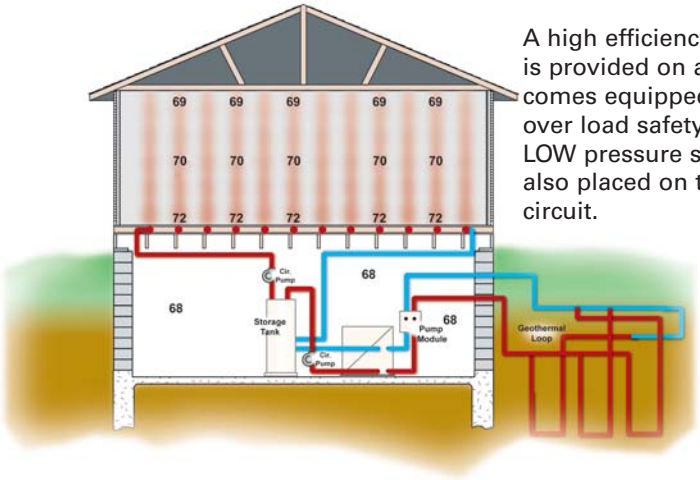
The GSWD High Efficiency Ground Source Heat Pump

A Buried Treasure That is Designed to Reduce Your Energy Bill

Trane's water-to-water heat pump system is an energy saving design used in high volume heating or cooling of water for applications such as radiant floor heating.

The compact unit design of the GSWD offers unparallel service access through the unique diagonal split cabinet construction. The unit incorporates two, stainless steel, brazed plate, water-to-refrigerant heat exchangers acting as either a condenser or evaporator depending on the mode of operation.



The GSWD may be installed just about anywhere indoors; and sizes range from 2 to 6-tons. The unit is constructed from heavy gauge steel with an electrostatic powder-paint finish. The cabinet is fully insulated to reduce condensate formation, and noise transmission. The schrader connections are piped to the unit's front, then clearly labeled.

Water hook-up is simplified through the use of brass swivel water connections. The swivel connection requires no back-up wrench during installation.

A high efficiency scroll compressor is provided on all GSWD models. It comes equipped with an internal over load safety device. HIGH and LOW pressure safety cutouts are also placed on the refrigeration circuit.

A desuperheater option provides heat recovery of the system. This selectable feature offers a low cost means of heating water while in the heating mode, or a means of virtually free hot water heating while in the cooling mode.

The GSWD design is the perfect alternative to heavy, bulky equipment. All six unit sizes are encased within the same 22 x 23 5/16 x 24 5/16-inch compact cabinet. It is the ideal choice for high volume water heating or cooling providing high comfort levels to the home owner while conserving energy.

Low Energy Usage without Compromising Space Comfort

Because the GSWD is capable of producing water temperatures up to 120 F, or temperatures down to 25 F, it may be used in multiple system applications including:

- Radiant slab heating
- Ice and snow removal
- Cooling with hydronic air handlers
- High volume, non potable, water heating

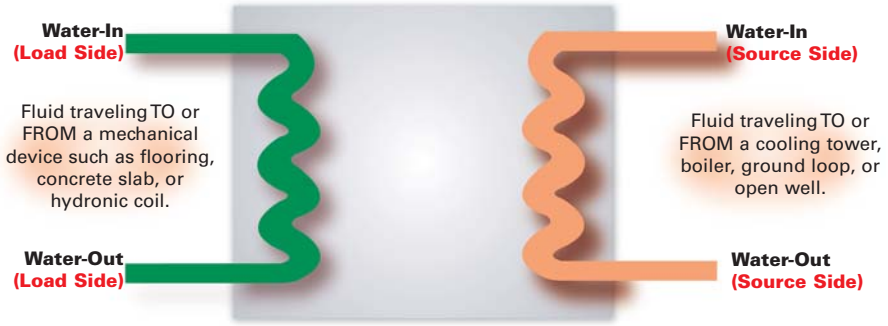
How the Water-to-Water is Fueled

Similar to a small reverse cycle chiller, a water-to-water, model GSWD, heat pump contains a source-side water-to-refrigerant heat exchanger, and a load-side water-to-refrigerant heat exchanger. The source for the water-to-water heat pump may be connected to a ground-source (geothermal) loop system. During the refrigeration cycle, heat is transferred from the source-side heat exchanger to the load-side heat exchanger, or vice versa. The load-side heat exchanger provides conditioned fluid (hot or cold) to a mechanical device such as radiant systems, hydronic fan coils, or fresh-air ventilation systems

The GSWD is designed to accommodate both a geothermal closed-loop and boiler/cooling tower closed loop applications.

Table 1: GSWD Performance Data at GLHP Conditions

Model Number GSWD	GPM	Cooling		Heating	
		EER	MBH	COP	MBH
024	7	21.8	20.28	3.4	22.53
036	8.5	22.8	29.73	3.32	27.99
042	9.5	22.8	34.8	3.4	33.32
048	11	22.3	39.53	3.17	35.99
060	14	22.5	51.12	3.32	47.98
072	16	21.7	56.71	3.32	56.64



TRANE

Trane
An American Standard Company
www.trane.com

For more information, contact your local district office or e-mail us at comfort@trane.com

Literature Order Number	WSHP-SLB026-EN
Date	June 2002
Supersedes	72-9049-01
Stocking Location	La Crosse