

## Subtype ECOGEO B/C 1 1-9kW

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 B/C 1 1-9kW
Registration number	011-1W0326
Heat Pump Type	Brine/Water
Refrigerant	R410A
Mass of Refrigerant	0.9 kg
Certification Date	28.05.2019
Testing basis	HP KEYMARK certification scheme rules rev. 14
Testing laboratory	Austrian Institute of Technology (AIT)

## Model ecoGEO C2T 1-9kW

Model name	ecoGEO C2T 1-9kW
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	3x400V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 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	4.12 kW	4.80 kW
El input	0.91 kW	1.70 kW
COP	4.52	2.83

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	186 %	140 %
P <sub>rated</sub>	11 kW	10.5 kW
SCOP	4.84	3.71
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.59 kW	9.47 kW
COP T <sub>j</sub> = -7°C	3.85	2.76
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.98 kW	5.54 kW
COP T <sub>j</sub> = +2°C	4.89	3.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.81 kW	3.61 kW
COP T <sub>j</sub> = +7°C	5.74	4.31
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	2.48 kW
COP T <sub>j</sub> = 12°C	4.93	3.95
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>	10.69 kW	10.58 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.60
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>	10.69 kW	10.58 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.60
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>	1.000	1.000
WTOL	60 °C	60 °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>	4692 kWh	5847 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	187 %	163 %
P <sub>rated</sub>	11.00 kW	10.5 kW
SCOP	4.87	4.28
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.17 kW	6.81 kW
COP T <sub>j</sub> = -7°C	4.47	3.62
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.33 kW	4.19 kW
COP T <sub>j</sub> = +2°C	5.47	4.96
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.73 kW	2.69 kW
COP T <sub>j</sub> = +7°C	5.74	6.00
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.30 kW	1.30 kW
COP T <sub>j</sub> = 12°C	3.91	5.15
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.48
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.48
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>	1.000	1.000
WTOL	60 °C	60 °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>	5571 kWh	6052 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)
EN 14825   Warmer Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	12.5 kW
η <sub>s</sub>	184 %	141 %
P <sub>rated</sub>	11.00 kW	10.5 kW
SCOP	4.80	3.73
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	10.69 kW	10.05 kW
COP T <sub>j</sub> = +2°C	3.55	2.48
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	7.62 kW	6.81 kW
COP T <sub>j</sub> = +7°C	4.31	3.35
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.33 kW	3.87 kW
COP T <sub>j</sub> = 12°C	5.72	4.61
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.48
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.48
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>	1.000	1.000
WTOL	60 °C	60 °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>	3061 kWh	3764 kWh

## Model ecoGEO C1 1-9kW

Model name	ecoGEO C1 1-9kW
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 $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 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	4.12 kW	4.80 kW
El input	0.91 kW	1.70 kW
COP	4.52	2.83

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	186 %	140 %
P <sub>rated</sub>	11 kW	10.5 kW
SCOP	4.84	3.71
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.59 kW	9.47 kW
COP T <sub>j</sub> = -7°C	3.85	2.76
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.98 kW	5.54 kW
COP T <sub>j</sub> = +2°C	4.89	3.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.81 kW	3.61 kW
COP T <sub>j</sub> = +7°C	5.74	4.31
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	2.48 kW
COP T <sub>j</sub> = 12°C	4.93	3.95
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>	10.69 kW	10.58 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.60
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>	10.69 kW	10.58 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.60
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>	1.000	1.000
WTOL	60 °C	60 °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>	4692 kWh	5847 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	187 %	163 %
P <sub>rated</sub>	11.00 kW	10.5 kW
SCOP	4.87	4.28
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.17 kW	6.81 kW
COP T <sub>j</sub> = -7°C	4.47	3.62
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.33 kW	4.19 kW
COP T <sub>j</sub> = +2°C	5.47	4.96
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.73 kW	2.69 kW
COP T <sub>j</sub> = +7°C	5.74	6.00
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.30 kW	1.30 kW
COP T <sub>j</sub> = 12°C	3.91	5.15
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.48
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.48
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>	1.000	1.000
WTOL	60 °C	60 °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>	5571 kWh	6052 kWh

#### EN 12102-1 | Warmer Climate



	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)
EN 14825   Warmer Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	12.5 kW
η <sub>s</sub>	184 %	141 %
P <sub>rated</sub>	11.00 kW	10.5 kW
SCOP	4.80	3.73
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	10.69 kW	10.05 kW
COP T <sub>j</sub> = +2°C	3.55	2.48
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	7.62 kW	6.81 kW
COP T <sub>j</sub> = +7°C	4.31	3.35
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.33 kW	3.87 kW
COP T <sub>j</sub> = 12°C	5.72	4.61
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.48
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.48
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>	1.000	1.000
WTOL	60 °C	60 °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>	3061 kWh	3764 kWh

## Model ecoGEO C1T 1-9kW

Model name	ecoGEO C1T 1-9kW
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	3x400V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
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### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 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	4.12 kW	4.80 kW
El input	0.91 kW	1.70 kW
COP	4.52	2.83

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	186 %	140 %
P <sub>rated</sub>	11 kW	10.5 kW
SCOP	4.84	3.71
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.59 kW	9.47 kW
COP T <sub>j</sub> = -7°C	3.85	2.76
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.98 kW	5.54 kW
COP T <sub>j</sub> = +2°C	4.89	3.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.81 kW	3.61 kW
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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	2.48 kW
COP T <sub>j</sub> = 12°C	4.93	3.95
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>	10.69 kW	10.58 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.60
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>	10.69 kW	10.58 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.60
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>	1.000	1.000
WTOL	60 °C	60 °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>	4692 kWh	5847 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	187 %	163 %
P <sub>rated</sub>	11.00 kW	10.5 kW
SCOP	4.87	4.28
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.17 kW	6.81 kW
COP T <sub>j</sub> = -7°C	4.47	3.62
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.33 kW	4.19 kW
COP T <sub>j</sub> = +2°C	5.47	4.96
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.73 kW	2.69 kW
COP T <sub>j</sub> = +7°C	5.74	6.00
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.30 kW	1.30 kW
COP T <sub>j</sub> = 12°C	3.91	5.15
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.48
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.48
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>	1.000	1.000
WTOL	60 °C	60 °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>	5571 kWh	6052 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)
EN 14825   Warmer Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	12.5 kW
η <sub>s</sub>	184 %	141 %
P <sub>rated</sub>	11.00 kW	10.5 kW
SCOP	4.80	3.73
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	10.69 kW	10.05 kW
COP T <sub>j</sub> = +2°C	3.55	2.48
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	7.62 kW	6.81 kW
COP T <sub>j</sub> = +7°C	4.31	3.35
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.33 kW	3.87 kW
COP T <sub>j</sub> = 12°C	5.72	4.61
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.48
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.48
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>	1.000	1.000
WTOL	60 °C	60 °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>	3061 kWh	3764 kWh

## Model ecoGEO C2 1-9kW

Model name	ecoGEO C2 1-9kW
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 $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	78 %
COP	2.07
Heating up time	1:43 h:min
Standby power input	88.2 W
Reference hot water temperature	58.9 °C
Mixed water at 40°C	227 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	4.12 kW	4.80 kW
El input	0.91 kW	1.70 kW
COP	4.52	2.83

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	186 %	140 %
P <sub>rated</sub>	11 kW	10.5 kW
SCOP	4.84	3.71
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.59 kW	9.47 kW
COP T <sub>j</sub> = -7°C	3.85	2.76
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.98 kW	5.54 kW
COP T <sub>j</sub> = +2°C	4.89	3.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.81 kW	3.61 kW
COP T <sub>j</sub> = +7°C	5.74	4.31
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	2.48 kW
COP T <sub>j</sub> = 12°C	4.93	3.95
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>	10.69 kW	10.58 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.60
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>	10.69 kW	10.58 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.60
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>	1.000	1.000
WTOL	60 °C	60 °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>	4692 kWh	5847 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	187 %	163 %
P <sub>rated</sub>	11.00 kW	10.5 kW
SCOP	4.87	4.28
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.17 kW	6.81 kW
COP T <sub>j</sub> = -7°C	4.47	3.62
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.33 kW	4.19 kW
COP T <sub>j</sub> = +2°C	5.47	4.96
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.73 kW	2.69 kW
COP T <sub>j</sub> = +7°C	5.74	6.00
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.30 kW	1.30 kW
COP T <sub>j</sub> = 12°C	3.91	5.15
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.48
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.48
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>	1.000	1.000
WTOL	60 °C	60 °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>	5571 kWh	6052 kWh

#### EN 12102-1 | Warmer Climate



	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)
EN 14825   Warmer Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	12.5 kW
η <sub>s</sub>	184 %	141 %
P <sub>rated</sub>	11.00 kW	10.5 kW
SCOP	4.80	3.73
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	10.69 kW	10.05 kW
COP T <sub>j</sub> = +2°C	3.55	2.48
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	7.62 kW	6.81 kW
COP T <sub>j</sub> = +7°C	4.31	3.35
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.33 kW	3.87 kW
COP T <sub>j</sub> = 12°C	5.72	4.61
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.55	2.48
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>	10.69 kW	10.05 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.55	2.48
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>	1.000	1.000
WTOL	60 °C	60 °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>	3061 kWh	3764 kWh

## Model ecoGEO B1T 1-9kW

Model name	ecoGEO B1T 1-9kW
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	3x400V 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	4.12 kW	4.80 kW
El input	0.91 kW	1.70 kW
COP	4.52	2.83

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	186 %	140 %
P <sub>rated</sub>	11 kW	10.5 kW
SCOP	4.84	3.71
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.59 kW	9.47 kW
COP T <sub>j</sub> = -7°C	3.85	2.76
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.98 kW	5.54 kW
COP T <sub>j</sub> = +2°C	4.89	3.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	3.81 kW	3.61 kW
COP Tj = +7°C	5.74	4.31
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.73 kW	2.48 kW
COP Tj = 12°C	4.93	3.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.58 kW
COP Tj = Tbiv	3.55	2.60
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	4692 kWh	5847 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	11.0 kW	10.5 kW
ηs	187 %	163 %
Prated	11.00 kW	10.5 kW
SCOP	4.87	4.28
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.17 kW	6.81 kW
COP Tj = -7°C	4.47	3.62
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.33 kW	4.19 kW
COP Tj = +2°C	5.47	4.96
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.73 kW	2.69 kW
COP Tj = +7°C	5.74	6.00
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.30 kW	1.30 kW
COP Tj = 12°C	3.91	5.15

Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.05 kW
COP Tj = Tbiv	3.55	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	5571 kWh	6052 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	11.0 kW	12.5 kW
$\eta_s$	184 %	141 %
Prated	11.00 kW	10.5 kW
SCOP	4.80	3.73
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.69 kW	10.05 kW
COP Tj = +2°C	3.55	2.48
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.62 kW	6.81 kW
COP Tj = +7°C	4.31	3.35
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.33 kW	3.87 kW
COP Tj = 12°C	5.72	4.61
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.05 kW
COP Tj = Tbiv	3.55	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.48

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	3061 kWh	3764 kWh

## Model ecoGEO B2T 1-9kW

Model name	ecoGEO B2T 1-9kW
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	3x400V 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	4.12 kW	4.80 kW
El input	0.91 kW	1.70 kW
COP	4.52	2.83

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	186 %	140 %
P <sub>rated</sub>	11 kW	10.5 kW
SCOP	4.84	3.71
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.59 kW	9.47 kW
COP T <sub>j</sub> = -7°C	3.85	2.76
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.98 kW	5.54 kW
COP T <sub>j</sub> = +2°C	4.89	3.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	3.81 kW	3.61 kW
COP Tj = +7°C	5.74	4.31
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.73 kW	2.48 kW
COP Tj = 12°C	4.93	3.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.58 kW
COP Tj = Tbiv	3.55	2.60
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	4692 kWh	5847 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	11.0 kW	10.5 kW
ηs	187 %	163 %
Prated	11.00 kW	10.5 kW
SCOP	4.87	4.28
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.17 kW	6.81 kW
COP Tj = -7°C	4.47	3.62
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.33 kW	4.19 kW
COP Tj = +2°C	5.47	4.96
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.73 kW	2.69 kW
COP Tj = +7°C	5.74	6.00
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.30 kW	1.30 kW
COP Tj = 12°C	3.91	5.15

Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.05 kW
COP Tj = Tbiv	3.55	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	5571 kWh	6052 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	11.0 kW	12.5 kW
$\eta_s$	184 %	141 %
Prated	11.00 kW	10.5 kW
SCOP	4.80	3.73
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.69 kW	10.05 kW
COP Tj = +2°C	3.55	2.48
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.62 kW	6.81 kW
COP Tj = +7°C	4.31	3.35
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.33 kW	3.87 kW
COP Tj = 12°C	5.72	4.61
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.05 kW
COP Tj = Tbiv	3.55	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.48



Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	3061 kWh	3764 kWh

## Model ecoGEO B1 1-9kW

Model name	ecoGEO B1 1-9kW
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	4.12 kW	4.80 kW
El input	0.91 kW	1.70 kW
COP	4.52	2.83

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	186 %	140 %
P <sub>rated</sub>	11 kW	10.5 kW
SCOP	4.84	3.71
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.59 kW	9.47 kW
COP T <sub>j</sub> = -7°C	3.85	2.76
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.98 kW	5.54 kW
COP T <sub>j</sub> = +2°C	4.89	3.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	3.81 kW	3.61 kW
COP Tj = +7°C	5.74	4.31
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.73 kW	2.48 kW
COP Tj = 12°C	4.93	3.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.58 kW
COP Tj = Tbiv	3.55	2.60
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	4692 kWh	5847 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	11.0 kW	10.5 kW
ηs	187 %	163 %
Prated	11.00 kW	10.5 kW
SCOP	4.87	4.28
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.17 kW	6.81 kW
COP Tj = -7°C	4.47	3.62
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.33 kW	4.19 kW
COP Tj = +2°C	5.47	4.96
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.73 kW	2.69 kW
COP Tj = +7°C	5.74	6.00
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.30 kW	1.30 kW
COP Tj = 12°C	3.91	5.15

Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.05 kW
COP Tj = Tbiv	3.55	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	5571 kWh	6052 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	11.0 kW	12.5 kW
$\eta_s$	184 %	141 %
Prated	11.00 kW	10.5 kW
SCOP	4.80	3.73
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.69 kW	10.05 kW
COP Tj = +2°C	3.55	2.48
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.62 kW	6.81 kW
COP Tj = +7°C	4.31	3.35
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.33 kW	3.87 kW
COP Tj = 12°C	5.72	4.61
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.05 kW
COP Tj = Tbiv	3.55	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.48

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	3061 kWh	3764 kWh

## Model ecoGEO B2 1-9kW

Model name	ecoGEO B2 1-9kW
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	4.12 kW	4.80 kW
El input	0.91 kW	1.70 kW
COP	4.52	2.83

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.0 kW	10.5 kW
η <sub>s</sub>	186 %	140 %
P <sub>rated</sub>	11 kW	10.5 kW
SCOP	4.84	3.71
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.59 kW	9.47 kW
COP T <sub>j</sub> = -7°C	3.85	2.76
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.98 kW	5.54 kW
COP T <sub>j</sub> = +2°C	4.89	3.87
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	3.81 kW	3.61 kW
COP Tj = +7°C	5.74	4.31
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.73 kW	2.48 kW
COP Tj = 12°C	4.93	3.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.58 kW
COP Tj = Tbiv	3.55	2.60
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	4692 kWh	5847 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	11.0 kW	10.5 kW
ηs	187 %	163 %
Prated	11.00 kW	10.5 kW
SCOP	4.87	4.28
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.17 kW	6.81 kW
COP Tj = -7°C	4.47	3.62
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.33 kW	4.19 kW
COP Tj = +2°C	5.47	4.96
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.73 kW	2.69 kW
COP Tj = +7°C	5.74	6.00
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.30 kW	1.30 kW
COP Tj = 12°C	3.91	5.15

Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.05 kW
COP Tj = Tbiv	3.55	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	5571 kWh	6052 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	54 dB(A)	54 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	11.0 kW	12.5 kW
$\eta_s$	184 %	141 %
Prated	11.00 kW	10.5 kW
SCOP	4.80	3.73
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.69 kW	10.05 kW
COP Tj = +2°C	3.55	2.48
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.62 kW	6.81 kW
COP Tj = +7°C	4.31	3.35
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.33 kW	3.87 kW
COP Tj = 12°C	5.72	4.61
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.69 kW	10.05 kW
COP Tj = Tbiv	3.55	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.69 kW	10.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.55	2.48



Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °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	3061 kWh	3764 kWh