

HMI 180T - 220T

Reversible air/water heat pump

Cooling capacity 17,5 ÷ 21,0 kW
Heating capacity 18,0 ÷ 22,0 kW

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



DESCRIPTION

HMI 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 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

Full load operation down to -25°C (outside air temperature in winter), and up to 48°C in summer.

Maximum processed water temperature in heating mode 65°C.

Production of domestic hot water up to 80°C with electric heater.

- 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.



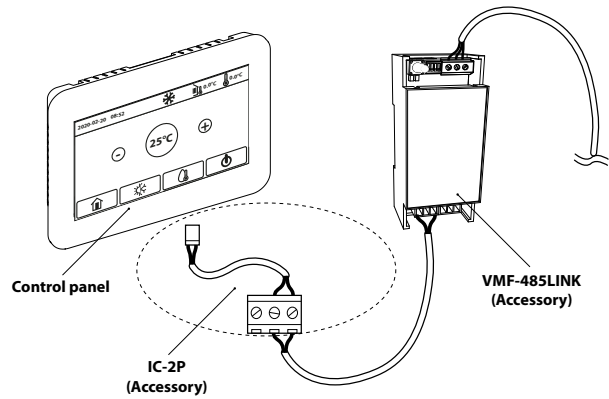
ACCESSORIES

- 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/aerualic 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.

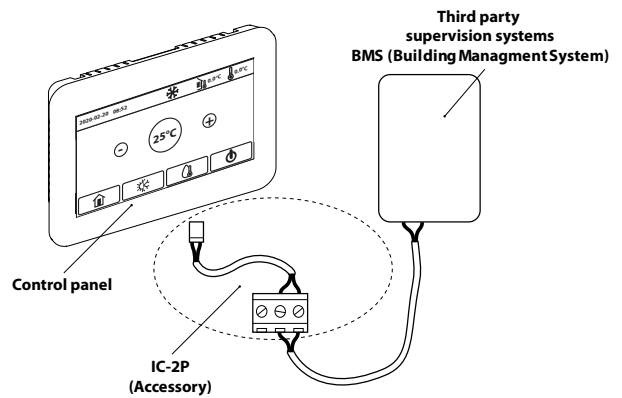
For more information about VMF system, refer to the dedicated documentation.

Accessory	HMI180T	HMI220T
LOGATW	.	.
Accessory	HMI180T	HMI220T
HMICB15	.	.
Accessory	HMI180T	HMI220T
IC-2P	.	.
VMF-485LINK	.	.
VMF-E5	.	.
VMF-E6	.	.

Connection with VMF-485LINK

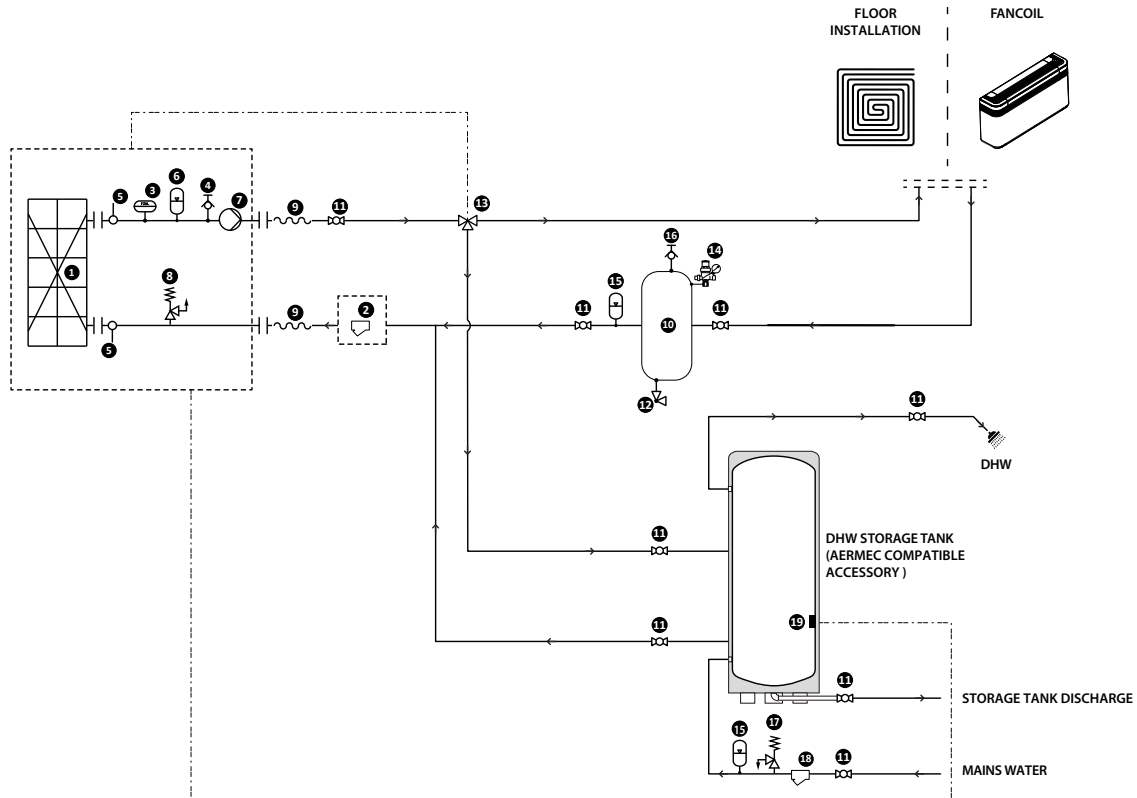


Connection with third party supervision systems



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)

- 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
- 12 Drain valve
- 13 3 way valve
- 14 Loading unit
- 15 Expansion vessel
- 16 Air drain valve
- 17 Pressure relief valve
- 18 Water filter
- 19 Water temperature probe DHW



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

		HMI180T	HMI220T
Cooling performance 12 °C / 7 °C (1)			
Cooling capacity	kW	17,50	21,00
Input power	kW	5,65	7,00
EER	W/W	3,10	3,00
Water flow rate	l/h	2.978	3.578
Useful head	kPa	59,1	55,2
Heating performance 40 °C / 45 °C (2)			
Heating capacity	kW	18,00	22,00
Input power	kW	5,00	6,29
COP	W/W	3,60	3,50
Water flow rate	l/h	3.158	3.853
Useful head	kPa	62,4	57,9

(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.

		HMI180T	HMI220T
Cooling performance 23 °C / 18 °C (1)			
Cooling capacity	kW	18,50	23,00
Input power	kW	3,85	4,89
EER	W/W	4,80	4,70
Water flow rate	l/h	-	-
Useful head	kPa	56,1	53,5
Heating performance 30 °C / 35 °C (2)			
Heating capacity	kW	18,00	22,00
Input power	kW	3,75	4,89
COP	W/W	4,80	4,50
Water flow rate	l/h	3.096	3.784
Useful head	kPa	62,2	58,0

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

(2) 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

		HMI180T	HMI220T
Electric data			
Rated power input	W	10.000	10.800
Compressor			
Type	type	Rotativo Inverter	Rotativo Inverter
Number	no.	1	1
Circuits	no.	1	1
Refrigerant	type	R32	R32
Total refrigerant charge	kg	4,00	4,00
Potential global heating (GWP)		675	675
Equivalent CO ₂	tCO ₂ eq	2,70	2,70
Oil	Type	FW68S	FW68S
Total oil charge	l	1,9	1,9
System side heat exchanger			
Type	type	Brazed plate	Brazed plate
Number	no.	1	1
Connections (in/out)	Type	Gas Maschio	Gas Maschio
Size (in)	Ø	1"1/4	1"1/4
Size (out)	Ø	1"1/4	1"1/4
Fan			
Type	type	Axial	Axial
Fan motor	type	Inverter	Inverter
Number	no.	2	2
Air flow rate	m ³ /h	9.700	9.700
Sound data calculated in cooling mode			
Sound pressure level (1 m)	dB(A)	57,0	58,0
Sound data calculated in heating mode			
Sound power level	dB(A)	65,0	65,0
Sound pressure level (1 m)	dB(A)	56,0	57,0
Sound power by centre octave band dB(A)			
63 Hz	dB(A)	42,1	42,6
125 Hz	dB(A)	52,8	54,9
250 Hz	dB(A)	59,2	54,1
500 Hz	dB(A)	60,4	56,6
1000 Hz	dB(A)	58,0	55,8
4000 Hz	dB(A)	48,6	50,2
8000 Hz	dB(A)	42,7	45,2
Power supply			
Power supply	V/Ph/Hz	380-415V 3N ~ 50Hz	380-415V 3N ~ 50Hz

- 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.
- 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.

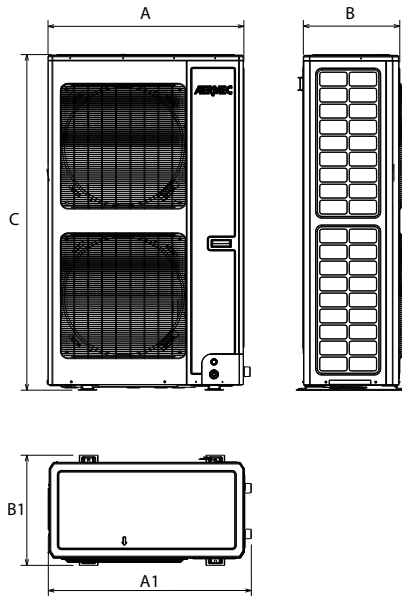
- Sound power: calculated in agreement with the Standard UNI EN ISO 9614-2, in compliance with that requested by Eurovent certification.
- Sound pressure measured in semi anechoic chamber at a distance of 1 m from the source.

ENERGY DATA

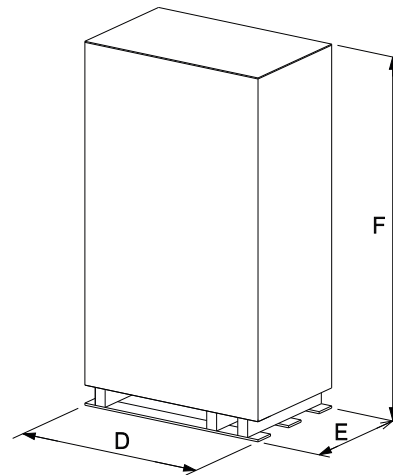
		HMI180T	HMI220T
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ≤ 70 kW (1)			
Pdesignh	kW	19	22
ηsh	%	181,00	180,00
Efficiency energy class		A+++	A+++
UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ≤ 70 kW (2)			
Pdesignh	kW	18	20
ηsh	%	127,00	127,00
SCOP	W/W	3,25	3,25
Efficiency energy class		A++	A++
Cooling capacity with low leaving water temp (UE n° 2016/2281)			
ηsc	%	190,00	195,00
SEER	W/W	4,85	4,94

- (1) Efficiencies for low temperature applications (35 °C)
 (2) Efficiencies for average temperature applications (55 °C)

DIMENSIONS



HMI180T-HMI220T



Example of packaging

		HMI180T	HMI220T
Dimensions and weights			
A	mm	943	943
A1	mm	977	977
B	mm	464	464
B1	mm	530	530
C	mm	1.615	1.615
D	mm	1.073	1.073
E	mm	593	593
F	mm	1.760	1.760
Net weight	kg	205,0	205,0
Weight for transport	kg	221,0	221,0

Aermec reserves the right to make any modifications deemed necessary. All data is subject to change without notice. Aermec does not assume responsibility or liability for errors or omissions.

Aermec S.p.A.
 Via Roma, 996 - 37040 Bevilacqua (VR) - Italia
 Tel. 0442633111 - Telefax 044293577
 www.aermec.com