

## Subtype ThermaX Mono 12/14/16KW

Certificate Holder	GD Shenling Thermal Tech Co., Ltd
Address	No.29 Shunye East Rd.
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Country	CN
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	ThermaX Mono 12/14/16KW
Registration number	011-1W0637
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.78 kg
Certification Date	05.06.2023
Testing basis	HP KEYMARK certification scheme rules V12

## Model HPM-V120W/R2

Model name	HPM-V120W/R2
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
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	12.20 kW	12.00 kW
El input	2.49 kW	4.00 kW
COP	4.90	3.00

## 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
$\eta_s$	203 %	145 %
Prated	12.20 kW	12.50 kW
SCOP	5.15	3.70
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.83 kW	11.24 kW
COP Tj = -7°C	3.18	2.23
Cdh Tj = -7 °C	0.996	0.997
Pdh Tj = +2°C	6.62 kW	6.74 kW
COP Tj = +2°C	4.78	3.52
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	4.27 kW	4.27 kW

COP Tj = +7°C	7.46	4.96
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	3.68 kW	3.58 kW
COP Tj = 12°C	9.78	7.49
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	10.83 kW	11.24 kW
COP Tj = Tbiv	3.18	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.62 kW	10.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.03	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.996	0.998
WTOL	63 °C	63 °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	2.60 kW	1.90 kW
Annual energy consumption Qhe	4891 kWh	6977 kWh

## Model HPM-V140W/R2

Model name	HPM-V140W/R2
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
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	14.20 kW	14.00 kW
El input	3.02 kW	4.73 kW
COP	4.70	2.96

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	195 %	145 %
Prated	14.00 kW	14.10 kW
SCOP	4.96	3.70
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.55 kW	12.62 kW
COP Tj = -7°C	3.03	2.19
Cdh Tj = -7 °C	0.997	0.998
Pdh Tj = +2°C	7.57 kW	7.63 kW
COP Tj = +2°C	4.61	3.52
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	4.79 kW	4.55 kW

COP Tj = +7°C	7.03	5.01
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.68 kW	3.58 kW
COP Tj = 12°C	9.78	7.49
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	12.55 kW	12.62 kW
COP Tj = Tbiv	3.03	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.47 kW	11.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.02
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	63 °C	63 °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	2.30 kW
Annual energy consumption Qhe	5836 kWh	7878 kWh

## Model HPM-V160W/R2

Model name	HPM-V160W/R2
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
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	16.40 kW
El input	3.56 kW	5.73 kW
COP	4.50	2.86

### 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
$\eta_s$	191 %	143 %
Prated	15.20 kW	14.70 kW
SCOP	4.85	3.64
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.61 kW	13.44 kW
COP Tj = -7°C	2.92	2.15
Cdh Tj = -7 °C	0.997	0.998
Pdh Tj = +2°C	8.08 kW	8.06 kW
COP Tj = +2°C	4.49	3.44
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.05 kW	4.97 kW

COP Tj = +7°C	7.03	5.03
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.68 kW	3.58 kW
COP Tj = 12°C	9.78	7.49
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	13.61 kW	13.44 kW
COP Tj = Tbiv	2.92	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.94 kW	12.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.98
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	63 °C	63 °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	3.30 kW	2.40 kW
Annual energy consumption Qhe	6472 kWh	8333 kWh

## Model HPM-V120W/SR2

Model name	HPM-V120W/SR2
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
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	12.20 kW	12.00 kW
EI input	2.49 kW	4.00 kW
COP	4.90	3.00

### 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
$\eta_s$	201 %	143 %
Prated	12.20 kW	12.50 kW
SCOP	5.11	3.66
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.87 kW	11.20 kW
COP Tj = -7°C	3.22	2.25
Cdh Tj = -7 °C	0.997	0.998
Pdh Tj = +2°C	6.58 kW	6.65 kW
COP Tj = +2°C	4.88	3.50
Cdh Tj = +2 °C	0.992	0.994
Pdh Tj = +7°C	4.11 kW	4.14 kW

COP Tj = +7°C	6.75	4.75
Cdh Tj = +7 °C	0.982	0.987
Pdh Tj = 12°C	3.71 kW	3.65 kW
COP Tj = 12°C	9.28	7.21
Cdh Tj = +12 °C	0.972	0.978
Pdh Tj = Tbiv	10.87 kW	11.20 kW
COP Tj = Tbiv	3.22	2.25
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.79 kW	10.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.94	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	63 °C	63 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.40 kW	1.60 kW
Annual energy consumption Qhe	4933 kWh	7063 kWh

## Model HPM-V140W/SR2

Model name	HPM-V140W/SR2
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
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	14.20 kW	14.00 kW
El input	3.02 kW	4.73 kW
COP	4.70	2.96

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	194 %	144 %
Prated	14.00 kW	14.10 kW
SCOP	4.93	3.69
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.43 kW	12.51 kW
COP Tj = -7°C	3.06	2.28
Cdh Tj = -7 °C	0.997	0.998
Pdh Tj = +2°C	7.38 kW	7.62 kW
COP Tj = +2°C	4.59	3.52
Cdh Tj = +2 °C	0.993	0.995
Pdh Tj = +7°C	4.71 kW	4.65 kW

COP Tj = +7°C	6.90	4.81
Cdh Tj = +7 °C	0.984	0.989
Pdh Tj = 12°C	3.73 kW	3.66 kW
COP Tj = 12°C	9.48	7.32
Cdh Tj = +12 °C	0.972	0.978
Pdh Tj = Tbiv	12.43 kW	12.51 kW
COP Tj = Tbiv	3.06	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.73 kW	11.48 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
WTOL	63 °C	63 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.60 kW
Annual energy consumption Qhe	5867 kWh	7903 kWh

## Model HPM-V160W/SR2

Model name	HPM-V160W/SR2
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
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	16.40 kW
El input	3.56 kW	5.73 kW
COP	4.50	2.86

### 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
$\eta_s$	194 %	144 %
Prated	15.20 kW	14.70 kW
SCOP	4.93	3.66
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.47 kW	13.05 kW
COP Tj = -7°C	3.01	2.23
Cdh Tj = -7 °C	0.998	0.998
Pdh Tj = +2°C	7.96 kW	7.98 kW
COP Tj = +2°C	4.53	3.43
Cdh Tj = +2 °C	0.994	0.995
Pdh Tj = +7°C	5.04 kW	5.25 kW

COP Tj = +7°C	7.24	5.03
Cdh Tj = +7 °C	0.984	0.989
Pdh Tj = 12°C	3.73 kW	3.66 kW
COP Tj = 12°C	9.48	7.32
Cdh Tj = +12 °C	0.972	0.978
Pdh Tj = Tbiv	13.47 kW	13.05 kW
COP Tj = Tbiv	3.01	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.73 kW	12.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.84	2.02
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.998	0.998
WTOL	63 °C	63 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 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	6366 kWh	8295 kWh