

# Variable-Speed Water-to-Water

## GEOHERMAL HEAT PUMP TECHNICAL OVERVIEW

Enertech engineers, dealers, and technicians worked together to create a hypothetical design so innovative it would revolutionize home comfort.

Our GeoComfort variable-speed, variable-capacity heating and cooling system adjusts the BTUH output to match the load profile for desired comfort settings. With the help of an outdoor temperature sensor, the modulating compressor adjusts to deliver the perfect water temperatures for a radiant or hydronic system application. This is vital because the efficiency of a water-to-water geothermal unit increases significantly with lower water temperatures.



## Install/Service Features:

### High temperature performance:

Maximum leaving water temperature up to 135° F when being used as the building's hot water heater.

**Large LCD Control Screen:** An easy-to-read high-mounted screen displays settings, diagnostics and running conditions, such as heat of extraction / rejection, discharge / suction pressures, superheat / sub-cooling and much more.

**Easy to Commission:** The onboard control includes a time-saving, factory start-up wizard with pre-programmed setup options.

**System Operation Display:** Direct readout on the LCD control screen reports flow in gallons-per-minute and verifies optimum performance at a glance without any tools.

**Electronic Expansion Valve:** Our EXV offers optimum compressor protection, load matching for comfort, and higher energy savings.

**Variable-Speed Pumps:** Our system includes an integrated variable-speed load pump with plug and play electrical connections for the variable-speed flow center.

**Double O-Ring Connections:** Load and source side double O-ring connections are standard on all models.

**Ruggedly Built:** Our 18-gauge, painted, galvanized steel cabinets are built to last.

**Hydronic Options:** We offer cased / uncased coils and air handler options.



**Available Voltages:**  
208/230V, 60Hz, 1Ph

## Unit Performance

### Ground Loop Heat Pump

Model	Cooling				Heating				Dimensional Data		
	Full Load	EER	Part Load	EER	Full Load	COP	Part Load	COP	Width	Depth	Height
WV060	43,000	18.4	21,600	25.4	54,600	3.0	27,000	3.9	25.1"	25.1"	37.2"

#### Notes:

Rated in accordance with ISO Standard 13256-2 which includes Pump Penalties.

Heating capacities based on 32°F EST & 104°F ELT.

Cooling capacities based on 77°F EST & 53.6°F ELT.

Published ratings are based off of a Full Load Cooling RPM of 3750, a Part Load Cooling RPM of 1800, a Full Load Heating RPM of 6000, and a Part Load Heating RPM of 2600.



Design, general information, and specifications within this brochure may change without notice. For the most up-to-date information, visit our website [www.geocomfort.com](http://www.geocomfort.com).

Self-contained immersion backup/auxiliary heater



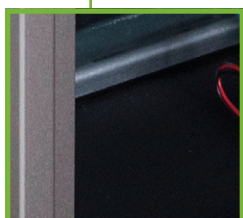
Integrated variable-speed load pump with plug and play electrical connections



System operation LCD control screen



Variable-speed, modulating capacity compressor



Elastomeric absorption pads provide superior sound and vibration insulation, resulting in quiet operation.



EXV (Electronically Controlled Expansion Valve)

## Efficient Comfort Features:

**Intelligent Controls:** Our onboard control monitors demand and calculates optimal running conditions multiple times every second to deliver the most efficient, comfortable heating and cooling

**Variable Compressor:** Our variable-speed, modulating compressor adjusts the output to match the load profile for desired comfort setting

**Higher COP's:** Lower water temperatures also means higher COP's and significantly reduced energy bills. When testing within AHRI parameters, the variable-speed water-to-water had a COP of 3.9, but in real-life application, the COP has potential to reach 4.8.

**Outdoor Reset:** The outdoor reset temperature sensor provides temperature feedback, using optimum water temperatures at all times to ensure the highest efficiencies, while delivering consistent warmth and cooling and eliminating temperature swings

**Domestic hot water:** The variable-speed, water-to-water will produce most or all (based on settings) of the household domestic hot water by throttling capacity based on demand – the system includes an immersion heater for high volume demand

**Brazed-Plate Heat Exchanger:** The heart of the system features an advanced design, high-efficiency brazed-plate heat exchanger

## Quiet and Peace of Mind Features:

**Ultra-Quiet Design:** Our exclusive Enertech design includes triple compressor isolation, featuring elastomeric vibration absorption pads, a heavy-gauge compressor isolation plate, and high-density rubber grommets – we say our variable-speed, water-to-water is ridiculously quiet

**High-Density Cabinet Insulation:** Exclusive to Enertech, UL GREENGUARD Gold certified, for improved sound isolation

**Premium Warranty:** The variable-speed, water-to-water comes standard with a 10-year all parts warranty on unit components and select accessory components with a 10-year labor allowance on select parts and accessories (registration required). The tank includes a manufacturer's warranty, which is currently 15 years on parts only

**Certifications:** All models are AHRI Certified to ISO Standards and ETL Certified to UL and CSA Standards



The system meets Energy Star® requirements for efficiency, qualifying it for the United States 30% federal tax credit and other state incentives, or in Canada, provincial incentives. Ask your local dealer or utility about incentives in your area or visit [www.dsireusa.org](http://www.dsireusa.org).



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GeoComfort geothermal systems are manufactured by Enertech Global and proudly built in the Heart of America – Mitchell, South Dakota. Enertech Global systems are built with stringent quality control standards and the most comprehensive testing within the geothermal heating and cooling industry.



Enertech Global is continually working to improve its products. As a result, the design, specifications, and general information of each product may change without notice and may not be as described herein. For the most up-to-date information, please visit our website, or contact our Customer Relations department at [customerrelations@enertechusa.com](mailto:customerrelations@enertechusa.com). Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely Enertech Global's opinion or commendation of its products.

