

Single-phase and three-phase inverter air-to-water monobloc heat pumps

Auriga





Inverter air-to-water monobloc heat pumps

Baxi introduces Auriga, the new inverter air-to-water monobloc heat pump range with single-fase and threefase power supply. The range is characterized by its easy and simple installation. Moreover, the available static pressure of the water pump allows to install the unit in large plants, to cover greater distances from the thermal power station or to install the unit combining it with one or more fan coils.

The range is wide and includes 7 models from 5 to 16 kW, single-fase and three-fase releases.



Auriga		5M	7M	9M	12M	16M	12T	16T
Seasonal energy efficiency	(1)	IIII' A***	IIII A***	IIII. V	IIII A**	IIII' A**	IIII' A**	IIII A**
	(2)	IIII' A**	IIII' A**	IIII. V.,	IIII. V.,	IIII. V	IIII' A**	IIII A**
Nominal heating capacity kW	(3)	4,65	6,65	8,60	12,30	16,30	12,30	16,30
COP	(3)	5,00	4,94	4,60	4,81	4,45	4,84	4,49
Nominal cooling output kW	(4)	4,85	6,30	7,95	10,90	13,80	10,90	13,80
EER	(4)	2,98	2,77	2,53	2,92	2,65	2,93	2,66

⁽¹⁾ Heating operation energy class: LOW TEMPERATURE, AVERAGE climatic conditions (UE N° 811/2013)

⁽²⁾ Heating operation energy class: MEDIUM TEMPERATURE, AVERAGE climatic conditions (UE N° 811/2013) (3) Outdoor air temperature 7°C - 87% U.R., water temperature 30/35°C - EN 14511

⁽⁴⁾ Outdoor air temperature 35°C, water temperature 12/7°C - EN 14511

Features

Wide range of powers, from 5 to 16 kW

introduced to satisfy all the installation needs: heating, cooling and DHW production.



Westen

Easy to install in different home environments

The available static pressure of the pump allows to face major pressure drops as the one that might occur in large plants or when the unit is combined with a fan coil.



Excellent cooling performances



Remote control panel

Control of system functions, parameters programming and check.

Integration in BMS systems thanks to the Modbus protocol.



ErP Energy Labelling

The energy labelling regulation (EU regulation 2017/1369) requires each product to be labelled according to a decreasing scale from A+++ to D (in heating) and from A+ to F (in DHW production). 5M/7M/9M models have an A+++ seasonal energy efficiency in low temperature heating.





Components



- > **Twin rotary DC inverter compressor** with internal thermal protection and crankcase resistance, it is mounted on anti-vibration dumpers and wrapped on an insulating hood to reduce the transmission of noise and vibrations due to operation.
- > Water-refrigerant exchanger: brazed steel plate heat exchanger AISI 316 with polypropylene insulation to prevent the condensation and anti-freeze resistance to avoid the ice formation in the exchanger.
- > **Air-refrigerant exchanger:** aluminum finned coil with hydrophilic treatment to facilitate the outflow of condensate, mechanically expanded copper pipes with internal shaping to increase the heat exchange. In addition, the optimized circuitry allows to reduce the formation of ice in the coil during the heat pump operation.
- > **Fan:** axial fan directly coupled to the high efficiency brushless DC variable speed motor. The fan is installed on aerodynamic nozzles and safety grilles.
- > **Refrigerant circuit:** made of pickled copper, it includes the electronic expansion valve, filter driers, high and low pressure switches, pressure transmitter, reverse cycle valves, liquid receiver and separator, suction refrigerant injection valve.
- > **Hydraulic circuit:** in addition to the brazed plate heat exchanger, the unit includes high head circulation pump, expansion vessel, safety valve, flow switch, pressure gauge and air vent valve and metal mesh Y filter (assembled by the installer).
- > **Electrical panel:** includes protection through fuse of the main internal components; the terminal block is divided into a power section for the supply and a control terminal block to connect auxiliary inputs/outputs and the control panel.

Monobloc system for heating, cooling and domestic hot water production



mod. 5M/7M/9M





Saving

Maximum energy efficiency

Wide operating range: up to -25°C outdoor air temperature in heating mode and up to 46°C outdoor air temperature in cooling mode

Wide operation ratio DC inverter compressor Low GWP refrigerant (R32)



Ease of integration

Suitable to radiand floor heating and fan coil integration Integrated management with different systems: boiler integration, solar integration, diverter valve management and secondary circuit pump



Advanced electronics

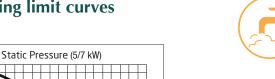
Modbus net connection

Intelligent defrosting thanks to room temperature, refrigerant temperature, produced water temperature and operating mode simultaneous monitoring



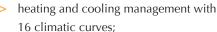
High sanitary performances

Full control of the DHW: up to 60°C DHW temperature production, boiler water temperature control, DHW circulating pump and solar system integration



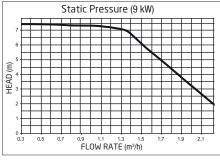
Included functions

Control panel (mandatory installation) to manage different plant configurations directly form the unit:





- DHW tank management, solar integration, boiler integration and circulating DHW pump management;
- integrated boiler and backup electrical resistance management;
- anti-legionella function;
- eco mode with double settable setpoint;
- silent mode with 2 settable levels of silence;
- holiday mode: anti-freeze and DHW management with dedicated setpoints, DHW anti-legionella treatment at the end of the setted period.



FLOW RATE (m3/h) A: speed I B: speed II C: speed III

Static Pressure (12/16 kW) FLOW RATE (m3/h) A: speed I B: speed II C: speed III

Additional functions

Electrical resistance kit



Technical data

Auriga		5M	7M	9M	12M	16M	12T	16T
Heating								
Rated heat output Outdoor air temperature 7°C – $87~\%$ R.H., water temperature $30/35^{\circ}\text{C}$ - EN 14511	kW	4,65	6,65	8,60	12,30	16,30	12,30	16,30
Absorbed electrical power Outdoor air temperature 7°C – 87 % R.H., water temperature 30/35°C - EN 14511	kW	0,93	1,35	1,87	2,56	3,66	2,54	3,63
COP Outdoor air temperature 7°C – $87~\%$ R.H., water temperature $30/35^{\circ}\text{C}$ - EN 14511		5,00	4,94	4,60	4,81	4,45	4,84	4,49
Rated heat output Outdoor air temperature 7°C – 87 % R.H., water temperature $40/45^{\circ}\text{C}$ - EN 14511	kW	4,65	6,73	8,60	12,10	16,20	12,10	16,20
Absorbed electrical power Outdoor air temperature 7°C – 87 % R.H., water temperature $40/45^{\circ}\text{C}$ - EN 14511	kW	1,35	1,89	2,50	3,42	4,79	3,39	4,73
COP Outdoor air temperature 7°C – 87 % R.H., water temperature 40/45°C - EN 14511		3,45	3,57	3,44	3,54	3,39	3,57	3,42
Rated heat output Outdoor air temperature 7°C – 87% R.H., water temperature 47/55°C - EN 14511	kW	4,65	6,80	8,60	11,90	16,10	11,90	16,10
Absorbed electrical power Outdoor air temperature 7°C – 87% R.H., water temperature 47/55°C - EN 14511	kW	1,77	2,42	3,13	4,28	5,91	4,23	5,83
COP Outdoor air temperature 7°C – 87% R.H., water temperature 47/55°C - EN 14511		2,63	2,81	2,75	2,78	2,73	2,81	2,76
Cooling								
Nominal cooling capacity Outdoor air temperature 35°C, water temperature 23/18°C - EN 14511	kW	5,10	6,50	8,00	12,20	15,50	12,20	15,50
Absorbed electrical power Outdoor air temperature 35°C, water temperature 23/18°C - EN 14511	kW	1,10	1,40	1,90	2,60	3,60	2,60	3,60
EER Outdoor air temperature 35°C, water temperature 23/18°C - EN 14511		4,82	4,65	4,16	4,78	4,26	4,78	4,26
Nominal cooling capacity Outdoor air temperature 35°C, water temperature 12/7°C - EN 14511	kW	4,90	6,30	7,60	10,90	13,80	10,90	13,80
Absorbed electrical power Outdoor air temperature 35°C, water temperature 12/7°C - EN 14511	kW	1,60	2,30	3,00	3,70	5,20	3,70	5,20
EER Outdoor air temperature 35°C, water temperature 12/7°C - EN 14511		2,98	2,77	2,53	2,92	2,65	2,92	2,65
ErP data								
SCOP	(1) (2)	4,47 3,24	4,47 3,24	4,51 3,22	4,29 3,23	4,30 3,27	4,29 3,23	4,30 3,27
Seasonal heating efficiency □s	(1) (2)	176 127	176 127	177 126	169 126	169 128	169 126	169 128
SEER	(3) (4)	7,61 4,71	8,58 4,99	7,88 4,92	7,5 4,85	6,78 4,54	7,5 4,85	6,78 4,54
Refrigerant circuit								
Refrigerant Gas					R32			
Refrigerant load	kg	2,00	2,00	2,00	2,80	2,80	2,80	2,80

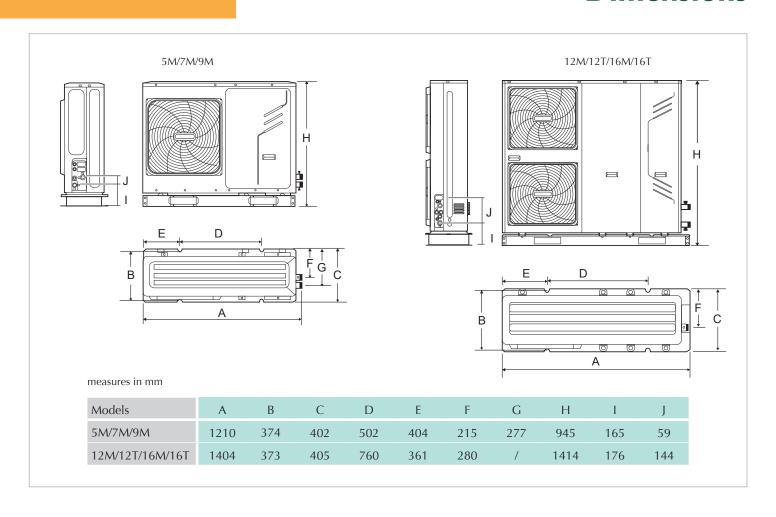
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(3) Room cooling seasonal energy efficiency radiant floor heating application (23/18°C) - (EN 14825)
(4) Room cooling Seasonal energy efficiency for Fan coil applications (12/7°C) - (EN 14825)

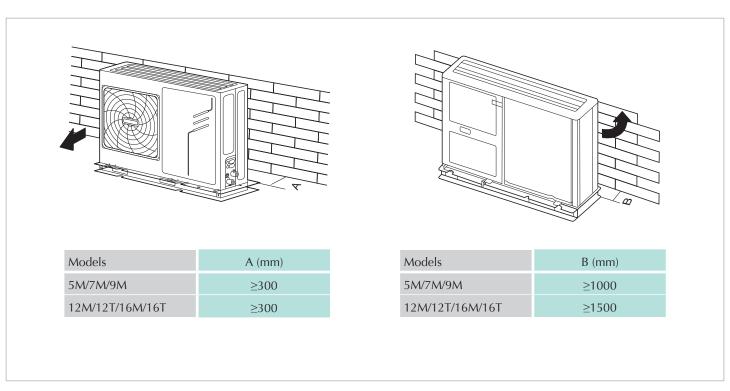
Auriga		5M	7M	9M	12M	16M	12T	16T
Hydraulic circuit								
Heat exchanger water flow Outdoor air temperature 7°C – $87~\%$ R.H., water temperature $30/35^{\circ}\text{C}$ - EN 14511	m³/h	0,80	1,15	1,49	2,13	2,82	2,13	2,82
Available static pressure Outdoor air temperature 7°C – 87 % R.H., water temperature $30/35^{\circ}\text{C}$ - EN 14511	kPa	55	50	60	80	70	80	70
Minimum water content	I	20	20	20	40	40	40	40
Expansion vessel	I	2	2	2	5	5	5	5
Safety valve	bar	3	3	3	3	3	3	3
Hydraulic connections		1"	1″	1″	1″ 1/4	1″ 1/4	1″ 1/4	1″ 1/4
Metal mesh water filter		1"	1″	1″	1″ 1/4	1″ 1/4	1″ 1/4	1″ 1/4
Electrical data								
Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
Noise data								
Sound power The sound power is the maximum value obtained at full load at nominal test conditions	dB(A)	61	64	67	68	71	68	71
Sound pressure Average sound pressure, at 1 meter distance,in a free field on a reflective surface; non-binding value, obtained from the sound power level	dB(A)	48,8	52,3	54,5	57,6	58,1	57,2	59,0
Weight								
Empty weight in operation Standard empty configuration, packaging not included	kg	92	92	92	158	158	172	172



Dimensions



Clearance space



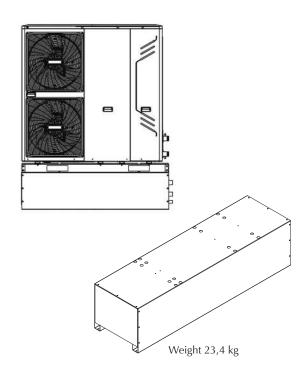
Accessories

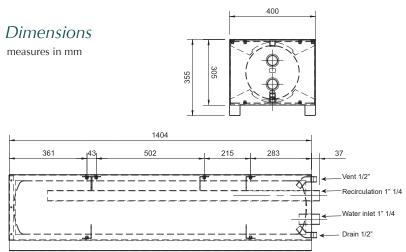
Wester	Remote control panel Full heat pump functions control; it can be used as thermostat thanks to the INCLUDED outdoor sensor CUMPULSORY INSTALLATION	A7750381
22.7 20 06 06 00 matrix	Room thermostat Digital room thermostat (heating and cooling)	7663411
9	Additional outdoor sensor As the included sensor, it allows to extend the on-board electronics functions	A7750595
	3-way valve G 1 1/4" for DHW Fitted downstream from the heat pump, it switches the water flow from the system to the DHW tank and vice versa, according to the signal received by the heat pump	A7754874
	Electrical resistance 3kW 230V Equipped electrical control and protection panel, it integrates and/or replaces the heat pump in the most critical operating conditions or in case of anomaly of the heat pump	A7750380
	Electrical resistance 4,5kW 400V Equipped electrical control and protection panel, it integrates and/or replaces the heat pump in the most critical operating conditions or in case of anomaly of the heat pump	A7750385
	Anti-vibration rubber support brackets (600 mm length) Stable support from atmospheric events; it allows the noise vibration reduction	A7694974
	60 It compact inertial for Auriga NEW Hydraulic connetions must be provided by the installer	A7777754



Compact inertial for Auriga NEW

cod. A7777754





The compact inertial tank is designed to be installed with Auriga heat pumps. The installation of this new tank saves space compared to the installation of the classic cylindrical puffer. The 60 litre capacity meets the minimum water content for all Auriga models.

Its structure and the material used guarantee reliability for outdoor installation and for heating and cooling water production.



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