LINEUP

HYDROLUTION R32

Outdoor units kW	6.00	8.00
R32	1-Phase	1-Phase
		
	FDCW 60 VNX-W	FDCW 71 VNX-W
Indoor units		
Hydrobox  **HMS60-W** Controller included Pump included	✓	
Hydrobox  **HMS100-W** Controller included Pump included		✓
All in One  **HMA60-W** Controller included Pump included 180L DHW tank included	✓	
All in One  **HMA100-W** Controller included Pump included 180L DHW tank included		✓

HYDROLUTION, THE SYSTEM FOR HEATING, COOLING AND DHW PRODUCTION

A+++

MINIMUM ENERGY CLASS 35°C

R32

6 & 8 KW MODELS

HYDROLUTION SYSTEM - ADVANTAGES

Cutting-edge design and technological innovation are the basis of the HYDROLUTION system.

ENERGY SAVING

The HYDROLUTION outdoor units are equipped with Inverter technology and Twin Rotary compressor: it is possible to vary the operating frequency of the compressor based on the actual demand of the system, with consequent optimization of the COP and EER values.

MAXIMUM SILENCE OF THE OUTDOOR UNITS

The sound level emitted by the outdoor unit of an air conditioning system can be a problem, especially at night.
The HYDROLUTION system, thanks to the 'Silent' mode, is able to reduce the speed of the fan and compressor. This results in a significant reduction in the sound level. It is possible to set the operation of the outdoor unit in 'Silent' mode using the RC-HY20/40-W controls.

EXTREME COMPACTNESS

In the case of the indoor units of the All in One version system, the reduced size is due to the high performance of the internal components, in particular the domestic water tank and the plate heat exchanger.

HOT WATER UP TO 65°C

HYDROLUTION is a heat pump particularly suitable for primary heating, tested in numerous projects in Europe: it is capable of producing hot water **up to 60°C**. It is possible to raise the limit up to 65°C via an additional heat source, **and keep them constant even at an outdoor temperature of -20°C**. For this reason, it can be combined with: low temperature heating elements (radiant panels); medium temperature heating elements (high efficiency radiators, warmcoils).

HIGH RELIABILITY

The outdoor unit compressor is designed to be efficient even in very cold climates.

BLUE FIN TREATMENT

Corrosion of the outdoor unit, due to the action of atmospheric agents, can compromise the correct functioning of the system.
The 'Blue Fin' treatment, applied to the exchanger, helps prevent corrosion.

HYDROLUTION SYSTEM - CONFIGURATIONS

ALL IN ONE CONFIGURATION

The wide range of Mitsubishi Heavy Industries products offers the right heat pump to meet every need.
All in One is a complete solution, suitable for renovations and new buildings.

ALL IN ONE COMBINATIONS (OUTDOOR UNIT + INDOOR UNIT)

The All in One combination provides the complete solution for all your heating, cooling and domestic hot water needs.

Each All in One combination includes an outdoor unit and an HMA system, having an integrated DHW tank, an electric resistance and a circulation pump.

Here are the advantages of HYDROLUTION All in One:

- heating, cooling and hot water in one unit;
- easy installation and operation, the indoor and outdoor units are compact and make installation as simple as possible;
- ideal for residential use in apartments and small homes;
- three settable control levels (economy, normal, luxury) for DHW production;
- **CAPACITIES AVAILABLE**
  6 kW - R32
  8 kW - R32

FUNCTIONALITY	APPLICATIONS	ADVANTAGES FOR PROFESSIONALS	ADVANTAGES FOR CUSTOMERS
• floor heating • heating via high efficiency radiators • DHW & heating • cooling • fancoil heating	• independent homes	• can also be installed in small spaces • installation flexibility • low environmental impact • can be integrated with traditional heating systems	• heating, DHW and cooling in a single system • easy to use • quiet operation • high performance • long-term reliability • low management costs

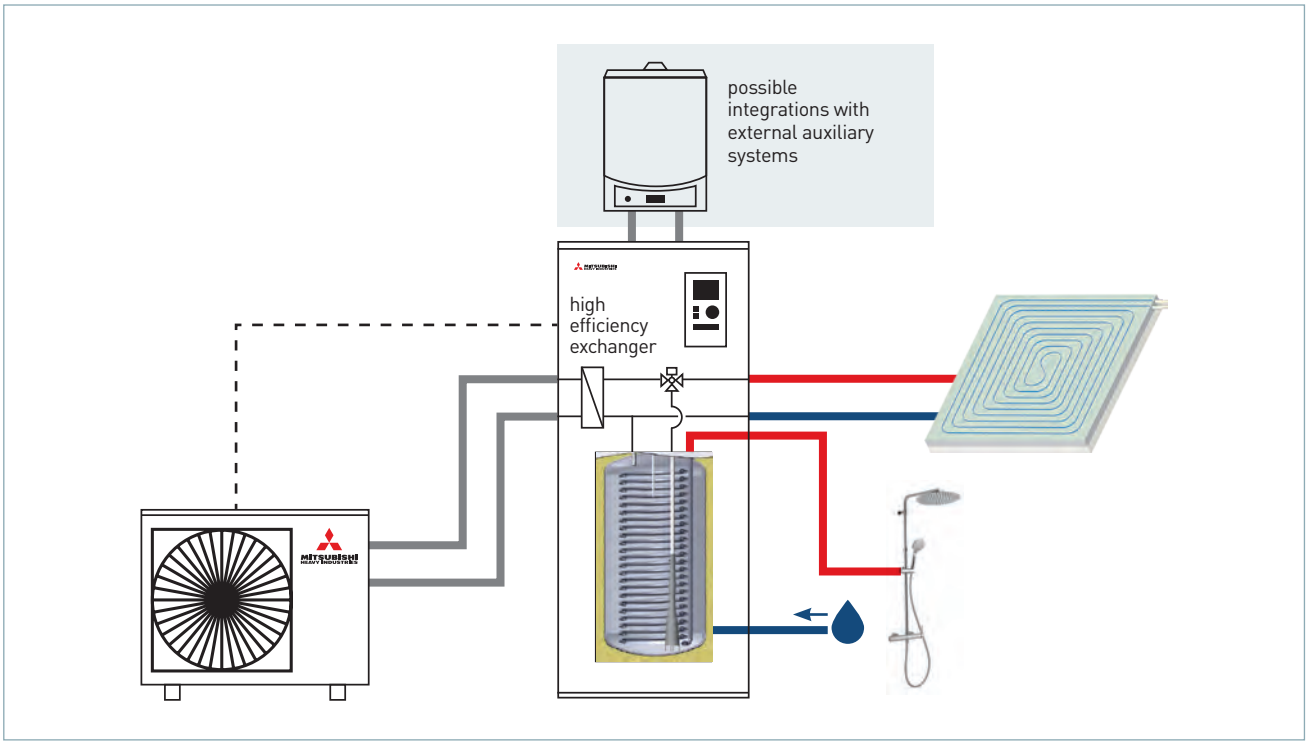
HMA MODULE

HYDROLUTION's All in One solution allows you to satisfy, with a plug-in solution, the main heating, cooling and DHW production needs of a home.

MAIN ADVANTAGES OF HMA MODULE

- integrated control on the machine which facilitates the management and installation of the system;
- compact, high-efficiency heat exchanger that allows you to quickly reach the desired temperatures;
- integrated 180 liter tank for the production of DHW;
- possibility of single-phase or three-phase power supply via special terminal block;
- titanium anode included as standard.

OPERATING DIAGRAM



HYDROLUTION SYSTEM - TECHNICAL DATA

ALL IN ONE R32

Outdoor unit model				FDCW60VNX-W	FDCW71VNX-W
Heating	Rated power	A7//W35	kW	5.08 (0.90~7.60)	8.30 (2.20~9.50)
	Power input			0.99	1.93
	Performance coefficient		COP	5.16	4.30
	Rated power	A7/W45	kW	2.70 (2.70~8.00)	8.00 (3.00~10.00)
	Power input			0.88	2.35
	Performance coefficient		COP	3.06	3.40
Cooling	Rated power	A35//W18	kW	7.54 (1.20~7.80)	9.00 (2.70~10.70)
	Power input			2.11	2.48
	Energy efficiency		EER	3.57	3.62
	Rated power	A35//W7	kW	5.31 (0.60~6.30)	7.10 (2.00~7.10)
	Power input			1.95	2.62
	Energy efficiency		EER	2.73	2.70
Seasonal data (Heating)	Prated @ -10°C	35/55	kW	4.80/5.30	7.50/7.00
	Seasonal performance coefficient		SCOP	4.83/3.50	4.58/3.35
	Seasonal energy efficiency (ns)		%	190/137	180/131
	Energy efficiency class		-	A+++/A++	A+++/A++
	Annual energy consumption		kWh/y	2089/3193	3450/4421
Seasonal data (DHW)	Test cycle profile			XL	XL
	Energy efficiency (nwh)		%	100	107
	Energy efficiency class			A	A
	Annual energy consumption		kWh/y	-	-
Operating range	Outdoor air temperature	Heating & DHW	°C	-20~43	
		Cooling		15~43	
Refrigerant circuit data	Refrigerant Type (GWP)			R32 (675)	
	Q.ty of precharge (tons CO2)		kg (t)	1.3 (0.878)	1.84 (1.242)
	Piping diameter liquid/gas		mm (inch)	6.35(1/4") / 12.7(1/2")	6.35(1/4") / 15.88(5/8")
	Max splitting distance		m	30	50
	Max splitting level difference O.U.-I.U. / I.U.-O.U.		m	20 / 20	30 / 15
	Splitting distance without additional charge		m	15	15
	Additional charge		g/m	20	20
	Refrigerant control system			Capillary tube + EEV	Electronic expansion valve
	Compressor		Type	Twin rotary - DC Inverter	
Electrical data	Power supply	From indoor unit	Ph-V-Hz	1ph-230V-50Hz	
	Maximum current		A	15	18
	Power cable (recommended)		Type	3x4 mm²	3x4 mm²
Product specifications	Fan	Type	q.ty	DC Inverter x 1	
		Air flow (max)	m³/h	2490	3000
	Sound power level (max)		dB(A)	65	69
	Sound pressure level (a 1 m)		dB(A)	44	49
	Dimensions	LxDxH	mm	800x290x640	880+(88)x340x750
	Weight	Net	kg	46	62
Indoor unit model				**HMA60-W**	**HMA100-W**
Operating range	Delivery water temperature	Heating & DHW	°C	25~58	25~60
		Cooling		7~25	
	DHW temperature (tank)	Max		80	
Hydraulic data	DHW tank capacity		L	180	
	Water/freon heat exchanger		Type	Braze-welded plates	
	Circulation pump			Included	
	Water connections	Size	mm	22	
	Operating pressure (system)	Max	bar	3	
	Expansion vessel	Volume	L	10	
		Precharge	bar	0.5	
Electrical data	Power supply		Ph-V-Hz	1ph-230V-50Hz / 3ph-400V-50Hz	
	Electrical integration	Power supply 230V /400V	kW	6 / 9	
	Power input (Max)		A	29 / 20	36 / 20
	Power cable (recommended)		Type	3x6 mm² / 5x4 mm²	3x10 mm² / 5x4 mm²
Product specifications	Sound power level		dB(A)	-	
	Dimensions	LxDxH	mm	600x610x1715	
	Weight	Net	kg	155	165
	Anode (supplied)			Titanium	
	Control (included)			On board machine	
	Remote control via Modbus (optional)			MODBUS40M	

The data reported above refers to the following standards: EN 14511:2018; EN 14825:2019; EN50564:2011; EN12102-1:2018; EN12102-2:2019; (EU)No:811:2013; (EU)No:813:2013; OJ 2014/C 207/02:2014.