

Subtype Mars R290 Series 18~22 kW

Certificate Holder	GD Midea Heating & Ventilating Equipment Co., Ltd.
Address	Penglai Industry Road
ZIP	528311
City	Beijiao, Shunde, Foshan
Country	CN
Certification Body	ICIM S.p.A.
Subtype title	Mars R290 Series 18~22 kW
Registration number	ICIM-PDC-000449
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.8 kg
Certification Date	19.06.2026
Testing basis	V15
Testing laboratory	Intertek Testing Services Shenzhen LTD. Guangzhou Branch, CN

Model MHC-V18WD2RN7-****

Model name	MHC-V18WD2RN7-****
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	18.00 kW	18.00 kW
El input	3.91 kW	5.63 kW
COP	4.60	3.20

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
η_s	187.0 %	148.0 %
Prated	18.0 kW	18.0 kW
SCOP	4.75	3.78
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	16.69 kW	15.73 kW
COP Tj = -7°C	2.99	2.38
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	10.32 kW	10.13 kW
COP Tj = +2°C	4.44	3.59
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	6.27 kW	6.54 kW

COP Tj = +7°C	6.94	5.21
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.94 kW	6.55 kW
COP Tj = 12°C	8.94	6.69
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	16.69 kW	15.73 kW
COP Tj = Tbiv	2.99	2.38
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.00 kW	18.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.51	2.09
WTOL	85.00 °C	85.00 °C
Poff	0.013 W	0.013 W
PTO	0.132 W	0.132 W
PSB	0.013 W	0.013 W
PCK	0.000 W	0.000 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	7723 kWh	9887 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	163.6 %	123.9 %
Prated	18.0 kW	18.0 kW
SCOP	4.16	3.17
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	11.06 kW	11.01 kW
COP Tj = -7°C	3.24	2.66
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.10 kW	6.74 kW
COP Tj = +2°C	5.24	3.57
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.16 kW	5.56 kW
COP Tj = +7°C	6.93	5.47
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.85 kW	5.64 kW
COP Tj = 12°C	7.47	6.85
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	17.55 kW	18.00 kW
COP Tj = Tbiv	2.33	2.06

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.51 kW	15.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.69
WTOL	85.00 °C	85.00 °C
Poff	0.013 W	0.013 W
PTO	0.132 W	0.132 W
PSB	0.013 W	0.013 W
PCK	0.000 W	0.000 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.49 kW	2.49 kW
Annual energy consumption Qhe	10656.00 kWh	13991.00 kWh
Pdh Tj = -15°C (if TOL	17.55	18.49
COP Tj = -15°C (if TOL	2.33	2.06
Cdh Tj = -15 °C	0.90	0.90

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	250.80 %	184.30 %
Prated	18.0 kW	18.0 kW
SCOP	6.34	4.68
Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	17.86 kW	18.00 kW
COP Tj = +2°C	3.40	2.43
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	11.78 kW	11.86 kW
COP Tj = +7°C	5.39	4.02
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.54 kW	7.08 kW
COP Tj = 12°C	8.63	6.44
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.78 kW	11.86 kW
COP Tj = Tbiv	5.39	4.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.86 kW	18.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.40	2.43
WTOL	85.00 °C	85.00 °C
Poff	0.013 W	0.013 W
PTO	0.132 W	0.132 W
PSB	0.013 W	0.013 W

PCK	0.000 W	0.000 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.14 kW	0.00 kW
Annual energy consumption Q _{he}	3790.00 kWh	5134.00 kWh

Model MHC-V22WD2RN7-****

Model name	MHC-V22WD2RN7-****
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	22.00 kW	22.00 kW
El input	5.12 kW	7.10 kW
COP	4.30	3.10

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
η_s	181.1 %	146.9 %
Prated	22.0 kW	22.0 kW
SCOP	4.60	3.75
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	19.19 kW	19.13 kW
COP Tj = -7°C	2.58	2.30
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	12.64 kW	11.95 kW
COP Tj = +2°C	4.36	3.58
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	7.68 kW	7.73 kW

COP Tj = +7°C	6.95	5.39
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.92 kW	6.56 kW
COP Tj = 12°C	9.02	6.84
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	19.19 kW	19.13 kW
COP Tj = Tbiv	2.58	2.30
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	19.54 kW	19.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.50	2.09
WTOL	85.00 °C	85.00 °C
Poff	0.013 W	0.013 W
PTO	0.132 W	0.132 W
PSB	0.013 W	0.013 W
PCK	0.000 W	0.000 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.46 kW	2.33 kW
Annual energy consumption Qhe	9804 kWh	11997 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	159.2 %	123.3 %
Prated	22.0 kW	22.0 kW
SCOP	4.06	3.16
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	13.84 kW	13.59 kW
COP Tj = -7°C	3.16	2.59
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.30 kW	8.15 kW
COP Tj = +2°C	5.02	3.59
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.51 kW	5.56 kW
COP Tj = +7°C	7.41	5.64
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.86 kW	5.64 kW
COP Tj = 12°C	7.56	6.93
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	17.55 kW	18.49 kW
COP Tj = Tbiv	2.33	2.06

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.51 kW	15.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.69
WTOL	85.00 °C	85.00 °C
Poff	0.013 W	0.013 W
PTO	0.132 W	0.132 W
PSB	0.013 W	0.013 W
PCK	0.000 W	0.000 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.49 kW	6.49 kW
Annual energy consumption Qhe	13372.00 kWh	17181.00 kWh
Pdh Tj = -15°C (if TOL	17.55	18.49
COP Tj = -15°C (if TOL	2.33	2.06
Cdh Tj = -15 °C	0.90	0.90

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	248.10 %	181.40 %
Prated	22.0 kW	22.0 kW
SCOP	6.28	4.61
Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	21.66 kW	21.64 kW
COP Tj = +2°C	2.85	2.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	14.21 kW	14.30 kW
COP Tj = +7°C	5.29	3.97
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	6.84 kW	7.03 kW
COP Tj = 12°C	8.86	6.19
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	14.21 kW	14.30 kW
COP Tj = Tbiv	5.29	3.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.66 kW	21.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.85	2.35
WTOL	85.00 °C	85.00 °C
Poff	0.013 W	0.013 W
PTO	0.132 W	0.132 W
PSB	0.013 W	0.013 W

PCK	0.000 W	0.000 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.34 kW	0.36 kW
Annual energy consumption Qhe	4682.00 kWh	6377.00 kWh