

HMI_1

Reversible air/water heat pump

Cooling capacity 5,0 ÷ 15,5 kW
Heating capacity 5,0 ÷ 15,7 kW

- New R32 ecological refrigerant gas
- Production of hot domestic water with external temperatures from -25 °C to 45 °C
- Quick & easy installation
- Hermetically sealed equipment



DESCRIPTION

HMI_1 is a reversible outdoor heat pump for air-conditioning systems where, in addition to cooling rooms, high-temperature hot water is required for heating or for the production of domestic hot water.

For the production of DHW it is mandatory to combine it with a domestic hot water storage tank Aermec compatible.

HMI_1 is designed to meet the needs of both the new constructions market and the renovation market, **replacing or working alongside conventional boilers.**

It can be combined with low-temperature emission systems such as floor heating or fan coils, and also with more traditional radiators, **and comes supplied with the main hydraulic components needed, thereby facilitating the final installation.**

FEATURES

Operating limits

Working at full load up to -25 °C outside air temperature in winter, and up to 48 °C in summer. Maximum temperature of water produced in heating mode 65 °C.

- Refrigerant circuit with economizer.
- Inverter rotary compressor.
- DC brushless axial flow fans designed for aerodynamic optimisation, reducing the noise level whilst at the same time increasing the efficiency and air flow rate.
- Fitted with a electrical anti-freeze heater (in unit base) to avoid the formation of ice and encourage the drainage of condensate during heating operation.
- Electronic expansion valve.

Main hydraulic components

- Inverter pump.
- Plate heat exchanger.
- Expansion tank
- Safety valve.
- Flow switch.
- Water filter supplied (**mandatory installation**).

Regulation

Adjustment via a **multi-language touch-screen control panel:**

- Management of a 3 way diverting valve (not supplied) for the production of domestic hot water.
- Management of a 2 way valve (not supplied) for shutting off part of the system.
- Weekly programming in time periods.
- **Auto-restart** function.
- Emergency operation (a supplementary heat source may be activated).
- **Quick hot water** function, for quickly heating domestic hot water.
- **Weather dependent mode** function for climate control.
- **Quiet** function for reduced noise operation (programmable with a timer).
- Condensation check
- When the anti-legionella cycle is activated (it's easily set via the control panel), the whole tank is heated once a week to a temperature (max. 70 °C) that weakens the bacteria responsible for the infection.

Special golden fin coil

Unlike normal batteries, this special golden epoxy coating silicon free is able to protect the heat exchanger against rust and corrosion, in areas where the air has a high salt content.



Smart APP Ewpe

The system is equipped standard with the Wi-Fi module; using this module and the app for iOS and Android devices (available free on Apple Store and Google Play, the system can be directly controlled from a distance on your smartphone or tablet. Remote control is possible via Cloud, using a wireless router connected to the Internet.



ACCESSORIES

HMICB15: Connection cable for the control panel. Cable length 15m.

IC-2P: Connector for communication via Mod Bus or VMF -485LINK. Accessory compulsory if combined with VMF-485LINK, or for third party supervision systems.

VMF-485LINK: Expansion to interface the unit with the VMF communication protocol, making it possible to manage it from the VMF-E5 or VMF-E6 supervisors.

VMF-E5: Black recessed panel with backlit graphic LCD display and capacitive keyboard, it allows the centralised command/control of a complete hydronic system consisting of Fan coils: up to 64 fan coil zones consisting of 1 master + up to 5 slaves; Chiller/heat pump (accessory required for RS 485 interface), pumps: up to 12 configurable zone pumps; boiler: boiler hook-up management for hot water production; heat recovery units: up to 3 hook-ups per programmable recovery units based on time periods and/or by measuring air quality with the VMF-VOC accessory; domestic water module: complete management of the domestic hot water production through the control of: diverter valve/pump, integrated heating element, storage tank temperature sensor, anti-legionella circuit system. The panel is available in both white (VMF-E5B) and black (VMF-E5N).

VMF-E6: White flush-mounting panel with 4.3 inch colour touchscreen. For the centralised command/control of a complete hydronic/aeraulic system consisting of: fan coils (up to 64 fan coil zones formed of 1 master + max. 5 slaves), heat pumps (up to 4), MZC accessories (up to 5) for the management of radiant panels (using a suitable number of VMF-REB accessories, up to 64 radiant panels associated with the fan coil zones and up to 32 radiant panels associated with the zones served by MZC), the complete management of DHW production, control of the RAS heater and/or the boiler, management of digital I/Os, control of heat recovery units and VOC probes (up to 4).

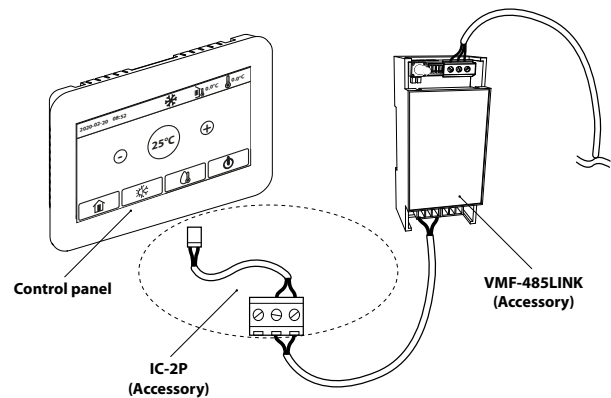
LOGATW: Diagnostic tool for air-water heat pumps.

DHWT300S: (220-240V~50Hz) DHW storage tank in enamelled steel. Single-phase power supply, tank capacity 300 litres with main and secondary coils and 3 kW back-up electric heater. Magnesium sacrificial anode. Indoor installation.

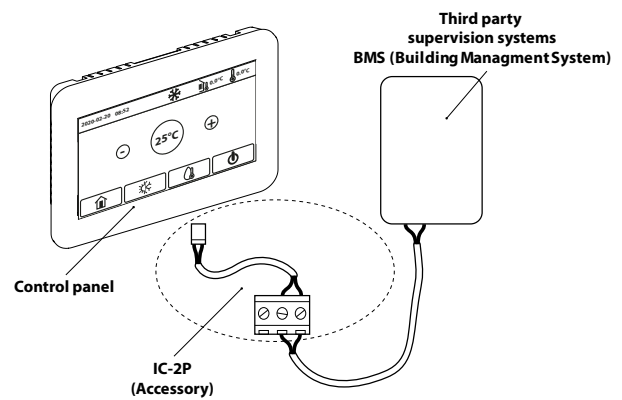
For more information about VMF system, refer to the dedicated documentation.

Accessory	HMI041	HMI061	HMI081	HMI081T	HMI101	HMI101T	HMI121	HMI121T	HMI141	HMI141T	HMI161	HMI161T
LOGATW	*	*	*	*	*	*	*	*	*	*	*	*
Accessory	HMI041	HMI061	HMI081	HMI081T	HMI101	HMI101T	HMI121	HMI121T	HMI141	HMI141T	HMI161	HMI161T
HMICB15	*	*	*	*	*	*	*	*	*	*	*	*
Accessory	HMI041	HMI061	HMI081	HMI081T	HMI101	HMI101T	HMI121	HMI121T	HMI141	HMI141T	HMI161	HMI161T
IC-2P	*	*	*	*	*	*	*	*	*	*	*	*
VMF-485LINK	*	*	*	*	*	*	*	*	*	*	*	*
VMF-E5	*	*	*	*	*	*	*	*	*	*	*	*
VMF-E6	*	*	*	*	*	*	*	*	*	*	*	*

Connection with VMF-485LINK

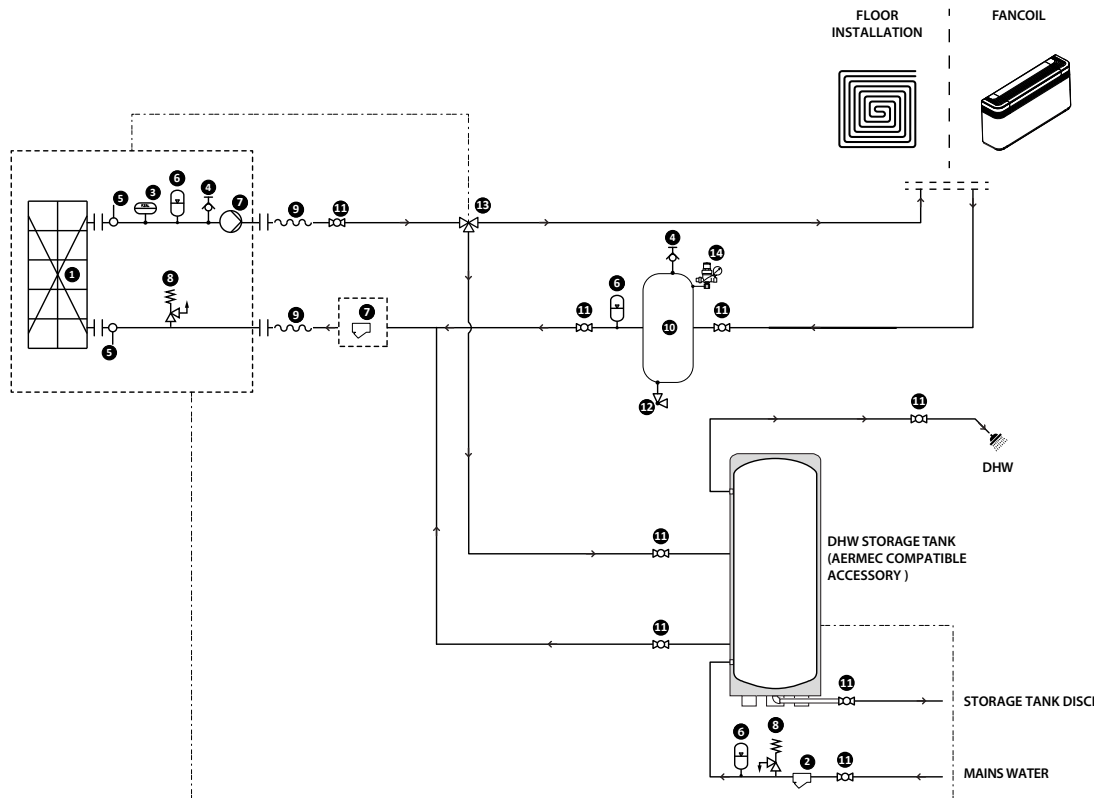


Connection with third party supervision systems



Accessories compatibility

FLOOR SYSTEM + DHW



COMPONENTS AS STANDARD

1. Plate heat exchanger
2. Water filter (as standard)
3. Flow switch
4. Air drain valve
5. Water temperature sensor (IN/OUT)
6. Expansion vessel
7. Pump
8. Pressure relief valve

HYDRAULIC COMPONENTS RECOMMENDED OUTSIDE THE UNIT (AT THE INSTALLER'S RESPONSIBILITY)

4. Air drain valve
9. Anti-vibration joints
10. System storage tank (recommended installation if the system water content is lower than that indicated in the technical manual).
11. Flow shut-off valves
6. Expansion vessel
12. Drain valve
13. 3 way valve
14. Loading unit



In case of a free-standing system, the bypass valve must be installed to ensure the circulation of a minimum amount of water to the system.

PERFORMANCE SPECIFICATIONS

		HMI041	HMI061	HMI081	HMI081T	HMI101	HMI101T	HMI121	HMI121T	HMI141	HMI141T	HMI161	HMI161T
Cooling performance 12 °C / 7 °C (1)													
Cooling capacity	kW	4,90	5,70	7,40	7,10	9,00	9,10	11,10	11,10	13,30	13,30	13,80	13,80
Input power	kW	1,40	1,76	2,00	2,10	2,65	2,80	3,58	3,58	4,75	4,75	5,09	5,09
EER	W/W	3,50	3,25	3,70	3,38	3,40	3,25	3,10	3,10	2,80	2,80	2,71	2,71
Water flow rate system side	l/h	834	971	1262	1211	1537	1554	1897	1897	2276	2276	2362	2362
Useful head	kPa	84,0	81,0	73,0	72,0	62,0	61,0	56,0	55,0	40,0	40,0	37,0	37,0
Heating performance 40 °C / 45 °C (2)													
Heating capacity	kW	4,90	6,80	8,30	8,20	10,20	10,20	13,00	13,00	14,20	14,20	16,20	16,20
Input power	kW	1,17	1,66	1,90	2,05	2,50	2,60	3,45	3,45	3,84	3,84	4,49	4,49
COP	W/W	4,20	4,10	4,36	4,00	4,08	3,92	3,77	3,77	3,70	3,70	3,61	3,61
Water flow rate system side	l/h	860	1191	1452	1435	1782	1782	2268	2269	2477	2477	2823	2823
Useful head	kPa	83,0	75,0	65,0	66,0	51,0	51,0	38,0	41,0	33,0	33,0	20,0	20,0
Cooling performance 23 °C / 18 °C (3)													
Cooling capacity	kW	5,00	6,50	8,30	8,30	10,20	10,20	12,00	12,00	13,70	13,90	15,50	15,40
Input power	kW	0,96	1,28	1,56	1,64	2,00	2,13	2,45	2,61	3,00	3,32	3,60	4,05
EER	W/W	5,20	5,10	5,32	5,06	5,10	4,79	4,90	4,60	4,57	4,19	4,31	3,80
Water flow rate system side	l/h	854	1112	1422	1422	1750	1750	2060	2060	2354	2388	2665	2648
Useful head	kPa	83,0	77,0	66,0	66,0	52,0	52,0	49,0	49,0	37,0	36,0	26,0	26,0
Heating performance 30 °C / 35 °C (4)													
Heating capacity	kW	5,00	6,00	8,20	8,20	10,20	10,20	12,00	12,00	14,20	14,20	15,70	15,70
Input power	kW	0,93	1,11	1,54	1,62	2,02	2,06	2,43	2,49	2,99	3,09	3,45	3,57
COP	W/W	5,40	5,40	5,32	5,06	5,05	4,95	4,94	4,82	4,75	4,60	4,55	4,40
Water flow rate system side	l/h	874	1048	1429	1429	1776	1776	2088	2088	2468	2468	2726	2726
Useful head	kPa	83,0	79,0	66,0	66,0	51,0	51,0	47,0	48,0	33,0	33,0	23,0	23,0

(1) Data EN 14511:2022; Heat exchanger water (services side) 12°C / 7°C; outside air 35°C

(2) Data EN 14511:2022; System side water heat exchanger 40 °C / 45 °C; Outside air 7 °C d.b. / 6 °C w.b.

(3) Data EN 14511:2022; System side water heat exchanger 23 °C / 18 °C; External air 35 °C

(4) Data EN 14511:2022; System side water heat exchanger 30 °C / 35 °C; External air 7 °C d.b. / 6 °C w.b.

GENERAL TECHNICAL DATA

		HMI041	HMI061	HMI081	HMI081T	HMI101	HMI101T
Electric data							
Rated current input (1)	A	11,0	11,0	23,0	8,0	25,0	9,0
Compressor							
Type	type	Inverter rotary					
Number	no.	1	1	1	1	1	1
Circuits	no.	1	1	1	1	1	1
Refrigerant	type	R32					
Potential global heating	GWP	675 kgCO ₂ eq					
Refrigerant charge (2)	kg	1,0	1,0	1,6	1,6	1,6	1,6
Oil	Type	FW68DA					
Total oil charge	kg	0,5	0,5	0,9	0,9	1,1	1,1
System side heat exchanger							
Type	type	Braze plate					
Number	no.	1	1	1	1	1	1
Connections (in/out)	Type	Gas femmina					
Size (in)	Ø	1"					
Size (out)	Ø	1"					
Fan							
Type	type	Axial					
Fan motor	type	Inverter					
Number	no.	1	1	1	1	1	1
Air flow rate	m³/h	3200	3200	5800	5800	5800	5800
Sound data calculated in cooling mode (3)							
Sound pressure level (1 m)	dB(A)	51,0	52,0	52,0	52,0	54,0	54,0
Sound data calculated in heating mode (3)							
Sound power level	dB(A)	58,0	58,0	68,0	68,0	68,0	68,0
Sound pressure level (1 m)	dB(A)	52,0	53,0	56,0	56,0	56,0	56,0
Power supply							
Power supply		230V ~ 50Hz		400V 3N ~ 50Hz		230V ~ 50Hz	400V 3N ~ 50Hz

		HMI121	HMI121T	HMI141	HMI141T	HMI161	HMI161T
Electric data							
Rated current input (1)	A	29,0	11,5	30,0	12,0	30,0	12,5
Compressor							
Type	type	Inverter rotary					
Number	no.	1	1	1	1	1	1
Circuits	no.	1	1	1	1	1	1
Refrigerant	type	R32					
Potential global heating	GWP	675 kgCO ₂ eq					
Refrigerant charge (2)	kg	2,2	2,2	2,2	2,2	2,2	2,2
Oil	Type	FW68DA					
Total oil charge	kg	1,1	1,1	1,1	1,1	1,1	1,1
System side heat exchanger							
Type	type	Braze plate					
Number	no.	1	1	1	1	1	1
Connections (in/out)	Type	Gas femmina					
Size (in)	Ø	1"					
Size (out)	Ø	1"					
Fan							
Type	type	Axial					
Fan motor	type	Inverter					
Number	no.	1	1	1	1	1	1
Air flow rate	m³/h	5051	5051	5051	5051	5051	5051
Sound data calculated in cooling mode (3)							
Sound pressure level (1 m)	dB(A)	54,0	54,0	55,0	55,0	56,0	56,0
Sound data calculated in heating mode (3)							
Sound power level	dB(A)	68,0	68,0	68,0	68,0	68,0	68,0
Sound pressure level (1 m)	dB(A)	58,0	58,0	59,0	59,0	59,0	59,0
Power supply							
Power supply		230V ~ 50Hz	400V 3N ~ 50Hz	230V ~ 50Hz	400V 3N ~ 50Hz	230V ~ 50Hz	400V 3N ~ 50Hz

(1) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.

(2) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.

(3) Sound power: calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure measured in free field (in compliance with UNI EN ISO 3744).

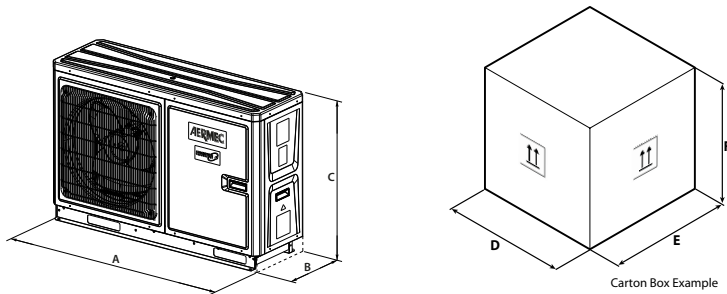
ENERGY DATA

		HMI041	HMI061	HMI081	HMI081T	HMI101	HMI101T	HMI121	HMI121T	HMI141	HMI141T	HMI161	HMI161T
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ≤ 70 kW (1)													
Pdesignh	kW	5	6	8	8	9	9	12	12	13	13	14	13
Efficiency energy class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ≤ 70 kW (2)													
Pdesignh	kW	5	5	9	9	10	10	12	12	13	13	14	14
ηsh	%	137,00	137,00	150,00	135,00	152,00	140,00	149,00	150,00	147,00	150,00	146,00	150,00
Efficiency energy class		A++	A++	A+++	A++	A+++	A++	A++	A+++	A++	A+++	A++	A+++

(1) Efficiencies for low temperature applications (35 °C)

(2) Efficiencies for average temperature applications (55 °C)

DIMENSIONS



		HMI041	HMI061	HMI081	HMI081T	HMI101	HMI101T
Dimensions and weights							
A	mm	1150	1150	1206	1206	1206	1206
B	mm	365	365	445	445	445	445
C	mm	750	750	880	880	880	880
D	mm	1258	1258	1338	1338	1338	1338
E	mm	503	503	553	553	553	553
F	mm	900	900	1020	1020	1020	1020
Net weight	kg	90,0	90,0	114,0	128,0	114,0	128,0
Weight for transport	kg	106,0	106,0	133,0	146,0	133,0	146,0
		HMI121	HMI121T	HMI141	HMI141T	HMI161	HMI161T
Dimensions and weights							
A	mm	1206	1206	1206	1206	1206	1206
B	mm	445	445	445	445	445	445
C	mm	880	880	880	880	880	880
D	mm	1338	1338	1338	1338	1338	1338
E	mm	553	553	553	553	553	553
F	mm	1020	1020	1020	1020	1020	1020
Net weight	kg	132,0	138,0	132,0	138,0	132,0	138,0
Weight for transport	kg	150,0	156,0	150,0	156,0	150,0	156,0

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responsibility or liability for errors or omissions.

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