

## Subtype ecoGEO B1/C1 1-6 PRO

Certificate Holder	Ecoforest Geotermia S.L.
Address	Rúa das Pontes, 25
ZIP	36350
City	Nigrán (Pontevedra)
Country	ES
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	ecoGEO B1/C1 1-6 PRO
Registration number	011-1W0429
Heat Pump Type	Brine/Water
Refrigerant	R290
Mass of Refrigerant	0.15 kg
Certification Date	17.11.2020
Testing basis	HP KEYMARK certification scheme rules V14
Testing laboratory	Austrian Institute of Technology (AIT)

## Model ecoGEO+ C1 230 1-6 PRO

Model name	ecoGEO+ C1 230 1-6 PRO
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

#### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	2.58 kW	4.39 kW
El input	0.60 kW	1.53 kW
COP	4.30	2.84

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	180 %	142 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.71	3.76
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.51 kW	5.06 kW
COP T <sub>j</sub> = -7°C	4.10	3.06
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.33 kW	3.08 kW
COP T <sub>j</sub> = +2°C	4.91	3.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.27 kW	1.89 kW
COP T <sub>j</sub> = +7°C	5.05	4.25
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.73 kW	0.86 kW
COP T <sub>j</sub> = 12°C	5.21	4.37
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>		
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	2722 kWh	3300 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	186 %	144 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.85	3.81
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.64 kW	3.42 kW
COP T <sub>j</sub> = -7°C	4.59	3.49
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.24 kW	2.10 kW
COP T <sub>j</sub> = +2°C	5.27	4.12
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.44 kW	1.43 kW
COP T <sub>j</sub> = +7°C	5.40	4.48
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	0.88 kW	1.21 kW
COP T <sub>j</sub> = 12°C	4.91	4.87
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
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C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>		
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	3151 kWh	4011 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
EN 14825   Warmer Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	178 %	132 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.66	3.49
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	6.16 kW	5.63 kW
COP T <sub>j</sub> = +2°C	3.72	2.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.86 kW	3.62 kW
COP T <sub>j</sub> = +7°C	4.43	3.34
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.71 kW	3.51 kW
COP T <sub>j</sub> = 12°C	5.37	4.32
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>		
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1777 kWh	2299 kWh

## Model ecoGEO+ C2 230 1-6 PRO

Model name	ecoGEO+ C2 230 1-6 PRO
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

#### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	2.58 kW	4.39 kW
El input	0.60 kW	1.53 kW
COP	4.30	2.84

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	180 %	142 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.71	3.76
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.51 kW	5.06 kW
COP T <sub>j</sub> = -7°C	4.10	3.06
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.33 kW	3.08 kW
COP T <sub>j</sub> = +2°C	4.91	3.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.27 kW	1.89 kW
COP T <sub>j</sub> = +7°C	5.05	4.25
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.73 kW	0.86 kW
COP T <sub>j</sub> = 12°C	5.21	4.37
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>		
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	2722 kWh	3300 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	186 %	144 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.85	3.81
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.64 kW	3.42 kW
COP T <sub>j</sub> = -7°C	4.59	3.49
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.24 kW	2.10 kW
COP T <sub>j</sub> = +2°C	5.27	4.12
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.44 kW	1.43 kW
COP T <sub>j</sub> = +7°C	5.40	4.48
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	0.88 kW	1.21 kW
COP T <sub>j</sub> = 12°C	4.91	4.87
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>		
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	3151 kWh	4011 kWh

#### EN 12102-1 | Warmer Climate



	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
EN 14825   Warmer Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	178 %	132 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.66	3.49
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	6.16 kW	5.63 kW
COP T <sub>j</sub> = +2°C	3.72	2.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.86 kW	3.62 kW
COP T <sub>j</sub> = +7°C	4.43	3.34
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.71 kW	3.51 kW
COP T <sub>j</sub> = 12°C	5.37	4.32
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>		
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1777 kWh	2299 kWh

## Model ecoGEO+ B1 230 1-6 PRO

Model name	ecoGEO+ B1 230 1-6 PRO
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	2.58 kW	4.39 kW
El input	0.60 kW	1.53 kW
COP	4.30	2.84

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	180 %	142 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.71	3.76
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.51 kW	5.06 kW
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P <sub>dh</sub> T <sub>j</sub> = +2°C	3.33 kW	3.08 kW
COP T <sub>j</sub> = +2°C	4.91	3.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.27 kW	1.89 kW
COP Tj = +7°C	5.05	4.25
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.73 kW	0.86 kW
COP Tj = 12°C	5.21	4.37
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2722 kWh	3300 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
ηs	186 %	144 %
Prated	6.20 kW	6.00 kW
SCOP	4.85	3.81
Tbiv	-22 °C	-22 °C
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Pdh Tj = -7°C	3.64 kW	3.42 kW
COP Tj = -7°C	4.59	3.49
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.24 kW	2.10 kW
COP Tj = +2°C	5.27	4.12
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.44 kW	1.43 kW
COP Tj = +7°C	5.40	4.48
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	0.88 kW	1.21 kW
COP Tj = 12°C	4.91	4.87

Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3151 kWh	4011 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
$\eta_s$	178 %	132 %
Prated	6.20 kW	6.00 kW
SCOP	4.66	3.49
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.16 kW	5.63 kW
COP Tj = +2°C	3.72	2.87
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.86 kW	3.62 kW
COP Tj = +7°C	4.43	3.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.71 kW	3.51 kW
COP Tj = 12°C	5.37	4.32
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87

$C_{dh} T_j = TOL$  or  $P_{dh} T_j = T_{designh}$  if  $TOL < T_{designh}$

WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1777 kWh	2299 kWh

## Model ecoGEO+ B2 230 1-6 PRO

Model name	ecoGEO+ B2 230 1-6 PRO
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	2.58 kW	4.39 kW
El input	0.60 kW	1.53 kW
COP	4.30	2.84

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	180 %	142 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.71	3.76
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.51 kW	5.06 kW
COP T <sub>j</sub> = -7°C	4.10	3.06
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.33 kW	3.08 kW
COP T <sub>j</sub> = +2°C	4.91	3.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.27 kW	1.89 kW
COP Tj = +7°C	5.05	4.25
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.73 kW	0.86 kW
COP Tj = 12°C	5.21	4.37
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2722 kWh	3300 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
ηs	186 %	144 %
Prated	6.20 kW	6.00 kW
SCOP	4.85	3.81
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.64 kW	3.42 kW
COP Tj = -7°C	4.59	3.49
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.24 kW	2.10 kW
COP Tj = +2°C	5.27	4.12
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.44 kW	1.43 kW
COP Tj = +7°C	5.40	4.48
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	0.88 kW	1.21 kW
COP Tj = 12°C	4.91	4.87

Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3151 kWh	4011 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
$\eta_s$	178 %	132 %
Prated	6.20 kW	6.00 kW
SCOP	4.66	3.49
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.16 kW	5.63 kW
COP Tj = +2°C	3.72	2.87
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.86 kW	3.62 kW
COP Tj = +7°C	4.43	3.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.71 kW	3.51 kW
COP Tj = 12°C	5.37	4.32
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87



$C_{dh} T_j = TOL$  or  $P_{dh} T_j = T_{designh}$  if  $TOL < T_{designh}$

WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1777 kWh	2299 kWh

## Model ecoGEO+ LITE1 230 1-6 PRO

Model name	ecoGEO+ LITE1 230 1-6 PRO
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	2.58 kW	4.39 kW
El input	0.60 kW	1.53 kW
COP	4.30	2.84

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	180 %	142 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.71	3.76
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.51 kW	5.06 kW
COP T <sub>j</sub> = -7°C	4.10	3.06
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.33 kW	3.08 kW
COP T <sub>j</sub> = +2°C	4.91	3.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.27 kW	1.89 kW
COP Tj = +7°C	5.05	4.25
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.73 kW	0.86 kW
COP Tj = 12°C	5.21	4.37
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2722 kWh	3300 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
ηs	186 %	144 %
Prated	6.20 kW	6.00 kW
SCOP	4.85	3.81
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.64 kW	3.42 kW
COP Tj = -7°C	4.59	3.49
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.24 kW	2.10 kW
COP Tj = +2°C	5.27	4.12
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.44 kW	1.43 kW
COP Tj = +7°C	5.40	4.48
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	0.88 kW	1.21 kW
COP Tj = 12°C	4.91	4.87

Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3151 kWh	4011 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
$\eta_s$	178 %	132 %
Prated	6.20 kW	6.00 kW
SCOP	4.66	3.49
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.16 kW	5.63 kW
COP Tj = +2°C	3.72	2.87
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.86 kW	3.62 kW
COP Tj = +7°C	4.43	3.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.71 kW	3.51 kW
COP Tj = 12°C	5.37	4.32
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87

$C_{dh} T_j = TOL$  or  $P_{dh} T_j = T_{designh}$  if  $TOL < T_{designh}$

WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1777 kWh	2299 kWh

## Model ecoGEO+ C1 230 1-6 PRO EH

Model name	ecoGEO+ C1 230 1-6 PRO EH
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure passed

Defrost test	passed	
Starting and operating test	passed	
EN 14511-2   Heating		
	Low temperature	Medium temperature
Heat output	2.58 kW	4.39 kW
El input	0.60 kW	1.53 kW
COP	4.30	2.84
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	180 %	142 %
Prated	6.20 kW	6.00 kW
SCOP	4.71	3.76
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.51 kW	5.06 kW
COP T <sub>j</sub> = -7°C	4.10	3.06
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.33 kW	3.08 kW
COP T <sub>j</sub> = +2°C	4.91	3.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.27 kW	1.89 kW
COP T <sub>j</sub> = +7°C	5.05	4.25
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.73 kW	0.86 kW
COP T <sub>j</sub> = 12°C	5.21	4.37
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	2722 kWh	3300 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	186 %	144 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.85	3.81
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.64 kW	3.42 kW
COP T <sub>j</sub> = -7°C	4.59	3.49
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.24 kW	2.10 kW
COP T <sub>j</sub> = +2°C	5.27	4.12
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.44 kW	1.43 kW
COP T <sub>j</sub> = +7°C	5.40	4.48
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	0.88 kW	1.21 kW
COP T <sub>j</sub> = 12°C	4.91	4.87
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	3151 kWh	4011 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Warmer Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	178 %	132 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.66	3.49
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	6.16 kW	5.63 kW
COP T <sub>j</sub> = +2°C	3.72	2.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.86 kW	3.62 kW
COP T <sub>j</sub> = +7°C	4.43	3.34
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.71 kW	3.51 kW
COP T <sub>j</sub> = 12°C	5.37	4.32
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1777 kWh	2299 kWh

## Model ecoGEO+ C2 230 1-6 PRO EH

Model name	ecoGEO+ C2 230 1-6 PRO EH
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.82
Heating up time	1:50 h:min
Standby power input	100.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	220 l

### EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed	
Starting and operating test	passed	
EN 14511-2   Heating		
	Low temperature	Medium temperature
Heat output	2.58 kW	4.39 kW
El input	0.60 kW	1.53 kW
COP	4.30	2.84
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	180 %	142 %
Prated	6.20 kW	6.00 kW
SCOP	4.71	3.76
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.51 kW	5.06 kW
COP T <sub>j</sub> = -7°C	4.10	3.06
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.33 kW	3.08 kW
COP T <sub>j</sub> = +2°C	4.91	3.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.27 kW	1.89 kW
COP T <sub>j</sub> = +7°C	5.05	4.25
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.73 kW	0.86 kW
COP T <sub>j</sub> = 12°C	5.21	4.37
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	2722 kWh	3300 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	186 %	144 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.85	3.81
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.64 kW	3.42 kW
COP T <sub>j</sub> = -7°C	4.59	3.49
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.24 kW	2.10 kW
COP T <sub>j</sub> = +2°C	5.27	4.12
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.44 kW	1.43 kW
COP T <sub>j</sub> = +7°C	5.40	4.48
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	0.88 kW	1.21 kW
COP T <sub>j</sub> = 12°C	4.91	4.87
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	3151 kWh	4011 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	178 %	132 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.66	3.49
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	6.16 kW	5.63 kW
COP T <sub>j</sub> = +2°C	3.72	2.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.86 kW	3.62 kW
COP T <sub>j</sub> = +7°C	4.43	3.34
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.71 kW	3.51 kW
COP T <sub>j</sub> = 12°C	5.37	4.32
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.72	2.87
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.16 kW	5.63 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.72	2.87
WTOL	70 °C	70 °C
P <sub>off</sub>	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1777 kWh	2299 kWh

## Model ecoGEO+ B1 230 1-6 PRO EH

Model name	ecoGEO+ B1 230 1-6 PRO EH
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	2.58 kW	4.39 kW
El input	0.60 kW	1.53 kW
COP	4.30	2.84

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	180 %	142 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.71	3.76
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.51 kW	5.06 kW
COP T <sub>j</sub> = -7°C	4.10	3.06
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.33 kW	3.08 kW
COP T <sub>j</sub> = +2°C	4.91	3.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.27 kW	1.89 kW
COP Tj = +7°C	5.05	4.25
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.73 kW	0.86 kW
COP Tj = 12°C	5.21	4.37
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2722 kWh	3300 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
ηs	186 %	144 %
Prated	6.20 kW	6.00 kW
SCOP	4.85	3.81
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.64 kW	3.42 kW
COP Tj = -7°C	4.59	3.49
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.24 kW	2.10 kW
COP Tj = +2°C	5.27	4.12
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.44 kW	1.43 kW
COP Tj = +7°C	5.40	4.48
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	0.88 kW	1.21 kW
COP Tj = 12°C	4.91	4.87
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3151 kWh	4011 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
$\eta_s$	178 %	132 %
Prated	6.20 kW	6.00 kW
SCOP	4.66	3.49
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.16 kW	5.63 kW
COP Tj = +2°C	3.72	2.87
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.86 kW	3.62 kW
COP Tj = +7°C	4.43	3.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.71 kW	3.51 kW
COP Tj = 12°C	5.37	4.32
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W



PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1777 kWh	2299 kWh

## Model ecoGEO+ B2 230 1-6 PRO EH

Model name	ecoGEO+ B2 230 1-6 PRO EH
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	2.58 kW	4.39 kW
El input	0.60 kW	1.53 kW
COP	4.30	2.84

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	6.20 kW	6.00 kW
η <sub>s</sub>	180 %	142 %
P <sub>rated</sub>	6.20 kW	6.00 kW
SCOP	4.71	3.76
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.51 kW	5.06 kW
COP T <sub>j</sub> = -7°C	4.10	3.06
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.33 kW	3.08 kW
COP T <sub>j</sub> = +2°C	4.91	3.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.27 kW	1.89 kW
COP Tj = +7°C	5.05	4.25
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.73 kW	0.86 kW
COP Tj = 12°C	5.21	4.37
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2722 kWh	3300 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
ηs	186 %	144 %
Prated	6.20 kW	6.00 kW
SCOP	4.85	3.81
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.64 kW	3.42 kW
COP Tj = -7°C	4.59	3.49
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.24 kW	2.10 kW
COP Tj = +2°C	5.27	4.12
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.44 kW	1.43 kW
COP Tj = +7°C	5.40	4.48
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	0.88 kW	1.21 kW
COP Tj = 12°C	4.91	4.87
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3151 kWh	4011 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	6.20 kW	6.00 kW
$\eta_s$	178 %	132 %
Prated	6.20 kW	6.00 kW
SCOP	4.66	3.49
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.16 kW	5.63 kW
COP Tj = +2°C	3.72	2.87
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.86 kW	3.62 kW
COP Tj = +7°C	4.43	3.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.71 kW	3.51 kW
COP Tj = 12°C	5.37	4.32
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.16 kW	5.63 kW
COP Tj = Tbiv	3.72	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.16 kW	5.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.87
WTOL	70 °C	70 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1777 kWh	2299 kWh