

LINE UP

MW R32 SPLIT WITH HYDROMODULE AND BUILT-IN TANK

Air-to-water heat pump

OUTDOOR UNITS



MCENG 600 Z



MCENG 800~1200 Z
MCESG 1400~1600 Z



MHNG 400~1600 Z
MHSG 1200~1600 Z



MHANG 401~1601 Z
MHASG 1201~1601 Z

MW R32 SPLIT AIR-TO-WATER HEAT PUMP WITH HYDROMODULE AND BUILT-IN TANK

The new range of MW R32 Split air-to-water heat pumps with hydromodule and integrated tank with latest-generation DC Inverter technology is ideal for cooling, heating and DHW production. It is available in a single-phase version from 6 to 12 kW and in a three-phase version from 14 to 15.5 kW of thermal power. It achieves very high levels of efficiency in heating, up to 5 of COP.

Energy efficiency

A+++

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

A++

In heating mode with **55° C** delivery water temperature.

R32

30% less charge than R410A gas.

Design flexibility

6~15.5 kW

Capacities

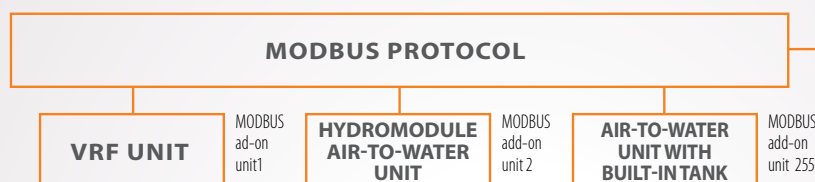
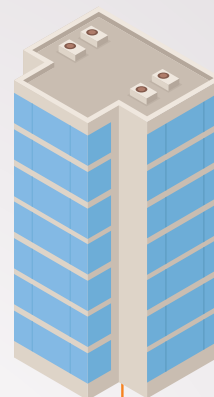
Features of the MW R32 Split heat pump with hydromodule and built-in tank

- DC Brushless Axial fans are designed for aerodynamic optimization, guaranteeing low noise levels, but high efficiency and large air flow.
- It is equipped with an electric resistance on the base, to prevent ice formation during winter operation.
- The outdoor unit is equipped with an electronic expansion valve.
- The system is equipped with Modbus protocol as standard: control via WiFi is possible.

Connectivity and remote control

The unit allows connection to a BMS supervision system using the Modbus protocol as standard.

By installing the MULTIWARM Ewpe Smart APP application on your smartphone, you will be able to remotely control the most significant parameters of the heat pump via integrated WiFi.



Dual stage compressor with vapor injection

Under low outside temperature conditions, the dual-stage compressor with vapor injection reduces heat capacity losses and has higher energy efficiency than the conventional compressor.

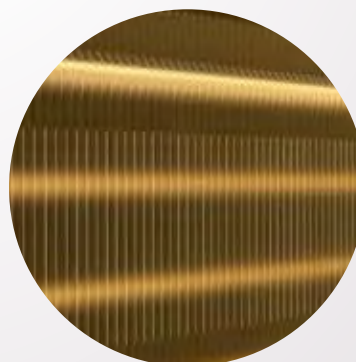
Under the same conditions, high compressor discharge temperatures and other problems can be completely avoided and the compressor reliability is significantly higher.

Double-stage compression, double-stage lamination and steam injection increase the outlet water temperature and improve control accuracy.

Golden fin anti-corrosion protective treatment

The heat exchanger coils are subjected to a special protective anti-corrosion treatment "Golden Fin". The heat exchanger fins, made of aluminum-manganese, are coated with a special layer of epoxy resin, which gives them the typical golden color, and with an additional hydrophilic layer.

This special treatment is able to protect the exchanger from rust and corrosion in areas with air with a high salt concentration, typical of marine areas.



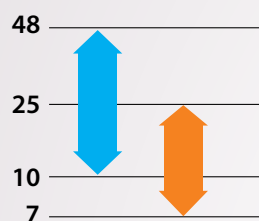
Wide operating range

The outlet water temperature range is from 20°C to 60°C: this allows use with radiant floors, hydronic terminals and medium temperature radiators.

COOLING MODE

from 10° C to 48° C

from 7° C to 25° C
(delivery temp.)



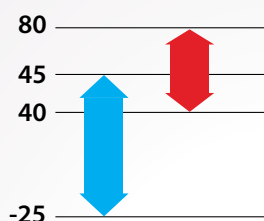
Outdoor air temperature

Delivery water temperature

DHW PRODUCTION

from -25° C to 45° C

from 40° C to 80° C
(tank temp.)

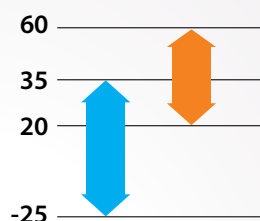


DHW tank temperature

HEATING MODE

from -25° C to 35° C

from 20° C to 60° C
(delivery temp.)



48°C

Maximum outside
temperature in cooling
mode

-25°C

Minimum outside
temperature in heating
mode



Touch screen control panel

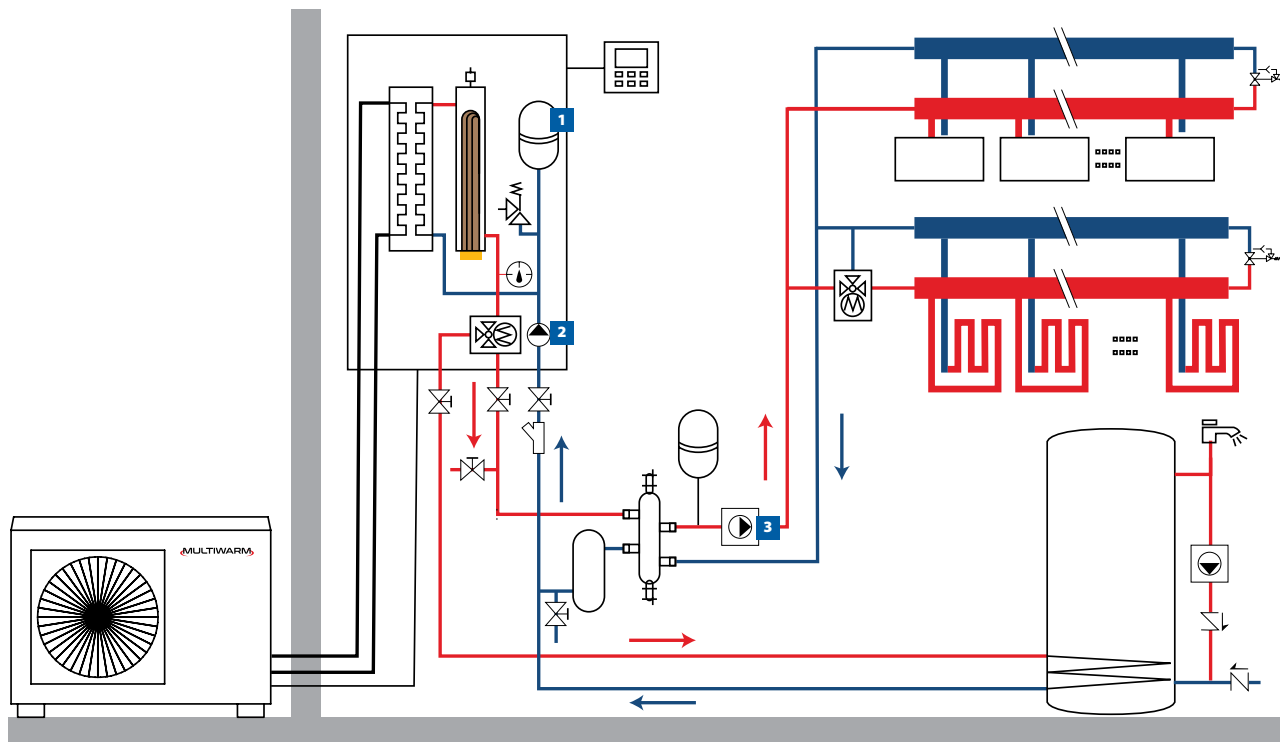
The control panel, supplied as standard and integrated into the indoor unit, allows you to:

- define the operating mode of the heat pump and its priorities (heating, cooling, production of domestic hot water);
- set all the main operating parameters (set point, hysteresis, etc.);
- activate external or internal systems for integration or replacement of the heating and domestic hot water production unit;
- manage the unit commissioning activity;
- view the status of the operating parameters of the main components of the heat pump;
- manage the unit remotely by connecting to a Modbus network or via the Wi-Fi integrated into the control panel.

Specific auxiliary functions are also available in the control panel, including:

- automatic management of the fluid delivery temperature based on the external temperature (climate curve);
- weekly and time-band operation programming;
- activation of silent operation;
- emergency management in case of unit malfunction;
- programmable activation of the anti-legionella cycle via electric resistance in the tank;
- automatic activation of frost protection.

SPLIT MODEL WITH HYDROMODULE - SYSTEM DIAGRAM



NOTE: 1. Expansion vessel referred to the system circuit. Check that what is included in the unit is sufficient for the purpose. 2. Primary circulator on the system side. 3. Secondary circulator on the system side.



DMG-HP-Z control

Group control, connect up to four R32 Monobloc or Split Series units, even combined together. Main functions:

- > Silent mode;
- > fast hot water;
- > Holiday mode;
- > Climate;
- > Child lock;
- > anti-legionella programming via electrical resistance in the tank;
- > Error reset;
- > Weekly timer.



SPLIT MODEL WITH HYDROMODULE

MCENGS 600 Z



MCENGS 800~1200 Z
MCESGS 1400~1600 Z



MHNGS 400-1600 Z
MHSGS 1200~1600 Z



ENERGY CLASS

A+++

In heating mode with 35°C delivery water temperature.

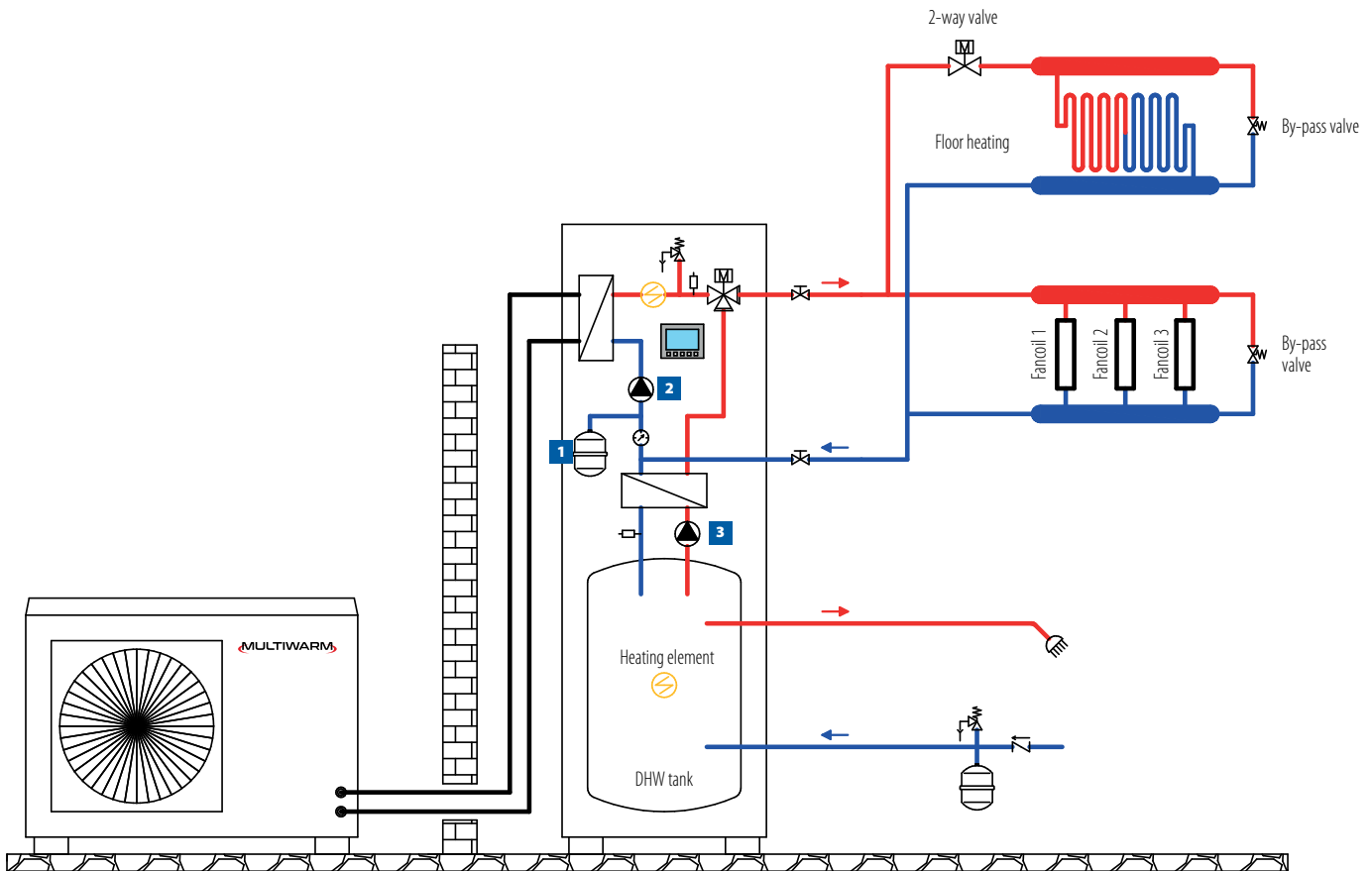
A++

In heating mode with 55°C delivery water temperature.

Outdoor unit model				MCENGS 600 Z	MCENGS 800 Z	MCENGS 1000 Z	MCENGS 1200 Z	MCESGS 1400 Z	MCESGS 1600 Z
Riscaldamento	Rated power	A7//W35	kW	6.00	8.00	10.00	12.00	14.00	15.50
	Electrical absorption			1.20	1.61	2.10	2.40	2.98	3.44
	Performance coefficient		A7/W45	COP	5.00	4.97	4.76	5.00	4.70
	Rated power	5.80			8.00	9.85	12.40	14.44	16.13
	Electrical absorption	kW		1.52	2.07	2.69	3.29	3.63	4.16
	Performance coefficient	COP	3.82	3.86	3.66	3.77	3.98	3.88	
Cooling	Rated power	A35//W18	kW	5.80	7.70	9.35	11.00	12.60	13.00
	Electrical absorption			1.13	1.72	2.36	2.50	3.41	3.6
	Energy efficiency		A35//W7	EER	5.15	4.48	3.96	4.40	3.70
	Rated power	4.00			7.15	7.60	10.59	11.24	11.52
	Electrical absorption	kW		1.16	2.49	2.77	3.79	4.13	4.38
	Energy efficiency	EER	3.45	2.87	2.74	2.79	2.72	2.63	
Seasonal heating data	Theoretical load (Pdesignh) @ -10°C	35/55	kW	6/5	7/7	9/8	11/11	12/13	13/13
	Seasonal energy efficiency (ηs)		%	178.7/127.4	181/129	181/127	182/126	175/131	175/131
	Energy efficiency class		-	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++
	Annual energy consumption		kWh/y	2729/3169	3149/4371	4038/5091	4967/6985	5552/7958	6027/7958
Operating range	Outdoor air temperature	Heating	°C	-25~35					
		Cooling		10~48					
		DHW		-25~45					
Refrigerant circuit data	Refrigerant type (GWP)			R32 (675)					
	Q.ty of pre-charge (tons CO2)			kg (t)	1.1 (0.743)	1.84 (1.242)	1.84 (1.242)	1.84 (1.242)	
	Piping diameter Liquid/Gas			mm (inch)	6.35(1/4") / 12.74(1/2")		6.35(1/4") / 12.74(1/2") / 15.88(5/8")		6.35(1/4") / 15.88(5/8")
	Max splitting length			m	20	15	15	15	15
	Max height diffence O.U.-I.U. / I.U.-O.U.			m	15	15	15	15	15
	Splitting length without additional charge			m	10	15	15	15	15
	Additional charge			g/m	16	0	0	0	0
	Refrigerant control system			Electronic expansion valve					
Electrical data	Compressor		type	Rotary - DC Inverter					
	Power supply		Ph-V-Hz	1ph-230V-50Hz				3ph-400V-50Hz	
	Maximum current	Heating	A	10.00	13.50	15.00	17.80	8.00	8.50
		Cooling		11.00	20.00	22.00	25.60	11.50	11.50
Product specifications	Power cable (recommended)		type	3x2.5 mm ²		3x4 mm ²		5x2.5 mm ²	
	Fan	Type	q.ty	DC Inverter		DC Inverter		DC Inverter	
		Air flow	m3/h	3200	3300	3300	5015	5015	5015
	Sound power level		dB(A)	62	67	68	68	68	68
	Sound pressure level		dB(A)	52	55	55	57	58	58
	Dimensions	WxDxH	mm	975x396x702	982x427x787	982x427x787	940x460x820	940x460x820	940x460x820
	Weight	Net	kg	55	82	82	104	110	110
Indoor unit model				MHNGS 400-600 Z	MHNGS 800-1000 Z	MHNGS 1200-1600 Z	MHSGS 1200-1600 Z		
Operating range	Delivery water temperature	Heating	°C	20~60	20~60	20~60	20~60		
	DHW temperature (tank)	Cooling		7~25	7~25	7~25	7~25		
					40~80	40~80	40~80	40~80	
Hydraulic data	Water/freon heat exchanger	Type		Brazed plate					
	Circulation pump	Brand		Shinhoo					
	Water connections	Type		Threaded					
		Dimension	Inch	1”M BSP	1”M BSP	1”M BSP	1”M BSP		
	Operating pressure	Min/Max	bar	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5		
	Expansion vessel	Volume	L	10	10	10	10		
		Pre-load	bar	1	1	1	1		
Electrical data	Power supply	Ph-V-Hz			1ph-230V-50Hz		3ph-400V-50Hz		
	Electrical integration	Max	kW	3.00	6.00	6.00	6.00		
	Electrical absorption		kW	3.10	6.10	6.10	6.1		
	Power cable (recommended)		type	3x2.5 mm ²	3x6 mm ²	3x6 mm ²	5x4 mm ²		
Product specifications	Sound power level		dB(A)	42	42	42	42		
	Sound pressure level		dB(A)	29	29	29	29		
	Dimensions	WxDxH	mm	460x318x860	460x318x860	460x318x860	460x318x860		
	Weight	Net	kg	58	58	58	60		
	Control (supplied)		On-board machine control						
Integrated remote control		Wifi. Modbus							

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.

SPLIT MODEL WITH BUILT-IN TANK - SYSTEM DIAGRAM



NOTE: 1. Expansion vessel referred to the system circuit. Check that what is included in the unit is sufficient for the purpose. 2. System side circulator. 3. Sanitary water side circulator.



DMG-HP-Z control

Group control, connect up to four R32 Monobloc or Split Series units, even combined together. Main functions:

- > Silent mode;
- > fast hot water;
- > Holiday mode;
- > Climate;
- > Child lock;
- > anti-legionella programming via electrical resistance in the tank;
- > Error reset;
- > Weekly timer.



SPLIT MODEL WITH BUILT-IN TANK

MCENG 600 Z



MCENG 800~1200 Z
MCESG 1400~1600 Z



MHANGS
401-1601 Z
MHASGS
1201-1601 Z

ENERGY CLASS

A+++

In heating mode with 35°C delivery water temperature.

A++

In heating mode with 55°C delivery water temperature.

Outdoor unit model				MCENG 600 Z	MCENG 800 Z	MCENG 1000 Z	MCENG 1200 Z	MCESG 1400 Z	MCESG 1600 Z	
Heating	Rated power	A7//W35	kW	6.00	8.00	10.00	12.00	14.00	15.50	
	Electrical absorption			1.20	1.61	2.10	2.40	2.98	3.44	
	Performance coefficient			5.00	4.97	4.76	5.00	4.70	4.51	
	Rated power	A7//W45	kW	5.80	8.00	9.85	12.40	14.44	16.13	
	Electrical absorption			1.52	2.07	2.69	3.29	3.63	4.16	
	Performance coefficient			3.82	3.86	3.66	3.77	3.98	3.88	
Cooling	Rated power	A35//W18	kW	5.80	7.70	9.35	11.00	12.60	13.00	
	Electrical absorption			1.13	1.72	2.36	2.50	3.41	3.60	
	Energy efficiency			5.13	4.48	3.96	4.40	3.70	3.61	
	Rated power	A35//W7	kW	4.00	7.15	7.60	10.59	11.24	11.52	
	Electrical absorption			1.16	2.49	2.77	3.79	4.13	4.38	
	Energy efficiency			3.45	2.87	2.74	2.79	2.72	2.63	
Seasonal heating data	Theoretical load (Pdesignh) @ -10°C	35/55	kW	6/5	7/7	9/8	11/11	12/13	13/13	
	%		182/128	181/129	181/127	182/126	175/132	175/132		
	-		A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++		
	Annual energy consumption		kWh/y	2685/3152	3149/4371	4038/5091	4967/6985	5552/7958	6027/7958	
Operating range	Outdoor air temperature	Heating	°C	-25~35						
		Cooling		10~48						
		DHW		-25~45						
Refrigerant circuit data	Refrigerant type (GWP)			R32 (675)						
	Q.ty of pre-charge (tons CO2)			kg (t)	1.1 (0.743)	1.84 (1.242)	1.84 (1.242)	1.84 (1.242)	1.84 (1.242)	
	Piping diameter Liquid/Gas			mm (inch)	6.35(1/4") / 12.74(1/2")		6.35(1/4") / 12.74(1/2")		6.35(1/4") / 15.88(5/8")	
	Max splitting length			m	20	25	25	15	15	15
	Max height diffrence O.U.-I.U. / I.U.-O.U.			m	15	15	15	15	15	15
	Splitting length without additional charge			m	10	25	25	15	15	15
	Additional charge			g/m	16	0	0	0	0	0
	Refrigerant control system			Electronic expansion valve						
	Compressor			type	Two-stage rotary- DC Inverter					
	Electrical data	Power supply		Ph-V-Hz	1ph-230V-50Hz				3ph-400V-50Hz	
Maximum current		Heating	A	10.00	13.50	15.00	17.80	8.00	8.50	
		Cooling		11.00	20.00	22.00	25.60	11.50	11.50	
Product specifications	Power cable (recommended)		type	3x2.5 mm ²		3x4 mm ²		5x2.5 mm ²		
	Fan	Type	q.ty	DC Inverter		DC Inverter		DC Inverter		
		Air flow	m ³ /h	3200	3300	3300	5015	5015	5015	
	Sound power level		dB(A)	62	67	68	68	68	68	
	Sound pressure level		dB(A)	52	55	55	57	58	58	
	Dimensions		WxDxH	mm	975x396x702	982x427x787	982x427x787	940x460x820	940x460x820	
	Weight		Net	kg	55	82	82	104	110	110
Indoor unit model				MHANGS 401-601 Z	MHANGS 801-1001 Z		MHANGS 1201-1601 Z	MHASGS 1201-1601 Z		
Operating range	Delivery water temperature	Heating	°C	20~60	20~60		20~60	20~60		
	DHW temperature (tank)	Cooling		7~25	7~25		7~25	7~25		
				40~80	40~80		40~80	40~80		
Hydraulic data	DHW tank capacity		L	190	190		190	190		
	Water/freon heat exchanger	Type	Braze plate							
	Circulation pump	Brand	Shinwoo							
	Water connections	Type	Threaded							
		Dimension	Inch	1"M BSP	1"M BSP		1"M BSP	1"M BSP		
	Operating pressure		Min/Max	bar	0.5/2.5	0.5/2.5		0.5/2.5	0.5/2.5	
	Expansion vessel	Volume	L	10	10		10	10		
		Pre-load	bar	1	1		1	1		
Electrical data	Power supply		Ph-V-Hz	1ph-230V-50Hz				3ph-400V-50Hz		
	Electrical integration	Heating	kW	3.00	6.00		6.00	6.00		
		Serbatolo ACS		3.00	3.00		3.00	3.00		
	Electrical absorption	Max	kW	3.175	6.10		6.10	6.1		
Product specifications	Power cable (recommended)		type	3x4 mm ²	3x6 mm ²		3x6 mm ²	5x4 mm ²		
	Sound power level		dB(A)	47	47		47	47		
	Sound pressure level		dB(A)	29	29		29	29		
	Dimensions		WxDxH	mm	600x650x1800	600x650x1800		600x650x1800	600x650x1800	
	Weight		Net	kg	195	195		195	195	
	Control (supplied)			On-board machine control						
Integrated remote control			Wifi. Modbus							

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 2017/02:2014.