

Subtype S-Therm Ontario SMH5-80 100

Certificate Holder	SINCLAIR Global Group s.r.o.
Address	Purkyňova 45
ZIP	61200
City	Brno
Country	CZ
Certification Body	BRE Global Limited
Subtype title	S-Therm Ontario SMH5-80 100
Registration number	041-K037-22
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.6 kg
Certification Date	03.03.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 11
Testing laboratory	Bureau Veritas Consumer Products Services (Guangzhou) Co., Ltd, Science City Branch

**Model SMH5-80B\*/SMH-80IRBC**

Model name	SMH5-80B*/SMH-80IRBC
Application	Heating + DHW + low temp
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

**General data**

Power supply	1x230V 50Hz
Off-peak product	n/a

**Outdoor Air/Water****EN 16147 | Average Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.93
Heating up time	2:04 h:min
Standby power input	58.5 W
Reference hot water temperature	49.0 °C
Mixed water at 40°C	325 l

**EN 16147 | Colder Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	101 %
COP	2.41
Heating up time	2:30 h:min
Standby power input	72.9 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	325 l

**EN 16147 | Warmer Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.93
Heating up time	2:07 h:min
Standby power input	58.6 W
Reference hot water temperature	49.0 °C
Mixed water at 40°C	325 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	
<b>EN 14511-2   Heating</b>		
	Low temperature	Medium temperature
Heat output	8.20 kW	7.81 kW
El input	1.54 kW	2.44 kW
COP	5.32	3.20
<b>EN 12102-1   Average Climate</b>		
	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	68 dB(A)
<b>EN 14825   Average Climate</b>		
	Low temperature	Medium temperature
$\eta_s$	177 %	145 %
Prated	8.00 kW	9.00 kW
SCOP	4.50	3.70
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.40 kW	8.30 kW
COP Tj = -7°C	3.12	2.33
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.40 kW	5.20 kW
COP Tj = +2°C	4.44	3.57
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	3.00 kW	3.30 kW
COP Tj = +7°C	5.31	4.96
Cdh Tj = +7 °C	0.950	0.970
Pdh Tj = 12°C	3.20 kW	3.00 kW
COP Tj = 12°C	7.69	6.56
Cdh Tj = +12 °C	0.940	0.960
Pdh Tj = Tbiv	7.40 kW	8.30 kW
COP Tj = Tbiv	3.12	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.80 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	0.30 kW
Annual energy consumption Qhe	3827 kWh	5206 kWh

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
$\eta_s$	165 %	125 %
Prated	9.00 kW	8.00 kW
SCOP	4.20	3.20
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.70 kW	5.20 kW
COP Tj = -7°C	3.45	2.83
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.50 kW	2.90 kW
COP Tj = +2°C	5.16	3.73
Cdh Tj = +2 °C	0.970	0.980
Pdh Tj = +7°C	2.60 kW	2.40 kW
COP Tj = +7°C	6.69	4.44
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.00 kW	3.00 kW
COP Tj = 12°C	7.53	7.10
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	7.40 kW	6.70 kW
COP Tj = Tbiv	2.70	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.10 kW	4.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.87	1.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.90 kW	3.90 kW
Annual energy consumption Qhe	5303 kWh	6322 kWh
Pdh Tj = -15°C (if TOL)	7.40	6.70
COP Tj = -15°C (if TOL)	2.70	2.10
Cdh Tj = -15 °C	0.990	0.990

**EN 14825 | Warmer Climate**

Low temperature	Medium temperature
-----------------	--------------------

ηs	257 %	190 %
Prated	9.00 kW	9.00 kW
SCOP	6.50	4.83
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	9.40 kW	8.60 kW
COP Tj = +2°C	3.85	2.59
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	6.10 kW	6.30 kW
COP Tj = +7°C	6.07	4.21
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.20 kW	3.00 kW
COP Tj = 12°C	7.83	6.32
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	9.40 kW	8.60 kW
COP Tj = Tbiv	3.85	2.59
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.40 kW	8.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.85	2.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1942 kWh	2372 kWh

**Model SMH5-80B\*-3/SMH-80IRBC-3**

Model name	SMH5-80B*-3/SMH-80IRBC-3
Application	Heating + DHW + low temp
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

**General data**

Power supply	3x400V 50Hz
Off-peak product	n/a

**Outdoor Air/Water****EN 16147 | Average Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.93
Heating up time	2:04 h:min
Standby power input	58.5 W
Reference hot water temperature	49.0 °C
Mixed water at 40°C	325 l

**EN 16147 | Colder Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	101 %
COP	2.41
Heating up time	2:30 h:min
Standby power input	72.9 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	325 l

**EN 16147 | Warmer Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.93
Heating up time	2:07 h:min
Standby power input	58.6 W
Reference hot water temperature	49.0 °C
Mixed water at 40°C	325 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	8.20 kW	7.81 kW
El input	1.62 kW	2.55 kW
COP	5.06	3.06

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	68 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	176 %	135 %
Prated	8.00 kW	9.00 kW
SCOP	4.48	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.40 kW	7.80 kW
COP Tj = -7°C	3.12	2.14
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.20 kW	5.00 kW
COP Tj = +2°C	4.17	3.36
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.84 kW	3.30 kW
COP Tj = +7°C	5.92	4.53
Cdh Tj = +7 °C	0.950	0.970
Pdh Tj = 12°C	3.20 kW	3.00 kW
COP Tj = 12°C	7.18	5.44
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	7.40 kW	7.80 kW
COP Tj = Tbiv	3.12	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.00 kW	8.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.84	2.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.40 kW
Annual energy consumption Qhe	3882 kWh	5261 kWh

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
$\eta_s$	142 %	120 %
Prated	9.00 kW	8.00 kW
SCOP	3.63	3.08
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.40 kW	5.10 kW
COP Tj = -7°C	2.75	2.75
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.20 kW	3.00 kW
COP Tj = +2°C	4.52	3.40
Cdh Tj = +2 °C	0.980	0.970
Pdh Tj = +7°C	2.60 kW	3.20 kW
COP Tj = +7°C	5.63	4.61
Cdh Tj = +7 °C	0.940	0.960
Pdh Tj = 12°C	3.20 kW	3.00 kW
COP Tj = 12°C	7.01	5.79
Cdh Tj = +12 °C	0.950	0.950
Pdh Tj = Tbiv	7.20 kW	6.80 kW
COP Tj = Tbiv	2.63	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.10 kW	4.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.87	1.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.90 kW	3.60 kW
Annual energy consumption Qhe	5935 kWh	6706 kWh
Pdh Tj = -15°C (if TOL)	7.20	6.80
COP Tj = -15°C (if TOL)	2.63	2.20
Cdh Tj = -15 °C	0.990	0.990

**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
--	-----------------	--------------------

$\eta_s$	226 %	168 %
Prated	9.00 kW	9.00 kW
SCOP	5.73	4.28
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.60 kW	8.90 kW
COP Tj = +2°C	2.93	2.12
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.40 kW	6.30 kW
COP Tj = +7°C	5.40	3.99
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.00 kW	3.00 kW
COP Tj = 12°C	7.04	5.29
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	8.60 kW	8.90 kW
COP Tj = Tbiv	2.93	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.60 kW	8.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.93	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2001 kWh	2751 kWh

**Model SMH5-100B\*/SMH-100IRBC2**

Model name	SMH5-100B*/SMH-100IRBC2
Application	Heating + DHW + low temp
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

**General data**

Power supply	1x230V 50Hz
Off-peak product	n/a

**Outdoor Air/Water****EN 16147 | Average Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.93
Heating up time	2:04 h:min
Standby power input	58.5 W
Reference hot water temperature	49.0 °C
Mixed water at 40°C	325 l

**EN 16147 | Colder Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	101 %
COP	2.41
Heating up time	2:30 h:min
Standby power input	72.9 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	325 l

**EN 16147 | Warmer Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.93
Heating up time	2:07 h:min
Standby power input	58.6 W
Reference hot water temperature	49.0 °C
Mixed water at 40°C	325 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	
<b>EN 14511-2   Heating</b>		
	Low temperature	Medium temperature
Heat output	10.20 kW	10.30 kW
El input	2.02 kW	3.30 kW
COP	5.05	3.12
<b>EN 12102-1   Average Climate</b>		
	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	68 dB(A)
<b>EN 14825   Average Climate</b>		
	Low temperature	Medium temperature
ηs	176 %	135 %
Prated	9.00 kW	10.00 kW
SCOP	4.48	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.00 kW	9.00 kW
COP Tj = -7°C	2.90	2.18
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.60 kW	5.20 kW
COP Tj = +2°C	4.41	3.44
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.80 kW	3.60 kW
COP Tj = +7°C	5.89	4.39
Cdh Tj = +7 °C	0.950	0.970
Pdh Tj = 12°C	3.20 kW	2.90 kW
COP Tj = 12°C	6.97	5.19
Cdh Tj = +12 °C	0.940	0.960
Pdh Tj = Tbiv	8.00 kW	9.00 kW
COP Tj = Tbiv	2.90	2.18
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.50 kW	9.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.50 kW
Annual energy consumption Qhe	4163 kWh	6076 kWh

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
$\eta_s$	152 %	119 %
Prated	10.00 kW	9.00 kW
SCOP	3.88	3.05
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.10 kW	5.50 kW
COP Tj = -7°C	3.23	2.77
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.40 kW	3.10 kW
COP Tj = +2°C	4.72	3.48
Cdh Tj = +2 °C	0.970	0.980
Pdh Tj = +7°C	2.70 kW	3.00 kW
COP Tj = +7°C	5.59	4.17
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.20 kW	3.10 kW
COP Tj = 12°C	6.85	5.42
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	8.00 kW	7.50 kW
COP Tj = Tbiv	2.50	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.00 kW	5.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.86	1.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.00 kW	3.80 kW
Annual energy consumption Qhe	6262 kWh	7415 kWh
Pdh Tj = -15°C (if TOL)	8.00	7.50
COP Tj = -15°C (if TOL)	2.50	2.10
Cdh Tj = -15 °C	0.990	0.990

**EN 14825 | Warmer Climate**

Low temperature	Medium temperature
-----------------	--------------------

$\eta_s$	223 %	169 %
Prated	10.00 kW	10.00 kW
SCOP	5.65	4.30
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	9.60 kW	10.10 kW
COP Tj = +2°C	3.47	2.55
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.90 kW	6.50 kW
COP Tj = +7°C	5.45	3.90
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.00 kW	2.90 kW
COP Tj = 12°C	6.55	5.19
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	9.60 kW	10.10 kW
COP Tj = Tbiv	3.47	2.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.60 kW	10.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.47	2.55
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2266 kWh	3157 kWh

**Model SMH5-100B\*-3/SMH-100IRBC2-3**

Model name	SMH5-100B*-3/SMH-100IRBC2-3
Application	Heating + DHW + low temp
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

**General data**

Power supply	3x400V 50Hz
Off-peak product	n/a

**Outdoor Air/Water****EN 16147 | Average Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.93
Heating up time	2:04 h:min
Standby power input	58.5 W
Reference hot water temperature	49.0 °C
Mixed water at 40°C	325 l

**EN 16147 | Colder Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	101 %
COP	2.41
Heating up time	2:30 h:min
Standby power input	72.9 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	325 l

**EN 16147 | Warmer Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.93
Heating up time	2:07 h:min
Standby power input	58.6 W
Reference hot water temperature	49.0 °C
Mixed water at 40°C	325 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	10.20 kW	10.30 kW
El input	2.06 kW	3.38 kW
COP	4.95	3.05

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	68 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	189 %	140 %
Prated	9.00 kW	10.00 kW
SCOP	4.80	3.58
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.30 kW	9.00 kW
COP Tj = -7°C	3.15	2.45
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.60 kW	5.20 kW
COP Tj = +2°C	4.32	3.44
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	3.30 kW	3.50 kW
COP Tj = +7°C	7.46	4.63
Cdh Tj = +7 °C	0.950	0.970
Pdh Tj = 12°C	3.20 kW	2.90 kW
COP Tj = 12°C	7.44	5.21
Cdh Tj = +12 °C	0.940	0.960
Pdh Tj = Tbiv	8.30 kW	9.00 kW
COP Tj = Tbiv	3.15	2.45
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.30 kW	9.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.74	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.70 kW	0.40 kW
Annual energy consumption Qhe	4069 kWh	5907 kWh

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
$\eta_s$	150 %	124 %
Prated	10.00 kW	9.00 kW
SCOP	3.83	3.18
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.70 kW	5.80 kW
COP Tj = -7°C	2.95	2.95
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.40 kW	3.50 kW
COP Tj = +2°C	4.71	3.50
Cdh Tj = +2 °C	0.970	0.980
Pdh Tj = +7°C	2.80 kW	2.70 kW
COP Tj = +7°C	6.23	4.83
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.20 kW	3.40 kW
COP Tj = 12°C	6.85	6.08
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	7.80 kW	7.60 kW
COP Tj = Tbiv	2.73	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.00 kW	4.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.86	1.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.00 kW	4.90 kW
Annual energy consumption Qhe	6194 kWh	7206 kWh
Pdh Tj = -15°C (if TOL)	7.80	7.60
COP Tj = -15°C (if TOL)	2.73	2.20
Cdh Tj = -15 °C	0.990	0.990

**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
--	-----------------	--------------------

ηs	223 %	165 %
Prated	10.00 kW	10.00 kW
SCOP	5.65	4.20
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.10 kW	10.10 kW
COP Tj = +2°C	3.70	2.55
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	6.00 kW	6.00 kW
COP Tj = +7°C	5.63	3.63
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.00 kW	3.30 kW
COP Tj = 12°C	6.22	5.30
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	10.10 kW	10.10 kW
COP Tj = Tbiv	3.70	2.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.10 kW	10.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.70	2.55
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2399 kWh	3236 kWh