



The GSHC High Efficiency Ground Source Heat Pump

Engineering Excellence in Geothermal Technology

Geothermal high efficiency equipment comes in a horizontal configuration too. With the environmentally responsible, GSHC model, you can expect effortless comfort and energy savings for years to come.

The GSHC model spotlights such options as: an ICM blower motor for optimum energy conservation, a desuperheater hot water supplement system, and a cabinet design that allows access to all major components.

The compact unit design may be installed just about anywhere indoors: such as an attic, basement, or crawl space. The unit is available in an end (PSC motor only) or side supply-air discharge configuration; and sizes that range from 1 1/2 to 5-tons. The unit is constructed from heavy gauge steel with an electrostatic powder-paint finish.

Each unit is specifically designed for service and maintainability. It includes features such as: a single access refrigeration panel, swivel water fittings, and external schrader connections. A high efficiency scroll compressor is provided on all GSHC models. The compressor contains an internal overload safety device. HIGH and LOW pressure safety cutouts are also placed on the refrigeration circuit.

Each GSHC model contains a stainless steel, brazed plate water-to-refrigerant heat exchanger. The brazed plate design lowers waterside pressure drops in most cases. All low-side tubing in the refrigeration circuit is insulated to help prevent condensation from forming in the unit.

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.

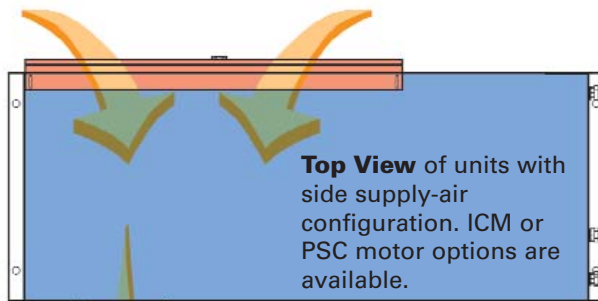
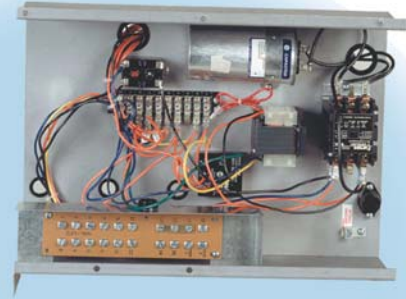
The standard PSC blower motor offers flexibility to the contractor of changing blower speed easily to adapt to various duct designs. An optional ICM variable speed blower motor offers increased efficiency, better humidity control, and reduced air noise, while providing higher comfort levels to the home owner.



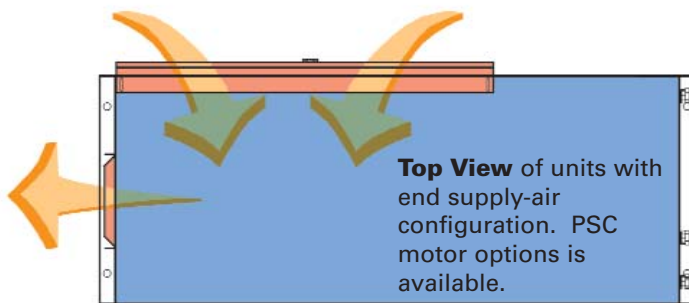
Design Advances in Geothermal Equipment

Accessible Control Box

The unit controls are accessible by removal of the side refrigerant panel. This allows serviceability room away from all hanging devices.



Side Supply-Air Configuration



End Supply-Air Configuration by field conversion

Desuperheater Option

The factory installed desuperheater package uses heat rejected from the unit to preheat a home's domestic hot water.

Drain Pan

Each unit contains a removable, cleanable drain pan to improve indoor air quality. This condensate pan discourages condensate build-up and microbial growth.

ICM Air Flow Options

The ICM blower motor option is capable of increasing or decreasing (dependent upon capacity demand) the nominal air flow by 10 or 20%. That means an increase from 400 cfm to 440 cfm per ton, or 400 cfm to 480 cfm per ton, or a decrease of 400 cfm to 360 cfm per ton, or 400 cfm to 320 cfm per ton.

Braze Plate Heat Exchanger

The stainless steel, brazed plate, water-to-refrigerant heat exchanger provides a low hydronic pressure drop, and an increased efficiency through its larger surface area for heat exchanger to occur between the water and refrigerant

Table 1: ICM Blower Motor Performance at GLHP Conditions

Model Number GSHC	Cooling		Heating	
	EER	btuh	COP	btuh
018	17.10	20,800	3.10	14,800
024	17.10	25,200	3.10	18,600
030	15.00	29,000	2.90	21,600
036	15.30	34,600	3.10	25,600
042	13.80	39,000	3.20	32,400
048	15.60	48,000	3.20	36,000
060	14.00	58,000	2.80	43,000

Table 2: PSC Blower Motor Performance at GLHP Conditions

Model Number GSHC	Cooling		Heating	
	EER	btuh	COP	btuh
018	15.30	20,400	2.90	15,200
024	15.60	24,800	2.90	18,800
030	14.10	28,600	2.80	22,000
036	14.30	34,200	3.00	26,000
042	13.20	38,800	3.10	32,800
048	13.70	47,000	3.00	37,000
060	13.10	57,500	2.70	43,500



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

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Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.