

COMMERCIAL PRODUCT LINE

AFFINITY™ AND LX™ SERIES

# WATER SOURCE/GEOTHERMAL HEAT PUMPS





# York Affinity™ and LX™ Series Commercial Product Line

Built on a foundation of innovation and quality, York Affinity™ and LX™ Series Commercial Products are dependable and cost effective for any water source or geothermal commercial application. A wide range of capacities and features are available to offer the exact specifications needed for any job. And each and every unit is subjected to a rigorous battery of computerized run-tests so you can rest assured that every one meets or exceeds standards for efficiency, safety, and reliable operation.

Invest in the perfect combination of efficiency, flexibility, and environmental responsibility by installing York Affinity™ and LX™ Series Commercial Products.



# **Typical Applications**

York Affinity and LX Series products can be designed to fit into a variety of applications. These versatile systems are perfect for boiler/tower as well as geothermal and hybrid configurations.



#### **Vertical Loop**

The ideal choice when limited land surface is available. Well-drilling equipment is used to bore the 75 ft. to 300 ft. deep, small-diameter holes that will accommodate the loop.



#### **Open Loop**

These loop systems utilize ground water as a direct energy source. In ideal conditions an open loop application can be the most economical type of ground-source system.



#### **Boiler/Tower**

Where large ground-source systems are not viable, existing boiler/tower installations are often retrofitted. Hybrid systems use a ground-source loop coupled with down-sized conventional heat rejection or boiler/tower equipment.



#### **Pond Loop**

Very economical to install when an adequate body of water is available, because excavation costs are virtually eliminated. Coils of pipe are simply placed on the bottom of the nearby pond or lake.

#### 10% Federal Tax Credit

A 10% Federal Energy Tax Credit and 5-year accelerated depreciation deductions are available for costs associated with energy property using geothermal heat pumps, construction of which must begin before January 1, 2024. The geothermal equipment must be located in the United States and use the ground or ground water as a thermal energy source for heating or thermal sink for cooling. IRS Form 3468 can be used to claim the energy credit which may be used to offset both regular income taxes and alternative minimum taxes. If the tax credit exceeds the income tax liability, the loss can be carried back one taxable year and the remaining balance can be carried forward into future years. Contact your tax professional for more information.



# **Respected Name**

There's a reason people trust us with the big jobs. We've been doing this a long time. Over 135 years, in fact. And we're constantly leading the industry in our design and our technology. No matter what the scale, chances are we've developed an efficient, durable and effective solution for it.





#### **LEED** certification

The LEED system is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. The USGBC (United States Green Building Council), promotes buildings that are environmentally responsible, profitable and healthy places to work with these ratings. York water source & geothermal systems can contribute in several sections of LEED, including energy efficiency and IAQ, to help you achieve points and the ultimate status in green building.



# **Efficiency**

Water source/geothermal heat pumps are much more efficient than traditional heating and cooling systems. The York Affinity™ and LX™ Series commercial product line combines the latest technology for industry-leading efficiencies into compact cabinets to provide the perfect solution for any application.



#### **Cost effective**

A York water source/geothermal system is so efficient, usually any added costs are more than offset by annual energy savings. In fact, most building owners see an immediate positive return on investment.



# Versatile

No combustion or flames are used to operate a geothermal heat pump, making it a safe choice for your building. Our systems efficiently move heat from one area of the building to another where it can be utilized or rejected.



#### Reliable

York uses only the highest-quality components, design, and workmanship. Computer run-testing after assembly ensures that your equipment performs flawlessly at startup.



#### **Flexible**

A variety of sizes and configurations are available, so no matter your application, a York Affinity $^{\text{TM}}$  or LX $^{\text{TM}}$  will work for you.



### **Geothermal Solution**

In geothermal applications, heat is efficiently harnessed or deposited in the earth for additional savings. Since our units don't burn expensive, polluting fossil fuels, they're the most environmentally responsible options available today. Installing geothermal can minimize acid rain threats, air pollution, and the greenhouse effect.



# LX™ Compact YB Series - 0.5 to 6 tons

Overall efficiency, performance & features: \*\*\*

17.0 EER | 3.5 COP

A value product line, the LX<sup>TM</sup> YB Series is engineered to provide a small cabinet footprint while maintaining high efficiency as well as value-added features. It's an ideal solution for both retrofit and new construction applications and performs efficiently in both water loop and geothermal applications.







# Affinity™ Compact YK Series - 0.75 to 6 tons

30.0 EER | 4.8 COP

Overall efficiency, performance & features: \*\*\*\*

Perfect for retrofit and boiler/tower applications, the YK Series offers industry-leading efficiencies in a small cabinet. More than twice as efficient as the ASHRAE 90.1 standard and featuring the Aurora generation of controls, the YK is the perfect fit for any building. Options include hot gas bypass and reheat; factory-installed 24V motorized on/off water valve for VFD pumping with automatic internal water flow control; and high efficiency 5-Speed ECM, or variable speed ECM blower motors to fit your efficiency and comfort needs.







#### Affinity™ Large YDL Series - 7 to 30 tons

17.5 EER | 5.6 COP

Overall efficiency, performance & features: \*\*\*\*/2

Available for both water source heat pump applications and extended range geothermal applications, the Affinity™ YDL Series is an exceptional choice for large zones in commercial and institutional applications. YDL units provide excellent performance, reliability, flexibility, and high efficiency while integrating easily with building automation systems.







# Affinity™ Console YC Series - 0.75 to 1.5 tons

Overall efficiency, performance & features: \*\*\*

The YC Series console is the ideal system for non-ducted applications like garages, sunrooms, hotels, or classrooms. It boasts high efficiencies and a wide range of options and capacities to fit any building need. A rotary compressor, high performance 3-speed blower motor, and an all-aluminum air coil provide impressive efficiencies and long-term reliability.







# Affinity™ Low Sill YCL Series - 0.75 to 1.5 tons

14.3 EER | 3.0 COP

16.0 EER | 3.5 COP

Overall efficiency, performance & features: \*\*\*\*

The YCL Series console boasts many of the same features of the YC Series but also offers lower sill clearance. Fitting perfectly beneath windowsills, the YCL provides efficient heating and cooling for any application that doesn't require ductwork. The console is available in a variety of cabinet and piping configurations and utilizes the latest in component and design technology for ease of installation in any application.







### Affinity™ Hydronic YHS Series - 1.5 to 6 tons

17.5 EER | 3.1 COP

Providing efficient hot water generation, the YHS Series is perfect for radiant floor, process water installations, aquaculture, and pool/spa heating. It offers a wide range of operating temperatures, a compact size, and reversible control box and piping to allow for flexibility in any application. Available as heating only or heating/cooling models, the YHS boasts many quality components and exceptional hot water energy savings.







# Affinity™ Hydronic YHT Series - 8 to 15 tons

22.0 EER | 3.5 COP

Overall efficiency, performance & features: \*\*\*/2

The YHT Series is perfect for high volume hot water demands for any building application. Available in a wide range of capacities from 8 to 15 ton, the YHT provides efficient hot water generation for radiant floor, process water installations, aquaculture, and pool/spa heating. Offering a wide range of temperatures, compact size, and piping flexibility, the YHS boasts many quality components and exceptional hot water savings.





# Product Specifications

- Stainless Steel Drain Pan







VERTICAL AND HORIZONTAL MODELS AVAILABLE

- Sound Kit

	MODELS AVAILABLE	MODELS AVAILABLE	MODELS AVAILABLE
	LX™ Compact Series	Affinity™ Compact YK Series	Affinity™ Large YDL Series
Style	Water to Air	Water to Air	Water to Air
Capacity Range (Tons)	0.5 - 6	0.75 - 6	7 - 30
Sizes Available (Tons)	0.5, 0.75, 1, 1.25, 1.5, 2, 2.5, 3, 3.5, 4, 5, 6	0.75, 1, 1.25, 1.5, 2, 2.5, 3, 3.5, 4, 5, 6	7, 8, 10, 12, 13, 15, 20, 25, 30
<b>Efficiency</b> Water Loop Heat Pump	13.2 - 14.7 EER 4.3 - 4.9 COP	15.0 - 21.6 EER 4.8 - 6.4 COP	12.1 - 17.5 EER 4.0 - 5.6 COP
Ground Loop Heat Pump	15.6 - 17.0 EER 3.3 - 3.5 COP	17.0 - 30.0 EER 3.7 - 4.8 COP	14.0 - 25.0 EER 3.2 - 4.2 COP
Compressor	Rotary or Scroll	Rotary or Scroll	Dual Scroll
Blower	5-Speed ECM	5-Speed ECM, Variable speed ECM	Variable Speed ECM - Backward Inclined
Cabinet Configuration	Vertical upflow or Horizontal	Vertical Upflow or Horizontal	Vertical Horizontal Vertical Take-Apart
Control Type	Aurora	Aurora	Aurora
Hot Water Generator (Coil Only)	N/A	015 - 070 Vertical only	N/A
Available Voltages	208-230/60/1 265/60/1 208-230/60/3 460/60/3 575/60/3 115/60/1 (006-012 Only)	208-230/60/1 265/60/1 208-230/60/3 460/60/3 575/60/3	208-230/60/3 460/60/3 575/60/3
Air Coil Construction	All Aluminum	All Aluminum	All Aluminum
Factory Installed Options	- Internal 2 way valve - Flow regulator - MERV 13 2" filter - Internal non-fused disconnect - Coated Coil - Sound Kit	- Hot gas reheat - Internal 2 way valve - Flow regulator - Hot gas bypass - Stainless steel drain pans - MERV 13 2" filter - Coated Coil	- Hot gas reheat - Hot gas bypass - Stainless steel drain pans - MERV 13 2" filter - Coated Coil - Sound Kit

- Coated Coil

- Sound Kit



- Coated Coil

- Sound Kit

- Sound Kit







Affinity™ Console YC Series	Affinity™ Low Sill YCL Series	Affinity™ Hydronic YHS Series	Affinity™ Hydronic YHT Series
Water to Air	Water to Air	Water to Water	Water to Water
0.75 - 1.5	0.75 - 1.5	1.5 - 6	8 - 15
0.75, 1, 1.25, 1.5	0.75, 1, 1.25, 1.5	1.5, 2, 3.5, 4, 5, 6	8, 10, 12, 15
12.3 - 13.6 EER 4.3 - 4.9 COP	12.2 EER 4.3 - 4.4 COP	12.3 - 15.5 EER 4.2 - 4.8 COP	13.3 - 15.8 EER 3.9 - 4.6 COP
14.2 - 16.0 EER 3.1 - 3.5 COP	13.5 - 14.3 EER 2.8 - 3.0 COP	14.0 - 17.5 EER 2.9 - 3.1 COP	15.8 - 22.0 EER 2.7 - 3.5 COP
Rotary	Rotary	Scroll	2 - Scroll
3-Speed ECM	(ECM on 15 & 18)	N/A	N/A
Console: Floor Mount, Slope Top, Chassis Only, Extended Slope Top, Flat Top	Console: Floor Mount, Slope Top, Chassis Only, Flat Top	Compact Unit	Compact Unit: Top & Back mounted water connections. Field switchable control box.
Aurora	Aurora	Aurora	Aurora
N/A	N/A	040 - 075 models only	N/A
115/60/1 208-230/60/1 265/60/1	208-230/60/1 265/60/1 115/60/1 (09-12 Only)	208-230/60/1 265/60/1 208-230/60/3 460/60/3 575/60/3	208-230/60/1 208-230/60/3 460/60/3 575/60/3
All Aluminum	All Aluminum	N/A	N/A
- 1-3 kW boilerless electric heat - Remote wall thermostat - Unit mounted thermostat	- Remote wall thermostat - Unit mounted thermostat - Coated Coil	- Copper or Cupronickel coaxial heat exchangers	- Back or Top water connection - Front or back control box location



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