Technical Guide: YORK® Sun™ Core ZQ, ZX, ZY, and ZL SERIES 3 Ton to 12.5 Ton, 60 Hz



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1068152-YTG-MM-1223

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2023-12-19

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Product highlights

- Assembled in Norman, OK
- ASHRAE 90.1 Compliant
- R-410A Refrigerant
- Cooling only and gas/electric configurations available
- Scroll compressors
- Up to 17.2 SEER on 3-5 ton ZL level
- 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
- Department of Energy (DOE) compliant - 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.
- Ultra-Low NOx (ULN) models meet California SCAQMD 14 ng/J NOx level requirements.
- State-of-the-art microprocessor controls with specific programming for product applications
- MicroChannel condenser coils
- Evaporator coils use copper tube/aluminum fin design for proven reliability and performance.
- Thermostatic Expansion Valve (TXV) Standard on: ASHRAE 90.1 Compliant Standard Efficiency Level 5 ton to 12.5 ton models, Energy Star Compliant Efficiency Level 3 ton to 10 ton models and advanced building code compliant efficiency level 7.5 ton to 12.5 ton models.
- Single-stage cooling (3 ton to 6 ton models)
- Two-stage cooling (3 ton to 5 ton ZL models and 6 ton to 12.5 ton models)
- Three-stage cooling available (7.5 ton to 12.5 ton models)
- Alternate motor and drives

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

Patents

Patents: https://jcipat.com

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 (except Ultra-Low NOx (ULN) models)
- High altitude heating conversion kits (except Ultra-Low NOx (ULN) models)
- 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 ton to 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 (3 ton to 5 ton ZL belt drive models and 6 ton to 12.5 ton models)
- *Field Installed Electric Heat Kit - Installation Instructions* for the Electric Heat Kits may be found in the Electric Heat Kits
- MagnaDry dehumidification system - Available on ZY 3 ton to 10 ton units and ZL 3 ton to 12.5 ton units - Smart Equipment board only.

Component location

Figure 1: Cooling with gas heat (3 ton through 5 ton) front

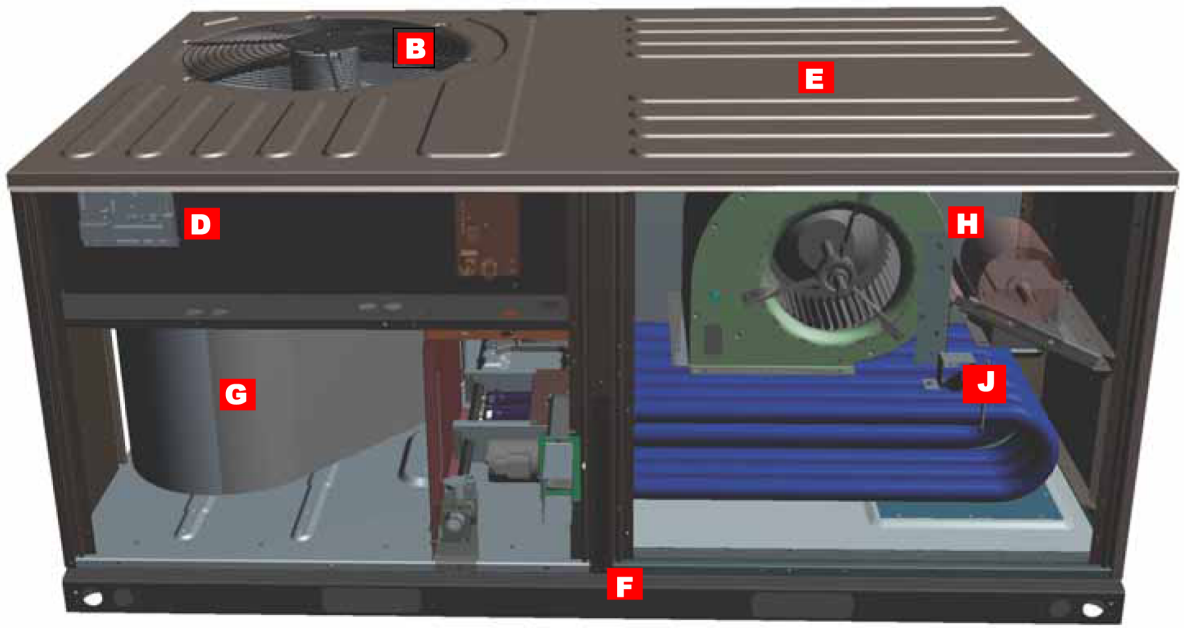
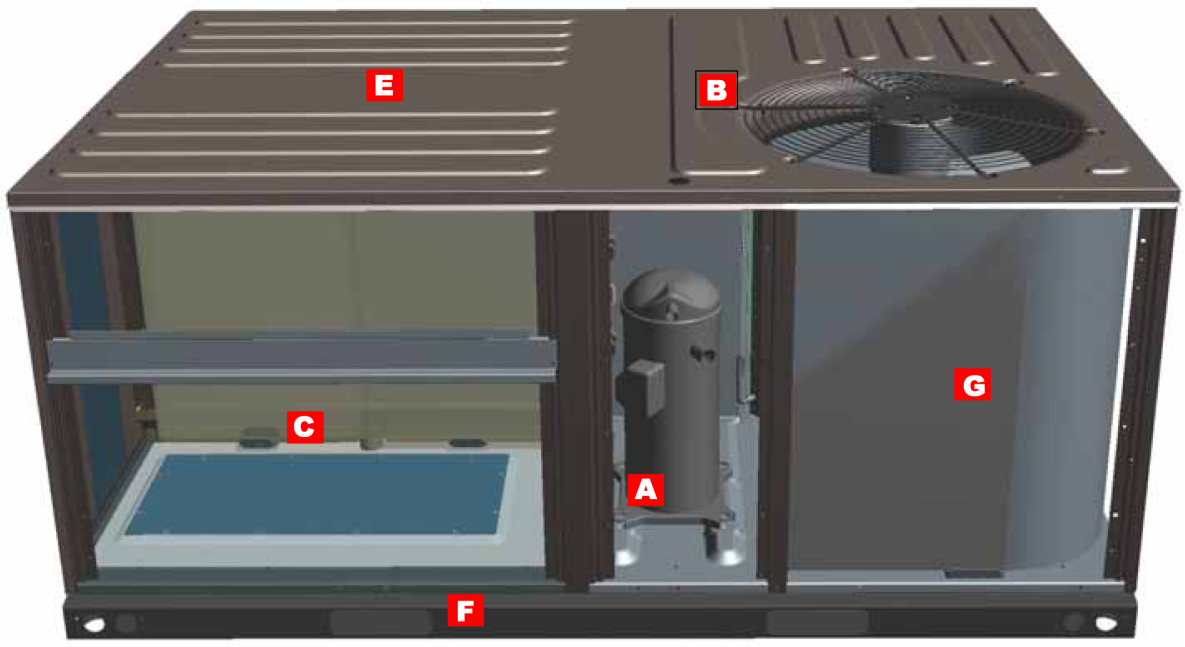


Figure 2: Cooling with gas heat (3 ton through 5 ton) back



Letter	Features
A	Scroll compressor
B	Outdoor fan
C	Filter rack
D	Smart Equipment (SE) Control Board

Letter	Features
E	Embossed top
F	Perimeter base rail
G	Coils
H	Indoor fans
J	Two-stage gas heating

See letters in Features and benefits for further description of the features.

Features and benefits

The letters in brackets in the text correspond to the letters in Figure 1 and Figure 2.

Three 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 17 SEER ZL units contain two-stage compressors and multi-stage blower control to achieve advanced rebate codes. The high efficiency 3-stage cooling units are available from 7.5 tons 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 use scroll compressors that are environmentally friendly by using R-410A refrigerant. Using 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.



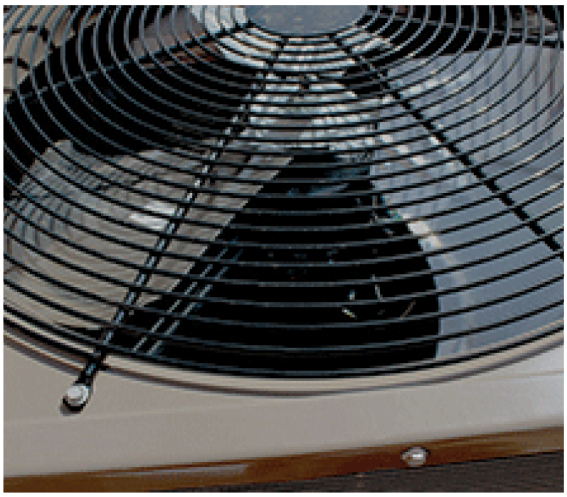
Total system design

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

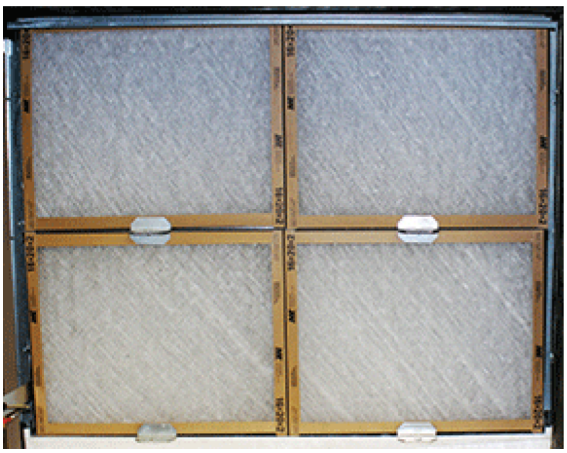
System protection

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) Filter rack - Units 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.



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All units as factory standard 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 run tested.



Versatile

You can configure the Smart Equipment™ control to work with a standard thermostat (easy to connect screw terminals), a zone sensor, or you can set it up to communicate with multiple BAS communication protocols to integrate with building automation systems.

Reduce field installed complexity

Each unit comes equipped with factory-installed supply air, return air, and outdoor air temperature sensors providing key temperature readings, reducing 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 an 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, you can program the control board 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 antishort cycle delay is incorporated into the standard control. Compressor reliability is further ensured by programmable minimum run times. For testing, you can temporarily override 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 locks out the associated compressor. The same safety must trip three times before a hard lockout occurs.

(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 fits on many existing curbs in the field. 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 use Microchannel "all-aluminum" condenser coils that provide 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.

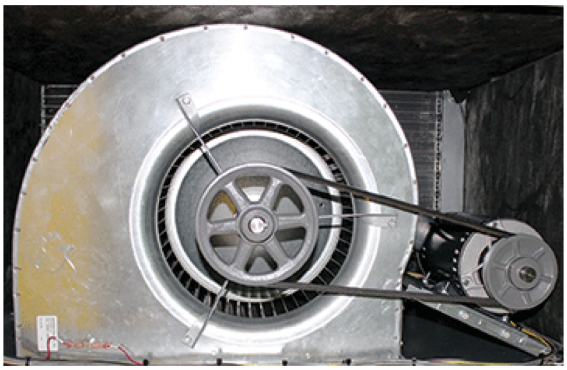
Optional MagnaDry™ dehumidification system

Units optioned with Micro-channel all-aluminum type reheat coils provide superior dehumidification at a wide range of outdoor temperatures. This system provides comfort without over-cooling the space. Available on ZY 3 ton to 10 ton and ZL 3 ton to 12.5 ton high efficiency units only.



All evaporator coils use 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 ton to 5 ton products. The belt drive option is standard on 6 ton to 12.5 ton products. Low, medium, and high Static drive options for airflow versatility up to 2 in. 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 ton to 12.5 ton products and standard on the belt drive 17 SEER units and 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 first and second stage gas heating. The first stage of a two stage gas heat option provides approximately 70% of the heating capacity in all 3 tons to 12.5 tons two stage gas heat models. Balanced heating allows the unit to better maintain required temperatures and helps saves 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 ton to 5 ton; Belt Drive for 6 ton to 12.5 ton) • B=Medium static (belt drive for 3 ton to 12.5 ton) • C=High static (belt drive for 3 ton to 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 contains 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™ (17 SEER belt drive models and 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 and 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 and 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 and 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 and outdoor coil (fin/tube design on indoor coil and MicroChannel design used on outdoor coil. E-coat coating added to indoor and outdoor coil) • E=Standard indoor and outdoor coils (fin/tube design on indoor coil and MicroChannel design used on outdoor coil with no E-coat coating added) with reheat • F=Standard indoor coil and 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) with reheat • G= E-coat indoor coil and standard outdoor coil (fin/tube design on indoor coil and MicroChannel design used on outdoor coil. E-coat coating added to indoor coil) with reheat • H= E-coat indoor coil and outdoor coil (fin/tube design on indoor coil and MicroChannel design used on outdoor coil. E-coat coating added to indoor and outdoor coil) with reheat

Controls (11)

Smart Equipment™ - This is the Standard microprocessor control for all units, with capabilities to work with a sensor or thermostat only. Smart Equipment™ with BAS includes communication board with BACnet open-protocol system. Required for units equipped with reheat option.
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, Mdbs, N2 COM Card
- E=Everyday Thermostat Control (ETC)
- 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=RA[1] smoke detector
- 3=SA smoke detector
- 4=RA[1] & SA Smoke Detector

1 Return air smoke detector sensor must be relocated in the field. (See Unit Installation manual.)

Economizer/Damper (13) (Smart Equipment™ models only)

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/ ft² at 1 in. 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
- G = Dry bulb economizer - enhanced static
- H = Enthalpy economizer - enhanced static

Convenience outlet (14)
Convenience outlet - (Powered and non-powered) - This option locates a 120 V 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 120 V 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 (60 A or 100 A 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 A, you should remove the factory installed disconnect and install an appropriately sized external disconnect. • 1=None • 2=Non-fused Disconnect[1]

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 that 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 saves 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 causing 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, the environmental temperatures and humidity using 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 in. 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 or the Everyday Thermostat Control board. 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 (except Ultra-Low NOX (ULN) models).
- **Gas heat high altitude kit -** This kit converts a gas heat unit to operate at high altitudes, 2,000 ft to 10,000 ft. Conversion kits are available for natural gas and propane (except Ultra-Low NOX (ULN) models).
- **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-V electronic and electro-mechanical thermostats. All 7.5 ton through 12.5 ton units operate with two-stage heat/ two-stage cool or two-stage cooling only thermostats and two-stage heat / three-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 ton to 12.5 ton units available. Necessary hardware and connectors are included with the heaters.

Nomenclature

3-12.5 Ton Model Number Nomenclature

ZX	G	04	D	2	A	1	A	A	1	A	1	1	1	A	2

Product Category

ZQ= Pkg AC 14 SEER Efficiency
ZX = Pkg AC Standard Efficiency
ZY = Pkg AC High Efficiency
ZL = Pkg AC High Efficiency 3-Stage/17S

Heat Type (3)

E = No Heat, Electric Heat Field Installed
G = Gas Heat

Nominal Cooling Capacity

04 = 3 Ton
05 = 4 Ton
06 = 5 Ton
07 = 6 Ton (Excludes ZL Tier)
A7 = 6 Ton (Excludes ZL Tier)
08 = 7-1/2 Ton
09 = 8-1/2 Ton
12 = 10 Ton
14 = 12-1/2 Ton (Excludes ZY Tier)

Heat Size

A = No Heat (Cooling Only)

Gas Heat

D = Low Heat
E = Medium Heat
F = High Heat
L = Low Heat (Low NOx)
M = Medium Heat (Low NOx)
N = High Heat (Low NOx)
R = Low Heat (Stainless Steel)
S = Medium Heat (Stainless Steel)
T = High Heat (Stainless Steel)
U = Low Heat (Ultra-Low NOx)
W = High Heat (Ultra-Low NOx)

Voltage

1 = 208/230-1-60 (3-5 Ton Only)
2 = 208/230-3-60
4 = 460-3-60
5 = 575-3-60

Airflow

A = Standard Static
B = Medium Static
C = High Static

Options

1 = None
2 = VFD/VAV (ZL 3-Stage Only)
3 = VFD IntellisSpeed™ (ZXA7-ZX14, ZYA7-ZY12, ZL04-ZL06 & ZL08-ZL14

Note: Not all options may be available. Contact local distributor.

Coil Options

A = Standard Indoor & Outdoor Coils
B = Standard Indoor Coil & ElectroFin Outdoor Coil
C = E-Coat Indoor Coil & Standard Outdoor Coil
D = E-Coat Indoor & Outdoor Coils
E = Standard Indoor & Outdoor Coils w/Reheat*
F = Standard Indoor Coil & E-Coat Outdoor Coil w/Reheat*
G = E-Coat Indoor Coil & Standard Outdoor Coil w/Reheat*
H = E-Coat Indoor & Outdoor Coils w/Reheat*

*ZY04-12 and ZL04-14 reheat units in power supply of 208/230/460/575-3-60 options only.

Controls

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

Sensor Options

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

1. Return air smoke detector sensor must be relocated in the field (see unit installation manual).

Economizer / Damper

A = None
B = Dry Bulb Economizer[1]
C = Enthalpy Economizer[1]
G = Dry bulb economizer - enhanced static
H = Enthalpy economizer - enhanced static

1. Smart Equipment models only

Convenience Outlet

1 = None
2 = Non-powered
3 = Powered

Electrical Options

1 = None
2 = Non-fused Disconnect[1]

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

1 = None
2 = Louvered Panels Installed
3 = Hinged Cabinet Doors
4 = Hinged Cabinet Doors & Louvered Panels

Special Options

A = None

Product Generation

2 = Second Generation
3 = Third Generation
4 = Fourth Generation

Accessories

Table 1: Accessories

Accessory kit number	Description	Where used	Voltage
2EE04711424	Econ, DB, vertical flow, small footprint with SE	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ5, ZQ06, ZXA7	All
2EE04711524	Econ, DB, vertical flow, large footprint with SE	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2EE04707024	Econ, DB, horizontal flow, small footprint, short cabinet with SE	ZL04, ZY04, ZQ04, ZQ05	All
2EE04707124	Econ, DB, horizontal flow, small footprint, tall cabinet with SE	ZL05, ZL06, ZX07, ZXA7, ZY05, ZY06, ZQ06	All
2EE04707224	Econ, DB, horizontal flow, large footprint, short cabinet with SE	ZYA7	All
2EE04707324	Econ, DB, horizontal flow, large footprint, tall cabinet with SE	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1FA0415	Manual outside air damper 0-35%	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1FA0416	Manual outside air damper 0-35%	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1FA0417	Manual outside air damper 0-100%	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1FA0418	Manual outside air damper 0-100%	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2MD04704424	0-35% motorized outside air damper	ZXA7, ZQ04-06, ZY04-06, ZL04-06,	All
2MD04704524	0-35% motorized outside air damper	ZYA7-ZY12	All
2MD04704224	Motorized outside air damper 0-100%	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZXA7	All
2MD04704324	Motorized outside air damper 0-100%	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, ZL04	All
1HD0402	Hinged filter access panel for units with a horizontal economizer	ZQ06, ZL05, ZL06, ZY05, ZY06, ZXA7	All
1HD0403	Hinged filter access panel for units with a horizontal economizer	ZYA7	All
1HD0404	Hinged filter access panel for units with a horizontal economizer	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1HG0419	Hail guard kit small footprint, short cabinet	ZY04, ZL04, ZQ04, ZQ05	All
1HG0420	Hail guard kit small footprint, tall cabinet	ZL05, ZL06, ZY05, ZY06, ZQ06, ZXA7	All
1HG0423	Hail guard kit large footprint, short cabinet	ZYA7	All
1HG0424	Hail guard kit large footprint, tall cabinet	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1RC0456	Curb rigid 14 in. small footprint	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1RC0457	Curb rigid 14 in. large footprint	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1RC0458	Curb rigid 24 in. small footprint	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1RC0459	Curb rigid 24 in. large footprint	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2PE04704206	Power exhaust vertical flow small footprint 208 V to 230 V 1-ph	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-1-60

Table 1: Accessories

Accessory kit number	Description	Where used	Voltage
2PE04704225	Power exhaust vertical flow small footprint 208 V to 230 V 3-ph	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-3-60
2PE04704246	Power exhaust vertical flow small footprint 460 V 3-ph	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60
2PE04704258	Power exhaust vertical flow small footprint 575 V 3-ph	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	575-3-60
2PE04704306	Power exhaust vertical flow large footprint 208 V to 230 V 1-ph	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-1-60
2PE04704325	Power exhaust vertical flow large footprint 208 V to 230 V 3-ph	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2PE04704346	Power exhaust vertical flow large footprint 460 V 3-ph	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2PE04704358	Power exhaust vertical flow large footprint 575 V 3-ph	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	575-3-60
2PE04704406	Power exhaust horizontal flow small footprint 208 V to 230 V 1-ph	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-1-60
2PE04704425	Power exhaust horizontal flow small footprint 208 V to 230 V 3-ph	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-3-60
2PE04704446	Power exhaust horizontal flow small footprint 460 V 3-ph	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60
2PE04704458	Power exhaust horizontal flow small footprint 575 V 3-ph	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	575-3-60
2PE04704506	Power exhaust horizontal flow large footprint 208 V to 230 V 1-ph	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-1-60
2PE04704525	Power exhaust horizontal flow large footprint 208 V to 230 V 3-ph	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2PE04704546	Power exhaust horizontal flow large footprint 460 V 3-ph	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2PE04704558	Power exhaust horizontal flow large footprint 575 V 3-ph	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	575-3-60
1HA0454	High altitude kit for natural gas (2,000-10,000 ft) **Note:** Not for use with Ultra-Low NOx (ULN) models	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7 - Low, Med, High Heat ZYA7 - Low Heat	All
1HA0455	High altitude kit for natural gas (2,000-10,000 ft)	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14 - Low, Med, High Heat ZYA7 - Med, High Heat	All
1NP0456	Propane conversion kit. **Note:** Not for use with low NOx or Ultra-Low NOx (ULN) models	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7 - Low, Med, High Heat ZYA7 - Low Heat	All
1NP0457	Propane conversion kit	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14 - Low, Med, High Heat ZYA7 - Med, High Heat	All
1HA0458	High altitude kit for propane (2,000-10,000 ft) **Note:** Not for use with low NOx or Ultra-Low NOx (ULN) models	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7 - Low, Med, High Heat ZYA7 - Low Heat	All
1HA0459	High altitude kit for propane (2,000-10,000 ft)	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14 - Low, Med, High Heat ZYA7 - Med, High Heat	All
1FE0414	Flue exhaust kit	ZLG04, ZYG04, ZQG04, ZQG05	All
1FE0415	Flue exhaust kit	ZXGA7, ZLG05, ZLG06, ZYG05, ZYG06, ZYGA7, ZQG06	All
1FE0416	Flue exhaust kit	ZYG08, ZYG09, ZYG12, ZL08, ZL09, ZL12, ZL14	All

Table 1: Accessories

Accessory kit number	Description	Where used	Voltage
1HS0401	Flue heat shield accessory	ZQ04, ZQ05, ZQ06, ZXA7, ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2EK04510625	6.5 kW electric heat	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-(1 or 3)-60
2EK04510646	6.0 kW electric heat	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60
2EK04510725	6.5 kW electric heat	ZYA7	208/230-3-60
2EK04510746	6.0 kW electric heat	ZYA7	460-3-60
2EK04511058	9.2 kW electric heat	ZL04, ZL05, ZY04, ZY05, ZQ04, ZQ05	575-3-60
2EK04511125	10.5 kW electric heat	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-(1 or 3)-60
2EK04511146	11.5 kW electric heat	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60
2EK04511458	13.8 kW electric heat	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06	575-3-60
2EK04511446	14 kW electric heat	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	460-3-60
2EK04511625	16 kW electric heat	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-3-60
2EK04511725	16 kW electric heat	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2EK04511746	16.5 kW electric heat	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2EK04511758	17 kW electric heat	ZYA7, ZY08, ZY09, ZL08, ZL09, ZL14	575-3-60
2EK04512358	23 kW electric heat	ZL06, ZX06, ZY06, ZQ06	575-3-60
2EK04510625	6.5 kW electric heat	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	208/230-(1 or 3)-60
2EK04512525	24.8 kW electric heat	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2EK04512646	25.5kW electric heat	ZYA7	460-3-60
2EK04512658	25.7kW electric heat	ZYA7	575-3-60
2EK04512846	27.8 kW electric heat	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2EK04513225	32 kW electric heat	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2EK04513346	33 kW electric heat	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2EK04513458	34 kW electric heat	ZY08, ZY09, ZL08, ZL09, ZL14	575-3-60
2EK04514225	42.4 kW electric heat	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	208/230-3-60
2EK04514246	41.7 kW electric heat	ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	460-3-60
2LA04704725	Low ambient accessory kit	ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06	208 V/230 V-1-60 or 208 V/230 V-3-60
2LA04704746	Low ambient accessory kit	ZY04, ZY05, ZYA7, ZQ04, ZQ05, ZQ06	460 V-3-60
2LA04704758	Low ambient accessory kit	ZY04, ZY05, ZY08, ZQ04, ZQ05, ZQ06	575 V-3-60
2LA04704825	Low ambient accessory kit	ZYA7, ZY08, ZY09, ZL08, ZL09	208 V/230 V-1-60 or 208 V/230 V-3-60
2LA04704846	Low ambient accessory kit	ZYA7, ZY08, ZY09, ZL08, ZL09	460 V-3-60
2LA04704858	Low ambient accessory kit	ZYA7, ZY08, ZY09, ZL08, ZL09	575 V-3-60

Table 1: Accessories

Accessory kit number	Description	Where used	Voltage
2LA04704925	Low ambient accessory kit	ZY12, ZL12, ZL14	208 V/230 V-3-60
2LA04704946	Low ambient accessory kit	ZY12, ZL12, ZL14	460 V-3-60
2LA04704958	Low ambient accessory kit	ZY12, ZL12, ZL14	575 V-3-60
2SD04701224	Supply air stream smoke detector	ZXA7, ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZYA7, ZY08, ZY09, ZY12, ZQ04, ZQ05, ZQ06, ZL08, ZL09, ZL12, ZL14	All
2SD04701124	Return air stream smoke detector	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
2SD04701424	Return air stream smoke detector	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
2SD04701324	Combination supply and return air stream smoke detector	ZY04, ZY05, ZY06, ZL04, ZL05, ZL06, ZQ04, ZQ05, ZQ06, ZXA7	All
2SD04701624	Combination supply and return air stream smoke detector	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1TB0401	Small footprint through the base electrical and through the curb gas	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1TB0402	Large footprint through the base electrical and through the curb gas	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1TB0403	Small footprint through the base electrical and gas	ZL04, ZL05, ZL06, ZY04, ZY05, ZY06, ZQ04, ZQ05, ZQ06, ZXA7	All
1TB0404	Large footprint through the base electrical and gas	ZYA7, ZY08, ZY09, ZY12, ZL08, ZL09, ZL12, ZL14	All
1LD0420	High speed drive kit	ZQ05	3-phase only