



TECHNICAL GUIDE

R-410A

ZH/ZJ/ZR SERIES

3 - 12.5 TON

60 Hertz



ZH/ZJ/ZR 3 THROUGH 10 TON



ZH/ZJ/ZR 12.5 TON



Description

ASHRAE 90.1 COMPLIANT

YORK® Sun™ Pro units are convertible single packages with a common footprint cabinet and common roof curb for all 3 through 12.5 ton models. All 6.5 through 12.5 ton 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 Sun™ Pro 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.

Sun™ Pro units in all tonnage sizes are convertible between side airflow and down airflow, with corresponding economizer if economizer option is desired.

Sun™ Pro units are available in the following configurations: cooling only, cooling with electric heat, cooling with gas heat, reheat only, reheat with electric heat and reheat with gas heat. Electric heaters are available as factory-installed options or field-installed accessories.

All units provide constant supply air volume. A variable air volume (VAV) option, which features a variable frequency drive (VFD), is available on 6.5 through 12.5 ton ZH/ZJ models only.

Tested in accordance with:



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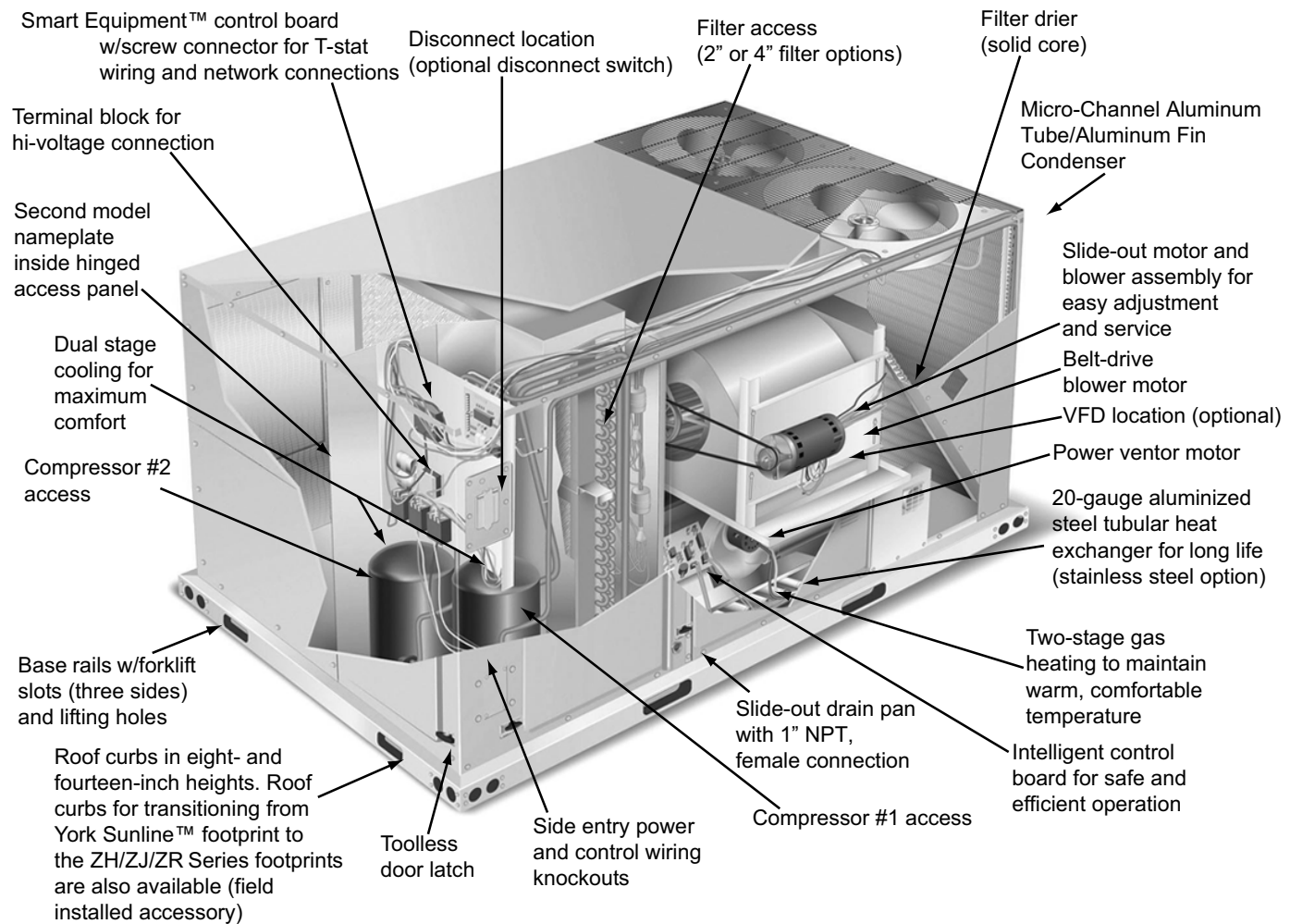
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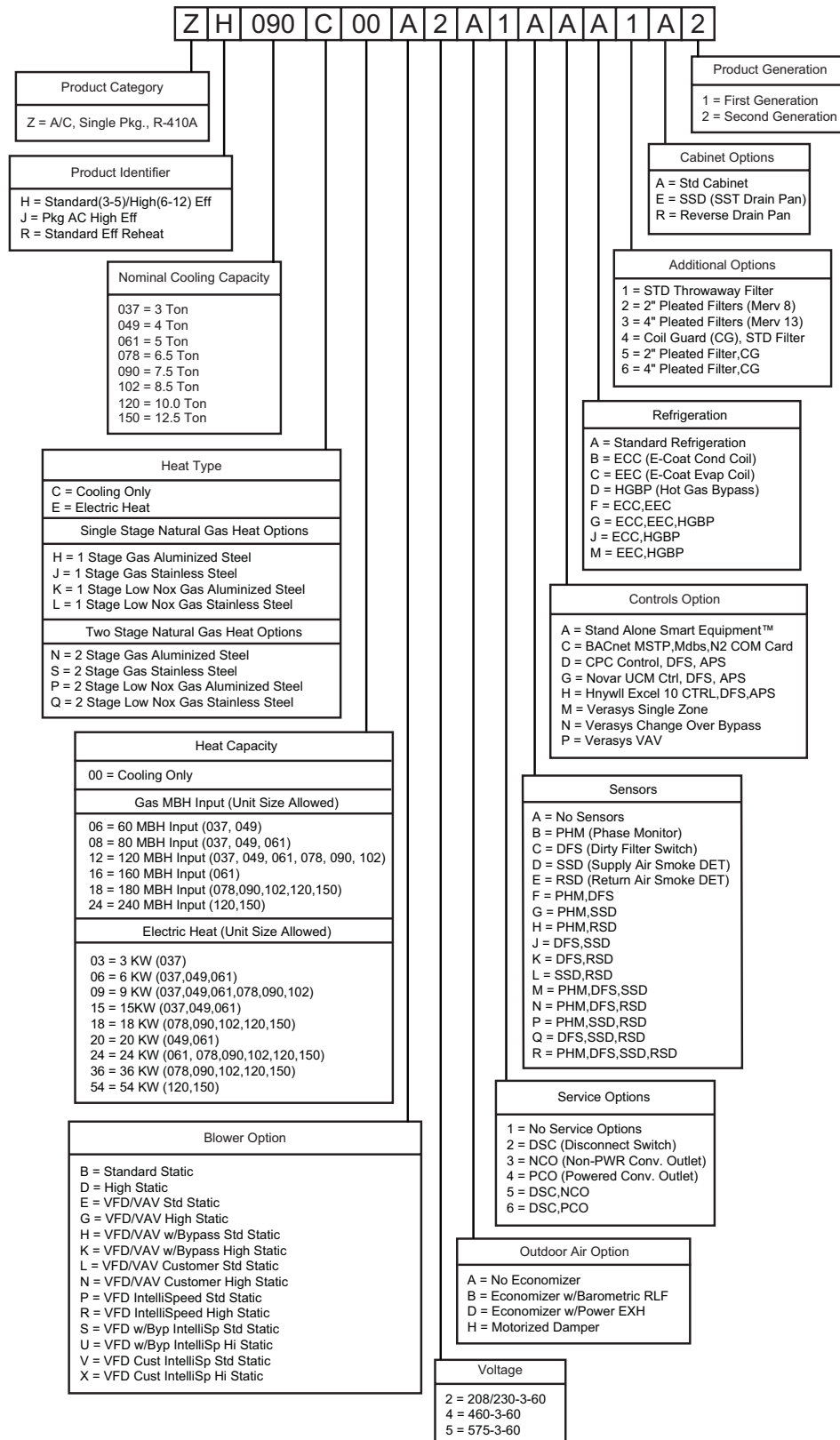
Component Location

Cooling With Gas Heat (6 Through 10 Ton)



Nomenclature

3-12.5 Ton York® Model Number Nomenclature



Features and Benefits

Standard Features

- **Service Friendly** - The Sun™ Pro incorporates a number of key features for ease of 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.

The Smart Equipment™ control board provides alarm messages to help quickly identify any faults.

All units use four filters of the same standard size. This standardization simplifies selections for filter 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 Sun™ Pro units have a second model nameplate located inside the control access door. This is to prevent deterioration of the nameplate through weathering.

- **Coil Technology** – All ZH/ZJ condensers utilize Micro-Channel “all-aluminum” condensers which provide improved heat transfer capabilities and reduced charge volumes. All evaporators utilize a conventional copper tube/aluminum fin design for proven reliability and performance. ZR037 thru 061 models utilize Micro-Channel condenser coils, ZR078 thru 150 models utilize copper tube/aluminum fin or Micro-Channel condenser coils. For specific unit model information see Physical Data Tables.
- **Environmentally Aware** - For improved Indoor Air Quality, a combination of aluminum foil faced and

elastometric rubber insulations are used exclusively throughout the units.

- **Balanced Heating** - The Sun™ Pro two stage gas heating offers "Ultimate Heating Comfort" with a balance between 1st and 2nd stage gas heating to provide a well maintained desired temperature.

Unit Tonnage	1st. Stage	2nd. Stage
3-5 Ton	70 to 75% of Heating Capacity	100% of Heating Capacity
6.5 - 12.5 Ton	60% of Heating Capacity	100% of Heating Capacity

- **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. 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** - Smart Equipment™ control boards have standardized a number of features previously available only as options or by utilizing additional controls.

CAUTION

The Smart Equipment™ control board used in this product will effectively operate the cooling system down to 0°F when this product is applied in a comfort cooling application for people. An economizer is typically included in this type of application. When applying this product for process cooling applications (computer rooms, switchgear, etc.), please call the applications department for Ducted Systems @ 1-877-874-SERV for guidance. Additional accessories may be needed for stable operation at temperatures below 30°F.

- **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 (10 yr.) and stainless steel tubular heat exchangers carry a 15- year warranty.

Factory Installed Options

YORK® offers several equipment options factory installed, for the Sun™ Pro line.

- **Optional Factory Installed Economizers** - Sun™ Pro units offer a variety of optional factory installed economizers with low leak dampers. The outdoor air dry bulb sensor enables economizer operation if the outdoor air temperature is less than the set point of the economizer logic module. See economizer options section to determine the correct economizer for your application.
- **Down flow / End Return Economizers (with barometric relief and fresh air hood)** - All units offer a variety of optional factory installed down flow economizers that are shipped, installed and wired with low leak dampers designed to meet ASHRAE 90.1, AMCA 511 Class 1A damper, and the International Energy Conservation Code (IECC) certification requirements by achieving leakage rates of 3 CFM/sq. ft. at 1" of static pressure. Each economizer goes through a rigorous 60,000 cycle test. Dry bulb, single enthalpy, and dual enthalpy (with field installed kit) can be selected. 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 outdoor air dry bulb temperature or the outdoor air enthalpy input. The optional (field installed) single or dual enthalpy kits provide additional inputs to monitor outdoor air/ or return air humidity and temperature for true enthalpy control. The installer needs only to assemble the outdoor air hood, attach the enthalpy control the hood and mount the hood to the unit (Hood and control are provided).
- **Power Exhaust** - This factory option allows down flow or horizontal end return economizer operation. **The power exhaust must be removed from the unit and mounted in the horizontal end return duct work when applying the product in the horizontal, end return configuration.**
- **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.
- **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.
- **Variable Air Volume (VAV; 6.5 through 12.5 ton, only)** - A factory-installed variable frequency drive (VFD), mounted in the Blower Access compartment, is used to

control the speed of the indoor blower motor in order to maintain a constant static pressure in the supply duct. A duct pressure transducer is provided with the unit. The drive comes completely wired and pre-programmed from the factory.

An optional, factory-installed manual bypass switch available with factory-installed VFD can be found in the Blower Motor Access compartment. The switch can be used to either route power to the VFD for modulating control of the blower motor, to bypass the drive and operate the motor at full speed, or to power the drive (and not the motor) for diagnostic purposes.

VAV is not available with the factory-installed 3rd. party BAS controllers. VAV is only factory installed with the Smart Equipment™ Controller.

A 'VFD-ready' option provides the provisions for a customer-installed drive. The unit comes with a mounting bracket installed in the Blower Access compartment which may accommodate other vendor's drives depending on their size. In order to utilize the unit's mounting bracket, the maximum recommended drive dimensions are limited to approximately 9" H x 5" W x 7.5" D.

If the drive will not fit in the allotted space, then it will have to be mounted elsewhere; either within the building on a perpendicular wall which is not subjected to excessive temperature, vibration, humidity, dust, corrosive gas, explosive gas, etc., or within an appropriate enclosure rated for outside installation to safeguard against moisture, dust and excessive heat. A terminal block located in the control box is provided for field connection of the VFD controls.

- **IntelliSpeed™ Supply Fan Control Option (ASHRAE 90.1 compliant)** - Units configured with the IntelliSpeed™ Supply Fan Option will contain a VFD for multi-speed supply fan operation. This option allows the supply fan RPM to vary based on the number of compressors or heating stages energized. The economizer's minimum position will also be configurable to vary based on the supply fan VFD frequency output.
- **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.
- **Low NOx Option** - For units with gas furnaces in locations where codes require that the Oxides of Nitrogen emissions from the furnace be below 40 Nano grams per joule.
- **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 3kW to 54kW and are available in all the voltage options of the base units. 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 stepdown transformer in the unit. Factory installed option only.
- **Smoke Detectors** - The smoke detectors stop operation of the unit and provide a fault message to the control board. Smoke detectors are available for both the supply and/or return air configurations.
- **Filters** - 2" Pleated MERV 8 or 4" Pleated MERV 13 are available to meet LEED requirements. A 2" Throwaway is shipped as standard.

WARNING

Factory-installed smoke detectors may be subjected to extreme temperatures during "off" times due to outside air infiltration. These smoke detectors have an operational limit of -4°F to 158°F. Smoke detectors installed in areas that could be outside this range will have to be relocated to prevent false alarms.

- **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.
- **E-Coat Condenser Coils** - The condenser coils are coated with an epoxy polymer coating to protect against corrosion.
- **E-Coat Evaporator Coils** - The evaporator coils are coated with an epoxy polymer coating to protect against corrosion.
- **Hot Gas Bypass** - Allows operation during low load conditions while avoiding coil frosting and damage to compressor. When suction pressure falls below valve setpoint, the valve modulates hot gas to the inlet of the evaporator. HGBP is standard on all units with VAV and optional with constant-volume units.

Control Options

- **Smart Equipment™ with Communication Option Control** - The York® Smart Equipment™ with Communication Option Control is factory installed. It includes all the features of the Smart Equipment™ control

with an additional gateway to BACnet MS/TP (programmable to Modbus or N2 protocols).

- **FDD (Fault Detection and Diagnostics) - Refrigerant side (Modification Center Option Only)** A factory installed control system option on the commercial equipment that constantly monitors refrigerant circuit pressures, refrigerant circuit temperatures, as well as the environmental temperatures and humidity via multiple sensor inputs.
 - Provides a building owner, technician or contractor with the operational characteristics of the RTUs entire refrigerant circuit to ensure the unit is functioning at its specified performance level.
 - Provides alarms if the unit is not functioning optimally.
 - Remotely accessible via the Mobile Access Portal (MAP) gateway as well as scrolled on the UCB LCD screen.
- **Novar® BAS Control** - The Novar® 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, with optional 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, with optional dirty filter indicator switch, and air proving switch.
- **Verasys** - Verasys provides a simple user experience with configurable self-recognizing controllers without the need for any additional tools. Verasys creates enhanced integration of HVACR equipment, zoning, and controls. Contractors are able to offer a complete bundled solution of equipment and controls to serve the light commercial market.

Field Installed Accessories

YORK® offers several equipment accessories for field installation, for the Sun™ Pro line.

- **Down flow and End Return Economizers (with fresh air hood and barometric relief)** - All units offer a variety of optional factory installed down flow economizers that are shipped, installed and wired with low leak dampers designed to meet ASHRAE 90.1, AMCA 511 Class 1A damper, and the International Energy Conservation Code (IECC) certification requirements by achieving leakage rates of 3 CFM/sq. ft. at 1" of static pressure. Each economizer goes through a rigorous 60,000 cycle test. Dry bulb, single enthalpy, and dual enthalpy (with field installed kit) can be selected. 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 outdoor air dry bulb temperature or the outdoor air enthalpy input. The dual enthalpy kit provides a second input used to

monitor the return air (field installed). The installer needs only to assemble the outdoor air hood, attach the enthalpy control the hood and mount the hood to the unit (Hood and control are provided).

- **Single or Dual Enthalpy Control, Accessories** - These kits contain the required components to convert a dry bulb economizer to a single enthalpy and/or dual enthalpy economizer.
- **Barometric Relief Damper** - Zero to 100% capacity barometric relief dampers for use with horizontal flow, or field installed economizers.
- **Power Exhaust** - This accessory installs in the unit with a down flow or horizontal end return economizer. Power exhaust plugs into the connector in the unit bulkhead.
User must purchase the 1EH0408 barometric relief and hood kit when applying the product in a horizontal flow application. The power exhaust must be mounted in the horizontal end return ductwork.
- **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.
- **CO₂ Sensor** - Senses CO₂ 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.

- **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.
- **Low NOx Kit** - For units with gas furnaces in locations where codes require that the Oxides of Nitrogen emissions from the furnace be below 40 Nano grams per joule.
- **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 3kW to 54kW and are available in all the voltage options of the base units. The 54kW/208-240 volt, field-installed heater kit is not available with VAV units due to a lack of space to accommodate the heater's fuse block accessory.
All heaters are dual staged. Cooling units include an adapter panel for easy installation of the electric heaters. Necessary hardware and connectors are included with the heaters. All heaters are intended for single point power supply.
- **Metal Frame Filter Kit** - Metal frame with polyester filter medium.
- **Permanent Filters** - Permanent filters are available.
- **Roof Curbs** - The roof curbs have insulated decks and are shipped disassembled. The roof curbs are available in 8" and 14" heights. For applications with security concerns, burglar bars are available for the duct openings of the roof curbs.
- **Roof Curb Transition** - Single Piece Adapter (10" High) - Roof curbs for transitioning from Sunline™ units to Sun™ Pro 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 6.5 thru 12.5 ton ZH,ZJ units and all 3 thru 12.5 ton ZR units (with or without an economizer) operate with two-stage heat/two-stage cool or two-stage cooling only thermostats, depending upon unit configuration.

Accessories

Field Installed Accessories - Non-Electrical

MODEL	VOLTAGE	DESCRIPTION	WHERE USED
1BD0408	All	Burglar Bars, Downflow	All Cabinets
1CG0419	All	Coil Guard	(Electric / Electric Models), 50" Tall Standard Cabinets
1CG0420	All	Coil Guard	(Gas / Electric Models), 50" Tall Standard Cabinets
1CG0427	All	Coil Guard	(Electric / Electric Models), 42" Tall Cabinets
1CG0428	All	Coil Guard	(Gas / Electric Models), 42" Tall Cabinets
1HG0411	All	Hail Guard Kit	All Tall (50") Standard Cabinets, (Excludes 12.5T "V" cabinets)
1HG0415	All	Hail Guard Kit	All Short (42") Standard Cabinets
1HG0425	All	Hail Guard Kit	Diamond Pattern "W" Style Cabinet: ZH/ZR/ZJ/XP 150
1HG0431	All	Hail Guard Kit	Provent Style 42" Std Short Cabinets
1HG0432	All	Hail Guard Kit	Provent Style 50" Std Tall Cabinets (Excludes 12.5T "V" cabinets)
1FE0412	All	Flue Exhaust Extension Kit	All Cabinets
1FF0414	All	2" only Metal Filter Frame Kit	All Tall 50" Cabinets
1FF0415	All	2" only Metal Filter Frame Kit	All Tall 42" Cabinets
1FL0402	All	Permanent 2" only Filter Kit Includes (4) Four Filters	All Tall 50" Cabinets
1FL0423	All	Permanent 2" only Filter Kit (Includes (4) four Filters)	All Tall 42" Cabinets
1GP0405	All	Gas Piping Kit	All Cabinets
1HA0442	All	High Altitude Kit for Natural Gas	All 6 - 12T Cabinets
1HA0450	All	High Altitude Kit for Natural Gas	3 - 5T (80, 120 & 160 MBH Input)
1HA0451	All	High Altitude Kit for Natural Gas	3 - 4T (60 MBH Input)
1HA0443	All	High Altitude Kit for Propane	All 6 - 12T Cabinets
1HA0452	All	High Altitude Kit for Propane	3 - 5T (80, 120 & 160 MBH Input)
1HA0453	All	High Altitude Kit for Propane	3 - 4T (60 MBH Input)
1NP0442	All	Propane Conversion Kit	All 6 - 12T Cabinets
1NP0454	All	Propane Conversion Kit	3 - 5T (80, 120 & 160 MBH Input)
1NP0455	All	Propane Conversion Kit	3 - 4T (60 MBH Input)
1RC0470	All	Roof Curb, 8" Height	All Cabinets
1RC0471	All	Roof Curb, 14" Height	All Cabinets
1RC0472	All	Roof Curb, Transition (7.5 T thru 12.5T Sunline to Sun™ Pro 3-12T)	All Cabinets
1WC0412	All	Wooden Crate for extra protection during shipping and handling	Standard Cabinets Only (not applicable to units 119" in length)
1LN0407	All	Low NOx Kit	3 - 5T (80, 120 & 160 MBH Input)
1LN0408	All	Low NOx Kit	3 - 5T (60 MBH Input)

standards. Indoor blower sections shall be insulated with up to 1" thick insulation coated on the airside. Either aluminum foil faced or elastometric rubber 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 as standard 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 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 coils shall be of the direct expansion, draw-thru design.

- c. Condenser coils shall have aluminum plate fins mechanically bonded to seamless internally enhanced copper tubes with all joints brazed or Micro-Channel aluminum tube, aluminum fins.

- d. Condenser coils shall be of the 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 6.5 through 12.5 ton unit shall have two independent refrigerant circuits, equally split in 50% capacity increments.

Unit Controls:

- a. Unit shall be complete with self-contained low-voltage control circuit protected by a resettable circuit breaker on the 24-volt transformer side.
- b. Unit shall incorporate a lockout circuit which provides reset capability at the space thermostat or base unit, should any of the following standard safety devices trip and shut off compressor.
 1. Loss-of-charge/Low-pressure switch.
 2. High-pressure switch.
 3. Freeze condition sensor on evaporator coil. If any of these safety devices trip, the LCD screen will display the alarm message.
- c. Unit shall incorporate "AUTO RESET" compressor over temperature, over current protection.
- d. Unit shall operate with conventional thermostat designs and have a low voltage terminal strip for easy hook-up.
- e. Unit control board shall have on-board diagnostics and fault message display.
- f. Standard controls shall include anti-short cycle and low voltage protection, and permit cooling operation down to a selectable value as low as 0 °F.
- g. Control board shall monitor each refrigerant safety switch independently.

GAS HEATING SECTION (IF EQUIPPED)

Heat exchanger and exhaust system shall be constructed of aluminized steel, and be designed with induced draft combustion with post purge logic, energy saving direct spark ignition, and redundant main gas valve. The heat exchanger shall be of the tubular type, constructed of T1-40 aluminized steel for corrosion resistance and allowing minimum mixed air entering temperature of 40 °F. Burners shall be of the in-shot type, constructed of aluminum-coated steel. All gas piping shall enter the unit cabinet at a single location, through either the side or

bottom, without any field modifications. An integrated control board shall provide timed control of evaporator fan functioning and burner ignition. Heating section shall be provided with the following minimum protection:

- a. Primary and auxiliary high-temperature limit switches.
- b. Induced draft pressure sensor.
- c. Flame roll out switch (manual reset).
- d. Flame proving controls.
- e. All two stage gas units shall have two independent stages of capacity as shown on Page 5.

ELECTRIC HEATING SECTION (IF EQUIPPED)

An electric heating section, with nickel chromium elements, shall be provided in a range of 3 thru 54KW. The heating section shall have a primary limit control(s) (automatic reset) to prevent the heating element system from operating at an excessive temperature. The Heating Section assembly shall slide out of the unit for easy maintenance and service. Units with Electric Heating Sections shall be wired for a single point power supply with branch circuit fusing (where required).

UNIT OPERATING CHARACTERISTICS

Unit shall be capable of starting and running at 125 °F outdoor temperature, exceeding maximum load criteria of AHRI Standard 340/360. The compressor, with standard controls, shall be capable of operation down to 0 °F outdoor temperature. Unit shall be provided with fan time delay to prevent cold air delivery before heat exchanger warms up. (Gas heat only)

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

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

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

- **DRY BULB 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 be designed to meet ASHRAE 90.1, AMCA 511 Class 1A damper, and the International Energy Conservation Code (IECC) certification requirements by achieving leakage rates of 3 CFM/sq. ft. at 1" of static pressure. 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 and power exhaust.

- **MOTORIZED OUTDOOR AIR DAMPERS** - Outdoor and return air dampers that are interlocked and positioned by a 2- position, spring-return damper actuator. 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.
- **VARIABLE AIR VOLUME (VAV)** - The VAV option using a variable frequency drive (VFD) shall be available on 6.5 through 12.5 ton models for applications requiring a constant supply-duct static pressure. Units equipped for VAV shall be controlled by a duct pressure transducer with a 0 - 5" WC pressure range. The pressure transducer shall provide a 0 - 5 VDC output signal to a VAV control board which, in turn shall provide a 2 - 10 VDC speed reference signal to the VFD. The control board shall operate using factory-installed Supply Air, Return Air and Outside Air Temperature Sensors with a nominal resistance of 10,000 Ohms. Units equipped with VFD's shall have factory-installed manual bypass as an option.
- **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 3kW to 54kW 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 HARDWARE** - 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.
- **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.

Physical Data

ZH037-061 Single Stage Gas Physical Data

Component	Models								
	ZH037			ZH049			ZH061		
Nominal Tonnage	3.0			4.0			5.0		
AHRI COOLING PERFORMANCE									
Gross Capacity @ AHRI A point (MBh)	36700			48500			60000		
AHRI net capacity (MBh)	35600			47000			58000		
EER	12.0			12.0			12.0		
SEER	14			14			14		
CFM	1200			1600			2000		
System power (KW)	2.97			3.92			4.83		
Refrigerant type	R-410A			R-410A			R-410A		
Refrigerant charge (lb-oz)									
System 1	6-2			6-10			8-2		
System 2	-			-			-		
AHRI HEATING PERFORMANCE									
Heating model	H06	H08	H12	H06	H08	H12	H08	H12	H16
Heat input (K Btu)	60	80	120	60	80	120	80	120	160
Heat output (K Btu)	49	65	97	49	65	97	65	97	129
AFUE %	-		-	-		-	-		-
Steady state efficiency (%)	81.5	81	81	81.5	81	81	81	81	80.5
No. burners	4	4	6	4	4	6	4	6	8
No. stages	1	1	1	1	1	1	1	1	1
Temperature Rise Range (°F)	20-50°F	25-65°F	50-80°F	20-50°F	25-65°F	40-70°F	25-65°F	35-65°F	45-75°F
Gas Limit Setting (°F)	235°F	200°F	255°F	235°F	200°F	255°F	200°F	245°F	240°F
Gas piping connection (in.)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
DIMENSIONS (inches)									
Length	89			89			89		
Width	59			59			59		
Height	42			42			42		
OPERATING WT. (lbs.)	701			748			855		
COMPRESSORS ¹									
Type	Scroll			Scroll			Scroll		
Quantity	1			1			1		
Unit Capacity Steps (%)	100			100			100		
CONDENSER COIL DATA									
Face area (Sq. Ft.)	11.9			18.5			21.1		
Rows	1			1			1		
Fins per inch	23			23			23		
Tube diameter (in./MM)	1/25			.71/18			.71/18		
Circuitry Type	2-pass Microchannel			2-pass Microchannel			2-pass Microchannel		
EVAPORATOR COIL DATA									
Face area (Sq. Ft.)	8			8			10.6		
Rows	3			3			3		
Fins per inch	15			15			15		
Tube diameter	0.375			0.375			0.375		
Refrigerant control	TXV			TXV			TXV		

ZH037-061 Two Stage Gas Physical Data (Continued)

Component	Models								
	ZH037		ZH049			ZH061			
Nominal Tonnage	3.0		4.0			5.0			
CONDENSER FAN DATA									
Quantity of fans	1		1			2			
Fan diameter (Inch)	24		24			24			
Type	Prop		Prop			Prop			
Drive type	Direct		Direct			Direct			
Quantity of motors	1		1			2			
Motor HP each	1/3		1/3			1/3			
No. speeds	1		1			1			
RPM	850		850			850			
Total CFM	3300		3700			6700			
BELT DRIVE EVAP FAN DATA									
Quantity	1		1			1			
Fan Size (Inch)	12 x 9		12 x 9			12 x 9			
Type	Centrifugal		Centrifugal			Centrifugal			
Motor Sheave	1VM34		1VL44	1VM34		1VL44	1VL40		1VP56
Blower Sheave	AK69		AK69	AK56		AK56	AK61		AK74
Belt	A47		A47	A47		A47	A47		A51
Motor HP each	1-1/2		1-1/2	1-1/2		1-1/2	1-1/2		2
RPM	1725		1725	1725		1725	1725		1725
Frame size	56		56	56		56	56		56
FILTERS									
Quantity - Size	4 - (24 x 16 x 2) ^{4,5}		4 - (24 x 16 x 2) ^{4,5}			4 - (24 x 16 x 2) ^{4,5}			
	4 - (24 x 16 x 4) ⁶		4 - (24 x 16 x 4) ⁶			4 - (24 x 16 x 4) ⁶			

1. 1st Stage Capacity is 75% of Full Capacity.
2. 1st Stage Capacity is 70% of Full Capacity.
3. ZH037, ZH049, ZH061 have crankcase heaters standard.
4. 2 In. Throwaway, Standard, MERV (Minimum Efficiency Reporting Value)
5. 2 In. Pleated, Optional, MERV 8.
6. 4 In. Pleated, Optional, MERV 13.

ZH078-150 Physical Data (Continued)

Component	Models									
	ZH078		ZH090		ZH102		ZH120		ZH150	
Nominal Tonnage	6.5		7.5		8.5		10		12.5	
CONDENSER FAN DATA										
Quantity of fans	2		2		2		2		4	
Fan diameter (Inch)	24		24		24		24		24	
Type	Prop		Prop		Prop		Prop		Prop	
Drive type	Direct		Direct		Direct		Direct		Direct	
Quantity of motors	2		2		2		2		4	
Motor HP each	1/3		3/4		3/4		3/4		1/3	
No. speeds	1		1		1		1		1	
RPM	850		1110		1110		1110		850	
Total CFM	6700		8600		9400		9400		14000	
BELT DRIVE EVAP FAN DATA										
Quantity	1		1		1		1		1	
Fan Size (Inch)	12 x 12		12 x 12		15 x 15		15 x 15		15 x 15	
Type	Centrifugal		Centrifugal		Centrifugal		Centrifugal		Centrifugal	
Motor Sheave	1VM50	1VM50	1VM50	1VM50	1VM50	1VM50	1VM50	1VM50	1VM50	1VP56
Blower Sheave	AK74	AK64	AK74	AK61	AK94	AK74	AK84	AK74	AK74	BK77
Belt	A49	A49	A49	A49	A56	A54	A56	A54	A54	BX55
Motor HP each	1-1/2	2	1-1/2	3	2	3	2	3	3	5
RPM	1725	1725	1725	1725	1725	1725	1725	1725	1725	1725
Frame size	56	56	56	56	56	56	56	56	56	184T
FILTERS										
Quantity - Size	4 - (24 x 16 x 2) ^{6,7}		4 - (24 x 16 x 2) ^{6,7}		4 - (24 x 20 x 2) ^{6,7}		4 - (24 x 20 x 2) ^{6,7}		4 - (24 x 20 x 2) ^{6,7}	
	4 - (24 x 16 x 4) ⁸		4 - (24 x 16 x 4) ⁸		4 - (24 x 20 x 4) ⁸		4 - (24 x 20 x 4) ⁸		4 - (24 x 20 x 4) ⁸	

1. Cooling Only Unit or Cooling Unit with Electric Heat
2. Cooling Unit with Gas Heat
3. Does not meet DOE 2018 minimum efficiency requirements.
4. 1st Stage 60% of Full Capacity.
5. All ZH units have crankcase heaters standard.
6. 2 In. Throwaway, Standard, MERV (Minimum Efficiency Reporting Value) 3.
7. 2 In. Pleated, Optional, MERV 8.
8. 4 In. Pleated, Optional, MERV 13.

ZJ037-061 Single Stage Gas Heat Physical Data

Component	Models								
	ZJ037			ZJ049			ZJ061		
Nominal Tonnage	3.0			4.0			5.0		
AHRI COOLING PERFORMANCE									
Gross Capacity @ AHRI A point (MBh)	36000			48500			59000		
AHRI net capacity (MBh)	35000			47000			57000		
EER	12.2			12.2			12.2		
SEER	14.5			15			14.5		
CFM	1200			1600			2000		
System power (KW)	2.87			3.85			4.67		
Refrigerant type	R-410A			R-410A			R-410A		
Refrigerant charge (lb-oz)									
System 1	6-12			8-6			7-8		
System 2	-			-			-		
AHRI HEATING PERFORMANCE									
Heating model	H06	H08	H12	H06	H08	H12	H08	H12	H16
Heat input (K Btu)	60	80	120	60	80	120	80	120	160
Heat output (K Btu)	49	65	97	49	65	97	65	97	129
AFUE %	-		-	-		-	-		-
Steady state efficiency (%)	81.5	81	81	81.5	81	81	81	81	80.5
No. burners	4	4	6	4	4	6	4	6	8
No. stages	1	1	1	1	1	1	1	1	1
Temperature Rise Range (°F)	20-50°F	25-65°F	50-80°F	20-50°F	25-65°F	40-70°F	25-65°F	35-65°F	45-75°F
Gas Limit Setting (°F)	235°F	200°F	255°F	235°F	200°F	255°F	200°F	245°F	240°F
Gas piping connection (in.)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
DIMENSIONS (inches)									
Length	89			89			89		
Width	59			59			59		
Height	42			42			42		
OPERATING WT. (lbs.)	719			748			765		
COMPRESSORS ¹									
Type	Scroll			Scroll			Scroll		
Quantity	1			1			1		
Unit Capacity Steps (%)	100			100			100		
CONDENSER COIL DATA									
Face area (Sq. Ft.)	18.5			23.8			23.8		
Rows	1			1			1		
Fins per inch	23			23			23		
Tube diameter (in./MM)	.71/18			.71/18			.71/18		
Circuitry Type	2-pass Microchannel			2-pass Microchannel			2-pass Microchannel		
EVAPORATOR COIL DATA									
Face area (Sq. Ft.)	7.9			10.5			10.5		
Rows	3			3			3		
Fins per inch	15			15			15		
Tube diameter	0.375			0.375			0.375		
Refrigerant control	TXV			TXV			TXV		

ZJ037-061 Single Stage Gas Heat Physical Data (Continued)

Component	Models								
	ZJ037		ZJ049			ZJ061			
Nominal Tonnage	3.0		4.0			5.0			
CONDENSER FAN DATA									
Quantity of fans	1		1			2			
Fan diameter (Inch)	24		24			24			
Type	Prop		Prop			Prop			
Drive type	Direct		Direct			Direct			
Quantity of motors	1		1			2			
Motor HP each	1/3		1/3			1/3			
No. speeds	1		1			1			
RPM	850		850			850			
Total CFM	3300		3700			6300			
BELT DRIVE EVAP FAN DATA									
Quantity	1		1			1			
Fan Size (Inch)	12 x 9		12 x 9			12 x 9			
Type	Centrifugal		Centrifugal			Centrifugal			
Motor Sheave	1VM34		1VL44	1VM34		1VL44	1VL40		1VP56
Blower Sheave	AK69		AK69	AK56		AK56	AK61		AK74
Belt	A47		A47	A47		A47	A47		A51
Motor HP each	1-1/2		1-1/2	1-1/2		1-1/2	1-1/2		2
RPM	1725		1725	1725		1725	1725		1725
Frame size	56		56	56		56	56		56
FILTERS									
Quantity - Size	4 - (24 x 16 x 2) ^{2,3}		4 - (24 x 16 x 2) ^{2,3}			4 - (24 x 16 x 2) ^{2,3}			
	4 - (24 x 16 x 4) ⁴		4 - (24 x 16 x 4) ⁴			4 - (24 x 16 x 4) ⁴			

1. ZJ037, ZJ049 and ZJ061 have crankcase heaters standard.
2. 2 In. Throwaway, Standard, MERV (Minimum Efficiency Reporting Value)
3. 2 In. Pleated, Optional, MERV 8.
4. 4 In. Pleated, Optional, MERV 13.

ZJ037-061 Two Stage Gas Heat Physical Data

Component	Models								
	ZJ037			ZJ049			ZJ061		
Nominal Tonnage	3.0			4.0			5.0		
AHRI COOLING PERFORMANCE									
Gross Capacity @ AHRI A point (MBh)	36000			48500			59000		
AHRI net capacity (MBh)	35000			47000			57000		
EER	12.2			12.2			12.2		
SEER	14.5			15			14.5		
CFM	1200			1600			2000		
System power (KW)	2.87			3.85			4.67		
Refrigerant type	R-410A			R-410A			R-410A		
Refrigerant charge (lb-oz)									
System 1	6-12			8-6			7-8		
System 2	-			-			-		
AHRI HEATING PERFORMANCE									
Heating model	N06	N08	N12	N06	N08	N12	N08	N12	N16
Heat input (K Btu)	60	80	120	60	80	120	80	120	160
Heat output (K Btu)	49	65	97	49	65	97	65	97	129
AFUE %	-		-	-		-	-		-
Steady state efficiency (%)	81.5	81	81	81.5	81	81	81	81	80.5
No. burners	4	4	6	4	4	6	4	6	8
No. stages	2 ¹	2 ²	2 ²	2 ¹	2 ²	2 ²	2 ²	2 ²	2 ²
Temperature Rise Range (°F)	20-50°F	25-65°F	50-80°F	20-50°F	25-65°F	40-70°F	25-65°F	35-65°F	45-75°F
Gas Limit Setting (°F)	235°F	200°F	255°F	235°F	200°F	255°F	200°F	245°F	240°F
Gas piping connection (in.)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
DIMENSIONS (inches)									
Length	89			89			89		
Width	59			59			59		
Height	42			42			42		
OPERATING WT. (lbs.)	719			748			765		
COMPRESSORS ³									
Type	Scroll			Scroll			Scroll		
Quantity	1			1			1		
Unit Capacity Steps (%)	100			100			100		
CONDENSER COIL DATA									
Face area (Sq. Ft.)	18.5			23.8			23.8		
Rows	1			1			1		
Fins per inch	23			23			23		
Tube diameter (in./MM)	.71/18			.71/18			.71/18		
Circuitry Type	2-pass Microchannel			2-pass Microchannel			2-pass Microchannel		
EVAPORATOR COIL DATA									
Face area (Sq. Ft.)	7.9			23.8			10.5		
Rows	3			3			3		
Fins per inch	15			15			15		
Tube diameter	0.375			0.375			0.375		
Refrigerant control	TXV			TXV			TXV		

ZJ037-061 Two Stage Gas Heat Physical Data (Continued)

Component	Models								
	ZJ037		ZJ049			ZJ061			
Nominal Tonnage	3.0		4.0			5.0			
CONDENSER FAN DATA									
Quantity of fans	1		1			2			
Fan diameter (Inch)	24		24			24			
Type	Prop		Prop			Prop			
Drive type	Direct		Direct			Direct			
Quantity of motors	1		1			2			
Motor HP each	1/3		1/3			1/3			
No. speeds	1		1			1			
RPM	850		850			850			
Total CFM	3300		3700			6300			
BELT DRIVE EVAP FAN DATA									
Quantity	1		1			1			
Fan Size (Inch)	12 x 9		12 x 9			12 x 9			
Type	Centrifugal		Centrifugal			Centrifugal			
Motor Sheave	1VM34		1VL44	1VM34		1VL44	1VL40		1VP56
Blower Sheave	AK69		AK69	AK56		AK56	AK61		AK74
Belt	A47		A47	A47		A47	A47		A51
Motor HP each	1-1/2		1-1/2	1-1/2		1-1/2	1-1/2		2
RPM	1725		1725	1725		1725	1725		1725
Frame size	56		56	56		56	56		56
FILTERS									
Quantity - Size	4 - (24 x 16 x 2) ^{4,5}		4 - (24 x 16 x 2) ^{4,5}			4 - (24 x 16 x 2) ^{4,5}			
	4 - (24 x 16 x 4) ⁶		4 - (24 x 16 x 4) ⁶			4 - (24 x 16 x 4) ⁶			

1. 1st Stage Capacity is 75% of Full Capacity.
2. 1st Stage Capacity is 70% of Full Capacity.
3. ZJ037, ZJ049 and ZJ061 have crankcase heaters standard.
4. 2 In. Throwaway, Standard, MERV (Minimum Efficiency Reporting Value)
5. 2 In. Pleated, Optional, MERV 8.
6. 4 In. Pleated, Optional, MERV 13.

ZJ078-150 Physical Data

Component	Models									
	ZJ078		ZJ090		ZJ102		ZJ120		ZJ150	
Nominal Tonnage	6.5		7.5		8.5		10		12.5	
AHRI COOLING PERFORMANCE										
Gross Capacity @ AHRI A point (Btu)	76000		88000		99700		124000		154000	
AHRI net capacity (Btu)	74000		86000		96000		120000		150000	
EER	11.8		12.2 ¹ /12.0 ²		12.2 ¹ /12.0 ²		12.0		12.1 ¹ /12 ²	
IEER with Constant Volume	13.20		13.2 ¹ /13.0 ²		13.0		12.9 ¹ /12.8 ²		13.7 ¹ /13.5 ²	
IEER with Intellispeed	14.8 ¹ /14.6 ²		14.8 ¹ /14.6 ²		14.0 ¹ /13.8 ²		14.8 ¹ /14.6 ²		15.2 ¹ /15.0 ²	
IEER with VAV	14.1 ¹ /13.9 ²		13.2 ¹ /13.0 ²		13.45 ¹ /13.25 ²		13.85 ¹ /13.65 ²		13.8 ¹ /13.6 ²	
CFM	2500		2500		3300		3400		3500	
System power (KW)	6.40		7.17		8.00		9.80		12.50	
Refrigerant type	R-410A		R-410A		R-410A		R-410A		R-410A	
Refrigerant charge (lb-oz)										
System 1	5-12		7-12		8-2		7-14		10-8	
System 2	5-12		7-5		7-14		7-14		9-12	
AHRI HEATING PERFORMANCE										
Heating model	N12	N18	N12	N18	N12	N18	N18	N24	N18	N24
Heat input (K Btu)	120	180	120	180	120	180	180	240	180	240
Heat output (K Btu)	96	144	96	144	96	144	144	192	144	192
AFUE %	-	-	-	-	-	-	-	-	-	-
Steady state efficiency (%)	80	80	80	80	80	80	80	80	80	80
No. burners	4	6	4	6	4	6	6	8	6	8
No. stages	2 ³	2 ³	2 ³	2 ³	2 ³	2 ³	2 ³	2 ³	2 ³	2 ³
Temperature Rise Range (°F)	20-50	35-65	15-45	30-60	10-40	25-55	20-50	35-65	10-40	25-55
Gas Limit Setting (°F)	165	165	165	165	215	195	195	160	195	160
Gas piping connection (in.)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
DIMENSIONS (inches)										
Length	89		89		89		89		119-1/2	
Width	59		59		59		59		59	
Height	50-3/4		50-3/4		50-3/4		50-3/4		50-3/4	
OPERATING WT. (lbs.)	1033		1035		1044		1070		1280	
COMPRESSORS ⁴										
Type	Scroll		Scroll		Scroll		Scroll		Scroll	
Quantity	2		2		2		2		2	
Unit Capacity Steps (%)	50 / 100		50 / 100		50 / 100		50 / 100		50 / 100	
CONDENSER COIL DATA										
Face area (Sq. Ft.)	29.0		23.8		29.0		29.0		47.5	
Rows	1		1		1		1		1	
Fins per inch	23		23		23		23		23	
Tube diameter (in./MM)	.71/18		1/25		1/25		1/25		.71/18	
Circuitry Type	2-pass Microchannel		2-pass Microchannel		2-pass Microchannel		2-pass Microchannel		2-pass Microchannel	
EVAPORATOR COIL DATA										
Face area (Sq. Ft.)	13.2		13.2		13.2		13.2		13.2	
Rows	3		4		4		4		4	
Fins per inch	15		15		15		15		15	
Tube diameter	0.375		0.375		0.375		0.375		0.375	
Circuitry Type	Intertwined		Intertwined		Intertwined		Intertwined		Intertwined	
Refrigerant control	TXV		TXV		TXV		TXV		TXV	

ZR037-061 Single Stage Gas Heat Physical Data (Continued)

Component	Models								
	ZR037			ZR049			ZR061		
Nominal Tonnage	3			4			5		
CONDENSER FAN DATA									
Quantity of fans	1			2			2		
Fan diameter (Inch)	24			24			24		
Type	Prop			Prop			Prop		
Drive type	Direct			Direct			Direct		
Quantity of motors	1			2			2		
Motor HP each	1/3			1/3			1/3		
No. speeds	Var.			Var.			Var.		
RPM (max.)	850			850			850		
Total CFM	3500			7000			7000		
BELT DRIVE EVAP FAN DATA									
Quantity	1			1			1		
Fan Size (Inch)	12 x 9			12 x 9			12 x 9		
Type	Centrifugal			Centrifugal			Centrifugal		
Motor Sheave	1VP34		1VL44	1VP34		1VL44	1VP34		1VL44
Blower Sheave	AK61		AK59	AK61		AK59	AK61		AK59
Belt	A47		A47	A47		A47	A47		A47
Motor HP each	1-1/2		1-1/2	1-1/2		1-1/2	1-1/2		2
RPM	1725		1725	1725		1725	1725		1725
Frame size	56		56	56		56	56		56
FILTERS									
Quantity - Size	4 - (24 x 16 x 2) ^{2, 3}			4 - (24 x 16 x 2) ^{2,3}			4 - (24 x 16 x 2) ^{2,3}		
	4 - (24 x 16 x 4) ⁴			4 - (24 x 16 x 4) ⁴			4 - (24 x 16 x 4) ⁴		

1. ZR037, ZR049 and ZR061 have crankcase heaters standard.
2. 2 In. Throwaway, Standard, MERV (Minimum Efficiency Reporting Value).
3. 2 In. Pleated, Optional, MERV 8.
4. 4 In. Pleated, Optional, MERV 13.

ZR037-061 Two Stage Gas Heat Physical Data (Continued)

Component	Models								
	ZR037			ZR049			ZR061		
Nominal Tonnage	3			4			5		
CONDENSER FAN DATA									
Quantity of fans	1			2			2		
Fan diameter (Inch)	24			24			24		
Type	Prop			Prop			Prop		
Drive type	Direct			Direct			Direct		
Quantity of motors	1			2			2		
Motor HP each	1/3			1/3			1/3		
No. speeds	Var.			Var.			Var.		
RPM	850			850			850		
Total CFM	3500			7000			7000		
BELT DRIVE EVAP FAN DATA									
Quantity	1			1			1		
Fan Size (Inch)	12 x 9			12 x 9			12 x 9		
Type	Centrifugal			Centrifugal			Centrifugal		
Motor Sheave	1VP34		1VL44	1VP34		1VL44	1VP34		1VL44
Blower Sheave	AK61		AK59	AK61		AK59	AK61		AK59
Belt	A47		A47	A47		A47	A47		A47
Motor HP each	1-1/2		1-1/2	1-1/2		1-1/2	1-1/2		2
RPM	1725		1725	1725		1725	1725		1725
Frame size	56		56	56		56	56		56
FILTERS									
Quantity - Size	4 - (24 x 16 x 2) ^{4,5}			4 - (24 x 16 x 2) ^{4,5}			4 - (24 x 16 x 2) ^{4,5}		
	4 - (24 x 16 x 4) ⁶			4 - (24 x 16 x 4) ⁶			4 - (24 x 16 x 4) ⁶		

1. 1st Stage Capacity is 75% of Full Capacity.
2. 1st Stage Capacity is 70% of Full Capacity.
3. ZR037, ZR049 and ZR061 have crankcase heaters standard.
4. 2 In. Throwaway, Standard, MERV (Minimum Efficiency Reporting Value).
5. 2 In. Pleated, Optional, MERV 8.
6. 4 In. Pleated, Optional, MERV 13.

ZH/ZJ/ZR078-150 Unit Limitations

Size (Tons)	Model	Unit Voltage	SCCR (kVA)	Unit Limitations		
				Applied Voltage		Outdoor DB Temp
				Min	Max	Max (°F)
037 (3)	ZH/ZJ/ZR	208/230-3-60	5	187	252	125
		460-3-60	5	432	504	125
		575-3-60	5	540	630	125
049 (4)	ZH/ZJ/ZR	208/230-3-60	5	187	252	125
		460-3-60	5	432	504	125
		575-3-60	5	540	630	125
061 (5)	ZH/ZJ/ZR	208/230-3-60	5	187	252	125
		460-3-60	5	432	504	125
		575-3-60	5	540	630	125
078 (6.5)	ZH/ZJ/ZR	208/230-3-60	5	187	252	125
		460-3-60	5	432	504	125
		575-3-60	5	540	630	125
090 (7.5)	ZH/ZJ/ZR	208/230-3-60	5	187	252	125
		460-3-60	5	432	504	125
		575-3-60	5	540	630	125
102 (8.5)	ZH/ZJ/ZR	208/230-3-60	5	187	252	125
		460-3-60	5	432	504	125
		575-3-60	5	540	630	125
120 (10)	ZH/ZJ/ZR	208/230-3-60	5	187	252	125
		460-3-60	5	432	504	125
		575-3-60	5	540	630	125
150 (12.5)	ZH/ZJ/ZR	208/230-3-60	5	187	252	125
		460-3-60	5	432	504	125
		575-3-60	5	540	630	125

ZH090 (7.5 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		115°F										125°F					
1875	77	87.4	8.7	49.7	41.3	32.8	-	-	-	80.8	9.5	48.0	39.2	30.5	-	-	-
	72	80.2	8.6	60.7	51.4	42.1	32.7	-	-	74.3	9.5	58.2	49.0	39.7	30.5	-	-
	67	73.5	8.6	71.7	61.6	51.4	42.1	32.9	-	68.4	9.5	68.4	58.7	48.9	39.7	30.6	-
	62	72.7	8.6	72.7	66.7	60.7	51.5	42.3	33.2	68.4	9.5	68.4	63.2	58.1	49.0	39.9	30.9
2250	77	87.2	8.7	56.5	44.9	33.4	-	-	-	80.3	9.6	54.6	42.8	30.9	-	-	-
	72	81.7	8.6	65.6	55.0	44.3	33.7	-	-	75.6	9.5	62.8	52.3	41.8	31.3	-	-
	67	76.2	8.6	74.7	65.0	55.2	44.6	33.9	-	70.9	9.5	70.9	61.8	52.7	42.1	31.6	-
	62	75.5	8.6	75.5	70.8	66.2	55.5	44.8	34.1	70.9	9.5	70.9	67.2	63.6	52.9	42.3	31.7
	57	74.9	8.6	74.9	74.9	74.9	66.4	55.7	44.9	70.9	9.5	70.9	70.9	70.9	63.7	53.0	42.3
2625	77	87.0	8.7	63.3	48.6	34.0	-	-	-	79.9	9.6	61.3	46.3	31.3	-	-	-
	72	83.1	8.6	70.5	58.5	46.5	34.6	-	-	77.0	9.5	67.4	55.6	43.9	32.2	-	-
	67	78.8	8.6	77.7	68.4	59.1	47.0	34.9	-	73.5	9.5	73.5	65.0	56.5	44.5	32.5	-
	62	78.3	8.6	78.3	75.0	71.7	59.4	47.2	35.0	73.4	9.5	73.4	71.2	69.0	56.8	44.7	32.5
	57	77.8	8.6	77.8	77.8	77.8	71.9	59.5	47.2	73.4	9.5	73.4	73.4	73.4	69.2	56.8	44.4
3000	77	86.8	8.7	70.0	52.3	34.6	-	-	-	79.4	9.6	67.9	49.8	31.8	-	-	-
	72	84.6	8.6	75.4	62.1	48.8	35.5	-	-	78.4	9.6	71.9	59.0	46.0	33.0	-	-
	67	81.4	8.6	80.7	71.8	63.0	49.4	35.9	-	76.0	9.5	76.0	68.1	60.2	46.9	33.5	-
	62	81.1	8.6	81.1	79.1	77.1	63.4	49.7	35.9	76.0	9.5	76.0	75.2	74.4	60.7	47.0	33.3
	57	80.8	8.6	80.8	80.8	80.8	77.4	63.4	49.4	76.0	9.5	76.0	76.0	76.0	74.6	60.5	46.4
3375	72	86.0	8.7	80.2	65.6	51.0	36.4	-	-	79.7	9.6	76.5	62.3	48.1	33.9	-	-
	67	84.1	8.6	83.7	75.3	66.8	51.9	36.9	-	78.5	9.6	78.5	71.2	64.0	49.2	34.5	-
	62	83.9	8.6	83.9	83.3	82.6	67.4	52.1	36.8	78.5	9.6	78.5	78.5	78.5	64.6	49.4	34.1
	57	83.8	8.6	83.8	83.8	83.8	82.8	67.3	51.7	78.5	9.6	78.5	78.5	78.5	78.5	64.2	48.5
3750	72	87.5	8.7	85.1	69.2	53.2	37.3	-	-	81.1	9.6	81.1	65.6	50.2	34.7	-	-
	67	86.7	8.7	86.7	78.7	70.7	54.3	37.9	-	81.0	9.6	81.0	74.4	67.8	51.6	35.5	-
	62	86.7	8.7	86.7	86.7	86.7	71.3	54.5	37.7	81.1	9.6	81.1	81.1	81.1	68.5	51.7	34.9
	57	86.7	8.7	86.7	86.7	86.7	86.7	71.1	53.9	81.1	9.6	81.1	81.1	81.1	81.1	68.0	50.5

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZH102 (8.5 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		115°F										125°F					
2125	77	104.0	9.8	56.9	47.9	38.9	-	-	-	97.6	10.9	54.7	45.7	36.8	-	-	-
	72	95.3	9.8	70.5	60.0	49.5	39.0	-	-	89.4	10.9	68.0	57.6	47.3	36.9	-	-
	67	86.7	9.8	84.2	72.2	60.2	49.6	38.9	-	81.3	10.9	44.0	44.0	44.0	44.0	36.7	-
	62	85.5	9.8	85.5	78.2	70.9	60.1	49.3	38.5	81.2	10.9	81.2	74.7	68.3	57.6	46.8	36.1
2550	77	104.4	9.8	65.1	52.5	39.9	-	-	-	97.8	10.9	63.2	50.5	37.8	-	-	-
	72	97.2	9.8	76.6	64.4	52.3	40.2	-	-	91.2	10.9	73.9	61.9	50.0	38.0	-	-
	67	90.0	9.8	88.0	76.4	64.7	52.5	40.2	-	84.6	10.9	46.2	46.2	46.2	46.2	37.9	-
	62	89.1	9.8	89.1	83.1	77.2	64.7	52.2	39.8	84.6	10.9	84.6	79.4	74.3	62.0	49.7	37.4
	57	88.1	9.8	88.1	88.1	88.1	76.9	64.3	51.7	84.5	10.9	46.4	46.4	46.4	46.4	46.4	46.4
2975	77	104.9	9.8	73.3	57.1	41.0	-	-	-	98.1	10.8	71.6	55.2	38.9	-	-	-
	72	99.1	9.8	82.6	68.8	55.1	41.4	-	-	93.0	10.8	79.8	66.2	52.7	39.2	-	-
	67	93.4	9.8	91.8	80.6	69.3	55.3	41.4	-	88.0	10.8	48.2	48.2	48.2	48.2	39.1	-
	62	92.6	9.8	92.6	88.0	83.4	69.3	55.2	41.0	87.9	10.8	87.9	84.1	80.4	66.4	52.5	38.6
	57	91.9	9.8	91.9	91.9	91.9	83.2	68.9	54.6	87.9	10.8	48.4	48.4	48.4	48.4	48.4	48.4
3400	77	105.3	9.8	81.5	61.8	42.0	-	-	-	98.3	10.8	80.0	60.0	40.0	-	-	-
	72	101.0	9.8	88.6	73.2	57.9	42.6	-	-	94.8	10.8	85.6	70.5	55.4	40.4	-	-
	67	96.7	9.8	95.7	84.7	73.8	58.2	42.7	-	91.3	10.8	50.2	50.2	50.2	50.2	40.3	-
	62	96.2	9.8	96.2	92.9	89.6	73.9	58.1	42.3	91.3	10.8	91.3	88.8	86.4	70.9	55.4	39.9
	57	95.7	9.8	95.7	95.7	95.7	89.5	73.5	57.5	91.2	10.8	50.4	50.4	50.4	50.4	50.4	50.4
3825	72	102.9	9.8	94.6	77.6	60.7	43.8	-	-	96.6	10.8	91.5	74.8	58.2	41.5	-	-
	67	100.0	9.8	99.5	88.9	78.3	61.1	43.9	-	94.6	10.8	52.3	52.3	52.3	52.3	41.5	-
	62	99.8	9.8	99.8	97.8	95.9	78.4	61.0	43.5	94.6	10.8	94.6	93.5	92.5	75.3	58.2	41.1
	57	99.5	9.8	99.5	99.5	99.5	95.8	78.1	60.4	94.6	10.8	52.5	52.5	52.5	52.5	52.5	52.5
4250	72	104.8	9.8	100.6	82.0	63.5	44.9	-	-	98.4	10.8	97.4	79.1	60.9	42.7	-	-
	67	103.4	9.8	103.4	93.1	82.8	64.0	45.1	-	98.0	10.8	98.0	88.8	79.7	61.2	42.7	-
	62	103.3	9.8	103.3	102.7	102.1	83.0	63.9	44.8	98.0	10.8	98.0	98.0	98.0	79.8	61.1	42.4
	57	103.3	9.8	103.3	103.3	103.3	102.0	82.6	63.2	98.0	10.8	98.0	98.0	98.0	98.0	79.4	60.5

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZH150 (12.5 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		115°F										125°F					
3125	77	158.4	14.6	65.6	53.5	40.6	-	-	-	147.6	16.1	60.0	50.8	38.1	-	-	-
	72	144.6	14.5	88.2	75.4	62.5	49.6	-	-	134.2	16.0	84.9	72.2	59.5	46.8	-	-
	67	130.9	14.3	110.9	97.3	84.4	71.5	58.7	-	120.9	15.8	107.4	93.6	80.9	68.2	55.5	-
	62	120.5	14.0	120.5	120.5	104.7	91.9	79.0	66.1	112.3	15.6	112.3	112.3	100.7	87.9	75.2	62.5
3750	77	162.2	14.7	73.1	58.6	44.1	-	-	-	150.8	16.1	69.9	55.6	41.3	-	-	-
	72	148.1	14.5	96.9	82.4	67.9	53.3	-	-	137.2	16.0	93.0	78.7	64.5	50.2	-	-
	67	134.0	14.3	120.6	106.1	91.6	77.1	62.6	-	123.5	15.8	116.2	101.9	87.6	73.4	59.1	-
	62	123.3	14.1	123.3	123.3	113.7	99.2	84.7	70.2	114.8	15.6	114.8	114.8	109.0	94.7	80.5	66.2
	57	121.8	14.1	121.8	121.8	110.3	95.8	81.2	66.7	112.1	15.6	112.1	112.1	102.2	88.0	73.7	59.4
4375	77	165.9	14.7	80.6	63.7	47.6	-	-	-	154.1	16.1	79.7	60.3	44.5	-	-	-
	72	151.5	14.5	105.5	89.4	73.2	57.1	-	-	140.1	15.9	101.1	85.3	69.5	53.6	-	-
	67	137.1	14.3	130.4	115.0	98.9	82.7	66.6	-	126.2	15.8	125.0	110.2	94.4	78.6	62.7	-
	62	126.2	14.1	126.2	126.2	122.7	106.5	90.4	74.2	117.2	15.5	117.2	117.2	117.2	101.6	85.7	69.9
	57	124.6	14.1	124.6	124.6	119.0	102.8	86.7	70.5	114.6	15.6	114.6	114.6	110.1	94.3	78.4	62.6
5000	77	169.7	14.7	88.1	68.8	51.0	-	-	-	157.3	16.1	89.6	65.1	47.7	-	-	-
	72	155.0	14.5	114.2	96.4	78.6	60.8	-	-	143.1	15.9	109.2	91.8	74.4	57.0	-	-
	67	140.2	14.3	140.2	123.9	106.1	88.3	70.5	-	128.9	15.7	128.9	118.6	101.1	83.7	66.3	-
	62	129.1	14.1	129.1	129.1	131.7	113.9	96.1	78.3	119.7	15.5	119.7	119.7	119.7	108.4	91.0	73.6
	57	127.4	14.2	127.4	127.4	127.7	109.9	92.1	74.3	117.0	15.6	117.0	117.0	117.0	100.6	83.2	65.7
5625	72	155.6	14.6	123.2	103.8	84.3	64.9	-	-	143.2	16.0	118.9	99.7	80.4	61.2	-	-
	67	140.8	14.4	140.8	132.6	113.9	94.4	74.9	-	128.9	15.8	128.9	127.5	109.3	90.0	70.8	-
	62	129.6	14.1	129.6	129.6	130.9	111.4	92.0	72.5	119.8	15.6	119.8	119.8	119.8	103.6	84.3	65.1
	57	127.9	14.2	127.9	127.9	128.1	108.6	89.1	69.7	117.0	15.6	117.0	117.0	117.0	98.3	79.0	59.8
6250	72	156.2	14.6	132.3	111.2	90.1	69.0	-	-	143.3	16.0	128.6	107.5	86.4	65.3	-	-
	67	141.4	14.4	141.4	141.4	121.6	100.5	79.4	-	129.0	15.8	129.0	129.0	117.4	96.3	75.2	-
	62	130.1	14.2	130.1	130.1	130.1	109.0	87.9	66.8	119.9	15.6	119.9	119.9	119.9	98.8	77.7	56.5
	57	128.4	14.2	128.4	128.4	128.4	107.3	86.2	65.1	117.1	15.7	117.1	117.1	117.1	96.0	74.9	53.8

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZJ037 (3.0 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil																			
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)									
				Return Dry Bulb (°F)								Return Dry Bulb (°F)									
				90	85	80	75	70	65			90	85	80	75	70	65				
		115°F										125°F									
750	77	35.7	3.2	18.2	14.4	10.6	-	-	-	32.6	3.6	17.3	13.4	9.5	-	-	-				
	72	31.8	3.1	22.5	18.4	14.3	10.3	-	-	28.9	3.5	21.1	17.1	13.1	9.0	-	-				
	67	28.0	3.0	26.7	22.4	18.0	13.9	9.8	-	25.2	3.4	25.0	20.8	16.6	12.5	8.5	-				
	62	28.0	3.1	27.7	24.7	21.7	17.6	13.5	9.4	25.9	3.4	25.3	22.7	20.1	16.1	12.0	7.9				
900	77	35.7	3.2	21.2	15.8	10.5	-	-	-	32.5	3.6	20.3	14.7	9.1	-	-	-				
	72	32.4	3.1	24.8	19.9	15.1	10.3	-	-	29.4	3.5	23.3	18.5	13.7	8.9	-	-				
	67	29.2	3.1	28.4	24.1	19.8	14.9	10.0	-	26.4	3.5	26.4	22.3	18.3	13.4	8.6	-				
	62	29.3	3.1	29.3	26.9	24.4	19.5	14.6	9.7	27.0	3.5	26.8	24.8	22.9	18.0	13.0	8.1				
	57	29.4	3.1	29.4	29.4	29.1	24.1	19.2	14.2	27.6	3.5	27.2	27.2	27.2	22.5	17.5	12.5				
1050	77	35.6	3.2	24.2	17.2	10.3	-	-	-	32.4	3.6	23.2	16.0	8.7	-	-	-				
	72	33.0	3.2	27.1	21.5	15.9	10.3	-	-	30.0	3.6	25.5	19.9	14.4	8.8	-	-				
	67	30.5	3.1	30.0	25.8	21.6	15.9	10.2	-	27.6	3.5	27.6	23.9	20.0	14.3	8.7	-				
	62	30.6	3.1	30.6	29.0	27.2	21.4	15.7	9.9	28.0	3.5	28.0	27.0	25.6	19.9	14.1	8.3				
	57	30.6	3.1	30.6	30.6	30.6	27.0	21.2	15.3	28.4	3.5	28.4	28.4	28.4	25.4	19.5	13.6				
1200	77	35.6	3.2	27.1	18.6	10.1	-	-	-	32.3	3.6	26.1	17.2	8.3	-	-	-				
	72	33.7	3.2	29.4	23.1	16.7	10.4	-	-	30.6	3.6	27.7	21.3	15.0	8.7	-	-				
	67	31.7	3.2	31.7	27.5	23.3	16.9	10.4	-	28.8	3.6	28.8	25.4	21.7	15.2	8.7	-				
	62	31.8	3.2	31.8	31.2	29.9	23.4	16.8	10.2	29.1	3.6	29.1	29.1	28.4	21.8	15.1	8.5				
	57	31.9	3.2	31.9	31.9	31.9	29.9	23.2	16.5	29.3	3.6	29.3	29.3	29.3	28.3	21.5	14.7				
1350	72	34.3	3.2	31.7	24.6	17.5	10.4	-	-	31.1	3.6	29.8	22.7	15.7	8.6	-	-				
	67	33.0	3.2	33.0	29.2	25.1	17.9	10.6	-	30.1	3.6	30.1	27.0	23.4	16.1	8.8	-				
	62	33.1	3.2	33.1	33.1	32.7	25.3	17.9	10.5	30.1	3.6	30.1	30.1	30.1	23.7	16.2	8.7				
	57	33.1	3.2	33.1	33.1	33.1	32.7	25.2	17.6	30.1	3.6	30.1	30.1	30.1	30.1	23.5	15.8				
1500	72	34.9	3.2	34.0	26.2	18.3	10.5	-	-	31.7	3.7	31.7	24.2	16.3	8.5	-	-				
	67	34.3	3.2	34.3	30.9	26.9	18.8	10.8	-	31.3	3.7	31.3	28.5	25.1	17.0	8.9	-				
	62	34.3	3.2	34.3	34.3	34.3	27.2	19.0	10.8	31.1	3.6	31.1	31.1	31.1	25.6	17.2	8.9				
	57	34.4	3.2	34.4	34.4	34.4	34.4	27.2	18.8	31.0	3.6	31.0	31.0	31.0	31.0	25.5	16.9				

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZJ049 (4.0 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil																			
CFM		WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)								
					Return Dry Bulb (°F)								Return Dry Bulb (°F)								
					90	85	80	75	70	65			90	85	80	75	70	65			
		115°F										125°F									
1000	77	47.0	4.4	24.4	19.6	14.8	-	-	-	42.5	4.9	23.5	18.5	13.5	-	-	-				
	72	43.5	4.3	31.1	25.5	19.9	14.3	-	-	39.9	4.8	29.8	24.1	18.4	12.7	-	-				
	67	39.9	4.2	37.8	31.4	25.0	19.4	13.8	-	37.2	4.7	44.0	29.7	23.3	17.6	12.0	-				
	62	39.3	4.1	38.1	34.1	30.2	24.5	18.8	13.2	37.1	4.6	35.0	31.5	28.1	22.5	17.0	11.4				
1200	77	47.4	4.3	28.5	21.5	14.4	-	-	-	42.8	4.9	27.3	20.0	12.6	-	-	-				
	72	44.5	4.3	34.1	27.5	20.9	14.4	-	-	40.7	4.8	32.4	25.8	19.2	12.5	-	-				
	67	41.6	4.2	39.6	33.5	27.5	20.8	14.1	-	38.6	4.7	46.2	31.6	25.7	18.9	12.2	-				
	62	41.1	4.1	39.8	36.9	34.0	27.2	20.3	13.5	38.5	4.6	36.5	34.3	32.2	25.3	18.4	11.5				
1400	57	40.6	4.1	40.1	40.1	40.1	33.6	26.6	19.6	38.4	4.5	46.4	37.1	38.7	31.7	24.7	17.7				
	77	47.7	4.3	32.7	23.3	13.9	-	-	-	43.1	4.8	31.2	21.5	11.8	-	-	-				
	72	45.5	4.2	37.0	29.5	21.9	14.4	-	-	41.6	4.8	35.0	27.5	19.9	12.4	-	-				
	67	43.3	4.2	41.4	35.6	29.9	22.1	14.3	-	40.0	4.7	48.2	33.4	28.1	20.2	12.4	-				
1600	62	42.9	4.1	41.5	39.7	37.9	29.9	21.8	13.8	39.9	4.6	38.1	37.1	36.2	28.0	19.9	11.7				
	57	42.5	4.1	41.7	41.7	41.7	37.6	29.3	21.0	39.9	4.5	48.4	40.8	44.4	35.9	27.4	18.9				
	77	48.1	4.2	36.8	25.1	13.5	-	-	-	43.5	4.7	35.0	23.0	10.9	-	-	-				
	72	46.5	4.2	40.0	31.5	22.9	14.4	-	-	42.4	4.7	37.6	29.1	20.7	12.2	-	-				
1800	67	44.9	4.2	43.2	37.8	32.4	23.5	14.6	-	41.4	4.7	50.2	35.3	30.5	21.5	12.6	-				
	62	44.6	4.2	43.3	42.5	41.8	32.6	23.3	14.1	41.4	4.6	39.6	39.6	39.6	30.8	21.3	11.8				
	57	44.4	4.1	43.4	43.4	43.4	41.6	32.0	22.4	41.3	4.6	50.4	44.6	50.1	40.1	30.1	20.1				
	72	47.5	4.2	42.9	33.4	23.9	14.5	-	-	43.3	4.7	40.2	30.8	21.5	12.1	-	-				
2000	67	46.6	4.2	45.0	39.9	34.8	24.8	14.9	-	42.8	4.7	52.3	37.2	32.9	22.8	12.7	-				
	62	46.4	4.2	45.0	45.0	45.0	35.2	24.8	14.4	42.8	4.6	41.1	41.1	41.1	33.5	22.7	12.0				
	57	46.3	4.2	45.1	45.1	45.1	45.1	34.7	23.8	42.7	4.6	52.5	48.3	52.5	44.2	32.7	21.3				
	72	48.5	4.2	45.9	35.4	25.0	14.5	-	-	44.2	4.6	42.8	32.5	22.2	12.0	-	-				
2000	67	48.2	4.2	46.7	42.0	37.3	26.2	15.2	-	44.2	4.7	42.8	39.0	35.3	24.1	12.9	-				
	62	48.2	4.2	46.7	46.7	46.7	37.9	26.3	14.7	44.2	4.7	42.7	42.7	42.7	36.3	24.2	12.1				
	57	48.2	4.2	46.7	46.7	46.7	46.7	37.4	25.2	44.2	4.7	42.6	42.6	42.6	42.6	35.4	22.4				

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZJ061 (5.0 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil																			
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)									
				Return Dry Bulb (°F)								Return Dry Bulb (°F)									
				90	85	80	75	70	65			90	85	80	75	70	65				
		115°F										125°F									
1250	77	58.5	5.1	26.8	23.1	19.3	-	-	-	51.5	5.7	22.9	20.1	17.3	-	-	-				
	72	56.0	5.1	38.8	33.4	28.0	22.6	-	-	51.0	5.7	36.7	32.0	27.2	22.5	-	-				
	67	53.5	5.2	50.7	43.7	36.6	30.1	23.6	-	50.5	5.7	44.0	43.8	37.2	30.8	24.4	-				
	62	51.9	5.2	51.9	48.9	45.2	37.6	30.0	22.4	50.6	5.7	50.5	48.8	47.1	39.1	31.0	23.0				
1500	77	59.8	5.1	33.0	26.1	19.2	-	-	-	53.1	5.7	29.9	23.4	16.9	-	-	-				
	72	57.1	5.1	42.8	35.9	29.0	22.0	-	-	52.2	5.7	40.6	34.2	27.8	21.4	-	-				
	67	54.4	5.1	52.6	45.6	38.7	30.7	22.8	-	51.2	5.7	46.2	45.0	38.7	30.8	22.9	-				
	62	53.2	5.2	53.2	51.1	48.5	39.4	30.4	21.4	51.2	5.7	51.2	50.4	49.6	40.2	30.8	21.3				
	57	52.0	5.2	52.0	52.0	48.1	38.1	28.0	-	51.2	5.7	46.4	46.4	46.4	46.4	38.6	27.7				
1750	77	61.0	5.2	39.3	29.2	19.1	-	-	-	54.7	5.7	36.8	26.6	16.4	-	-	-				
	72	58.1	5.1	46.9	38.4	29.9	21.5	-	-	53.4	5.7	44.4	36.4	28.3	20.3	-	-				
	67	55.3	5.1	54.4	47.6	40.8	31.4	21.9	-	52.0	5.7	48.2	46.1	40.3	30.8	21.4	-				
	62	54.5	5.1	54.5	53.3	51.7	41.3	30.9	20.4	51.8	5.7	51.8	51.8	51.8	41.3	30.5	19.7				
	57	53.6	5.1	53.6	53.6	51.2	39.8	28.4	-	51.6	5.7	48.4	48.4	48.4	48.4	39.6	27.4				
2000	77	62.2	5.2	45.6	32.3	19.0	-	-	-	56.3	5.7	43.8	29.9	16.0	-	-	-				
	72	59.2	5.1	50.9	40.9	30.9	20.9	-	-	54.5	5.7	48.3	38.6	28.9	19.2	-	-				
	67	56.2	5.1	56.2	49.6	42.9	32.0	21.1	-	52.7	5.7	50.2	47.3	41.8	30.8	19.9	-				
	62	55.7	5.1	55.7	55.6	54.9	43.1	31.3	19.5	52.3	5.7	52.3	52.3	52.3	42.5	30.2	18.0				
	57	55.3	5.1	55.3	55.3	55.3	54.2	41.4	28.7	52.0	5.7	50.4	50.4	50.4	50.4	40.6	27.1				
2250	72	60.3	5.1	55.0	43.4	31.9	20.4	-	-	55.7	5.7	52.1	40.8	29.4	18.1	-	-				
	67	57.1	5.1	57.1	51.6	45.0	32.6	20.3	-	53.4	5.6	52.3	48.4	43.3	30.8	18.3	-				
	62	57.0	5.1	57.0	57.0	57.0	44.9	31.7	18.5	52.9	5.6	52.9	52.9	52.9	43.6	30.0	16.3				
	57	56.9	5.1	56.9	56.9	56.9	56.9	43.1	29.1	52.4	5.6	52.5	52.5	52.5	52.5	41.6	26.8				
2500	72	61.3	5.1	59.0	46.0	32.9	19.8	-	-	56.9	5.7	56.0	43.0	30.0	16.9	-	-				
	67	58.0	5.1	58.0	53.5	47.1	33.3	19.5	-	54.2	5.6	54.2	49.5	44.9	30.8	16.8	-				
	62	58.3	5.1	58.3	58.3	58.3	46.7	32.1	17.5	53.5	5.6	53.5	53.5	53.5	44.7	29.7	14.7				
	57	58.6	5.1	57.6	57.6	57.6	57.6	44.8	29.4	52.7	5.6	52.7	52.7	52.7	52.7	42.6	26.5				

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZJ078 (6.5 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		115°F										125°F					
1625	77	75.1	7.4	36.7	30.0	23.2	-	-	-	68.6	8.2	34.0	27.5	21.0	-	-	-
	72	65.8	7.3	48.3	39.7	31.1	22.5	-	-	59.2	8.1	45.7	37.2	28.7	20.2	-	-
	67	57.2	7.2	57.2	49.4	39.0	30.2	21.4	-	50.9	8.0	50.9	46.9	36.4	27.7	19.0	-
	62	57.5	7.2	57.5	53.1	46.8	37.9	29.0	20.0	52.7	8.1	52.7	49.3	44.1	35.2	26.3	17.4
1950	77	76.1	7.5	45.0	35.1	25.3	-	-	-	69.3	8.3	42.5	32.7	23.0	-	-	-
	72	68.9	7.4	54.4	44.6	34.8	24.9	-	-	62.7	8.2	51.9	42.2	32.4	22.7	-	-
	67	61.8	7.3	61.8	54.1	44.3	34.3	24.2	-	56.0	8.2	56.0	51.6	41.9	31.9	21.9	-
	62	62.0	7.3	62.0	58.7	53.8	43.6	33.4	23.2	57.5	8.2	57.5	55.2	51.4	41.1	30.9	20.6
	57	62.3	7.4	62.3	62.3	52.9	42.5	32.2	58.9	8.2	56.7	56.7	56.7	50.3	39.8	29.3	29.3
2275	77	77.0	7.5	53.2	40.3	27.3	-	-	-	70.0	8.4	51.0	38.0	24.9	-	-	-
	72	72.1	7.5	60.6	49.5	38.5	27.4	-	-	66.1	8.4	58.1	47.1	36.2	25.2	-	-
	67	66.4	7.5	66.4	58.8	49.6	38.3	27.1	-	61.1	8.3	61.1	56.3	47.4	36.2	24.9	-
	62	66.6	7.5	66.6	64.2	60.7	49.3	37.8	26.4	62.2	8.3	62.2	61.0	58.7	47.1	35.4	23.8
	57	66.7	7.5	66.7	66.7	60.2	48.6	36.9	63.3	8.3	61.6	61.6	61.6	58.0	46.0	34.1	34.1
2600	77	77.9	7.6	61.5	45.4	29.4	-	-	-	70.7	8.4	59.6	43.2	26.8	-	-	-
	72	75.2	7.6	66.8	54.4	42.1	29.8	-	-	69.6	8.5	64.2	52.1	39.9	27.7	-	-
	67	71.0	7.6	71.0	63.5	54.9	42.4	29.9	-	66.3	8.4	66.3	60.9	53.0	40.4	27.8	-
	62	71.1	7.6	71.1	69.8	67.7	55.0	42.2	29.5	67.0	8.4	67.0	66.9	66.0	53.0	40.0	27.0
	57	71.2	7.6	71.2	71.2	71.2	67.5	54.6	41.7	67.7	8.5	66.6	66.6	66.6	65.7	52.2	38.8
2925	72	78.4	7.7	72.9	59.4	45.8	32.3	-	-	73.1	8.6	70.4	57.0	43.6	30.3	-	-
	67	75.6	7.7	75.6	68.2	60.2	46.5	32.7	-	71.4	8.6	71.4	65.6	58.5	44.6	30.7	-
	62	75.6	7.7	75.6	75.3	74.6	60.7	46.7	32.7	71.8	8.6	71.8	71.8	71.8	59.0	44.6	30.2
	57	75.7	7.7	75.7	75.7	75.7	74.8	60.6	46.5	72.1	8.6	71.5	71.5	71.5	71.5	58.5	43.6
3250	72	81.5	7.8	79.1	64.3	49.5	34.7	-	-	76.6	8.7	76.6	62.0	47.4	32.8	-	-
	67	80.2	7.9	80.2	72.9	65.5	50.5	35.5	-	76.6	8.7	76.6	70.3	64.0	48.8	33.7	-
	62	80.2	7.9	80.2	80.2	80.2	66.3	51.1	35.9	76.5	8.7	76.5	76.5	76.5	64.9	49.2	33.4
	57	80.1	7.9	80.1	80.1	80.1	80.1	66.7	51.2	76.5	8.7	76.5	76.5	76.5	76.5	64.7	48.4

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZJ102 (8.5 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil																			
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)									
				Return Dry Bulb (°F)								Return Dry Bulb (°F)									
				90	85	80	75	70	65			90	85	80	75	70	65				
		115°F										125°F									
2125	77	94.1	8.9	52.8	43.6	34.3	-	-	-	83.9	9.8	50.8	41.2	31.6	-	-	-				
	72	89.8	8.7	66.7	55.0	43.4	31.8	-	-	82.5	9.7	64.2	52.2	40.3	28.3	-	-				
	67	85.6	8.6	80.5	66.5	52.5	41.5	30.6	-	81.1	9.5	44.0	44.0	44.0	37.9	27.0	-				
	62	83.0	8.6	79.8	70.7	61.6	51.3	40.9	30.6	77.7	9.5	74.9	66.2	57.6	47.6	37.5	27.5				
2550	77	97.5	8.8	62.7	47.6	32.5	-	-	-	89.0	9.8	60.4	44.7	29.0	-	-	-				
	72	92.3	8.7	72.4	58.9	45.3	31.7	-	-	85.1	9.7	69.0	55.4	41.8	28.1	-	-				
	67	87.0	8.6	82.2	70.1	58.1	44.4	30.8	-	81.1	9.5	46.2	46.2	46.2	40.9	27.2	-				
	62	86.4	8.6	83.0	76.9	70.9	57.2	43.5	29.9	80.6	9.6	77.5	72.4	67.4	53.7	39.9	26.2				
	57	85.8	8.6	83.8	83.7	83.7	69.9	56.2	42.5	80.2	9.6	46.4	46.4	46.4	46.4	46.4	38.9				
2975	77	101.0	8.8	72.5	51.6	30.6	-	-	-	94.1	9.8	70.1	48.2	26.3	-	-	-				
	72	94.7	8.7	78.2	62.7	47.1	31.6	-	-	87.6	9.7	73.8	58.5	43.2	28.0	-	-				
	67	88.4	8.6	83.9	73.8	63.6	47.3	31.1	-	81.1	9.5	48.2	48.2	48.2	43.9	27.5	-				
	62	89.8	8.6	86.2	83.2	80.1	63.1	46.1	29.1	83.6	9.6	80.1	78.6	77.1	59.7	42.4	25.0				
	57	91.2	8.6	88.4	88.4	88.4	78.9	61.1	43.4	86.2	9.6	48.4	48.4	48.4	48.4	48.4	38.8				
3400	77	104.5	8.8	82.3	55.6	28.8	-	-	-	99.2	9.7	79.7	51.7	23.6	-	-	-				
	72	97.1	8.7	84.0	66.5	49.0	31.5	-	-	90.1	9.6	78.6	61.7	44.7	27.8	-	-				
	67	89.8	8.6	85.6	77.4	69.2	50.2	31.3	-	81.1	9.5	50.2	50.2	50.2	46.8	27.8	-				
	62	93.2	8.7	89.4	89.4	89.4	69.0	48.7	28.3	86.6	9.6	82.7	82.7	82.7	65.8	44.8	23.7				
	57	96.6	8.7	93.1	93.1	93.1	87.8	66.1	44.3	92.1	9.7	50.4	50.4	50.4	50.4	50.4	38.7				
3825	72	99.6	8.7	89.8	70.3	50.8	31.3	-	-	92.7	9.6	83.5	64.8	46.2	27.6	-	-				
	67	91.2	8.6	87.4	81.1	74.7	53.2	31.6	-	81.1	9.5	52.3	52.3	52.3	49.8	28.1	-				
	62	96.6	8.7	92.5	92.5	92.5	75.0	51.3	27.6	89.6	9.6	85.3	85.3	85.3	71.9	47.2	22.5				
	57	102.1	8.7	97.7	97.7	97.7	96.8	71.0	45.1	98.1	9.7	52.5	52.5	52.5	52.5	52.5	38.6				
4250	72	102.0	8.7	95.5	74.1	52.7	31.2	-	-	95.2	9.6	88.3	68.0	47.7	27.4	-	-				
	67	92.6	8.6	89.1	84.7	80.3	56.1	31.8	-	81.1	9.5	77.5	77.3	77.1	52.7	28.4	-				
	62	100.1	8.7	95.7	95.7	95.7	80.9	53.8	26.8	92.6	9.7	88.0	88.0	88.0	78.0	49.6	21.2				
	57	107.5	8.8	102.3	102.3	102.3	102.3	75.9	46.0	104.1	9.8	98.4	98.4	98.4	98.4	70.9	38.4				

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZJ120 (10 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		115°F										125°F					
2500	77	113.0	11.0	47.0	40.7	30.0	-	-	-	101.1	12.1	44.1	37.0	26.4	-	-	-
	72	104.5	11.0	69.2	58.5	47.8	37.1	-	-	93.6	12.1	65.1	54.5	43.9	33.3	-	-
	67	96.0	11.0	91.4	76.3	65.6	55.0	44.3	-	86.1	12.1	86.1	72.0	61.4	50.8	40.2	-
	62	89.7	11.0	89.7	89.7	79.8	69.1	58.4	47.7	81.3	12.1	81.3	81.3	74.1	63.0	52.3	41.7
3000	77	119.6	11.1	58.6	46.1	33.6	-	-	-	108.1	12.1	57.2	42.5	30.0	-	-	-
	72	110.6	11.1	78.6	66.1	53.5	41.0	-	-	100.1	12.2	74.7	62.2	49.8	37.3	-	-
	67	101.6	11.1	98.5	86.0	73.5	61.0	48.5	-	92.1	12.2	92.1	82.0	69.5	57.1	44.6	-
	62	94.9	11.0	94.9	94.9	89.3	76.8	64.3	51.8	87.0	12.2	87.0	87.0	83.3	70.9	58.4	46.0
	57	94.9	11.0	94.9	94.9	85.5	73.0	60.5	47.9	86.7	12.0	86.7	86.7	77.8	65.3	52.9	40.4
3500	77	126.1	11.2	70.2	51.5	37.2	-	-	-	115.1	12.2	70.3	47.9	33.6	-	-	-
	72	116.6	11.2	87.9	73.6	59.3	44.9	-	-	106.6	12.3	84.2	69.9	55.6	41.3	-	-
	67	107.2	11.2	105.6	95.7	81.4	67.0	52.7	-	98.1	12.3	98.1	92.0	77.7	63.4	49.1	-
	62	100.1	11.1	100.1	100.1	98.9	84.6	70.2	55.9	92.6	12.3	92.6	92.6	92.6	78.8	64.6	50.3
	57	100.1	11.0	100.1	100.1	94.6	80.3	66.0	51.6	92.3	12.1	92.3	92.3	87.0	72.7	58.4	44.1
4000	77	132.7	11.3	81.8	56.9	40.8	-	-	-	122.2	12.3	83.4	53.3	37.1	-	-	-
	72	122.7	11.3	97.3	81.1	65.0	48.8	-	-	113.1	12.4	93.7	77.6	61.5	45.3	-	-
	67	112.7	11.3	112.7	105.4	89.2	73.1	56.9	-	104.1	12.4	104.1	102.0	85.8	69.7	53.6	-
	62	105.3	11.2	105.3	105.3	108.4	92.3	76.1	60.0	98.2	12.4	98.2	98.2	98.2	86.8	70.7	54.5
	57	105.3	11.1	105.3	105.3	103.7	87.6	71.5	55.3	98.0	12.2	98.0	98.0	96.2	80.0	63.9	47.8
4500	72	123.4	11.2	104.9	87.3	69.6	52.0	-	-	113.1	12.3	100.8	83.3	65.8	48.3	-	-
	67	113.3	11.2	113.3	109.7	95.6	78.0	60.4	-	104.1	12.3	104.1	104.0	91.9	74.4	56.9	-
	62	105.9	11.2	105.9	105.9	107.5	89.8	72.2	54.6	98.2	12.3	98.2	98.2	98.2	83.1	65.6	48.1
	57	105.9	11.1	105.9	105.9	105.1	87.5	69.9	52.2	98.0	12.2	98.0	98.0	97.1	79.6	62.1	44.6
5000	72	124.0	11.2	112.5	93.4	74.3	55.2	-	-	113.1	12.3	107.8	89.0	70.1	51.3	-	-
	67	113.9	11.2	113.9	113.9	102.0	82.9	63.8	-	104.1	12.3	104.1	104.1	97.9	79.1	60.3	-
	62	106.5	11.2	106.5	106.5	106.5	87.4	68.3	49.2	98.2	12.3	98.2	98.2	98.2	79.4	60.6	41.7
	57	106.4	11.1	106.4	106.4	106.4	87.3	68.3	49.2	98.0	12.1	98.0	98.0	98.0	79.1	60.3	41.5

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZJ150 (12.5 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil																			
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)									
				Return Dry Bulb (°F)								Return Dry Bulb (°F)									
				90	85	80	75	70	65			90	85	80	75	70	65				
		115°F										125°F									
3125	77	158.4	14.0	63.3	51.9	38.9	-	-	-	148.8	15.3	56.6	48.7	35.8	-	-	-				
	72	144.4	14.0	86.9	73.8	60.8	47.8	-	-	134.6	15.3	82.9	70.0	57.1	44.2	-	-				
	67	130.4	14.0	110.4	95.8	82.7	69.7	56.7	-	120.4	15.4	106.6	91.3	78.4	65.5	52.6	-				
	62	120.7	13.8	120.7	120.7	101.4	88.4	75.3	62.3	112.9	15.2	112.9	112.9	96.0	83.1	70.2	57.3				
3750	77	164.8	14.1	73.4	58.4	43.3	-	-	-	154.3	15.4	69.8	54.9	40.0	-	-	-				
	72	150.2	14.1	97.9	82.8	67.8	52.7	-	-	139.6	15.4	93.6	78.7	63.8	48.9	-	-				
	67	135.6	14.1	122.3	107.3	92.2	77.2	62.1	-	124.8	15.5	117.4	102.5	87.6	72.7	57.9	-				
	62	125.6	13.9	125.6	125.6	113.0	98.0	82.9	67.9	117.1	15.3	117.1	117.1	107.3	92.5	77.6	62.7				
	57	123.7	13.9	123.7	123.7	110.6	95.6	80.5	65.5	115.8	15.3	115.8	115.8	102.3	87.4	72.5	57.7				
4375	77	171.1	14.2	83.5	64.8	47.8	-	-	-	159.8	15.5	82.9	61.1	44.2	-	-	-				
	72	156.0	14.2	108.8	91.8	74.7	57.7	-	-	144.5	15.5	104.2	87.4	70.5	53.7	-	-				
	67	140.8	14.2	134.2	118.7	101.7	84.6	67.6	-	129.2	15.6	128.1	113.7	96.9	80.0	63.2	-				
	62	130.4	14.0	130.4	130.4	124.6	107.6	90.5	73.4	121.2	15.4	121.2	121.2	118.6	101.8	85.0	68.1				
	57	128.4	14.0	128.4	128.4	122.0	104.9	87.9	70.8	119.9	15.5	119.9	119.9	113.1	96.3	79.4	62.6				
5000	77	177.5	14.4	93.6	71.3	52.2	-	-	-	165.3	15.6	96.0	67.2	48.5	-	-	-				
	72	161.8	14.3	119.8	100.8	81.7	62.6	-	-	149.5	15.7	114.8	96.1	77.3	58.5	-	-				
	67	146.1	14.3	146.1	130.2	111.2	92.1	73.0	-	133.7	15.7	133.7	124.9	106.1	87.3	68.5	-				
	62	135.3	14.1	135.3	135.3	136.2	117.2	98.1	79.0	125.4	15.5	125.4	125.4	125.4	111.1	92.4	73.6				
	57	133.2	14.1	133.2	133.2	133.3	114.3	95.2	76.1	124.1	15.6	124.1	124.1	123.9	105.1	86.3	67.5				
5625	72	167.6	14.4	131.7	110.5	89.3	68.1	-	-	154.5	15.8	126.5	105.6	84.6	63.6	-	-				
	67	151.3	14.4	151.3	142.7	121.5	100.3	79.0	-	138.1	15.8	138.1	137.1	116.1	95.2	74.2	-				
	62	140.1	14.2	140.1	140.1	140.6	119.4	98.1	76.9	129.6	15.6	129.6	129.6	129.6	110.9	89.9	68.9				
	57	138.0	14.2	138.0	138.0	138.0	116.8	95.6	74.4	128.2	15.7	128.2	128.2	128.1	107.1	86.1	65.2				
6250	72	173.4	14.5	143.6	120.2	96.9	73.5	-	-	159.4	15.9	138.2	115.1	91.9	68.8	-	-				
	67	156.5	14.5	156.5	155.2	131.8	108.4	85.0	-	142.5	15.9	142.5	142.5	126.2	103.0	79.9	-				
	62	145.0	14.3	145.0	145.0	145.0	121.6	98.2	74.8	133.7	15.7	133.7	133.7	133.7	110.6	87.4	64.3				
	57	142.7	14.3	142.7	142.7	142.7	119.4	96.0	72.6	132.3	15.8	132.3	132.3	132.3	109.1	86.0	62.8				

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR037 (3.0 Ton) Reheat (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						
				Return Dry Bulb (°F)							Return Dry Bulb (°F)						
				85	80	75	70	65			85	80	75	70	65		
		75°F								85°F							
750	72	26.0	1.9	5.3	4.3	3.2	-	-	25.2	1.9	4.8	3.8	2.8	-	-		
	67	20.9	1.9	8.9	7.9	6.8	5.8	-	20.2	1.9	8.5	7.5	6.5	5.5	-		
	62	16.9	1.9	11.5	10.4	9.4	8.3	7.3	16.3	1.9	11.3	10.3	9.3	8.3	7.3		
900	72	25.5	1.9	5.6	4.5	3.4	-	-	24.4	1.9	4.9	3.9	2.8	-	-		
	67	20.5	1.9	9.4	8.3	7.2	6.1	-	19.6	1.9	8.7	7.7	6.7	5.6	-		
	62	16.6	1.9	12.1	11.0	9.9	8.8	7.7	15.8	1.9	11.7	10.7	9.6	8.6	7.6		
	57	14.8	1.9	13.9	12.8	11.7	10.6	9.5	14.2	2.0	13.6	12.5	11.5	10.5	9.4		
1050	72	25.0	1.9	6.0	4.8	3.6	-	-	23.6	1.9	5.0	4.0	2.9	-	-		
	67	20.2	1.9	10.0	8.8	7.6	6.5	-	18.9	1.9	9.0	7.9	6.9	5.8	-		
	62	16.2	1.9	12.8	11.7	10.5	9.3	8.2	15.3	2.0	12.1	11.0	10.0	8.9	7.8		
	57	14.5	1.9	14.0	13.5	12.3	11.1	10.0	13.7	2.0	13.4	13.0	11.9	10.9	9.8		
1200	72	24.6	1.9	6.3	5.0	3.8	-	-	22.9	1.9	5.2	4.1	3.0	-	-		
	67	19.8	1.9	10.5	9.3	8.0	6.8	-	18.3	1.9	9.3	8.2	7.1	6.0	-		
	62	15.9	1.9	13.5	12.3	11.0	9.8	8.6	14.8	2.0	12.5	11.4	10.3	9.2	8.1		
	57	14.2	1.9	14.2	14.2	13.0	11.7	10.5	13.3	2.0	13.3	13.3	12.3	11.2	10.1		
1350	72	24.5	1.9	6.5	5.3	4.0	-	-	22.9	1.9	5.4	4.3	3.2	-	-		
	67	19.8	1.9	10.9	9.7	8.5	7.2	-	18.3	1.9	9.7	8.6	7.5	6.4	-		
	62	15.9	1.9	14.1	12.8	11.6	10.4	9.1	14.8	2.0	13.1	12.0	10.9	9.8	8.7		
	57	14.2	1.9	14.2	14.2	12.9	11.7	10.5	13.3	2.0	13.3	13.3	12.3	11.2	10.0		
1500	72	24.5	1.9	6.8	5.5	4.3	-	-	22.9	1.9	5.7	4.5	3.4	-	-		
	67	19.7	1.9	11.4	10.1	8.9	7.6	-	18.4	1.9	10.2	9.1	8.0	6.9	-		
	62	15.9	1.9	14.7	13.4	12.2	10.9	9.7	14.9	2.0	13.8	12.7	11.6	10.4	9.3		
	57	14.2	1.9	14.2	14.2	12.9	11.7	10.4	13.3	2.0	13.3	13.3	12.2	11.1	10.0		

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR49 (4.0 Ton) Reheat (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil													
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)				
				Return Dry Bulb (°F)							Return Dry Bulb (°F)				
				85	80	75	70	65			85	80	75	70	65
		75°F							85°F						
1000	72	31.5	2.8	7.4	6.3	5.1	-	-	28.8	2.9	6.6	5.5	4.5	-	-
	67	24.2	2.7	11.5	10.3	9.1	7.9	-	21.8	2.9	10.4	9.4	8.3	7.3	-
	62	20.0	2.7	14.3	13.1	12.0	10.8	9.6	17.6	2.8	13.3	12.2	11.2	10.1	9.1
1200	72	30.5	2.8	7.7	6.5	5.3	-	-	28.0	2.9	6.7	5.7	4.6	-	-
	67	23.5	2.7	12.0	10.8	9.6	8.4	-	21.2	2.8	10.7	9.7	8.6	7.5	-
	62	19.4	2.7	14.9	13.7	12.5	11.3	10.1	17.1	2.8	13.7	12.6	11.6	10.5	9.5
	57	17.7	2.7	16.2	15.0	13.8	12.6	11.5	15.9	2.8	15.3	14.2	13.2	12.1	11.1
1400	72	29.6	2.8	8.0	6.8	5.6	-	-	27.2	2.9	6.9	5.8	4.8	-	-
	67	22.7	2.7	12.4	11.2	10.0	8.8	-	20.6	2.8	11.0	9.9	8.9	7.8	-
	62	18.8	2.7	15.5	14.3	13.1	11.9	10.7	16.7	2.8	14.1	13.0	11.9	10.9	9.8
	57	17.2	2.7	16.4	15.7	14.5	13.3	12.0	15.4	2.8	15.1	14.7	13.6	12.6	11.5
1600	72	28.6	2.7	8.3	7.1	5.9	-	-	26.4	2.8	7.1	6.0	4.9	-	-
	67	22.0	2.7	12.9	11.7	10.5	9.2	-	20.0	2.8	11.3	10.2	9.1	8.1	-
	62	18.2	2.7	16.1	14.9	13.7	12.5	11.2	16.2	2.8	14.4	13.4	12.3	11.2	10.2
	57	16.6	2.7	16.6	16.3	15.1	13.9	12.6	15.0	2.8	15.0	15.0	14.1	13.0	11.9
1800	72	27.8	2.8	8.2	7.0	5.9	-	-	25.2	2.9	6.9	5.9	4.9	-	-
	67	21.3	2.7	12.7	11.6	10.4	9.3	-	19.1	2.8	11.0	10.0	9.0	8.0	-
	62	17.7	2.7	15.9	14.8	13.6	12.5	11.3	15.4	2.8	14.1	13.1	12.1	11.1	10.1
	57	16.1	2.7	16.1	16.0	14.8	13.7	12.5	14.3	2.8	14.3	14.3	13.6	12.6	11.6
2000	72	27.0	2.8	8.1	7.0	5.9	-	-	24.0	2.9	6.6	5.7	4.8	-	-
	67	20.7	2.7	12.6	11.5	10.4	9.3	-	18.2	2.8	10.7	9.8	8.9	8.0	-
	62	17.1	2.7	15.7	14.6	13.6	12.5	11.4	14.7	2.8	13.7	12.8	11.9	11.0	10.1
	57	15.7	2.7	15.7	15.7	14.6	13.5	12.4	13.6	2.8	13.6	13.6	13.1	12.2	11.3

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR078 (6.5 Ton) Reheat (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						
				Return Dry Bulb (°F)							Return Dry Bulb (°F)						
				85	80	75	70	65			85	80	75	70	65		
		75°F								85°F							
1625	72	34.3	5.7	-	-	-	-	-	32.4	5.6	-	-	-	-	-		
	67	34.2	5.4	1.3	1.2	1.1	1.0	-	32.2	5.6	0.3	0.4	0.5	0.6	-		
	62	30.6	5.0	4.3	4.2	4.1	4.0	3.9	28.2	4.8	2.1	2.2	2.2	2.3	2.4		
1950	72	35.1	5.7	-	-	-	-	-	33.5	5.8	-	-	-	-	-		
	67	35.0	5.4	4.0	3.5	3.0	2.6	-	33.3	5.7	3.0	2.7	2.3	1.9	-		
	62	31.3	5.0	12.4	12.0	11.5	11.0	10.6	29.1	4.9	11.0	10.6	10.3	9.9	9.5		
	57	31.2	5.0	14.6	14.2	13.7	13.3	12.8	29.4	4.9	12.2	11.9	11.5	11.2	10.8		
2275	72	35.9	5.7	-	-	-	-	-	34.5	5.9	-	-	-	-	-		
	67	35.8	5.4	6.6	5.8	5.0	4.2	-	34.4	5.8	5.7	4.9	4.1	3.3	-		
	62	32.0	5.0	20.5	19.7	18.9	18.1	17.3	30.1	5.1	19.9	19.1	18.3	17.4	16.6		
	57	31.9	5.0	23.6	23.4	22.6	21.8	21.0	30.4	5.0	21.8	21.6	20.8	20.0	19.2		
2600	72	36.7	5.7	-	-	-	-	-	35.6	6.0	-	-	-	-	-		
	67	36.6	5.4	9.2	8.1	6.9	5.7	-	35.5	5.9	8.5	7.2	6.0	4.7	-		
	62	32.7	5.0	28.7	27.5	26.3	25.2	24.0	31.0	5.2	28.8	27.5	26.3	25.0	23.8		
	57	32.6	5.0	32.6	32.6	31.4	30.3	29.1	31.3	5.2	31.3	31.3	30.1	28.8	27.6		
2925	72	37.0	5.6	-	-	-	-	-	35.9	5.8	-	-	-	-	-		
	67	36.9	5.4	11.5	10.2	8.8	7.4	-	35.8	5.8	10.9	9.4	7.9	6.4	-		
	62	33.0	4.9	30.9	30.4	29.0	27.6	26.2	31.3	5.0	30.2	29.6	28.0	26.5	25.0		
	57	32.8	4.9	32.8	32.8	31.5	30.1	28.7	31.6	5.0	31.6	31.6	30.1	28.6	27.1		
3250	72	37.2	5.6	-	-	-	-	-	36.2	5.7	-	-	-	-	-		
	67	37.1	5.3	13.9	12.3	10.7	9.1	-	36.1	5.6	13.3	11.5	9.8	8.0	-		
	62	33.2	4.9	33.2	33.2	31.6	30.0	28.4	31.6	4.9	31.6	31.6	29.8	28.1	26.3		
	57	33.1	4.9	33.1	33.1	31.5	29.9	28.3	31.9	4.9	31.9	31.9	30.1	28.4	26.6		

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR090 (7.5 Ton) Reheat (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		75°F								85°F							
1875	77	56.0	5.7	-	-	-	-	-	-	54.0	6.0	-	-	-	-	-	-
	72	49.0	5.5	-	-	-	-	-	-	46.3	5.8	-	-	-	-	-	-
	67	42.0	5.2	9.4	8.6	7.7	6.8	6.0	-	38.7	5.5	7.8	7.1	6.4	5.8	5.1	-
	62	39.6	5.0	22.6	21.7	20.9	20.0	19.1	18.3	37.2	5.3	22.7	22.0	21.3	20.7	20.0	19.3
2250	77	56.8	5.7	-	-	-	-	-	-	53.9	6.0	-	-	-	-	-	-
	72	49.7	5.5	-	-	-	-	-	-	46.2	5.7	-	-	-	-	-	-
	67	42.6	5.2	11.6	10.5	9.4	8.3	7.2	-	38.6	5.5	8.9	8.1	7.3	6.4	5.6	-
	62	40.2	5.0	27.7	26.6	25.5	24.4	23.3	22.2	37.0	5.3	26.5	25.7	24.9	24.0	23.2	22.4
	57	39.2	4.9	31.7	30.6	29.5	28.4	27.3	26.2	35.6	5.2	30.0	29.1	28.3	27.4	26.6	25.8
2625	77	57.6	5.7	-	-	-	-	-	-	53.8	5.9	-	-	-	-	-	-
	72	50.4	5.4	-	-	-	-	-	-	46.1	5.7	-	-	-	-	-	-
	67	43.2	5.2	13.8	12.5	11.1	9.8	8.4	-	38.4	5.5	10.0	9.0	8.1	7.1	6.1	-
	62	40.8	5.0	32.8	31.5	30.1	28.8	27.4	26.1	36.9	5.3	30.4	29.4	28.4	27.4	26.4	25.5
	57	39.7	4.9	36.0	35.5	34.9	33.6	32.2	30.9	35.5	5.2	32.7	32.2	32.2	31.2	30.3	29.3
3000	77	58.4	5.6	-	-	-	-	-	-	53.6	5.9	-	-	-	-	-	-
	72	51.1	5.4	-	-	-	-	-	-	45.9	5.7	-	-	-	-	-	-
	67	43.8	5.2	16.0	14.4	12.8	11.2	9.7	-	38.2	5.4	11.1	10.0	8.9	7.7	6.6	-
	62	41.4	5.0	37.9	36.3	34.7	33.2	31.6	30.0	36.8	5.3	34.2	33.0	31.9	30.8	29.7	28.5
	57	40.3	4.9	40.3	40.3	40.3	38.7	37.1	35.5	35.4	5.2	35.4	35.4	35.4	35.0	33.9	32.8
3375	72	52.8	5.4	-	-	-	-	-	-	47.7	5.7	-	-	-	-	-	-
	67	45.3	5.2	21.6	19.4	17.3	15.1	12.9	-	39.7	5.4	17.5	15.7	13.9	12.2	10.4	-
	62	42.8	5.0	41.0	40.2	39.4	37.3	35.1	32.9	38.2	5.2	36.9	36.3	35.9	34.1	32.4	30.6
	57	41.6	4.9	41.6	41.6	41.6	39.5	37.3	35.1	36.7	5.2	36.7	36.7	36.7	35.4	33.6	31.8
3750	72	54.5	5.4	-	-	-	-	-	-	49.5	5.6	-	-	-	-	-	-
	67	46.8	5.1	27.2	24.4	21.7	18.9	16.2	-	41.2	5.4	23.9	21.4	19.0	16.6	14.1	-
	62	44.1	4.9	44.1	44.1	44.1	41.4	38.6	35.9	39.6	5.2	39.6	39.6	39.6	37.5	35.0	32.6
	57	43.0	4.9	43.0	43.0	43.0	40.2	37.5	34.7	38.1	5.1	38.1	38.1	38.1	35.7	33.3	30.8

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR102 (8.5 Ton) Cooling (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		115°F										125°F					
2125	77	102.2	10.3	39.0	35.2	25.4	-	-	-	95.6	11.4	36.2	31.0	22.6	-	-	-
	72	93.5	10.1	60.2	50.4	40.6	30.8	-	-	86.5	11.1	56.8	47.1	37.5	27.8	-	-
	67	84.8	10.0	81.3	65.5	55.8	46.0	36.2	-	77.4	10.9	77.4	62.1	52.4	42.7	33.1	-
	62	78.5	9.9	78.5	78.5	63.8	54.0	44.2	34.4	71.8	10.8	71.8	71.8	57.3	47.7	38.0	28.3
2550	77	105.2	10.4	51.2	39.7	28.3	-	-	-	98.0	11.4	49.9	36.6	25.3	-	-	-
	72	96.2	10.2	68.1	56.6	45.2	33.7	-	-	88.7	11.2	64.7	53.3	41.9	30.6	-	-
	67	87.3	10.0	85.0	73.5	62.0	50.6	39.1	-	79.4	11.0	79.4	70.0	58.6	47.3	35.9	-
	62	80.8	9.9	80.8	80.8	71.0	59.6	48.1	36.6	73.6	10.9	73.6	73.6	64.2	52.8	41.5	30.1
	57	79.6	10.0	79.6	79.6	69.9	58.5	47.0	35.5	73.3	11.0	73.3	73.3	63.4	52.1	40.7	29.3
2975	77	108.2	10.4	63.4	44.3	31.1	-	-	-	100.5	11.4	63.7	42.3	28.0	-	-	-
	72	99.0	10.2	76.0	62.9	49.7	36.6	-	-	90.9	11.2	72.5	59.5	46.4	33.4	-	-
	67	89.8	10.0	88.6	81.5	68.3	55.2	42.1	-	81.4	11.0	81.4	77.9	64.8	51.8	38.7	-
	62	83.1	9.9	83.1	83.1	78.2	65.1	51.9	38.8	75.4	10.9	75.4	75.4	71.0	58.0	44.9	31.9
	57	81.8	10.0	81.8	81.8	77.0	63.9	50.7	37.6	75.1	11.0	75.1	75.1	70.2	57.1	44.1	31.0
3400	77	111.2	10.4	75.7	48.8	34.0	-	-	-	102.9	11.4	77.4	47.9	30.7	-	-	-
	72	101.7	10.2	84.0	69.1	54.3	39.5	-	-	93.1	11.2	80.4	65.6	50.9	36.1	-	-
	67	92.3	10.0	92.3	89.5	74.6	59.8	45.0	-	83.3	11.0	83.3	83.3	71.1	56.3	41.6	-
	62	85.4	9.9	85.4	85.4	85.4	70.6	55.8	41.0	77.3	10.9	77.3	77.3	77.3	63.1	48.4	33.6
	57	84.1	10.0	84.1	84.1	84.1	69.3	54.5	39.6	77.0	11.0	77.0	77.0	77.0	62.2	47.5	32.7
3825	72	102.6	10.3	89.7	73.7	57.7	41.8	-	-	93.9	11.3	86.0	70.1	54.1	38.2	-	-
	67	93.0	10.1	93.0	91.6	79.3	63.3	47.4	-	84.0	11.1	84.0	84.0	75.6	59.7	43.8	-
	62	86.1	10.0	86.1	86.1	86.1	70.1	54.2	38.2	77.9	11.0	77.9	77.9	77.9	62.3	46.4	30.5
	57	84.8	10.1	84.8	84.8	84.8	68.8	52.8	36.9	77.6	11.1	77.6	77.6	77.6	61.7	45.8	29.8
4250	72	103.4	10.3	95.4	78.3	61.1	44.0	-	-	94.7	11.4	91.6	74.5	57.4	40.3	-	-
	67	93.8	10.1	93.8	93.8	84.0	66.9	49.7	-	84.7	11.1	84.7	84.7	80.2	63.1	46.0	-
	62	86.8	10.0	86.8	86.8	86.8	69.7	52.6	35.4	78.6	11.1	78.6	78.6	78.6	61.5	44.4	27.3
	57	85.5	10.1	85.5	85.5	85.5	68.3	51.2	34.1	78.2	11.2	78.2	78.2	78.2	61.2	44.1	27.0

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR102 (8.5 Ton) Reheat (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM		WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
					Return Dry Bulb (°F)							Return Dry Bulb (°F)					
					85	80	75	70	65			85	80	75	70	65	
		75°F								85°F							
2125	72	42.8	6.3	-	-	-	-	-	37.6	6.4	-	-	-	-	-		
	67	35.4	6.5	1.6	1.5	1.4	1.2	-	28.6	6.8	-	-	-	-	-		
	62	31.9	6.2	4.4	4.3	4.2	4.1	4.0	24.7	6.5	-	-	-	-	-		
2550	72	50.9	6.2	-	-	-	-	-	48.3	6.4	-	-	-	-	-		
	67	42.1	6.4	6.2	5.4	4.7	3.9	-	37.3	6.8	3.3	2.9	2.5	2.0	-		
	62	38.0	6.1	16.6	15.8	15.0	14.3	13.5	32.5	6.5	13.0	12.5	12.1	11.6	11.2		
	57	29.4	6.1	16.6	15.8	15.0	14.3	13.5	22.5	6.4	10.6	10.1	9.7	9.3	8.8		
2975	72	59.1	6.2	-	-	-	-	-	58.9	6.3	-	-	-	-	-		
	67	48.9	6.4	10.8	9.4	8.0	6.6	-	46.0	6.7	7.9	6.8	5.7	4.6	-		
	62	44.0	6.1	28.7	27.3	25.9	24.5	23.1	40.2	6.4	26.6	25.5	24.4	23.3	22.2		
	57	34.1	6.0	27.7	27.3	25.9	24.5	23.1	28.4	6.4	22.4	22.2	21.1	20.0	19.0		
3400	72	67.2	6.2	-	-	-	-	-	69.6	6.3	-	-	-	-	-		
	67	55.6	6.3	15.4	13.3	11.3	9.2	-	54.7	6.7	12.5	10.7	9.0	7.3	-		
	62	50.1	6.0	40.9	38.8	36.8	34.7	32.6	48.0	6.4	40.2	38.5	36.7	35.0	33.3		
	57	38.8	6.0	38.8	38.8	36.8	34.7	32.6	34.3	6.3	34.3	34.3	32.6	30.8	29.1		
3825	72	68.6	6.1	-	-	-	-	-	69.7	6.2	-	-	-	-	-		
	67	56.7	6.3	19.7	17.0	14.4	11.7	-	54.6	6.6	17.2	14.9	12.5	10.2	-		
	62	51.1	6.0	46.5	45.5	42.8	40.1	37.5	47.9	6.3	45.3	45.4	43.1	40.7	38.3		
	57	39.6	5.9	39.6	39.6	36.9	34.3	31.6	34.0	6.3	34.0	34.0	31.6	29.3	26.9		
4250	72	69.9	6.1	-	-	-	-	-	69.8	6.2	-	-	-	-	-		
	67	57.8	6.3	24.0	20.8	17.5	14.2	-	54.5	6.6	22.0	19.0	16.0	13.1	-		
	62	52.1	5.9	52.1	52.1	48.8	45.6	42.3	47.7	6.3	47.7	47.7	47.7	46.4	43.4		
	57	40.4	5.9	40.4	40.4	37.1	33.9	30.6	33.7	6.2	33.7	33.7	30.7	27.8	24.8		

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR120 (10 Ton) Cooling (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		115°F										125°F					
2500	77	107.7	11.9	48.1	41.3	30.8	-	-	-	98.0	13.2	43.3	38.4	28.1	-	-	-
	72	101.7	11.7	68.7	58.2	47.7	37.3	-	-	92.6	13.0	65.1	54.8	44.5	34.3	-	-
	67	95.6	11.6	89.3	75.1	64.6	54.2	43.7	-	87.3	12.8	86.8	71.2	60.9	50.6	40.4	-
	62	89.0	11.4	89.0	89.0	75.9	65.4	54.9	44.4	81.8	12.6	81.8	81.8	71.4	61.2	50.9	40.6
3000	77	112.4	11.8	58.3	46.1	34.0	-	-	-	102.5	13.1	54.8	42.9	31.1	-	-	-
	72	106.1	11.7	76.9	64.8	52.6	40.5	-	-	96.9	13.0	72.9	61.0	49.2	37.3	-	-
	67	99.8	11.5	95.6	83.4	71.3	59.1	47.0	-	91.3	12.8	91.0	79.1	67.2	55.4	43.5	-
	62	92.8	11.3	92.8	92.8	83.7	71.5	59.4	47.2	85.6	12.5	85.6	85.6	78.9	67.0	55.1	43.2
	57	91.9	11.4	91.9	91.9	82.8	70.7	58.5	46.4	84.6	12.7	84.6	84.6	76.2	64.3	52.4	40.5
3500	77	117.1	11.8	68.5	51.0	37.2	-	-	-	107.0	13.1	66.3	47.5	34.0	-	-	-
	72	110.6	11.7	85.2	71.4	57.5	43.7	-	-	101.2	12.9	80.8	67.3	53.8	40.3	-	-
	67	104.0	11.5	101.9	91.8	77.9	64.1	50.3	-	95.3	12.7	95.2	87.1	73.6	60.1	46.6	-
	62	96.7	11.3	96.7	96.7	91.5	77.6	63.8	50.0	89.4	12.5	89.4	89.4	86.3	72.8	59.3	45.8
	57	95.7	11.4	95.7	95.7	90.5	76.7	62.9	49.1	88.3	12.6	88.3	88.3	83.4	69.9	56.4	42.9
4000	77	121.8	11.8	78.7	55.8	40.3	-	-	-	111.5	13.0	77.8	52.0	36.9	-	-	-
	72	115.0	11.6	93.4	77.9	62.5	47.0	-	-	105.4	12.8	88.6	73.5	58.4	43.3	-	-
	67	108.2	11.5	108.2	100.1	84.6	69.1	53.6	-	99.3	12.7	99.3	95.0	79.9	64.8	49.7	-
	62	100.6	11.3	100.6	100.6	99.3	83.8	68.3	52.8	93.1	12.4	93.1	93.1	93.1	78.6	63.5	48.4
	57	99.6	11.4	99.6	99.6	98.3	82.8	67.3	51.8	92.0	12.6	92.0	92.0	90.5	75.4	60.3	45.3
4500	72	116.2	11.6	100.1	83.2	66.2	49.3	-	-	106.4	12.9	95.1	78.5	62.0	45.5	-	-
	67	109.3	11.5	109.3	105.3	89.7	72.8	55.8	-	100.2	12.7	100.2	99.3	84.8	68.3	51.8	-
	62	101.7	11.3	101.7	101.7	101.0	84.1	67.1	50.2	94.0	12.4	94.0	94.0	94.0	77.7	61.2	44.7
	57	100.6	11.4	100.6	100.6	100.0	83.1	66.1	49.2	92.9	12.6	92.9	92.9	92.1	75.6	59.1	42.5
5000	72	117.5	11.7	106.8	88.4	70.0	51.6	-	-	107.3	12.9	101.5	83.6	65.6	47.7	-	-
	67	110.5	11.5	110.5	110.5	94.8	76.4	58.1	-	101.1	12.7	101.1	101.1	89.8	71.8	53.9	-
	62	102.7	11.3	102.7	102.7	102.7	84.4	66.0	47.6	94.8	12.5	94.8	94.8	94.8	76.8	58.9	40.9
	57	101.7	11.4	101.7	101.7	101.7	83.3	65.0	46.6	93.7	12.7	93.7	93.7	93.7	75.7	57.8	39.8

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR120 (10 Ton) Reheat (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		75°F										85°F					
2500	77	40.8	8.0	-	-	-	-	-	-	35.1	8.4	-	-	-	-	-	-
	72	42.8	7.6	-	-	-	-	-	-	36.6	8.0	-	-	-	-	-	-
	67	44.9	7.2	9.9	9.0	8.1	7.1	6.2	-	38.1	7.5	6.8	6.1	5.5	4.8	4.2	-
	62	39.9	6.9	19.1	18.2	17.3	16.3	15.4	14.5	33.8	7.2	14.6	13.9	13.3	12.6	12.0	11.3
3000	77	46.1	8.0	-	-	-	-	-	-	40.9	8.4	-	-	-	-	-	-
	72	48.4	7.6	-	-	-	-	-	-	42.7	7.9	-	-	-	-	-	-
	67	50.7	7.2	16.2	14.5	12.8	11.1	9.4	-	44.5	7.5	13.0	11.6	10.2	8.7	7.3	-
	62	45.2	6.8	30.9	29.2	27.5	25.7	24.0	22.3	39.5	7.2	26.8	25.3	23.9	22.5	21.0	19.6
	57	44.8	6.8	34.9	33.2	31.5	29.8	28.1	26.4	39.3	7.1	29.3	27.9	26.4	25.0	23.6	22.1
3500	77	51.4	8.0	-	-	-	-	-	-	46.7	8.3	-	-	-	-	-	-
	72	54.0	7.6	-	-	-	-	-	-	48.8	7.9	-	-	-	-	-	-
	67	56.6	7.1	22.5	20.0	17.5	15.1	12.6	-	50.9	7.5	19.3	17.1	14.8	12.6	10.4	-
	62	50.4	6.8	42.6	40.1	37.6	35.1	32.7	30.2	45.1	7.1	39.0	36.8	34.5	32.3	30.0	27.8
	57	49.9	6.8	45.0	44.2	43.2	40.7	38.3	35.8	44.9	7.1	39.9	39.2	38.4	36.1	33.9	31.6
4000	77	56.7	8.0	-	-	-	-	-	-	52.5	8.3	-	-	-	-	-	-
	72	59.6	7.6	-	-	-	-	-	-	54.9	7.9	-	-	-	-	-	-
	67	62.4	7.1	28.8	25.6	22.3	19.0	15.8	-	57.3	7.4	25.6	22.6	19.5	16.5	13.4	-
	62	55.6	6.8	54.3	51.1	47.8	44.6	41.3	38.0	50.8	7.1	50.8	48.2	45.1	42.1	39.1	36.0
	57	55.1	6.8	55.1	55.1	54.9	51.7	48.4	45.1	50.5	7.1	50.5	50.5	50.3	47.2	44.2	41.2
4500	72	60.0	7.6	-	-	-	-	-	-	56.7	7.9	-	-	-	-	-	-
	67	62.9	7.2	34.2	30.3	26.3	22.4	18.4	-	59.2	7.5	32.4	28.5	24.6	20.7	16.8	-
	62	56.0	6.9	55.4	53.7	52.1	48.1	44.2	40.2	52.5	7.2	52.5	51.2	49.7	45.8	41.9	38.0
	57	55.5	6.8	55.5	55.5	55.4	51.4	47.5	43.5	52.2	7.1	52.2	52.2	52.1	48.2	44.2	40.3
5000	72	60.5	7.7	-	-	-	-	-	-	58.5	8.0	-	-	-	-	-	-
	67	63.4	7.2	39.7	35.0	30.4	25.7	21.0	-	61.0	7.5	39.3	34.5	29.7	24.9	20.1	-
	62	56.4	6.9	56.4	56.4	56.4	51.7	47.1	42.4	54.2	7.2	54.2	54.2	54.2	49.5	44.7	39.9
	57	55.9	6.9	55.9	55.9	55.9	51.2	46.6	41.9	53.9	7.2	53.9	53.9	53.9	49.1	44.3	39.5

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR150 (12.5 Ton) Cooling (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM	WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)								Return Dry Bulb (°F)					
				90	85	80	75	70	65			90	85	80	75	70	65
		115°F										125°F					
3125	77	156.3	14.6	67.9	54.8	40.9	-	-	-	144.5	16.0	60.9	51.5	37.9	-	-	-
	72	142.6	14.5	90.8	77.0	63.1	49.3	-	-	131.3	15.9	86.6	73.0	59.4	45.8	-	-
	67	128.8	14.4	113.7	99.1	85.3	71.5	57.6	-	118.1	15.7	110.3	94.4	80.8	67.2	53.6	-
	62	118.4	14.2	118.4	118.4	105.7	91.8	78.0	64.1	108.8	15.6	108.8	108.8	102.4	87.6	74.0	60.4
3750	77	162.8	14.7	75.9	60.2	44.5	-	-	-	150.2	16.0	72.3	56.7	41.2	-	-	-
	72	148.5	14.6	100.0	84.3	68.6	52.9	-	-	136.4	15.9	95.5	80.0	64.4	48.9	-	-
	67	134.1	14.4	124.1	108.4	92.7	77.0	61.3	-	122.7	15.8	118.8	103.2	87.7	72.1	56.6	-
	62	123.3	14.3	123.3	123.3	114.8	99.1	83.4	67.7	113.0	15.6	113.0	113.0	109.8	94.3	78.7	63.2
	57	121.1	14.3	121.1	121.1	108.4	92.7	77.0	61.3	112.0	15.7	112.0	112.0	99.7	84.2	68.6	53.1
4375	77	169.3	14.7	83.9	65.6	48.0	-	-	-	155.8	16.1	83.6	61.9	44.4	-	-	-
	72	154.4	14.6	109.2	91.6	74.1	56.5	-	-	141.5	16.0	104.5	87.0	69.5	52.0	-	-
	67	139.5	14.5	134.5	117.6	100.1	82.5	65.0	-	127.2	15.8	127.2	112.0	94.5	77.0	59.5	-
	62	128.2	14.3	128.2	128.2	124.0	106.4	88.8	71.3	117.3	15.7	117.3	117.3	117.3	100.9	83.4	65.9
	57	126.0	14.4	126.0	126.0	117.1	99.5	81.9	64.4	116.2	15.7	116.2	116.2	107.5	90.0	72.6	55.1
5000	77	175.8	14.8	91.9	71.0	51.6	-	-	-	161.4	16.2	95.0	67.0	47.6	-	-	-
	72	160.3	14.7	118.4	98.9	79.5	60.1	-	-	146.6	16.0	113.4	93.9	74.5	55.1	-	-
	67	144.9	14.5	144.9	126.9	107.5	88.1	68.6	-	131.8	15.9	131.8	120.8	101.4	82.0	62.5	-
	62	133.1	14.4	133.1	133.1	133.1	113.7	94.3	74.9	121.5	15.7	121.5	121.5	121.5	107.6	88.1	68.7
	57	130.8	14.4	130.8	130.8	125.7	106.3	86.9	67.5	120.4	15.8	120.4	120.4	115.4	95.9	76.5	57.0
5625	72	163.7	14.7	128.0	107.1	86.2	65.3	-	-	148.9	16.0	122.7	102.0	81.2	60.4	-	-
	67	147.9	14.5	147.9	137.4	116.5	95.6	74.7	-	133.9	15.9	133.9	131.3	110.5	89.7	69.0	-
	62	135.9	14.4	135.9	135.9	135.9	115.0	94.1	73.2	123.4	15.7	123.4	123.4	123.4	105.4	84.6	63.9
	57	133.5	14.4	133.5	133.5	131.0	110.1	89.2	68.3	122.3	15.8	122.3	122.3	119.8	99.0	78.3	57.5
6250	72	167.0	14.7	137.7	115.3	92.9	70.5	-	-	151.2	16.0	132.0	110.0	87.9	65.8	-	-
	67	150.9	14.5	150.9	147.9	125.5	103.1	80.7	-	135.9	15.8	135.9	135.9	119.6	97.5	75.4	-
	62	138.6	14.4	138.6	138.6	138.6	116.3	93.9	71.5	125.3	15.7	125.3	125.3	125.3	103.2	81.1	59.0
	57	136.2	14.4	136.2	136.2	136.2	113.9	91.5	69.1	124.2	15.7	124.2	124.2	124.2	102.1	80.0	58.0

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

ZR150 (12.5 Ton) Reheat (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
CFM		WB (°F)	Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					Total Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
					Return Dry Bulb (°F)							Return Dry Bulb (°F)					
					85	80	75	70	65			85	80	75	70	65	
		75°F								85°F							
3125	72	83.6	9.7	-	-	-	-	-	83.0	10.2	-	-	-	-	-		
	67	76.2	9.2	11.5	10.1	8.7	7.3	-	73.4	9.4	12.6	11.4	10.1	8.8	-		
	62	70.5	8.7	34.8	33.4	32.0	30.6	29.2	66.4	8.9	44.7	43.4	42.1	40.9	39.6		
3750	72	85.8	9.9	-	-	-	-	-	84.3	10.5	-	-	-	-	-		
	67	78.2	9.3	14.5	12.7	10.9	9.1	-	74.4	9.7	10.8	9.3	7.9	6.4	-		
	62	72.3	8.8	43.6	41.8	40.0	38.2	36.4	67.3	9.3	47.1	45.6	44.2	42.7	41.3		
	57	69.0	9.3	49.8	48.1	46.3	44.5	42.7	65.5	9.7	55.5	54.1	52.7	51.2	49.8		
4375	72	88.0	10.0	-	-	-	-	-	85.5	10.9	-	-	-	-	-		
	67	80.2	9.4	17.4	15.2	13.1	10.9	-	75.5	10.1	8.9	7.2	5.6	4.0	-		
	62	74.2	8.9	52.3	50.2	48.0	45.8	43.7	68.2	9.6	49.5	47.9	46.2	44.6	43.0		
	57	70.8	9.5	59.9	57.7	55.5	53.4	51.2	66.4	10.0	59.4	57.6	56.0	54.4	52.8		
5000	72	90.1	10.1	-	-	-	-	-	86.8	11.3	-	-	-	-	-		
	67	82.2	9.5	20.3	17.8	15.2	12.7	-	76.5	10.5	7.0	5.2	3.4	1.6	-		
	62	76.0	9.0	61.1	58.5	56.0	53.5	50.9	69.1	10.0	51.9	50.1	48.3	46.5	44.7		
	57	72.6	9.6	69.9	67.3	64.8	62.3	59.7	67.4	10.4	63.3	61.2	59.4	57.6	55.8		
5625	72	96.1	10.3	-	-	-	-	-	94.4	11.3	-	-	-	-	-		
	67	87.6	9.6	24.1	21.1	18.1	15.2	-	83.4	10.5	16.4	13.9	11.3	8.8	-		
	62	81.0	9.1	72.5	69.6	66.6	63.7	60.7	75.4	9.9	75.4	73.1	70.6	68.0	65.5		
	57	77.3	9.7	76.0	74.7	71.8	68.8	65.8	73.4	10.4	73.4	73.4	73.4	73.4	71.5		
6250	72	102.0	10.4	-	-	-	-	-	102.0	11.3	-	-	-	-	-		
	67	93.0	9.8	27.8	24.5	21.1	17.7	-	90.3	10.4	25.9	22.6	19.3	16.0	-		
	62	86.0	9.2	84.0	80.6	77.2	73.8	70.5	81.7	9.9	81.7	81.7	81.7	81.7	81.7		
	57	82.1	9.8	82.1	82.1	78.7	75.3	71.9	79.5	10.3	79.5	79.5	79.5	79.5	79.5		

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 condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

Drive Selection

1. Determine side or bottom supply duct Application.
2. Determine desired airflow.
3. Calculate or measure the amount of external static pressure.
 - Add or deduct any additional static resistance from "Additional Static Resistance Table".
4. Using the operating point determined from steps 1, 2 & 3, locate this point on the appropriate supply air blower performance table. (Linear interpolation may be necessary.)
5. Noting the RPM and BHP from step 4, locate the appropriate motor and, or drive on the RPM selection table.
6. Review the BHP compared to the motor options available. Select the appropriate motor and, or drive.
7. Review the RPM range for the motor options available. Select the appropriate drive if multiple drives are available for the chosen motor.
8. Determine turns open to obtain the desired operation point.

Example

1. 2600 CFM
2. 1.6 iwg
3. Using the supply air blower performance table below, the following data point was located: 1268 RPM & 1.95 BHP.
4. Using the RPM selection table below, Size X and Model Y is found.
5. 1.95 BHP exceeds the maximum continuous BHP rating of the 1.5 HP motor. The 2 HP motor is required.
6. 1268 RPM is within the range of the 2 HP drives.
7. Using the 2 HP motor and drive, .5 turns open will achieve 1268 RPM.

Airflow Performance**Example Supply Air Blower Performance**

Air Flow (CFM)	Available External Static Pressure - IWG																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	1.5 HP & Field Supplied Drive						Standard 1.5 HP & Drive						Alternate 2 HP & Drive							
2200	804	0.50	866	0.71	925	0.90	982	1.06	1038	1.21	1092	1.35	1147	1.48	1203	1.61	1259	1.73	1317	1.87
2400	835	0.66	897	0.87	956	1.06	1013	1.22	1069	1.37	1124	1.51	1178	1.64	1234	1.77	1290	1.90	1348	2.03
2600	869	0.84	931	1.05	990	1.24	1047	1.40	1103	1.55	1158	1.69	1212	1.82	1268	1.95	1324	2.07	1382	2.21
2800	906	1.03	968	1.25	1027	1.43	1084	1.60	1139	1.75	1194	1.89	1249	2.02	1304	2.14	1361	2.27	-	-

Example RPM Selection

Size (Tons)	Model	Airflow Option	HP	Max BHP	Motor Sheave	Blower Sheave	6 Turns Open	5 Turns Open	4 Turns Open	3 Turns Open	2 Turns Open	1 Turn Open	Fully Closed
X	Y	Std.	1.5	1.73	1VM50	AK74	N/A	897	945	991	1035	1079	1126
		H. Static	2	2.30	1VM50	AK64	N/A	1039	1094	1150	1207	1256	1308

Example Additional Static Resistance

Size (Tons)	Model	CFM	Cooling Only	Economizer	4" Pleated Filter	Electric Heat kW					
						3	6	9	15	20	24
X	Y	900	0.05	-0.05	0.01	0.00	0.00	0.00	0.01	0.01	0.01
		1000	0.05	-0.03	0.02	0.00	0.00	0.00	0.02	0.02	0.02
		1100	0.04	-0.02	0.03	0.01	0.01	0.01	0.02	0.02	0.02
		1200	0.04	0.00	0.04	0.01	0.01	0.01	0.02	0.02	0.02
		1300	0.03	0.01	0.05	0.01	0.01	0.01	0.03	0.03	0.03

Altitude and Temperature Correction for CFM, Static Pressure and Power.

The information below should be used to assist in application of product when being applied at altitudes at or exceeding 1000 feet above sea level.

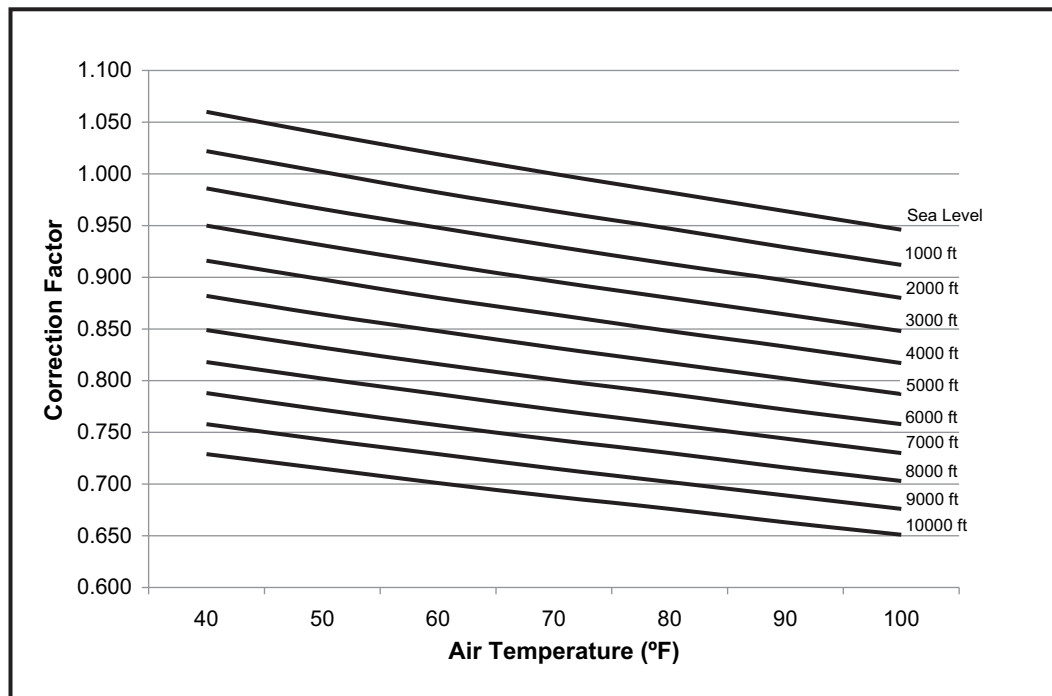
The air flow rates listed in the standard blower performance tables are based on standard air at sea level. As the altitude or temperature increases, the density of air decreases. In order to

use the indoor blower tables for high altitude applications, certain corrections are necessary.

A centrifugal fan is a "constant volume" device. This means that, if the rpm remains constant, the CFM delivered is the same regardless of the density of the air. However, since the air at high altitude is less dense, less static pressure will be generated and less power will be required than a similar application at sea level. Air density correction factors are shown in Table **Altitude/Temperature Correction Factors** and following Figure.

Altitude/Temperature Correction Factors

Air Temp.	Altitude (Ft.)										
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
40	1.060	1.022	0.986	0.950	0.916	0.882	0.849	0.818	0.788	0.758	0.729
50	1.039	1.002	0.966	0.931	0.898	0.864	0.832	0.802	0.772	0.743	0.715
60	1.019	0.982	0.948	0.913	0.880	0.848	0.816	0.787	0.757	0.729	0.701
70	1.000	0.964	0.930	0.896	0.864	0.832	0.801	0.772	0.743	0.715	0.688
80	0.982	0.947	0.913	0.880	0.848	0.817	0.787	0.758	0.730	0.702	0.676
90	0.964	0.929	0.897	0.864	0.833	0.802	0.772	0.744	0.716	0.689	0.663
100	0.946	0.912	0.880	0.848	0.817	0.787	0.758	0.730	0.703	0.676	0.651



The examples below will assist in determining the airflow performance of the product at altitude.

Example 1: What are the corrected CFM, static pressure, and BHP at an elevation of 5,000 ft. if the blower performance data is 6,000 CFM, 1.5 IWC and 4.0 BHP?

Solution: At an elevation of 5,000 ft. the indoor blower will still deliver 6,000 CFM if the rpm is unchanged. However, **Airflow Performance Table** must be used to determine the static pressure and BHP. Since no temperature data is given, we will assume an air temperature of 70°F. **Altitude/Temperature Correction Factors Table** shows the correction factor to be 0.832.

$$\begin{aligned}\text{Corrected static pressure} &= 1.5 \times 0.832 = 1.248 \text{ IWC} \\ \text{Corrected BHP} &= 4.0 \times 0.832 = 3.328\end{aligned}$$

Example 2: A system, located at 5,000 feet of elevation, is to deliver 6,000 CFM at a static pressure of 1.5". Use the unit blower tables to select the blower speed and the BHP requirement.

Solution: As in the example above, no temperature information is given so 70°F is assumed.

The 1.5" static pressure given is at an elevation of 5,000 ft. The first step is to convert this static pressure to equivalent sea level conditions.

Sea level static pressure = $1.5 / .832 = 1.80"$
Enter the blower table at 6000 CFM and static pressure of 1.8".
The rpm listed will be the same rpm needed at 5,000 ft.

Suppose that the corresponding BHP listed in the table is 3.2.
This value must be corrected for elevation.

$$\text{BHP at 5,000 ft.} = 3.2 \times .832 = 2.66$$

Indoor Blower Specifications

Size (Tons)	Model	Airflow Option	Motor					Motor Sheave			Blower Sheave			Belt
			HP	RPM	Eff.	SF	Frame	Datum Dia. (in.)	Bore (in.)	Model	Datum Dia. (in.)	Bore (in.)	Model	
037 (3)	ZH	Std.	1-1/2	1725	0.8	1.15	56	2.0 - 3.0	7/8	1VM34	6.5	1	AK69	A47
		H. Static	1-1/2	1725	0.8	1.15	56	3.0 - 4.0	7/8	1VL44	6.5	1	AK69	A47
049 (4)	ZH	Std.	1-1/2	1725	0.8	1.15	56	2.0 - 3.0	7/8	1VM34	5.2	1	AK56	A47
		H. Static	1-1/2	1725	0.8	1.15	56	3.0 - 4.0	7/8	1VL44	5.2	1	AK56	A47
061 (5)	ZH	Std.	1-1/2	1725	0.8	1.15	56	2.6 - 3.6	7/8	1VL40	5.7	1	AK61	A47
		H. Static	2	1725	0.8	1.15	56	4.2 - 5.2	7/8	1VP56	7.0	1	AK74	A51
078 (6.5)	ZH	Std.	1-1/2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A49
		H. Static	2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	6.0	1	AK64	A49
090 (7.5)	ZH	Std.	1-1/2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A49
		H. Static	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	5.7	1	AK61	A49
102 (8.5)	ZH	Std.	2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	9.0	1	AK94	A56
		H. Static	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
120 (10)	ZH	Std.	2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	8.0	1	AK84	A56
		H. Static	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
150 (12.5)	ZH	Std.	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
		H. Static	5	1725	0.87	1.15	184T	4.3 - 5.3	1-1/8	1VP56	6.7	1	BK77	BX55
037 (3)	ZJ	Std.	1-1/2	1725	0.8	1.15	56	2.0 - 3.0	7/8	1VM34	6.5	1	AK69	A47
		H. Static	1-1/2	1725	0.8	1.15	56	3.0 - 4.0	7/8	1VL44	6.5	1	AK69	A47
049 (4)	ZJ	Std.	1-1/2	1725	0.8	1.15	56	2.0 - 3.0	7/8	1VM34	5.2	1	AK56	A47
		H. Static	1-1/2	1725	0.8	1.15	56	3.0 - 4.0	7/8	1VL44	5.2	1	AK56	A47
061 (5)	ZJ	Std.	1-1/2	1725	0.8	1.15	56	2.6 - 3.6	7/8	1VL40	5.7	1	AK61	A47
		H. Static	2	1725	0.8	1.15	56	4.2 - 5.2	7/8	1VP56	7.0	1	AK74	A51
078 (6.5)	ZJ	Std.	1-1/2	1725	0.8	1.15	56	2.6 - 3.6	7/8	1VL40	7.0	1	AK74	A53
		H. Static	2	1725	0.8	1.15	56	3.6 - 4.6	7/8	1VM50	7.0	1	AK74	A54
090 (7.5)	ZJ	Std.	1-1/2	1725	0.8	1.15	56	2.6 - 3.6	7/8	1VL40	6.5	1	AK69	A52
		H. Static	3	1725	0.8	1.15	56	3.6 - 4.6	7/8	1VM50	6.5	1	AK69	A54
102 (8.5)	ZJ	Std.	2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	8.5	1	AK89	A56
		H. Static	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
120 (10)	ZJ	Std.	2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	8.0	1	AK84	A56
		H. Static	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
150 (12.5)	ZJ	Std.	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
		H. Static	5	1725	0.87	1.15	184T	4.3 - 5.3	1-1/8	1VP56	6.7	1	BK77	BX55
037 (3)	ZR	Std.	1-1/2	1725	0.8	1.15	56	1.2 - 2.9	7/8	1VP34	5.7	1	AK61	A47
		H. Static	1-1/2	1725	0.8	1.15	56	3.0 - 4.0	7/8	1VL44	5.5	1	AK59	A47
049 (4)	ZR	Std.	1-1/2	1725	0.8	1.15	56	1.2 - 2.9	7/8	1VP34	5.7	1	AK61	A47
		H. Static	1-1/2	1725	0.8	1.15	56	3.0 - 4.0	7/8	1VL44	5.5	1	AK59	A47
061 (5)	ZR	Std.	1-1/2	1725	0.8	1.15	56	1.2 - 2.9	7/8	1VP34	5.7	1	AK61	A47
		H. Static	2	1725	0.8	1.15	56	3.0 - 4.0	7/8	1VL44	5.5	1	AK59	A47
078 (6.5)	ZR	Std.	1-1/2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A49
		H. Static	2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	6.0	1	AK64	A49
090 (7.5)	ZR	Std.	1-1/2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A49
		H. Static	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	5.7	1	AK61	A49
102 (8.5)	ZR	Std.	2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	8.5	1	AK89	A56
		H. Static	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
120 (10)	ZR	Std.	2	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	8.0	1	AK84	A56
		H. Static	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
150 (12.5)	ZR	Std.	3	1725	0.8	1.15	56	3.4 - 4.4	7/8	1VM50	7.0	1	AK74	A54
		H. Static	5	1725	0.87	1.15	184T	4.3 - 5.3	1-1/8	1VP56	6.7	1	BK77	BX55

Power Exhaust Specifications

Model	Voltage	Motor			Unit (Per Circuit)			Fuse Size	CFM @ 0.1 ESP
		HP	RPM ¹	QTY	LRA	FLA	MCA		
2PE04704706	208/230-1-60	3/4	1075	1	24.9	5	6.3	10	4800
2PE04704746	460-1-60	3/4	1075	1	N/A	2.2	2.8	5	4800
2PE04704758	575-1-60	3/4	1050	1	N/A	1.5	1.9	4	4800

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

RPM Selection

Size (Tons)	Model	Airflow Option	HP	Max BHP	Motor Sheave	Blower Sheave	6 Turns Open	5 Turns Open	4 Turns Open	3 Turns Open	2 Turns Open	1 Turn Open	Fully Closed
037 (3)	ZH	Std.	1.5	1.5	1VM34	AK69	N/A	531	584	637	690	743	796
		H. Static	1.5	1.5	1VL44	AK69	N/A	796	849	902	955	1008	1062
049 (4)	ZH	Std.	1.5	1.5	1VM34	AK56	N/A	663	730	796	863	929	995
		H. Static	1.5	1.5	1VL44	AK56	N/A	995	1062	1128	1194	1261	1327
061 (5)	ZH	Std.	1.5	1.5	1VL40	AK61	N/A	787	847	908	968	1029	1089
		H. Static	2	2	1VP56	AK74	N/A	1035	1084	1134	1183	1232	1281
078 (6.5)	ZH	Std.	1.5	1.73	1VM50	AK74	N/A	887	936	986	1035	1084	1134
		H. Static	2	2.30	1VM50	AK64	N/A	1039	1094	1150	1207	1256	1308
090 (7.5)	ZH	Std.	1.5	1.73	1VM50	AK74	N/A	887	936	986	1035	1084	1134
		H. Static	3	3.45	1VM50	AK61	N/A	1088	1147	1205	1265	1312	1365
102 (8.5)	ZH	Std.	2	2.30	1VM50	AK94	N/A	690	728	767	805	843	882
		H. Static	3	3.45	1VM50	AK74	N/A	887	936	986	1035	1084	1134
120 (10)	ZH	Std.	2	2.30	1VM50	AK84	N/A	776	819	863	906	949	992
		H. Static	3	3.45	1VM50	AK74	N/A	887	936	986	1035	1084	1134
150 (12.5)	ZH	Std.	3	3.45	1VM50	AK74	N/A	887	936	986	1035	1084	1134
		H. Static	5	5.75	1VP56	BK77	1052	1095	1136	1175	1216	1272	N/A
037 (3)	ZJ	Std.	1.5	1.5	1VM34	AK69	N/A	531	584	637	690	743	796
		H. Static	1.5	1.5	1VL44	AK69	N/A	796	849	902	955	1008	1062
049 (4)	ZJ	Std.	1.5	1.5	1VM34	AK56	N/A	663	730	796	863	929	995
		H. Static	1.5	1.5	1VL44	AK56	N/A	995	1062	1128	1194	1261	1327
061 (5)	ZJ	Std.	1.5	1.5	1VL40	AK61	N/A	787	847	908	968	1029	1089
		H. Static	2	2	1VP56	AK74	N/A	1035	1084	1134	1183	1232	1281
078 (6.5)	ZJ	Std.	1.5	1.73	1VL40	AK74	N/A	641	690	739	789	838	887
		H. Static	2	2.30	1VM50	AK74	N/A	887	936	986	1035	1084	1134
090 (7.5)	ZJ	Std.	1.5	1.73	1VL40	AK69	N/A	690	743	796	849	902	955
		H. Static	3	3.45	1VM50	AK69	N/A	955	1008	1062	1115	1168	1221
102 (8.5)	ZJ	Std.	2	2.30	1VM50	AK89	N/A	731	771	812	852	893	934
		H. Static	3	3.45	1VM50	AK74	N/A	887	936	986	1035	1084	1134
120 (10)	ZJ	Std.	2	2.30	1VM50	AK84	N/A	776	819	863	906	949	992
		H. Static	3	3.45	1VM50	AK74	N/A	887	936	986	1035	1084	1134
150 (12.5)	ZJ	Std.	3	3.45	1VM50	AK74	N/A	887	936	986	1035	1084	1134
		H. Static	5	5.75	1VP56	BK77	1052	1095	1136	1175	1216	1272	N/A
037 (3.0)	ZR	Std.	1.5	1.5	1VP34	AK61	N/A	575	636	696	757	817	878
		H. Static	1.5	1.5	1VL44	AK59	N/A	878	941	1004	1066	1129	1192
049 (4.0)	ZR	Std.	1.5	1.5	1VP34	AK61	N/A	575	636	696	757	817	878
		H. Static	1.5	1.5	1VL44	AK59	N/A	878	941	1004	1066	1129	1192
061 (5.0)	ZR	Std.	1.5	1.5	1VP34	AK61	N/A	575	636	696	757	817	878
		H. Static	2	2	1VL44	AK59	N/A	878	941	1004	1066	1129	1192
078 (6.5)	ZR	Std.	1.5	1.73	1VM50	AK74	N/A	897	945	991	1035	1079	1126
		H. Static	2	2.30	1VM50	AK64	N/A	1039	1094	1150	1207	1256	1308
090 (7.5)	ZR	Std.	1.5	1.73	1VM50	AK74	N/A	897	945	991	1035	1079	1126
		H. Static	3	3.45	1VM50	AK61	N/A	1088	1147	1205	1265	1312	1365
102 (8.5)	ZR	Std.	2	2.30	1VM50	AK89	N/A	735	775	815	851	889	930
		H. Static	3	3.45	1VM50	AK74	N/A	880	928	972	1016	1067	1110
120 (10)	ZR	Std.	2	2.30	1VM50	AK84	N/A	785	821	858	901	940	980
		H. Static	3	3.45	1VM50	AK74	N/A	880	928	972	1016	1067	1110
150 (12.5)	ZR	Std.	3	3.45	1VM50	AK74	N/A	880	928	972	1016	1067	1110
		H. Static	5	5.75	1VP56	BK77	1052	1095	1136	1175	1216	1272	N/A

Additional Static Resistance - ZH037 thru 061

Size (Tons)	Model	CFM	Cooling Only ¹	Economizer ^{2 3}	4" Pleated Filter ²	Electric Heat kW ²					
						3	6	9	15	20	24
037 (3) 049 (4)	ZH	900	0.05	-0.05	0.01	0.00	0.00	0.00	0.01	0.01	0.01
		1000	0.05	-0.03	0.02	0.00	0.00	0.00	0.02	0.02	0.02
		1100	0.04	-0.02	0.03	0.01	0.01	0.01	0.02	0.02	0.02
		1200	0.04	0.00	0.04	0.01	0.01	0.01	0.02	0.02	0.02
		1300	0.03	0.01	0.05	0.01	0.01	0.01	0.03	0.03	0.03
		1400	0.03	0.03	0.07	0.02	0.02	0.02	0.03	0.03	0.03
		1500	0.03	0.04	0.08	0.02	0.02	0.02	0.04	0.04	0.04
		1600	0.02	0.06	0.09	0.02	0.02	0.02	0.04	0.04	0.04
		1700	0.02	0.07	0.10	0.03	0.03	0.03	0.05	0.05	0.05
		1800	0.01	0.08	0.11	0.03	0.03	0.03	0.05	0.05	0.05
		1900	0.01	0.10	0.13	0.04	0.04	0.04	0.06	0.06	0.06
061 (5)	ZH	2000	0.00	0.11	0.14	0.04	0.04	0.04	0.07	0.07	0.07
		1500	-0.01	0.13	0.07	0.02	0.02	0.02	0.04	0.04	0.04
		1600	-0.01	0.14	0.08	0.02	0.02	0.02	0.04	0.04	0.04
		1700	-0.01	0.15	0.08	0.03	0.03	0.03	0.05	0.05	0.05
		1800	-0.02	0.16	0.09	0.03	0.03	0.03	0.05	0.05	0.05
		1900	-0.02	0.17	0.10	0.04	0.04	0.04	0.06	0.06	0.06
		2000	-0.02	0.18	0.10	0.04	0.04	0.04	0.07	0.07	0.07
		2100	-0.03	0.19	0.11	0.05	0.05	0.05	0.07	0.07	0.07
		2200	-0.03	0.20	0.12	0.06	0.06	0.06	0.08	0.08	0.08
		2300	-0.04	0.21	0.12	0.06	0.06	0.06	0.09	0.09	0.09
		2400	-0.04	0.22	0.13	0.07	0.07	0.07	0.10	0.10	0.10
		2500	-0.05	0.23	0.14	0.08	0.08	0.08	0.11	0.11	0.11

1. Add these values to the available static resistance in the respective Blower Performance Tables.
2. Deduct these values from the available external static pressure shown in the respective Blower Performance Tables.
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 is less than 0.25 IWG, the unit will deliver less CFM during full economizer operation.

Additional Static Resistance - ZJ/ZR037 thru 061

Size (Tons)	Model	CFM	Cooling Only ¹	Economizer ^{2 3}	4" Pleated Filter ²	Electric Heat kW ²					
						3	6	9	15	20	24
037 (3)	ZJ/ZR	900	0.05	-0.05	0.01	0.00	0.00	0.00	0.01	0.01	0.01
		1000	0.05	-0.03	0.02	0.00	0.00	0.00	0.02	0.02	0.02
		1100	0.04	-0.02	0.03	0.01	0.01	0.01	0.02	0.02	0.02
		1200	0.04	0.00	0.04	0.01	0.01	0.01	0.02	0.02	0.02
		1300	0.03	0.01	0.05	0.01	0.01	0.01	0.03	0.03	0.03
		1400	0.03	0.03	0.07	0.02	0.02	0.02	0.03	0.03	0.03
		1500	0.03	0.04	0.08	0.02	0.02	0.02	0.04	0.04	0.04
049 (4) 061 (5)	ZJ/ZR	1200	-0.01	0.10	0.05	0.01	0.01	0.01	0.02	0.02	0.02
		1300	-0.01	0.11	0.06	0.01	0.01	0.01	0.03	0.03	0.03
		1400	-0.01	0.12	0.06	0.02	0.02	0.02	0.03	0.03	0.03
		1500	-0.01	0.13	0.07	0.02	0.02	0.02	0.04	0.04	0.04
		1600	-0.01	0.14	0.08	0.02	0.02	0.02	0.04	0.04	0.04
		1700	-0.01	0.15	0.08	0.03	0.03	0.03	0.05	0.05	0.05
		1800	-0.02	0.16	0.09	0.03	0.03	0.03	0.05	0.05	0.05
		1900	-0.02	0.17	0.10	0.04	0.04	0.04	0.06	0.06	0.06
		2000	-0.02	0.18	0.10	0.04	0.04	0.04	0.07	0.07	0.07
		2100	-0.03	0.19	0.11	0.05	0.05	0.05	0.07	0.07	0.07
		2200	-0.03	0.20	0.12	0.06	0.06	0.06	0.08	0.08	0.08
		2300	-0.04	0.21	0.12	0.06	0.06	0.06	0.09	0.09	0.09
		2400	-0.04	0.22	0.13	0.07	0.07	0.07	0.10	0.10	0.10
		2500	-0.05	0.23	0.14	0.08	0.08	0.08	0.11	0.11	0.11

1. Add these values to the available static resistance in the respective Blower Performance Tables.
2. Deduct these values from the available external static pressure shown in the respective Blower Performance Tables.
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 is less than 0.25 IWG, the unit will deliver less CFM during full economizer operation.

Additional Static Resistance - ZH/ZR078 thru 150

Size (Tons)	Model	CFM	Cooling Only ¹	Economizer ^{2 3}	4" Filter ²	Electric Heat kW ²				
						09	18	24	36	54
078 (6.5) 090 (7.5)	ZH/ZR	1900	0.00	0.07	0.10	0.05	0.06	0.07	0.08	0.10
		2100	-0.01	0.09	0.11	0.06	0.07	0.08	0.09	0.11
		2300	-0.01	0.11	0.12	0.07	0.08	0.09	0.10	0.13
		2500	-0.02	0.13	0.14	0.08	0.09	0.10	0.11	0.14
		2700	-0.03	0.16	0.15	0.09	0.10	0.12	0.13	0.16
		2900	-0.04	0.18	0.16	0.10	0.11	0.13	0.14	0.18
		3100	-0.05	0.20	0.18	0.12	0.13	0.15	0.16	0.20
		3300	-0.06	0.22	0.19	0.13	0.14	0.17	0.18	0.22
		3500	-0.07	0.24	0.20	0.15	0.16	0.19	0.20	0.24
		3700	-0.08	0.27	0.21	0.17	0.18	0.21	0.22	0.26
		3900	-0.09	0.29	0.23	0.19	0.20	0.23	0.24	0.28
		4100	-0.09	0.31	0.24	0.21	0.22	0.25	0.26	0.31
		4300	-0.10	0.30	0.25	0.23	0.24	0.28	0.29	0.34
		4500	-0.11	0.35	0.26	0.25	0.26	0.30	0.31	0.37
102 (8.5) 120 (10) 150 (12.5)	ZH/ZR	1900	0.06	0.02	0.12	0.05	0.06	0.07	0.08	0.10
		2100	0.07	0.02	0.13	0.06	0.07	0.08	0.09	0.11
		2300	0.08	0.04	0.14	0.07	0.08	0.09	0.10	0.13
		2500	0.09	0.11	0.16	0.08	0.09	0.10	0.11	0.14
		2700	0.11	0.18	0.17	0.09	0.10	0.12	0.13	0.16
		2900	0.12	0.25	0.19	0.10	0.11	0.13	0.14	0.18
		3100	0.14	0.31	0.20	0.12	0.13	0.15	0.16	0.20
		3300	0.16	0.37	0.22	0.13	0.14	0.17	0.18	0.22
		3500	0.18	0.43	0.25	0.15	0.16	0.19	0.20	0.24
		3700	0.20	0.49	0.27	0.17	0.18	0.21	0.22	0.26
		3900	0.23	0.54	0.29	0.19	0.20	0.23	0.24	0.28
		4100	0.25	0.58	0.32	0.21	0.22	0.25	0.26	0.31
		4300	0.28	0.65	0.35	0.23	0.24	0.28	0.29	0.34
		4500	0.30	0.69	0.38	0.25	0.26	0.30	0.31	0.37
		4700	0.33	0.74	0.41	0.28	0.29	0.33	0.34	0.40
		4900	0.36	0.78	0.44	0.30	0.31	0.35	0.37	0.43
		5100	0.39	0.82	0.47	0.33	0.34	0.38	0.40	0.46
		5300	0.42	0.86	0.51	0.35	0.37	0.41	0.43	0.49
		5500	0.45	0.89	0.56	0.38	0.40	0.44	0.46	0.53
		5700	0.48	0.93	0.58	0.41	0.43	0.47	0.49	0.56
		5900	0.52	0.96	0.62	0.44	0.46	0.50	0.53	0.59
		6100	0.56	0.98	0.67	0.47	0.49	0.53	0.56	0.62
		6300	0.60	1.01	0.71	0.50	0.53	0.56	0.59	0.65

1. Add these values to the available static resistance in the respective Blower Performance Tables.
2. Deduct these values from the available external static pressure shown in the respective Blower Performance Tables.
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 is less than 0.25 IWG, the unit will deliver less CFM during full economizer operation.

Additional Static Resistance - ZJ078-150

Size (Tons)	Model	CFM	Cooling Only ¹	Economizer ^{2,3}	4" Filter ²	Electric Heat kW ²				
						9	18	24	36	54
078 (6.5) 090 (7.5) 102 (8.5) 120 (10) 150 (12.5)	ZJ	1900	0.06	0.02	0.12	0.05	0.06	0.07	0.08	0.10
		2100	0.07	0.02	0.13	0.06	0.07	0.08	0.09	0.11
		2300	0.08	0.04	0.14	0.07	0.08	0.09	0.10	0.13
		2500	0.09	0.11	0.16	0.08	0.09	0.10	0.11	0.14
		2700	0.11	0.18	0.17	0.09	0.10	0.12	0.13	0.16
		2900	0.12	0.25	0.19	0.10	0.11	0.13	0.14	0.18
		3100	0.14	0.31	0.20	0.12	0.13	0.15	0.16	0.20
		3300	0.16	0.37	0.22	0.13	0.14	0.17	0.18	0.22
		3500	0.18	0.43	0.26	0.15	0.16	0.19	0.20	0.24
		3700	0.20	0.49	0.27	0.17	0.18	0.21	0.22	0.26
		3900	0.23	0.54	0.29	0.19	0.20	0.23	0.24	0.28
		4100	0.25	0.58	0.32	0.21	0.22	0.25	0.26	0.31
		4300	0.28	0.65	0.35	0.23	0.24	0.28	0.29	0.34
		4500	0.30	0.69	0.38	0.25	0.26	0.30	0.31	0.37
		4700	0.33	0.74	0.41	0.28	0.29	0.33	0.34	0.40
		4900	0.36	0.78	0.44	0.30	0.31	0.35	0.37	0.43
		5100	0.39	0.82	0.47	0.33	0.34	0.38	0.40	0.46
		5300	0.42	0.86	0.51	0.35	0.37	0.41	0.43	0.49
		5500	0.45	0.89	0.55	0.38	0.40	0.44	0.46	0.53
		5700	0.48	0.93	0.58	0.41	0.43	0.47	0.49	0.56
		5900	0.52	0.96	0.62	0.44	0.46	0.50	0.53	0.59
		6100	0.56	0.98	0.67	0.47	0.49	0.53	0.56	0.62
		6300	0.60	1.01	0.71	0.50	0.53	0.56	0.59	0.65

1. Add these values to the available static resistance in the respective Blower Performance Tables.
2. Deduct these values from the available external static pressure shown in the respective Blower Performance Tables.
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 is less than 0.25 IWG, the unit will deliver less CFM during full economizer operation.

Gas Heat Minimum Supply Air

Size (Tons)	Model	Heat Size	Supply Air (CFM)	
			Heating	
			Min	Max
037 (3)	ZH/ZJ/ZR	H06 / N06	890	2220
		H08 / N08	915	2370
		H12 / N12	1130	1800
049 (4)	ZH/ZJ/ZR	H06 / N06	890	2220
		H08 / N08	915	2370
		H12 / N12	1290	2250
061 (5)	ZH/ZJ/ZR	H08 / N08	915	2370
		H12 / N12	1380	2570
		H16 / N16	1580	2630
078 (6.5)	ZH/ZJ/ZR	N12	1950	3250
		N18	1950	3250
090 (7.5)	ZH/ZJ/ZR	N12	2250	3750
		N18	2250	3750
102 (8.5)	ZH/ZJ/ZR	N12	2550	4250
		N18	2550	4250
120 (10)	ZH/ZJ/ZR	N18	3000	5000
		N24	3000	5000
150 (12.5)	ZH/ZJ/ZR	N18	3750	6250
		N24	3750	6250

Electric Heat Minimum Supply Air**3 thru 5 Tons**

Size (Tons)	Model	Voltage	Minimum Supply Air (CFM)					
			Heater kW					
			3	6	9	15	20	24
037 (3)	ZH/ZJ/ZR	208/230-3-60	960	960	1020	1020	-	-
		460-3-60	980	960	960	960	-	-
		600-3-60	-	-	960	960	-	-
049 (4)	ZH/ZJ/ZR	208/230-3-60	-	1280	1420	1420	1420	-
		460-3-60	-	1400	1400	1400	1400	-
		600-3-60	-	-	1400	1400	1400	-
061 (5)	ZH/ZJ/ZR	208/230-3-60	-	1600	1600	1600	1600	1600
		460-3-60	-	1600	1600	1600	1600	1600
		600-3-60	-	-	1600	1600	1600	1600

6-1/2 thru 12-1/5 Tons

Size (Tons)	Model	Voltage	Minimum Supply Air (CFM)				
			Heater kW				
			9	18	24	36	54
078 (6.5)	ZH/ZJ/ZR	208/230-3-60	1950	1950	1950	1950	-
		460-3-60	1950	1950	1950	1950	-
		600-3-60	1950	1950	1950	1950	-
090 (7.5)	ZH/ZJ/ZR	208/230-3-60	2250	2250	2250	2250	-
		460-3-60	2250	2250	2250	2250	-
		600-3-60	2250	2250	2250	2250	-
102 (8.5)	ZH/ZJ/ZR	208/230-3-60	2550	2550	2550	2550	-
		460-3-60	2550	2550	2550	2550	-
		600-3-60	2550	2550	2550	2550	-
120 (10)	ZH/ZJ/ZR	208/230-3-60	-	3000	3000	3000	3500
		460-3-60	-	3000	3000	3000	3000
		600-3-60	-	3000	3000	3000	3500
150 (12.5)	ZH/ZJ/ZR	208/230-3-60	-	3750	3750	3750	4000
		460-3-60	-	3750	3750	3750	3750
		600-3-60	-	3750	3750	3750	3750

Airflow Performance

ZH037-150 Side Duct Application

ZH037 (3.0 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard 1.5 HP & Drive								Hi Static 1.5 HP & Drive											
900	560	0.29	628	0.35	695	0.42	760	0.51	823	0.61	886	0.72	949	0.82	1011	0.92	1073	1.01	1136	1.09
1000	582	0.29	650	0.34	716	0.42	781	0.51	845	0.61	908	0.71	970	0.82	1032	0.92	1095	1.01	1158	1.08
1100	601	0.30	670	0.35	736	0.43	801	0.52	864	0.62	927	0.72	990	0.83	1052	0.93	1114	1.02	1177	1.09
1200	620	0.32	688	0.37	754	0.45	819	0.54	883	0.64	946	0.74	1008	0.85	1070	0.95	1133	1.04	1196	1.11
1300	638	0.35	706	0.40	772	0.48	837	0.57	901	0.67	964	0.77	1026	0.88	1088	0.98	1151	1.06	1214	1.14
1400	655	0.39	724	0.44	790	0.51	855	0.60	918	0.70	981	0.81	1044	0.91	1106	1.01	1168	1.10	1231	1.18
1500	673	0.43	741	0.48	807	0.56	872	0.65	936	0.75	999	0.85	1061	0.96	1124	1.06	1186	1.15	1249	1.22
	1.5 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZH049 (4.0 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																					
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0			
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
	FS ⁴		Standard 1.5 HP & Drive										Hi Static 1.5 HP & Drive									
1200	620	0.32	688	0.37	754	0.45	819	0.54	883	0.64	946	0.74	1008	0.85	1070	0.95	1133	1.04	1196	1.11		
1300	638	0.35	706	0.40	772	0.48	837	0.57	901	0.67	964	0.77	1026	0.88	1088	0.98	1151	1.06	1214	1.14		
1400	655	0.39	724	0.44	790	0.51	855	0.60	918	0.70	981	0.81	1044	0.91	1106	1.01	1168	1.10	1231	1.18		
1500	673	0.43	741	0.48	807	0.56	872	0.65	936	0.75	999	0.85	1061	0.96	1124	1.06	1186	1.15	1249	1.22		
1600	691	0.48	759	0.54	825	0.61	890	0.70	954	0.80	1017	0.90	1079	1.01	1141	1.11	1204	1.20	1267	1.27		
1700	709	0.54	777	0.59	843	0.67	908	0.76	972	0.86	1035	0.96	1097	1.07	1160	1.17	1222	1.26	1285	1.33		
1800	728	0.60	796	0.66	862	0.73	927	0.82	991	0.92	1053	1.03	1116	1.13	1178	1.23	1241	1.32	1303	1.39		
1900	747	0.67	815	0.73	881	0.80	946	0.89	1010	0.99	1073	1.09	1135	1.20	1197	1.30	1260	1.39	1323	1.46		
2000	766	0.75	834	0.80	901	0.87	966	0.96	1029	1.06	1092	1.17	1155	1.27	1217	1.37	1279	1.46	-	-		

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZH061 (5.0 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	1.5 HP & Field Supplied Drive						Standard 1.5 HP & Drive										Hi Static 2 HP & Drive			
1500	659	0.35	719	0.46	780	0.57	843	0.67	905	0.77	964	0.87	1020	0.97	1071	1.07	1116	1.17	1154	1.28
1600	675	0.38	735	0.50	796	0.60	859	0.71	920	0.81	980	0.91	1036	1.01	1087	1.11	1132	1.21	1170	1.32
1700	691	0.42	751	0.54	812	0.64	875	0.75	936	0.85	996	0.95	1052	1.05	1103	1.15	1148	1.25	1186	1.36
1800	707	0.47	767	0.58	829	0.69	891	0.79	953	0.90	1012	0.99	1069	1.09	1120	1.20	1165	1.30	1202	1.41
1900	724	0.53	784	0.64	846	0.75	908	0.85	970	0.95	1029	1.05	1085	1.15	1137	1.25	1182	1.35	1219	1.46
2000	741	0.59	801	0.70	863	0.81	925	0.91	987	1.01	1047	1.11	1103	1.21	1154	1.31	1199	1.41	1236	1.52
2100	759	0.65	819	0.77	881	0.87	943	0.98	1005	1.08	1065	1.18	1121	1.28	1172	1.38	1217	1.48	1254	1.59
2200	778	0.73	838	0.84	900	0.95	962	1.05	1024	1.15	1083	1.25	1139	1.35	1191	1.45	1236	1.56	1273	1.66
2300	797	0.81	857	0.92	919	1.03	981	1.13	1043	1.23	1103	1.33	1159	1.43	1210	1.53	1255	1.64	1292	1.74
2400	817	0.90	877	1.01	939	1.12	1002	1.22	1063	1.32	1123	1.42	1179	1.52	1230	1.62	1275	1.73	1312	1.83
2500	838	1.00	898	1.11	960	1.22	1022	1.32	1084	1.42	1144	1.52	1200	1.62	1251	1.72	1296	1.82	1333	1.93
FS ⁴																				

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZH078 (6.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive						Standard 1.5 HP & Drive								Hi Static 2 HP & Drive					
1800	751	0.22	813	0.43	872	0.62	929	0.78	985	0.93	1040	1.07	1095	1.20	1150	1.33	1206	1.46	1265	1.59
2000	776	0.35	838	0.56	897	0.75	954	0.92	1010	1.07	1064	1.20	1119	1.33	1175	1.46	1231	1.59	1289	1.72
2200	804	0.50	866	0.71	925	0.90	982	1.06	1038	1.21	1092	1.35	1147	1.48	1203	1.61	1259	1.73	1317	1.87
2400	835	0.66	897	0.87	956	1.06	1013	1.22	1069	1.37	1124	1.51	1178	1.64	1234	1.77	1290	1.90	1348	2.03
2600	869	0.84	931	1.05	990	1.24	1047	1.40	1103	1.55	1158	1.69	1212	1.82	1268	1.95	1324	2.07	1382	2.21
2800	906	1.03	968	1.25	1027	1.43	1084	1.60	1139	1.75	1194	1.89	1249	2.02	1304	2.14	1361	2.27	-	-
3000	945	1.25	1007	1.46	1066	1.65	1123	1.81	1179	1.96	1234	2.10	1288	2.23	-	-	-	-	-	-
3200	987	1.48	1048	1.69	1107	1.88	1165	2.04	1220	2.19	-	-	-	-	-	-	-	-	-	-
3400	1030	1.73	1092	1.94	1151	2.12	1208	2.29	-	-	-	-	-	-	-	-	-	-	-	-
	2 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZH090 (7.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 1.5 HP & Drive								Hi Static 3 HP & Drive							
2000	776	0.35	838	0.56	897	0.75	954	0.92	1010	1.07	1064	1.20	1119	1.33	1175	1.46	1231	1.59	1289	1.72
2200	804	0.50	866	0.71	925	0.90	982	1.06	1038	1.21	1092	1.35	1147	1.48	1203	1.61	1259	1.73	1317	1.87
2400	835	0.66	897	0.87	956	1.06	1013	1.22	1069	1.37	1124	1.51	1178	1.64	1234	1.77	1290	1.90	1348	2.03
2600	869	0.84	931	1.05	990	1.24	1047	1.40	1103	1.55	1158	1.69	1212	1.82	1268	1.95	1324	2.07	1382	2.21
2800	906	1.03	968	1.25	1027	1.43	1084	1.60	1139	1.75	1194	1.89	1249	2.02	1304	2.14	1361	2.27	1419	2.40
3000	945	1.25	1007	1.46	1066	1.65	1123	1.81	1179	1.96	1234	2.10	1288	2.23	1344	2.36	1400	2.48	1458	2.62
3200	987	1.48	1048	1.69	1107	1.88	1165	2.04	1220	2.19	1275	2.33	1330	2.46	1385	2.59	1442	2.71	1500	2.85
3400	1030	1.73	1092	1.94	1151	2.12	1208	2.29	1264	2.44	1319	2.58	1374	2.71	1429	2.84	1485	2.96	1544	3.10
3600	1076	1.99	1138	2.20	1197	2.39	1254	2.56	1310	2.71	1364	2.84	1419	2.97	1475	3.10	1531	3.23	1589	3.36
3800	1124	2.27	1185	2.48	1245	2.67	1302	2.84	1357	2.99	1412	3.12	1467	3.25	1522	3.38	-	-	-	-
	3 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZH102 (8.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 2 HP & Drive						Hi Static 3 HP & Drive									
2600	628	0.56	678	0.76	730	0.93	781	1.09	833	1.25	883	1.41	933	1.59	980	1.80	1025	2.05	1068	2.35
2800	648	0.67	698	0.87	750	1.04	801	1.20	853	1.36	903	1.52	953	1.70	1000	1.91	1046	2.16	1088	2.46
3000	666	0.80	717	1.00	768	1.17	820	1.33	871	1.49	922	1.65	971	1.83	1019	2.04	1064	2.29	1106	2.59
3200	684	0.95	735	1.15	786	1.32	838	1.48	889	1.63	940	1.80	989	1.98	1037	2.19	1082	2.44	1124	2.74
3400	702	1.11	753	1.31	804	1.48	856	1.64	907	1.79	958	1.96	1007	2.14	1055	2.35	1100	2.60	1142	2.90
3600	721	1.28	772	1.48	824	1.65	875	1.81	927	1.97	977	2.13	1027	2.31	1074	2.52	1119	2.77	-	-
3800	742	1.47	793	1.67	844	1.84	896	2.00	947	2.15	998	2.32	1047	2.50	1095	2.71	1140	2.96	-	-
4000	765	1.67	815	1.86	867	2.04	918	2.19	970	2.35	1020	2.51	1070	2.70	1117	2.91	-	-	-	-
4200	789	1.87	840	2.07	891	2.24	943	2.40	995	2.56	1045	2.72	1094	2.90	-	-	-	-	-	-
	3 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZH120 (10 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹											
	0.2		0.4		0.6		0.8		1.0		1.2	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 2 HP & Drive				Hi Static 3 HP & Drive			
2600	675	0.53	726	0.74	776	0.94	824	1.12	870	1.30	914	1.48
2800	686	0.63	738	0.84	787	1.04	835	1.23	881	1.41	925	1.58
3000	699	0.75	750	0.96	800	1.16	847	1.34	893	1.52	938	1.70
3200	713	0.88	764	1.09	814	1.28	861	1.47	907	1.65	952	1.83
3400	728	1.02	779	1.23	829	1.43	877	1.61	923	1.79	967	1.97
3600	745	1.18	796	1.39	846	1.59	893	1.77	939	1.95	984	2.13
3800	763	1.36	815	1.57	864	1.76	912	1.95	958	2.13	1002	2.31
4000	783	1.55	835	1.76	884	1.96	932	2.15	978	2.33	1022	2.50
4200	805	1.77	856	1.98	906	2.17	953	2.36	999	2.54	1044	2.72
4400	828	2.00	879	2.21	929	2.41	976	2.59	1022	2.77	1067	2.95
4600	852	2.25	904	2.46	953	2.66	1001	2.85	1047	3.03	1092	3.20
4800	879	2.52	930	2.73	980	2.93	1027	3.12	1073	3.30	-	-
5000	906	2.81	958	3.02	1007	3.22	1055	3.41	-	-	-	-

3 HP & Field Supplied Drive

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZH150 (12.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹											
	0.2		0.4		0.6		0.8		1.0		1.2	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 3 HP & Drive				Hi Static 5 HP & Drive			
3200	713	0.88	764	1.09	814	1.28	861	1.47	907	1.65	952	1.83
3400	728	1.02	779	1.23	829	1.43	877	1.61	923	1.79	967	1.97
3600	745	1.18	796	1.39	846	1.59	893	1.77	939	1.95	984	2.13
3800	763	1.36	815	1.57	864	1.76	912	1.95	958	2.13	1002	2.31
4000	783	1.55	835	1.76	884	1.96	932	2.15	978	2.33	1022	2.50
4200	805	1.77	856	1.98	906	2.17	953	2.36	999	2.54	1044	2.72
4400	828	2.00	879	2.21	929	2.41	976	2.59	1022	2.77	1067	2.95
4600	852	2.25	904	2.46	953	2.66	1001	2.85	1047	3.03	1092	3.20
4800	879	2.52	930	2.73	980	2.93	1027	3.12	1073	3.30	1118	3.47
5000	906	2.81	958	3.02	1007	3.22	1055	3.41	1101	3.59	1146	3.76
5200	936	3.12	987	3.33	1037	3.53	1084	3.72	1130	3.90	1175	4.07
5400	966	3.45	1018	3.66	1067	3.86	1115	4.05	1161	4.23	1206	4.40
5600	999	3.80	1050	4.01	1100	4.20	1147	4.39	1193	4.57	1238	4.75
5800	1032	4.16	1084	4.37	1133	4.57	1181	4.75	1227	4.93	1271	5.11
6000	1067	4.54	1119	4.75	1168	4.95	1216	5.13	1262	5.31	1306	5.49
6200	1103	4.94	1155	5.15	1204	5.34	1252	5.53	1298	5.71	-	-

5 HP & Field Supplied Drive

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZH037-150 Bottom Duct Application**ZH037 (3.0 Ton) Bottom Duct**

Air Flow (CFM)	Available External Static Pressure - IWG ¹																							
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0					
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
900 1000 1100 1200 1300 1400 1500	Standard 1.5 HP & Drive						Hi Static 1.5 HP & Drive																	
	605	0.23	671	0.33	738	0.42	804	0.52	869	0.62	933	0.71	995	0.80	1054	0.89	1111	0.98	1164	1.07				
	621	0.25	688	0.34	754	0.44	820	0.53	885	0.63	949	0.72	1011	0.82	1071	0.91	1127	1.00	1180	1.09				
	637	0.27	703	0.36	769	0.46	835	0.56	900	0.65	964	0.74	1026	0.84	1086	0.93	1142	1.02	1195	1.11				
	651	0.30	717	0.39	784	0.49	850	0.58	915	0.68	979	0.77	1041	0.87	1100	0.96	1157	1.05	1210	1.13				
	666	0.33	732	0.43	799	0.52	865	0.62	930	0.71	994	0.81	1056	0.90	1115	0.99	1172	1.08	1225	1.17				
	681	0.37	747	0.47	814	0.56	880	0.66	945	0.75	1009	0.85	1071	0.94	1130	1.03	1187	1.12	1240	1.21				
	697	0.42	763	0.51	830	0.61	896	0.71	961	0.80	1025	0.90	1087	0.99	1146	1.08	1203	1.17	1256	1.26				
1.5 HP & Field Supplied Drive																								

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZH049 (4.0 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	FS ⁴		Standard 1.5 HP & Drive										Hi Static 1.5 HP & Drive							
1200	651	0.30	717	0.39	784	0.49	850	0.58	915	0.68	979	0.77	1041	0.87	1100	0.96	1157	1.05	1210	1.13
1300	666	0.33	732	0.43	799	0.52	865	0.62	930	0.71	994	0.81	1056	0.90	1115	0.99	1172	1.08	1225	1.17
1400	681	0.37	747	0.47	814	0.56	880	0.66	945	0.75	1009	0.85	1071	0.94	1130	1.03	1187	1.12	1240	1.21
1500	697	0.42	763	0.51	830	0.61	896	0.71	961	0.80	1025	0.90	1087	0.99	1146	1.08	1203	1.17	1256	1.26
1600	714	0.47	780	0.57	846	0.66	913	0.76	978	0.86	1042	0.95	1103	1.04	1163	1.14	1220	1.22	1273	1.31
1700	732	0.53	798	0.63	864	0.73	930	0.82	996	0.92	1059	1.01	1121	1.10	1181	1.20	1237	1.29	1291	1.37
1800	751	0.60	817	0.70	883	0.79	950	0.89	1015	0.98	1079	1.08	1140	1.17	1200	1.26	1257	1.35	1310	1.44
1900	771	0.68	837	0.77	904	0.87	970	0.96	1035	1.06	1099	1.15	1161	1.25	1220	1.34	1277	1.43	-	-
2000	793	0.75	859	0.85	925	0.95	991	1.04	1056	1.14	1120	1.23	1182	1.32	1242	1.42	1298	1.51	-	-

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZH061 (5.0 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	1.5 HP & Field Supplied Drive				Standard 1.5 HP & Drive								Hi Static 2 HP & Drive							
1500	673	0.47	736	0.54	797	0.63	855	0.72	910	0.82	964	0.92	1016	1.03	1067	1.14	1117	1.25	1166	1.36
1600	693	0.49	756	0.57	817	0.65	874	0.75	930	0.85	984	0.95	1036	1.06	1087	1.17	1137	1.28	1186	1.39
1700	713	0.53	777	0.60	837	0.69	895	0.78	951	0.88	1004	0.98	1057	1.09	1107	1.20	1157	1.31	1207	1.42
1800	734	0.57	797	0.65	858	0.73	916	0.83	971	0.92	1025	1.03	1077	1.14	1128	1.25	1178	1.36	1228	1.47
1900	755	0.62	819	0.70	879	0.79	937	0.88	992	0.98	1046	1.08	1098	1.19	1149	1.30	1199	1.41	1249	1.52
2000	776	0.69	840	0.76	900	0.85	958	0.94	1014	1.04	1067	1.14	1120	1.25	1171	1.36	1221	1.47	1270	1.59
2100	798	0.76	861	0.84	921	0.92	979	1.02	1035	1.11	1089	1.22	1141	1.32	1192	1.44	1242	1.55	1291	1.66
2200	819	0.84	882	0.92	943	1.00	1001	1.10	1056	1.20	1110	1.30	1162	1.41	1213	1.52	1263	1.63	1312	1.74
2300	840	0.93	903	1.01	964	1.10	1022	1.19	1077	1.29	1131	1.39	1183	1.50	1234	1.61	1284	1.72	1334	1.83
2400	861	1.03	925	1.11	985	1.20	1043	1.29	1099	1.39	1152	1.49	1204	1.60	1255	1.71	1305	1.82	1355	1.93
2500	882	1.14	946	1.22	1006	1.30	1064	1.40	1120	1.50	1173	1.60	1226	1.71	1276	1.82	1326	1.93	1376	2.04
	3 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZH078 (6.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 1.5 HP & Drive						Hi Static 2 HP & Drive									
1800	775	0.31	850	0.53	924	0.72	998	0.89	1072	1.05	1147	1.20	1224	1.35	1303	1.51	1384	1.69	1469	1.89
2000	803	0.45	878	0.67	952	0.86	1026	1.03	1100	1.19	1175	1.34	1252	1.49	1331	1.65	1412	1.83	1497	2.03
2200	838	0.60	913	0.82	986	1.01	1060	1.19	1134	1.34	1210	1.49	1286	1.65	1365	1.81	1447	1.98	1532	2.18
2400	878	0.78	953	1.00	1027	1.19	1100	1.36	1174	1.52	1250	1.67	1327	1.82	1405	1.98	1487	2.16	-	-
2600	923	0.98	997	1.20	1071	1.39	1145	1.56	1219	1.72	1294	1.87	1371	2.02	1450	2.18	-	-	-	-
2800	971	1.20	1046	1.42	1119	1.61	1193	1.78	1267	1.94	1343	2.09	1419	2.24	-	-	-	-	-	-
3000	1023	1.44	1097	1.66	1171	1.85	1245	2.03	1319	2.18	-	-	-	-	-	-	-	-	-	-
3200	1077	1.71	1151	1.93	1225	2.12	1299	2.29	-	-	-	-	-	-	-	-	-	-	-	-
3400	1133	1.99	1208	2.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 HP & Field Supplied Drive																				

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.

2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.

3. kW = BHP x 0.932.

ZH090 (7.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 1.5 HP & Drive						Hi Static 3 HP & Drive									
2000	803	0.45	878	0.67	952	0.86	1026	1.03	1100	1.19	1175	1.34	1252	1.49	1331	1.65	1412	1.83	1497	2.03
2200	838	0.60	913	0.82	986	1.01	1060	1.19	1134	1.34	1210	1.49	1286	1.65	1365	1.81	1447	1.98	1532	2.18
2400	878	0.78	953	1.00	1027	1.19	1100	1.36	1174	1.52	1250	1.67	1327	1.82	1405	1.98	1487	2.16	1572	2.36
2600	923	0.98	997	1.20	1071	1.39	1145	1.56	1219	1.72	1294	1.87	1371	2.02	1450	2.18	1532	2.36	1617	2.56
2800	971	1.20	1046	1.42	1119	1.61	1193	1.78	1267	1.94	1343	2.09	1419	2.24	1498	2.40	1580	2.58	1665	2.78
3000	1023	1.44	1097	1.66	1171	1.85	1245	2.03	1319	2.18	1394	2.33	1471	2.49	1550	2.65	1632	2.82	1717	3.02
3200	1077	1.71	1151	1.93	1225	2.12	1299	2.29	1373	2.45	1448	2.60	1525	2.75	1604	2.91	1686	3.09	1771	3.29
3400	1133	1.99	1208	2.21	1282	2.41	1356	2.58	1430	2.73	1505	2.88	1582	3.04	1661	3.20	1742	3.37	-	-
3600	1192	2.30	1267	2.52	1341	2.71	1414	2.88	1489	3.04	1564	3.19	1641	3.34	-	-	-	-	-	-
3800	1253	2.63	1327	2.85	1401	3.04	1475	3.21	1549	3.37	-	-	-	-	-	-	-	-	-	-
3 HP & Field Supplied Drive																				

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.

2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.

3. kW = BHP x 0.932.

ZH102 (8.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	FS ⁴		Standard 2 HP & Drive						Hi Static 3 HP & Drive											
2600	674	0.71	731	0.88	786	1.05	838	1.24	887	1.42	933	1.59	974	1.74	1010	1.87	1040	1.97	1064	2.03
2800	689	0.86	746	1.02	801	1.20	854	1.38	903	1.56	948	1.73	989	1.88	1025	2.01	1056	2.11	1080	2.17
3000	707	1.01	764	1.17	819	1.35	872	1.53	921	1.71	966	1.88	1007	2.03	1043	2.16	1074	2.26	1098	2.32
3200	728	1.17	785	1.33	840	1.51	892	1.69	941	1.87	987	2.04	1028	2.20	1064	2.33	1094	2.42	1118	2.48
3400	751	1.34	808	1.51	863	1.68	915	1.87	964	2.05	1010	2.22	1051	2.37	1087	2.50	1117	2.60	1141	2.66
3600	776	1.53	833	1.70	888	1.87	941	2.06	990	2.24	1035	2.41	1076	2.56	1112	2.69	1142	2.79	1167	2.85
3800	804	1.74	861	1.90	916	2.08	969	2.26	1018	2.44	1063	2.61	1104	2.77	1140	2.90	1170	2.99	-	-
4000	835	1.97	892	2.13	947	2.31	999	2.49	1048	2.67	1094	2.84	1135	2.99	-	-	-	-	-	-
4200	867	2.21	924	2.37	979	2.55	1032	2.73	1081	2.91	1127	3.08	-	-	3 HP & Field Supplied Drive					

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.

2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.

3. kW = BHP x 0.932.

4. Field Supplied Drive.

ZH120 (10 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive		Standard 2 HP & Drive										Hi Static 3 HP & Drive							
2600	722	0.83	776	0.97	828	1.11	878	1.25	926	1.37	973	1.50	1018	1.62	1063	1.74	1106	1.86	1149	1.99
2800	744	0.97	798	1.12	850	1.26	900	1.39	949	1.52	995	1.64	1041	1.76	1085	1.88	1128	2.00	1171	2.13
3000	769	1.13	823	1.28	875	1.42	925	1.55	974	1.68	1020	1.80	1066	1.92	1110	2.05	1153	2.17	1196	2.29
3200	797	1.32	851	1.46	903	1.60	953	1.74	1001	1.86	1048	1.99	1093	2.11	1138	2.23	1181	2.35	1224	2.48
3400	828	1.52	882	1.67	934	1.81	983	1.94	1032	2.07	1078	2.19	1124	2.32	1168	2.44	1212	2.56	1254	2.68
3600	861	1.75	915	1.90	967	2.04	1017	2.17	1065	2.30	1112	2.42	1157	2.54	1201	2.67	1245	2.79	1287	2.91
3800	897	2.00	951	2.15	1002	2.29	1052	2.42	1101	2.55	1147	2.67	1193	2.80	1237	2.92	1280	3.04	1323	3.16
4000	935	2.27	989	2.42	1041	2.56	1091	2.69	1139	2.82	1186	2.95	1231	3.07	1275	3.19	1319	3.31	1362	3.43
4200	976	2.57	1030	2.72	1082	2.86	1132	2.99	1180	3.12	1227	3.24	1272	3.36	-	-	-	-	-	-
4400	1019	2.88	1073	3.03	1125	3.17	1175	3.30	1223	3.43	-	-	-	-	-	-	-	-	-	-
4600	1065	3.22	1119	3.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 HP & Field Supplied Drive																				

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZH150 (12.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 3 HP & Drive								Hi Static 5 HP & Drive							
3200	797	1.32	851	1.46	903	1.60	953	1.74	1001	1.86	1048	1.99	1093	2.11	1138	2.23	1181	2.35	1224	2.48
3400	828	1.52	882	1.67	934	1.81	983	1.94	1032	2.07	1078	2.19	1124	2.32	1168	2.44	1212	2.56	1254	2.68
3600	861	1.75	915	1.90	967	2.04	1017	2.17	1065	2.30	1112	2.42	1157	2.54	1201	2.67	1245	2.79	1287	2.91
3800	897	2.00	951	2.15	1002	2.29	1052	2.42	1101	2.55	1147	2.67	1193	2.80	1237	2.92	1280	3.04	1323	3.16
4000	935	2.27	989	2.42	1041	2.56	1091	2.69	1139	2.82	1186	2.95	1231	3.07	1275	3.19	1319	3.31	1362	3.43
4200	976	2.57	1030	2.72	1082	2.86	1132	2.99	1180	3.12	1227	3.24	1272	3.36	1316	3.48	1360	3.60	1402	3.73
4400	1019	2.88	1073	3.03	1125	3.17	1175	3.30	1223	3.43	1270	3.55	1315	3.67	1360	3.80	1403	3.92	1446	4.04
4600	1065	3.22	1119	3.36	1171	3.50	1221	3.64	1269	3.76	1316	3.89	1361	4.01	1405	4.13	1449	4.25	1491	4.38
4800	1113	3.57	1167	3.72	1219	3.86	1269	3.99	1317	4.12	1364	4.24	1409	4.36	1453	4.48	1497	4.61	1540	4.73
5000	1163	3.94	1217	4.09	1269	4.23	1319	4.36	1367	4.49	1414	4.62	1459	4.74	1504	4.86	1547	4.98	1590	5.10
5200	1216	4.34	1270	4.48	1321	4.62	1371	4.76	1420	4.88	1466	5.01	1512	5.13	1556	5.25	1600	5.37	1642	5.50
5400	1270	4.75	1324	4.89	1376	5.03	1426	5.17	1474	5.29	1521	5.42	1566	5.54	1611	5.66	-	-	-	-
5600	1327	5.17	1381	5.32	1433	5.46	1483	5.59	1531	5.72	-	-	-	-	-	-	-	-	-	-
5800	1385	5.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZJ037-150 Side Duct Application**ZJ037 (3.0 Ton) Side Duct**

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard 1.5 HP & Drive								Hi Static 1.5 HP & Drive											
900	560	0.29	628	0.35	695	0.42	760	0.51	823	0.61	886	0.72	949	0.82	1011	0.92	1073	1.01	1136	1.09
1000	582	0.29	650	0.34	716	0.42	781	0.51	845	0.61	908	0.71	970	0.82	1032	0.92	1095	1.01	1158	1.08
1100	601	0.30	670	0.35	736	0.43	801	0.52	864	0.62	927	0.72	990	0.83	1052	0.93	1114	1.02	1177	1.09
1200	620	0.32	688	0.37	754	0.45	819	0.54	883	0.64	946	0.74	1008	0.85	1070	0.95	1133	1.04	1196	1.11
1300	638	0.35	706	0.40	772	0.48	837	0.57	901	0.67	964	0.77	1026	0.88	1088	0.98	1151	1.06	1214	1.14
1400	655	0.39	724	0.44	790	0.51	855	0.60	918	0.70	981	0.81	1044	0.91	1106	1.01	1168	1.10	1231	1.18
1500	673	0.43	741	0.48	807	0.56	872	0.65	936	0.75	999	0.85	1061	0.96	1124	1.06	1186	1.15	1249	1.22
	1.5 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZJ049 (4.0 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																					
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0			
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
	FS ⁴		Standard 1.5 HP & Drive																Hi Static 1.5 HP & Drive			
1200	608	0.25	677	0.34	744	0.44	807	0.54	868	0.64	927	0.74	986	0.84	1043	0.93	1101	1.02	1160	1.10		
1300	623	0.28	692	0.37	758	0.47	822	0.57	883	0.67	942	0.77	1001	0.86	1058	0.96	1116	1.04	1175	1.13		
1400	637	0.31	706	0.40	772	0.50	836	0.60	897	0.70	956	0.80	1015	0.90	1072	0.99	1130	1.08	1189	1.16		
1500	650	0.35	720	0.44	786	0.54	849	0.64	911	0.74	970	0.84	1028	0.93	1086	1.03	1144	1.12	1202	1.20		
1600	664	0.39	734	0.49	800	0.58	863	0.68	924	0.78	984	0.88	1042	0.98	1100	1.07	1158	1.16	1216	1.24		
1700	678	0.44	748	0.54	814	0.63	877	0.73	938	0.83	998	0.93	1056	1.03	1114	1.12	1172	1.21	1230	1.29		
1800	693	0.50	763	0.59	829	0.69	892	0.79	953	0.89	1013	0.99	1071	1.08	1129	1.18	1186	1.26	1245	1.35		
1900	708	0.56	778	0.65	844	0.75	907	0.85	968	0.95	1028	1.05	1086	1.15	1144	1.24	1202	1.33	1260	1.41		
2000	725	0.62	794	0.72	860	0.82	924	0.92	985	1.02	1044	1.12	1102	1.21	1160	1.30	1218	1.39	1277	1.47		

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive

ZJ061 (5.0 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	1.5 HP & Field Supplied Drive						Standard 1.5 HP & Drive										Hi Static 2 HP & Drive			
1500	659	0.35	719	0.46	780	0.57	843	0.67	905	0.77	964	0.87	1020	0.97	1071	1.07	1116	1.17	1154	1.28
1600	675	0.38	735	0.50	796	0.60	859	0.71	920	0.81	980	0.91	1036	1.01	1087	1.11	1132	1.21	1170	1.32
1700	691	0.42	751	0.54	812	0.64	875	0.75	936	0.85	996	0.95	1052	1.05	1103	1.15	1148	1.25	1186	1.36
1800	707	0.47	767	0.58	829	0.69	891	0.79	953	0.90	1012	0.99	1069	1.09	1120	1.20	1165	1.30	1202	1.41
1900	724	0.53	784	0.64	846	0.75	908	0.85	970	0.95	1029	1.05	1085	1.15	1137	1.25	1182	1.35	1219	1.46
2000	741	0.59	801	0.70	863	0.81	925	0.91	987	1.01	1047	1.11	1103	1.21	1154	1.31	1199	1.41	1236	1.52
2100	759	0.65	819	0.77	881	0.87	943	0.98	1005	1.08	1065	1.18	1121	1.28	1172	1.38	1217	1.48	1254	1.59
2200	778	0.73	838	0.84	900	0.95	962	1.05	1024	1.15	1083	1.25	1139	1.35	1191	1.45	1236	1.56	1273	1.66
2300	797	0.81	857	0.92	919	1.03	981	1.13	1043	1.23	1103	1.33	1159	1.43	1210	1.53	1255	1.64	1292	1.74
2400	817	0.90	877	1.01	939	1.12	1002	1.22	1063	1.32	1123	1.42	1179	1.52	1230	1.62	1275	1.73	1312	1.83
2500	838	1.00	898	1.11	960	1.22	1022	1.32	1084	1.42	1144	1.52	1200	1.62	1251	1.72	1296	1.82	1333	1.93
FS ⁴																				

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZJ078 (6.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	FS ⁴				Standard 1.5 HP & Drive								Hi Static 2 HP & Drive							
1800	514	0.15	586	0.33	657	0.52	727	0.71	794	0.89	857	1.07	917	1.23	972	1.38	1021	1.50	1064	1.59
2000	529	0.23	601	0.41	672	0.60	741	0.79	808	0.97	872	1.15	931	1.31	986	1.46	1036	1.58	1079	1.67
2200	544	0.33	616	0.51	687	0.69	756	0.88	823	1.07	886	1.24	946	1.41	1001	1.55	1051	1.67	1094	1.77
2400	559	0.43	631	0.61	702	0.80	771	0.98	838	1.17	902	1.35	961	1.51	1016	1.65	1066	1.78	1109	1.87
2600	574	0.54	646	0.72	717	0.91	787	1.10	853	1.28	917	1.46	977	1.62	1032	1.77	1081	1.89	1124	1.98
2800	590	0.67	662	0.85	733	1.03	802	1.22	869	1.41	933	1.59	993	1.75	1047	1.89	1097	2.02	1140	2.11
3000	607	0.80	679	0.98	750	1.17	819	1.36	886	1.54	949	1.72	1009	1.88	1064	2.03	1113	2.15	1157	2.24
3200	624	0.95	695	1.13	766	1.31	836	1.50	903	1.69	966	1.86	1026	2.03	1081	2.17	1130	2.29	-	-
3400	641	1.10	713	1.28	784	1.47	853	1.66	920	1.84	984	2.02	1043	2.18	1098	2.33	-	-	-	-
													FS ⁴							

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZJ090 (7.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	FS ⁴				Standard 1.5 HP & Drive								Hi Static 3 HP & Drive							
2000	-	-	656	0.24	711	0.48	768	0.73	826	0.96	886	1.19	945	1.41	1003	1.61	1058	1.79	1110	1.95
2200	619	0.07	670	0.32	724	0.57	781	0.81	840	1.04	899	1.27	959	1.49	1016	1.69	1072	1.87	1124	2.04
2400	631	0.16	682	0.41	736	0.66	793	0.90	852	1.14	911	1.36	970	1.58	1028	1.78	1084	1.97	1136	2.13
2600	642	0.27	692	0.52	747	0.76	804	1.01	862	1.24	922	1.47	981	1.69	1039	1.89	1094	2.07	1146	2.24
2800	652	0.39	703	0.64	757	0.88	814	1.13	873	1.36	932	1.59	992	1.81	1049	2.01	1105	2.19	1157	2.36
3000	663	0.53	714	0.77	768	1.02	825	1.26	884	1.50	943	1.73	1003	1.94	1060	2.14	1116	2.33	1168	2.49
3200	675	0.68	726	0.92	780	1.17	837	1.41	896	1.65	955	1.88	1014	2.09	1072	2.29	1128	2.48	1180	2.64
3400	688	0.84	739	1.09	793	1.34	850	1.58	909	1.82	968	2.04	1027	2.26	1085	2.46	1141	2.65	1193	2.81
3600	703	1.03	753	1.28	807	1.52	864	1.76	923	2.00	983	2.23	1042	2.44	1100	2.64	1155	2.83	-	-
3800	718	1.23	769	1.47	823	1.72	880	1.96	939	2.20	998	2.43	1058	2.64	1115	2.84	1171	3.03	-	-

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZJ102 (8.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 2 HP & Drive								Hi Static 3 HP & Drive							
2200	654	0.32	706	0.53	755	0.73	803	0.92	849	1.10	893	1.27	937	1.44	979	1.62	1020	1.79	1061	1.96
2400	664	0.43	716	0.64	765	0.83	813	1.02	859	1.20	904	1.38	947	1.55	989	1.72	1030	1.89	1071	2.07
2600	675	0.53	726	0.74	776	0.94	824	1.12	870	1.30	914	1.48	957	1.65	1000	1.82	1041	1.99	1082	2.17
2800	686	0.63	738	0.84	787	1.04	835	1.23	881	1.41	925	1.58	969	1.76	1011	1.93	1052	2.10	1093	2.27
3000	699	0.75	750	0.96	800	1.16	847	1.34	893	1.52	938	1.70	981	1.87	1024	2.04	1065	2.21	1106	2.39
3200	713	0.88	764	1.09	814	1.28	861	1.47	907	1.65	952	1.83	995	2.00	1037	2.17	1079	2.34	1119	2.52
3400	728	1.02	779	1.23	829	1.43	877	1.61	923	1.79	967	1.97	1010	2.14	1053	2.31	1094	2.48	1135	2.66
3600	745	1.18	796	1.39	846	1.59	893	1.77	939	1.95	984	2.13	1027	2.30	1069	2.47	1111	2.64	1152	2.82
3800	763	1.36	815	1.57	864	1.76	912	1.95	958	2.13	1002	2.31	1046	2.48	1088	2.65	1129	2.82	1170	3.00
4000	783	1.55	835	1.76	884	1.96	932	2.15	978	2.33	1022	2.50	1066	2.67	1108	2.84	1149	3.02	1190	3.19
4200	805	1.77	856	1.98	906	2.17	953	2.36	999	2.54	1044	2.72	1087	2.89	1129	3.06	1171	3.23	1211	3.41
													3 HP & Field Supplied Drive							

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZJ120 (10 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 2 HP & Drive								Hi Static 3 HP & Drive							
2600	675	0.53	726	0.74	776	0.94	824	1.12	870	1.30	914	1.48	957	1.65	1000	1.82	1041	1.99	1082	2.17
2800	686	0.63	738	0.84	787	1.04	835	1.23	881	1.41	925	1.58	969	1.76	1011	1.93	1052	2.10	1093	2.27
3000	699	0.75	750	0.96	800	1.16	847	1.34	893	1.52	938	1.70	981	1.87	1024	2.04	1065	2.21	1106	2.39
3200	713	0.88	764	1.09	814	1.28	861	1.47	907	1.65	952	1.83	995	2.00	1037	2.17	1079	2.34	1119	2.52
3400	728	1.02	779	1.23	829	1.43	877	1.61	923	1.79	967	1.97	1010	2.14	1053	2.31	1094	2.48	1135	2.66
3600	745	1.18	796	1.39	846	1.59	893	1.77	939	1.95	984	2.13	1027	2.30	1069	2.47	1111	2.64	1152	2.82
3800	763	1.36	815	1.57	864	1.76	912	1.95	958	2.13	1002	2.31	1046	2.48	1088	2.65	1129	2.82	1170	3.00
4000	783	1.55	835	1.76	884	1.96	932	2.15	978	2.33	1022	2.50	1066	2.67	1108	2.84	1149	3.02	1190	3.19
4200	805	1.77	856	1.98	906	2.17	953	2.36	999	2.54	1044	2.72	1087	2.89	1129	3.06	1171	3.23	1211	3.41
4400	828	2.00	879	2.21	929	2.41	976	2.59	1022	2.77	1067	2.95	1110	3.12	1152	3.29	-	-	-	-
4600	852	2.25	904	2.46	953	2.66	1001	2.85	1047	3.03	1092	3.20	1135	3.37	-	-	-	-	-	-
4800	879	2.52	930	2.73	980	2.93	1027	3.12	1073	3.30	-	-	-	-	-	-	-	-	-	-
5000	906	2.81	958	3.02	1007	3.22	1055	3.41	-	-	-	-	-	-	-	-	-	-	-	-
	3 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZJ150 (12.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																					
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0			
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
	Field Supplied Drive								Standard 3 HP & Drive													
3200	713	0.88	764	1.09	814	1.28	861	1.47	907	1.65	952	1.83	995	2.00	1037	2.17	1079	2.34	1119	2.52		
3400	728	1.02	779	1.23	829	1.43	877	1.61	923	1.79	967	1.97	1010	2.14	1053	2.31	1094	2.48	1135	2.66		
3600	745	1.18	796	1.39	846	1.59	893	1.77	939	1.95	984	2.13	1027	2.30	1069	2.47	1111	2.64	1152	2.82		
3800	763	1.36	815	1.57	864	1.76	912	1.95	958	2.13	1002	2.31	1046	2.48	1088	2.65	1129	2.82	1170	3.00		
4000	783	1.55	835	1.76	884	1.96	932	2.15	978	2.33	1022	2.50	1066	2.67	1108	2.84	1149	3.02	1190	3.19		
4200	805	1.77	856	1.98	906	2.17	953	2.36	999	2.54	1044	2.72	1087	2.89	1129	3.06	1171	3.23	1211	3.41		
4400	828	2.00	879	2.21	929	2.41	976	2.59	1022	2.77	1067	2.95	1110	3.12	1152	3.29	1194	3.46	1235	3.64		
4600	852	2.25	904	2.46	953	2.66	1001	2.85	1047	3.03	1092	3.20	1135	3.37	1177	3.54	1219	3.72	1259	3.89		
4800	879	2.52	930	2.73	980	2.93	1027	3.12	1073	3.30	1118	3.47	1161	3.65	1203	3.82	1245	3.99	1285	4.16		
5000	906	2.81	958	3.02	1007	3.22	1055	3.41	1101	3.59	1146	3.76	1189	3.94	1231	4.11	1273	4.28	1313	4.45		
5200	936	3.12	987	3.33	1037	3.53	1084	3.72	1130	3.90	1175	4.07	1218	4.24	1260	4.42	1302	4.59	1343	4.76		
5400	966	3.45	1018	3.66	1067	3.86	1115	4.05	1161	4.23	1206	4.40	1249	4.57	1291	4.74	1333	4.91	1373	5.09		
5600	999	3.80	1050	4.01	1100	4.20	1147	4.39	1193	4.57	1238	4.75	1281	4.92	1323	5.09	1365	5.26	1405	5.44		
5800	1032	4.16	1084	4.37	1133	4.57	1181	4.75	1227	4.93	1271	5.11	1315	5.28	1357	5.45	1398	5.62	-	-		
6000	1067	4.54	1119	4.75	1168	4.95	1216	5.13	1262	5.31	1306	5.49	1350	5.66	-	-	-	-	-	-		
6200	1103	4.94	1155	5.15	1204	5.34	1252	5.53	1298	5.71	-	-	-	-	-	-	-	-	-	-		
	Hi Static 5 HP & Drive								5 HP & Field Supplied Drive													

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZJ037-150 Bottom Duct Application**ZJ037 (3.0 Ton) Bottom Duct**

Air Flow (CFM)	Available External Static Pressure - IWG ¹													
	0.2		0.4		0.6		0.8		1.0		1.2		1.4	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard 1.5 HP & Drive						Hi Static 1.5 HP & Drive							
900	605	0.23	671	0.33	738	0.42	804	0.52	869	0.62	933	0.71	995	0.80
1000	621	0.25	688	0.34	754	0.44	820	0.53	885	0.63	949	0.72	1011	0.82
1100	637	0.27	703	0.36	769	0.46	835	0.56	900	0.65	964	0.74	1026	0.84
1200	651	0.30	717	0.39	784	0.49	850	0.58	915	0.68	979	0.77	1041	0.87
1300	666	0.33	732	0.43	799	0.52	865	0.62	930	0.71	994	0.81	1056	0.90
1400	681	0.37	747	0.47	814	0.56	880	0.66	945	0.75	1009	0.85	1071	0.94
1500	697	0.42	763	0.51	830	0.61	896	0.71	961	0.80	1025	0.90	1087	0.99
	1.5 HP & Field Supplied Drive													

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZJ049 (4.0 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹													
	0.2		0.4		0.6		0.8		1.0		1.2		1.4	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	FS ⁴		Standard 1.5 HP & Drive						Hi Static 1.5 HP & Drive					
1200	635	0.25	704	0.34	770	0.44	832	0.54	893	0.65	953	0.75	1013	0.85
1300	648	0.28	717	0.38	782	0.47	845	0.58	906	0.68	966	0.78	1025	0.88
1400	661	0.32	730	0.42	796	0.51	858	0.62	919	0.72	979	0.82	1039	0.92
1500	675	0.37	744	0.46	810	0.56	872	0.66	933	0.77	993	0.87	1053	0.96
1600	690	0.42	759	0.51	825	0.61	887	0.72	948	0.82	1008	0.92	1068	1.02
1700	706	0.48	775	0.57	841	0.67	903	0.77	964	0.88	1024	0.98	1084	1.08
1800	723	0.55	792	0.64	857	0.74	920	0.84	981	0.94	1041	1.04	1101	1.14
1900	741	0.62	810	0.71	875	0.81	938	0.91	999	1.01	1059	1.11	1118	1.21
2000	760	0.69	829	0.79	894	0.88	957	0.99	1018	1.09	1078	1.19	1137	1.29

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZJ061 (5.0 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹													
	0.2		0.4		0.6		0.8		1.0		1.2		1.4	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	1.5 HP & Field Supplied Drive				Standard 1.5 HP & Drive						Hi Static 2 HP & Drive			
1500	673	0.47	736	0.54	797	0.63	855	0.72	910	0.82	964	0.92	1016	1.03
1600	693	0.49	756	0.57	817	0.65	874	0.75	930	0.85	984	0.95	1036	1.06
1700	713	0.53	777	0.60	837	0.69	895	0.78	951	0.88	1004	0.98	1057	1.09
1800	734	0.57	797	0.65	858	0.73	916	0.83	971	0.92	1025	1.03	1077	1.14
1900	755	0.62	819	0.70	879	0.79	937	0.88	992	0.98	1046	1.08	1098	1.19
2000	776	0.69	840	0.76	900	0.85	958	0.94	1014	1.04	1067	1.14	1120	1.25
2100	798	0.76	861	0.84	921	0.92	979	1.02	1035	1.11	1089	1.22	1141	1.32
2200	819	0.84	882	0.92	943	1.00	1001	1.10	1056	1.20	1110	1.30	1162	1.41
2300	840	0.93	903	1.01	964	1.10	1022	1.19	1077	1.29	1131	1.39	1183	1.50
2400	861	1.03	925	1.11	985	1.20	1043	1.29	1099	1.39	1152	1.49	1204	1.60
2500	882	1.14	946	1.22	1006	1.30	1064	1.40	1120	1.50	1173	1.60	1226	1.71
	2 HP & Field Supplied Drive													

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZJ078 (6.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹											
	0.2 RPM BHP	0.4 RPM BHP	0.6 RPM BHP	0.8 RPM BHP	1.0 RPM BHP	1.2 RPM BHP	1.4 RPM BHP	1.6 RPM BHP	1.8 RPM BHP	2.0 RPM BHP		
	FS ⁴	Standard 1.5 HP & Drive					Hi Static 2 HP & Drive					
1800	603 0.13	656 0.36	718 0.58	784 0.79	851 0.98	914 1.16	968 1.31	1010 1.43	1035 1.53	1039 1.59		
2000	627 0.26	680 0.49	742 0.71	808 0.92	875 1.12	937 1.29	992 1.44	1034 1.57	1059 1.66	1063 1.72		
2200	650 0.40	703 0.63	765 0.85	831 1.06	898 1.25	961 1.43	1015 1.58	1057 1.71	1082 1.80	1086 1.86		
2400	673 0.55	726 0.78	788 1.00	854 1.21	921 1.40	984 1.58	1038 1.73	1080 1.85	1105 1.95	1109 2.01		
2600	696 0.71	749 0.94	811 1.16	878 1.37	944 1.56	1007 1.73	1061 1.89	1103 2.01	1128 2.10	1133 2.16		
2800	720 0.87	773 1.10	835 1.32	902 1.53	968 1.73	1031 1.90	1085 2.05	1127 2.18	1152 2.27	1157 2.33		
3000	745 1.05	798 1.28	860 1.50	926 1.71	993 1.91	1056 2.08	1110 2.23	1152 2.36	1177 2.45	1181 2.51		
3200	771 1.24	824 1.47	886 1.69	952 1.90	1019 2.09	1081 2.27	1136 2.42	1178 2.54	1203 2.64	1207 2.70		
3400	797 1.44	850 1.67	912 1.89	979 2.10	1045 2.29	1108 2.47	1162 2.62	1204 2.74	1229 2.84	1234 2.90		

3 HP & Field Supplied Drive

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZJ090 (7.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹											
	0.2 RPM BHP	0.4 RPM BHP	0.6 RPM BHP	0.8 RPM BHP	1.0 RPM BHP	1.2 RPM BHP	1.4 RPM BHP	1.6 RPM BHP	1.8 RPM BHP	2.0 RPM BHP		
	FS ⁴	Standard 1.5 HP & Drive					Hi Static 3 HP & Drive					
2000	644 0.11	698 0.38	755 0.62	814 0.85	874 1.06	933 1.26	990 1.46	1043 1.66	1090 1.87	1131 2.09		
2200	666 0.26	720 0.53	777 0.77	836 1.00	896 1.21	956 1.41	1012 1.61	1065 1.81	1113 2.02	1153 2.24		
2400	689 0.42	743 0.69	800 0.93	859 1.16	919 1.37	978 1.57	1035 1.77	1088 1.97	1135 2.18	1176 2.40		
2600	712 0.60	766 0.87	823 1.11	882 1.34	942 1.55	1002 1.75	1058 1.95	1111 2.15	1159 2.36	1199 2.58		
2800	736 0.80	790 1.06	847 1.31	906 1.53	967 1.74	1026 1.94	1082 2.14	1135 2.34	1183 2.55	1223 2.78		
3000	761 1.00	815 1.27	872 1.52	931 1.74	991 1.95	1051 2.15	1107 2.35	1160 2.55	1208 2.76	1248 2.98		
3200	787 1.22	840 1.49	898 1.74	957 1.96	1017 2.17	1076 2.37	1133 2.57	1186 2.77	1233 2.98	1274 3.20		
3400	813 1.46	867 1.73	924 1.97	984 2.19	1044 2.40	1103 2.61	1160 2.80	1212 3.01	1260 3.21	- -		
3600	841 1.70	894 1.97	952 2.21	1011 2.44	1071 2.65	1130 2.85	1187 3.05	- -	- -	- -		
3800	869 1.96	923 2.22	980 2.47	1039 2.69	1099 2.90	1158 3.10	1215 3.30	- -	- -	- -		

3 HP & Field Supplied Drive

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZJ102 (8.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹											
	0.2 RPM BHP	0.4 RPM BHP	0.6 RPM BHP	0.8 RPM BHP	1.0 RPM BHP	1.2 RPM BHP	1.4 RPM BHP	1.6 RPM BHP	1.8 RPM BHP	2.0 RPM BHP		
	FS ⁴	Standard 2 HP & Drive					Hi Static 3 HP & Drive					
2200	685 0.59	739 0.74	791 0.88	841 1.01	889 1.14	936 1.27	981 1.39	1025 1.51	1069 1.63	1111 1.75		
2400	702 0.70	756 0.85	808 0.99	858 1.12	906 1.25	953 1.37	999 1.49	1043 1.62	1086 1.74	1129 1.86		
2600	722 0.83	776 0.97	828 1.11	878 1.25	926 1.37	973 1.50	1018 1.62	1063 1.74	1106 1.86	1149 1.99		
2800	744 0.97	798 1.12	850 1.26	900 1.39	949 1.52	995 1.64	1041 1.76	1085 1.88	1128 2.00	1171 2.13		
3000	769 1.13	823 1.28	875 1.42	925 1.55	974 1.68	1020 1.80	1066 1.92	1110 2.05	1153 2.17	1196 2.29		
3200	797 1.32	851 1.46	903 1.60	953 1.74	1001 1.86	1048 1.99	1093 2.11	1138 2.23	1181 2.35	1224 2.48		
3400	828 1.52	882 1.67	934 1.81	983 1.94	1032 2.07	1078 2.19	1124 2.32	1168 2.44	1212 2.56	1254 2.68		
3600	861 1.75	915 1.90	967 2.04	1017 2.17	1065 2.30	1112 2.42	1157 2.54	1201 2.67	1245 2.79	1287 2.91		
3800	897 2.00	951 2.15	1002 2.29	1052 2.42	1101 2.55	1147 2.67	1193 2.80	1237 2.92	1280 3.04	1323 3.16		
4000	935 2.27	989 2.42	1041 2.56	1091 2.69	1139 2.82	1186 2.95	1231 3.07	1275 3.19	1319 3.31	1362 3.43		
4200	976 2.57	1030 2.72	1082 2.86	1132 2.99	1180 3.12	1227 3.24	1272 3.36	- -	- -	- -		

3 HP & Field Supplied Drive

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZJ120 (10 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive		Standard 2 HP & Drive										Hi Static 3 HP & Drive							
2600	722	0.83	776	0.97	828	1.11	878	1.25	926	1.37	973	1.50	1018	1.62	1063	1.74	1106	1.86	1149	1.99
2800	744	0.97	798	1.12	850	1.26	900	1.39	949	1.52	995	1.64	1041	1.76	1085	1.88	1128	2.00	1171	2.13
3000	769	1.13	823	1.28	875	1.42	925	1.55	974	1.68	1020	1.80	1066	1.92	1110	2.05	1153	2.17	1196	2.29
3200	797	1.32	851	1.46	903	1.60	953	1.74	1001	1.86	1048	1.99	1093	2.11	1138	2.23	1181	2.35	1224	2.48
3400	828	1.52	882	1.67	934	1.81	983	1.94	1032	2.07	1078	2.19	1124	2.32	1168	2.44	1212	2.56	1254	2.68
3600	861	1.75	915	1.90	967	2.04	1017	2.17	1065	2.30	1112	2.42	1157	2.54	1201	2.67	1245	2.79	1287	2.91
3800	897	2.00	951	2.15	1002	2.29	1052	2.42	1101	2.55	1147	2.67	1193	2.80	1237	2.92	1280	3.04	1323	3.16
4000	935	2.27	989	2.42	1041	2.56	1091	2.69	1139	2.82	1186	2.95	1231	3.07	1275	3.19	1319	3.31	1362	3.43
4200	976	2.57	1030	2.72	1082	2.86	1132	2.99	1180	3.12	1227	3.24	1272	3.36	-	-	-	-	-	-
4400	1019	2.88	1073	3.03	1125	3.17	1175	3.30	1223	3.43	-	-	-	-	-	-	-	-	-	-
4600	1065	3.22	1119	3.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 HP & Field Supplied Drive																				

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZJ150 (12.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive				Standard 3 HP & Drive								Hi Static 5 HP & Drive							
3200	797	1.32	851	1.46	903	1.60	953	1.74	1001	1.86	1048	1.99	1093	2.11	1138	2.23	1181	2.35	1224	2.48
3400	828	1.52	882	1.67	934	1.81	983	1.94	1032	2.07	1078	2.19	1124	2.32	1168	2.44	1212	2.56	1254	2.68
3600	861	1.75	915	1.90	967	2.04	1017	2.17	1065	2.30	1112	2.42	1157	2.54	1201	2.67	1245	2.79	1287	2.91
3800	897	2.00	951	2.15	1002	2.29	1052	2.42	1101	2.55	1147	2.67	1193	2.80	1237	2.92	1280	3.04	1323	3.16
4000	935	2.27	989	2.42	1041	2.56	1091	2.69	1139	2.82	1186	2.95	1231	3.07	1275	3.19	1319	3.31	1362	3.43
4200	976	2.57	1030	2.72	1082	2.86	1132	2.99	1180	3.12	1227	3.24	1272	3.36	1316	3.48	1360	3.60	1402	3.73
4400	1019	2.88	1073	3.03	1125	3.17	1175	3.30	1223	3.43	1270	3.55	1315	3.67	1360	3.80	1403	3.92	1446	4.04
4600	1065	3.22	1119	3.36	1171	3.50	1221	3.64	1269	3.76	1316	3.89	1361	4.01	1405	4.13	1449	4.25	1491	4.38
4800	1113	3.57	1167	3.72	1219	3.86	1269	3.99	1317	4.12	1364	4.24	1409	4.36	1453	4.48	1497	4.61	1540	4.73
5000	1163	3.94	1217	4.09	1269	4.23	1319	4.36	1367	4.49	1414	4.62	1459	4.74	1504	4.86	1547	4.98	1590	5.10
5200	1216	4.34	1270	4.48	1321	4.62	1371	4.76	1420	4.88	1466	5.01	1512	5.13	1556	5.25	1600	5.37	1642	5.50
5400	1270	4.75	1324	4.89	1376	5.03	1426	5.17	1474	5.29	1521	5.42	1566	5.54	1611	5.66	-	-	-	-
5600	1327	5.17	1381	5.32	1433	5.46	1483	5.59	1531	5.72	-	-	-	-	-	-	-	-	-	-
5800	1385	5.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR037-150 Side Duct Application**ZR037 (3.0 Ton) Side Duct**

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	FS ⁴		Standard 1.5 HP & Drive								Hi Static 1.5 HP & Drive									
900	480	0.4	582	0.4	673	0.5	756	0.5	830	0.6	898	0.7	960	0.8	1018	0.9	1072	1.0	1124	1.1
1000	489	0.4	591	0.4	682	0.5	764	0.6	839	0.6	907	0.7	969	0.8	1026	0.9	1080	1.0	1132	1.1
1100	500	0.4	602	0.4	693	0.5	776	0.6	850	0.6	918	0.7	980	0.8	1038	0.9	1092	1.0	1144	1.1
1200	513	0.4	614	0.5	706	0.5	788	0.6	863	0.7	931	0.8	993	0.8	1050	0.9	1104	1.0	1156	1.1
1300	525	0.4	627	0.5	719	0.6	801	0.6	876	0.7	943	0.8	1005	0.9	1063	1.0	1117	1.1	1169	1.2
1400	537	0.5	639	0.5	731	0.6	813	0.7	888	0.7	955	0.8	1017	0.9	1075	1.0	1129	1.1	1181	1.2
1500	549	0.5	650	0.6	742	0.6	824	0.7	899	0.8	966	0.9	1028	0.9	1086	1.0	1140	1.1	1192	1.2

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZR049 (4.0 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																				
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0		
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
	1.5 HP & Field Supplied Drive		Standard 1.5 HP & Drive						Hi Static 1.5 HP & Drive												
1200	513	0.4	614	0.5	706	0.5	788	0.6	863	0.7	931	0.8	993	0.8	1050	0.9	1104	1.0	1156	1.1	
1300	525	0.4	627	0.5	719	0.6	801	0.6	876	0.7	943	0.8	1005	0.9	1063	1.0	1117	1.1	1169	1.2	
1400	537	0.5	639	0.5	731	0.6	813	0.7	888	0.7	955	0.8	1017	0.9	1075	1.0	1129	1.1	1181	1.2	
1500	549	0.5	650	0.6	742	0.6	824	0.7	899	0.8	966	0.9	1028	0.9	1086	1.0	1140	1.1	1192	1.2	
1600	558	0.6	660	0.6	752	0.7	834	0.8	909	0.8	976	0.9	1038	1.0	1096	1.1	1150	1.2	1202	1.3	
1700	566	0.6	668	0.7	760	0.7	842	0.8	917	0.9	984	1.0	1046	1.1	1104	1.1	1158	1.2	1210	1.4	
1800	573	0.7	675	0.7	766	0.8	849	0.9	923	1.0	991	1.0	1053	1.1	1110	1.2	1164	1.3	1216	1.4	
1900	577	0.8	679	0.8	771	0.9	853	1.0	928	1.0	995	1.1	1057	1.2	1115	1.3	1169	1.4	1221	1.5	
2000	580	0.8	682	0.9	773	1.0	856	1.0	930	1.1	998	1.2	1060	1.3	1117	1.4	1172	1.5	1224	1.6	
	FS ⁴																				

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZR061 (5.0 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard 1.5 HP & Drive							Hi Static 2 HP & Drive												
1500	616	0.5	685	0.6	766	0.7	833	0.8	905	0.9	975	1.0	1035	1.0	1101	1.1	1163	1.2	1229	1.3
1600	638	0.6	707	0.7	781	0.7	848	0.8	920	0.9	990	1.0	1050	1.1	1104	1.1	1166	1.2	1232	1.3
1700	655	0.6	724	0.7	796	0.8	863	0.9	935	1.0	1005	1.1	1064	1.1	1109	1.2	1172	1.3	1238	1.4
1800	670	0.7	739	0.8	810	0.8	877	0.9	949	1.0	1018	1.1	1078	1.2	1117	1.2	1179	1.3	1245	1.5
1900	686	0.7	755	0.8	823	0.9	890	1.0	962	1.1	1032	1.2	1091	1.2	1125	1.3	1187	1.4	1253	1.5
2000	702	0.8	772	0.9	836	1.0	903	1.1	975	1.2	1045	1.3	1078	1.3	1135	1.4	1197	1.5	1263	1.6
2100	722	0.9	791	1.0	849	1.0	916	1.1	988	1.2	1058	1.3	1089	1.4	1147	1.5	1209	1.6	1275	1.7
2200	745	0.9	814	1.0	861	1.1	928	1.2	1000	1.3	1050	1.4	1102	1.5	1159	1.6	1221	1.7	1287	1.8
2300	772	1.0	841	1.1	874	1.2	941	1.3	1013	1.4	1064	1.5	1115	1.6	1173	1.7	1235	1.8	-	-
2400	804	1.1	832	1.2	886	1.3	953	1.4	1033	1.4	1078	1.6	1130	1.7	1188	1.8	-	-	-	-
2500	841	1.2	844	1.3	898	1.4	965	1.5	1049	1.5	1094	1.7	-	-	-	-	2 HP & Field Supplied Drive			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR078-150 Side Duct Application**ZR078 (6.5 Ton) Side Duct**

Air Flow (CFM)	Available External Static Pressure - IWG ¹																							
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0					
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
	1.5 HP & Field Supplied Drive						Standard 1.5 HP & Drive						Hi Static 2 HP & Drive											
1800	778	0.37	838	0.56	895	0.73	951	0.88	1005	1.01	1059	1.13	1112	1.25	1166	1.36	1221	1.47	1278	1.59				
2000	803	0.50	864	0.69	921	0.85	977	1.00	1031	1.14	1085	1.26	1138	1.37	1192	1.49	1247	1.60	1304	1.72				
2200	833	0.64	893	0.83	951	1.00	1006	1.14	1061	1.28	1114	1.40	1168	1.51	1221	1.63	1276	1.74	1333	1.86				
2400	866	0.80	926	0.99	984	1.15	1039	1.30	1094	1.43	1147	1.56	1201	1.67	1254	1.78	1309	1.90	1366	2.02				
2600	902	0.97	962	1.16	1020	1.33	1076	1.47	1130	1.61	1183	1.73	1237	1.85	1291	1.96	1346	2.07	1402	2.19				
2800	941	1.16	1002	1.35	1059	1.52	1115	1.67	1169	1.80	1222	1.92	1276	2.04	1330	2.15	1385	2.26	-	-				
3000	983	1.37	1043	1.56	1101	1.73	1157	1.88	1211	2.01	1264	2.13	1318	2.25	-	-	-	-	-	-				
3200	1028	1.60	1088	1.79	1145	1.95	1201	2.10	1255	2.24	-	-	-	-	-	-	-	-	-	-				
3400	1074	1.84	1134	2.03	1192	2.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	2 HP & Field Supplied Drive																							

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR090 (7.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																					
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0			
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
	1.5 HP & Field Supplied Drive				Standard 1.5 HP & Drive								Hi Static 3 HP & Drive									
2000	803	0.50	864	0.69	921	0.85	977	1.00	1031	1.14	1085	1.26	1138	1.37	1192	1.49	1247	1.60	1304	1.72		
2200	833	0.64	893	0.83	951	1.00	1006	1.14	1061	1.28	1114	1.40	1168	1.51	1221	1.63	1276	1.74	1333	1.86		
2400	866	0.80	926	0.99	984	1.15	1039	1.30	1094	1.43	1147	1.56	1201	1.67	1254	1.78	1309	1.90	1366	2.02		
2600	902	0.97	962	1.16	1020	1.33	1076	1.47	1130	1.61	1183	1.73	1237	1.85	1291	1.96	1346	2.07	1402	2.19		
2800	941	1.16	1002	1.35	1059	1.52	1115	1.67	1169	1.80	1222	1.92	1276	2.04	1330	2.15	1385	2.26	1442	2.38		
3000	983	1.37	1043	1.56	1101	1.73	1157	1.88	1211	2.01	1264	2.13	1318	2.25	1372	2.36	1427	2.47	1483	2.59		
3200	1028	1.60	1088	1.79	1145	1.95	1201	2.10	1255	2.24	1309	2.36	1362	2.47	1416	2.59	1471	2.70	1528	2.82		
3400	1074	1.84	1134	2.03	1192	2.20	1248	2.35	1302	2.48	1355	2.60	1409	2.72	1463	2.83	1518	2.94	1574	3.06		
3600	1123	2.10	1183	2.29	1241	2.46	1297	2.61	1351	2.74	1404	2.86	1458	2.98	1512	3.09	1567	3.21	1623	3.32		
3800	1174	2.38	1234	2.57	1292	2.74	1348	2.88	1402	3.02	1455	3.14	1509	3.26	1562	3.37	-	-	-	-		
	3 HP & Field Supplied Drive																					

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR102 (8.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	2 HP & Field Supplied Drive		Standard 2 HP & Drive										Hi Static 3 HP & Drive							
2200	684	0.48	735	0.67	783	0.84	829	1.01	874	1.17	918	1.32	960	1.48	1001	1.63	1041	1.78	1081	1.94
2400	695	0.58	745	0.76	793	0.94	840	1.11	885	1.27	928	1.42	970	1.57	1011	1.73	1052	1.88	1091	2.04
2600	706	0.67	756	0.86	805	1.04	851	1.20	896	1.36	939	1.52	981	1.67	1023	1.82	1063	1.98	1103	2.13
2800	719	0.78	769	0.96	817	1.14	863	1.31	908	1.47	952	1.62	994	1.78	1035	1.93	1075	2.08	1115	2.24
3000	732	0.89	782	1.08	831	1.25	877	1.42	922	1.58	965	1.74	1007	1.89	1049	2.04	1089	2.19	1128	2.35
3200	747	1.02	797	1.21	846	1.38	892	1.55	937	1.71	980	1.86	1023	2.02	1064	2.17	1104	2.32	1144	2.48
3400	764	1.16	814	1.35	862	1.53	909	1.69	954	1.85	997	2.01	1039	2.16	1080	2.31	1121	2.47	1160	2.62
3600	783	1.33	833	1.51	881	1.69	927	1.86	972	2.02	1016	2.17	1058	2.32	1099	2.48	1139	2.63	1179	2.79
3800	803	1.51	853	1.69	901	1.87	948	2.04	992	2.20	1036	2.35	1078	2.50	1119	2.66	1159	2.81	1199	2.97
4000	825	1.71	875	1.89	923	2.07	970	2.23	1014	2.39	1058	2.55	1100	2.70	1141	2.86	1181	3.01	1221	3.16
4200	849	1.92	899	2.11	947	2.29	993	2.45	1038	2.61	1082	2.77	1124	2.92	1165	3.07	1205	3.23	1245	3.38
	3 HP & Field Supplied Drive																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR120 (10 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹													
	0.2		0.4		0.6		0.8		1.0		1.2		1.4	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	2 HP & Field Supplied Drive				Standard 2 HP & Drive				Hi Static 3 HP & Drive					
2600	706	0.67	756	0.86	805	1.04	851	1.20	896	1.36	939	1.52	981	1.67
2800	719	0.78	769	0.96	817	1.14	863	1.31	908	1.47	952	1.62	994	1.78
3000	732	0.89	782	1.08	831	1.25	877	1.42	922	1.58	965	1.74	1007	1.89
3200	747	1.02	797	1.21	846	1.38	892	1.55	937	1.71	980	1.86	1023	2.02
3400	764	1.16	814	1.35	862	1.53	909	1.69	954	1.85	997	2.01	1039	2.16
3600	783	1.33	833	1.51	881	1.69	927	1.86	972	2.02	1016	2.17	1058	2.32
3800	803	1.51	853	1.69	901	1.87	948	2.04	992	2.20	1036	2.35	1078	2.50
4000	825	1.71	875	1.89	923	2.07	970	2.23	1014	2.39	1058	2.55	1100	2.70
4200	849	1.92	899	2.11	947	2.29	993	2.45	1038	2.61	1082	2.77	1124	2.92
4400	874	2.16	924	2.35	972	2.52	1019	2.69	1064	2.85	1107	3.01	1149	3.16
4600	901	2.42	952	2.61	1000	2.78	1046	2.95	1091	3.11	1134	3.26	1177	3.42
4800	930	2.70	981	2.88	1029	3.06	1075	3.23	1120	3.39	-	-	-	-
5000	961	2.99	1011	3.18	1059	3.35	-	-	-	-	-	-	-	-

3 HP & Field Supplied Drive

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR150 (12.5 Ton) Side Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹													
	0.2		0.4		0.6		0.8		1.0		1.2		1.4	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	3 HP & Field Supplied Drive				Standard 3 HP & Drive									
3200	747	1.02	797	1.21	846	1.38	892	1.55	937	1.71	980	1.86	1023	2.02
3400	764	1.16	814	1.35	862	1.53	909	1.69	954	1.85	997	2.01	1039	2.16
3600	783	1.33	833	1.51	881	1.69	927	1.86	972	2.02	1016	2.17	1058	2.32
3800	803	1.51	853	1.69	901	1.87	948	2.04	992	2.20	1036	2.35	1078	2.50
4000	825	1.71	875	1.89	923	2.07	970	2.23	1014	2.39	1058	2.55	1100	2.70
4200	849	1.92	899	2.11	947	2.29	993	2.45	1038	2.61	1082	2.77	1124	2.92
4400	874	2.16	924	2.35	972	2.52	1019	2.69	1064	2.85	1107	3.01	1149	3.16
4600	901	2.42	952	2.61	1000	2.78	1046	2.95	1091	3.11	1134	3.26	1177	3.42
4800	930	2.70	981	2.88	1029	3.06	1075	3.23	1120	3.39	1163	3.54	1206	3.69
5000	961	2.99	1011	3.18	1059	3.35	1106	3.52	1151	3.68	1194	3.84	1236	3.99
5200	993	3.31	1043	3.49	1092	3.67	1138	3.84	1183	4.00	1226	4.15	1269	4.30
5400	1027	3.64	1077	3.83	1126	4.00	1172	4.17	1217	4.33	1260	4.48	1302	4.64
5600	1063	3.99	1113	4.18	1161	4.35	1207	4.52	1252	4.68	1296	4.84	1338	4.99
5800	1100	4.36	1150	4.55	1198	4.72	1244	4.89	1289	5.05	1333	5.20	1375	5.36
6000	1138	4.75	1188	4.93	1237	5.11	1283	5.28	1328	5.44	1371	5.59	1413	5.74
6200	1178	5.15	1228	5.34	1277	5.51	1323	5.68	-	-	-	-	-	-

Hi Static 5 HP & Drive

5 HP & Field Supplied Drive

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR037-150 Bottom Duct Application**ZR037 (3.0 Ton) Bottom Duct**

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	FS ⁴		Standard 1.5 HP & Drive								Hi Static 1.5 HP & Drive									
900	544	0.4	632	0.5	708	0.5	774	0.6	834	0.7	889	0.8	941	0.9	993	1.0	1047	1.1	1104	1.2
1000	549	0.4	637	0.5	713	0.5	779	0.6	839	0.7	894	0.8	946	0.9	998	1.0	1052	1.1	1109	1.2
1100	562	0.4	649	0.5	725	0.6	792	0.6	852	0.7	906	0.8	959	0.9	1010	1.0	1064	1.1	1121	1.2
1200	579	0.5	666	0.5	742	0.6	809	0.6	868	0.7	923	0.8	975	0.9	1027	1.0	1081	1.1	1138	1.2
1300	598	0.5	685	0.5	761	0.6	828	0.7	887	0.8	942	0.8	994	0.9	1046	1.0	1100	1.2	1157	1.3
1400	617	0.5	705	0.6	781	0.6	847	0.7	907	0.8	962	0.9	1014	1.0	1066	1.1	1119	1.2	1177	1.3
1500	637	0.6	724	0.6	800	0.7	867	0.8	927	0.8	981	0.9	1034	1.0	1085	1.1	1139	1.2	1196	1.4
	FS ⁴																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZR049 (4.0 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard 1.5 HP & Drive									Hi Static 1.5 HP & Drive										
1200	579	0.5	666	0.5	742	0.6	809	0.6	868	0.7	923	0.8	975	0.9	1027	1.0	1081	1.1	1138	1.2
1300	598	0.5	685	0.5	761	0.6	828	0.7	887	0.8	942	0.8	994	0.9	1046	1.0	1100	1.2	1157	1.3
1400	617	0.5	705	0.6	781	0.6	847	0.7	907	0.8	962	0.9	1014	1.0	1066	1.1	1119	1.2	1177	1.3
1500	637	0.6	724	0.6	800	0.7	867	0.8	927	0.8	981	0.9	1034	1.0	1085	1.1	1139	1.2	1196	1.4
1600	655	0.6	743	0.7	819	0.7	885	0.8	945	0.9	1000	1.0	1052	1.1	1104	1.2	1158	1.3	1215	1.4
1700	672	0.7	760	0.7	836	0.8	902	0.9	962	1.0	1017	1.0	1069	1.1	1121	1.2	1175	1.3	1232	1.5
1800	687	0.7	775	0.8	851	0.9	918	0.9	977	1.0	1032	1.1	1084	1.2	1136	1.3	1190	1.4	1247	1.5
1900	700	0.8	788	0.9	864	0.9	930	1.0	990	1.1	1045	1.2	1097	1.3	1149	1.4	1202	1.5	1260	1.6
2000	711	0.9	798	0.9	874	1.0	941	1.1	1000	1.2	1055	1.2	1107	1.3	1159	1.4	1213	1.6	1270	1.7
	FS ⁴																			

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.
4. Field Supplied Drive.

ZR061 (5.0 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG¹																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard 1.5 HP & Drive								Hi Static 2 HP & Drive											
1500	613	0.5	684	0.6	759	0.7	831	0.7	928	0.8	984	0.9	1042	1.0	1093	1.1	1149	1.2	1201	1.3
1600	629	0.6	700	0.6	775	0.7	847	0.8	929	0.8	985	0.9	1043	1.0	1098	1.1	1154	1.2	1206	1.3
1700	646	0.6	717	0.7	793	0.8	864	0.8	934	0.9	990	1.0	1048	1.1	1106	1.2	1161	1.3	1214	1.4
1800	666	0.7	737	0.7	812	0.8	884	0.9	943	1.0	999	1.1	1057	1.2	1116	1.3	1172	1.4	1224	1.5
1900	687	0.7	758	0.8	833	0.9	905	0.9	954	1.0	1010	1.1	1068	1.2	1128	1.3	1184	1.4	1236	1.5
2000	710	0.8	781	0.9	856	0.9	927	1.0	968	1.1	1024	1.2	1082	1.3	1142	1.4	1198	1.5	1250	1.6
2100	733	0.8	804	0.9	879	1.0	951	1.1	983	1.2	1039	1.3	1097	1.4	1157	1.5	1213	1.6	1265	1.7
2200	758	0.9	828	1.0	904	1.1	947	1.2	1000	1.3	1056	1.4	1116	1.5	1174	1.6	1229	1.7	1281	1.8
2300	783	1.0	854	1.1	929	1.1	964	1.3	1018	1.4	1075	1.5	1133	1.6	1191	1.7	1246	1.8	-	-
2400	809	1.1	879	1.2	932	1.3	983	1.4	1037	1.5	1094	1.6	1152	1.7	1209	1.8	-	-	-	-
2500	835	1.1	906	1.2	951	1.4	1001	1.5	1055	1.6	1112	1.7	1170	1.8	2 HP & Field Supplied Drive					

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR078-150 Bottom Duct Application**ZR078 (6.5 Ton) Bottom Duct**

Air Flow (CFM)	Available External Static Pressure - IWG ¹													
	0.2		0.4		0.6		0.8		1.0		1.2		1.4	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	1.5 HP & Field Supplied Drive		Standard 1.5 HP & Drive						Hi Static 2 HP & Drive					
1800	801	0.45	874	0.65	946	0.82	1018	0.97	1090	1.11	1163	1.25	1238	1.38
2000	831	0.59	903	0.78	975	0.95	1047	1.10	1119	1.24	1193	1.38	1267	1.51
2200	867	0.74	940	0.93	1012	1.10	1084	1.25	1156	1.39	1229	1.53	1304	1.66
2400	910	0.91	983	1.10	1055	1.27	1126	1.43	1199	1.57	1272	1.70	1347	1.84
2600	957	1.10	1030	1.30	1102	1.47	1174	1.62	1246	1.76	1320	1.89	1394	2.03
2800	1009	1.32	1082	1.51	1154	1.69	1225	1.84	1298	1.98	1371	2.11	1446	2.25
3000	1064	1.56	1137	1.75	1208	1.92	1280	2.08	1353	2.22	-	-	-	-
3200	1122	1.82	1194	2.02	1266	2.19	-	-	-	-	-	-	-	-
3400	1182	2.10	1254	2.30	-	-	-	-	-	-	-	-	-	-
2 HP & Field Supplied Drive														

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR090 (7.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹													
	0.2		0.4		0.6		0.8		1.0		1.2		1.4	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	1.5 HP & Field Supplied Drive		Standard 1.5 HP & Drive						Hi Static 3 HP & Drive					
2000	831	0.59	903	0.78	975	0.95	1047	1.10	1119	1.24	1193	1.38	1267	1.51
2200	867	0.74	940	0.93	1012	1.10	1084	1.25	1156	1.39	1229	1.53	1304	1.66
2400	910	0.91	983	1.10	1055	1.27	1126	1.43	1199	1.57	1272	1.70	1347	1.84
2600	957	1.10	1030	1.30	1102	1.47	1174	1.62	1246	1.76	1320	1.89	1394	2.03
2800	1009	1.32	1082	1.51	1154	1.69	1225	1.84	1298	1.98	1371	2.11	1446	2.25
3000	1064	1.56	1137	1.75	1208	1.92	1280	2.08	1353	2.22	1426	2.35	1501	2.49
3200	1122	1.82	1194	2.02	1266	2.19	1338	2.34	1410	2.48	1484	2.61	1559	2.75
3400	1182	2.10	1254	2.30	1326	2.47	1398	2.62	1471	2.76	1544	2.90	1619	3.03
3600	1244	2.41	1317	2.60	1389	2.77	1461	2.93	1533	3.07	1606	3.20	1681	3.33
3800	1308	2.73	1381	2.93	1453	3.10	1525	3.25	1597	3.39	-	-	-	-
3 HP & Field Supplied Drive														

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR102 (8.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹													
	0.2		0.4		0.6		0.8		1.0		1.2		1.4	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	2 HP & Field Supplied Drive		Standard 2 HP & Drive						Hi Static 3 HP & Drive					
2200	715	0.72	768	0.85	818	0.98	867	1.09	914	1.21	960	1.32	1004	1.43
2400	734	0.83	786	0.96	837	1.08	886	1.20	933	1.31	978	1.42	1022	1.53
2600	755	0.95	808	1.08	858	1.20	907	1.32	954	1.44	1000	1.55	1044	1.65
2800	779	1.09	832	1.22	882	1.35	931	1.46	978	1.58	1024	1.69	1068	1.80
3000	806	1.25	859	1.38	910	1.51	958	1.63	1005	1.74	1051	1.85	1095	1.96
3200	837	1.44	889	1.57	940	1.69	989	1.81	1036	1.93	1081	2.04	1125	2.14
3400	870	1.65	922	1.78	973	1.90	1022	2.02	1069	2.13	1114	2.24	1158	2.35
3600	906	1.88	959	2.01	1009	2.13	1058	2.25	1105	2.36	1150	2.47	1195	2.58
3800	945	2.13	998	2.26	1048	2.38	1097	2.50	1144	2.61	1190	2.72	1234	2.83
4000	987	2.40	1040	2.53	1090	2.66	1139	2.78	1186	2.89	1231	3.00	1276	3.11
4200	1032	2.70	1084	2.83	1135	2.95	1184	3.07	1231	3.18	1276	3.29	1320	3.40
3 HP & Field Supplied Drive														

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR120 (10 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹											
	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0		
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP		
	2 HP & Field Supplied Drive											
	Standard 2 HP & Drive						Hi Static 3 HP & Drive					
2600	755 0.95	808 1.08	858 1.20	907 1.32	954 1.44	1000 1.55	1044 1.65	1087 1.76	1129 1.87	1171 1.98		
2800	779 1.09	832 1.22	882 1.35	931 1.46	978 1.58	1024 1.69	1068 1.80	1111 1.90	1153 2.01	1195 2.12		
3000	806 1.25	859 1.38	910 1.51	958 1.63	1005 1.74	1051 1.85	1095 1.96	1138 2.07	1181 2.17	1222 2.28		
3200	837 1.44	889 1.57	940 1.69	989 1.81	1036 1.93	1081 2.04	1125 2.14	1168 2.25	1211 2.36	1252 2.47		
3400	870 1.65	922 1.78	973 1.90	1022 2.02	1069 2.13	1114 2.24	1158 2.35	1202 2.46	1244 2.57	1286 2.68		
3600	906 1.88	959 2.01	1009 2.13	1058 2.25	1105 2.36	1150 2.47	1195 2.58	1238 2.69	1280 2.80	1322 2.91		
3800	945 2.13	998 2.26	1048 2.38	1097 2.50	1144 2.61	1190 2.72	1234 2.83	1277 2.94	1319 3.05	1361 3.16		
4000	987 2.40	1040 2.53	1090 2.66	1139 2.78	1186 2.89	1231 3.00	1276 3.11	1319 3.21	1361 3.32	1403 3.43		
4200	1032 2.70	1084 2.83	1135 2.95	1184 3.07	1231 3.18	1276 3.29	1320 3.40	- -	- -	- -		
4400	1079 3.01	1132 3.15	1182 3.27	1231 3.39	- -	- -	- -	- -	- -	- -		
4600	1129 3.35	- -	- -	- -	- -	- -	- -	- -	- -	- -		
	3 HP & Field Supplied Drive											

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

ZR150 (12.5 Ton) Bottom Duct

Air Flow (CFM)	Available External Static Pressure - IWG ¹											
	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0		
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP		
	3 HP & Field Supplied Drive											
	Standard 3 HP & Drive						Hi Static 5 HP & Drive					
3200	837 1.44	889 1.57	940 1.69	989 1.81	1036 1.93	1081 2.04	1125 2.14	1168 2.25	1211 2.36	1252 2.47		
3400	870 1.65	922 1.78	973 1.90	1022 2.02	1069 2.13	1114 2.24	1158 2.35	1202 2.46	1244 2.57	1286 2.68		
3600	906 1.88	959 2.01	1009 2.13	1058 2.25	1105 2.36	1150 2.47	1195 2.58	1238 2.69	1280 2.80	1322 2.91		
3800	945 2.13	998 2.26	1048 2.38	1097 2.50	1144 2.61	1190 2.72	1234 2.83	1277 2.94	1319 3.05	1361 3.16		
4000	987 2.40	1040 2.53	1090 2.66	1139 2.78	1186 2.89	1231 3.00	1276 3.11	1319 3.21	1361 3.32	1403 3.43		
4200	1032 2.70	1084 2.83	1135 2.95	1184 3.07	1231 3.18	1276 3.29	1320 3.40	1364 3.51	1406 3.62	1447 3.73		
4400	1079 3.01	1132 3.15	1182 3.27	1231 3.39	1278 3.50	1324 3.61	1368 3.72	1411 3.83	1453 3.93	1495 4.05		
4600	1129 3.35	1182 3.48	1232 3.61	1281 3.72	1328 3.84	1374 3.95	1418 4.06	1461 4.16	1503 4.27	1545 4.38		
4800	1182 3.71	1235 3.84	1285 3.96	1334 4.08	1381 4.20	1426 4.31	1471 4.41	1514 4.52	1556 4.63	1598 4.74		
5000	1237 4.08	1290 4.22	1340 4.34	1389 4.46	1436 4.57	1481 4.68	1526 4.79	1569 4.90	1611 5.01	1653 5.12		
5200	1294 4.48	1347 4.61	1398 4.74	1446 4.85	1493 4.97	1539 5.08	1583 5.19	1626 5.29	1669 5.40	1710 5.51		
5400	1354 4.89	1407 5.03	1457 5.15	1506 5.27	1553 5.38	1599 5.49	1643 5.60	1686 5.71	- -	- -		
5600	1416 5.33	1469 5.46	1519 5.58	1568 5.70	- -	- -	- -	- -	- -	- -		
5800	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
	5 HP & Field Supplied Drive											

1. Blower performance includes gas heat exchangers and 2" filters. See STATIC RESISTANCE table for additional applications.
2. See RPM SELECTION table to determine desired motor sheave setting and to determine the maximum continuous BHP.
3. kW = BHP x 0.932.

Sound Performance

Indoor Sound Power Levels (3 thru 5 Ton)

Indoor Sound Power Levels (Horizontal Ducted Inlet, Standard Static Belt Drive)

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR037 / 3 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Horizontal (Side Return) Ducted Inlet			
Indoor Blower Speed (RPM)	612 - 3 Turns Open Equivalent		709 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.5		0.4	
Airflow (CFM)	850		1300	
Blower Motor BHP	0.37		0.40	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	73	77	73	77
125	61	70	66	71
250	56	63	60	64
500	51	56	55	57
1000	44	48	51	52
2000	41	44	48	49
4000	44	47	47	48
8000	42	44	43	44

1. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR049 / 4 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Horizontal (Side Return) Ducted Inlet			
Indoor Blower Speed (RPM)	612 - 3 Turns Open Equivalent		709 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.5		0.4	
Airflow (CFM)	850		1300	
Blower Motor BHP	0.37		0.40	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	73	77	73	77
125	61	70	66	71
250	56	63	60	64
500	51	56	55	57
1000	44	48	51	52
2000	41	44	48	49
4000	44	47	47	48
8000	42	44	43	44

1. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR061 / 5 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Horizontal (Side Return) Ducted Inlet			
Indoor Blower Speed (RPM)	814 - 3 Turns Open Equivalent		918 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.6		0.8	
Airflow (CFM)	1700		1950	
Blower Motor BHP	0.42		0.88	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	77	81	85	82
125	71	80	68	81
250	63	67	64	68
500	58	60	60	61
1000	56	57	58	59
2000	52	53	55	55
4000	51	51	54	54
8000	47	47	48	48

1. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

Indoor Sound Power Levels (Horizontal Ducted Discharge, Standard Static Belt Drive)

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR037 / 3 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Horizontal (Side Supply) Ducted Discharge			
Indoor Blower Speed (RPM)	610 - 3 Turns Open Equivalent		710 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.5		0.6	
Airflow (CFM)	850		950	
Blower Motor BHP	0.37		0.42	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	77	78	79	79
125	74	75	75	76
250	66	68	70	70
500	61	61	65	64
1000	60	62	65	66
2000	52	52	58	58
4000	52	52	59	60
8000	44	44	50	50

1. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR049 / 4 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Horizontal (Side Supply) Ducted Discharge			
Indoor Blower Speed (RPM)	610 - 3 Turns Open Equivalent		710 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.5		0.6	
Airflow (CFM)	850		950	
Blower Motor BHP	0.37		0.42	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	77	78	79	79
125	74	75	75	76
250	66	68	70	70
500	61	61	65	64
1000	60	62	65	66
2000	52	52	58	58
4000	52	52	59	60
8000	44	44	50	50

1. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR061 / 5 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Horizontal (Side Supply) Ducted Discharge			
Indoor Blower Speed (RPM)	810 - 3 Turns Open Equivalent		918 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.4		0.8	
Airflow (CFM)	2050		1950	
Blower Motor BHP	0.73		0.88	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	85	83	83	83
125	78	79	76	79
250	69	70	69	70
500	68	68	68	68
1000	64	64	65	65
2000	63	63	64	64
4000	64	64	64	64
8000	59	59	59	60

1. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

Indoor Sound Power Levels (Vertical Ducted Inlet, Standard Static Belt Drive)

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR037 / 3 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Vertical (Bottom Return) Ducted Inlet			
Indoor Blower Speed (RPM)	609 - 3 Turns Open Equivalent		708 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.4		0.4	
Airflow (CFM)	850		1150	
Blower Motor BHP	0.32		0.38	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	76	76	74	76
125	63	70	66	70
250	55	62	59	62
500	54	55	58	59
1000	48	48	53	53
2000	44	44	48	48
4000	41	44	45	46
8000	42	43	43	44

1. Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR049 / 4 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Vertical (Bottom Return) Ducted Inlet			
Indoor Blower Speed (RPM)	609 - 3 Turns Open Equivalent		708 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.4		0.4	
Airflow (CFM)	850		1150	
Blower Motor BHP	0.32		0.38	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	76	76	74	76
125	63	70	66	70
250	55	62	59	62
500	54	55	58	59
1000	48	48	53	53
2000	44	44	48	48
4000	41	44	45	46
8000	42	43	43	44

1. Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR061 / 5 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Vertical (Bottom Return) Ducted Inlet			
Indoor Blower Speed (RPM)	812 - 3 Turns Open Equivalent		915- 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.6		0.8	
Airflow (CFM)	1575		1800	
Blower Motor BHP	0.64		0.83	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	75	78	80	80
125	66	80	69	81
250	59	66	62	65
500	60	60	63	63
1000	57	57	60	60
2000	52	53	55	55
4000	49	50	53	53
8000	44	45	47	47

1. Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.
- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

Indoor Sound Power Levels (Vertical Ducted Discharge, Standard Static Belt Drive)

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR037 / 3 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Vertical (Bottom Supply) Ducted Discharge			
Indoor Blower Speed (RPM)	609 - 3 Turns Open Equivalent		712 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.4		0.6	
Airflow (CFM)	850		950	
Blower Motor BHP	0.32		0.42	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	76	77	81	81
125	68	68	72	72
250	55	65	57	57
500	56	57	57	57
1000	51	57	52	56
2000	49	49	50	50
4000	48	48	49	51
8000	46	46	47	48

1. Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.
- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR049 / 4 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Vertical (Bottom Supply) Ducted Discharge			
Indoor Blower Speed (RPM)	609 - 3 Turns Open Equivalent		712 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.4		0.6	
Airflow (CFM)	850		950	
Blower Motor BHP	0.32		0.42	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	76	77	81	81
125	68	68	72	72
250	55	65	57	57
500	56	57	57	57
1000	51	57	52	56
2000	49	49	50	50
4000	48	48	49	51
8000	46	46	47	48

1. Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.
- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR061 / 5 Ton / Standard Static Belt Drive			
TEST CONFIGURATION	Vertical (Bottom Supply) Ducted Discharge			
Indoor Blower Speed (RPM)	809 - 3 Turns Open Equivalent		914 - 1 Turn Open Equivalent	
External Static Pressure (IWG)	0.5		0.8	
Airflow (CFM)	1700		1800	
Blower Motor BHP	0.64		0.83	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	81	81	79	79
125	75	75	75	76
250	65	65	63	63
500	67	67	67	67
1000	63	63	63	63
2000	61	62	61	61
4000	62	62	61	61
8000	57	57	56	56

1. Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.
- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

Indoor Sound Power Levels (Horizontal Ducted Inlet, High Static Belt Drive)

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR037 / 3 Ton / High Static Belt Drive					
TEST CONFIGURATION	Horizontal (Side Return) Ducted Inlet					
Indoor Blower Speed (RPM)	876 - 4 Turns Open Equivalent		1,064 - 1/2 Turn Open Equivalent		1,190 - 2.5 Turns Open Equivalent ¹	
External Static Pressure (IWG)	1.0		1.6		2.0 ¹	
Nominal Airflow (CFM)	1,200		1,100		1,000	
Blower Motor BHP	0.64		0.93		1.08	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ² (dB)	ID Blower Only (dB)	Cooling Operation ² (dB)	ID Blower Only (dB)	Cooling Operation ² (dB)
63	75	80	81	81	81	83
125	69	71	71	73	73	75
250	62	68	66	71	68	70
500	54	56	57	59	59	60
1000	52	56	56	58	58	60
2000	47	49	52	52	54	56
4000	43	45	48	49	51	53
8000	43	45	45	46	47	48

- Requires driven pulley #AK-56, normal high static pulley is an #AK-69.
 - Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.
- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR049 / 4 Ton / High Static Belt Drive					
TEST CONFIGURATION	Horizontal (Side Return) Ducted Inlet					
Indoor Blower Speed (RPM)	965 - 5.5 Turns Open Equivalent		1,088 - 4 Turns Open Equivalent		1,186 - 2.5 Turns Open Equivalent	
External Static Pressure (IWG)	1.0		1.6		2.0	
Nominal Airflow (CFM)	1,600		1,400		1,200	
Blower Motor BHP	0.86		1.03		1.13	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	74	80	77	80	81	81
125	69	74	72	75	75	76
250	68	68	68	69	70	71
500	62	62	60	61	61	63
1000	60	61	58	58	59	60
2000	57	57	53	54	55	56
4000	56	56	49	50	51	52
8000	54	54	45	47	47	48

- Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.
- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR061 / 5 Ton / High Static Belt Drive					
TEST CONFIGURATION	Horizontal (Side Return) Ducted Inlet					
Indoor Blower Speed (RPM)	1,012- 5.5 Turns Open Equivalent		1,134 - 3 Turns Open Equivalent		1,174 - 2 Turns Open Equivalent	
External Static Pressure (IWG)	1.0		1.6		2.0	
Nominal Airflow (CFM)	2,000		1,800		1,600	
Blower Motor BHP	1.04		1.25		1.39	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	76	78	78	79	79	81
125	70	73	73	76	74	77
250	68	70	68	69	69	70
500	61	62	61	62	60	62
1000	61	62	61	62	58	60
2000	57	58	57	58	54	56
4000	56	56	55	56	52	53
8000	50	50	50	50	47	48

1. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

Indoor Sound Power Levels (Horizontal Ducted Discharge, High Static Belt Drive)

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR037 / 3 Ton / High Static Belt Drive					
TEST CONFIGURATION	Horizontal (Side Supply) Ducted Discharge					
Indoor Blower Speed (RPM)	896 - 3.5 Turns Open Equivalent		1,072 - Fully Closed Equivalent		1,170 - 2.5 Turns Open Equivalent ¹	
External Static Pressure (IWG)	1.0		1.6		2.0 ¹	
Nominal Airflow (CFM)	1,200		1,100		1,000	
Blower Motor BHP	0.64		0.93		1.08	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ² (dB)	ID Blower Only (dB)	Cooling Operation ² (dB)	ID Blower Only (dB)	Cooling Operation ² (dB)
63	77	81	83	84	83	84
125	74	76	76	77	80	80
250	67	68	70	70	72	73
500	65	66	67	67	67	68
1000	61	62	67	67	66	69
2000	58	60	63	63	63	64
4000	57	59	62	62	62	63
8000	51	53	56	57	56	58

1. Requires driven pulley #AK-56, normal high static pulley is an #AK-69.

2. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR049 / 4 Ton / High Static Belt Drive					
TEST CONFIGURATION	Horizontal (Side Supply) Ducted Discharge					
Indoor Blower Speed (RPM)	922 - 6 Turns Open Equivalent		1,069 - 4 Turns Open Equivalent		1,165 - 2.5 Turns Open Equivalent	
External Static Pressure (IWG)	1.0		1.6		2.0	
Nominal Airflow (CFM)	1,600		1,400		1,200	
Blower Motor BHP	0.86		1.03		1.13	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	80	82	82	83	84	84
125	76	77	76	77	78	79
250	71	72	72	72	74	74
500	69	69	69	69	70	70
1000	65	65	69	69	70	70
2000	64	64	64	64	65	65
4000	63	63	63	63	64	64
8000	58	58	58	58	59	59

1. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR061 / 5 Ton / High Static Belt Drive					
TEST CONFIGURATION	Horizontal (Side Supply) Ducted Discharge					
Indoor Blower Speed (RPM)	1,009- 5.5 Turns Open Equivalent		1,131 - 3 Turns Open Equivalent		1,184 - 2 Turns Open Equivalent	
External Static Pressure (IWG)	1.0		1.6		2.0	
Nominal Airflow (CFM)	2,000		1,800		1,600	
Blower Motor BHP	1.04		1.25		1.39	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	84	85	82	83	82	83
125	78	79	79	79	78	79
250	75	75	74	75	73	73
500	71	71	70	71	69	69
1000	69	69	71	71	71	72
2000	66	67	67	67	66	66
4000	66	66	66	67	66	66
8000	61	62	61	62	60	60

1. Cooling Operation – ID blower, compressor and outdoor fan operating at 230 VAC.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

Indoor Sound Power Levels (Vertical Ducted Inlet, High Static Belt Drive)

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR037 / 3 Ton / High Static Belt Drive					
TEST CONFIGURATION	Vertical (Bottom Return) Ducted Inlet					
Indoor Blower Speed (RPM)	927 - 3 Turns Open Equivalent		1,085 - 1/2 Turn Open Equivalent		1,190 - 2.5 Turns Open Equivalent ¹	
External Static Pressure (IWG)	1.0		1.6		2.0 ¹	
Nominal Airflow (CFM)	1,200		1,100		1,000	
Blower Motor BHP	0.68		0.93		1.09	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ² (dB)	ID Blower Only (dB)	Cooling Operation ² (dB)	ID Blower Only (dB)	Cooling Operation ² (dB)
63	77	79	82	83	79	81
125	68	69	70	71	72	73
250	60	67	62	69	64	67
500	58	58	63	63	62	63
1000	54	55	60	60	60	60
2000	48	49	56	56	55	55
4000	43	44	48	49	51	51
8000	44	44	45	46	47	47

- Requires driven pulley #AK-56, normal high static pulley is an #AK-69.
- Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.
 - Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR049 / 4 Ton / High Static Belt Drive					
TEST CONFIGURATION	Vertical (Bottom Return) Ducted Inlet					
Indoor Blower Speed (RPM)	968 - 5.5 Turns Open Equivalent		1,120 - 3.5 Turns Open Equivalent		1,218 - 2.0 Turns Open Equivalent	
External Static Pressure (IWG)	1.0		1.6		2.0	
Nominal Airflow (CFM)	1,600		1,400		1,200	
Blower Motor BHP	0.86		1.03		1.13	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	77	79	78	78	81	81
125	69	73	71	73	73	74
250	63	63	63	64	66	66
500	63	64	62	63	64	64
1000	59	59	59	59	61	61
2000	54	54	53	54	56	56
4000	49	49	48	48	50	51
8000	45	46	45	46	47	47

- Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.
 - Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR061 / 5 Ton / High Static Belt Drive					
TEST CONFIGURATION	Vertical (Bottom Return) Ducted Inlet					
Indoor Blower Speed (RPM)	1,039 - 5 Turns Open Equivalent		1,143 - 3 Turns Open Equivalent		1,201 - 2 Turns Open Equivalent	
External Static Pressure (IWG)	1.0		1.6		2.0	
Nominal Airflow (CFM)	2,000		1,800		1,600	
Blower Motor BHP	1.11		1.25		1.39	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	79	80	77	77	81	81
125	74	75	71	73	73	74
250	63	65	63	64	63	65
500	62	63	64	64	62	62
1000	61	61	61	61	59	59
2000	55	56	55	56	54	55
4000	52	52	50	51	50	50
8000	47	47	46	46	46	46

- Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.
- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

Indoor Sound Power Levels (Vertical Ducted Discharge, High Static Belt Drive)

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR037 / 3 Ton / High Static Belt Drive					
TEST CONFIGURATION	Vertical (Bottom Supply) Ducted Discharge					
Indoor Blower Speed (RPM)	920 - 3.0 Turns Open Equivalent		1,074 - Fully Closed Equivalent		1,189 - 2.0 Turns Open Equivalent ¹	
External Static Pressure (IWG)	1.0		1.6		2.0 ¹	
Nominal Airflow (CFM)	1,200		1,100		1,000	
Blower Motor BHP	0.68		0.93		1.09	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ² (dB)	ID Blower Only (dB)	Cooling Operation ² (dB)	ID Blower Only (dB)	Cooling Operation ² (dB)
63	81	82	81	81	82	82
125	78	78	78	78	81	81
250	69	70	70	71	74	74
500	67	68	68	69	71	71
1000	62	63	67	68	70	71
2000	60	61	62	63	65	66
4000	61	61	63	63	66	66
8000	54	55	57	57	60	61

- Requires driven pulley #AK-56, normal high static pulley is an #AK-69.
- Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.
- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing datum includes effect of standard inlet air filters.
 - Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
 - Test duct termination is flush with reverberant room wall.
 - Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR049 / 4 Ton / High Static Belt Drive					
TEST CONFIGURATION	Vertical (Bottom Supply) Ducted Discharge					
Indoor Blower Speed (RPM)	962 - 5.5 Turns Open Equivalent		1,092 - 3.5 Turns Open Equivalent		1,190 - 2.0 Turns Open Equivalent	
External Static Pressure (IWG)	1.0		1.6		2.0	
Nominal Airflow (CFM)	1,600		1,400		1,200	
Blower Motor BHP	0.86		1.03		1.13	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	83	84	82	82	83	83
125	80	81	79	80	80	81
250	75	75	74	75	75	75
500	71	72	70	71	71	72
1000	66	67	70	71	72	72
2000	63	64	64	64	65	65
4000	64	64	64	64	65	66
8000	58	59	59	59	60	60

1. Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

UNIT DESCRIPTION / MODEL	ZH/ZJ/ZR061 / 5 Ton / High Static Belt Drive					
TEST CONFIGURATION	Vertical (Bottom Supply) Ducted Discharge					
Indoor Blower Speed (RPM)	1,033 - 5.5 Turns Open Equivalent		1,135 - 3 turns Open Equivalent		1,175 - 2.5 Turns Open Equivalent	
External Static Pressure (IWG)	1.0		1.6		2.0	
Nominal Airflow (CFM)	2,000		1,135		1,175	
Blower Motor BHP	1.11		1.25		1.39	
Octave Center Freq. Hz	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)	ID Blower Only (dB)	Cooling Operation ¹ (dB)
63	83	83	83	83	85	86
125	84	84	82	82	79	81
250	79	80	77	78	66	66
500	73	73	70	71	65	66
1000	69	70	69	70	61	65
2000	67	67	65	66	60	61
4000	67	68	66	67	61	62
8000	62	63	60	61	54	54

1. Differentials for Cooling Operation (IDB, COMP, & ODF) are logarithmically calculated from the horizontal flow sound test.

- Tested in accordance with AHRI Standard 260-2001. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
- Testing datum includes effect of standard inlet air filters.
- Test duct dimension: 18 in. wide x 28 in. high x 8 ft. long, no elbows.
- Test duct termination is flush with reverberant room wall.
- Duct end (sound reflection) corrections included: (7.2, 3.4, 1.2, 0.4, 0.1, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 2k, 4k, 8k) Hz respectively.

Indoor Sound Power Levels (6.5 thru 12.5 Ton)

Size (Tons)	Model	CFM	ESP (IWG)	Blower		Sound Power, dB (10 ⁻¹²) Watts								
				RPM	BHP	Sound Rating ¹ dB (A)	Octave Band Centerline Frequency (Hz)							
							63	125	250	500	1000	2000	4000	8000
078 (6.5)	ZH/ZJ/ZR	2600	0.6	812	1.14	74	71	73	73	71	69	65	65	60
090 (7.5)	ZH/ZJ/ZR	3000	0.6	854	1.47	77	74	76	76	74	72	68	68	63
102 (8.5)	ZH/ZJ/ZR	3400	0.6	872	1.65	80	77	79	79	77	75	71	71	66
120 (10)	ZH/ZJ/ZR	4000	0.6	959	2.29	83	80	82	82	80	78	74	74	69
150 (12.5)	ZH/ZJ/ZR	5000	0.6	1132	3.74	87	84	86	86	84	82	78	78	73

1. These values have been accessed using a model of sound propagation from a point source into the hemispheric/free field. The dBA values provided are to be used for reference only. Calculation of dBA values cover matters of system design and the fan manufacture has no way of knowing the details of each system. This constitutes an exception to any specification or guarantee requiring a dBA value of sound data in any other form than sound power level ratings.

Outdoor Sound Power Levels
ZH/ZJ/ZR037-150

Size (Tons)	Model	Sound Rating ¹ dB (A)	Octave Band Centerline Frequency (Hz)							
			63	125	250	500	1000	2000	4000	8000
037 (3)	ZH	78	79.0	83.0	76.0	75.0	73.0	68.0	63.0	59.0
049 (4)	ZH	78	82.0	86.0	78.5	75.5	73.0	68.0	63.0	56.0
061 (5)	ZH	84	81.0	91.0	82.5	80.5	79.0	73.5	69.5	64.5
078 (6.5)	ZH	87	89.0	88.5	84.5	84.5	82.0	76.5	72.0	66.5
090 (7.5)	ZH	89	87.0	91.0	88.0	87.0	84.0	78.0	73.0	66.0
102 (8.5)	ZH	92	97.0	94.0	93.5	90.5	87.0	81.5	76.0	69.0
120 (10)	ZH	91	99.5	91.5	91.5	89.0	86.0	80.5	76.5	71.0
150 (12.5)	ZH	86	89.5	91.0	85.5	84.0	81.0	76.5	71.0	62.5
037 (3)	ZJ	72	80.0	83.0	72.0	69.0	66.0	61.0	55.0	50.0
049 (4)	ZJ	76	80.0	81.0	75.0	73.0	71.0	67.0	61.0	55.0
061 (5)	ZJ	78	81.0	86.0	80.0	74.0	71.0	67.0	63.0	59.0
078 (6.5)	ZJ	83	77.0	85.0	82.0	81.0	79.0	73.0	67.0	60.0
090 (7.5)	ZJ	86	86.0	91.0	87.0	84.0	80.0	76.0	71.0	65.0
102 (8.5)	ZJ	88	89.0	91.0	89.0	86.0	83.0	78.0	74.0	67.0
120 (10)	ZJ	91	99.5	91.5	91.5	89.0	86.0	80.5	76.5	71.0
150 (12.5)	ZJ	85	89.0	88.0	83.5	83.5	78.5	74.0	69.5	64.5
037 (3)	ZR	77	82.0	83.5	80.0	73.0	70.0	65.5	60.5	55.5
049 (4)	ZR	81	87.5	88.5	83.0	77.5	73.5	70.5	67.0	62.0
61 (5)	ZR	76	82.0	84.0	77.0	74.0	70.0	64.0	59.0	51.0
078 (6.5)	ZR	83	~	88.0	82.5	81.5	78.0	73.0	69.0	62.0
090 (7.5)	ZR	83	~	89.5	83.5	82.0	78.0	72.5	68.0	60.5
102 (8.5)	ZR	83	~	89.0	84.5	81.5	78.0	72.5	68.5	70.5
120 (10)	ZR	83	~	89.5	83.5	81.0	78.0	72.0	68.5	70.5
150 (12.5)	ZR	84	~	90.0	84.5	81.5	77.5	72.0	68.5	61.5

1. Rated in accordance with AHRI 270 standard.

Electrical Data

ZH037-061 Standard Indoor Blower - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					FLA	FLA	FLA	FLA				
037 (3)	208	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	2.3	1	6.4	18.6	24.1	25	30
									E06	4.5	1	12.5	22.1	29	25	30
									E08	6.8	1	18.9	30.1	37	35	40
	230	9	71	14	2.1	5.2	5.5		E15	11.3	2	31.4	45.8	52.6	50	60
									None	-	-	-	18.6	24.1	25	30
									E03	3	1	7.2	18.6	24.1	25	30
									E06	6	1	14.4	24.5	31.4	25	35
	460	5.8	38	9	1.26	2.6	2.2		E08	9	1	21.7	33.6	40.5	35	45
									E15	15	2	36.1	51.6	58.5	60	60
									None	-	-	-	11.2	13.4	15	15
									E03	3	1	3.6	11.2	13.4	15	15
	575	3.8	36.5	6	0.66	2	1.8		E06	6	1	7.2	12.3	15	15	15
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
									None	-	-	-	7.5	9.3	15	15
								E08	9	1	8.7	13.4	15.6	15	20	
								E15	15	2	14.4	20.5	22.8	25	25	
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	24.6	30.1	35	40
									E06	4.5	1	12.5	24.6	30.1	35	40
									E08	6.8	1	18.9	30.1	37	35	40
									E15	11.3	2	31.4	45.8	52.6	50	60
	230	13.8	83.1	22	2.1	5.2	5.5		E20	15	2	41.6	58.5	65.4	60	70
									None	-	-	-	24.6	30.1	35	40
									E06	6	1	14.4	24.6	31.4	35	40
									E08	9	1	21.7	33.6	40.5	35	45
	460	6.2	41	10	1.26	2.6	2.2		E15	15	2	36.1	51.6	58.5	60	60
									E20	20	2	48.1	66.6	73.5	70	80
									None	-	-	-	11.7	13.9	15	20
									E06	6	1	7.2	12.3	15	15	20
	575	4.9	33	8	0.66	2	1.8		E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
									E20	20	2	24.1	33.4	36.1	35	40
									None	-	-	-	8.8	10.6	15	15
								E08	9	1	8.7	13.4	15.6	15	20	
								E15	15	2	14.4	20.5	22.8	25	25	
								E20	20	2	19.2	26.5	28.8	30	30	
061 (5)	208	15.9	110	25	2.1	5.2	5.5		None	-	-	-	29.3	34.8	40	45
									E06	4.5	1	12.5	29.3	34.8	40	45
									E08	6.8	1	18.9	30.1	37	40	50
									E15	11.3	2	31.4	45.8	52.6	50	60
	230	15.9	110	25	2.1	5.2	5.5		E20	15	2	41.6	58.5	65.4	60	70
									E23	18	2	50	69	75.9	70	80
									None	-	-	-	29.3	34.8	40	45
									E06	6	1	14.4	29.3	34.8	40	45
	460	7.1	52	11	1.26	2.6	2.2		E08	9	1	21.7	33.6	40.5	45	50
									E15	15	2	36.1	51.6	58.5	60	60
									E20	20	2	48.1	66.6	73.5	70	80
									E23	24	2	57.7	78.6	85.5	80	90
	575	5.1	39.5	8	0.66	2	1.8		None	-	-	-	14	16.2	20	20
									E06	6	1	7.2	14	16.2	20	20
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
								E20	20	2	24.1	33.4	36.1	35	40	
								E23	24	2	28.9	39.4	42.1	40	45	
								None	-	-	-	9.7	11.5	15	15	
								E08	9	1	8.7	13.4	15.6	15	20	
								E15	15	2	14.4	20.5	22.8	25	25	
								E20	20	2	19.2	26.5	28.8	30	30	
								E23	24	2	23.1	31.4	33.6	35	35	

1. Minimum Circuit Ampacity.

2. Dual Element, Time Delay Type.

3. HACR type per NEC.

ZH078-150 Standard Motor - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
078 (6.5)	208	11.2	84	18	2.1	5.2	5.5		None	-	-	-	34.6	40.1	45	50
									E09	6.8	1	18.9	34.6	40.1	45	50
									E18	13.5	2	37.5	53.4	60.3	60	70
									E24	18	2	50	69	75.9	70	80
									E36	25.5	2	70.8	95	101.9	100	110
	230	11.2	84	18	2.1	5.2	5.5		None	-	-	-	34.6	40.1	45	50
									E09	9	1	21.7	34.6	40.5	45	50
									E18	18	2	43.3	60.6	67.5	70	70
									E24	24	2	57.7	78.6	85.5	80	90
									E36	34	2	81.8	108.8	115.6	110	125
	460	5.6	44	9	1.26	2.6	2.2		None	-	-	-	17.7	19.9	20	25
									E09	9	1	10.8	17.7	19.9	20	25
									E18	18	2	21.7	30.4	33.1	35	35
									E24	24	2	28.9	39.4	42.1	40	45
									E36	34	2	40.9	54.4	57.1	60	60
	575	3.8	34	6	0.66	2	1.8		None	-	-	-	11.9	13.7	15	15
									E09	9	1	8.7	13.4	15.6	15	20
									E18	18	2	17.3	24.1	26.4	25	30
									E24	24	2	23.1	31.4	33.6	35	35
									E36	34	2	32.7	43.4	45.6	45	50
090 (7.5)	208	13.8	83.1	22	3.03	5.2	5.5		None	-	-	-	42.4	47.9	50	60
									E09	6.8	1	18.9	42.4	47.9	50	60
									E18	13.5	2	37.5	53.4	60.3	60	70
									E24	18	2	50	69	75.9	70	80
									E36	25.5	2	70.8	95	101.9	100	110
	230	13.8	83.1	22	3.03	5.2	5.5		None	-	-	-	42.4	47.9	50	60
									E09	9	1	21.7	42.4	47.9	50	60
									E18	18	2	43.3	60.6	67.5	70	70
									E24	24	2	57.7	78.6	85.5	80	90
									E36	34	2	81.8	108.8	115.6	110	125
	460	6.2	41	10	1.6	2.6	2.2		None	-	-	-	19.8	22	25	25
									E09	9	1	10.8	19.8	22	25	25
									E18	18	2	21.7	30.4	33.1	35	35
									E24	24	2	28.9	39.4	42.1	40	45
									E36	34	2	40.9	54.4	57.1	60	60
	575	4.9	33	8	1.35	2	1.8		None	-	-	-	15.7	17.5	20	20
									E09	9	1	8.7	15.7	17.5	20	20
									E18	18	2	17.3	24.1	26.4	25	30
									E24	24	2	23.1	31.4	33.6	35	35
									E36	34	2	32.7	43.4	45.6	45	50
102 (8.5)	208	14.5	98	23	3.03	6.8	5.5		None	-	-	-	45.5	51	60	60
									E09	6.8	1	18.9	45.5	51	60	60
									E18	13.5	2	37.5	55.4	62.3	60	70
									E24	18	2	50	71	77.9	80	80
									E36	25.5	2	70.8	97	103.9	100	110
	230	14.5	98	23	3.03	6.8	5.5		None	-	-	-	45.5	51	60	60
									E09	9	1	21.7	45.5	51	60	60
									E18	18	2	43.3	62.6	69.5	70	70
									E24	24	2	57.7	80.6	87.5	90	90
									E36	34	2	81.8	110.8	117.6	125	125
	460	6.3	55	10	1.6	3.4	2.2		None	-	-	-	20.8	23	25	25
									E09	9	1	10.8	20.8	23	25	25
									E18	18	2	21.7	31.4	34.1	35	35
									E24	24	2	28.9	40.4	43.1	45	45
									E36	34	2	40.9	55.4	58.1	60	60
	575	6	41	9	1.35	2.4	1.8		None	-	-	-	18.6	20.4	20	25
									E09	9	1	8.7	18.6	20.4	20	25
									E18	18	2	17.3	24.6	26.9	25	30
									E24	24	2	23.1	31.9	34.1	35	35
									E36	34	2	32.7	43.9	46.1	45	50

ZH078-150 Standard Motor - Without Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16	110	25	3.03	6.8	5.5		None	-	-	-	48.9	54.4	60	70
									E18	13.5	2	37.5	55.4	62.3	60	70
									E24	18	2	50	71	77.9	80	80
									E36	25.5	2	70.8	97	103.9	100	110
									E54	40.6	2	112.7	149.4	156.3	150	175
	230	16	110	25	3.03	6.8	5.5		None	-	-	-	48.9	54.4	60	70
									E18	18	2	43.3	62.6	69.5	70	70
									E24	24	2	57.7	80.6	87.5	90	90
									E36	34	2	81.8	110.8	117.6	125	125
									E54	54	2	129.9	138.4	145.3	150	175
	460	7.8	52	12	1.6	3.4	2.2		None	-	-	-	24.2	26.4	30	30
									E18	18	2	21.7	31.4	34.1	35	35
									E24	24	2	28.9	40.4	43.1	45	45
									E36	34	2	40.9	55.4	58.1	60	60
									E54	54	2	65	69.3	72	80	80
	575	5.7	38.9	9	1.35	2.4	1.8		None	-	-	-	17.9	19.7	20	25
									E18	18	2	17.3	24.6	26.9	25	30
									E24	24	2	23.1	31.9	34.1	35	35
									E36	34	2	32.7	43.9	46.1	45	50
									E54	54	2	52	55	57.3	60	60
150 (12.5)	208	23.1	160	36	2.1	9.6	5.5		None	-	-	-	70	75.5	90	90
									E18	13.5	2	37.5	70	75.5	90	90
									E24	18	2	50	74.5	81.4	90	90
									E36	25.5	2	70.8	100.5	107.4	110	110
									E54	40.6	2	112.7	152.9	159.8	175	175
	230	23.1	160	36	2.1	9.6	5.5		None	-	-	-	70	75.5	90	90
									E18	18	2	43.3	70	75.5	90	90
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
									E54	54	2	129.9	141.9	148.8	175	175
	460	12.2	87	19	1.26	4.7	2.2		None	-	-	-	37.2	39.4	45	50
									E18	18	2	21.7	37.2	39.4	45	50
									E24	24	2	28.9	42	44.8	45	50
									E36	34	2	40.9	57	59.8	60	60
									E54	54	2	65	70.9	73.6	80	80
	575	8.7	62	14	0.66	3.6	1.8		None	-	-	-	25.8	27.6	30	35
									E18	18	2	17.3	26.1	28.4	30	35
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50
									E54	54	2	52	56.5	58.8	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZH037-061 Hi Static Indoor Blower - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	2.3	1	6.4	18.6	24.1	25	30
									E06	4.5	1	12.5	22.1	29	25	30
									E08	6.8	1	18.9	30.1	37	35	40
									E15	11.3	2	31.4	45.8	52.6	50	60
	230	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	3	1	7.2	18.6	24.1	25	30
									E06	6	1	14.4	24.5	31.4	25	35
									E08	9	1	21.7	33.6	40.5	35	45
									E15	15	2	36.1	51.6	58.5	60	60
	460	5.8	38	9	1.26	2.6	2.2		None	-	-	-	11.2	13.4	15	15
									E03	3	1	3.6	11.2	13.4	15	15
									E06	6	1	7.2	12.3	15	15	15
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
	575	3.8	36.5	6	0.66	2	1.8		None	-	-	-	7.5	9.3	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	24.6	30.1	35	40
									E06	4.5	1	12.5	24.6	30.1	35	40
									E08	6.8	1	18.9	30.1	37	35	40
									E15	11.3	2	31.4	45.8	52.6	50	60
									E20	15	2	41.6	58.5	65.4	60	70
	230	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	24.6	30.1	35	40
									E06	6	1	14.4	24.6	31.4	35	40
									E08	9	1	21.7	33.6	40.5	35	45
									E15	15	2	36.1	51.6	58.5	60	60
									E20	20	2	48.1	66.6	73.5	70	80
	460	6.2	41	10	1.26	2.6	2.2		None	-	-	-	11.7	13.9	15	20
									E06	6	1	7.2	12.3	15	15	20
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
									E20	20	2	24.1	33.4	36.1	35	40
	575	4.9	33	8	0.66	2	1.8		None	-	-	-	8.8	10.6	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
									E20	20	2	19.2	26.5	28.8	30	30
061 (5)	208	15.9	110	25	2.1	6.8	5.5		None	-	-	-	30.9	36.4	40	50
									E06	4.5	1	12.5	30.9	36.4	40	50
									E08	6.8	1	18.9	32.1	39	45	50
									E15	11.3	2	31.4	47.8	54.6	50	60
									E20	15	2	41.6	60.5	67.4	70	70
	230	15.9	110	25	2.1	6.8	5.5		E23	18	2	50	71	77.9	80	80
									None	-	-	-	30.9	36.4	40	50
									E06	6	1	14.4	30.9	36.4	40	50
									E08	9	1	21.7	35.6	42.5	45	50
									E15	15	2	36.1	53.6	60.5	60	70
	460	7.1	52	11	1.26	3.4	2.2		E20	20	2	48.1	68.6	75.5	70	80
									E23	24	2	57.7	80.6	87.5	90	90
									None	-	-	-	14.8	17	20	20
									E06	6	1	7.2	14.8	17	20	20
									E08	9	1	10.8	17.8	20.5	20	25
	575	5.1	39.5	8	0.66	2.4	1.8		E15	15	2	18	26.8	29.5	30	30
									E20	20	2	24.1	34.4	37.1	35	40
									E23	24	2	28.9	40.4	43.1	45	45
									None	-	-	-	10.1	11.9	15	15
									E08	9	1	8.7	13.9	16.1	15	20

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZH078-150 Hi Static Motor - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ^{2/} Breaker ³ Size (Amps)	Max Fuse ^{2/} Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
078 (6.5)	208	11.2	84	18	2.1	6.8	5.5		None	-	-	-	36.2	41.7	45	50
									E09	6.8	1	18.9	36.2	41.7	45	50
									E18	13.5	2	37.5	55.4	62.3	60	70
									E24	18	2	50	71	77.9	80	80
									E36	25.5	2	70.8	97	103.9	100	110
	230	11.2	84	18	2.1	6.8	5.5		None	-	-	-	36.2	41.7	45	50
									E09	9	1	21.7	36.2	42.5	45	50
									E18	18	2	43.3	62.6	69.5	70	70
									E24	24	2	57.7	80.6	87.5	90	90
									E36	34	2	81.8	110.8	117.6	125	125
	460	5.6	44	9	1.26	3.4	2.2		None	-	-	-	18.5	20.7	20	25
									E09	9	1	10.8	18.5	20.7	20	25
									E18	18	2	21.7	31.4	34.1	35	35
									E24	24	2	28.9	40.4	43.1	45	45
									E36	34	2	40.9	55.4	58.1	60	60
	575	3.8	34	6	0.66	2.4	1.8		None	-	-	-	12.3	14.1	15	15
									E09	9	1	8.7	13.9	16.1	15	20
									E18	18	2	17.3	24.6	26.9	25	30
									E24	24	2	23.1	31.9	34.1	35	35
									E36	34	2	32.7	43.9	46.1	45	50
090 (7.5)	208	13.8	83.1	22	3.03	9.6	5.5		None	-	-	-	46.8	52.3	60	60
									E09	6.8	1	18.9	46.8	52.3	60	60
									E18	13.5	2	37.5	58.9	65.8	60	70
									E24	18	2	50	74.5	81.4	80	90
									E36	25.5	2	70.8	100.5	107.4	110	110
	230	13.8	83.1	22	3.03	9.6	5.5		None	-	-	-	46.8	52.3	60	60
									E09	9	1	21.7	46.8	52.3	60	60
									E18	18	2	43.3	66.1	73	70	80
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
	460	6.2	41	10	1.6	4.7	2.2		None	-	-	-	21.9	24.1	25	30
									E09	9	1	10.8	21.9	24.1	25	30
									E18	18	2	21.7	33	35.8	35	40
									E24	24	2	28.9	42	44.8	45	45
									E36	34	2	40.9	57	59.8	60	60
	575	4.9	33	8	1.35	3.6	1.8		None	-	-	-	17.3	19.1	20	20
									E09	9	1	8.7	17.3	19.1	20	20
									E18	18	2	17.3	26.1	28.4	30	30
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50
102 (8.5)	208	14.5	98	23	3.03	9.6	5.5		None	-	-	-	48.3	53.8	60	60
									E09	6.8	1	18.9	48.3	53.8	60	60
									E18	13.5	2	37.5	58.9	65.8	60	70
									E24	18	2	50	74.5	81.4	80	90
									E36	25.5	2	70.8	100.5	107.4	110	110
	230	14.5	98	23	3.03	9.6	5.5		None	-	-	-	48.3	53.8	60	60
									E09	9	1	21.7	48.3	53.8	60	60
									E18	18	2	43.3	66.1	73	70	80
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
	460	6.3	55	10	1.6	4.7	2.2		None	-	-	-	22.1	24.3	25	30
									E09	9	1	10.8	22.1	24.3	25	30
									E18	18	2	21.7	33	35.8	35	40
									E24	24	2	28.9	42	44.8	45	45
									E36	34	2	40.9	57	59.8	60	60
	575	6	41	9	1.35	3.6	1.8		None	-	-	-	19.8	21.6	25	25
									E09	9	1	8.7	19.8	21.6	25	25
									E18	18	2	17.3	26.1	28.4	30	30
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50

ZH078-150 Hi Static Motor - Without Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16	110	25	3.03	9.6	5.5		None	-	-	-	51.7	57.2	60	70
									E18	13.5	2	37.5	58.9	65.8	60	70
									E24	18	2	50	74.5	81.4	80	90
									E36	25.5	2	70.8	100.5	107.4	110	110
									E54	40.6	2	112.7	152.9	159.8	175	175
	230	16	110	25	3.03	9.6	5.5		None	-	-	-	51.7	57.2	60	70
									E18	18	2	43.3	66.1	73	70	80
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
									E54	54	2	129.9	141.9	148.8	175	175
	460	7.8	52	12	1.6	4.7	2.2		None	-	-	-	25.5	27.7	30	35
									E18	18	2	21.7	33	35.8	35	40
									E24	24	2	28.9	42	44.8	45	45
									E36	34	2	40.9	57	59.8	60	60
									E54	54	2	65	70.9	73.6	80	80
	575	5.7	38.9	9	1.35	3.6	1.8		None	-	-	-	19.1	20.9	20	25
									E18	18	2	17.3	26.1	28.4	30	30
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50
									E54	54	2	52	56.5	58.8	70	70
150 (12.5)	208	23.1	160	36	2.1	14	5.5		None	-	-	-	74.4	79.9	90	100
									E18	13.5	2	37.5	74.4	79.9	90	100
									E24	18	2	50	80	86.9	90	100
									E36	25.5	2	70.8	106	112.9	110	125
									E54	40.6	2	112.7	158.4	165.3	175	175
	230	23.1	160	36	2.1	14	5.5		None	-	-	-	74.4	79.9	90	100
									E18	18	2	43.3	74.4	79.9	90	100
									E24	24	2	57.7	89.6	96.5	90	100
									E36	34	2	81.8	119.8	126.6	125	150
									E54	54	2	129.9	147.4	154.3	175	175
	460	12.2	87	19	1.26	6.6	2.2		None	-	-	-	39.1	41.3	50	50
									E18	18	2	21.7	39.1	41.3	50	50
									E24	24	2	28.9	44.4	47.1	50	50
									E36	34	2	40.9	59.4	62.1	60	70
									E54	54	2	65	73.3	76	80	90
	575	8.7	62	14	0.66	5.2	1.8		None	-	-	-	27.4	29.2	35	35
									E18	18	2	17.3	28.1	30.4	35	35
									E24	24	2	23.1	35.4	37.6	40	40
									E36	34	2	32.7	47.4	49.6	50	50
									E54	54	2	52	58.5	60.8	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZH037-061 Standard Indoor Blower - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	2.3	1	6.4	28.8	34.3	35	40
									E06	4.5	1	12.5	34.6	41.5	40	45
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
	230	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	3	1	7.2	28.8	34.9	35	40
									E06	6	1	14.4	37	43.9	40	45
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
	460	5.8	38	9	1.26	2.6	2.2	20	None	-	-	-	16.2	18.4	20	20
									E03	3	1	3.6	16.2	18.4	20	20
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
	575	3.8	36.5	6	0.66	2	1.8	20	None	-	-	-	11.5	13.3	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	24.1	39.6	42.4	40	45
									E23	24	2	23.1	36.4	38.6	40	40
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	34.6	40.1	45	50
									E06	4.5	1	12.5	34.6	41.5	45	50
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
									E20	15	2	41.6	71	77.9	80	80
	230	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	34.6	40.1	45	50
									E06	6	1	14.4	37	43.9	45	50
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
									E20	20	2	48.1	79.1	86	80	90
	460	6.2	41	10	1.26	2.6	2.2	20	None	-	-	-	16.7	18.9	20	25
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
									E20	20	2	24.1	39.6	42.4	40	45
	575	4.9	33	8	0.66	2	1.8	20	None	-	-	-	12.8	14.6	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	19.2	31.5	33.8	35	35
									E23	24	2	23.1	36.4	38.6	40	40
061 (5)	208	15.9	110	25	2.1	5.2	5.5	20	None	-	-	-	39.3	44.8	50	60
									E06	4.5	1	12.5	39.3	44.8	50	60
									E08	6.8	1	18.9	42.6	49.5	50	60
									E15	11.3	2	31.4	58.3	65.1	60	70
									E20	15	2	41.6	71	77.9	80	80
	230	15.9	110	25	2.1	5.2	5.5	20	None	-	-	-	39.3	44.8	50	60
									E06	6	1	14.4	39.3	44.8	50	60
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
									E20	20	2	48.1	79.1	86	80	90
	460	7.1	52	11	1.26	2.6	2.2	20	None	-	-	-	19	21.2	25	25
									E06	6	1	7.2	19	21.3	25	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
									E20	20	2	24.1	39.6	42.4	40	45
	575	5.1	39.5	8	0.66	2	1.8	20	None	-	-	-	13.7	15.5	15	20
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	19.2	31.5	33.8	35	35
									E23	24	2	23.1	36.4	38.6	40	40

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZH078-150 Standard Motor - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)	
		RLA	LRA	MCC					FLA	FLA	FLA	FLA					Model
078 (6.5)	208	11.2	84	18	2.1	5.2	5.5	20	None	-	-	-	44.6	50.1	50	60	
									E09	6.8	1	18.9	44.6	50.1	50	60	
									E18	13.5	2	37.5	65.9	72.8	70	80	
									E24	18	2	50	81.5	88.4	90	90	
		230	11.2	84	18	2.1	5.2	5.5	20	E36	25.5	2	70.8	107.5	114.4	110	125
										None	-	-	-	44.6	50.1	50	60
										E09	9	1	21.7	46.1	53	50	60
										E18	18	2	43.3	73.1	80	80	80
		460	5.6	44	9	1.26	2.6	2.2	20	E24	24	2	57.7	91.1	98	100	100
										E36	34	2	81.8	121.3	128.1	125	150
										None	-	-	-	22.7	24.9	25	30
										E09	9	1	10.8	23	25.8	25	30
		575	3.8	34	6	0.66	2	1.8	20	E18	18	2	21.7	36.6	39.4	40	40
										E24	24	2	28.9	45.6	48.4	50	50
										E36	34	2	40.9	60.6	63.4	70	70
										None	-	-	-	15.9	17.7	20	20
	090 (7.5)	208	13.8	83.1	22	3.03	5.2	5.5	20	E09	9	1	8.7	18.4	20.6	20	25
										E18	18	2	17.3	29.1	31.4	30	35
										E24	24	2	23.1	36.4	38.6	40	40
										E36	34	2	32.7	48.4	50.6	50	60
None										-	-	-	52.4	57.9	60	70	
		230	13.8	83.1	22	3.03	5.2	5.5	20	E09	9	1	21.7	52.4	57.9	60	70
										E18	18	2	43.3	73.1	80	80	80
										E24	24	2	57.7	91.1	98	100	100
										E36	34	2	81.8	121.3	128.1	125	150
										None	-	-	-	24.8	27	30	30
		460	6.2	41	10	1.6	2.6	2.2	20	E09	9	1	10.8	24.8	27	30	30
										E18	18	2	21.7	36.6	39.4	40	40
										E24	24	2	28.9	45.6	48.4	50	50
										E36	34	2	40.9	60.6	63.4	70	70
										None	-	-	-	19.7	21.5	20	25
		575	4.9	33	8	1.35	2	1.8	20	E09	9	1	8.7	19.7	21.5	20	25
										E18	18	2	17.3	29.1	31.4	30	35
										E24	24	2	23.1	36.4	38.6	40	40
										E36	34	2	32.7	48.4	50.6	50	60
										None	-	-	-	55.5	61	70	70
102 (8.5)	208	14.5	98	23	3.03	6.8	5.5	20	E09	6.8	1	18.9	55.5	61	70	70	
									E18	13.5	2	37.5	67.9	74.8	70	80	
									E24	18	2	50	83.5	90.4	90	100	
									E36	25.5	2	70.8	109.5	116.4	110	125	
									None	-	-	-	55.5	61	70	70	
		230	14.5	98	23	3.03	6.8	5.5	20	E09	9	1	21.7	55.5	61	70	70
										E18	18	2	43.3	75.1	82	80	90
										E24	24	2	57.7	93.1	100	100	100
										E36	34	2	81.8	123.3	130.1	125	150
										None	-	-	-	25.8	28	30	30
		460	6.3	55	10	1.6	3.4	2.2	20	E09	9	1	10.8	25.8	28	30	30
										E18	18	2	21.7	37.6	40.4	40	45
										E24	24	2	28.9	46.6	49.4	50	50
										E36	34	2	40.9	61.6	64.4	70	70
										None	-	-	-	22.6	24.4	25	30
		575	6	41	9	1.35	2.4	1.8	20	E09	9	1	8.7	22.6	24.4	25	30
										E18	18	2	17.3	29.6	31.9	30	35
										E24	24	2	23.1	36.9	39.1	40	40
										E36	34	2	32.7	48.9	51.1	50	60
										None	-	-	-	22.6	24.4	25	30

ZH078-150 Standard Motor - With Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16	110	25	3.03	6.8	5.5	20	None	-	-	-	58.9	64.4	70	80
									E18	13.5	2	37.5	67.9	74.8	70	80
									E24	18	2	50	83.5	90.4	90	100
									E36	25.5	2	70.8	109.5	116.4	110	125
									E54	40.6	2	112.7	161.9	168.8	175	175
	230	16	110	25	3.03	6.8	5.5	20	None	-	-	-	58.9	64.4	70	80
									E18	18	2	43.3	75.1	82	80	90
									E24	24	2	57.7	93.1	100	100	100
									E36	34	2	81.8	123.3	130.1	125	150
									E54	54	2	129.9	150.9	157.8	175	175
	460	7.8	52	12	1.6	3.4	2.2	20	None	-	-	-	29.2	31.4	35	35
									E18	18	2	21.7	37.6	40.4	40	45
									E24	24	2	28.9	46.6	49.4	50	50
									E36	34	2	40.9	61.6	64.4	70	70
									E54	54	2	65	75.5	78.3	80	90
	575	5.7	38.9	9	1.35	2.4	1.8	20	None	-	-	-	21.9	23.7	25	25
									E18	18	2	17.3	29.6	31.9	30	35
									E24	24	2	23.1	36.9	39.1	40	40
									E36	34	2	32.7	48.9	51.1	50	60
									E54	54	2	52	60	62.3	70	70
150 (12.5)	208	23.1	160	36	2.1	9.6	5.5	20	None	-	-	-	80	85.5	100	100
									E18	13.5	2	37.5	80	85.5	100	100
									E24	18	2	50	87	93.9	100	100
									E36	25.5	2	70.8	113	119.9	125	125
									E54	40.6	2	112.7	165.4	172.3	175	175
	230	23.1	160	36	2.1	9.6	5.5	20	None	-	-	-	80	85.5	100	100
									E18	18	2	43.3	80	85.5	100	100
									E24	24	2	57.7	96.6	103.5	100	110
									E36	34	2	81.8	126.8	133.6	150	150
									E54	54	2	129.9	154.4	161.3	175	175
	460	12.2	87	19	1.26	4.7	2.2	20	None	-	-	-	42.2	44.4	50	50
									E18	18	2	21.7	42.2	44.4	50	50
									E24	24	2	28.9	48.3	51	50	60
									E36	34	2	40.9	63.3	66	70	70
									E54	54	2	65	77.1	79.9	90	90
	575	8.7	62	14	0.66	3.6	1.8	20	None	-	-	-	29.8	31.6	35	40
									E18	18	2	17.3	31.1	33.4	35	40
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60
									E54	54	2	52	61.5	63.8	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZH037-061 Hi Static Indoor Blower - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	2.3	1	6.4	28.8	34.3	35	40
									E06	4.5	1	12.5	34.6	41.5	40	45
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
	230	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	3	1	7.2	28.8	34.9	35	40
									E06	6	1	14.4	37	43.9	40	45
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
	460	5.8	38	9	1.26	2.6	2.2	20	None	-	-	-	16.2	18.4	20	20
									E03	3	1	3.6	16.2	18.4	20	20
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
	575	3.8	36.5	6	0.66	2	1.8	20	None	-	-	-	11.5	13.3	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	34.6	40.1	45	50
									E06	4.5	1	12.5	34.6	41.5	45	50
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
									E20	15	2	41.6	71	77.9	80	80
	230	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	34.6	40.1	45	50
									E06	6	1	14.4	37	43.9	45	50
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
									E20	20	2	48.1	79.1	86	80	90
	460	6.2	41	10	1.26	2.6	2.2	20	None	-	-	-	16.7	18.9	20	25
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
									E20	20	2	24.1	39.6	42.4	40	45
	575	4.9	33	8	0.66	2	1.8	20	None	-	-	-	12.8	14.6	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	19.2	31.5	33.8	35	35
061 (5)	208	15.9	110	25	2.1	6.8	5.5	20	None	-	-	-	40.9	46.4	50	60
									E06	4.5	1	12.5	40.9	46.4	50	60
									E08	6.8	1	18.9	44.6	51.5	50	60
									E15	11.3	2	31.4	60.3	67.1	70	70
									E20	15	2	41.6	73	79.9	80	80
	230	15.9	110	25	2.1	6.8	5.5	20	E23	18	2	50	83.5	90.4	90	100
									None	-	-	-	40.9	46.4	50	60
									E06	6	1	14.4	40.9	46.4	50	60
									E08	9	1	21.7	48.1	55	50	60
									E15	15	2	36.1	66.1	73	70	80
	460	7.1	52	11	1.26	3.4	2.2	20	E20	20	2	48.1	81.1	88	90	90
									E23	24	2	57.7	93.1	100	100	100
									None	-	-	-	19.8	22	25	25
									E06	6	1	7.2	19.8	22.3	25	25
									E08	9	1	10.8	24	26.8	25	30
	575	5.1	39.5	8	0.66	2.4	1.8	20	E15	15	2	18	33	35.8	35	40
									E20	20	2	24.1	40.6	43.4	45	45
									E23	24	2	28.9	46.6	49.4	50	50
									None	-	-	-	14.1	15.9	15	20
									E08	9	1	8.7	18.9	21.1	20	25
									E15	15	2	14.4	26	28.3	30	30
									E20	20	2	19.2	32	34.3	35	35
									E23	24	2	23.1	36.9	39.1	40	40

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZH078-150 Hi Static Motor - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
078 (6.5)	208	11.2	84	18	2.1	6.8	5.5	20	None	-	-	-	46.2	51.7	50	60
									E09	6.8	1	18.9	46.2	51.7	50	60
									E18	13.5	2	37.5	67.9	74.8	70	80
									E24	18	2	50	83.5	90.4	90	100
									E36	25.5	2	70.8	109.5	116.4	110	125
	230	11.2	84	18	2.1	6.8	5.5	20	None	-	-	-	46.2	51.7	50	60
									E09	9	1	21.7	48.1	55	50	60
									E18	18	2	43.3	75.1	82	80	90
									E24	24	2	57.7	93.1	100	100	100
									E36	34	2	81.8	123.3	130.1	125	150
	460	5.6	44	9	1.26	3.4	2.2	20	None	-	-	-	23.5	25.7	25	30
									E09	9	1	10.8	24	26.8	25	30
									E18	18	2	21.7	37.6	40.4	40	45
									E24	24	2	28.9	46.6	49.4	50	50
									E36	34	2	40.9	61.6	64.4	70	70
	575	3.8	34	6	0.66	2.4	1.8	20	None	-	-	-	16.3	18.1	20	20
									E09	9	1	8.7	18.9	21.1	20	25
									E18	18	2	17.3	29.6	31.9	30	35
									E24	24	2	23.1	36.9	39.1	40	40
									E36	34	2	32.7	48.9	51.1	50	60
090 (7.5)	208	13.8	83.1	22	3.03	9.6	5.5	20	None	-	-	-	56.8	62.3	70	70
									E09	6.8	1	18.9	56.8	62.3	70	70
									E18	13.5	2	37.5	71.4	78.3	80	80
									E24	18	2	50	87	93.9	90	100
									E36	25.5	2	70.8	113	119.9	125	125
	230	13.8	83.1	22	3.03	9.6	5.5	20	None	-	-	-	56.8	62.3	70	70
									E09	9	1	21.7	56.8	62.3	70	70
									E18	18	2	43.3	78.6	85.5	80	90
									E24	24	2	57.7	96.6	103.5	100	110
									E36	34	2	81.8	126.8	133.6	150	150
	460	6.2	41	10	1.6	4.7	2.2	20	None	-	-	-	26.9	29.1	30	35
									E09	9	1	10.8	26.9	29.1	30	35
									E18	18	2	21.7	39.3	42	40	45
									E24	24	2	28.9	48.3	51	50	60
									E36	34	2	40.9	63.3	66	70	70
	575	4.9	33	8	1.35	3.6	1.8	20	None	-	-	-	21.3	23.1	25	25
									E09	9	1	8.7	21.3	23.1	25	25
									E18	18	2	17.3	31.1	33.4	35	35
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60
102 (8.5)	208	14.5	98	23	3.03	9.6	5.5	20	None	-	-	-	58.3	63.8	70	70
									E09	6.8	1	18.9	58.3	63.8	70	70
									E18	13.5	2	37.5	71.4	78.3	80	80
									E24	18	2	50	87	93.9	90	100
									E36	25.5	2	70.8	113	119.9	125	125
	230	14.5	98	23	3.03	9.6	5.5	20	None	-	-	-	58.3	63.8	70	70
									E09	9	1	21.7	58.3	63.8	70	70
									E18	18	2	43.3	78.6	85.5	80	90
									E24	24	2	57.7	96.6	103.5	100	110
									E36	34	2	81.8	126.8	133.6	150	150
	460	6.3	55	10	1.6	4.7	2.2	20	None	-	-	-	27.1	29.3	30	35
									E09	9	1	10.8	27.1	29.3	30	35
									E18	18	2	21.7	39.3	42	40	45
									E24	24	2	28.9	48.3	51	50	60
									E36	34	2	40.9	63.3	66	70	70
	575	6	41	9	1.35	3.6	1.8	20	None	-	-	-	23.8	25.6	25	30
									E09	9	1	8.7	23.8	25.6	25	30
									E18	18	2	17.3	31.1	33.4	35	35
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60

ZH078-150 Hi Static Motor - With Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16	110	25	3.03	9.6	5.5	20	None	-	-	-	61.7	67.2	70	80
									E18	13.5	2	37.5	71.4	78.3	80	80
									E24	18	2	50	87	93.9	90	100
									E36	25.5	2	70.8	113	119.9	125	125
									E54	40.6	2	112.7	165.4	172.3	175	175
	230	16	110	25	3.03	9.6	5.5	20	None	-	-	-	61.7	67.2	70	80
									E18	18	2	43.3	78.6	85.5	80	90
									E24	24	2	57.7	96.6	103.5	100	110
									E36	34	2	81.8	126.8	133.6	150	150
									E54	54	2	129.9	154.4	161.3	175	175
	460	7.8	52	12	1.6	4.7	2.2	20	None	-	-	-	30.5	32.7	35	40
									E18	18	2	21.7	39.3	42	40	45
									E24	24	2	28.9	48.3	51	50	60
									E36	34	2	40.9	63.3	66	70	70
									E54	54	2	65	77.1	79.9	90	90
	575	5.7	38.9	9	1.35	3.6	1.8	20	None	-	-	-	23.1	24.9	25	30
									E18	18	2	17.3	31.1	33.4	35	35
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60
									E54	54	2	52	61.5	63.8	70	70
150 (12.5)	208	23.1	160	36	2.1	14	5.5	20	None	-	-	-	84.4	89.9	100	110
									E18	13.5	2	37.5	84.4	89.9	100	110
									E24	18	2	50	92.5	99.4	100	110
									E36	25.5	2	70.8	118.5	125.4	125	150
									E54	40.6	2	112.7	170.9	177.8	175	200
	230	23.1	160	36	2.1	14	5.5	20	None	-	-	-	84.4	89.9	100	110
									E18	18	2	43.3	84.4	91	100	110
									E24	24	2	57.7	102.1	109	110	110
									E36	34	2	81.8	132.3	139.1	150	150
									E54	54	2	129.9	159.9	166.8	175	175
	460	12.2	87	19	1.26	6.6	2.2	20	None	-	-	-	44.1	46.3	50	50
									E18	18	2	21.7	44.1	46.3	50	50
									E24	24	2	28.9	50.6	53.4	60	60
									E36	34	2	40.9	65.6	68.4	70	70
									E54	54	2	65	79.5	82.3	90	90
	575	8.7	62	14	0.66	5.2	1.8	20	None	-	-	-	31.4	33.2	40	40
									E18	18	2	17.3	33.1	35.4	40	40
									E24	24	2	23.1	40.4	42.6	45	45
									E36	34	2	32.7	52.4	54.6	60	60
									E54	54	2	52	63.5	65.8	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZJ037-061 Standard Indoor Blower - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	2.3	1	6.4	18.6	24.1	25	30
									E06	4.5	1	12.5	22.1	29	25	30
									E08	6.8	1	18.9	30.1	37	35	40
									E15	11.3	2	31.4	45.8	52.6	50	60
	230	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	3	1	7.2	18.6	24.1	25	30
									E06	6	1	14.4	24.5	31.4	25	35
									E08	9	1	21.7	33.6	40.5	35	45
									E15	15	2	36.1	51.6	58.5	60	60
	460	5.8	38	9	1.26	2.6	2.2		None	-	-	-	11.2	13.4	15	15
									E03	3	1	3.6	11.2	13.4	15	15
									E06	6	1	7.2	12.3	15	15	15
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
	575	3.8	36.5	6	0.66	2	1.8		None	-	-	-	7.5	9.3	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
									E20	20	2	24.1	33.4	36.1	35	40
									E23	24	2	28.9	39.4	42.1	40	45
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	24.6	30.1	35	40
									E06	4.5	1	12.5	24.6	30.1	35	40
									E08	6.8	1	18.9	30.1	37	35	40
									E15	11.3	2	31.4	45.8	52.6	50	60
									E20	15	2	41.6	58.5	65.4	60	70
	230	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	24.6	30.1	35	40
									E06	6	1	14.4	24.6	31.4	35	40
									E08	9	1	21.7	33.6	40.5	35	45
									E15	15	2	36.1	51.6	58.5	60	60
									E20	20	2	48.1	66.6	73.5	70	80
	460	6.2	41	10	1.26	2.6	2.2		None	-	-	-	11.7	13.9	15	20
									E06	6	1	7.2	12.3	15	15	20
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
									E20	20	2	24.1	33.4	36.1	35	40
	575	4.9	33	8	0.66	2	1.8		None	-	-	-	8.8	10.6	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
									E20	20	2	19.2	26.5	28.8	30	30
									E23	24	2	23.1	31.4	33.6	35	35
061 (5)	208	15.9	110	25	2.1	5.2	5.5		None	-	-	-	29.3	34.8	40	45
									E06	4.5	1	12.5	29.3	34.8	40	45
									E08	6.8	1	18.9	30.1	37	40	50
									E15	11.3	2	31.4	45.8	52.6	50	60
									E20	15	2	41.6	58.5	65.4	60	70
	230	15.9	110	25	2.1	5.2	5.5		None	-	-	-	29.3	34.8	40	45
									E06	6	1	14.4	29.3	34.8	40	45
									E08	9	1	21.7	33.6	40.5	45	50
									E15	15	2	36.1	51.6	58.5	60	60
									E20	20	2	48.1	66.6	73.5	70	80
	460	7.1	52	11	1.26	2.6	2.2		None	-	-	-	14	16.2	20	20
									E06	6	1	7.2	14	16.2	20	20
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
									E20	20	2	24.1	33.4	36.1	35	40
	575	5.1	39.5	8	0.66	2	1.8		None	-	-	-	9.7	11.5	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
									E20	20	2	19.2	26.5	28.8	30	30
									E23	24	2	23.1	31.4	33.6	35	35

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZJ078-150 Standard Motor - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					FLA	FLA	FLA	FLA				
078 (6.5)	208	11.2	84	18	2.1	5.2	5.5		None	-	-	-	34.6	40.1	45	50
									E09	6.8	1	18.9	34.6	40.1	45	50
									E18	13.5	2	37.5	53.4	60.3	60	70
									E24	18	2	50	69	75.9	70	80
									E36	25.5	2	70.8	95	101.9	100	110
	230	11.2	84	18	2.1	5.2	5.5		None	-	-	-	34.6	40.1	45	50
									E09	9	1	21.7	34.6	40.5	45	50
									E18	18	2	43.3	60.6	67.5	70	70
									E24	24	2	57.7	78.6	85.5	80	90
									E36	34	2	81.8	108.8	115.6	110	125
	460	5.6	44	9	1.26	2.6	2.2		None	-	-	-	17.7	19.9	20	25
									E09	9	1	10.8	17.7	19.9	20	25
									E18	18	2	21.7	30.4	33.1	35	35
									E24	24	2	28.9	39.4	42.1	40	45
									E36	34	2	40.9	54.4	57.1	60	60
	575	3.8	34	6	0.66	2	1.8		None	-	-	-	11.9	13.7	15	15
									E09	9	1	8.7	13.4	15.6	15	20
									E18	18	2	17.3	24.1	26.4	25	30
									E24	24	2	23.1	31.4	33.6	35	35
									E36	34	2	32.7	43.4	45.6	45	50
090 (7.5)	208	13.6	83.1	21	3.03	5.2	5.5		None	-	-	-	41.9	47.4	50	60
									E09	6.8	1	18.9	41.9	47.4	50	60
									E18	13.5	2	37.5	53.4	60.3	60	70
									E24	18	2	50	69	75.9	70	80
									E36	25.5	2	70.8	95	101.9	100	110
	230	13.6	83.1	21	3.03	5.2	5.5		None	-	-	-	41.9	47.4	50	60
									E09	9	1	21.7	41.9	47.4	50	60
									E18	18	2	43.3	60.6	67.5	70	70
									E24	24	2	57.7	78.6	85.5	80	90
									E36	34	2	81.8	108.8	115.6	110	125
	460	6.1	41	10	1.6	2.6	2.2		None	-	-	-	19.5	21.7	25	25
									E09	9	1	10.8	19.5	21.7	25	25
									E18	18	2	21.7	30.4	33.1	35	35
									E24	24	2	28.9	39.4	42.1	40	45
									E36	34	2	40.9	54.4	57.1	60	60
	575	4.2	33	7	1.35	2	1.8		None	-	-	-	14.2	16	15	20
									E09	9	1	8.7	14.2	16	15	20
									E18	18	2	17.3	24.1	26.4	25	30
									E24	24	2	23.1	31.4	33.6	35	35
									E36	34	2	32.7	43.4	45.6	45	50
102 (8.5)	208	14.5	98	23	3.03	6.8	5.5		None	-	-	-	45.5	51	60	60
									E09	6.8	1	18.9	45.5	51	60	60
									E18	13.5	2	37.5	55.4	62.3	60	70
									E24	18	2	50	71	77.9	80	80
									E36	25.5	2	70.8	97	103.9	100	110
	230	14.5	98	23	3.03	6.8	5.5		None	-	-	-	45.5	51	60	60
									E09	9	1	21.7	45.5	51	60	60
									E18	18	2	43.3	62.6	69.5	70	70
									E24	24	2	57.7	80.6	87.5	90	90
									E36	34	2	81.8	110.8	117.6	125	125
	460	6.3	55	10	1.6	3.4	2.2		None	-	-	-	20.8	23	25	25
									E09	9	1	10.8	20.8	23	25	25
									E18	18	2	21.7	31.4	34.1	35	35
									E24	24	2	28.9	40.4	43.1	45	45
									E36	34	2	40.9	55.4	58.1	60	60
	575	6	41	9	1.35	2.4	1.8		None	-	-	-	18.6	20.4	20	25
									E09	9	1	8.7	18.6	20.4	20	25
									E18	18	2	17.3	24.6	26.9	25	30
									E24	24	2	23.1	31.9	34.1	35	35
									E36	34	2	32.7	43.9	46.1	45	50

ZJ078-150 Standard Motor - Without Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ^{2/} Breaker ³ Size (Amps)	Max Fuse ^{2/} Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16.0	110.0	24.9	3.0	6.8	5.5	0.0	None	-	-	-	48.9	54.4	60	70
									E18	13.5	2	37.5	55.3	62.2	60	70
									E24	18.0	2	50.0	71.0	77.8	80	80
									E36	25.5	2	70.8	97.0	103.9	100	110
	230	16.0	110.0	24.9	3.0	6.8	5.5	0.0	E54	40.6	2	112.7	149.4	156.2	150	175
									None	-	-	-	48.9	54.4	60	70
									E18	18.0	2	43.3	62.6	69.5	70	70
									E24	24.0	2	57.7	80.7	87.5	90	90
	460	7.8	52.0	12.1	1.6	3.4	2.2	0.0	E36	34.0	2	81.8	110.7	117.6	125	125
									E54	54.0	2	129.9	138.4	145.3	150	175
									None	-	-	-	24.2	26.4	30	30
									E18	18.0	2	21.7	31.3	34.1	35	35
	575	5.7	38.9	8.9	1.4	2.4	1.8	0.0	E24	24.0	2	28.9	40.3	43.1	45	45
									E36	34.0	2	40.9	55.4	58.1	60	60
									E54	54.0	2	65.0	69.2	72.0	80	80
									None	-	-	-	17.9	19.7	20	25
150 (12.5)	208	23.1	160.0	36.0	2.1	9.6	5.5	0.0	E18	18.0	2	17.3	24.7	26.9	25	30
									E24	24.0	2	23.1	31.9	34.1	35	35
									E36	34.0	2	32.7	43.9	46.1	45	50
									E54	54.0	2	52.0	55.0	57.2	60	60
	230	23.1	160.0	36.0	2.1	9.6	5.5	0.0	None	-	-	-	70.0	75.5	90	90
									E18	13.5	2	37.5	70.0	75.5	90	90
									E24	18.0	2	50.0	74.5	81.3	90	90
									E36	25.5	2	70.8	100.5	107.4	110	110
	460	12.2	87.0	19.0	1.3	4.7	2.2	0.0	E54	40.6	2	112.7	152.9	159.7	175	175
									None	-	-	-	70.0	75.5	90	90
									E18	18.0	2	43.3	70.0	75.5	90	90
									E24	24.0	2	57.7	84.2	91.0	90	100
	575	8.7	62.0	13.5	0.7	3.6	1.8	0.0	E36	34.0	2	81.8	114.2	121.1	125	125
									E54	54.0	2	129.9	141.9	148.8	175	175
									None	-	-	-	37.2	39.4	45	50
									E18	18.0	2	21.7	37.2	39.4	45	50
	208	23.1	160.0	36.0	2.1	9.6	5.5	0.0	E24	24.0	2	28.9	42.0	44.7	45	50
									E36	34.0	2	40.9	57.0	59.7	60	60
									E54	54.0	2	65.0	70.8	73.6	80	80
									None	-	-	-	25.8	27.6	30	35
	230	23.1	160.0	36.0	2.1	9.6	5.5	0.0	E18	18.0	2	17.3	26.2	28.4	30	35
									E24	24.0	2	23.1	33.4	35.6	35	40
									E36	34.0	2	32.7	45.4	47.6	50	50
									E54	54.0	2	52.0	56.5	58.7	70	70

1. Minimum Circuit Ampacity.

2. Dual Element, Time Delay Type.

3. HACR type per NEC.

ZJ037-061 Hi Static Indoor Blower - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ^{2/} Breaker ³ Size (Amps)	Max Fuse ^{2/} Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	2.3	1	6.4	18.6	24.1	25	30
									E06	4.5	1	12.5	22.1	29	25	30
									E08	6.8	1	18.9	30.1	37	35	40
									E15	11.3	2	31.4	45.8	52.6	50	60
	230	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	3	1	7.2	18.6	24.1	25	30
									E06	6	1	14.4	24.5	31.4	25	35
									E08	9	1	21.7	33.6	40.5	35	45
									E15	15	2	36.1	51.6	58.5	60	60
	460	5.8	38	9	1.26	2.6	2.2		None	-	-	-	11.2	13.4	15	15
									E03	3	1	3.6	11.2	13.4	15	15
									E06	6	1	7.2	12.3	15	15	15
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
	575	3.8	36.5	6	0.66	2	1.8		None	-	-	-	7.5	9.3	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	24.6	30.1	35	40
									E06	4.5	1	12.5	24.6	30.1	35	40
									E08	6.8	1	18.9	30.1	37	35	40
									E15	11.3	2	31.4	45.8	52.6	50	60
									E20	15	2	41.6	58.5	65.4	60	70
	230	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	24.6	30.1	35	40
									E06	6	1	14.4	24.6	31.4	35	40
									E08	9	1	21.7	33.6	40.5	35	45
									E15	15	2	36.1	51.6	58.5	60	60
									E20	20	2	48.1	66.6	73.5	70	80
	460	6.2	41	10	1.26	2.6	2.2		None	-	-	-	11.7	13.9	15	20
									E06	6	1	7.2	12.3	15	15	20
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
									E20	20	2	24.1	33.4	36.1	35	40
	575	4.9	33	8	0.66	2	1.8		None	-	-	-	8.8	10.6	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
									E20	20	2	19.2	26.5	28.8	30	30
061 (5)	208	15.9	110	25	2.1	6.8	5.5		None	-	-	-	30.9	36.4	40	50
									E06	4.5	1	12.5	30.9	36.4	40	50
									E08	6.8	1	18.9	32.1	39	45	50
									E15	11.3	2	31.4	47.8	54.6	50	60
									E20	15	2	41.6	60.5	67.4	70	70
	230	15.9	110	25	2.1	6.8	5.5		E23	18	2	50	71	77.9	80	80
									None	-	-	-	30.9	36.4	40	50
									E06	6	1	14.4	30.9	36.4	40	50
									E08	9	1	21.7	35.6	42.5	45	50
									E15	15	2	36.1	53.6	60.5	60	70
	460	7.1	52	11	1.26	3.4	2.2		E20	20	2	48.1	68.6	75.5	70	80
									E23	24	2	57.7	80.6	87.5	90	90
									None	-	-	-	14.8	17	20	20
									E06	6	1	7.2	14.8	17	20	20
									E08	9	1	10.8	17.8	20.5	20	25
	575	5.1	39.5	8	0.66	2.4	1.8		E15	15	2	18	26.8	29.5	30	30
									E20	20	2	24.1	34.4	37.1	35	40
									E23	24	2	28.9	40.4	43.1	45	45
									None	-	-	-	10.1	11.9	15	15
									E08	9	1	8.7	13.9	16.1	15	20
									E15	15	2	14.4	21	23.3	25	25
									E20	20	2	19.2	27	29.3	30	30
									E23	24	2	23.1	31.9	34.1	35	35

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZJ078-150 Hi Static Motor - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
078 (6.5)	208	11.2	84	18	2.1	6.8	5.5		None	-	-	-	36.2	41.7	45	50
									E09	6.8	1	18.9	36.2	41.7	45	50
									E18	13.5	2	37.5	55.4	62.3	60	70
									E24	18	2	50	71	77.9	80	80
									E36	25.5	2	70.8	97	103.9	100	110
	230	11.2	84	18	2.1	6.8	5.5		None	-	-	-	36.2	41.7	45	50
									E09	9	1	21.7	36.2	42.5	45	50
									E18	18	2	43.3	62.6	69.5	70	70
									E24	24	2	57.7	80.6	87.5	90	90
									E36	34	2	81.8	110.8	117.6	125	125
	460	5.6	44	9	1.26	3.4	2.2		None	-	-	-	18.5	20.7	20	25
									E09	9	1	10.8	18.5	20.7	20	25
									E18	18	2	21.7	31.4	34.1	35	35
									E24	24	2	28.9	40.4	43.1	45	45
									E36	34	2	40.9	55.4	58.1	60	60
	575	3.8	34	6	0.66	2.4	1.8		None	-	-	-	12.3	14.1	15	15
									E09	9	1	8.7	13.9	16.1	15	20
									E18	18	2	17.3	24.6	26.9	25	30
									E24	24	2	23.1	31.9	34.1	35	35
									E36	34	2	32.7	43.9	46.1	45	50
090 (7.5)	208	13.6	83.1	21	3.03	9.6	5.5		None	-	-	-	46.3	51.8	50	60
									E09	6.8	1	18.9	46.3	51.8	50	60
									E18	13.5	2	37.5	58.9	65.8	60	70
									E24	18	2	50	74.5	81.4	80	90
									E36	25.5	2	70.8	100.5	107.4	110	110
	230	13.6	83.1	21	3.03	9.6	5.5		None	-	-	-	46.3	51.8	50	60
									E09	9	1	21.7	46.3	51.8	50	60
									E18	18	2	43.3	66.1	73	70	80
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
	460	6.1	41	10	1.6	4.7	2.2		None	-	-	-	21.6	23.8	25	25
									E09	9	1	10.8	21.6	23.8	25	25
									E18	18	2	21.7	33	35.8	35	40
									E24	24	2	28.9	42	44.8	45	45
									E36	34	2	40.9	57	59.8	60	60
	575	4.2	33	7	1.35	3.6	1.8		None	-	-	-	15.8	17.6	20	20
									E09	9	1	8.7	15.8	17.6	20	20
									E18	18	2	17.3	26.1	28.4	30	30
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50
102 (8.5)	208	14.5	98	23	3.03	9.6	5.5		None	-	-	-	48.3	53.8	60	60
									E09	6.8	1	18.9	48.3	53.8	60	60
									E18	13.5	2	37.5	58.9	65.8	60	70
									E24	18	2	50	74.5	81.4	80	90
									E36	25.5	2	70.8	100.5	107.4	110	110
	230	14.5	98	23	3.03	9.6	5.5		None	-	-	-	48.3	53.8	60	60
									E09	9	1	21.7	48.3	53.8	60	60
									E18	18	2	43.3	66.1	73	70	80
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
	460	6.3	55	10	1.6	4.7	2.2		None	-	-	-	22.1	24.3	25	30
									E09	9	1	10.8	22.1	24.3	25	30
									E18	18	2	21.7	33	35.8	35	40
									E24	24	2	28.9	42	44.8	45	45
									E36	34	2	40.9	57	59.8	60	60
	575	6	41	9	1.35	3.6	1.8		None	-	-	-	19.8	21.6	25	25
									E09	9	1	8.7	19.8	21.6	25	25
									E18	18	2	17.3	26.1	28.4	30	30
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50

ZJ078-150 Hi Static Motor - Without Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ^{2/} Breaker ³ Size (Amps)	Max Fuse ^{2/} Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC	FLA	FLA	FLA	FLA	Model	kW	Stages	Amps				
120 (10)	208	16.0	110.0	24.9	3.0	9.6	5.5	0.0	None	-	-	-	51.7	57.2	60	70
									E18	13.5	2	37.5	58.8	65.7	60	70
									E24	18.0	2	50.0	74.5	81.3	80	90
									E36	25.5	2	70.8	100.5	107.4	110	110
									E54	40.6	2	112.7	152.9	159.7	175	175
	230	16.0	110.0	24.9	3.0	9.6	5.5	0.0	None	-	-	-	51.7	57.2	60	70
									E18	18.0	2	43.3	66.1	73.0	70	80
									E24	24.0	2	57.7	84.2	91.0	90	100
									E36	34.0	2	81.8	114.2	121.1	125	125
									E54	54.0	2	129.9	141.9	148.8	175	175
	460	7.8	52.0	12.1	1.6	4.7	2.2	0.0	None	-	-	-	25.5	27.7	30	35
									E18	18.0	2	21.7	32.9	35.7	35	40
									E24	24.0	2	28.9	42.0	44.7	45	45
									E36	34.0	2	40.9	57.0	59.7	60	60
									E54	54.0	2	65.0	70.8	73.6	80	80
	575	5.7	38.9	8.9	1.4	3.6	1.8	0.0	None	-	-	-	19.1	20.9	20	25
									E18	18.0	2	17.3	26.2	28.4	30	30
									E24	24.0	2	23.1	33.4	35.6	35	40
									E36	34.0	2	32.7	45.4	47.6	50	50
									E54	54.0	2	52.0	56.5	58.7	70	70
150 (12.5)	208	23.1	160.0	36.0	2.1	14.0	5.5	0.0	None	-	-	-	74.4	79.9	90	100
									E18	13.5	2	37.5	74.4	79.9	90	100
									E24	18.0	2	50.0	80.0	86.8	90	100
									E36	25.5	2	70.8	106.0	112.9	110	125
									E54	40.6	2	112.7	158.4	165.2	175	175
	230	23.1	160.0	36.0	2.1	14.0	5.5	0.0	None	-	-	-	74.4	79.9	90	100
									E18	18.0	2	43.3	74.4	79.9	90	100
									E24	24.0	2	57.7	89.7	96.5	90	100
									E36	34.0	2	81.8	119.7	126.6	125	150
									E54	54.0	2	129.9	147.4	154.3	175	175
	460	12.2	87.0	19.0	1.3	6.6	2.2	0.0	None	-	-	-	39.1	41.3	50	50
									E18	18.0	2	21.7	39.1	41.3	50	50
									E24	24.0	2	28.9	44.3	47.1	50	50
									E36	34.0	2	40.9	59.4	62.1	60	70
									E54	54.0	2	65.0	73.2	76.0	80	90
	575	8.7	62.0	13.5	0.7	5.2	1.8	0.0	None	-	-	-	27.4	29.2	35	35
									E18	18.0	2	17.3	28.2	30.4	35	35
									E24	24.0	2	23.1	35.4	37.6	40	40
									E36	34.0	2	32.7	47.4	49.6	50	50
									E54	54.0	2	52.0	58.5	60.7	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZJ037-061 Standard Indoor Blower - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	2.3	1	6.4	28.8	34.3	35	40
									E06	4.5	1	12.5	34.6	41.5	40	45
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
	230	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	3	1	7.2	28.8	34.9	35	40
									E06	6	1	14.4	37	43.9	40	45
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
	460	5.8	38	9	1.26	2.6	2.2	20	None	-	-	-	16.2	18.4	20	20
									E03	3	1	3.6	16.2	18.4	20	20
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
	575	3.8	36.5	6	0.66	2	1.8	20	None	-	-	-	11.5	13.3	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	24.1	39.6	42.4	40	45
									E23	24	2	28.9	45.6	48.4	50	50
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	34.6	40.1	45	50
									E06	4.5	1	12.5	34.6	41.5	45	50
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
									E20	15	2	41.6	71	77.9	80	80
	230	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	34.6	40.1	45	50
									E06	6	1	14.4	37	43.9	45	50
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
									E20	20	2	48.1	79.1	86	80	90
	460	6.2	41	10	1.26	2.6	2.2	20	None	-	-	-	16.7	18.9	20	25
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
									E20	20	2	24.1	39.6	42.4	40	45
	575	4.9	33	8	0.66	2	1.8	20	None	-	-	-	12.8	14.6	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	19.2	31.5	33.8	35	35
									E23	24	2	23.1	36.4	38.6	40	40
061 (5)	208	15.9	110	25	2.1	5.2	5.5	20	None	-	-	-	39.3	44.8	50	60
									E06	4.5	1	12.5	39.3	44.8	50	60
									E08	6.8	1	18.9	42.6	49.5	50	60
									E15	11.3	2	31.4	58.3	65.1	60	70
									E20	15	2	41.6	71	77.9	80	80
	230	15.9	110	25	2.1	5.2	5.5	20	None	-	-	-	39.3	44.8	50	60
									E06	6	1	14.4	39.3	44.8	50	60
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
									E20	20	2	48.1	79.1	86	80	90
	460	7.1	52	11	1.26	2.6	2.2	20	None	-	-	-	19	21.2	25	25
									E06	6	1	7.2	19	21.3	25	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
									E20	20	2	24.1	39.6	42.4	40	45
	575	5.1	39.5	8	0.66	2	1.8	20	None	-	-	-	13.7	15.5	15	20
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	19.2	31.5	33.8	35	35
									E23	24	2	23.1	36.4	38.6	40	40

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZJ078-150 Standard Motor - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)	
		RLA	LRA	MCC					FLA	FLA	FLA	FLA					Model
078 (6.5)	208	11.2	84	18	2.1	5.2	5.5	20	None	-	-	-	44.6	50.1	50	60	
									E09	6.8	1	18.9	44.6	50.1	50	60	
									E18	13.5	2	37.5	65.9	72.8	70	80	
									E24	18	2	50	81.5	88.4	90	90	
	230	11.2	84	18	2.1	5.2	5.5	20	E36	25.5	2	70.8	107.5	114.4	110	125	
									None	-	-	-	44.6	50.1	50	60	
									E09	9	1	21.7	46.1	53	50	60	
									E18	18	2	43.3	73.1	80	80	80	
	460	5.6	44	9	1.26	2.6	2.2	20	E24	24	2	57.7	91.1	98	100	100	
									E36	34	2	81.8	121.3	128.1	125	150	
									None	-	-	-	22.7	24.9	25	30	
									E09	9	1	10.8	23	25.8	25	30	
	575	3.8	34	6	0.66	2	1.8	20	E18	18	2	21.7	36.6	39.4	40	40	
									E24	24	2	28.9	45.6	48.4	50	50	
									E36	34	2	40.9	60.6	63.4	70	70	
									None	-	-	-	15.9	17.7	20	20	
	090 (7.5)	208	13.6	83.1	21	3.03	5.2	5.5	20	E09	9	1	8.7	18.4	20.6	20	25
										E18	18	2	17.3	29.1	31.4	30	35
										E24	24	2	23.1	36.4	38.6	40	40
										E36	34	2	32.7	48.4	50.6	50	60
230		13.6	83.1	21	3.03	5.2	5.5	20	None	-	-	-	51.9	57.4	60	70	
									E09	9	1	21.7	51.9	57.4	60	70	
									E18	18	2	43.3	73.1	80	80	80	
									E24	24	2	57.7	91.1	98	100	100	
460-		6.1	41	10	1.6	2.6	2.2	20	E36	34	2	81.8	121.3	128.1	125	150	
									None	-	-	-	24.5	26.7	30	30	
									E09	9	1	10.8	24.5	26.7	30	30	
									E18	18	2	21.7	36.6	39.4	40	40	
575		4.2	33	7	1.35	2	1.8	20	E24	24	2	28.9	45.6	48.4	50	50	
									E36	34	2	40.9	60.6	63.4	70	70	
									None	-	-	-	18.2	20	20	20	
									E09	9	1	8.7	18.4	20.6	20	25	
102 (8.5)		208	14.5	98	23	3.03	6.8	5.5	20	E18	18	2	17.3	29.1	31.4	30	35
										E24	24	2	23.1	36.4	38.6	40	40
										E36	34	2	32.7	48.4	50.6	50	60
										None	-	-	-	55.5	61	70	70
	230	14.5	98	23	3.03	6.8	5.5	20	E09	6.8	1	18.9	55.5	61	70	70	
									E18	13.5	2	37.5	67.9	74.8	70	80	
									E24	18	2	50	83.5	90.4	90	100	
									E36	25.5	2	70.8	109.5	116.4	110	125	
	460	6.3	55	10	1.6	3.4	2.2	20	None	-	-	-	55.5	61	70	70	
									E09	9	1	21.7	55.5	61	70	70	
									E18	18	2	43.3	75.1	82	80	90	
									E24	24	2	57.7	93.1	100	100	100	
	575	6	41	9	1.35	2.4	1.8	20	E36	34	2	81.8	123.3	130.1	125	150	
									None	-	-	-	25.8	28	30	30	
									E09	9	1	10.8	25.8	28	30	30	
									E18	18	2	21.7	37.6	40.4	40	45	
									E24	24	2	28.9	46.6	49.4	50	50	
									E36	34	2	40.9	61.6	64.4	70	70	
									None	-	-	-	22.6	24.4	25	30	
									E09	9	1	8.7	22.6	24.4	25	30	
								E18	18	2	17.3	29.6	31.9	30	35		
								E24	24	2	23.1	36.9	39.1	40	40		
								E36	34	2	32.7	48.9	51.1	50	60		

ZJ078-150 Standard Motor - With Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16.0	110.0	24.9	3.0	6.8	5.5	10.0	None	-	-	-	58.9	64.4	70	80
									E18	13.5	2	37.5	67.8	74.7	70	80
									E24	18.0	2	50.0	83.5	90.3	90	100
									E36	25.5	2	70.8	109.5	116.4	110	125
									E54	40.6	2	112.7	161.9	168.7	175	175
	230	16.0	110.0	24.9	3.0	6.8	5.5	10.0	None	-	-	-	58.9	64.4	70	80
									E18	18.0	2	43.3	75.1	82.0	80	90
									E24	24.0	2	57.7	93.2	100.0	100	100
									E36	34.0	2	81.8	123.2	130.1	125	150
									E54	54.0	2	129.9	150.9	157.8	175	175
	460	7.8	52.0	12.1	1.6	3.4	2.2	5.0	None	-	-	-	29.2	31.4	35	35
									E18	18.0	2	21.7	37.6	40.3	40	45
									E24	24.0	2	28.9	46.6	49.3	50	50
									E36	34.0	2	40.9	61.6	64.4	70	70
									E54	54.0	2	65.0	75.5	78.2	80	90
	575	5.7	38.9	8.9	1.4	2.4	1.8	4.0	None	-	-	-	21.9	23.7	25	25
									E18	18.0	2	17.3	29.7	31.9	30	35
									E24	24.0	2	23.1	36.9	39.1	40	40
									E36	34.0	2	32.7	48.9	51.1	50	60
									E54	54.0	2	52.0	60.0	62.2	70	70
150 (12.5)	208	23.1	160.0	36.0	2.1	9.6	5.5	10.0	None	-	-	-	80.0	85.5	100	100
									E18	13.5	2	37.5	80.0	85.5	100	100
									E24	18.0	2	50.0	87.0	93.8	100	100
									E36	25.5	2	70.8	113.0	119.9	125	125
									E54	40.6	2	112.7	165.4	172.2	175	175
	230	23.1	160.0	36.0	2.1	9.6	5.5	10.0	None	-	-	-	80.0	85.5	100	100
									E18	18.0	2	43.3	80.0	85.5	100	100
									E24	24.0	2	57.7	96.7	103.5	100	110
									E36	34.0	2	81.8	126.7	133.6	150	150
									E54	54.0	2	129.9	154.4	161.3	175	175
	460	12.2	87.0	19.0	1.3	4.7	2.2	5.0	None	-	-	-	42.2	44.4	50	50
									E18	18.0	2	21.7	42.2	44.4	50	50
									E24	24.0	2	28.9	48.2	51.0	50	60
									E36	34.0	2	40.9	63.2	66.0	70	70
									E54	54.0	2	65.0	77.1	79.8	90	90
	575	8.7	62.0	13.5	0.7	3.6	1.8	4.0	None	-	-	-	29.8	31.6	35	40
									E18	18.0	2	17.3	31.2	33.4	35	40
									E24	24.0	2	23.1	38.4	40.6	40	45
									E36	34.0	2	32.7	50.4	52.6	60	60
									E54	54.0	2	52.0	61.5	63.7	70	70

1. Minimum Circuit Ampacity.

2. Dual Element, Time Delay Type.

3. HACR type per NEC.

ZJ037-061 Hi Static Blower - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	2.3	1	6.4	28.8	34.3	35	40
									E06	4.5	1	12.5	34.6	41.5	40	45
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
	230	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	3	1	7.2	28.8	34.9	35	40
									E06	6	1	14.4	37	43.9	40	45
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
	460	5.8	38	9	1.26	2.6	2.2	20	None	-	-	-	16.2	18.4	20	20
									E03	3	1	3.6	16.2	18.4	20	20
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
	575	3.8	36.5	6	0.66	2	1.8	20	None	-	-	-	11.5	13.3	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	24.1	39.6	42.4	40	45
									E23	24	2	23.1	36.9	39.1	40	40
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	34.6	40.1	45	50
									E06	4.5	1	12.5	34.6	41.5	45	50
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
									E20	15	2	41.6	71	77.9	80	80
	230	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	34.6	40.1	45	50
									E06	6	1	14.4	37	43.9	45	50
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
									E20	20	2	48.1	79.1	86	80	90
	460	6.2	41	10	1.26	2.6	2.2	20	None	-	-	-	16.7	18.9	20	25
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
									E20	20	2	24.1	39.6	42.4	40	45
	575	4.9	33	8	0.66	2	1.8	20	None	-	-	-	12.8	14.6	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	19.2	31.5	33.8	35	35
									E23	24	2	23.1	36.9	39.1	40	40
061 (5)	208	15.9	110	25	2.1	6.8	5.5	20	None	-	-	-	40.9	46.4	50	60
									E06	4.5	1	12.5	40.9	46.4	50	60
									E08	6.8	1	18.9	44.6	51.5	50	60
									E15	11.3	2	31.4	60.3	67.1	70	70
									E20	15	2	41.6	73	79.9	80	80
	230	15.9	110	25	2.1	6.8	5.5	20	None	-	-	-	40.9	46.4	50	60
									E06	6	1	14.4	40.9	46.4	50	60
									E08	9	1	21.7	48.1	55	50	60
									E15	15	2	36.1	66.1	73	70	80
									E20	20	2	48.1	81.1	88	90	90
	460	7.1	52	11	1.26	3.4	2.2	20	None	-	-	-	19.8	22	25	25
									E06	6	1	7.2	19.8	22.3	25	25
									E08	9	1	10.8	24	26.8	25	30
									E15	15	2	18	33	35.8	35	40
									E20	20	2	24.1	40.6	43.4	45	45
	575	5.1	39.5	8	0.66	2.4	1.8	20	None	-	-	-	14.1	15.9	15	20
									E08	9	1	8.7	18.9	21.1	20	25
									E15	15	2	14.4	26	28.3	30	30
									E20	20	2	19.2	32	34.3	35	35
									E23	24	2	23.1	36.9	39.1	40	40

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZJ078-150 Hi Static Motor - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					FLA	FLA	FLA	FLA				
078 (6.5)	208	11.2	84	18	2.1	6.8	5.5	20	None	-	-	-	46.2	51.7	50	60
									E09	6.8	1	18.9	46.2	51.7	50	60
									E18	13.5	2	37.5	67.9	74.8	70	80
									E24	18	2	50	83.5	90.4	90	100
									E36	25.5	2	70.8	109.5	116.4	110	125
	230	11.2	84	18	2.1	6.8	5.5	20	None	-	-	-	46.2	51.7	50	60
									E09	9	1	21.7	48.1	55	50	60
									E18	18	2	43.3	75.1	82	80	90
									E24	24	2	57.7	93.1	100	100	100
									E36	34	2	81.8	123.3	130.1	125	150
	460	5.6	44	9	1.26	3.4	2.2	20	None	-	-	-	23.5	25.7	25	30
									E09	9	1	10.8	24	26.8	25	30
									E18	18	2	21.7	37.6	40.4	40	45
									E24	24	2	28.9	46.6	49.4	50	50
									E36	34	2	40.9	61.6	64.4	70	70
	575	3.8	34	6	0.66	2.4	1.8	20	None	-	-	-	16.3	18.1	20	20
									E09	9	1	8.7	18.9	21.1	20	25
									E18	18	2	17.3	29.6	31.9	30	35
									E24	24	2	23.1	36.9	39.1	40	40
									E36	34	2	32.7	48.9	51.1	50	60
090 (7.5)	208	13.6	83.1	21	3.03	9.6	5.5	20	None	-	-	-	56.3	61.8	60	70
									E09	6.8	1	18.9	56.3	61.8	60	70
									E18	13.5	2	37.5	71.4	78.3	80	80
									E24	18	2	50	87	93.9	90	100
									E36	25.5	2	70.8	113	119.9	125	125
	230	13.6	83.1	21	3.03	9.6	5.5	20	None	-	-	-	56.3	61.8	60	70
									E09	9	1	21.7	56.3	61.8	60	70
									E18	18	2	43.3	78.6	85.5	80	90
									E24	24	2	57.7	96.6	103.5	100	110
									E36	34	2	81.8	126.8	133.6	150	150
	460	6.1	41	10	1.6	4.7	2.2	20	None	-	-	-	26.6	28.8	30	30
									E09	9	1	10.8	26.6	28.8	30	30
									E18	18	2	21.7	39.3	42	40	45
									E24	24	2	28.9	48.3	51	50	60
									E36	34	2	40.9	63.3	66	70	70
	575	4.2	33	7	1.35	3.6	1.8	20	None	-	-	-	19.8	21.6	20	25
									E09	9	1	8.7	20.4	22.6	25	25
									E18	18	2	17.3	31.1	33.4	35	35
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60
102 (8.5)	208	14.5	98	23	3.03	9.6	5.5	20	None	-	-	-	58.3	63.8	70	70
									E09	6.8	1	18.9	58.3	63.8	70	70
									E18	13.5	2	37.5	71.4	78.3	80	80
									E24	18	2	50	87	93.9	90	100
									E36	25.5	2	70.8	113	119.9	125	125
	230	14.5	98	23	3.03	9.6	5.5	20	None	-	-	-	58.3	63.8	70	70
									E09	9	1	21.7	58.3	63.8	70	70
									E18	18	2	43.3	78.6	85.5	80	90
									E24	24	2	57.7	96.6	103.5	100	110
									E36	34	2	81.8	126.8	133.6	150	150
	460	6.3	55	10	1.6	4.7	2.2	20	None	-	-	-	27.1	29.3	30	35
									E09	9	1	10.8	27.1	29.3	30	35
									E18	18	2	21.7	39.3	42	40	45
									E24	24	2	28.9	48.3	51	50	60
									E36	34	2	40.9	63.3	66	70	70
	575	6	41	9	1.35	3.6	1.8	20	None	-	-	-	23.8	25.6	25	30
									E09	9	1	8.7	23.8	25.6	25	30
									E18	18	2	17.3	31.1	33.4	35	35
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60

ZJ078-150 Hi Static Motor - With Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16.0	110.0	24.9	3.0	9.6	5.5	10.0	None	-	-	-	61.7	67.2	70	80
									E18	13.5	2	37.5	71.3	78.2	80	80
									E24	18.0	2	50.0	87.0	93.8	90	100
									E36	25.5	2	70.8	113.0	119.9	125	125
									E54	40.6	2	112.7	165.4	172.2	175	175
	230	16.0	110.0	24.9	3.0	9.6	5.5	10.0	None	-	-	-	61.7	67.2	70	80
									E18	18.0	2	43.3	78.6	85.5	80	90
									E24	24.0	2	57.7	96.7	103.5	100	110
									E36	34.0	2	81.8	126.7	133.6	150	150
									E54	54.0	2	129.9	154.4	161.3	175	175
	460	7.8	52.0	12.1	1.6	4.7	2.2	5.0	None	-	-	-	30.5	32.7	35	40
									E18	18.0	2	21.7	39.2	41.9	40	45
									E24	24.0	2	28.9	48.2	51.0	50	60
									E36	34.0	2	40.9	63.2	66.0	70	70
									E54	54.0	2	65.0	77.1	79.8	90	90
	575	5.7	38.9	8.9	1.4	3.6	1.8	4.0	None	-	-	-	23.1	24.9	25	30
									E18	18.0	2	17.3	31.2	33.4	35	35
									E24	24.0	2	23.1	38.4	40.6	40	45
									E36	34.0	2	32.7	50.4	52.6	60	60
									E54	54.0	2	52.0	61.5	63.7	70	70
150 (12.5)	208	23.1	160.0	36.0	2.1	14.0	5.5	10.0	None	-	-	-	84.4	89.9	100	110
									E18	13.5	2	37.5	84.4	89.9	100	110
									E24	18.0	2	50.0	92.5	99.3	100	110
									E36	25.5	2	70.8	118.5	125.4	125	150
									E54	40.6	2	112.7	170.9	177.7	175	200
	230	23.1	160.0	36.0	2.1	14.0	5.5	10.0	None	-	-	-	84.4	89.9	100	110
									E18	18.0	2	43.3	84.4	91.0	100	110
									E24	24.0	2	57.7	102.2	109.0	110	110
									E36	34.0	2	81.8	132.2	139.1	150	150
									E54	54.0	2	129.9	159.9	166.8	175	175
	460	12.2	87.0	19.0	1.3	6.6	2.2	5.0	None	-	-	-	44.1	46.3	50	50
									E18	18.0	2	21.7	44.1	46.3	50	50
									E24	24.0	2	28.9	50.6	53.3	60	60
									E36	34.0	2	40.9	65.6	68.4	70	70
									E54	54.0	2	65.0	79.5	82.2	90	90
	575	8.7	62.0	13.5	0.7	5.2	1.8	4.0	None	-	-	-	31.4	33.2	40	40
									E18	18.0	2	17.3	33.2	35.4	40	40
									E24	24.0	2	23.1	40.4	42.6	45	45
									E36	34.0	2	32.7	52.4	54.6	60	60
									E54	54.0	2	52.0	63.5	65.7	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZR037-061 Standard Indoor Blower - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	2.3	1	6.4	18.6	24.1	25	30
									E06	4.5	1	12.5	22.1	29	25	30
									E08	6.8	1	18.9	30.1	37	35	40
									E15	11.3	2	31.4	45.8	52.6	50	60
	230	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	3	1	7.2	18.6	24.1	25	30
									E06	6	1	14.4	24.5	31.4	25	35
									E08	9	1	21.7	33.6	40.5	35	45
									E15	15	2	36.1	51.6	58.5	60	60
	460	5.8	38	9	1.26	2.6	2.2		None	-	-	-	11.2	13.4	15	15
									E03	3	1	3.6	11.2	13.4	15	15
									E06	6	1	7.2	12.3	15	15	15
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
	575	3.8	36.5	6	0.66	2	1.8		None	-	-	-	7.5	9.3	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	26.7	32.2	35	45
									E06	4.5	1	12.5	26.7	32.2	35	45
									E08	6.8	1	18.9	30.1	37	40	45
									E15	11.3	2	31.4	45.8	52.6	50	60
									E20	15	2	41.6	58.5	65.4	60	70
	230	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	26.7	32.2	35	45
									E06	6	1	14.4	26.7	32.2	35	45
									E08	9	1	21.7	33.6	40.5	40	45
									E15	15	2	36.1	51.6	58.5	60	60
									E20	20	2	48.1	66.6	73.5	70	80
	460	6.2	41	10	1.26	2.6	2.2		None	-	-	-	12.9	15.1	15	20
									E06	6	1	7.2	12.9	15.1	15	20
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
									E20	20	2	24.1	33.4	36.1	35	40
	575	4.9	33	8	0.66	2	1.8		None	-	-	-	9.4	11.2	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
									E20	20	2	19.2	26.5	28.8	30	30
061 (5)	208	15.9	110	25	2.1	5.2	5.5		None	-	-	-	29.3	34.8	40	45
									E06	4.5	1	12.5	29.3	34.8	40	45
									E08	6.8	1	18.9	30.1	37	40	50
									E15	11.3	2	31.4	45.8	52.6	50	60
									E20	15	2	41.6	58.5	65.4	60	70
	230	15.9	110	25	2.1	5.2	5.5		E23	18	2	50	69	75.9	70	80
									None	-	-	-	29.3	34.8	40	45
									E06	6	1	14.4	29.3	34.8	40	45
									E08	9	1	21.7	33.6	40.5	45	50
									E15	15	2	36.1	51.6	58.5	60	60
	460	7.1	52	11	1.26	2.6	2.2		E20	20	2	48.1	66.6	73.5	70	80
									E23	24	2	57.7	78.6	85.5	80	90
									None	-	-	-	14	16.2	20	20
									E06	6	1	7.2	14	16.2	20	20
									E08	9	1	10.8	16.8	19.5	20	20
	575	5.1	39.5	8	0.66	2	1.8		E15	15	2	18	25.8	28.5	30	30
									E20	20	2	24.1	33.4	36.1	35	40
									E23	24	2	28.9	39.4	42.1	40	45
									None	-	-	-	9.7	11.5	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
									E20	20	2	19.2	26.5	28.8	30	30
									E23	24	2	23.1	31.4	33.6	35	35

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZR078-150 Standard Motor - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
078 (6.5)	208	13.5	88	21	2.1	5.2	5.5		None	-	-	-	39.8	45.3	50	50
									E09	6.8	1	18.9	39.8	45.3	50	50
									E18	13.5	2	37.5	53.4	60.3	60	70
									E24	18	2	50	69	75.9	70	80
									E36	25.5	2	70.8	95	101.9	100	110
	230	13.5	88	21	2.1	5.2	5.5		None	-	-	-	39.8	45.3	50	50
									E09	9	1	21.7	39.8	45.3	50	50
									E18	18	2	43.3	60.6	67.5	70	70
									E24	24	2	57.7	78.6	85.5	80	90
									E36	34	2	81.8	108.8	115.6	110	125
	460	6	44	9	1.26	2.6	2.2		None	-	-	-	18.6	20.8	20	25
									E09	9	1	10.8	18.6	20.8	20	25
									E18	18	2	21.7	30.4	33.1	35	35
									E24	24	2	28.9	39.4	42.1	40	45
									E36	34	2	40.9	54.4	57.1	60	60
	575	4.9	34	8	0.66	2	1.8		None	-	-	-	14.3	16.1	15	20
									E09	9	1	8.7	14.3	16.1	15	20
									E18	18	2	17.3	24.1	26.4	25	30
									E24	24	2	23.1	31.4	33.6	35	35
									E36	34	2	32.7	43.4	45.6	45	50
090 (7.5)	208	13.1	83.1	21	2.1	5.2	5.5		None	-	-	-	38.9	44.4	50	50
									E09	6.8	1	18.9	38.9	44.4	50	50
									E18	13.5	2	37.5	53.4	60.3	60	70
									E24	18	2	50	69	75.9	70	80
									E36	25.5	2	70.8	95	101.9	100	110
	230	13.1	83.1	21	2.1	5.2	5.5		None	-	-	-	38.9	44.4	50	50
									E09	9	1	21.7	38.9	44.4	50	50
									E18	18	2	43.3	60.6	67.5	70	70
									E24	24	2	57.7	78.6	85.5	80	90
									E36	34	2	81.8	108.8	115.6	110	125
	460	6.1	41	10	1.26	2.6	2.2		None	-	-	-	18.8	21	20	25
									E09	9	1	10.8	18.8	21	20	25
									E18	18	2	21.7	30.4	33.1	35	35
									E24	24	2	28.9	39.4	42.1	40	45
									E36	34	2	40.9	54.4	57.1	60	60
	575	4.4	33	7	0.66	2	1.8		None	-	-	-	13.2	15	15	15
									E09	9	1	8.7	13.4	15.6	15	20
									E18	18	2	17.3	24.1	26.4	25	30
									E24	24	2	23.1	31.4	33.6	35	35
									E36	34	2	32.7	43.4	45.6	45	50
102 (8.5)	208	14.5	98	23	2.1	6.8	5.5		None	-	-	-	43.6	49.1	50	60
									E09	6.8	1	18.9	43.6	49.1	50	60
									E18	13.5	2	37.5	55.4	62.3	60	70
									E24	18	2	50	71	77.9	80	80
									E36	25.5	2	70.8	97	103.9	100	110
	230	14.5	98	23	2.1	6.8	5.5		None	-	-	-	43.6	49.1	50	60
									E09	9	1	21.7	43.6	49.1	50	60
									E18	18	2	43.3	62.6	69.5	70	70
									E24	24	2	57.7	80.6	87.5	90	90
									E36	34	2	81.8	110.8	117.6	125	125
	460	6.3	55	10	1.26	3.4	2.2		None	-	-	-	20.1	22.3	25	25
									E09	9	1	10.8	20.1	22.3	25	25
									E18	18	2	21.7	31.4	34.1	35	35
									E24	24	2	28.9	40.4	43.1	45	45
									E36	34	2	40.9	55.4	58.1	60	60
	575	6	41	9	0.66	2.4	1.8		None	-	-	-	17.2	19	20	25
									E09	9	1	8.7	17.2	19	20	25
									E18	18	2	17.3	24.6	26.9	25	30
									E24	24	2	23.1	31.9	34.1	35	35
									E36	34	2	32.7	43.9	46.1	45	50

ZR078-150 Standard Motor - Without Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16	110	25	3.03	6.8	5.5		None	-	-	-	48.9	54.4	60	70
									E18	13.5	2	37.5	55.4	62.3	60	70
									E24	18	2	50	71	77.9	80	80
									E36	25.5	2	70.8	97	103.9	100	110
									E54	40.6	2	112.7	149.4	156.3	150	175
	230	16	110	25	3.03	6.8	5.5		None	-	-	-	48.9	54.4	60	70
									E18	18	2	43.3	62.6	69.5	70	70
									E24	24	2	57.7	80.6	87.5	90	90
									E36	34	2	81.8	110.8	117.6	125	125
									E54	54	2	129.9	138.4	145.3	150	175
	460	7.8	52	12	1.6	3.4	2.2		None	-	-	-	24.2	26.4	30	30
									E18	18	2	21.7	31.4	34.1	35	35
									E24	24	2	28.9	40.4	43.1	45	45
									E36	34	2	40.9	55.4	58.1	60	60
									E54	54	2	65	69.3	72	80	80
	575	5.7	38.9	9	1.35	2.4	1.8		None	-	-	-	17.9	19.7	20	25
									E18	18	2	17.3	24.6	26.9	25	30
									E24	24	2	23.1	31.9	34.1	35	35
									E36	34	2	32.7	43.9	46.1	45	50
									E54	54	2	52	55	57.3	60	60
150 (12.5)	208	22.4	149	35	2.1	9.6	5.5		None	-	-	-	68.4	73.9	90	90
									E18	13.5	2	37.5	68.4	73.9	90	90
									E24	18	2	50	74.5	81.4	90	90
									E36	25.5	2	70.8	100.5	107.4	110	110
									E54	40.6	2	112.7	152.9	159.8	175	175
	230	22.4	149	35	2.1	9.6	5.5		None	-	-	-	68.4	73.9	90	90
									E18	18	2	43.3	68.4	73.9	90	90
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
									E54	54	2	129.9	141.9	148.8	175	175
	460	10.6	75	17	1.26	4.7	2.2		None	-	-	-	33.6	35.8	40	45
									E18	18	2	21.7	33.6	35.8	40	45
									E24	24	2	28.9	42	44.8	45	45
									E36	34	2	40.9	57	59.8	60	60
									E54	54	2	65	70.9	73.6	80	80
	575	7.7	54	12	0.66	3.6	1.8		None	-	-	-	23.5	25.3	30	30
									E18	18	2	17.3	26.1	28.4	30	30
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50
									E54	54	2	52	56.5	58.8	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZR037-061 Hi Static Indoor Blower - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	2.3	1	6.4	18.6	24.1	25	30
									E06	4.5	1	12.5	22.1	29	25	30
									E08	6.8	1	18.9	30.1	37	35	40
									E15	11.3	2	31.4	45.8	52.6	50	60
	230	9	71	14	2.1	5.2	5.5		None	-	-	-	18.6	24.1	25	30
									E03	3	1	7.2	18.6	24.1	25	30
									E06	6	1	14.4	24.5	31.4	25	35
									E08	9	1	21.7	33.6	40.5	35	45
									E15	15	2	36.1	51.6	58.5	60	60
	460	5.8	38	9	1.26	2.6	2.2		None	-	-	-	11.2	13.4	15	15
									E03	3	1	3.6	11.2	13.4	15	15
									E06	6	1	7.2	12.3	15	15	15
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
	575	3.8	36.5	6	0.66	2	1.8		None	-	-	-	7.5	9.3	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	26.7	32.2	35	45
									E06	4.5	1	12.5	26.7	32.2	35	45
									E08	6.8	1	18.9	30.1	37	40	45
									E15	11.3	2	31.4	45.8	52.6	50	60
									E20	15	2	41.6	58.5	65.4	60	70
	230	13.8	83.1	22	2.1	5.2	5.5		None	-	-	-	26.7	32.2	35	45
									E06	6	1	14.4	26.7	32.2	35	45
									E08	9	1	21.7	33.6	40.5	40	45
									E15	15	2	36.1	51.6	58.5	60	60
									E20	20	2	48.1	66.6	73.5	70	80
	460	6.2	41	10	1.26	2.6	2.2		None	-	-	-	12.9	15.1	15	20
									E06	6	1	7.2	12.9	15.1	15	20
									E08	9	1	10.8	16.8	19.5	20	20
									E15	15	2	18	25.8	28.5	30	30
									E20	20	2	24.1	33.4	36.1	35	40
	575	4.9	33	8	0.66	2	1.8		None	-	-	-	9.4	11.2	15	15
									E08	9	1	8.7	13.4	15.6	15	20
									E15	15	2	14.4	20.5	22.8	25	25
									E20	20	2	19.2	26.5	28.8	30	30
061 (5)	208	15.9	110	25	2.1	6.8	5.5		None	-	-	-	30.9	36.4	40	50
									E06	4.5	1	12.5	30.9	36.4	40	50
									E08	6.8	1	18.9	32.1	39	45	50
									E15	11.3	2	31.4	47.8	54.6	50	60
									E20	15	2	41.6	60.5	67.4	70	70
	230	15.9	110	25	2.1	6.8	5.5		E23	18	2	50	71	77.9	80	80
									None	-	-	-	30.9	36.4	40	50
									E06	6	1	14.4	30.9	36.4	40	50
									E08	9	1	21.7	35.6	42.5	45	50
									E15	15	2	36.1	53.6	60.5	60	70
	460	7.1	52	11	1.26	3.4	2.2		E20	20	2	48.1	68.6	75.5	70	80
									E23	24	2	57.7	80.6	87.5	90	90
									None	-	-	-	14.8	17	20	20
									E06	6	1	7.2	14.8	17	20	20
									E08	9	1	10.8	17.8	20.5	20	25
	575	5.1	39.5	8	0.66	2.4	1.8		E15	15	2	18	26.8	29.5	30	30
									E20	20	2	24.1	34.4	37.1	35	40
									E23	24	2	28.9	40.4	43.1	45	45
									None	-	-	-	10.1	11.9	15	15
									E08	9	1	8.7	13.9	16.1	15	20
									E15	15	2	14.4	21	23.3	25	25
									E20	20	2	19.2	27	29.3	30	30
									E23	24	2	23.1	31.9	34.1	35	35

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZR078-150 Hi Static Motor - Without Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					FLA	FLA	FLA	FLA				
078 (6.5)	208	13.5	88	21	2.1	6.8	5.5		None	-	-	-	41.4	46.9	50	60
									E09	6.8	1	18.9	41.4	46.9	50	60
									E18	13.5	2	37.5	55.4	62.3	60	70
									E24	18	2	50	71	77.9	80	80
									E36	25.5	2	70.8	97	103.9	100	110
	230	13.5	88	21	2.1	6.8	5.5		None	-	-	-	41.4	46.9	50	60
									E09	9	1	21.7	41.4	46.9	50	60
									E18	18	2	43.3	62.6	69.5	70	70
									E24	24	2	57.7	80.6	87.5	90	90
									E36	34	2	81.8	110.8	117.6	125	125
	460	6	44	9	1.26	3.4	2.2		None	-	-	-	19.4	21.6	25	25
									E09	9	1	10.8	19.4	21.6	25	25
									E18	18	2	21.7	31.4	34.1	35	35
									E24	24	2	28.9	40.4	43.1	45	45
									E36	34	2	40.9	55.4	58.1	60	60
	575	4.9	34	8	0.66	2.4	1.8		None	-	-	-	14.7	16.5	15	20
									E09	9	1	8.7	14.7	16.5	15	20
									E18	18	2	17.3	24.6	26.9	25	30
									E24	24	2	23.1	31.9	34.1	35	35
									E36	34	2	32.7	43.9	46.1	45	50
090 (7.5)	208	13.1	83.1	21	2.1	9.6	5.5		None	-	-	-	43.3	48.8	50	60
									E09	6.8	1	18.9	43.3	48.8	50	60
									E18	13.5	2	37.5	58.9	65.8	60	70
									E24	18	2	50	74.5	81.4	80	90
									E36	25.5	2	70.8	100.5	107.4	110	110
	230	13.1	83.1	21	2.1	9.6	5.5		None	-	-	-	43.3	48.8	50	60
									E09	9	1	21.7	43.3	48.8	50	60
									E18	18	2	43.3	66.1	73	70	80
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
	460	6.1	41	10	1.26	4.7	2.2		None	-	-	-	20.9	23.1	25	25
									E09	9	1	10.8	20.9	23.1	25	25
									E18	18	2	21.7	33	35.8	35	40
									E24	24	2	28.9	42	44.8	45	45
									E36	34	2	40.9	57	59.8	60	60
	575	4.4	33	7	0.66	3.6	1.8		None	-	-	-	14.8	16.6	15	20
									E09	9	1	8.7	15.4	17.6	20	20
									E18	18	2	17.3	26.1	28.4	30	30
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50
102 (8.5)	208	14.5	98	23	2.1	9.6	5.5		None	-	-	-	46.4	51.9	60	60
									E09	6.8	1	18.9	46.4	51.9	60	60
									E18	13.5	2	37.5	58.9	65.8	60	70
									E24	18	2	50	74.5	81.4	80	90
									E36	25.5	2	70.8	100.5	107.4	110	110
	230	14.5	98	23	2.1	9.6	5.5		None	-	-	-	46.4	51.9	60	60
									E09	9	1	21.7	46.4	51.9	60	60
									E18	18	2	43.3	66.1	73	70	80
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
	460	6.3	55	10	1.26	4.7	2.2		None	-	-	-	21.4	23.6	25	25
									E09	9	1	10.8	21.4	23.6	25	25
									E18	18	2	21.7	33	35.8	35	40
									E24	24	2	28.9	42	44.8	45	45
									E36	34	2	40.9	57	59.8	60	60
	575	6	41	9	0.66	3.6	1.8		None	-	-	-	18.4	20.2	20	25
									E09	9	1	8.7	18.4	20.2	20	25
									E18	18	2	17.3	26.1	28.4	30	30
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50

ZR078-150 Hi Static Motor - Without Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16	110	25	3.03	9.6	5.5		None	-	-	-	51.7	57.2	60	70
									E18	13.5	2	37.5	58.9	65.8	60	70
									E24	18	2	50	74.5	81.4	80	90
									E36	25.5	2	70.8	100.5	107.4	110	110
									E54	40.6	2	112.7	152.9	159.8	175	175
	230	16	110	25	3.03	9.6	5.5		None	-	-	-	51.7	57.2	60	70
									E18	18	2	43.3	66.1	73	70	80
									E24	24	2	57.7	84.1	91	90	100
									E36	34	2	81.8	114.3	121.1	125	125
									E54	54	2	129.9	141.9	148.8	175	175
	460	7.8	52	12	1.6	4.7	2.2		None	-	-	-	25.5	27.7	30	35
									E18	18	2	21.7	33	35.8	35	40
									E24	24	2	28.9	42	44.8	45	45
									E36	34	2	40.9	57	59.8	60	60
									E54	54	2	65	70.9	73.6	80	80
	575	5.7	38.9	9	1.35	3.6	1.8		None	-	-	-	19.1	20.9	20	25
									E18	18	2	17.3	26.1	28.4	30	30
									E24	24	2	23.1	33.4	35.6	35	40
									E36	34	2	32.7	45.4	47.6	50	50
									E54	54	2	52	56.5	58.8	70	70
150 (12.5)	208	22.4	149	35	2.1	14	5.5		None	-	-	-	72.8	78.3	90	100
									E18	13.5	2	37.5	72.8	78.3	90	100
									E24	18	2	50	80	86.9	90	100
									E36	25.5	2	70.8	106	112.9	110	125
									E54	40.6	2	112.7	158.4	165.3	175	175
	230	22.4	149	35	2.1	14	5.5		None	-	-	-	72.8	78.3	90	100
									E18	18	2	43.3	72.8	78.5	90	100
									E24	24	2	57.7	89.6	96.5	90	100
									E36	34	2	81.8	119.8	126.6	125	150
									E54	54	2	129.9	147.4	154.3	175	175
	460	10.6	75	17	1.26	6.6	2.2		None	-	-	-	35.5	37.7	45	45
									E18	18	2	21.7	35.5	38.1	45	45
									E24	24	2	28.9	44.4	47.1	45	50
									E36	34	2	40.9	59.4	62.1	60	70
									E54	54	2	65	73.3	76	80	90
	575	7.7	54	12	0.66	5.2	1.8		None	-	-	-	25.1	26.9	30	30
									E18	18	2	17.3	28.1	30.4	30	35
									E24	24	2	23.1	35.4	37.6	40	40
									E36	34	2	32.7	47.4	49.6	50	50
									E54	54	2	52	58.5	60.8	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZR037-061 Standard Indoor Blower - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
037 (3)	208	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	2.3	1	6.4	28.8	34.3	35	40
									E06	4.5	1	12.5	34.6	41.5	40	45
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
	230	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	3	1	7.2	28.8	34.9	35	40
									E06	6	1	14.4	37	43.9	40	45
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
	460	5.8	38	9	1.26	2.6	2.2	20	None	-	-	-	16.2	18.4	20	20
									E03	3	1	3.6	16.2	18.4	20	20
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
	575	3.8	36.5	6	0.66	2	1.8	20	None	-	-	-	11.5	13.3	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	36.7	42.2	50	50
									E06	4.5	1	12.5	36.7	42.2	50	50
									E08	6.8	1	18.9	42.6	49.5	50	50
									E15	11.3	2	31.4	58.3	65.1	60	70
									E20	15	2	41.6	71	77.9	80	80
	230	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	36.7	42.2	50	50
									E06	6	1	14.4	37	43.9	50	50
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
									E20	20	2	48.1	79.1	86	80	90
	460	6.2	41	10	1.26	2.6	2.2	20	None	-	-	-	17.9	20.1	20	25
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
									E20	20	2	24.1	39.6	42.4	40	45
	575	4.9	33	8	0.66	2	1.8	20	None	-	-	-	13.4	15.2	15	20
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	19.2	31.5	33.8	35	35
061 (5)	208	15.9	110	25	2.1	5.2	5.5	20	None	-	-	-	39.3	44.8	50	60
									E06	4.5	1	12.5	39.3	44.8	50	60
									E08	6.8	1	18.9	42.6	49.5	50	60
									E15	11.3	2	31.4	58.3	65.1	60	70
									E20	15	2	41.6	71	77.9	80	80
	230	15.9	110	25	2.1	5.2	5.5	20	None	-	-	-	39.3	44.8	50	60
									E06	6	1	14.4	39.3	44.8	50	60
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
									E20	20	2	48.1	79.1	86	80	90
	460	7.1	52	11	1.26	2.6	2.2	20	None	-	-	-	19	21.2	25	25
									E06	6	1	7.2	19	21.3	25	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
									E20	20	2	24.1	39.6	42.4	40	45
	575	5.1	39.5	8	0.66	2	1.8	20	None	-	-	-	13.7	15.5	15	20
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	19.2	31.5	33.8	35	35
									E23	24	2	23.1	36.4	38.6	40	40

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZR078-150 Standard Motor - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					FLA	FLA	FLA	FLA				
078 (6.5)	208	13.5	88	21	2.1	5.2	5.5	20	None	-	-	-	49.8	55.3	60	60
									E09	6.8	1	18.9	49.8	55.3	60	60
									E18	13.5	2	37.5	65.9	72.8	70	80
									E24	18	2	50	81.5	88.4	90	90
	230	13.5	88	21	2.1	5.2	5.5	20	E36	25.5	2	70.8	107.5	114.4	110	125
									None	-	-	-	49.8	55.3	60	60
									E09	9	1	21.7	49.8	55.3	60	60
									E18	18	2	43.3	73.1	80	80	80
	460	6	44	9	1.26	2.6	2.2	20	E24	24	2	57.7	91.1	98	100	100
									E36	34	2	81.8	121.3	128.1	125	150
									None	-	-	-	23.6	25.8	25	30
									E09	9	1	10.8	23.6	25.8	25	30
	575	4.9	34	8	0.66	2	1.8	20	E18	18	2	21.7	36.6	39.4	40	40
									E24	24	2	28.9	45.6	48.4	50	50
									E36	34	2	40.9	60.6	63.4	70	70
									None	-	-	-	18.3	20.1	20	25
090 (7.5)	208	13.1	83.1	21	2.1	5.2	5.5	20	E09	9	1	8.7	18.4	20.6	20	25
									E18	18	2	17.3	29.1	31.4	30	35
									E24	24	2	23.1	36.4	38.6	40	40
									E36	34	2	32.7	48.4	50.6	50	60
	230	13.1	83.1	21	2.1	5.2	5.5	20	None	-	-	-	48.9	54.4	60	60
									E09	9	1	21.7	48.9	54.4	60	60
									E18	18	2	43.3	73.1	80	80	80
									E24	24	2	57.7	91.1	98	100	100
	460	6.1	41	10	1.26	2.6	2.2	20	E36	34	2	81.8	121.3	128.1	125	150
									None	-	-	-	23.8	26	25	30
									E09	9	1	10.8	23.8	26	25	30
									E18	18	2	21.7	36.6	39.4	40	40
	575	4.4	33	7	0.66	2	1.8	20	E24	24	2	28.9	45.6	48.4	50	50
									E36	34	2	40.9	60.6	63.4	70	70
									None	-	-	-	17.2	19	20	20
									E09	9	1	8.7	18.4	20.6	20	25
102 (8.5)	208	14.5	98	23	2.1	6.8	5.5	20	E18	18	2	17.3	29.1	31.4	30	35
									E24	24	2	23.1	36.4	38.6	40	40
									E36	34	2	32.7	48.4	50.6	50	60
									None	-	-	-	53.6	59.1	60	70
	230	14.5	98	23	2.1	6.8	5.5	20	E09	6.8	1	18.9	53.6	59.1	60	70
									E18	13.5	2	37.5	67.9	74.8	70	80
									E24	18	2	50	83.5	90.4	90	100
									E36	25.5	2	70.8	109.5	116.4	110	125
	460	6.3	55	10	1.26	3.4	2.2	20	None	-	-	-	53.6	59.1	60	70
									E09	9	1	10.8	25.1	27.3	30	30
									E18	18	2	21.7	37.6	40.4	40	45
									E24	24	2	28.9	46.6	49.4	50	50
	575	6	41	9	0.66	2.4	1.8	20	E36	34	2	40.9	61.6	64.4	70	70
									None	-	-	-	21.2	23	25	25
									E09	9	1	8.7	21.2	23	25	25
									E18	18	2	17.3	29.6	31.9	30	35
								E24	24	2	23.1	36.9	39.1	40	40	
								E36	34	2	32.7	48.9	51.1	50	60	

ZR078-150 Standard Motor - With Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16	110	25	3.03	6.8	5.5	20	None	-	-	-	58.9	64.4	70	80
									E18	13.5	2	37.5	67.9	74.8	70	80
									E24	18	2	50	83.5	90.4	90	100
									E36	25.5	2	70.8	109.5	116.4	110	125
	230	16	110	25	3.03	6.8	5.5	20	E54	40.6	2	112.7	161.9	168.8	175	175
									None	-	-	-	58.9	64.4	70	80
									E18	18	2	43.3	75.1	82	80	90
									E24	24	2	57.7	93.1	100	100	100
	460	7.8	52	12	1.6	3.4	2.2	20	E36	34	2	81.8	123.3	130.1	125	150
									E54	54	2	129.9	150.9	157.8	175	175
									None	-	-	-	29.2	31.4	35	35
									E18	18	2	21.7	37.6	40.4	40	45
	575	5.7	38.9	9	1.35	2.4	1.8	20	E24	24	2	28.9	46.6	49.4	50	50
									E36	34	2	40.9	61.6	64.4	70	70
									E54	54	2	65	75.5	78.3	80	90
									None	-	-	-	21.9	23.7	25	25
150 (12.5)	208	22.4	149	35	2.1	9.6	5.5	20	E18	18	2	17.3	29.6	31.9	30	35
									E24	24	2	23.1	36.9	39.1	40	40
									E36	34	2	32.7	48.9	51.1	50	60
									E54	54	2	52	60	62.3	70	70
	230	22.4	149	35	2.1	9.6	5.5	20	None	-	-	-	78.4	83.9	100	100
									E18	18	2	43.3	78.6	85.5	100	100
									E24	24	2	57.7	96.6	103.5	100	110
									E36	34	2	81.8	126.8	133.6	150	150
	460	10.6	75	17	1.26	4.7	2.2	20	E54	54	2	129.9	154.4	161.3	175	175
									None	-	-	-	38.6	40.8	45	50
									E18	18	2	21.7	39.3	42	45	50
									E24	24	2	28.9	48.3	51	50	60
	575	7.7	54	12	0.66	3.6	1.8	20	E36	34	2	40.9	63.3	66	70	70
									E54	54	2	65	77.1	79.9	90	90
									None	-	-	-	27.5	29.3	35	35
									E18	18	2	17.3	31.1	33.4	35	35
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60
									E54	54	2	52	61.5	63.8	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

ZR037-061 Hi Static Indoor Blower - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					FLA	FLA	FLA	FLA				
037 (3)	208	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	2.3	1	6.4	28.8	34.3	35	40
									E06	4.5	1	12.5	34.6	41.5	40	45
									E08	6.8	1	18.9	42.6	49.5	45	50
									E15	11.3	2	31.4	58.3	65.1	60	70
	230	9	71	14	2.1	5.2	5.5	20	None	-	-	-	28.8	34.3	35	40
									E03	3	1	7.2	28.8	34.9	35	40
									E06	6	1	14.4	37	43.9	40	45
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
	460	5.8	38	9	1.26	2.6	2.2	20	None	-	-	-	16.2	18.4	20	20
									E03	3	1	3.6	16.2	18.4	20	20
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
	575	3.8	36.5	6	0.66	2	1.8	20	None	-	-	-	11.5	13.3	15	15
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
049 (4)	208	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	36.7	42.2	50	50
									E06	4.5	1	12.5	36.7	42.2	50	50
									E08	6.8	1	18.9	42.6	49.5	50	50
									E15	11.3	2	31.4	58.3	65.1	60	70
									E20	15	2	41.6	71	77.9	80	80
	230	13.8	83.1	22	2.1	5.2	5.5	20	None	-	-	-	36.7	42.2	50	50
									E06	6	1	14.4	37	43.9	50	50
									E08	9	1	21.7	46.1	53	50	60
									E15	15	2	36.1	64.1	71	70	80
									E20	20	2	48.1	79.1	86	80	90
	460	6.2	41	10	1.26	2.6	2.2	20	None	-	-	-	17.9	20.1	20	25
									E06	6	1	7.2	18.5	21.3	20	25
									E08	9	1	10.8	23	25.8	25	30
									E15	15	2	18	32	34.8	35	35
									E20	20	2	24.1	39.6	42.4	40	45
	575	4.9	33	8	0.66	2	1.8	20	None	-	-	-	13.4	15.2	15	20
									E08	9	1	8.7	18.4	20.6	20	25
									E15	15	2	14.4	25.5	27.8	30	30
									E20	20	2	19.2	31.5	33.8	35	35
061 (5)	208	15.9	110	25	2.1	6.8	5.5	20	None	-	-	-	40.9	46.4	50	60
									E06	4.5	1	12.5	40.9	46.4	50	60
									E08	6.8	1	18.9	44.6	51.5	50	60
									E15	11.3	2	31.4	60.3	67.1	70	70
									E20	15	2	41.6	73	79.9	80	80
	230	15.9	110	25	2.1	6.8	5.5	20	E23	18	2	50	83.5	90.4	90	100
									None	-	-	-	40.9	46.4	50	60
									E06	6	1	14.4	40.9	46.4	50	60
									E08	9	1	21.7	48.1	55	50	60
									E15	15	2	36.1	66.1	73	70	80
	460	7.1	52	11	1.26	3.4	2.2	20	E20	20	2	48.1	81.1	88	90	90
									E23	24	2	57.7	93.1	100	100	100
									None	-	-	-	19.8	22	25	25
									E06	6	1	7.2	19.8	22.3	25	25
									E08	9	1	10.8	24	26.8	25	30
	575	5.1	39.5	8	0.66	2.4	1.8	20	E15	15	2	18	33	35.8	35	40
									E20	20	2	24.1	40.6	43.4	45	45
									E23	24	2	28.9	46.6	49.4	50	50
									None	-	-	-	14.1	15.9	15	20
E08									9	1	8.7	18.9	21.1	20	25	

1. Minimum Circuit Ampacity.

2. Dual Element, Time Delay Type.

3. HACR type per NEC.

ZR078-150 Hi Static Motor - With Powered Convenience Outlet

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
078 (6.5)	208	13.5	88	21	2.1	6.8	5.5	20	None	-	-	-	51.4	56.9	60	70
									E09	6.8	1	18.9	51.4	56.9	60	70
									E18	13.5	2	37.5	67.9	74.8	70	80
									E24	18	2	50	83.5	90.4	90	100
									E36	25.5	2	70.8	109.5	116.4	110	125
	230	13.5	88	21	2.1	6.8	5.5	20	None	-	-	-	51.4	56.9	60	70
									E09	9	1	21.7	51.4	56.9	60	70
									E18	18	2	43.3	75.1	82	80	90
									E24	24	2	57.7	93.1	100	100	100
									E36	34	2	81.8	123.3	130.1	125	150
	460	6	44	9	1.26	3.4	2.2	20	None	-	-	-	24.4	26.6	30	30
									E09	9	1	10.8	24.4	26.8	30	30
									E18	18	2	21.7	37.6	40.4	40	45
									E24	24	2	28.9	46.6	49.4	50	50
									E36	34	2	40.9	61.6	64.4	70	70
	575	4.9	34	8	0.66	2.4	1.8	20	None	-	-	-	18.7	20.5	20	25
									E09	9	1	8.7	18.9	21.1	20	25
									E18	18	2	17.3	29.6	31.9	30	35
									E24	24	2	23.1	36.9	39.1	40	40
									E36	34	2	32.7	48.9	51.1	50	60
090 (7.5)	208	13.1	83.1	21	2.1	9.6	5.5	20	None	-	-	-	53.3	58.8	60	70
									E09	6.8	1	18.9	53.3	58.8	60	70
									E18	13.5	2	37.5	71.4	78.3	80	80
									E24	18	2	50	87	93.9	90	100
									E36	25.5	2	70.8	113	119.9	125	125
	230	13.1	83.1	21	2.1	9.6	5.5	20	None	-	-	-	53.3	58.8	60	70
									E09	9	1	21.7	53.3	58.8	60	70
									E18	18	2	43.3	78.6	85.5	80	90
									E24	24	2	57.7	96.6	103.5	100	110
									E36	34	2	81.8	126.8	133.6	150	150
	460	6.1	41	10	1.26	4.7	2.2	20	None	-	-	-	25.9	28.1	30	30
									E09	9	1	10.8	25.9	28.4	30	30
									E18	18	2	21.7	39.3	42	40	45
									E24	24	2	28.9	48.3	51	50	60
									E36	34	2	40.9	63.3	66	70	70
	575	4.4	33	7	0.66	3.6	1.8	20	None	-	-	-	18.8	20.6	20	25
									E09	9	1	8.7	20.4	22.6	25	25
									E18	18	2	17.3	31.1	33.4	35	35
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60
102 (8.5)	208	14.5	98	23	2.1	9.6	5.5	20	None	-	-	-	56.4	61.9	70	70
									E09	6.8	1	18.9	56.4	61.9	70	70
									E18	13.5	2	37.5	71.4	78.3	80	80
									E24	18	2	50	87	93.9	90	100
									E36	25.5	2	70.8	113	119.9	125	125
	230	14.5	98	23	2.1	9.6	5.5	20	None	-	-	-	56.4	61.9	70	70
									E09	9	1	21.7	56.4	61.9	70	70
									E18	18	2	43.3	78.6	85.5	80	90
									E24	24	2	57.7	96.6	103.5	100	110
									E36	34	2	81.8	126.8	133.6	150	150
	460	6.3	55	10	1.26	4.7	2.2	20	None	-	-	-	26.4	28.6	30	30
									E09	9	1	10.8	26.4	28.6	30	30
									E18	18	2	21.7	39.3	42	40	45
									E24	24	2	28.9	48.3	51	50	60
									E36	34	2	40.9	63.3	66	70	70
	575	6	41	9	0.66	3.6	1.8	20	None	-	-	-	22.4	24.2	25	30
									E09	9	1	8.7	22.4	24.2	25	30
									E18	18	2	17.3	31.1	33.4	35	35
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60

ZR078-150 Hi Static Motor - With Powered Convenience Outlet (Continued)

Size (Tons)	Volt	Compressors (each)			OD Fan Motors (each)	Supply Blower Motor	Pwr Exh Motor	Pwr Conv Outlet	Electric Heat Option				MCA ¹ (Amps)	MCA ¹ w/Pwr Exh (Amps)	Max Fuse ² / Breaker ³ Size (Amps)	Max Fuse ² / Breaker ³ Size w/ Pwr Exh (Amps)
		RLA	LRA	MCC					Model	kW	Stages	Amps				
120 (10)	208	16	110	25	3.03	9.6	5.5	20	None	-	-	-	61.7	67.2	70	80
									E18	13.5	2	37.5	71.4	78.3	80	80
									E24	18	2	50	87	93.9	90	100
									E36	25.5	2	70.8	113	119.9	125	125
	230	16	110	25	3.03	9.6	5.5	20	E54	40.6	2	112.7	165.4	172.3	175	175
									None	-	-	-	61.7	67.2	70	80
									E18	18	2	43.3	78.6	85.5	80	90
									E24	24	2	57.7	96.6	103.5	100	110
	460	7.8	52	12	1.6	4.7	2.2	20	E36	34	2	81.8	126.8	133.6	150	150
									E54	54	2	129.9	154.4	161.3	175	175
									None	-	-	-	30.5	32.7	35	40
									E18	18	2	21.7	39.3	42	40	45
	575	5.7	38.9	9	1.35	3.6	1.8	20	E24	24	2	28.9	48.3	51	50	60
									E36	34	2	40.9	63.3	66	70	70
									E54	54	2	65	77.1	79.9	90	90
									None	-	-	-	23.1	24.9	25	30
150 (12.5)	208	22.4	149	35	2.1	14	5.5	20	E18	18	2	17.3	31.1	33.4	35	35
									E24	24	2	23.1	38.4	40.6	40	45
									E36	34	2	32.7	50.4	52.6	60	60
									E54	54	2	52	61.5	63.8	70	70
	230	22.4	149	35	2.1	14	5.5	20	None	-	-	-	82.8	88.3	100	110
									E18	18	2	43.3	84.1	91	100	110
									E24	24	2	57.7	102.1	109	110	110
									E36	34	2	81.8	132.3	139.1	150	150
	460	10.6	75	17	1.26	6.6	2.2	20	E54	54	2	129.9	159.9	166.8	175	175
									None	-	-	-	40.5	42.7	50	50
									E18	18	2	21.7	41.6	44.4	50	50
									E24	24	2	28.9	50.6	53.4	60	60
	575	7.7	54	12	0.66	5.2	1.8	20	E36	34	2	40.9	65.6	68.4	70	70
									E54	54	2	65	79.5	82.3	90	90
									None	-	-	-	29.1	30.9	35	35
									E18	18	2	17.3	33.1	35.4	35	40
									E24	24	2	23.1	40.4	42.6	45	45
									E36	34	2	32.7	52.4	54.6	60	60
									E54	54	2	52	63.5	65.8	70	70

1. Minimum Circuit Ampacity.
2. Dual Element, Time Delay Type.
3. HACR type per NEC.

Electric Heat Multipliers

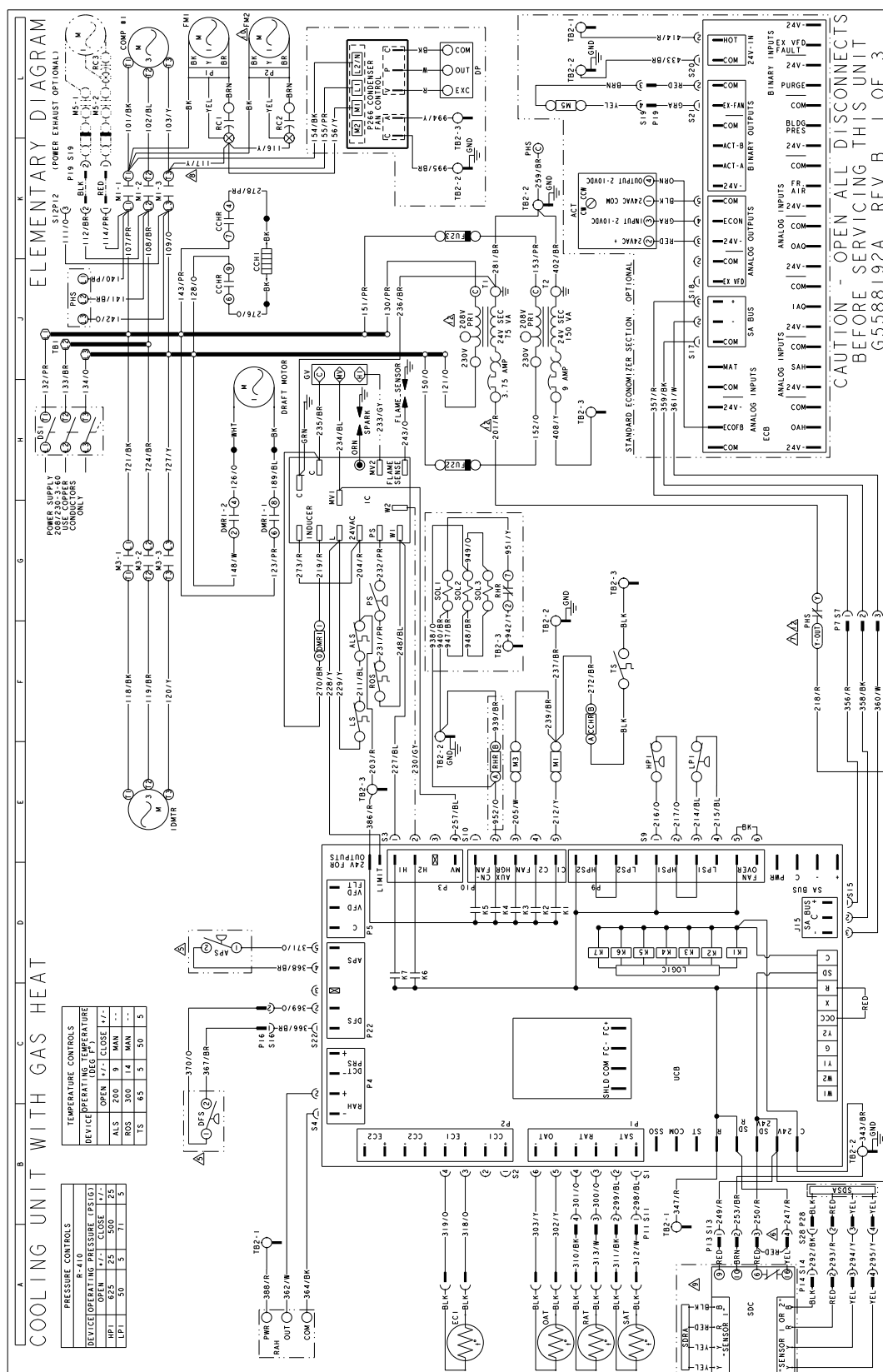
Voltage		kW Capacity Multipliers ¹
Nominal	Applied	
240	208	0.75
	230	0.92
480	460	0.92
600	575	0.92

1. Electric heaters are rated at nominal voltage. Use this table to determine the electric heat capacity for heaters applied at lower voltages.

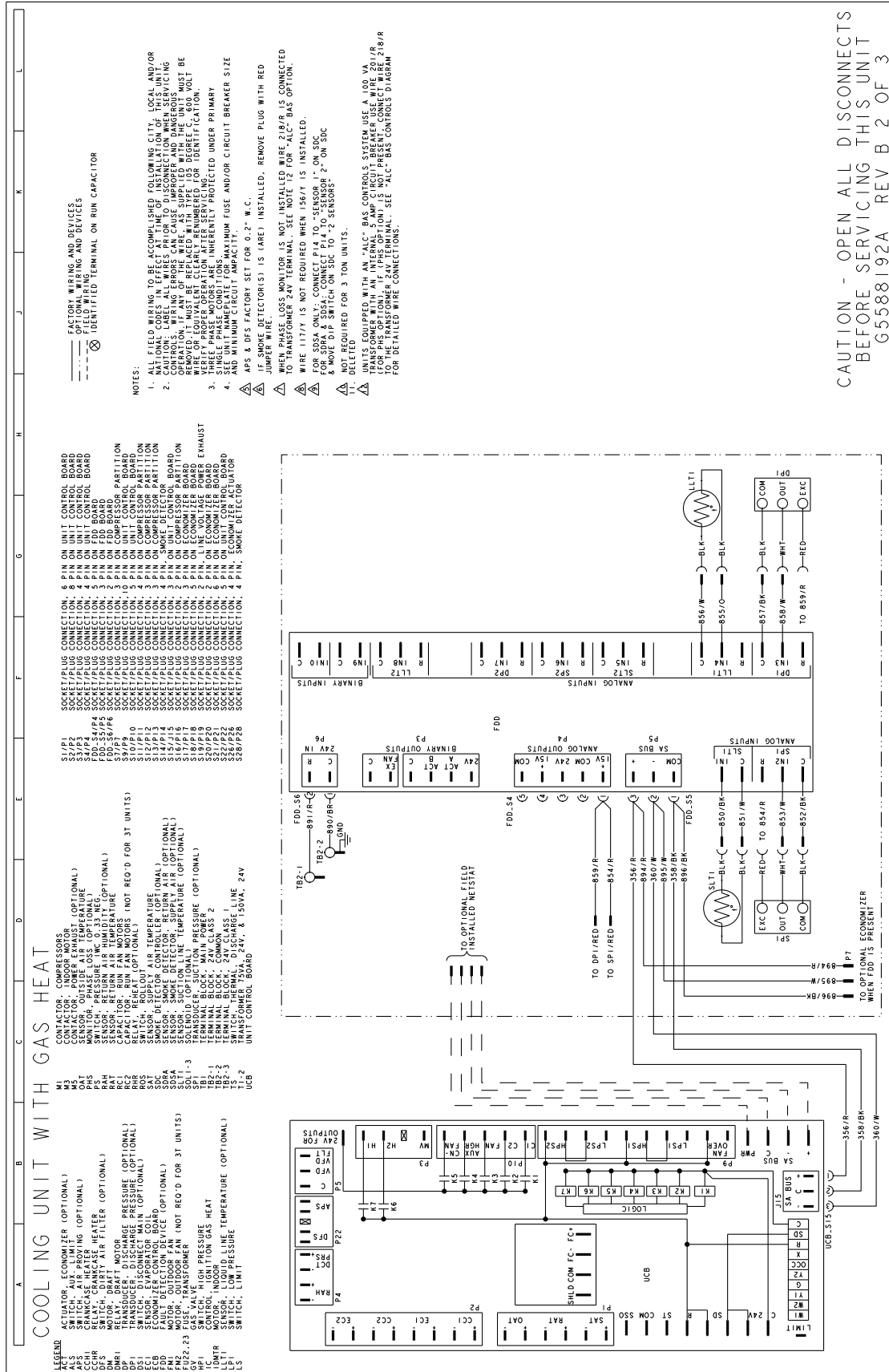
Typical Wiring Diagrams

ZH/ZJ037-150 Typical Wiring Diagrams

Typical ZH/ZJ/ZR037-061 Cooling Unit with Gas Heat 208/230 Volt Wiring Diagram

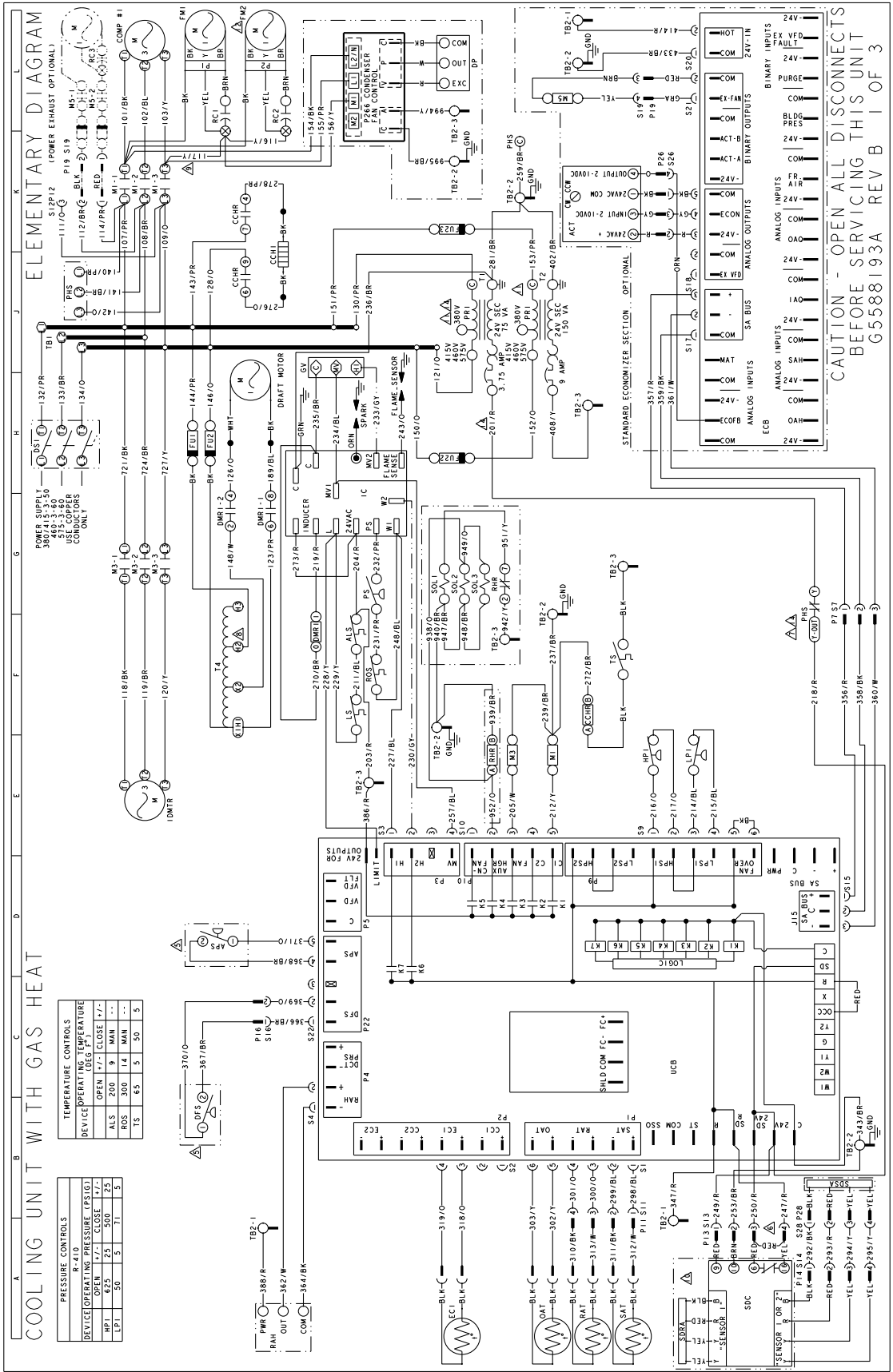


Typical ZH/ZJ/ZR037-061 Cooling Unit with Gas Heat 208/230 Volt Unit (Options)

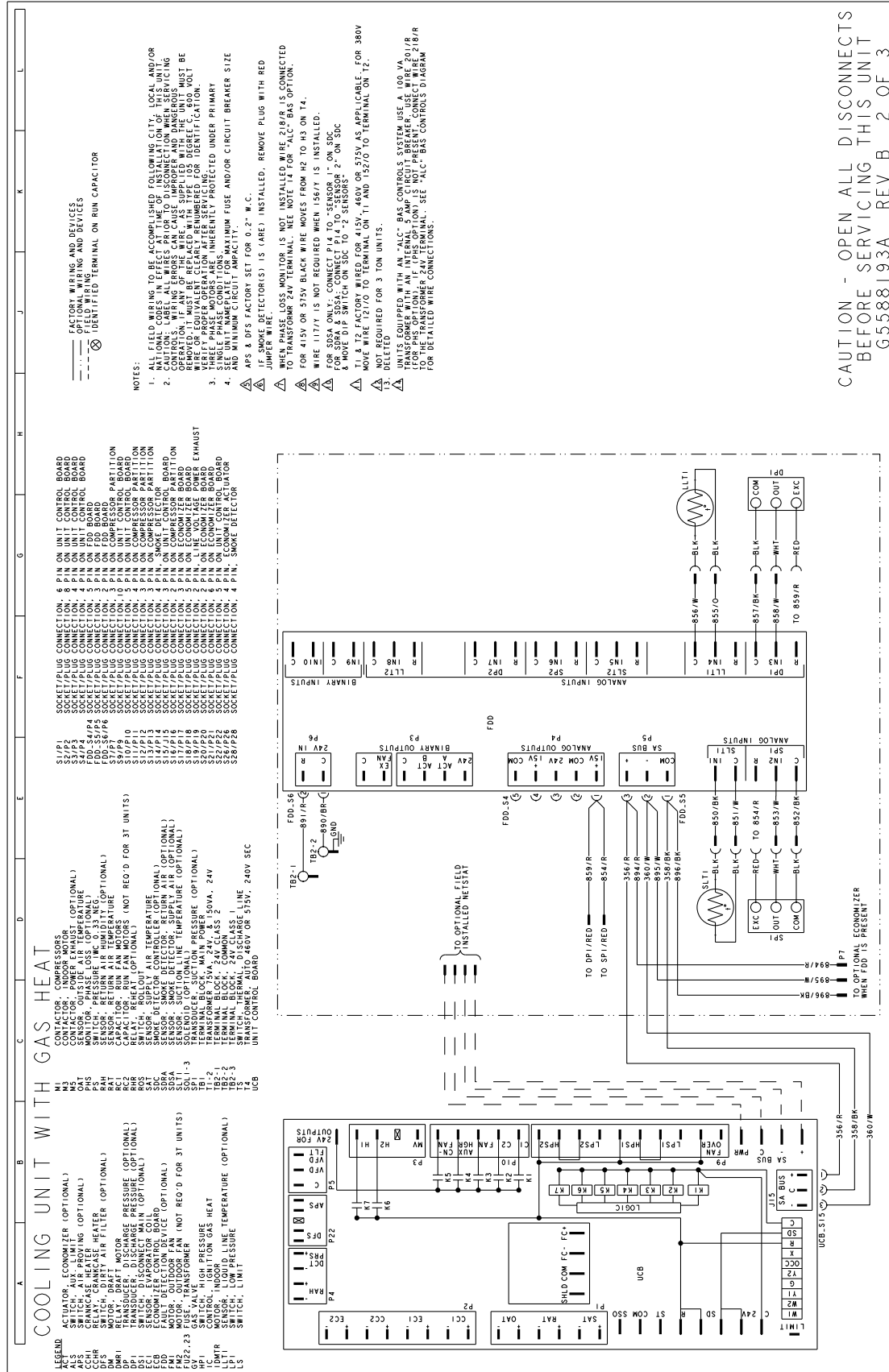


CAUTION - OPEN ALL DISCONNECTS
BEFORE SERVICING THIS UNIT
G5588192A REV B 2 OF 3

Typical ZH/ZJ/ZR037-061 Cooling Unit with Gas Heat 460/575 Volt Wiring Diagram

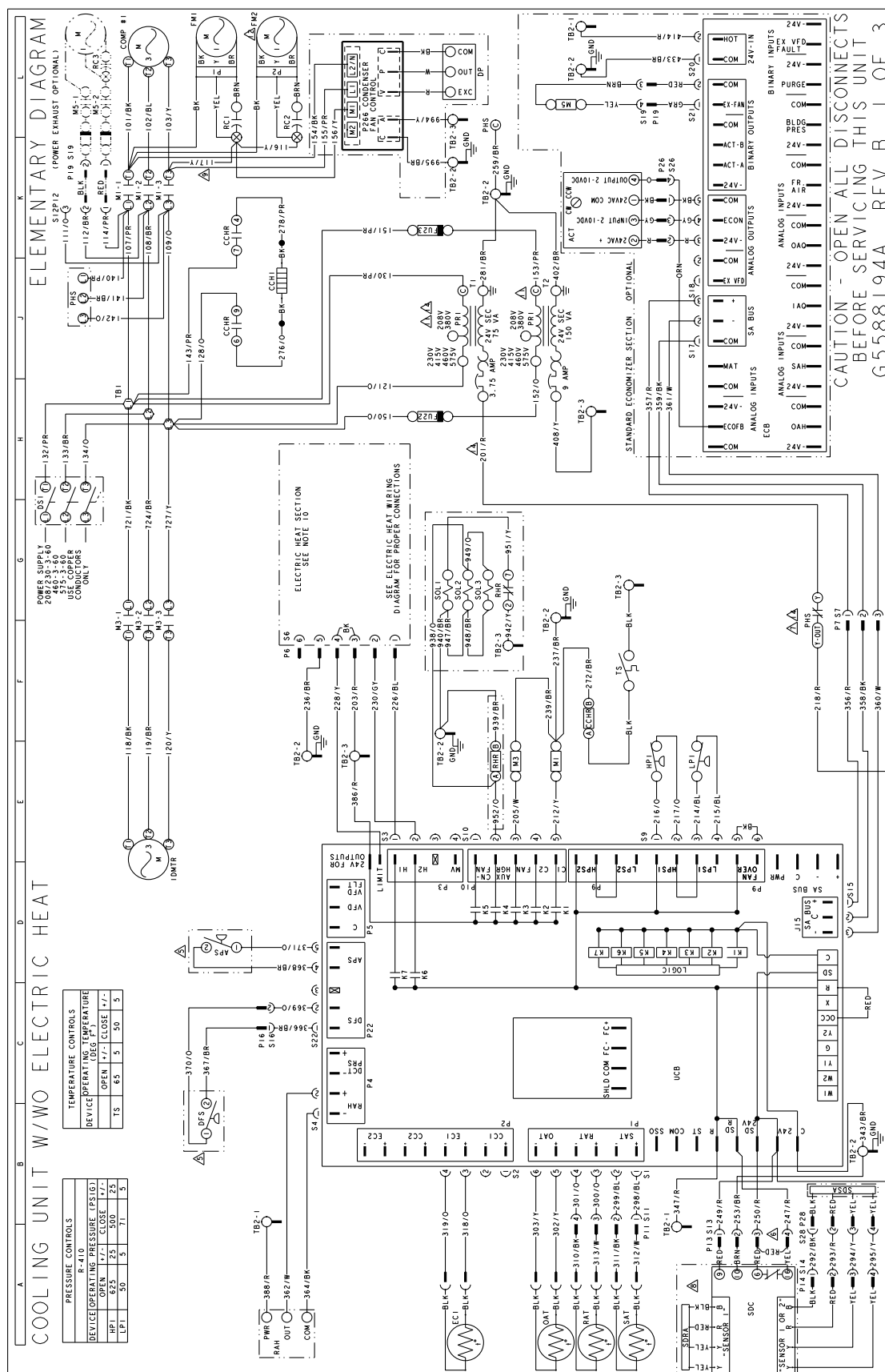


Typical ZH/ZJ/ZR037-061 Cooling Unit with Gas Heat 460/575 Volt Unit (Options)

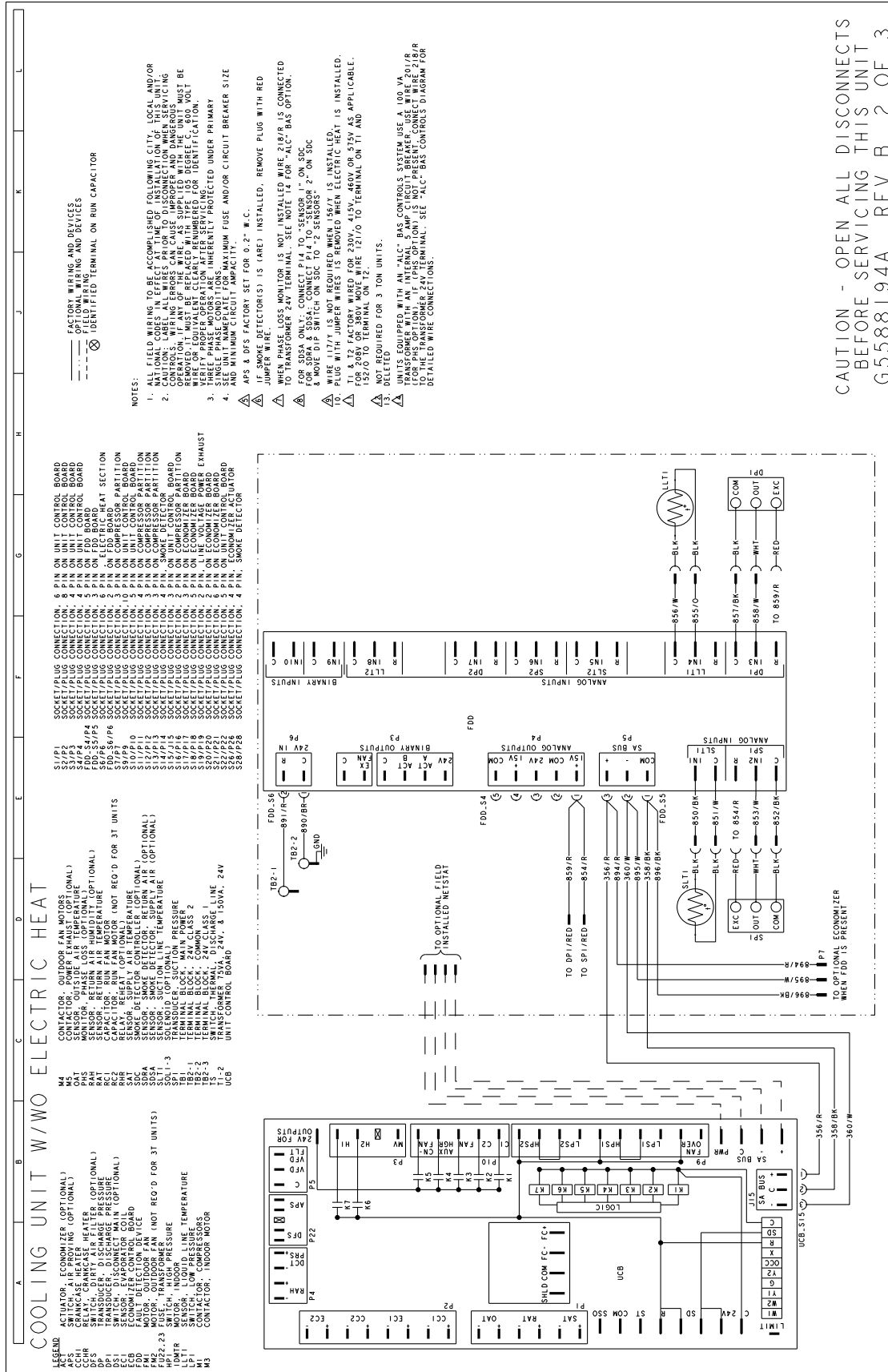


CAUTION - OPEN ALL DISCONNECTS
BEFORE SERVICING THIS UNIT
G5588193A REV B 2 OF 3

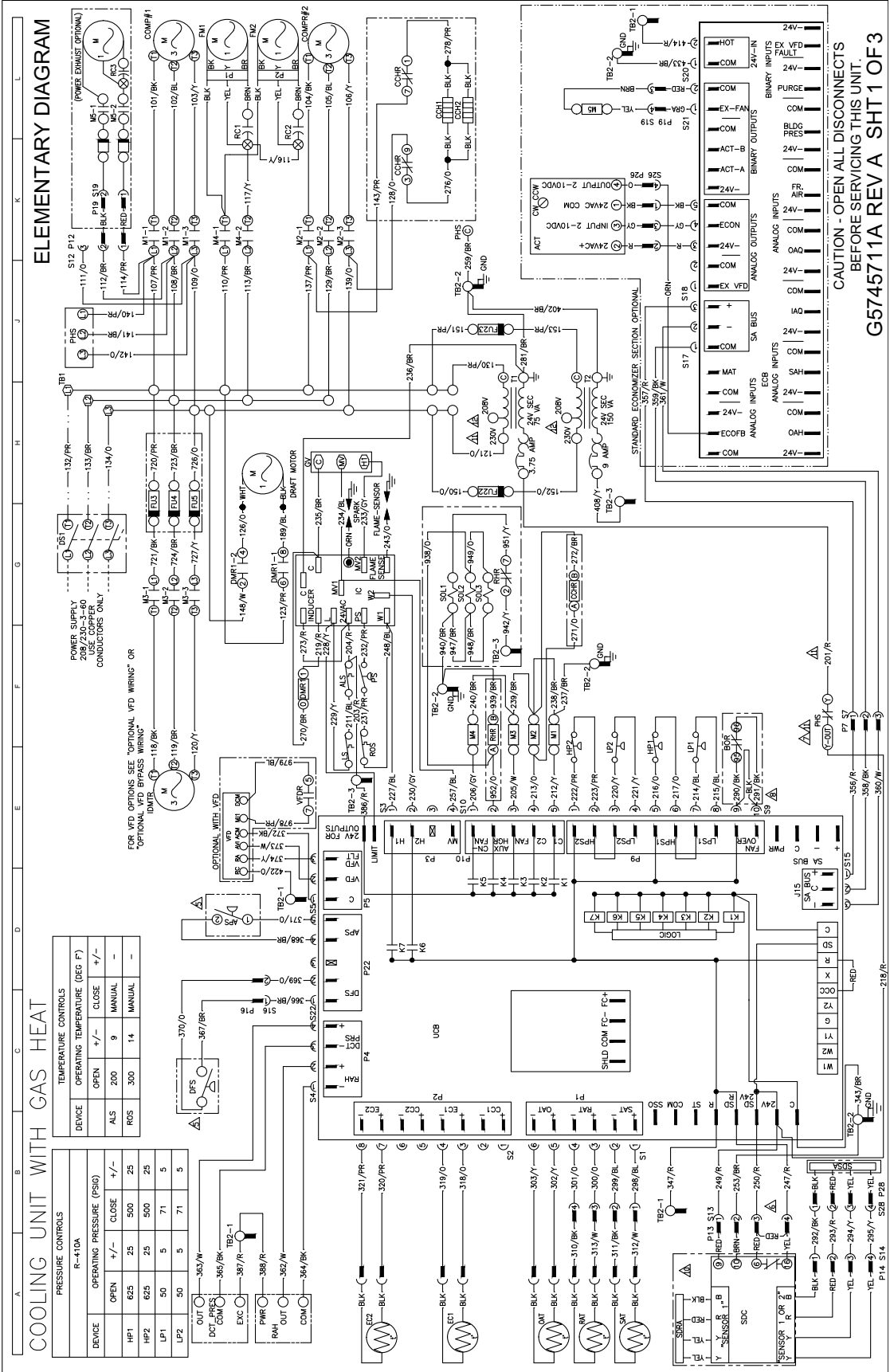
Johnson Controls Ducted Systems



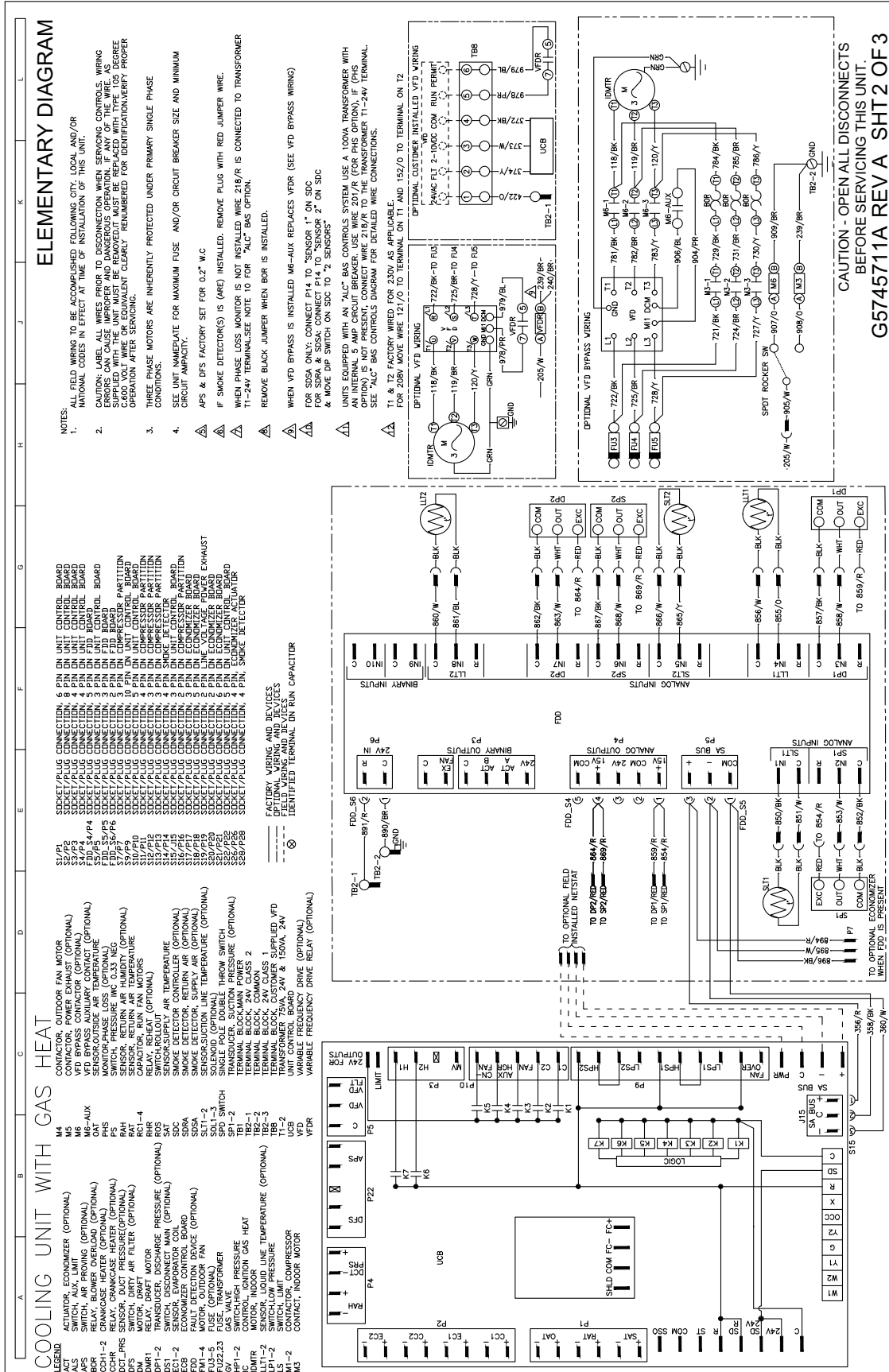
Typical ZH/ZJ/ZR037-061 Cooling Unit with/without Electric Heat Unit (Options)



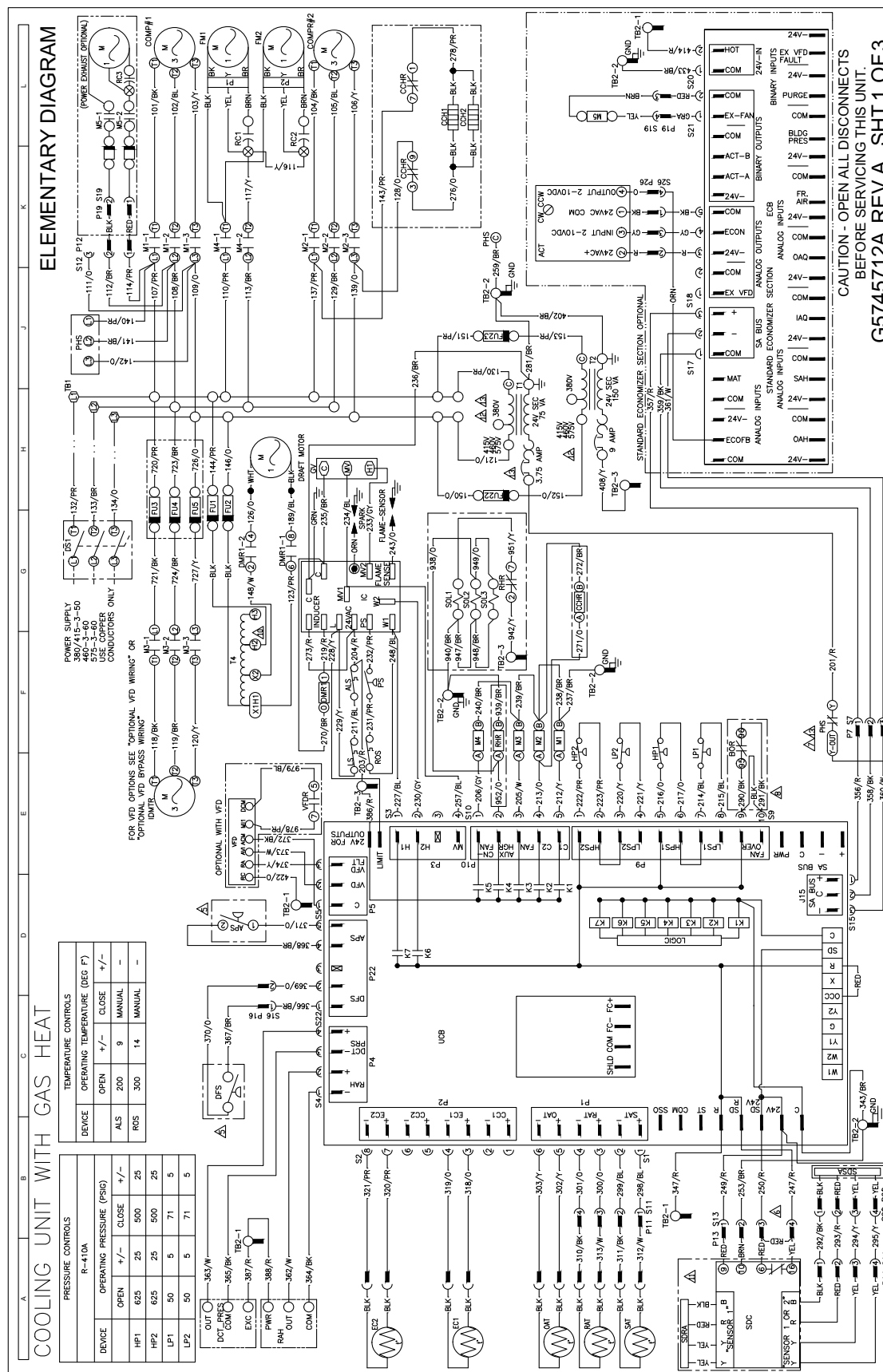
Typical ZH/ZJ/ZR078-120 Cooling Unit with Gas Heat 208/230 Volt Wiring Diagram



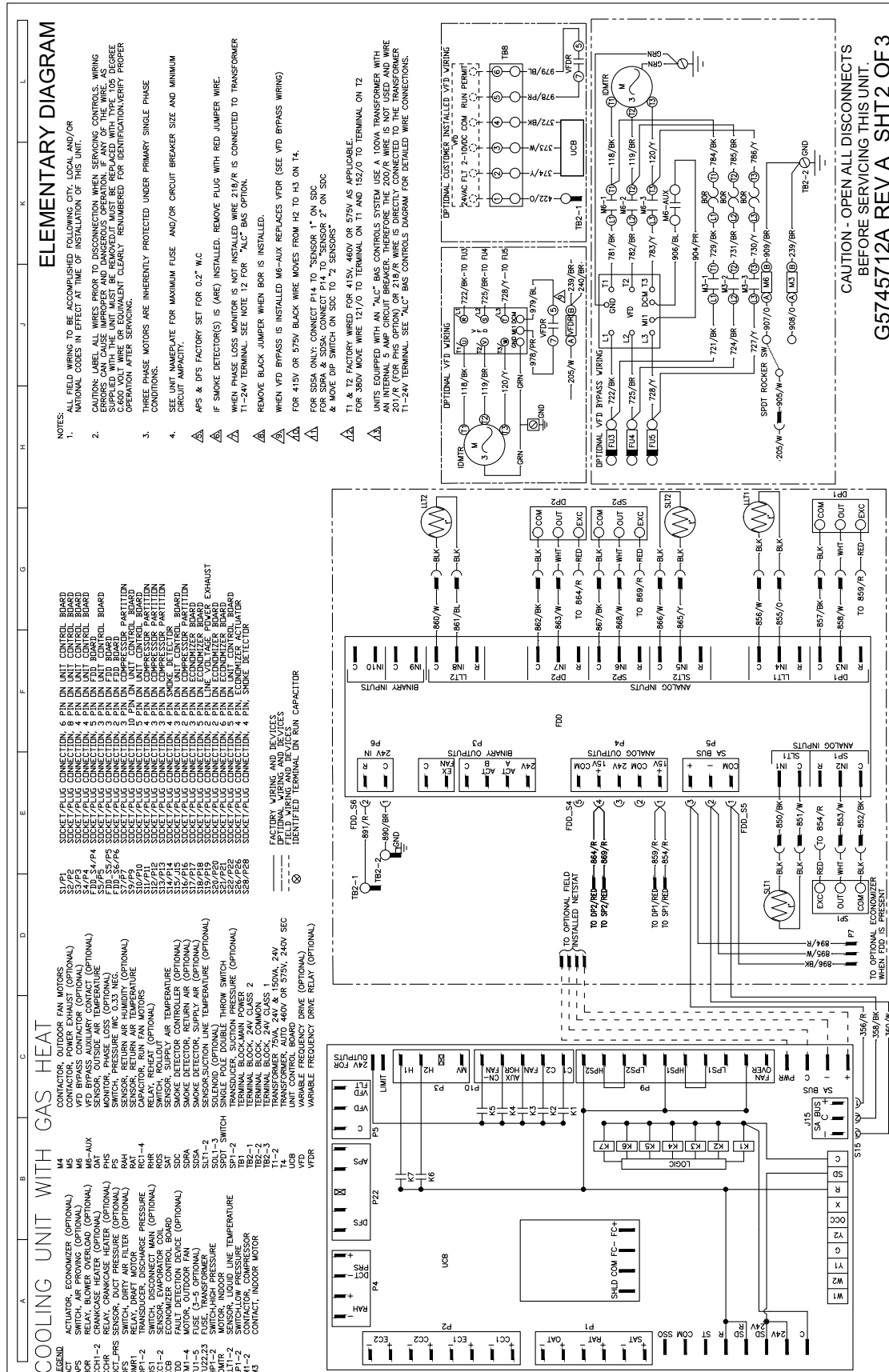
Typical ZH/ZJ/ZR078-120 Cooling Unit with Gas Heat 208/230 Volt Unit (Options)



Johnson Controls Ducted Systems

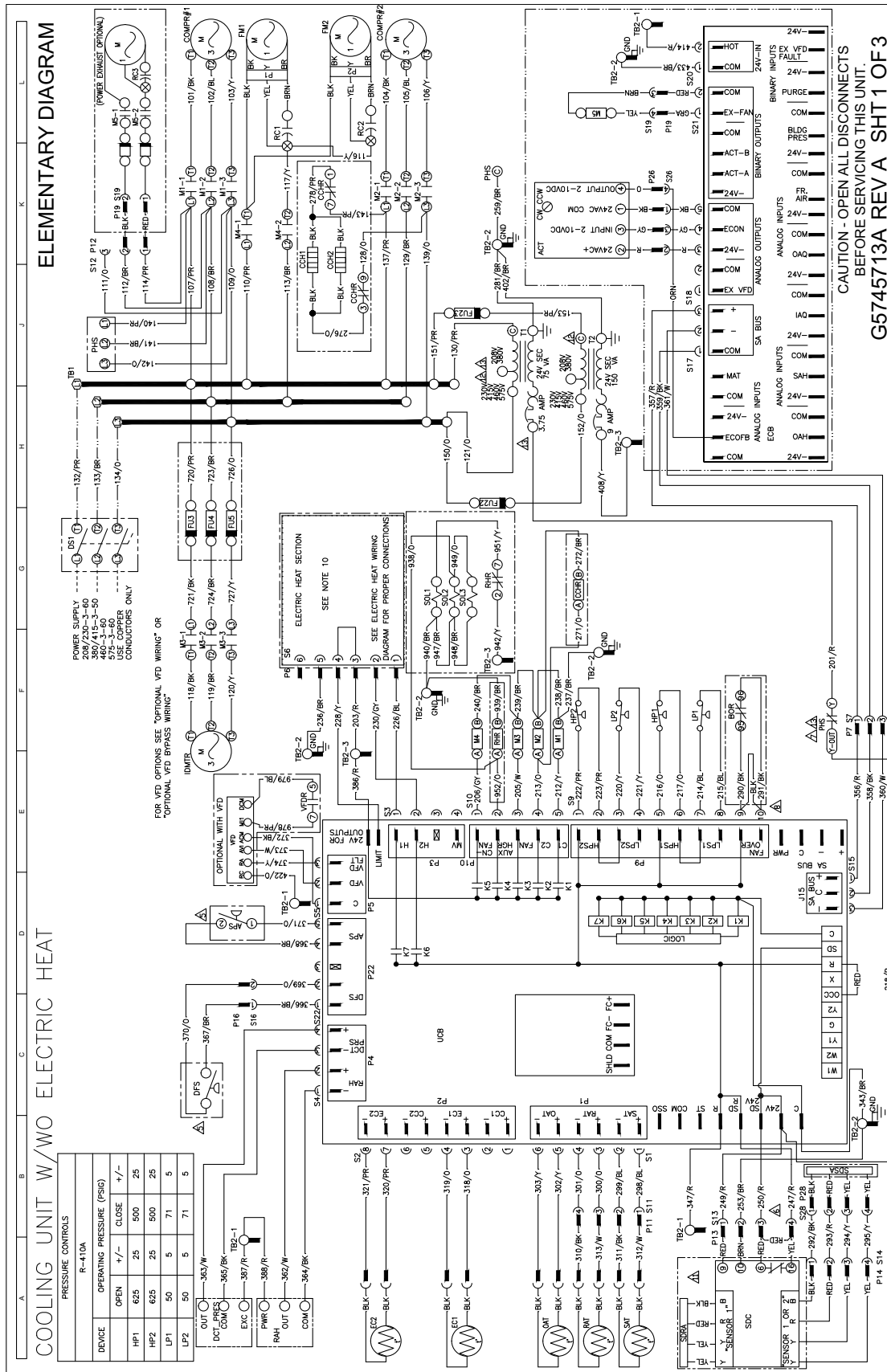


Typical ZH/ZJ/ZR078-120 Cooling Unit with Gas Heat 460/575 Volt Unit (Options)

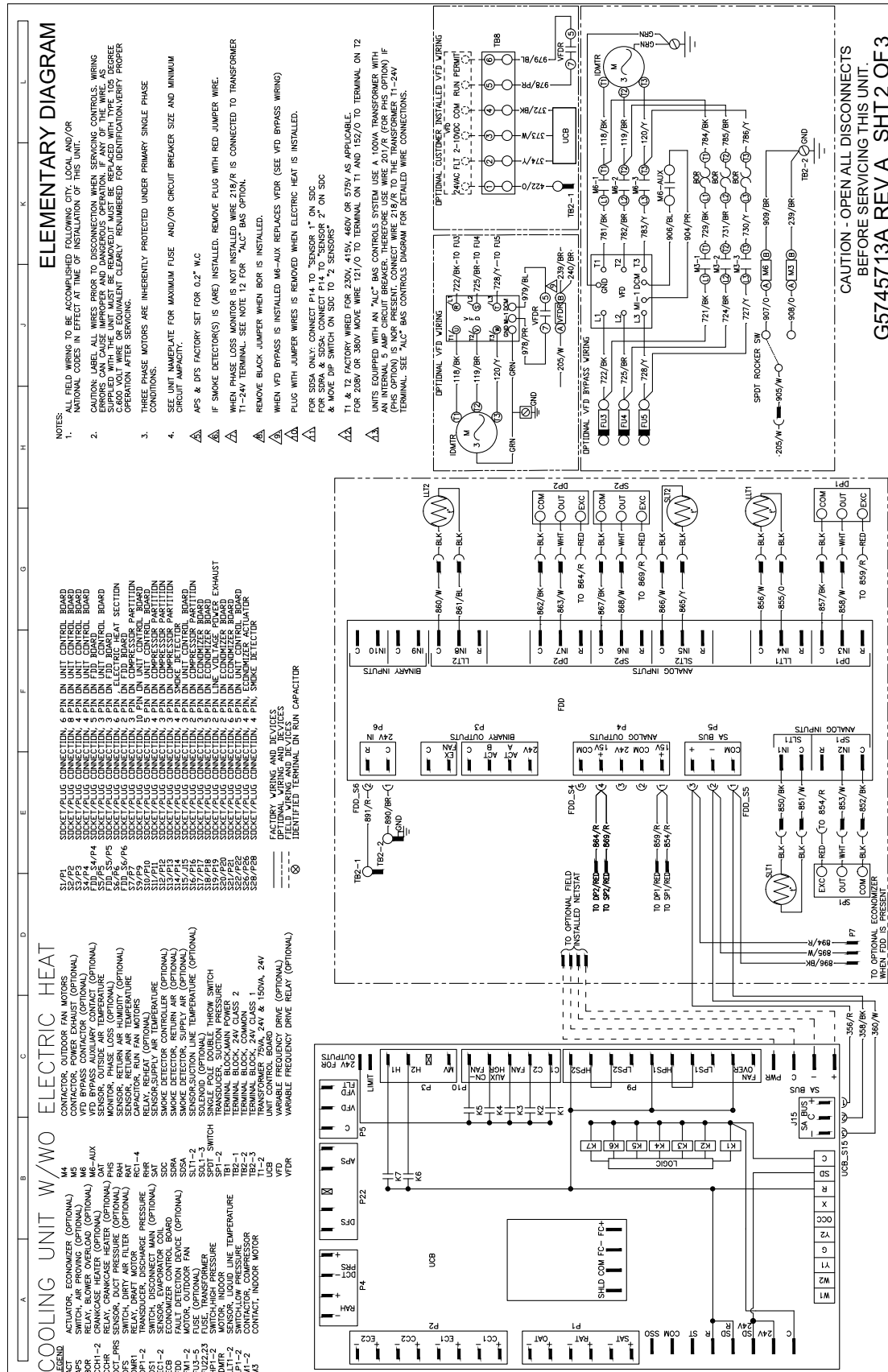


CAUTION - OPEN ALL DISCONNECTS
BEFORE SERVICING THIS UNIT.

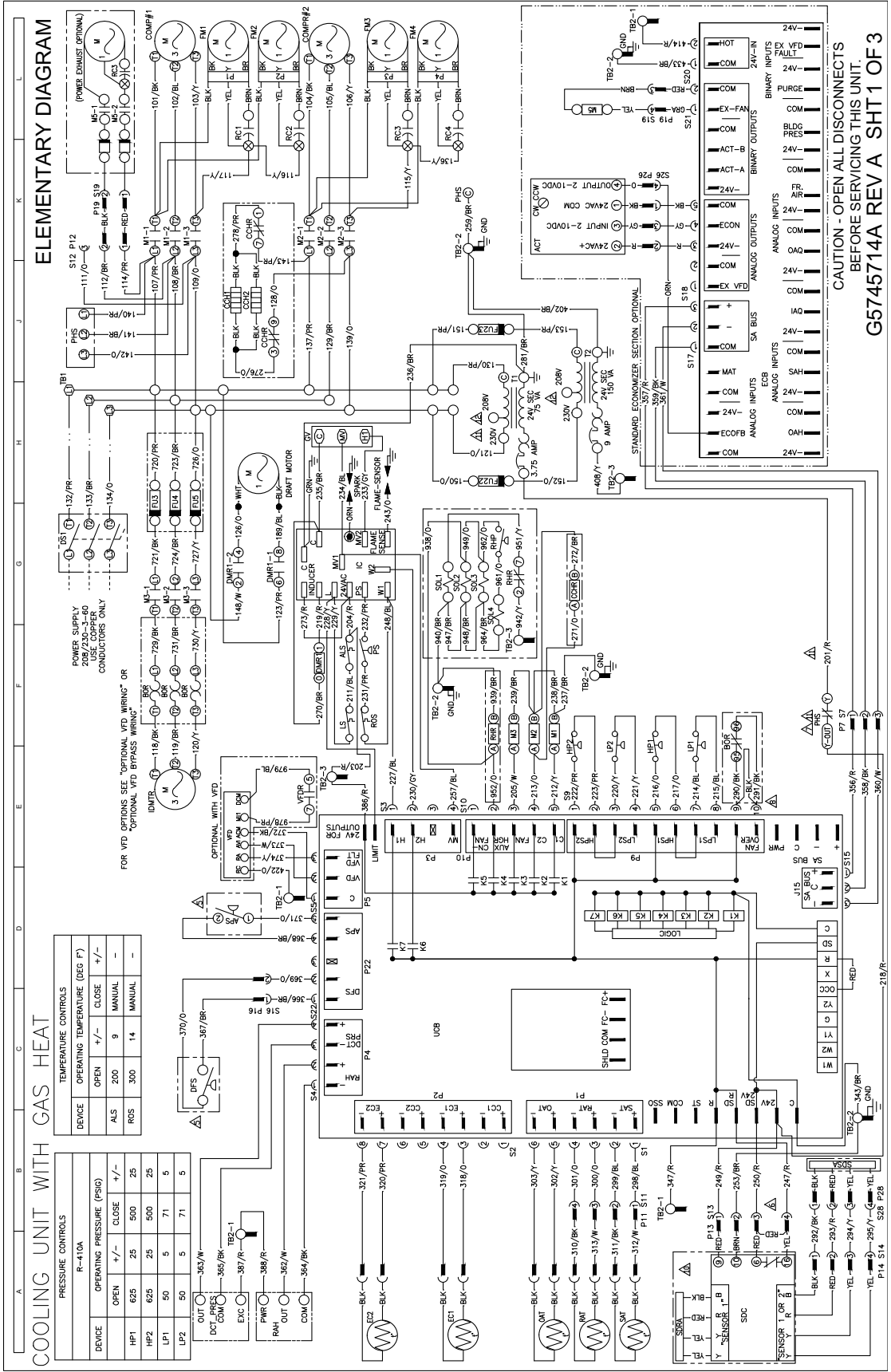
Typical ZH/ZJ/ZR078-120 Cooling Unit with/without Electric Heat Wiring Diagram



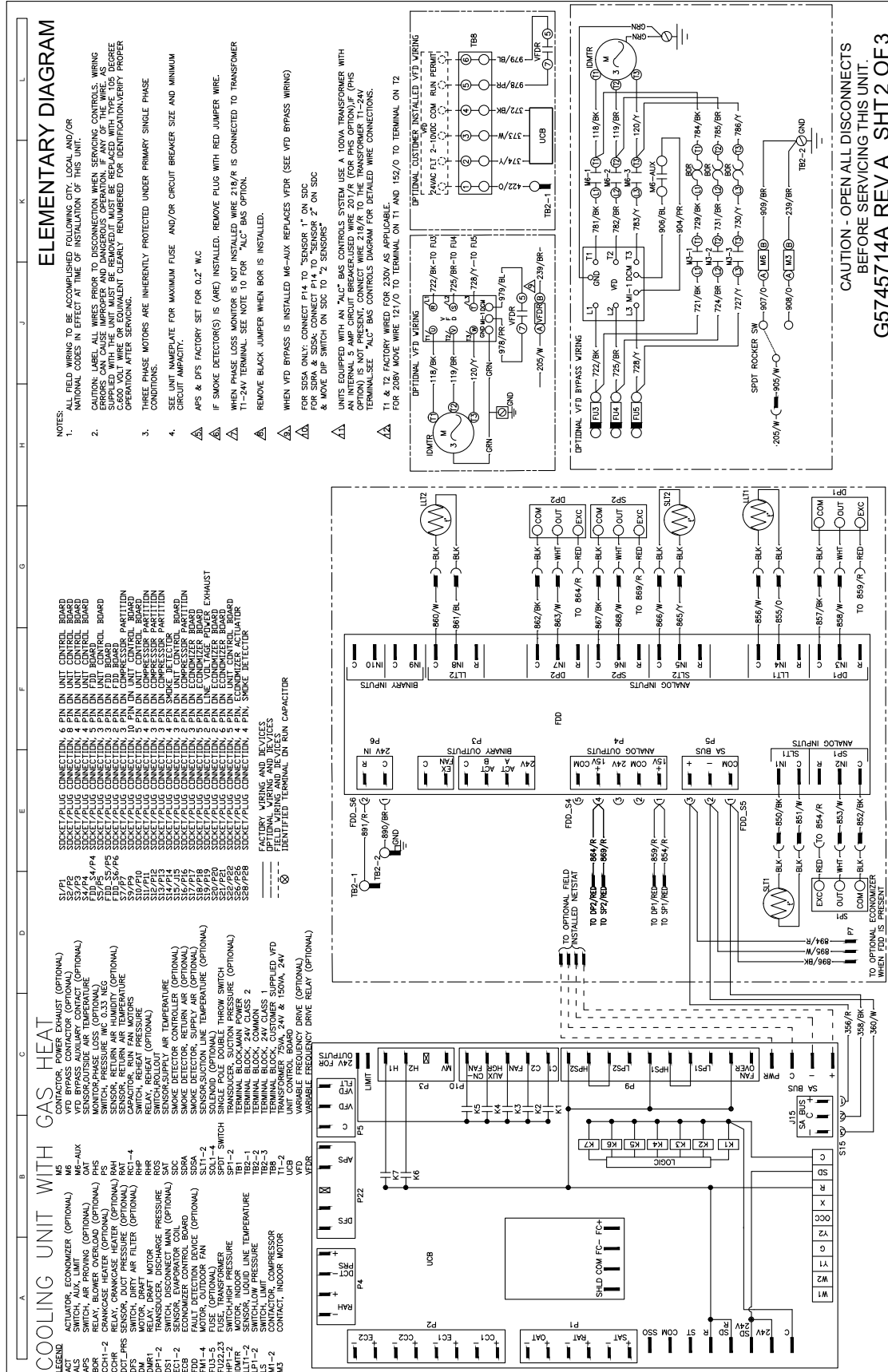
Typical ZH/ZJ/ZR078-120 Cooling Unit with/without Electric Heat Unit (Options)



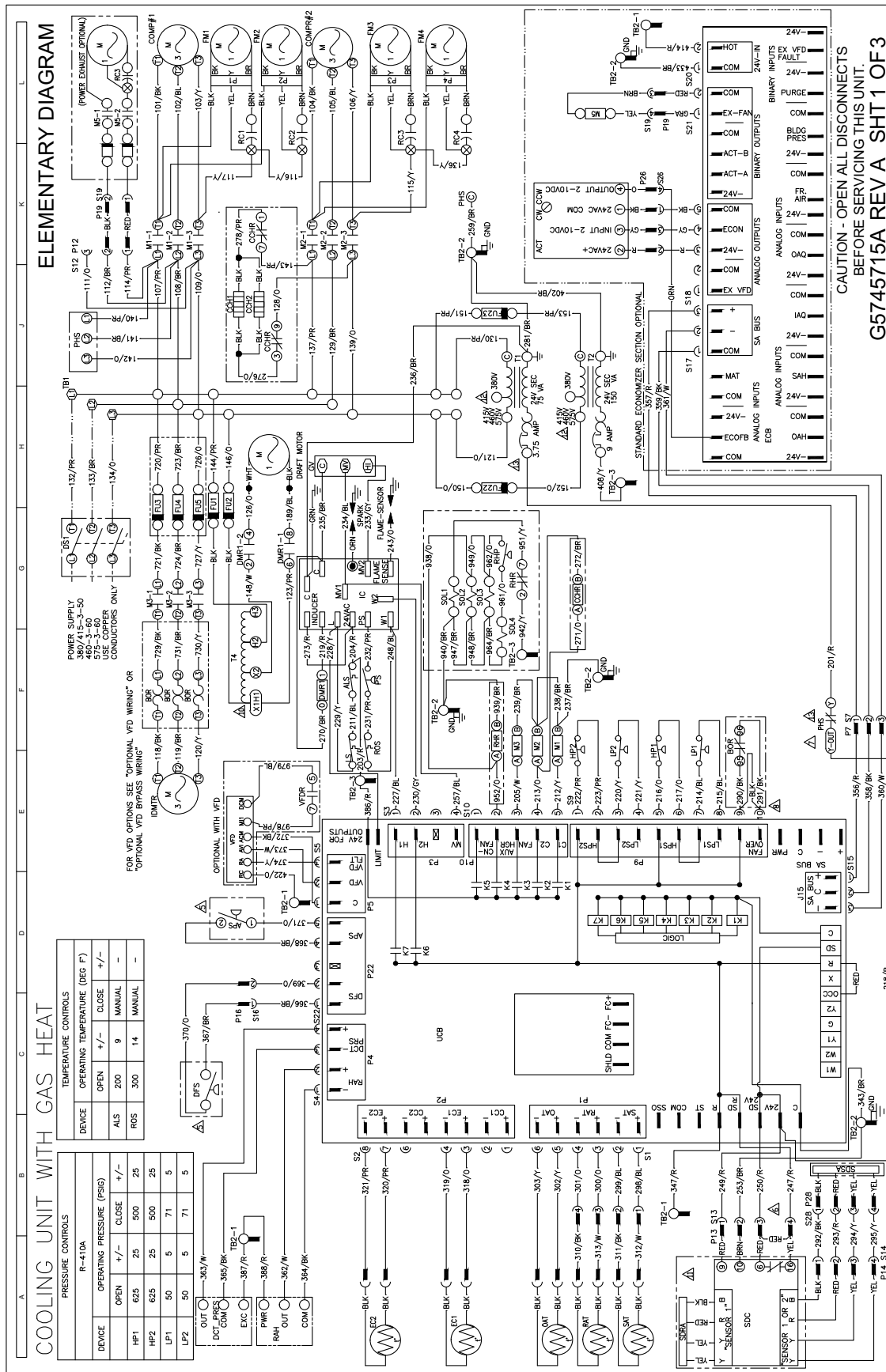
Typical ZH/ZJ/ZR150 Cooling Unit with Gas Heat 208/230 Volt Wiring Diagram



Typical ZH/ZJ/ZR150 Cooling Unit with Gas Heat 208/230 Volt Unit (Options)








Typical ZH/ZJ/ZR150 Cooling Unit with Gas Heat 460/575 Volt Wiring Diagram



COOLING UNIT WITH GAS HEAT

[illegible][illegible]

_____ FACTORY WIRING AND DEVICES
 _____ OPTIONAL WIRING AND DEVICES
 - - - - - FIELD WIRING AND DEVICES
 ⊗ IDENTIFIED TERMINAL ON RUN CAPACITOR

 WHEN VFD BYPASS IS INSTALLED MG-AUX REPLACES VFD* (SEE VFD BYPASS WIRING)
 FOR 415V OR 575V BLACK WIRE MOVES FROM H2 TO H3 ON T4.
 FOR SDSA ONLY: CONNECT P14 TO "SENSOR 1" ON SOC
 FOR SDSA & S2DA: CONNECT P14 TO "SENSOR 2" ON SOC
 & MAKE DIP SWITCH ON SOC TO 2 SENSORS
 T1 & T2 FACTORY WIRED FOR 415V, 480V OR 575V AS APPLICABLE.
 FOR 380V WIRE T1/T2 TO TERMINAL ON T11 AND 132/0 TO TERMINAL ON T2
 UNITS EQUIPPED WITH "ALC" BAS CONTROLS SYSTEM USE A T001A TRANSFORMER
 WITH 240V PRIMARY WIRING. THE TRANSFORMER RATIO (PHASE TO PHASE) IS 240V TO 208V. THE TRANSFORMER 11-24V TAP
 OPTION IS NOT PRESENT ON WIRING. MAKE 24V/0V TAP CONNECTION.
 *SEE "ALC" BAS CONTROLS DIAGRAM FOR DETAILED WIRE CONNECTIONS

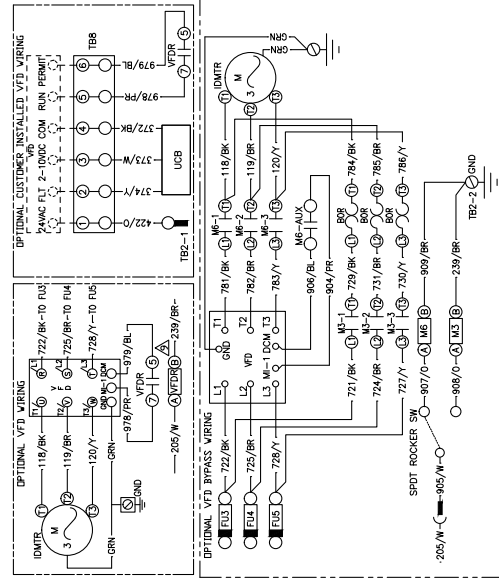
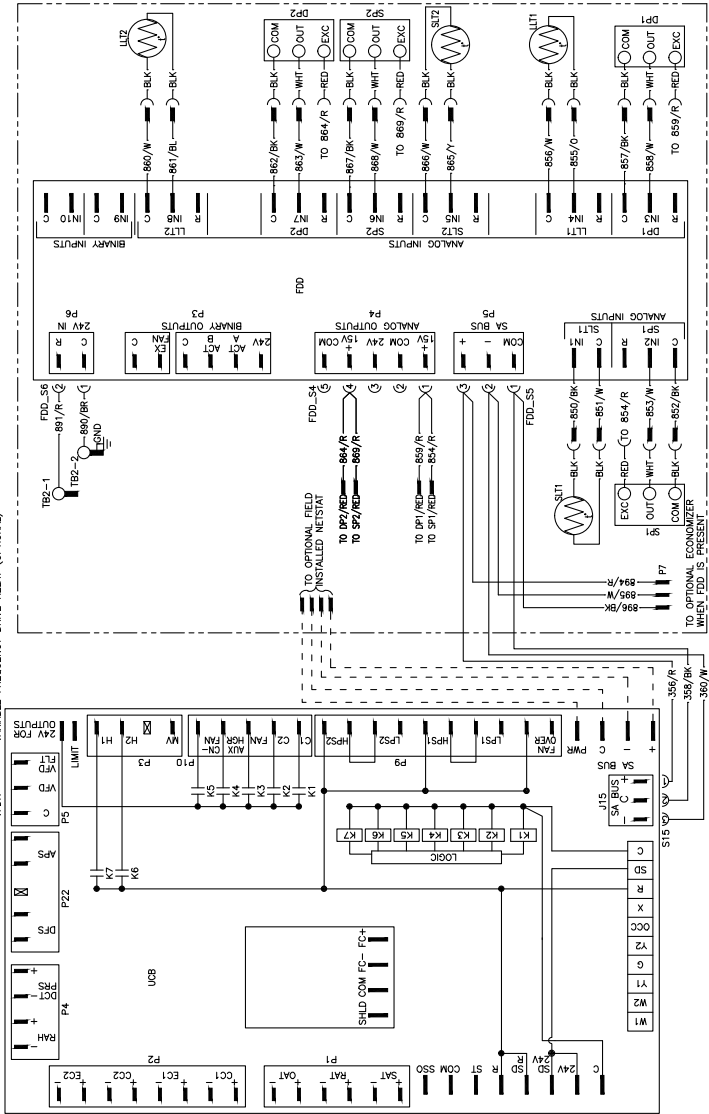
ELEMENTARY DIAGRAM

ALL FIELD WIRING TO BE ACCOMPLISHED FOLLOWING CITY, LOCAL AND/OR NATIONAL CODES IN EFFECT AT TIME OF INSTALLATION OF THIS UNIT.

1. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVING CONTROLS. WHEN REMOVING OR REPAIRING CONTROLS, THE EQUIPMENT MUST BE DE-ENERGIZED. THE WIRE SUPPLIED WITH THE UNIT MUST BE REMOVED IT MUST BE REPLACED WITH TYPE 105 DEGREE COLD CHLORINATED CABLE. THE EQUIVALENT CLEARLY REMARKED FOR IDENTIFICATION. VERIFY PROPER OPERATION AFTER SERVICING.
2. THREE PHASE MOTORS ARE INHERENTLY PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
3. SEE UNIT MANUFACTURER FOR MAXIMUM FUSE AND/OR CIRCUIT BREAKER SIZE AND MINIMUM CIRCUIT AMPACITY.
4. APS & DPS FACTORY SET FOR 0.2" W.C

IF SMOKE DETECTOR(S) IS (ARE) INSTALLED, REMOVE PLUG WITH RED JUMPER WIRE. TI-24V TERMINAL, SEE MONITOR IS NOT INSTALLED WIRE 218/R IS CONNECTED TO TRANSFORMER T1-24V TERMINAL. SEE NOTE 12 FOR "ALC" B3 OPTION.

REMOVE BLACK JUMPER WHEN B3 IS INSTALLED.

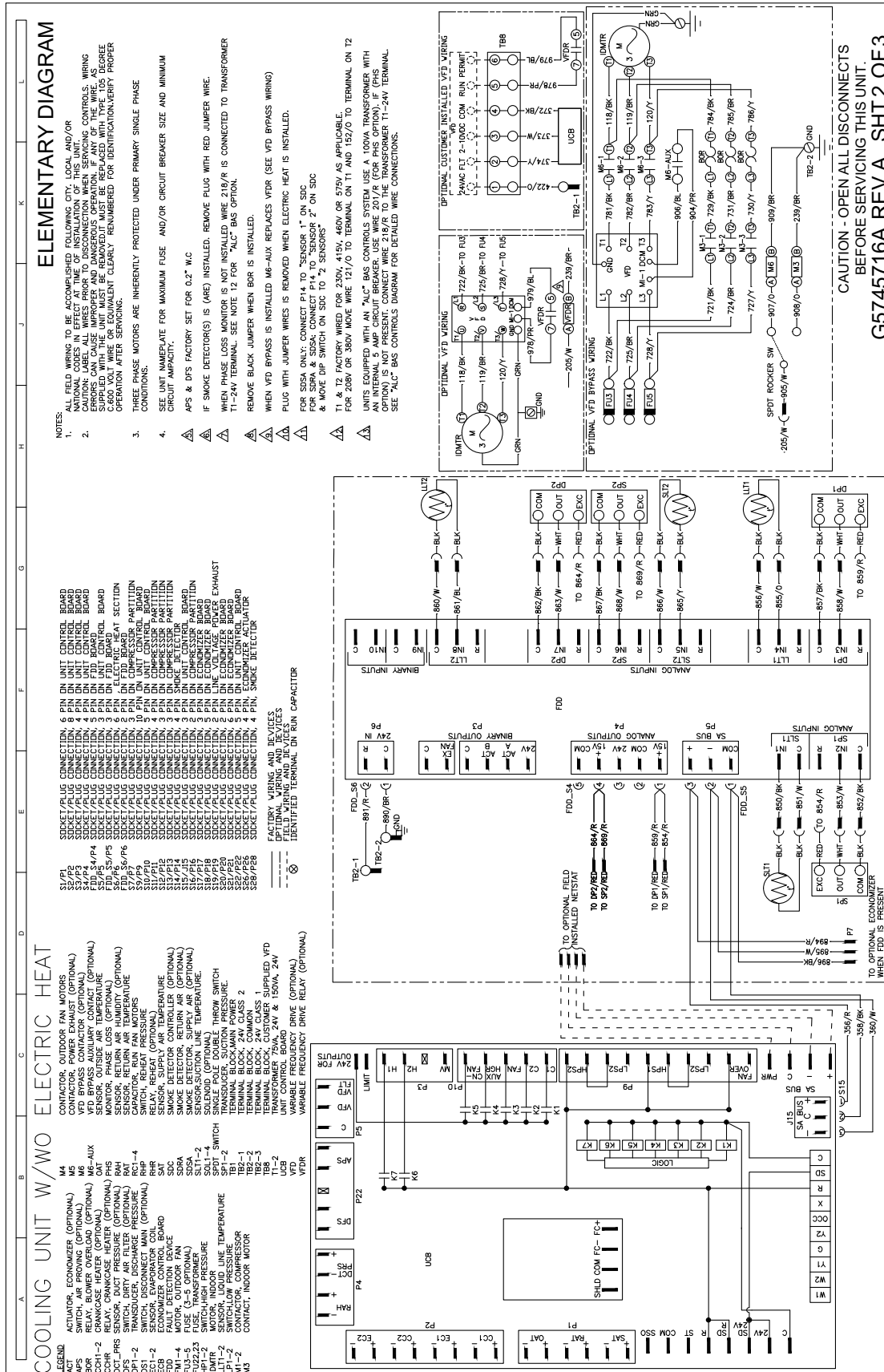


CAUTION - OPEN ALL DISCONNECTS
BEFORE SERVICING THIS UNIT.

G5745715A REV A SHT 2 OF 3

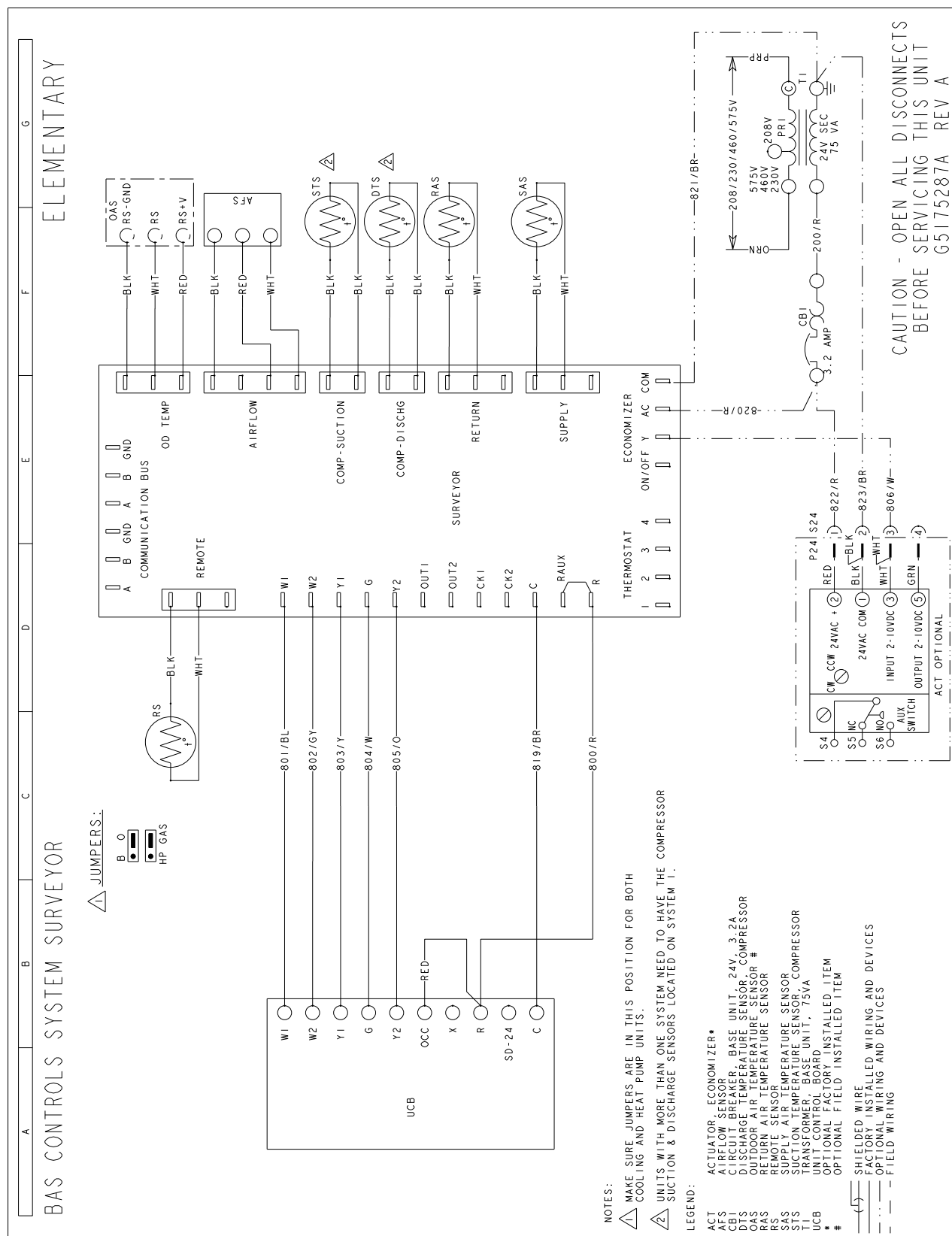


Typical ZH/ZJ/ZR150 Cooling Unit with/without Electric Heat Unit (Options)

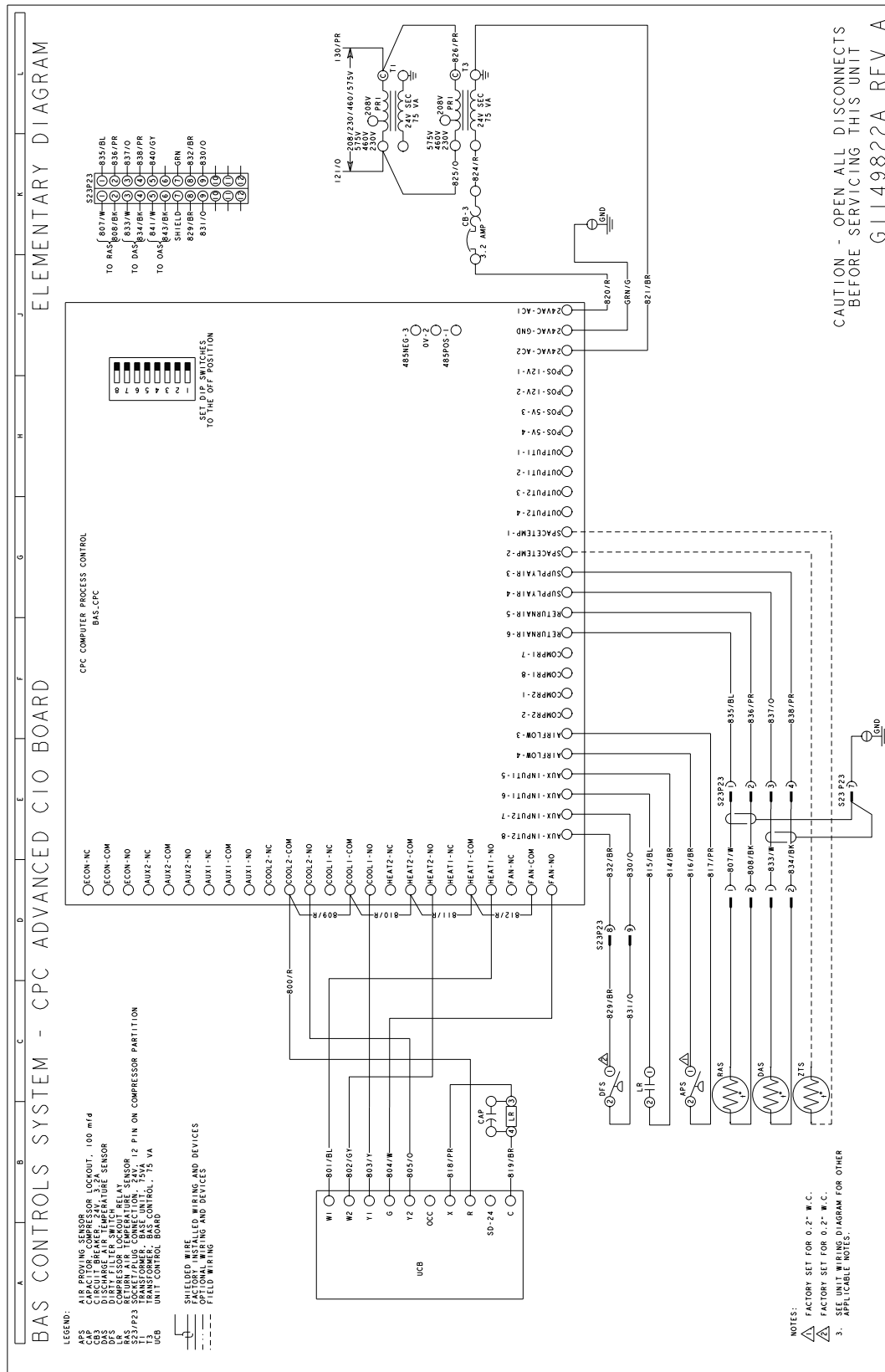


BAS Controls Typical Wiring Diagrams

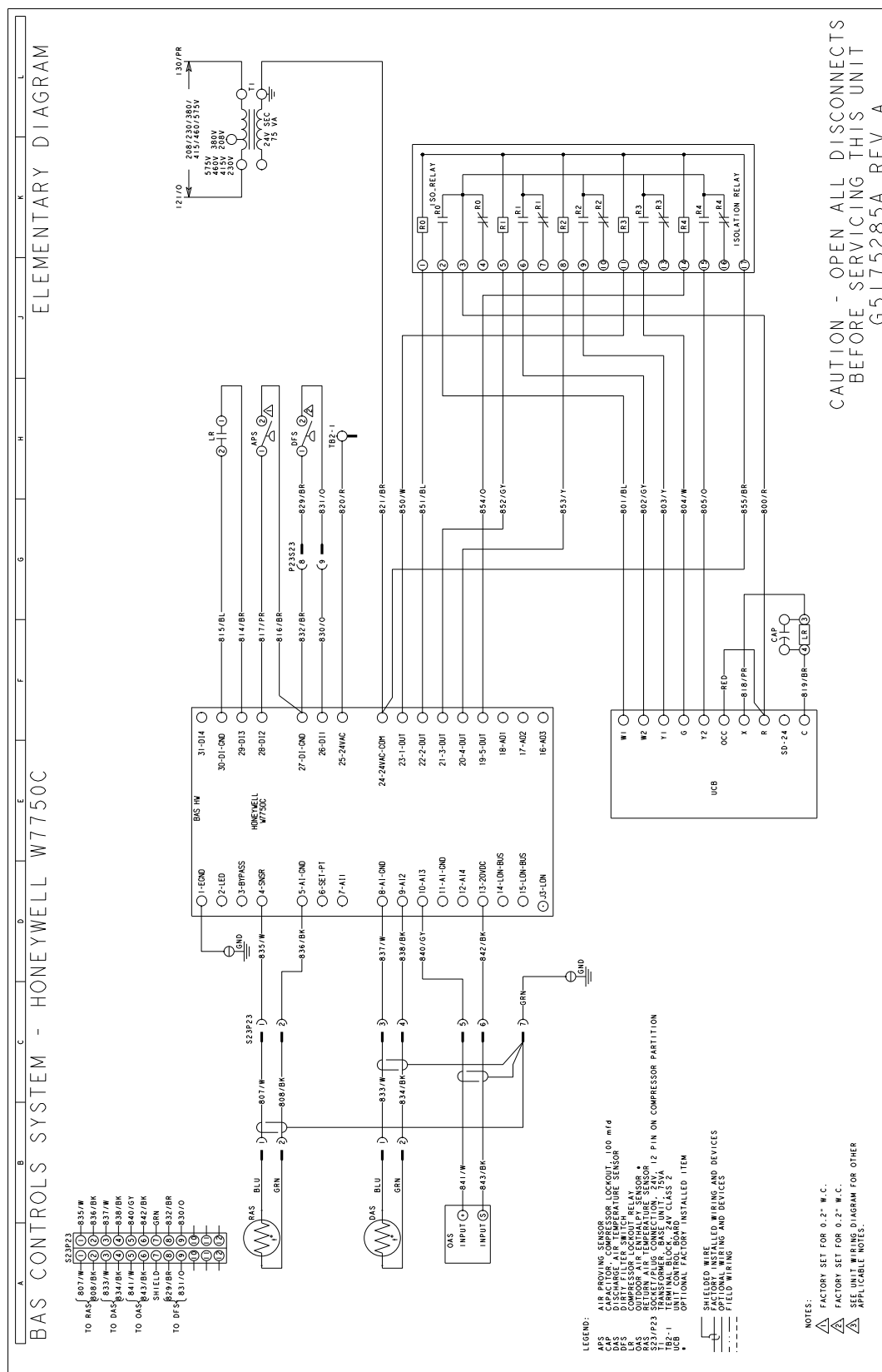
Typical SURVEYOR BAS Control Wiring Diagram



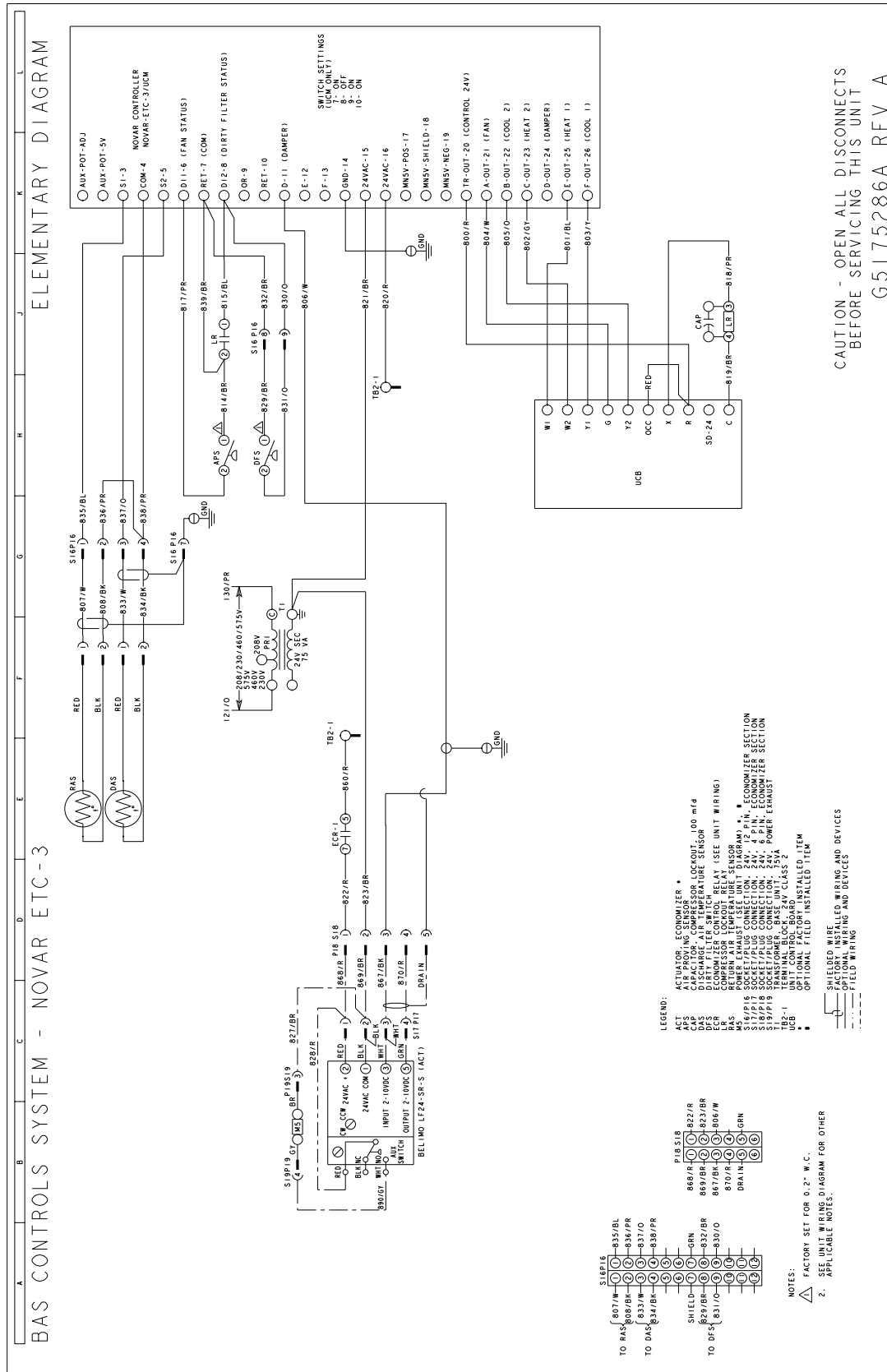
Typical CPC BAS Control Wiring Diagram



Typical HONEYWELL BAS Control Wiring Diagram



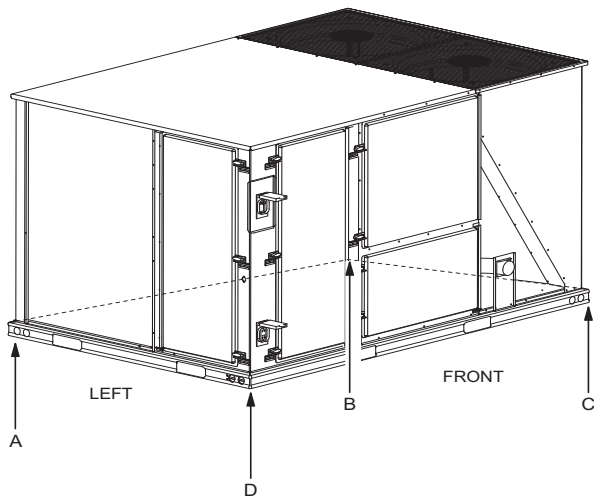
Typical NOVAR BAS Control Wiring Diagram



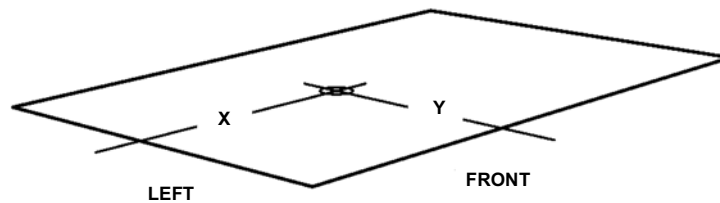
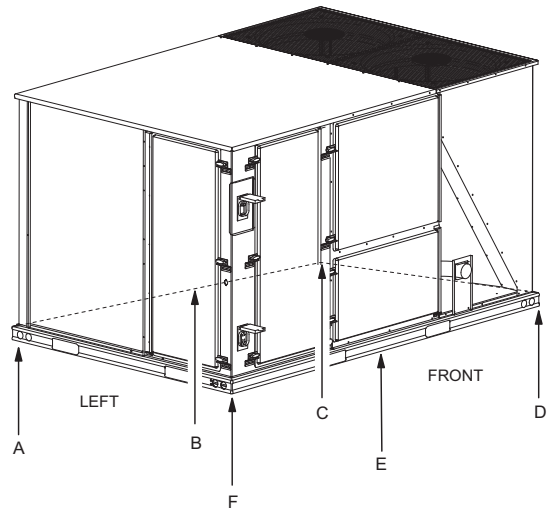
Weights and Dimensions

ZH/ZJ037-150 Unit Weights

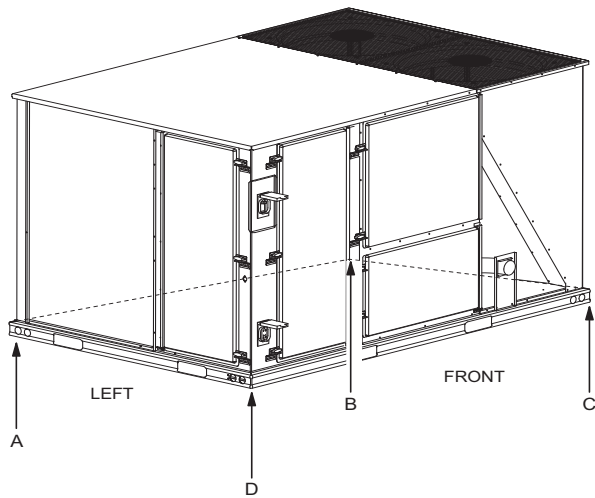
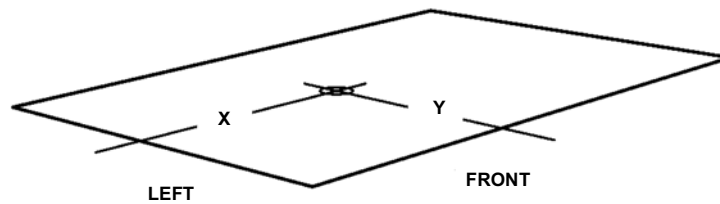
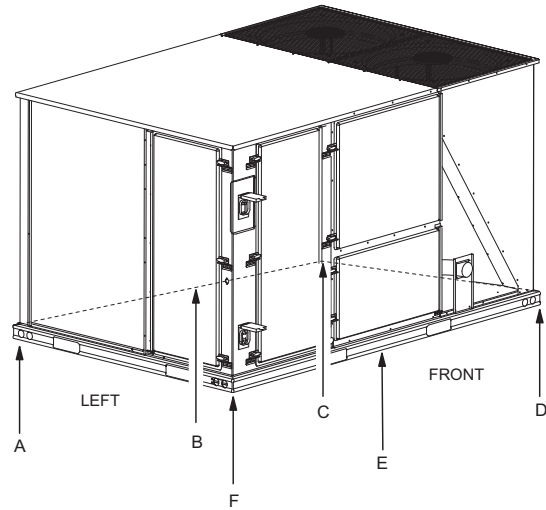
Unit 4 Point Load Weight



Unit 6 Point Load Weight



Size (Tons)	Model	Weight (lbs.)		Center of Gravity		4 Point Load Location (lbs.)				6 Point Load Location (lbs.)					
		Shipping	Operating	X	Y	A	B	C	D	A	B	C	D	E	F
037 (3)	ZH	706	701	47.25	24.00	134	151	221	195	87	95	103	150	138	127
049 (4)	ZH	753	748	48.25	25.34	147	174	231	195	95	106	119	159	141	127
061 (5)	ZH	860	855	47.25	24.75	168	190	264	233	110	119	130	179	165	152
078 (6.5)	ZH	916	911	47.25	24.00	174	197	287	254	114	123	134	195	180	166
090 (7.5)	ZH	900	895	48.25	25.34	176	208	277	234	114	127	143	190	169	152
102 (8.5)	ZH	1037	1032	47.25	24.75	203	230	318	281	133	144	156	216	199	184
120 (10)	ZH	1095	1090	45.00	25.50	233	238	313	306	155	157	159	209	206	203
150 (12.5)	ZH	1285	1280	49.75	24.50	234	297	418	330	150	175	206	290	246	212
037 (3)	ZJ	724	719	47.25	24.00	137	155	226	200	90	97	106	154	142	131
049 (4)	ZJ	753	748	48.25	25.34	147	174	231	195	95	106	119	159	141	127
061 (5)	ZJ	770	765	47.25	24.75	151	170	236	208	98	107	116	160	148	136
078 (6.5)	ZJ	1038	1033	47.25	24.00	197	223	325	287	129	140	152	221	204	188
090 (7.5)	ZJ	1040	1035	48.25	25.34	204	241	320	270	132	147	165	220	196	175
102 (8.5)	ZJ	1049	1044	47.25	24.75	205	233	322	284	134	145	158	219	201	186
120 (10)	ZJ	1075	1070	45.00	25.50	229	234	307	300	152	154	156	206	202	199
150 (12.5)	ZJ	1285	1280	49.75	24.50	234	297	418	330	150	175	206	290	246	212

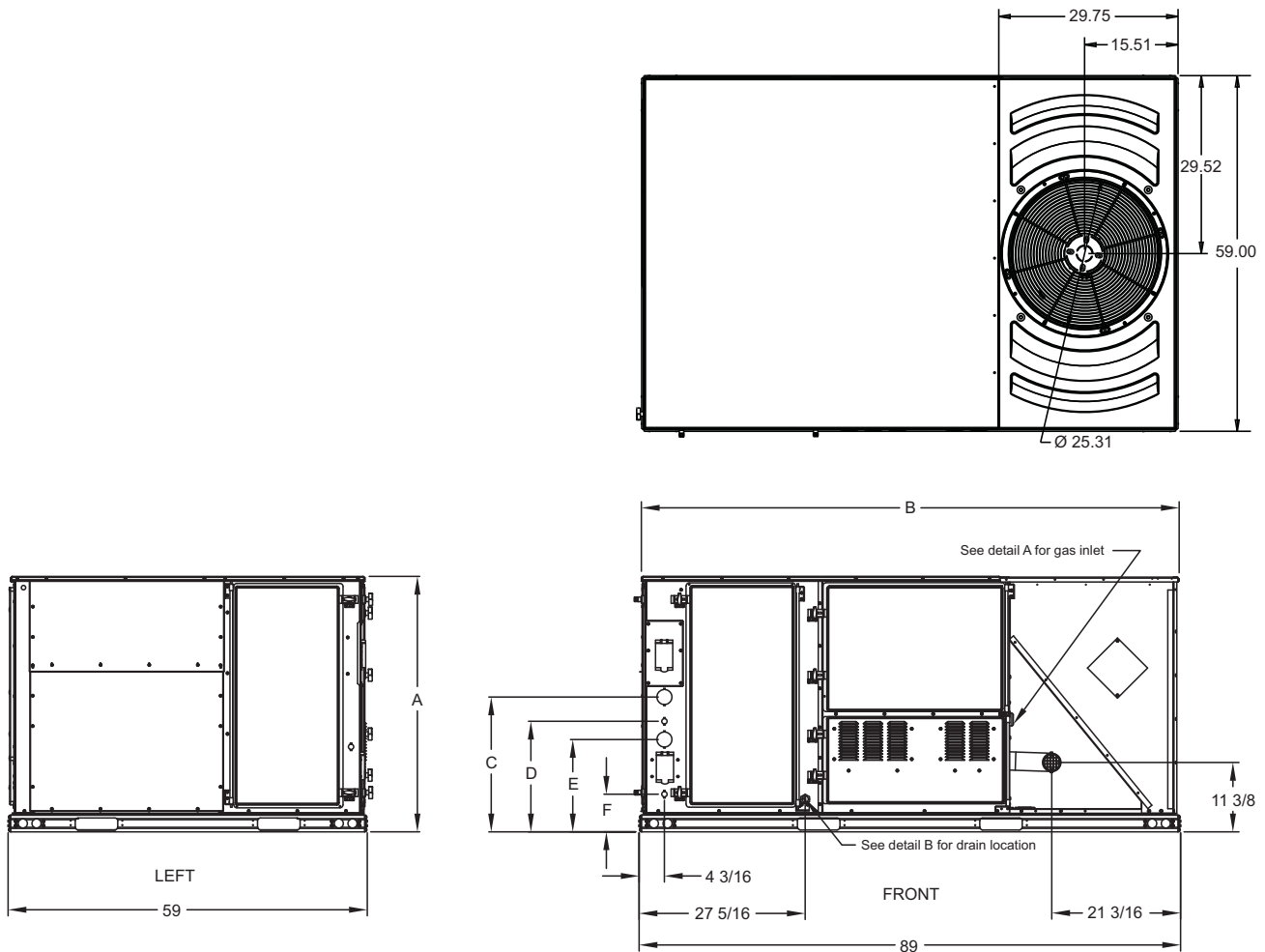
ZR037-150 Unit Weights**Unit 4 Point Load Weight****Unit 6 Point Load Weight**

Size (Tons)	Model	Weight (lbs.)		Center of Gravity		4 Point Load Location (lbs.)				6 Point Load Location (lbs.)					
		Shipping	Operating	X	Y	A	B	C	D	A	B	C	D	E	F
037 (3)	ZR	851	846	47.25	24.00	161	183	266	235	105	114	124	181	167	154
049 (4)	ZR	870	865	48.25	25.34	170	201	268	226	110	123	138	184	163	147
061 (5)	ZR	863	858	47.25	24.75	169	191	264	234	110	120	130	180	165	153
078 (6.5)	ZR	962	957	38	23	214	159	249	335	150	122	101	159	191	234
090 (7.5)	ZR	970	965	38	23	216	161	251	337	151	123	102	160	193	236
102 (8.5)	ZR	1205	1200	38	25.5	297	221	291	390	208	170	141	185	223	274
120 (10)	ZR	1205	1200	38	25.5	297	221	291	390	208	170	141	185	223	274
150 (12.5)	ZR	1470	1465	51	25.5	270	363	477	355	172	207	254	334	272	226

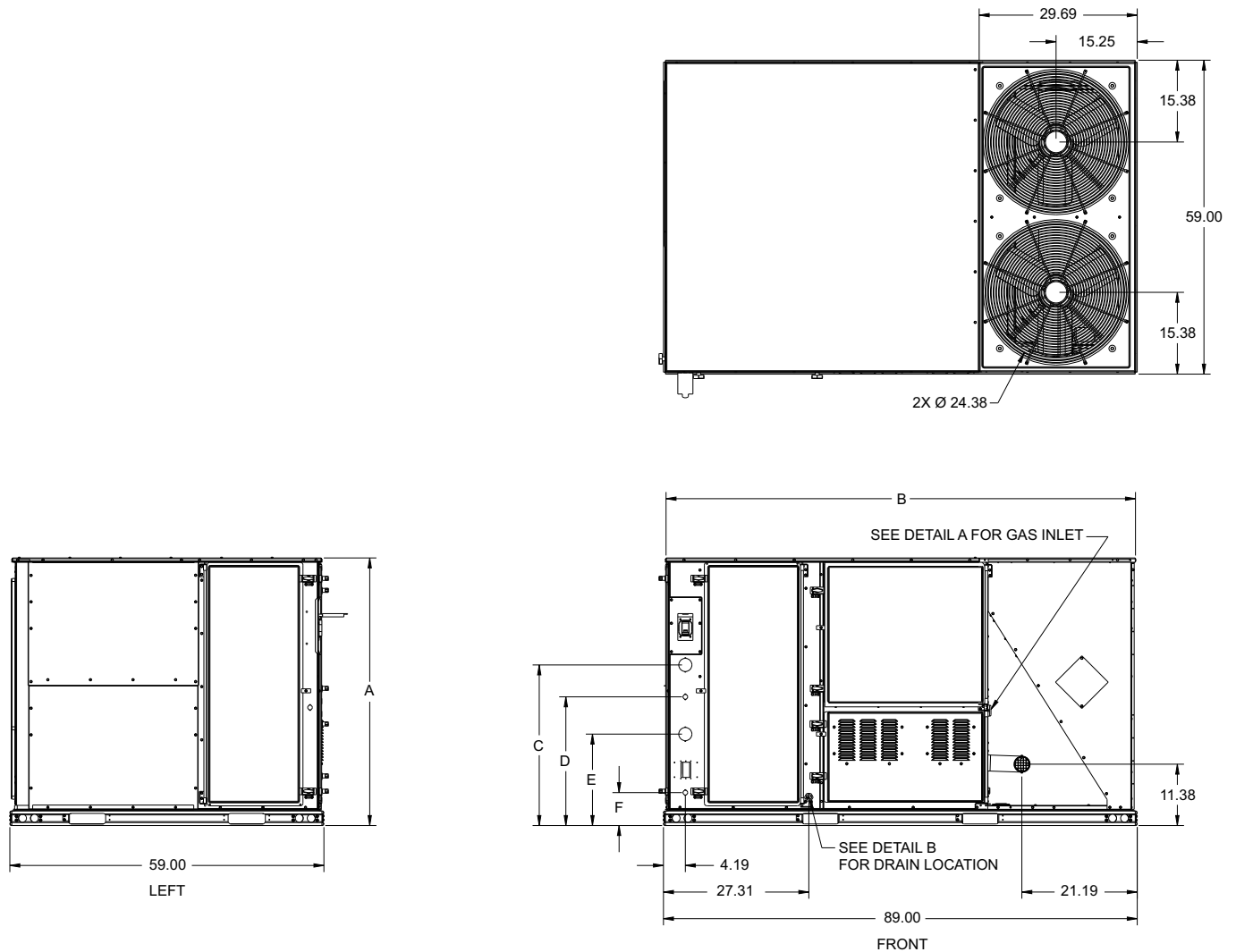
ZH/ZJ/ZR037-150 Unit Accessory Weights

Unit Accessory	Weight (lbs.)	
	Shipping	Operating
Economizer	90	85
Power Exhaust	40	35
Electric Heat ¹	49	49
Gas Heat ²	110	110
Variable Frequency Drive ³	30	30

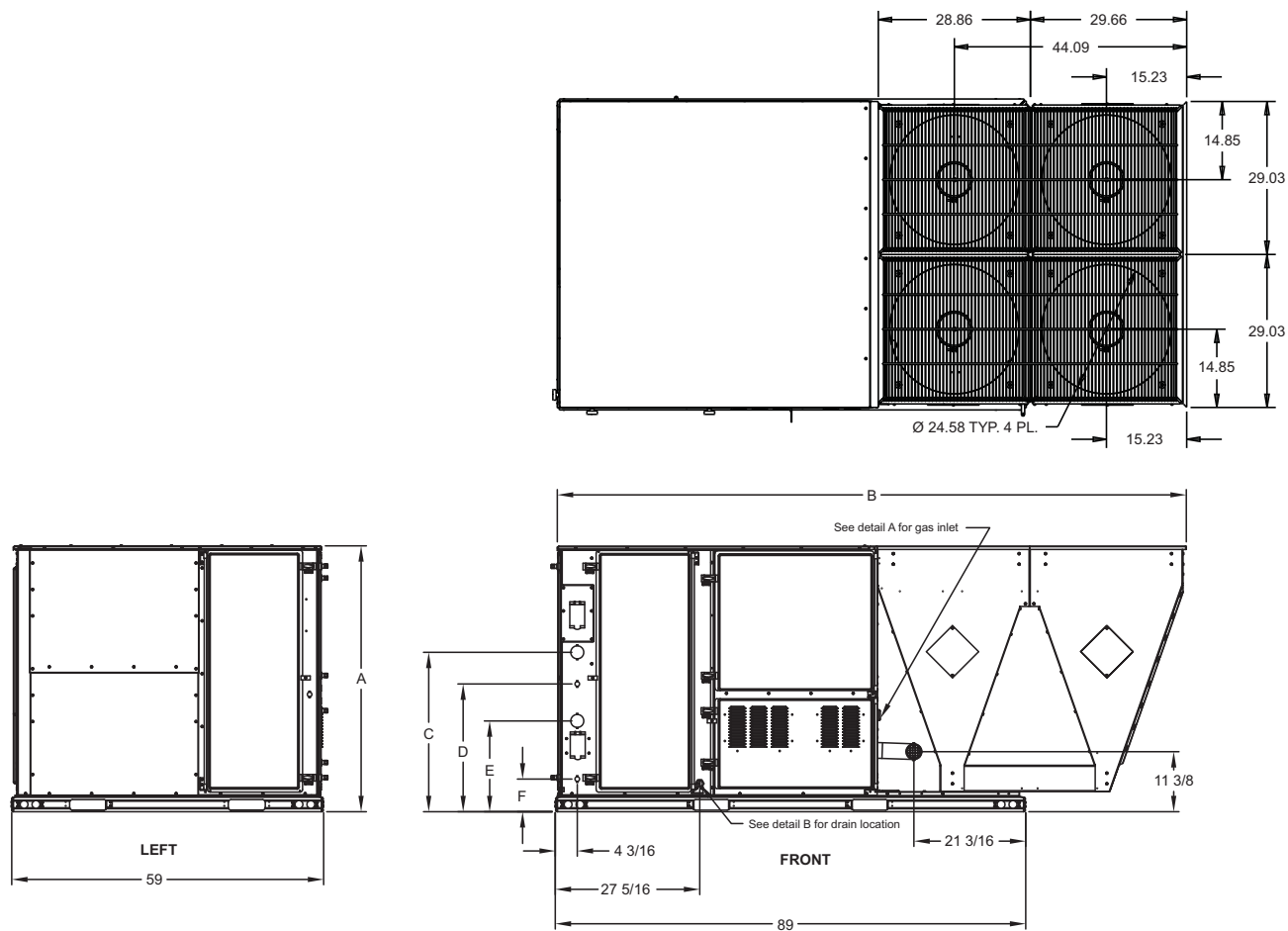
1. Weight given is for the maximum heater size available (54KW).
2. Weight given is for the maximum number of tube heat exchangers available (8 tube).
3. Weight includes mounting hardware, controls and manual bypass option (6-1/2 to 12-1/2 ton only).

ZH/ZJ/ZR037-150 Unit Dimensions**ZH/ZJ037-049 and ZR037**

ZH/ZJ 061, ZR049 - 061 and ZH/ZJ/ZR078 thru 120

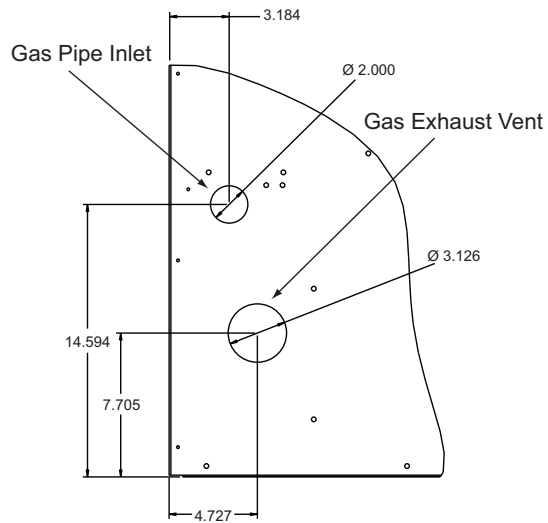
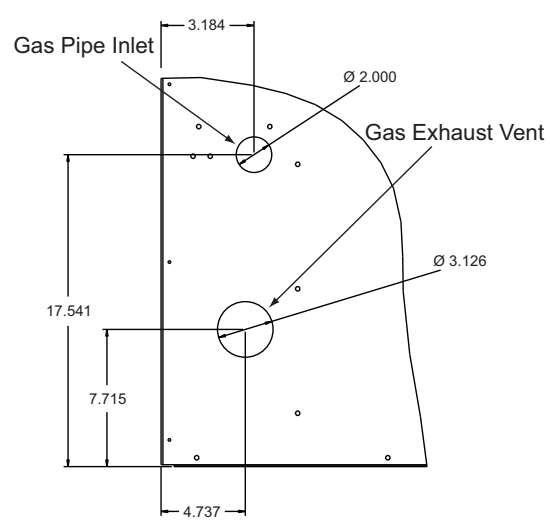
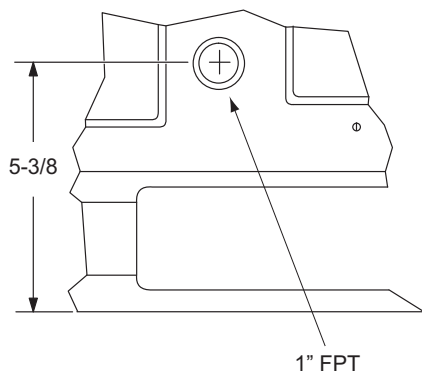


ZH/ZJ/ZR150



ZH/ZJ/ZR037-150 Unit Physical Dimensions

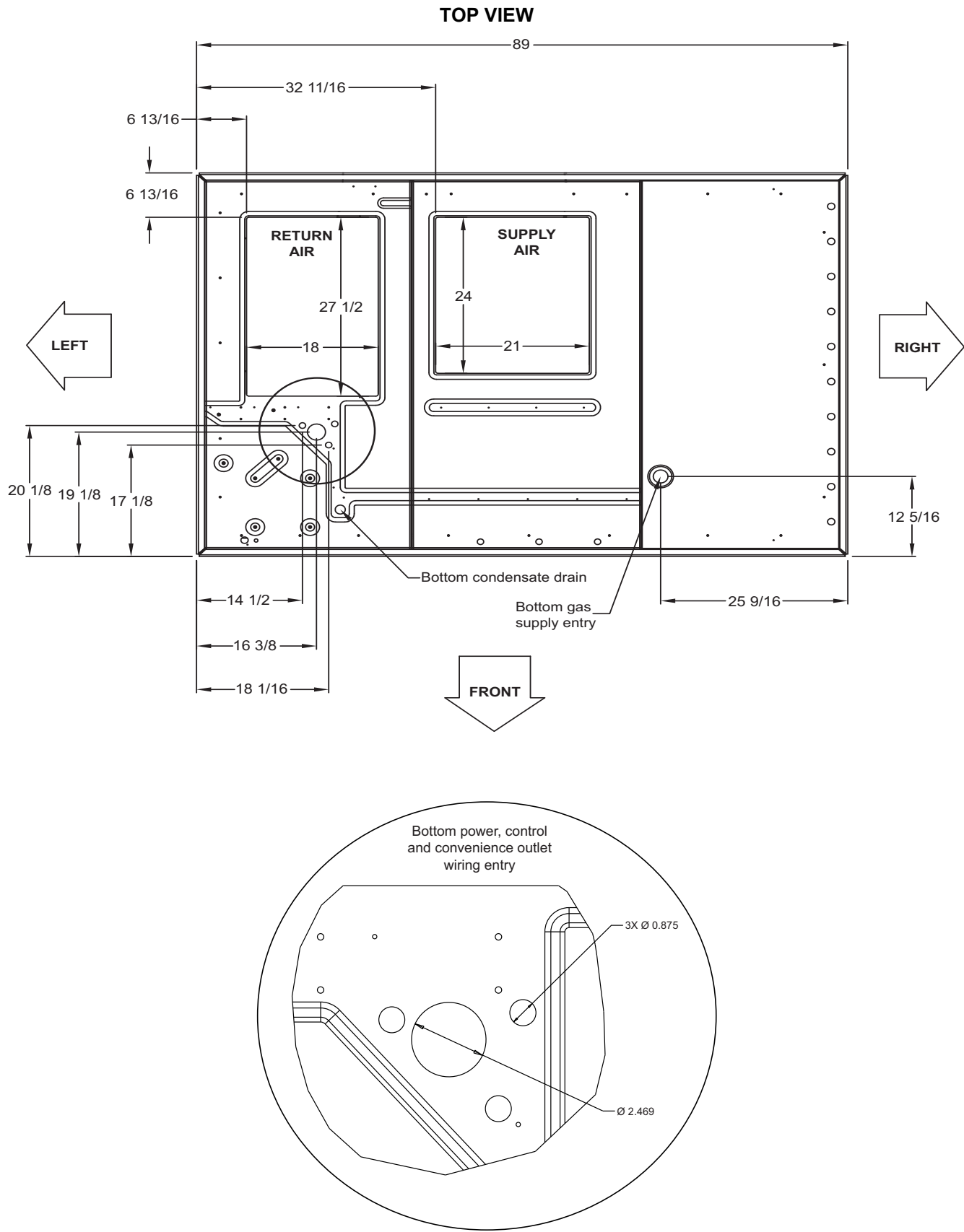
Unit Model Number	Dimension (in.)					
	A	B	C	D	E	F
ZH037, 049, 061, 078, 090	42	89	22 1/8	18 3/16	15 3/16	6 3/16
ZH102, 120	50 3/4	89	30 3/16	24 3/16	17 3/16	6 3/16
ZH150	50 3/4	119 1/2	30 3/16	24 3/16	17 3/16	6 3/16
ZJ037, 049, 061	42	89	22 1/8	18 3/16	15 3/16	6 3/16
ZJ078, 090, 102, 120	50 3/4	89	30 3/16	24 3/16	17 3/16	6 3/16
ZJ150	50 3/4	119 1/2	30 3/16	24 3/16	17 3/16	6 3/16
ZR037, 049, 061	42	89	22 1/8	18 3/16	15 3/16	6 3/16
ZR078, 090	42	89	22 1/8	18 3/16	15 3/16	6 3/16
ZR102, 120	50 3/4	89	30 3/16	24 3/16	17 3/16	6 3/16
ZR150	50 3/4	119 1/2	30 3/16	24 3/16	17 3/16	6 3/16

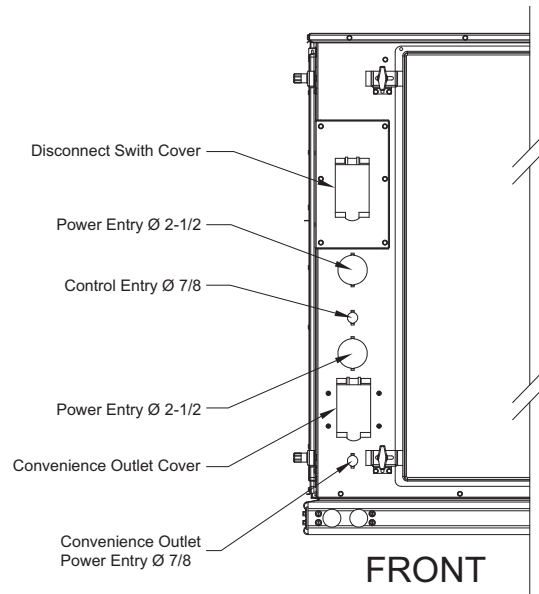
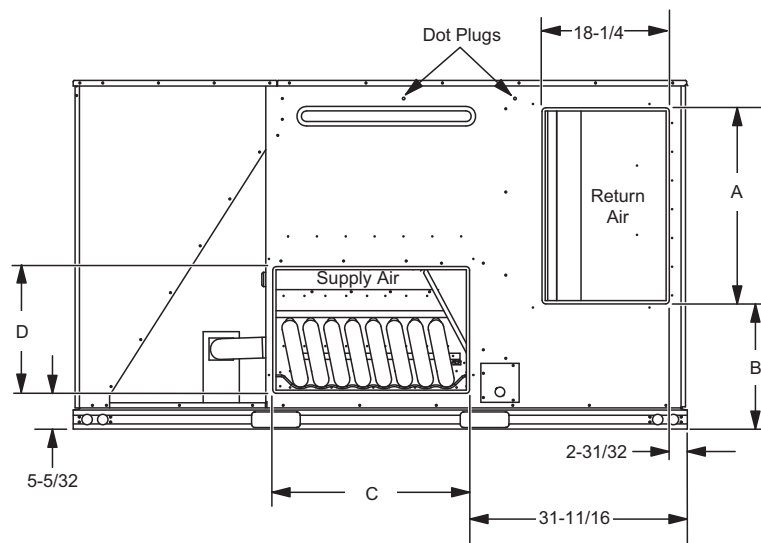
Detail A**42" CABINET****50 3/4" CABINET****Detail B****ZH/ZJ/ZR037-150 Unit Clearances**

Direction	Distance (in.)	Direction	Distance (in.)
Top ¹	72	Right	12
Front	36	Left	36
Rear	36	Bottom ²	0

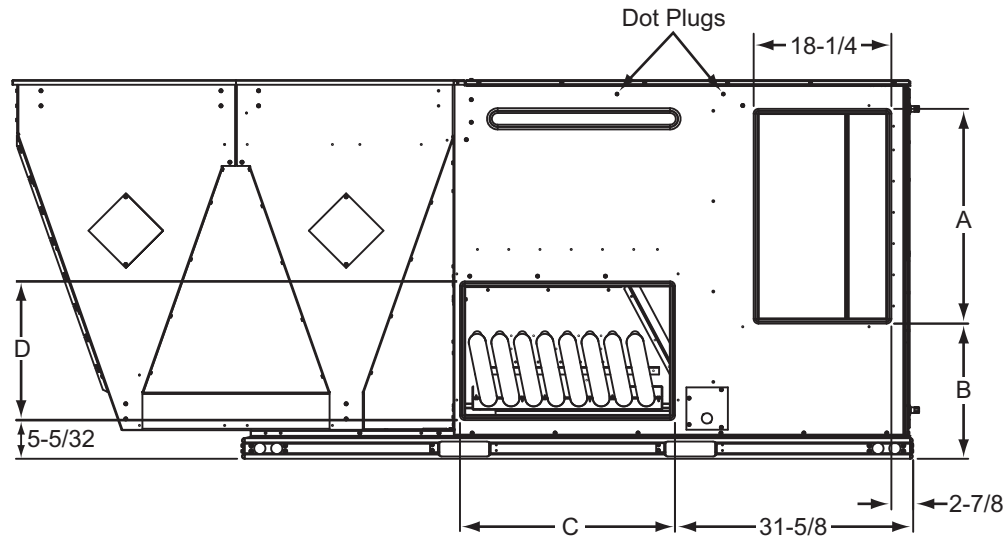
1. Units must be installed outdoors. Over hanging structure or shrubs should not obscure condenser air discharge outlet.
2. Units may be installed on combustible floors made from wood or class A, B or C roof covering materials.

ZH/ZJ/ZR037-150 Unit Bottom Duct Openings



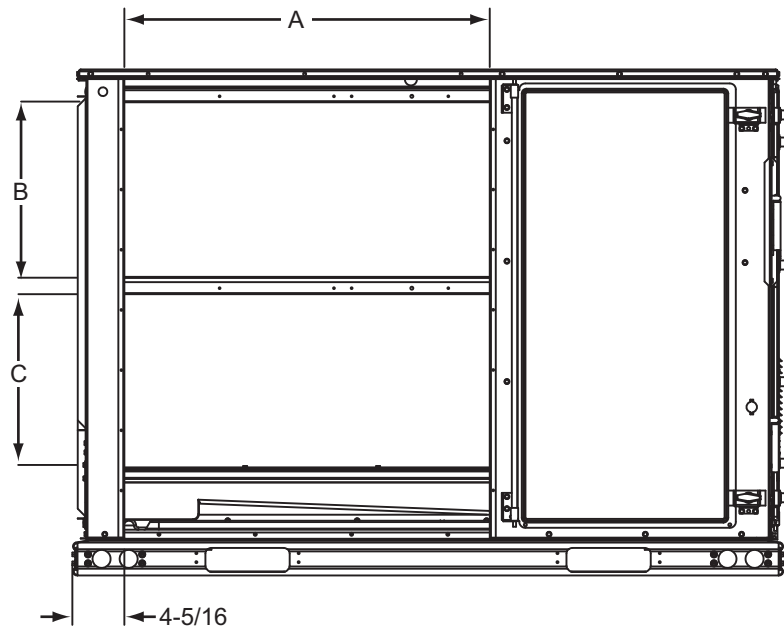
ZH/ZJ/ZR037-150 Unit Electrical Entry**ZH/ZJ/ZR037-120 Unit Side Duct Openings**

ZH/ZJ/ZR150 Unit Side Duct Openings



ZH/ZJ/ZR037-150 Side Duct Dimensions

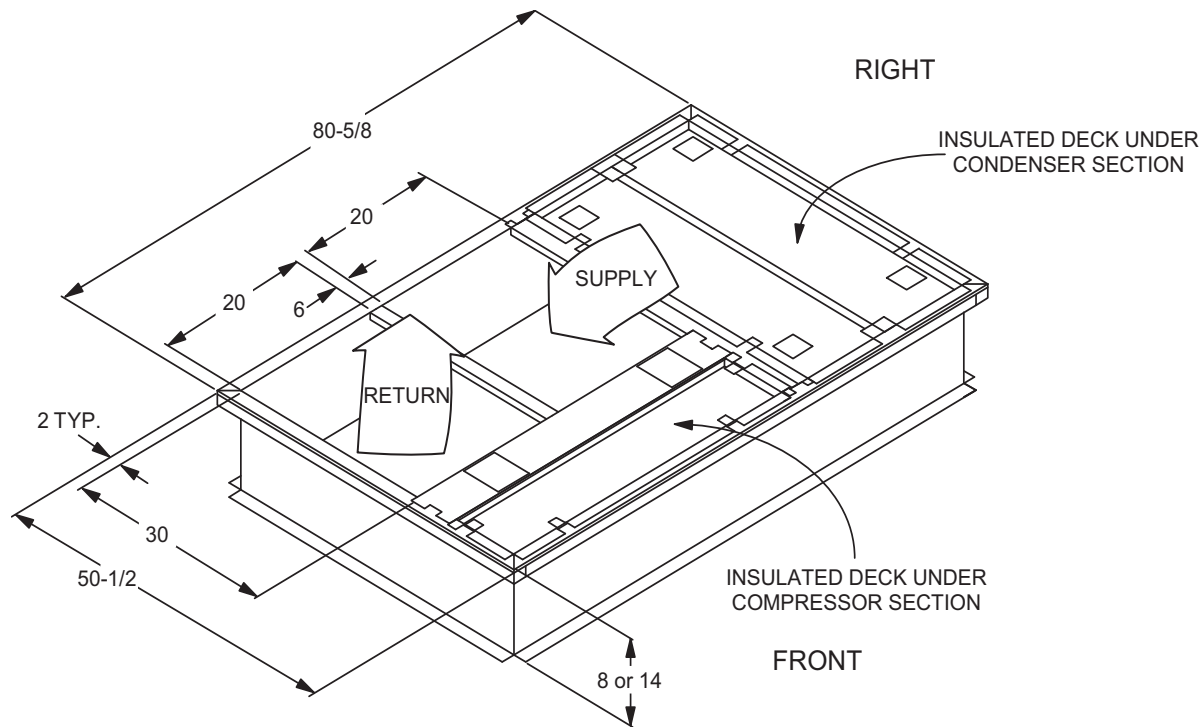
Unit Model Number	Dimension (in.)			
	A	B	C	D
ZH037, 049, 061, 078, 090	27 3/4	12 1/16	27 1/2	16
ZH102, 120	28 1/4	18 1/16	28 1/4	18 1/4
ZH150	28 1/4	18 1/16	28 1/4	18 1/4
ZJ037, 049, 061	27 3/4	12 1/16	27 1/2	16
ZJ078, 090, 102, 120	28 1/4	18 1/16	28 1/4	18 1/4
ZJ150	28 1/4	18 1/16	28 1/4	18 1/4
ZR037, 049, 061	27 3/4	12 1/16	27 1/2	16
ZR078, 090	27 3/4	12 1/16	27 1/2	16
ZR102, 120	28 1/4	18 1/16	28 1/4	18 1/4
ZR150	28 1/4	18 1/16	28 1/4	18 1/4

ZH/ZJ/ZR037-150 Unit Left/End Duct Opening**ZH/ZJ/ZR037-150 Left/End Duct Dimensions**

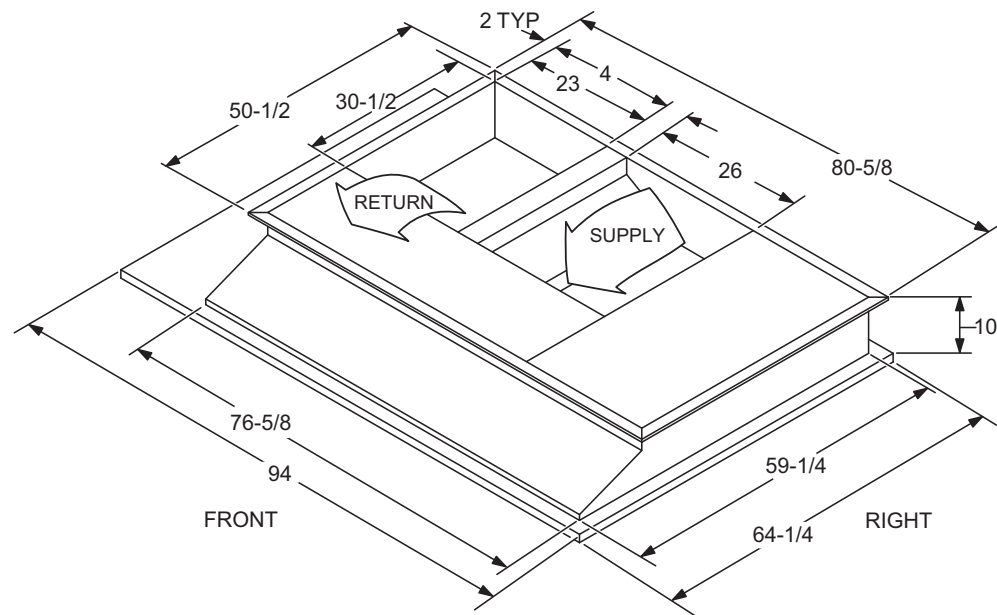
Unit Model Number	Dimension (in.)		
	A	B	C
ZH037, 049, 061, 078, 090	30.357	13.365	22.516
ZH102, 120	30.358	22.580	22.330
ZH150	30.358	22.580	22.330
ZJ037, 049, 061	30.357	13.365	22.516
ZJ078, 090, 102, 120	30.358	22.580	22.330
ZJ150	30.358	22.580	22.330
ZR037, 049, 061	30.357	13.365	22.516
ZR078, 090	30.357	13.365	22.516
ZR102, 120	30.358	22.580	22.330
ZR150	30.358	22.580	22.330

ZH/ZJ/ZR037-150 Unit Accessory Dimensions

ZH/ZJ/ZR037-150 Roof Curb



ZH/ZJ/ZR037-150 Transition Roof Curb



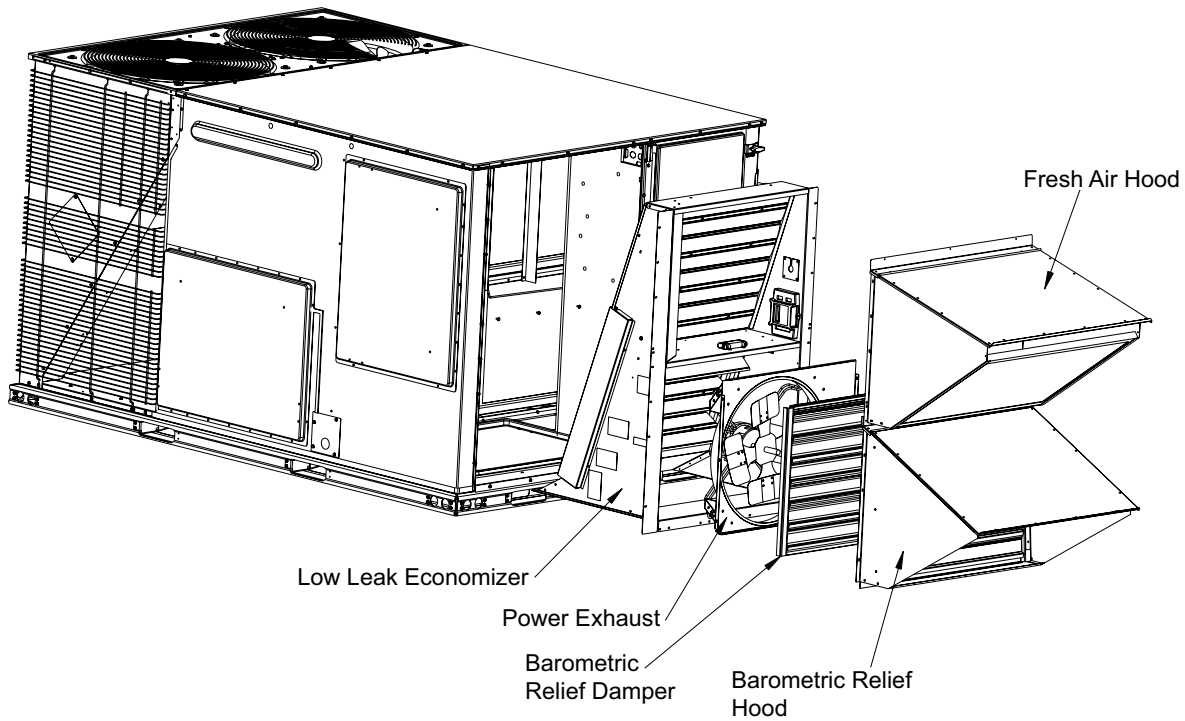
Economizer Options

Economizer Usage

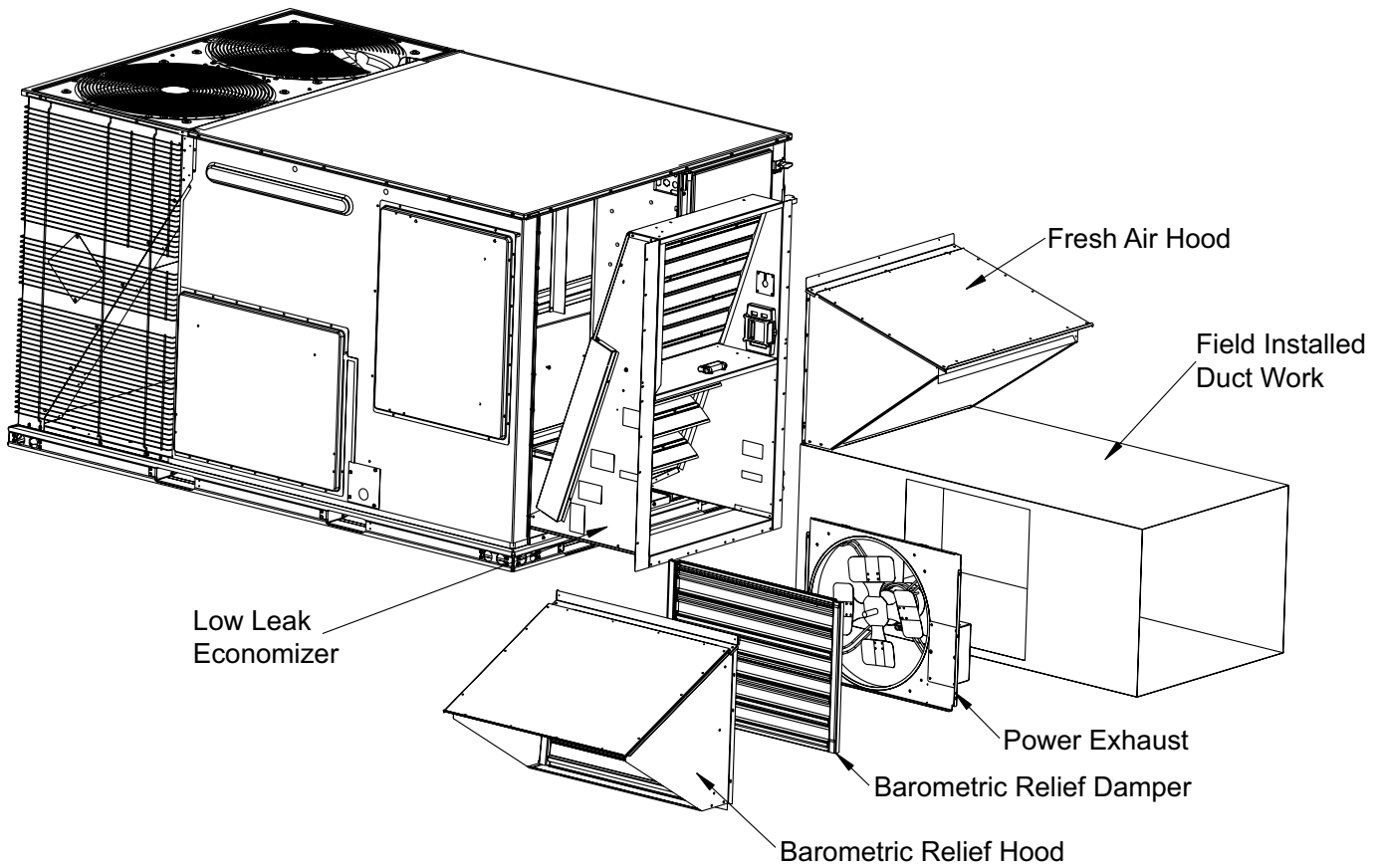
Application	Cabinet Height	Description	Model
Side Return	All	Horizontal economizer without barometric relief	2EE04706924 ¹
Downflow, End Return	42"	Economizer, 42" tall cabinet	2EE04717424 ²
Horizontal or ERV	50"	Economizer, 50" tall cabinet	2EE04717624 ²

1. Barometric relief must be ordered separately and installed in duct work.
2. Includes fresh air hood, exhaust hood and barometric relief.

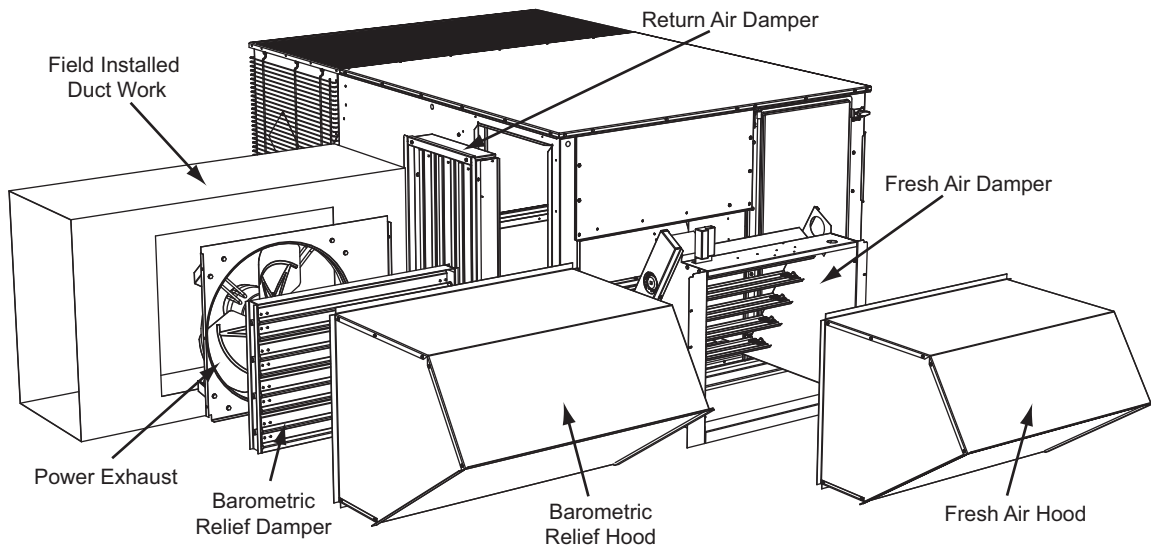
Economizer Downflow W/Power Exhaust



Economizer End Return W/Power Exhaust



Field Installed Horizontal Economizer W/Power Exhaust



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