HMG_P

Reversible air/water heat pump

Cooling capacity 33,0 ÷ 60,0 kW
Heating capacity 36,0 ÷ 65,0 kW

- **Touch-screen control panel**
- **Easy and quick to install**
- **Reliability and compactness**
- **Hermetically sealed equipment**
- **Modularity**

DESCRIPTION

HMG_P the new outdoor reversible inverter heat pump system for producing chilled and heated water.
HMG_P is designed to meet the needs of both the new constructions market and the renovation market, replacing conventional boilers.
It can be combined with low-temperature emission systems such as floor heating or fan coils, and comes supplied with the main hydraulic components needed, thereby facilitating the final installation.
HMG_P formed of fully independent modules that can be linked together to create a modular system.
The base, the structure and the panels are made of galvanized steel treated with polyester paint.
These units are supplied with Integrated hydronic kit.

Main components

— 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.
— Compressor twin rotary inverter.
— Special coil with fin golden coating.
— High-efficiency plate heat exchanger (system side) for excellent reliability and a long lifespan.
— Electronic expansion valve.
— 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.

Main hydraulic components

— Flow switch.
— Inverter pump.
— Expansion tank.
— Drain valve.
— Safety valve.
— Water filter supplied (mandatory installation).

FEATURES

Operating limits

Operation from -20°C outside air temperature (winter) to 52°C (summer).
Production of hot water up to 50 °C.
For more information about the operating limits of these units, refer to the specific paragraph on this product data sheet.

Modularity

HMG_Pcan be installed in a modular system with combinable basic modules specially designed to minimize the overall dimensions.
It is also possible to connect units of different powers.
The modularity allows to adapt the installation of these units to the actual development needs of the system. Based on these needs, it is possible to choose between: homogeneous modularity and sequential modularity.

Homogeneous modularity

Made possible with the use of a control panel TCP (mandatory accessory) to be connected to the master unit of the system.
This type of modularity allows the modules to work with a homogeneous capacity control logic whilst still guaranteeing delay switch-on and switch-off to avoid power consumption peaks and intelligent defrosting (the simultaneous defrosting of up to 1/3 of the modules installed).
Up to 3 modules can be linked together with this operating mode.

Sequential modularity

Made possible with the use of accessories TCP (mandatory accessory), IC-2P, VMF-485LINK and VMF-E6.
This type of modularity allows the HMG_P units to be added to the control system of the whole hydraulic/aeraulic system, so DHW can also be managed.
Unit switch-on and switch-off is managed in a sequential manner, according to a selected control logic (free regulation, regulation by load or regulation by temperature difference).
For more information about VMF system, refer to the dedicated documentation.

Up to 3 modules can be linked together with this operating mode HMG_P.

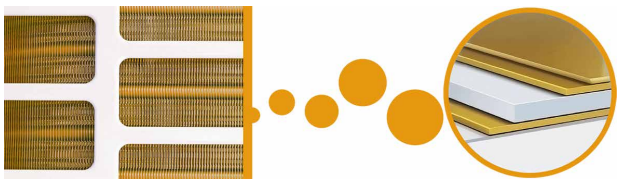
Regulation

Adjustment via **touch-screen control panel (TCP accessory compulsory)**::

— management of (up to) two auxiliary electric resistors (not supplied),
— **Quiet** function for reduced noise operation,
— climatic regulation function,
— unit anti-freeze protection at low temperatures,
— weekly programming in time periods,
— high and low pressure protection,
— smart compressor control, extending the lifespan of the unit and enhancing its reliability,
— alarm history.

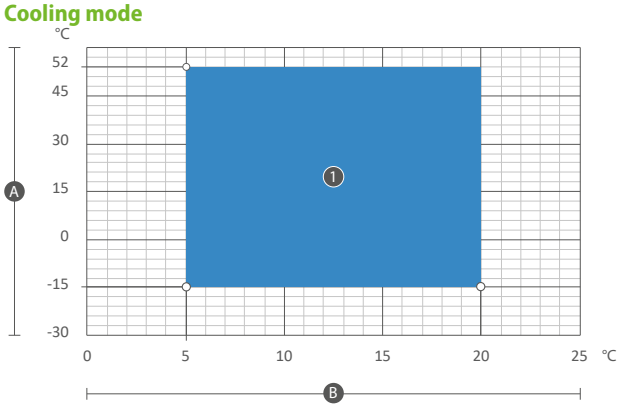
Special golden fin coil

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.



OPERATING LIMITS

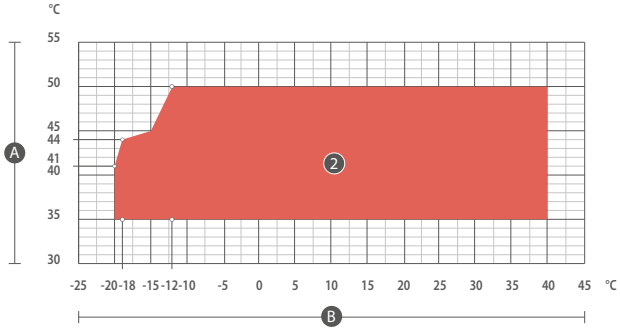
Cooling mode



KEY

1 cooling mode
A outdoor air temperature (°C)
B water produced temperature (°C)

Heating mode range



KEY

2 heating mode
A Water produced (°C)
B Outdoor air temperature (°C)

ACCESSORIES

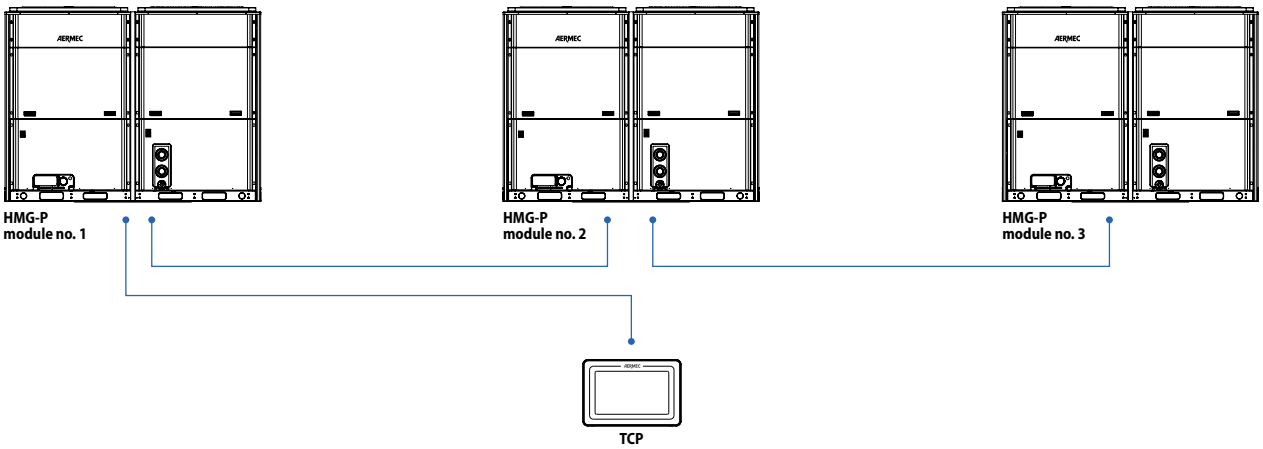
TCP: Touch-screen control panel. (Accessory compulsory).
IC-2P: Connector for communication via Mod Bus or VMF -485LINK. Accessory compulsory if combined with VMF-485LINK, or for third party supervision systems.
VMF-485LINK: Expansion to interface the unit with the VMF communication protocol, making it possible to manage it from the VMF-E5 or VMF-E6 supervisors.
VMF-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).

COMPATIBILITY WITH VMF SYSTEM

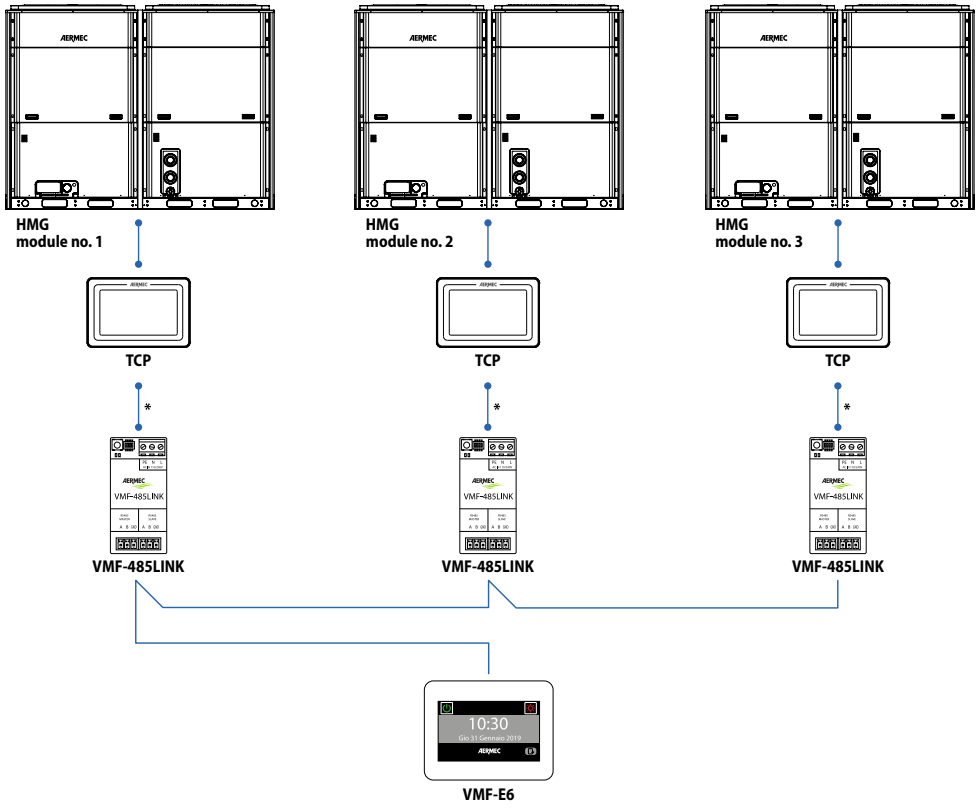
For more information about VMF system, refer to the dedicated documentation.

MODULARITY

Homogeneous modularity - connection diagram



Sequential modularity - connection diagram



* Connection to be made with the aid of the accessory IC-2P.

PERFORMANCE SPECIFICATIONS

		HMG0350P	HMG0600P
Cooling performance 12 °C / 7 °C (1)			
Cooling capacity	kW	33,00	60,00
Input power	kW	11,40	21,10
Cooling total input current	A	18,7	33,2
EER	W/W	2,89	2,84
Water flow rate system side	l/h	5680	10320
Useful head system side	kPa	203	210
Heating performance 40 °C / 45 °C (2)			
Heating capacity	kW	36,00	65,00
Input power	kW	10,90	19,70
Heating total input current	A	18,1	32,3
COP	W/W	3,30	3,30
Water flow rate system side	l/h	6190	11180
Useful head system side	kPa	180	200
Cooling performance 23 °C / 18 °C (3)			
Cooling capacity	kW	32,80	64,00
Input power	kW	8,00	18,00
Cooling total input current	A	13,3	28,4
EER	W/W	4,10	3,57
Water flow rate system side	l/h	5648	11015
Heating performance 30 °C / 35 °C (4)			
Heating capacity	kW	33,50	61,60
Input power	kW	8,40	16,00
Heating total input current	A	13,8	25,4
COP	W/W	4,00	3,86
Water flow rate system side	l/h	5729	10650

(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.

ENERGY DATA

		HMG0350P	HMG0600P
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ≤ 70 kW (1)			
Pdesignh	kW	24	52
SCOP	W/W	4,00	4,01
ηsh	%	157,00	157,50
Efficiency energy class		A++	A++
Cooling capacity with low leaving water temp (UE n° 2016/2281)			
ηsc	%	183,00	186,60
SEER	W/W	4,65	4,74

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

ELECTRIC DATA

		HMG0350P	HMG0600P
Electric data			
Rated power input (1)	kW	13,4	25,6
Power supply			
Power supply		380-415V 3N ~ 50Hz	380-415V 3N ~ 50Hz

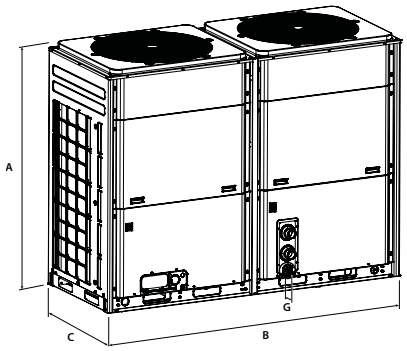
(1) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.

GENERAL TECHNICAL DATA

		HMG0350P	HMG0600P
Compressor			
Type	type	Inverter rotary	
Number	no.	1	2
Circuits	no.	1	2
Refrigerant	type	R32	
Refrigerant load circuit 1 (1)	kg	5,2	5,4
Refrigerant load circuit 2 (1)	kg	0,0	5,4
System side heat exchanger			
Type	type	Brazed plate	
Number	no.	1	1
Connections (in/out)	Type	Gas maschio	
Size (in)	Ø	1"1/4	2"
Fan			
Type	type	Axial	
Fan motor	type	Inverter	
Number	no.	2	2
Air flow rate	m^3/h	12600	24000
Sound data calculated in cooling mode (2)			
Sound power level	dB(A)	81,0	86,0

(1) 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.
(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



		HMG0350P	HMG0600P
Dimensions and weights			
A	mm	1605	1675
B	mm	1340	2200
C	mm	765	880
G	mm	37	57
Net weight	kg	323,0	609,0
Weight for transport	kg	340,0	645,0

G: tap protrusion

Aermec si riserva la facoltà di apportare in qualsiasi momento tutte le modifiche ritenute necessarie per il miglioramento del prodotto con eventuale modifica dei relativi dati tecnici.

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