

HEAT PUMP: ecoGEO 3-12

- The thermal power control can modulate within a large range (20-100%) and control the flow of the brine and the production circuit.
- The compact design includes the brine and production circulating pumps, the brine and production expansion vessels (8l and 12l for brine and production circuits respectively), brine and production security valves and the three-way valve for the DHW.
- The High Temperature Recovery system (HTR) makes the simultaneous production of DHW and heating or cooling possible, as well as DHW production up to 70 °C without electrical support.
- Integrated management of up to 4 different distribution temperatures, 2 different buffer tanks (1 for cooling and 1 for heating), 1 DHW tank, 1 pool and the daily schedule of DHW recirculation.
- Integrated management of modulating air

units, both for air source systems and for hybrid (air source - ground source) systems.

- Integrated management of external variable or ON/OFF auxiliary systems such as boilers or electrical resistances.
- Integrated management of cascade systems up to 3 units.
- Integrated management of simultaneous cooling/heating systems according to the scheme.
- Integrated Passive cooling in models 2 and 4.
- Integrated Active cooling in models 3 and 4.
- Single-phase and Three-phase electrical supply availability.
- Compatibility with e-manager and e-system
- Integrated energy meters to measure the electric consumption, the heating/cooling thermal power, the COP and the monthly and annual SPF.



SPECIFICATIONS ecoGEO B/C 3-12		UNITS	B/C 1	B/C 2	B/C 3	B/C 4
APPLICATION	Place of installation	-	Indoors			
	Type of brine system	-	Ground source / Air source / Hybrid			
	Heating	-	✓	✓	✓	✓
	High Temperature Recovery (HTR) system	-	✓	✓	✓ ^{integrated}	✓ ^{integrated}
	Integrated Active cooling	-	-	-	✓	✓
	Integrated Passive cooling	-	-	✓	-	✓
PERFORMANCE	Modulation range of the compressor	%	20 to 100			
	Heating power ² , B0W35	kW	3,1 to 16			
	COP ² , B0W35	-	4,6			
	Active cooling power ² , B35W7	kW	-	3,1 to 15		
	EER ² , B35W7	-	-	5,2		
	Max. DHW temperature without support	°C	63			
	Max. DHW temperature with support ⁵	°C	70			
	Noise emission level ⁶	db	34 to 45			
	Energy label / η_p with average climate control	-	A+++ / 192%			
OPERATION LIMITS	Distribution / Set heating outlet temperature range	°C	10 to 60 / 20 to 60			
	Distribution / Set cooling outlet temperature range	°C	4 to 35 / 7 to 25			
	Brine inlet temperature range	°C	-25 to +35			
	Brine outlet temperature in cooling mode range	°C	10 to 60			
	Refrigerant circuit pressure min / max	bar	2 / 45			
	Production / Pre-load circuit pressure	bar	0,5 to 3 / 1,5			
	Brine / Pre-load circuit pressure	bar	0,5 to 3 / 0,7			
	Maximum DHW storage tank pressure	bar	8 (Only for ecoGEO C)			
	WORKING FLUIDS	R410A Refrigerant load without HTR / with HTR	kg	0,9 / 1		
Compressor oil type / load		kg	POE / 0,74			
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁸	-	✓			
	Maximum recommended external protection ⁹	A	C16A			
	Transformer primary circuit fuse	A	0,5A			
ELECTRICAL DATA: SINGLE-PHASE	1/N/PE 230 V / 50-60 Hz ⁸	-	✓			
	Maximum recommended external protection ⁹	A	C32A			
	Maximum consumption ² , B0W35	kW/A	4,2 / 18,6			
	Maximum consumption ² , B0W55	kW/A	5 / 21,7			
	Starting current min/max ⁷	A	2 / 8			
	Correction of cosine \emptyset	-	0,96/1			
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁸	-	✓			
	Maximum recommended external protection ⁹	A	C16A			
	Maximum consumption ² , B0W35	kW/A	4,2 / 6,2			
	Maximum consumption ² , B0W55	kW/A	5 / 7,2			
	Starting current min/max ⁷	A	0,7 / 2,6			
DIMENSIONS/WEIGHT	Height x width x depth	mm	ecoGEO B: 1060x600x710 · ecoGEO C: 1804x600x710			
	Empty weight (without assembly)	kg	B 185 · C 246	B 193 · C 254	B 185 · C 246	B 193 · C 254

1. Replacing or combining the geothermal collector with one or more ecoGEO AU12 aerothermal units. Refer to the ecoGEO AU12 aerothermal units manual for more detailed information.
2. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver.
3. Considering brine and production flows of

- 2000 l/h.
4. Considering a heat ramp of 20°C to 50°C in absence of consumption.
5. Considering support provided by the emergency electrical resistor or the HTR system. Maximum DHW temperature with the HTR system can be limited by the compressor discharge temperature.
6. In compliance with EN 12102, this

- includes the acoustic insulation kit of the compressor.
7. Starting current depends on working condition of the hydraulic circuits.
8. The admissible voltage range for proper operation of the heat pump is $\pm 10\%$.
9. Maximum consumption can vary significantly according to working conditions, or if the compressor's range

- of operation is restricted. Refer to the technical service manual for more detailed information.
10. Certification in process.

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ecoGEO Basic

35 / 55 °C



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ecoGEO Compact

35 / 55 °C



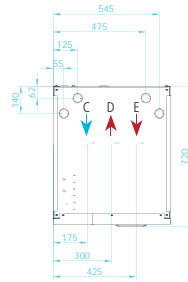
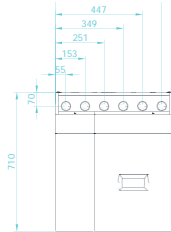
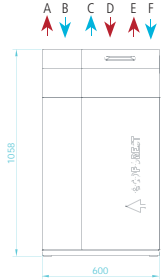
A++



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- A. Heating/Cooling Outlet/ 1 1/4" F
- B. Heating/Cooling Inlet/ 1 1/4" F
- C. Brine Outlet/ 1 1/4" F
- D. Brine Inlet/ 1 1/4" F
- E. DHW Outlet/ 1 1/4" F
- F. DHW Inlet/ 1 1/4" F

- A. Heating/Cooling Outlet/ 1 1/4" F
- B. Heating/Cooling Inlet/ 1 1/4" F
- C. DCW Inlet/ 1" F
- D. DHW Outlet/ 1" F
- E. DHW Return/ 3/4" F
- F. Brine Outlet/ 1 1/4" F
- G. Brine Inlet/ 1 1/4" F



Operation Map

