

Subtype ThermaX R290 9KW

Certificate Holder	GD Shenling Thermal Tech Co., Ltd
Address	No.29 Shunye East Rd.
ZIP	528325
City	Foshan
Country	CN
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	ThermaX R290 9KW
Registration number	011-1W0746
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	0.92 kg
Certification Date	29.11.2023
Testing basis	HP KEYMARK certification scheme rules V14

Model HPM-V90W/R3

Model name	HPM-V90W/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	9.00 kW	9.00 kW
El input	1.86 kW	2.86 kW
COP	4.85	3.15

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	203 %	150 %
Prated	9.00 kW	9.00 kW
SCOP	5.15	3.82
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.03 kW	8.03 kW
COP Tj = -7°C	2.97	2.19
Cdh Tj = -7 °C	0.995	0.996
Pdh Tj = +2°C	4.84 kW	4.82 kW
COP Tj = +2°C	4.85	3.73
Cdh Tj = +2 °C	0.987	0.990
Pdh Tj = +7°C	3.09 kW	2.96 kW

COP Tj = +7°C	7.80	5.57
Cdh Tj = +7 °C	0.967	0.976
Pdh Tj = 12°C	1.75 kW	2.10 kW
COP Tj = 12°C	8.84	7.99
Cdh Tj = +12 °C	0.934	0.951
Pdh Tj = Tbiv	8.03 kW	8.03 kW
COP Tj = Tbiv	2.97	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.40 kW	7.74 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	2.05
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	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	1.30 kW
Annual energy consumption Qhe	3612 kWh	4749 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	179 %	138 %
Prated	8.30 kW	8.60 kW
SCOP	4.55	3.51
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.07 kW	5.37 kW
COP Tj = -7°C	3.65	2.84
Cdh Tj = -7 °C	0.991	0.993
Pdh Tj = +2°C	3.02 kW	3.17 kW
COP Tj = +2°C	5.68	4.39
Cdh Tj = +2 °C	0.976	0.982
Pdh Tj = +7°C	2.11 kW	2.11 kW
COP Tj = +7°C	7.84	6.05
Cdh Tj = +7 °C	0.952	0.963
Pdh Tj = 12°C	2.08 kW	1.89 kW
COP Tj = 12°C	9.59	7.14
Cdh Tj = +12 °C	0.940	0.951
Pdh Tj = Tbiv	6.83 kW	7.16 kW

COP Tj = Tbiv	2.63	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.58 kW	5.52 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.04	1.46
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	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	2.70 kW	3.10 kW
Annual energy consumption Qhe	4495 kWh	6034 kWh
Pdh Tj = -15°C (if TOL	6.83	7.16
COP Tj = -15°C (if TOL	2.63	1.93
Cdh Tj = -15 °C	0.995	0.996

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	304 %	208 %
Prated	8.60 kW	8.80 kW
SCOP	7.69	5.26
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.64 kW	8.80 kW
COP Tj = +2°C	3.59	2.47
Cdh Tj = +2 °C	0.995	0.996
Pdh Tj = +7°C	5.72 kW	5.83 kW
COP Tj = +7°C	6.31	4.28
Cdh Tj = +7 °C	0.986	0.990
Pdh Tj = 12°C	2.66 kW	2.63 kW
COP Tj = 12°C	10.56	7.26
Cdh Tj = +12 °C	0.948	0.964
Pdh Tj = Tbiv	8.64 kW	8.80 kW
COP Tj = Tbiv	3.59	2.47
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.64 kW	8.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.59	2.47

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	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	1495 kWh	2234 kWh