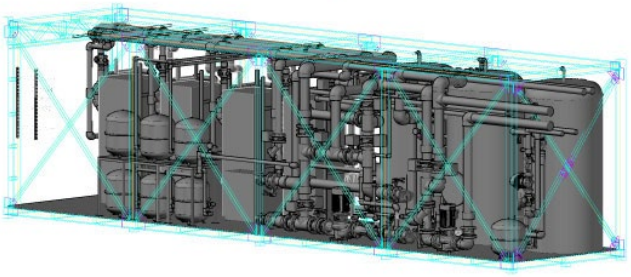
GEO QUICK BOX 1568-300

The **GEO QUICK BOX** is a plug-and-play 4-pipe modular geothermal energy center for heating, cooling, DHW production according to the flow-through principle minimising the risk of legionella formation that provides unparalleled efficiency and reliability for a wide range of applications - residential premises, commercial and industrial sites, district heating systems, greenhouses, pig farms, data centers, etc. to deliver incomparable performance. Each **GEO QUICK BOX** goes through testing norms at the factory to ensure trouble-free installation and further operation.



GEO QUICK BOX 1568-300 contains:

- Cooling module
- 2500 L Accumulator tank heating
- 2500 L Accumulator tank cooling
- Heat exchanger cooling
- 2000 L Accumulator tank with integrated ext. hot water heat exchanger
- Shut-off valves, control valves, safety valves, and control equipment for the modular geothermal energy center
- Brine circulation pump
- Electric switchboard
- Heat exchanger for DHW heating - optional in the **GEO QUICK BOX** or in the building

Technical specifications GEO QUICK BOX 1568-300

Output data according to EN 14511		
Heating capacity (PH)	kW	
Brine 0/Water 35		
Heating capacity (PH)	kW	296.1
Supplied power (PE)	kW	68.60
COP	--	4.32
Brine 0/Water 45		
Heating capacity (PH)	kW	280.6
Supplied power (PE)	kW	80.10
COP	--	3.50
Brine 10/Water 35		
Heating capacity (PH)	kW	391.6
Supplied power (PE)	kW	75.40
COP	--	5.19
Brine 10/Water 45		
Heating capacity (PH)	kW	371.05
Supplied power (PE)	kW	88.00
COP	--	4.22
Output data according to EN 14825		
Pdesignh' 35 °C / 55 °C	kW	335
SCOP cold climate, 35 °C / 55 °C	--	4,7 / 3,8
SCOP average climate, 35 °C / 55 °C	--	4,6 / 3,7

Energy rating, average climate		
The product's room heating efficiency class 35 °C / 55 °C, Scale for the product's efficiency class room heating: A+++ to D.	--	A+++ / A++
The system's room heating efficiency class 35 °C / 55 °C, Scale for the system's efficiency class room heating: A+++ to G. Reported efficiency for the system takes the product's temperature regulator into account.	--	A+++ / A++
Electrical data		
Rated voltage	--	400V 3N ~ 50Hz
Max operating current, heat pumps	Arms	221.5
Max operating current, complete GEO QUICK BOX	Arms	232
Max operating current per compressor	Arms	19.9
Recommended fuse rating	A	250
Starting current	Arms	53
Max permitted impedance at connection point 4	ohm	0,40
Total output, Heat pumps Brine pumps	W	200-6250
Total output, HM pumps	W	25-870
Enclosure class	--	IP 21
Refrigerant circuit		
Type of refrigerant	--	R410A
Volume	kg	17
GWP refrigerant	--	2,088
CO2 equivalent	ton	35.5
Cut-out value pressostat HP	MPa	4,2 (42 bar)
Difference pressostat HP	MPa	-0,7 (-7 bar)
Cut-out value pressostat LP	MPa	0,2 (2 bar)
Difference pressostat LP	MPa	0,07 (0,7 bar)
Cut-out value, pressure transmitter LP	MPa	0,2 (2 bar)
Difference, pressure transmitter LP	MPa	0.01 (0.1 bar)
Brine circuit module		
Max system pressure brine	MPa	0.6 (6 bar)
Min flow	l/s	2.36
Nominal flow	l/s	15.5
Max external available press at nominal flow[5]	kPa	65
Min/Max incoming Brine temp	°C	-7° / 30° C
Min. outgoing brine temp.	°C	-12
Heating medium circuit		
Max system pressure heating medium	MPa	0.6 (6 bar)
Min flow	l/s	0.92
Nominal flow	l/s	6.7
Max external avail. pressure at nominal flow	kPa	according to the design of the air conditioning system
Min/max HM-temp	°C	17° / 64° C
Noise of the heat pump		
Sound power level (L_{WA}) according to EN 12102 at 0/35	dB(A)	47
Sound pressure level (L_{PA}) calculated values according to EN ISO 11203 at 0/35 and 1 m range	dB(A)	32
Noise of the GEO QUICK BOX		
Sound power level (L_{WA}) according to EN 12102 at 0/35	dB(A)	less than 30
Sound pressure level (L_{PA}) calculated values according to EN ISO 11203 at 0/35 and 1 m range	dB(A)	N/A
Brine pump geothermal field		
Nominal flow brine geothermal field	l/s	20.83
Max external avail. pressure at nominal flow	kPa	130

Rated voltage	--	400V 3N ~ 50Hz
Rated power pump for geothermal field	kW	5.5
Max operating current	A_{rms}	10.5
Power input brine pump for geothermal field	W	438-4490
Enclosure class brine pump for geothermal field	--	IP 55 (IEC 34-5)
Circulation pump for cooling 4-pipe system		
Nominal flow pump for cooling	l/s	18.05
Max pump avail. pressure at nominal flow	kPa	90
Max external avail. pressure at nominal flow	kPa	according to the design of the air conditioning system
Rated voltage		
Rated power pump for cooling	kW	3
Max operating current	A_{rms}	5.8
Power input circulation pump for cooling		
Enclosure class circulation pump for cooling	--	IP 55 (IEC 34-5)
Pipe connections GEO QUICK BOX		
Brine pipes diam. PEHD pipes	--	10 x PEHD Ø90x8,2
Heating medium pipes diam. PPR pipes	--	2 x PPR Ø110x10
Cooling medium pipes diam. PPR pipes	--	2xPEHD Ø160x9,5
Heating medium pipes for DHW production	--	2 x PPR Ø75x6,8
Compressor oil		
Oil type	--	POE
Volume	l	19
Dimensions		
Length	mm	11500
Width	mm	2400
Height	mm	2850
Required ceiling height	mm	N/A
Weight (transport) complete GEO QUICK BOX	kg	12050
Weight (work) complete GEO QUICK BOX	kg	18600
Accumulator tank integrated ext. domestic water heat exchanger for hot water preparation according to the flow principle minimizes the risk of legionella formation		
Max pressure buffer tank		6/0,6
Working pressure buffer tank	bar/Mpa	3/0,3
Max. output Immersion heater 400V 3N ~ 50 Hz	kW	3(4)x9
Max. operating temperature	°C	95
Heat content at 50°C	kWh	92
Equivalent amount of hot water (40°C)	litre	2360
Corrosion protection	--	AISI 316 Ti/L
Heat loss	W	232
Volume	litre	1975
Connection for immersion heaters	int.thread	3(4)xG50
Circulation pump for hot water system		
Nominal flow pump for hot water system	l/s	2.82
Max external avail. pressure at nominal flow	kPa	85
Rated voltage	--	1 x 230 V ~ 50Hz
Rated power pump for hot water system	kW	0.463
Max operating current	A_{rms}	2.05
Power input circulation pump for hot water system	W	15-463
Enclosure class circulation pump for hot water system	--	IPX4D (EN 60529).
Serial number	**REGQBxxxxxxxxxOFXXTPBTHWTO2300**	

@2024 GEO SYSTEMS/ALL RIGHTS RESERVED