Air-Cooled Heat Pumps -

A full portfolio of solutions for comfort and process applications



As buildings continue to evolve in size and function, their cooling & heating systems must meet increasingly rigorous demands in an efficient and sustainable way. But often, what works for one project may not work for another, even with similar specifications. Location, utility rates and architectural features all introduce challenging variables that must be accounted for.

That's why Withair® has developed a robust portfolio of air-cooled heat pumps with intentional overlap in capacity, efficiency and sound performance. Our large selection gives customers the ability to make targeted equipment customizations with the opportunity to reduce energy intensity and lessen environmental impact.

The result is numerous system designs and heat pump configurations with a variety of possible efficiency levels. So, whether our customers are calculating energy efficiency to meet local code requirements, selecting an HVAC system with the lowest operating costs, there's a Withair® solution for you.

No matter which one you choose, you can rest easy knowing that every Withair® product is backed by the proven reliability and performance. It's how we help customers make the easy decision to choose Withair® — and how we continue to go beyond.

Read on to see which Withair® air-cooled heat pump model is right for your project.

No matter your application, there's a Withair® air-cooled heat pump that's right for you !

Air-Cooled (Mini) Heat Pumps & Chillers

Capacity	Model & Description

8.2 to 52.4 kW
2 to 15 tons



Model W01R1-I series
Refrigerant: R-410A, R-454B
Compressor: DC Inverter Hermetic Scroll
Power supply : 50 and 60 Hz
Ideal applications: Comfort and process cooling; Heat recovery sites.
Unique features : DC Inverter scroll compressor(10~120Hz); 60Hz~330Hz inverter controller; BAS communications; Self-diagnosis function; High precision of temperature control; Brazed plate heat-exchanger; Superior performance; Easy layout.
Factory-installed options: VSD hydronic pump kit; ECM fans; Extreme low-ambient kit to -35℃ (-31℉); High ambient kit to 55℃ (131℉); Heat recovery capability; Double-pipe heat-exchanger; Flow switch; Metallic filter; Expansion tank; Anti-corrosion; Sound-reduction packages, etc.

Overview

Withair® **Air Cooled Inverter (Mini) Heat Pump & Chiller** is a very intelligent system with flexible capacity output. It could adjust cooling/heating capacity output automatically according to requirements. It is much more energy-saving with a long lifespan. and provides energy-efficient room cooling/heating for residential and small commercial application. Using free renewable energy from the air, the units are highly efficient with low running costs, low carbon emission.

8.2 to 52.4 kW
2 to 15 tons



Model W01R1-IR4 series
Refrigerant: R-32
Compressor: DC Inverter Hermetic Scroll
Power supply : 50 and 60 Hz
Ideal applications: Comfort and process cooling; Heat recovery sites.
Unique features : DC Inverter scroll compressor(10~120Hz); 60Hz~330Hz inverter controller; BAS communications; Self-diagnosis function; High precision of temperature control; Brazed plate heat-exchanger; Superior performance; Easy layout.
Factory-installed options: VSD hydronic pump kit; ECM fans; Extreme low-ambient kit to -35℃ (-31℉); High ambient kit to 55℃ (131℉); Heat recovery capability; Double-pipe heat-exchanger; Flow switch; Metallic filter; Expansion tank; Anti-corrosion; Sound-reduction packages, etc.

Overview

The new generation Withair® **small full inverter chiller & heat pump** uses R-32 refrigerant to reduce drastically the carbon footprint of the unit. The selection of R-32 (chemical name difluoromethane) minimises the global warming impact of scroll compressor units thanks to the lower Global Warming Potential in combination with high-energy efficiency. The Global Warming Potential of R-32 is 675, which is only one third of the commonly used refrigerant R-410A.Thanks to the low flammability classification (R-32 refrigerant is classified A2L in ISO817), it can be safely used in many applications including chilled water systems. Being a single component refrigerant, R-32 is also easier to recycle and reuse, that is another environmental plus in its favour.

Modular Air-Cooled Scroll Heat Pumps & Chillers

Capacity	Model & Description

72 to 565 kW
20 to 160 tons



Model W01R1 series

Free cooling economizer as option

Refrigerant: R-410A, R-454B
Compressor: Hermetic Scroll
Power supply: 50 and 60 Hz
Ideal applications: Comfort and process cooling; Glycol chilling; Heat pumps; Heat recovery sites; Industrial cooling.
Unique features: Shell & tube heat-exchanger; Smart control; BAS communications; Easy serviceability; Great flexibility; Robust reliability; Service isolation valves; Ease of installation; Easy layout; Multiple protection functions; Compact design and smaller footprint.
Factory-installed options: Hydronic pump kit; Extreme low-ambient kit to -35℃ (-31℉); High ambient kit to 55℃ (131℉); Heat recovery capability; Brazed plate heat-exchanger; Flow switch; Metallic filter; Expansion tank; Anti-corrosion; Sound-reduction packages, etc.

Overview

Withair® **Modular Air-Cooled Scroll Heat Pump & Chiller** offers the perfect combination of flexibility, efficiency and low noise. Available in sizes ranging from 20 to 160 tons with a compact footprint. There are multiple levels of efficiency to choose from to comply with your local code requirements.

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72 to 565 kW
20 to 160 tons



Model W01R1-I series

Free cooling economizer as option

Refrigerant: R-410A, R-454B
Compressor: Inverter Hermetic Scroll
Power supply: 50 and 60 Hz
Ideal applications: Comfort and process cooling; Glycol chilling; Heat pumps; Heat recovery sites; Industrial cooling;
Unique features: Inverter scroll compressor(10~120Hz); 60Hz~330Hz inverter controller; BAS communications; Easy layout; High precision of temperature control; Shell & tube heat-exchanger; Fast cooling; Superior performance; Small footprint.
Factory-installed options: VSD hydronic pump kit; Extreme low-ambient kit to -35℃ (-31℉); High ambient kit to 55℃ (131℉); VSD/EC fans; Heat recovery capability; Brazed plate heat-exchanger; Flow switch; Metallic filter; Expansion tank; Anti-corrosion; Sound-reduction packages, etc.

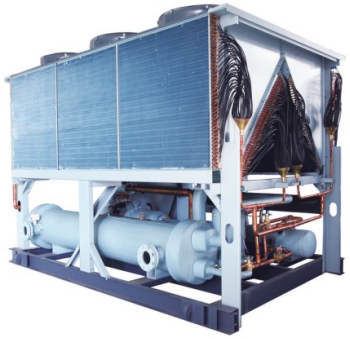
Overview

In an effort to reduce the energy consumed by cooling & heating, Withair® has developed the W02C1-I series **Modular Inverter Air-Cooled Scroll Heat Pump & Chiller** by leveraging the latest DC inverter compressor technology, Variable Speed Drive (VSD), offering the right balance of energy efficiency and quiet operation. Its exceptional efficiency at both full load and part load set new benchmarks for the industry, making the new inverter chiller stand out as the premium solution for small-to-medium size commercial and industrial applications, making them ideal for buildings with a large amount of off-peak operation.

Air-Cooled Screw Heat Pumps & Chillers

Capacity	Model & Description

200 to 1,516 kW
60 to 460 tons



Model W01R1-S series
Refrigerant: R-134a, R-513A
Compressor: Semi-hermetic Screw
Power supply: 50 and 60 Hz

Free cooling economizer as option

Ideal applications: Comfort and process cooling; Glycol chilling; Heat pumps; Heat recovery sites; Industrial cooling;
Unique features: BAS communications; Shell and tube condenser; DX evaporator; Capacity turndown to 10 percent load; Operation from -17℃ (0°F) to 125℃ (51°F) ambient; Microprocessor control center touch-screen; Easy serviceability; Great flexibility; Robust reliability.
Factory-installed options: Hydronic pump kit; Extreme low-ambient kit to -35℃ (-31°F); High ambient kit to 55℃ (131°F); Quick start; Heat recovery capability; Electrostatic coating; Flow switch; Metallic filter; Expansion tank; Anti-corrosion; Sound-reduction packages, etc.

Overview

The Withair® **Air-Cooled Screw Heat Pump & Chiller** is designed to meet current and future requirements in terms of reliability, energy efficiency and intelligent control. we adopt touchable screen display and Siemens PLC controls, twin-rotor screw compressors, low operating noise benefit from low-noise, low-vibration fans and double-wall structure screw compressor.

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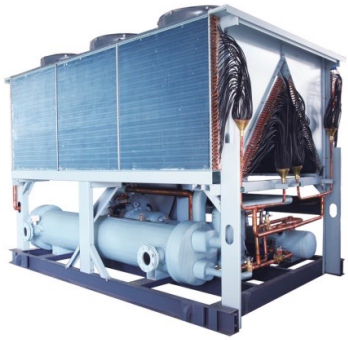
200 to 1,516 kW
60 to 460 tons



Model W01R1-SV series
Refrigerant: R-134a, R-513A
Compressor: VSD Semi-hermetic Screw
Power supply: 50 and 60 Hz

Free cooling economizer as option

Ideal applications: Comfort and process cooling; Glycol chilling; Heat pumps; Heat recovery sites; Industrial cooling;
Unique features: Variable speed drive; Shell and tube condenser; DX evaporator; Siemens PLC control system; BAS communications; Operation from -29℃ (-20°F) to 55℃ (131°F) ambient; High precision of temperature control; Superior performance; Variable flow rates.
Factory-installed options: VSD hydronic pump kit; VSD/EC fans; Hybrid falling film evaporator; Vibration Isolators; Economizer; Strainer; Heat recovery capability; Quick start; Electrostatic coating; Flow switch; Expansion tank; Anti-corrosion; Sound-reduction packages, etc.

Overview

The W02C1-SV series **Air-Cooled, Variable-Speed Drive (VSD) Screw Heat Pump & Chiller** from Withair® is designed to improve reliability and performance through proven technology and a customizable, highly optimized design. Installed across the globe, the unit offers a tailored solution for a broad range of applications. variable volume rates improves part-load efficiency makes the chiller a great choice in a variety of applications. With optional Quick Start technology, the Withair® Air-Cooled VSD Screw Heat Pump & Chiller is the more reliable, lower maintenance solution for high-efficiency cooling/heating.

Heat Pump Water Heaters

Capacity	Model & Description

21 to 81 kW
6 to 23 tons



Model W01R1-IHT series
Refrigerant: R-410A, R-134a
Compressor: Inverter Hermetic Scroll
Power supply: 50 and 60 Hz
Ideal applications: Food/drinks processing industry; Hospital; Electroplating dyeing industry, Textile printing and dyeing industry, Drying industry; Sterilization line; Oil drilling; military industry etc.
Unique features: Smart control; BAS communications; Easy layout; Easy serviceability; Great flexibility; Robust reliability; Service isolation valves; Ease of installation; Multiple protection functions; Shell & tube/ Brazed plate heat-exchanger; Compact design and smaller footprint.
Factory-installed options: Hydronic pump kit; Extreme low-ambient kit to -35℃ (-31°F); High ambient kit to 55℃ (131°F); Flow switch; Brazed plate heat-exchanger; Metallic filter; Expansion tank; Anti-corrosion; Sound-reduction packages; etc.

Overview

Withair® **High Temperature (Up to 90℃) DC Inverter Heat Pump Water Heater** with double compressors to producing hot water by two stage cascading operation. Best combination between the R410A excellent low-temperature characteristics and R134a high temperature properties. Outlet hot water temperature can set from 55℃~90℃ as user requirement, so it is widely using home radiator heating by 65℃, 75℃,85℃ or 90℃ hot water for industry heating use.

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4 to 85 kW
1.2 to 25 tons



Model W01R1-WH series
Refrigerant: R-410A, R-454B
Compressor: Hermetic Rotary/Scroll
Power supply: 50 and 60 Hz
Ideal applications: Comfort and Industrial process heating
Unique features: Smart control; BAS communications; Easy layout; Easy serviceability; Great flexibility; Robust reliability; Service isolation valves; Ease of installation; Multiple protection functions; Shell & tube/ Brazed plate heat-exchanger; Compact design and smaller footprint.
Factory-installed options: Hydronic pump kit; Extreme low-ambient kit to -35℃ (-31°F); High ambient kit to 55℃ (131°F); Flow switch; VSD fans; Metallic filter; Expansion tank; DC Inverter compressor; Anti-corrosion; Sound-reduction packages, etc.

Overview

With high efficiency and energy saving advantages, Withair® **Air Source Heat Pump Water Heater** is free modular combination, the maximum output water temperature is up to 65 ℃.It is widely used in large hot water project of apartment, villa, school, hotel, restaurant and hospital, etc. and equipped with bigger and more powerful compressors, larger heating capacity output to meet big heat consumption.

Air to Water Multipurpose Unit _
Simultaneous and Independent Production of Hot and Chilled Water

Capacity	Model & Description

72 to 565 kW
20 to 160 tons



Model W01R1 series
Refrigerant: R-410A, R-454B
Compressor: Hermetic Scroll
Power supply: 50 and 60 Hz
Ideal applications: Simultaneous and independent production of chilled water, medium temperature hot water and high temperature hot water (also suitable for domestic use); Heat recovery for simultaneous;
Unique features: Shell & tube heat-exchanger; Smart control; BAS communications; Easy serviceability; Great flexibility; Robust reliability; Service isolation valves; Ease of installation; Easy layout; Multiple protection functions; Compact design and smaller footprint.

Overview

The multipurpose units designed for 2 or 4-pipe systems. and is the range of multipurpose external units operating on refrigerant R-410A/R-454B With just one unit simultaneous and independent requests for hot and chilled water canbe accommodated all year round. The base, the structure and the panels are made ofgalvanized steel treatedwith polyester paint RAL 9003. Withair® **Air to Water Multipurpose Unit** offers the perfect combination of flexibility, efficiency and low noise. Available in sizes ranging from 20 to 160 tons with a compact footprint. There are multiple levels of efficiency to choose from to comply with your local code requirements.

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200 to 1,516 kW
60 to 460 tons



Model W01R1-S series
Refrigerant: R-134a, R-513A
Compressor: Semi-hermetic Screw
Power supply: 50 and 60 Hz
Ideal applications: Simultaneous and independent production of chilled water, medium temperature hot water and high temperature hot water (also suitable for domestic use); Heat recovery for simultaneous;
Unique features: BAS communications; Shell and tube condenser; DX evaporator; Capacity turndown to 10 percent load; Operation from -17℃ (0℉) to 125℃ (51℉) ambient; Microprocessor control center touch-screen; Easy serviceability; Great flexibility; Robust reliability.

Overview

The multi-purpose units are designed for residential buildings and accommodation facilities that require the simultaneous availability of heating and cooling for the rooms, along with high-temperature water (up to 75˚C on the machine outlet) for heating needs and/or DHW production.
Each single service (cooling, medium-temperature heating, high-temperature hot water) can be supplied independently of the request for the others.
The versatile functions, extended operating limits and simplified installation of these units mean that they can also be used in a variety of different industrial processes. Withair® multi-purpose unit is the ideal solution for both new installations and upgrading existing systems.

Benefits At A Glance

The industrial-grade design of the Withair® Air-Cooled Heat Pump & Chiller is ideal for both industrial and commercial markets, in applications such as office buildings, hospitals, schools, retail buildings, and industrial facilities. The latest advanced compressor, wide operating temperature range, advanced controls, electronic expansion valve, and high efficiencies mean that heat pump is the perfect choice for tight temperature control in almost any application temperatures, and under widely varying loads.

For Building Owners and Managers

- Quiet operation
- Easy to maintain
- Reliable operation
- Reduces operating expenses
- Environmentally sound refrigerant
- Building automation system compatible

For Consulting Engineers

- HFC refrigerants
- High-efficiency optimization
- Ideal for replacement projects
- Compliant local code requirements
- Quick response technical support services

For Contractors

- Compact footprint
- Diagnostic controls
- Easy to break down
- Ideal for replacement
- Reliable performance
- Reduces installation expenses

Premium manufacturer in HVACR products
for Heating,Cooling and Indoor Air Quality.

Learn more at www.withairgroup.com
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About Withair ®

Withair® is the premium manufacturer in sustainable energy solutions supplying HVACR products & services for heating, cooling, hot water, indoor air quality, industrial refrigeration, and heat recovery that reflect today's demand for sustainable construction, comfortable indoor climate and industrial cooling & heating process application.

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