



TECHNICAL GUIDE

ZX/ZY/ZQ/ZL SERIES

3 - 12.5 TON

60 HERTZ



Table of Contents

Table of Contents	2
Component Location	3
Factory Installed Options	7
Field Installed Accessories	8
Nomenclature	10
AHRI Cooling Rating Table	14
AHRI 270 Outdoor Sound Power Levels	15
Physical Data	16
Capacity Performance	57
Airflow Performance	106
Power Exhaust Blower Curves	130
Electrical Data	131
Typical Wiring Diagrams	193
Weights and Dimensions	235
Economizer Options	245
Guide Specifications	248

Product Highlights

- Assembled in Norman, OK
- ASHRAE 90.1 Compliant
- R-410A Refrigerant
- Cooling Only and Gas/Electric configurations available
- Scroll Compressors
- Up to 16.3 IEER and 12.2 EER on the 3 stage cooling advanced building code compliant level.
- Up to 15.4 SEER and 12.2 EER on the Energy Star Compliant Energy Level
- Up to 14.0 SEER and 11.2 EER on the ASHRAE 90.1 Compliant Standard Efficiency Level
- DOE (Department of Energy) Complaint - All models meet minimum DOE efficiencies for cooling and fan efficiencies. Single phase gas heating products are fan energy rated (FER) to meet DOE requirements.
- State of the art Microprocessor Controls with specific programming for product applications
- MicroChannel Condenser Coils
- Evaporator coils utilize copper tube/aluminum fin design for proven reliability and performance.
- TXV (Thermostatic Expansion Valve) Standard on: ASHRAE 90.1 Compliant Standard Efficiency Level 5 - 12.5 ton models, Energy Star Compliant Efficiency Level 3 - 10 ton models and advanced building code compliant efficiency level 7.5-12.5 ton models.
- Single-stage Cooling (3 -6 ton models)
- Two-stage Cooling (6 - 12.5 ton models)
- Three-stage Cooling available (7.5-12.5 ton models)
- Alternate Motor and Drives

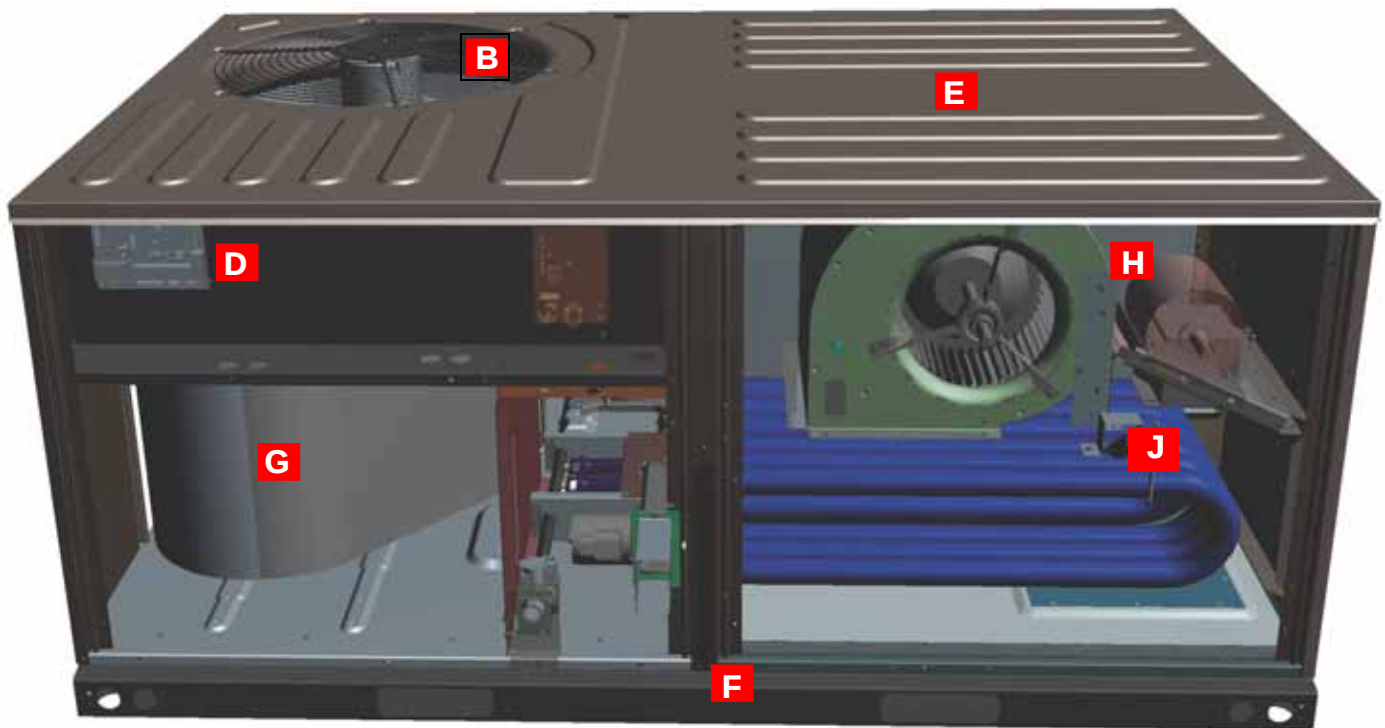
NOTE: All single phase 3-5 ton gas heating units are equipped with an ECM motor on direct drive units.

Options and Accessories

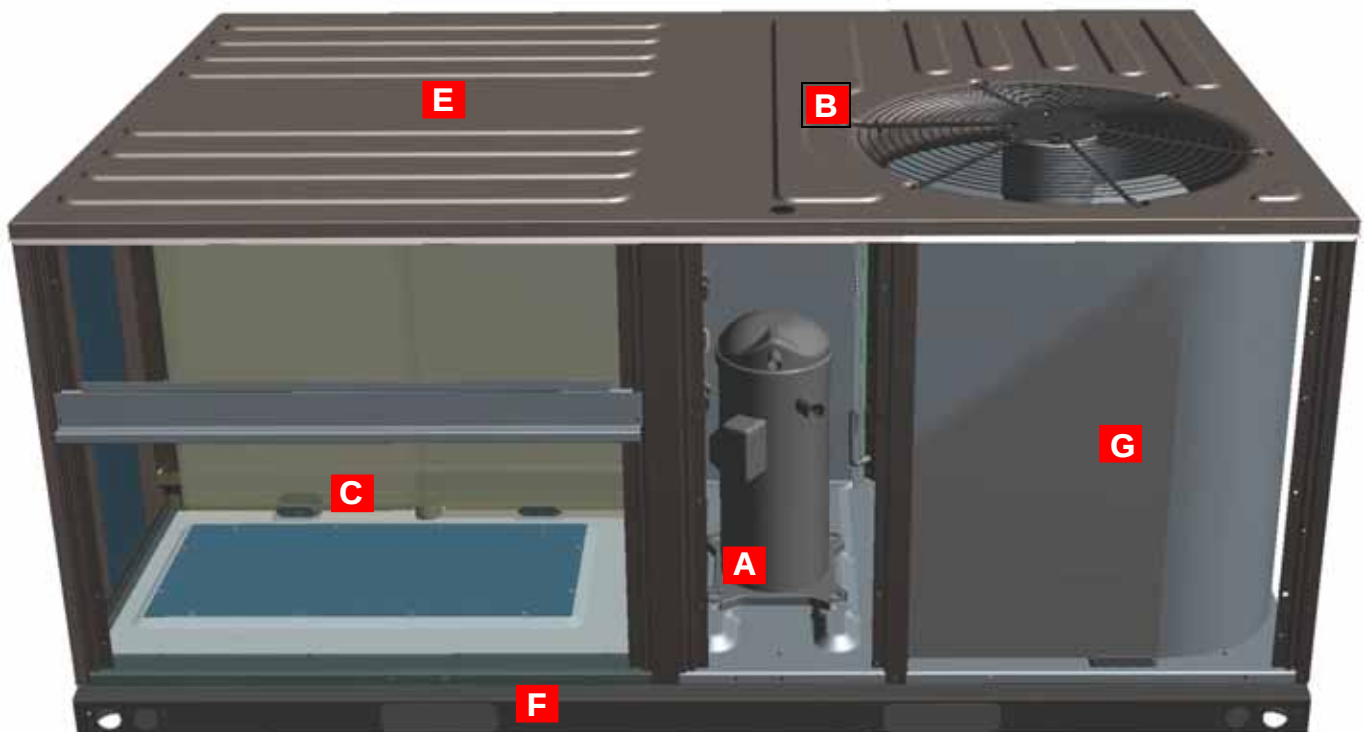
- Economizers with Barometric Relief
- Louvered Hail Guards
- Non-fused Disconnect (Verify on the unit nameplate that the disconnect is properly sized for the application. Units with field installed electric heat may exceed the factory installed disconnect amperage rating.)
- Power Exhaust
- Propane Conversion Kits
- High Altitude Heating Conversion Kits
- Flue Exhaust Extension Kit
- Flue Heat Shield
- Smoke Detectors
- Manual and Motorized Dampers
- Hinged Cabinet Doors
- Low Ambient Head Pressure Control Kit.
- Optional Stainless Steel Heat Exchanger (Standard on 3-5 Ton Low-NOx Models)
- Thru-The-Base Connections for power, gas and control wiring.
- IntelliSpeed™ with Premium Efficiency indoor motors to meet ASHRAE 90.1 requirements (6-12.5 ton models)
- Field Installed Electric Heat Kit, Installation Instructions for the Electric Heat Kits may be found in the Electric Heat Kits.

Component Location

Cooling With Gas Heat (3 Through 5 Ton)



Click on the letters to see a description of the features.



Features and Benefits

Two Tiers of Efficiency - 14 SEER standard efficiency provides a cost effective 14 SEER/11.0 EER product that meets ASHRAE 90.1 requirements. The High-efficiency meets the requirements for Energy Star that exceeds 15 SEER and 12 EER. The high efficiency 3-stage cooling units are available from 7.5 to 12.5 tons to meet advanced building code requirements. Gas/electric units have electronic spark ignition and power vented combustion steady state efficiencies of 80%. These efficiencies meet or exceed all legislated minimum levels providing lower operating costs.



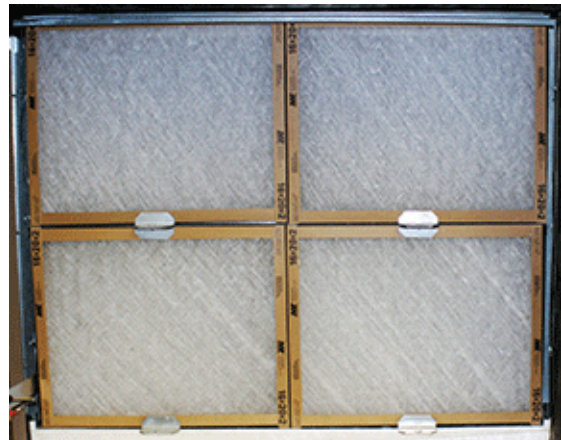
A All models utilize scroll compressors that are environmentally friendly by utilizing R-410A refrigerant. Use of the scroll compressor technology means a simple internal design, fewer moving parts, equating to a quiet, reliable, easy to service and efficient system. Internal compressor protection is standard and compressors include protection to prevent liquid damage.

Total system design - A TXV is used for precise metering on the 6-12.5 Ton products and a fixed orifice is used to keep the cost of the product down on the 3-5 ton product. Two independent refrigerant circuits and compressors are used on the 7.5- 12.5 ton units for economical and precise control. A single circuit, single compressor design is used on the 3-6 ton units for cost effectiveness and reliability without compromising quality.

System Protection - Liquid line filter-driers, high and low pressure safeties are standard on each independent refrigerant circuit. Suction line sensors monitor temperature to prevent possible liquid flood back to the compressors and also protect against loss of charge and coil frosting.



B Balanced outdoor fan design makes for a quieter unit - The outdoor condenser fans are dynamically balanced for better performance and reliability. The direct drive fan design mounted to the fan grill allows for quick and easy service. Where other's components might fail at extreme temperatures Our units are tested and rated up to 125°F ambient cooling operation.



C Convertible Filter Rack - No tools required for easy field conversion of the filter rack to accommodate either 2" or 4" filters. Units will ship with MERV 4 throwaway filters standard; however MERV 8 and MERV 13 filters can be easily added through the tool-free filter access panel to meet LEED requirements. Refer to physical data tables for filter size details.



D Units will come with the state of the art **Smart Equipment™ control system**. The unit control incorporates the best of the already proven Smart Equipment™ controls and creates a more robust, intelligent control. The goal of this control is to utilize cutting edge technology making the equipment easier to install, operate, and service. All units are Factory commissioned, configured, and run tested.

Versatile - The Smart Equipment™ control can be configured to use with a standard thermostat (easy to connect screw terminals), a zone sensor, or can be setup to communicate with multiple BAS communication protocols to integrate with building automation systems.

Reduce field installed complexity - Each unit will come equipped with factory installed supply air, return air, and outdoor air temperature sensors providing key temperature readings thus reduce field installed complexity.

On-board USB Port - The control comes with a long list of features including data logging, current and previous system faults and software update capabilities using the on board USB port and common flash drive. Energy use monitoring capabilities allow custom tailoring to allow a system to work more efficiently at all times and occupancy levels. Self test and start-up reports also available from the board VIA the USB port.

Embedded LCD Display - The board has a easy to read, built-in LCD display and easy to use navigation joystick and buttons allowing the user to quickly navigate the menus displaying unit status, options, current function, supply, return and outdoor temperatures, fault codes and other information.

Safety Monitoring - The control monitors the outdoor, supply, and return air temperatures and the high and low pressure switch status on the independent refrigerant circuits. On units with heating the gas valve and high temperature limit switches

are monitored on gas and electric heating units. The control also monitors the voltage supplied to the unit and will protect the unit if low voltage due to a brown out, or other electrical issue occurs.

Low Ambient - An integrated low-ambient control allows units to operate in the cooling mode down to 0°F outdoor ambient without additional components or intervention. Optionally, the control board can be programmed to lockout the compressors when the outdoor air temperature is low or when free cooling is available.

Anti-Short Cycle Protection - To aid compressor life, an anti-short cycle delay is incorporated into the standard control. Compressor reliability is further ensured by programmable minimum run times. For testing, the anti-short cycle delay can be temporarily overridden with the push of a button.

Fan Delays - Fan on and fan off delays are fully programmable. Furthermore, the heating and cooling fan delay times are independent of one another. All units are programmed with default values based upon their configuration of cooling and/or heating capacity.

Nuisance Trip Protection and Three Strikes - To prevent nuisance calls, the control board uses a three times, you're out philosophy. The high, low-pressure switch, anti-freeze protection, low voltage or heating high limit must trip three times within two hours before the unit control board will lock out the associated compressor. The same safety must trip three times before a hard lockout will occur.



E Robust design - Each unit is designed with an embossed top to increase structural support and ensure rigidity. The unit has a powder paint exterior finish including a industry leading 750-hour salt spray rating. All units are painted with a long lasting, powder paint that stands up over the life of the unit.

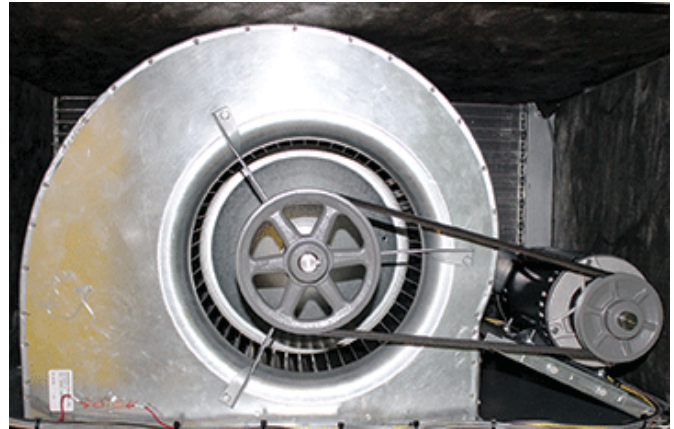


F Full Perimeter base rail that fits on many existing curbs - This product was designed with the replacement market in mind which is why it will fit on many existing curbs in the field but it also takes into account the new construction market by being versatile and sturdy. This unit is equipped with heavier gauge and innovatively designed base rails to prevent damage from transporting and rigging.



G Coils - All units utilize Micro-Channel "all-aluminum" condenser coils that provides improved heat transfer capabilities and reduced refrigerant charge volumes. This equates to all units meeting LEED EA Credit 4 Requirements for Enhanced Refrigerant Management. MicroChannel coils are also much easier to clean than your typical fin/tube designs.

All evaporator coils utilize copper tube with aluminum fin design for proven reliability and performance.



H Rigid Mounted Blower Assembly - Dynamically balanced indoor fans ensure better performance and reliability. Large access panels for easier access, service, and maintenance. X13 Direct drive (Standard Static Option) and belt drive (Medium Static and High Static Options) options available on 3-5 ton products. The belt drive option is standard on 6-12.5 ton products. Low, Medium, and High Static drive options for airflow versatility up to 2" ESP with no field installed drive packages necessary. The X13 motor technology offers several benefits w/ respect to efficiency, operation, comfort, and cost when compared to other motors. Premium efficiency indoor motors are standard on ZY06 and ZX14. The IntelliSpeed™ option is available on 6-12.5 ton products and standard on the 3 stage cooling models to meet ASHRAE 90.1 and Title 24 Requirements. The blower section includes a dual density insulation for indoor air quality.



J Balanced Heating - The two stage gas heating offers ultimate heating comfort with a balance between 1st and 2nd stage gas heating. The first stage of a two stage gas heat option provides approximately 70% of the heating capacity in all 3-12.5 tons two stage gas heat models. Balanced heating allows the unit to better maintain desired temperatures and helps save energy. Low-NOx comes standard with a stainless steel heat exchanger to meet California environmental requirements. The heat exchanger section includes foil faced insulation that is not only environmentally friendly but meets all NFPA codes.

Warranty - All models include a 1-year limited warranty on the complete unit. Compressors carry a 5-year warranty. Aluminized steel heat exchangers carry a 10-year warranty and stainless steel heat exchangers carry a 15- year warranty.

Factory Installed Options

(Nomenclature Digit Position)

Airflow Options (8)

Alternate Indoor Blower Motor - For applications with high static restrictions, units are offered with optional indoor motors providing higher external static capability and/or higher airflow, depending upon the installer's needs.

- A=Standard Static (Direct Drive for 3-5 ton; Belt Drive for 6-12.5 Ton)
- B=Medium Static (Belt Drive for 3-12.5 Ton)
- C=High Static (Belt Drive for 3-12.5 Ton; 3 Phase Models Only)

VFD/VAV Options (9)

IntelliSpeed™ Supply Fan Control Option (ASHRAE 90.1 compliant) - Units configured with the IntelliSpeed™ Supply Fan Option will contain a VFD for variable volume 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 is also configurable.

- 1=None (Comes with standard constant volume controls)
- 2=VFD/VAV (ZL 3-Stage only)
- 3=VFD IntelliSpeed™ (standard on ZL High Efficiency 3-stage cooling models)

Coil Options (10)

E-Coat Coils – Coils are coated with an epoxy polymer coating to protect against corrosion. A 3-year warranty is added when this option is selected.

- A=Standard Indoor & Outdoor Coils (fin/tube design on indoor coil and MicroChannel design used on outdoor coil with no E-Coat coating added).
- B=Standard Indoor Coil & E-Coat Coil Outdoor Coil (fin/tube design on indoor coil and MicroChannel design used on outdoor coil. E-Coat coating added to outdoor coil)
- C= E-Coat Indoor Coil & Standard Outdoor Coil (fin/tube design on indoor coil and MicroChannel design used on outdoor coil. E-Coat coating added to indoor coil)
- D= E-Coat Indoor Coil & Outdoor Coil (fin/tube design on indoor coil and MicroChannel design used on outdoor coil. E-Coat coating added to indoor and outdoor coil)

Controls (11)

Smart Equipment™ - This is the Standard microprocessor control with capabilities to work with a sensor or thermostat only. Smart Equipment™ with BAS includes communication board with BACnet open-protocol system.

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.

- A=Smart Equipment™
- B=Smart Equipment™ + BACnet MSTP, Mdb, N2 COM Card
- J=Verasys Single Zone
- K=Verasys Change Over Bypass

Sensor Options (12)

- 1=None (Units come standard with factory installed supply air, return air, and outdoor air temperature sensors)
- 2=RA¹ Smoke Detector
- 3=SA Smoke Detector
- 4=RA¹ & SA Smoke Detector

1. Return Air Smoke Detector Sensor Must Be Relocated in the Field. (See Unit Installation Manual.)

Economizer/Damper (13)

Down flow Economizers (with barometric relief) - All units offer a variety of optional factory installed economizers that are shipped, installed and wired with AMCA 511 Licensed Class 1A low leak dampers designed to exceed ASHRAE 90.1 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. All economizer options are fully integrated into the Smart Equipment™ controls. 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).

Dry Bulb Economizer - Economizer operation is enabled by the outdoor air temperature being less than the setpoint of the economizer module.

Enthalpy Economizer - The added outdoor air enthalpy sensor enables economizer operation if the outdoor enthalpy is less than the setpoint of the economizer logic module.

- A=None
- B=Dry Bulb Economizer
- C=Enthalpy Economizer

Convenience Outlet (14)

Convenience Outlet - (Powered and Non-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. Factory installed option only.

- 1=None
- 2=Non-powered Convenience Outlet
- 3=Powered Convenience Outlet

Electrical Options (15)

Disconnect Switch - For units with field installed electric heat kits, two factory installed disconnect sizes are available (60A or 100A non-fused disconnect). Depending on the field installed heater kit selected, the factory installed disconnect may not be sufficient. Always refer to the unit nameplate or unit electrical data for the proper disconnect size. If the heater application requires a disconnect above 100 Amps, the factory installed disconnect should be removed and an appropriately sized external disconnect should be installed.

- 1=None
- 2=Non-fused Disconnect¹

1. Verify on the unit nameplate that the disconnect is properly sized for the application. Units with field installed electric heat may exceed the factory installed disconnect amperage rating.

Cabinet Options (16)

Louvered Hail Guard - This kit includes a decorative louvered panel which installs over the outside condenser coil and prevents damage to the coil fins from hail strikes.

Hinged Cabinet Doors - The factory installed hinged panel option will save time, money and labor while allowing easy servicing of blower components, filters and controls. With this option there is no longer a need to remove panels to access these critical sections and running the risk of losing panels or roof damage from loose panels and materials. Extra care was taken to design a durable hinged panel with leak tight seal.

- 1=None
- 2=Louvered Panels
- 3=Hinged Cabinet Doors
- 4=Hinged Cabinet Doors And Louvered Panels

FDD (Fault Detection and Diagnostics) - Refrigerant side A Modification Shop offering for an additional installed control system for commercial equipment that constantly monitors refrigerant circuit pressures, refrigerant circuit temperatures, as well as the environmental temperatures and humidity via multiple sensor inputs.

Field Installed Accessories

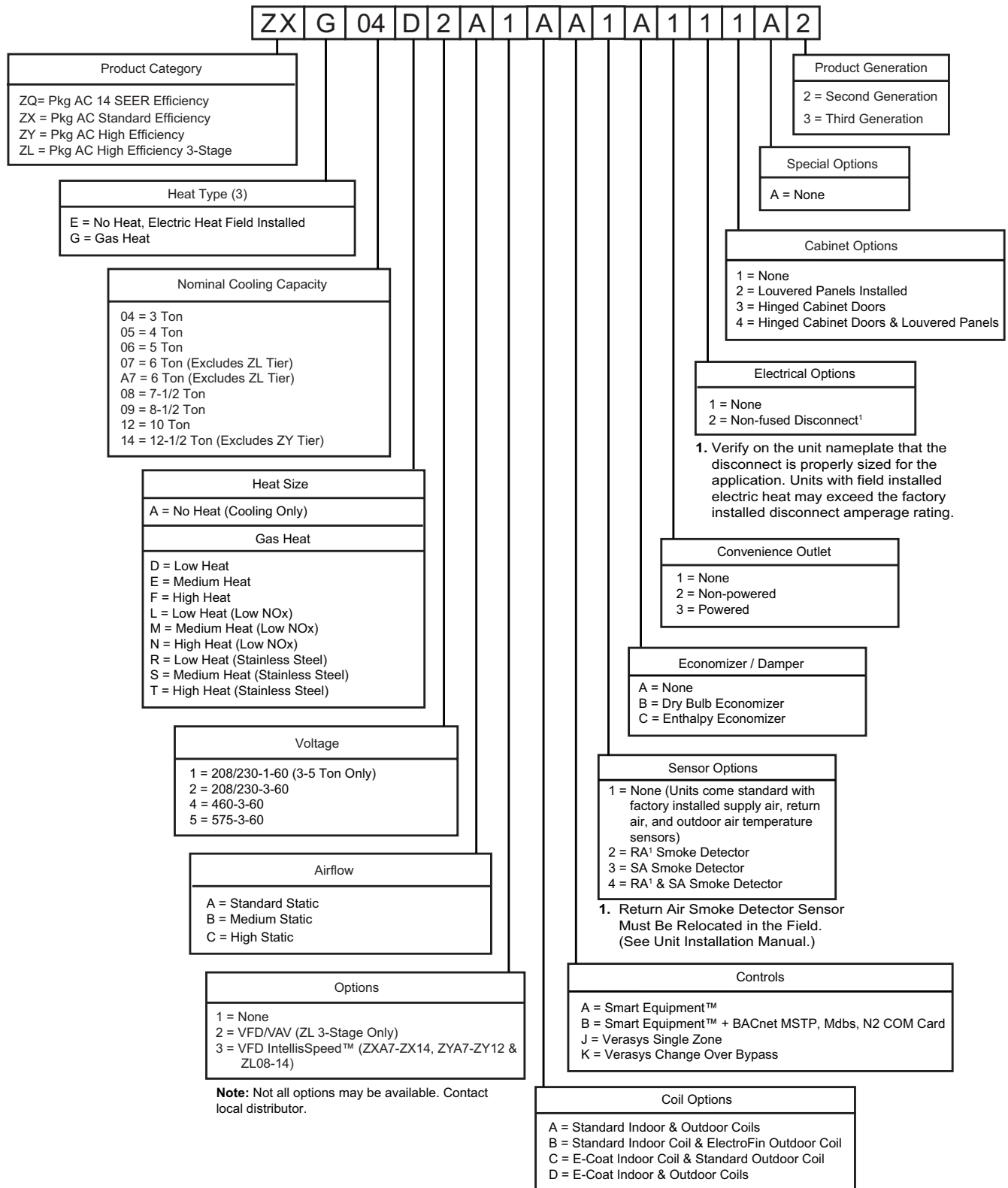
- **Down flow Economizers/Horizontal Economizers (with barometric relief)** - All units offer a variety of field installed economizers that are installed and wired with AMCA 511 Licensed Class 1A low leak dampers designed to exceed ASHRAE 90.1 and the International Energy Conservation Code (IECC) certification 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. All economizer options are fully integrated into the Smart Equipment™ controls. 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).

- **Dry Bulb Economizer** - Economizer operation is enabled by the outdoor air temperature being less than the setpoint of the economizer module.
- **Single Enthalpy Control, Accessory for Economizer** - All field installed economizers will come standard as a dry bulb economizer. This kit adds an outdoor air enthalpy sensor which enables economizer operation if the outdoor enthalpy is less than the setpoint of the economizer logic module.
- **Dual Enthalpy Control, Accessory for Economizer** - All field installed economizers will come standard as a dry bulb economizer. This kit adds an outdoor air enthalpy sensor and return air enthalpy sensor which enables economizer operation if the outdoor enthalpy is less than the setpoint of the economizer logic module.
- **Power Exhaust** - This accessory installs in the unit with a down flow economizer or in the ductwork for a horizontal application.
- **Louvered Hail Guard** - This kit includes a decorative louvered panel which installs over the outside condenser coil and prevents damage to the coil fins from hail strikes.
- **Flue Exhaust Extension Kit** - In locations where wind or weather conditions 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.
- **Propane Conversion Kit** - This kit converts a gas heat unit to operate with propane gas at altitudes up to 2,000 feet.
- **Gas Heat High Altitude Kit** - This kit converts a gas heat unit to operate at high altitudes, 2,000 to 10,000 feet. Conversion kits are available for natural gas and propane.
- **Roof Curbs** - The roof curbs have insulated decks and are shipped disassembled. The roof curbs are available in 14 and 24 heights.
- **Thermostat** - The units are designed to operate with 24-volt electronic and electro-mechanical thermostats. All 7.5 thru 12.5 ton units operate with two-stage heat/two-stage cool or two-stage cooling only thermostats and 2 stage heat / 3 stage cool on ZL tier products depending upon unit configuration.
- **Smoke detectors** - The smoke detectors stop operation of the unit by interrupting power and providing a fault message to the control board if smoke is detected within the air compartment. Smoke detectors are available for both the supply and/or return air configurations.
- **Hinged Filter Access Panel For Use With Horizontal Flow Economizer** - Allows hinged access to the filter section when used with a horizontal economizer.
- **Low Ambient Head Pressure Control Kit** - The Electronic Low Ambient Controller is designed to regulate condenser head pressure at low ambient temperatures by varying the amount of airflow through the condenser.
- **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.
- **Thru The Base Connection** - Kits are available to provide a way to route wiring to the unit through the base of the unit and gas supplied to the unit through the base or through the curb. These kits provide a seal tight way to bring power and gas to the unit without additional roof penetrations.
- **Electric Heat (Field installed option Only)** - Select heater sizes for 3-12.5 ton units available. Necessary hardware and connectors are included with the heaters.

Nomenclature

3-12.5 Ton Model Number Nomenclature



Accessories

Accessory Kit Number	Description	Where Used	Voltage
2EE04706724	Econ, DB, Vertical Flow, Small Footprint	ZY04, ZY05, ZY06, ZQ04, ZQ5, ZQ06, ZXA7	All
2EE04706824	Econ, DB, Vertical Flow, Large Footprint	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2EE04707024	Econ, DB, Horizontal Flow, Small Footprint, Short Cabinet	ZY04, ZQ04, ZQ05	All
2EE04707124	Econ, DB, Horizontal Flow, Small Footprint, Tall Cabinet	ZX07, ZXA7, ZY05, ZY06, ZQ06	All
2EE04707224	Econ, DB, Horizontal Flow, Large Footprint, Short Cabinet	ZX08, ZY07, ZYA7	All
2EE04707324	Econ, DB, Horizontal Flow, Large Footprint, Tall Cabinet	ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1FA0415	Manual Outside Air Damper 0-35%	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1FA0416	Manual Outside Air Damper 0-35%	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1FA0417	Manual Outside Air Damper 0-100%	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1FA0418	Manual Outside Air Damper 0-100%	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2MD04704224	Motorized Outside Air Damper 0-100%	ZY04, ZY05, ZY06, ZXA7	All
2MD04704324	Motorized Outside Air Damper 0-100%	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2EC0401	Kit, Single Enthalpy Field Installed	All	All
2EC0402	Kit, Dual Enthalpy Field Installed	All	All
1HD0401	Hinged Filter Access Panel For Units With A Horizontal Economizer	ZQ04, ZQ05, ZY04	All
1HD0402	Hinged Filter Access Panel For Units With A Horizontal Economizer	ZQ06, ZY05, ZY06, ZXA7	All
1HD0403	Hinged Filter Access Panel For Units With A Horizontal Economizer	ZX08, ZY07, ZYA7	All
1HD0404	Hinged Filter Access Panel For Units With A Horizontal Economizer	ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1HG0419	Hail Guard Kit Small Footprint, Short Cabinet	ZY04, ZQ04, ZQ05	All
1HG0420	Hail Guard Kit Small Footprint, Tall Cabinet	ZY05, ZY06, ZQ06, ZXA7	All
1HG0423	Hail Guard Kit Large Footprint, Short Cabinet	ZX08, ZY07, ZYA7	All
1HG0424	Hail Guard Kit Large Footprint, Tall Cabinet	ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1RC0456	Curb Rigid 14" Small Footprint	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1RC0457	Curb Rigid 14" Large Footprint	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1RC0458	Curb Rigid 24" Small Footprint	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1RC0459	Curb Rigid 24" Large Footprint	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2PE04704206	Power Exhaust Vert Flow Small Footprint 208V-230V 1-ph	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-1-60
2PE04704225	Power Exhaust Vert Flow Small Footprint 208V-230V 3-ph	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-3-60
2PE04704246	Power Exhaust Vert Flow Small Footprint 460V 3-ph	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60
2PE04704258	Power Exhaust Vert Flow Small Footprint 575V 3-ph	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	575-3-60
2PE04704306	Power Exhaust Vert Flow Large Footprint 208V-230V 1-ph	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-1-60
2PE04704325	Power Exhaust Vert Flow Large Footprint 208V-230V 3-ph	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2PE04704346	Power Exhaust Vert Flow Large Footprint 460V 3-ph	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60

Accessories (Continued)

Accessory Kit Number	Description	Where Used	Voltage
2PE04704358	Power Exhaust Vert Flow Large Footprint 575V 3-ph	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	575-3-60
2PE04704406	Power Exhaust Horiz Flow Small Footprint 208V-230V 1-ph	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-1-60
2PE04704425	Power Exhaust Horiz Flow Small Footprint 208V-230V 3-ph	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-3-60
2PE04704446	Power Exhaust Horiz Flow Small Footprint 460V 3-ph	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60
2PE04704458	Power Exhaust Horiz Flow Small Footprint 575V 3-ph	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	575-3-60
2PE04704506	Power Exhaust Horiz Flow Large Footprint 208V-230V 1-ph	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-1-60
2PE04704525	Power Exhaust Horiz Flow Large Footprint 208V-230V 3-ph	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2PE04704546	Power Exhaust Horiz Flow Large Footprint 460V 3-ph	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2PE04704558	Power Exhaust Horiz Flow Large Footprint 575V 3-ph	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	575-3-60
1HA0454	High Altitude Kit for Natural Gas (2,000-10,000 ft)	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7 - Low, Med, High Heat ZY07, ZYA7 - Low Heat	All
1HA0455	High Altitude Kit for Natural Gas (2,000-10,000 ft)	ZX08, ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14 - Low, Med, High Heat ZY07, ZYA7 - Med, High Heat	All
1NP0456	Propane Conversion Kit Note: Not for use with Low NOx	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7 - Low, Med, High Heat ZY07, ZYA7 - Low Heat	All
1NP0457	Propane Conversion Kit	ZX08, ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14 - Low, Med, High Heat ZY07, ZYA7 - Med, High Heat	All
1HA0458	High Altitude Kit for Propane (2,000-10,000 ft) Note: Not for use with Low NOx	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7 - Low, Med, High Heat ZY07, ZYA7 - Low Heat	All
1HA0459	High Altitude Kit for Propane (2,000-10,000 ft)	ZX08, ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14 - Low, Med, High Heat ZY07, ZYA7 - Med, High Heat	All
1FE0414	Flue Exhaust Kit	ZYG04, ZQG04, ZQG05	All
1FE0415	Flue Exhaust Kit	ZXGA7, ZXG08, ZYG05, ZYG06, ZYG07, ZYGA7, ZQG06	All
1FE0416	Flue Exhaust Kit	ZXG09, ZXG12, ZXG14, ZYG08, ZYG09, ZYG12, ZL08, ZL09, ZL12, ZL14	All
1HS0401	Flue Heat Shield Accessory	ZQ04, ZQ05, ZQ06, ZXA7, ZX08, ZX09, ZX12, ZX14, ZY04, ZY05, ZY06, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2EK04510625	6.5 KW Electric Heat	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-(1 or 3)-60
2EK04510646	6.0 KW Electric Heat	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60
2EK04510725	6.5 KW Electric Heat	ZY07, ZYA7	208/230-3-60
2EK04510746	6.0 KW Electric Heat	ZY07, ZYA7	460-3-60
2EK04511058	9.2 KW Electric Heat	ZY04, ZY05, ZQ04, ZQ05	575-3-60
2EK04511125	10.5 KW Electric Heat	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-(1 or 3)-60
2EK04511146	11.5 KW Electric Heat	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60

Accessories (Continued)

Accessory Kit Number	Description	Where Used	Voltage
2EK04511458	13.8 KW Electric Heat	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06	575-3-60
2EK04511446	14 KW Electric Heat	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60
2EK04511625	16 KW Electric Heat	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-3-60
2EK04511725	16 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2EK04511746	16.5 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2EK04511758	17 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZL08, ZL09, ZL14	575-3-60
2EK04512358	23 KW Electric Heat	ZX06, ZY06, ZQ06	575-3-60
2EK04510625	6.5 KW Electric Heat	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-(1 or 3)-60
2EK04512525	24.8 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2EK04512646	25.5KW Electric Heat	ZY07, ZYA7	460-3-60
2EK04512658	25.7KW Electric Heat	ZY07, ZYA7	575-3-60
2EK04512846	27.8 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2EK04513225	32 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2EK04513346	33 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2EK04513458	34 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY08, ZY09, ZL08, ZL09, ZL14	575-3-60
2EK04514225	42.4 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2EK04514246	41.7 KW Electric Heat	ZX08, ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2LA04704725	Low Ambient Accessory Kit	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208V/230V-1-60 or 208V/230V-3-60
2LA04704746	Low Ambient Accessory Kit	ZY04, ZY05, ZY07, ZYA7, ZQ04, ZQ05, ZQ06, ZXA7	460V-3-60
2LA04704758	Low Ambient Accessory Kit	ZY04, ZY05, ZY08, ZQ04, ZQ05, ZQ06, ZXA7	575V-3-60
2LA04704825	Low Ambient Accessory Kit	ZX08, ZX09, ZX12, ZY07, ZYA7, ZY08, ZY09, ZL08, ZL09	208V/230V-1-60 or 208V/230V-3-60
2LA04704846	Low Ambient Accessory Kit	ZX08, ZX09, ZX12, ZY07, ZYA7, ZY08, ZY09, ZL08, ZL09	460V-3-60
2LA04704858	Low Ambient Accessory Kit	ZX08, ZX09, ZX12, ZY07, ZYA7, ZY08, ZY09, ZL08, ZL09	575V-3-60
2LA04704925	Low Ambient Accessory Kit	ZX14, ZY12, ZL12, ZL14	208V/230V-3-60
2LA04704946	Low Ambient Accessory Kit	ZX14, ZY12, ZL12, ZL14	460V-3-60
2LA04704958	Low Ambient Accessory Kit	ZX14, ZY12, ZL12, ZL14	575V-3-60
2SD04701224	Supply Air Stream Smoke Detector	ZXA7, ZX08, ZX09, ZX12, ZX14, ZY04, ZY05, ZY06, ZY07, ZYA7, ZY08, ZY09, ZY12, ZQ04, ZQ05, ZQ06, ZL08, ZL09, ZL12, ZL14	All
2SD04701124	Return Air Stream Smoke Detector	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
2SD04701424	Return Air Stream Smoke Detector	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2SD04701324	Combination Supply & Return Air Stream Smoke Detector	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
2SD04701624	Combination Supply & Return Air Stream Smoke Detector	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1TB0401	Small Footprint Thru The Base Electrical & Thru The Curb Gas	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All

Accessories (Continued)

Accessory Kit Number	Description	Where Used	Voltage
1TB0402	Large Footprint Thru The Base Electrical & Thru The Curb Gas	ZX08, ZX09, ZX12, ZX14, ZY07, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1TB0403	Small Footprint Thru The Base Electrical & Gas	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1TB0404	Large Footprint Thru The Base Electrical & Gas	ZX08, ZY07, ZYA7, ZX09, ZX12, ZX14, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1LD0420	High Speed Drive Kit	ZQ05	3-phase only

AHRI Cooling Rating Table

UNIT	COOLING STAGES	NOM. COOLING CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	SEER	EER (COOLING ONLY)	EER (A/C WITH GAS HEAT)	IEER (COOLING ONLY)	IEER (A/C WITH GAS HEAT)	IEER WITH IntelliSpeed (COOLING ONLY)	IEER WITH IntelliSpeed (GAS HEAT)
ZXA7	2	6	67.0	6.0	---	11.2	11.0	12.9	12.9	14.8	14.8
ZX08	2	7.5	85.0	6.6	---	11.2	11.0	N/A	N/A	13.5	13.4
ZX09	2	8.5	99.0	7.7	---	11.2	11.0	N/A	N/A	13.3	13.0
ZX12	2	10.0	116.0	9.2	---	11.2	11.0	N/A	N/A	14.6	14.4
ZX14	2	12.5	135.0	10.8	---	11.0	11.0	N/A	N/A	12.7	12.5
ZY04	1	3	36.0	2.6	15.0	12.0	12.0	---	---	---	---
ZY05	1	4	49.0	3.5	15.4	12.0	12.0	---	---	---	---
ZY06	1	5	58.0	4.4	15.2	12.0	12.0	---	---	---	---
ZY07	1	6	72.0	5.0	---	12.2	12.0	12.9	12.7	---	---
ZYA7	2	6	71.0	5.89	---	12.0	12.0	14.6	14.6	16.0	16.0
ZY08	2	7.5	89.0	6.6	---	12.2	12.0	12.9	12.7	14.1	14.0
ZY09	2	8.5	98.0	7.3	---	12.2	12.0	12.9	12.7	14.8	14.6
ZY12	2	10.0	116.0	8.9	---	11.7	11.5	12.9	12.7	14.0	14.0
ZQ04	1	3	35.0	2.8	14.0	12.2	12.2	---	---	---	---
ZQ05	1	4	48.0	4.0	14.0	12.0	12.0	---	---	---	---
ZQ06	1	5	58.5	4.8	14.1	12.1	12.1	---	---	---	---
ZL08	3	7.5	89.0	7.4	---	12.2	12.0	N/A	N/A	15.8	15.6
ZL09	3	8.5	98.0	8.0	---	12.2	12.0	N/A	N/A	16.3	16.1
ZL12	3	10.0	116.0	9.6	---	12.2	12.0	N/A	N/A	15.6	15.4
ZL14	3	12.5	135.0	11.9	---	11.2	11.0	N/A	N/A	14.9	14.7

AHRI 270 Outdoor Sound Power Levels

Unit (Tons)	Sound Rating ¹ (dB-A)	Octave Bands (Hz)							
		63	125	250	500	1000	2000	4000	8000
ZXA7 (6)	79	85.0	85.0	77.0	75.0	74.0	70.0	66.0	62.0
ZX08 (7.5)	84	87.0	86.0	82.0	80.5	79.5	75.0	70.5	66.5
ZX09 (8.5)	83	91.0	86.0	79.0	79.5	78.0	74.0	70.5	69.0
ZX12 (10)	84	87.5	85.0	81.0	80.0	80.0	74.5	70.0	66.5
ZX14 (12.5)	90	87.5	88.5	85.0	86.0	85.0	81.0	78.5	73.0
ZY04 (3)	79	81.0	86.5	77.0	76.0	75.0	70.5	66.5	63.5
ZY05 (4)	79	84.0	83.0	76.0	75.0	74.0	70.0	66.0	63.5
ZY06 (5)	79	83.0	83.0	76.0	75.0	75.0	69.5	66.0	63.0
ZY07 (6)	84	90.0	87.0	81.5	81.0	79.0	74.5	71.0	69.5
ZYA7 (6)	83	85.0	86.0	81.0	80.0	78.0	73.0	70.0	65.0
ZY08 (7.5)	83	91.5	84.5	79.5	79.5	78.5	74.0	68.5	66.0
ZY09 (8.5)	83	92.0	87.0	81.0	80.5	79.0	74.0	69.0	66.0
ZY12 (10)	87	88.0	88.5	84.5	84.0	82.5	78.5	76.0	73.0
ZQ04 (3)	79	81.5	84.5	76.5	75.0	74.0	69.5	65.5	61.0
ZQ05 (4)	79	82.0	85.0	77.5	75.5	74.0	70.0	66.5	62.0
ZQ06 (5)	79	83.0	83.0	76.0	75.0	75.0	69.5	66.0	63.0
ZL08 (7.5)	82	85.0	86.0	80.0	79.0	78.0	73.0	68.0	64.0
ZL09 (8.5)	82	88.5	83.0	81.0	79.0	78.0	73.5	69.0	65.5
ZL12 (10)	86	82.0	88.5	85.0	82.5	80.5	76.0	73.5	69.5
ZL14 (12.5)	86	84.0	88.5	84.5	83.5	81.0	76.5	73.5	69.5

1. Rated in accordance with AHRI 270 standard.

Physical Data

ZXA7 Physical Data

Component		Models			
		ZXGA7		ZXEA7	
Nominal Tonnage		6		6	
AHRI COOLING PERFORMANCE	Gross Capacity @ AHRI A point (Btu)	70000		70000	
	AHRI net capacity (Btu)	67000		67000	
	EER	11.0		11.2	
	SEER	-		-	
	IEER	12.9		12.9	
	IEER IntelliSpeed	14.8		14.8	
	Nominal CFM	2200		2200	
	System power (KW)	6.0		6.0	
	Refrigerant type	R-410A		R-410A	
	Refrigerant charge (lb-oz)				
	System 1	7-4		7-4	
	System 2				
AHRI HEATING PERFORMANCE	Heating Option	D	E	F	-
	Heating model	Low	Med	High	-
	1st. Stage Heat input (K Btu)	-	-	100	-
	2nd. Stage Heat input (K Btu)	70	114	145	-
	1st. Stage Heat output (K Btu)	-	-	80	-
	2nd. Stage Heat output (K Btu)	56	91	116	-
	AFUE %				-
	Steady state efficiency (%)	80	80	80	-
	No. burners	2	3	3	-
	No. stages	1	1	2	-
	Temperature Rise Range (°F)	17-29	28-47	36-60	-
	Gas Limit Setting (°F)	150	140	140	-
	Gas piping connection (in.)	1/2	1/2	1/2	-
DIMENSIONS (inches)	Length	74.1		74.1	
	Width	48.9		48.9	
	Height	40.6		40.6	
OPERATING WT. (lbs.)		668		614	
COMPRESSORS	Type	2-Stage Scroll		2-Stage Scroll	
	Quantity	1		1	
	Unit Capacity Steps (%)	67/100		67/100	
CONDENSER COIL DATA	Face area (Sq. Ft.)	21.1		21.1	
	Rows	1		1	
	Fins per inch	23		23	
	Tube diameter (in./MM)	.79/20		.79/20	
	Circuitry Type	2-pass Microchannel		2-pass Microchannel	
EVAPORATOR COIL DATA	Face area (Sq. Ft.)	7.3		7.3	
	Rows	4		4	
	Fins per inch	15		15	
	Tube diameter	0.375		0.375	
	Circuitry Type	Intertwined		Intertwined	
	Refrigerant control	TXV		TXV	

ZXA7 Physical Data (Continued)

Component		Models					
		ZXGA7			ZXE7		
Nominal Tonnage		6			6		
CONDENSER FAN DATA	Quantity of fans	1			1		
	Fan diameter (Inch)	22			22		
	Type	Prop			Prop		
	Drive type	Direct			Direct		
	Quantity of motors	1			1		
	Motor HP each	1/2			1/2		
	No. speeds	2			2		
	RPM	900 / 1150			900 / 1150		
	Nominal total CFM	3600 / 4600			3600 / 4600		
EVAP FAN DATA BELT DRIVE	Airflow Option	A	B	C	A	B	C
	Quantity	1	1	1	1	1	1
	Fan Size (Inch)	11 x 10	11 x 10	11 x 10	11 x 10	11 x 10	11 x 10
	Type	Centrifugal			Centrifugal		
	Motor Sheave	1VL34	1VL44	1VP50	1VL34	1VL44	1VP50
	Blower Sheave	AK51	AK51	AK51	AK51	AK51	AK51
	Belt	A39	A40	A41	A39	A40	A41
	Motor Max Bhp, 3 Phase	2.4	2.9	3.7	2.4	2.9	3.7
	RPM	1725	1725	1725	1725	1725	1725
	Frame size	56Y	56Y	56HZ	56Y	56Y	56HZ
FILTERS	Quantity - Size	4 - (16 x 16 x 2) ¹			4 - (16 x 16 x 2) ¹		

1. 2 in. Throwaway, Standard, MERV 4 (Minimum Efficiency Reporting Value).

ZX08 Physical Data

Component		Models			
		ZXG08		ZXE08	
Nominal Tonnage		7.5		7.5	
AHRI COOLING PERFORMANCE	Gross Capacity @ AHRI A point (Btu)	94000		94000	
	AHRI net capacity (Btu)	85000		85000	
	EER	11		11.2	
	SEER	-		-	
	IEER IntelliSpeed	13.4		13.5	
	Nominal CFM	2900		2900	
	System power (KW)	6.6		6.6	
	Refrigerant type	R-410A		R-410A	
	Refrigerant charge (lb-oz)				
	System 1	4-8		4-8	
	System 2	4-12		4-12	
AHRI HEATING PERFORMANCE	Heating Option	D	E	F	-
	Heating model	Low	Med	High	-
	1st. Stage Heat input (K Btu)	90	125	176	-
	2nd. Stage Heat input (K Btu)	125	180	220	-
	1st. Stage Heat output (K Btu)	72	100	141	-
	2nd. Stage Heat output (K Btu)	100	144	176	-
	AFUE %				-
	Steady state efficiency (%)	80	80	80	-
	No. burners	3	4	5	-
	No. stages	2	2	2	-
	Temperature Rise Range (°F)	25-41	36-59	43-72	-
	Gas Limit Setting (°F)	140	150	140	-
	Gas piping connection (in.)	3/4	3/4	3/4	-
DIMENSIONS (inches)	Length	87.1		87.1	
	Width	61.7		61.7	
	Height	40.6		40.6	
OPERATING WT. (lbs.)		893		791	
COMPRESSORS	Type	Scroll		Scroll	
	Quantity	2		2	
	Unit Capacity Steps (%)	50/100		50/100	
CONDENSER COIL DATA	Face area (Sq. Ft.)	21.1		21.1	
	Rows	1		1	
	Fins per inch	23		23	
	Tube diameter (in./MM)	1/25		1/25	
	Circuitry Type	2-pass Microchannel		2-pass Microchannel	
EVAPORATOR COIL DATA	Face area (Sq. Ft.)	8.9		8.9	
	Rows	3		3	
	Fins per inch	15		15	
	Tube diameter	0.375		0.375	
	Circuitry Type	Intertwined		Intertwined	
	Refrigerant control	Orifice		Orifice	

ZX08 Physical Data (Continued)

Component		Models					
		ZXG08			ZXE08		
Nominal Tonnage		7.5			7.5		
CONDENSER FAN DATA	Quantity of fans	2			2		
	Fan diameter (Inch)	22			22		
	Type	Prop			Prop		
	Drive type	Direct			Direct		
	Quantity of motors	2			2		
	Motor HP each	1/2			1/2		
	No. speeds	1			1		
	RPM	1085			1085		
	Nominal total CFM	7600			7600		
EVAP FAN DATA BELT DRIVE	Airflow Option	A	B	C	A	B	C
	Quantity	1	1	1	1	1	1
	Fan Size (Inch)	15 X 15	15 X 15	15 X 15	15 X 15	15 X 15	15 X 15
	Type	Centrifugal			Centrifugal		
	Motor Sheave	1VL34	1VL44	1VP50	1VL34	1VL44	1VP50
	Blower Sheave	AK74	AK74	AK74	AK74	AK74	AK74
	Belt	A47	A48	A48	A47	A48	A48
	Motor Max Bhp, 3 Phase	2.4	2.9	3.7	2.4	2.9	3.7
	RPM	1725	1725	1725	1725	1725	1725
	Frame size	56Y	56Y	56HZ	56Y	56Y	56HZ
FILTERS	Quantity - Size	4 - (16 x 20 x 2) ¹			4 - (16 x 20 x 2) ¹		

1. 2 in. Throwaway, Standard, MERV 4 (Minimum Efficiency Reporting Value).

ZX09 Physical Data

Component		Models			
		ZXG09		ZXE09	
Nominal Tonnage		8.5		8.5	
AHRI COOLING PERFORMANCE	Gross Capacity @ AHRI A point (Btu)	105600		105600	
	AHRI net capacity (Btu)	99000		99000	
	EER	11		11.2	
	SEER	-		-	
	IEER IntelliSpeed	13.0		13.3	
	Nominal CFM	3300		3300	
	System power (KW)	7.70		7.70	
	Refrigerant type	R-410A		R-410A	
	Refrigerant charge (lb-oz)				
	System 1	5-4		5-4	
	System 2	5-4		5-4	
AHRI HEATING PERFORMANCE	Heating Option	D	E	F	-
	Heating model	Low	Med	High	-
	1st. Stage Heat input (K Btu)	90	125	176	-
	2nd. Stage Heat input (K Btu)	125	180	220	-
	1st. Stage Heat output (K Btu)	72	100	141	-
	2nd. Stage Heat output (K Btu)	100	144	176	-
	AFUE %				-
	Steady state efficiency (%)	80	80	80	-
	No. burners	3	4	5	-
	No. stages	2	2	2	-
	Temperature Rise Range (°F)	22-36	31-52	38-64	-
	Gas Limit Setting (°F)	140	150	140	-
	Gas piping connection (in.)	3/4	3/4	3/4	-
DIMENSIONS (inches)	Length	87.2		87.2	
	Width	61.7		61.7	
	Height	48.6		48.6	
OPERATING WT. (lbs.)		954		852	
COMPRESSORS	Type	Scroll		Scroll	
	Quantity	2		2	
	Unit Capacity Steps (%)	50/100		50/100	
CONDENSER COIL DATA	Face area (Sq. Ft.)	25.5		25.5	
	Rows	1		1	
	Fins per inch	23		23	
	Tube diameter (in./MM)	1/25		1/25	
	Circuitry Type	2-pass Microchannel		2-pass Microchannel	
EVAPORATOR COIL DATA	Face area (Sq. Ft.)	11.1		11.1	
	Rows	3		3	
	Fins per inch	15		15	
	Tube diameter	0.375		0.375	
	Circuitry Type	Intertwined		Intertwined	
	Refrigerant control	Orifice		Orifice	

ZX09 Physical Data (Continued)

Component		Models					
		ZXG09			ZXE09		
Nominal Tonnage		8.5			8.5		
CONDENSER FAN DATA	Quantity of fans	2			2		
	Fan diameter (Inch)	22			22		
	Type	Prop			Prop		
	Drive type	Direct			Direct		
	Quantity of motors	2			2		
	Motor HP each	1/2			1/2		
	No. speeds	1			1		
	RPM	1085			1085		
	Nominal total CFM	8600			8600		
EVAP FAN DATA BELT DRIVE	Airflow Option	A	B	C	A	B	C
	Quantity	1	1	1	1	1	1
	Fan Size (Inch)	15 x 15	15 x 15	15 x 15	15 x 15	15 x 15	15 x 15
	Type	Centrifugal			Centrifugal		
	Motor Sheave	1VL34	1VL44	1VP50	1VL34	1VL44	1VP50
	Blower Sheave	AK74	AK74	AK74	AK74	AK74	AK74
	Belt	A47	A48	A50	A47	A48	A50
	Motor Max Bhp, 3 Phase	2.4	2.4	3.7	2.4	2.4	3.7
	RPM	1725	1725	1725	1725	1725	1725
	Frame size	56Y	56Y	56HZ	56Y	56Y	56HZ
FILTERS	Quantity - Size	4 - (20 x 20 x 2) ¹			4 - (20 x 20 x 2) ¹		

1. 2 in. Throwaway, Standard, MERV 4 (Minimum Efficiency Reporting Value).

ZX12 Physical Data

Component		Models			
		ZXG12		ZXE12	
Nominal Tonnage		10		10	
AHRI COOLING PERFORMANCE	Gross Capacity @ AHRI A point (Btu)	125600		125600	
	AHRI net capacity (Btu)	116000		116000	
	EER	11		11.2	
	SEER	-		-	
	IEER IntelliSpeed	14.4		14.6	
	Nominal CFM	3400		3400	
	System power (KW)	9.2		9.2	
	Refrigerant type	R-410A		R-410A	
	Refrigerant charge (lb-oz)				
	System 1	5-12		5-12	
	System 2	5-12		5-12	
AHRI HEATING PERFORMANCE	Heating Option	D	E	F	-
	Heating model	Low	Med	High	-
	1st. Stage Heat input (K Btu)	125	176	200	-
	2nd. Stage Heat input (K Btu)	180	220	250	-
	1st. Stage Heat output (K Btu)	100	141	160	-
	2nd. Stage Heat output (K Btu)	144	176	200	-
	AFUE %				-
	Steady state efficiency (%)	80	80	80	-
	No. burners	4	5	5	-
	No. stages	2	2	2	-
	Temperature Rise Range (°F)	27-44	33-54	37-62	-
	Gas Limit Setting (°F)	150	140	160	-
	Gas piping connection (in.)	3/4	3/4	3/4	-
DIMENSIONS (inches)	Length	87.2		87.2	
	Width	61.7		61.7	
	Height	48.6		48.6	
OPERATING WT. (lbs.)		985		879	
COMPRESSORS	Type	Scroll		Scroll	
	Quantity	2		2	
	Unit Capacity Steps (%)	50/100		50/100	
CONDENSER COIL DATA	Face area (Sq. Ft.)	25.5		25.5	
	Rows	1		1	
	Fins per inch	23		23	
	Tube diameter (in./MM)	1/25		1/25	
	Circuitry Type	2-pass Microchannel		2-pass Microchannel	
EVAPORATOR COIL DATA	Face area (Sq. Ft.)	11.1		11.1	
	Rows	4		4	
	Fins per inch	15		15	
	Tube diameter	0.375		0.375	
	Circuitry Type	Intertwined		Intertwined	
	Refrigerant control	Orifice		Orifice	

ZX12 Physical Data (Continued)

Component		Models					
		ZXG12			ZXE12		
Nominal Tonnage		10			10		
CONDENSER FAN DATA	Quantity of fans	2			2		
	Fan diameter (Inch)	22			22		
	Type	Prop			Prop		
	Drive type	Direct			Direct		
	Quantity of motors	2			2		
	Motor HP each	1/2			1/2		
	No. speeds	1			1		
	RPM	1085			1085		
	Nominal total CFM	8600			8600		
EVAP FAN DATA BELT DRIVE	Airflow Option	A	B	C	A	B	C
	Quantity	1	1	1	1	1	1
	Fan Size (Inch)	15 x 15	15 x 15	15 x 15	15 x 15	15 x 15	15 x 15
	Type	Centrifugal			Centrifugal		
	Motor Sheave	1VL44	1VP50	1VP56	1VL44	1VP50	1VP56
	Blower Sheave	AK79	AK79	BK85	AK79	AK79	BK85
	Belt	A50	A50	BX52	A50	A50	BX52
	Motor Max Bhp, 3 Phase	2.4	3.7	5.25	2.4	3.7	5.25
	RPM	1725	1725	1725	1725	1725	1725
	Frame size	56Y	56HZ	145TY	56Y	56HZ	145TY
FILTERS	Quantity - Size	4 - (20 x 20 x 2) ¹			4 - (20 x 20 x 2) ¹		

1. 2 in. Throwaway, Standard, MERV 4 (Minimum Efficiency Reporting Value).

ZX14 Physical Data

Component		Models			
		ZXG14		ZXE14	
Nominal Tonnage		12.5		12.5	
AHRI COOLING PERFORMANCE	Gross Capacity @ AHRI A point (Btu)	145000		145000	
	AHRI net capacity (Btu)	135000		135000	
	EER	11.0		11.0	
	SEER	-		-	
	IEER IntelliSpeed	12.5		12.7	
	Nominal CFM	4000		4000	
	System power (KW)	10.8		10.8	
	Refrigerant type	R-410A		R-410A	
	Refrigerant charge (lb-oz)				
	System 1	6-8		6-8	
	System 2	6-12		6-12	
AHRI HEATING PERFORMANCE	Heating Option	D	E	F	-
	Heating model	Low	Med	High	-
	1st. Stage Heat input (K Btu)	125	176	200	-
	2nd. Stage Heat input (K Btu)	180	220	250	-
	1st. Stage Heat output (K Btu)	100	141	160	-
	2nd. Stage Heat output (K Btu)	144	176	200	-
	AFUE %				-
	Steady state efficiency (%)	80	80	80	-
	No. burners	4	5	5	-
	No. stages	2	2	2	-
	Temperature Rise Range (°F)	21-36	26-43	30-49	-
	Gas Limit Setting (°F)	150	140	160	-
	Gas piping connection (in.)	3/4	3/4	3/4	-
DIMENSIONS (inches)	Length	87.2		87.2	
	Width	61.7		61.7	
	Height	55.26		55.26	
OPERATING WT. (lbs.)		1047		941	
COMPRESSORS	Type	Scroll		Scroll	
	Quantity	2		2	
	Unit Capacity Steps (%)	50/100		50/100	
CONDENSER COIL DATA	Face area (Sq. Ft.)	24.9		24.9	
	Rows	1		1	
	Fins per inch	21		21	
	Tube diameter (in./MM)	1.26/32		1.26/32	
	Circuitry Type	2-pass Microchannel		2-pass Microchannel	
EVAPORATOR COIL DATA	Face area (Sq. Ft.)	11.1		11.1	
	Rows	4		4	
	Fins per inch	15		15	
	Tube diameter	0.375		0.375	
	Circuitry Type	Intertwined		Intertwined	
	Refrigerant control	TXV		TXV	

ZX14 Physical Data (Continued)

Component		Models					
		ZXG14			ZXE14		
Nominal Tonnage		12.5			12.5		
CONDENSER FAN DATA	Quantity of fans	1			1		
	Fan diameter (Inch)	30			30		
	Type	Prop			Prop		
	Drive type	Direct			Direct		
	Quantity of motors	1			1		
	Motor HP each	1 1/2			1 1/2		
	No. speeds	1			1		
	RPM	1140			1140		
	Nominal total CFM	10600			10600		
EVAP FAN DATA BELT DRIVE	Airflow Option	A	B	C	A	B	C
	Quantity	1	1	1	1	1	1
	Fan Size (Inch)	15 x 15	15 x 15	15 x 15	15 x 15	15 x 15	15 x 15
	Type	Centrifugal			Centrifugal		
	Motor Sheave	1VL44	1VP50	1VP56	1VL44	1VP50	1VP56
	Blower Sheave	AK79	AK79	BK85	AK79	AK79	BK85
	Belt	A50	A52	BX54	A50	A52	BX54
	Motor Max Bhp, 3 Phase	2.9	3.7	5.25	2.9	3.7	5.25
	RPM	1750	1750	1750	1750	1750	1750
	Frame size	56Z	184TZ	184TZ	56Z	184TZ	184TZ
FILTERS	Quantity - Size	4 - (20 x 20 x 2) ¹			4 - (20 x 20 x 2) ¹		

1. 2 in. Throwaway, Standard, MERV 4 (Minimum Efficiency Reporting Value).