

## Subtype ecoGEO+ B/C1 4-16 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+ B/C1 4-16 PRO
Registration number	011-1W0912
Heat Pump Type	Brine/Water
Refrigerant	R290
Mass of Refrigerant	0.86 kg
Certification Date	14.10.2024
Testing basis	European KEYMARK Scheme for Heat Pumps V.14 (2024-04)

## Model ecoGEO+ C1 230 4-16 PRO HTR EH

Model name	ecoGEO+ C1 230 4-16 PRO HTR 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 $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

#### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

#### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
$\eta_s$	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
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WTOL	60 °C	60 °C
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PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

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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 $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

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### EN 16147 | Warmer Climate

Declared load profile	L
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COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
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Shutting off the heat transfer medium flow	passed
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EN 14825   Average Climate		
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TOL	-10 °C	-10 °C
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P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
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COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
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P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
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WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
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WTOL	60 °C	60 °C
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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>	4377 kWh	4842 kWh

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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
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COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
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Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

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### EN 16147 | Warmer Climate

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COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
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Complete power supply failure	passed

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PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
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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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C1 230 4-16 PRO

Model name	ecoGEO+ C1 230 4-16 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 $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C2 230 4-16 PRO HTR EH

Model name	ecoGEO+ C2 230 4-16 PRO HTR 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 $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C2 230 4-16 PRO HTR

Model name	ecoGEO+ C2 230 4-16 PRO HTR
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 $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C2 230 4-16 PRO EH

Model name	ecoGEO+ C2 230 4-16 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 $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C2 230 4-16 PRO

Model name	ecoGEO+ C2 230 4-16 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 $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C1 400 4-16 PRO HTR EH

Model name	ecoGEO+ C1 400 4-16 PRO HTR 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	3x400V 50Hz
Off-peak product	Yes

### Brine/Water

#### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

#### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

#### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C1 400 4-16 PRO HTR

Model name	ecoGEO+ C1 400 4-16 PRO HTR
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 $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C1 400 4-16 PRO EH

Model name	ecoGEO+ C1 400 4-16 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	3x400V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C1 400 4-16 PRO

Model name	ecoGEO+ C1 400 4-16 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	3x400V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
$\eta_s$	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C2 400 4-16 PRO HTR EH

Model name	ecoGEO+ C2 400 4-16 PRO HTR 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	3x400V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C2 400 4-16 PRO HTR

Model name	ecoGEO+ C2 400 4-16 PRO HTR
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 $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C2 400 4-16 PRO EH

Model name	ecoGEO+ C2 400 4-16 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	3x400V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ C2 400 4-16 PRO

Model name	ecoGEO+ C2 400 4-16 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	3x400V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	89 %
COP	2.09
Heating up time	1:18 h:min
Standby power input	80 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	200 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.36 kW	5.08 kW
COP T <sub>j</sub> = +7°C	5.32	4.37
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.09 kW
COP T <sub>j</sub> = 12°C	5.70	4.95
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	192 %	151 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	5.02	3.98
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	9.27 kW	8.07 kW
COP T <sub>j</sub> = -7°C	4.81	3.69
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.89 kW	5.24 kW
COP T <sub>j</sub> = +2°C	5.31	4.29
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	4.13 kW	4.08 kW
COP T <sub>j</sub> = +7°C	5.57	4.73
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.14 kW	4.11 kW
COP T <sub>j</sub> = 12°C	5.70	5.19
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	187 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.97	3.93
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	16.05 kW	14.10 kW
COP T <sub>j</sub> = +2°C	3.74	2.79
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	9.92 kW	8.81 kW
COP T <sub>j</sub> = +7°C	4.68	3.52
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	4.66 kW	4.06 kW
COP T <sub>j</sub> = 12°C	5.45	4.52
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.74	2.79
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>	16.05 kW	14.10 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.74	2.79
WTOL	60 °C	60 °C
P <sub>off</sub>	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B1 230 4-16 PRO HTR EH

Model name	ecoGEO+ B1 230 4-16 PRO HTR 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
ηs	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B1 230 4-16 PRO HTR

Model name	ecoGEO+ B1 230 4-16 PRO HTR
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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
ηs	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B1 230 4-16 PRO EH

Model name	ecoGEO+ B1 230 4-16 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	4377 kWh	4842 kWh

## Model ecoGEO+ B1 230 4-16 PRO

Model name	ecoGEO+ B1 230 4-16 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
ηs	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B2 230 4-16 PRO HTR EH

Model name	ecoGEO+ B2 230 4-16 PRO HTR 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	4377 kWh	4842 kWh

## Model ecoGEO+ B2 230 4-16 PRO HTR

Model name	ecoGEO+ B2 230 4-16 PRO HTR
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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
ηs	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B2 230 4-16 PRO EH

Model name	ecoGEO+ B2 230 4-16 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B2 230 4-16 PRO

Model name	ecoGEO+ B2 230 4-16 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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B1 400 4-16 PRO HTR EH

Model name	ecoGEO+ B1 400 4-16 PRO HTR 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	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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B1 400 4-16 PRO HTR

Model name	ecoGEO+ B1 400 4-16 PRO HTR
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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
ηs	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B1 400 4-16 PRO EH

Model name	ecoGEO+ B1 400 4-16 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	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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B1 400 4-16 PRO

Model name	ecoGEO+ B1 400 4-16 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	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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
ηs	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	4377 kWh	4842 kWh

## Model ecoGEO+ B2 400 4-16 PRO HTR EH

Model name	ecoGEO+ B2 400 4-16 PRO HTR 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	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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B2 400 4-16 PRO HTR

Model name	ecoGEO+ B2 400 4-16 PRO HTR
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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
ηs	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B2 400 4-16 PRO EH

Model name	ecoGEO+ B2 400 4-16 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	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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh

## Model ecoGEO+ B2 400 4-16 PRO

Model name	ecoGEO+ B2 400 4-16 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	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	5.77 kW	6.92 kW
El input	1.28 kW	2.31 kW
COP	4.52	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	16.00 kW	14.00 kW
η <sub>s</sub>	186 %	146 %
P <sub>rated</sub>	16.00 kW	14.00 kW
SCOP	4.89	3.87
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	13.65 kW	11.95 kW
COP T <sub>j</sub> = -7°C	4.20	3.02
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.42 kW	7.31 kW
COP T <sub>j</sub> = +2°C	4.86	3.86
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	5.36 kW	5.08 kW
COP Tj = +7°C	5.32	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.09 kW
COP Tj = 12°C	5.70	4.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	6822 kWh	7531 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	192 %	151 %
Prated	16.00 kW	14.00 kW
SCOP	5.02	3.98
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.27 kW	8.07 kW
COP Tj = -7°C	4.81	3.69
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.89 kW	5.24 kW
COP Tj = +2°C	5.31	4.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	4.08 kW
COP Tj = +7°C	5.57	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.11 kW
COP Tj = 12°C	5.70	5.19
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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	7883 kWh	8701 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	16.00 kW	14.00 kW
$\eta_s$	187 %	146 %
Prated	16.00 kW	14.00 kW
SCOP	4.97	3.93
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.05 kW	14.10 kW
COP Tj = +2°C	3.74	2.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.92 kW	8.81 kW
COP Tj = +7°C	4.68	3.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.66 kW	4.06 kW
COP Tj = 12°C	5.45	4.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	16.05 kW	14.10 kW
COP Tj = Tbiv	3.74	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.05 kW	14.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.79
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 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>	4377 kWh	4842 kWh