Subtype ThermaX R290 18/22KW

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 18/22KW
Registration number	011-1W0906
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	2 kg
Certification Date	07.10.2024
Testing basis	HP KEYMARK certification scheme rules V14

Model HPM-V180W/SR3	
Model name	HPM-V180W/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	17.92 kW	17.91 kW
El input	3.78 kW	5.63 kW
COP	4.75	3.18

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
ηs	200 %	154 %
Prated	18.00 kW	18.00 kW
SCOP	5.09	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	16.20 kW	16.03 kW
COP Tj = -7°C	3.31	2.38
Cdh Tj = -7 °C	0.996	0.997
Pdh Tj = +2°C	9.27 kW	9.14 kW
COP Tj = +2°C	4.73	3.76
Cdh Tj = +2 °C	0.991	0.993
Pdh Tj = +7°C	5.94 kW	5.89 kW

COP Tj = +7°C	7.08	5.40
Cdh Tj = +7 °C	0.979	0.984
Pdh Tj = 12°C	4.87 kW	4.74 kW
COP Tj = 12°C	8.89	7.02
Cdh Tj = +12 °C	0.967	0.973
Pdh Tj = Tbiv	16.20 kW	16.03 kW
COP Tj = Tbiv	3.31	2.38
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	14.98 kW	15.01 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.01	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.996	0.997
WTOL	75 °C	75 °C
Poff	17 W	17 W
PTO	18 W	18 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.00 kW	3.00 kW
Annual energy consumption Qhe	7312 kWh	9451 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
ηs	168 %	134 %
Prated	18.00 kW	18.00 kW
SCOP	4.28	3.43
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	10.66 kW	10.69 kW
COP Tj = -7°C	3.77	2.91
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	6.80 kW	6.69 kW
COP Tj = +2°C	4.63	3.92
Cdh Tj = +2 °C	0.988	0.989
Pdh Tj = +7°C	4.43 kW	4.20 kW
COP Tj = +7°C	7.93	5.93
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	4.97 kW	4.78 kW
COP Tj = 12°C	9.05	7.47
Cdh Tj = +12 °C	0.967	0.972
Pdh Tj = Tbiv	14.97 kW	15.00 kW

COP Tj = Tbiv	2.72	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.97 kW	14.01 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.16	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	75 °C	75 °C
Poff	17 W	17 W
PTO	18 W	18 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.00 kW	4.00 kW
Annual energy consumption Qhe	10359 kWh	12920 kWh
Pdh Tj = -15°C (if TOL	14.97	15.00
COP Tj = -15°C (if TOL	2.72	2.07
Cdh Tj = -15 °C	0.997	0.998

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
ηs	283 %	190 %
Prated	18.00 kW	18.00 kW
SCOP	7.15	4.83
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	18.23 kW	18.42 kW
COP Tj = +2°C	3.36	2.45
Cdh Tj = +2 °C	0.997	0.998
Pdh Tj = +7°C	11.41 kW	11.17 kW
COP Tj = +7°C	6.12	4.02
Cdh Tj = +7 °C	0.990	0.994
Pdh Tj = 12°C	4.93 kW	4.89 kW
COP Tj = 12°C	9.34	6.38
Cdh Tj = +12 °C	0.966	0.977
Pdh Tj = Tbiv	18.23 kW	18.42 kW
COP Tj = Tbiv	3.36	2.45
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.23 kW	18.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.36	2.45

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	75 °C	75 °C
Poff	17 W	17 W
PTO	18 W	18 W
PSB	17 W	17 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	3364 kWh	4981 kWh

Model HPM-V220W/SR3	
Model name	HPM-V220W/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	22.07 kW	21.64 kW
El input	4.94 kW	6.97 kW
COP	4.47	3.10

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
ηs	194 %	153 %
Prated	20.50 kW	20.50 kW
SCOP	4.92	3.90
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	18.24 kW	18.36 kW
COP Tj = -7°C	3.18	2.29
Cdh Tj = -7 °C	0.997	0.998
Pdh Tj = +2°C	10.40 kW	10.06 kW
COP Tj = +2°C	4.49	3.75
Cdh Tj = +2 °C	0.992	0.993
Pdh Tj = +7°C	6.80 kW	6.67 kW

COP Tj = +7°C	7.06	5.37
Cdh Tj = +7 °C	0.981	0.985
Pdh Tj = 12°C	4.89 kW	4.75 kW
COP Tj = 12°C	9.07	7.12
Cdh Tj = +12 °C	0.967	0.973
Pdh Tj = Tbiv	18.24 kW	18.36 kW
COP Tj = Tbiv	3.18	2.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.03 kW	17.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	2.02
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	75 °C	75 °C
Poff	17 W	17 W
PTO	18 W	18 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.50 kW	3.20 kW
Annual energy consumption Qhe	8608 kWh	10859 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	169 %	137 %
Prated	19.50 kW	19.50 kW
SCOP	4.31	3.49
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	11.53 kW	11.64 kW
COP Tj = -7°C	3.77	2.95
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	7.19 kW	7.25 kW
COP Tj = +2°C	4.76	4.04
Cdh Tj = +2 °C	0.988	0.990
Pdh Tj = +7°C	4.78 kW	4.87 kW
COP Tj = +7°C	8.02	6.11
Cdh Tj = +7 °C	0.970	0.977
Pdh Tj = 12°C	4.96 kW	4.79 kW
COP Tj = 12°C	9.07	7.53
Cdh Tj = +12 °C	0.967	0.972
Pdh Tj = Tbiv	15.97 kW	16.13 kW

COP Tj = Tbiv	2.61	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	14.68 kW	14.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.12	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	75 °C	75 °C
Poff	17 W	17 W
PTO	18 W	18 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.80 kW	4.60 kW
Annual energy consumption Qhe	11159 kWh	13778 kWh
Pdh Tj = -15°C (if TOL	15.97	16.13
COP Tj = -15°C (if TOL	2.61	2.02
Cdh Tj = -15 °C	0.997	0.998

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	276 %	194 %
Prated	20.50 kW	20.50 kW
SCOP	6.97	4.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	20.54 kW	20.93 kW
COP Tj = +2°C	3.31	2.32
Cdh Tj = +2 °C	0.997	0.998
Pdh Tj = +7°C	12.91 kW	12.83 kW
COP Tj = +7°C	5.93	3.94
Cdh Tj = +7 °C	0.992	0.994
Pdh Tj = 12°C	5.57 kW	5.73 kW
COP Tj = 12°C	9.14	6.86
Cdh Tj = +12 °C	0.970	0.978
Pdh Tj = Tbiv	20.54 kW	20.93 kW
COP Tj = Tbiv	3.31	2.32
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	20.54 kW	20.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.31	2.32

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	75 °C	75 °C
Poff	17 W	17 W
PTO	18 W	18 W
PSB	17 W	17 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	3929 kWh	5568 kWh