

Subtype M thermal P series Split 12 14 16 kW

Certificate Holder	GD Midea Heating & Ventilating Equipment Co., Ltd.
Address	Penglai Industry Road
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City	Beijiao, Shunde, Foshan
Country	CN
Certification Body	BRE Global Limited
Subtype title	M thermal P series Split 12 14 16 kW
Registration number	041-K007-38
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.75 kg
Certification Date	05.11.2024
Testing basis	Heat Pump Keymark Scheme Rules Rev 14

Model MHA-V12WD2N8*-C-B+HB-A160C****GN8*-C

Model name	MHA-V12WD2N8*-C-B+HB-A160C****GN8*-C
Application	Heating (medium temp)
Units	Indoor, 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	12.10 kW	12.10 kW
El input	2.52 kW	4.03 kW
COP	4.80	3.00

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	69 dB(A)	69 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	138 %
Prated	12.4 kW	12.3 kW
SCOP	4.83	3.53
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	11.06 kW	10.92 kW
COP Tj = -7°C	3.02	2.17
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.91 kW	6.83 kW
COP Tj = +2°C	4.74	3.53
Cdh Tj = +2 °C	0.90	0.90

Pdh Tj = +7°C	5.09 kW	4.76 kW
COP Tj = +7°C	6.54	4.74
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.82 kW	5.43 kW
COP Tj = 12°C	8.20	5.85
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.06 kW	10.92 kW
COP Tj = Tbiv	3.02	2.17
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.87 kW	9.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.74
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8.00 W	8.00 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.53 kW	3.04 kW
Annual energy consumption Qhe	5334 kWh	7222 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	69 dB(A)	69 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	162 %	121 %
Prated	12.3 kW	11.2 kW
SCOP	4.13	3.10
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	7.82 kW	6.91 kW
COP Tj = -7°C	3.57	2.69
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.53 kW	4.31 kW
COP Tj = +2°C	4.96	3.91
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.94 kW	4.93 kW
COP Tj = +7°C	6.59	5.10
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.45 kW	5.84 kW
COP Tj = 12°C	7.43	6.49
Cdh Tj = +12 °C	0.90	0.90

Pdh Tj = Tbiv	10.04 kW	9.14 kW
COP Tj = Tbiv	2.61	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.22 kW	4.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.99	1.10
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8 W	8 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.08 kW	6.78 kW
Annual energy consumption Qhe	7329.01 kWh	8842.67 kWh
Pdh Tj = -15°C (if TOL	10.04	9.14
COP Tj = -15°C (if TOL	2.61	1.74
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	69 dB(A)	69 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	237.00 %	168.00 %
Prated	12.1 kW	12.1 kW
SCOP	6.00	4.28
Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	11.97 kW	11.94 kW
COP Tj = +2°C	3.69	2.50
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	7.82 kW	7.77 kW
COP Tj = +7°C	5.88	3.86
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.34 kW	5.22 kW
COP Tj = 12°C	7.09	5.43
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	9.14 kW	9.14 kW
COP Tj = Tbiv	1.74	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.97 kW	11.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.50
WTOL	65.00 °C	65.00 °C

Poff	14.00 W	14.00 W
PTO	8.00 W	8.00 W
PSB	14 W	14 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.13 kW	0.16 kW
Annual energy consumption Qhe	2687.00 kWh	3773.00 kWh

Model MHA-V14WD2N8*-C-B+HB-A160C****GN8*-C

Model name	MHA-V14WD2N8*-C-B+HB-A160C****GN8*-C
Application	Heating (medium temp)
Units	Indoor, 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	14.00 kW	14.00 kW
El input	3.04 kW	4.75 kW
COP	4.60	2.95

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	137 %
Prated	14.2 kW	13.5 kW
SCOP	4.80	3.50
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	12.53 kW	11.96 kW
COP Tj = -7°C	2.90	2.10
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.86 kW	7.58 kW
COP Tj = +2°C	4.64	3.48
Cdh Tj = +2 °C	0.90	0.90

Pdh Tj = +7°C	5.12 kW	4.76 kW
COP Tj = +7°C	6.76	4.82
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.83 kW	5.40 kW
COP Tj = 12°C	8.27	5.88
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.53 kW	11.96 kW
COP Tj = Tbiv	2.90	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.88 kW	9.85 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.74
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8.00 W	8.00 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.28 kW	3.67 kW
Annual energy consumption Qhe	6083 kWh	7938 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	164 %	122 %
Prated	14.2 kW	12.4 kW
SCOP	4.18	3.13
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	8.84 kW	7.70 kW
COP Tj = -7°C	3.46	2.69
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.23 kW	4.75 kW
COP Tj = +2°C	5.21	3.92
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.96 kW	4.97 kW
COP Tj = +7°C	6.70	5.20
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.56 kW	5.87 kW
COP Tj = 12°C	7.57	6.56
Cdh Tj = +12 °C	0.90	0.90

Pdh Tj = Tbiv	11.57 kW	10.17 kW
COP Tj = Tbiv	2.52	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.18 kW	4.66 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.01	1.09
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8 W	8 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.00 kW	7.74 kW
Annual energy consumption Qhe	8362.25 kWh	9791.95 kWh
Pdh Tj = -15°C (if TOL	11.57	10.17
COP Tj = -15°C (if TOL	2.52	1.74
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	233 %	172 %
Prated	13.10 kW	14.40 kW
SCOP	5.90	4.38
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.90 kW	13.07 kW
COP Tj = +2°C	3.45	2.46
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.45 kW	9.24 kW
COP Tj = +7°C	5.62	3.90
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.33 kW	5.44 kW
COP Tj = 12°C	7.12	5.81
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.17 kW	10.17 kW
COP Tj = Tbiv	1.74	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.90 kW	13.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.45	2.46

$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$

WTOL	65 °C	65 °C
P _{off}	14 W	14 W
PTO	8 W	8 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	1.30 kW
Annual energy consumption Q _{he}	2964 kWh	4374 kWh

Model MHA-V16WD2N8*-C-B+HB-A160C****GN8*-C

Model name	MHA-V16WD2N8*-C-B+HB-A160C****GN8*-C
Application	Heating (medium temp)
Units	Indoor, 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	15.20 kW	15.20 kW
El input	3.38 kW	5.33 kW
COP	4.50	2.85

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	138 %
Prated	15.3 kW	14.5 kW
SCOP	4.80	3.53
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	13.58 kW	12.85 kW
COP Tj = -7°C	2.83	2.09
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.30 kW	8.20 kW
COP Tj = +2°C	4.67	3.49
Cdh Tj = +2 °C	0.90	0.90

Pdh Tj = +7°C	5.56 kW	5.09 kW
COP Tj = +7°C	6.92	4.95
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.89 kW	5.42 kW
COP Tj = 12°C	8.41	5.93
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	13.58 kW	12.85 kW
COP Tj = Tbiv	2.83	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.88 kW	10.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.52	1.72
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8.00 W	8.00 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.46 kW	3.79 kW
Annual energy consumption Qhe	6598 kWh	8466 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	164 %	121 %
Prated	15.3 kW	13.4 kW
SCOP	4.18	3.10
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	9.24 kW	8.32 kW
COP Tj = -7°C	3.44	2.68
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.72 kW	4.98 kW
COP Tj = +2°C	5.30	3.79
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.01 kW	5.00 kW
COP Tj = +7°C	6.83	5.28
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.59 kW	5.86 kW
COP Tj = 12°C	7.63	6.58
Cdh Tj = +12 °C	0.90	0.90

Pdh Tj = Tbiv	12.45 kW	10.96 kW
COP Tj = Tbiv	2.43	1.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.97 kW	5.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.09
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8 W	8 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.29 kW	8.34 kW
Annual energy consumption Qhe	8971.10 kWh	10645.49 kWh
Pdh Tj = -15°C (if TOL	12.45	10.96
COP Tj = -15°C (if TOL	2.43	1.78
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	237 %	173 %
Prated	14.10 kW	14.80 kW
SCOP	6.00	4.40
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.94 kW	13.57 kW
COP Tj = +2°C	3.40	2.46
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.04 kW	9.49 kW
COP Tj = +7°C	5.69	3.91
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.30 kW	5.44 kW
COP Tj = 12°C	7.15	5.83
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.96 kW	10.96 kW
COP Tj = Tbiv	1.78	1.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.94 kW	13.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.40	2.46

$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$

WTOL	65 °C	65 °C
P _{off}	14 W	14 W
PTO	8 W	8 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.16 kW	1.20 kW
Annual energy consumption Q _{he}	3128 kWh	4463 kWh

Model MHA-V12WD2RN8*-C-B+HB-A160C****GN8*-C

Model name	MHA-V12WD2RN8*-C-B+HB-A160C****GN8*-C
Application	Heating (medium temp)
Units	Indoor, 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	12.10 kW	12.10 kW
El input	2.52 kW	4.03 kW
COP	4.80	3.00

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	69 dB(A)	69 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	138 %
Prated	12.4 kW	12.3 kW
SCOP	4.83	3.53
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	11.06 kW	10.92 kW
COP Tj = -7°C	3.02	2.17
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.91 kW	6.83 kW
COP Tj = +2°C	4.74	3.53
Cdh Tj = +2 °C	0.90	0.90

Pdh Tj = +7°C	5.09 kW	4.76 kW
COP Tj = +7°C	6.54	4.74
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.82 kW	5.43 kW
COP Tj = 12°C	8.20	5.85
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.06 kW	10.92 kW
COP Tj = Tbiv	3.02	2.17
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.87 kW	9.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.74
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8.00 W	8.00 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.53 kW	3.04 kW
Annual energy consumption Qhe	5334 kWh	7222 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	69 dB(A)	69 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	162 %	121 %
Prated	12.3 kW	11.2 kW
SCOP	4.13	3.10
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	7.82 kW	6.91 kW
COP Tj = -7°C	3.57	2.69
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.53 kW	4.31 kW
COP Tj = +2°C	4.96	3.91
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.94 kW	4.93 kW
COP Tj = +7°C	6.59	5.10
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.45 kW	5.84 kW
COP Tj = 12°C	7.43	6.49
Cdh Tj = +12 °C	0.90	0.90

Pdh Tj = Tbiv	10.04 kW	9.14 kW
COP Tj = Tbiv	2.61	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.22 kW	4.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.99	1.10
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8 W	8 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.08 kW	6.78 kW
Annual energy consumption Qhe	7329.01 kWh	8842.67 kWh
Pdh Tj = -15°C (if TOL	10.04	9.14
COP Tj = -15°C (if TOL	2.61	1.74
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	69 dB(A)	69 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	237.00 %	168.00 %
Prated	12.1 kW	12.1 kW
SCOP	6.00	4.28
Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	11.97 kW	11.94 kW
COP Tj = +2°C	3.69	2.50
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	7.82 kW	7.77 kW
COP Tj = +7°C	5.88	3.86
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.34 kW	5.22 kW
COP Tj = 12°C	7.09	5.43
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	9.14 kW	9.14 kW
COP Tj = Tbiv	1.74	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.97 kW	11.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.50
WTOL	65.00 °C	65.00 °C

Poff	14.00 W	14.00 W
PTO	8.00 W	8.00 W
PSB	14 W	14 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.13 kW	0.16 kW
Annual energy consumption Qhe	2687.00 kWh	3773.00 kWh

Model MHA-V14WD2RN8*-C-B+HB-A160C****GN8*-C

Model name	MHA-V14WD2RN8*-C-B+HB-A160C****GN8*-C
Application	Heating (medium temp)
Units	Indoor, 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	14.00 kW	14.00 kW
El input	3.04 kW	4.75 kW
COP	4.60	2.95

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	137 %
Prated	14.2 kW	13.5 kW
SCOP	4.80	3.50
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	12.53 kW	11.96 kW
COP Tj = -7°C	2.90	2.10
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.86 kW	7.58 kW
COP Tj = +2°C	4.64	3.48
Cdh Tj = +2 °C	0.90	0.90

Pdh Tj = +7°C	5.12 kW	4.76 kW
COP Tj = +7°C	6.76	4.82
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.83 kW	5.40 kW
COP Tj = 12°C	8.27	5.88
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.53 kW	11.96 kW
COP Tj = Tbiv	2.90	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.88 kW	9.85 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.74
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8.00 W	8.00 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.28 kW	3.67 kW
Annual energy consumption Qhe	6083 kWh	7938 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	164 %	122 %
Prated	14.2 kW	12.4 kW
SCOP	4.18	3.13
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	8.84 kW	7.70 kW
COP Tj = -7°C	3.46	2.69
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.23 kW	4.75 kW
COP Tj = +2°C	5.21	3.92
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.96 kW	4.97 kW
COP Tj = +7°C	6.70	5.20
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.56 kW	5.87 kW
COP Tj = 12°C	7.57	6.56
Cdh Tj = +12 °C	0.90	0.90

Pdh Tj = Tbiv	11.57 kW	10.17 kW
COP Tj = Tbiv	2.52	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.18 kW	4.66 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.01	1.09
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8 W	8 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.00 kW	7.74 kW
Annual energy consumption Qhe	8362.25 kWh	9791.95 kWh
Pdh Tj = -15°C (if TOL	11.57	10.17
COP Tj = -15°C (if TOL	2.52	1.74
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	233 %	172 %
Prated	13.10 kW	14.40 kW
SCOP	5.90	4.38
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.90 kW	13.07 kW
COP Tj = +2°C	3.45	2.46
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.45 kW	9.24 kW
COP Tj = +7°C	5.62	3.90
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.33 kW	5.44 kW
COP Tj = 12°C	7.12	5.81
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.17 kW	10.17 kW
COP Tj = Tbiv	1.74	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.90 kW	13.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.45	2.46

$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$

WTOL	65 °C	65 °C
P _{off}	14 W	14 W
PTO	8 W	8 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	1.30 kW
Annual energy consumption Q _{he}	2964 kWh	4374 kWh

Model MHA-V16WD2RN8*-C-B+HB-A160C****GN8*-C

Model name	MHA-V16WD2RN8*-C-B+HB-A160C****GN8*-C
Application	Heating (medium temp)
Units	Indoor, 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	15.20 kW	15.20 kW
El input	3.38 kW	5.33 kW
COP	4.50	2.85

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	138 %
Prated	15.3 kW	14.5 kW
SCOP	4.80	3.53
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	13.58 kW	12.85 kW
COP Tj = -7°C	2.83	2.09
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.30 kW	8.20 kW
COP Tj = +2°C	4.67	3.49
Cdh Tj = +2 °C	0.90	0.90

Pdh Tj = +7°C	5.56 kW	5.09 kW
COP Tj = +7°C	6.92	4.95
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.89 kW	5.42 kW
COP Tj = 12°C	8.41	5.93
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	13.58 kW	12.85 kW
COP Tj = Tbiv	2.83	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.88 kW	10.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.52	1.72
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8.00 W	8.00 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.46 kW	3.79 kW
Annual energy consumption Qhe	6598 kWh	8466 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	164 %	121 %
Prated	15.3 kW	13.4 kW
SCOP	4.18	3.10
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	9.24 kW	8.32 kW
COP Tj = -7°C	3.44	2.68
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.72 kW	4.98 kW
COP Tj = +2°C	5.30	3.79
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.01 kW	5.00 kW
COP Tj = +7°C	6.83	5.28
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.59 kW	5.86 kW
COP Tj = 12°C	7.63	6.58
Cdh Tj = +12 °C	0.90	0.90

Pdh Tj = Tbiv	12.45 kW	10.96 kW
COP Tj = Tbiv	2.43	1.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.97 kW	5.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.09
WTOL	65.00 °C	65.00 °C
Poff	14.00 W	14.00 W
PTO	8 W	8 W
PSB	14.00 W	14.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.29 kW	8.34 kW
Annual energy consumption Qhe	8971.10 kWh	10645.49 kWh
Pdh Tj = -15°C (if TOL	12.45	10.96
COP Tj = -15°C (if TOL	2.43	1.78
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	43.00 dB(A)	43.00 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	237 %	173 %
Prated	14.10 kW	14.80 kW
SCOP	6.00	4.40
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.94 kW	13.57 kW
COP Tj = +2°C	3.40	2.46
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.04 kW	9.49 kW
COP Tj = +7°C	5.69	3.91
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.30 kW	5.44 kW
COP Tj = 12°C	7.15	5.83
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.96 kW	10.96 kW
COP Tj = Tbiv	1.78	1.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.94 kW	13.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.40	2.46

$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$

WTOL	65 °C	65 °C
P _{off}	14 W	14 W
PTO	8 W	8 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.16 kW	1.20 kW
Annual energy consumption Q _{he}	3128 kWh	4463 kWh