

HMI

Reversible air/water heat pump

Cooling capacity 3 ÷ 14,5 kW
Heating capacity 4 ÷ 15,5 kW

- New R32 ecological refrigerant gas
- Production of hot water up to 60 °C
- Production of hot domestic water with external temperatures from -25 °C a 48 °C



DESCRIPTION

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 the domestic hot water storage tank DHWT300S.**

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

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 60 °C.

- Refrigerant circuit with economizer.
- 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**).

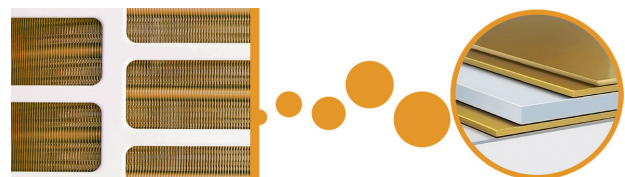
Regulation

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

DHWT300S: (220-240V~50Hz) single-phase DHW storage tank of 300 litres with main coil and supplementary coil in enamelled steel, and 3kW back-up electric heater. Electronic sacrificial anode. Internal installation. Mandatory for DHW production.

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

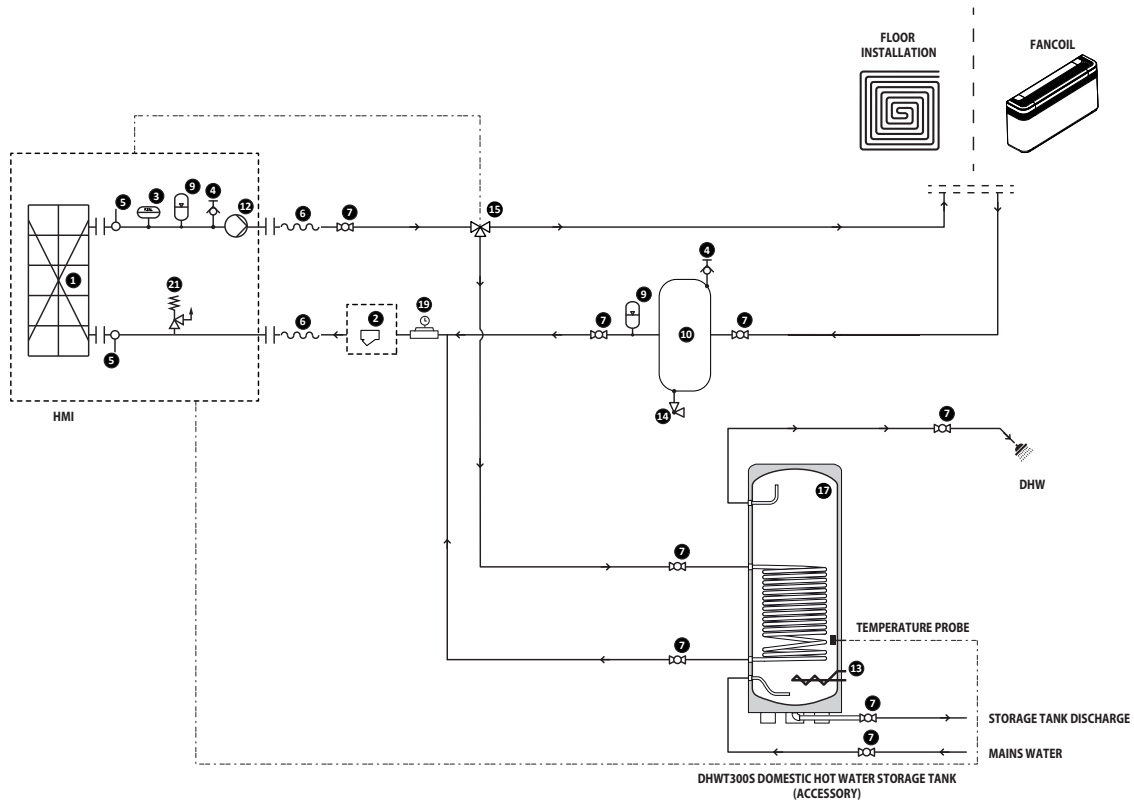
VMF SYSTEM ACCESSORIES

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.

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

FLOOR SYSTEM + DHW



COMPONENTS AS STANDARD

- 1 Plate heat exchanger
- 2 Water filter (supplied)
- 3 Flow switch
- 4 Air drain valve
- 5 Water temperature sensor (IN/OUT)
- 9 Expansion tank
- 12 Pump
- 21 Safety valve

WARNING: in the 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.

HYDRAULIC COMPONENTS NOT PROVIDED AND RESPONSIBILITY OF THE INSTALLER

- 4 Air drain valve
- 6 Anti-vibration joints
- 7 Flow shut-off valve
- 9 Expansion tank
- 10 System storage tank (installation recommended if the system water content is lower than the value indicated in the technical manual).
- 13 Electric heater
- 14 Drain tap
- 15 3 way valve
- 17 DHWT300S Accessory
- 19 Loading unit

PERFORMANCE SPECIFICATIONS

EUROVENT TECHNICAL DATA 14511:2013

		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120	HMI120T	HMI140	HMI140T	HMI160	HMI160T
Cooling performances 12 °C / 7 °C - 14511:2013 (1)												
Cooling capacity	kW	3,00	4,00	5,00	7,80	7,80	9,50	9,50	12,00	12,00	13,00	13,00
Input power	kW	0,94	1,29	1,61	2,48	2,64	3,20	3,11	4,14	4,38	4,96	4,91
Cooling total input current	A	4,3	5,9	7,7	11,4	4,0	14,7	4,7	19,0	6,7	22,7	7,5
EER	W/W	3,19	3,10	3,11	3,15	2,95	2,97	3,05	2,90	2,74	2,62	2,65
Water flow rate system side	l/h	516	672	860	1320	1270	1650	1665	2080	2065	2270	2231
Useful head system side	kPa	75	74	74	71	71	65	64	51	51	45	46
Heating performances 40 °C / 45 °C - 14511:2013 (2)												
Heating capacity	kW	4,00	6,00	7,50	10,00	10,00	12,00	12,00	14,00	14,00	15,50	15,50
Input power	kW	1,00	1,58	2,00	2,70	2,70	3,48	3,48	4,18	4,18	4,70	4,70
Heating total input current	A	4,6	7,2	9,2	12,4	4,1	15,9	5,3	19,1	6,4	21,5	7,1
COP	W/W	4,00	3,80	3,75	3,70	3,70	3,45	3,45	3,35	3,35	3,30	3,30
Water flow rate system side	l/h	690	977	1240	1700	1710	2050	2040	2500	2474	2700	2734
Useful head system side	kPa	74	73	72	63	63	52	52	37	38	30	29

(1) Data 14511:2013; System side water heat exchanger 12 °C/7 °C; External air 35 °C

(2) Data 14511:2013; System side water heat exchanger 40 °C/45 °C; Outside air 7 °C d.b. / 6 °C w.b.

		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120	HMI120T	HMI140	HMI140T	HMI160	HMI160T
Cooling performances 23 °C / 18 °C - 14511:2013 (1)												
Cooling capacity	kW	3,80	5,80	6,80	8,80	8,80	11,00	11,00	12,50	12,50	14,50	14,50
Input power	kW	0,82	1,32	1,55	1,96	1,96	2,56	2,56	3,05	3,05	3,82	3,82
Cooling total input current	A	3,8	6,0	7,1	9,0	3,0	11,7	3,9	14,0	4,6	17,5	5,8
EER	W/W	4,63	4,39	4,39	4,49	4,49	4,30	4,30	4,10	4,10	3,80	3,80
Water flow rate system side	l/h	660	981	1220	1510	1500	1926	1900	2238	2200	2640	2570
Useful head system side	kPa	74	73	72	69	69	56	57	46	47	32	34
Heating performances 30 °C / 35 °C - 14511:2013 (2)												
Heating capacity	kW	4,00	6,00	7,50	10,00	10,00	12,00	12,00	14,00	14,00	15,50	15,50
Input power	kW	0,79	1,20	1,63	2,17	2,17	2,64	2,64	3,22	3,22	3,60	3,60
Heating total input current	A	3,6	5,5	7,5	9,9	3,3	12,1	4,0	14,7	4,9	16,5	5,5
COP	W/W	5,10	5,00	4,60	4,61	4,61	4,55	4,55	4,35	4,35	4,31	4,31
Water flow rate system side	l/h	690	1030	1247	1736	1720	2137	2100	2524	2400	2703	2626
Useful head system side	kPa	74	73	72	62	62	49	50	36	40	30	32

(1) Data 14511:2013; System side water heat exchanger 23 °C / 18 °C; External air 35 °C

(2) Data 14511:2013; System side water heat exchanger 30 °C / 35 °C; Outside air 7 °C d.b. / 6 °C w.b.

EUROVENT TECHNICAL DATA 14511:2018

		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120	HMI120T	HMI140	HMI140T	HMI160	HMI160T
Cooling performance 12 °C / 7 °C (1)												
Cooling capacity	kW	2,98	3,97	4,96	7,75	7,75	9,45	9,45	11,94	11,94	12,95	12,95
Input power	kW	0,94	1,29	1,61	2,48	2,64	3,20	3,11	4,14	4,38	4,96	4,91
Cooling total input current	A	4,7	6,4	7,9	12,0	4,6	15,0	5,3	20,0	7,3	23,0	8,1
EER	W/W	3,17	3,08	3,08	3,12	2,94	2,95	3,04	2,88	2,73	2,61	2,64
Water flow rate system side	l/h	504	673	842	1318	1318	1609	1609	2038	2038	2210	2210
Useful head system side	kPa	74	74	74	69	69	64	64	52	52	47	47
Heating performance 40 °C / 45 °C (2)												
Heating capacity	kW	4,03	6,04	7,55	10,06	10,06	12,06	12,06	14,05	14,05	15,54	15,54
Input power	kW	1,00	1,58	2,00	2,70	2,70	3,48	3,48	4,18	4,18	4,70	4,70
Heating total input current	A	5,1	7,8	9,7	13,0	4,7	17,0	5,9	20,0	6,9	22,0	7,7
COP	W/W	4,03	3,83	3,78	3,72	3,72	3,46	3,46	3,36	3,36	3,31	3,31
Water flow rate system side	l/h	710	1062	1326	1762	1762	2110	2110	2456	2456	2714	2714
Useful head system side	kPa	74	73	71	60	60	50	50	39	39	29	29

(1) Data 14511:2018; System side water heat exchanger 12 °C/7 °C; External air 35 °C

(2) Data 14511:2018; System side water heat exchanger 40 °C/45 °C; Outside air 7 °C d.b. / 6 °C w.b.

ENERGY DATA

		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120	HMI120T	HMI140	HMI140T	HMI160	HMI160T
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ≤ 70 kW (1)												
Pdesignh	kW	5	5	6	9	9	11	11	11	11	13	13
ηsh	%	185,00	185,00	183,00	176,00	176,00	175,00	175,00	168,00	168,00	164,00	164,00
Efficiency energy class		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	6	6	7	8	8	10	10	11	11	13	13
ηsh	%	126,00	126,00	127,00	128,00	128,00	126,00	126,00	125,00	125,00	125,00	125,00
Efficiency energy class		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)

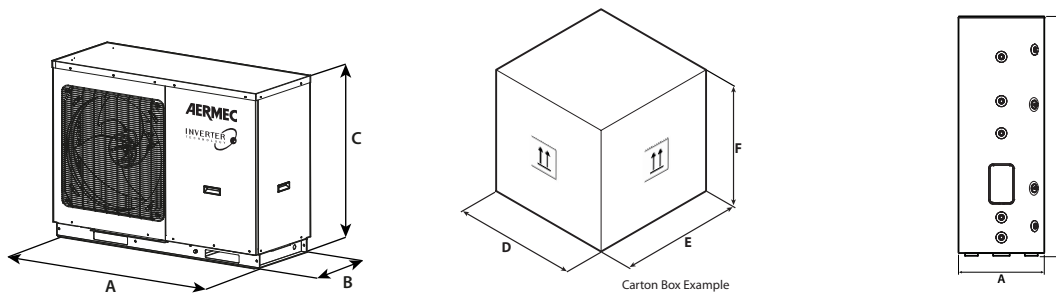
GENERAL TECHNICAL DATA

	HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120	HMI120T	HMI140	HMI140T	HMI160	HMI160T		
Electric data													
Rated current input (1)	A	10,4	10,4	10,4	23,0	12,0	25,0	12,0	29,0	12,0	29,0	12,0	
Compressor													
Type	type	Rotary DC Inverter											
Number	no.	1	1	1	1	1	1	1	1	1	1	1	
Circuits	no.	1	1	1	1	1	1	1	1	1	1	1	
Refrigerant	type	R32											
Potential global heating	GWP	675 kgCO ₂ eq											
Refrigerant charge	kg	0,9	0,9	0,9	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	
Oil	Type	FW68DA											
Total oil charge	kg	0,5	0,5	0,5	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	
System side heat exchanger													
Type	type	Brazen plate											
Number	no.	1	1	1	1	1	1	1	1	1	1	1	
Connections (in/out)	Type	Female Gas											
Size (in)	Ø	1"											
Size (out)	Ø	1"											
Fan													
Type	type	Axial											
Fan motor	type	Inverter											
Number	no.	1	1	1	1	1	1	1	1	1	1	1	
Air flow rate	m ³ /h	2600	2600	2600	4500	4500	4500	4500	4500	4500	4500	4500	
Sound data calculated in cooling mode (2)													
Sound pressure level (1 m)	dB(A)	51,0	52,0	53,0	56,0	56,0	56,0	56,0	57,0	57,0	59,0	59,0	
Sound data calculated in heating mode (2)													
Sound power level	dB(A)	64,0	64,0	65,0	69,0	69,0	69,0	69,0	70,0	70,0	72,0	72,0	
Sound pressure level in heating mode (1 m)	dB(A)	50,0	50,0	51,0	54,0	54,0	54,0	54,0	55,0	55,0	57,0	57,0	
Power supply													
Power supply		220-240V ~ 50Hz				380-415V 220-240V		380-415V 220-240V		380-415V 220-240V		380-415V 220-240V	
						3N ~ 50Hz ~ 50Hz		3N ~ 50Hz ~ 50Hz		3N ~ 50Hz ~ 50Hz		3N ~ 50Hz ~ 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) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

DIMENSIONS



	HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120	HMI120T	HMI140	HMI140T	HMI160	HMI160T	
Dimensions and weights												
A	mm	1150	1150	1150	1200	1200	1200	1200	1200	1200	1200	
B	mm	345	345	345	460	460	460	460	460	460	460	
C	mm	758	758	758	878	878	878	878	878	878	878	
D	mm	1260	1260	1260	1295	1295	1295	1295	1295	1295	1295	
E	mm	490	490	490	595	595	595	595	595	595	595	
F	mm	900	900	900	1020	1020	1020	1020	1020	1020	1020	
Empty weight	kg	96	96	96	151	151	151	151	151	151	151	
Dimensions and weights for transport												
Weight for transport	kg	109	109	109	166	166	166	166	166	166	166	
DHWT300S												
Dimensions and weights												
A	mm	620										
B	mm	1725										
Net weight	kg	140										

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.

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