

## Subtype ecoGEO+ HP1 400 15-60

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+ HP1 400 15-60
Registration number	011-1W0916
Heat Pump Type	Brine/Water
Refrigerant	R410A
Mass of Refrigerant	6 kg
Certification Date	19.11.2024
Testing basis	HP KEYMARK certification scheme rules rev. 14

## Model ecoGEO+ HP1 400 15-60

Model name	ecoGEO+ HP1 400 15-60
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	n/a

## 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	22.39 kW	25.93 kW
El input	5.02 kW	9.50 kW
COP	4.46	2.73

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	62 dB(A)	62 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	55.00 kW	51.00 kW
η <sub>s</sub>	196 %	144 %
P <sub>rated</sub>	55.00 kW	51.00 kW
SCOP	5.12	3.82
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	47.55 kW	44.46 kW
COP T <sub>j</sub> = -7°C	3.97	2.73
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	29.73 kW	27.08 kW
COP T <sub>j</sub> = +2°C	5.03	3.76
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900

Pdh Tj = +7°C	18.52 kW	17.41 kW
COP Tj = +7°C	6.01	4.62
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	18.69 kW	18.35 kW
COP Tj = 12°C	6.62	5.49
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	54.74 kW	51.11 kW
COP Tj = Tbiv	3.69	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	54.74 kW	51.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.50
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 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	22265 kWh	27647 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	62 dB(A)	62 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
Pdesignh	55.00 kW	51.00 kW
ηs	205 %	151 %
Prated	55.00 kW	51.00 kW
SCOP	5.35	3.99
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	32.46 kW	30.12 kW
COP Tj = -7°C	4.92	3.52
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	21.47 kW	18.51 kW
COP Tj = +2°C	5.87	4.47
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	18.64 kW	18.23 kW
COP Tj = +7°C	6.41	5.17
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	18.69 kW	18.47 kW
COP Tj = 12°C	6.62	5.83
Cdh Tj = +12 °C	0.900	0.900

Pdh Tj = Tbiv	54.74 kW	51.11 kW
COP Tj = Tbiv	3.69	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	54.74 kW	51.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.50
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 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	25405 kWh	31580 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	62 dB(A)	62 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	55.00 kW	51.00 kW
$\eta_s$	201 %	147 %
Prated	55.00 kW	51.00 kW
SCOP	5.26	3.89
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	54.74 kW	51.11 kW
COP Tj = +2°C	3.69	2.50
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	35.05 kW	31.51 kW
COP Tj = +7°C	4.69	3.33
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	18.58 kW	18.11 kW
COP Tj = 12°C	6.21	4.88
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	54.74 kW	51.11 kW
COP Tj = Tbiv	3.69	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	54.74 kW	51.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.50
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 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>	14086 kWh	17608 kWh

## Model ecoGEO+ HP1 400 15-60 HTR

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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	3x400V 50Hz
Off-peak product	n/a

## 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	22.39 kW	25.93 kW
El input	5.02 kW	9.50 kW
COP	4.46	2.73

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	62 dB(A)	62 dB(A)

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	Low temperature	Medium temperature
P <sub>designh</sub>	55.00 kW	51.00 kW
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C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	29.73 kW	27.08 kW
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	54.74 kW	51.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.50
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 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	22265 kWh	27647 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	62 dB(A)	62 dB(A)

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Pdesignh	55.00 kW	51.00 kW
ηs	205 %	151 %
Prated	55.00 kW	51.00 kW
SCOP	5.35	3.99
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	32.46 kW	30.12 kW
COP Tj = -7°C	4.92	3.52
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Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	18.64 kW	18.23 kW
COP Tj = +7°C	6.41	5.17
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	18.69 kW	18.47 kW
COP Tj = 12°C	6.62	5.83
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	54.74 kW	51.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.50
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 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	25405 kWh	31580 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	62 dB(A)	62 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
Pdesignh	55.00 kW	51.00 kW
$\eta_s$	201 %	147 %
Prated	55.00 kW	51.00 kW
SCOP	5.26	3.89
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	54.74 kW	51.11 kW
COP Tj = +2°C	3.69	2.50
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	35.05 kW	31.51 kW
COP Tj = +7°C	4.69	3.33
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	18.58 kW	18.11 kW
COP Tj = 12°C	6.21	4.88
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	54.74 kW	51.11 kW
COP Tj = Tbiv	3.69	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	54.74 kW	51.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.50
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 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>	14086 kWh	17608 kWh