

LINE UP

MW MODULAR MONOBLOC R32

Air-to-water heat pump

OUTDOOR UNITS



36.02 kW	62.60 kW
3-Phase	3-Phase
MCWSGS 3501 Z	MCWSGS 6001 Z

MW MONOBLOC MODULAR AIR-TO-WATER HEAT PUMP R32

The new range of modular Full DC Inverter heat pumps is ideal for cooling and heating residential and commercial buildings. Available in two sizes, 35 and 60 kW of cooling capacity, modularity is one of its most important advantages; in fact, it is possible to combine the two models up to 16 units, for a maximum of 960 kW of capacity.

High power in combination

35 & 60 kW 960 kW

Outdoor units' capacities

Maximum capacity combining 16 units of 60 kW



Energy efficiency

A++

In heating mode with 35° C delivery water temperature.

R32

30% less charge than R410A gas.

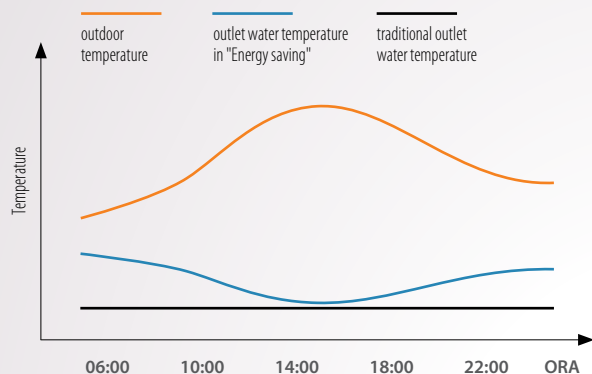
Modbus

The system is equipped with Modbus protocol as standard.

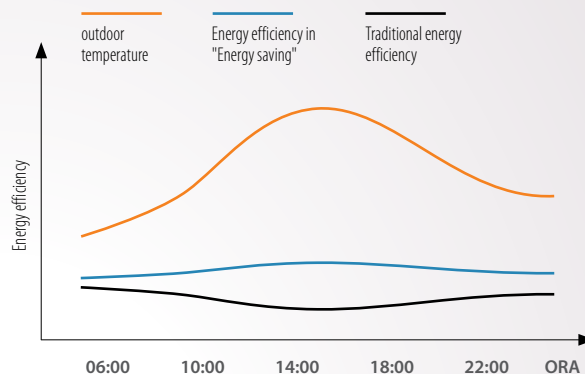
Control consumption with the "Energy saving" mode

The unit is able to estimate the thermal load of the building based on the outside air temperature, consequently modifying the flow water temperature set in order to reduce energy consumption.

OUTLET WATER TEMPERATURE



ENERGY EFFICIENCY TREND



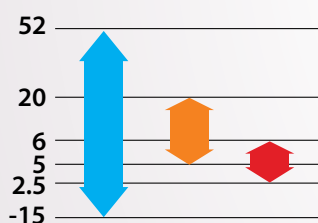
Wide operating range

COOLING MODE

🌬️ from -15° C to 52° C

🔥 from 5° C to 20° C (delivery temp.)

⚠️ from 2.5° C to 6° C



🌬️ Outdoor air temperature

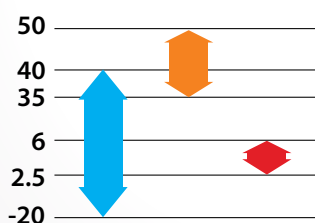
🔥 Delivery water temperature

HEATING MODE

🌬️ from -20° C to 40° C

🔥 from 35° C to 50° C (delivery temp.)

⚠️ from 2.5° C to 6° C



⚠️ Water delivery temperature difference

-15°C

Minimum outside temperature in cooling mode

52°C

Maximum outside temperature in cooling mode

-20°C

Minimum outside temperature in heating mode

40°C

Maximum outside temperature in heating mode



Very quiet operation

- > Wide plastic fan blades
- > «Quiet mode» function
- > Compressor sound insulation
- > Special design of the fan area

52dB(A)

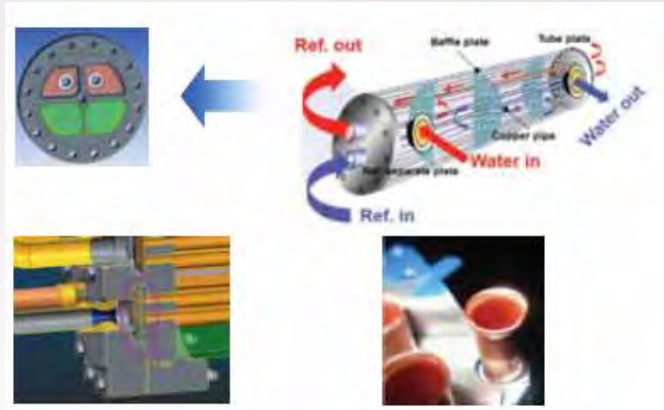
sound level at partial loads

High efficiency with shell and tube heat exchanger

Heat exchanger with "Dual flow" design, to increase the efficiency and capacity of the unit.

The special design of the plate and the related constriction at the exchanger inlet maintain a regular and uniform flow of refrigerant in order to improve exchange efficiency.

The U-thread inside the copper pipes improves the laminar flow of the fluid and facilitates heat exchange.



Longer service life with balanced work function

Thanks to smart control it is possible to balance the working time of the compressors in order to avoid excess work for only some, this improves the reliability of the system and its service life.

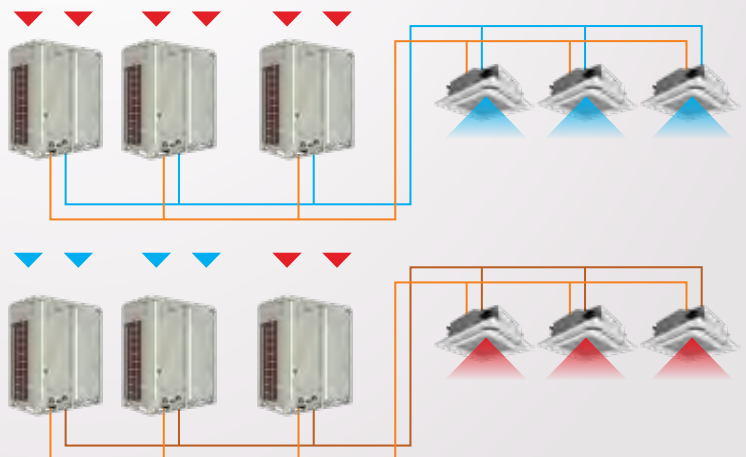


Greater reliability with the rotation function of the hydronic pumps

The units do not have hydronic pumps, which must therefore be provided externally, even in pairs. The pump rotation function can be activated automatically in order to increase their service life.

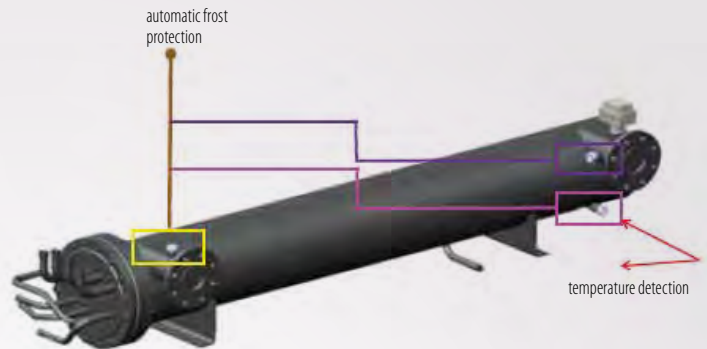
Winter comfort with selective machine defrosting

Only a third of the outdoor units are allowed to defrost simultaneously, thus reducing fluctuations in the outlet water temperature and, consequently, improving room comfort.



Frost protection for temperatures below 5°C

Anti-freeze protection is automatically activated by the unit when the outside temperature drops below 5°C, both in cooling and heating.



Operational continuity with free master unit

Each unit can be a master. In the event of a malfunction of a master unit, communication between the units of the same system is timely. A possible problem on one unit does not affect the normal functioning of the others, ensuring operational continuity.



Centralized control up to 16 units

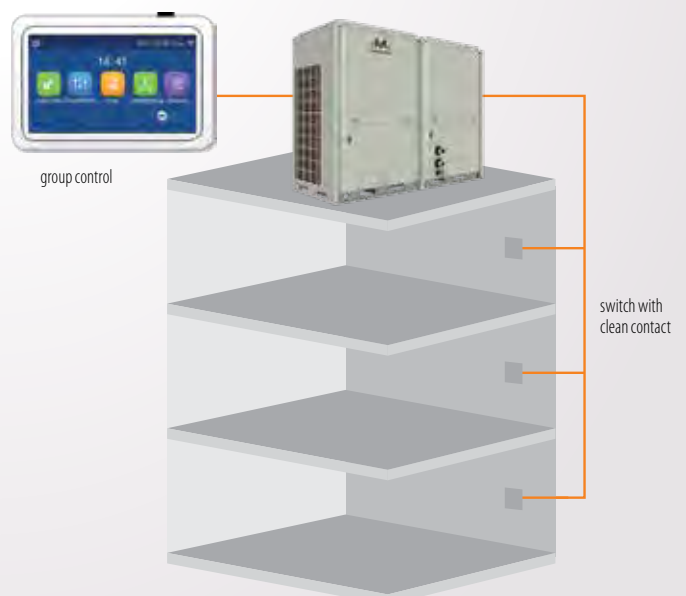
The wired remote control allows you to control up to 16 units.

- It is equipped with a 4.3-inch backlit LCD touch screen display.
- Allows the display of parameters and operating status in real time.
- It features anti-corrosion structure.
- Touch screen, allows easy and quick operations.
- It can show up to 10 error codes on the same page.



Remote on/off thanks to the clean contact

The unit (or group of units) can be put into standby/ON by means of a clean external contact.



OUTDOOR UNITS



MCWSGS 3501 Z



MCWSGS 6001 Z

ENERGY CLASS

A++

In heating mode with **35°C** delivery water temperature.

Model				MCWSGS 3501 Z		MCWSGS 6001 Z	
Heating	Rated power	A7//W35	kW	36.02		62.60	
	Electrical absorption			8.81		15.08	
	Performance coefficient		COP	4.09		4.15	
	Rated power	A7//W45	kW	35.00		65.00	
	Electrical absorption			10.60		19.90	
	Performance coefficient		COP	3.30		3.27	
Cooling	Rated power	A35//W7	kW	32.00		60.00	
	Electrical absorption			11.70		20.80	
	Energy efficiency		EER	2.74		2.88	
	Potenza massima	A35//W18	kW	41.38		72.18	
	Electrical absorption			11.18		18.60	
	Energy efficiency		EER	3.70		3.88	
Seasonal heating data	Theoretical load (Pdesignh) @ -10°C	W35	kW	24.00		51.00	
	Seasonal energy efficiency (ηs)		%	153.0		153.0	
	Energy efficiency class		-	A++		A++	
	Annual energy consumption		kWh/y	12504		25964	
Operating range	Outdoor air temperature	Heating	°C	-20~40			
		Cooling	°C	-15~52			
	Delivery water temperature	Heating	°C	35~50			
		Cooling	°C	5~20			
Refrigerant circuit data	Refrigerant type (GWP)			R32 (675)			
	Quantity (tons CO2)	kg (t)		5.5 (3.713)		5.5 x 2 (7.425)	
	Control system			Electronic expansion valve			
	Compressor	type		Twin Rotary DC Inverter x 1		Twin Rotary DC Inverter x 2	
Hydraulic data	Heat exchanger	Type		Shell and tube			
		Flow rate	m³/h	5.5		10.3	
		Load loss	kPa	80		55	
	Circulation pump			Not included			
	Water connections	Type		Threaded		Threaded	
		Dimension	Inch	G1" 1/4 M (DN32)		G2" M (DN50)	
Electrical data	Operating pressure Min/Max	bar		0.6/16			
	Expansion vessel			Not included			
	Power supply	Ph-V-Hz		3-380~415V-50Hz			
	Maximum current	A		22.00		52.00	
Product specifications	Power cable (recommended)	type		5x6 mm²		5x16 mm²	
	Fan	Type	q.ty	DC Inverter x 2		DC Inverter x 2	
		Air flow	m³/h	12600		24000	
	Sound pressure level	dB(A)		62		68	
	Sound power level	dB(A)		78		86	
	Dimensions	WxDxH	mm	1340x845x1605		2200x965x1675	
	Weight	Net	kg	405		686	
	Controls	Wired control (NOT included)		DMWZ-CWG-BIG			
		Climate curve		NOT available			
		Modbus		Integrated			

GENERAL NOTE: The above data 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

SYSTEM DIAGRAM

