

Technical specifications

Hydro box

Model	HMS60-W	HMS100-W
General conditions		
Power source	400V 3NAC 50Hz / 230V 1AC 50 Hz	
Max. operating current (A)	20 (400V) / 29 (230V)	20 (400V) / 36 (230V)
Recommended fuse (A)	25 (400V) / 32 (230V)	25 (400V) / 40 (230V)
Wire size (Power source)	5 x 2.5mm ² (400V) / 3 x 10mm ² (230V)	
Wire size (Power source and communication cable to outdoor unit)	Min. 5 x 2.5 mm ² (PE, L, N, signal, signal)	
Power source deviation (%)	-15 – +10	
Power factor	0.99	
Pipe size refrigerant (ref) Gas	OD12.7 (1/2")	OD15.88 (5/8")
Pipe size refrigerant (ref) Liquid	OD6.35 (1/4")	OD9.52 (3/8")
Flare connection	OD6.35 (9.1mm); OD9.52 (13.2mm); OD12.7 (16.6mm); OD15.88 (19.7mm)	
Indoor unit (split type, hydro-unit)		
Immersion heater	Max. 9 kW (6kW for single-phase 230V)	
Capacity steps heater	3 (3,6,9kW) for three-phase 400V 3 (1.5, 3, 6kW) for single-phase 230V	
Pump model	Variable	
Pump control	Wilo-Para G 15/75	
Pump capacity, max. head	76 kPa (external)	
Pump capacity, max. flow	4 m ³ /h	
Pump power	5 – 75W	
Pump efficiency, max.	EEI≤0.21	
Heat exchanger	ACH18-52H-F	ACH-30EQ-80H-F
Heat exchanger size	–0.9 m ²	–1.8 m ²
Pressure transmitter	0 – 4.6 MPa, deviation ±3%	
Water strainer system	0.6 mm ²	
Filter drier refrigeration system	Bi-flow 083	
Emergency thermostat	5 – 65 °C	
Thermal cut-off	92 (-6) °C or 98 (-8) °C	
Motor valve on hydraulic circuit	1 x 3-way, ball type	
Actuator	230V 50Hz	
Safety relief valve system	0.3 MPa	
Manometer gauge	0 – 0.4 MPa	
Expansion vessel	12L	
Expansion vessel, Factory precharge	0.75 +/- 20%bar	
IP Grade	IP21	

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Cabinet	Top/side/ front bottom	EN10130 DC01	
	Back	DX51D+Z275	
Material	Top/side/ front bottom	Steel 0.7mm	
	Back	Galvanized steel 275g/m ²	
Color (powder coated 1 layer)	Top/side/ front bottom	RAL9016, white	
	Back	Untreated	
Isolation heat exchanger		Synthetic rubber (+110 / -50°C)	
Design pressure refrigerant system		4.5 MPa	
Water quality sanitary hot water		<EU directive nr 98/83/EF	
Operating ambient temperature: indoor unit		+5 – +35°C, Max. RH 95%	
Connection water system		Compression fitting 22mm	
Connection sanitary hot water		Compression fitting 22mm	
Sound power level L WA indoors		35dB	
Type of refrigerant (outdoor unit)		R32 or R410A	
Minimal system temperature in cooling mode		7°C	
Design pressure on product (heating system)		0.3 MPa	
Height, (adjustment)		850 mm	
Width		515 mm	
Depth		350 mm	
Weight net/gross		50 kg / 56 kg	56 kg / 62 kg
Weight packaging: Wood		1.3 kg	
Weight packaging: cardboard		1.9 kg	
Weight packaging: Plastics		1.3 kg	
Packaging volume /dimensions		0.15 m ³ (850 x 515 x 350mm)	
Part number MHIAE		MCD001A019	MCD001A020
Enclosed			
		Flare Nut, reducing, 1/4" tube x 3/8" flare	
		1 x Safety kit with safety valve, manometer and automatic air vent; insulated	
		1 x Strap for single-phase connection	
		1 x Outdoor sensor	
		2 x Indoor sensor	
		3 x Current sensor	
		1 x Valve filter 3/4"	
		1 x 22 x 1 "connector (nipple)	
		3 x Temperature sensor L=1450	
		1 x Hanger	



Model	HMS60-W	HMS100-W
Miscellaneous		
Ambient area of operation (outdoor unit)	- 20 — +43°C	
Internet connection function	(Straight, cat.5e UTP) RJ45 plug	
Language	English (en), Swedish (sv), German (de), French (fr), Spanish (es), Finnish (fi), Lithuanian (Lt), Czech (cz), Polish (pl), Dutch (nl), Danish (da), Estonian (et), Latvian (lv), Russian (ru), Italian (It), Slovenian (sl), Greek (gr), Romanian (ro), Portuguese (pt)	

Controller

RC-HY20-W	
Electrical data	
Power source voltage	230V 50Hz
Enclosure class	IP21
Rated value for impulse voltage	4 kV
Electrical contamination	2
Option connections	
Max. number of air/water heat pumps	1
Max. number of sensors	8
Max. number of charge pumps	1
Max. number of outputs for additional heat step	3
Miscellaneous	
Area of operation	- 25 – 70 °C
Ambient temperature	5 – 35 °C
Dimensions and weight	
Width	354mm
Depth	123mm
Height	400mm
Net weight	4.3kg
Gross weight	4.5kg
Part number MHIAE	MCD501A003
Internet connection function*	Included
Language	English, Swedish, German, French, Spanish, Finnish, Lithuanian, Czech, Polish, Dutch, Norwegian, Danish, Estonian, Latvian, Russian, Italian, Hungarian, Slovenian, Turkish, Croatian, Romanian, Icelandic, Portuguese

*Function is provided by myUpTech AB., which monitors operation data and control unit through internet

Installation requirements

Indoor unit	HMA60-W	HMA100-W
Outdoor unit	FDCW60VNX-W	FDCW71VNX-W
Highest recommended supply / return temperature	55/45°C	
Max. pressure, climate system	0.3MPa (3.0 bar)	
Max. temperature, climate system	65°C	
Max. temperature in indoor unit	65°C	
Max. temperature from external heat source	65°C	
Max. supply temperature with compressor	58°C	60°C
Min. supply temperature cooling	7°C	
Max. supply temperature cooling	25°C	
Min. volume, climate system without under floor cooling application	50L	80L
Min. volume, climate system with under floor cooling application	50L	80L
Max. flow, climate system	0.29L/s	0.38L/s
Min. flow, climate system	0.09L/s	0.19L/s
Nominal system flow heating (ΔT=5K)	0.29L/s (6kW, 7/45°C)	0.38L/s (8kW, 7/45°C)
Nominal system flow cooling (ΔT=5K)	0.29L/s (6kW, 35/7°C)	0.34L/s (7.1kW, 35/7°C)

External circulation pump must be used when the pressure drop in the system is greater than the available external pressure. In such case, a bypass line with non-return valve must be installed.

Use an overflow valve if system flow cannot be guaranteed.

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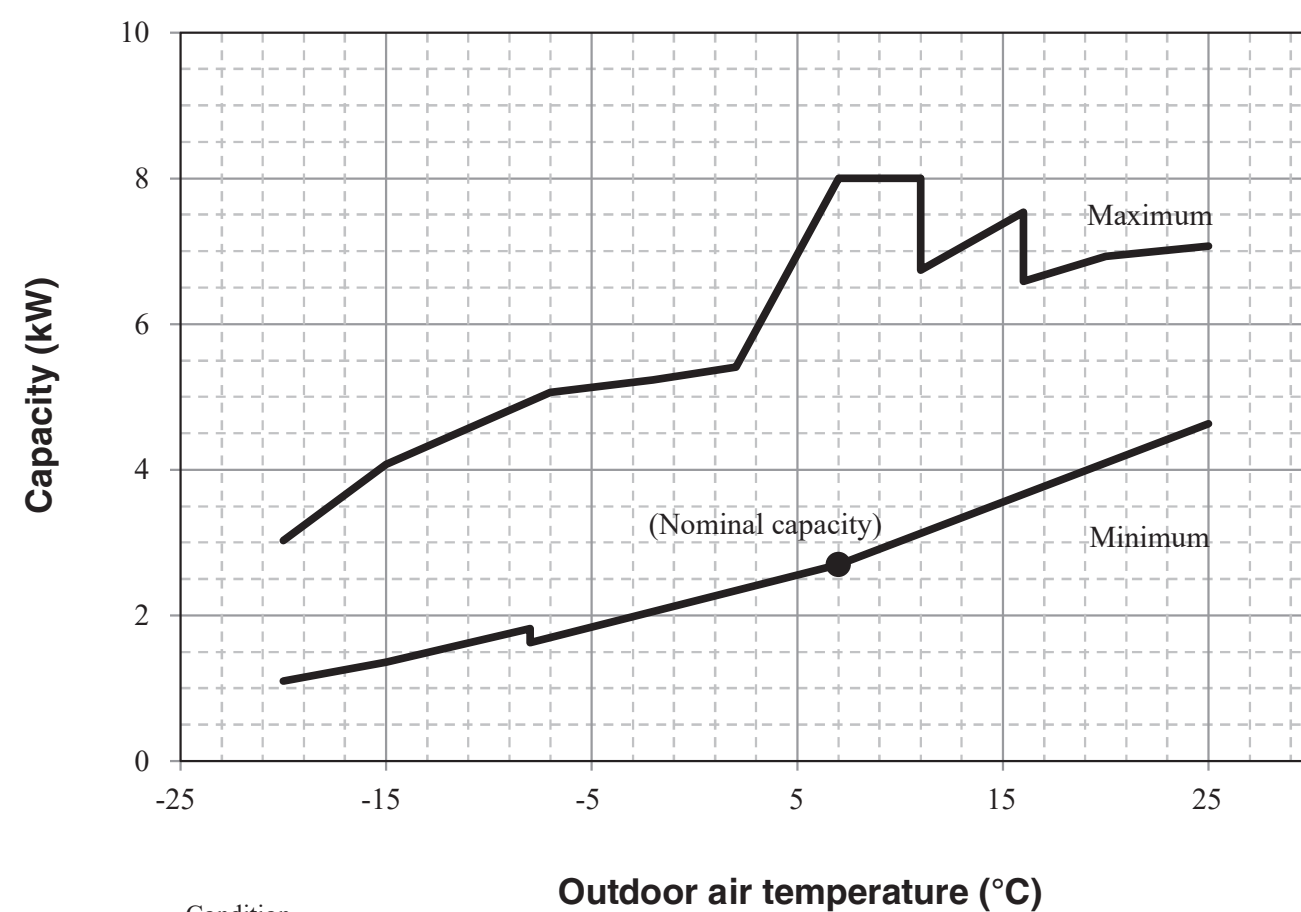
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Capacity diagram

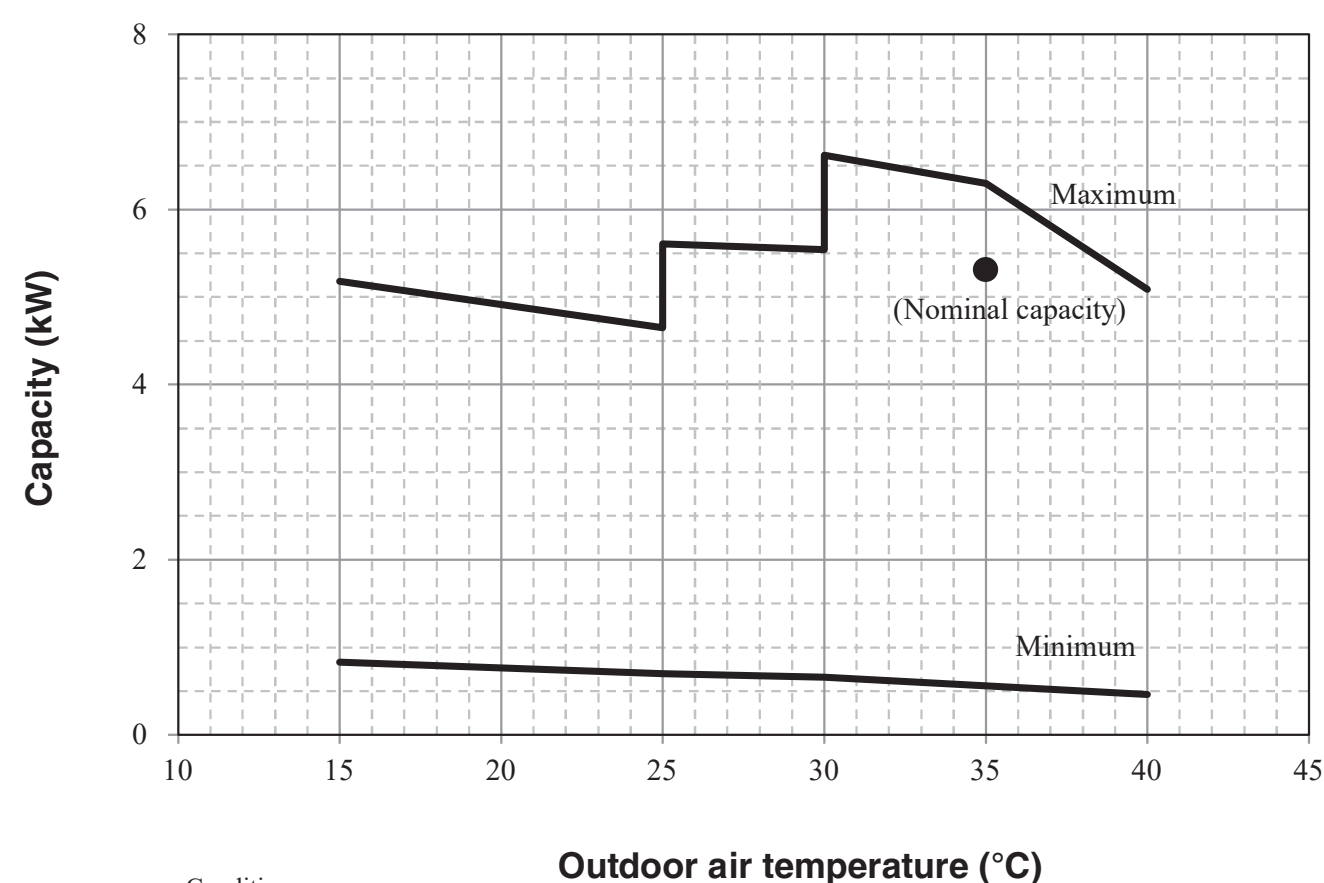
FDCW60VNX-W in combination with HMA60-W, HMS60-W or HSB60-W

Heating



Condition
Supply water temperature : 45°C
Water flow rate : 1044L/h

Cooling



Condition
Supply water temperature : 7°C
Water flow rate : 1008L/h