

ecoGEO⁺

Ground source heat pumps



ecoGEO⁺

Inverter ground source, the most efficient technology

The ecoGEO⁺ range is the Ecoforest range of ground source heat pumps. These heat pumps, both domestic and high power, are compatible with any of the type of ground source collection system, even with hybrid air source-ground source collection systems and fully air source collection systems. Likewise, they are also capable of offering all the services required in a HVAC system in an integrated way: DHW, Heating, Pool heating, Passive Cooling (or Free Cooling) and Active Cooling.

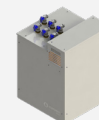


All ecoGEO⁺ heat pumps make use of Inverter technology, which allows them to modulate their power in order to adapt to the thermal demands of the installation with the highest efficiency. This translates into a very considerable reduction in electrical consumption and great savings. Thanks to the technology and control strategies developed by Ecoforest, the installation of ecoGEO⁺ heat pumps also becomes much simpler, more compact and cheaper than those of other heat pumps on the market, since it allows to dispense with certain components that would be necessary in traditional heat pump installations.

ecoGEO+ LITE



- Modulating thermal power control within a wide range (12,5-100%) and modulating flow rate control of both brine and production circuits (20-100%).
- Natural refrigerant R290: GWP 3.
- Inverter technology.
- Compact design including brine and production circulation pumps, 7 liter production expansion vessel, brine and production safety valves and DHW three-way valve.
- Integrated management of up to 2 different emission temperatures.
- Integrated management of aérothermal collection modulating units, in case of air source or hybrid configurations.
- Active cooling as an option.
- Single-phase version available.
- Integrated photovoltaic hybridisation.
- Integrated energy meters to measure the electrical consumption, the heating/cooling thermal power, the COP and the monthly and annual SPF.
- Only 790 mm x 595 mm x 575 mm (height x width x depth).



SPECIFICATIONS ecoGEO+ LITE		UNITS	
APPLICATION	Place of installation	-	Indoors
	Type of brine system ¹	-	Ground source / Air source / Hybrid source
	Heating	-	✓
	Integrated Active cooling	-	✓
PERFORMANCE	Modulation range of the compressor	%	12,5 to 100
	Heating power output ² , B0W35	kW	1,0 to 6,0
	COP ² , B0W35	-	4,3 / 2,6
	Active cooling power output ² , B35W7	kW	1,0 to 6,0
	EER ² , B35W7	-	4,4 / 2
	Max. DHW temperature without / with support ⁵	°C	75 / 80
	Noise power emission level ⁵	db	33 to 44
	Energy label / η _s	-	A+++ / 182%
OPERATION LIMITS	Heating temperatures / Maximum setpoint	°C	10 to 75 / 75
	Cooling temperatures / Min. setpoint	°C	5 to 35 / 7
	Brine inlet temperature range in heating applications	°C	-25 to 35
	Brine inlet temperature range in cooling applications	°C	10 to 75
	Minimum / Maximum refrigerant circuit pressure	bar	0,5 / 32
	Production / Pre-load circuit pressure	bar	0,5 to 3,0 / 1,5
	Brine / Pre-load circuit pressure	bar	0,5 to 6
WORKING FLUIDS	R290 Refrigerant load	kg	0,15
	Compressor oil type / load	kg	PZ46M / 0,3
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
	Transformer primary circuit fuse	A	0,5
	Transformer secondary circuit fuse	A	2,5
ELECTRICAL DATA: SINGLE-PHASE	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C16A
	Maximum consumption ² , B0W35	kW / A	1,6 / 6,8
	Maximum consumption ² , B0W55	kW / A	2,0 / 8,6
	Minimum / Maximum starting current ⁷	A	0,6 / 1,8
DIMENSIONS/WEIGHT	Correction of cosine Ø	-	0,96 / 1
	Height x width x depth	mm	790 x 595 x 575
	Empty weight (without assembly)	kg	107

1. Air source by replacing the ground source circuit by one or more ecoGEO+ AU air units. Consult the ecoGEO+ AU aérothermal 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 flow rates in compliance with EN 14511.

4. Considering a heat slope from 20°C to 50°C in absence of consumption.

5. Considering support provided by the emergency electrical heater.

6. In compliance with EN 12102.

7. Starting current depends on the working conditions of the hydraulic circuits.

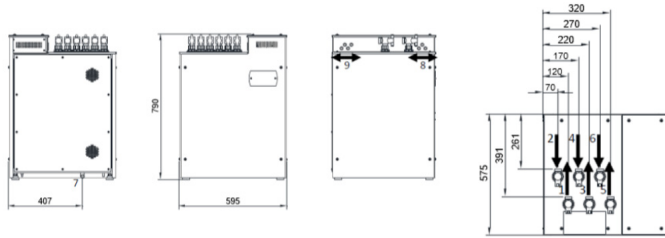
8. The admissible voltage range for proper operation of the heat pump is ±10%.

9. Maximum consumption can vary significantly according to working conditions, or if the compressor's operation range is restricted. Consult the technical service manual for more detailed information.

10. Certification in process

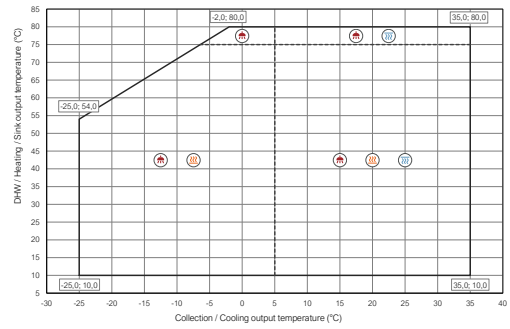
Dimensions and hydraulic connections

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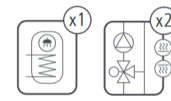


- | | |
|----------------------------------|----------------------------|
| 1. Heating/Cooling Outlet - 1" M | 6. DHW System Inlet - 1" M |
| 2. Heating/Cooling Inlet - 1" M | 7. Drain - G3/4" M |
| 3. Brine Outlet - 1" M | 8. Power cables inlet |
| 4. Brine Inlet - 1" M | 9. Control cables inlet |
| 5. DHW system Outlet - 1" M | |

Operational chart

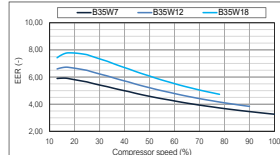
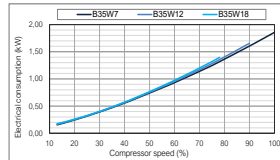
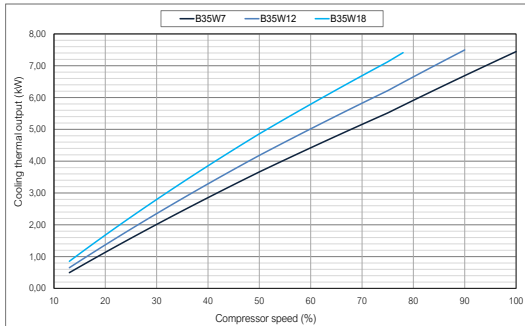
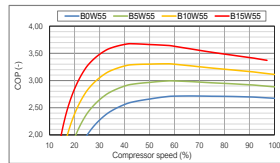
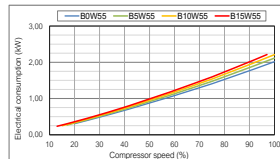
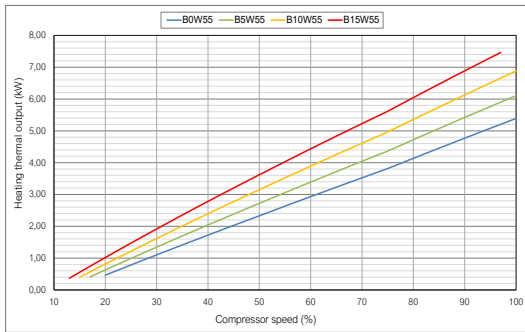
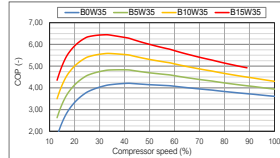
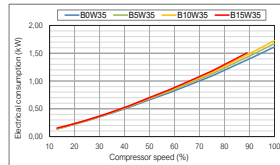
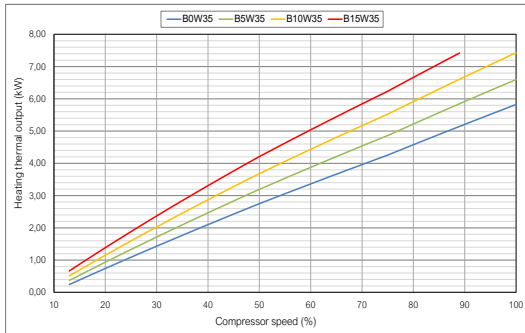


Installation management



Performance curves

Thermal performance



Hydraulic performance

