

Subtype M thermal A HT Series 12 14 16 kW

Certificate Holder	GD Midea Heating & Ventilating Equipment Co., Ltd.
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Country	CN
Certification Body	ICIM S.p.A.
Subtype title	M thermal A HT Series 12 14 16 kW
Registration number	ICIM-PDC-000199
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.25 kg
Certification Date	08.09.2023
Testing basis	V12

Model MHC-V12WD2N7-***

Model name	MHC-V12WD2N7-***
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	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 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
η_s	183 %	141 %
Prated	12.1 kW	12.0 kW
SCOP	4.67	3.62
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	10.75 kW	10.58 kW
COP Tj = -7°C	2.78	2.23
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.73 kW	6.59 kW
COP Tj = +2°C	4.55	3.52
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.23 kW	4.78 kW
COP Tj = +7°C	6.89	4.99
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.34 kW	5.59 kW
COP Tj = 12°C	7.41	6.41
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	10.75 kW	10.58 kW
COP Tj = Tbiv	2.78	2.23

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.77 kW	10.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.61	2.05
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9.00 W	9.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.33 kW	1.95 kW
Annual energy consumption Qhe	5352 kWh	6843 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	162 %	127 %
Prated	11.5 kW	10.8 kW
SCOP	4.13	3.26
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	7.11 kW	6.76 kW
COP Tj = -7°C	3.47	2.72
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.33 kW	4.14 kW
COP Tj = +2°C	5.18	4.05
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.08 kW	5.00 kW
COP Tj = +7°C	6.46	5.15
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.15 kW	5.01 kW
COP Tj = 12°C	6.84	5.66
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	9.39 kW	8.84 kW
COP Tj = Tbiv	2.49	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.70 kW	6.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.04	1.52
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14 W	14 W
PSB	9.00 W	9.00 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.80 kW	3.96 kW
Annual energy consumption Q _{he}	6869.00 kWh	8197.00 kWh
P _{dh} T _j = -15°C (if TOL	9.39	8.84
COP T _j = -15°C (if TOL	2.49	1.98
C _{dh} T _j = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	232 %	174 %
Prated	11.70 kW	12.40 kW
SCOP	5.90	4.45
T _{biv}	7 °C	7 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	11.58 kW	11.41 kW
COP T _j = +2°C	3.30	2.55
C _{dh} T _j = +2 °C	0.900	0.900
P _{dh} T _j = +7°C	7.57 kW	7.85 kW
COP T _j = +7°C	5.78	3.99
C _{dh} T _j = +7 °C	0.900	0.900
P _{dh} T _j = 12°C	5.17 kW	5.47 kW
COP T _j = 12°C	6.98	5.90
C _{dh} T _j = +12 °C	0.900	0.900
P _{dh} T _j = T _{biv}	7.57 kW	7.85 kW
COP T _j = T _{biv}	5.78	3.99
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	11.58 kW	11.41 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.30	2.55
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}		
WTOL	75 °C	75 °C
P _{off}	9 W	9 W
PTO	14 W	14 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.12 kW	0.99 kW
Annual energy consumption Q _{he}	2651 kWh	3724 kWh

Model MHC-V14WD2N7-***

Model name	MHC-V14WD2N7-***
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	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 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
η_s	182 %	141 %
Prated	13.7 kW	13.0 kW
SCOP	4.63	3.61
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	12.08 kW	11.47 kW
COP Tj = -7°C	2.66	2.15
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.55 kW	7.29 kW
COP Tj = +2°C	4.45	3.50
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.25 kW	4.85 kW
COP Tj = +7°C	7.06	5.10
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.23 kW	5.60 kW
COP Tj = 12°C	7.46	6.46
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.08 kW	11.47 kW
COP Tj = Tbiv	2.66	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.62 kW	10.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.53	2.02
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9.00 W	9.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.08 kW	2.03 kW
Annual energy consumption Qhe	6110 kWh	7438 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	162 %	126 %
Prated	12.6 kW	12.0 kW
SCOP	4.13	3.23
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	7.83 kW	7.39 kW
COP Tj = -7°C	3.35	2.67
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.77 kW	4.56 kW
COP Tj = +2°C	5.37	4.00
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.08 kW	4.99 kW
COP Tj = +7°C	6.50	5.20
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.15 kW	5.06 kW
COP Tj = 12°C	6.85	5.81
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	10.31 kW	9.77 kW
COP Tj = Tbiv	2.39	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.57 kW	7.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.01	1.53
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14 W	14 W
PSB	9.00 W	9.00 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.03 kW	4.37 kW
Annual energy consumption Q _{he}	7513.00 kWh	9168.00 kWh
P _{dh} T _j = -15°C (if TOL	10.31	9.77
COP T _j = -15°C (if TOL	2.39	1.95
C _{dh} T _j = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	231.00 %	174.00 %
Prated	12.7 kW	14.1 kW
SCOP	5.85	4.43
T _{biv}	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
P _{dh} T _j = +2°C	12.41 kW	12.05 kW
COP T _j = +2°C	3.21	2.48
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	8.19 kW	9.11 kW
COP T _j = +7°C	5.67	3.98
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	5.17 kW	5.49 kW
COP T _j = 12°C	7.02	6.01
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	8.19 kW	9.11 kW
COP T _j = T _{biv}	5.67	3.98
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	12.41 kW	12.05 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.21	2.48
WTOL	75.00 °C	75.00 °C
P _{off}	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9 W	9 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.29 kW	2.21 kW
Annual energy consumption Q _{he}	2897.00 kWh	4256.00 kWh

Model MHC-V16WD2N7-***

Model name	MHC-V16WD2N7-***
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	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 12102-1 | Average Climate

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

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	139 %
Prated	14.7 kW	14.4 kW
SCOP	4.59	3.57
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	13.04 kW	12.78 kW
COP Tj = -7°C	2.54	2.05
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.00 kW	7.96 kW
COP Tj = +2°C	4.40	3.44
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.26 kW	4.78 kW
COP Tj = +7°C	7.12	5.13
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.28 kW	5.72 kW
COP Tj = 12°C	7.56	6.58
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	13.04 kW	12.78 kW
COP Tj = Tbiv	2.54	2.05

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.81 kW	12.54 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.37	1.94
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9.00 W	9.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.89 kW	1.86 kW
Annual energy consumption Qhe	6617 kWh	8349 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	160 %	128 %
Prated	14.6 kW	13.9 kW
SCOP	4.08	3.29
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	8.89 kW	8.30 kW
COP Tj = -7°C	3.25	2.70
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.87 kW	5.18 kW
COP Tj = +2°C	5.22	4.03
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.24 kW	5.17 kW
COP Tj = +7°C	6.67	5.44
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.32 kW	5.23 kW
COP Tj = 12°C	7.26	6.07
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.91 kW	11.32 kW
COP Tj = Tbiv	2.41	1.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.06 kW	9.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.02	1.56
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14 W	14 W
PSB	9.00 W	9.00 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.54 kW	4.83 kW
Annual energy consumption Q _{he}	8813.00 kWh	10408.00 kWh
P _{dh} T _j = -15°C (if TOL	11.91	11.32
COP T _j = -15°C (if TOL	2.41	1.97
C _{dh} T _j = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	238.00 %	181.00 %
Prated	14.3 kW	14.9 kW
SCOP	6.05	4.62
T _{biv}	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
P _{dh} T _j = +2°C	13.82 kW	13.47 kW
COP T _j = +2°C	3.18	2.48
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	9.17 kW	9.58 kW
COP T _j = +7°C	5.82	4.04
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	5.34 kW	5.64 kW
COP T _j = 12°C	7.33	6.31
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	9.17 kW	9.58 kW
COP T _j = T _{biv}	5.82	4.04
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	13.82 kW	13.47 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.18	2.48
WTOL	75.00 °C	75.00 °C
P _{off}	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9 W	9 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.48 kW	1.43 kW
Annual energy consumption Q _{he}	3159.00 kWh	4306.00 kWh

Model MHC-V12WD2RN7-***

Model name	MHC-V12WD2RN7-***
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	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 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
η_s	183 %	141 %
Prated	12.1 kW	12.0 kW
SCOP	4.67	3.62
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	10.75 kW	10.58 kW
COP Tj = -7°C	2.78	2.23
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.73 kW	6.59 kW
COP Tj = +2°C	4.55	3.52
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.23 kW	4.78 kW
COP Tj = +7°C	6.89	4.99
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.34 kW	5.59 kW
COP Tj = 12°C	7.41	6.41
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	10.75 kW	10.58 kW
COP Tj = Tbiv	2.78	2.23

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.77 kW	10.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.61	2.05
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9.00 W	9.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.33 kW	1.95 kW
Annual energy consumption Qhe	5352 kWh	6843 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	162 %	127 %
Prated	11.5 kW	10.8 kW
SCOP	4.13	3.26
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	7.11 kW	6.76 kW
COP Tj = -7°C	3.47	2.72
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.33 kW	4.14 kW
COP Tj = +2°C	5.18	4.05
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.08 kW	5.00 kW
COP Tj = +7°C	6.46	5.15
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.15 kW	5.01 kW
COP Tj = 12°C	6.84	5.66
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	9.39 kW	8.84 kW
COP Tj = Tbiv	2.49	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.70 kW	6.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.04	1.52
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14 W	14 W
PSB	9.00 W	9.00 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.80 kW	3.96 kW
Annual energy consumption Q _{he}	6869.00 kWh	8197.00 kWh
P _{dh} T _j = -15°C (if TOL	9.39	8.84
COP T _j = -15°C (if TOL	2.49	1.98
C _{dh} T _j = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	232 %	174 %
Prated	11.70 kW	12.40 kW
SCOP	5.90	4.45
T _{biv}	7 °C	7 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	11.58 kW	11.41 kW
COP T _j = +2°C	3.30	2.55
C _{dh} T _j = +2 °C	0.900	0.900
P _{dh} T _j = +7°C	7.57 kW	7.85 kW
COP T _j = +7°C	5.78	3.99
C _{dh} T _j = +7 °C	0.900	0.900
P _{dh} T _j = 12°C	5.17 kW	5.47 kW
COP T _j = 12°C	6.98	5.90
C _{dh} T _j = +12 °C	0.900	0.900
P _{dh} T _j = T _{biv}	7.57 kW	7.85 kW
COP T _j = T _{biv}	5.78	3.99
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	11.58 kW	11.41 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.30	2.55
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}		
WTOL	75 °C	75 °C
P _{off}	9 W	9 W
PTO	14 W	14 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.12 kW	0.99 kW
Annual energy consumption Q _{he}	2651 kWh	3724 kWh

Model MHC-V14WD2RN7-***

Model name	MHC-V14WD2RN7-***
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	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 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
η_s	182 %	141 %
Prated	13.7 kW	13.0 kW
SCOP	4.63	3.61
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	12.08 kW	11.47 kW
COP Tj = -7°C	2.66	2.15
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.55 kW	7.29 kW
COP Tj = +2°C	4.45	3.50
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.25 kW	4.85 kW
COP Tj = +7°C	7.06	5.10
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.23 kW	5.60 kW
COP Tj = 12°C	7.46	6.46
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.08 kW	11.47 kW
COP Tj = Tbiv	2.66	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.62 kW	10.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.53	2.02
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9.00 W	9.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.08 kW	2.03 kW
Annual energy consumption Qhe	6110 kWh	7438 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	162 %	126 %
Prated	12.6 kW	12.0 kW
SCOP	4.13	3.23
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	7.83 kW	7.39 kW
COP Tj = -7°C	3.35	2.67
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.77 kW	4.56 kW
COP Tj = +2°C	5.37	4.00
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.08 kW	4.99 kW
COP Tj = +7°C	6.50	5.20
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.15 kW	5.06 kW
COP Tj = 12°C	6.85	5.81
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	10.31 kW	9.77 kW
COP Tj = Tbiv	2.39	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.57 kW	7.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.01	1.53
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14 W	14 W
PSB	9.00 W	9.00 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.03 kW	4.37 kW
Annual energy consumption Q _{he}	7513.00 kWh	9168.00 kWh
P _{dh} T _j = -15°C (if TOL	10.31	9.77
COP T _j = -15°C (if TOL	2.39	1.95
C _{dh} T _j = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	231.00 %	174.00 %
Prated	12.7 kW	14.1 kW
SCOP	5.85	4.43
T _{biv}	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
P _{dh} T _j = +2°C	12.41 kW	12.05 kW
COP T _j = +2°C	3.21	2.48
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	8.19 kW	9.11 kW
COP T _j = +7°C	5.67	3.98
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	5.17 kW	5.49 kW
COP T _j = 12°C	7.02	6.01
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	8.19 kW	9.11 kW
COP T _j = T _{biv}	5.67	3.98
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	12.41 kW	12.05 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.21	2.48
WTOL	75.00 °C	75.00 °C
P _{off}	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9 W	9 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.29 kW	2.21 kW
Annual energy consumption Q _{he}	2897.00 kWh	4256.00 kWh

Model MHC-V16WD2RN7-***

Model name	MHC-V16WD2RN7-***
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	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 12102-1 | Average Climate

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

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	139 %
Prated	14.7 kW	14.4 kW
SCOP	4.59	3.57
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	13.04 kW	12.78 kW
COP Tj = -7°C	2.54	2.05
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.00 kW	7.96 kW
COP Tj = +2°C	4.40	3.44
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.26 kW	4.78 kW
COP Tj = +7°C	7.12	5.13
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.28 kW	5.72 kW
COP Tj = 12°C	7.56	6.58
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	13.04 kW	12.78 kW
COP Tj = Tbiv	2.54	2.05

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.81 kW	12.54 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.37	1.94
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9.00 W	9.00 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.89 kW	1.86 kW
Annual energy consumption Qhe	6617 kWh	8349 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	160 %	128 %
Prated	14.6 kW	13.9 kW
SCOP	4.08	3.29
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	8.89 kW	8.30 kW
COP Tj = -7°C	3.25	2.70
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.87 kW	5.18 kW
COP Tj = +2°C	5.22	4.03
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.24 kW	5.17 kW
COP Tj = +7°C	6.67	5.44
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.32 kW	5.23 kW
COP Tj = 12°C	7.26	6.07
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.91 kW	11.32 kW
COP Tj = Tbiv	2.41	1.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.06 kW	9.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.02	1.56
WTOL	75.00 °C	75.00 °C
Poff	9.00 W	9.00 W
PTO	14 W	14 W
PSB	9.00 W	9.00 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.54 kW	4.83 kW
Annual energy consumption Q _{he}	8813.00 kWh	10408.00 kWh
P _{dh} T _j = -15°C (if TOL	11.91	11.32
COP T _j = -15°C (if TOL	2.41	1.97
C _{dh} T _j = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	238.00 %	181.00 %
Prated	14.3 kW	14.9 kW
SCOP	6.05	4.62
T _{biv}	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
P _{dh} T _j = +2°C	13.82 kW	13.47 kW
COP T _j = +2°C	3.18	2.48
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	9.17 kW	9.58 kW
COP T _j = +7°C	5.82	4.04
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	5.34 kW	5.64 kW
COP T _j = 12°C	7.33	6.31
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	9.17 kW	9.58 kW
COP T _j = T _{biv}	5.82	4.04
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	13.82 kW	13.47 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.18	2.48
WTOL	75.00 °C	75.00 °C
P _{off}	9.00 W	9.00 W
PTO	14.00 W	14.00 W
PSB	9 W	9 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.48 kW	1.43 kW
Annual energy consumption Q _{he}	3159.00 kWh	4306.00 kWh