



SPLIT R32 WITH HYDROMODULE AND WITH HYDROMODULE AND BUILT-IN TANK

Air-to-water heat pump

OUTDOOR UNITS



MCENG 600 Z



MCENG 800~1200 Z
MCESG 1400~1600 Z

INDOOR UNIT HYDROMODULE



MHNG 400~1600 Z
MHSG 1200~1600 Z











INDOOR UNIT HYDROMODULE AND BUILT-IN TANK



MHANG 401~1601 Z
MHASG 1201~1601 Z











SPLIT R32 WITH HYDROMODULE

Air-to-water heat pump

kW	6	8	10	12	14	15.5
	 MCENG 600 Z 1-Phase	 MCENG 800 Z 1-Phase	 MCENG 1000 Z 1-Phase	 MCENG 1200 Z 1-Phase	 MCESG 1400 Z 3-Phase	 MCESG 1600 Z 3-Phase
 MHNGS 400-600 Z	✓					
 MHNGS 800-1000 Z		✓	✓			
 MHNGS 1200-1600 Z				✓		
 MHSGS 1200-1600 Z					✓	✓

SPLIT R32 WITH HYDROMODULE AND BUILT-IN TANK

Air-to-water heat pump

	kW	6	8	10	12	14	15.5
		 MCENG 600 Z 1-Phase	 MCENG 800 Z 1-Phase	 MCENG 1000 Z 1-Phase	 MCENG 1200 Z 1-Phase	 MCESG 1400 Z 3-Phase	 MCESG 1600 Z 3-Phase
 MHANGS 401-601 Z		✓					
 MHANGS 801-1001 Z			✓	✓			
 MHANGS 1201-1601 Z					✓		
 MHASGS 1201-1601 Z						✓	✓

SPLIT R32 AIR-TO-WATER HEAT PUMP

WITH HYDROMODULE AND BUILT-IN TANK

Split R32 is the new range of air-to-water heat pumps with the latest-generation DC Inverter technology, ideal for cooling, heating and DHW production.

The split system is available in two configurations:
with hydromodule, or with hydromodule featuring an integrated tank.

The range includes single-phase versions from 6 to 12 kW and three-phase versions from 14 to 15.5 kW of heating output, achieving COP up to 5 in heating mode.

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

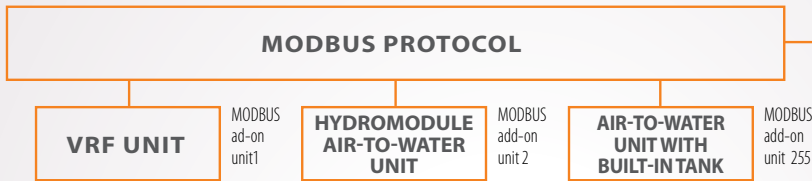
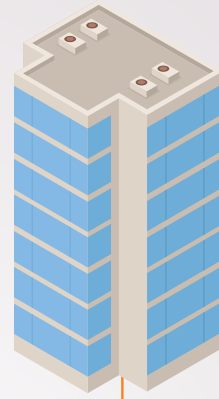
Features of the Split R32 heat pump with hydromodule and built-in tank

- > 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.

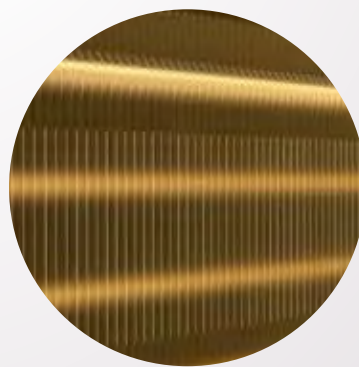
Double-stage compression, double-stage lamination and steam injection increase the outlet water temperature and improve control accuracy.

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.



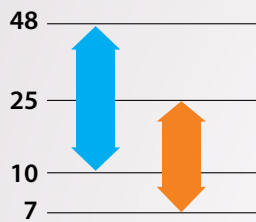
Wide operating range

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.)



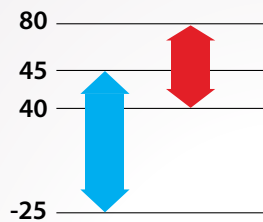
Outdoor air temperature

Delivery water temperature

DHW PRODUCTION

from -25° C to 45° C

from 40° C to 80° C
(tank temp.)

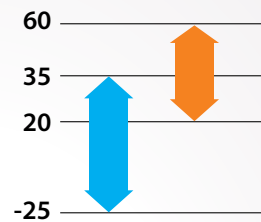


DHW tank temperature

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

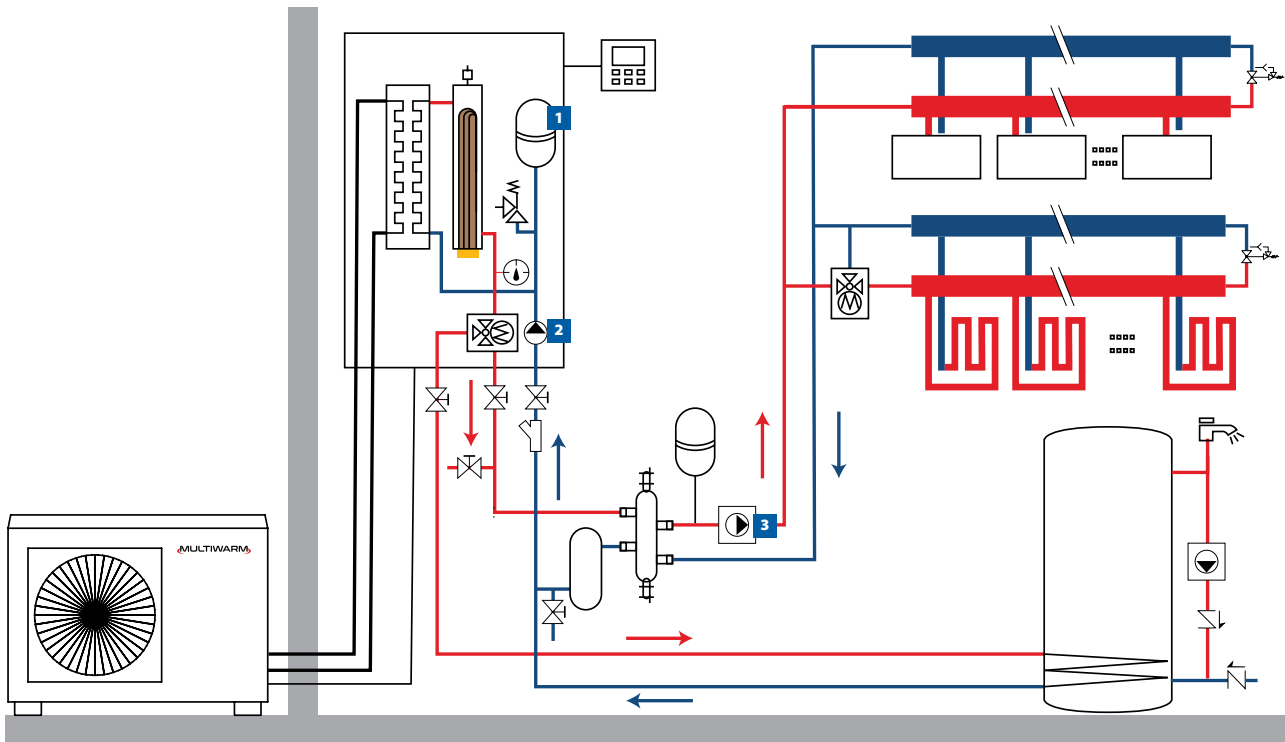
The control panel, supplied as standard and integrated into the indoor unit, allows you to:

- > 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.

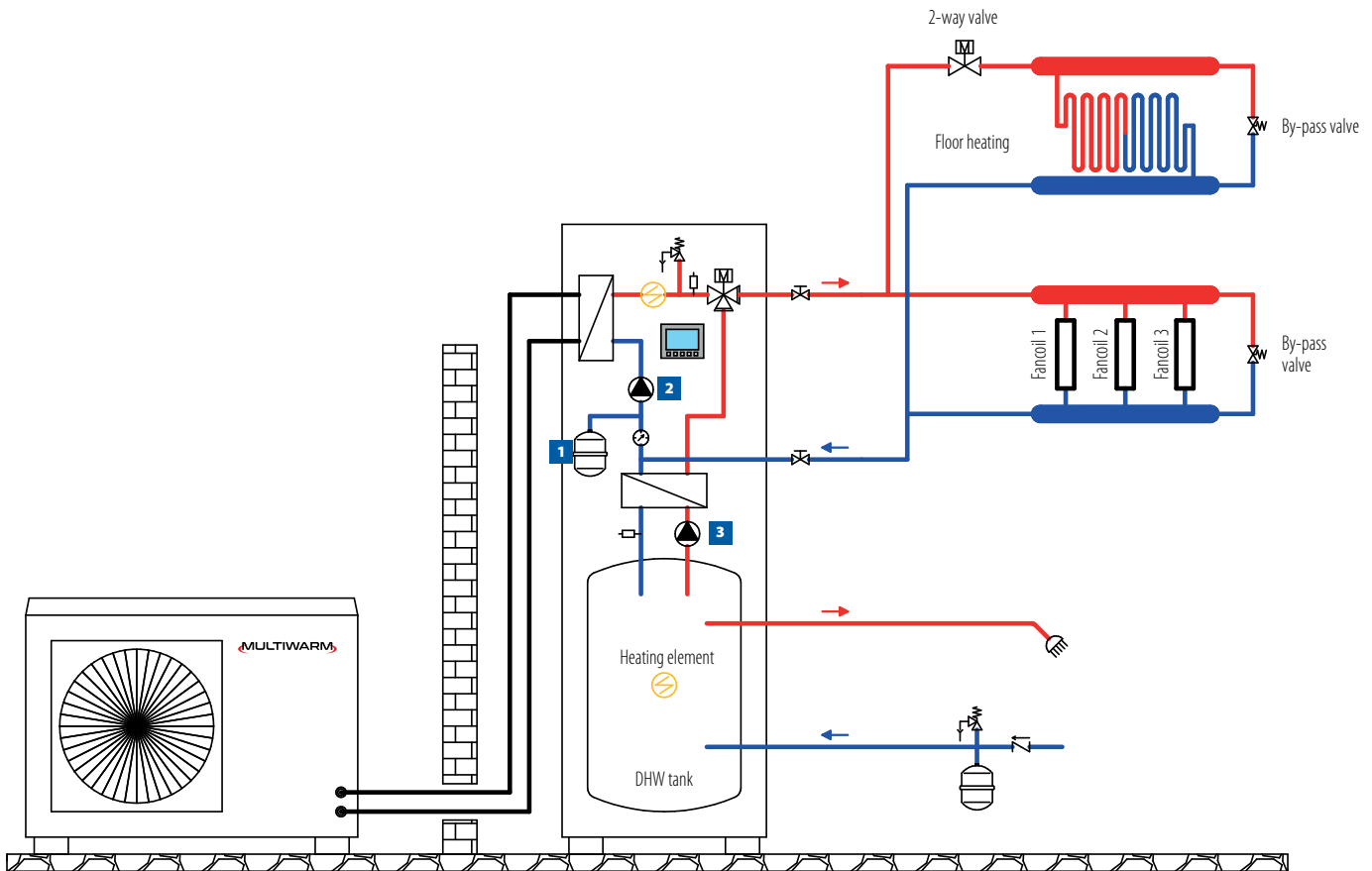
A++

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	
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	
	Cooling	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
Seasonal heating data		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			5.15	4.48	3.96	4.40	3.70	3.61
	Operating range	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
Refrigerant circuit data		Theoretical load (Pdesignh) @ -10°C	35/55	%	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++
	Annual energy consumption	kWh/y			2729/3169	3149/4371	4038/5091	4967/6985	5552/7958	6027/7958
Refrigerant control system	Outdoor air temperature	Heating	°C	-25~35						
	Compressor	Cooling		10~48						
Refrigerant type (GWP)		DHW		Type	-25~45					
	Compressor				R32 (675)					
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	
Product specifications	Power cable (recommended)	Type			3x2.5 mm ²		3x4 mm ²		5x2.5 mm ²	
	Ventilatore	Tipo	q.tà	DC Inverter			DC Inverter		DC Inverter	
Product specifications	Sound power level	Portata aria	m ³ /h	3200	3300	3300	5015	5015	5015	
	Sound pressure level	dB(A)			62	67	68	68	68	
	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		
	DHW temperature (tank)	Cooling		7~25		7~25		7~25		
		Type		40~80		40~80		40~80		
Hydraulic data	Water/freon heat exchanger	Type			Braze 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	kW			3.00		6.00		6.00	
	Electrical absorption	Max	kW			3.10		6.10		6.1
Product specifications	Power cable (recommended)	Type			3x2.5 mm ²		3x6 mm ²		5x4 mm ²	
	Sound power level	dB(A)			42		42		42	
	Sound pressure level	dB(A)			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 HYDROMODULE AND BUILT-IN TANK SYSTEM DIAGRAM



NOTE: 1. Vaso d'espansione riferito al circuito d'impianto. Verificare che quanto incluso nell'unità sia sufficiente allo scopo. 2. Circolatore lato impianto. 3. Circolatore lato acqua sanitaria.



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 AND BUILT-IN TANK

MCENGS 600 Z



MCENGS 800~1200 Z
MCESGS 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				MCENGS 600 Z	MCENGS 800 Z	MCENGS 1000 Z	MCENGS 1200 Z	MCESGS 1400 Z	MCESGS 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		A7//W45	COP	5.00	4.97	4.76	5.00	4.70	4.51
	Rated power				5.80	8.00	9.85	12.40	14.44	16.13
Cooling	Electrical absorption	A35//W18	kW	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	
	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		A35//W7	EER	5.13	4.48	3.96	4.40	3.70	3.61
	Rated power				4.00	7.15	7.60	10.59	11.24	11.52
Seasonal heating data	Electrical absorption	35/55	kW	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	
	Theoretical load (Pdesignh) @ -10°C		6/5	7/7	9/8	11/11	12/13	13/13		
	Seasonal energy efficiency (ηs)		%	182/128	181/129	181/127	182/126	175/132	175/132	
Operating range	Outdoor air temperature	Heating	°C	-25~35						
				Cooling	10~48					
Refrigerant circuit data	Refrigerant type (GWP)	kg (t)	R32 (675)							
			Q.ty of pre-charge (tons CO2)	1.1 (0.743)	1.84 (1.242)	1.84 (1.242)		1.84 (1.242)		
			Piping diameter Liquid/Gas	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	20	25	25	15	15	15	
			Max height difference O.U.-I.U. / I.U.-O.U.	15	15	15	15	15	15	
			Splitting length without additional charge	10	25	25	15	15	15	
			Additional charge	g/m	16	0	0	0	0	
			Refrigerant control system	Electronic expansion valve						
			Compressor	Rotativo bistadio - DC Inverter						
			Electrical data	Power supply	Ph-V-Hz	1ph-230V-50Hz				3ph-400V-50Hz
Maximum current	Heating	10.00				13.50	15.00	17.80		
		Cooling				11.00	20.00	22.00	25.60	
Power cable (recommended)	Ttype	3x2.5 mm ²		3x4 mm ²		5x2.5 mm ²				
Product specifications	Fan	Type	DC Inverter			DC Inverter				
		Air flow	m ³ /h	3200	3300	3300	5015	5015		
	Sound power level	dB(A)	62	67	68	68	68			
	Sound pressure level	dB(A)	52	55	55	57	58			
Dimensions	WxDxH	mm	975x396x702	982x427x787	982x427x787	940x460x820	940x460x820			
	Weight	Net	kg	55	82	82	104	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						
				Cooling	7~25					
					40~80					
Hydraulic data	DHW tank capacity	L	190							
			Water/freon heat exchanger	Type	Braze plate					
				Brand	Shinhoo					
			Circulation pump	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	
Volume	L	10		10	10	10				
Expansion vessel	Pre-load	bar	1	1	1	1				
	Power supply	Ph-V-Hz	1ph-230V-50Hz							
Electrical data	Electrical integration	Heating	kW	3.00	6.00	6.00	6.00			
				Serbatiao ACS	3.00	3.00	3.00	3.00		
	Electrical absorption	Max	kW	3.175	6.10	6.10	6.1			
				Power cable (recommended)	Type	3x4 mm ²	3x6 mm ²	3x6 mm ²	5x4 mm ²	
Product specifications	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 2014/C 207/02:2014.