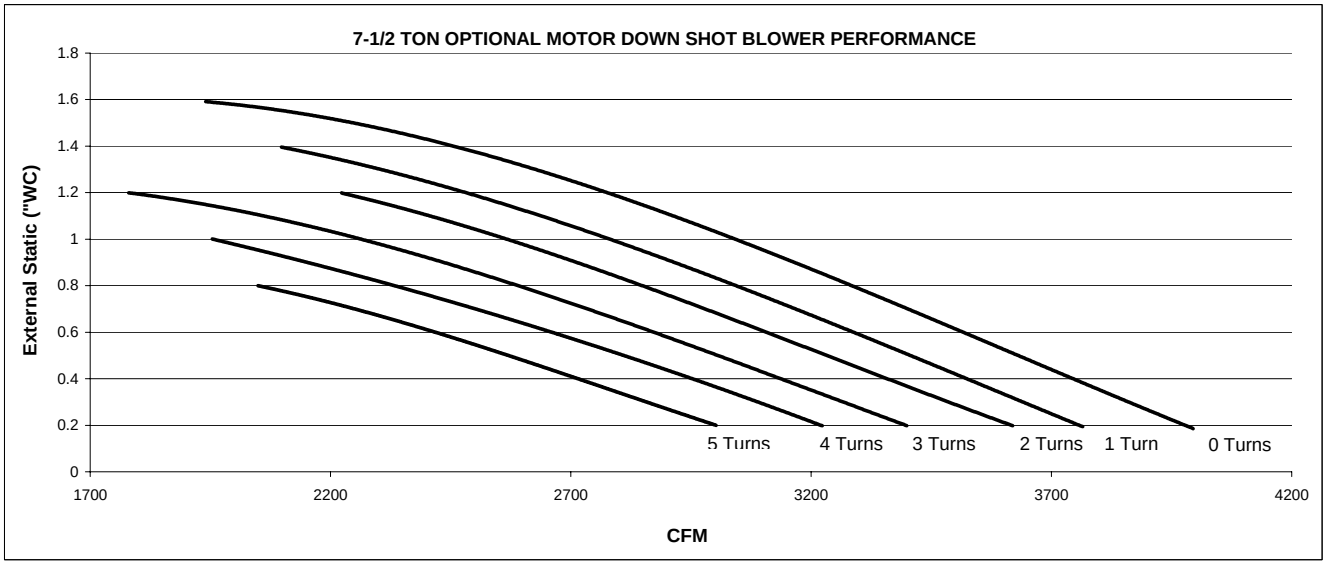


TABLE 30: DH102 (8-1/2 TON) DOWN SHOT BLOWER PERFORMANCE

CFM	External Static Pressure																											
	0.2			0.4			0.6			0.8			1.0			1.2			1.4			1.6			1.8			2.0		
	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
2300	----	----	----	----	----	----	713	1.03	959	795	1.09	1012	863	1.19	1108	920	1.32	1233	967	1.47	1374	1004	1.62	1508	1034	1.73	1615	1056	1.81	1686
2400	----	----	----	----	----	----	727	1.06	984	807	1.13	1054	874	1.25	1163	929	1.39	1296	974	1.55	1441	1010	1.69	1577	1039	1.81	1683	1061	1.88	1751
2500	----	----	----	655	1.06	985	742	1.09	1014	819	1.18	1101	884	1.31	1221	938	1.46	1362	981	1.62	1511	1016	1.77	1647	1044	1.88	1752	1065	1.95	1817
2600	----	----	----	672	1.07	999	756	1.13	1049	831	1.24	1152	894	1.38	1282	946	1.53	1430	989	1.70	1583	1023	1.84	1720	1049	1.95	1822	1070	2.02	1885
2700	----	----	----	689	1.10	1021	771	1.17	1091	843	1.29	1207	904	1.45	1347	955	1.61	1501	996	1.78	1657	1029	1.92	1794	1054	2.03	1894	1074	2.10	1953
2800	----	----	----	706	1.13	1050	785	1.22	1138	856	1.36	1267	915	1.52	1416	964	1.69	1576	1003	1.86	1733	1035	2.01	1870	1060	2.11	1967	1079	2.17	2023
2900	652	1.11	1035	724	1.16	1085	800	1.28	1190	868	1.43	1331	925	1.60	1488	972	1.77	1653	1011	1.94	1812	1041	2.09	1947	1065	2.19	2041	1083	2.25	2093
3000	671	1.14	1061	741	1.21	1128	814	1.34	1248	880	1.50	1400	935	1.68	1564	981	1.86	1732	1018	2.03	1893	1047	2.17	2026	1070	2.27	2117	1087	2.32	2165
3100	690	1.18	1096	758	1.26	1178	829	1.41	1312	892	1.58	1473	945	1.76	1643	990	1.95	1815	1025	2.12	1976	1053	2.26	2107	1075	2.35	2194	1092	2.40	2237
3200	709	1.22	1138	775	1.32	1234	843	1.48	1381	904	1.66	1550	956	1.85	1726	998	2.04	1900	1032	2.21	2061	1060	2.35	2190	1080	2.44	2273	----	----	----
3300	729	1.28	1189	792	1.39	1298	858	1.56	1456	916	1.75	1632	966	1.94	1812	1007	2.13	1989	1040	2.31	2149	1066	2.44	2275	1086	2.52	2352	----	----	----
3400	748	1.34	1248	809	1.47	1369	872	1.65	1537	929	1.84	1719	976	2.04	1902	1015	2.23	2080	1047	2.40	2239	1072	2.53	2361	----	----	----	----	----	----
3500	767	1.41	1315	826	1.55	1447	887	1.74	1623	941	1.94	1810	986	2.14	1995	1024	2.33	2174	1054	2.50	2331	1078	2.63	2449	----	----	----	----	----	----
3600	786	1.49	1391	843	1.64	1532	901	1.84	1715	953	2.04	1905	997	2.24	2092	1033	2.44	2270	1062	2.60	2425	1084	2.72	2538	----	----	----	----	----	----
3700	805	1.58	1474	860	1.74	1624	916	1.94	1812	965	2.15	2005	1007	2.35	2193	1041	2.54	2370	1069	2.71	2522	1090	2.82	2630	----	----	----	----	----	----
3800	824	1.68	1566	877	1.85	1723	930	2.05	1915	977	2.26	2109	1017	2.46	2297	1050	2.65	2473	1076	2.81	2621	----	----	----	----	----	----	----	----	----
3900	843	1.79	1666	894	1.96	1829	945	2.17	2023	990	2.38	2218	1027	2.58	2405	1059	2.77	2578	1083	2.92	2722	----	----	----	----	----	----	----	----	----
4000	862	1.90	1774	911	2.08	1943	959	2.29	2138	1002	2.50	2331	1038	2.70	2516	1067	2.88	2686	1091	3.03	2825	----	----	----	----	----	----	----	----	----
4100	881	2.03	1890	928	2.21	2063	974	2.42	2257	1014	2.63	2449	1048	2.82	2631	1076	3.00	2797	----	----	----	----	----	----	----	----	----	----	----	----
4200	900	2.16	2015	945	2.35	2190	988	2.56	2383	1026	2.76	2571	1058	2.95	2749	1085	3.12	2911	----	----	----	----	----	----	----	----	----	----	----	----

High Horsepower Option Required

Motor Efficiency 0.8

Std HP Motor 2

TABLE 31: DH120 (10 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
3000	----	----	----	741	1.21	1128	814	1.34	1248	880	1.50	1400	935	1.68	1564	981	1.86	1732	1018	2.03	1893	1047	2.17	2026
3100	----	----	----	758	1.26	1178	829	1.41	1312	892	1.58	1473	945	1.76	1643	990	1.95	1815	1025	2.12	1976	1053	2.26	2107
3200	----	----	----	775	1.32	1234	843	1.48	1381	904	1.66	1550	956	1.85	1726	998	2.04	1900	1032	2.21	2061	1060	2.35	2190
3300	----	----	----	792	1.39	1298	858	1.56	1456	916	1.75	1632	966	1.94	1812	1007	2.13	1989	1040	2.31	2149	1066	2.44	2275
3400	748	1.34	1248	809	1.47	1369	872	1.65	1537	929	1.84	1719	976	2.04	1902	1015	2.23	2080	1047	2.40	2239	1072	2.53	2361
3500	767	1.41	1315	826	1.55	1447	887	1.74	1623	941	1.94	1810	986	2.14	1995	1024	2.33	2174	1054	2.50	2331	----	----	----
3600	786	1.49	1391	843	1.64	1532	901	1.84	1715	953	2.04	1905	997	2.24	2092	1033	2.44	2270	1062	2.60	2425	----	----	----
3700	805	1.58	1474	860	1.74	1624	916	1.94	1812	965	2.15	2005	1007	2.35	2193	1041	2.54	2370	1069	2.71	2522	----	----	----
3800	824	1.68	1566	877	1.85	1723	930	2.05	1915	977	2.26	2109	1017	2.46	2297	1050	2.65	2473	1076	2.81	2621	----	----	----
3900	843	1.79	1666	894	1.96	1829	945	2.17	2023	990	2.38	2218	1027	2.58	2405	1059	2.77	2578	----	----	----	----	----	----
4000	862	1.90	1774	911	2.08	1943	959	2.29	2138	1002	2.50	2331	1038	2.70	2516	1067	2.88	2686	----	----	----	----	----	----
4100	881	2.03	1890	928	2.21	2063	974	2.42	2257	1014	2.63	2449	1048	2.82	2631	1076	3.00	2797	----	----	----	----	----	----
4200	900	2.16	2015	945	2.35	2190	988	2.56	2383	1026	2.76	2571	1058	2.95	2749	----	----	----	----	----	----	----	----	----
4300	919	2.30	2148	962	2.49	2324	1003	2.70	2514	1038	2.89	2697	1068	3.08	2871	----	----	----	----	----	----	----	----	----
4400	938	2.45	2288	979	2.65	2466	1017	2.84	2650	1050	3.03	2828	1079	3.21	2996	----	----	----	----	----	----	----	----	----
4500	957	2.61	2437	996	2.80	2614	1032	3.00	2792	1063	3.18	2963	----	----	----	----	----	----	----	----	----	----	----	----
4600	976	2.78	2595	1013	2.97	2770	1046	3.15	2940	1075	3.33	3103	----	----	----	----	----	----	----	----	----	----	----	----
4700	995	2.96	2760	1030	3.15	2932	1061	3.32	3094	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4800	1015	3.15	2934	1047	3.33	3102	1075	3.49	3253	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4900	1034	3.34	3115	1065	3.52	3278	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5000	1053	3.55	3305	1082	3.71	3462	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

High Horsepower Option Required

Motor Efficiency 0.8

Std HP Motor2

TABLE 32: DH150 (12-1/2 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			1.8			2.0		
	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
3700	----	----	----	----	----	----	908	1.99	1853	957	2.12	1976	1004	2.27	2112	1050	2.42	2258	1094	2.59	2412	1136	2.76	2571	1177	2.93	2733	1217	3.11	2895
3800	----	----	----	875	1.96	1831	926	2.09	1946	974	2.23	2077	1020	2.38	2220	1065	2.54	2372	1108	2.71	2530	1151	2.89	2693	1191	3.06	2856	1231	3.24	3021
3900	----	----	----	893	2.06	1918	943	2.19	2044	990	2.34	2183	1036	2.50	2332	1080	2.67	2489	1123	2.84	2652	1165	3.02	2817	1205	3.20	2983	1244	3.38	3149
4000	----	----	----	911	2.16	2012	960	2.30	2147	1007	2.46	2294	1052	2.63	2449	1096	2.80	2611	1138	2.98	2777	1179	3.16	2945	1219	3.34	3113	1258	3.52	3280
4100	878	2.13	1984	929	2.27	2113	977	2.42	2256	1023	2.59	2410	1068	2.76	2571	1111	2.94	2737	1153	3.12	2906	1194	3.30	3076	1233	3.48	3245	1271	3.66	3414
4200	897	2.23	2080	947	2.38	2219	995	2.54	2371	1040	2.72	2531	1084	2.89	2697	1127	3.08	2867	1168	3.26	3039	1208	3.44	3211	1247	3.63	3381	1285	3.81	3550
4300	915	2.34	2184	965	2.50	2332	1012	2.67	2491	1056	2.85	2657	1100	3.03	2828	1142	3.22	3001	1183	3.41	3175	1223	3.59	3348	1261	3.78	3520	1298	3.96	3690
4400	934	2.46	2294	983	2.63	2451	1029	2.81	2617	1073	2.99	2788	1116	3.18	2963	1157	3.37	3139	1198	3.56	3315	1237	3.74	3490	1275	3.93	3662	1311	4.11	3832
4500	953	2.59	2411	1001	2.76	2577	1046	2.95	2749	1090	3.14	2925	1132	3.33	3103	1173	3.52	3281	1212	3.71	3459	1251	3.90	3634	1289	4.08	3807	1325	4.27	3977
4600	972	2.72	2536	1019	2.91	2708	1063	3.10	2886	1106	3.29	3066	1148	3.48	3247	1188	3.68	3428	1227	3.87	3606	1266	4.06	3782	1303	4.24	3955	1338	4.43	4125
4700	991	2.86	2667	1036	3.05	2846	1081	3.25	3029	1123	3.45	3212	1164	3.64	3396	1204	3.84	3578	1242	4.03	3758	1280	4.22	3933	1316	4.40	4106	1352	4.59	4275
4800	1009	3.01	2806	1054	3.21	2990	1098	3.41	3177	1139	3.61	3364	1180	3.81	3549	1219	4.00	3732	1257	4.20	3912	1294	4.39	4088	1330	4.57	4260	1365	4.75	4429
4900	1028	3.17	2951	1072	3.37	3141	1115	3.57	3331	1156	3.78	3520	1196	3.98	3707	1234	4.17	3891	1272	4.37	4071	1309	4.56	4246	1344	4.74	4417	1379	4.92	4585
5000	1047	3.33	3103	1090	3.54	3297	1132	3.74	3491	1172	3.95	3682	1211	4.15	3870	1250	4.35	4054	1287	4.54	4233	1323	4.73	4407	1358	4.91	4577	1392	5.09	4744
5100	1066	3.50	3263	1108	3.71	3460	1149	3.92	3656	1189	4.13	3848	1227	4.33	4037	1265	4.53	4221	1302	4.72	4399	1338	4.91	4572	1372	5.09	4740	----	----	----
5200	1084	3.68	3430	1126	3.89	3629	1167	4.11	3827	1205	4.31	4020	1243	4.51	4208	1281	4.71	4391	1317	4.90	4569	1352	5.09	4740	----	----	----	----	----	----
5300	1103	3.87	3603	1144	4.08	3805	1184	4.29	4003	1222	4.50	4196	1259	4.70	4384	1296	4.90	4566	1331	5.09	4742	----	----	----	----	----	----	----	----	----
5400	1122	4.06	3784	1162	4.28	3987	1201	4.49	4185	1238	4.70	4378	1275	4.90	4565	1311	5.09	4745	----	----	----	----	----	----	----	----	----	----	----	----
5500	1141	4.26	3971	1180	4.48	4175	1218	4.69	4373	1255	4.90	4564	1291	5.10	4750	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5600	1160	4.47	4166	1198	4.69	4369	1235	4.90	4566	1271	5.10	4756	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5700	1178	4.69	4368	1216	4.90	4569	1253	5.11	4765	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5800	1197	4.91	4576	1234	5.12	4776	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5900	1216	5.14	4792	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6200	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

High Horsepower Option Required

Motor Efficiency0.8

Std HP Motor3

TABLE 33: ADDITIONAL STATIC RESISTANCE DH078, 102, 120 AND 150

CFM	Cooling Only[1]	Economizer[2 3]	Electric Heat KW[2]				
			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
5300	0.42	0.06	0.35	0.37	0.41	0.43	0.49
5500	0.45	0.06	0.38	0.40	0.44	0.46	0.53
5700	0.48	0.06	0.41	0.43	0.47	0.49	0.56
5900	0.52	0.07	0.44	0.46	0.50	0.53	0.59
6100	0.56	0.07	0.47	0.49	0.53	0.56	0.62
6300	0.60	0.07	0.50	0.53	0.56	0.59	0.65

1 Add these resistance values to the available static resistance in the respective Blower Performance Tables.
2 Deduct these resistance values from the available external static pressure shown in the respective Blower Performance Table.
3 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 34: ADDITIONAL STATIC RESISTANCE DH090

CFM	Cooling Only[1]	Economizer[2 3]	Electric Heat KW[2]				
			9	18	24	36	54
1900	-0.004	0.07	0.05	0.06	0.07	0.08	0.10
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	0.10	0.13
2500	0.02	0.13	0.08	0.09	0.10	0.11	0.14
2700	0.03	0.16	0.09	0.10	0.12	0.13	0.16
2900	0.04	0.18	0.10	0.11	0.13	0.14	0.18
3100	0.05	0.20	0.12	0.13	0.15	0.16	0.20
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	0.20	0.24
3700	0.08	0.27	0.17	0.18	0.21	0.22	0.26
3900	0.09	0.29	0.19	0.20	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

1 Deduct these resistance values to the available static resistance in the respective Blower Performance Tables.
2 Deduct these resistance values from the available external static pressure shown in the respective Blower Performance Table.
3 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 35: 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)	150 (12.5)
		MINIMUM SUPPLY AIR CFM				
9	208/230	1950	2250	2550	-	-
18		1950	2250	2550	3000	3750
24		1950	2250	2550	3000	3750
36		1950	2250	2550	3000	3750
54		-	-	-	3500	4000
9	480	1950	2250	2550	-	-
18		1950	2250	2550	3000	3750
24		1950	2250	2550	3000	3750
36		1950	2250	2550	3000	3750
54		-	-	-	3000	3750
9	600	1950	2250	2550	-	-
18		1950	2250	2550	3000	3750
24		1950	2250	2550	3000	3750
36		1950	2250	2550	3000	3750
54		-	-	-	3500	3750

TABLE 36: 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	
DH078	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
DH090	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
DH102	2	1725	80%	1.15	56	3.4 - 4.4	7/8	1VM50	9.0	1	AK94	A56
	3	1725	80%	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
DH120	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
DH150	3	1725	80%	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
	5	1725	87%	1.15	184T	4.3 - 5.3	1 1/8	1VP56	6.7	1	BK77	BX55

TABLE 37: POWER EXHAUST SPECIFICATIONS

POWER EXHAUST MODEL	VOLT	PHASE	MOTOR			ELECTRICAL			FUSE SIZE	CFM@ 0.1 ESP
			HP	RPM[1]	QTY	LRA	FLA	MCA		
2PE0473125	208/230	1	0.75	1075	1	24.9	5.0	6.3	10	3,800
2PE0473146	460	1				-	2.2	2.8	5	
2PE0473158	575	1		1050			1.5	1.9	4	

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

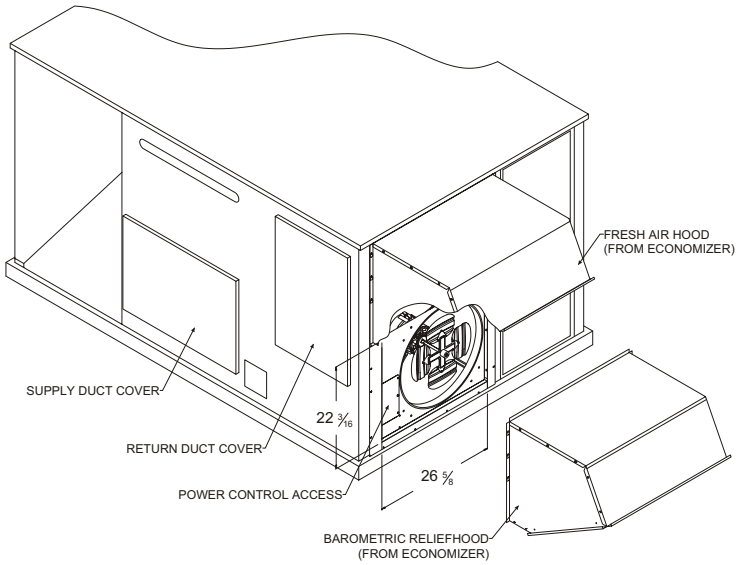


FIGURE 2 - POWER EXHAUST ACCESSORY DOWNFLOW APPLICATION

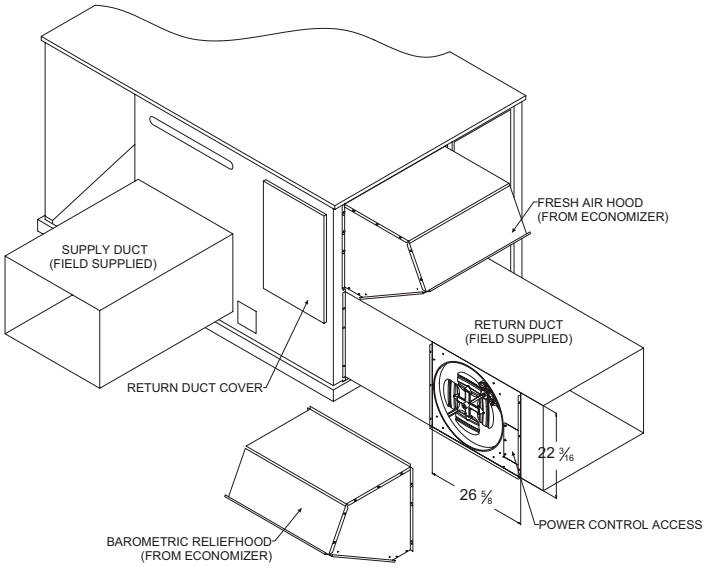


FIGURE 3 - POWER EXHAUST ACCESSORY HORIZONTAL APPLICATION

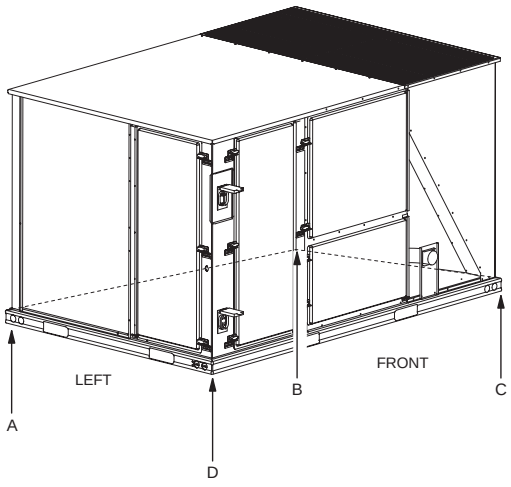


FIGURE 4 - UNIT 4 POINT LOAD

TABLE 38: 4 POINT LOAD WEIGHT

Model	Location (lbs.)			
	A	B	C	D
DH078	241	206	300	352
DH090	199	148	232	311
DH102	257	220	321	375
DH120	265	226	330	386
DH150	263	224	327	383

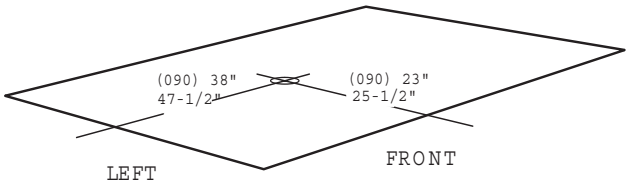


FIGURE 5 - UNIT CENTER OF GRAVITY

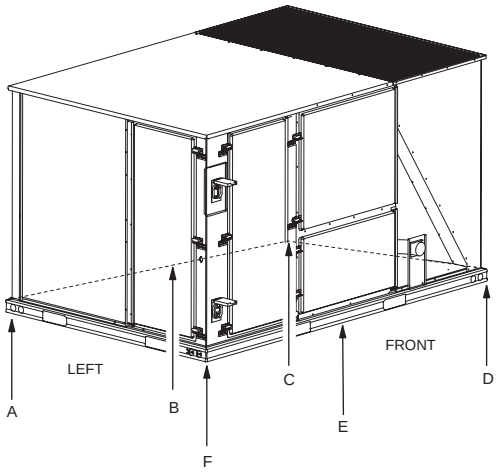


FIGURE 6 - UNIT 6 POINT LOAD

TABLE 39: 6 POINT LOAD WEIGHT

Model	Locations (lbs.)					
	A	B	C	D	E	F
DH078	165	148	134	195	216	241
DH090	139	113	94	147	178	218
DH102	176	158	143	208	231	257
DH120	181	163	147	214	237	264
DH150	180	161	146	213	235	262

TABLE 40: UNIT WEIGHT

Model	Shipping Weight (lbs.)	Operating Weight (lbs.)
DH078	1104	1099
DH090	895	890
DH102	1178	1173
DH120	1212	1207
DH150	1202	1197
W/ECON.	85	84
W/PE	150	148
W/ELECT. HEAT[1]	49	49
W/GAS HEAT[2]	110	110

1 54 KW Heater
2 8 Tube Heat Exchanger

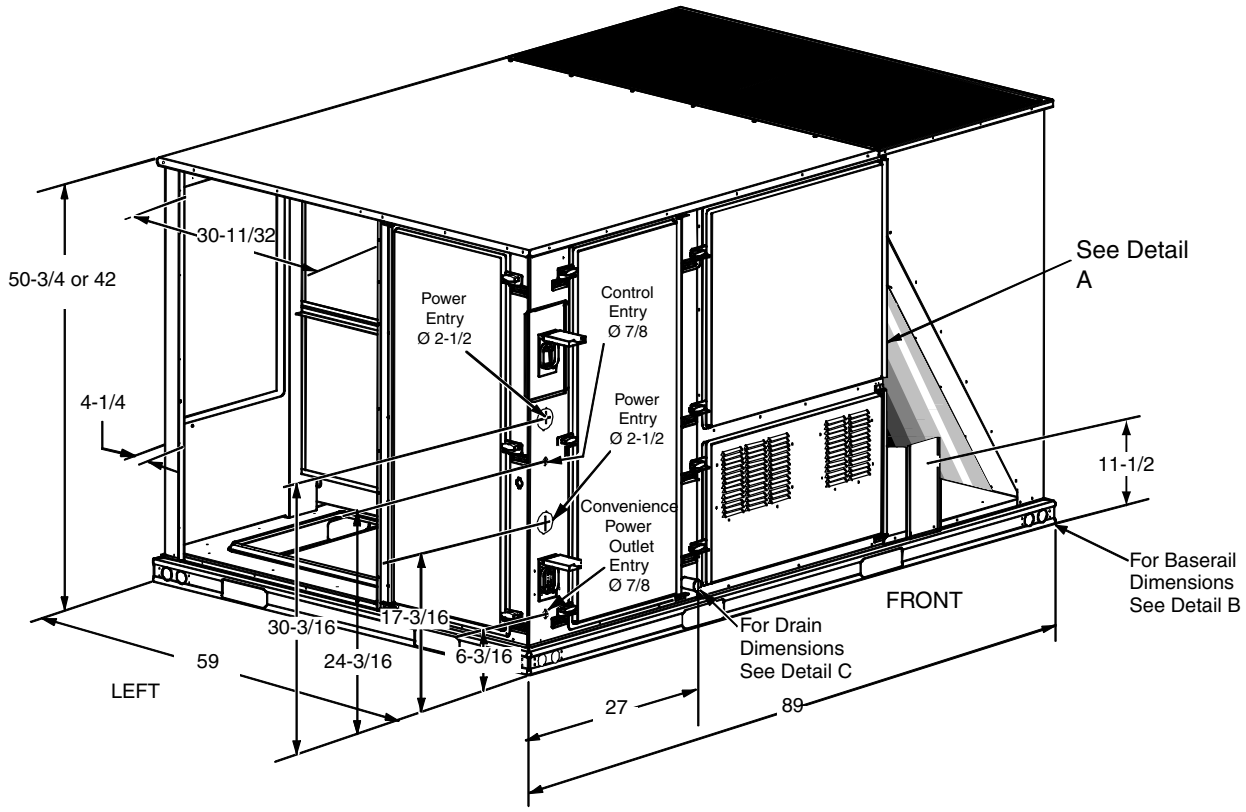
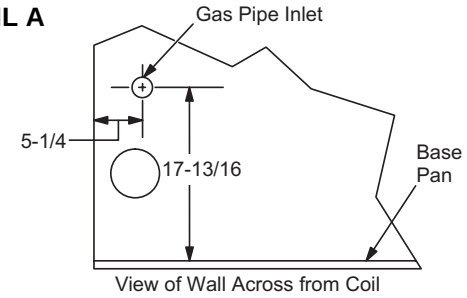
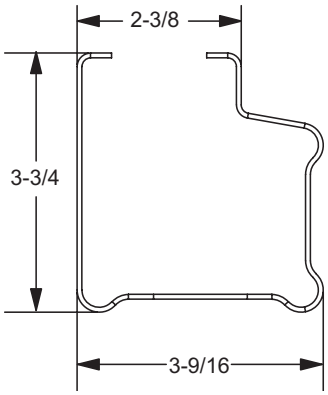


FIGURE 7 - UNIT DIMENSIONS

DETAIL A



DETAIL B



DETAIL C

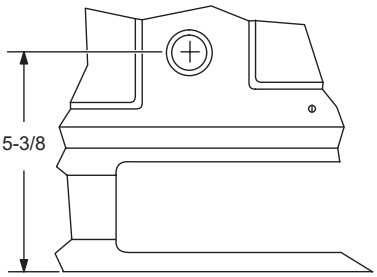


TABLE 41: UNIT CLEARANCES

Top[1]	72”	**Right**	12”
Front	36”	**Left**	36”
Rear[2]	36”	**Bottom[3]**	0”

1 Units must be installed outdoors. Overhanging structure or shrubs should not obstruct condenser air discharge outlet.
2 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.
3 Units may be installed on combustible floors made from wood or class A, B or C roof covering materials.

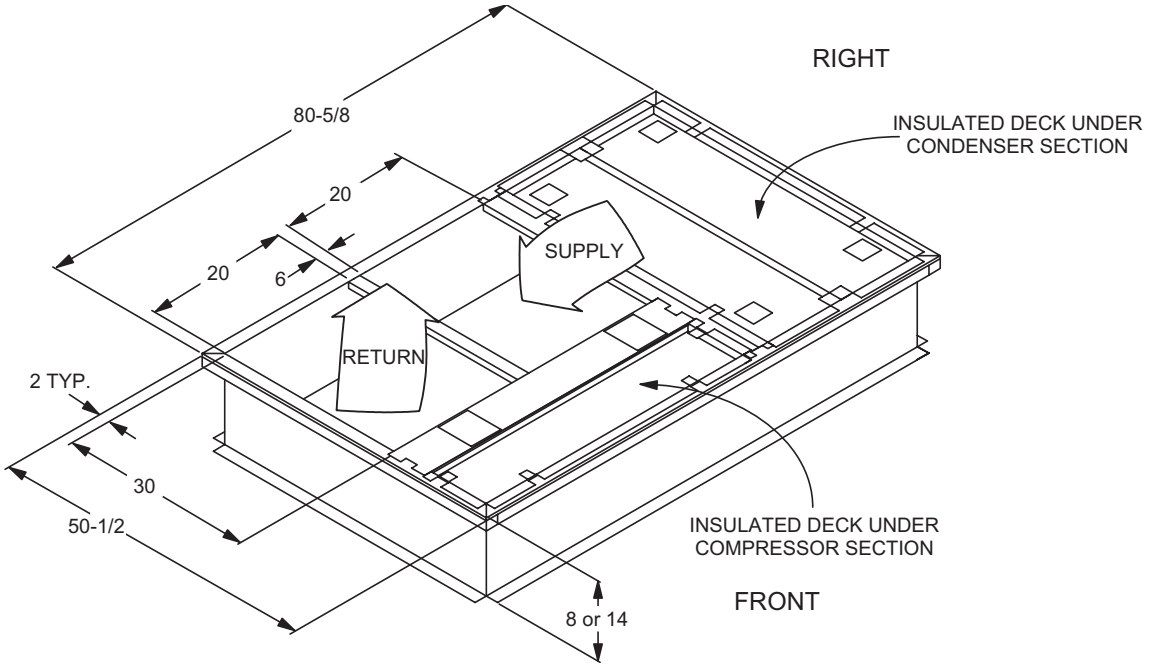


FIGURE 8 - PREDATOR® ROOF CURB DIMENSIONS

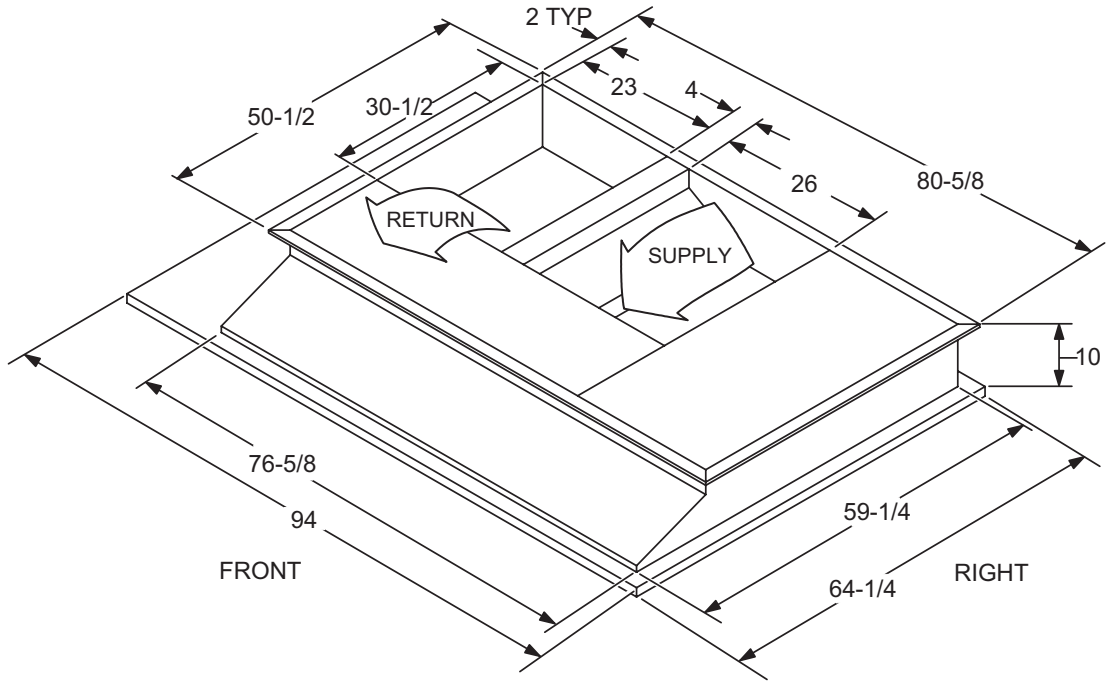


FIGURE 9 - SUNLINE™ TO PREDATOR® TRANSITION ROOF CURBS

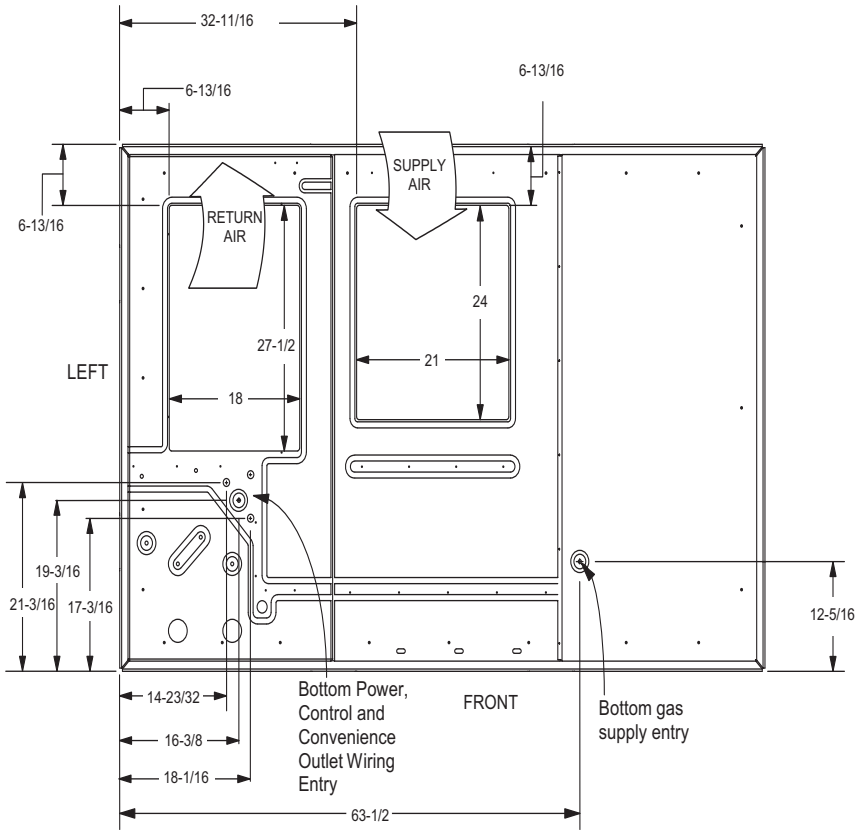


FIGURE 10 - BOTTOM DUCT OPENINGS (FROM ABOVE)

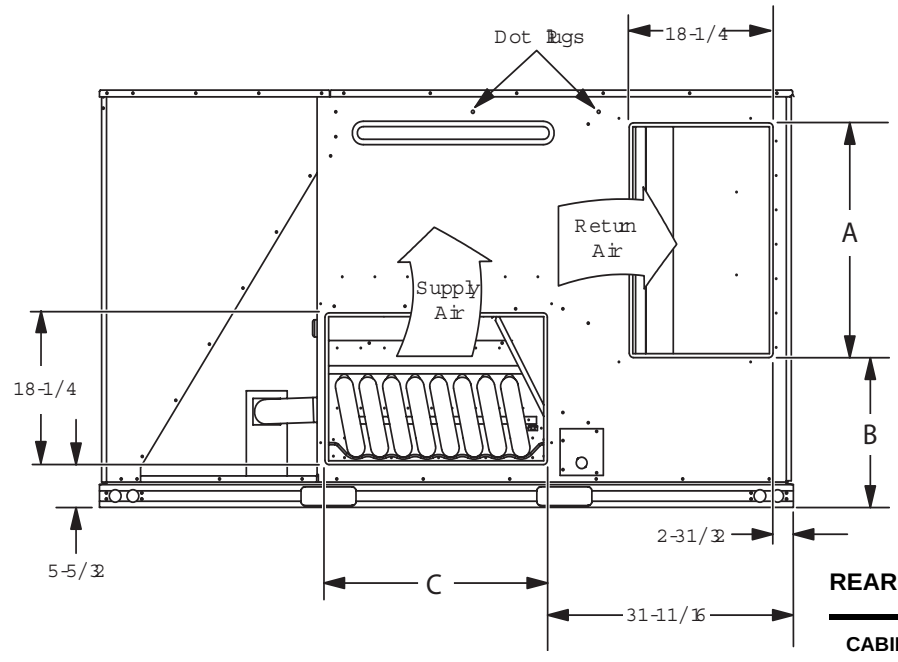


FIGURE 11 - REAR DUCT DIMENSIONS

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

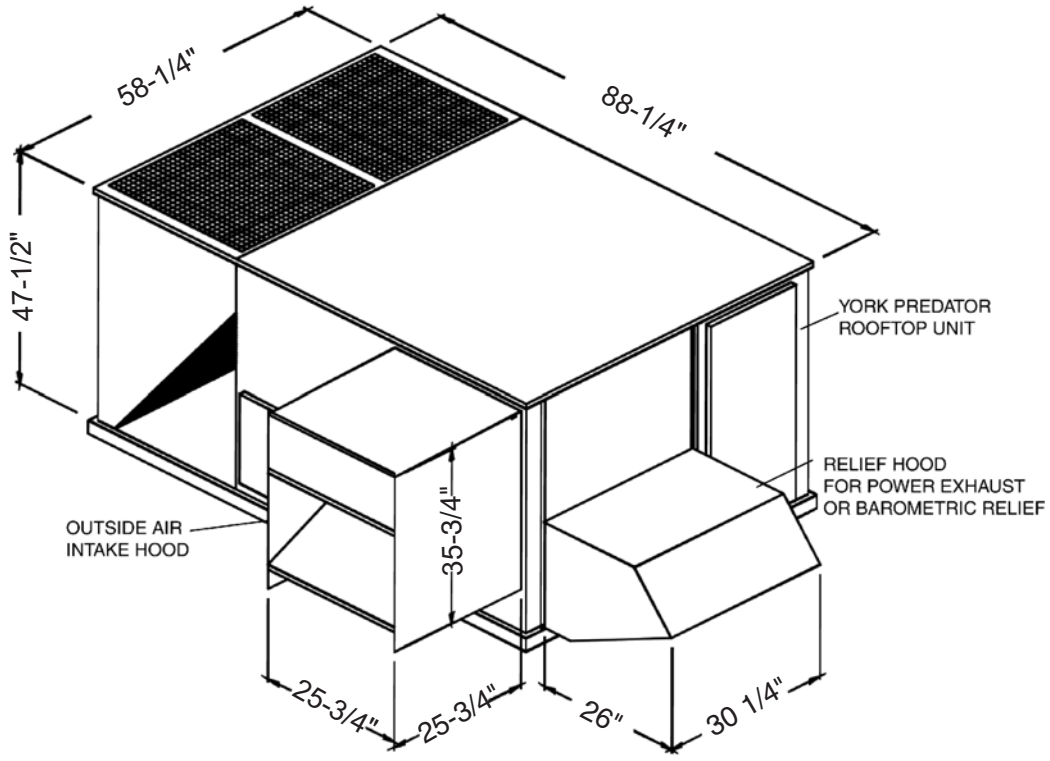


FIGURE 12 - DOWNFLOW ECONOMIZER HOOD DETAIL

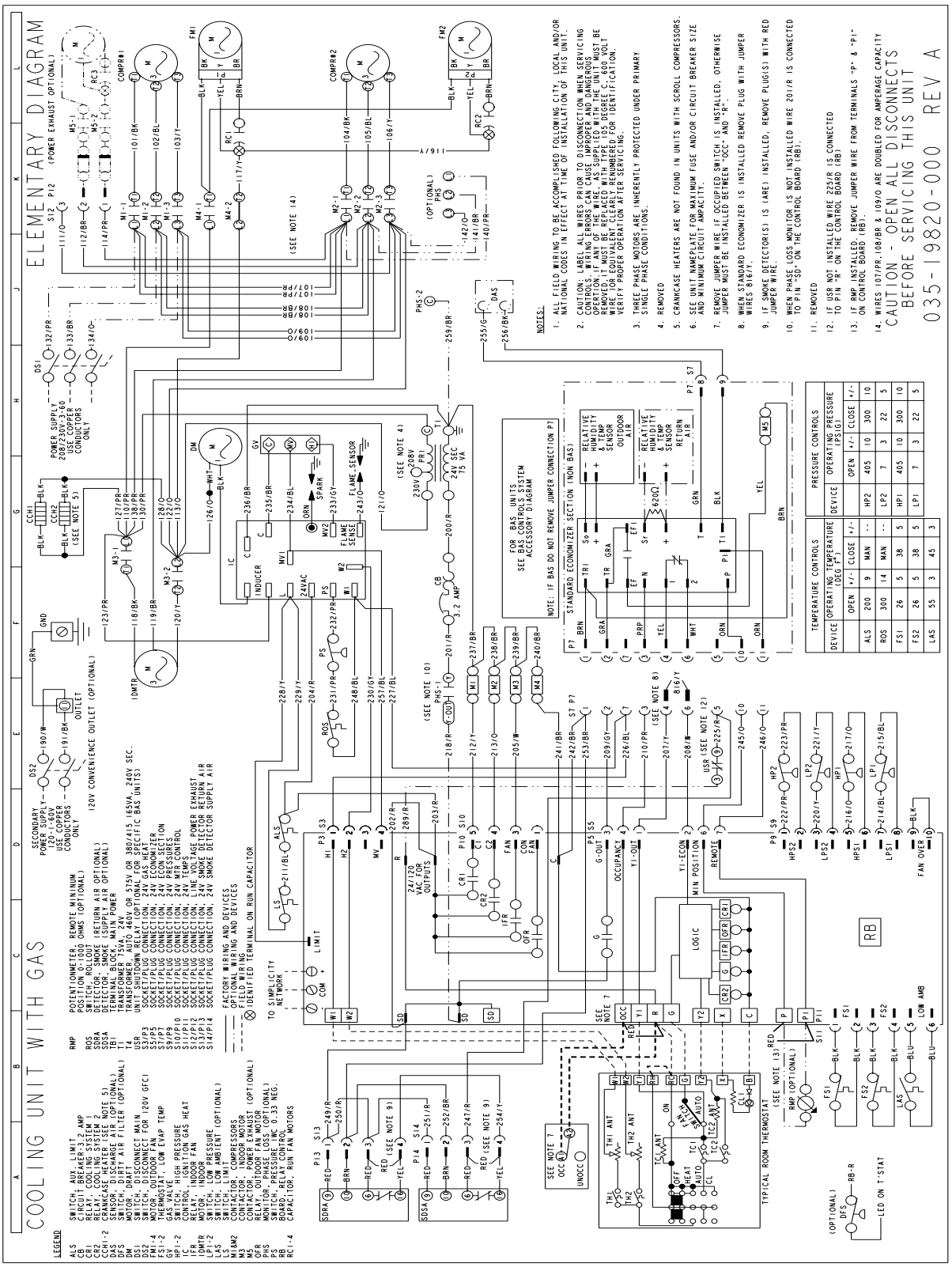


FIGURE 13 - COOLING UNIT WITH GAS HEAT WIRING 230 VOLT DIAGRAM

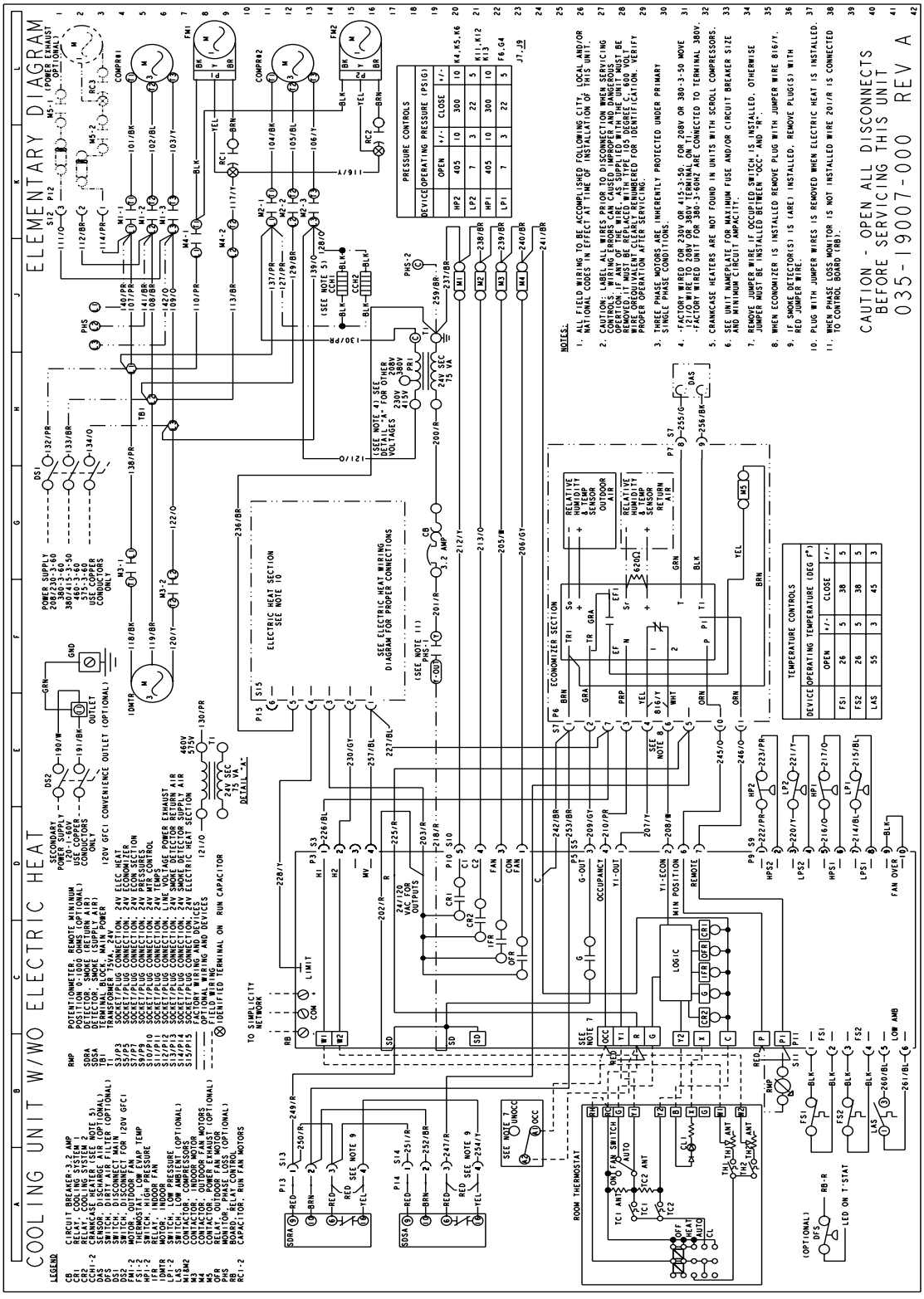


FIGURE 14 - COOLING UNIT WITH/WITHOUT ELECTRIC HEAT WIRING DIAGRAM

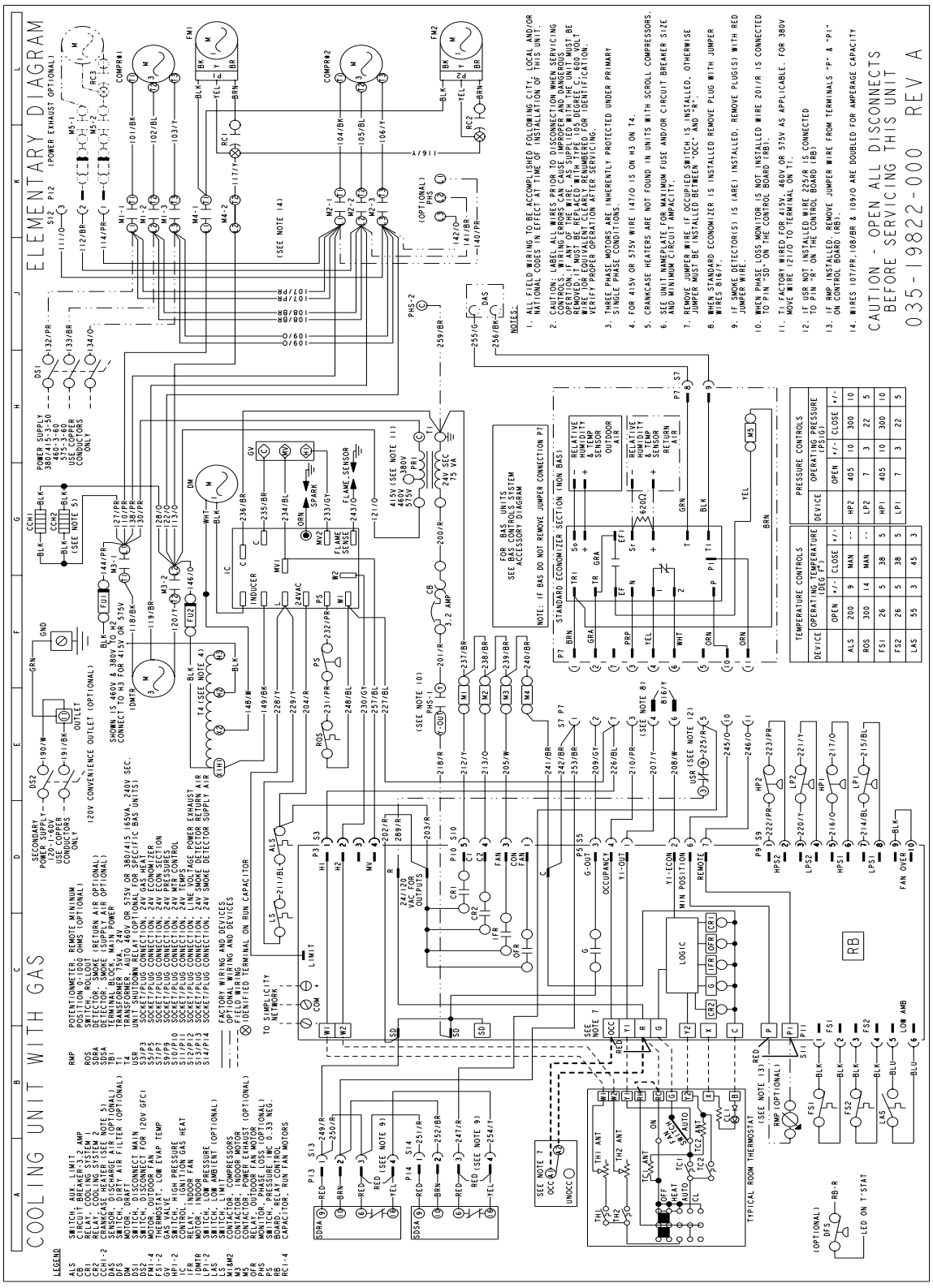


FIGURE 15 - COOLING UNIT WITH GAS HEAT WIRING 460, 575 VOLT 50 HZ DIAGRAM

GUIDE SPECIFICATIONS

PREDATOR®
DH 078, 090, 102, 120 & 150, 11.5 EER

GENERAL

Units shall be manufactured by York International Unitary Products Group in an ISO 9001 certified facility. YORK® Predator® units are convertible single packages with a common footprint cabinet and common roof curb for all 6-1/2 through 12-1/2 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 9.0. 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 hour 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 ¾” 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:

C. Loss-of-charge/Low-pressure switch.

(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 ºF.

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 ºF. 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% 1st stage, 100% 2nd 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 ºF outdoor temperature, exceeding maximum load criteria of ARI Standard 210/240. The compressor, with standard controls, shall be capable of operation down to 0 ºF 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 ºF. 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 9 kW 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 heat.
- **DISCONNECT SWITCH** - A disconnect can be factory installed on a 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.
- **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) – 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 ºF 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.

036-21059-005-A-1104
Supersedes: 036-21059-004-C-0504

Unitary Products Group

5005 York Drive

Norman OK 73069