TECHNICAL DATA MANUAL

M-thermal Mono
ATW Heat Pump



IMPORTANT NOTE:

Thank you very much for purchasing our product,
Before using your unit , please read this manual carefully and keep it for future reference.

Product fiche 1

Heat pump space heater		unit	MHC-V18W/D2RN8	MHC-V22W/D2RN8	MHC-V26W/D2RN8	MHC-V30W/D2RN8
Indoor unit sound power (*)		[dB(A)]	/	/	/	/
Outdoor unit sound power (*)		[dB(A)]	71	73	75	77
Capacity of the back-up heater integrated in the unit	Psup back-up heater	[kW]	0	0	0	0
off peak operation function integrated in Heat pump		Y/N	No	No	No	No
Space heating	Energy efficiency class 35°C (Low temp. app.)	-	A+++	A+++	A+++	A++
Space heating	Energy efficiency class 55°C(Medium temp. app.)	-	A++	A++	A+	A+
Average climate (Design temperature= –10°C)						
Space heating 35°C	Prated(declared heating capacity) @–10°C	[kW]	18	22	25	29
	Seasonal space heating efficiency(ηs)	[%]	181	178	177	165
	Annual energy consumption	[kWh]	8,086	10,180	11,489	14,165
Space heating 55°C	Prated(declared heating capacity) @–10°C	[kW]	18	22	26	30
	Seasonal space heating efficiency(ηs)	[%]	125	126	123	123
	Annual energy consumption	[kWh]	11,375	14,390	17,204	19,316
Part load conditions space heating average climate low temperature application						
(A) condition (-7°C)	Pdh(declared heating capacity)	[kW]	15.91	19.73	22.15	21.95
	COPd (declared COP)	-	2.85	2.74	2.56	2.53
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh(declared heating capacity)	[kW]	9.67	12.04	13.78	16.22
	COPd (declared COP)	-	4.57	4.40	4.41	4.12
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh(declared heating capacity)	[kW]	6.57	8.02	9.38	10.69
	COPd (declared COP)	-	5.95	6.24	6.43	6.21
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh(declared heating capacity)	[kW]	3.77	3.81	4.11	4.59
	COPd (declared COP)	-	6.97	7.0	7.08	7.14
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90

Product fiche 2

Heat pump space heater		unit	MHC-V18W/D2RN8	MHC-V22W/D2RN8	MHC-V26W/D2RN8	MHC-V30W/D2RN8
(E) Tol(temperature operating limit)	Tol (temperature operating limit)	[°C]	-10	-10	-10	-10
	Pdh (declared heating capacity)	[kW]	18.14	20.34	20.36	20.43
	COPd (declared COP)	-	2.49	2.35	2.34	2.34
	WTOL (Heating water Operation Limit)	[°C]	60	60	60	60
(F) Tbivalent temperature	Tbiv	[°C]	-7	-7	-7	-5
	Pdh (declared heating capacity)	[kW]	15.91	19.73	22.15	23.57
	COPd (declared COP)	-	2.85	2.74	2.56	2.70
Supplementary capacity at P_design	Psup (@Tdesignh:–10°C)	[kW]	0.00	1.97	4.68	8.75
Part load conditions space heating average climate medium temperature application						
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	15.64	19.84	20.65	20.12
	COPd (declared COP)	-	1.72	1.74	1.69	1.63
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	9.62	11.91	14.28	16.50
	COPd (declared COP)	-	3.30	3.30	3.11	3.09
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	6.40	7.99	9.30	10.51
	COPd (declared COP)	-	4.41	4.62	4.72	4.73
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.60	3.62	3.90	4.65
	COPd (declared COP)	-	5.09	5.20	5.41	5.85
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol(temperature operating limit)	Tol (temperature operating limit)	[°C]	-10	-10	-10	-10
	Pdh (declared heating capacity)	[kW]	15.03	13.83	13.87	13.83
	COPd (declared COP)	-	1.17	1.08	1.08	1.07
	WTOL (Heating water Operation Limit)	[°C]	60	60	60	60
(F) Tbivalent temperature	Tbiv	[°C]	-7	-7	-6	-5
	Pdh (declared heating capacity)	[kW]	15.64	19.84	22.13	23.98
	COPd (declared COP)	-	1.72	1.74	1.88	2.02
Supplementary capacity at P_design	Psup (@Tdesignh:–10°C)	[kW]	2.64	8.6	12.28	15.86

Product fiche 3

Heat pump space heater		unit	MHC-V18W/D2RN8	MHC-V22W/D2RN8	MHC-V26W/D2RN8	MHC-V30W/D2RN8
Colder climate (Design temperature = –22°C)						
Space heating 35°C	Prated (declared heating capacity) @ –22°C	[kW]	18	21	26	29
	Seasonal space heating efficiency (ηs)	[%]	146	146	143	138
	Annual energy consumption	[kWh]	11,740	14,179	17,421	20,390
Space heating 55°C	Prated (declared heating capacity) @ –22°C	[kW]	18	22	26	30
	Seasonal space heating efficiency (ηs)	[%]	97	102	101	100
	Annual energy consumption	[kWh]	18,156	21,067	24,967	29,238
Part load conditions space heating colder climate low temperature application						
condition (-15°C)	Pdh (declared heating capacity)	[kW]	14.49	17.46	18.95	18.61
	COPd (declared COP)	-	2.42	2.36	2.27	2.24
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	11.21	13.30	15.91	18.49
	COPd (declared COP)	-	3.09	3.12	3.10	3.07
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.64	8.25	10.10	11.88
	COPd (declared COP)	-	4.50	4.42	4.45	4.42
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	4.77	5.45	6.30	7.53
	COPd (declared COP)	-	5.85	5.87	6.06	6.15
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.95	3.98	4.03	4.11
	COPd (declared COP)	-	7.18	7.19	7.13	6.87
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol(temperature operating limit)	Tol (temperature operating limit)	[°C]	-22	-22	-22	-22
	Pdh (declared heating capacity)	[kW]	13.14	13.27	13.07	13.17
	COPd (declared COP)	-	1.67	1.69	1.67	1.67
	WTOL (Heating water Operation Limit)	[°C]	37	37	37	37
(F) Tbivalent temperature	Tbiv	[°C]	-15	-15	-12	-10
	Pdh (declared heating capacity)	[kW]	14.49	17.46	18.97	19.93
	COPd (declared COP)	-	2.42	2.36	2.36	2.44
Supplementary capacity at P_design	Psup (@Tdesignh:–22°C)	[kW]	4.62	8.13	12.68	15.96

Product fiche 4

Heat pump space heater		unit	MHC-V18W/D2RN8	MHC-V22W/D2RN8	MHC-V26W/D2RN8	MHC-V30W/D2RN8
Part load conditions space heating colder climate medium temperature application						
condition (-15°C)	Pdh (declared heating capacity)	[kW]	13.56	13.78	13.37	13.06
	COPd (declared COP)	-	1.21	1.24	1.20	1.18
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	11.12	13.53	15.90	18.40
	COPd (declared COP)	-	1.98	2.07	2.10	2.10
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.65	8.61	10.17	11.23
	COPd (declared COP)	-	3.44	3.70	3.58	3.51
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	4.66	5.21	6.52	7.42
	COPd (declared COP)	-	4.35	4.49	4.99	5.18
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.74	3.74	3.63	3.64
	COPd (declared COP)	-	5.68	5.76	5.68	5.73
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol(temperature operating limit)	Tol (temperature operating limit)	[°C]	-15	-15	-15	-15
	Pdh (declared heating capacity)	[kW]	13.56	13.78	13.37	13.06
	COPd (declared COP)	-	1.21	1.24	1.20	1.18
	WTOL (Heating water Operation Limit)	[°C]	50	50	50	50
(F) Tbivalent temperature	Tbiv	[°C]	-7	-7	-7	-7
	Pdh (declared heating capacity)	[kW]	11.12	13.53	15.90	18.40
	COPd (declared COP)	-	1.98	2.07	2.10	2.10
Supplementary capacity at P_design	Psup (@Tdesignh:-22°C)	[kW]	18.38	22.36	26.27	30.41
Warmer climate (Design temperature =2°C)						
Space heating 35°C	Prated (declared heating capacity) @ 2°C	[kW]	18	22	26	30
	Seasonal space heating efficiency (ηs)	[%]	226	234	231	213
	Annual energy consumption	[kWh]	4,116	4,945	5,959	7,540
Space heating 55°C	Prated (declared heating capacity) @ 2°C	[kW]	18	22	26	30
	Seasonal space heating efficiency (ηs)	[%]	157	161	168	163
	Annual energy consumption	[kWh]	6,041	7,180	8,218	9,580

Product fiche 5

Heat pump space heater		unit	MHC-V18W/D2RN8	MHC-V22W/D2RN8	MHC-V26W/D2RN8	MHC-V30W/D2RN8
Part load conditions space heating warmer climate low temperature application						
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	17.84	21.81	25.50	26.29
	COPd (declared COP)	-	3.53	3.31	3.0	2.94
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	11.36	14.08	16.77	19.57
	COPd (declared COP)	-	5.16	5.20	5.02	4.75
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.45	6.44	7.65	8.90
	COPd (declared COP)	-	7.01	7.50	7.78	7.53
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol(temperature operating limit)	Tol (temperature operating limit)	[°C]	2	2	2	2
	Pdh (declared heating capacity)	[kW]	17.84	21.81	25.50	26.29
	COPd (declared COP)	-	3.53	3.31	3.0	2.94
	WTOL (Heating water Operation Limit)	[°C]	60	60	60	60
(F) Tbivalent temperature	Tbiv	[°C]	7	7	7	7
	Pdh (declared heating capacity)	[kW]	11.36	14.08	16.77	19.57
	COPd (declared COP)	-	5.16	5.20	5.02	4.75
Supplementary capacity at P_design	Psup (@Tdesignh:2°C)	[kW]	0.00	0.09	0.58	4.15
Part load conditions space heating warmer climate medium temperature application						
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	18.44	22.12	26.50	26.41
	COPd (declared COP)	-	2.12	2.12	1.99	1.99
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	11.62	14.15	16.86	19.11
	COPd (declared COP)	-	3.49	3.50	3.47	3.37
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.35	6.38	7.58	8.92
	COPd (declared COP)	-	5.09	5.34	5.94	6.09
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol(temperature operating limit)	Tol (temperature operating limit)	[°C]	2	2	2	2
	Pdh (declared heating capacity)	[kW]	18.44	22.12	26.50	26.41
	COPd (declared COP)	-	2.12	2.12	1.99	1.99
	WTOL (Heating water Operation Limit)	[°C]	60	60	60	60

Product fiche 6

Heat pump space heater		unit	MHC-V18W/D2RN8	MHC-V22W/D2RN8	MHC-V26W/D2RN8	MHC-V30W/D2RN8
(F) Tbivalent temperature	Tbiv	[°C]	7	7	7	7
	Pdh (declared heating capacity)	[kW]	11.62	14.15	16.86	19.11
	COPd (declared COP)	-	3.49	3.50	3.47	3.37
Supplementary capacity at P_design	Psup (@Tdesignh:2°C)	[kW]	0.00	0.00	0.00	3.32
Ecodesign technical data						
Product description	Air-to-water heat pump	Y/N	Yes	Yes	Yes	Yes
	Water-to-water heat pump	Y/N	No	No	No	No
	Brine-to-water heat pump	Y/N	No	No	No	No
	Low-temperature heat pump	Y/N	No	No	No	No
	Equipped with a supplementary heater	Y/N	No	No	No	Yes
	Heat pump combination heater	Y/N	No	No	No	No
Air to water unit	Rated airflow (outdoor)	[m^3/h]	10650	10650	11200	11200
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	[m^3/h]	/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.018	0.018	0.018	0.018
	Pto (Power consumption Thermostat off mode)	[kW]	0.096	0.096	0.096	0.096
	Psb (Power consumption Standby mode)	[kW]	0.018	0.018	0.018	0.018
	PCK (Power crankcase heater model)	[kW]	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/

Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.

Technical parameters

Model(s):	MHC-V22W/D2RN8
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	NO
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE
Parameters are declared for medium-temperature application.	

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	22.4	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	Pdh	19.8	kW
Tj = 2℃	Pdh	11.9	kW
Tj = 7℃	Pdh	8.0	kW
Tj = 12℃	Pdh	3.6	kW
Tj = bivalent temperature	Pdh	19.8	kW
Tj = operating limit	Pdh	13.8	kW
For air-to-water heat pumps: Tj = -15℃	Pdh	-	kW
Bivalent temperature	T_{biv}	-7	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.018	kW
Standby mode	P_{sb}	0.018	kW
Thermostat-off mode	P_{to}	0.096	kW
Crankcase heater mode	P_{ck}	0.000	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	126	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	COPd	1.74	-
Tj = 2℃	COPd	3.30	-
Tj = 7℃	COPd	4.62	-
Tj = 12℃	COPd	5.20	-
Tj = bivalent temperature	COPd	1.74	-
Tj = operating limit	COPd	1.08	-
For air-to-water heat pumps: Tj = -15℃	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output (**)	P_{sup}	8.6	kW
Type of energy input	Electrical		

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L_{WA}	-/73	dB
Annual energy consumption	Q_{HE}	14390	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	-	10650	m^3/h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h

For heat pump combination heater:			
Declared load profile	-		
Daily electricity consumption	Q_{clec}	-	kWh
Annual electricity consumption	AEC	-	kWh

Water heating energy efficiency	η_{wh}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details	GD Midea Heating & Ventilating Equipment Co. Ltd (Penglai industry road, Beijiao, Shunde, Foshan, Guangdong, P.R China)

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Technical parameters

Model(s):	MHC-V22W/D2RN8
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	NO
Heat pump combination heater:	NO
Declared climate condition:	COLDER
Parameters are declared for medium-temperature application.	

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	22.4	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	Pdh	13.5	kW
Tj = 2℃	Pdh	8.6	kW
Tj = 7℃	Pdh	5.2	kW
Tj = 12℃	Pdh	3.7	kW
Tj = bivalent temperature	Pdh	13.5	kW
Tj = operating limit	Pdh	13.8	kW
For air-to-water heat pumps: Tj = -15℃	Pdh	13.8	kW
Bivalent temperature	T_{biv}	-7	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.018	kW
Standby mode	P_{sb}	0.018	kW
Thermostat-off mode	P_{to}	0.096	kW
Crankcase heater mode	P_{ck}	0.000	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	102	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	COPd	2.07	-
Tj = 2℃	COPd	3.70	-
Tj = 7℃	COPd	4.49	-
Tj = 12℃	COPd	5.76	-
Tj = bivalent temperature	COPd	2.07	-
Tj = operating limit	COPd	1.24	-
For air-to-water heat pumps: Tj = -15℃	COPd	1.24	-
For air-to-water heat pumps: Operation limit temperature	TOL	-15	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	50	°C
Supplementary heater			
Rated heat output (**)	P_{sup}	22.4	kW
Type of energy input	-		

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L_{WA}	-/73	dB
Annual energy consumption	Q_{HE}	21067	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	-	10650	m^3/h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h

For heat pump combination heater:			
Declared load profile	-		
Daily electricity consumption	Q_{clec}	-	kWh
Annual electricity consumption	AEC	-	kWh

Water heating energy efficiency	η_{wh}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details	GD Midea Heating & Ventilating Equipment Co. Ltd (Penglai industry road, Beijiao, Shunde, Foshan, Guangdong, P.R China)

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Technical parameters

Model(s):	MHC-V22W/D2RN8
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	NO
Heat pump combination heater:	NO
Declared climate condition:	WARMER
Parameters are declared for medium-temperature application.	

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	22.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	Pdh	-	kW
Tj = 2℃	Pdh	22.1	kW
Tj = 7℃	Pdh	14.1	kW
Tj = 12℃	Pdh	6.4	kW
Tj = bivalent temperature	Pdh	14.1	kW
Tj = operating limit	Pdh	22.1	kW
For air-to-water heat pumps: Tj = -15℃	Pdh	-	kW
Bivalent temperature	T_{biv}	7	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.018	kW
Standby mode	P_{sb}	0.018	kW
Thermostat-off mode	P_{to}	0.096	kW
Crankcase heater mode	P_{ck}	0.000	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	COPd	-	-
Tj = 2℃	COPd	2.12	-
Tj = 7℃	COPd	3.50	-
Tj = 12℃	COPd	5.34	-
Tj = bivalent temperature	COPd	3.50	-
Tj = operating limit	COPd	2.12	-
For air-to-water heat pumps: Tj = -15℃	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output (**)	P_{sup}	0.0	kW
Type of energy input	-		

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L_{WA}	-/73	dB
Annual energy consumption	Q_{HE}	7180	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	-	10650	m^3/h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h

For heat pump combination heater:			
Declared load profile	-		
Daily electricity consumption	Q_{clec}	-	kWh
Annual electricity consumption	AEC	-	kWh

Water heating energy efficiency	η_{wh}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details	GD Midea Heating & Ventilating Equipment Co. Ltd (Penglai industry road, Beijiao, Shunde, Foshan, Guangdong, P.R China)

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Information requirements for comfort chillers

Model(s):	MHC-V22W/D2RN8
Outdoor side heat exchanger of chiller:	Air to water
Indoor side heat exchanger chiller:	Water
Type:	Compressor driven vapour compression
Driver of compressor:	Electric motor

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	20.6	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	185	%
Declared cooling capacity for part load at given outdoor temperature Tj				Declared energy efficiency ratio for part load at given outdoor temperature Tj			
Tj=+35°C	P_{dc}	20.6	kW	Tj=+35°C	EER_d	2.89	-
Tj=+30°C	P_{dc}	14.9	kW	Tj=+30°C	EER_d	3.95	-
Tj=+25°C	P_{dc}	9.3	kW	Tj=+25°C	EER_d	5.37	-
Tj=+20°C	P_{dc}	4.3	kW	Tj=+20°C	EER_d	6.19	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.017	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.084	kW	Standby mode	P_{SB}	0.017	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	8950	m^3/h
Sound power level, indoors / outdoors	L_{WA}	-/73	dB				
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	GD Midea Heating & Ventilating Equipment Co. , Ltd. Penglai industry Road, Beijiao, Shunde, Foshan, Guangdong, 528311 P.R. China						

(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9.
(**) From 26 September 2018.

Information requirements for comfort chillers

Model(s):	MHC-V22W/D2RN8
Outdoor side heat exchanger of chiller:	Air to water
Indoor side heat exchanger chiller:	Water
Type:	Compressor driven vapour compression
Driver of compressor:	Electric motor

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	22.8	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	224	%
Declared cooling capacity for part load at given outdoor temperature Tj				Declared energy efficiency ratio for part load at given outdoor temperature Tj			
Tj=+35°C	P_{dc}	22.8	kW	Tj=+35°C	EER_d	4.25	-
Tj=+30°C	P_{dc}	16.3	kW	Tj=+30°C	EER_d	5.16	-
Tj=+25°C	P_{dc}	10.2	kW	Tj=+25°C	EER_d	6.45	-
Tj=+20°C	P_{dc}	4.6	kW	Tj=+20°C	EER_d	6.38	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.017	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.084	kW	Standby mode	P_{SB}	0.017	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	8950	m^3/h
Sound power level, indoors / outdoors	L_{WA}	-/73	dB				
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	GD Midea Heating & Ventilating Equipment Co. , Ltd. Penglai industry Road, Beijiao, Shunde, Foshan, Guangdong, 528311 P.R. China						

(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9.
(**) From 26 September 2018.

Model	Mode	Heating					Cooling	
	Ambient temperature	7/6			2/1	-7/-8	35/24	
	Water temperature	30-35	40-45	47-55	30-35	30-35	23-18	12-7
MHC-V18W/D2RN8	Capacity /W	18000	18000	18000	18000	18000	18500	17000
	Power input /W	3830	5143	6545	5325	6667	3895	5574
	COP / EER	4.70	3.50	2.75	3.38	2.70	4.75	3.05
MHC-V22W/D2RN8	Capacity /W	22000	22000	22000	22000	21000	23000	21000
	Power input /W	5000	6471	8302	7097	8077	5000	7119
	COP / EER	4.40	3.40	2.65	3.10	2.60	4.60	2.95
MHC-V26W/D2RN8	Capacity /W	26000	26000	26000	24000	22000	27000	26000
	Power input /W	6373	8387	10612	8333	8800	6279	9630
	COP / EER	4.08	3.10	2.45	2.88	2.50	4.30	2.70
MHC-V30W/D2RN8	Capacity /W	30100	30000	30000	26000	23000	31000	29500
	Power input /W	7698	10345	13043	9286	9388	7750	11569
	COP / EER	3.91	2.90	2.30	2.80	2.45	4.00	2.55

NOTE