

HMI

Reversible air/water heat pump

Cooling capacity 3,0 ÷ 14,5 kW – Heating capacity 4,0 ÷ 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 to 48 °C
- Quick & easy installation



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 Aermec compatible domestic hot water storage tank.**

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 an 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**).

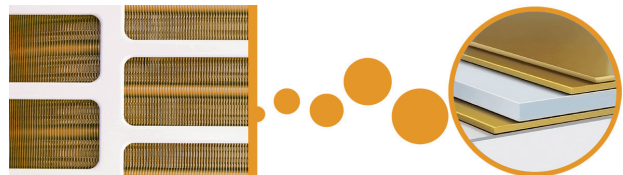
Regulation

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.

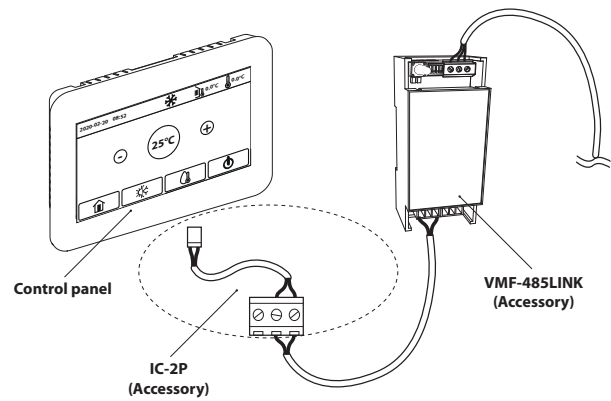
VMF-485LINK: Expansion to interface the unit with the VMF communication protocol, making it possible to manage it from the VMF-E5 or VMF-E6 supervisors.

LOGATW: Diagnostic tool for air-water heat pumps.

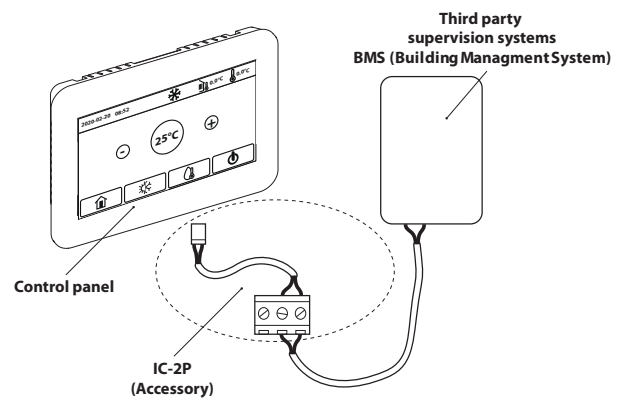
DHWT300S: (220-240V~50Hz) DHW storage tank in enamelled steel. Single-phase power supply, tank capacity 300 litres with main and secondary coils and 3 kW back-up electric heater. Magnesium sacrificial anode. Indoor installation.

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

Connection with VMF-485LINK

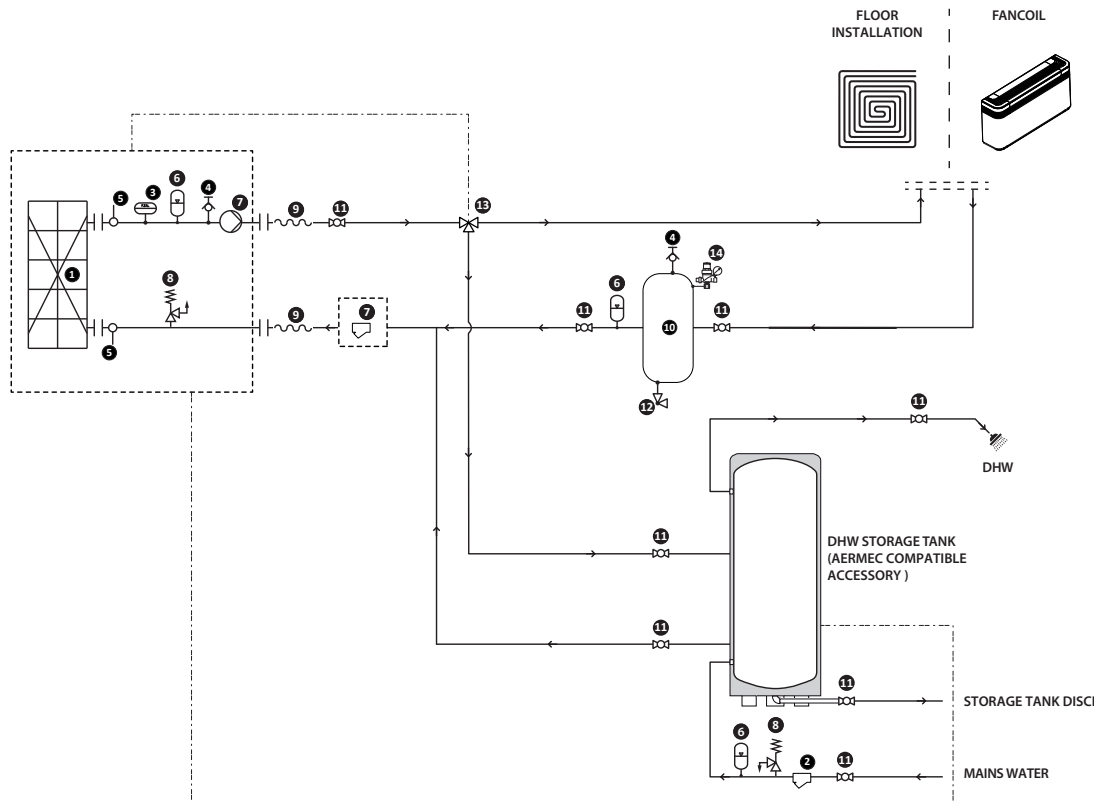


Connection with third party supervision systems



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

PERFORMANCE SPECIFICATIONS

EUROVENT TECHNICAL DATA EN 14511:2013

		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120
Cooling performance 12 °C / 7 °C - EN 14511:2013 (1)							
Cooling capacity	kW	3,00	4,00	5,00	7,80	7,80	9,50
Input power	kW	0,94	1,29	1,61	2,48	2,64	3,20
Input current	A	4,3	5,9	7,7	11,4	4,0	14,7
EER	W/W	3,19	3,10	3,11	3,15	2,95	2,97
Water flow rate	l/h	516	672	860	1320	1270	1650
Useful head	kPa	75,0	74,0	74,0	71,0	71,0	65,0
Heating performance 40 °C / 45 °C - EN 14511:2013 (2)							
Heating capacity	kW	4,00	6,00	7,50	10,00	10,00	12,00
Input power	kW	1,00	1,58	2,00	2,70	2,70	3,48
Input current	A	4,6	7,2	9,2	12,4	4,1	15,9
COP	W/W	4,00	3,80	3,75	3,70	3,70	3,45
Water flow rate	l/h	690	977	1240	1700	1710	2050
Useful head	kPa	74,0	73,0	72,0	63,0	63,0	52,0

		HMI120T	HMI140	HMI140T	HMI160	HMI160T
Cooling performance 12 °C / 7 °C - EN 14511:2013 (1)						
Cooling capacity	kW	9,50	12,00	12,00	13,00	13,00
Input power	kW	3,11	4,14	4,38	4,96	4,91
Input current	A	4,7	19,0	6,7	22,7	7,5
EER	W/W	3,05	2,90	2,74	2,62	2,65
Water flow rate	l/h	1665	2080	2065	2270	2231
Useful head	kPa	64,0	51,0	51,0	45,0	46,0
Heating performance 40 °C / 45 °C - EN 14511:2013 (2)						
Heating capacity	kW	12,00	14,00	14,00	15,50	15,50
Input power	kW	3,48	4,18	4,18	4,70	4,70
Input current	A	5,3	19,1	6,4	21,5	7,1
COP	W/W	3,45	3,35	3,35	3,30	3,30
Water flow rate	l/h	2040	2500	2474	2700	2734
Useful head	kPa	52,0	37,0	38,0	30,0	29,0

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

(2) Data EN 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
Cooling performance 23 °C / 18 °C - EN 14511:2013 (1)							
Cooling capacity	kW	3,80	5,80	6,80	8,80	8,80	11,00
Input power	kW	0,82	1,32	1,55	1,96	1,96	2,56
Input current	A	3,8	6,0	7,1	9,0	3,0	11,7
EER	W/W	4,63	4,39	4,39	4,49	4,49	4,30
Water flow rate	l/h	660	981	1220	1510	1500	1926
Useful head	kPa	74,0	73,0	72,0	69,0	69,0	56,0
Heating performance 30 °C / 35 °C - EN 14511:2013 (2)							
Heating capacity	kW	4,00	6,00	7,50	10,00	10,00	12,00
Input power	kW	0,79	1,20	1,63	2,17	2,17	2,64
Input current	A	3,6	5,5	7,5	9,9	3,3	12,1
COP	W/W	5,10	5,00	4,60	4,61	4,61	4,55
Water flow rate	l/h	690	1030	1247	1736	1720	2137
Useful head	kPa	74,0	73,0	72,0	62,0	62,0	49,0

		HMI120T	HMI140	HMI140T	HMI160	HMI160T
Cooling performance 23 °C / 18 °C - EN 14511:2013 (1)						
Cooling capacity	kW	11,00	12,50	12,50	14,50	14,50
Input power	kW	2,56	3,05	3,05	3,82	3,82
Input current	A	3,9	14,0	4,6	17,5	5,8
EER	W/W	4,30	4,10	4,10	3,80	3,80
Water flow rate	l/h	1900	2238	2200	2640	2570
Useful head	kPa	57,0	46,0	47,0	32,0	34,0
Heating performance 30 °C / 35 °C - EN 14511:2013 (2)						
Heating capacity	kW	12,00	14,00	14,00	15,50	15,50
Input power	kW	2,64	3,22	3,22	3,60	3,60
Input current	A	4,0	14,7	4,9	16,5	5,5
COP	W/W	4,55	4,35	4,35	4,31	4,31
Water flow rate	l/h	2100	2524	2400	2703	2626
Useful head	kPa	50,0	36,0	40,0	30,0	32,0

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

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

EUROVENT TECHNICAL DATA EN 14511:2018

		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120
Cooling performance 12 °C / 7 °C (1)							
Cooling capacity	kW	2,98	3,97	4,96	7,75	7,75	9,45
Input power	kW	0,94	1,29	1,61	2,48	2,64	3,20
Input current	A	4,7	6,4	7,9	12,0	4,6	15,0
EER	W/W	3,17	3,08	3,08	3,12	2,94	2,95
Water flow rate	l/h	504	673	842	1318	1318	1609
Useful head	kPa	74,0	74,0	74,0	69,0	69,0	64,0

Heating performance 40 °C / 45 °C (2)							
Heating capacity	kW	4,03	6,04	7,55	10,06	10,06	12,06
Input power	kW	1,00	1,58	2,00	2,70	2,70	3,48
Input current	A	5,1	7,8	9,7	13,0	4,7	17,0
COP	W/W	4,03	3,83	3,78	3,72	3,72	3,46
Water flow rate	l/h	710	1062	1326	1762	1762	2110
Useful head	kPa	74,0	73,0	71,0	60,0	60,0	50,0

		HMI120T	HMI140	HMI140T	HMI160	HMI160T
Cooling performance 12 °C / 7 °C (1)						
Cooling capacity	kW	9,45	11,94	11,94	12,95	12,95
Input power	kW	3,11	4,14	4,38	4,96	4,91
Input current	A	5,3	20,0	7,3	23,0	8,1
EER	W/W	3,04	2,88	2,73	2,61	2,64
Water flow rate	l/h	1609	2038	2038	2210	2210
Useful head	kPa	64,0	52,0	52,0	47,0	47,0

Heating performance 40 °C / 45 °C (2)						
Heating capacity	kW	12,06	14,05	14,05	15,54	15,54
Input power	kW	3,48	4,18	4,18	4,70	4,70
Input current	A	5,9	20,0	6,9	22,0	7,7
COP	W/W	3,46	3,36	3,36	3,31	3,31
Water flow rate	l/h	2110	2456	2456	2714	2714
Useful head	kPa	50,0	39,0	39,0	29,0	29,0

(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.

		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120
Cooling performance 23 °C / 18 °C (1)							
Cooling capacity	kW	3,77	5,76	6,75	8,75	8,75	10,94
Input power	kW	0,82	1,32	1,55	1,96	1,96	2,56
Input current	A	4,2	6,6	7,6	9,5	3,6	12,0
EER	W/W	4,60	4,36	4,36	4,46	4,46	4,27
Water flow rate	l/h	641	982	1152	1495	1495	1873
Useful head	kPa	74,0	74,0	73,0	66,0	66,0	57,0

Heating performance 30 °C / 35 °C (2)							
Heating capacity	kW	4,03	6,04	7,55	10,06	10,06	12,06
Input power	kW	0,79	1,20	1,63	2,17	2,17	2,64
Input current	A	4,1	6,0	8,0	11,0	3,9	13,0
COP	W/W	5,10	5,04	4,63	4,63	4,63	4,57
Water flow rate	l/h	708	1058	1321	1756	1756	2102
Useful head	kPa	74,0	73,0	71,0	60,0	60,0	50,0

		HMI120T	HMI140	HMI140T	HMI160	HMI160T
Cooling performance 23 °C / 18 °C (1)						
Cooling capacity	kW	10,94	12,44	12,44	14,45	14,45
Input power	kW	2,56	3,05	3,05	3,82	3,82
Input current	A	4,5	15,0	5,2	18,0	6,4
EER	W/W	4,27	4,08	4,08	3,78	3,78
Water flow rate	l/h	1873	2132	2132	2478	2478
Useful head	kPa	57,0	50,0	50,0	38,0	38,0

Heating performance 30 °C / 35 °C (2)						
Heating capacity	kW	12,06	14,05	14,05	15,54	15,54
Input power	kW	2,64	3,22	3,22	3,60	3,60
Input current	A	4,6	15,0	5,5	17,0	6,1
COP	W/W	4,57	4,36	4,36	4,32	4,32
Water flow rate	l/h	2102	2447	2447	2704	2704
Useful head	kPa	50,0	39,0	39,0	30,0	30,0

(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

		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120
Electric data							
Rated current input (1)	A	10,4	10,4	10,4	23,0	12,0	25,0
Compressor							
Type	type	Rotary DC Inverter					
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	0,9	0,9	0,9	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
System side heat exchanger							
Type	type	Braze plate					
Number	no.	1	1	1	1	1	1
Connections (in/out)	Type	Gas Maschio					
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	m ³ /h	2600	2600	2600	4500	4500	4500
Sound data calculated in cooling mode (3)							
Sound pressure level (1 m)	dB(A)	51,0	52,0	53,0	56,0	56,0	56,0
Sound data calculated in heating mode (3)							
Sound power level	dB(A)	64,0	64,0	65,0	69,0	69,0	69,0
Sound pressure level (1 m)	dB(A)	50,0	50,0	51,0	54,0	54,0	54,0
Power supply							
Power supply		220-240V ~ 50Hz			380-415V 3N ~ 50Hz		220-240V ~ 50Hz
		HMI120T	HMI140	HMI140T	HMI160	HMI160T	
Electric data							
Rated current input (1)	A	12,0	29,0	12,0	29,0	12,0	
Compressor							
Type	type	Rotary DC Inverter					
Number	no.	1	1	1	1	1	
Circuits	no.	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	
Oil	Type	FW68DA					
Total oil charge	kg	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	
Connections (in/out)	Type	Gas Maschio					
Size (in)	Ø	1"					
Size (out)	Ø	1"					
Fan							
Type	type	Axial					
Fan motor	type	Inverter					
Number	no.	1	1	1	1	1	
Air flow rate	m ³ /h	4500	4500	4500	4500	4500	
Sound data calculated in cooling mode (3)							
Sound pressure level (1 m)	dB(A)	56,0	57,0	57,0	59,0	59,0	
Sound data calculated in heating mode (3)							
Sound power level	dB(A)	69,0	70,0	70,0	72,0	72,0	
Sound pressure level (1 m)	dB(A)	54,0	55,0	55,0	57,0	57,0	
Power supply							
Power supply		380-415V 3N ~ 50Hz	220-240V ~ 50Hz	380-415V 3N ~ 50Hz	220-240V ~ 50Hz	380-415V 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).

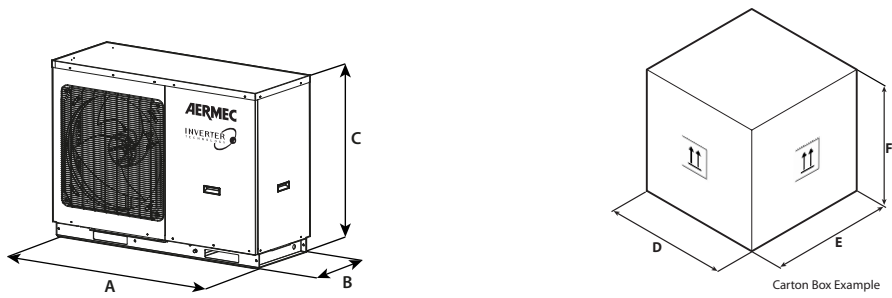
ENERGY DATA

		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ≤ 70 kW (1)							
Pdesignh	kW	5	5	6	9	9	11
ηsh	%	185,00	185,00	183,00	176,00	176,00	175,00
Efficiency energy class		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
ηsh	%	126,00	126,00	127,00	128,00	128,00	126,00
Efficiency energy class		A++	A++	A++	A++	A++	A++
		HMI120T	HMI140	HMI140T	HMI160	HMI160T	
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ≤ 70 kW (1)							
Pdesignh	kW	11	11	11	13	13	
ηsh	%	175,00	168,00	168,00	164,00	164,00	
Efficiency energy class		A+++	A++	A++	A++	A++	
UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ≤ 70 kW (2)							
Pdesignh	kW	10	11	11	13	13	
ηsh	%	126,00	125,00	125,00	125,00	125,00	
Efficiency energy class		A++	A++	A++	A++	A++	

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

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

DIMENSIONS



		HMI040	HMI060	HMI080	HMI100	HMI100T	HMI120
Dimensions and weights							
A	mm	1150	1150	1150	1200	1200	1200
B	mm	345	345	345	460	460	460
C	mm	758	758	758	878	878	878
D	mm	1260	1260	1260	1295	1295	1295
E	mm	490	490	490	595	595	595
F	mm	900	900	900	1020	1020	1020
Net weight	kg	96,0	96,0	96,0	151,0	151,0	151,0
Weight for transport	kg	109,0	109,0	109,0	166,0	166,0	166,0
		HMI120T	HMI140	HMI140T	HMI160	HMI160T	
Dimensions and weights							
A	mm	1200	1200	1200	1200	1200	
B	mm	460	460	460	460	460	
C	mm	878	878	878	878	878	
D	mm	1295	1295	1295	1295	1295	
E	mm	595	595	595	595	595	
F	mm	1020	1020	1020	1020	1020	
Net weight	kg	151,0	151,0	151,0	151,0	151,0	
Weight for transport	kg	166,0	166,0	166,0	166,0	166,0	

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.

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