

# HYDROLUTION, THE SYSTEM FOR HEATING, COOLING AND DHW PRODUCTION

**A+++**

MINIMUM  
ENERGY  
CLASS 35° C

**R32**

6 & 8 KW  
MODELS

**R410A**

10 & 16 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.

# HYDROBOX CONFIGURATION

In Hydrobox mode, HYDROLUTION can be used for heating and cooling only, or in combination with one or more storage tanks to also produce domestic hot water.

## HYDROBOX COMBINATIONS

The Hydrobox combination offers space heating and cooling with the option of adding domestic hot water production.

HYDROLUTION Hydrobox is composed of an external unit and a hydromodule (HMS), having an electrical resistance and a circulation pump inside. By combining the accessories, the installation is even more complete and adapts to every air conditioning need.

Hydrobox solution has the following advantages:

- **HEATING AND COOLING ONLY OPTION**, is available without the addition of any accessories as the circulation pump and the electrical resistance are already inside the hydromodule;
- **DHW OPTION**, available by connecting a DHW tank to the HYDROLUTION Hydrobox;
- **FLEXIBLE INSTALLATION OF UNITS**, you can combine the components according to your needs;
- **CAPACITIES AVAILABLE**
  - 6 kW - R32
  - 8 kW - R32
  - 10 kW - R410A
  - 16 kW - R410A



FUNCTIONALITY	APPLICATIONS	ADVANTAGES FOR PROFESSIONALS	ADVANTAGES FOR CUSTOMERS
<ul style="list-style-type: none"> <li>• floor heating</li> <li>• heating via high efficiency radiators</li> <li>• DHW &amp; heating</li> <li>• cooling</li> <li>• fancoil heating</li> </ul>	<ul style="list-style-type: none"> <li>• independent homes</li> <li>• micro condominiums</li> <li>• offices</li> <li>• small shops</li> </ul>	<ul style="list-style-type: none"> <li>• integrates with traditional heating systems</li> <li>• installation flexibility</li> <li>• low environmental impact</li> <li>• can also be installed in small spaces</li> </ul>	<ul style="list-style-type: none"> <li>• high performance</li> <li>• long-term reliability</li> <li>• low management costs</li> <li>• quiet operation</li> <li>• easy to use</li> </ul>

# HEATING / COOLING / DOMESTIC HOT WATER

## HYDROLUTION SYSTEM - TECHNICAL DATA

### HYDROBOX

Outdoor unit model				FDCW60VNX-W	FDCW71VNX-W	FDCW100VNX-A	FDCW140VNX-A	
Heating	Rated power	A7//W35	kW	5.08 [0.90~7.60]	8.30 [2.20~9.50]	9.20 [3.50~10.00]	16.00 [4.20~16.00]	
	Power input			0.98	1.93	2.15	3.81	
	Performance coefficient			5.16	4.30	4.28	4.20	
	Rated power	A7//W45	kW	2.70 [2.70~8.00]	8.00 [3.00~10.00]	9.00 [3.50~11.00]	16.00 [5.80~16.00]	
	Power input			0.88	2.35	2.62	4.83	
	Performance coefficient			3.06	3.40	3.44	3.31	
Cooling	Rated power	A35//W18	kW	7.54 [1.20~7.80]	9.00 [2.70~10.70]	11.00 [3.30~12.00]	16.50 [5.20~16.50]	
	Power input			2.11	2.49	3.04	4.36	
	Energy efficiency			3.57	3.62	3.62	3.78	
	Rated power	A35//W7	kW	5.31 [0.60~6.30]	7.10 [2.00~7.10]	8.00 [3.00~9.00]	11.80 [3.10~11.80]	
	Power input			1.95	2.63	2.85	4.45	
	Energy efficiency			2.73	2.70	2.81	2.65	
Seasonal data (Heating)	Design load [Pdesignh] @ -10°C	35/55	kW	4.80/5.30	7.50/7.00	8.50/10.00	12.50/13.00	
	Seasonal energy efficiency (ηs)		%	190/137	180/131	165/126	166/133	
	Energy efficiency class		-	A+++/A++	A+++/A++	A++/A++	A+/A++	
	Annual energy consumption		kWh/y	2089/3193	3450/4421	4181/6391	6099/7906	
Seasonal data (DHW)	Test cycle profile			XXL	XXL	XXL	XXL	
	Energy efficiency (ηwh)	%		113	-	89	88	
	Energy efficiency class		A		-		A	
	Annual energy consumption		kWh/y		-		2430	2449
Operating range	Outdoor air temperature	Heating & DHW	°C	-20~43				
		Cooling		15~43				
Refrigerant circuit data	Refrigerant type [GWP]		R32 [675]					R410A [2088]
	Q.ty of precharge (tons CO2)		kg (t)	1.3 [0.878]	1.84 [1.242]	2.9 [6.055]	4.0 [8.352]	
	Piping diameter liquid/gas		mm (inch)	6.35[1/4"] / 12.7[1/2"]	6.35[1/4"] / 15.88[5/8"]	9.52[3/8"] / 15.88[5/8"]	9.52[3/8"] / 15.88[5/8"]	
	Max splitting distance		m	30	50	30	30	
	Max splitting level difference O.U.-I.U. / I.U..-O.U.		m	20 / 20	30 / 15	7 / 7	7 / 7	
	Splitting distance without additional charge		m	15	15	15	15	
	Additional charge		g/m	20	20	60	60	
	Refrigerant control system		Capillary tube + EEV					Electronic expansion valve
	Compressor		type	Twin rotary - DC Inverter		Rotary - DC Inverter		
Electrical data	Power supply	From indoor unit	Ph-V-Hz	1ph-230V-50Hz				
	Maximum current		A	15	18	23	25	
	Power cable (recommended)		type	3x4 mm²	3x4 mm²	3x6 mm²	3x6 mm²	
Product specifications	Fan	Type	q.ty	DC Inverter x 1		DC Inverter		
	Air flow		m³/h	2490	3000	4380	6000	
	Sound power level (max)		dB(A)	65	69	58	58	
	Sound pressure level (a 1 m)		dB(A)	44	49	50	54	
	Dimensions	LxDxH	mm	800x290x640	880(+88)x340x750	970x370x845	970x370x1300	
	Weight	Net	kg	46	62	81	105	
Indoor unit model				HMS60-W	HMS100-W	HMS100-W	HMS140-S	
Operating range	Delivery water temperature	Heating & DHW	°C	25~58	25~60	25~58	25~58	
		Cooling		7~25				
Hydraulic data	Min. DHW tank capacity (not included)		L	200	200	300	500	
	Water/freon heat exchanger		type	Braze-welded plates				
	Circulation pump		Included					
	Water connections	Size	mm	22	22	22	28	
	Operating pressure (system)		Max	bar	3	3	3	3
	Expansion vessel	Volume	L	12	12	12	12	
Precharge		bar	0.5	0.5	0.5	0.5		
Electrical data	Power supply			Ph-V-Hz	1ph-230V-50Hz / 3ph-400V-50Hz			
	Electrical integration	Power supply 230V /400V	kW	6 / 9				4.5 / 9
	Power input (Max)		A	29 / 20	36 / 20	36 / 20	45 / 25	
	Power cable (recommended)		type	3x6 mm² / 5x4 mm²	3x10 mm² / 5x4 mm²		3x10 mm² / 5x6 mm²	
Product specifications	Sound power level		dB(A)	-				
	Dimensions	LxDxH	mm	515x350x850				
	Weight	Net	kg	50	56	56	58	
	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.