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WATER SOURCE & GEOTHERMAL HEAT PUMPS

HIGH EFFICIENCY HEAT PUMPS FOR SANITARY HOT WATER & SPACE HEATING

Water source and geothermal heat pumps have been specifically designed to produce sanitary hot water up to 90ºC. Water source and geothermal heat pumps combines efficiency with simplicity and the use of the natural refrigerant C02.

Available in 3 different sizes, which can be mounted in parallel to cover a wide range of capacity.

FEATURES & BENEFITS

- Plug and play unit, easy service, robust design and smooth operation
- Compact Design
- Low noise due to special mounting of compressors and cladding protection
- Dedicated logic control with COP optimisation
- User friendly setting keyboard
- Variable speed water pump
- Standard design pressure 80 bar LP side - 130 bar HP side

MODEL	Qth NOM/COP(a) (kWt) / (-)	PRODUCTION(a) Litres/Hour	DESIGN DATA		WEIGHT kg	DIMENSIONS LxWxH (mm)
			Max Power (kW)	Max Current (a)		
GEOHEAT 18	17.51/4.24(a)	280	6.4	10	380	1200x1040x1306
GEOHEAT 24	28.21/4.30(a)	440	10	20	430	1200x1040x1306
GEOHEAT 48	53.06/4.37(a)	840	16	26	560	1200x1040x1306

(a) GEOHEAT Nominal Capacity QthNOM: water inlet/outlet 10/65ºC - water source 12ºC

For more information call: 01253 685145 **email:** info@greenthermalenergy.com **visit:** greenthermalenergy.com

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APPLICATIONS

FAQ'S

- Where are the units manufactured: The equipment is produced in Northern Italy by Enex, which is a leading CO2 cooling & heating manufacturer.
- Who are Green Thermal Energy: We are a specialist CO2 systems provider and the exclusive UK partner of Enex.
- Are Air and Ground/Water Source CO2 units available: Yes a complete range is available.
- Is the CO2 refrigerant contained internally within the Heat Pump: Yes, all external connections are water based.
- What maximum outlet temperatures can genuinely be achieved: 90°C can be achieved where high temperature thermal storage is required.
- Are the units MCS accredited: No, they are geared towards commercial applications.
- Will the units operate with heating return temperatures above 35°C: No, the return must be below 35°C otherwise efficiency will be significantly reduced.
- Is design support available: Yes, experienced UK based design and specification support is available.
- Is commissioning support also available: Yes, field based commissioning support is provided.
- What is the nominal capacity of heat pumps available: 20kW, 50kW and 100kW units are all available as Air, Ground or Water source.

HOW DOES IT WORK?

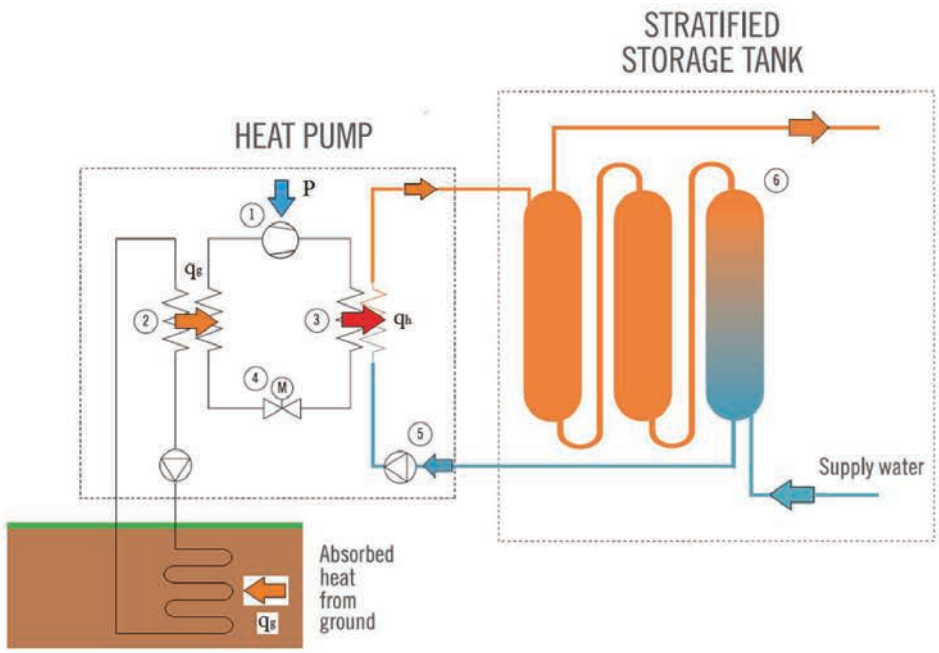
Transcritical cycle operated by CO2 is ideal for efficient use of the high temperature glide of refrigerant for heating water from a low temperature.

High pressure/high temperature CO2 icirculates in one heat exchanger and heats up in a single passage (once-through) mains water, circulated with a variable speed pump so as to reach the water temperature set in the most efficient way.

The high water temperature makes it possible stratification in a special vessel, so avoiding, as with normal heat pumps, to mix water at different temperatures.

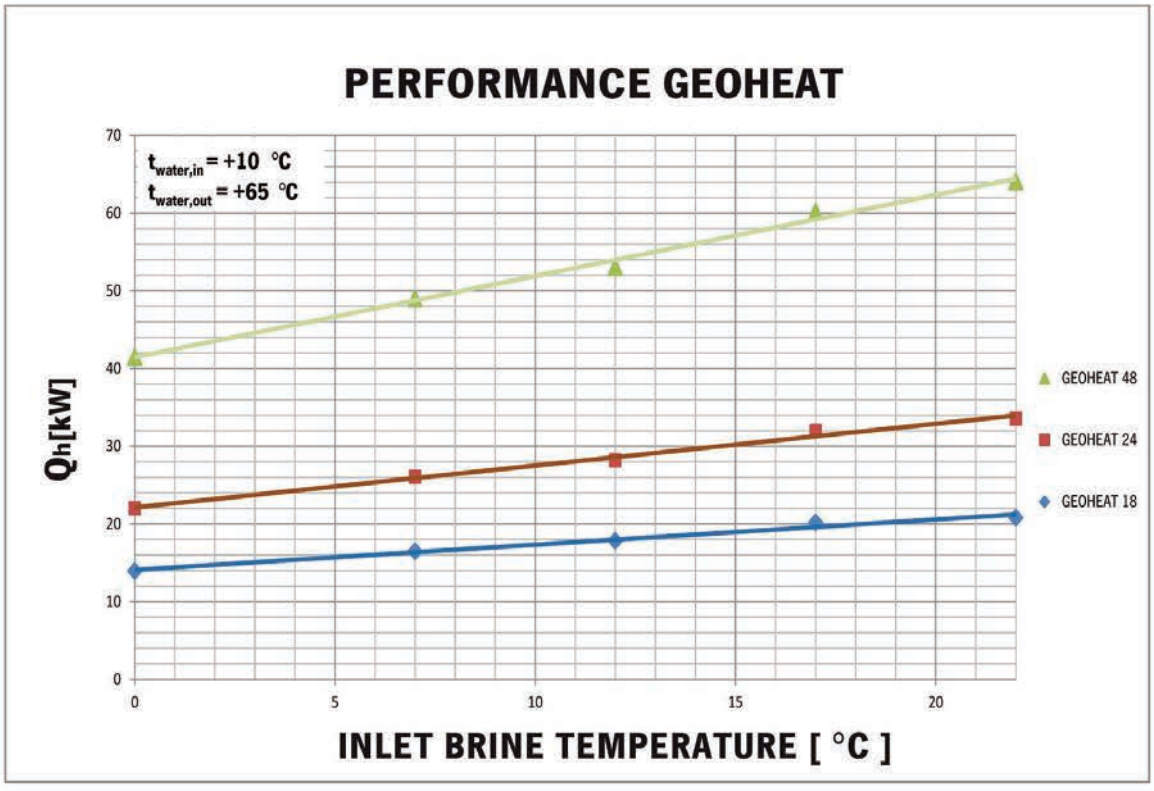
By using this kind of water storage it is possible to operate the heat pump during night time, taking advantage of lower energy costs.

- Stratified water tank
- Manometers panel
- Electronic soft starter



1	Compressor
2	Evaporator
3	Gas-cooler
4	Expansion valve
5	High efficiency pump
6	Stratified storage tank

		GEOHEAT PERFORMANCE										
		Water Temperature IN/OUT [°C]	Source temperature [°C]									
			0/-3		+7/+3		+12/+7		+17/+12		+20/+14	
			COP	Qh[kW]	COP	Qh[kW]	COP	Qh[kW]	COP	Qh[kW]	COP	Qh[kW]
MODELS	18	+10/+55	3,77	14,03	4,33	16,31	4,65	17,51	5,24	20,05	5,49	20,72
		+10/+65	3,46	13,96	3,94	16,49	4,24	17,85	4,64	20,23	4,83	20,81
		+10/+75	3,33	13,95	3,64	16,53	3,87	17,92	4,18	20,23	4,33	20,74
	24	+10/+55	3,79	22,16	4,39	25,77	4,76	27,66	5.32	31,68	5,60	33,40
		+10/+65	3,52	22,05	4,00	26,06	4,30	28,21	4,71	32,00	4,93	33,56
		+10/+75	3,38	22,04	3,69	26,12	3,93	28,32	3,66	31,96	4,42	33,43
	48	+10/+55	3,85	41.69	4,46	48,47	4,83	52,03	5,40	59,59	5,68	63,76
		+10/+65	3,57	41,48	4,06	49,01	4,37	53,06	4,78	60,20	5,00	64,07
		+10/+75	3,43	41,46	3,75	49,13	3,99	53,27	4,31	60,12	4,49	63,83



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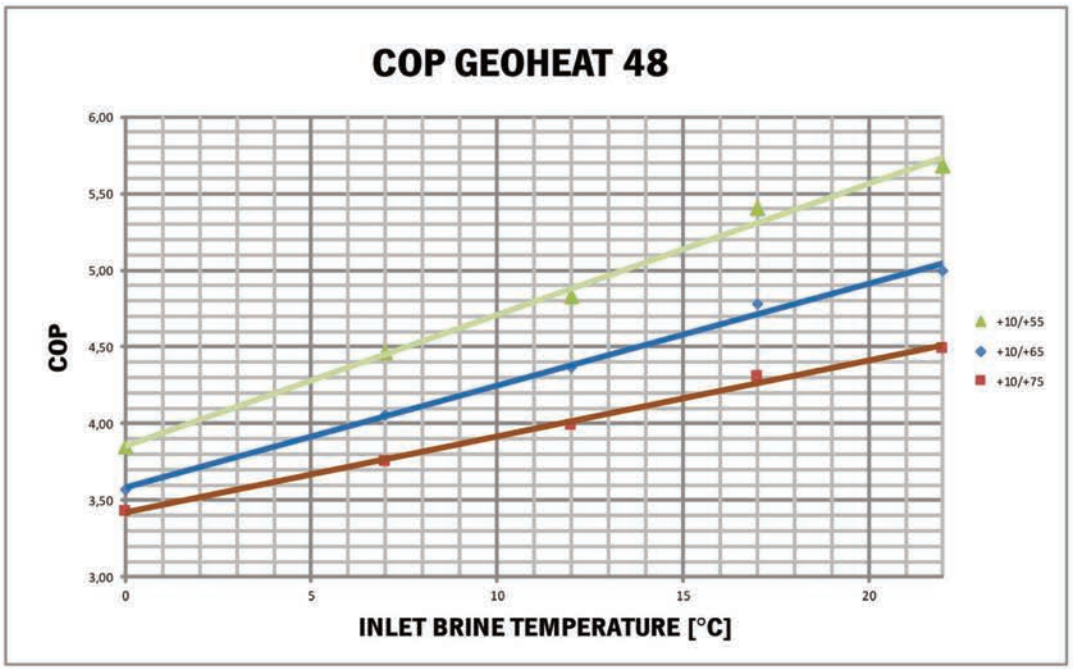

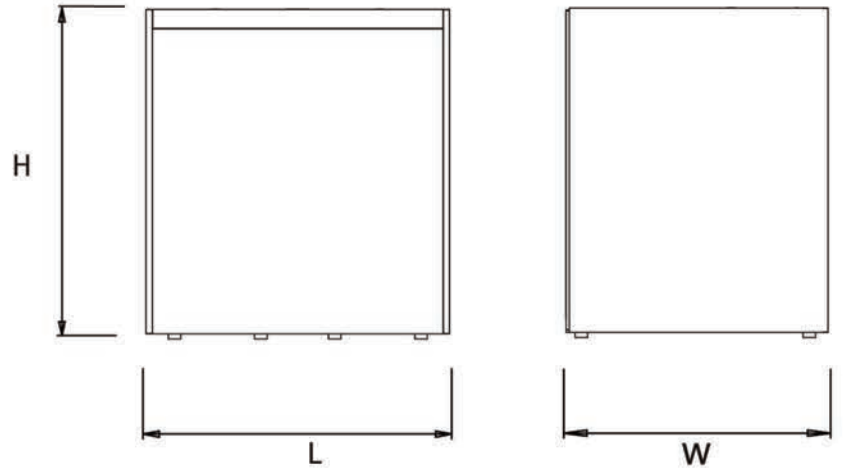

DIMENSIONS:

L*: 1200
W*: 1040
H*: 1306

(*for all Geoheat models)

OPTIONS

- Stratified water tank
- Manometers panel
- Electronic soft starter

Please note: The information provided above may be subject to change and amendments due to product/range improvement or replacement, please check prior to specification.
A formal project specific proposal should be requested in order to confirm accurate/current equipment details at the point of specification.

Contact Green Thermal Energy now to discuss a current project or to discuss the benefits of using WATER SOURCE & GEOTHERMAL HEAT PUMPS in the future...**Call: 01253 685 145**

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