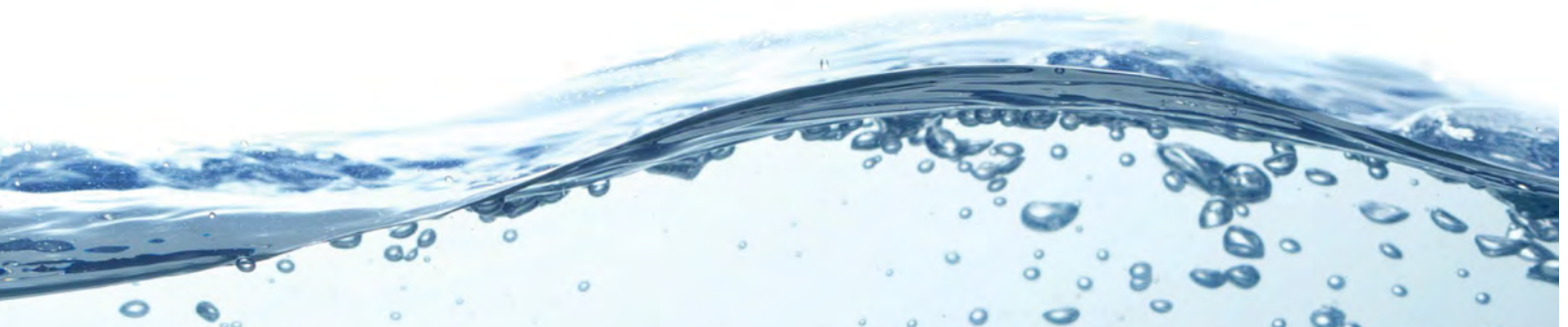




Water-Source Heat Pumps

WV SERIES



Vertical Configuration Water-Source Heat Pumps

Features:

- ½ to 15 ton Vertical Configuration
- Left or Right Return
- Top Discharge
- High Efficiency PSC or ECM Supply Fan Motor
- Reliable Scroll or Rotary Compressors
- Complete and Easy Service Access with Tool-less Panels
- Single-Sided Service Access for Easy Maintenance
- Option Flexibility including Disconnect, High Efficiency Filtration, Hot Gas Reheat Dehumidification, and Waterside Economizer
- All Aluminum Cabinet with Neoprene Foam Rubber Insulation
- Aluminum Microchannel Air Coil
- 5 Year Parts Warranty

o *Designed in Quality*

o *Easy Service Access*

o *Aluminum Cabinet Construction*

o *Replacement Ready Size*

AAON WV Series Vertical Water-Source Heat Pumps incorporate state-of-the-art manufacturing processes with the latest HVAC design technical knowledge to create a WSHP product with innovative design, performance, and serviceability. The technologically advanced AAON WSHP manufacturing line is unmatched in the industry, utilizing a unique production methodology that integrates mass production with mass customization and allows production of up to 180 units per day.

Applications

- Vertical Configuration Water-Source Heat Pumps, from ½ to 15 tons
- Multiple Levels of Efficiency
- Standard efficiency level significantly exceeding ASHRAE Standards at AHRI conditions

Standard Features

- R-410A Scroll (2 to 15 tons) or Rotary (½ to 1 ½ tons) Compressors for reliable operation
- Aluminum Microchannel DX Coil with large face area for improved efficiency, reduced air pressure drop, reduced fan horsepower and reduced unit weight
- Copper Coaxial Refrigerant-to-Water Heat Exchanger for reliable operation
- High Efficiency Direct Drive Forward Curved Supply Fans available with Permanent Split Capacitor (PSC) motors or Electronically Commutated Motors (ECM)
- Direct Drive ECM Driven Backward Curved Plenum Fan is standard on the A and B Cabinets (½ to 1 ½ tons)
- AAON Pioneer Silver Controller with terminal block for connection to a standard heat pump thermostat containing the following terminals:

G = Blower **R = 24V Supply**
Y = Compressor **COM = Common**
O = Reversing Valve

Construction

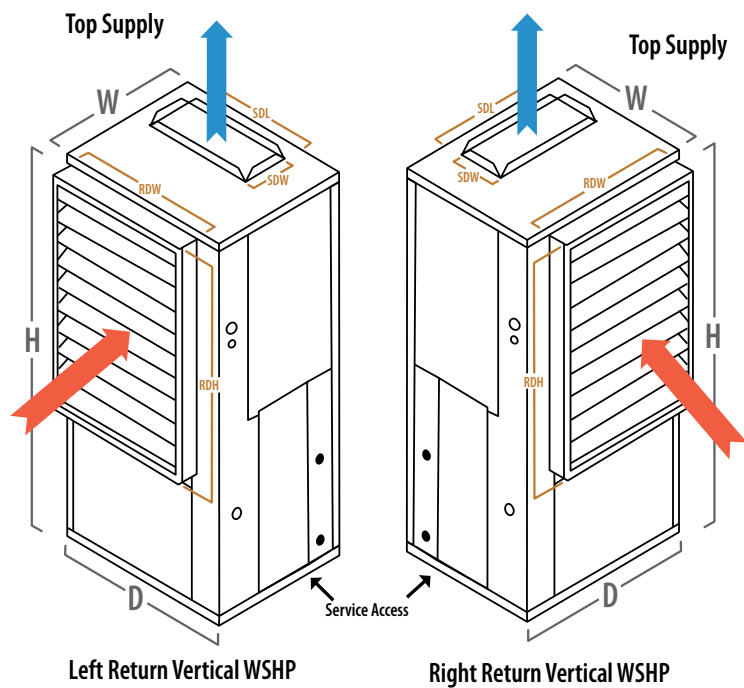
- Replacement Ready size matches with conventional water-source heat pumps
- All Aluminum Construction results in significantly less weight and superior corrosion resistance
- Hem Bends reduce sharp edges and improve serviceability
- Left or Right Hand Return
- Top Discharge
- Neoprene Foam Rubber Cabinet Insulation eliminates fiber in the airstream
- Toolless Control Panel Service Access
- Sloped Stainless Steel Drain Pan includes Automated TIG and Induction Welding
- Integrated internal condensate P-Trap within the cabinet eliminates need for housekeeping pad
- Induction Brazed Copper Piping Connections
- Sellable or Recyclable Sheet Metal Pallet - Standard!
- 5 Year Parts Warranty - Standard!

Factory Installed Options

- Corrosion Resistant Cupronickel Coaxial Refrigerant-to-Water Heat Exchanger
- Factory Installed Non-Fused Disconnect Switch
- Low Sound Package reduce fan and compressor sound
- One Inch Foil Face Cotton Fiber Cabinet Insulation
- Four Inch Filter Rack available with High Efficiency Filters, Up to MERV 14
- Factory Provided Return Air Duct Connection
- ECM Fan with Optional Dehumidification Mode Fan Speed Control
- Hot Gas Reheat Dehumidification
- Factory Installed Waterside Economizer with Three-Way Motorized Valve
- Ground/Ground Water Loop Insulation for Geothermal application

Vertical Configuration Airflow

Small Cabinet Sizes allow for a smaller footprint in new construction or replacement applications, such as replacing a vertical stack unit. Smaller footprint saves valuable usable space.



WSHP Cabinet Dimensions

WV Model (MBH)	Cabinet	Configuration	Width	Depth	Height	Supply Duct		Return Duct		Water (FPT)		Weight (lbs)
						W	L	W	H	In	Out	
WV-006	A	Vertical	15	19	40	4 ⁷ / ₈	11 ⁷ / ₈	15 ¹ / ₂	24 ¹ / ₂	1/2	1/2	
WV-009												
WV-012												
WV-015	B	Vertical	15	19	40	4 ⁷ / ₈	11 ⁷ / ₈	15 ¹ / ₂	24 ¹ / ₂	1/2	1/2	
WV-018												
WV-024	C	Vertical	21 1/2	21 1/2	44	11 1/2	10 3/4	23 1/2	39	1/2	1/2	
WV-030										3/4	3/4	
WV-036	D	Left or Right Return	21 1/2	25 1/2	48	11 1/2	10 3/4	23 1/2	39	3/4	3/4	
WV-042										3/4	3/4	
WV-048	E	Top Discharge	24	29	60	11 1/2	10 3/4	23 1/2	39	3/4	3/4	
WV-060										1	1	
WV-072	F	Vertical										
WV-084	G	Vertical										
WV-120												
WV-144												
WV-180												

All dimensions are in inches. Dimensions and weight may vary depending on options selected.
Four inch filter rack adds an additional 2 inches (width).



Tool-less Control Panel Service Access

Access panels do not require tools to open/close. Panels provide service access to the controls, compressor, filters, and supply fan.

Pioneer Silver Controls

Terminal block connections allow connection to a standard heat pump.



Internal P-Trap

Eliminates the need for housekeeping pads.

Standard Two Inch Pleated Filter

Two inch filter rack is included as standard on C Cabinet (2 ton) and larger units for pleated MERV 8 filtration. Unit can also be factory configured with a four inch filter rack for high efficiency filtration applications. Filters can be access from top of the unit for ease of maintenance.

Copper Coaxial Refrigerant-to-Water Heat Exchanger

Coaxial heat exchanger provides reliable operation. Cupronickel heat exchanger option is available for additional corrosion resistance.

Interior of Supply Fan Section



High Efficiency Fan (Top Discharge)

Direct drive forward curved supply fan is available with Permanent Split Capacitor (PSC) motor or Electronically Commutated Motor (ECM).



Insulated Service Access Panel

Neoprene Foam Rubber Cabinet Insulation

Provides cleaner, fiber-free air, and reduces sound transmission.



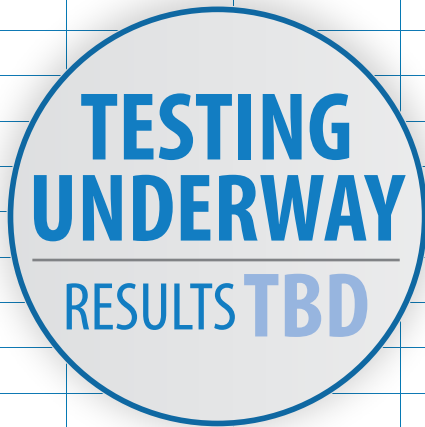
Interior of Compressor and Refrigeration Components Section

Reliable Scroll/Rotary Compressors

R-410A scroll compressors are included on units 2 tons and larger. R-410A rotary compressors are included on units from 1/2 through 1 1/2 tons. Compressors are mounted with rubber-in-shear on an isolation plate that is rubber-in-shear isolated in the cabinet for reduced vibration.

WSHP Performance Data with PSC Motor Fan

WV Model	Airflow (cfm)	Fluid Flow (gpm)	Voltage	Water Loop (Ratings at AHRI Cooling Tower/Boiler Conditions as in accordance with ISO Standard 13256-1)			
				Cooling EWT 86°F		Heating EWT 68°F	
				Btu/hr	EER	Btu/hr	COP
WV-015			208/230V-60Hz-1ph 265V-60Hz-1ph				
WV-018							
WV-024			208/230V-60Hz-1ph 265V-60Hz-1ph 208/230V-60Hz-3ph 460V-60Hz-3ph				
WV-030							
WV-036							
WV-042							
WV-048							
WV-060							
WV-072			208/230V-60Hz-3ph 460V-60Hz-3ph				
WV-084							
WV-120							
WV-144							
WV-180							



All Aluminum Construction

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

AAON Metal Pallet

AAON designed a custom sheet metal pallet for the AAON Water-Source Heat Pump. The pallet is used to ship and store the units. The metal pallet prevents damage during transit or storage as is common with wood pallets used with conventional water-source heat pump units. Once the equipment is installed at the jobsite the metal pallet can be easily sold or recycled!

Microchannel Coils

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

Replacement Ready

AAON Water-Source Heat Pumps will be stocked and ready to ship. Contact your local AAON representative for availability. Replacement units match the size of conventional water-source heat pump units.



WSHP Performance Data with Electronically Commutated Motor Fan

WV Model	Airflow (cfm)	Fluid Flow (gpm)	Voltage	Water Loop (Ratings at AHRI Cooling Tower/Boiler Conditions as in accordance with ISO Standard 13256-1)			
				Cooling EWT 86°F		Heating EWT 68°F	
				Btu/hr	EER	Btu/hr	COP
WV-006			115V-60Hz-1ph				
WV-009			208/230V-60Hz-1ph				
WV-012			265V-60Hz-1ph				
WV-015			208/230V-60Hz-1ph				
WV-018			265V-60Hz-1ph				
WV-024			208/230V-60Hz-1ph 265V-60Hz-1ph 208/230V-60Hz-3ph 460V-60Hz-3ph				
WV-030							
WV-036							
WV-042							
WV-048							
WV-060							
WV-072			208/230V-60Hz-3ph 460V-60Hz-3ph				
WV-084							
WV-120							
WV-144							
WV-180							

**TESTING
UNDERWAY**
RESULTS TBD

Advanced Testing Technology

All AAON Water-Source Heat Pump designs are lab tested before going into production. The new AAON Water-Source Heat Pump Laboratory utilizes the most recent advances in HVAC chamber testing technology to allow testing from 20-120°F, 30-80% RH, 147-6,000 cfm, and 1-50 gpm. Unit performance information provided is based on lab testing in accordance with ISO Standard 13256-1.



High Tech Water-Source Heat Pump Testing Laboratory

AAON Environmentally Friendly HVAC Product Family

ROOFTOP UNITS (2-240 tons)



RZ/RL SERIES



RN SERIES



RQ SERIES

PACKAGED OUTDOOR MECHANICAL ROOMS (4-540 tons)



BOILER MECHANICAL ROOM



LF SERIES



LN SERIES



FLUID COOLER



LZ SERIES

SELF-CONTAINED UNITS (3-70 tons)



SB SERIES



SA SERIES



M2 SERIES

OUTDOOR AIR HANDLING UNITS (800 - 100,000 + cfm)



RZ/RL SERIES



RN SERIES



RQ SERIES

CONDENSING UNITS (2-230 tons)



CB SERIES

CF SERIES

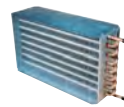


CN SERIES



CL SERIES

COILS



BOOSTER, HYDRONIC, & DX

INDOOR AIR HANDLING UNITS (800 - 100,000 + cfm)

F1 SERIES



H3 SERIES



V3 SERIES



SA SERIES



M2 SERIES



M3 SERIES



VERTICAL & HORIZONTAL WSHP

WATER-SOURCE HEAT PUMPS (1/2 - 230 tons)



RQ SERIES



RZ/RL SERIES



RN SERIES



M2 SERIES



SA SERIES

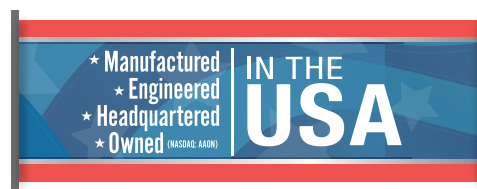


SB SERIES



Defining Quality. Building Comfort.

2425 S. Yukon Ave. • Tulsa, OK 74107-2728 • www.AAON.com



It is the intent of AAON to provide accurate and current product information. However, in the interest of product improvement, AAON reserves the right to change pricing, specifications, and/or design of its product without notice, obligation, or liability. Copyright © AAON, all rights reserved throughout the world. AAON® and AAONAIRE® are registered trademarks of AAON, Inc., Tulsa, OK.

WSHP_WV - V89420 - 170228