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#### This information was generated by the HP KEYMARK database on 23 Jun 2022

#### **Login**

Summary of	ECOGEO B/C 3 5-22kW	Reg. No.	011-1W0331		
Certificate Holder	Certificate Holder				
Name	Ecoforest Geotermia S.L.	Ecoforest Geotermia S.L.			
Address	Rúa das Pontes, 25	Zip	36350		
City	Nigrán (Pontevedra)	Country	Spain		
Certification Body	DIN CERTCO Gesellschaft für Ko	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH			
Subtype title	ECOGEO B/C 3 5-22kW				
Heat Pump Type	Brine/Water	Brine/Water			
Refrigerant	R410A				
Mass of Refrigerant	1.5 kg	1.5 kg			
Certification Date	28.05.2019				

# Model: ecoGEO C3T 5-22kW

Configure model		
Model name	ecoGEO C3T 5-22kW	
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data	
Power supply	3x400V 50Hz
Off-peak product	Yes

# Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.60 kW	7.91 kW	
El input	1.76 kW	2.62 kW	
СОР	4.88	3.02	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

#### Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	140 %
Prated	23.00 kW	20.00 kW
SCOP	4.67	3.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	24.76 kW	19.09 kW
COP Tj = +2°C	3.77	2.90
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	14.91 kW	12.89 kW
COP Tj = +7°C	4.20	3.21
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.56 kW	5.72 kW
COP Tj = 12°C	5.33	4.36
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW

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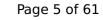




COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6574 kWh	7228 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	186 %	161 %





	,	The database on 23 Juli 202
Prated	23.00 kW	20.00 kW
SCOP	4.86	4.22
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.83 kW	11.90 kW
$COP Tj = -7^{\circ}C$	4.39	3.71
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	8.55 kW	7.38 kW
COP Tj = +2°C	5.18	4.66
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.62 kW	4.80 kW
$COPTj = +7^{\circ}C$	5.38	5.24
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.57 kW	3.55 kW
COP Tj = 12°C	4.94	5.55
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
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WTOL 60 °C 60 °C Poff 7 W 7 W PTO 7 W 7 W 6 W **PSB** 6 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 11672 kWh 11679 kWh Pdh Tj = -15°C (if TOL<-20°C) 18.78 16.54 4.06 3.09 COP Tj = -15°C (if TOL<-20°C) 0.99 0.99 Cdh Tj = -15  $^{\circ}$ C

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	181 %	142 %
Prated	23.00 kW	20.00 kW
		I.





SCOP	4.71	3.77
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	20.07 kW	17.41 kW
$COP Tj = -7^{\circ}C$	3.27	2.67
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	12.97 kW	10.69 kW
COP Tj = +2°C	4.86	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7$ °C	8.50 kW	7.08 kW
$COPTj = +7^{\circ}C$	5.52	4.99
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.79 kW	3.76 kW
COP Tj = 12°C	5.19	4.38
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C



Poff	7 W	7 W
PTO	7 W	7 W
PSB	6 W	6 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	10085 kWh	10970 kWh

# Domestic Hot Water (DHW)

#### Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	100 %	
СОР	1.68	
Heating up time	0:56:51 h:min	
Standby power input	162.8 W	
Reference hot water temperature	57.5 °C	
Mixed water at 40°C	233 I	



EN 16147		
Declared load profile	L	
Efficiency ηDHW	100 %	
СОР	1.68	
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# Model: ecoGEO C4T 5-22kW

Configure model		
Model name ecoGEO C4T 5-22kW		
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	
Off-peak product	Yes	

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.60 kW	7.91 kW
El input	1.76 kW	2.62 kW
СОР	4.88	3.02

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

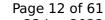
#### Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	140 %
Prated	23.00 kW	20.00 kW
SCOP	4.67	3.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	24.76 kW	19.09 kW
COP Tj = +2°C	3.77	2.90
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	14.91 kW	12.89 kW
COP Tj = +7°C	4.20	3.21
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.56 kW	5.72 kW
COP Tj = 12°C	5.33	4.36
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW

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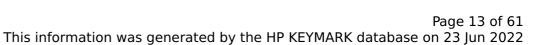




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WTOL	60 °C	60 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6574 kWh	7228 kWh

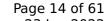
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	186 %	161 %





23.00 kW	20.00 kW
4.86	4.22
-22 °C	-22 °C
-22 °C	-22 °C
13.83 kW	11.90 kW
4.39	3.71
0.990	0.990
8.55 kW	7.38 kW
5.18	4.66
0.990	0.990
5.62 kW	4.80 kW
5.38	5.24
0.990	0.990
3.57 kW	3.55 kW
4.94	5.55
0.990	0.990
24.76 kW	19.09 kW
3.77	2.90
24.76 kW	19.09 kW
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	4.86  -22 °C  -22 °C  13.83 kW  4.39  0.990  8.55 kW  5.18  0.990  5.62 kW  5.38  0.990  3.57 kW  4.94  0.990  24.76 kW  3.77  24.76 kW

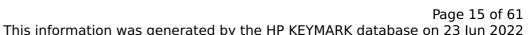




WTOL	60 °C	60 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	6 W	6 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11672 kWh	11679 kWh
Pdh Tj = -15°C (if TOL<-20°C)	18.78	16.54
COP Tj = -15°C (if TOL $<$ -20°C)	4.06	3.09
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	181 %	142 %
Prated	23.00 kW	20.00 kW
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Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	20.07 kW	17.41 kW
COP Tj = -7°C	3.27	2.67
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	12.97 kW	10.69 kW
COP Tj = +2°C	4.86	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	8.50 kW	7.08 kW
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Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.79 kW	3.76 kW
COP Tj = 12°C	5.19	4.38
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
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Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		
WTOL	60 °C	60 °C



	-	
Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW

10085 kWh

10970 kWh

# Domestic Hot Water (DHW)

Annual energy consumption Qhe

#### Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	100 %	
СОР	1.68	
Heating up time	0:56:51 h:min	
Standby power input	162.8 W	
Reference hot water temperature	57.5 °C	
Mixed water at 40°C	233	



EN 16147	
Declared load profile	L
Efficiency ηDHW	100 %
СОР	1.68
Heating up time	0:56:51 h:min
Standby power input	162.8 W
Reference hot water temperature	57.5 °C
Mixed water at 40°C	233 I

EN 16147		
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Efficiency ηDHW	100 %	
СОР	1.68	
Heating up time	0:56:51 h:min	
Standby power input	162.8 W	
Reference hot water temperature	57.5 °C	
Mixed water at 40°C	233 I	

# Model: ecoGEO C3 5-22kW

Configure model		
Model name ecoGEO C3 5-22kW		
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	
Off-peak product	Yes	

# Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	8.60 kW	7.91 kW	
El input	1.76 kW	2.62 kW	
СОР	4.88	3.02	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

#### Warmer Climate



EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	42 dB(A)	42 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	140 %
Prated	23.00 kW	20.00 kW
SCOP	4.67	3.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	24.76 kW	19.09 kW
COP Tj = +2°C	3.77	2.90
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	14.91 kW	12.89 kW
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WTOL	60 °C	60 °C
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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6574 kWh	7228 kWh

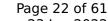
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	Low temperature	Medium temperature
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Supplementary Heater: Type of energy input	Electricity	Electricity
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Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C



<u> </u>		
Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	10085 kWh	10970 kWh

# Domestic Hot Water (DHW)

### Warmer Climate

EN 16147		
Declared load profile	L	
Deciared load profile		
Efficiency ηDHW	100 %	
СОР	1.68	
Heating up time	0:56:51 h:min	
Standby power input	162.8 W	
Reference hot water temperature	57.5 °C	
Mixed water at 40°C	233	



EN 16147	
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Efficiency ηDHW	100 %
СОР	1.68
Heating up time	0:56:51 h:min
Standby power input	162.8 W
Reference hot water temperature	57.5 °C
Mixed water at 40°C	233 I

EN 16147		
Declared load profile	L	
Efficiency ηDHW	100 %	
СОР	1.68	
Heating up time	0:56:51 h:min	
Standby power input	162.8 W	
Reference hot water temperature	57.5 °C	
Mixed water at 40°C	233 I	

# Model: ecoGEO C4 5-22kW

Configure model		
Model name	ecoGEO C4 5-22kW	
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	
Off-peak product	Yes	

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.60 kW	7.91 kW
El input	1.76 kW	2.62 kW
СОР	4.88	3.02

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
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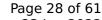
#### Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	140 %
Prated	23.00 kW	20.00 kW
SCOP	4.67	3.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	24.76 kW	19.09 kW
COP Tj = +2°C	3.77	2.90
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	14.91 kW	12.89 kW
COP Tj = +7°C	4.20	3.21
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.56 kW	5.72 kW
COP Tj = 12°C	5.33	4.36
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW

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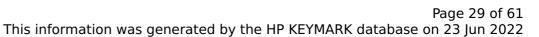




COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	6 W	6 W
PCK	0 W	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6574 kWh	7228 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	186 %	161 %





Prated	23.00 kW	20.00 kW
SCOP	4.86	4.22
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.83 kW	11.90 kW
COP Tj = $-7^{\circ}$ C	4.39	3.71
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	8.55 kW	7.38 kW
$COP Tj = +2^{\circ}C$	5.18	4.66
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.62 kW	4.80 kW
$COP Tj = +7^{\circ}C$	5.38	5.24
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.57 kW	3.55 kW
COP Tj = 12°C	4.94	5.55
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		

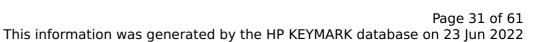




WTOL	60 °C	60 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	0 W	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11672 kWh	11679 kWh
Pdh Tj = -15°C (if TOL<-20°C)	18.78	16.54
COP Tj = -15°C (if TOL<-20°C)	4.06	3.09
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

Low temperature	Medium temperature
181 %	142 %
23.00 kW	20.00 kW
	181 %





SCOP	4.71	3.77
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	20.07 kW	17.41 kW
COP Tj = -7°C	3.27	2.67
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	12.97 kW	10.69 kW
$COP Tj = +2^{\circ}C$	4.86	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	8.50 kW	7.08 kW
$COPTj = +7^{\circ}C$	5.52	4.99
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.79 kW	3.76 kW
COP Tj = 12°C	5.19	4.38
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		
WTOL	60 °C	60 °C



This information was generated by the HP KEYMARK database on 23 Jun 2022			
	7 W	7 W	

Poff	7 W	7 W
PTO	7 W	7 W
PSB	6 W	6 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	10085 kWh	10970 kWh

# Domestic Hot Water (DHW)

### Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	100 %	
СОР	1.68	
Heating up time	0:56:51 h:min	
Standby power input	162.8 W	
Reference hot water temperature	57.5 °C	
Mixed water at 40°C	233 I	



EN 16147		
Declared load profile	L	
Efficiency ηDHW	100 %	
СОР	1.68	
Heating up time	0:56:51 h:min	
Standby power input	162.8 W	
Reference hot water temperature	57.5 °C	
Mixed water at 40°C	233 I	

EN 16147		
Declared load profile	L	
Efficiency ηDHW	100 %	
СОР	1.68	
Heating up time	0:56:51 h:min	
Standby power input	162.8 W	
Reference hot water temperature	57.5 °C	
Mixed water at 40°C	233 I	



# Model: ecoGEO B3T 5-22kW

Configure model		
Model name ecoGEO B3T 5-22kW		
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data			
Power supply 3x400V 50Hz			

# Heating

COP

4.88

EN 14511-2			
Low temperature Medium temperature			
Heat output	8.60 kW	7.91 kW	
El input	1.76 kW	2.62 kW	

3.02

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

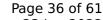
## Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	140 %
Prated	23.00 kW	20.00 kW
SCOP	4.67	3.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	24.76 kW	19.09 kW
COP Tj = +2°C	3.77	2.90
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	14.91 kW	12.89 kW
COP Tj = +7°C	4.20	3.21
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.56 kW	5.72 kW
COP Tj = 12°C	5.33	4.36
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW

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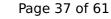




COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	6 W	6 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6574 kWh	7228 kWh

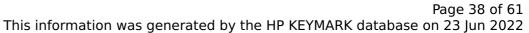
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	186 %	161 %
	I	ı





1110 1110 1110 1110 110 110 110 110 110		NK database on 23 juli 202
Prated	23.00 kW	20.00 kW
SCOP	4.86	4.22
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.83 kW	11.90 kW
$COP Tj = -7^{\circ}C$	4.39	3.71
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	8.55 kW	7.38 kW
COP Tj = +2°C	5.18	4.66
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.62 kW	4.80 kW
$COPTj = +7^{\circ}C$	5.38	5.24
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.57 kW	3.55 kW
COP Tj = 12°C	4.94	5.55
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
	•	•

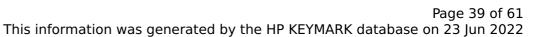




WTOL 60 °C 60 °C Poff 7 W 7 W PTO 7 W 7 W 6 W **PSB** 6 W **PCK** 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW Annual energy consumption Qhe 11672 kWh 11679 kWh Pdh Tj = -15°C (if TOL<-20°C) 18.78 16.54 4.06 3.09 COP Tj = -15°C (if TOL<-20°C) 0.99 0.99 Cdh Tj = -15  $^{\circ}$ C

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

Low temperature	Medium temperature
181 %	142 %
23.00 kW	20.00 kW
	181 %





SCOP	4.71	3.77
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	20.07 kW	17.41 kW
$COP Tj = -7^{\circ}C$	3.27	2.67
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	12.97 kW	10.69 kW
COP Tj = +2°C	4.86	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	8.50 kW	7.08 kW
$COP Tj = +7^{\circ}C$	5.52	4.99
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.79 kW	3.76 kW
COP Tj = 12°C	5.19	4.38
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		
WTOL	60 °C	60 °C



Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	10085 kWh	10970 kWh



# Model: ecoGEO B4T 5-22kW

Configure model		
Model name	ecoGEO B4T 5-22kW	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

## Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.60 kW	7.91 kW	
El input	1.76 kW	2.62 kW	
СОР	4.88	3.02	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

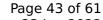
## Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	140 %
Prated	23.00 kW	20.00 kW
SCOP	4.67	3.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	24.76 kW	19.09 kW
COP Tj = +2°C	3.77	2.90
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	14.91 kW	12.89 kW
COP Tj = +7°C	4.20	3.21
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.56 kW	5.72 kW
COP Tj = 12°C	5.33	4.36
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW

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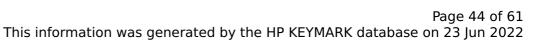


3.77	2.90
24.76 kW	19.09 kW
3.77	2.90
60 °C	60 °C
7 W	7 W
7 W	7 W
6 W	6 W
o w	0 W
Electricity	Electricity
0.00 kW	0.00 kW
6574 kWh	7228 kWh
	24.76 kW  3.77  60 °C  7 W  7 W  6 W  0 W  Electricity  0.00 kW

### Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	186 %	161 %
	I	ı





Prated	23.00 kW	20.00 kW
SCOP	4.86	4.22
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.83 kW	11.90 kW
COP Tj = $-7$ °C	4.39	3.71
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	8.55 kW	7.38 kW
$COP Tj = +2^{\circ}C$	5.18	4.66
Cdh Tj = $+2$ °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.62 kW	4.80 kW
$COP Tj = +7^{\circ}C$	5.38	5.24
Cdh Tj = $+7$ °C	0.990	0.990
Pdh Tj = 12°C	3.57 kW	3.55 kW
COP Tj = 12°C	4.94	5.55
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		





WTOL	60 °C	60 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	6 W	6 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11672 kWh	11679 kWh
Pdh Tj = -15°C (if TOL<-20°C)	18.78	16.54
COP Tj = -15°C (if TOL $<$ -20°C)	4.06	3.09
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

Low temperature	Medium temperature
181 %	142 %
23.00 kW	20.00 kW
	181 %





SCOP	4.71	3.77
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = $-7$ °C	20.07 kW	17.41 kW
COP Tj = -7°C	3.27	2.67
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	12.97 kW	10.69 kW
COP Tj = +2°C	4.86	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7$ °C	8.50 kW	7.08 kW
$COP Tj = +7^{\circ}C$	5.52	4.99
Cdh Tj = $+7$ °C	0.990	0.990
Pdh Tj = 12°C	3.79 kW	3.76 kW
COP Tj = 12°C	5.19	4.38
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		
WTOL	60 °C	60 °C



Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	10085 kWh	10970 kWh



# Model: ecoGEO B3 5-22kW

Configure model		
Model name	ecoGEO B3 5-22kW	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.60 kW	7.91 kW	
El input	1.76 kW	2.62 kW	
СОР	4.88	3.02	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	140 %
Prated	23.00 kW	20.00 kW
SCOP	4.67	3.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	24.76 kW	19.09 kW
COP Tj = +2°C	3.77	2.90
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	14.91 kW	12.89 kW
COP Tj = +7°C	4.20	3.21
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.56 kW	5.72 kW
COP Tj = 12°C	5.33	4.36
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW

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#### COP Tj = Tbiv3.77 2.90 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 24.76 kW 19.09 kW COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 3.77 2.90 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh WTOL 60 °C 60 °C 7 W 7 W Poff PTO 7 W 7 W

6 W

0 W

Electricity

0.00 kW

6574 kWh

6 W

0 W

Electricity

0.00 kW

7228 kWh

## Colder Climate

Supplementary Heater: PSUP

Annual energy consumption Qhe

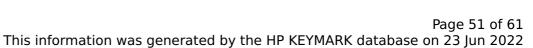
Supplementary Heater: Type of energy input

**PSB** 

**PCK** 

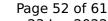
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	186 %	161 %
	·	





Prated	23.00 kW	20.00 kW
SCOP	4.86	4.22
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.83 kW	11.90 kW
$COPTj = -7^{\circ}C$	4.39	3.71
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	8.55 kW	7.38 kW
COP Tj = +2°C	5.18	4.66
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.62 kW	4.80 kW
$COPTj = +7^{\circ}C$	5.38	5.24
Cdh Tj = $+7$ °C	0.990	0.990
Pdh Tj = 12°C	3.57 kW	3.55 kW
COP Tj = 12°C	4.94	5.55
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
		•

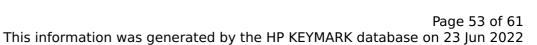




WTOL	60 °C	60 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11672 kWh	11679 kWh
Pdh Tj = -15°C (if TOL<-20°C)	18.78	16.54
COP Tj = -15°C (if TOL $<$ -20°C)	4.06	3.09
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	

Low temperature	Medium temperature
181 %	142 %
23.00 kW	20.00 kW
	181 %





SCOP	4.71	3.77
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	20.07 kW	17.41 kW
$COP Tj = -7^{\circ}C$	3.27	2.67
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	12.97 kW	10.69 kW
COP Tj = +2°C	4.86	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	8.50 kW	7.08 kW
$COPTj = +7^{\circ}C$	5.52	4.99
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.79 kW	3.76 kW
COP Tj = 12°C	5.19	4.38
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C



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Poff	7 W	7 W
PTO	7 W	7 W
PSB	6 W	6 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	10085 kWh	10970 kWh

# Model: ecoGEO B4 5-22kW

Configure model		
Model name	ecoGEO B4 5-22kW	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-2				
Low temperature Medium temperature				
Heat output	8.60 kW	7.91 kW		
El input	1.76 kW	2.62 kW		
СОР	4.88	3.02		

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

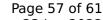
## Warmer Climate



EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	42 dB(A)	42 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	140 %
Prated	23.00 kW	20.00 kW
SCOP	4.67	3.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	24.76 kW	19.09 kW
COP Tj = +2°C	3.77	2.90
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	14.91 kW	12.89 kW
COP Tj = +7°C	4.20	3.21
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.56 kW	5.72 kW
COP Tj = 12°C	5.33	4.36
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
	I	

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COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 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	6574 kWh	7228 kWh

### Colder Climate

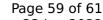
EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	42 dB(A)	42 dB(A)		

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	186 %	161 %





Prated	23.00 kW	20.00 kW
SCOP	4.86	4.22
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.83 kW	11.90 kW
COP Tj = $-7^{\circ}$ C	4.39	3.71
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	8.55 kW	7.38 kW
$COP Tj = +2^{\circ}C$	5.18	4.66
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.62 kW	4.80 kW
$COP Tj = +7^{\circ}C$	5.38	5.24
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.57 kW	3.55 kW
COP Tj = 12°C	4.94	5.55
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		

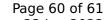




WTOL	60 °C	60 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11672 kWh	11679 kWh
Pdh Tj = -15°C (if TOL<-20°C)	18.78	16.54
COP Tj = -15°C (if TOL $<$ -20°C)	4.06	3.09
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	42 dB(A)	42 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	181 %	142 %
Prated	23.00 kW	20.00 kW
		I.





SCOP	4.71	3.77
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = $-7$ °C	20.07 kW	17.41 kW
COP Tj = -7°C	3.27	2.67
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	12.97 kW	10.69 kW
COP Tj = +2°C	4.86	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7$ °C	8.50 kW	7.08 kW
$COP Tj = +7^{\circ}C$	5.52	4.99
Cdh Tj = $+7$ °C	0.990	0.990
Pdh Tj = 12°C	3.79 kW	3.76 kW
COP Tj = 12°C	5.19	4.38
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	24.76 kW	19.09 kW
COP Tj = Tbiv	3.77	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.76 kW	19.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.77	2.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		
WTOL	60 °C	60 °C



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Poff	7 W	7 W
РТО	7 W	7 W
PSB	6 W	6 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	10085 kWh	10970 kWh