

Subtype ThermaX R290 12/15KW

Certificate Holder	GD Shenling Thermal Tech Co., Ltd
Address	No.29 Shunye East Rd.
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City	Foshan
Country	CN
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	ThermaX R290 12/15KW
Registration number	011-1W0744
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.4 kg
Certification Date	29.11.2023
Testing basis	HP KEYMARK certification scheme rules V14

Model HPM-V120W/R3

Model name	HPM-V120W/R3
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	12.00 kW	12.00 kW
El input	2.53 kW	4.00 kW
COP	4.75	3.00

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	193 %	148 %
Prated	12.20 kW	12.10 kW
SCOP	4.90	3.77
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.07 kW	10.73 kW
COP Tj = -7°C	2.90	2.20
Cdh Tj = -7 °C	0.995	0.996
Pdh Tj = +2°C	6.52 kW	6.43 kW
COP Tj = +2°C	4.52	3.58
Cdh Tj = +2 °C	0.987	0.989
Pdh Tj = +7°C	4.26 kW	4.24 kW

COP Tj = +7°C	7.19	5.34
Cdh Tj = +7 °C	0.968	0.976
Pdh Tj = 12°C	2.78 kW	2.56 kW
COP Tj = 12°C	10.18	6.76
Cdh Tj = +12 °C	0.930	0.950
Pdh Tj = Tbiv	11.07 kW	10.73 kW
COP Tj = Tbiv	2.90	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.55 kW	10.48 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.76	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	19 W	19 W
PSB	12 W	12 W
PCK	2 W	2 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.60 kW
Annual energy consumption Qhe	5141 kWh	6639 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	170 %	134 %
Prated	11.30 kW	10.50 kW
SCOP	4.33	3.43
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.09 kW	6.51 kW
COP Tj = -7°C	3.55	2.84
Cdh Tj = -7 °C	0.990	0.992
Pdh Tj = +2°C	4.34 kW	4.07 kW
COP Tj = +2°C	5.25	4.11
Cdh Tj = +2 °C	0.977	0.981
Pdh Tj = +7°C	2.87 kW	2.72 kW
COP Tj = +7°C	7.35	5.60
Cdh Tj = +7 °C	0.951	0.961
Pdh Tj = 12°C	2.71 kW	2.62 kW
COP Tj = 12°C	8.15	6.86
Cdh Tj = +12 °C	0.943	0.950
Pdh Tj = Tbiv	9.36 kW	8.75 kW

COP Tj = Tbiv	2.57	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.88 kW	6.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.04	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	19 W	19 W
PSB	12 W	12 W
PCK	2 W	2 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.40 kW	3.50 kW
Annual energy consumption Qhe	6440 kWh	7537 kWh
Pdh Tj = -15°C (if TOL)	9.36	8.75
COP Tj = -15°C (if TOL)	2.57	2.06
Cdh Tj = -15 °C	0.995	0.996

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	270 %	197 %
Prated	11.40 kW	11.40 kW
SCOP	6.81	5.01
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.59 kW	12.37 kW
COP Tj = +2°C	3.62	2.51
Cdh Tj = +2 °C	0.994	0.996
Pdh Tj = +7°C	7.76 kW	7.72 kW
COP Tj = +7°C	5.81	4.09
Cdh Tj = +7 °C	0.986	0.990
Pdh Tj = 12°C	3.48 kW	3.46 kW
COP Tj = 12°C	8.80	6.80
Cdh Tj = +12 °C	0.952	0.963
Pdh Tj = Tbiv	11.59 kW	12.37 kW
COP Tj = Tbiv	3.62	2.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.59 kW	12.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.62	2.51

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.996
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	19 W	19 W
PSB	12 W	12 W
PCK	2 W	2 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2235 kWh	3042 kWh

Model HPM-V150W/R3

Model name	HPM-V150W/R3
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	15.00 kW	15.00 kW
El input	3.33 kW	5.26 kW
COP	4.50	2.85

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	186 %	146 %
Prated	14.00 kW	14.00 kW
SCOP	4.73	3.73
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.53 kW	12.47 kW
COP Tj = -7°C	2.74	2.10
Cdh Tj = -7 °C	0.996	0.997
Pdh Tj = +2°C	7.58 kW	7.67 kW
COP Tj = +2°C	4.37	3.55
Cdh Tj = +2 °C	0.989	0.991
Pdh Tj = +7°C	4.83 kW	4.81 kW

COP Tj = +7°C	7.04	5.39
Cdh Tj = +7 °C	0.972	0.979
Pdh Tj = 12°C	2.78 kW	2.56 kW
COP Tj = 12°C	10.18	6.76
Cdh Tj = +12 °C	0.930	0.950
Pdh Tj = Tbiv	12.53 kW	12.47 kW
COP Tj = Tbiv	2.74	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.55 kW	12.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.76	2.00
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.997
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	19 W	19 W
PSB	12 W	12 W
PCK	2 W	2 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.40 kW	1.90 kW
Annual energy consumption Qhe	6115 kWh	7763 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	133 %
Prated	13.50 kW	12.80 kW
SCOP	4.20	3.40
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.25 kW	7.78 kW
COP Tj = -7°C	3.37	2.77
Cdh Tj = -7 °C	0.992	0.993
Pdh Tj = +2°C	5.11 kW	4.77 kW
COP Tj = +2°C	5.12	4.11
Cdh Tj = +2 °C	0.981	0.984
Pdh Tj = +7°C	3.29 kW	3.16 kW
COP Tj = +7°C	7.46	5.88
Cdh Tj = +7 °C	0.957	0.965
Pdh Tj = 12°C	2.71 kW	2.62 kW
COP Tj = 12°C	8.15	6.86
Cdh Tj = +12 °C	0.943	0.950
Pdh Tj = Tbiv	11.15 kW	10.46 kW

COP Tj = Tbiv	2.49	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.27 kW	8.59 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.04	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.996	0.996
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	19 W	19 W
PSB	12 W	12 W
PCK	2 W	2 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.20 kW	4.20 kW
Annual energy consumption Qhe	7924 kWh	9284 kWh
Pdh Tj = -15°C (if TOL)	11.15	10.46
COP Tj = -15°C (if TOL)	2.49	1.95
Cdh Tj = -15 °C	0.996	0.996

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	253 %	190 %
Prated	13.00 kW	12.30 kW
SCOP	6.39	4.83
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.08 kW	12.74 kW
COP Tj = +2°C	3.36	2.44
Cdh Tj = +2 °C	0.995	0.996
Pdh Tj = +7°C	8.58 kW	8.54 kW
COP Tj = +7°C	5.69	4.02
Cdh Tj = +7 °C	0.987	0.991
Pdh Tj = 12°C	3.81 kW	3.85 kW
COP Tj = 12°C	7.89	6.42
Cdh Tj = +12 °C	0.961	0.968
Pdh Tj = Tbiv	13.08 kW	12.74 kW
COP Tj = Tbiv	3.36	2.44
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.08 kW	12.74 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.36	2.44

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	19 W	19 W
PSB	12 W	12 W
PCK	2 W	2 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2720 kWh	3402 kWh

Model HPM-V120W/SR3

Model name	HPM-V120W/SR3
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	12.00 kW	12.00 kW
El input	2.53 kW	4.00 kW
COP	4.75	3.00

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	192 %	148 %
Prated	12.20 kW	12.10 kW
SCOP	4.88	3.76
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.22 kW	11.18 kW
COP Tj = -7°C	2.79	2.21
Cdh Tj = -7 °C	0.997	0.997
Pdh Tj = +2°C	6.67 kW	6.45 kW
COP Tj = +2°C	4.57	3.58
Cdh Tj = +2 °C	0.991	0.993
Pdh Tj = +7°C	4.23 kW	4.18 kW

COP Tj = +7°C	7.10	5.17
Cdh Tj = +7 °C	0.978	0.984
Pdh Tj = 12°C	2.77 kW	2.71 kW
COP Tj = 12°C	10.01	7.54
Cdh Tj = +12 °C	0.953	0.964
Pdh Tj = Tbiv	11.22 kW	11.18 kW
COP Tj = Tbiv	2.79	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.57 kW	10.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.61	2.00
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.997
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	13 W	13 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.90 kW
Annual energy consumption Qhe	5168 kWh	6642 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	170 %	132 %
Prated	11.30 kW	10.50 kW
SCOP	4.33	3.36
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.95 kW	6.47 kW
COP Tj = -7°C	3.61	2.77
Cdh Tj = -7 °C	0.993	0.994
Pdh Tj = +2°C	4.19 kW	4.05 kW
COP Tj = +2°C	5.25	3.98
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	2.82 kW	2.70 kW
COP Tj = +7°C	6.84	5.52
Cdh Tj = +7 °C	0.969	0.973
Pdh Tj = 12°C	2.69 kW	2.63 kW
COP Tj = 12°C	7.99	6.82
Cdh Tj = +12 °C	0.961	0.966
Pdh Tj = Tbiv	9.22 kW	8.61 kW

COP Tj = Tbiv	2.60	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.66 kW	6.78 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.996	0.997
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	13 W	13 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.60 kW	3.70 kW
Annual energy consumption Qhe	6435 kWh	7693 kWh
Pdh Tj = -15°C (if TOL)	9.22	8.61
COP Tj = -15°C (if TOL)	2.60	2.09
Cdh Tj = -15 °C	0.996	0.997

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	265 %	189 %
Prated	11.40 kW	11.40 kW
SCOP	6.71	4.80
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.44 kW	11.96 kW
COP Tj = +2°C	3.61	2.51
Cdh Tj = +2 °C	0.996	0.997
Pdh Tj = +7°C	7.51 kW	7.91 kW
COP Tj = +7°C	5.85	4.13
Cdh Tj = +7 °C	0.990	0.993
Pdh Tj = 12°C	3.47 kW	3.57 kW
COP Tj = 12°C	8.40	6.11
Cdh Tj = +12 °C	0.969	0.978
Pdh Tj = Tbiv	11.44 kW	11.96 kW
COP Tj = Tbiv	3.61	2.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.44 kW	11.96 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.61	2.51

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.996	0.997
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	13 W	13 W
PSB	12 W	12 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	2271 kWh	3173 kWh

Model HPM-V150W/SR3

Model name	HPM-V150W/SR3
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	15.00 kW	15.00 kW
El input	3.33 kW	5.26 kW
COP	4.50	2.85

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	187 %	145 %
Prated	14.00 kW	14.00 kW
SCOP	4.74	3.69
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.39 kW	12.85 kW
COP Tj = -7°C	2.68	2.10
Cdh Tj = -7 °C	0.997	0.998
Pdh Tj = +2°C	7.55 kW	7.54 kW
COP Tj = +2°C	4.45	3.49
Cdh Tj = +2 °C	0.992	0.994
Pdh Tj = +7°C	4.83 kW	4.78 kW

COP Tj = +7°C	6.93	5.25
Cdh Tj = +7 °C	0.981	0.986
Pdh Tj = 12°C	2.77 kW	2.71 kW
COP Tj = 12°C	10.01	7.54
Cdh Tj = +12 °C	0.953	0.964
Pdh Tj = Tbiv	12.39 kW	12.85 kW
COP Tj = Tbiv	2.68	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.54 kW	11.77 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	13 W	13 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.50 kW	2.20 kW
Annual energy consumption Qhe	6097 kWh	7837 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	163 %	131 %
Prated	13.50 kW	12.80 kW
SCOP	4.15	3.36
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.25 kW	7.90 kW
COP Tj = -7°C	3.45	2.76
Cdh Tj = -7 °C	0.995	0.995
Pdh Tj = +2°C	4.96 kW	4.72 kW
COP Tj = +2°C	4.97	4.02
Cdh Tj = +2 °C	0.987	0.989
Pdh Tj = +7°C	3.22 kW	3.05 kW
COP Tj = +7°C	6.96	5.44
Cdh Tj = +7 °C	0.972	0.977
Pdh Tj = 12°C	2.69 kW	2.63 kW
COP Tj = 12°C	7.99	6.82
Cdh Tj = +12 °C	0.961	0.966
Pdh Tj = Tbiv	11.06 kW	10.47 kW

COP Tj = Tbiv	2.45	1.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.91 kW	8.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.04	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.997
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	13 W	13 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.60 kW	4.40 kW
Annual energy consumption Qhe	8028 kWh	9404 kWh
Pdh Tj = -15°C (if TOL)	11.06	10.47
COP Tj = -15°C (if TOL)	2.45	1.99
Cdh Tj = -15 °C	0.997	0.998

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	250 %	190 %
Prated	13.00 kW	12.30 kW
SCOP	6.33	4.83
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.09 kW	12.39 kW
COP Tj = +2°C	3.37	2.50
Cdh Tj = +2 °C	0.997	0.997
Pdh Tj = +7°C	8.59 kW	8.30 kW
COP Tj = +7°C	5.80	4.11
Cdh Tj = +7 °C	0.991	0.994
Pdh Tj = 12°C	3.77 kW	3.84 kW
COP Tj = 12°C	7.56	6.23
Cdh Tj = +12 °C	0.974	0.979
Pdh Tj = Tbiv	13.09 kW	12.39 kW
COP Tj = Tbiv	3.37	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.09 kW	12.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.37	2.50

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.997
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	13 W	13 W
PSB	12 W	12 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	2744 kWh	3401 kWh