Subtype Tri-Thermal monobloc series 12 14 16 kW	
Certificate Holder	GD TCL Intelligent Heating & Ventilating Equipment Co., Ltd.
Address	No. 7 Yuanlin Road,
ZIP	
City	Guangdong
Country	CN
Certification Body	BRE Global Limited
Subtype title	Tri-Thermal monobloc series 12 14 16 kW
Registration number	041-K051-03
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.74 kg
Certification Date	31.07.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 12
Testing laboratory	SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch, CN

Model THMLd-12D/3HBp-A	
Model name	THMLd-12D/3HBp-A
Application	Heating (medium 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 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	12.10 kW	12.00 kW
El input	2.42 kW	3.85 kW
COP	5.00	3.12

EN 12102-1 | Average Climate

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

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	188 %	136 %
Prated	12.00 kW	12.00 kW
SCOP	4.78	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.70 kW	10.70 kW
COP Tj = -7°C	2.90	2.12
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	6.60 kW
COP Tj = +2°C	4.53	3.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.60 kW	4.40 kW

COP Tj = +7°C	6.66	4.74
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.00 kW
COP Tj = 12°C	8.92	7.28
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	10.70 kW
COP Tj = Tbiv	2.90	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.40 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.60 kW	2.10 kW
Annual energy consumption Qhe	5261 kWh	7224 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	163 %	119 %
Prated	11.00 kW	10.00 kW
SCOP	4.15	3.05
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.20 kW	6.70 kW
COP Tj = -7°C	3.51	2.58
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.10 kW	4.00 kW
COP Tj = +2°C	5.05	3.68
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.20 kW	2.90 kW
COP Tj = +7°C	6.18	4.57
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.60 kW	3.30 kW
COP Tj = 12°C	8.19	6.59
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.30 kW	8.50 kW

COP Tj = Tbiv	2.59	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	4.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.21
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	5.40 kW
Annual energy consumption Qhe	6746 kWh	8470 kWh
Pdh Tj = -15°C (if TOL	9.30	8.50
COP Tj = -15°C (if TOL	2.59	1.84
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	253 %	174 %
Prated	11.00 kW	12.00 kW
SCOP	6.40	4.40
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.00 kW	12.00 kW
COP Tj = +2°C	3.62	2.27
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.10 kW	8.00 kW
COP Tj = +7°C	5.64	3.76
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.70 kW	4.30 kW
COP Tj = 12°C	8.33	5.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.10 kW	8.00 kW
COP Tj = Tbiv	5.64	3.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.00 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.62	2.27

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 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	2326 kWh	3761 kWh

Model THML-12D/HBp-A	
Model name	THML-12D/HBp-A
Application	Heating (medium 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 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	12.10 kW	12.00 kW
El input	2.42 kW	3.85 kW
COP	5.00	3.12

EN 12102-1 | Average Climate

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

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	188 %	136 %
Prated	12.00 kW	12.00 kW
SCOP	4.78	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.70 kW	10.70 kW
COP Tj = -7°C	2.90	2.12
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	6.60 kW
COP Tj = +2°C	4.53	3.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.60 kW	4.40 kW

COP Tj = +7°C	6.66	4.74
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.00 kW
COP Tj = 12°C	8.92	7.28
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	10.70 kW
COP Tj = Tbiv	2.90	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.40 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.60 kW	2.10 kW
Annual energy consumption Qhe	5261 kWh	7224 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	163 %	119 %
Prated	11.00 kW	10.00 kW
SCOP	4.15	3.05
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.20 kW	6.70 kW
COP Tj = -7°C	3.51	2.58
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.10 kW	4.00 kW
COP Tj = +2°C	5.05	3.68
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.20 kW	2.90 kW
COP Tj = +7°C	6.18	4.57
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.60 kW	3.30 kW
COP Tj = 12°C	8.19	6.59
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.30 kW	8.50 kW

COP Tj = Tbiv	2.59	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	4.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.21
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	5.40 kW
Annual energy consumption Qhe	6746 kWh	8470 kWh
Pdh Tj = -15°C (if TOL	9.30	8.50
COP Tj = -15°C (if TOL	2.59	1.84
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	253 %	174 %
Prated	11.00 kW	12.00 kW
SCOP	6.40	4.40
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.00 kW	12.00 kW
COP Tj = +2°C	3.62	2.27
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.10 kW	8.00 kW
COP Tj = +7°C	5.64	3.76
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.70 kW	4.30 kW
COP Tj = 12°C	8.33	5.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.10 kW	8.00 kW
COP Tj = Tbiv	5.64	3.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.00 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.62	2.27

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 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	2326 kWh	3761 kWh

Model THML-12S/HBp-A	
Model name	THML-12S/HBp-A
Application	Heating (medium 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 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	12.10 kW	12.00 kW
El input	2.42 kW	3.85 kW
COP	5.00	3.12

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	187 %	138 %
Prated	12.00 kW	12.00 kW
SCOP	4.75	3.53
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.70 kW	10.70 kW
COP Tj = -7°C	2.90	2.13
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	6.60 kW
COP Tj = +2°C	4.53	3.33
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.60 kW	4.40 kW

COP Tj = +7°C	6.65	4.88
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.00 kW
COP Tj = 12°C	8.92	7.67
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	10.70 kW
COP Tj = Tbiv	2.90	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.40 kW	10.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.60 kW	2.00 kW
Annual energy consumption Qhe	5256 kWh	7085 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	163 %	119 %
Prated	11.00 kW	10.00 kW
SCOP	4.15	3.05
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.20 kW	6.70 kW
COP Tj = -7°C	3.51	2.58
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.20 kW	4.00 kW
COP Tj = +2°C	5.06	3.68
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.20 kW	2.90 kW
COP Tj = +7°C	6.20	4.57
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.60 kW	3.30 kW
COP Tj = 12°C	8.19	6.59
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.30 kW	8.50 kW

COP Tj = Tbiv	2.59	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	4.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.21
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	5.30 kW
Annual energy consumption Qhe	6738 kWh	8459 kWh
Pdh Tj = -15°C (if TOL	9.30	8.50
COP Tj = -15°C (if TOL	2.59	1.89
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	253 %	175 %
Prated	11.00 kW	12.00 kW
SCOP	6.40	4.45
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.00 kW	12.00 kW
COP Tj = +2°C	3.62	2.27
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.20 kW	8.00 kW
COP Tj = +7°C	5.64	3.85
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.70 kW	4.30 kW
COP Tj = 12°C	8.34	5.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.20 kW	8.00 kW
COP Tj = Tbiv	5.64	3.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.00 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.62	2.27

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 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	2325 kWh	3733 kWh

Model THML-14D/HBp-A	
Model name	THML-14D/HBp-A
Application	Heating (medium 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 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	14.50 kW	14.00 kW
El input	3.05 kW	4.65 kW
COP	4.75	3.01

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	182 %	134 %
Prated	14.00 kW	12.00 kW
SCOP	4.63	3.43
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.40 kW	10.90 kW
COP Tj = -7°C	2.80	1.99
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.50 kW	6.90 kW
COP Tj = +2°C	4.38	3.26
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.20 kW	4.50 kW

COP Tj = +7°C	6.53	4.79
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.50 kW	4.00 kW
COP Tj = 12°C	8.58	7.25
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.40 kW	10.90 kW
COP Tj = Tbiv	2.80	1.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.80 kW	10.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.51	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.20 kW	1.70 kW
Annual energy consumption Qhe	6238 kWh	7427 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	117 %
Prated	13.00 kW	11.00 kW
SCOP	3.98	3.00
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.20 kW	7.20 kW
COP Tj = -7°C	3.35	2.56
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.60 kW	4.20 kW
COP Tj = +2°C	4.72	3.62
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.40 kW	3.10 kW
COP Tj = +7°C	6.10	4.77
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.80 kW	3.60 kW
COP Tj = 12°C	8.00	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.60 kW	8.90 kW

COP Tj = Tbiv	2.55	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.90 kW	4.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.10	1.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.10 kW	6.60 kW
Annual energy consumption Qhe	8111 kWh	8975 kWh
Pdh Tj = -15°C (if TOL	10.60	8.90
COP Tj = -15°C (if TOL	2.55	1.82
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	248 %	170 %
Prated	12.00 kW	14.00 kW
SCOP	6.28	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.00 kW	13.10 kW
COP Tj = +2°C	3.40	2.25
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.00 kW	9.00 kW
COP Tj = +7°C	5.60	3.61
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.10 kW
COP Tj = 12°C	7.94	5.94
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.00 kW	9.00 kW
COP Tj = Tbiv	5.60	3.61
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	13.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.40	2.25

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	2638 kWh	4323 kWh

Model THML-16D/HBp-A	
Model name	THML-16D/HBp-A
Application	Heating (medium 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 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	16.00 kW	16.00 kW
El input	3.54 kW	5.49 kW
COP	4.52	2.91

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	179 %	136 %
Prated	15.00 kW	13.00 kW
SCOP	4.55	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.40 kW	11.30 kW
COP Tj = -7°C	2.66	2.04
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.00 kW	7.30 kW
COP Tj = +2°C	4.33	3.31
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.40 kW	4.80 kW

COP Tj = +7°C	6.48	4.81
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.60 kW	4.00 kW
COP Tj = 12°C	8.96	7.35
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	13.40 kW	11.30 kW
COP Tj = Tbiv	2.66	2.04
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	11.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.46	1.72
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.80 kW
Annual energy consumption Qhe	6863 kWh	7593 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	121 %
Prated	14.00 kW	12.00 kW
SCOP	3.98	3.10
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.10 kW	7.70 kW
COP Tj = -7°C	3.30	2.61
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.00 kW	4.50 kW
COP Tj = +2°C	4.87	3.78
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.20 kW	3.20 kW
COP Tj = +7°C	6.50	4.87
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.70 kW	3.60 kW
COP Tj = 12°C	7.59	6.39
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.30 kW	9.60 kW

COP Tj = Tbiv	2.28	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.80 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.89	1.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.20 kW	6.90 kW
Annual energy consumption Qhe	8618 kWh	9389 kWh
Pdh Tj = -15°C (if TOL	11.30	9.60
COP Tj = -15°C (if TOL	2.28	1.84
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	239 %	171 %
Prated	13.00 kW	14.00 kW
SCOP	6.05	4.35
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.00 kW	13.20 kW
COP Tj = +2°C	3.33	2.30
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.50 kW	9.00 kW
COP Tj = +7°C	5.19	3.68
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.80 kW	4.10 kW
COP Tj = 12°C	7.95	5.80
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.50 kW	9.00 kW
COP Tj = Tbiv	5.19	3.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	13.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.33	2.30

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2934 kWh	4329 kWh

Model THMLd-16D/3HBp-A	
Model name	THMLd-16D/3HBp-A
Application	Heating (medium 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 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	16.00 kW	16.00 kW
El input	3.54 kW	5.49 kW
COP	4.52	2.91

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	179 %	136 %
Prated	15.00 kW	13.00 kW
SCOP	4.55	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.40 kW	11.30 kW
COP Tj = -7°C	2.66	2.04
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.00 kW	7.30 kW
COP Tj = +2°C	4.33	3.31
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.40 kW	4.80 kW

COP Tj = +7°C	6.48	4.81
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.60 kW	4.00 kW
COP Tj = 12°C	8.96	7.35
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	13.40 kW	11.30 kW
COP Tj = Tbiv	2.66	2.04
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	11.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.46	1.72
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.80 kW
Annual energy consumption Qhe	6863 kWh	7593 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	121 %
Prated	14.00 kW	12.00 kW
SCOP	3.98	3.10
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.10 kW	7.70 kW
COP Tj = -7°C	3.30	2.61
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.00 kW	4.50 kW
COP Tj = +2°C	4.87	3.78
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.20 kW	3.20 kW
COP Tj = +7°C	6.50	4.87
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.70 kW	3.60 kW
COP Tj = 12°C	7.59	6.39
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.30 kW	9.60 kW

COP Tj = Tbiv	2.28	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.80 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.89	1.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.20 kW	6.90 kW
Annual energy consumption Qhe	8618 kWh	9389 kWh
Pdh Tj = -15°C (if TOL	11.30	9.60
COP Tj = -15°C (if TOL	2.28	1.84
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	239 %	171 %
Prated	13.00 kW	14.00 kW
SCOP	6.05	4.35
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.00 kW	13.20 kW
COP Tj = +2°C	3.33	2.30
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.50 kW	9.00 kW
COP Tj = +7°C	5.19	3.68
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.80 kW	4.10 kW
COP Tj = 12°C	7.95	5.80
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.50 kW	9.00 kW
COP Tj = Tbiv	5.19	3.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	13.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.33	2.30

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2934 kWh	4329 kWh

Model THML-16S/HBp-A	
Model name	THML-16S/HBp-A
Application	Heating (medium 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 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	16.00 kW	16.00 kW
El input	3.54 kW	5.49 kW
COP	4.52	2.91

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	179 %	136 %
Prated	15.00 kW	13.00 kW
SCOP	4.55	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.40 kW	11.30 kW
COP Tj = -7°C	2.60	2.04
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.00 kW	7.30 kW
COP Tj = +2°C	4.39	3.33
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.40 kW	4.80 kW

COP Tj = +7°C	6.44	4.81
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.60 kW	4.00 kW
COP Tj = 12°C	8.92	7.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	13.40 kW	11.30 kW
COP Tj = Tbiv	2.60	2.04
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	11.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.70 kW
Annual energy consumption Qhe	6838 kWh	7571 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	121 %
Prated	14.00 kW	12.00 kW
SCOP	3.98	3.10
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.10 kW	7.80 kW
COP Tj = -7°C	3.32	2.64
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.00 kW	4.50 kW
COP Tj = +2°C	4.88	3.78
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.20 kW	3.20 kW
COP Tj = +7°C	6.50	4.87
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.70 kW	3.70 kW
COP Tj = 12°C	7.59	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.30 kW	9.60 kW

COP Tj = Tbiv	2.28	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.80 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.89	1.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.20 kW	6.90 kW
Annual energy consumption Qhe	8597 kWh	9356 kWh
Pdh Tj = -15°C (if TOL	11.30	9.60
COP Tj = -15°C (if TOL	2.28	1.85
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	239 %	171 %
Prated	13.00 kW	14.00 kW
SCOP	6.05	4.35
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.00 kW	13.20 kW
COP Tj = +2°C	3.33	2.32
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.60 kW	9.10 kW
COP Tj = +7°C	5.20	3.70
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.80 kW	4.10 kW
COP Tj = 12°C	7.95	5.80
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.60 kW	9.10 kW
COP Tj = Tbiv	5.20	3.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	13.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.33	2.32

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2933 kWh	4321 kWh

Model THMLd-14D/3HBp-A	
Model name	THMLd-14D/3HBp-A
Application	Heating (medium 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 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	14.50 kW	14.00 kW
El input	3.05 kW	4.65 kW
COP	4.75	3.01

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	182 %	134 %
Prated	14.00 kW	12.00 kW
SCOP	4.63	3.43
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.40 kW	10.90 kW
COP Tj = -7°C	2.80	1.99
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.50 kW	6.90 kW
COP Tj = +2°C	4.38	3.26
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.20 kW	4.50 kW

COP Tj = +7°C	6.53	4.79
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.50 kW	4.00 kW
COP Tj = 12°C	8.58	7.25
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.40 kW	10.90 kW
COP Tj = Tbiv	2.80	1.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.80 kW	10.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.51	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.20 kW	1.70 kW
Annual energy consumption Qhe	6238 kWh	7427 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	117 %
Prated	13.00 kW	11.00 kW
SCOP	3.98	3.00
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.20 kW	7.20 kW
COP Tj = -7°C	3.35	2.56
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.60 kW	4.20 kW
COP Tj = +2°C	4.72	3.62
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.40 kW	3.10 kW
COP Tj = +7°C	6.10	4.77
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.80 kW	3.60 kW
COP Tj = 12°C	8.00	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.60 kW	8.90 kW

COP Tj = Tbiv	2.55	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.90 kW	4.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.10	1.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.10 kW	6.60 kW
Annual energy consumption Qhe	8111 kWh	8975 kWh
Pdh Tj = -15°C (if TOL	10.60	8.90
COP Tj = -15°C (if TOL	2.55	1.82
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	248 %	170 %
Prated	12.00 kW	14.00 kW
SCOP	6.28	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.00 kW	13.10 kW
COP Tj = +2°C	3.40	2.25
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.00 kW	9.00 kW
COP Tj = +7°C	5.60	3.61
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.10 kW
COP Tj = 12°C	7.94	5.94
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.00 kW	9.00 kW
COP Tj = Tbiv	5.60	3.61
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	13.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.40	2.25

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	2638 kWh	4323 kWh

Model THML-14S/HBp-A	
Model name	THML-14S/HBp-A
Application	Heating (medium 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 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	14.50 kW	14.00 kW
El input	3.05 kW	4.65 kW
COP	4.75	3.01

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	182 %	135 %
Prated	14.00 kW	12.00 kW
SCOP	4.63	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.40 kW	10.90 kW
COP Tj = -7°C	2.80	2.03
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.50 kW	7.10 kW
COP Tj = +2°C	4.40	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.10 kW	4.80 kW

COP Tj = +7°C	6.38	4.67
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.90 kW	4.00 kW
COP Tj = 12°C	9.16	7.27
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.40 kW	10.90 kW
COP Tj = Tbiv	2.80	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.90 kW	10.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	2.00 kW
Annual energy consumption Qhe	6237 kWh	7384 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	117 %
Prated	13.00 kW	11.00 kW
SCOP	3.98	3.00
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.30 kW	7.20 kW
COP Tj = -7°C	3.36	2.56
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.70 kW	4.30 kW
COP Tj = +2°C	4.73	3.62
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.40 kW	3.10 kW
COP Tj = +7°C	6.11	4.77
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.80 kW	3.60 kW
COP Tj = 12°C	7.98	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	8.90 kW

COP Tj = Tbiv	2.61	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.90 kW	4.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.10	1.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.10 kW	6.60 kW
Annual energy consumption Qhe	8082 kWh	8967 kWh
Pdh Tj = -15°C (if TOL	10.70	8.90
COP Tj = -15°C (if TOL	2.61	1.82
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	248 %	170 %
Prated	12.00 kW	14.00 kW
SCOP	6.28	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.00 kW	13.10 kW
COP Tj = +2°C	3.41	2.25
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.00 kW	9.00 kW
COP Tj = +7°C	5.61	3.61
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.10 kW
COP Tj = 12°C	7.94	5.94
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.00 kW	9.00 kW
COP Tj = Tbiv	5.61	3.61
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	13.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.41	2.25

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	2638 kWh	4320 kWh

Model THMLd-12S/3HBp-A	
Model name	THMLd-12S/3HBp-A
Application	Heating (medium 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	n/a
Off-peak product	n/a

Outdoor Air/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	12.10 kW	12.00 kW
El input	2.42 kW	3.85 kW
COP	5.00	3.12

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	187 %	138 %
Prated	12.00 kW	12.00 kW
SCOP	4.75	3.53
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.70 kW	10.70 kW
COP Tj = -7°C	2.90	2.13
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	6.60 kW
COP Tj = +2°C	4.53	3.33
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.60 kW	4.40 kW

COP Tj = +7°C	6.65	4.88
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.00 kW
COP Tj = 12°C	8.92	7.67
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	10.70 kW
COP Tj = Tbiv	2.90	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.40 kW	10.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.60 kW	2.00 kW
Annual energy consumption Qhe	5256 kWh	7085 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	163 %	119 %
Prated	11.00 kW	10.00 kW
SCOP	4.15	3.05
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.20 kW	6.70 kW
COP Tj = -7°C	3.51	2.58
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.20 kW	4.00 kW
COP Tj = +2°C	5.06	3.68
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.20 kW	2.90 kW
COP Tj = +7°C	6.20	4.57
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.60 kW	3.30 kW
COP Tj = 12°C	8.19	6.59
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.30 kW	8.50 kW

COP Tj = Tbiv	2.59	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	4.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.21
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	5.30 kW
Annual energy consumption Qhe	6738 kWh	8459 kWh
Pdh Tj = -15°C (if TOL	9.30	8.50
COP Tj = -15°C (if TOL	2.59	1.89
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	253 %	175 %
Prated	11.00 kW	12.00 kW
SCOP	6.40	4.45
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.00 kW	12.00 kW
COP Tj = +2°C	3.62	2.27
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.20 kW	8.00 kW
COP Tj = +7°C	5.64	3.85
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.70 kW	4.30 kW
COP Tj = 12°C	8.34	5.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.20 kW	8.00 kW
COP Tj = Tbiv	5.64	3.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.00 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.62	2.27

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 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	2325 kWh	3733 kWh

Model THMLd-12S/6HBp-A	
Model name	THMLd-12S/6HBp-A
Application	Heating (medium 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	n/a
Off-peak product	n/a

Outdoor Air/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	12.10 kW	12.00 kW
El input	2.42 kW	3.85 kW
COP	5.00	3.12

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	187 %	138 %
Prated	12.00 kW	12.00 kW
SCOP	4.75	3.53
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.70 kW	10.70 kW
COP Tj = -7°C	2.90	2.13
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	6.60 kW
COP Tj = +2°C	4.53	3.33
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.60 kW	4.40 kW

COP Tj = +7°C	6.65	4.88
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.00 kW
COP Tj = 12°C	8.92	7.67
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	10.70 kW
COP Tj = Tbiv	2.90	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.40 kW	10.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.60 kW	2.00 kW
Annual energy consumption Qhe	5256 kWh	7085 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	163 %	119 %
Prated	11.00 kW	10.00 kW
SCOP	4.15	3.05
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.20 kW	6.70 kW
COP Tj = -7°C	3.51	2.58
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.20 kW	4.00 kW
COP Tj = +2°C	5.06	3.68
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.20 kW	2.90 kW
COP Tj = +7°C	6.20	4.57
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.60 kW	3.30 kW
COP Tj = 12°C	8.19	6.59
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.30 kW	8.50 kW

COP Tj = Tbiv	2.59	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	4.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.21
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	5.30 kW
Annual energy consumption Qhe	6738 kWh	8459 kWh
Pdh Tj = -15°C (if TOL	9.30	8.50
COP Tj = -15°C (if TOL	2.59	1.89
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	253 %	175 %
Prated	11.00 kW	12.00 kW
SCOP	6.40	4.45
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.00 kW	12.00 kW
COP Tj = +2°C	3.62	2.27
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.20 kW	8.00 kW
COP Tj = +7°C	5.64	3.85
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.70 kW	4.30 kW
COP Tj = 12°C	8.34	5.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.20 kW	8.00 kW
COP Tj = Tbiv	5.64	3.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.00 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.62	2.27

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 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	2325 kWh	3733 kWh

Model THMLd-12S/9HBp-A	
Model name	THMLd-12S/9HBp-A
Application	Heating (medium 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	n/a
Off-peak product	n/a

Outdoor Air/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	12.10 kW	12.00 kW
El input	2.42 kW	3.85 kW
COP	5.00	3.12

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	187 %	138 %
Prated	12.00 kW	12.00 kW
SCOP	4.75	3.53
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.70 kW	10.70 kW
COP Tj = -7°C	2.90	2.13
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	6.60 kW
COP Tj = +2°C	4.53	3.33
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.60 kW	4.40 kW

COP Tj = +7°C	6.65	4.88
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.00 kW
COP Tj = 12°C	8.92	7.67
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	10.70 kW
COP Tj = Tbiv	2.90	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.40 kW	10.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.60 kW	2.00 kW
Annual energy consumption Qhe	5256 kWh	7085 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	163 %	119 %
Prated	11.00 kW	10.00 kW
SCOP	4.15	3.05
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.20 kW	6.70 kW
COP Tj = -7°C	3.51	2.58
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.20 kW	4.00 kW
COP Tj = +2°C	5.06	3.68
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.20 kW	2.90 kW
COP Tj = +7°C	6.20	4.57
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.60 kW	3.30 kW
COP Tj = 12°C	8.19	6.59
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.30 kW	8.50 kW

COP Tj = Tbiv	2.59	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	4.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.21
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	5.30 kW
Annual energy consumption Qhe	6738 kWh	8459 kWh
Pdh Tj = -15°C (if TOL	9.30	8.50
COP Tj = -15°C (if TOL	2.59	1.89
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	253 %	175 %
Prated	11.00 kW	12.00 kW
SCOP	6.40	4.45
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.00 kW	12.00 kW
COP Tj = +2°C	3.62	2.27
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.20 kW	8.00 kW
COP Tj = +7°C	5.64	3.85
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.70 kW	4.30 kW
COP Tj = 12°C	8.34	5.95
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.20 kW	8.00 kW
COP Tj = Tbiv	5.64	3.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.00 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.62	2.27

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 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	2325 kWh	3733 kWh

Model THMLd-14S/3HBp-A	
Model name	THMLd-14S/3HBp-A
Application	Heating (medium 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	n/a
Off-peak product	n/a

Outdoor Air/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	14.50 kW	14.00 kW
El input	3.05 kW	4.65 kW
COP	4.75	3.01

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	182 %	135 %
Prated	14.00 kW	12.00 kW
SCOP	4.63	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.40 kW	10.90 kW
COP Tj = -7°C	2.80	2.03
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.50 kW	7.10 kW
COP Tj = +2°C	4.40	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.10 kW	4.80 kW

COP Tj = +7°C	6.38	4.67
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.90 kW	4.00 kW
COP Tj = 12°C	9.16	7.27
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.40 kW	10.90 kW
COP Tj = Tbiv	2.80	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.90 kW	10.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	2.00 kW
Annual energy consumption Qhe	6237 kWh	7384 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	117 %
Prated	13.00 kW	11.00 kW
SCOP	3.98	3.00
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.30 kW	7.20 kW
COP Tj = -7°C	3.36	2.56
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.70 kW	4.30 kW
COP Tj = +2°C	4.73	3.62
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.40 kW	3.10 kW
COP Tj = +7°C	6.11	4.77
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.80 kW	3.60 kW
COP Tj = 12°C	7.98	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	8.90 kW

COP Tj = Tbiv	2.61	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.90 kW	4.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.10	1.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.10 kW	6.60 kW
Annual energy consumption Qhe	8082 kWh	8967 kWh
Pdh Tj = -15°C (if TOL	10.70	8.90
COP Tj = -15°C (if TOL	2.61	1.82
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	248 %	170 %
Prated	12.00 kW	14.00 kW
SCOP	6.28	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.00 kW	13.10 kW
COP Tj = +2°C	3.41	2.25
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.00 kW	9.00 kW
COP Tj = +7°C	5.61	3.61
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.10 kW
COP Tj = 12°C	7.94	5.94
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.00 kW	9.00 kW
COP Tj = Tbiv	5.61	3.61
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	13.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.41	2.25

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	2638 kWh	4320 kWh

Model THMLd-14S/6HBp-A		
Model name	THMLd-14S/6HBp-A	
Application	Heating (medium 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	n/a	
Off-peak product	n/a	
Outdoor Air/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	14.50 kW	14.00 kW
El input	3.05 kW	4.65 kW
COP	4.75	3.01
EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)
EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	182 %	135 %
Prated	14.00 kW	12.00 kW
SCOP	4.63	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.40 kW	10.90 kW
COP Tj = -7°C	2.80	2.03
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.50 kW	7.10 kW
COP Tj = +2°C	4.40	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.10 kW	4.80 kW

COP Tj = +7°C	6.38	4.67
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.90 kW	4.00 kW
COP Tj = 12°C	9.16	7.27
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.40 kW	10.90 kW
COP Tj = Tbiv	2.80	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.90 kW	10.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	2.00 kW
Annual energy consumption Qhe	6237 kWh	7384 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	117 %
Prated	13.00 kW	11.00 kW
SCOP	3.98	3.00
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.30 kW	7.20 kW
COP Tj = -7°C	3.36	2.56
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.70 kW	4.30 kW
COP Tj = +2°C	4.73	3.62
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.40 kW	3.10 kW
COP Tj = +7°C	6.11	4.77
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.80 kW	3.60 kW
COP Tj = 12°C	7.98	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	8.90 kW

COP Tj = Tbiv	2.61	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.90 kW	4.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.10	1.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.10 kW	6.60 kW
Annual energy consumption Qhe	8082 kWh	8967 kWh
Pdh Tj = -15°C (if TOL	10.70	8.90
COP Tj = -15°C (if TOL	2.61	1.82
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	248 %	170 %
Prated	12.00 kW	14.00 kW
SCOP	6.28	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.00 kW	13.10 kW
COP Tj = +2°C	3.41	2.25
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.00 kW	9.00 kW
COP Tj = +7°C	5.61	3.61
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.10 kW
COP Tj = 12°C	7.94	5.94
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.00 kW	9.00 kW
COP Tj = Tbiv	5.61	3.61
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	13.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.41	2.25

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	2638 kWh	4320 kWh

Model THMLd-14S/9HBp-A	
Model name	THMLd-14S/9HBp-A
Application	Heating (medium 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	n/a
Off-peak product	n/a

Outdoor Air/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	14.50 kW	14.00 kW
El input	3.05 kW	4.65 kW
COP	4.75	3.01

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	182 %	135 %
Prated	14.00 kW	12.00 kW
SCOP	4.63	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.40 kW	10.90 kW
COP Tj = -7°C	2.80	2.03
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.50 kW	7.10 kW
COP Tj = +2°C	4.40	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.10 kW	4.80 kW

COP Tj = +7°C	6.38	4.67
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.90 kW	4.00 kW
COP Tj = 12°C	9.16	7.27
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.40 kW	10.90 kW
COP Tj = Tbiv	2.80	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.90 kW	10.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	2.00 kW
Annual energy consumption Qhe	6237 kWh	7384 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	117 %
Prated	13.00 kW	11.00 kW
SCOP	3.98	3.00
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.30 kW	7.20 kW
COP Tj = -7°C	3.36	2.56
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.70 kW	4.30 kW
COP Tj = +2°C	4.73	3.62
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.40 kW	3.10 kW
COP Tj = +7°C	6.11	4.77
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.80 kW	3.60 kW
COP Tj = 12°C	7.98	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.70 kW	8.90 kW

COP Tj = Tbiv	2.61	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.90 kW	4.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.10	1.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.10 kW	6.60 kW
Annual energy consumption Qhe	8082 kWh	8967 kWh
Pdh Tj = -15°C (if TOL	10.70	8.90
COP Tj = -15°C (if TOL	2.61	1.82
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	248 %	170 %
Prated	12.00 kW	14.00 kW
SCOP	6.28	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.00 kW	13.10 kW
COP Tj = +2°C	3.41	2.25
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.00 kW	9.00 kW
COP Tj = +7°C	5.61	3.61
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	4.10 kW
COP Tj = 12°C	7.94	5.94
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.00 kW	9.00 kW
COP Tj = Tbiv	5.61	3.61
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	13.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.41	2.25

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	2638 kWh	4320 kWh

Model THMLd-16S/3HBp-A	
Model name	THMLd-16S/3HBp-A
Application	Heating (medium 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	n/a
Off-peak product	n/a

Outdoor Air/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	16.00 kW	16.00 kW
El input	3.54 kW	5.49 kW
COP	4.52	2.91

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	179 %	136 %
Prated	15.00 kW	13.00 kW
SCOP	4.55	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.40 kW	11.30 kW
COP Tj = -7°C	2.60	2.04
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.00 kW	7.30 kW
COP Tj = +2°C	4.39	3.33
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.40 kW	4.80 kW

COP Tj = +7°C	6.44	4.81
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.60 kW	4.00 kW
COP Tj = 12°C	8.92	7.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	13.40 kW	11.30 kW
COP Tj = Tbiv	2.60	2.04
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	11.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.70 kW
Annual energy consumption Qhe	6838 kWh	7571 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	121 %
Prated	14.00 kW	12.00 kW
SCOP	3.98	3.10
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.10 kW	7.80 kW
COP Tj = -7°C	3.32	2.64
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.00 kW	4.50 kW
COP Tj = +2°C	4.88	3.78
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.20 kW	3.20 kW
COP Tj = +7°C	6.50	4.87
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.70 kW	3.70 kW
COP Tj = 12°C	7.59	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.30 kW	9.60 kW

COP Tj = Tbiv	2.28	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.80 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.89	1.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.20 kW	6.90 kW
Annual energy consumption Qhe	8597 kWh	9356 kWh
Pdh Tj = -15°C (if TOL	11.30	9.60
COP Tj = -15°C (if TOL	2.28	1.85
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	239 %	171 %
Prated	13.00 kW	14.00 kW
SCOP	6.05	4.35
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.00 kW	13.20 kW
COP Tj = +2°C	3.33	2.32
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.60 kW	9.10 kW
COP Tj = +7°C	5.20	3.70
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.80 kW	4.10 kW
COP Tj = 12°C	7.95	5.80
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.60 kW	9.10 kW
COP Tj = Tbiv	5.20	3.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	13.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.33	2.32

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2933 kWh	4321 kWh

Model THMLd-16S/6HBp-A	
Model name	THMLd-16S/6HBp-A
Application	Heating (medium 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	n/a
Off-peak product	n/a

Outdoor Air/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	16.00 kW	16.00 kW
El input	3.54 kW	5.49 kW
COP	4.52	2.91

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	179 %	136 %
Prated	15.00 kW	13.00 kW
SCOP	4.55	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.40 kW	11.30 kW
COP Tj = -7°C	2.60	2.04
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.00 kW	7.30 kW
COP Tj = +2°C	4.39	3.33
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.40 kW	4.80 kW

COP Tj = +7°C	6.44	4.81
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.60 kW	4.00 kW
COP Tj = 12°C	8.92	7.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	13.40 kW	11.30 kW
COP Tj = Tbiv	2.60	2.04
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	11.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.70 kW
Annual energy consumption Qhe	6838 kWh	7571 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	121 %
Prated	14.00 kW	12.00 kW
SCOP	3.98	3.10
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.10 kW	7.80 kW
COP Tj = -7°C	3.32	2.64
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.00 kW	4.50 kW
COP Tj = +2°C	4.88	3.78
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.20 kW	3.20 kW
COP Tj = +7°C	6.50	4.87
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.70 kW	3.70 kW
COP Tj = 12°C	7.59	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.30 kW	9.60 kW

COP Tj = Tbiv	2.28	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.80 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.89	1.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.20 kW	6.90 kW
Annual energy consumption Qhe	8597 kWh	9356 kWh
Pdh Tj = -15°C (if TOL	11.30	9.60
COP Tj = -15°C (if TOL	2.28	1.85
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	239 %	171 %
Prated	13.00 kW	14.00 kW
SCOP	6.05	4.35
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.00 kW	13.20 kW
COP Tj = +2°C	3.33	2.32
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.60 kW	9.10 kW
COP Tj = +7°C	5.20	3.70
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.80 kW	4.10 kW
COP Tj = 12°C	7.95	5.80
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.60 kW	9.10 kW
COP Tj = Tbiv	5.20	3.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	13.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.33	2.32

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2933 kWh	4321 kWh

Model THMLd-16S/9HBp-A	
Model name	THMLd-16S/9HBp-A
Application	Heating (medium 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	n/a
Off-peak product	n/a

Outdoor Air/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	16.00 kW	16.00 kW
El input	3.54 kW	5.49 kW
COP	4.52	2.91

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	179 %	136 %
Prated	15.00 kW	13.00 kW
SCOP	4.55	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.40 kW	11.30 kW
COP Tj = -7°C	2.60	2.04
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.00 kW	7.30 kW
COP Tj = +2°C	4.39	3.33
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.40 kW	4.80 kW

COP Tj = +7°C	6.44	4.81
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.60 kW	4.00 kW
COP Tj = 12°C	8.92	7.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	13.40 kW	11.30 kW
COP Tj = Tbiv	2.60	2.04
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	11.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.70 kW
Annual energy consumption Qhe	6838 kWh	7571 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	156 %	121 %
Prated	14.00 kW	12.00 kW
SCOP	3.98	3.10
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.10 kW	7.80 kW
COP Tj = -7°C	3.32	2.64
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.00 kW	4.50 kW
COP Tj = +2°C	4.88	3.78
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.20 kW	3.20 kW
COP Tj = +7°C	6.50	4.87
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.70 kW	3.70 kW
COP Tj = 12°C	7.59	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.30 kW	9.60 kW

COP Tj = Tbiv	2.28	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.80 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.89	1.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.20 kW	6.90 kW
Annual energy consumption Qhe	8597 kWh	9356 kWh
Pdh Tj = -15°C (if TOL	11.30	9.60
COP Tj = -15°C (if TOL	2.28	1.85
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	239 %	171 %
Prated	13.00 kW	14.00 kW
SCOP	6.05	4.35
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.00 kW	13.20 kW
COP Tj = +2°C	3.33	2.32
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.60 kW	9.10 kW
COP Tj = +7°C	5.20	3.70
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.80 kW	4.10 kW
COP Tj = 12°C	7.95	5.80
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.60 kW	9.10 kW
COP Tj = Tbiv	5.20	3.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	13.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.33	2.32

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2933 kWh	4321 kWh