Ground Source Heat Pump (GSHP)

Technical Datasheet

About Calibrate

Calibrate Energy Engineering supply intelligent, hands off, commercial heating, chilling and electricity generating solutions to high energy-use industries.

About Ground Source Heat Pumps

Our Ground Source Heat Pump is designed to take naturally occurring energy from the ground or water to produce heating and chilling simultaneously in two separate hydraulic circuits. The energy is then passed either through a system of pipes or a heat exchanger to the Heat Pump.
The cold fluid is sent to the ground / water to be heated naturally again. The chill process recovers the waste energy, increasing the efficiency of the system by taking heat from the product and boosting the ground with this waste energy.
The dehumidification of the cold fluid is sent to the ground or to the water to be heated naturally again. This chill process is recovering the waste energy which increases the efficiency of the system by taking heat from the product and boosting the ground with that waste energy.
It is a clever combination of recovered energy and naturally occurring energy used to run the Heat Pump system.

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Technical Specification

Heat Pump Thermic Output	499kW	998kW	1996kW	3096kW	6190kW
Power Supply	400 v 3 phase 50 Hz	400 v 3 phase 50 Hz	400 v 3 phase 50 Hz	400 v 3 phase 50 Hz	400 v 3 phase 50 Hz
Heating Fluid Outlet Temperature (max 90°C)	50°C	50°C	50°C	50°C	50°C
Chilling Fluid Outlet Temperature	-5°C	-5°C	-5°C	-5°C	-5°C
Total Heating Capacity (including water)	499 kW	998 kW	1996 kW	3096 kW	6190 kW
Total Power Input (excluding pumps)	88 kW	176 kW	352 kW	505 kW	1008 kW
Heating Fluid Flow	24 l/s	48 l/s	96 l/s	149 l/s	298 l/s
Chilling Fluid Flow	28 l/s	28 l/s	28 l/s	174 l/s	348 l/s
COP	5.66 kW	5.66 kW	5.66 kW	6.1 kW	6.1 kW
Compressor Type	Scroll	Scroll	Scroll	Screw	Screw
Refrigerant	R410A	R410A	R410A	R513A	R513A
Number of Compressors	4	8	16	4	8
Minimum Operational Capacity	25 %	12.5 %	6.25 %	12.5 %	6.25 %

Note: this is based on design conditions and is guidance only, all data must be checked against final drawings/schematics prior to order.

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