

ecoGEO⁺

Ground source heat pumps



ecoGEO⁺

Inverter ground source, the most efficient technology

The ecoGEO⁺ range is the Ecoforest range of geothermal 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 aerothermal-geothermal collection systems and fully aerothermal collection systems. Likewise, they are also capable of offering all the services required in a HVAC system in an integrated way: DHW, Heating, Pool, Passive Cooling (or Free Cooling) and Active Cooling.



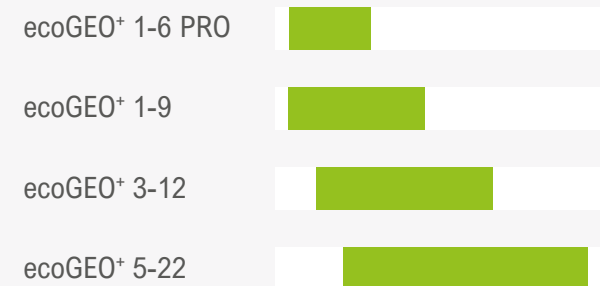
All ecoGEO⁺ heat pumps make use of Inverter technology, which allows them to modulate their power in order to adapt to the thermal demands of the installation with the highest efficiency. This translates into a very considerable reduction in electrical consumption and great savings. Thanks to the technology 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+ Basic / Compact

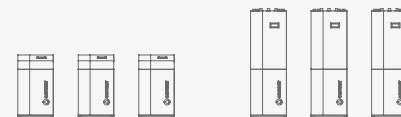
Residential range



Power ranges



Cascade



Services



DHW



Heating



Cooling



Pool

Models

ecoGEO+ B1/C1

DHW
Heating
Pool

ecoGEO+ B2/C2

DHW
Heating
Pool
Free Cooling

ecoGEO+ B3/C3

DHW
Heating
Pool
Active Cooling

ecoGEO+ B4/C4

DHW
Heating
Pool
Free Cooling
Active Cooling

Collection system



Ground



Open loop



Air



Hybrid

Inverter technology

Power ranges: 1-6 kW / 1-9 kW / 3-12 kW / 5-22 kW

Domestic hot water production

Heating and pool production

Integrated active cooling production

Integrated passive (free) cooling production

Internet connection through the ecoSMART Easynet

Integrated photovoltaic hybridisation

HTR technology for DHW production up to 70°C and simultaneous production of several services

Natural refrigerant used in ecoGEO+ PRO models allowing DHW production temperature up to 75°C

Integrated cascade management up to 3 units

Single-phase (230V) or three-phase (400V) power supply



ecoGEO+ B/C 1-9

- Modulating thermal power control within a wide range (12,5-100%) and modulating flow rate control of both brine and production circuits (20-100%).
 - Inverter technology and scroll compressor.
 - Compact design including brine and production circulation pumps, brine and production expansion vessels (8l and 12l respectively), brine and production safety valves and DHW three-way valve.
 - High Temperature Recovery system (HTR) for DHW production up to 70 °C without electrical support and simultaneous production of DHW and heating/cooling.
 - Integrated management of up to 4 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
 - Integrated management of aerothermal collection modulating units, in case of air source or hybrid configurations.
- Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
 - Integrated management of cascade systems up to 3 units.
 - Integrated management of simultaneous cooling/heating systems according to scheme.
 - Integrated free cooling in models 2 and 4.
 - Integrated active cooling in models 3 and 4.
 - Single-phase and Three-phase versions 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.

SPECIFICATIONS ecoGEO+ B/C 1-9		UNITS	B1/C1	B2/C2	B3/C3	B4/C4	
APPLICATION	Place of installation	-	Indoors				
	Type of brine system ¹	-	Ground source / Air source / Hybrid source				
	DHW, Heating and Pool	-	✓	✓	✓	✓	
	High Temperature Recovery (HTR) system option	-	✓	✓	by default	by default	
	Integrated Active cooling	-	-	-	✓	✓	
	Integrated Passive cooling	-	-	✓	-	✓	
PERFORMANCE	Modulation range of the compressor	%	12,5 to 100				
	Heating power output ² , B0W35	kW	1,3 to 11,0				
	COP ² , B0W35	-	4,5				
	Active cooling power output ² , B35W7	kW	-	1,4 to 11,0			
	EER ² , B35W7	-	-	5,2			
	Max. DHW temperature without / with support ⁵	°C	63 / 70				
	Noise power emission level ⁶	db	33 to 44				
	Energy label / rjs / SCOP W35 average climate control	-	A+++ / 190% / 4,84				
	Energy label / rjs / SCOP W55 average climate control	-	A++ / 138% / 3,54				
	OPERATION LIMITS	Distribution / Set heating outlet temperature range	°C	10 to 60 / 20 to 60			
Distribution / Set cooling outlet temperature range		°C	5 to 35 / 7 to 25				
Brine inlet temperature range in heating applications		°C	-25 to 35				
Brine inlet temperature range in cooling applications		°C	10 to 60				
Minimum / Maximum refrigerant circuit pressure		bar	2 / 45				
Production / Pre-load circuit pressure		bar	0,5 to 3,0 / 1,5				
Brine / Pre-load circuit pressure		bar	0,5 to 3,0 / 0,7				
Volume / Max. DHW storage tank pressure (ecoGEO+ C)		l / bar	165 / 8				
WORKING FLUIDS		R410A Refrigerant load without HTR / with HTR	kg	0,8 / 0,85		1,0	
		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	-	C16				
	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	-	C25A				
	Maximum consumption ² , B0W35	kW / A	2,7 / 11,8				
	Maximum consumption ² , B0W55	kW / A	3,8 / 16,5				
	Minimum / Maximum starting current ⁷	A	2,8 / 5,8				
	Correction of cosine Ø	-	0,96 / 1				
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁸	-	✓				
	Maximum recommended external protection ⁹	-	C10A				
	Maximum consumption ² , B0W35	kW / A	2,7 / 4,0				
	Maximum consumption ² , B0W55	kW / A	3,8 / 5,5				
	Minimum / Maximum starting current ⁷	A	0,9 / 1,9				
	Correction of cosine Ø	-	0,96 / 1				
DIMENSIONS/WEIGHT	Height x width x depth	mm	ecoGEO+ B: 1058x600x710 · ecoGEO+ C: 1851x600x720				
	Empty weight (without assembly)	kg	B 184 · C 245	B 192 · C 253	B 184 · C 245	B 192 · C 253	

1. Air source/Hybrid source by replacing/combining the ground source circuit by/with one or more ecoGEO+ AU. Consult the ecoGEO+ AU 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 or the HTR system. Maximum DHW temperature with the HTR system can be limited by

6. the compressor discharge temperature.

7. In compliance with EN 12102.

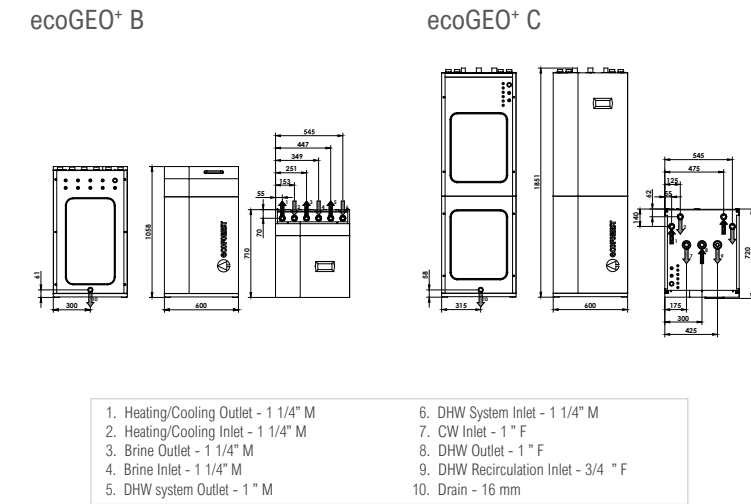
8. Starting current depends on the working conditions of the hydraulic circuits.

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

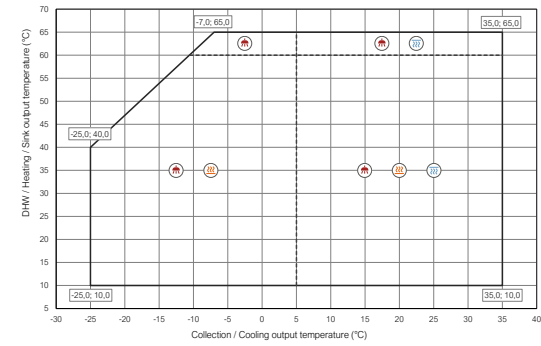
10. Maximum consumption can vary significantly according to working conditions, or if the compressor's operation range is restricted. Consult the technical service manual for more detailed information.

10. Certification in process.

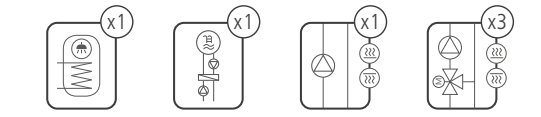
Dimensions and hydraulic connections



Operational chart

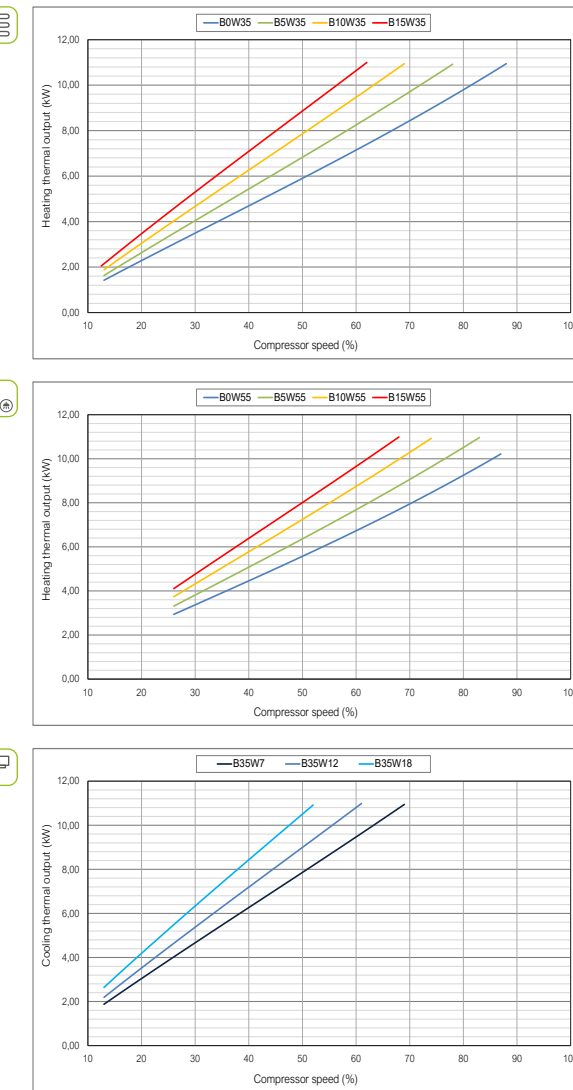


Installation management

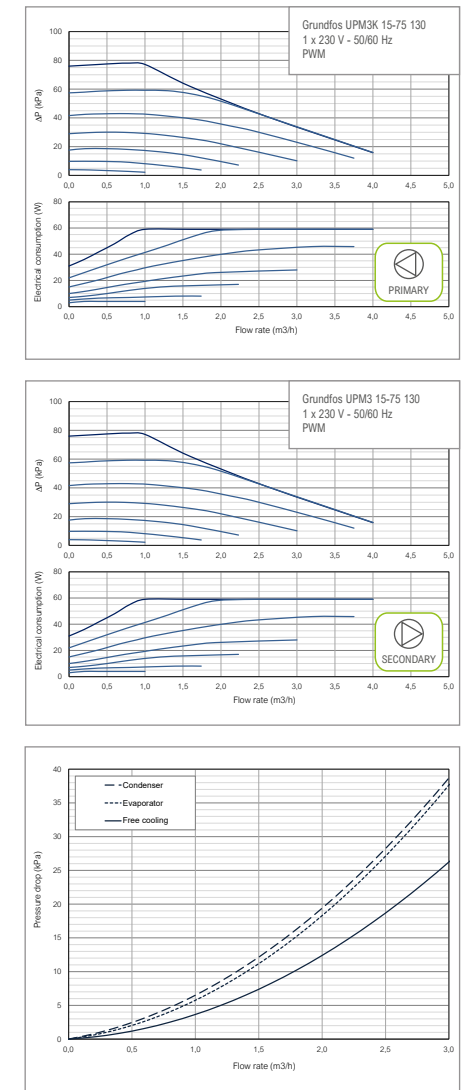


Performance curves

Thermal performance



Hydraulic performance



ecoGEO+ B/C 3-12

- Modulating thermal power control within a wide range (12,5-100%) and modulating flow rate control of both brine and production circuits (20-100%).
 - Inverter technology and scroll compressor.
 - Compact design including brine and production circulation pumps, brine and production expansion vessels (8l and 12l respectively), brine and production safety valves and DHW three-way valve.
 - High Temperature Recovery system (HTR) for DHW production up to 70 °C without electrical support and simultaneous production of DHW and heating/cooling.
 - Integrated management of up to 4 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
 - Integrated management of aerothermal collection modulating units, in case of air source or hybrid configurations.
- Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
 - Integrated management of cascade systems up to 3 units.
 - Integrated management of simultaneous cooling/heating systems according to scheme.
 - Integrated free cooling in models 2 and 4.
 - Integrated active cooling in models 3 and 4.
 - Single-phase and Three-phase versions 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.

SPECIFICATIONS ecoGEO+ B/C 3-12		UNITS	B1/C1	B2/C2	B3/C3	B4/C4	
APPLICATION	Place of installation	-	Indoors				
	Type of brine system ¹	-	Ground source / Air source / Hybrid source				
	DHW, Heating and Pool	-	✓	✓	✓	✓	
	High Temperature Recovery (HTR) system option	-	✓	✓	by default	by default	
	Integrated Active cooling	-	-	-	✓	✓	
	Integrated Passive cooling	-	-	✓	-	✓	
PERFORMANCE	Modulation range of the compressor	%	12,5 to 100				
	Heating power output ² , B0W35	kW	2,1 to 16,0				
	COP ² , B0W35	-	4,6				
	Active cooling power output ² , B35W7	kW	-	2,1 to 15,0			
	EER ² , B35W7	-	-	5,2			
	Max. DHW temperature without / with support ⁵	°C	63 / 70				
	Noise power emission level ⁶	db	34 to 45				
	Energy label / rjs / SCOP W35 average climate control	-	A+++ / 194% / 4,95				
	Energy label / rjs / SCOP W55 average climate control	-	A++ / 141% / 3,63				
	OPERATION LIMITS	Distribution / Set heating outlet temperature range	°C	10 to 60 / 20 to 60			
Distribution / Set cooling outlet temperature range		°C	5 to 35 / 7 to 25				
Brine inlet temperature range in heating applications		°C	-25 to 35				
Brine inlet temperature range in cooling applications		°C	10 to 60				
Minimum / Maximum refrigerant circuit pressure		bar	2 / 45				
Production / Pre-load circuit pressure		bar	0,5 to 3,0 / 1,5				
Brine / Pre-load circuit pressure		bar	0,5 to 3,0 / 0,7				
Volume / Max. DHW storage tank pressure (ecoGEO+ C)		l / bar	165 / 8				
WORKING FLUIDS		R410A Refrigerant load without HTR / with HTR	kg	0,9 / 1,0		1,0	
		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	-	C16A				
	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	-	C32A				
	Maximum consumption ² , B0W35	kW / A	4,2 / 18,6				
	Maximum consumption ² , B0W55	kW / A	5,0 / 21,7				
	Minimum / Maximum starting current ⁷	A	2,0 / 8,0				
	Correction of cosine Ø	-	0,96 / 1				
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁸	-	✓				
	Maximum recommended external protection ⁹	-	C16A				
	Maximum consumption ² , B0W35	kW / A	4,2 / 6,2				
	Maximum consumption ² , B0W55	kW / A	5,0 / 7,2				
	Minimum / Maximum starting current ⁷	A	0,7 / 2,6				
	Correction of cosine Ø	-	0,96 / 1				
DIMENSIONS/WEIGHT	Height x width x depth	mm	ecoGEO+ B: 1058x600x710 · ecoGEO+ C: 1851x600x720				
	Empty weight (without assembly)	kg	B 185 · C 246	B 193 · C 254	B 185 · C 246	B 193 · C 254	

1. Air source/Hybrid source by replacing/combining the ground source circuit by/with one or more ecoGEO+ AU. Consult the ecoGEO+ AU 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 or the HTR system. Maximum DHW temperature with the HTR system can be limited by

6. the compressor discharge temperature.

7. In compliance with EN 12102.

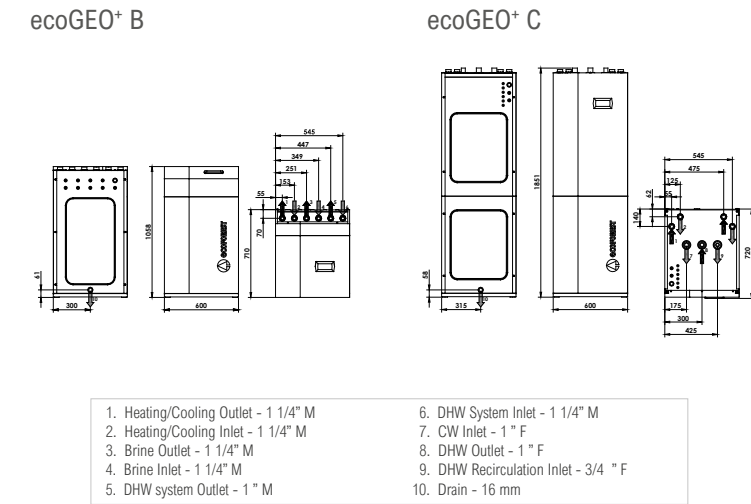
8. Starting current depends on the working conditions of the hydraulic circuits.

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

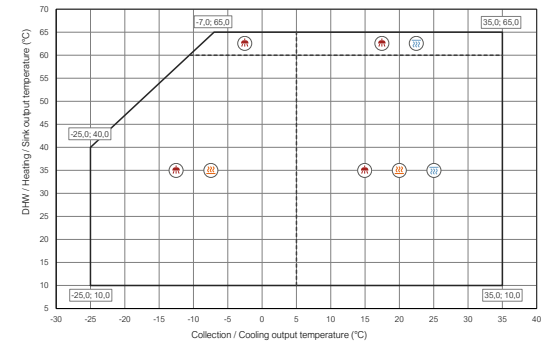
10. Maximum consumption can vary significantly according to working conditions, or if the compressor's operation range is restricted. Consult the technical service manual for more detailed information.

10. Certification in process.

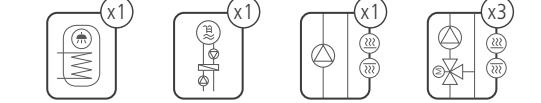
Dimensions and hydraulic connections



Operational chart

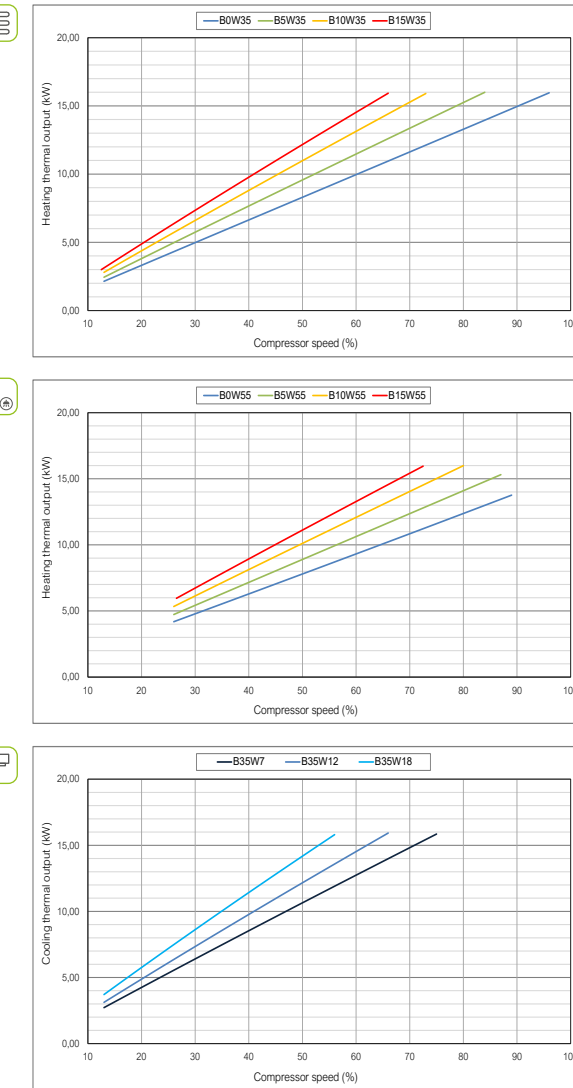


Installation management

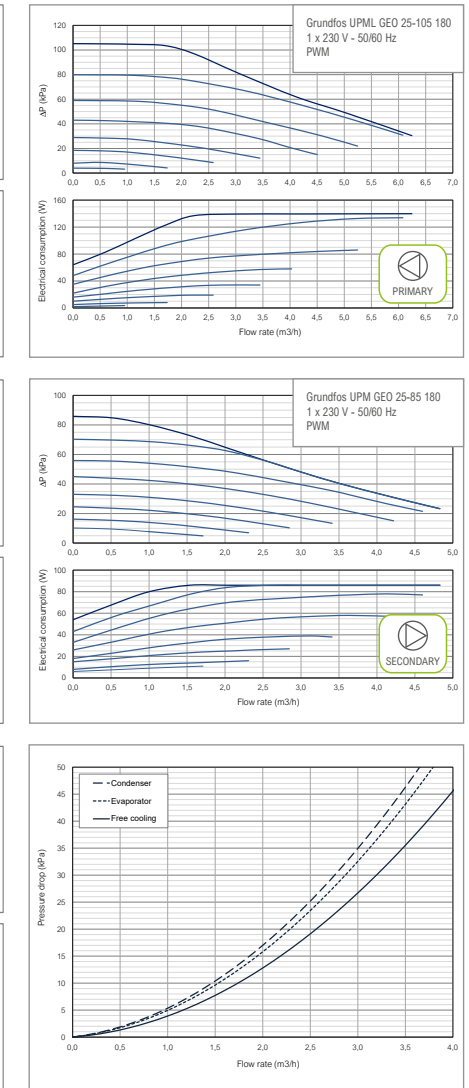


Performance curves

Thermal performance



Hydraulic performance



ecoGEO+ B/C 5-22

- Modulating thermal power control within a wide range (15-100%) and modulating flow rate control of both brine and production circuits (20-100%).
 - Inverter technology and scroll compressor.
 - Compact design including brine and production circulation pumps, brine and production expansion vessels (8l and 12l respectively), brine and production safety valves and DHW three-way valve.
 - High Temperature Recovery system (HTR) for DHW production up to 70 °C without electrical support and simultaneous production of DHW and heating/cooling.
 - Integrated management of up to 4 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
 - Integrated management of aerothermal collection modulating units, in case of air source or hybrid configurations.
- Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
 - Integrated management of cascade systems up to 3 units.
 - Integrated management of simultaneous cooling/heating systems according to scheme.
 - Integrated free cooling in models 2 and 4.
 - Integrated active cooling in models 3 and 4.
 - Single-phase and Three-phase versions 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.

SPECIFICATIONS ecoGEO+ B/C 5-22		UNITS	B1/C1	B2/C2	B3/C3	B4/C4
APPLICATION	Place of installation	-	Indoors			
	Type of brine system ¹	-	Ground source / Air source / Hybrid source			
	DHW, Heating and Pool	-	✓	✓	✓	✓
	High Temperature Recovery (HTR) system option	-	✓	✓	✓ by default	✓ by default
	Integrated Active cooling	-	-	-	✓	✓
	Integrated Passive cooling	-	-	✓	-	✓
PERFORMANCE	Modulation range of the compressor	%	15 to 100			
	Heating power output ² , B0W35	kW	4,0 to 22,8			
	COP ² , B0W35	-	4,9			
	Active cooling power output ² , B35W7	kW	-	4,2 to 22,0		
	EER ² , B35W7	-	-	5,3		
	Max. DHW temperature without / with support ⁵	°C	63 / 70			
	Noise power emission level ⁶	db	35 to 46			
	Energy label / rjs / SCOP W35 average climate control	-	A+++ / 184% / 4,70			
	Energy label / rjs / SCOP W55 average climate control	-	A++ / 146% / 3,76			
OPERATION LIMITS	Distribution / Set heating outlet temperature range	°C	10 to 60 / 20 to 60			
	Distribution / Set cooling outlet temperature range	°C	5 to 35 / 7 to 25			
	Brine inlet temperature range in heating applications	°C	-25 to 35			
	Brine inlet temperature range in cooling applications	°C	10 to 60			
	Minimum / Maximum refrigerant circuit pressure	bar	2 / 45			
	Production / Pre-load circuit pressure	bar	0,5 to 3,0 / 1,5			
	Brine / Pre-load circuit pressure	bar	0,5 to 3,0 / 0,7			
	Volume / Max. DHW storage tank pressure (ecoGEO+ C)	l / bar	165 / 8			
	WORKING FLUIDS	R410A Refrigerant load without HTR / with HTR	kg	1,4	1,5	
Compressor oil type / load		kg	POE / 1,18			
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁸	-	✓			
	Maximum recommended external protection ⁹	-	C16A			
	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	-	C32A			
	Maximum consumption ² , B0W35	kW / A	5,5 / 23,9			
	Maximum consumption ² , B0W55	kW / A	5,5 / 23,9			
	Minimum / Maximum starting current ⁷	A	2,6 / 12,5			
	Correction of cosine Ø	-	0,96 / 1			
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁸	-	✓			
	Maximum recommended external protection ⁹	-	C16A			
	Maximum consumption ² , B0W35	kW / A	6,0 / 8,7			
	Maximum consumption ² , B0W55	kW / A	6,0 / 8,7			
	Minimum / Maximum starting current ⁷	A	0,9 / 4,2			
	Correction of cosine Ø	-	0,96 / 1			
DIMENSIONS/WEIGHT	Height x width x depth	mm	ecoGEO+ B: 1058x600x710 · ecoGEO+ C: 1851x600x720			
	Empty weight (without assembly)	kg	B 185 · C 247	B 193 · C 255	B 185 · C 247	B 193 · C 255

1. Air source/Hybrid source by replacing/combining the ground source circuit by/with one or more ecoGEO+ AU. Consult the ecoGEO+ AU 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 or the HTR system. Maximum DHW temperature with the HTR system can be limited by

6. The compressor discharge temperature.

7. In compliance with EN 12102.

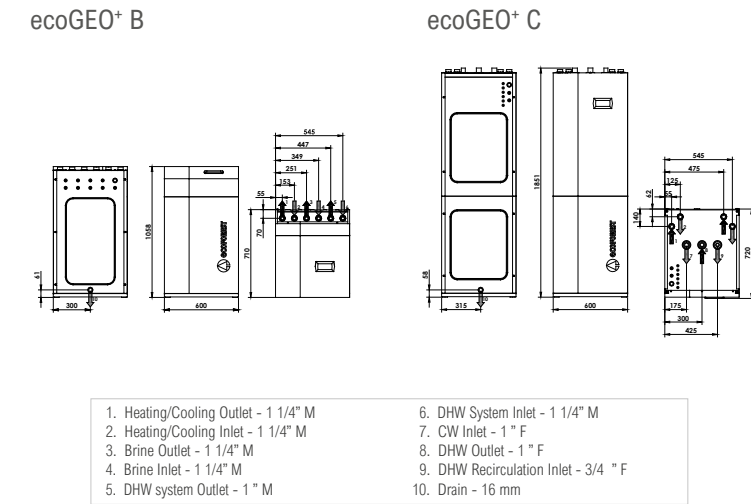
8. Starting current depends on the working conditions of the hydraulic circuits.

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

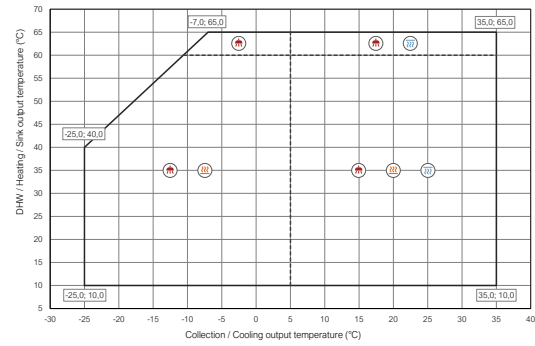
10. Maximum consumption can vary significantly according to working conditions, or if the compressor's operation range is restricted. Consult the technical service manual for more detailed information.

10. Certification in process.

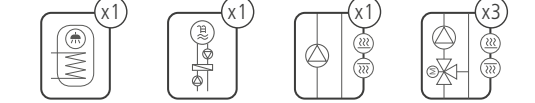
Dimensions and hydraulic connections



Operational chart

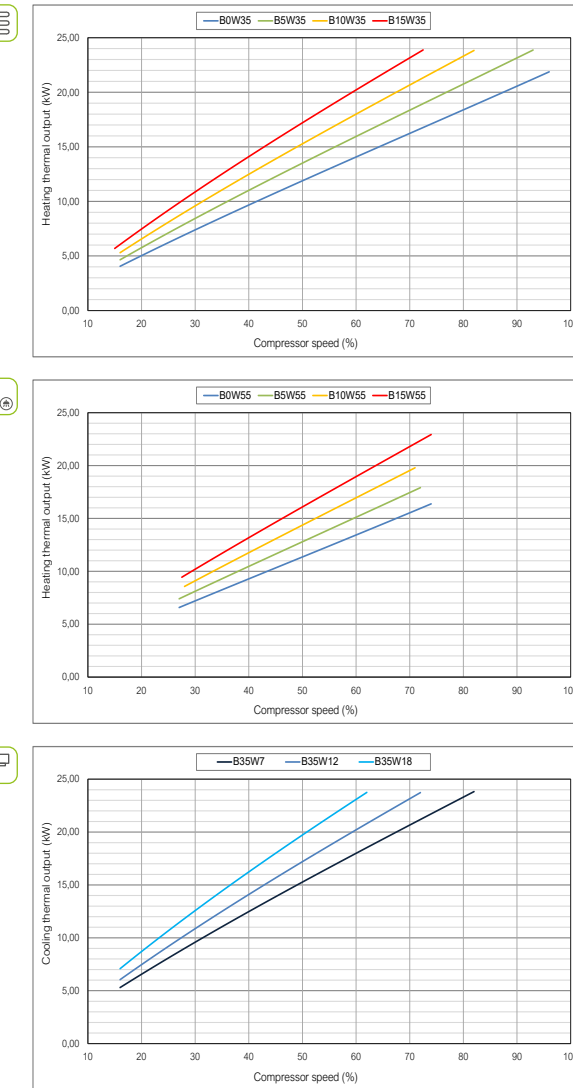


Installation management

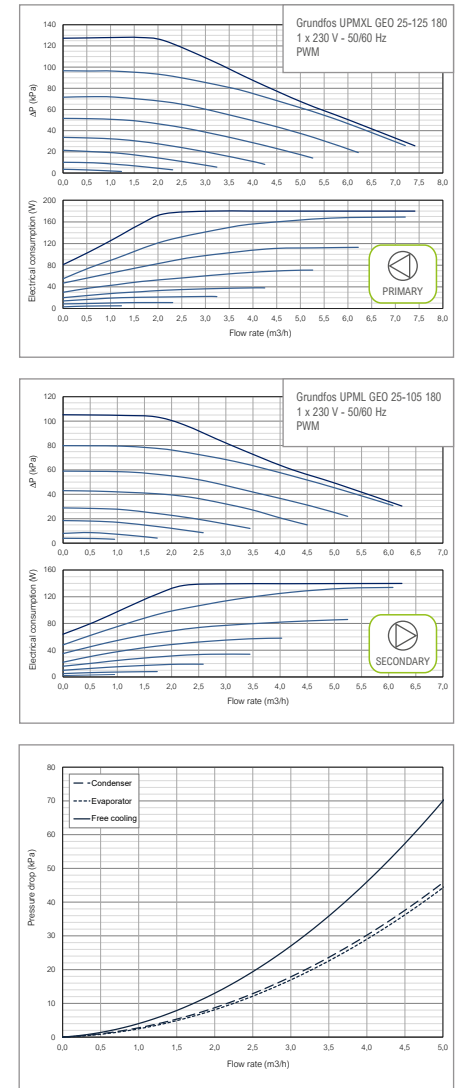


Performance curves

Thermal performance



Hydraulic performance



ecoGEO+ HP

High Power range



Power ranges

ecoGEO+ 12-40



ecoGEO+ 15-70



ecoGEO+ 25-100



Cascade



Services



DHW



Heating



Cooling



Pool

Models

ecoGEO+ HP1

DHW
Heating
Pool
Free Cooling *

ecoGEO+ HP3

DHW
Heating
Pool
Free Cooling *
Active Cooling

* External free cooling management



Inverter technology

Power ranges: 12-40 kW / 15-70 kW / 25-100 kW

Domestic hot water production

Heating and pool production

Integrated active cooling production

External passive (free) cooling production management

Internet connection through the ecoSMART Easynet

Integrated photovoltaic hybridisation

Simultaneous heating and cooling production

Hybrid source management through ecoSMART e-source

Cascade management up to 6 units through cascade manager
ecoSMART Supervisor

Three-phase (400V) power supply

Collection system



Ground



Open loop



Air



Hybrid



ecoGEO+ HP 12-40

- Modulating thermal power control within a wide range (25-100%) and modulating flow rate control of both brine and production circuits (20-100%).
 - Inverter technology and scroll compressor.
 - Integrated management of up to 5 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
 - Management of aerothermal collection modulating units, in case of air source or hybrid configurations by means of the ecoSMART e-source.
 - Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
 - Management of cascade systems up to 6 units by means of the ecoSMART Supervisor.
- Integrated management of simultaneous cooling/heating systems according to scheme.
 - Free cooling (Passive cooling) management.
 - Integrated active cooling in models 3.
 - Three-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.

SPECIFICATIONS ecoGEO+ HP 12-40		UNITS	HP1	HP3
APPLICATION	Place of installation	-	Indoors	
	Type of brine system ¹	-	Ground source / Air source / Hybrid source	
	DHW with external tank	-	✓	✓
	Heating and Pool	-	✓	✓
	External Passive cooling management	-	✓	✓
	Integrated Active cooling	-	-	✓
PERFORMANCE	Modulation range of the compressor	%	25 to 100	
	Heating power output ¹ , B0W35	kW	10,7 to 44,6	
	COP ¹ , B0W35	-	4,6	
	Active cooling power output ¹ , B35W7	kW	-	11,3 to 45,8
	EER ¹ , B35W7	-	-	4,4
	Max. DHW temperature without / with support	°C	60 / 70	
	Noise power emission level ³	db	53 to 71	
	Energy label / rjs / SCOP W35 average climate control	-	A+++ / 194% / 4,94	
	Energy label / rjs / SCOP W55 average climate control	-	A++ / 148% / 3,81	
	Distribution / Set heating outlet temperature range ²	°C	10 to 60 / 20 to 60	
OPERATION LIMITS	Distribution / Set cooling outlet temperature range ²	°C	5 to 35 / 7 to 25	
	Brine inlet temperature range in heating applications ²	°C	-20 to 35	
	Brine inlet temperature range in cooling applications ²	°C	10 to 60	
	Minimum / Maximum refrigerant circuit pressure	bar	2 / 45	
	Production / Pre-load circuit pressure	bar	0,5 to 5,0	
	Brine / Pre-load circuit pressure	bar	0,5 to 5,0	
WORKING FLUIDS	R410A Refrigerant load	kg	4,1	4,4
	Compressor oil type / load	kg	POE 160SZ / 3,8	
	Nominal primary flow rate, B0W35 (ΔT = 3 °C)	l/h	2405 to 9830	
	Nominal secondary flow rate, B0W35 (ΔT = 5 °C)	l/h	1845 to 7685	
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁵	-	✓	
	Maximum recommended external protection ⁷	-	C1A	
	Transformer primary circuit fuse	A	0,63	
	Transformer secondary circuit fuse	A	4,0	
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁵	-	✓	
	Maximum recommended external protection ⁷	-	C40A	
	Maximum consumption ² , B0W35	kW / A	10,9 / 17,7	
	Maximum consumption ² , B0W55	kW / A	15,5 / 24,6	
	Maximum consumption	kW / A	18,1 / 28,6	
	Minimum / Maximum starting current ⁴	A	5,6 / 9,0	
DIMENSIONS/WEIGHT	Correction of cosine Ø	-	0,96 / 1	
	Height x width x depth	mm	1063x870x785	
	Empty weight (without assembly)	kg	295	307

1. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver.

2. With variable speed circulating pumps, managed by the ecoGEO+ HP heat pump.

3. According to EN 12102.

4. Starting current depends on working condition of the hydraulic circuits.

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

6. Maximum consumption can vary significantly according to working conditions, or if the compressor's range of operation is restricted.

7. External protection exclusively regarding the ecoGEO+ heat pump controller electrical consumption. This protection should be updated in

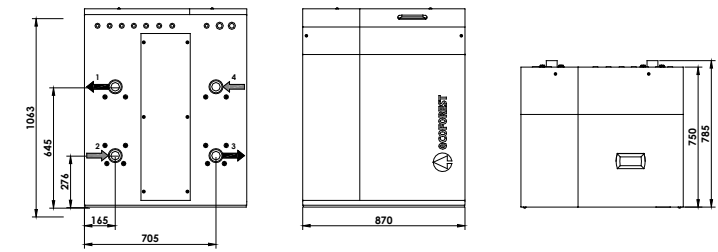
case of using the controller single-phase electrical supply to wire other equipments depending on the features of such equipments.

8. In case of air source or hybrid source configuration, it is required to combine the ecoGEO+ HP heat pump with the ecoSMART e-source.

Note: primary circuit and secondary circuit circulation pumps not included.

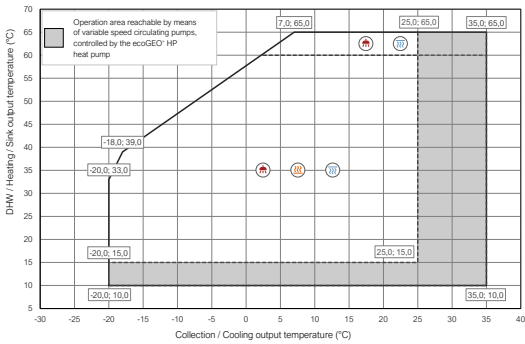
Dimensions and hydraulic connections

ecoGEO+ HP

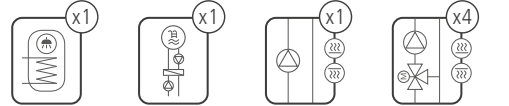


- 1. Secondary Outlet - 2 " M
- 2. Secondary Inlet - 2 " M
- 3. Primary Outlet - 2 " M
- 4. Primary Inlet - 2 " M

Operational chart

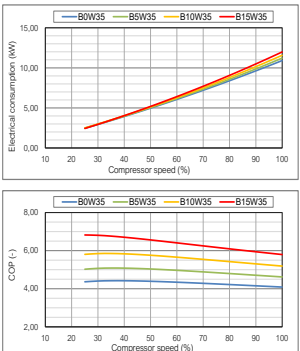
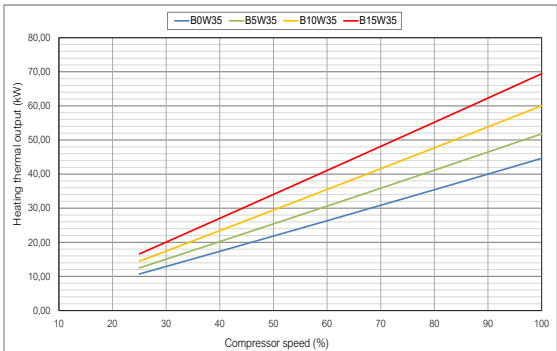


Installation management

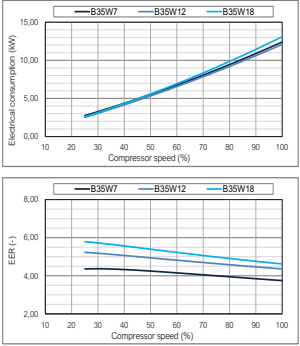
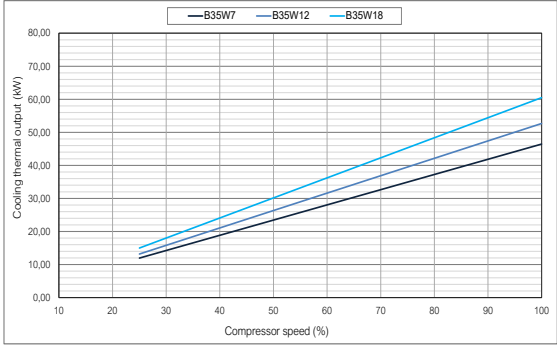
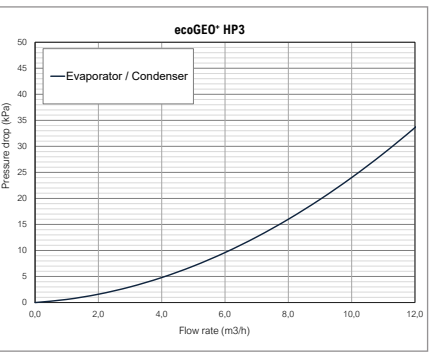
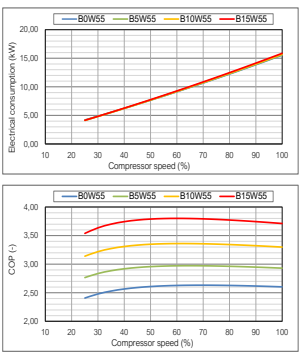
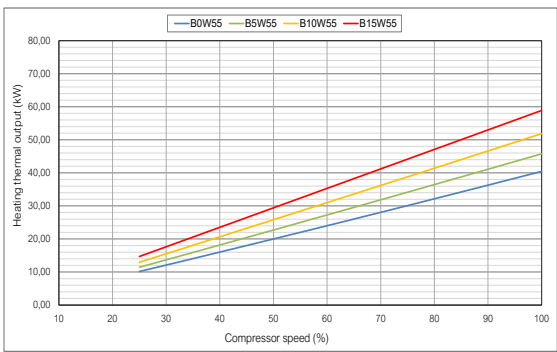
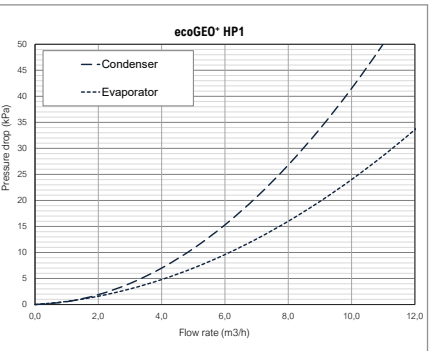


Performance curves

Thermal performance



Hydraulic performance



ecoGEO+ HP 15-70

- Modulating thermal power control within a wide range (25-100%) and modulating flow rate control of both brine and production circuits (20-100%).
 - Inverter technology and scroll compressor.
 - Integrated management of up to 5 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
 - Management of aerothermal collection modulating units, in case of air source or hybrid configurations by means of the ecoSMART e-source.
 - Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
 - Management of cascade systems up to 6 units by means of the ecoSMART Supervisor.
- Integrated management of simultaneous cooling/heating systems according to scheme.
 - Free cooling (Passive cooling) management.
 - Integrated active cooling in models 3.
 - Three-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.

SPECIFICATIONS ecoGEO+ HP 15-70		UNITS	HP1	HP3
APPLICATION	Place of installation	-	Indoors	
	Type of brine system ¹	-	Ground source / Air source / Hybrid source	
	DHW with external tank	-	✓	✓
	Heating and Pool	-	✓	✓
	External Passive cooling management	-	✓	✓
	Integrated Active cooling	-	-	✓
PERFORMANCE	Modulation range of the compressor	%	25 to 100	
	Heating power output ¹ , B0W35	kW	17,1 to 59,6	
	COP ¹ , B0W35	-	4,5	
	Active cooling power output ¹ , B35W7	kW	-	15,1 to 61,5
	EER ¹ , B35W7	-	-	4,5
	Max. DHW temperature without / with support	°C	60 / 70	
	Noise power emission level ³	db	53 to 71	
	Energy label / rjs / SCOP W35 average climate control	-	A+++ / 200% / 5,09	
	Energy label / rjs / SCOP W55 average climate control	-	A+++ / 152% / 3,90	
	Distribution / Set heating outlet temperature range ²	°C	10 to 60 / 20 to 60	
OPERATION LIMITS	Distribution / Set cooling outlet temperature range ²	°C	5 to 35 / 7 to 25	
	Brine inlet temperature range in heating applications ²	°C	-20 to 35	
	Brine inlet temperature range in cooling applications ²	°C	10 to 60	
	Minimum / Maximum refrigerant circuit pressure	bar	2 / 45	
	Production / Pre-load circuit pressure	bar	0,5 to 5,0	
	Brine / Pre-load circuit pressure	bar	0,5 to 5,0	
WORKING FLUIDS	R410A Refrigerant load	kg	4,7	5,5
	Compressor oil type / load	kg	POE 160SZ / 4,1	
	Nominal primary flow rate, B0W35 (ΔT = 3 °C)	l/h	3230 to 13195	
	Nominal secondary flow rate, B0W35 (ΔT = 5 °C)	l/h	2465 to 10265	
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁵	-	✓	
	Maximum recommended external protection ⁷	-	C1A	
	Transformer primary circuit fuse	A	0,63	
	Transformer secondary circuit fuse	A	4,0	
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁵	-	✓	
	Maximum recommended external protection ⁷	-	C50A	
	Maximum consumption ² , B0W35	kW / A	14,3 / 23,2	
	Maximum consumption ² , B0W55	kW / A	20,4 / 32,3	
	Maximum consumption	kW / A	23,7 / 37,0	
	Minimum / Maximum starting current ⁴	A	7,5 / 11,8	
DIMENSIONS/WEIGHT	Height x width x depth	mm	1063x870x785	
	Empty weight (without assembly)	kg	322	336

1. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver.

2. With variable speed circulating pumps, managed by the ecoGEO+ HP heat pump.

3. According to EN 12102.

4. Starting current depends on working condition of the hydraulic circuits.

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

6. Maximum consumption can vary significantly according to working conditions, or if the compressor's range of operation is restricted.

7. External protection exclusively regarding the ecoGEO+ heat pump controller electrical consumption. This protection should be updated in

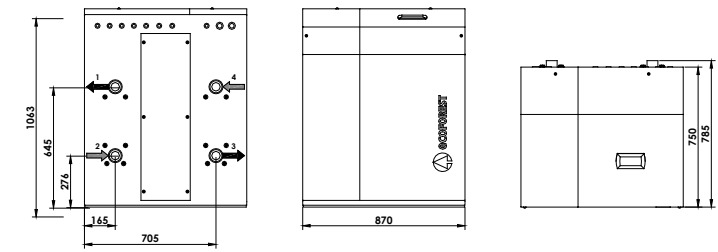
case of using the controller single-phase electrical supply to wire other equipments depending on the features of such equipments.

8. In case of air source or hybrid source configuration, it is required to combine the ecoGEO+ HP heat pump with the ecoSMART e-source.

Note: primary circuit and secondary circuit circulation pumps not included.

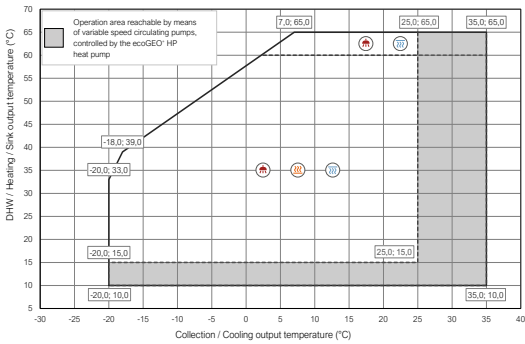
Dimensions and hydraulic connections

ecoGEO+ HP

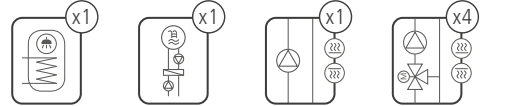


- 1. Secondary Outlet - 2" M
- 2. Secondary Inlet - 2" M
- 3. Primary Outlet - 2" M
- 4. Primary Inlet - 2" M

Operational chart

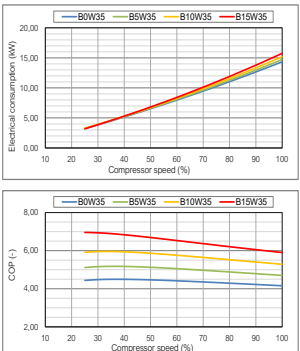
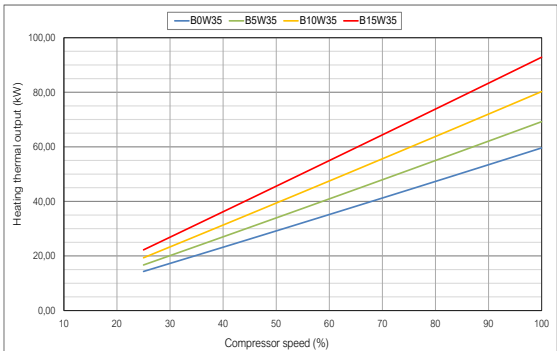


Installation management

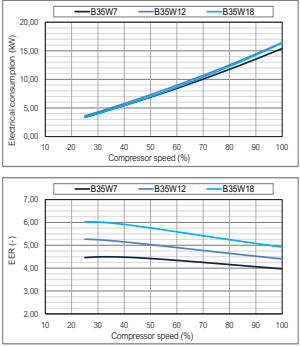
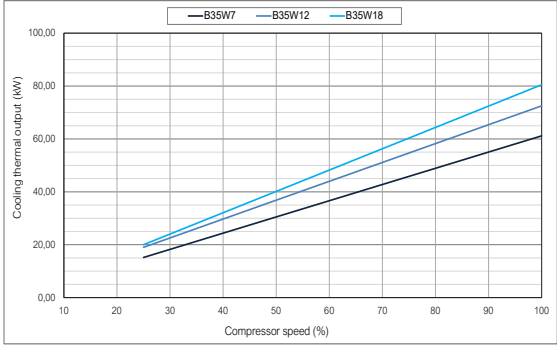
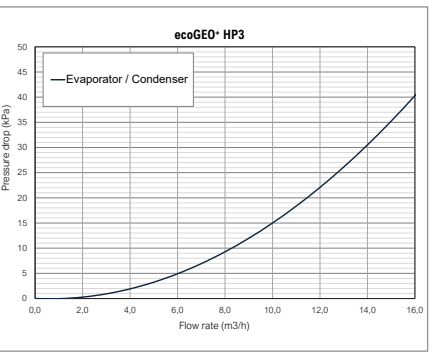
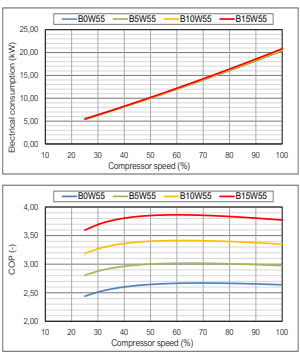
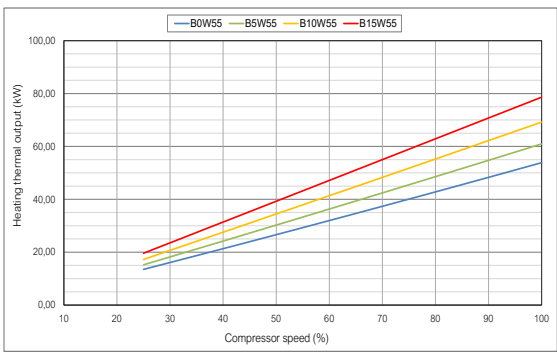
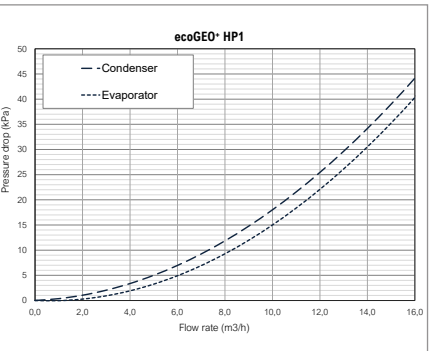


Performance curves

Thermal performance



Hydraulic performance



ecoGEO+ HP 25-100

- Modulating thermal power control within a wide range (25-100%) and modulating flow rate control of both brine and production circuits (20-100%).
 - Inverter technology and scroll compressor.
 - Integrated management of up to 5 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
 - Management of aerothermal collection modulating units, in case of air source or hybrid configurations by means of the ecoSMART e-source.
 - Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
 - Management of cascade systems up to 6 units by means of the ecoSMART Supervisor.
- Integrated management of simultaneous cooling/heating systems according to scheme.
 - Free cooling (Passive cooling) management.
 - Integrated active cooling in models 3.
 - Three-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.

SPECIFICATIONS ecoGEO+ HP 25-100		UNITS	HP1	HP3
APPLICATION	Place of installation	-	Indoors	
	Type of brine system ¹	-	Ground source / Air source / Hybrid source	
	DHW with external tank	-	✓	✓
	Heating and Pool	-	✓	✓
	External Passive cooling management	-	✓	✓
	Integrated Active cooling	-	-	✓
PERFORMANCE	Modulation range of the compressor	%	25 to 100	
	Heating power output ¹ , B0W35	kW	21,1 to 86,7	
	COP ¹ , B0W35	-	4,5	
	Active cooling power output ¹ , B35W7	kW	-	22,3 to 90,3
	EER ¹ , B35W7	-	-	4,6
	Max. DHW temperature without / with support	°C	60 / 70	
	Noise power emission level ³	db	59 to 72	
	Energy label / rjs / SCOP W35 average climate control	-	A+++ / 199% / 5,08	
	Energy label / rjs / SCOP W55 average climate control	-	A++ / 147% / 3,78	
	Distribution / Set heating outlet temperature range ²	°C	10 to 60 / 20 to 60	
OPERATION LIMITS	Distribution / Set cooling outlet temperature range ²	°C	5 to 35 / 7 to 25	
	Brine inlet temperature range in heating applications ²	°C	-20 to 35	
	Brine inlet temperature range in cooling applications ²	°C	10 to 60	
	Minimum / Maximum refrigerant circuit pressure	bar	2 / 45	
	Production / Pre-load circuit pressure	bar	0,5 to 5,0	
	Brine / Pre-load circuit pressure	bar	0,5 to 5,0	
WORKING FLUIDS	R410A Refrigerant load	kg	8,5	9,1
	Compressor oil type / load	kg	POE 160SZ / 7,7	
	Nominal primary flow rate, B0W35 ¹ (ΔT = 3 °C)	l/h	4765 to 19360	
	Nominal secondary flow rate, B0W35 ¹ (ΔT = 5 °C)	l/h	3625 to 14935	
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁵	-	✓	
	Maximum recommended external protection ⁷	-	C1A	
	Transformer primary circuit fuse	A	0,63	
	Transformer secondary circuit fuse	A	4,0	
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁵	-	✓	
	Maximum recommended external protection ⁷	-	C63A	
	Maximum consumption ² , B0W35	kW / A	20,3 / 31,8	
	Maximum consumption ² , B0W55	kW / A	29,6 / 45,1	
	Maximum consumption	kW / A	33,7 / 52,9	
	Minimum / Maximum starting current ⁴	A	10,8 / 16,7	
DIMENSIONS/WEIGHT	Correction of cosine Ø	-	0,96 / 1	
	Height x width x depth	mm	1063x950x886	
	Empty weight (without assembly)	kg	450	465

1. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver.

2. With variable speed circulating pumps, managed by the ecoGEO+ HP heat pump.

3. According to EN 12102.

4. Starting current depends on working condition of the hydraulic circuits.

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

6. Maximum consumption can vary significantly according to working conditions, or if the compressor's range of operation is restricted.

7. External protection exclusively regarding the ecoGEO+ heat pump controller electrical consumption. This protection should be updated in

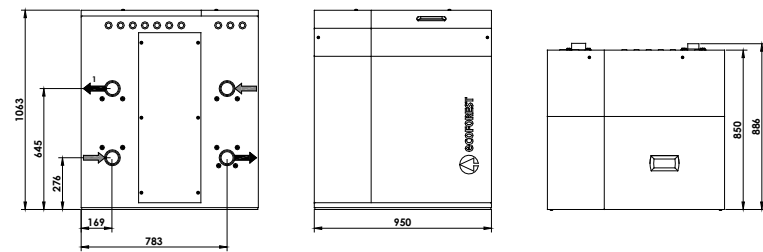
case of using the controller single-phase electrical supply to wire other equipments depending on the features of such equipments.

8. In case of air source or hybrid source configuration, it is required to combine the ecoGEO+ HP heat pump with the ecoSMART e-source.

Note: primary circuit and secondary circuit circulation pumps not included.

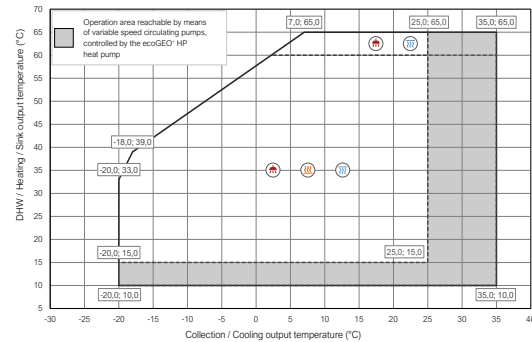
Dimensions and hydraulic connections

ecoGEO+ HP

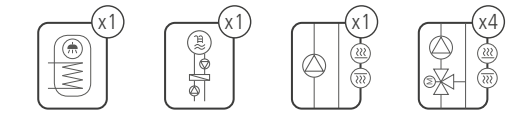


- 1. Secondary Outlet - 2 1/2" M
- 2. Secondary Inlet - 2 1/2" M
- 3. Primary Outlet - 2 1/2" M
- 4. Primary Inlet - 2 1/2" M

Operational chart

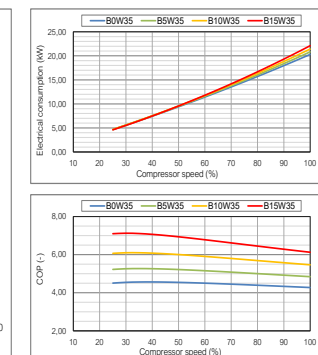
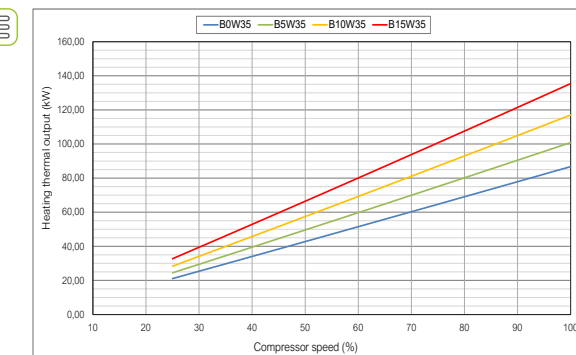


Installation management

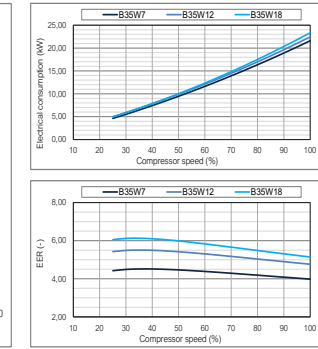
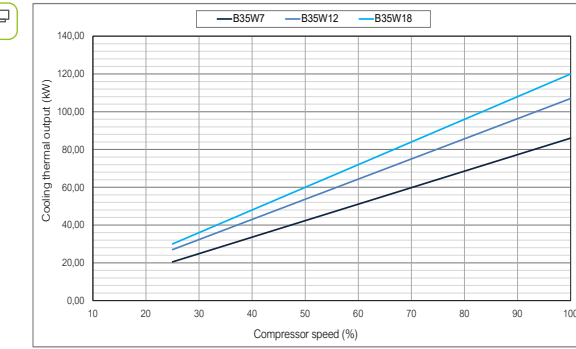
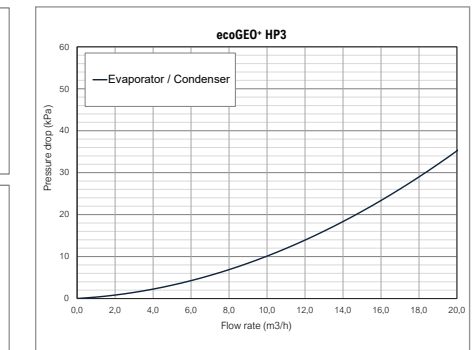
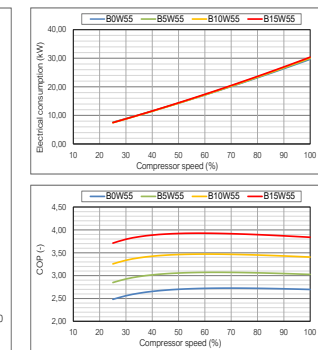
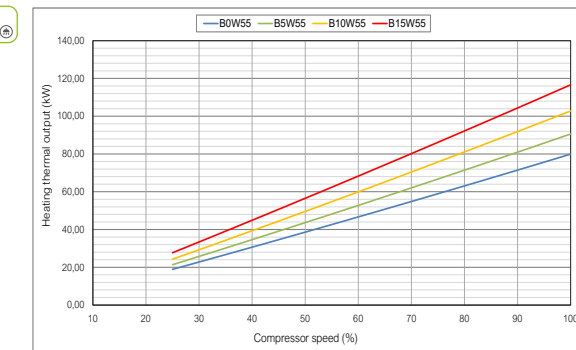
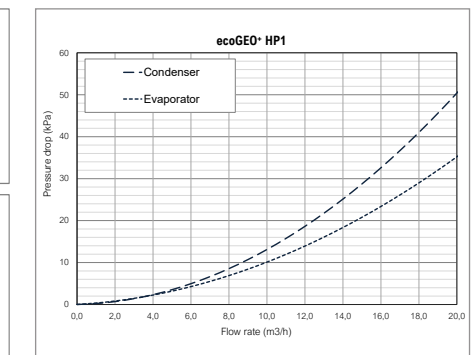


Performance curves

Thermal performance



Hydraulic performance

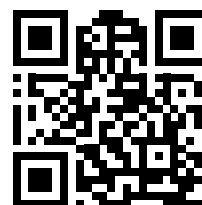


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