Subtype Aqua Thermal Super 110 140	
Certificate Holder	GD Midea Heating & Ventilating Equipment Co., Ltd.
Address	Penglai Industry Road
ZIP	528311
City	Beijiao, Shunde, Foshan
Country	CN
Certification Body	BRE Global Limited
Subtype title	Aqua Thermal Super 110 140
Registration number	041-K007-31
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	15.5 kg
Certification Date	01.04.2025
Testing basis	Heat Pump KEYMARK certification Scheme rules v12
Testing laboratory	Intertek Testing Services Shenzhen LTD. Guangzhou Branch, CN

Model MH-SU110-RN8L	
Model name	MH-SU110-RN8L
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	112 kW	110 kW
El input	27 kW	29.9 kW
COP	4.15	3.68

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level outdoor	80 dB(A)	80 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	167 %	127 %
Prated	95 kW	80 kW
SCOP	4.25	3.25
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	85.48 kW	69.31 kW
COP Tj = -7°C	3.03	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	50.02 kW	41.99 kW
COP Tj = +2°C	3.73	3.1
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	33.85 kW	28.27 kW
COP Tj = +7°C	6.23	4.52

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	39.27 kW	37.99 kW
COP Tj = 12°C	8.02	6.03
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	85.48 kW	69.31 kW
COP Tj = Tbiv	3.03	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	94.45 kW	79.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.38	1.76
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.55 kW	0.29 kW
Annual energy consumption Qhe	46188 kWh	50858 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	80 dB(A)	80 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	146 %	108 %
Prated	80 kW	68 kW
SCOP	3.73	2.79
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	47.25 kW	43.15 kW
COP Tj = -7°C	3.07	2.49
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	29.39 kW	25.41 kW
COP Tj = +2°C	4.23	3.07
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	27.48 kW	24.58 kW
COP Tj = +7°C	6.32	4.66
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.27 kW	31.53 kW
COP Tj = 12°C	7.77	6.43
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	67.26 kW	56.15 kW
COP Tj = Tbiv	2.56	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	75.44 kW	61.03 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.98	1.8
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.56 kW	68 kW
Annual energy consumption Qhe	52894 kWh	60183 kWh
Pdh Tj = -15°C (if TOL	67.26	56.15
COP Tj = -15°C (if TOL	2.56	1.86
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	80 dB(A)	80 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	235 %	167 %
Prated	95 kW	80 kW
SCOP	5.95	4.26
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	93.78 kW	79.98 kW
COP Tj = +2°C	2.89	2.04
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	61.13 kW	52.24 kW
COP Tj = +7°C	5.29	3.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.17 kW	31.12 kW
COP Tj = 12°C	8.03	5.66
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	61.13 kW	52.24 kW
COP Tj = Tbiv	5.29	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	93.78 kW	79.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.89	2.04
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.22 kW	0.02 kW
Annual energy consumption Qhe	21332 kWh	25115 kWh

Model MH-SU110M-RN8L	
Model name	MH-SU110M-RN8L
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	112 kW	110 kW
El input	28.52 kW	31.21 kW
COP	3.97	3.55

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	83 dB(A)	83 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	166 %	126 %
Prated	95 kW	80 kW
SCOP	4.23	3.23
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	85.48 kW	69.25 kW
COP Tj = -7°C	2.99	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	49.88 kW	41.9 kW
COP Tj = +2°C	3.72	3.1
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	33.76 kW	28.17 kW
COP Tj = +7°C	6.24	4.4

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	39.22 kW	37.89 kW
COP Tj = 12°C	7.94	6.07
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	85.48 kW	69.25 kW
COP Tj = Tbiv	2.99	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	94.65 kW	79.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.37	1.76
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.35 kW	0.27 kW
Annual energy consumption Qhe	46383 kWh	51163 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	83 dB(A)	83 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	144 %	107 %
Prated	80 kW	68 kW
SCOP	3.69	2.76
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	47.1 kW	43.6 kW
COP Tj = -7°C	3.06	2.5
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	29.3 kW	25.32 kW
COP Tj = +2°C	4.15	3.01
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	27.39 kW	24.48 kW
COP Tj = +7°C	6.3	4.5
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.18 kW	31.43 kW
COP Tj = 12°C	7.6	6.3
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	67.34 kW	56.06 kW
COP Tj = Tbiv	2.55	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	75.58 kW	60.95 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.96	1.8
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.42 kW	68 kW
Annual energy consumption Qhe	53450 kWh	60837 kWh
Pdh Tj = -15°C (if TOL	67.34	56.06
COP Tj = -15°C (if TOL	2.55	1.86
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	83 dB(A)	83 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	226 %	165 %
Prated	95 kW	80 kW
SCOP	5.73	4.22
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	93.9 kW	79.9 kW
COP Tj = +2°C	2.87	2.04
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	61.08 kW	52.14 kW
COP Tj = +7°C	5	3.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.07 kW	31.02 kW
COP Tj = 12°C	7.8	5.55
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	61.08 kW	52.14 kW
COP Tj = Tbiv	5	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	93.9 kW	79.9 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.04
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.1 kW	0.1 kW
Annual energy consumption Qhe	22151 kWh	25329 kWh

Model MH-SU140-RN8L	
Model name	MH-SU140-RN8L
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	142 kW	140 kW
El input	38.17 kW	44.73 kW
COP	3.72	3.13

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level outdoor	92 dB(A)	92 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	167 %	127 %
Prated	95 kW	80 kW
SCOP	4.25	3.25
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	85.48 kW	69.31 kW
COP Tj = -7°C	3.03	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	50.02 kW	41.99 kW
COP Tj = +2°C	3.73	3.1
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	33.85 kW	28.27 kW
COP Tj = +7°C	6.23	4.52

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	39.27 kW	37.99 kW
COP Tj = 12°C	8.02	6.03
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	85.48 kW	69.31 kW
COP Tj = Tbiv	3.03	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	94.45 kW	79.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.38	1.76
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.55 kW	0.29 kW
Annual energy consumption Qhe	46188 kWh	50858 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	92 dB(A)	92 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	146 %	108 %
Prated	80 kW	68 kW
SCOP	3.73	2.79
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	47.25 kW	43.15 kW
COP Tj = -7°C	3.07	2.49
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	29.39 kW	25.41 kW
COP Tj = +2°C	4.23	3.07
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	27.48 kW	24.58 kW
COP Tj = +7°C	6.32	4.66
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.27 kW	31.53 kW
COP Tj = 12°C	7.77	6.43
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	67.26 kW	56.15 kW
COP Tj = Tbiv	2.56	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	75.44 kW	61.03 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.98	1.8
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.56 kW	68 kW
Annual energy consumption Qhe	52894 kWh	60183 kWh
Pdh Tj = -15°C (if TOL	67.26	56.15
COP Tj = -15°C (if TOL	2.56	1.86
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	92 dB(A)	92 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	235 %	167 %
Prated	95 kW	80 kW
SCOP	5.95	4.26
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	93.78 kW	79.98 kW
COP Tj = +2°C	2.89	2.04
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	61.13 kW	52.24 kW
COP Tj = +7°C	5.29	3.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.17 kW	31.12 kW
COP Tj = 12°C	8.03	5.66
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	61.13 kW	52.24 kW
COP Tj = Tbiv	5.29	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	93.78 kW	79.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.89	2.04
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.22 kW	0.02 kW
Annual energy consumption Qhe	21332 kWh	25115 kWh

Model MH-SU140M-RN8L	
Model name	MH-SU140M-RN8L
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	142 kW	140 kW
El input	40.54 kW	47.1 kW
COP	3.53	2.99

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level outdoor	93 dB(A)	93 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	166 %	126 %
Prated	95 kW	80 kW
SCOP	4.23	3.23
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	85.48 kW	69.25 kW
COP Tj = -7°C	2.99	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	49.88 kW	41.9 kW
COP Tj = +2°C	3.72	3.1
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	33.76 kW	28.17 kW
COP Tj = +7°C	6.24	4.4

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	39.22 kW	37.89 kW
COP Tj = 12°C	7.94	6.07
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	85.48 kW	69.25 kW
COP Tj = Tbiv	2.99	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	94.65 kW	79.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.37	1.76
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.35 kW	0.27 kW
Annual energy consumption Qhe	46383 kWh	51163 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	93 dB(A)	93 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	144 %	107 %
Prated	80 kW	68 kW
SCOP	3.69	2.76
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	47.1 kW	43.6 kW
COP Tj = -7°C	3.06	2.5
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	29.3 kW	25.32 kW
COP Tj = +2°C	4.15	3.01
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	27.39 kW	24.48 kW
COP Tj = +7°C	6.3	4.5
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.18 kW	31.43 kW
COP Tj = 12°C	7.6	6.3
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	67.34 kW	56.06 kW
COP Tj = Tbiv	2.55	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	75.58 kW	60.95 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.96	1.8
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.42 kW	68 kW
Annual energy consumption Qhe	53450 kWh	60837 kWh
Pdh Tj = -15°C (if TOL	67.34	56.06
COP Tj = -15°C (if TOL	2.55	1.86
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	93 dB(A)	93 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	226 %	165 %
Prated	95 kW	80 kW
SCOP	5.73	4.22
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	93.9 kW	79.9 kW
COP Tj = +2°C	2.87	2.04
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	61.08 kW	52.14 kW
COP Tj = +7°C	5	3.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.07 kW	31.02 kW
COP Tj = 12°C	7.8	5.55
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	61.08 kW	52.14 kW
COP Tj = Tbiv	5	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	93.9 kW	79.9 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.04
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.1 kW	0.1 kW
Annual energy consumption Qhe	22151 kWh	25329 kWh

Model MDVM-V110D2BR8-AS	
Model name	MDVM-V110D2BR8-AS
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	112 kW	110 kW
El input	27 kW	29.9 kW
COP	4.15	3.68

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level outdoor	80 dB(A)	80 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	167 %	127 %
Prated	95 kW	80 kW
SCOP	4.25	3.25
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	85.48 kW	69.31 kW
COP Tj = -7°C	3.03	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	50.02 kW	41.99 kW
COP Tj = +2°C	3.73	3.1
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	33.85 kW	28.27 kW
COP Tj = +7°C	6.23	4.52

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	39.27 kW	37.99 kW
COP Tj = 12°C	8.02	6.03
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	85.48 kW	69.31 kW
COP Tj = Tbiv	3.03	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	94.45 kW	79.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.38	1.76
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.55 kW	0.29 kW
Annual energy consumption Qhe	46188 kWh	50858 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	80 dB(A)	80 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	146 %	108 %
Prated	80 kW	68 kW
SCOP	3.73	2.79
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	47.25 kW	43.15 kW
COP Tj = -7°C	3.07	2.49
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	29.39 kW	25.41 kW
COP Tj = +2°C	4.23	3.07
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	27.48 kW	24.58 kW
COP Tj = +7°C	6.32	4.66
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.27 kW	31.53 kW
COP Tj = 12°C	7.77	6.43
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	67.26 kW	56.15 kW
COP Tj = Tbiv	2.56	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	75.44 kW	61.03 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.98	1.8
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.56 kW	68 kW
Annual energy consumption Qhe	52894 kWh	60183 kWh
Pdh Tj = -15°C (if TOL	67.26	56.15
COP Tj = -15°C (if TOL	2.56	1.86
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	80 dB(A)	80 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	235 %	167 %
Prated	95 kW	80 kW
SCOP	5.95	4.26
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	93.78 kW	79.98 kW
COP Tj = +2°C	2.89	2.04
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	61.13 kW	52.24 kW
COP Tj = +7°C	5.29	3.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.17 kW	31.12 kW
COP Tj = 12°C	8.03	5.66
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	61.13 kW	52.24 kW
COP Tj = Tbiv	5.29	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	93.78 kW	79.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.89	2.04
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.22 kW	0.02 kW
Annual energy consumption Qhe	21332 kWh	25115 kWh

Model MDVM-V110MD2BR8-AS	
Model name	MDVM-V110MD2BR8-AS
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	112 kW	110 kW
El input	28.52 kW	31.21 kW
COP	3.97	3.55

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level outdoor	83 dB(A)	83 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	166 %	126 %
Prated	95 kW	80 kW
SCOP	4.23	3.23
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	85.48 kW	69.25 kW
COP Tj = -7°C	2.99	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	49.88 kW	41.9 kW
COP Tj = +2°C	3.72	3.1
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	33.76 kW	28.17 kW
COP Tj = +7°C	6.24	4.4

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	39.22 kW	37.89 kW
COP Tj = 12°C	7.94	6.07
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	85.48 kW	69.25 kW
COP Tj = Tbiv	2.99	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	94.65 kW	79.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.37	1.76
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.35 kW	0.27 kW
Annual energy consumption Qhe	46383 kWh	51163 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	83 dB(A)	83 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	144 %	107 %
Prated	80 kW	68 kW
SCOP	3.69	2.76
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	47.1 kW	43.6 kW
COP Tj = -7°C	3.06	2.5
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	29.3 kW	25.32 kW
COP Tj = +2°C	4.15	3.01
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	27.39 kW	24.48 kW
COP Tj = +7°C	6.3	4.5
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.18 kW	31.43 kW
COP Tj = 12°C	7.6	6.3
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	67.34 kW	56.06 kW
COP Tj = Tbiv	2.55	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	75.58 kW	60.95 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.96	1.8
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.42 kW	68 kW
Annual energy consumption Qhe	53450 kWh	60837 kWh
Pdh Tj = -15°C (if TOL	67.34	56.06
COP Tj = -15°C (if TOL	2.55	1.86
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	83 dB(A)	83 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	226 %	165 %
Prated	95 kW	80 kW
SCOP	5.73	4.22
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	93.9 kW	79.9 kW
COP Tj = +2°C	2.87	2.04
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	61.08 kW	52.14 kW
COP Tj = +7°C	5	3.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.07 kW	31.02 kW
COP Tj = 12°C	7.8	5.55
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	61.08 kW	52.14 kW
COP Tj = Tbiv	5	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	93.9 kW	79.9 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.04
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.1 kW	0.1 kW
Annual energy consumption Qhe	22151 kWh	25329 kWh

Model MDVM-V140D2BR8-AS	
Model name	MDVM-V140D2BR8-AS
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	142 kW	140 kW
El input	38.17 kW	44.73 kW
COP	3.72	3.13

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level outdoor	92 dB(A)	92 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	167 %	127 %
Prated	95 kW	80 kW
SCOP	4.25	3.25
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	85.48 kW	69.31 kW
COP Tj = -7°C	3.03	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	50.02 kW	41.99 kW
COP Tj = +2°C	3.73	3.1
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	33.85 kW	28.27 kW
COP Tj = +7°C	6.23	4.52

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	39.27 kW	37.99 kW
COP Tj = 12°C	8.02	6.03
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	85.48 kW	69.31 kW
COP Tj = Tbiv	3.03	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	94.45 kW	79.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.38	1.76
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.55 kW	0.29 kW
Annual energy consumption Qhe	46188 kWh	50858 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	92 dB(A)	92 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	146 %	108 %
Prated	80 kW	68 kW
SCOP	3.73	2.79
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	47.25 kW	43.15 kW
COP Tj = -7°C	3.07	2.49
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	29.39 kW	25.41 kW
COP Tj = +2°C	4.23	3.07
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	27.48 kW	24.58 kW
COP Tj = +7°C	6.32	4.66
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.27 kW	31.53 kW
COP Tj = 12°C	7.77	6.43
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	67.26 kW	56.15 kW
COP Tj = Tbiv	2.56	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	75.44 kW	61.03 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.98	1.8
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.56 kW	68 kW
Annual energy consumption Qhe	52894 kWh	60183 kWh
Pdh Tj = -15°C (if TOL	67.26	56.15
COP Tj = -15°C (if TOL	2.56	1.86
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	92 dB(A)	92 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	235 %	167 %
Prated	95 kW	80 kW
SCOP	5.95	4.26
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	93.78 kW	79.98 kW
COP Tj = +2°C	2.89	2.04
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	61.13 kW	52.24 kW
COP Tj = +7°C	5.29	3.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.17 kW	31.12 kW
COP Tj = 12°C	8.03	5.66
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	61.13 kW	52.24 kW
COP Tj = Tbiv	5.29	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	93.78 kW	79.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.89	2.04
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.22 kW	0.02 kW
Annual energy consumption Qhe	21332 kWh	25115 kWh

Model MDVM-V140MD2BR8-AS	
Model name	MDVM-V140MD2BR8-AS
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	142 kW	140 kW
El input	40.54 kW	47.1 kW
COP	3.53	2.99

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level outdoor	93 dB(A)	93 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	166 %	126 %
Prated	95 kW	80 kW
SCOP	4.23	3.23
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	85.48 kW	69.25 kW
COP Tj = -7°C	2.99	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	49.88 kW	41.9 kW
COP Tj = +2°C	3.72	3.1
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	33.76 kW	28.17 kW
COP Tj = +7°C	6.24	4.4

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	39.22 kW	37.89 kW
COP Tj = 12°C	7.94	6.07
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	85.48 kW	69.25 kW
COP Tj = Tbiv	2.99	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	94.65 kW	79.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.37	1.76
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.35 kW	0.27 kW
Annual energy consumption Qhe	46383 kWh	51163 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level outdoor	93 dB(A)	93 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	144 %	107 %
Prated	80 kW	68 kW
SCOP	3.69	2.76
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	47.1 kW	43.6 kW
COP Tj = -7°C	3.06	2.5
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	29.3 kW	25.32 kW
COP Tj = +2°C	4.15	3.01
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	27.39 kW	24.48 kW
COP Tj = +7°C	6.3	4.5
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.18 kW	31.43 kW
COP Tj = 12°C	7.6	6.3
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	67.34 kW	56.06 kW
COP Tj = Tbiv	2.55	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	75.58 kW	60.95 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.96	1.8
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.42 kW	68 kW
Annual energy consumption Qhe	53450 kWh	60837 kWh
Pdh Tj = -15°C (if TOL	67.34	56.06
COP Tj = -15°C (if TOL	2.55	1.86
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	93 dB(A)	93 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	226 %	165 %
Prated	95 kW	80 kW
SCOP	5.73	4.22
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	93.9 kW	79.9 kW
COP Tj = +2°C	2.87	2.04
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	61.08 kW	52.14 kW
COP Tj = +7°C	5	3.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	32.07 kW	31.02 kW
COP Tj = 12°C	7.8	5.55
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	61.08 kW	52.14 kW
COP Tj = Tbiv	5	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	93.9 kW	79.9 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.04
WTOL	65 °C	65 °C
Poff	140 W	140 W
PTO	700 W	700 W
PSB	140 W	140 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.1 kW	0.1 kW
Annual energy consumption Qhe	22151 kWh	25329 kWh