Innovative Design, Performance, & Serviceability

Water-Source Heat Pumps

Rooftop Units • Self-Contained Units • Horizontal and Vertical Units
For over 15 years AAON has manufactured Water-Source Heat Pump (WSHP) Rooftop Units, Vertical Self-Contained Units, and Modular Air Handling Units with capacities ranging from 2-230 tons. AAON offers all of these units with mass customization or the ability to configure the features and options of the unit at the factory to meet nearly any application’s requirements. These products may be used as Makeup Air ventilation units, Variable Air Volume (VAV) units, or Single Zone VAV units with variable capacity cooling and variable speed supply fans.

The mass produced Water-Source Heat Pump has been a reliable product in the HVAC market for more than 50 years, its design and functionality not significantly changing over time. Today there is a great need for competitively priced, innovative, premium quality water-source heat pumps that can be quickly produced. AAON recognized this need and has answered with the AAON Water-Source Heat Pump. The AAON Water-Source Heat Pump is offered in two configurations, horizontal and vertical, and multiple efficiency levels to meet any application’s requirements. The AAON Water-Source Heat Pump leads in innovative design, performance, and serviceability.
The AAON Water-Source Heat Pump technologically advanced manufacturing line is unmatched in the industry, utilizing a unique production methodology that integrates mass production with mass customization and allows production of hundreds of units per day. State-of-the-art automated sheet metal production provides a consistent, premium quality aluminum cabinet construction. Induction brazing on all copper connections enables the highly automated production line to electronically heat joints rather than using torch welding for a higher quality low leakage refrigerant circuit. Quality has been designed into the AAON Water-Source Heat Pump and all designs have been lab tested before going into production.
AAON Water-Source Heat Pump Features

- ½ to 30 ton Capacities
- Horizontal and Vertical Configurations
- Left or Right Return
- Left, Right, or End Discharge
- High Efficiency PSC or ECM Supply Fan Motor
- Multiple Levels of Efficiency
- Standard Level Efficiency Significantly Exceeds ASHRAE Standards
- High Efficiency Scroll or Rotary Compressors
- Complete and Easy Service Access to the Supply Fan, Compressor, Reversing Valve, Expansion Valve, Controls, and Filters
- Bottom Access to Expansion Valve, Reversing Valve, Filter Drier, Supply Fan, and Filters (Horizontal Configuration)
- Factory installed options including disconnect, high efficiency filtration, hot gas reheat dehumidification, and waterside economizer.
- 5 Year Parts Warranty

All Aluminum Construction

AAON Water-Source Heat Pumps feature all aluminum cabinet construction with unit weight that is significantly less than a conventional water-source heat pump galvanized steel unit. Additional construction features include hem bends on all exposed edges, integrated hanging brackets (horizontal units) and a filter rack that is integrated into the unit cabinet.

Microchannel Coils

AAON Water-Source Heat Pumps feature an aluminum microchannel indoor DX coil with a larger surface area than conventional water-source heat pumps. Microchannel coils improve the efficiency of the unit, reduce air pressure drop, reduce fan horsepower, reduce refrigerant charge, and reduce unit weight.

AAON Metal Pallet

AAON designed a custom sheet metal pallet for the AAON Water-Source Heat Pump. The pallet allows multiple units to be stacked and is used to ship and store the units. Once the equipment is installed at the jobsite the metal pallet can be easily sold or recycled!

Replacement Ready

AAON Water-Source Heat Pumps are in stock and ready to ship. Contact your local AAON representative for availability. Replacement units match the size of conventional water-source heat pump units.
Water-Source Heat Pump Indoor Unit (Horizontal Configuration, Right Return)

- Toolless Control Panel
- Service Access
- Reliable Scroll/Rotary Compressors
- Copper Coaxial Refrigerant-to-Water Heat Exchanger
- Integrated Hanging Brackets (Rubber Vibration Isolation, Horizontal Units)
- Bottom Service Access
- Standard Pleated Air Filter
- Aluminum Microchannel Air Coil Horizontal Configuration (Left or Right Return)
- High Efficiency Fan (Left, Right, or End Discharge)
Water-Source/Geothermal Heat Pump System

WSHP Rooftop Units

WSHP Indoor Self-Contained Units

WSHP Indoor Units

Vertical Water-Source Heat Pumps (5-30 tons)

Packaged Outdoor Mechanical Rooms

Horizontal Water-Source Heat Pumps (6-5 tons)

Horizontal Water-Source Heat Pumps (6-20 tons)

Vertical Water-Source Heat Pumps (6-30 tons)

Boiler and Pumping Package

Geothermal Heat Exchanger

RL/RZ Series (55-240 tons)

M2 Series (3-70 tons)

SA Series (23-70 tons)

SB Series (3-18 tons)

RN Series (6-140 tons)

RQ Series (2-10 tons)

Indirect Evaporative-Cooler, Boiler, and Pumping Package (Future Release TBD)
### WSHP Rooftop Units

#### RL/RZ Series (55-240 tons)
- Constant Volume, Variable Air Volume, Single Zone VAV, and Makeup Air Units
- Staged and VFD Controlled Variable Speed Compressors
- VFD Controlled Variable Speed Direct Drive Backward Curved Plenum Fans
- Double Wall Rigid Polyurethane Foam Panel Construction

#### RN Series (6-140 tons)
- Constant Volume, Variable Air Volume, Single Zone VAV, and Makeup Air Units
- Staged and 10-100% Variable Capacity Compressors (6-70 tons)
- Staged and VFD Controlled Variable Speed Compressors (55-140 tons)
- VFD Controlled Variable Speed Direct Drive Backward Curved Plenum Fans
- Double Wall Rigid Polyurethane Foam Panel Construction

#### RQ Series (2-6 tons)
- Constant Volume, Variable Air Volume, Single Zone VAV, and Makeup Air Units
- VFD Controlled Variable Speed Compressors
- VFD Controlled and ECM Driven Variable Speed Direct Drive Backward Curved Plenum Fans
- Double Wall Rigid Polyurethane Foam Panel Construction

### WSHP Indoor Units

#### Horizontal Water-Source Heat Pumps (½ -5 tons)
- Replacement Ready Stocked Units
- Staged Scroll or Rotary Compressors
- High Efficiency PSC or ECM Fans
- Microchannel Indoor DX Coil
- Easy Service Access
- All Aluminum Construction

#### Horizontal Water-Source Heat Pumps (6 -20 tons)
- Replacement Ready Stocked Units
- Staged Scroll Compressors
- High Efficiency PSC or ECM Fans
- Microchannel Indoor DX Coil
- Easy Service Access
- All Aluminum Construction

#### Vertical Water-Source Heat Pumps (½ -30 tons)
- Replacement Ready Stocked Units
- Staged Scroll Compressors
- High Efficiency PSC or ECM Fans
- Microchannel Indoor DX Coil
- Easy Service Access
- All Aluminum Construction

### WSHP Indoor Self-Contained Units

#### M2 Series (3-70 tons)
- Constant Volume, Variable Air Volume, Single Zone VAV, and Makeup Air Units
- Staged, Two-Step, and 10-100% Variable Capacity Compressors
- VFD Controlled and ECM Driven Variable Speed Direct Drive Backward Curved Plenum Fans
- Double Wall Rigid Polyurethane Foam Panel Construction
- Modular cabinet construction can be configured to meet the application

#### SA Series (23-70 tons)
- Constant Volume, Variable Air Volume, Single Zone VAV, and Makeup Air Units
- Staged and 10-100% Variable Capacity Compressors
- VFD Controlled Variable Speed Direct Drive Backward Curved Plenum Fans
- Double Wall Rigid Polyurethane Foam Panel Construction
- Vertical self-contained unit cabinet construction can be configured to meet the application

#### SB Series (3-18 tons)
- Constant Volume, Variable Air Volume, Single Zone VAV, and Makeup Air Units
- ECM Controlled Variable Speed Direct Drive Backward Curved Plenum Fans
- Double Wall Rigid Polyurethane Foam Panel Construction
- Vertical self-contained unit cabinet construction can be configured to meet the application

### Packaged Outdoor Mechanical Rooms

#### Boiler and Pumping Package
- Packaged Boiler Outdoor Mechanical Room
- 98% Thermal Efficiency Condensing Room
- VFD Controlled Variable Flow Pumping Package
- Boilers heat the water in the system during the heating season
- Used when additional heating is needed beyond the capacity of the Geothermal Exchanger

#### Indirect Evaporative-Cooler, Boiler and Pumping Package (Future)
- Packaged Evaporative-Cooler and Boiler Outdoor Mechanical Room
- VFD Controlled Variable Flow Pumping Package
- Evaporative-cooler cools the water in the system during the cooling season
- Used when additional cooling is needed beyond the capacity of the Geothermal Exchanger
- Optional complete Packaged System with Evaporative-Cooler and Boiler

#### Geothermal Heat Exchanger
- Transfers heat from the ground to the water or glycol loop during the heating season
- Transfers heat to the ground from the water or glycol loop during the cooling season
- Energy efficient first stage of the water or glycol loop heat exchange
Contact your local AAON representative for more information about AAON Water-Source Heat Pump Units

www.AAON.com/RepSearch