MAXA
HEATING & COOLING

2024
Ver 24.03

Industrial & Commercial
Catalogue

DEP02670120001		Catalogue Industrial & Commercial
Rev.	Date	Changes
0	01/03/2024	First issue: i-290 0240, 0250 new data Updated minimum water volumes i-290 0106/0127 Added "A" version for i-32V5 14, 16, 18 T and i-32V5 SL 16 T New GI/ GI3 hardware expansion modules + remote controls combination table ConnectBox catalogue Insertion Re-introduction of Calido product versions D Hydrofull catalogue Insertion Phase out HWA-A/FC Phase out OTA 1-AD, OTA-VHE Phase out CRR
1	08/04/2024	Updated GWP i-290 range
2	12/04/2024	Phase out CRB
3	29/05/2024	Phase out Grimper accessories: RAD18, RAD34

Index

Inverter Heat Pumps

R290

R32

R410A

Hybrid System

Controls

DHW Heat Pump

Tanks, Boilers & Preparers

Industrial Range - On/Off

R410A

Industrial Hydronic

Heat Recovery Units

Technology and Innovation for over 30 years

We design, manufacture and market heat pumps and air conditioning systems that will change the world. Maxa was born with this declaration of intent, a clear mission that still guides the spirit of the entire company today, more than 30 years after its foundation.

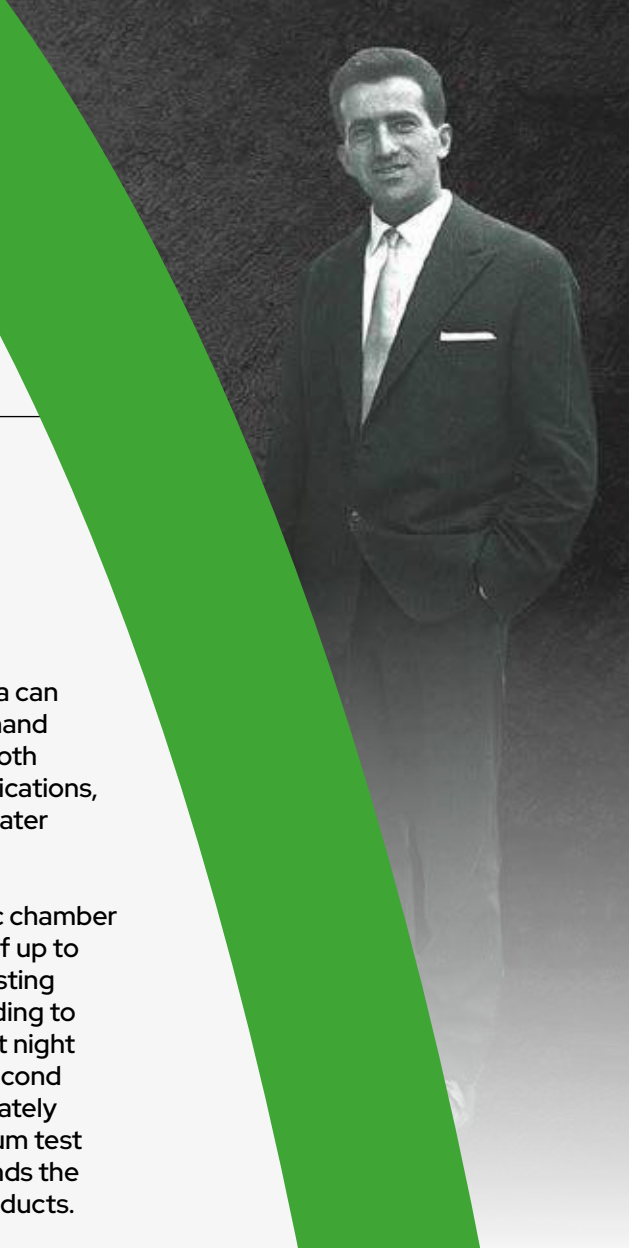
In 1992, Luciano Tredicesimo Ferroli, who had already led several successful entrepreneurial projects, founded what is now the largest heat pump production company on the Italian market.

Today led by his three sons: Paolo, David, Simone and his wife Elide, Maxa continues along the path indicated by its Founder. Environmental comfort, climate and the reduction of CO2 levels in the atmosphere are the result of the commitment that Maxa's 280 people spend every day to design and produce increasingly innovative and high-performance systems.

The Research and Development Team, from which our products are born, is made up of engineers, designers and laboratory researchers; a cohesive team of over 30 people whose mission is to develop and test new technological solutions, anticipating the increasing demands of the market.

Our range has solutions designed for residential, commercial, industrial and tertiary air conditioning. Thanks to continuous research and development of integrated products and solutions, we have one of the most comprehensive and competitive ranges in Europe. Our heat pumps currently range in sizes from 6 to 350 kW.

In 2023, we launch the new Maxa i-290 Range, which exploits the potential of the hydrocarbon R290, with very low global warming potential (GWP) and absolute top performance. One of the most complete ranges on the entire market, capable of achieving very high performance in heating, even at temperatures as low as -20°C.



The birth of our Made in Italy

Our story begins in 1957, the year in which our President, Luciano Tredicesimo Ferroli, founded his first company in the world of heating, designing and building boilers that were already innovative at the time. He was responsible for the development of the first high-efficiency condensing boiler and several patents worldwide.

In 1973 he took his first steps towards the construction of air-conditioning machines for server rooms for mechanics and telephone centres, moving into the residential air-conditioning sector in 1996, in its early days at the time.

From that date to the present day, Maxa has grown to become a leading Italian and international company, not only for its product ranges dedicated to residential and commercial air-conditioning, but also for its Made in Italy production of highly efficient inverter heat pumps.

The company headquarters is located in Arcole, in the province of Verona, and houses, in addition to the offices, the warehouse for storing finished products and spare parts, as well as 7,800 m^2 for production.

With 15 production lines, Maxa can satisfy every production demand for inverter heat pumps for both residential and industrial applications, as well as the wide range of water chillers up to 1,000 kW.

The latest generation climatic chamber with a maximum test power of up to 100 kW enables functional testing at full and partial loads according to EN14511 and EN14825, even at night and without an operator. A second chamber divided into 2 separately operable units, with a maximum test power of up to 800 kW, extends the testing capabilities of our products.

The company has also adopted the LEAN methodology in the production process with a consequent improvement in the component transport system through Milk-run and Kanban management for optimised component consumption management.

We can proudly claim to be a company capable of designing, developing and manufacturing heating and air-conditioning products Made in Italy.

Global Sustainability

Environmental protection, full sustainability and a focus on climate well-being and, more generally, on improving the quality of life are the values on which our way of acting and working is based. We want to take an active part in protecting the environment and the Earth, and we do this by translating our ideals into concrete actions.

This is why we continuously develop products that aim at energy saving, maximum efficiency, using environmentally friendly gases that reduce global warming as much as possible, and promote a careful recycling policy for components.

Use of sustainable energy for production
We introduced our ecological philosophy into the company as early as 2011 with the construction of an initial photovoltaic system, which was later expanded by utilising the space available at the car park shelters and on the roofs of our buildings. In this way, our energy needs are met with almost 350 kW of photovoltaic power.

Product Innovation
From 2019, we anticipated the use of the refrigerant gas R32 in our heat pumps and air conditioners, a gas that later became a MUST for all other operators in the sector.

Subsequently, we introduced the natural refrigerant gas R290, which guarantees high energy performance (hot water up to 75°C) combined with maximum respect for the environment (ODP=0; GWP=3). And we will not stop there.

The continuous search for new technological solutions, combined with investments in the development of heat pump heating systems for homes and large areas, are part of the company's mission, which is completely oriented to maximise energy efficiency.

Component recycling
Complying with the RoHS 2002/95/EC directive, which requires the prohibition and restriction of components using lead, mercury, cadmium and chromium.

Membership of the RIDOMUS air conditioning recycling consortium guarantees a careful recycling policy for household air conditioning components.

Maxa in Italy and the World

In 2005 Maxa expanded its activities outside its national borders, gaining immediate success thanks to the performance of its machines, capable of serving extremely hot and cold climates.

Today our product range is appreciated in over 40 countries, wherever there is a need for quality air conditioning, from residential to hotels, from hospitals to sports centres, from industries to shopping centres.

With Subsidiaries and Partnerships of excellence in the rest of the world, Maxa punctually serves its Customers providing full technical and commercial support.

We are present in Italy with over 50 Agents and 300 Service Centres. To always and in any case put the customer at the centre.

i-290

New Heat Pumps Range with R290 gas

The widest in the market!

- **A unique solution for heating, cooling and hot water production** with assured performance all year round.

- **Sustainability, technology** and **reliability** combined with an incomparable **Made in Italy** style.

- MAXA's i-290 heat pumps are designed to generate **extremely high water temperatures** even in the harshest conditions.

78°C
hot water

- The range is distinguished by a **unique design** that integrates advanced technical solutions and modern aesthetics.
With elegant lines and **state-of-the-art functionality**, it combines energy efficiency with distinctive style, representing excellence in heating and cooling.

MAXA®
HEATING & COOLING

LIVE BETTER

DESIGNED, REALIZED, GUARANTEED IN ITALY

The **i-290 range** is available in **11 sizes**, with power outputs between **6 kW** and **50 kW** in heating mode.

Finally, the right heat pump solution for every system.

The i-290 range can be **perfectly and quickly integrated** both in new buildings and in combination with existing systems.
This makes it possible to satisfy with great efficiency both radiant floor systems, as well as traditional systems that exploit high-temperature water.

Environmental Sustainability

Thanks to the R290 technology, your system operates without the use of any fuel gas, ensuring efficient and sustainable operation **without any CO2 emissions** into the environment.

Unique and suitable for every need

Numerous accessories and fittings allow the individual heat pump to be customised.

A+++
energy class

GWP = 0,02

ICIM

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

i-290

R290 Inverter heat pump monoblock

6 kW÷27 kW

The latest evolution of MAXA full inverter heat pump technology uses the environmentally friendly refrigerant gas R290.
This new evolutionary step further simplifies the construction of fully heat pump systems.
In fact, thanks to the 78° maximum water temperature achievable by the i-290 range, application on systems requiring high flow temperatures is also very simple.
Finally, the direct replacement of existing systems, which previously operated with combustion appliances, is very manageable.

Technical Features

- Proprietary control system with microcontroller control, overheating control logic via electronic expansion valve.
- Compressors. Twin Rotary/Scroll DC inverter.
- Fans. Axial type with brushless DC motor.
- Source heat exchanger. Optimised with a finned coil circuit, copper tubes and aluminium fins with hydrophilic treatment (0106/0118).
- AISI 304 stainless steel brazed plate heat exchanger with low pressure drop on the water side.
- Refrigeration circuit made of copper piping, includes: condensation control, electronic thermostatic valve, reversing valve, high pressure switch, liquid separator, liquid receiver (sizes 0112-0127 only), pressure tap, bidirectional metal mesh filters, high and low pressure transducers.
- Integrated hydraulic circuit with high-efficiency brushless circulator with variable speed, flowmeter, deaerator with air vent valve (loose accessories for sizes 0106-0118), overpressure valve (3 bar:0106-0118 - 6 bar:0121-0127), system filling and draining tap.

Logic and Controls:

- All units can operate in 3 different modes: heating, cooling and DHW, with specific programming to optimise performance in all conditions, with possible management of the climatic curve.
- All units of the i-290 series are equipped with a wired control for complete control of the heat pump, model e-LITE.
- The i-290 series units are able to manage mixing valves, diverter valves and secondary-side circulator; they are also able to control the solar thermal system, possible integration with external heat sources, and integration with external Home/Building automation or Home Automation systems. ModBus available as standard for sizes 0106-0118. Modbus available as "CM" access for other sizes.
- The i-290 series is equipped with an innovative remote control that, once connected to the heat pump, allows complete control.
- Various accessories are also available for connection to the wi-fi network (CONNECT-BOX) or for controlling cascade systems (HI-TV415).

Common accessories

AG	Anti-vibration kit	**KA**	Heat exchanger resistance + base
CONNECT BOX**	Gateway Heat Pump Communication and Maxa Connect	**KA3**	Base resistance
		RP	Battery protection grilles
EXOGEL	Frost protection	**SAS**	Remote plant probe - Sanitary storage probe
FD	Dirt separator filter		
FY	Y-filter	**TR2**	Cu/Al battery with anti-corrosion treatment
GI3**	External hardware extension module		
Hi-TV415	Remote Touch Screen Display		

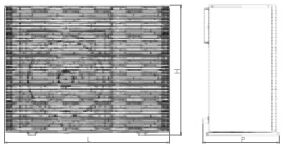
** Accessories that cannot be used simultaneously

Specific accessories for sizes 106 to 118

VDIS2	Three-way diverter valve for hot water production in sanitary thermal storage.

Specific accessories for sizes 121 to 127

VDIS3	Three-way diverter valve for hot water production in sanitary thermal storage.	**CM**	Provision of Modbus connectivity



Dimensions		0106	0109	0112	0115	0118	0121	0123	0125	0127
L	mm	1105	1105	1105	1105	1105	1610	1610	1610	1610
P	mm	490	490	490	490	490	710	710	710	710
H	mm	870	870	1440	1440	1440	1270	1270	1270	1270

i-290		0106	0109	0112	0115	0118	0121	0123	0125	0127
Cooling										
Cooling capacity (1)	kW	5,8* / 5,4	9,2* / 8,6	11,2* / 10,7	13,5* / 12,4	14,3* / 13,8	17,4	18,9	19,8	22,3
Power input (1)	kW	2,0	2,8	3,8	3,7	4,3	5,26	5,89	6,19	7,19
EER (1)	W/W	2,8	3,1	2,6	3,4	3,2	3,31	3,21	3,20	3,10
Cooling capacity (2)	kW	6,2* / 5,62	9,9* / 9,15	13,3* / 12,57	14,4* / 12,90	14,8* / 13,94	19,6	21,0	25,3	27,9
Power input (2)	kW	1,25	1,93	2,83	2,40	2,69	4,02	4,38	5,32	6,43
EER (2)	W/W	4,49	4,74	4,44	5,37	5,18	4,88	4,79	4,76	4,34
SEER (5)	W/W	4,8	5,4	4,7	5,0	5,0	5,27	5,27	4,94	4,84
Water flow rate (1)	L/s	0,3	0,4	0,5	0,6	0,7	0,83	0,90	0,95	1,07
Useful head (1)	kPa	66	57	81	80	74	128	121	128	117
Heating										
Heating capacity (3)	kW	6,9* / 6,24	10,4* / 9,69	13,7* / 12,60	17,7* / 16,33	19,84* / 18,72	21,0	22,8	24,8	27,0
Power input (3)	kW	1,31	2,05	2,61	3,30	4,05	4,31	4,78	5,37	6,21
COP (3)	W/W	4,76	4,72	4,83	4,94	4,62	4,87	4,77	4,62	4,35
Heating capacity (4)	kW	6,4* 6,0	9,75* 9,1	12,77* 11,6	17,69* 15,2	18,7* 17,4	19,6	21,6	23,2	26,3
Power input (4)	kW	1,9	2,9	3,6	4,5	5,3	6,13	6,79	7,66	8,74
COP (4)	W/W	3,1	3,2	3,2	3,4	3,3	3,20	3,18	3,03	3,01
Heating capacity (11)	kW	6,41* / 5,9	9,81* / 9,1	13,08* / 12,0	16,64* / 14,7	17,7* / 16,7	19,7	21,2	24,1	25,8
Power input (11)	kW	2,3	3,4	4,6	5,2	6,0	7,38	7,97	9,56	10,3
COP (11)	W/W	2,6	2,7	2,6	2,8	2,8	2,67	2,66	2,52	2,50
SCOP (6)	W/W	4,7	5,2	4,9	4,9	4,8	4,75	4,72	4,49	4,46
Water flow rate (3)	L/s	0,3	0,4	0,6	0,8	0,9	0,59	0,65	0,69	0,79
Useful head (3)	kPa	63	52	79	68	60	150	146	149	142
Energy efficiency (Water 35°C / 65°C)		A+++ A++	A+++ A+++		A+++ A++			A+++ A++		
Compressor										
Type		Twin Rotary DC Inverter					Scroll DC Inverter			
Compressors	n°	1	1	1	1	1	1	1	1	1
Refrigerant circuits	n°	1	1	1	1	1	1	1	1	1
R290 refrigerant quantity (7)	kg	0,43	0,75	1,00	1,27	1,27	1,7	1,7	2,1	2,1
Hydraulic circuit										
Plumbing fittings	inch			1"M				1" 1/4 M		
Minimum water volume (8)	L	65	95	125	155	155	175	175	220	225
Noise level										
Sound power (9)	dB(A)	57	58	59	62	62	64	64	65	65
Sound pressure at 1m distance (10)	dB(A)	42	43	44	47	47	48	48	49	49
Electrical data										
Power supply		230V/1/50Hz			400V/3P+N+T/50Hz					
Maximum power input	kW	3	4	5	8	8	11	11	13	13
Maximum input current	A	14	21	26	16	16	19	19	21	21
Weight										
Shipping weight	kg	117	119	170	188	188	276	276	285	285

* Performance referring to the following conditions:
(1) Cooling: outdoor air temperature 35°C; in/out water temperature 12/7°C.
(2) Cooling: outdoor air temperature 35°C; in/out water temperature 23/18°C.
(3) Heating: outdoor air temperature 7°C db 6°C db; in/out water temperature 30/35°C.
(4) Heating: outdoor air temperature 7°C db 6°C db; in/out water temperature 47/55°C.
(5) Cooling: low temperature, variable output, fixed flow rate.
(6) Heating: average climatic conditions; Tbiv=-7°C; low temperature, variable output, fixed flow rate.
(7) Indicative data subject to changes. For the correct value, always refer to the technical label on the unit.
(8) Calculated for a decrease in system water temperature of 10°C with a defrost cycle lasting 6 minutes.
(9) Sound power: heating mode according to EN 12102:2022; value determined on the basis of measurements made in accordance with UNI EN ISO 9614-1, in compliance with Eurovent certification requirements.
(10) Sound pressure: value calculated from the sound power level using the standard ISO 3744:2010 at a distance of 1 m.
(11) Heating: outdoor air temperature 7°C db 6°C db; in/out water temperature 55/65°C.
(*) by activating the maximum Hz function

i-290

Tandem scroll inverter heat pumps air/water with EC axial fan

40 kW÷50 kW

The i-290 0240 and 0250 sizes represent the latest evolution in MAXA full inverter heat pump technology. In fact, using the environmentally friendly refrigerant gas R290, it is possible to take the latest evolutionary step that further simplifies the construction of fully heat pump systems.
In fact, thanks to reaching a maximum temperature of 78°, direct application on systems requiring high flow temperatures is also very easy.

Technical Features

- Proprietary control system with microcontroller control, overheating control logic via electronic expansion valve.
- Compressors. Scroll DC inverter with tandem operation.
- Fans. Axial type with brushless DC motor.
- Heat exchanger source. Optimised with a finned coil circuit, copper tubes and aluminium fins with hydrophilic treatment. AISI 304 stainless steel brazed plate user exchanger with reduced water-side pressure drop.
- Refrigeration circuit made of copper tube, includes: 4-way cycle reversing valve, electronic expansion valve, liquid separator, liquid receiver, safety device (high pressure switch), pressure transducers, filter dehydrator, liquid flow and moisture indicator.
- The suction pipe is thermally insulated with flexible, closed-cell elastomeric foam.
- Hydraulic circuit including: plate heat exchanger, protection flow switch, safety valve (6 bar) to be connected to a collection system and manual air vent valve.
- On request (optional) further components such as a tank and circulation pump can be installed on the machine.

Logic and Controls

- All units can operate in 3 different modes: heating, cooling and DHW, with specific programming that exalts performance in all conditions, with possible management of the climatic curve.
- The i-290 series units are able to manage mixing valves, diverter valves and secondary-side circulator; they are also able to control the solar thermal system, possible integration with external heat sources, and integration with external Home/ Building automation or Home Automation systems.
- The i-290 0240-0250 series is fully controllable via the on-board display..
- In addition, various accessories are available for remote control (e-LITE) or connection to the wi-fi network (CONNECT-BOX) or control of cascade systems (HI-TV415).

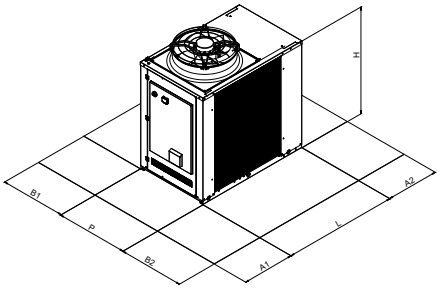
Accessories

GL	Wooden cage packing
GL	Wooden cage packing (with SI acc.)
IM	Protection swiches
KA1	Heat exchanger + pump (if on board) electrical heaters
RP	Protection module
TR2	Cu/Al battery with anti-corrosion
CM	Modbus communication module
KA1	Heat exchanger + pump (if on board) electrical heaters
PS	Single pump AC
PSEC	Single pump EC
PSEC-SI	Single pump EC and inertial tank
PSI	Inverter modulated single pump AC
PSI-SI	Inverter modulated single pump AC and inertial tank
PS-SI	Single pump AC and inertial tank
SL	Silencing
SSL	Super silencing (SI included)

Loose accessories

AG	Anti-vibration kit
CONNECT BOX**	Gateway Heat Pump Communication and Maxa Connect
e-LITE	Multifunctional remote control system
FY	Y-filter
GI3**	External hardware extension module
Hi-TV415	Remote Touch Screen Display
RP	Battery protection grilles
SAS	Remote plant probe - Sanitary storage probe
TR2	Cu/Al battery with anti-corrosion
RV	Grooved Joint Connection
VDIS4	Three-way diverter valve for hot water production in sanitary thermal storage

** Accessories that cannot be used simultaneously



Dimensions		0240	0250
L	mm	1850	1850
L (with tank)	mm	2460	2460
P	mm	1110	1110
H	mm	1920	1920
H (SSL)	mm	1980	1980

Spaces of respect		0240-0250
A1	mm	1200
A2	mm	1000
B1	mm	1500
B2	mm	1500

i-290		0240	0250
Cooling			
Cooling capacity (1)	kW	28,9	34,1
Power input (1)	kW	9,20	11,0
EER (1)	W/W	3,14	3,10
Cooling capacity (2)	kW	34,5	37,0
Power input (2)	kW	8,10	8,53
EER (2)	W/W	4,26	4,34
SEER (5)	W/W	4,86	4,80
Water flow rate (1)	L/s	1,38	1,63
Heating			
Heating capacity (3)	kW	40,1	50,0
Power input (3)	kW	9,8	11,9
COP (3)	W/W	4,10	4,20
Heating capacity (4)	kW	38,0	47,9
Power input (4)	kW	13,1	16,5
COP (4)	W/W	2,90	2,90
Heating capacity (11)	kW	38,4	45,8
Power input (11)	kW	16,0	18,8
COP (11)	W/W	2,40	2,44
SCOP (6)	W/W	4,09	4,20
Water flow rate (3)	L/s	1,14	1,43
Energy efficiency (Water 35°C / 65°C)		A++ A++	
Compressor			
Type		Scroll DC Inverter	
Compressors	n°	2	2
Refrigerant circuits	n°	1	1
R290 Refrigerant quantity (7)	kg	3,15	3,50
Hydraulic circuit			
Plumbing fittings (grooved)	inch	1" 1/2 (DN 40)	
Minimum water volume (8)	L	365	415
Noise level			
Sound power (9)	dB(A)	82	83
Sound pressure at 1m distance (10)	dB(A)	64	65
Electrical data			
Power supply		400V/3P+N+T/50Hz	
Maximum power input	kW	23	27
Maximum input current	A	37	44
Weight			
Shipping weight	kg	510	525

* Performance referring to the following conditions:
(1) Cooling: outdoor air temperature 35°C; in/out water temperature 12/7°C.
(2) Cooling: outdoor air temperature 35°C; in/out water temperature 23/18°C.
(3) Heating: outdoor air temperature 7°C db 6°C db; in/out water temperature 30/35°C.
(4) Heating: outdoor air temperature 7°C db 6°C db; in/out water temperature 47/55°C.
(5) Cooling: low temperature, variable output, fixed flow rate.
(6) Heating: average climatic conditions; Tbiv=-7°C; low temperature, variable output, fixed flow rate.
(7) Indicative data subject to changes. For the correct value, always refer to the technical label on the unit.
(8) Calculated for a decrease in system water temperature of 10°C with a defrost cycle lasting 6 minutes.
(9) Sound power: heating mode according to EN 12102:2022; value determined on the basis of measurements made in accordance with UNI EN ISO 9614-1, in compliance with Eurovent certification requirements.
(10) Sound pressure: value calculated from the sound power level using the standard ISO 3744:2010 at a distance of 1 m.
(11) Heating: outdoor air temperature 7°C db 6°C db; in/out water temperature 55/65°C.

i-32V5

Inverter monoblock heat pump

6 kW÷18 kW

11 models: the most compact and the best performing of the market!
The inverter technology employement together with DC brushless motors ensures higher global energetic efficiency of equipment also thanks to high and effective modulating power. The employement extension to all components gives the COP and EER improvement and a substantial increase of partial loads efficiency.

Technical Features

- Customized control system with microcontroller regulation, overheating control logic with electronic expansion valve.
- DC inverter compressors: twin-rotary Dc Inverter.
- Ventilation: DC inverter with axial fan
- Source exchanger: optimized circuit with finned coil, copper pipes and hydrophilic aluminum fins.
- Users exchanger: a brazed plate type in stainless steel AISI 304 with reduced pressure drop on the water side.
- Refrigerant circuit is made with copper pipes and includes: condensing control, electronic expansion valve, reversing valve 4 ways, high pressure switch, separator and liquid receiver, valves for maintenance and control, high and low pressure transducers.
- Integral hydraulic system: pump with high efficiency brushless circulator, flow switch, air valve, pressure relief valve (6 bar), pressure gauge, water valve for system charge/discharge.

Logic and Controls

- All units can works in three different modes: heating, cooling and DHW, with specific programs that enhance the performance in all conditions, with possible management of the temperature curve.
- The V5 series units are able to handle mixing valves, diverter and circulatory secondary side; They are also able to control the solar thermal system, the eventual integration with external heat sources, and integration with external systems Home Building automation or Domotic. All i-32V5 series is controllable remotely (accessory HI-TV415).
- Modbus RS485 protocol as standard

The i-32V5 KA models with integrated defrosting kit "KA" has the same performance and technical data, in order to they have the same Eurovent HP Keymark certification.

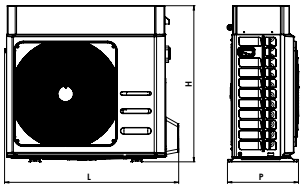
Accessories

AG	Vibration damper kit
CONNECT BOX**	Gateway Heat Pump Communication and Maxa Connect
EXOGEL	Frost protection
FD	Dirt separator filter
GI *	Internal hardware extension module
GI3**	External hardware extension module
Hi-TV415	Multifunctioning touch screen remote control
i-CR	Remote wall controller
KA	Anti-frost heater on base and plate heat exchanger
SAS	DHW probe / Sanitary water probe
SPS	Solar panel probe
TR2	Anti-corrosion treatment
VDIS2	Three-way diverter valve for hot water production in sanitary thermal storage

* Factory mounted accessory available only for sizes 10-10T-12-12T-14-16
** Accessories that cannot be used simultaneously

Versions

i-32V5	Reversible heat pump
i-32V5/KA	Reversible heat pump with integrated defrosting kit



Dimensions		06A	08A	10	10T	12	12T	14	14T	16	16T	18T
L	mm	918	918	1.047	1.047	1.047	1.047	1.044	1.044	1.044	1.044	1.044
P	mm	394	394	455	455	455	455	455	455	455	455	455
H	mm	830	830	936	936	936	936	1.409	1.409	1.409	1.409	1.409

i-32V5		06A	08A	10	10T	12	12T	14	14T A	16	16T A	18T A
Cooling												
Cooling capacity (1)	kW	5,7* / 5,2	6,7* / 6,1	8,3* / 7,5	8,3* / 7,5	9,4* / 8,5	9,4* / 8,5	12,1* / 11,5	12,1* / 11,5	14,5* / 13,8	14,5* / 13,8	15,8* / 15,04
Power input (1)	kW	1,6	2,0	2,4	2,4	2,8	2,8	3,5	3,5	4,4	4,4	4,9
EER (1)	W/W	3,2	3,1	3,2	3,2	3,1	3,1	3,3	3,3	3,2	3,2	3,1
Cooling capacity (2)	kW	6,7* / 6,4	8,7* / 8,0	10,4* / 9,5	10,4* / 9,5	12,8* / 11,6	12,8* / 11,6	14,7* / 14,0	14,7* / 14,0	16,6* / 15,8	16,6* / 15,8	18,0* / 17,1
Power input (2)	kW	1,3	1,8	2,2	2,2	2,8	2,8	2,6	2,6	3,2	3,2	3,6
EER (2)	W/W	4,9	4,5	4,4	4,4	4,2	4,2	5,4	5,4	5,0	5,0	4,8
SEER (5)	W/W	4,4	4,5	4,3	4,3	4,4	4,4	4,8	4,8	4,9	4,9	5,1
Water flow (1)	L/s	0,3	0,3	0,4	0,4	0,4	0,4	0,6	0,6	0,7	0,7	0,7
Available pressure (1)	kPa	75,0	71,0	68,9	68,9	63,4	63,4	75,0	75,0	62,3	62,3	55,6
Heating												
Heating capacity (3)	kW	7,5* / 6,1	9,4* / 7,8	11,6* / 10,1	11,6* / 10,1	13,6* / 11,8	13,6* / 11,8	15,2* / 14,1	15,2* / 14,1	17,6* / 16,3	17,6* /16,3	19,3* / 17,9
Power input (3)	kW	1,3	1,7	2,3	2,3	2,7	2,7	2,9	2,9	3,5	3,5	4,1
COP (3)	W/W	4,9	4,6	4,4	4,4	4,3	4,3	4,9	4,9	4,7	4,7	4,4
Heating capacity (4)	kW	7,0* / 6,0	9.0* / 7,7	11,2* / 9,76	11,2* / 9,8	13,2* / 11,5	13,2* / 11,5	14,6* / 13,6	14,6* / 13,6	17,0* / 15,8	17,0* / 15,8	18,7* / 17,3
Power input (4)	kW	1,6	2,1	2,8	2,8	3,3	3,3	3,6	3,6	4,2	4,2	4,9
COP (4)	W/W	3,8	3,7	3,5	3,5	3,4	3,4	3,8	3,8	3,7	3,7	3,5
SCOP (6)		4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5
Water flow (3)	L/s	0,3	0,4	0,5	0,5	0,6	0,6	0,7	0,7	0,8	0,8	0,8
Available pressure (3)	kPa	73,0	65,5	55,2	55,2	43,4	43,4	63,6	63,6	48,5	48,5	37,3
Energy efficiency (Water 35°C / 55°C)		A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++
Compressor												
Type		Twin Rotary DC Inverter										
Compressors	n°	1	1	1	1	1	1	1	1	1	1	1
Refrigerant circuits	n°	1	1	1	1	1	1	1	1	1	1	1
Refrigerant charge (7)	kg	0,97	0,97	2,5	2,5	2,5	2,5	3,2	3,2	3,5	3,5	3,5
Hydraulic circuit												
Water connections	inch	1"M	1"M	1"M	1"M	1"M	1"M	1"M	1"M	1"M	1"M	1"M
Min. water volume (8)	L	40	40	50	50	60	60	60	60	70	70	70
Sound level												
Sound power Lw (9)	dB(A)	64	64	64	64	65	65	68	68	68	68	68
Sound pressure at 1 m distance Lp1 (10)	dB(A)	62	62	62	62	62	62	66	66	66	66	66
Electrical data												
Power supply		230V/1/50Hz			400V 3/50Hz	230V 1/50Hz	400V/3P +N+T/50Hz	230V/1/50Hz	400V/3P +N+T/50Hz	230V 1/50Hz	400V/3P +N+T/50Hz	
Max. power input	kW	3,4	4,1	4,6	4,6	5,1	5,1	6,6	6,6	7,0	7,0	8,3
Max. current input	A	15,5	18,7	20,2	6,6	22,1	7,3	28,6	9,5	30,4	10,1	12,0
Weight												
Gross weight	kg	77	77	110	110	110	110	134	148	140	154	154
Operation weight	kg	66	66	96	96	96	96	121	136	126	141	141

Operating conditions:
(1) Cooling: Outdoor air temperature 35°C; inlet/outlet water temperature 12/7°C.
(2) Cooling: Outdoor air temperature 35°C; inlet/outlet water temperature 23/ 18°C.
(3) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet water temperature 30/35°C.
(4) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet temperature 40/45°C.
(5) Cooling: Water temperature inlet/outlet 12/7°C.
(6) Heating: in average climate condition; Tbiv=-7°C; water temperature inlet/outlet 30/35°C.
(7) The data are only indicative and subject to change. For the correct data, refer to the technical label sticked on the unit.
(8) Calculated for a decrease of the water temperature of the plant with 10°C with a defrosting cycle of 6 minutes.
(9) Sound power heating mode condition (3); the value is determined respecting the measurements taken in accordance with the regulations UNI EN ISO 9614-2, in compliant with the Eurovent certification.
(10) Sound pressure level obtained with internal measurements made in accordance with ISO 3744, at 1 m distance..
(*) by activating the maximum Hz function

i-32V5 SL

Silenced Inverter monoblock heat pump

8 kW÷16 kW

5 models: low noise guaranteed with only 53 dB(A)

Extreme Silence

The introduction of rules concerning not only the energy efficiency of heating equipment but also the noise level of the same requires a constant evolution of the products. The new SL series of the i-32V5 range represents the ideal combination of high efficiency, extreme quietness and the usual reliability. Thanks to a complete software and hardware reorganization of the well tested i-32V5 has allowed to reach the best levels of silence and makes this i-32V5SL series perfectly compliant with the most stringent national and international standards.

Technical Features

- Customized control system with microcontroller regulation, overheating control logic with electronic expansion valve.
- DC inverter compressors: twin-rotary Dc Inverter.
- Ventilation: DC inverter with axial fan
- Source exchanger: optimized circuit with finned coil, copper pipes and hydrophilic aluminum fins.
- Users exchanger: a brazed plate type in stainless steel AISI 304 with reduced pressure drop on the water side.
- Refrigerant circuit: is made with copper pipes and includes: condensing control, electronic expansion valve, reversing valve 4 ways, high/low pressure switch, separator and liquid receiver, valves for maintenance and control, double-inlet pressure, high and low pressure transducers.
- Integral hydraulic system: pump with high efficiency brushless circulator, expansion tank, flow switch, air valve, pressure relief valve (6 bar), pressure gauge, water valve for system charge/discharge.

Logic and Controls

- All units can works in three different modes: heating, cooling and DHW, with specific programs that enhance the performance in all conditions, with possible management of the temperature curve.
- The V5 series units are able to handle mixing valves, diverter and circulatory secondary side; They are also able to control the solar thermal system, the eventual integration with external heat sources, and integration with external systems Home Building automation or Domotic. All i-32V5 series is controllable remotely (accessory HI-TV415).
- Modbus RS485 protocol as standard

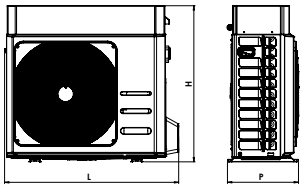
Accessories

AG	Vibration damper kit
CONNECT BOX**	Gateway Heat Pump Communication and Maxa Connect
EXOGEL	Frost protection
FD	Dirt separator filter
GI **	Internal hardware extension module
GI3	External hardware extension module
Hi-TV415	Multifunctioning touch screen remote control
i-CR	Remote wall controller
KA	Anti-frost heater on base and plate heat exchanger
SAS	DHW probe / Sanitary water probe
SPS	Solar panel probe
TR2	Anti-corrosion treatment
VDIS2	Three-way diverter valve for hot water production in sanitary thermal storage

* Factory mounted accessory available only for sizes 10-10T-12-12T-14-16
** Accessories that cannot be used simultaneously

Versions

i-32V5SL	Silenced reversible heat pump
i-32V5SL/KA	Silenced reversible heat pump with integrated defrosting kit



Dimensions		08A	12	12T	16	16T A
L	mm	918	1047	1047	1044	1044
P	mm	394	466	466	448	448
H	mm	830	936	936	1409	1409

i-32V5SL		08A	12	12T	16	16T A
Cooling						
Cooling capacity (1)	kW	6,7* / 6,1	9,4* / 8,5	9,4* / 8,5	14,5* / 13,8	14,5* / 13,8
Power input (1)	kW	2,0	2,8	2,8	4,4	4,4
EER (1)	W/W	3,1	3,1	3,1	3,2	3,2
Cooling capacity (2)	kW	8,8* / 8,0	12,8* / 11,6	12,8* / 11,6	16,6* / 15,8	16,6* / 15,8
Power input (2)	kW	1,8	2,8	2,8	3,2	3,2
EER (2)	W/W	4,5	4,2	4,2	5,0	5,0
SEER (5)	W/W	4,5	4,4	4,4	4,9	4,9
Water flow (1)	L/s	0,3	0,4	0,4	0,7	0,7
Available pressure (1)	kPa	71,0	63,4	63,4	62,3	62,3
Heating						
Heating capacity (3)	kW	9,4* / 4,8	13,6* / 7,4	13,6* / 7,4	17,6* / 8,7	17,6* / 8,7
Power input (3)	kW	1,0	1,5	1,5	1,7	1,7
COP (3)	W/W	5,0	4,8	4,8	5,2	5,2
Heating capacity (4)	kW	9,0* / 4,7	13,2* / 7,14	13,2* / 7,1	17,0* / 8,4	17,0* / 8,4
Power input (4)	kW	1,2	1,9	1,9	2,0	2,0
COP (4)	W/W	3,9	3,9	3,9	4,1	4,1
SCOP (6)		4,6	4,5	4,5	4,5	4,5
Water flow (3)	L/s	0,2	0,3	0,3	0,4	0,4
Available pressure (3)	kPa	65,5	70,9	70,9	87,4	87,4
Energy efficiency (Water 35°C / 55°C)		A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++
Compressor						
Type				Twin Rotary		
Compressors	n°	1	1	1	1	1
Refrigerant circuits	n°	1	1	1	1	1
Refrigerant charge (7)	kg	0,97	2,5	2,5	3,5	3,5
Hydraulic circuit						
Water connections	inch	1"M	1"M	1"M	1"M	1"M
Min. water volume (8)	L	40	60	60	70	70
Sound level						
Sound power Lw (9)	dB(A)	53	53	53	53	53
Sound pressure at 1 m distance Lp1 (10)	dB(A)	38,8	38,4	38,4	37,7	37,7
Electrical data						
Power supply		230V/1/50Hz	230V/1/50Hz	400V/3P +N+T/50Hz	230V/1/50Hz	400V/3P +N+T/50Hz
Max. power input	kW	4,1	5,1	5,1	7,0	7,0
Max. current input	A	18,7	22,1	7,3	30,4	10,1
Weight						
Gross weight	kg	77	110	110	140	154
Operation weight	kg	66	96	96	126	141

Operating conditions:
(1) Cooling: Outdoor air temperature 35°C; inlet/outlet water temperature 12/7°C.
(2) Cooling: Outdoor air temperature 35°C; inlet/outlet water temperature 23/ 18°C.
(3) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet water temperature 30/35°C.
(4) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet temperature 40/45°C.
(5) Cooling: Water temperature inlet/outlet 12/7°C.
(6) Heating: in average climate condition; Tbiv=-7°C; water temperature inlet/outlet 30/35°C.
(7) The data are only indicative and subject to change. For the correct data, refer to the technical label sticked on the unit.
(8) Calculated for a decrease of the water temperature of the plant with 10°C with a defrosting cycle of 6 minutes.
(9) Sound power heating mode condition (3); the value is determined respecting the measurements taken in accordance with the regulations UNI EN ISO 9614-2, in compliant with the Eurovent certification.
(10) Sound pressure level obtained with internal measurements made in accordance with ISO 3744, at 1 m distance.
(*) by activating the maximum Hz function

ACT

Technical storage
for hot water and chilled water

50-75-95 L

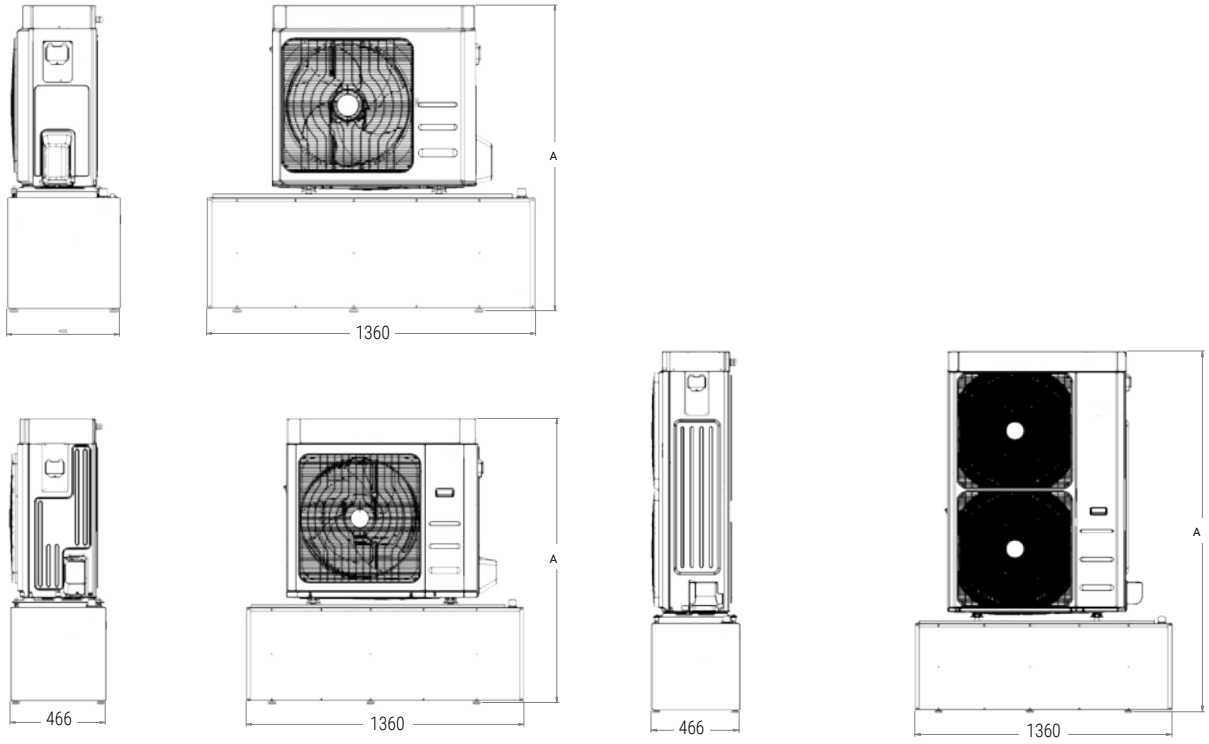
The technical accumulation called ACT consists of a cylindrical tank in a horizontal position, available in three different capacities. The tank is thermally insulated so that it can operate with both hot and cold water and is equipped with hydraulic connections positioned in order to promote a homogeneous flow inside the entire tank. The ACT accumulation is closed with a supporting frame and with powder-coated metal sheet panels of the same colour as the i-32V5 series units. The supply includes both the fastening screws between the heat pump and the ACT chassis and the adjustable feet for levelling the assembly. Some accessories are available such as: different sizes of electrical resistors equipped with its own electrical panel, the expansion tank and the EXOGEL valve.

Building Features

- *Free standing horizontal inertial puffer with 50, 75 and 95 liters capacity.*
- *One encumbrance dimensions for all sizes.*
- *Solid hardware to support i-32V5 units*
- *Dampers between inertial puffer and heat pump as standard*
- *Insulation panel in polyester fiber of thickness 50 mm*
- *Finishing with Polyolefin-foam adhesive of 3 mm thick*
- *Possibility of installing and expansion tank 18 l (optional)*
- *Discharge valve included as standard*
- *N. 1 flexible for the connection of the inertial puffer to the heat pump as standard.*
- *Tank anti-corrosion painting .*
- *EDILFIBER insulation; new concept of thermal insulation, made of polyester fiber with the characteristic of being mainly produced from differentiated urban recycle waste (PET bottles collection) and therefor strongly respecting the environment.*
- *Metal sheets polyurethane powder painting*
- *Possibility of installing electric heaters from 1.2 (single phase) 2, 3 to 4.5 kW single and three-phase (optional).*
- *18l expansion vessel (optional, factory installed).*
- *2, 3, 4.5kW electrical heaters, available in single and three phases, managed as integration and/or replacement with double security level with automatic and manual reset thermostat to protect user and plant (optional, factory installed).*
- *Kit Exogel, mechanical valve saves machinery from freezing.*

Electrical resistance (optional)

Insulating panel



Variation of the total height (A)
as a function of the supporters regulation

Dimensions (A)		Min
i-32V5 04-06-08	mm	1270
i-32V5 10-12	mm	1.400
i-32V5 14-14T-16-16T-18T	mm	1.900

ACT		50	75	95
Useful capacity	L	50	75	95
Insulation thickness	mm		50	
Thermal conductivity coefficient	W/mK		0,04	
Max operating temperature	°C		95	
Max working pressure	bar		6	
Maximum test pressure	bar		3	
Empty weight	kg	60	65	69
Operating weight	kg	110	140	165
Dimensions	mm		1360x466x504 (527)	

Exogel Kit - Frost protection
It protects the appliance and the plant from damage caused by an unexpected cooling of the working temperature of the technical water near the freezing point by evacuating the system.

Only cooling R32 inverter

i-32V5C Midi

Inverter monoblock chiller

21 kW÷32 kW

Compressor
DC inverter compressor are of the hermetic rotary type, expressly designed for operation with R32, equipped with thermal protection and mounted on rubber vibration dampers.

User-Side Heat Exchanger
Grade AISI 304 stainless steel brazed plate heat exchanger coated with black closed-cell flexible elastomeric foam.

Structure
Structure consisting of profiles and panels in hot-dip galvanized steel sheet and polyester powder coated, color RAL 7035 peeled weather resistant.

Source-Side Heat Exchanger
The air exchangers are made entirely of aluminium with the microchannel technology.

Fan
DC inverter axial-type fans are mounted, featuring aerofoil blades. They are statically and dynamically balanced.

Refrigerant Circuit
- Dehydrator filter;
- Shut-off valve on the liquid line;
- Liquid flow and humidity indicator;
- Electronic expansion valve;
- Service couplers;
- High pressure safety pressure switches;
- High-and low-pressure transducers;

Standard Components
- Electronic circulator
- EEV - electronic expansion valve
- Liquid indicator
- Water side safety valve
- Drain cock
- Flow switch (flow presence signal)
- Remote on / off dry contact
- Dynamic set point
- Three-phase relay for sequence / lack monitoring
- Fan speed regulator (ECM fans)
- 2nd set point

Electrical Panel And Control
Entirely made and wired in conformity to the IEC 60335-2-40.

Accessories

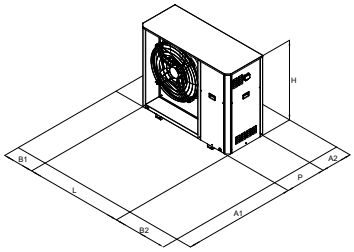
CM	Modbus communication module
DS	Desuperheater partial heat recovery unit
DSFR	Sequence control device, phase failure + Minimum and Maximum voltage relay
GI	Internal hardware extension module
IM	Protection swiches
KA1	Heat exchanger adhesive resistance
RP	Metallic guards for condenser
TR1	Micro-channel coil with Aero surface treatment
SL	Silenced version

Loose accessories

e-LITE	Multifunctional remote control system
Hi-TV415	Remote Touch Screen Display
CONNECT BOX	Gateway Heat Pump Communication and Maxa Connect
AG	Anti-vibration kit
FD	Dirt separator filter
FY	Y-strainer
i-CR	Remote wall controller
SAS	Remote plant probe - Sanitary storage probe
VDIS3	Three-way diverter valve for hot water production in sanitary thermal storage

Versions

i-32V5C Midi	Standard version chiller
i-32V5C-DS Midi	Chiller with desuperheater
i-32V5C-BT Midi	BT version chiller (for low water temperatures)



Spaces of respect		0121-0126	0128-0132
A1	mm	1500	1500
A2	mm	400	400
B1	mm	400	400
B2	mm	700	700

Dimensions		0121	0126	0128	0132
L	mm	1600	1600	1600	1600
P	mm	680	680	680	680
H	mm	1315	1315	1315	1315

i-32V5C Midi		0121	0126	0128	0132
Cooling					
Cooling capacity (1)	kW	24,7* / 20,7	27,1* / 25,8	30,8* / 28,1	32,8* / 31,8
Power input (1)	kW	5,9	8,0	8,2	10,2
EER (1)	W/W	3,5	3,2	3,4	3,1
Cooling capacity (2)	kW	24,7* / 21,6	27,4* / 25,5	31,9* / 28,4	34,3* / 32,8
Power input (2)	kW	4,3	5,3	5,8	7,1
EER (2)	W/W	5,0	4,8	4,9	4,6
SEER (3)	W/W	5,2	5,1	5,4	5,1
Water flow (1)	L/s	1,0	1,2	1,3	1,5
Hydronic circuit side load losses (1)	kPa	37,5	53,1	39,2	47,8
Compressor					
Type		Twin Rotary DC Inverter			
Compressors	n°	1	1	1	1
Refrigerant circuits	n°	1	1	1	1
Refrigerant (R32)	kg	1,8	1,8	2,2	2,2
Cooling quantity in tonnes of CO2 equivalent	ton	1,22	1,22	1,49	1,49
Fan					
Type		DC Brushless			
Number	N°	1	1	1	1
Nominal air flow (1)	m³/h	8091	8407	12873	12836
Hydronic heat exchanger					
Type		Plate	Plate	Plate	Plate
Number	N°	1	1	1	1
Hydraulic circuit					
Water connections	inch	1"	1"	1"1/4	1"1/4
Water quantity	L	2,4	2,4	3,4	3,4
Minimum water volume	L	110	110	110	110
Sound level					
Sound power (Lw)	dB(A)	73	74	75	76
Sound power SL version (Lw)	dB(A)	69	70	71	72
Electrical data					
Power supply		400V/3P+N+T/50Hz			
Max. power input	kW	9,88	10,3	11,1	11,7
Max. current input	A	19,0	19,7	20,9	21,9
Weight					
Gross weight	kg	215	215	225	225
Net weight	kg	205	205	215	215

Performance referred to the following conditions:
(1) Cooling: outdoor air temperature 35 ° C; water temperature in / out 12/7 ° C.
(2) Cooling: outdoor air temperature 35 ° C; water temperature in / out 23/18 ° C
(3) Cooling: inlet / outlet water temperature 12/7 ° C.
(*) by activating the maximum Hz function

i-32V5H Midi

Inverter monoblock heat pump

21 kW÷32 kW

Compressor
DC inverter compressor are of the hermetic rotary type, expressly designed for operation with R32, equipped with thermal protection and mounted on rubber vibration dampers.

User-Side Heat Exchanger
Grade AISI 304 stainless steel brazed plate heat exchanger coated with black closed-cell flexible elastomeric foam.

Structure
Structure suitable for outdoor installation consisting of high-thickness profiles made of hop-dip galvanised steel sheets coated with polyester powder, coated with RAL 7035 bush-hammered finish resistant to weathering.

Source-Side Heat Exchanger
The air-cooled heat exchangers are made with copper pipes and aluminium fins.

Electrical Panel And Control
Entirely made and wired in conformity to the IEC 60335-2-40.

Fan
Axial-type fans are mounted, featuring aerofoil blades. They are statically and dynamically balanced and supplied with a protection grille and air inlet and outlet nozzle with double-flared profile, specially shaped to boost efficiency and reduce noise. The electric motor is modulated with EC brushless motor, directly coupled, and equipped with an integrated thermal protection device.
The motor has an IP 54 protection rating in accordance with the CEI EN 60529 standard.

Standard Components
- Electronic circulator
- EEV - electronic expansion valve
- Liquid indicator
- Water side safety valve
- Drain cock
- Flow switch (flow presence signal)
- Remote on / off dry contact
- Dynamic set point
- Three-phase relay for sequence / lack monitoring
- Fan speed regulator (ECM fans)
- 2nd set point

Accessories

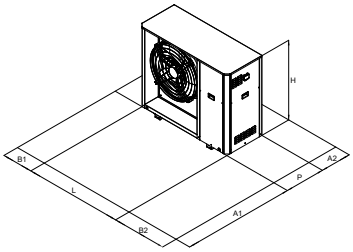
CM	Modbus communication module
DS	Desuperheater partial heat recovery unit
DSFR	Sequence control device, phase failure + Minimum and Maximum voltage relay
GI	Internal hardware extension module
IM	Protection swiches
KA	Plate heat exchanger + basament electrical heaters
RP	Metallic guards for condenser
TR2	Cu / Al coil with Silver Line anti-corrosion treatment
SL	Silenced version

Loose accessories

e-LITE	Multifunctional remote control system
Hi-TV415	Remote Touch Screen Display
CONNECT BOX	Gateway Heat Pump Communication and Maxa Connect
AG	Anti-vibration kit
FD	Dirt separator filter
FY	Y-strainer
i-CR	Remote wall controller
SAS	Remote plant probe - Sanitary storage probe
VDIS3	Three-way diverter valve for hot water production in sanitary thermal storage

Versions

i-32V5H Midi	Standard version reversible heat pump
i-32V5H-DS Midi	Reversible heat pump with desuperheater
i-32V5H-BT Midi	BT version reversible heat pump (for low water temperatures)



Spaces of respect		0121-0126	0128-0132
A1	mm	1500	1500
A2	mm	400	400
B1	mm	400	400
B2	mm	700	700

Dimensions		0121	0126	0128	0132
L	mm	1600	1600	1600	1600
P	mm	640	640	640	640
H	mm	1315	1315	1315	1315

i-32V5H Midi		0121	0126	0128	0132
Cooling					
Cooling capacity (1)	kW	18,0* / 17,7	22,7* / 18,7	25,0* / 24,2	27,5* / 26,0
Power input (1)	kW	5,9	6,2	8,0	8,7
EER (1)	W/W	3,0	3,0	3,0	3,0
Cooling capacity (2)	kW	25,1* / 22,0	27,7* / 25,8	30,8* / 29,0	32,7* / 31,4
Power input (2)	kW	4,4	5,5	6,4	7,1
EER (2)	W/W	5,0	4,7	4,6	4,4
SEER (3)	W/W	4,4	4,6	4,8	4,8
Water flow (1)	L/s	0,8	0,9	1,2	1,2
Hydronic circuit side load losses (1)	kPa	32,5	34,5	31,2	34,2
Heating					
Heating capacity (3)	kW	25,2* / 21,3	27,3* / 26,0	31,4* / 28,0	33,9* / 32,1
Power input (3)	kW	4,9	6,4	6,4	7,9
COP (3)	W/W	4,3	4,0	4,4	4,1
Heating capacity (4)	kW	25,2* / 21,2	27,6* / 25,8	30,7* / 28,3	34,5* / 32,7
Power input (4)	kW	6,4	7,9	8,2	9,9
COP (4)	W/W	3,3	3,3	3,5	3,3
SCOP (6)	W/W	4,2	4,0	4,3	4,0
Water flow (1)	L/s	1,0	1,2	1,4	1,6
Use side heat exchanger load losses (4)	kPa	37,9	53,1	41,4	50,6
Energy efficiency (Water 35°C / 55°C)	Class	A++/A+	A++/A+	A++/A++	A++/A+
Compressor					
Type			Twin Rotary DC Inverter		
Compressors	n°	1	1	1	1
Refrigerant circuits	n°	1	1	1	1
Refrigerant (R32)	kg	4,3	4,3	5,1	5,1
Cooling quantity in tonnes of CO2 equivalent	ton	2,90	2,90	3,44	3,44
Fan					
Type			DC Brushless		
Number	N°	1	1	1	1
Nominal air flow (1)	m³/h	10769	10847	12209	13202
Hydronic heat exchanger					
Type		Plate	Plate	Plate	Plate
Number	N°	1	1	1	1
Hydraulic circuit					
Water connections	inch	1"	1"	1"1/4	1"1/4
Water quantity	L	2,4	2,4	3,4	3,4
Minimum water volume	L	110	110	110	110
Sound level					
Sound power (Lw)	dB(A)	72	74	75	76
Sound power SL version (Lw)	dB(A)	68	70	71	72
Electrical data					
Power supply			400V/3P+N+T/50Hz		
Max. power input	kW	12,3	12,3	14,7	14,7
Max. current input	A	22,9	22,9	26,8	26,8
Weight					
Gross weight	kg	250	250	265	265
Net weight (*)	kg	240	240	255	255

Performance referred to the following conditions:
(1) Cooling: outdoor air temperature 35 ° C; water temperature in / out 12/7 ° C.
(2) Cooling: outdoor air temperature 35 ° C; water temperature in / out 23/18 ° C
(3) Heating: external air temperature 7 ° C d.b. 6 ° C b.u .; in / out water temp. 30/35 ° C.
(4) Heating: external air temperature 7 ° C d.b. 6 ° C b.u .; in / out water temp. 40/45 ° C
(5) Cooling: inlet / outlet water temperature 12/7 ° C.
(6) Heating: average climatic conditions; Tbiv = -7 ° C; in / out water temp. 30/35 ° C.
(*) by activating the maximum Hz function

i-HPV5H

Air/water inverter heat pumps with axial fan

40 kW÷70 kW

Compressors
DC inverter compressor are of the hermetic scroll type expressaly designed for operation with gas R32.

Structure
Structure suitable for outdoor installation consisting of high-thickness profiles made of hop-dip galvanised steel sheets coated with polyester powder, coated with RAL 7035 bush-hammered finish.

User-Side Heat Exchanger
Grade AISI 304 stainless steel brazed plate heat exchanger coated with black closed-cell flexible elastomeric foam.

Source-Side Heat Exchanger
The air exchangers are made of copper pipes and aluminum fins. The tubes are mechanically expanded into the aluminum fins to increase the heat exchange factor.

Fan Section
The fan is axial type with wing profile blades. The electric motor used and controlled in modulation with brushless EC motor.

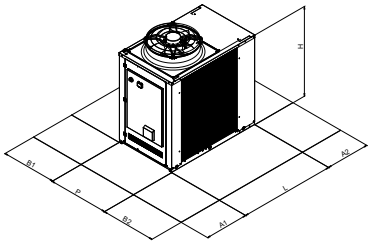
Refrigerant Circuit
It includes:
- Dehydrator filter;
- Shut-off valve on the liquid line;
- Liquid flow and humidity indicator;
- Electronic expansion valve;
- Service couplers;
- High pressure safety pressure switches;
- High- and low-pressure transducers;
- 4-way valve
- Receiver and liquid separator
- Non-return valves

Electric Panel And Control
Entirely made and wired in conformity to the IEC 60335-2-40
The power section includes:
- Isolation transformer for powering the control devices;
- Thermal protection fuses for compressor drivers, EC fan and pump Driver;
- Automatic switch for protecting the compressors (optional);
- Drivers for modulating compressor control;
- Phase sequence control relay;
- Phase sequence control relay with minimum/maximum voltage
- invertion calibration (optional);
- Thermostatic ventilation inside electrical cabinet;
- Plant management module (optional or for the versions that require it)
- Interface terminal with alphanumerical display;
- Visualisation function for the set values, analogue inputs, fault codes, alarm log and parameter index;
- On/off and alarm reset buttons;
- Button combinations for forcing defrosting and for forcing pump to maximum power;
- Unit switch-on management from local or remote source;
- Configuration for Modbus connectivity (CM accessory).

Main accessories

DS	Desuperheater partial heat recovery unit
BT	Unit for low water temperatures (BT)
C	Ductable unit
C (S)	Ductable unit with compressors insonorization
DS	Desuperheater partial heat recovery unit
PD	Double pump AC (includes the GI accessory)
PD-SI	Double pump AC and inertial tank (includes the GI accessory)
PS	Single pump AC
PSEC	Single pump EC
PSEC-SI	Single pump EC and inertial tank
PSI	Inverter modulated single pump AC
PS-SI	Single pump AC and inertial tank
PSI-SI	Inverter modulated single pump AC and inertial tank
SL	Silenced unit
SSL	Super-silenced unit
VDIS4	Three-way diverter valve for hot water production in sanitary thermal storage

Versions		
	i-HPV5H	Reversible heat pump



Dimensions		0140	0250	0260	0270
L	mm	1850	1850	1850	1850
L (with tank)	mm	2460	2460	2460	2460
P	mm	1110	1110	1110	1110
H	mm	1920	1920	1920	1920
H (SSL)	mm	1980	1980	1980	1980

Spaces of respect		0140	0250	0260	0270
A1	mm	1200	1200	1200	1200
A2	mm	1000	1000	1000	1000
B1	mm	1000	1500	1500	1500
B2	mm	1500	1500	1500	1500

i-HPV5H -PS/PSI/PD		0140	0250	0260	0270
Cooling					
Cooling capacity (1)	kW	33,1* / 29,6	41,2* / 36,3	53,1* / 48	58,2* / 53,2
Power input (1)	kW	9,54	11,7	15,5	17,7
EER (1)	W/W	3,1	3,1	3,1	3,0
Cooling capacity (2)	kW	42,4* / 37,3	62,3* / 55,3	71,8* / 65,3	73,8* / 66
Power input (2)	kW	8,9	13	15,5	16,6
EER (2)	W/W	4,2	4,3	4,2	4,0
SEER (5)	W/W	4,8	4,7	4,9	4,8
Water flow (1)	L/s	1,4	1,7	2,3	2,6
Available head (1)	kPa	146	138	155	151
Heating					
Heating capacity (3)	kW	44,3* / 40	56,3* / 50,2	66* / 61,4	74,6* / 66,8
Power input (3)	kW	9,8	12,2	15	16,3
COP (3)	W/W	4,1	4,1	4,1	4,1
Heating capacity (4)	kW	43,6* / 40,6	55,9* / 49,7	64,2* / 59,5	75,5* / 66,6
Power input (4)	kW	12,5	15,4	18,3	20,4
COP (4)	W/W	3,3	3,23	3,3	3,3
SCOP (6)	W/W	4,3	4,16	3,9	3,9
Energy Efficiency (water 35°C / 55°C)	Classe	A++ / A++	A++ / A+	A++ / A+	A++ / A+
Water flow (1)	L/s	1,9	2,4	2,9	3,2
Available head (4)	kPa	125	109	130	122
Compressor					
Type		Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter
Compressors	n°	1	2	2	2
Refrigerant circuits	n°	1	1	1	1
Refrigerant		R32	R32	R32	R32
Refrigerant charge R32	kg	6,5	8,5	11,7	12,00
Cooling quantity in tonnes of CO2 equivalent	ton	4,4	5,7	7,9	8,1
Fan					
Nominal air flow	L/s	4368	5431	6417	5547
Hydraulic circuit					
Water flow (1)	L/s	1,42	1,74	2,30	2,55
Water connections	inch	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)
Max pressure hydronic side	bar	6	6	6	6
Minimum water volume	L	286	389	490	522
Noise level					
Sound power Lw (9)	dB(A)	77	83	84	84
Sound power Lw configur. SL (9)	dB(A)	76	82	83	83
Sound power Lw configur. SSL (9)	dB(A)	75	81	82	82
Electrical data					
Power supply		400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz
Max. power input	kW	24	33	39	43
Max. current input	A	38	52	62	68
Weight					
Net weight (**)	kg	440	540	560	600
Hydronic kit (Optional)					
Tank volume	L	400	400	400	400
Expansion vessel volume	L	24	24	24	24

Data referred to the following condition:
(1) Cooling: outdoor air temperature 35°C; in/out water temperature 12/7°C.
(2) Cooling: outdoor air temperature 35°C; in/out water temperature. 23/18°C.
(3) Heating: outdoor air temperature 7°C b.s. 6°C b.u.; in/out water temperature 30/35°C.
(4) Heating: outdoor air temperature 7°C b.s. 6°C b.u.; in/out water temperature 40/45°C.
(5) Cooling: in/out water temperature 7/12°C.
(6) Heating: Average climatic conditions; Tbiv=-7°C; low temperature.

(9) Sound power: condition (3); value determined on the basis of measurements made in accordance with UNI EN ISO 9614-2, in compilance with the requirements of Eurovent certification.
N.B. Performance data are indicative and are subject to change. Furthermore the performance declared in points (1), (2), (3), and (4) is intended to refer to instantaneous power according to UNI EN 14511. The value declared in point (5) and (6) is determined according to UNI EN 14825.
(*) by activating the maximum Hz function
(**) For data relating to other versions, refer to the technical manual

i-MAX

Air/water inverter heat pumps with axial fan

66 kW÷115 kW

Carpentry
Made up of hot-galvanized sheet painted metal.

Compressors
The compressors are a scroll type, mounted on a rubber material acting as a shock absorber. Each one of the two circuits is equipped with a DC inverter compressor. In this way, the capacity of each circuit can be modulated continuously between the minimum capacity of a single inverter compressor and the sum of the maximum capacities of the whole compressors of the same circuit.

User Side Heat Exchanger
The employed user side heat exchanger is made up of AISI 304 stainless steel braze-welded plates type integrating a dual cooling circuit.

Air Side Heat Exchanger
The air side heat exchanger is made up of copper pipes and aluminum fins.

Fan Section
The type of the fan is axial-flow with aluminum aerofoil blades of fibre. The electric fan motor used in this series is modulated by inverter.

Refrigerant Circuit
The refrigerant circuit has been manufactured by means of international primary brands components and according to the UNI EN 13134 Rule concerning welding procedures. The refrigerant gas is R410A. Each refrigerant circuit includes 4 way reverse cycle valve, electronic expansion valve, liquid separator, liquid receivers, auxiliary circuit to reduce the defrosting time, oil recovery circuit, non-return valves, valves of inspection for maintenance and control, safety device (high pressure switch) according to PED regulation, pressure transducers, precision sensors, high capacity filter dryer, mechanical filters.

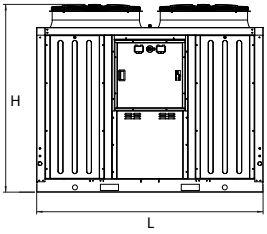
Electric Panel
The electric panel is manufactured according to the actual European Union rules and it contains all the electromechanical and electronic components of regulation and control. The terminal board in the electric panel is supplied with voltage free contacts for: remote ON-OFF, winter/summer commutation, domestic hot water temperature sensor, and for the remote control panel. The addition of the GI optional module allows further management of the plant.

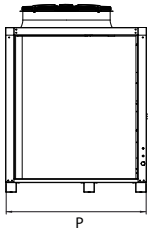
Hydraulic Circuit
Includes: dual refrigerant circuit plate heat exchanger and a single hydraulic circuit, a pressure gauge at the inlet and a fitting on the heat exchanger outlet for evaluating the load losses, service valve and flow switch for protection, automatic air release valve and safety valve (6 bar).

Main accessories

AG	Rubber shock absorbers	**i-CR**	Remote wall controller
CI6	AC inverter pump (GI module included)	**IM**	Protection module
CI7	AC ntegrated pump	**KA**	Antifreeze kit
CM	Modbus interface RS485 activation	**SL**	Silencing
DSFR	Sequence control device, phase failure + Minimum and Maximum voltage relay	**SSL**	Super Silencing
GI	Internal hardware extension module	**TR2**	Anti-corrosion treatment
HiT2	Multifunction touch screen remote controller		

Versions		
	i-MAX	Reversible heat pump





Dimensions		0466	0475	0485	0695	06105	06115
L	mm	2.250	2.250	2.250	2.250	2.250	2.250
P	mm	1.170	1.170	1.170	1.170	1.450	1.450
H	mm	1.985	1.985	1.985	1.985	2.010	2.010

i-MAX		0466	0475	0485	0695	06105	06115
Cooling							
Cooling capacity (1)	kW	65,6	74,6	83,9	94,7	105,6	114,3
Power input (1)	kW	22,6	25,7	28,8	32,7	36,2	39,4
EER (1)	W/W	2,9	2,9	2,91	2,9	2,9	2,9
Cooling capacity (2)	kW	79,6	90,2	102,8	113,3	127,3	139,3
Power input (2)	kW	21,8	24,6	28,2	31,0	34,9	38,2
EER (2)	W/W	3,7	3,7	3,7	3,7	3,7	3,7
SEER (5)	W/W	3,8	3,9	3,8	3,8	3,8	3,8
Water flow (1)	L/s	3,1	3,6	4,0	4,5	5,1	5,5
Pressure drop (1)	kPa	32	36	37	34	33	38
Heating							
Heating capacity (3)	kW	68,4	74,7	85,6	93,3	102,5	111,5
Power input (3)	kW	16,9	18,4	21,1	23,9	25,3	28,6
COP (3)	W/W	4,1	4,1	4,1	3,9	4,1	3,9
Heating capacity (4)	kW	65,9	71,0	82,1	88,6	97,1	108,3
Power input (4)	kW	20,5	22,2	25,7	27,7	30,4	36,1
COP (4)	W/W	3,2	3,2	3,2	3,2	3,2	3,0
SCOP (6)	W/W	3,6	3,6	3,5	3,6	3,6	3,5
Water flow (4)	L/s	3,2	3,4	3,9	4,2	4,7	5,2
Use side heat exchanger load losses (4)	kPa	30	31	31	32	27	27
Energy efficiency (Water 35°C/55°C)	Class-se	A+/A+	A+/A+	A+/A+	A+/A+	A+/A+	A++/A+
Compressor							
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressors	n°	4	4	4	6	6	6
Refrigerant circuits	n°	2	2	2	2	2	2
Refrigerant charge R410A (7)	kg	13,4	14,2	14,3	13,4	14,2	14,3
Fan							
Nominal air flow	m³/s	6,5x2	7x2	7,5x2	8x2	8,5x2	9x2
Hydraulic circuit							
Max pressure hydronic kit	bar	6	6	6	6	6	6
Water connections	inch	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2
Min. water volume (8)	L	200	200	200	260	260	260
Sound level							
Sound power (9)	dB(A)	84 / SL 82,0 / SSL 81,2	84 / SL 82,5 / SSL 81,7	85 / SL 83,0 / SSL 82,2	85 / SL 83,2 / SSL 82,7	85 / SL 83,2/ SSL 82,7	86 / SL 83,7 / SSL 83,2
Sound pressure (10)	dB(A)	52,2	52,2	53,2	53,2	53,2	54,2
Electrical data							
Power supply		400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz
Max. power input	kW	39,9	42,3	46,7	52,3	55,8	63,0
Max. current input	A	60,1	63,5	70,3	78,7	83,9	94,7
Weight							
Gross weight	kg	943	955	1011	1026	1128	1142
Operation weight	kg	923	946	996	1011	1105	1120

Operating conditions:
(1) Cooling: Outdoor air temperature 35°C; inlet/outlet temperature 12/7°C.
(2) Cooling: Outdoor air temperature 35°C; inlet/outlet temperature 23/18°C.
(3) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet temperature 30/35°C.
(4) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet temperature 40/45°C.
(5) Cooling: water temperature inlet/outlet 12/7°C.
(6) Heating: normal climatic condition; Tbiv=-7°C; eater temperature inlet/outlet 30/35°C.
(7) Indicative data and subject to change. For the correct data, always refer to the technical label on the unit.
(8) Calculated in the case of the plant water temperature decreased by 10°C for 6 minutes of defrosting.
(9) Condition (3); the value is determined on the basis of measurements taken in accordance with the UNI EN ISO 9614-2, in compliance with the requirements of Eurovent certification.
(10) Sound pressure level measured at 10 m from the unit, in free field, according to ISO 3744:2010.
N.B. The performance data are indicative and could be subject to change. In addition, the performances declared in apex (1), (2), (3) and (4) refer to the instantaneous power according to EN 14511. The declared data stated in the apex (5) and (6) is determined according to the UNI EN 14825.

Atria

Hybrid system
with heat pump and boiler

21 kW÷29 kW

Atria's range is the ideal for domestic/residential installation, especially in situations where it is necessary the substitution on an existing system.

Respects the environment decreasing the carbon dioxide emissions. Is suitable for all types of domestic heating: radiant system, radiators, fancoil. Now a days the incentives provided for energy improvement are several.

The technological integration that guarantees:

- Versatility
- Energy consumption reduction
- Respect for the environment thanks with R32 gas
- Guaranteed savings, thanks to the 110% super bonus & thermal account
- Possibility of choice between the indoor boiler (I) and the outdoor boiler (E)

An hybrid system is made of a heat pump and a condensation boiler, expressly realized and designed from the manufacturer in order to make them work together.
Maxa new proposal allows to have an hybrid system according to current regulations which offers an high performance level without renunciation of an eco-friendly choice, that allows the carbon dioxide emission decrease in favour of environmental sustainability.

Accessories available separately

ACT	Inertial tank for hot and cold technical water	**i-CR**	Remote wall controller
AG	Vibration dumper	**KIT EXOGEL**	Frost protection
FD	Dirt separator filter	**SAS**	DHW probe / Sanitary water probe
GI *	Internal hardware extension module	**SPS**	Solar panel probe for GI
GI3	External hardware extension module	**TPV**	Starting coaxial stub 60/100 mm
Hi-TV415	Multifunctioning touch screen remote control	**TAPS KIT**	Taps kit (condensing boiler)
		Dima	Template for Atria hybrid module

* Factory mounted accessory excluding sizes i-32V5 6A and i-32V5 8A

Loose accessories specific to ATRIA-I

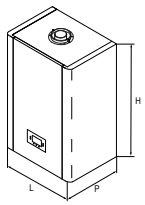
CDP	Double starting curve 90 ° diam. 60 / 100mm	**TPV**	Starting coaxial stub diam. 60 / 100mm
SDO	Splitter D.80F-F		

Loose accessories specific to ATRIA-E

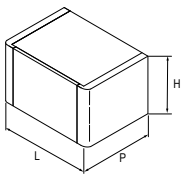
DP	Starting diffuser for ATRIA E diam. 80mm (recommended accessory)	**Wirecontroller**	Standard for Atria E outdoor

Versions

ATRIA-I	Indoor condensing boiler	**ATRIA-E**	Outdoor condensing boiler



		25-I	30-I	35-I	25-E	30-E	35-E
L	mm	400	400	400	400	400	400
P	mm	250	250	250	250	250	250
H	mm	700	700	700	700	700	700
	kg	31	31	32	31	31	32



Hydraulic separator		
L	mm	400
P	mm	250
H	mm	360

			25-I	30-I	35-I	25-E	30-E	35-E
Element	Symbol	Unit	Value	Value	Value	Value	Value	Value
Load profile			XL	XL	XL	XL	XL	XL
Seasonal energy efficiency of room heating			A	A	A	A	A	A
Seasonal energy efficiency of water heating			A	A	A	A	A	A
Nominal heating capacity	$P_{nominale}$	kW	21,0	25,0	29,0	21,0	25,0	29,0
Useful heat input at nominal heating capacity at high temperature (P4)		kW	20,4	24,3	28,3	20,4	24,3	28,3
Annual fuel consumption	A_{FC}	GJ	17,3	17,4	17,6	17,3	17,4	17,6
Seasonal energy efficiency of room heating (GCV)	η_S	%	91,7	92	93,2	91,7	92	93,2
Energy efficiency of water heating (GVC)	η_{wh}	%	85,1	84,86	83,6	85,1	84,86	83,6
Sound power level	L_{WA}	dB	50,5	52	52	50,5	52	52
Indoor Unit								
Type			C13 - C33 - C53 - C63 - C83					
Nox class		mg/kWh	6 (24,40)	6 (36,06)	6 (24,71)	6 (24,40)	6 (36,06)	6 (24,71)
Nominal heating capacity		kW	21	25,0	29	21	25,0	29
Nominal domestic hot water flow rate		kW	25,5	31,0	34,9	25,5	31,0	34,9
Minimum heat input		kW	3,7	4,0	4,0	3,7	4,0	4,0
Max. useful power heating		kW	20,4	24,2	28,3	20,4	24,2	28,3
Thermal power (80/60°C)		kW	3,5	3,7	3,7	3,5	3,7	3,7
Thermal power (50/30°C)		kW	3,9	4,2	4,1	3,9	4,2	4,1
Performance at 100% Pn (80/60°C)		%	97	97,1	97,5	97	97,1	97,5
Performance at 100% Pn (50/30°C)		%	105,1	105,5	105,5	105,1	105,5	105,5
Performance at 30% Pn (50/30°C)		%	107,7	107,8	107,8	107,1	107,8	107,8

Outdoor unit						
Heating		**i-32V5 06A**	**i-32V5 08A**	**i-32V5 10**	**i-32V5 12**	**i-32V5 14**
Heating capacity (3)	kW	6,1	7,8	10,1	11,8	14,1
Power input (3)	kW	1,3	1,7	2,3	2,7	2,9
C.O.P. (3)	W/W	4,9	4,6	4,4	4,3	4,9
Heating capacity (4)	kW	6,0	7,7	9,8	11,5	13,6
Power input (4)	kW	1,6	2,1	2,8	3,3	3,6
C.O.P. (4)	W/W	3,8	3,7	3,5	3,4	3,8
SCOP (6)	W/W	4,5	4,5	4,5	4,5	4,5
Water flow (4)	L/s	0,3	0,4	0,5	0,6	0,7
Ext. pressure (4)	kPa	73,0	65,5	55,2	43,4	63,6
Energy efficiency (Water 35°C-55°C)		A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++
Cooling						
Cooling capacity (1)	kW	5,2	6,1	7,5	8,51	11,5
Power input (1)	kW	1,6	2,0	2,4	2,8	3,5
E.E.R. (1)	W/W	3,2	3,1	3,2	3,1	3,3
Cooling capacity (2)	kW	6,4	8,0	9,5	11,6	14,0
Power input (2)	kW	1,3	1,8	2,2	2,79	2,6
E.E.R. (2)	W/W	4,9	4,5	4,4	4,16	5,4
SEER (5)	W/W	4,4	4,5	4,2	4,25	4,6
Water supply (1)	L/s	0,3	0,3	0,4	0,4	0,6
Ext. pressure (1)	kPa	3,2	5,3	68,9	63,4	75,0
Hydraulic circuit						
Hydraulic connections	inch	1"M	1"M	1"M	1"M	1"M
Minimum water volume (8)	L	40	40	50	60	60
Electrical data						
Power supply		230V/1/50Hz	230V/1/50Hz	230V/1/50Hz (400V/3/50Hz)(11)		
Maximum absorbed power	kW	3,5	3,9	4,6	5,1	6,6

(1) Cooling: outdoor air temperature 35 ° C; water temperature in / out 12/7 ° C.
(2) Cooling: outside air temperature 35 ° C; water temperature in / out 23/18 ° C.
(3) Heating: external air temperature 7 ° C d.b. 6 ° C b.u .; in / out water temp. 30/35 ° C.
(4) Heating: external air temperature 7 ° C d.b. 6 ° C b.u .; in / out water temp. 40/45 ° C.
(5) Cooling: in / out water temperature 12/7 ° C.
(6) Heating: average climatic conditions; Tbiv = -7 ° C; in / out water temp. 30/35 ° C.
(7) Data indicative and subject to change. For the correct data, always refer to the technical label on the unit.
(8) Calculated for a decrease in the system water temperature of 10 ° C with a defrost cycle lasting 6 minutes.
(9) Sound power: heating mode condition (3); value determined on the basis of measurements carried out in accordance with the UNI EN ISO 9614-2 standard, in compliance with the requirements of Eurovent certification.
(10) Sound pressure: value calculated from the sound power level using ISO 3744: 2010 at a distance of 1 m.
(11) Valid only with 10T / 12T outdoor unit
(12) Valid only for single-phase single models
(*) by activating the maximum Hz function

Combination table

GI/ GI3 hardware expansion modules

	Modulo GI					
	i-32V5 	i-32V5 SL 	MIDI 	i-HPV5 	i-MAX 	HWA1 
	10 ÷ 16	12 ÷ 16				
Remote On/Off	□	□	□	□	□	□
Domestic hot water management	□	□	□	□	□	X
DHW integration resistance	□	□	□	■	■	X
System resistance integration	□	□	□	■	■	■
Boiler enable integration	□	□	□	■	■	■
Double set point digital contact	□	□	□	□	■	■
Summer-winter digital contact	□	□	□	□	■	■
Signalling mode of operation	□	□	□	■	■	■
Signaling functioning mode	□	□	□	■	■	■
Two zones management	■	■	■	■	■	■
Alarm-block signaling	□	□	□	■	■	■
Block report	□	□	□	■	■	■
Remote plant water probe	■	■	■	■	■	■
Secondary circulator	■	■	■	■	■	■
Mixing valve	■	■	■	■	■	X
Solar thermal integration	■	■	■	■	■	X
Climate compensation	□	□	□	□	□	□

Mandatory accessory ■
Accessory not necessary □
Function not available X

Combination table

Remote controllers

	i-32V5 	i-32V5 SL 	MIDI 	i-HPV5 	i-MAX 	HWA1 
e-LITE 	■	■	■	■	X	X
i-CR 	■	■	■	■	■	■
Hi-TV415* 	■	■	■	■	■	■

** Accessory necessary for cascade management*

Compatible ■
Not compatible X

Modulo GI3

i-32V5 *	i-32V5 SL *	i290 0106÷0118	i290 0121÷0127	i290 0240÷0250	
					
□	□	□	□	□	Remote On/Off
□	□	□	□	□	Domestic hot water management
□	□	□	□	■	DHW integration resistance
□	□	□	□	■	System resistance integration
□	□	□	□	■	Boiler enable integration
□	□	□	□	■	Double set point digital contact
□	□	□	□	□	Summer-winter digital contact
□	□	□	□	■	Signalling mode of operation
□	□	□	□	■	Signaling functioning mode
■	■	■	■	■	Two zones management
□	□	□	□	■	Alarm-block signaling
□	□	□	□	■	Block report
□	□	□	□	■	Remote plant water probe
■	■	■	■	■	Secondary circulator
■	■	■	■	■	Mixing valve
■	■	■	■	■	Solar thermal integration
□	□	□	□	□	Climate compensation

* GI3 is not compatible with i -32V5 14/16, i-32V5 SL 16

i290 0106÷0118	i290 0121÷0127	i290 0240÷0250	HWA1	
				
■	■	■	X	e-LITE 
X	X	X	■	i-CR 
■	■	■	■	Hi-TV415* 

MAXA
HEATING & COOLING

Connect Box

Maximum Efficiency and Total Control of your heat pumps, just a click away!

Google play | App Store

Connect Box is the wireless gateway that enables efficient communication with Maxa heat pumps of the **i-290, i-32V5, i-32V5SL, i-32V5 Midi** and **i-HPV5** ranges.

Maxa Connect

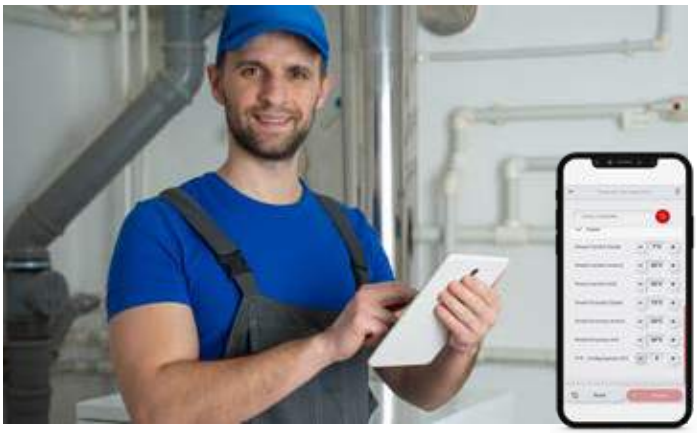
Connect Box makes it possible to interact with your air conditioning system via the new App ***Maxa Connect***.
Available both as a single App and as a Web App, therefore fully navigable using your desktop or mobile browser, Maxa Connect offers a simple and complete user experience.

Maxa Connect allows you to record **all operating data of the Maxa heat pump in real time**, such as water temperatures in your system, manage its operating modes, and generally obtain a wide range of useful information.

Also remotely, it is possible to know both the power and the amount of thermal energy produced by your heat pump.

Connect Box is quickly associated with the home router and immediately projects the heat pump into the MAXA cloud.

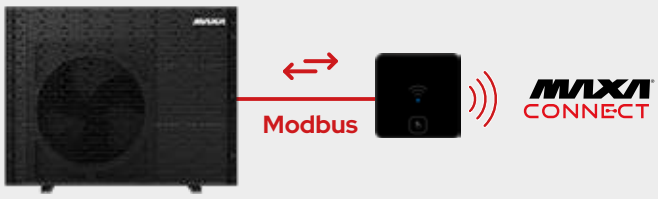
Thanks to its simple operation and deep integration with on-board electronics, the Connect Box is a useful tool for commercial and tertiary applications, allowing thermal system operators direct control of operating parameters.



Start My Connect

Connect Box enables authorised service centres to interact with the heat pump via the dedicated APP for the professional world: ***Start My Connect***.

The latter enables the Connect Box to be associated with your heating system.



Easy to install, it uses the on-board ModBus connection, allowing you to reach your heat pump remotely and safely.

Intuitive User Interface

User-friendly interface that allows users to easily monitor and manage their systems and installations.

Security

Utilizing state-of-the-art security technologies to protect your data and ensure secure communication with service technicians.

Diagnostics and monitoring

Advanced diagnostic tools allow for real-time monitoring of system status, enabling quick identification and remote problem-solving.
View and access a complete history of alarms/events.

Remote Configuration

The platform enables remote adjustment of system and installation settings, minimizing the need for a physical presence of a technician on-site. Access to installations 24/7. Management of schedules and editing installation parameters.

e-LITE

Multifunctional remote control system

Touch screen LCD capacitive remote control for wall-mounted installations in residential and commercial indoor environments for managing MAXA heat pumps and water chillers.

The e-LITE remote replicates all functions on board the MAXA unit, including:

- Turning on and off
- Setting operating modes
- Setpoint setting (heating, cooling, DHW production)
- Diagnostics and real-time data display
- Enabling DHW production
- Enabling double set-point
- Enabling dynamic setpoint
- Room thermostat
- Included 12 Vdc power supply
- Micro SD slot for firmware updates

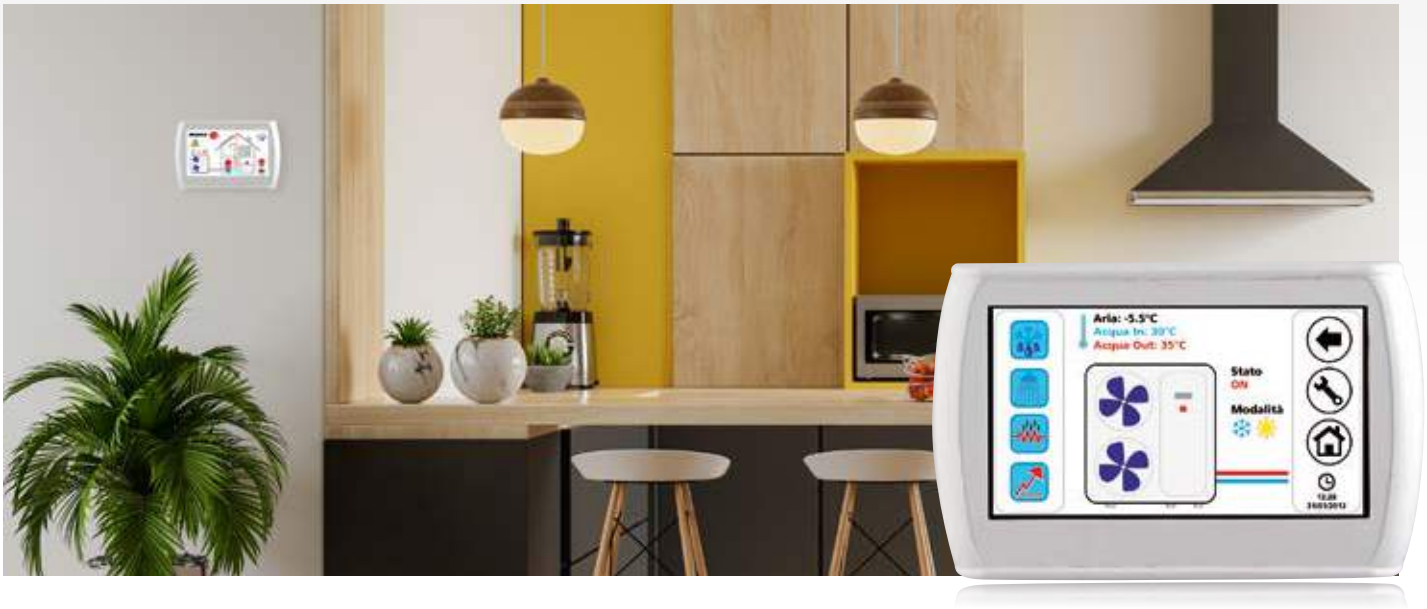
Compatible with the following ranges: i-290, i-32V5, Atria, i-32V5 Midi, i-HPV5.

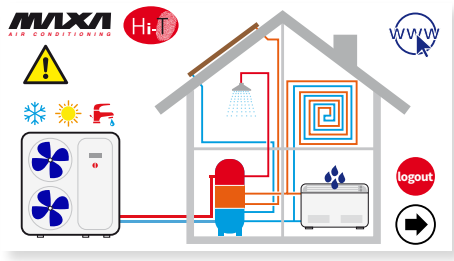
Hi-TV415

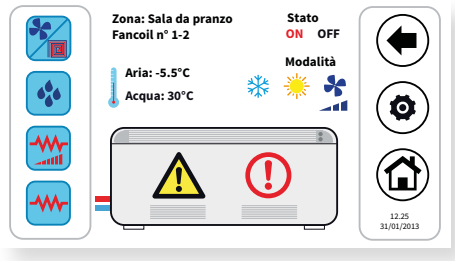
Multifunctional remote control system

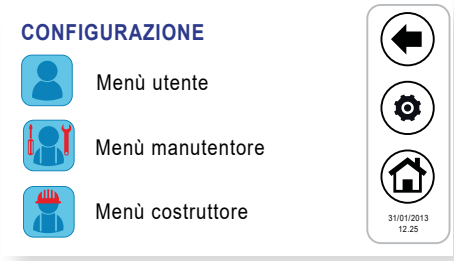
Hi-TV415 is a touch screen remote control suitable for the management of both individual systems and systems consisting of several units in cascade.
Hi-TV415 integrates the temperature sensor to also allow the management of the room thermostat function.

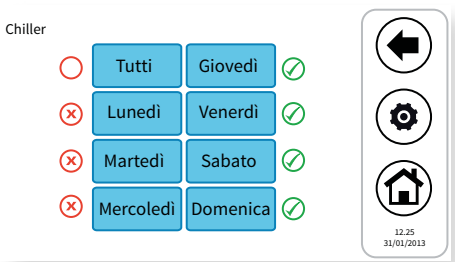
Hi-TV415 is presented with a very intuitive color interface that simplifies the use of control; all functions are easily adjustable thanks to the use of synoptics of immediate understanding.

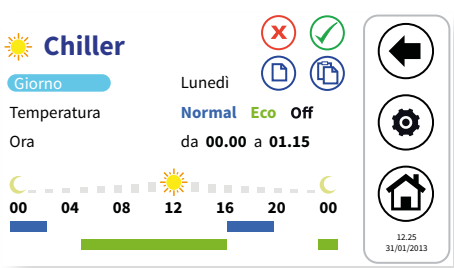












i-CR

Touch screen remote controller

LCD touch screen remote controller with negative LCD and capacitive keys for residential use for the control and management of the single unit. With i-CR you will be able to comfortably replicate all the functions from your home available on the control on the machine (reading probes, access parameters).

Other important functions are listed below:

- Double set-point.
- Weekly programmable thermostat.
- Anti-Legionella cycle.
- Alarm history.
- Room thermostat

ON/OFF BACKLIGHT
Function that acts at the thermostat level, used to turn off/on the LEDs and the backlight. In OFF mode, the keyboard does not accept any command. This function has not no effect on the setting of the machine, but it enables/disables the interaction with the Thermostat. Allows you to exit the menu. If this buttons is pressed for 3 seconds, the keyboard will lockout and the padlock icon appears on the display. This function has not no effect on the setting of the machine, it is just used to enable/disable the interaction of the user with the thermostat keyboard.

UP
This button allows you to move up to higher menus or to increase the value of a given parameter

DOWN
This button allows you to move down on lower menus or to decrease the value of a given parameter

CHRONOTHERMOSTAT
This allows you to set the operational time slot to regulate room temperature read by the probe on the i-CR

CHANGE SEASON BUTTON
Push this button at least for 3 seconds to change the season mode or to turn the heat pump/chiller unit OFF

ENTER BUTTON
Use this button to enter the menus or to confirm a parameter.

Maxa Das

Supervision, monitoring and analysis system

Maxa SCADA
It is the beating heart of the DAS system: it is a software for PC associated with a license, free buying a connection device, that acquires all data and parameterizations of the heat pump or system in real time, and send them to the visualization system.

- Multi-connection system with local units or inserted on one
- LAN / WIFI network or for remote connections.
- Simple and intuitive tree selection of the model from to monitor.
- Forcing the machine status.
- Monitoring of system variables, with notification system alarm via popup or by sending mail.
- Parameterization of the unit.
- Process registration.
- Event log and data traffic debugging.
- Import new models or updated revisions, through quick library import.
- Management of user levels.
- Available in Italian and English
- Online help
- Multiple levels of user management.

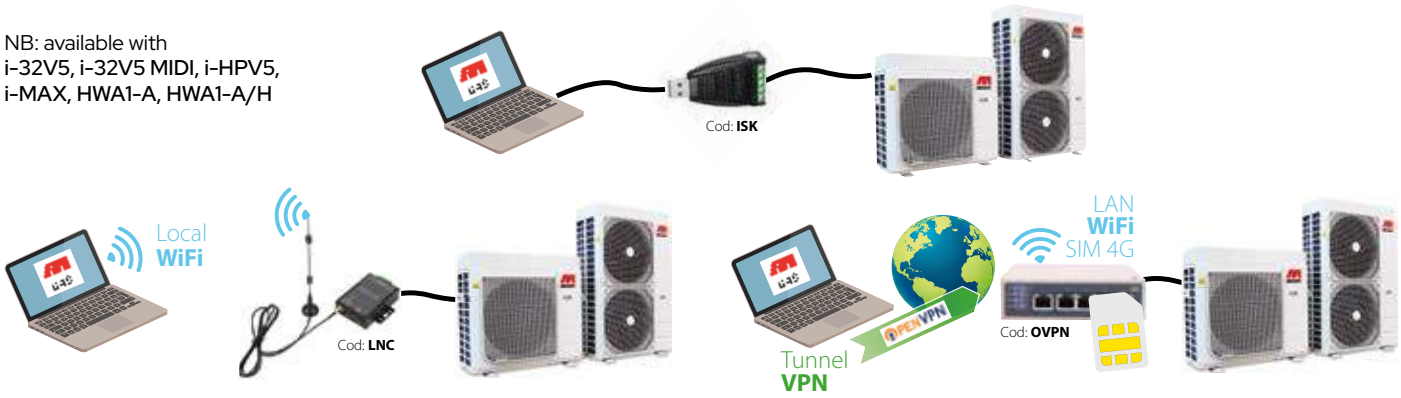
Maxa TREND
Useful for heat pumps and only cooling, displays all the processes in progress through configurable and customizable charts on multiple levels

- Graphic analysis of the acquired measurements with personalization of the tracks.
- List of activation and deactivation of alarms and time stamp.
- Cursor functionality to view and browse graphed data.
- Zoom for analysis on a temporal detail or relating to a range of values.
- Real-time updating of a process in progress.

Connectivity
There are three ways to connect our heat pump to the system DAS monitoring and everyone has a different level of operation.

1- Serial converter - Accessory ISK
Direct connection to the units via RS-485 serial cable and USB. For quick maintenance directly on the machines.
2- Lan-Wifi Router - Accessory LNC
Connecting the units on a local network using an Ethernet cable o WIFI coverage. For a local remote display, ideal for residential and commercial applications.
3- Lan-Wifi 4G Router with VPN Tunnel - Accessory OVPN
Remote connection of the units via an industrial router uses a secure and protected OPENVPN service. For monitoring at unlimited distance all over the world.

NB: available with
i-32V5, i-32V5 MIDI, i-HPV5, i-MAX, HWA1-A, HWA1-A/H



Calido 110

Wall mounted heat pump for domestic hot water

110 L

Calido 110 is a water heater in air/water heat pump for wall installation. Thanks to the volume of 110 liters of water, Calido 110 guarantees high compactness and aesthetic care.

The Calido 110 is perfect for the replacement of electric water heaters on existing systems, thanks to the functions of hot water temperature set, timer setting and function antilegionella.

Installation is very simple and practical.

The kettle is made of steel with vitrification treatment, insulated with rigid polyurethane foam (PU).
The condenser is wrapped in a steel tank, which is not immersed in water while the rotary compressor guarantees maximum efficiency and silence, and finally the centrifugal fan allows the air ducting necessary for the correct operation of the heat pump.
Access to the battery is facilitated by the special compartment.

The machine has excellent yields even with external temperatures ranging from -5°C to +43°C thanks to the electronic expansion valve that improves its performance.

Technical Features

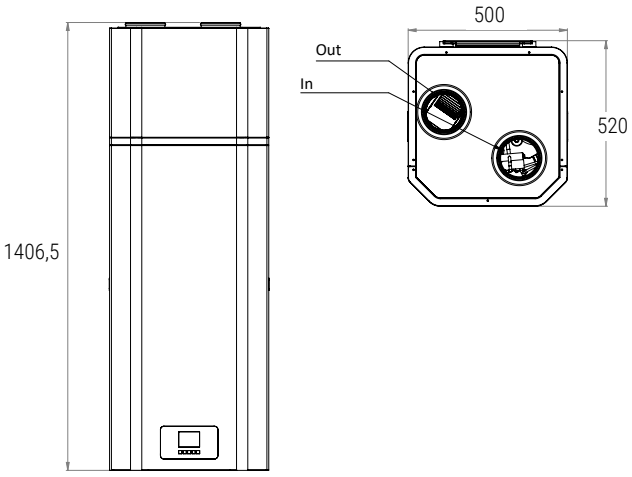
- Water boiler with 100 litres capacity, made of S235 JR steel with internal enamel coating, thermic insulation in hard thick expanded polyurethane (PU) without CFC and HCFC.
- External coating in metal sheet varnished with epossidic powders (white).
- Mounting brackets for wall installation.
- Magnesium anode for corrosion prevention.
- Hydraulic links located on the bottom part.
- Non submerged capacitor wrapped around the steel boiler.
- Integrated electric resistance 1,5 kW 230V~ activable through switches located inside control panel for heating of ranging from 60°C (max temp with heating pump only) to 70°C.
- Rotary compressor for maximum efficiency and reducing noise.
- Centrifugal fan for canalization of the necessary air for the proper functioning of the heating pump.
- Winged pack evaporator.
- R134a refrigerant cooling fluid.
- Safety thermostat set at + 85°C
- Dry contact to start the unit from external switch
- Complete electronic control with control panel equipped with LCD touch display, water temp gauge, bright functioning heating pump and electric resistance gauge, commands with relative gauges for the activation of the various functioning modes, warnings for eventual alarm malfunction, such as:
- Antilegionella function,
- Setting / display of date and hour,
- Hot water temp setting.

Accessori

Bracket for wall mounted
Screws and dowels for mounting
Spacers for wall mounted
Dielectric couplings

Loose Accessories

Antivibration dampers for floor installation



		Calido 110
Energy class (1)		A+
Declared load profile		M
COP_{DHW} (ERP) (1)		3.01
Heating time	h: min	6: 53
Heating energy consumption	kWh	1.58
Annual electricity consuption (average climatic condition)	kWh/year	462
Duct air flow (nom.)	m^3/h	300
Available static pressure	Pa	60
Rated power input	W	236 (3) [+1500 (2)]
Electrical Heating rated input	W	1500
Current (rated)	A	1.14 (3) [+6.5 (2)]
Maximum current	A	1.81 (3) [+6.5 (2)]
Power supply	V/Ph/Hz	220-240~/1/50
Max outlet water temperature (without using E-heater)	°C	60
GWP - Refrigerant / Charge / GWP	.../g /...	R134a/650/1430
CO_2 equivalent tonnes	t	0,93
Refrigerant pressure suction (max.) - discharge (max.)	Bar	0.2/25
Set point relief valve	Bar	8
Diameter of hydraulic connections	-	G 1/2" M
Storage tank nominal volume	L	110
Internal water tank material	-	Vetrificato
Sound power level	dB (A)	48.5
Net weight	kg	62
Gross weight (when tank filled)	kg	172
Net size (WxHxD)	mm	500x1406x520
Package Size (WxHxD)	mm	550x1460x550
Duct diameter	mm	125
Protection rating	-	IPX1
Operating temperature range	°C	-5~43

(1) Tank at room temperature 20° C, air in ducted entry 7° C DB, 6° C WB, inlet water temperature 10 ° C and tank set at 55 ° C.
(2) Electrical resistance data
(3) Room temperature 20°C, water temperature from 15 ° C to 55 ° C

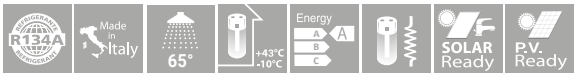
Calido

Heat pump for domestic hot water

200÷300 L

Heat 200 and 300. The Calido range for floor installation is a system that takes advantage of the high efficiency of the air/water heat pump and ensures reduced operating costs, with a significant saving compared to traditional gas kettles or electric heaters only.

Calido 200 and 300 can be installed in a technical room or in secondary rooms of the house such as garages or laundries, Thanks to the particularly accurate aesthetics, Calido 200 and 300 can be perfectly integrated into domestic environments. The Calido-S and Calido-D versions allow integration with systems with solar thermal panels and/or auxiliary sources such as boilers or hydronic heaters. Thanks to a clean contact input it is possible to manage the system remotely or activate it according to any automation coming from the photovoltaic system of the house.



Technical Features

- Steel tank with double layer vitrification.
- Anti-corrosion magnesium stick for assuring the durability of the tank.
- Condenser wrapped externally to the boiler, free from fouling and gas-water contamination.
- High thickness polyurethane foam (PU) thermal insulation.
- Outer shell made of grey colour plastic material.
- Acoustically isolated top part plastic cover.
- Highly efficient compressor with the R134a refrigerant.
- High and low gas pressure protections.
- Electrical heater available in the unit as a back-up (with integrated thermo cut out with protection set at 90°C), assuring constant hot water even in extreme cold winters.
- ON-OFF contact for starting the unit from an external switch.
- Weekly disinfection cycle.
- Possibility of manage hot sanitary water re-circulation or solar water integration (presence of a dedicated temperature probe, flow switch input and command for an external pump).
- Electronic expansion valve for precise control

Advantages

- The actual set of the heat pump is controlled by a climate curve for preventing that the hot air taken from outside (over 25°C with water at 65°C, over 35°C with water at 55°C) may cause high pressure alarms.
- The electrical heater integrates automatically the temperature of the tank to the desired setting when the actual setting is controlled by the weather curve.
- Predisposition for integration with photovoltaic system. After enabling the photovoltaic inverter, the set temperature will increase to the maximum value (according to the climate

Flexibility and Benefits

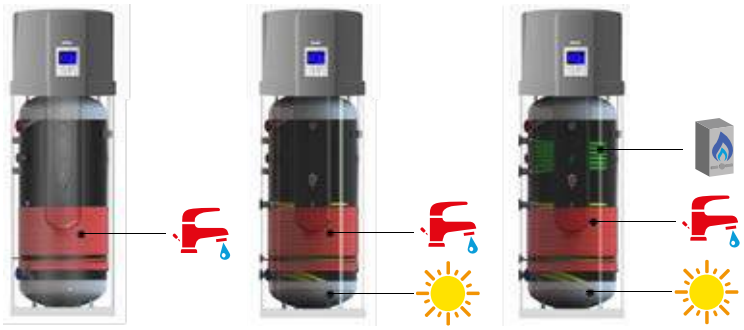
- Waste heat recovery: the unit can be installed near the kitchen, in the boiler-room or the garage, basically in every room which has a large number of waste-heat so that it has the higher energy efficiency even with very low outside temperatures during the winter.
- Hot water, cooling and dehumidification: the unit can be placed in the laundry room, in clothing room, gym or garage. When it produces hot water it lowers the temperature and dehumidifies the room as well.
- Compatible with solar energy: the unit can work with a second heat source as solar panels, boilers or other different energy sources (remark: the extra heat source is not provided with).
- The function for which the unit has been designed is only that of heat pump for DHW production. Any other side effect (ambient cooling, dehumidification, waste heat recovery) should be considered as a perk. The performance data are therefore provided only with respect to the function of water heating.

Accessories

ONE-SAS	T6 Solar/DHW temperature sensor	**ONE-FL**	Nylon flow switch 1"F 9 l/min

Versions

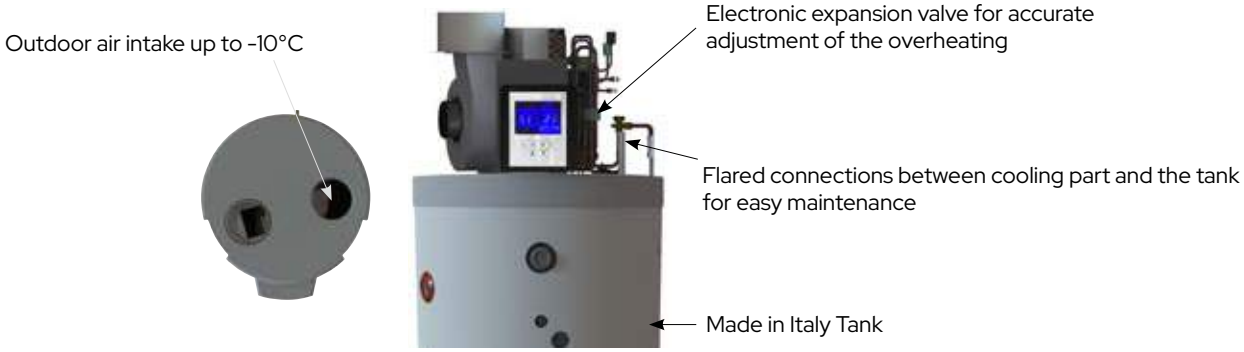
CALIDO	Standard version, heat pump and the electric heater	**CALIDO-D**	With double auxiliary coil in order to have at the same time three energy sources.
CALIDO-S	With auxiliary coil for use combination with solar panels		



Calido Calido-S Calido-D

Calido		200	200-S	200-D	300	300-S	300-D
Energy class (1)		A	A	A	A	A	A
Declared load profile		L	L	L	XL	XL	XL
COP_{DHW} (ERP) (1)		2.64	2.64	2.64	2.85	2.85	2.85
Heating time	h: min	07:48	07:48	07:48	09:53	09:53	09:53
Annual electricity consuption (average climatic condition)	kWh/year	1012	1012	1012	1426	1426	1426
Duct air flow (nom.)	m^3/h	350					
Available static pressure	Pa	60					
Rated power input	W	2060 (3)					
Electrical Heating rated input	W	1200 (2)					
Current (rated)	A	2,21 (3) (+ 5.2) (2)					
Maximum current	A	3,2 (3) (+ 5.2) (2)					
Power supply	V/Ph/Hz	220-240/1Ph+N+PE/50					
Max outlet water temperature (without using E-heater)	°C	65					
GWP - Refrigerant / Charge / GWP	.../g /...	R134a/920/1430					
CO_2 equivalent tonnes	t	1,32					
Refrigerant pressure suction (max.) - discharge (max.)	Bar	0,2 / 25					
Diameter of hydraulic connections	-	G 1" F					
Storage tank nominal volume	L	228	220	217	286	278	273
Internal water tank material	-	Vitrification with double layer					
Solar exchange coil surface	m^2	/	1,2	1,2	/	1,2	1,2
Auxiliary exchange coil surface	m^2	/	/	0,5	/	/	0,8
Sound power level	dB (A)	58,2					
Net weight	kg	98.0	106.5	113.0	121.5	121.0	129.5
Gross weight (when tank filled)	kg	326.0	392.5	333.0	399.5	338.0	402.5
Net size (ØxH)	mm	Ø 654x1638	Ø 654x1638	Ø 654x1638	Ø 654x1888	Ø 654x1888	Ø 654x1888
Package Size (WxDxH)	mm	700x700x1760	700x700x1760	700x700x1760	700x700x2010	700x700x2010	700x700x2010
Duct diameter	mm	Ø160					
Protection rating	-	IPX1					
Operating temperature range	°C	-10 / + 43°C					

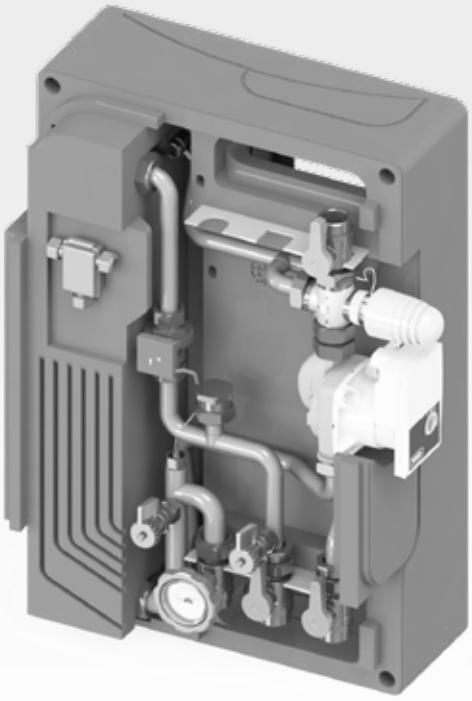
(1) Tank at room temperature 20° C, air in ducted entry 7° C DB, 6° C WB, inlet water temperature 10 ° C and tank set at 55 ° C.
(2) Electrical resistance data
(3) Room temperature 20°C, water temperature from 15 ° C to 55 ° C



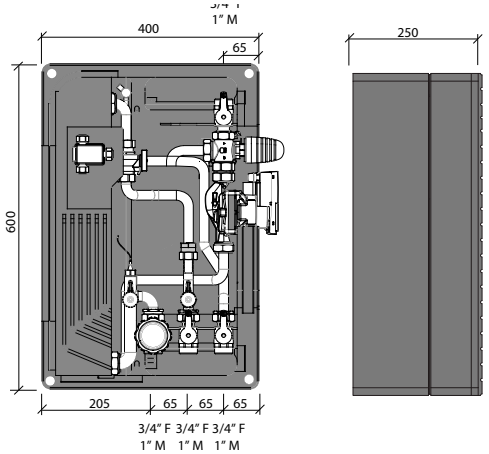
Aqua Speedy

Instantaneous hot water heater

18÷25 L



Aqua Speedy is an instant producer of hot water for sanitation purposes with a water-to-water heat exchanger made of stainless steel plates welded together. The temperature of the hot water for sanitation is regulated by a thermostatic mixer installed at the factory.
An external energy source from which the energy needed to produce the hot water for sanitation is always necessary. This energy source is usually represented by a technical storage tank kept at temperature by the heat pump. A circulator inside AquaSpeedy is responsible for regulating the amount of energy needed based on the type of hot water for sanitation withdrawal. AquaSpeedy allows for the production of hot water for sanitation in complete safety.



Advantages

- Instant production of hot water for sanitation
- Nominal delivery of hot water for sanitation 18 or 25 l/min
- High efficiency thanks to the oversized steel plate heat exchanger
- Wall or tank installation
- Quick installation
- Very easy maintenance
- Complete with black EPP thermal insulation 40 g/l.

Use

In both residential and commercial or tertiary heat pump systems, Aqua Speedy is a suitable solution to provide the domestic hot water production service of instant type.

Aqua Speedy		18	25
Maximum secondary output flow rate (DHW)	l/m	30	40
Minimum DHW ON/OFF flow rate	l/m	2,5 - 0,3	2,5 - 0,3
DHW pressure drop (30 l/min)	bar	0,5	0,9
DHW temperature setting	°C	40÷55	40÷55
Maximum pressure	bar	10	10
Heat exchanger surface	m^2	0,882	1,76
Maximum primary flow rate	l/h	1480	1700
Max temperature	°C	90	90
Circulator		Wilo PARA SC 15/1-6	Wilo PARA SC 15/1-6
Maximum absorbed power	W	45	45
Connections		3/4"F-1"M	3/4"F-1"M
Maximum dimensions (packaging)	mm	620x490x30	620x490x30
ULTRA CFMUS ULTRASONIC M-BUS Qn 1,5 m3/h - 110 x 3/4"	mm	1,5 m^3/h - CL2 - 110 mm x ¾"	1,5 m^3/h - CL2 - 110 mm x ¾"
ULTRA CFMUS ULTRASONIC M-BUS Qn 1,5 m3/h - 110 x 3/4"	mm	1,5 m^3/h - CL2 - 110 mm x ¾"	1,5 m^3/h - CL2 - 110 mm x ¾"
Dimensions LxPxH	mm	400x250x600	400x250x600

Versions

18 18 liters per minute with input 10°C, output 48°C, and buffer 55°C.

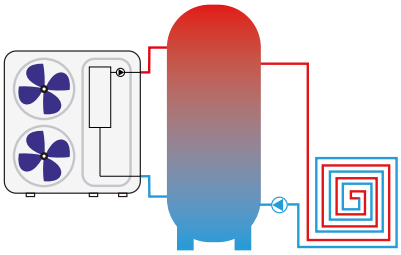
25 25 liters per minute with input 10°C, output 48°C, and buffer 55°C.

Puffroller

Optimal for the storage of chilled and hot water

60÷880 L

- To be integrated on all kind of plants.
- Storage rapidity, abundant and continuous erogation.
- High efficiency for low exercice costs
- Absolute hygiene
- Long durability without corrosion
- Simplicty of installation
- Inside untreated.
- Fixture point for wall installation for models 60/120 and 200 l.
- The models 60/120 and 200l can be installed in horizontal or vertical position.
- Polyurethane foam insulation 50 mm.
- Prepared for inserting auxiliary electric resistance.



Puffroller		60	120	200	280	400	480	750	880
Total storage	l	58	126	203	283	399	483	732	855
Isolation thickness	mm	50	50	50	50	50	50	30	30
Total height insulation included	mm	935	1100	1395	1560	1540	1840	1725	1975
Diameter isolation included	mm	380	510	550	600	700	700	850	850
Unloaded weight	kg	25	35	45	55	95	100	170	190
Heating max working pressure	bar	6	6	6	6	6	6	6	6
Boiler max working temp	°C	95	95	95	95	95	95	95	95

Hydraulic connections	60-120	200	280	400	480	750	880
Air evacuation	1"	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4
Boiler inlet	1" 1/4	1" 1/2	2"	2" 1/2	2" 1/2	3"	3"
Heating inlet	-	-	-	-	2" 1/2	3"	3"
Boiler - heating outlet	1" 1/4	1" 1/2	2"	2" 1/2	2" 1/2	3"	3"
Thermometer	1/2	1/2	1/2"	1/2"	1/2"	1/2"	1/2"
Feeler	1/2	1/2	1/2"	1/2"	1/2"	1/2"	1/2"
Electric heater	1" 1/2	1" 1/2	1" 1/2	1" 1/2	1" 1/2	1" 1/2	1" 1/2
Drain	1/2	1/2	3/4"	3/4"	3/4"	1"	1"

Accessories

RE1.5M3 Electrical resistance single phase 1,5 kW (L=340 mm) *

RE2.0M3 Electrical resistance single phase 2,0 kW (L=390 mm) *

RE3.0M3 Electrical resistance single phase 3,0 kW (L=390 mm) *

VAS Anti-scalding valve

VE24AT Expansion vessel 24 l for tanks with capacity up to 500 l

VEP35AT Expansion vessel 35 l for tanks with capacity up to 1000 l

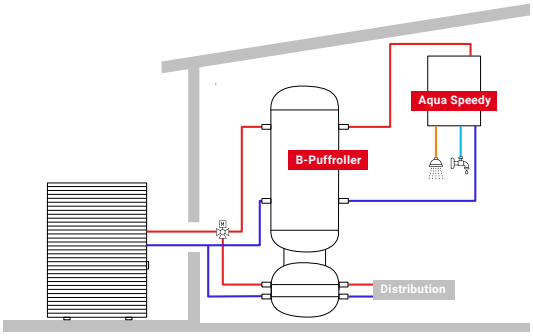
* Not for model 60-750-880

B-Puffroller

Technical water double puffer for DHW production and plant side

300/80-500/70 L

- Integrated and compact solution
- To be integrated on all kind of plants.
- Storage rapidity, abundant and continuous erogation.
- High efficiency for low exercice costs
- Absolute hygiene
- Long durability without corrosion
- Simplicty of installation
- Inside untreated.
- Polyurethane foam insulation 50 mm.
- Prepared for inserting auxiliary electric resistance
- Lower Puffer for heat or cold water,
- No inside handling. Insulation: PU-hard polyurethane 70 mm



B-Puffroller		300	500
Total storage	l	363	553
Isolation thickness	mm	50	50
Total height insulation included	mm	1940	2050
Diameter isolation included	mm	600	700
Unloaded weight	kg	55	100
Heating max working pressure	bar	6	6
Boiler max working temp	°C	95	95

* For the accessories see the Puffroller's page

Lower tank			
Thermal wheel for Heat Pump	l	80	70

Upper tank		
Connector Type	**300**	**500**
Air evacuation	1" 1/4	1" 1/4
Boiler outlet	2"	2" 1/2
Heating circuit outlet	-	2" 1/2
Boiler - heating circuit return at 50°C	2"	2" 1/2
Boiler - heating circuit return at 30°C	1/2"	1/2"
Thermometer	1/2"	1/2"
Feeler	1/2"	1/2"
Electric heater	1" 1/2	1" 1/2
Drain coil	3/4"	3/4"

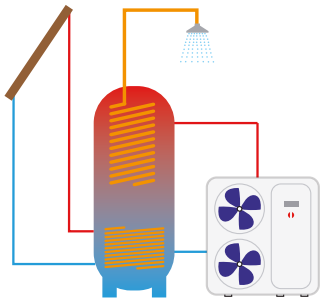
Caddy

Tank for heating water with innovative thermic chimney and incorporated sanitary exchanger

300÷800 L

Innovative tank for alternative source and instant sanitary water production. Caddy is the synthesis of integration tanks to its sanitary water exchanger for the best performance with different energetic sources.

- Insulation made of soft polyurethane 100 mm.
- Solar intergration for HDW and heating technical water.
- Gas boiler integration.
- Wood boiler integration.
- Instantaneous HDW
- Stratification with hydraulic chimney.
- 4 m2 copper coil exchanger.
- Sanitary water exchanger to choose.
- Absolute hygiene.
- Long durability.



Caddy		300	500	800
Total storage	l	270	450	700
Isolation thickness	mm	100	100	100
Total height insulation included	mm	1625	1765	1780
Diameter isolation included	mm	700	850	990
Lower collector pipe coil	m^2	1,9	2,5	2,5
Water capacity of pipe coil	l	11,4	14,9	14,2
Power input	kW	45	60	63
Unladen weight	kg	130	150	220
Heating max working pressure	bar	3	3	3
Boiler max working temp	°C	95	95	95

Extractable heat-exchanger kit, complete with bored flange, upper cap for flange and nuts and bolts, already included

		4
Heat exchanger surface	m^2	4,0
Pipe coil water capacity	l	2,8
Power input	kW	80
Domestic hot water production	m^3/h	2,0
Pressure loss	mbar	584
Power code (DIN 4708)	NL	20

* For the accessories see the Puffroller's page

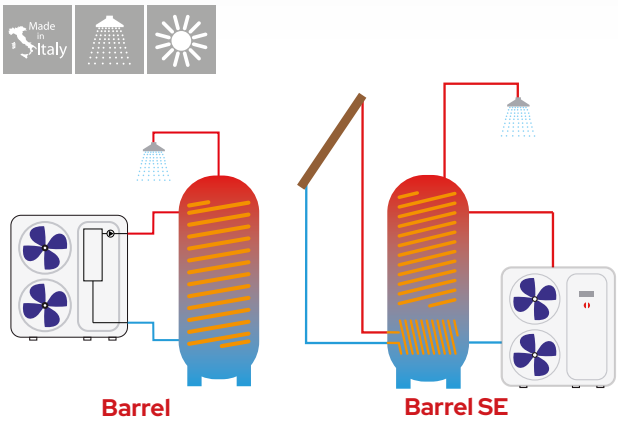
Barrel

DHW boiler with internal treathment and pipe coil for heat pump

300÷1000 L

Water-heater made of high quality steel with 1 fixed pipe-coil, complete with anodic protection, inside treament according to norm DIN 4753 and UNI 10025. Insulation: Foamed hard polyurethane layer 50 mm (mod.200÷500), soft polyurethane 100 mm (mod. 800÷1000).

- To be integrated on all kind of plants.
- Storage rapidity, abundant and continuous erogation.
- High efficiency for low exercice costs.
- Absolute hygiene.
- Long durability without corrosion.
- Simplicty of installation.
- Efficient heat-exchange surface.
- Barrel SE version with solar heat exchanger.



Barrel		200	300	500	800	1000
Total storage	l	190	263	470	702	900
Isolation thickness	mm	50	50	50	100	100
Total height insulation included	mm	1215	1615	1705	1810	2140
Diameter isolation included	mm	600	600	750	990	990
Coil heat exchanger	m^2	3,0	4,0	6,0	7,0	8,0
Water capacity of pipe coil *	l	17,2	23,0	51,5	60,0	68,5
Unladen weight	kg	120	160	220	280	320
Max. working-pressure	bar			10		
Max. working-pressure heat exchanger	bar			6		
Boiler max working temp.	°C			95		
Barrel SE		**200**	**300**	**500**	**800**	**1000**
Total storage	l	-	260	455	702	900
Upper collector pipe coil	m^2	-	3,7	5,2	5,2	6,0
Water capacity of pipe coil *	l	-	18	31	31	35
Unladen weight	kg	-	140	245	250	280
Lower collector pipe coil	m^2	-	1,2	1,8	2,4	3,7

For the accessories see the Puffroller's page
* Check that the water contained in the coil is above the minimum water content required by the heat pump

Hybridroller

Double tank for DHW production from heat pump and solar with thermal wheel for hot/cold water

60÷500 L

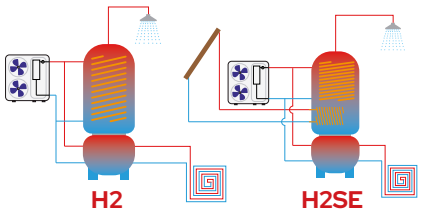
- To be integrated on all kind of plants.
- Storage rapidity, abundant and continuous erogation.
- High efficiency for low exercice costs.
- Absolute hygiene.
- Long durability without corrosion.
- Simplicity of installation.
- Efficient heat-exchange surface.
- Integrated and compact solution.
- Space saving.

H2
Upper Tank with 1 fixed pipe-coil, made of high quality steel, complete with anodic protection, inside treatment according to Norm DIN 4753-3 and UNI 10025. Lower Puffer for heat or cold water, no inside handling. Insulation: PU-hard polyurethane 70mm

H2SE
Upper Tank with 2 fixed pipe-coils, made of high quality steel, complete with anodic protection, inside treatment according to Norm DIN 4753-3 and UNI 10025. Lower Puffer for heat or cold water, no inside handlingInsulation: PU-hard polyurethane 70mm.

Hybridroller		H2		H2SE	
		300	500	300	500
Diameter with insulation	mm	690	790	690	790
Tot. Height	mm	1925	2040	1925	2040
Weight Empty	kg	150	200	150	200
Effective Capacity	l	270	460	270	450
Pressure Of Operation Serpentine	bar	10	10	10	10
Pressure Of Operation Tank	bar	10	10	10	10
Maximum Temperature Serpentine	°C	110	110	110	110
Maximum Temperature Tank	°C	95	95	95	95
Coil Surface Area	m^2	2,8	4,4	3,7	6,0
Contenuto Acqua Serpentino *	l	17	26,6	20,2	51,5
Rated capacity (60/50°C)	m^3/h	1,2	2	1,3	2,7
Output power (60/50°C)	kW	14	23	15	31
Produzione Sanitaria (10/45°C) Din 4708	m^3/h	0,34	0,57	0,37	0,76
Perdita Di Carico	mbar	13	22	11	31
Thermal Wheel For Heat Pump		80	74	80	74
Pressure Of Operation Puffer	bar	6	6	6	6
Maximum Puffer temperature	°C	95	95	95	95

Hybridroller		H2SE	
		300	500
Lower Pipe Coil			
Coil Surface Area	m^2	0,9	1,5
Water Capacity Of The Pipe Coil	l	5,3	9,4
Heating Water (80/60°C)	m^3/h	0,9	1,6
Heat Delivered	kW	22	37
Output Sanitary Water (10/45°C) Din 4708	m^3/h	0,54	0,91
Pressure Loss	mbar	7	13
Coils In Series			
Total Surface Area	m^2	3,7	5,9
Total Content	l	22,3	36
Heating Water (60/50°C)	m^3/h	1,7	2,8
Heat Delivered	kW	20	32
Output Sanitary Water (10/45°C) Din 4708	m^3/h	0,49	0,79
Pressure Loss	mbar	26	42



* Check that the water contained in the coil is above the minimum water content required by the heat pump

Accessories

RE1.5M3	Electrical resistance single phase 1,5 kW (L=340 mm) *
RE2.0M3	Electrical resistance single phase 2,0 kW (L=390 mm) *
RE3.0M3	Electrical resistance single phase 3,0 kW (L=390 mm) *
VAS	Anti-scalding valve
VE24AT	Expansion vessel 24 l for tanks with capacity up to 500 l
VEP35AT	Expansion vessel 35 l for tanks with capacity up to 1000 l

HydroFull

The HydroFull range concentrates all the main system components within a single container, simplifying the installation of heat pump systems.

- **WIDE RANGE**
  Different models are available with different types of DHW storage and various sizes of inertial storage for system service.

- **FULL ELECTRIC SOLUTION**
  The HydroFull range can be operated with i-32V5 and i-290 series monobloc pumps with a service guarantee using electricity only.

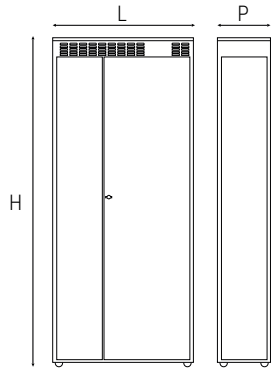
- **DOMESTIC HOT WATER**
  Perfect combination of the high reliability of the tank made of AISI 316 L stainless steel and two different capacities for different needs.

- **INSTALLATION FLEXIBILITY**
  Various models of storage box allow them to be installed either recessed within the masonry or visible.

- **INERTIAL STORAGE**
  Various standard or optional equipment allows to guarantee an adequate volume of technical water.

Maximum flexibility 5 Versions


MAXA
MAXA
MAXA
MAXA



Dimensions		C	R	L	X	Y
L	mm	700	950	1000	1000	1000
P	mm	350	350	425	425	425
H	mm	2200	2200	2250	2250	2250

		HydroFull-C	HydroFull-R	HydroFull-L	HydroFull-X	HydroFull-Y
Insulation type domestic hot water tank		polyurethane	polyurethane	polyurethane	polyurethane	polyurethane
Exchange surface	mq	1.65	1.2	2	2	2
Inertial tank capacity	L	20	20	-	40	40
Net weight	kg	100	149	185	210	210
Nominal capacity of domestic hot water tank	L	150	150	200	200	200
Useful hydraulic pump head	kPa	68	68	68	68	68
Volume of the expansion vessel	L	6	6	12	12	12
Heat loss	W	75	75	75	75	75
Net box dimensions (LxHxP)	mm	700 x 2200 x 350	950 x 2200 x 350	1000 x 2250 x 425	1000 x 2250 x 425	1000 x 2250 x 425

HydroFull is only compatible with:

Range	Models
i-32V5	**06A, 08A, 10, 10T, 12, 12T**
i-290	**0106, 0109, 0112**

HydroFull-C accessories

CARTER Wall box side closure Carter kit for covering hydraulic connections in visible installations

VE10C System expansion tank kit 10 lt

RE1.5M-R 1.5 kW electric heater, complete with safety thermostat, managed by the PDC electronics

HydroFull-R accessories

BOX-R Wall box for built-in or visible installation. Supplied disassembled.

RE1.5M-R 1.5 kW electric heater, complete with safety thermostat, managed by the PDC electronics

HydroFull-L accessories

BOX-L-Z Galvanised built-in installation wall box. Supplied disassembled.

BOX-L-V Wall box for exposed installation painted RAL 9016. Supplied dissambled

RE1.5M-L 1.5 kW electric heater, complete with safety thermostat, managed by the PDC electronics

HydroFull-X accessories

BOX-L-Z Galvanised built-in installation wall box. Supplied disassembled.

BOX-L-V Wall box for exposed installation painted RAL 9016. Supplied dissambled

RE1.5M-L 1.5 kW electric heater, complete with safety thermostat, managed by the PDC electronics

VE10AT Expansion tanks 10 l for technical water storage

HydroFull-Y accessories

BOX-L-Z Galvanised built-in installation wall box. Supplied disassembled.

BOX-L-V Wall box for exposed installation painted RAL 9016. Supplied dissambled

RE1.5M-L 1.5 kW electric heater, complete with safety thermostat, managed by the PDC electronics

VE10AT Expansion tanks 10 l for technical water storage

KR-L Direct booster set with standard circulator 6 m head

K-MIX-L Mixed booster set (230V) with standard circulator 6 m head

HydroFull-C

BOX
White painted box for built-in or exposed installation (only 70 cm width, 35 cm depth and 2.2 m height), with practical front opening for easy inspection and maintenance.

BOILER
Vertical stainless steel boiler with a capacity of 150 litres, high stratification with increased coil with high exchange surface. An electric heating element can be fitted as optional.

INERTIAL STORAGE 20 LITRES

RELAUNCH KIT
Direct zone relaunch kit downstream of the hydraulic compensator

HYDRAULIC AND ELECTRIC KIT
Hydraulic and electrical kit for connection with heat pumps of the i-32V5 and i-290 series including:
- • 3-way valve with priority on the DHW side
- • 6-litre expansion vessel on DHW side
- • thermostatic mixing valve
- • system loading unit
- • relaunch circulator with 7 m head
- • hydraulic compensator.

HydroFull-R

BOX
White painted box for built-in or exposed installation with practical front opening for easy inspection and maintenance (accessory).

BOILER
Highly stratified vertical 316L stainless steel boiler with a capacity of 150 litres, single elliptical coil with concentric double helix for 1.2 m2 of surface area. HYDRAULIC AND

ELECTRIC KIT
Hydraulic and electrical kit including:
- 3-way valve sanitary priority
- 20-litre inertial storage to optimise the modulation accuracy of the heat pump
- thermostatic mixing diverter valve
- 6-litre domestic expansion tank
- Taps kit

*All components are supplied in special mounting kits

HydroFull-L

BOX
Box supplied disassembled, made of galvanised sheet metal for built-in installation, with vasistas opening doors or self-supporting box supplied pre-assembled, made of sheet metal painted RAL 9016, with vasistas opening doors.

SANITARY CIRCUIT
Sanitary circuit, with AISI316L stainless steel boiler, 200 L capacity in with heat pump exchanger with nominal power up to 12 kW.

HYDRAULIC CIRCUIT
Hydraulic circuit for connection to the heat pump system.

SUPPLIED MATERIALS
- sanitary diverter valve
- connection pipes to the boiler
- sanitary circuit connection pipes safety devices
- thermostatic valve
- sanitary circuit connection pipes safety devices.

*All components are supplied in special mounting kits

HydroFull-X

BOX
Box supplied disassembled, made of galvanised sheet metal for built-in installation, with vasistas opening doors or self-supporting box supplied pre-assembled, made of sheet metal painted RAL 9016, with vasistas opening doors.

SANITARY CIRCUIT
Sanitary circuit, with AISI316L stainless steel boiler, 200 L capacity in with heat pump exchanger with nominal power up to 12 kW.

HYDRAULIC CIRCUIT
Hydraulic circuit for connection to the heat pump system.

SUPPLIED MATERIALS
- sanitary diverter valve
- connection pipes to the boiler
- sanitary circuit connection pipes safety devices
- thermostatic valve
- sanitary expansion tank
- direct discharge to the system.

ACCUMULATION
40 litre technical water tank

*All components are supplied in special mounting kits

HydroFull-Y

BOX
Box supplied disassembled, made of galvanised sheet metal for built-in installation, with vasistas opening doors or self-supporting box supplied pre-assembled, made of sheet metal painted RAL 9016, with vasistas opening doors.

SANITARY CIRCUIT
Sanitary circuit, with AISI316L stainless steel boiler, 200 L capacity in with heat pump exchanger with nominal power up to 12 kW.

HYDRAULIC CIRCUIT
Hydraulic circuit for connection to the heat pump system.

SUPPLIED MATERIALS
- sanitary diverter valve
- connection pipes to the boiler
- sanitary circuit connection pipes safety devices
- thermostatic valve
- sanitary expansion tank
- predisposition for two relaunches.

ACCUMULATION
40 litre technical water tank

*All components are supplied in special mounting kits

HWA1-A 0140÷0285
HWA1-A/H 0140÷0285*

Air cooled liquid chiller and reversable heat pump for oudoor installation

40 kW÷85 kW

Air cooled liquid chillers and reversible heat pumps, with scroll compressors, axial fans with inverter control (except cooling only version), high performances plate heat exchanger, circulating pump, connectable with Hi-Touch remote controller.
Models widely used for replacing old units or to be installed on new systems.

(*) Eurovent certified product range

Technical Features

- Hot-galvanised thick sheet metal frame.
- Scroll ermetic 3-phase compressor complete with integral protection module.
- Axial fan type AC, which allows condensation control up to 0°C.
- Microchannel aluminium condensation coil (cooling only) and Louve with splitted circuits (heat pump version).
- Evaporator.
- Frontal electrical panel.
- Microprocessor with overheating control logic program.
- Refrigerant circuit manufactured according to the UNI EN 13134 directive.
- High and low pressure transducers, with values that can be shown on the display.
- Water circuit in copper tubing.
- Standard equipped with control and protection devices.

Fitted accessories

C	Ducted version
CM	Modbus interface RS485 activation
DSFR	Sequence control device, phase failure + Minimum and Maximum voltage relay
EC	EC inverter fan, modulating up to -15°C air (standard on 0285 cooling only and 0273, 0285 heat pump)
GI	Internal hardware extension module
IM	Magnethermic switch for compressors and fans
KA	Plate heat exchanger + basament electrical heaters (for HWA1-A/H heat pump versions)
KA1	Anti-frost heater on plate exchanger
PS	Single circulating pump with high pump head
SL	Standard silencing
SSL	Super silencing with EC fan and condensing control down to -15 °C
TR1	Micro-channel coil with Aero surface treatment (for cooling only version HWA1-A)
TR2	Cu / Al coil with Silver Line anti-corrosion treatment

Loose accessories

AG	Rubber shock absorbers
Hi-TV415	Hi-touch controller
i-CR	Remote wall controller
FY	Y-strainer

Versions

HWA1-A	Cooling only
HWA1-A/H	Air cooled water chiller and reversibile heat pump
HWA1-A/BT	Cooling only for low temperature water production
HWA1-A/C	Ductable version

Structure
With support frame, hot galvanized sheet, painted with polyurethane powder enamels at 180 ° C to ensure the best weather resistance.

Compressors
Three-phase hermetic compressors installed on rubber anti-vibrations, complete with integral protection modules with PT100 drowned in engine windings.

Fan
Special profile axial, directly connected to the external rotor motor with IP54 degree of protection, complete with overtemperature protection of the motor and grill.

Outdoor Heat Exchanger
For cooling only units, microcanal aluminum heat exchanger that guarantees:

- No galvanic corrosion (100% aluminum)
- Reduction of refrigerant charge (up to 70%)
- Long life even in very aggressive environments
- ΔP lower air side (up to 30%)
- Good refrigerant distribution thanks to the special 3-step design.

For the heat pump version: Aluminum finned pack changers with pitch type louver wedges and copper plated tubes with split circuits for maximum evaporative efficiency and undercooling circuit to increase refrigeration capacity.

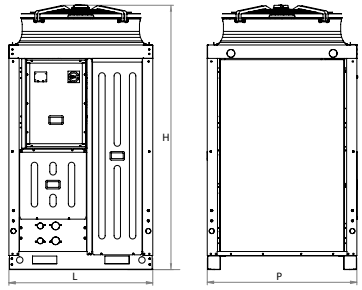
Plant side Heat Exchanger
Plate type, stainless steel plates AISI 304, braided type.

Electric panel
Includes: General disconnector with door lock, fuses, fan and pump compressor remote sensors, electronic board for the management of all Analogic Input and Output, Digital Input and Output.

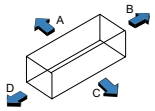
Control System (Microprocessor)
The units are equipped with a microprocessor that adopts a logic program and regulates the overheating through an electronic thermostatic valve monitored by the pressure transducer signals and temperature sensors. The CPU also manages the following functions: water temperature control, antifreeze protection, high and low pressure protection, compressor timing adjustment, alarm management and alarm, operating LEDs. On request, the microprocessor can be connected to a BMS remote control system.

Refrigerant circuit
The refrigerant circuit was built according to the UNI EN 13134 standard for welding procedures. The refrigerant used is R410A. The basic refrigerant circuit includes: electronic expansion valve, liquid separator, liquid receiver, maintenance and control valves, pressure regulator according to PED regulation, pressure transducers for precise setting of evaporation and condensing pressures, High capacity drier filter. In addition to the heat pump versions: the 4-way switch valve, the VEE capacity extension solenoid valve and 4 switching valves to allow installation of any heat recuperators.

Hydraulic circuit
The copper pipe circuit includes: service valve and flow switch, antifreeze sensor installed on the water supply pipe to the plant, safety valve, drain cock, air vent valve and pressure gauge.



Dimensions		0140	0147	0260	0273	0285
L	mm	1125	1125	1125	1125	1125
P	mm	1170	1170	1170	1170	1170
H	mm	2040	2040	2070	2070	2070



Minimum clearances		0140	0147	0260	0273	0285
A Frontal Panel	mm	800	800	800	800	800
D	mm	800	800	800	800	800
B	mm	200	200	800	800	800
C	mm	600	600	600	600	600

HWA1-A		0140	0147	0260	0273	0285
Cooling						
Cooling capacity (1)	kW	39,7	46,8	60,8	73,3	86,5
Power input (1)	kW	12,5	15,1	19,3	24,8	29,3
EER (1)	W/W	3,16	3,11	3,16	2,95	2,96
Cooling capacity (2)	kW	54,4	63,5	81,9	99,4	116,3
Power input (2)	kW	14,3	17,0	21,9	28,0	33,3
EER (2)	W/W	3,80	3,74	3,75	3,55	3,50
SEER (3)	W/W	3,80	3,80	4,05	3,98	4,14
Cooling capacity (8)	kW	22,7	27,0	36,2	42,9	51,1
Power input (8)	kW	11,4	13,5	16,9	22,1	25,7
EER (8)	W/W	1,99	2,01	2,14	1,94	1,99
Water flow (1)	L/s	1,90	2,24	2,92	3,51	4,14
Pressure drop (1)	kPa	54,08	51,68	56,79	46,43	50,41
Compressor						
Type		Scroll	Scroll	Scroll	Scroll	Scroll
Compressors	n°	1	1	2	2	2
Refrigerant circuits	n°	1	1	1	1	1
Refrigerant charge (4)	kg	7,8	7,8	12,8	13,4	14,6
Fan						
Nominal air flow Y/Δ	m^3/s	4,04/5,32	3,88/5,23	4,15/5,44	4,86/6,01	7,4
Hydraulic circuit						
Max pressure hydronic kit	bar	6	6	6	6	6
Water connections	inch	2"	2"	2"	2"	2"
Min. water volume (5)	L	330	380	260	380	490
Sound level						
Sound power (6)	dB(A)	81	81	82	83	84
Sound pressure (7)	dB(A)	49,3	49,3	50,3	51,3	52,3
Electrical data						
Power supply		400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz
Max. power input	kW	17,0	21,5	28,0	35,0	43,0
Max. current input	A	28,0	38,0	45,0	56,0	71,0
Weight						
Gross weight	kg	365	375	470	495	510
Operation weight	kg	350	360	455	480	495

Operating conditions:
(1) Internal exchanger water temp.=12/7 ° C, air entering the external heat exchanger 35° C.
(2) Internal exchanger water temp.=23/18 ° C, air entering the external heat exchanger 35° C.
(3) Internal exchanger water reference temperature = 12/7 ° C.
(4) Indicative data and subject to change. For the correct data, always refer to the technical label on the unit.
(5) The calculated value of minimum volume of water at the plant does not consider the volume of water contained in the internal exchanger (evaporator). With low external air temperature applications or low average loads required, the minimum volume of water to the system is obtained by doubling the indicated value.
(6) Condition (3); value determined on the basis of measurements carried out in accordance with the UNI EN ISO 9614-2 standard, in compliance with the requirements of the Eurovent certification.
(7) Value calculated from the sound power level using ISO 3744: 2010, referred to 10 m distance from the unit.
(8) Cooling version BT: outdoor air temperature 35 ° C, internal exchanger water temperature = -3 / -8 ° C. Fluid treated with 35% ethylene glycol.
N.B. The performance data are indicative and could be subject to change. In addition, the performances declared in apex (1), (2), and (8) refer to the instantaneous power according to EN 14511. The declared data stated in the apex (6) is determined according to the UNI EN 14825.

HWA1-A/H		0140	0147	0260	0273	0285
Cooling						
Cooling capacity (1)	kW	38,6	45,6	58,6	71,2	80,2
Power input (1)	kW	13,0	15,7	19,9	24,6	29,2
EER (1)	W/W	2,97	2,91	2,94	2,90	2,75
Cooling capacity (2)	kW	51,8	60,6	77,7	94,1	106,4
Power input (2)	kW	14,7	17,6	22,6	28,0	33,3
EER (2)	W/W	3,53	3,43	3,43	3,37	3,20
SEER (5)	W/W	3,82	3,8	3,94	3,98	4,07
Water flow (1)	L/s	1,86	2,20	2,83	3,41	3,84
Pressure drop (1)	kPa	55,8	56,6	61,5	63,7	66,6
Heating						
Heating capacity (3)	kW	43,5	48,2	64,1	80,9	88,7
Power input (3)	kW	10,7	12,3	15,6	20,0	22,7
COP (3)	W/W	4,05	3,92	4,10	4,05	3,90
Heating capacity (4)	kW	42,1	47,8	63,0	74,9	84,6
Power input (4)	kW	12,8	14,8	18,8	23,3	28,5
COP (4)	W/W	3,28	3,23	3,35	3,22	2,97
SCOP (6)	W/W	3,49	3,34	3,85	3,84	3,70
Water flow (4)	l/s	2,02	2,30	3,03	3,60	4,07
Use side heat exchanger load losses (4)	kPa	84,4	81,6	84,1	81,5	84,1
Energy efficiency (Water 35°C)		A+	A+	A++	A++	A+
Compressor						
Type		Scroll	Scroll	Scroll	Scroll	Scroll
Compressors	n°	1	1	2	2	2
Refrigerant circuits	n°	1	1	1	1	1
Refrigerant charge (7)	kg	9,98	9,98	14	15,25	15,6
Fan						
Nominal air flow	m^3/s	4,3	5,3	6,3	6,9	7,4
Hydraulic circuit						
Max pressure hydronic kit	bar	6	6	6	6	6
Water connections	inch	2"	2"	2"	2"	2"
Min. water volume (8)	L	330	380	260	380	490
Sound level						
Sound power (9)	dB(A)	84	85	89	88	88
Sound pressure (10)	dB(A)	52,3	53,3	56,3	56,3	56,3
Electrical data						
Power supply		400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz
Max. power input	kW	17,0	21,5	28,0	35,0	43,0
Max. current input	A	28,0	38,0	45,0	56,0	71,0
Weight						
Gross weight	kg	400	420	520	545	555
Operation weight	kg	390	410	505	530	540

Data referred to the following condition:
(1) Cooling: outdoor air temperature 35°C; water temperature inlet/outlet 12/7°C.
(2) Cooling: outdoor air temperature 35°C; water temperature inlet/outlet 23/18°C.
(3) Heating: outdoor air temperature 7°C d.b. 6°C w.b.; water temperature inlet/outlet 30/35°C.
(4) Heating: outdoor air temperature 7°C d.b. 6°C w.b.; water temperature inlet/outlet 40/45°C.
(5) Internal exchanger water reference temperature = 12/7 ° C.
(6) Heating: average climatic conditions; Tbiv = -7 ° C; Water Temp in/out 30/35 ° C.
(7) Indicative data and subject to change. For the correct data, always refer to the technical label on the unit.
(8) The calculated value of minimum volume of water at the plant does not consider the volume of water contained in the internal exchanger (evaporator). With low external air temperature applications or low average loads required, the minimum volume of water to the system is obtained by doubling the indicated value.
(9) Condition (3); value determined on the basis of measurements carried out in accordance with the UNI EN ISO 9614-2 standard, in compliance with the requirements of the Eurovent certification.
(10) Value calculated from the sound power level using ISO 3744: 2010, referred to 10 m distance from the unit.
N.B. The performance data are indicative and could be subject to change. In addition, the performances declared in apex (1), (2), and (8) refer to the instantaneous power according to EN 14511. The declared data stated in the apex (6) is determined according to the UNI EN 14825.

HWA1-A 02106÷04349

Air-Cooled liquid chiller for outdoor installation

106 kW÷349 kW

The high efficiency air-cooled chillers and heat pumps of the HWA1-A and HWA1-A / H series are designed for outdoor installation, available in 24 sizes, 12 chillers and 12 heat pumps, so as to satisfy all system requirements in commercial, residential and industrial buildings.

These are units made for cooling and heating water, very versatile and characterized by the possibility of complete and simple maintenance management.

R410A · Made in Italy · EC INVERTER · V.415 · ErP 2021

EUROVENT CERTIFIED PERFORMANCE

Fitted accessories

2SFV	Double security valve with changeover valve
BT	BT version for low water temperatures
C	Ducted version
CC	Condensation control up to -20°C
CM	Modbus communication module
CT	Condensation control up to -10°C
DS	Chiller with desuperheater
EC	EC fan (included in versions C, BT, SSL)
GR1	Cooling circuit anti-intrusion grid
GR2	Condenser anti-intrusion grid
GR3	Condenser and circuit anti-intrusion grid
IM	Magnethermic switch for compressors and fans
KS	Hoist ring kit
LQ	Electrical board lighting
PD	Standard double pump
PD/SI	Double standard pump+tank
PDAP	High pressure double pump
PDAP/SI	Double high pressure pump+tank
PS	Standard pressure pump
PS/SI	Standard pressure pump+tank
PSAP	High pressure pump
PSAP/SI	High pressure pump+tank
RFM	Suction and discharge ball valve for compressors
SAS	Remote probe
SH	Schuko plug (with magnetothermal switch)
SL	Silenced version
SS	Soft starter
SSL	Super silenced version
TE1	Special pump gasket seal for glycol concentration over 40%
TR1	Micro-channel coil with Aero surface treatment

Loose accessories

AG	Anti-vibration rubber mounts
AM	Anti-vibration spring mounts
FY	Y-strainer
Hi-TV415	Touch screen display
i-CR	Remote control
ISK	Serial converter USB/RS485 (ISK)
RV	Starting kit made by 2 grooved couplers and 2 straight starting pipes
SAS	Remote probe

Standard

Remote probe enabling

Enable 2nd set point

Versions

HWA1-A Standard version chiller

You can choose an acoustic configuration from the following:

/SL	Silenced version
/SSL	Super silenced version
/C	Ductable version

There are different types of hydronic kits to be combined with the chiller: with single/double pump standard/high pressure, with or without tank:

/PS	Standard pressure pump
/PSAP	High pressure pump
PD	Double standard pressure pump
PDAP	High pressure double pump
PS/SI	Standard pressure pump + tank
PSAP/SI	High pressure pump + tank
PD/SI	Double standard pressure pump + tank
PDAP/SI	Double high pressure pump + tank

Carpentry
Suitable for outdoor installation, consisting of thick profiles in hot galvanized steel sheet or painted with RAL 7035 polyester powder resistant to atmospheric agents.

Source (side) heat exchanger air
Full-aluminium coil microchannel type. Coil structure made with an open-angle V-geometry layout.

Compressor
Hermetic scroll complete with internal thermal protection.
The compressor is isolated from the structure by interposition of special rubber mountings. The mobile spiral is driven by an electric motor 2-pole (2900 rpm) cooled by the inlet refrigerant, the starter is directed. All compressors have full charge of oil polyester, suitable for use with refrigerant R410A. An electrical heater, located on the crankcase, is automatically activated when the unit is switch off in order to prevent the mixing of oil in the refrigerant. The control of cooling power is achieved through steps of parzialization in number equal to the number of compressors installed. When connecting in tandem there is an oil equalizing line with a level indicator.

User (side) heat exchanger
AISI 304 steel braze-welded plate exchanger, insulated with Black closed-cell flexible elastomeric foam (FEF) coupled with a 3 mm layer of reticulated foam in PE and an exterior embossed finishing PE film in aluminium in colour; total thickness 6+3 mm, thermal conductivity (λ)≤ 0,034 W/m·K.
A differential pressure switch, mounted on the water side, safeguard the flow rate and prevent ice from forming inside the evaporator. Maximum operating pressure exchanger: 15 bar on the water side and 45 bar on the refrigerant side

Fan section
Ventilation system composed by 800mm axial electric fans, protected to IP54, with external rotor and plastic-coated aluminium blades. Housed in aerodynamic hoods complete with safety grille. Brushless electronically commutated electrical motor and incorporated thermal protection.Continuous adjustment of fan rotation speed.

Refrigerant circuit
One or two independent refrigeration circuits made of copper, brazed and factory-assembled, complete with:

- Anti-acid dehydrator filter with solid cartridge,100% molecular sieve solid core from 3Å, particularly suitable for HFC and POE, PAG oil;
- Liquid flow and moisture indicator;
- Low and high pressure transducer;
- Electronic expansion valve;
- Low and high pressure safety pressure switch;
- Low and high pressure safety valve;
- Shut-off valve on liquid line;
- Service valves

Electrical panel
It is completely manufactured and wired in accordance with EN 60204.
The power supply section includes:

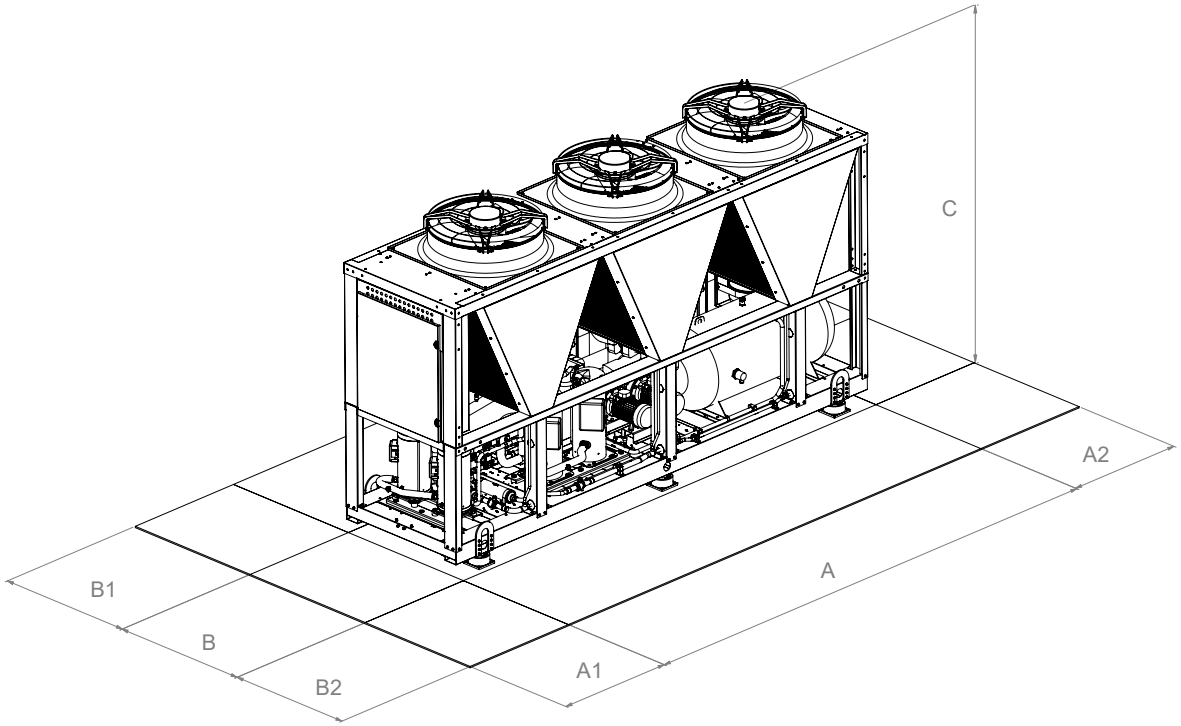
- General door lock switch, with bars for main power supply (400Vac/3ph+PE/50Hz);
- Isolating transformer for the auxiliary power supply circuit (400Vac/230Vac-12Vac);
- Compressor and fan protection fuses;
- Power supply contactor with thermal protection for compressor control;
- Phase control relay with minimum / maximum voltage intervention calibration
- Thermostated ventilation inside the electrical panel

The control section includes:

- Interface terminal with alphanumeric display;
- Displaying function of setting values, of analog inputs, error codes, alarm history and parameter index;
- Forced circulation function in case of frost risk;
- Keys for on/off switching and reset of alarms;
- Keys combination to constrain the defrosting process and constraining the pump at maximum rpm (if present);
- Remote/Local power on/off management of the unit;
- Digital input for the machine power ON/OFF;
- Analog input for enabling remote plant temperature sensor;
- Digital input for double set point enablement;
- Digital input for Summer/Winter mode activation (heat pump only);
- BMS connectivity predisposition (Modbus / Bacnet / Knx / Lonworks)
- Thermoregulation and timing of the compressors;
- Fan motors speed regulation in evaporation/condensation;
- Dynamic set point management.

HWA1-A		02106	02120	02128	02140	04155	04177	04184	04209	04239	04258	04305	04349
Cooling													
Cooling capacity (1)	kW	105	119	130	139	155	176	182	208	238	257	305	348
Power input (1)	kW	33,5	38,3	44,2	44,3	49,9	56,7	62,9	67,1	76,8	88,5	98,3	112
EER (1)	W/W	3,13	3,10	2,93	3,15	3,11	3,10	2,90	3,10	3,10	2,90	3,10	3,10
Cooling capacity (2)	kW	139	155	164	185	204	230	239	277	314	333	405	458
Power input (2)	kW	35,7	40,8	46,8	47,5	52,9	60,9	67,8	71,6	81,9	94,6	105	121
EER (2)	W/W	3,88	3,79	3,50	3,89	3,87	3,77	3,52	3,87	3,84	3,52	3,85	3,78
SEER (3)	W/W	4,13	4,12	4,11	4,27	4,11	4,11	4,10	4,14	4,24	4,10	4,16	4,12
Cooling capacity (8)	kW	61,9	70,6	77,8	82,0	91,5	103	109	123	144	158	184	211
Power input (8)	kW	29,9	34,1	39,3	39,5	45,4	50,8	55,8	59,7	68,8	79,4	88,5	101
EER (8)	W/W	2,07	2,07	1,98	2,08	2,02	2,04	1,95	2,06	2,09	1,99	2,08	2,10
Water flow (1)	L/s	5,0	5,7	6,2	6,5	7,2	8,4	8,7	9,9	11,4	12,3	14,7	16,6
Pressure drop (1)	kPa	17,5	20,7	16,1	27,8	21,1	16,7	19,1	24,8	34,2	35,4	32,0	28,8
Compressor													
Type		Scroll											
Compressors	n°	2	2	2	2	4	4	4	4	4	4	4	4
Refrigerant circuits	n°	1	1	1	1	2	2	2	2	2	2	2	2
Refrigerant charge-Circuit 1 (4)	kg	10,5	10,5	10,5	15,0	13,0	13,0	13,0	13,0	13,5	13,5	19,5	20,0
Refrigerant charge-Circuit 2 (4)	kg	-	-	-	-	10,5	10,5	10,5	13,0	13,5	13,5	19,5	20,5
Fans													
Nominal air flow	l/s	10614	10714	11143	14649	14467	15868	15892	20647	20471	22231	29279	33255
Fan numbers	n°	2	2	2	3	3	3	3	4	4	4	6	6
Hydraulic circuit													
Max pressure hydronic kit	bar	6	6	6	6	6	6	6	6	6	6	6	6
Min. water volume (5)	L	427	535	535	699	409	533	533	533	669	669	874	874
Tank volume	L	390	390	390	705	420	420	420	520	520	520	705	705
Sound level													
Sound power (6)	dB(A)	86 std/ 85 SL/ 83 SSL	86 std/ 85 SL/ 83 SSL	87 std/ 86 SL/ 84 SSL	87 std/ 86 SL/ 84 SSL	87 std/ 86 SL/ 84 SSL	88 std/ 87 SL/ 85 SSL	88 std/ 87 SL/ 85 SSL	88 std/ 87 SL/ 85 SSL	88 std/ 87 SL/ 85 SSL	88 std/ 87 SL/ 85 SSL	88 std/ 87 SL/ 85 SSL	90 std/ 89 SL/ 87 SSL
Sound pressure (7)	dB(A)	54 std/ 53 SL/ 51 SSL	54 std/ 53 SL/ 51 SSL	55 std/ 54 SL/ 52 SSL	54,9 std/ 53,9 SL/ 51,9 SSL	54,9 std/ 53,9 SL/ 51,9 SSL	55,9 std/ 54,9 SL/ 52,9 SSL	55,9 std/ 54,9 SL/ 52,9 SSL	55,9 std/ 54,9 SL/ 52,9 SSL	55,9 std/ 54,9 SL/ 52,9 SSL	55,9 std/ 54,9 SL/ 52,9 SSL	55,8 std/ 54,8 SL/ 52,8 SSL	57,8 std/ 56,8 SL/ 54,8 SSL
Electrical data													
Power supply		400Vac/3P+PE/50Hz											
Max. power input	kW	48,9	55,0	61,1	66,9	82,4	87,4	90,9	97,8	110,0	122,3	146,0	165,8
Max. current input	A	83,0	93,4	103,8	113,5	139,9	148,3	154,3	166,0	186,8	207,6	247,8	281,4
Weight													
Gross weight (9)	kg	1.080	1.080	1.090	1.510	1.620	1.620	1.620	1.950	1.960	1.960	2.670	2.850
Operation weight (9)	kg	1.090	1.090	1.100	1.520	1.630	1.630	1.630	1.960	1.970	1.980	2.690	2.870

Data referred to the following condition:
(1) Cooling: outdoor air temperature 35°C; water temperature inlet/outlet 12/7°C.
(2) Cooling: outdoor air temperature 35°C; water temperature inlet/outlet 23/18°C.
(3) Internal exchanger water reference temperature = 12/7 ° C.
(4) Indicative data and subject to change. For the correct data, always refer to the technical label on the unit.
(5) The calculated value of minimum volume of water at the plant does not consider the volume of water contained in the internal exchanger (evaporator). With low external air temperature applications or low average loads required, the minimum volume of water to the system is obtained by doubling the indicated value.
(6) Condition (1); value determined on the basis of measurements carried out in accordance with the UNI EN ISO 9614-2 standard, in compliance with the requirements of the Eurovent certification.
(7) Value calculated from the sound power level using ISO 3744: 2010, referred to 10 m distance from the unit.
(8) Cooling version BT: outdoor air temperature 35 ° C, internal exchanger water temperature = -3 / -8 ° C. Fluid treated with 35% ethylene glycol.
(9) Weight referred to the standard version without hydronic kit and possible accessories.
N.B. The performance data are indicative and could be subject to change. In addition, the performances declared in apex (1), (2), and (8) refer to the instantaneous power according to EN 14511. The declared data stated in the apex (6) is determined according to the UNI EN 14825.



Model	Size			Clearance recommended access				Heat exchanger	
	A [mm]	B [mm]	C [mm]	A1[mm]	A2 [mm]	B1 [mm]	B2 [mm]	Type	Ø
02106	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02120	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02128	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02140	4060	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
04155	4060	1100	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04177	4060	1100	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04184	4060	1100	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04209	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04239	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04258	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04305	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04349	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")

* Depends on the hydronic version - check the technical bulletin

HWA1-A/H 02109÷04345

Air-Cooled reversible heat pump for outdoor installation

109 kW÷345 kW

The high efficiency air-cooled chillers and heat pumps of the HWA1-A and HWA1-A / H series are designed for outdoor installation, available in 24 sizes, 12 chillers and 12 heat pumps, so as to satisfy all system requirements in commercial, residential and industrial buildings.

Fitted accessories

2SFV	Double security valve with changeover valve
BT	BT version for low water temperatures
ACK6	Segnalazione Summer/Winter
C	Ducted version
CC	Condensation control up to -20°C
CM	Modbus communication module
CT	Condensation control up to -10°C
DS	Chiller with desuperheater
EC	EC fan (included in versions C, BT, SSL)
GR1	Cooling circuit anti-intrusion grid
GR2	Condenser anti-intrusion grid
GR3	Condenser and circuit anti-intrusion grid
IM	Magnethermic switch for compressors and fans
KA1	Heat exchanger + pump (if on board) electrical heaters
KA2	Heat exchanger + pump (if on board) + inertial tank electrical heaters
KS	Hoist ring kit
LQ	Electrical board lighting
PD	Standard double pump
PD/SI	Double standard pump+tank
PDAP	High pressure double pump
PDAP/SI	Double high pressure pump+tank
PS	Standard pressure pump
PS/SI	Standard pressure pump+tank
PSAP	High pressure pump
PSAP/SI	High pressure pump+tank
RFM	Suction and discharge ball valve for compressors
SAS	Remote probe
SH	Schuko plug (with magnetothermal switch)
SL	Silenced version
SS	Soft starter
SSL	Super silenced version
TE1	Special pump gasket seal for glycol concentration over 40%
TR2	Al/Cu battery with anti-corrosion Silver Line treatment

Loose accessories

AG	Anti-vibration rubber mounts
AM	Anti-vibration spring mounts
FY	Y-strainer
Hi-TV415	Touch screen display
i-CR	Remote control
ISK	Serial converter USB/RS485 (ISK)
RV	Starting kit made by 2 grooved couplers and 2 straight starting pipes
SAS	Remote probe

Standard

Remote probe enabling

Enable 2nd set point

Versioni

HWA1-A/H Standard version chiller

You can choose an acoustic configuration from the following:

/SL	Silenced version
/SSL	Super silenced version
/C	Ductable version

There are different types of hydronic kits to be combined with the reversible heat pump: with single/double pump standard/ high pressure, with or without tank:

/PS	Standard pressure pump
/PSAP	High pressure pump
/PD	Double standard pressure pump
/PDAP	High pressure double pump
/PS/SI	Standard pressure pump + tank
/PSAP/SI	High pressure pump + tank
/PD/SI	Double standard pressure pump + tank
/PDAP/SI	Double high pressure pump + tank

Compressor
Hermetic scroll complete with internal thermal protection. The compressor is isolated from the structure by interposition of special rubber mountings. The mobile spiral is driven by an electric motor 2-pole (2900 rpm) cooled by the inlet refrigerant, the starter is directed. All compressors have full charge of oil polyester, suitable for use with refrigerant R410A. An electrical heater, located on the crankcase, is automatically activated when the unit is switch off in order to prevent the mixing of oil in the refrigerant. The control of cooling power is achieved through steps of parzialization in number equal to the number of compressors installed. When connecting in tandem there is an oil equalizing line with a level indicator.

User (side) heat exchanger
AISI 304 steel braze-welded plate exchanger, insulated with Black closed-cell flexible elastomeric foam (FEF) coupled with a 3 mm layer of reticulated foam in PE and an exterior embossed finishing PE film in aluminium in colour; total thickness 6+3 mm, thermal conductivity (λ) ≤ 0,034 W/m·K.
A differential pressure switch, mounted on the water side, safeguard the flow rate and prevent ice from forming inside the evaporator.
Maximum operating pressure exchanger: 15 bar on the water side and 45 bar on the refrigerant side.

Carpentry
Suitable for outdoor installation, consisting of thick profiles in hot galvanized steel sheet or painted with RAL 7035 polyester powder resistant to atmospheric agents.

Source (side) heat exchanger air
Finned exchanger, made from copper pipes arranged in staggered rows and mechanically expanded for better adherence to the collar of the fins. The fins are made of aluminium with a special corrugated surface, set a suitable distance apart to ensure maximum heat exchange efficiency. A proper liquid supply of the expansion valve is ensured by the subcooling circuit. Each finned heat exchanger is directly cooled by the air flow of its specific fans.

Fan section
Ventilation system composed of axial fans with 800mm diameter, with IP54 protection degree, with external rotor, with high aerodynamic efficiency aluminum blades with winglet profile (possibly covered with plastic material), housed in aerodynamic profile mouthpieces, complete with safety protection net. Brushless electric motor with electronic switching and built-in thermal protection. Continuous regulation of the fan rotation speed.

Refrigerant circuit
One or two independent refrigeration circuits made of copper, brazed and factory-assembled, complete with:

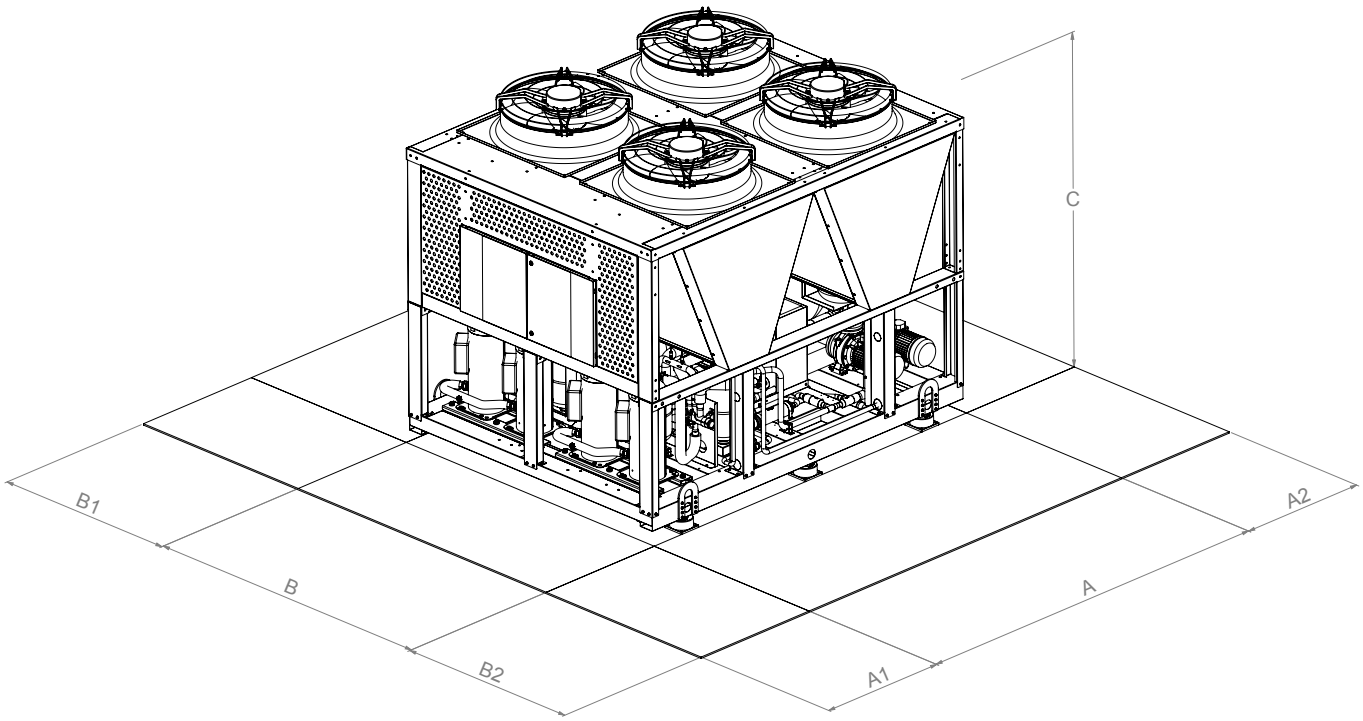
- Anti-acid dehydrator filter with solid cartridge;
- Liquid flow and moisture indicator;
- Low and high pressure transducer;
- Electronic expansion valve;
- Check valves;
- 4-Way reversing valve;
- Liquid receiver;
- Suction separator;
- Low and high pressure safety pressure switch;
- Low and high pressure safety valve;
- Shut-off valve on liquid line;
- Service valves

Electrical panel
- It is completely manufactured and wired in accordance with EN 60204.
- The power supply section includes:
- General door lock switch, with bars for main power supply (400Vac/3ph+PE/50Hz);
- Isolating transformer for the auxiliary power supply circuit (400Vac/230Vac-12Vac);
- Compressor and fan protection fuses;
- Power supply contactor with thermal protection for compressor control;
- Phase control relay with minimum / maximum voltage intervention calibration
- Thermostated ventilation inside the electrical panel

The control section includes:
- Interface terminal with alphanumeric display;
- Displaying function of setting values, of analog inputs, error codes, alarm history and parameter index;
- Water side protection of antifreeze pump (if present and on heat pump models);
- Keys for on/off switching and reset of alarms;
- Keys combination to constrain the defrosting process and constraining the pump at maximum rpm (if present);
- Remote/Local power on/off management of the unit;
- Digital input for the machine power ON/OFF;
- Analog input for enabling remote plant temperature sensor;
- Digital input for double set point enablement;
- Digital input for Summer/Winter mode activation (heat pump only);
- BMS connectivity predisposition (Modbus / Bacnet / Knx / Lonworks)
- Thermoregulation and timing of the compressors;
- Fan motors speed regulation in evaporation/condensation;
- Dynamic set point management.

HWA1-A/H		02109	02121	02142	02148	02160	04176	04199	04215	04237	04273	04304	04345
Cooling													
Cooling capacity (1)	kW	103	113	132	138	148	165	187	208	225	260	289	325
Power input (1)	kW	33,8	38,9	41,3	44,4	49,8	52,6	59,4	67,2	77,5	80,6	92,9	112
EER (1)	W/W	3,05	2,90	3,19	3,11	2,97	3,14	3,15	3,10	2,90	3,22	3,10	2,90
Cooling capacity (2)	kW	139	151	177	188	202	224	252	282	301	351	388	434
Power input (2)	kW	36,5	42,7	44,1	47,7	53,0	55,7	63,8	71,6	83,2	87,0	101	122
EER (2)	W/W	3,81	3,53	4,01	3,94	3,82	4,01	3,95	3,94	3,62	4,04	3,86	3,56
SEER (5)	W/W	4,35	4,36	4,38	4,73	4,50	4,61	4,64	4,71	4,53	4,65	4,73	4,42
Water flow (1)	L/s	4,9	5,4	6,3	6,6	7,1	7,9	8,9	10,0	10,8	12,4	13,8	15,5
Pressure drop (1)	kPa	21,7	20,1	26,5	24,3	20,2	21,7	26,5	24,7	27,2	18,8	24,9	17,9
Heating													
Heating capacity (3)	kW	113	125	148	154	166	188	207	223	246	286	316	356
Power input (3)	kW	27,6	30,9	36,6	37,7	41,4	46,0	50,7	54,8	61,1	69,2	78,3	88,5
COP (3)	W/W	4,09	4,05	4,04	4,08	4,01	4,08	4,09	4,07	4,02	4,13	4,04	4,02
Heating capacity (4)	kW	108	120	142	148	160	179	198	214	237	273	303	344
Power input (4)	kW	32,9	37,5	43,9	45,3	49,4	55,9	61,5	66,0	74,0	83,8	94,7	108
COP (4)	W/W	3,30	3,20	3,22	3,26	3,23	3,21	3,22	3,24	3,20	3,26	3,20	3,20
SCOP (6)	W/W	3,72	3,77	3,62	3,69	3,68	3,90	3,84	3,96	4,00	3,92	3,95	4,01
Water flow (4)	l/s	5,2	5,8	6,8	7,0	7,7	8,6	9,5	10,3	11,4	13,1	14,6	16,6
Use side heat exchanger load losses (4)	kPa	24,2	22,9	30,6	28,4	24,0	26,6	31,9	27,6	30,5	22,9	29,1	22,3
Energy efficiency (Water 35°C-55°C)		A+/A+	A+/A+	A+/A+	A+/A+	A+/A+	A++/A+	A++/A+	A++/A+	A++/A+	A++/A+	A++/A+	A++/A+
Compressor													
Type		Scroll											
Compressors	n°	2	2	2	2	2	4	4	4	4	4	4	4
Refrigerant circuits	n°	1	1	1	1	1	2	2	2	2	2	2	2
Refrigerant charge-Circuit 1 (7)	kg	26,5	27,0	34,5	42,0	40,0	22,0	18,0	25,5	28,5	43,0	47,0	50,0
Refrigerant charge-Circuit 2 (7)	kg	-	-	-	-	-	22,0	18,0	24,0	28,5	36,0	34,0	30,0
Fans													
Nominal air flow	l/s	10021	9984	15109	15088	15045	20954	20888	20815	20738	31370	31264	31109
Fan numbers	n°	2	2	3	3	3	4	4	4	4	6	6	6
Hydraulic circuit													
Max pressure hydronic kit	bar	6	6	6	6	6	6	6	6	6	6	6	6
Min. water volume (8)	L	490	630	630	820	820	480	610	610	780	1.020	1.020	1.290
Tank volume	L	390	390	705	705	705	520	520	520	520	705	705	705
Sound level													
Sound power (9)	dB(A)	88 std/ 87 SL/ 84 SSL	88 std/ 87 SL/ 84 SSL	88 std/ 87 SL/ 84 SSL	88 std/ 87 SL/ 84 SSL	88 std/ 87 SL/ 84 SSL	89 std/ 88 SL/ 85 SSL	89 std/ 88 SL/ 85 SSL	89 std/ 88 SL/ 85 SSL	90 std/ 89 SL/ 86 SSL	90 std/ 89 SL/ 86 SSL	91 std/ 90 SL/ 87 SSL	92 std/ 91 SL/ 88 SSL
Sound pressure (10)	dB(A)	56 std/ 55 SL/ 52 SSL	56 std/ 55 SL/ 52 SSL	55,9 std/ 54,9 SL/ 51,9 SSL	55,9 std/ 54,9 SL/ 51,9 SSL	55,9 std/ 54,9 SL/ 51,9 SSL	56,9 std/ 55,9 SL/ 52,9 SSL	56,9 std/ 55,9 SL/ 52,9 SSL	56,9 std/ 55,9 SL/ 52,9 SSL	57,9 std/ 56,9 SL/ 53,9 SSL	57,8 std/ 56,9 SL/ 53,9 SSL	58,8 std/ 57,8 SL/ 54,8 SSL	59,8 std/ 58,8 SL/ 55,8 SSL
Electrical data													
Power supply		400Vac/3P+PE/50Hz											
Max. power input	kW	48,9	55,0	63,1	66,9	73,0	87,9	92,8	97,8	110,0	123,8	139,8	160,1
Max. current input	A	83,0	93,4	107,1	113,5	123,9	149,2	157,6	166,0	186,8	210,2	237,4	271,8
Weight													
Gross weight (11)	kg	1.180	1.210	1.470	1.530	1.530	2.030	2.060	2.100	2.130	2.680	2.880	2.900
Operation weight (11)	kg	1.190	1.220	1.480	1.540	1.540	2.040	2.070	2.110	2.140	2.700	2.900	2.930

Data referred to the following condition:
(1) Cooling: outdoor air temperature 35°C; water temperature inlet/outlet 12/7°C.
(2) Cooling: outdoor air temperature 35°C; water temperature inlet/outlet 23/18°C.
(3) Heating: outdoor air temperature 7°C d.b. 6°C w.b.; water temperature inlet/outlet 30/35°C.
(4) Heating: outdoor air temperature 7°C d.b. 6°C w.b.; water temperature inlet/outlet 40/45°C.
(5) Internal exchanger water reference temperature = 12/7 ° C.
(6) Indicative data and subject to change. For the correct data, always refer to the technical label on the unit.
(7) The calculated value of minimum volume of water at the plant does not consider the volume of water contained in the internal exchanger (evaporator). With low external air temperature applications or low average loads required, the minimum volume of water to the system is obtained by doubling the indicated value.
(8) Condition (1); value determined on the basis of measurements carried out in accordance with the UNI EN ISO 9614-2 standard, in compliance with the requirements of the Eurovent certification.
(9) Value calculated from the sound power level using ISO 3744: 2010, referred to 10 m distance from the unit.
(10) Cooling version BT: outdoor air temperature 35 ° C, internal exchanger water temperature = -3 / -8 ° C. Fluid treated with 35% ethylene glycol.
(11) Weight referred to the standard version without hydronic kit and possible accessories.
N.B. The performance data are indicative and could be subject to change. In addition, the performances declared in apex (1), (2), and (8) refer to the instantaneous power according to EN 14511. The declared data stated in the apex (6) is determined according to the UNI EN 14825.



Model	Size			Clearance recommended access				Heat exchanger	
	A [mm]	B [mm]	C [mm]	A1[mm]	A2 [mm]	B1 [mm]	B2 [mm]	Type	Ø
02109	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02121	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02142	4060	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02148	4060	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02160	4060	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
04176	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04199	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04215	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04237	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04273	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04304	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04345	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")

* Depends on the hydronic version - check the technical bulletin

HWA-A 08365÷12599*
HWA-A 12667÷121031

Air-Cooled liquid chiller for outdoor installation

367 kW÷1035 kW

The new multi-compressors chiller line doesn't need any water tank thanks to the partialisation from 6 to 10 steps.

The management software manages the compressors working cycle according to the load requirements and let them start alternatively to guarantee an equal number of working hours.

(*) Eurovent certified product range

Technical Features

- Compressors. Scroll with oil sight glass. They are fitted with internal overheat protection and crankcase heater if needed, installed on rubber shock absorbers.
- Fans. EC axial fans directly coupled to the motor. A safety fan guard is fitted on the air flow discharge.
- Condenser. Two copper tube and aluminium finned coils.
- Evaporator. In AISI 316 stainless steel braze welded plates type with two independent circuits on the arefrigerant side and one on the water side.
- Managing system and microprocessor regulation.
- Water circuit.Includes: evaporator, temperature sensor, antifreeze sensor, differential water pressure switch and manual air vent.

Fitted accessories

BT	Low water temperature device
CC	Condensation control up to -20 °C
CT	Condensation control up to 0 °C
DS	Desuperheater
EC	EC inverter fans
ECH	High external static pressure EC inverter fan
FE	Antifreeze heater for evaporator
IM	Magnetothermic switches
IS	RS 485 serial interface
PD	Double circulating pump
PDI	Inverter double circulating pump
PS	Circulating pump
PSI	Inverter single circulating pump
RFL	Cooling circuit shut-off valve on liquid line
RFM	Cooling circuit shut-off valve on discharge line
RT	Total heat recovery
SI	Inertial tank
SL	Silenced version
SS	Soft start
TX	Coil with pre-coated fins

Loose accessories

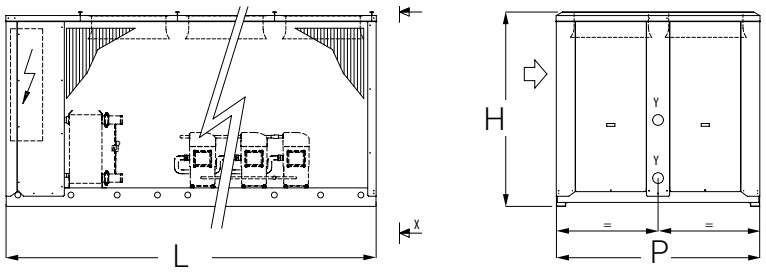
AG	Rubber vibration dampers
AM	Spring shock absorbers
CR	Remote control panel
MN	High and low pressure gauges
RP	Coil protection guards

Customizations

GL	Packing in wooden crate for special transport

Versions

HWA-A	Cooling only
HWA-A/SSL	Super silenced cooling only



	HWA-A		08365	10402	10442	12493	12544	12599	12667	12749	12833	12924	121031
L	STD	mm	4.000	4.000	5.000	5.000	5.000	5.000	5.000	6.200	6.200	7.200	7.200
	SSL	mm	4.000	4.000	5.000	5.000	5.000	5.000	6.200	7.200	7.200	--	--
P	STD	mm	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200
	SSL	mm	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	--	--
H	STD	mm	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100
	SSL	mm	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	--	--

HWA-A 08365÷12599 *		08365	10402	10442	12493	12544	12599
(1) Cooling capacity	kW	366,5	402,6	443,5	494,5	545,4	601,4
(1) Power input	kW	123,0	132,9	156,2	171,1	185,5	212,5
(1) EER	W/W	2,98	3,03	2,84	2,89	2,94	2,83
(2) SEER	W/W	4,34	4,55	4,56	4,55	4,55	4,55
Compressors	n.	4+4	5+5	5+5	6+6	6+6	6+6
Refrigerant circuits	n.	2	2	2	2	2	2
Capacity steps	n.	8	8	8	10	10	10
Water flow	l/s	17,53	19,25	21,21	23,65	26,09	28,76
Pressure drop	kPa	59	47	59	49	60	58
EC Inverter Fans	n.	4	6	6	6	6	8
Air flow	m³/s	23,3	23,3	25,3	30,7	30,7	30,7
Power input	kW	7,6	7,6	7,6	10,2	10,2	10,2
Power supply	V~/Ph/Hz	400/3/50					
Max Running current	A	250	274	316	350	375	422
Max inrush current	A	418	407	384	518	543	600
(3) Sound pressure STD	dB(A)	73	73	72	73	75	76
(3) Sound pressure SL	dB(A)	69	70	69	70	72	73
(3) Sound pressure SSL	dB(A)	67	66	66	67	69	70
Pump head	kPa	145	140	110	165	145	135
Water connections	DN	80	80	80	80	80	80
Water connections pump unit	DN	100	100	100	100	100	150
STD HWA-A							
(4) Transport weight	kg	2566	2610	3179	3294	3463	3517
(4) Operation weight	kg	2590	2640	3210	3330	3500	3560

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C - EN14511
(2) Seasonal low temperature cooling energy efficiency
* Eurovent certified product range

(3) Sound pressure level measured in free field conditions at 1 m from the unit (Q=2) according to ISO 3744

HWA-A 12667÷121031		12667	12749	12833	12924	121031
(1) Cooling capacity	kW	671	751	845	942	1.051
(1) Power input	kW	243	275	303	336	365
(1A) Cooling capacity	kW	669	749	842	939	1.047
(1A) Power input	kW	246	277	306	339	369
(1A) EER	W/W	2,72	2,70	2,75	2,77	2,84
Compressors	n.	6+6	6+6	6+6	6+6	6+6
Refrigerant circuits	n.	2	2	2	2	2
Capacity steps	n.	10	10	10	10	10
Water flow	l/s	32,0	35,9	40,3	44,3	49,5
Pressure drop	kPa	49	41	51	42	52
Water connections	inch	6"	6"	6"	6"	6"
STD - STD/SL						
Fans	n.	8	10	10	12	12
Air flow	m³/s	38,6	47,8	47,8	57,2	57,2
Power input	kW	16	20	20	24	24
SSL						
Fans	n.	8	12	12	--	--
Air flow	m³/s	32,8	46,1	46,1	--	--
Power input	kW	10,2	15,2	15,2	--	--
Power supply	V~/Ph/Hz			400/3/50		
Max Running current	A	528	602	667	718	761
Max inrush current	A	702	810	875	979	1022
(3) Sound pressure						
STD	dB(A)	73,5	73,5	73,5	73,5	74,5
STD/SL	dB(A)	70,5	70,5	70,5	70,5	71,5
SSL	dB(A)	65,5	64,5	65,5	--	--
Pump power	kW	5,5	11	11	11	11
Pump head	kPa	161	212	183	171	131
Expansion vessel	l	18	18	18	18	18
Water connections	DN	150	150	150	150	150
STD HWA-A						
(4) Transport weight	kg	3682	4200	4518	4918	5044
(4) Operation weight	kg	3730	4260	4580	5238	5354

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C
(1A) Chilled water from 12 to 7 °C, ambient air temperature 35 °C - EN14511

(3) Sound pressure level measured in free field conditions at 1 m from the unit (Q=2) according to ISO 3744

HWA-A/H 08365÷12599*
HWA-A/H 12667÷121031

Air-Cooled reversible heat pump for outdoor installation

367 kW÷1035 kW

The new multi-compressors chiller line doesn't need any water tank thanks to the partialisation from 6 to 10 steps.

The management software manages the compressors working cycle according to the load requirements and let them start alternatively to guarantee an equal number of working hours.

(*) Eurovent certified product range

Technical Features

- Compressors. Scroll with oil sight glass. They are fitted with internal overheat protection and crankcase heater if needed, installed on rubber shock absorbers.
- Fans. Axial fans directly coupled to a three-phase electric motor with external rotor. A safety fan guard is fitted on the air flow discharge.
- Condenser. Two copper tube and aluminium finned coils.
- Evaporator. In AISI 316 stainless steel braze welded plates type with two independent circuits on the arefrigerant side and one on the water side.
- Antifreeze electrical heater factory mounted
- Managing system and microprocessor regulation.
- Water circuit.Includes: evaporator, temperature sensor, antifreeze sensor, differential water pressure switch and manual air vent.

Fitted accessories

BT	Low water temperature device
CC	Condensation control up to -20 °C
CT	Condensation control up to 0 °C
DS	Desuperheater
EC	EC inverter fans
ECH	High external static pressure EC inverter fan
FE	Antifreeze heater for evaporator
IM	Magnetothermic switches
IS	RS 485 serial interface
PD	Double circulating pump
PDI	Inverter double circulating pump
PS	Circulating pump
PSI	Inverter single circulating pump
RFL	Cooling circuit shut-off valve on liquid line
RFM	Cooling circuit shut-off valve on discharge line
RT	Total heat recovery
SI	Inertial tank
SL	Silenced version
SS	Soft start
TX	Coil with pre-coated fins

Loose accessories

AG	Rubber vibration dampers
AM	Spring shock absorbers
CR	Remote control panel
MN	High and low pressure gauges
RP	Coil protection guards

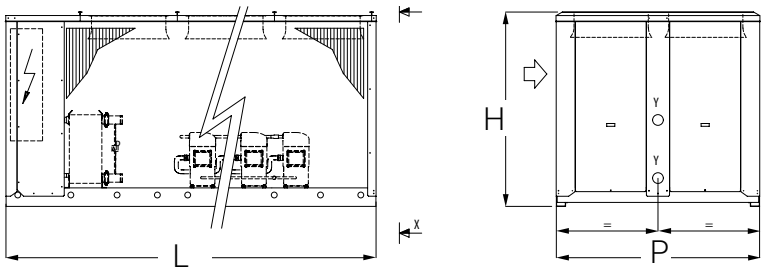
Customizations

GL	Packing in wooden crate for special transport

Versions

HWA-A/H Cooling only

HWA-A/H/SSL Super silenced cooling only



HWA-A/H			08365	10402	10442	12493	12544	12599	12667	12749	12833	12924	121031
L	STD	mm	4.000	4.000	5.000	5.000	5.000	5.000	5.000	6.200	6.200	7.200	7.200
	SSL	mm	4.000	4.000	5.000	5.000	5.000	5.000	6.200	7.200	7.200	--	--
P	STD	mm	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200
	SSL	mm	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	--	--
H	STD	mm	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100
	SSL	mm	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	--	--

HWA-A/H 08365÷12599 *		08365	10402	10442	12493	12544	12599
(1) Cooling capacity	kW	366,5	402,6	443,5	494,5	545,4	601,4
(1) Power input	kW	123,8	133,8	157,3	171,7	186,1	213,3
(1) EER	W/W	2,96	3,01	2,83	2,88	2,93	2,82
(2) SEER	W/W	4,01	4,08	4,14	4,14	4,20	4,24
(2) Heating capacity	kW	401,6	441,6	510,7	564,7	620,8	684,8
(2) Power input	kW	134,8	143,4	166,9	185,2	205,6	227,5
(2) COP	W/W	2,98	3,08	3,06	3,05	3,02	3,01
(5) SCOP	W/W	3,22	3,21	3,22	3,19	3,19	3,19
Compressors	n.	4+4	5+5	5+5	6+6	6+6	6+6
Refrigerant circuits	n.	2	2	2	2	2	2
Capacity steps	n.	8	8	8	10	10	10
Water flow	l/s	16,2	17,15	20,11	22,69	24,46	28,52
(1) Pressure drop	kPa	59	47	59	49	60	58
(2) Pressure drop	kPa	84,5	65,8	85	70,6	86,1	90,3
EC Inverter Fans	n.	4	6	6	6	6	8
Air flow	m³/s	23,3	23,3	25,3	30,7	30,7	30,7
Power supply	V~/Ph/Hz	400/3/50					
Max Running current	A	265	284	336	367	398	458
Max inrush current	A	394	416	465	496	527	632
Pump head	kPa	201	194	155	191	173	166
Water connections	DN	80	80	80	80	80	80
Water connections pump unit	DN	100	100	100	100	100	150
HWA-A STD - *STD HWA-A*							
(4) Transport weight	kg	2566	2610	3179	3294	3463	3517
(4) Operation weight	kg	2590	2640	3210	3330	3500	3560

(1) Acqua refrigerata da 12 a 7 °C, temp. aria esterna 35 °C - EN14511
(2) Acqua riscaldata da 40 a 45 °C, temp. aria esterna 7 °C b.s. / 6 °C b.u. - EN14511
(4) Temp. acqua scambiatore interno = 40/45°C, temp. aria entrante allo scambiatore esterno = 7°C D.B./6°C W.B.
(5) Condizioni climatiche medie; Tbiv=-7°C, temp. acqua scambiatore interno = 30/35°C.
(*) Gamma prodotti certificati Eurovent

HWA-A/H 12667÷121031		12667	12749	12833	12924	121031
(1) Cooling capacity	kW	671	751	845	942	1.051
(1) Power input	kW	243	275	303	336	365
(1A) Cooling capacity	kW	669	749	842	939	1.047
(1A) Power input	kW	246	277	306	339	369
(1A) EER	W/W	2,72	2,70	2,75	2,77	2,84
(2) Heating capacity	kW	776	861	962	1.078	1.210
(2) Power input	kW	249	282	312	349	383
(2A) Heating capacity	kW	777	862	963	1.079	1.211
(2A) Power input	kW	250	283	313	350	384
(2A) COP	W/W	3,11	3,05	3,08	3,08	3,15
Compressors	n.	6+6	6+6	6+6	6+6	6+6
Refrigerant circuits	n.	2	2	2	2	2
Capacity steps	n.	10	10	10	10	10
Water flow	l/s	32,0	35,9	40,3	44,3	49,5
Pressure drop	kPa	49	41	51	42	52
Water connections	inch	6"	6"	6"	6"	6"
STD - STD/SL						
Fans	n.	8	10	10	12	12
Air flow	m³/s	38,6	47,8	47,8	57,2	57,2
Power input	kW	16	20	20	24	24
SSL						
Fans	n.	8	12	12	--	--
Air flow	m³/s	32,8	46,1	46,1	--	--
Power input	kW	10,2	15,2	15,2	--	--
Power supply	V~/Ph/Hz			400/3/50		
Max Running current	A	528	602	667	718	761
Max inrush current	A	702	810	875	979	1022
Pump power	kW	5,5	11	11	11	11
Pump head	kPa	161	212	183	171	131
Expansion vessel	l	18	18	18	18	18
Water connections	DN	150	150	150	150	150
HWA-A STD - *STD HWA-A*						
(4) Transport weight	kg	3682	4200	4518	4918	5044
(4) Operation weight	kg	3730	4260	4580	5238	5354

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C
(1A) Chilled water from 12 to 7 °C, ambient air temperature 35 °C - EN14511
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(2A) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. - EN14511
(3) Sound pressure level measured in free field conditions at 1 m from the unit (Q=2) according to ISO 3744

Airmust

Wire controller & thermostat

Remote control with thermostat function for VE, HCN, HCNA, and GrimperFan (all models) Fan-Coil units, in 3V versions for units with AC motor at different speeds and 010 for units in MB version (with brushless motor).

Airmust 3V A1 / 010 - A1

Touch screen control for wall installation

- Color touch screen 3.5" TFT
- Power supply 230V
- European standard mounting
- 3-speed version (3V) fan coils or 0-10V version (010)
- 2 pipes and 4 pipes systems
- Dry input for window contact / water temperature probe inlet
- Automatic brightness
- Room temperature probe
- Relative humidity probe
- Temperature and humidity history display
- Working mode management
- Automatic change from summer to winter
- Automatic time change management (daylight saving)
- Multilanguage
- Weekly schedule
- 2.4G Wi-Fi
- Mobile phone APP available on Android and iOS stores
- Modbus

Airmust BMCP

Touch screen control for on-board mounting
(VSL model only) or wall mounted (all models)

- LCD display with five function keys
- Power supply 230V
- Wall mounting (on board mountaing VSL only)
- For 3 speed fan coils
- 2 pipes and 4 pipes systems
- Dry input for window contact
- Water temperature probe input (probe included)
- Room temperature sensor
- Working mode management
- Automatic change from summer to winter
- Weekly schedule
- Modbus

Airmust BM

Touch screen control for wall installation

- LCD display with four function keys
- Power supply 230V
- Wall mounting
- For 3-speed fan coils with or without valve
- Room temperature probe
- Working mode management
- Weekly schedule
- 2.4G Wi-Fi
- Mobile phone APP available on Android and iOS stores
- Modbus

Grimper Fan

Ultra flat fan coil

0,9 kW÷3,4 kW

The Grimper range in all its models holds the record of being the thinnest design fan coil on the market, with its 12 cm is 10% thinner than its competitors in the slim segment.

One feature that distinguishes the range is the absence of front intake grilles, thanks to the innovative ventilation system that improves battery performance working at negative pressure. The absence of front grilles also allows you to install Grimper Fan in a versatile way even in the most confined spaces.

DC Inverter technology: maximum silence.
Optional on-board machine control.

Heating

Cooling

Dehumidification

Left or right hydraulic connections always available without extra work

Wi-fi controls for easy management by smartphone

Low energy consumption

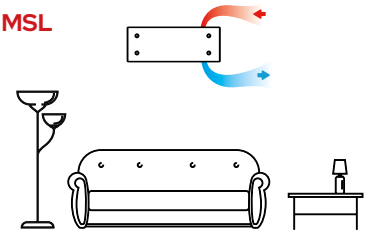
Accessories

2V2BSL	Straight 2-way valve kit with micro for BSL
2V2MSL	Straight 2-way valve kit with micro for MSL 12-17
2V2MSL	Straight 2-way valve kit with micro for MSL 25
2V2VSL	Straight 2-way valve kit with micro for VSL 09-27
2V2VSL34	Straight 2-way valve kit with micro for VSL 34
3V2BSL	3-way by-pass valve kit with micro 2 pipes for BSL
3V2MSL	3-way by-pass valve kit with micro 2 pipes for MSL 12-17
3V2MSL	3-way by-pass valve kit 2 pipes with micro for MSL 25
3V2VSL	3-way by-pass valve kit 2 pipes with micro for VSL 09-27
3V4VSL	3-way by-pass valve kit 4 pipes with micro for VSL
3V2VSL34	3-way by-pass valve kit with micro 2 pipes for VSL 34
AIRMUST-BM	On-board machine control (VSL only) or wall-mounted control with Wi-Fi and Modbus.
PEP09	Rear aesthetic panel VSL 09
PEP18	Rear aesthetic panel VSL 18
PEP27	Rear aesthetic panel VSL 27
PEP34	PRear aesthetic panel VSL 34
P-VSL	VSL ground fixing feet
STSL	Minimum water temperature probe
VASL09	Tray for horizontal installation VSL 09
VASL18	Tray for horizontal installation VSL 18
VASL27	Tray for horizontal installation VSL 27
VASL34	Tray for horizontal installation VSL 34

Versions

MSL	Hydronic fan coil for high wall installation
VSL	Hydronic fan coil for floor standing or ceiling installation
BSL	Hydronic fan coil for bathrooms and and behing the doors

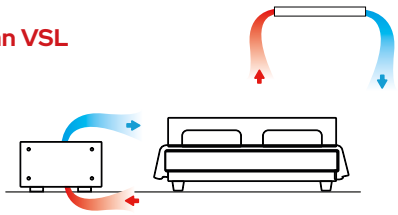
Grimper Fan MSL



- **High wall installation**
- Super thin thickness, only 12 cm
- Minimum noise level below the threshold of the audible, 20 dB(A)
- DC Inverter technology
- Low power consumption, only 4 Watts
- Modern design
- Front panel in tempered glass crystal
- Pleated stainless steel filters of unlimited duration
- Tangential aluminum fan for greater efficiency
- Standard remote control or wired remote control
- Digital indicator of the room temperature

MSL		12	17	25
Total cooling capacity	kW	1,20	1,70	2,45
Total heating capacity main exchanger	kW	1,68	2,45	3,30
Air flow rate (min-max)	m³/h	155-315	240-450	310-540
Electric power absorption (min-max)	W	4-11	5-14	8-17
Minimum sound pressure (SPL)	dB(A)	23,0	23,4	25,0
Width	mm	873	1065	1257
Height	mm	383	383	383
Depth	mm	122	122	122
Weight	kg	16	17	20
DC Inverter motor low power		si	si	si
Tangential aluminum fan		si	si	si
Remote control		si	si	si
LCD display		si	si	si
Pleated stainless steel filter		si	si	si
Front panel in tempered glass		si	si	si
Machine frame in powder-coated steel		si	si	si
Supply voltage	V-Hz	220-50	220-50	220-50

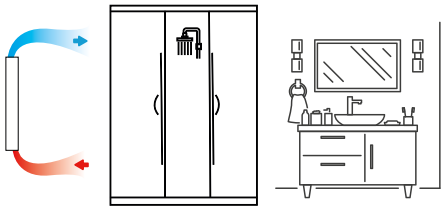
Grimper Fan VSL



- **Floor standing or ceiling installation**
- Super thin thickness, only 12 cm
- Minimum noise level below the threshold of the audible, 20 dB (A)
- DC Inverter technology
- Low power consumption, only 4 Watts
- Modern design
- Front panel in tempered glass crystal
- Double facade, front and rear, on request
- Pleated stainless steel filters of unlimited duration
- Tangential aluminum fan for greater efficiency
- Control built-in or with remote wall panel
- Left or right hydraulic connections always available without extra work

VSL		09	18	27	34
Total cooling capacity	kW	0,88	1,81	2,7	3,38
Total heating capacity main exchanger	kW	1,10	2,40	3,20	4,23
Air flow rate (min-max)	m³/h	80-180	155-315	240-450	310-540
Electric power absorption (min-max)	W	3-12	4-13	5-14	8-17
Minimum sound pressure (SPL)	dB(A)	20,5	21,6	23,5	21,7
Width	mm	681	873	1065	1257
Height*	mm	553	553	553	553
Depth	mm	122	122	122	122
Weight	kg	18	21	24	27
DC Inverter motor low power		si	si	si	si
Tangential aluminum fan		si	si	si	si
Remote control		no	no	no	no
LCD display		no	no	no	no
Pleated stainless steel filter		si	si	si	si
Front panel in tempered glass		si	si	si	si
Machine frame in powder-coated steel		si	si	si	si
Supply voltage	V-Hz	220-50	220-50	220-50	220-50

Grimper Fan BSL



- **Floor standing installation with or without feet**
- Super thin thickness, only 12 cm
- Minimum noise level below the threshold of the audible, 20 dB (A)
- DC Inverter technology
- Low power consumption, only 4 Watts
- Modern design
- Front panel in tempered glass crystal
- Radiant panel of 200Watt as standard
- Pleated stainless steel filters of unlimited duration
- Tangential aluminum fan for greater efficiency
- Infrared remote controller

BSL		12
Total cooling capacity	kW	1,20
Total heating capacity main exchanger	kW	1,45
Air flow rate (min-max)	m³/h	120-225
Electric power absorption (min-max)	watt	4-11
Minimum sound pressure (SPL)	dB(A)	19,1
Width	mm	565
Height	mm	1100
Depth	mm	122
Weight	kg	18
DC Inverter motor low power		si
Tangential aluminum fan		si
Remote control		si
LCD display		si
Pleated stainless steel filter		si
Front panel in tempered glass		si
Unit frame in powder-coated steel		si
Supply voltage	V-Hz	220-50

Cooling test conditions: Room:27° C – 47% R.H. Water temp. (in/out):7/12°C - Heating test conditions: Room:20° C. Water temp. in:50. same water flow conditioning
*Height without aesthetic feet

VE & VE/MB

Fan coil with AC asynchronous or Brushless DC motor

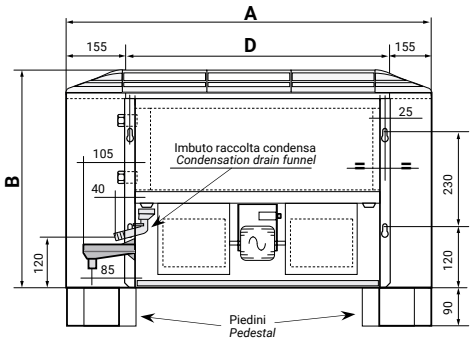
1,4 kW÷10,7 kW

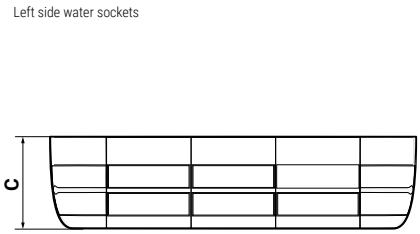
Fancoil Brushless (only MB version)

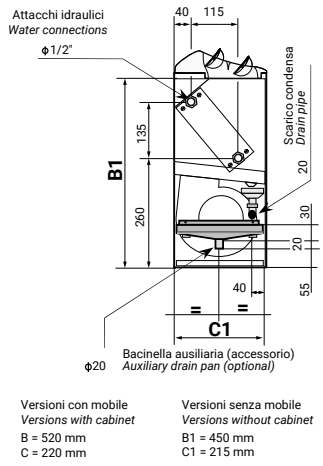
- Modulating ventilation 0-100%
- Super quiet operation
- Highest well-being: the continuous variation 0-100% of the air flow (by means of the signal 0...10Vdc) is reflected in the modulation of the heating and cooling power by their instantaneous adaptation, to the actual needs of the room that to be conditioned and ensuring reduced fluctuations temperature, humidity and quiet noise.

Building Features

- Structure galvanized sheet with prepainted covering shell (in VMI-VMF-OMP-OMI models) and ABS details, complete with heat/sound insulation
- Regenerating filter and natural discharge moisture tray.
- Centrifugal 6-speed fans type, with 3 speeds connected in the standard configuration.
- Heat exchanger in copper tubes and alluminium fins with hydrophilic surface treatment to rapid draining of moisture.
- It's recommended to use the kit valves for each type of system.







Dimensions - With cabinet

VE		13	23	33	43	53	63	73	83	93	103	93P	103P	113P	123P
A*	mm	670	670	870	870	1.070	1.070	1.270	1.270	1.470	1.470	1.470	1.470	1.670	1.670
B	mm	520	520	520	520	520	520	520	520	520	520	520	520	520	520
C	mm	220	220	220	220	220	220	220	220	220	220	220	220	220	220
Weight	kg	15	15,5	18,5	19	25	26	29	30	34	35	35	36	39	42

* In horizontal versions the width A is larger than 120 mm

Dimensions - Naked Version

VE		13	23	33	43	53	63	73	83	93	103	93P	103P	113P	123P
D*	mm	425	425	625	625	825	825	1.025	1.025	1.225	1.225	1.225	1.225	1.425	1.425
E	mm	450	450	450	450	450	450	450	450	450	450	450	450	450	450
F	mm	215	215	215	215	215	215	215	215	215	215	215	215	215	215
Eeight	kg	11	11,6	14	15	20	21	23,5	25	27,5	29	28,5	30	31	35

* in horizontal versions the width A is larger than 120 mm

Versions

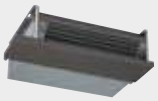
VMI	Vertical units with bottom inlet
VMF	Vertical units with front inlet
OMP	Horizontal units with rear inlet
OMI	Horizontal units with bottom inlet
VII	Fitted vertical units, bottom inlet
VIF	Fitted vertical units, front inlet
OIP	Fitted horizontal units, rear inlet
OII	Fitted horizontal units, bottom inlet
VIP	Fitted vertical units whit P1 panel
VIP2	Fitted vertical units whit P2 panel
ONP	Horizontal vertical units whit panel

Versions

VMI Vertical terminal with cabinet, bottom air intake

OMP Horizontal terminal with cabinet, rear air intake

VII Vertical naked terminal, bottom air intake



OIP Horizontal naked terminal, rear air intake

VMF Vertical terminal with cabinet, frontal air intake

VIF Vertical naked terminal, front air intake

OMI Horizontal terminal with cabinet, bottom air intake

OII Horizontal naked terminal, bottom air intake

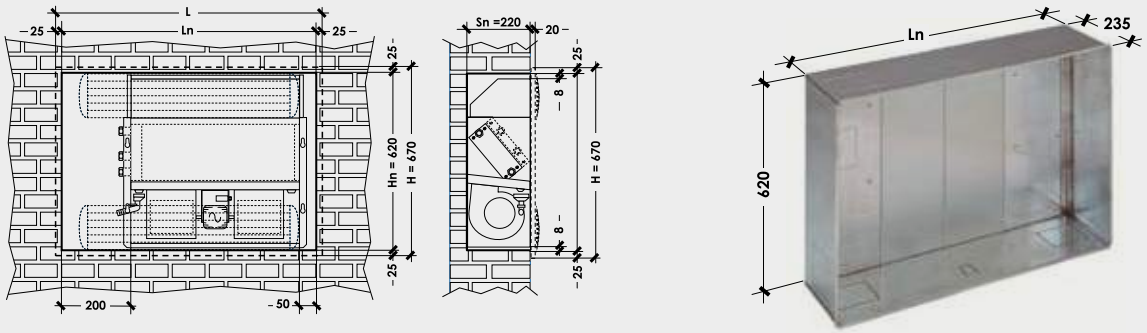
VIP

Vertical built-in terminal with panel (included VE/VIF, FTI, PMI, MOR, P1)

ONP

Horizontal built-in with panel (included VE/OII, PMI, MOR, P1)

FTI



Dimensions		13/23	33/43	53/63	73/83	93/103P	113/123P
Ln	mm	650	850	1.050	1.250	1.450	1.650
L	mm	700	900	1.100	1.300	1.500	1.700

Mammoth type terminal board (included on the on board controller CVA-CVB-CVC-CBB-CVD1) In other cases must be ordered as an accessory.

3 ROWS															
VE		**13**	**23**	**33**	**43**	**53**	**63**	**73**	**83**	**93**	**103**	**93P**	**103P**	**113P**	**123P**
Cooling cap. (1) (*)	W	1.579	2.105	2.663	3.179	3.947	4.474	5.811	6.758	7.926	9.495	9.568	10.337	10.105	11.274
Sensible capacity (1) (*)	W	1.290	1.620	2.070	2.310	2.870	3.230	4.330	4.800	5.670	6.620	6.200	7.300	7.640	8.360
Heating cap. (2) (*)	W	1.870	2.455	2.990	3.355	4.080	4.720	6.000	6.650	7.750	9.050	8.415	9.895	10.550	11.600
Heating cap. (3) (*)	W	3.740	4.910	5.980	6.710	8.160	9.440	12.000	13.300	15.500	18.100	16.830	19.790	21.100	23.200
Pressure drop															
Cooling (*)	kPa	14,5	18,1	20,5	23,0	25,1	26,8	27,2	30,0	31,9	32,4	37,4	38,4	34,4	37,0
Heating (3) (*)	kPa	15,9	19,2	20,1	20,0	20,9	23,2	22,6	22,6	23,8	22,9	28,1	27,4	29,2	30,5
Air flow (*) max	m³/h	370	400	500	550	670	720	1.000	1.050	1.280	1.310	1.450	1.500	1.910	1.940
Air flow (*) med	m³/h	285	308	400	440	590	634	890	935	1.139	1.166	1.291	1.335	1.643	1.668
Air flow (*) min	m³/h	226	244	305	336	462	497	650	683	870	891	986	1020	1490	1.513
Cooling (*)	l/h	272	362	458	547	679	769	999	1.162	1.363	1.633	1.474	1.778	1.738	1.939
Heating (3) (*)	l/h	322	422	514	577	702	812	1.032	1.144	1.333	1.557	1.447	1.702	1.815	1.995
Power input (*)	W	55	55	85	85	75	75	145	145	175	175	225	225	285	285
Sound pressure (4)	dB(A)	24 31 38	25 31 38	30 38 44	31 38 45	26 33 37	27 34 37	34 41 43	35 41 45	39 46 48	40 46 49	43 48 51	44 49 52	45 48 51	46 48 51
ower supply	V~/Ph/Hz	230/1/50													
Water connections	"G	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Condensing drain	mm	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Motors	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fans	n°	1	1	1	1	2	2	2	2	2	2	2	2	2	2

HOT WATER EXCHANGER															
VE		**13**	**23**	**33**	**43**	**53**	**63**	**73**	**83**	**93**	**103**	**93P**	**103P**	**113P**	**123P**
Heating cap. (2) (*)	W	940	990	1.590	1.675	2.190	2.275	3.145	3.230	3.995	4.055	4.350	4.450	5.545	5.600
Heating cap. (3) (*)	W	1.880	1.980	3.180	3.350	4.380	4.550	6.290	6.460	7.990	8.110	8.700	8.900	11.090	11.200
Pressure drop (3) (*)	kPa	7,3	8,0	11,7	12,9	21,3	22,9	41,1	43,3	37,7	38,8	44,6	46,7	48,4	49,3

BRUSHLESS															
VE		**13**	**23**	**33**	**43**	**53**	**63**	**73**	**83**	**93**	**103**	**93P**	**103P**	**113P**	**123P**
Cooling cap. (1)	W	1.810-880	2.320-1.130	2.830-1.400	3.220-1.600	4.630-2.130	5.070-2.330	6.010-3.060	6.820-3.470	7.440-3.780	8.790-4.460	-	-	-	-
Heating cap. (2)	W	985-2.325	1.233-2.915	1.670-3.409	1.557-3.625	2.063-5.209	2.285-5.794	2.949-6.615	2.174-7.149	3.388-7.650	3.898-8.800	-	-	-	-
Heating cap. (3)	W	4.680-1.970	5.860-2.470	6.840-2.940	7.250-3.120	10.510-4.130	11.650-4.580	13.280-5.900	14.300-6350	15.300-6.780	17.600-7.800	-	-	-	-
Hot water exchanger (2)	W	1.209-510	1.211-515	1.855-800	1.865-805	2.880-1.135	2.883-1.140	3.553-1.580	3.561-1.590	4.045-1.790	4.045-1.795	-	-	-	-
Hot water exchanger (3)	W	2.440-1.030		3.730-1.610		5.800-2.280		7.140-3.170	7.140-3.170	8.090-3.590		-	-	-	-
Air flow	m³/h	537-127		625-153		1.021-215		1.184-306	1.184-306	1.255-323		-	-	-	-
Power input (5)	W	9		9		10		11	11	11		-	-	-	-
Sound pressure (5)	dB(A)	23		26		22		24	24	25		-	-	-	-
Power supply	V~/Ph/Hz	230/1/50										-	-	-	-
Signal	Vdc	0-10								0-10		-	-	-	-
Motors	n°	1	1	1	1	1	1	1	1	1	1	-	-	-	-
Fans	n°	1	1	1	1	2	2	2	2	2	2	-	-	-	-

Left side water sockets

Note: Capacities and air flow rates referred in terms of prevalence 0 Pa. For different static pressure, refer air flow variation diagrams.

(1) Entering air temperature: 27°C d.b./19,5°C w.b.
In/Out water temperature: 7°C /12°C
(2) Entering air temperature: 20°C d.b.
In/Out water temperature: 45°C / 40°C
(3) In/Out water temperature: 70°C / 60°C
(4) At a distance of 2 m and with reverberation time of 0.5 s.
(5) 3Vdc input signal
(*) Max speed

Fitted accessories

	**BC**	Auxiliary coil 1 rank		**CVC**	On board mounted electronic controll 230Vac with off/summer/ winter+3speeds+thermostat with-without valves (Mammoth terminal board already included)
	**VA**	Auxiliary drain pan for vertical versions (included in horizontal versions)		**CBB**	On board brushless controll 2/4pipes unit with-without valves (Mammoth terminal board already included). Available with the electrical resistances RA and RB.
	**CVA**	OFF/3-speed switch (Mammoth terminal board already included)		**CVD1**	On board controll 230 Vac for controll 2/4 pipes unit with/without valves (Mammoth terminal board already included). Available with the electrical resistances RA and RB.
	**CVB**	OFF/3-speed switch Winter-Summer switch+Bulb room thermostat (Mammoth terminal board already included)		**SND-W4**	Water temperature probe (type NTC 4700 Ohm @ 25°C) with minimum temperature settable. Cable length 1 meter. Alternative to TMB thermostat.
	**TMB**	Water low temperature thermostat automatically shuts down the ventilation when the inlet water temperature to the coil is below 32°C in heating mode (Winter mode).		**MOR**	Mammoth type terminal board (included on the on board controller CVA-CVB-CVC-CBB-CVD1) In other cases must be ordered as an accessory
	**SDI.4 X3A**	Card with 4 by 3A output (suitable to control up to max No. 4 3-Speed 3A motors ; ex. No. 4 small fan-coils). To be combined only in case of AC motors. Contacts: 4x 3(0,3)A 230Vac		**3V2**	3-way valve with actuator 230V for 2 pipes units
	**2V2**	2-way valve with actuator 230V for 2 pipes units		**3V4**	3-way valve with actuator 230V heating coil for 4 pipes units
	**2V4**	2-way valve with actuator 230V for 4 pipes units		**RA**	Electrical heater 230V (0,7 kW - 2 kW). Power relay and safety thermostat included. Not available separately.
	**TEL**	Remote control management system. Motherboard + Air sensor + Water sensor - I.R. reciever + I.R. Remote control (control 2-4 pipe units, with/without valves). Fan 7A-230Vac. Valves: 2A-230Vac.		**RB**	Electrical heater 230V (1 kW - 3 kW). Power relay and safety thermostat included. Not available separately.

Loose accessories

PA

Air intake plenum with spigots (PA, PM)

VE	13/23	33/43	53/63	73/83	93P/103P	113P/123P
Spigots (N° x Ø 200/180/160 mm)	1 x Ø	2 x Ø	2 x Ø	3 x Ø	4 x Ø	4 x Ø

P

Pedestal (Supplied separately)

P2

Panel made of pre-painted steel with controll panel doors

P1

Panel made of pre-painted steel

FTI

False frame made of galvanizes steel for versions VIP

PMI

Air supply plenum with spigots for versions VIP and ONP

PCPB

Central closing back panel

PCPF

Central closing back panel

PCB

Bottom closing panel without grill

PM

Air supply plenum with spigots
Plénum de raccords à section circulaires de décharge

CRA

230V wall thermostat. 3 speeds fan selector + Off/On selector + 2 pipes plant management with or without 230V on-off valves

CBP

Digital wall thermostat 230V/24V. On-off or brushless fan motor, 2 or 4 pipes plant management with or without on-off valve or 0..10V with 230V or 24V alimentation.

AIRMUST 3V

Wall-mounted thermostat function control for 3-speed fancoil with Wi-Fi and Modbus, with or without valves

AIRMUST 010

Wall-mounted thermostat function control for Brushless motor 0-10V fancoil, with Wi-Fi and Modbus, with or without valves

MI

Hydronic Highwall

2,7 kW÷4,4 kW

The MAXA hydronic high wall is designed to meet the demanding requirements for efficiency, quiet operation and good looks. The microprocessor assures accurate environmental control. 3-way valve on board.

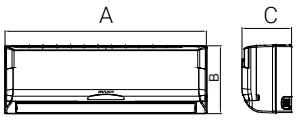
Unit in A.b.s. with high mechanical characteristics and resistence to ageing; DC fan motor, the water coil has a large heat transfer surface is equipped with purge air valve and purge water valve; equipped with boot deflector blades and independent directional vanes, supply air can automatically be distributed and customized to direct the air; all function controlled by the LCD remote control handset unit; cool, heat, three fan speeds and auto mode; manual-restart, timer function

As A Standard

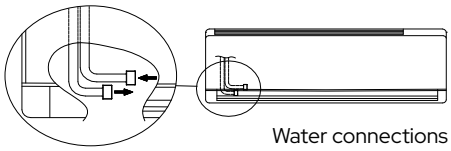
- Three-way diverter valve 230 V, with compact electric actuator, normally closed and equipped with protection, air purge valve, LCD remote control, clean contact for remote ON-OFF, modbus input, collection basin and condensate drain.

Micro Limit Switch

- The unit is equipped with a "micro limit switch" located on the three-way diverting valve. This microswitch is connected to a special terminal board from which the signal can be used for various purposes. In particular, this free contact is useful for creating plant automation systems.



Dimensions		26A3	35A3	42A3
A	mm	915	915	1072
B	mm	290	290	315
C	mm	230	230	230



Water connections on left

MI		26A3	35A3	42A3
(1) Cooling capacity	kW	2,7/2,59/2,39	3,81/3,3/2,88	4,47/3,98/3,48
(1) Cooling capacity	kBTU/h	9,2/8,8/8,1	12/11,2/9,8	15,2/13,5/11,8
Power input	W	13/11/10	34/22/15	26/18/13
Water flow	m³/h	0,48/0,46/0,42	0,67/0,57/0,51	0,77/0,68/0,61
Pressure drop water	kPa	31,61/28,63/25,36	56,75/41,23/33,02	41,17/33,54/27,05
(2) Heating capacity	kW	2,94/2,8/2,58	4,3/3,65/3,09	4,84/4,23/3,62
(2) Heating capacity	kBTU/h	10/9,5/8,8	14,6/12,4/10,5	16,5/14,4/12,3
Power input	W	11/11/9	31/20/14	22/16/12
Water flow	m³/h	0,51/0,49/0,46	0,73/0,64/0.56	0,84/0,73/0,64
Pressure drop water	kPa	32,66/34,89/30,24	51,86/47,53/35,69	36,82/33,83/26,26
Absorbed current	A	0,2	0,4	0,3
(3) Press. sonora / Sound pressure				
MAX - MED - MIN	dB(A)	32/30/27	45/39/35	38/34/30
Water connections	Ø	3/4"	3/4"	3/4"
Weight	kg	12,7	12,7	15,1
Power supply	V~/Ph/Hz		230/1/50	
Air flow	m³/h	492/454/400	825/689/590	862/741/634
Coil				
Rows		2	2	2
Max. working-pressure	MPa		1.6	
Diameter	mm		Φ7	
Condensing drain	mm		ODΦ20	

It not fitted with condensate pump.
(1)Cooling capacity:Entering air temperature: 27°C d.b./ 19°C w.b. Max speed
In/Out water temperature: 7°C / 12°C Max speed

(2)Heating capacity:Entering air temperature: 20°C d.b. Max speed
In/Out water temperature: 45°C / 40°C Max speed
(3) Noise is tested in semi-anechoic test room.

HCA1 HCA1/4

DC brushless hydronic cassettes

2,0 kW÷6,1 kW

MAXA hydronic cassettes with brushless DC motor are designed to fully meet efficiency requirements,
silence and aesthetics required by the market.
The microprocessor control ensures an accurate comfort in the environment. The modbus input allows a quick match to external BMS systems.
The small dimensions meet the installation requirements in the suspended ceilings thanks to the reduced measures of 57 x 57 cm or 84 x 84 cm in the more powerful versions.

Unit composition

- Finned batteries for heat exchange with high efficiency and low pressure drop.
- Internal insulation with closed cells expanded enough to limit heat dispersion and noise emissions to a minimum.
- Automatic fins adjustment.
- Build-in Drain water pump for lifting the condensing up to a maximum of 500 mm.

KIT VALVOLE

3V2C 2 pipes 3 way valve kit (HCA 22-29-35-42)
3V2CG 2 pipes 3 way valve kit (Necessary for HCA 60)
3V4C 4 pipes 3 way valve kit (HCA 22-35-50)
3V4CG 4 pipes 3 way valve kit (Necessary for HCA 60)

Kit valves for systems with modulating pump

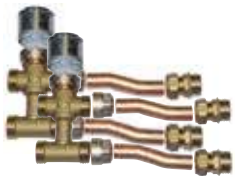
2V2C 2 pipes 2 way valve kit (HCA 22-29-35-42)
2V2CG 2 pipes 2 way valve kit (HCA 60)
2V4C 4 pipes 2 way valve kit (HCA 35-50)
2V4CG 4 pipes 2 way valve kit (HCA 60)

KIT for 3-way / 2-WAY valve
The kit, necessary for size 60, is composed by:
a) n° 2 nipples / n° 1 nipples
b) n° 4 o-ring / n° 2 o-ring
c) n° 2 copper joints / n° 1 copper joints
d) n° 1 3 way valve - 4 connections / n° 1 2 way valve - 2 connections
e) n° 1 ON / OFF actuators / n° 1 ON / OFF actuators

2V4C/2V4CG

3V4C

3V2C/3V2CG



3V4CG

Accessories

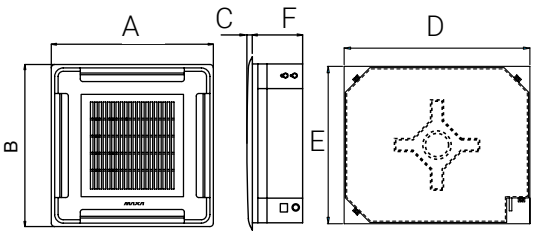
WRC11 Multi functions accessory compact wired controller

WRC16 It can connect up to 16 indoor uni ts with a single wire controller throught XYE ports

Versions

HCA1 Cassette for 2-pipe systems with electronic control and wireless controller

HCA1/4 Cassette for 4-pipe systems with electronic control and wireless controller



Dimensions		HCA1 22	HCA1 29	HCA1 35 HCA1/4 35	HCA1 42 HCA1/4 50	HCA1 60 HCA1/4 60
A	mm	647	647	647	647	950
B	mm	647	647	647	647	950
C	mm	50	50	50	50	45
D	mm	575	575	575	575	840
E	mm	575	575	575	575	840
F	mm	261	261	261	261	300
Weight	kg	19	19	19	19	33,5

HCA1		22	29	35	42	60
(1) Cooling capacity	W	2.000	2.980	3.960	4.200	6.120
(1) Cooling capacity	BTU/h	6.826	10.171	13.515	14.335	20.888
(1) Power input	W	5	15	28	43	75
(2) Heating capacity	W	2.240	2.610	4.630	4.950	6. 270
(2) Heating capacity	BTU/h	7.645	8.908	15.802	16.894	21.400
(2) Power input	W	5	15	28	33	76
Sound pressure (3)						
MAX - MED - Min	dB(A)	39/33/27	39/33/27	42/36/30	43/38/32	44/40/34
Air flow	m^3/h	322	535	719	781	1229

HCA1/4		35	50	60
(1) Cooling capacity	W	3.080	3.050	5.620
(1) Cooling capacity	BTU/h	10.512	10.410	19.181
(1) Power input	W	37	32	60
(2) Heating capacity	W	5.520	5.970	7.660
(2) Heating capacity	BTU/h	18.840	20.376	26.144
(2) Power input	W	28	32	61
Sound pressure (3)				
MAX - MED - Min	dB(A)	42/35/30	44/39/31	44/39/33
Air flow	m^3/h	723	731	1389

(1) Entering air temperature: 27°C d.b./19,5°C w.b. maximum speed
In/Out water temperature: 7°C / 12°C maximum speed
(2) Entering air temperature: 20°C d.b. maximum speed
In water temperature: 50°C maximum speed
(3) At a distance of 1 m and with reverberation time of 0.5 s. maximum speed

HCN

Modular terminal units slim/reduced with Brushless DC and AC Asynchronous motor

6 kW÷20 kW

- It has a self-supporting structure made of galvanized sheet with thermal and acoustic insulation (version S) or sandwich double panels 20mm thick with outer painted sheet with white RAL 9002 (version D); with ceiling/wall mounting holes, of contained dimensions and optimized encumbrance.
- Drain pan made with dual slope.
- Heat exchange coils with high efficiency made of copper tubes and aluminium fins, standard connections are located on the right side, 1 coil for a 2-pipe system; 2 coils for a 4-pipe system.
- Centrifugal fans with double air inlet aluminium blades of large diameter with 3-speed, mounted on elastic supports and dampers.
- The unit is provided with a of "Mammoth" type terminal board IP20 installed outside the unit.
- The basic units are supplied without air filter in order to allow the customer to choose between the available filtering sections as accessories; even the remote control is an accessory.

Versioni

S-OIP Single panel, horizontal naked terminal, rear air intake

S-OII Single panel, horizontal naked terminal, bottom air intake

D-OIP Double panel, horizontal naked terminal, rear air intake

D-OII Double panel, horizontal naked terminal, bottom air intake

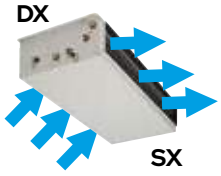
Versions

S-OIP	Single panel, horizontal naked terminal, rear air intake	**S-OII**	Single panel, horizontal naked terminal, bottom air intake
D-OIP	Double panel, horizontal naked terminal, rear air intake	**D-OII**	Double panel, horizontal naked terminal, bottom air intake

Nomenclature

When ordering, always specify complete model like the example.

HCN	–	S	–	OIP	–	130	–	DX
Series		Main casing		Version		Size		Connections
HCN		S; D		OIP-OII		60.....200		DX; SX



HCN-S-OIP 130-DX

HCN		60	75	86	103	130	136	150	170	200
Cooling cap. (1) (*)	W	6.010	7.480	8.590	10.300	12.900	13.600	15.000	17.200	20.200
Sensible capacity (1) (*)	W	4.570	5.560	6.160	8.100	9.950	10.800	11.100	13.300	14.900
Heating cap. (2) (*)	W	6.550	7.900	8.300	11.700	14.400	15.650	15.200	19.400	20.400
Heating cap. (3) (*)	W	13.100	15.800	16.600	23.400	28.800	31.300	30.400	38.800	40.800
Air flow (4)	m³/h	1.100	1.200	1.150	2.100	2.300	2.800	2.200	3.100	2.950
Sound pressure (7)										
Min-Med-Max	dB(A)	37-44-49	38-45-50	38-45-50	45-50-52	46-51-53	41-48-51	46-51-53	42-49-52	42-49-52

Heating coil

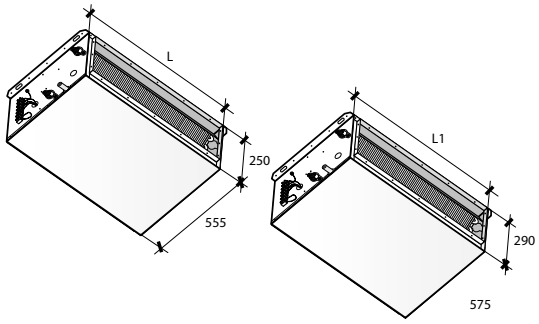
HCN		60	75	-	103	130	
Heating cap. (2)	W	6.610	6.970	-	11.600	12.200	W
Air flow (4)	m³/h	1.050	1.140	-	2.000	2.170	m³/h

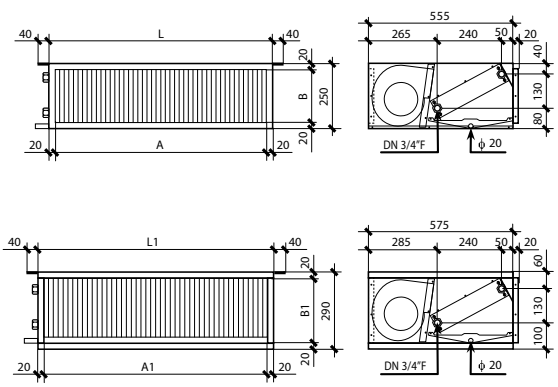
HCN		-	136	170	-		
Heating cap. (2)	W	-	15.500	16.400	-	W	
Air flow (3)	m³/h	-	2.670	2.930	-	m³/h	

Note: Capacities and air flow rates referred in terms of prevalence 0 Pa. For different static pressure, refer air flow variation diagrams.

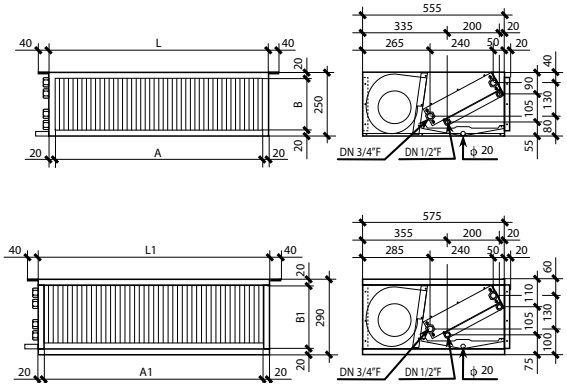
(1) Entering air temperature: 27°C d.b./19°C w.b.
In/Out water temperature: 7°C /12°C
(2) Entering air temperature: 20°C d.b.
In/Out water temperature: 70°C / 60°C
(3) Entering air temperature: 20°C d.b.
In/Out water temperature: 40°C / 45°C

(4) Nominal data measured with casing ref. AMCA210-74 standards and plenum + diaphragm ref. CNR-UNI10023 standards.
(7) Free field sound pressure, 3 m distance. Data calculated based on sound power measured in riverberation room ref. ISO 3741 - ISO 3742 standards.
(1)(2)(3)(4)(5)(6) Nominal technical data, refer air flow (4) to the max speed and unit with free air flow
DN: Nominal diameter; F=Female gas water coil connections





Hot water exchanger



Version "S"

HCN		60	75	86	103	130	150	136	170	200
L	mm	800	800	800	1.200	1.200	1.200	1.600	1.600	1.600
A	mm	760	760	760	1.160	1.160	1.160	1.560	1.560	1.560
B	mm	210	210	210	210	210	210	210	210	210
Peso	kg	34	35	37	48	50	53	63	65	68

Version "D"

HCN		60	75	86	103	130	150	136	170	200
L1	mm	840	840	840	1.240	1.240	1.240	1.640	1.640	1.640
A1	mm	800	800	800	1.200	1.200	1.200	1.600	1.600	1.600
B1	mm	250	250	250	250	250	250	250	250	250
Peso	kg	48	49	51	66	68	71	85	87	90

Version "S" - Hot water exchanger

HCN		60	75	103	130	136	170
L	mm	800	800	1.200	1.200	1.600	1.600
A	mm	760	760	1.160	1.160	1.560	1.560
B	mm	210	210	210	210	210	210
Peso	kg	36	37	51	53	67	69

Version "D" - Hot water exchanger

HCN		60	75	103	130	136	170
L1	mm	840	840	1.240	1.240	1.640	1.640
A1	mm	800	800	1.200	1.200	1.600	1.600
B1	mm	250	250	250	250	250	250
Peso	kg	50	51	69	71	89	91

Fitted accessories

BC Auxiliary heating coil, 2 raws

RE Electrical heater integrated inside the units + "TS" safety thermostat (without power relay) 230V/50Hz/1Ph

MOR TMB Mammoth type terminal board + water low temperature thermostat. Tset 32°C. All HCN units are supplied with standard Mammoth type terminal board, without thermostat.

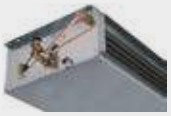
TEL Remote control management system .Motherboard + Air sensor + Water sensor - I.R. reciever + I.R. Remote control (control 2-4 pipe units, with/without valves). Fan 7A-230Vac. Valves: 2A-230Vac.

SND W4 Water temperature probe (type NTC 4700 Ohm @ 25°C) with minimum temperature settable. Cable length 1 meter. Alternative to TMB thermostat.

SFA-S SFA-D Flat air filter (not ductable), EU3 filtering level. (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

MB Brushless motor with continuos variation 0-100% of the air flow (signal 0..10 Vdc) Digital wall thermostat is an essential accessory for the operation of a unit with Brushless motor. Should not be combined with accessory TEL

SFC-S SFC-D Ductable air filter section + flat ait filter, EU3 filtering level (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)



3V-2,5 3V-4 3V-6 3-way valve with actuator 230V for 2 pipes units

3VM-2,5 3VM-4 3VM-6 3-way valve with actuator 24Vac for 2 pipes units, Modulating signal 0-10V

2V-2,5 2V-4 2V-6 2-way valve with actuator 230V for 2 pipes units

2VM-2,5 2VM-4 2VM-6 2-way valve with actuator 24Vac for 2 pipes units, Modulating signal 0-10V

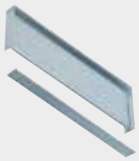
3VC-2,5 3VC-4 3VC-6 3-way valve for heating coil (4-pipe unit) with actuator 230V

3VCM-2,5 3VCM-4 3VCM-6 3-way valve for heating coil (4-pipe unit) with actuator 24Vac, Modulating signal 0-10V

QR1 Quadro elettrico per sezione elettrica 230Vac (BOX+magnetotermico+relè)

Modello	Potenza	Compatibilità HCN	Compatibilità QR1
RE0.7-24	0,7 kW / 3,1 A	Tutte le taglie	QR1-0,7
RE1.0-24	1,0 kW / 4,4 A	Tutte le taglie	QR1-1,4
RE1.5-24	1,5 kW / 6,6 A	Tutte le taglie	QR1-2,3
RE2.0-24	2,0 kW / 8,7 A	Tutte le taglie	QR1-2,3
RE3.0-24	3,0 kW / 13,1 A	HCN 103-130-150-136-170-200	QR1-3,7

Fitted accessories



SFD-S
SFD-D

Ductable air filter section + HIGH EFFICIENCY ondulated air filter H=100mm, EU5 filtering level (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

Air press. drop (clean/dirty filter)

HCN	60	75	86	103	130	150	136	170	200
SFA (Pa)	15/35	17/42	16/38	23/55	27/66	25/60	22/54	28/66	25/60
SFC (Pa)	15/35	17/42	16/38	23/55	27/66	25/60	22/54	28/66	25/60
SFD (Pa)	20/37	24/44	22/41	32/59	38/70	35/64	31/58	39/71	35/64

QR1

Power electric board for heaters 230Vac (BOX+magnetothermic+relè)

Model	Power	HCN Compatibility	QR1 Compatibility
RE0.7-24	0,7 kW / 3,1 A	All size	QR1-0,7
RE1.0-24	1,0 kW / 4,4 A	All size	QR1-1,4
RE1.5-24	1,5 kW / 6,6 A	All size	QR1-2,3
RE2.0-24	2,0 kW / 8,7 A	All size	QR1-2,3
RE3.0-24	3,0 kW / 13,1 A	HCN 103-130-150-136-170-200	QR1-3,7

2VC-2,5
2VC-4
2VC-6
2-way valve for heating coil (4-pipe unit) with actuator 230V

2VCM-2,5
2VCM-4
2VCM-6
2-way valve for heating coil (4-pipe unit) with actuator 24Vac, Modulating signal 0-10V

Note: Every single kit includes one valve and one actuator. In case of 4-pipe system must be provided n° 2 valves. For example, with ducted 4-pipe, in the case of 3-way valves, power supply 230 V: 3V + 3VC

3/2 way valve characteristics - RECOMMENDED MATCHINGS

HCN	60	75	86	103	130	150	136	170	200
Valve characteristics	Kvs 2,5				Kvs 4			Kvs 6	
User side connection	DN 3/4" M								
Nominal pressure	PN 16 bar								

Loose accessories

CRA (1)

230V wall thermostat. 3 speeds fan selector + Off/On selector + 2 pipes plant management with or without 230V on-off valves

MS

Motor "230Vac on-off" suitable for air damper

PMP

Condensate pump provided with 8A (250V)

CBP (1)

Digital wall thermostat 230V/24V. On-off or brushless fan, 2 or 4 pipes plant management with or without on-off valve or 0..10V with 230V or 24V alimentation.

AIRMUST 3V

Wall-mounted thermostat function control for 3-speed fancoil with Wi-Fi and Modbus, with or without valves

AIRMUST 010

Wall-mounted thermostat function control for Brushless motor 0-10V fancoil, with Wi-Fi and Modbus, with or without valves

SDI.4X3A

Card with 4 by 3A output (suitable to control up to max No. 4 3-Speed 3A motors ; ex. No. 4 small fan-coils) Contatti-Contacts: 4x 3(0,3)A 230Vac

SDI.2X10A

Card with 2 by 10A output (suitable to control up to max No. 2 3-Speed motors of 10A ; ex. No. 1 large unit with 2 motors) Contatti-Contacts: 2x I0A-230Vac

S2S-S S2S-D

Closed section + 2 Regulation/ adjustment louvers (1 louver below + 1 louver on the rear side) - Louvers without controls - can be either manual or motorized control (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

SSL-S SSL-D

Labyrint noise level attenuator section, suitable for both air intake/supply outlets (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

Scm-S Scm-D

Steel section with spigots "Ø" with variable diameter made of plastic material, external insulation (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

N° and Ø spigots

HCN	60	75	86	103	130	150	136	170	200
SCM n° x Ø	3xØ200/180/160			5xØ200/180/160			6xØ200/180/160		

SSM-S SSM-D

External/Internal mixing section "externail air 0-33% - internal air 100-67% or vice versa (coupled louvers with manual controls - can be motorized) (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

Air pressure drop

HCN	60	75	86	103	130	150	136	170	200
SSM (Pa)	13	15	14	20	24	22	20	24	22
S2S (Pa)	15	17	16	23	27	25	22	28	25

SBC-O

Auxiliary drain pan made of galvanized steel- thermal insulation

(1) Each control panel can control only one unit. To controll more units see SDI accessory

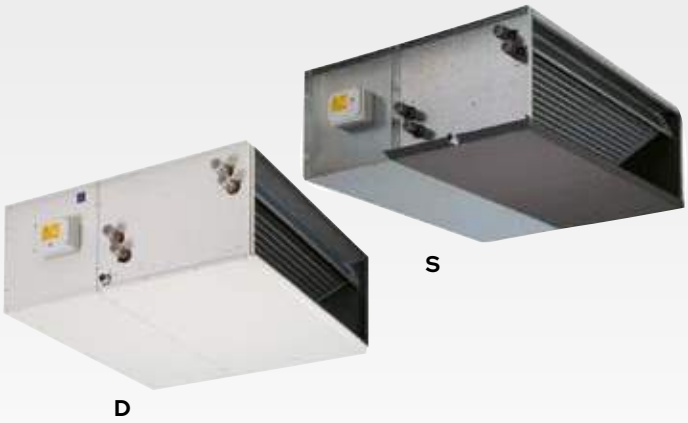
HCNA

Medium ductable terminal units with Brushless DC and AC Asynchronous motor

7 kW÷68 kW

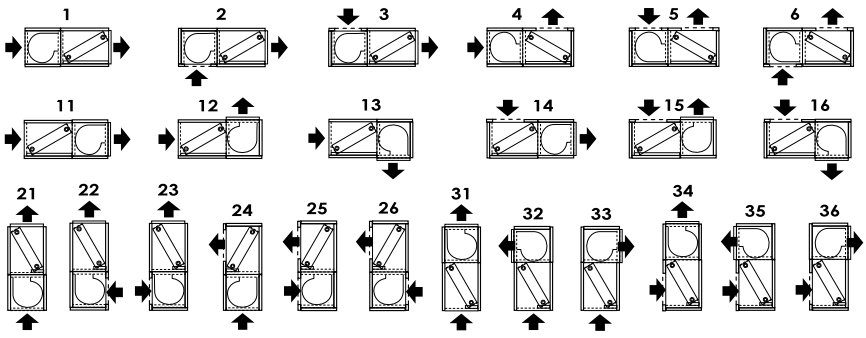
The HCNA are small air handling units, which can be freely configured. It is possible to select between 2 motors (6 Poles or Brushless), 2 types of housing cases (S or D), the version of 2/4 pipes and a wide range of coupled accessories.

The wide flexibility combined with the full range of capacity rating is the HCNA winning idea that allows to find the best solution for suiting your needs.



Technical Features

- It has a self-supporting structure made of thick galvanized sheet making it resistant to rust, corrosion, chemical agents, solvents, aliphatic and alcohols.
- Self-supporting panels and removable; assembling with self-tapping screws for quick and easy inspection/maintenance. They are available in housing cases "S"-version (Simple panel) and "D"-version (Sandwich double panels 20mm thick with outer painted sheet with white RAL 9002).
- The units provide heat exchange coils (without air vent valves) with high-efficiency made of copper tubes and aluminium fins.
- Standard connections located on the right; on request for left connections at additional charges.
- The sections with cooling coil are equipped with a drain pan in galvanized sheet + external thermal insulation (optional, with additional charges, made of stainless steel AISI 304) with a single slope in order to ensure the optimal condensate draining, with drain hole of Ø30mm.
- The standard electrical equipment includes: "Mammoth" type terminal board IP20 installed outside the unit on the same side of the water connections. For units with 2 motors, it is recommended the installation of 3 relays or the interface card.
- All the standard versions are supplied with free air inlet and air outlet openings, without any grill/protection and without air filter.
- N° 2 motor types:6 Poles or Brushless



Versions

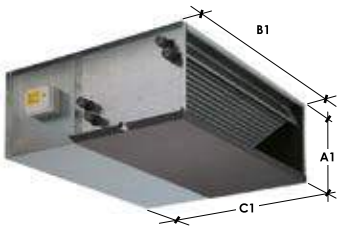
S	Concealed version - Single panel	**D**	With cabinet version - Double panel

HCNA		71	117	143	165	216 (7)	290(7)	240(7)	293(7)	330(7)	565(7)	685(7)
Cooling cap. (1)	kW	7,3	11,7	14,6	17,0	22,2	29,8	24,1	30,1	34,0	58,1	70,1
Sensible capacity (1)	kW	5,9	9,8	12,0	14,0	18,3	24,3	20,2	24,6	28,1	44,5	55,4
Heating cap. (2)	kW	17,2	28,3	34,9	40,7	52,9	69,9	58,8	71,2	80,9	125,7	157,2
Heating cap (3)	W	8.350	14.100	17.000	19.700	25.650	34.100	29.300	34.600	39.150	60.950	76.650
Air flow (3)	m³/h	1500	2500	3000	3500	5000	6000	5000	6000	7000	10000	12000
Water flow (4)												
Cooling	l/h	1256	2012	2511	2924	3818	5126	4145	5177	5848	9993	12057
Heating	l/h	1479	2434	3001	3500	4549	6011	5057	6123	6957	10810	13519
Pressure drop water (4)												
Cooling	kPa	27,7	27,3	29,7	27,5	28,1	32,8	25,7	27,4	29,0	32,4	35,0
Heating	kPa	30,0	31,1	33,1	30,7	31,0	35,2	30,1	30,0	32,0	29,6	34,3
Sound pressure (5)												
Min-Med-Max	dB(A)	35-41-46	42-48-54	40-45-54	43-47-53	48-52-58	47-51-57	45-51-57	43-48-57	46-50-56	51-55-61	50-54-60
Motors/Fans	n°/n°	1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
Absorbed current	A	1x2,4	1x5,0	1x5,0	1x7,0	1x7,2	1x9	2x5	2x5	2x7	2x7,2	2x9
Power supply		230Vac - 1 Ph - 50Hz										
Poles		4										
Coil/Rows	n°	3R	3R	3R	3R	3R	3R	3R	3R	3R	4R	4R
Water connections	Ø	3/4"M	1"M	1"M	1"M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M
Drain pipe	Ø (mm)	30	30	30	30	30	30	30	30	30	30	30

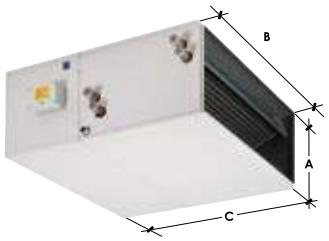
Heating coil

HCNA		71	117	143	165	216 (7)	290(7)	240(7)	293(7)	330(7)	565(7)	685(7)
Heating cap. (2)	W	13,3	21,7	27,3	31,7	40,4	54,5	44,8	55,3	62,4	85,2	103,1
Water flow (5)												
Heating	l/h	1144	1866	2348	2726	3474	4687	3853	4756	5366	7327	8867
Pressure drop water (5)												
Heating	kPa	35,1	36,3	37,7	38,6	40,4	37,3	37,7	34,7	37,1	37	40,2
Coil/Rows	n°	2R	2R	2R	2R	2R	2R	2R	2R	2R	2R	2R
Water connections	Ø	3/4"M	1"M	1"M	1"M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M

(1) Entering air temp.: 27°C d.b./19°C w.b. - In/Out water temp.: 7°C /12°C Max speed
(2) Entering air temp.: 20°C d.b. - In/Out water temperature: 70°C / 60°C Max speed
(3) Entering air temp.: 20°C d.b. In/Out water temperature: 45°C / 40°C Max speed
(4) Nominal data measured with casing ref. AMCA210-74 standards and plenum + diaphragm ref. CNR-UNI10023 standards.
(6) Free field sound pressure, 3 m distance. Data calculated based on sound power measured in riverberation room ref. ISO 3741 - ISO 3742 standards.
(7) With CRBM-CBP-CRA accessories. For units equipped with a motor with electrical absorption greater than 3A, or with 2 motors, add 1 SDI.2x10A interface card.
(1)(2)(3)(4)(5) Nominal technical data , refer air flow (3) to the max speed and unit with free air flow
(*) DN: Nominal diameter; F=Female gas water coil connections



S
Concealed version - Single panel



D
With cabinet version - Double panel

Version "S"

HCNA		71	117	143	165	216	290	240	293	330	565	685
A1	mm	360	425	425	480	550	550	425	425	480	580	580
B1	mm	560	660	760	760	1.160	1.360	1.160	1.360	1.360	1.660	1.660
C1	mm	840	995	1.105	1.160	1.140	1.240	995	1.105	1.160	1.450	1.450
Weight	kg	35,8	46,6	55,7	60,6	93,7	107,8	78,5	94,8	103,5	179,1	181,1

Version "D"

HCNA		71	117	143	165	216	290	240	293	330	565	685
A	mm	380	440	440	480	570	570	440	440	480	600	600
B	mm	520	620	720	720	1.120	1.320	1.120	1.320	1.320	1.620	1.620
C	mm	870	1.020	1.120	1.160	1.150	1.250	1.020	1.120	1.160	1.470	1.470
Weight	kg	45,1	59,5	71,3	77,3	118,9	138,7	99,7	121,4	131,4	224,4	226,4

Version "S" - con batteria calda / hot water exchanger

HCNA		71	117	143	165	216	290	240	293	330	565	685
A1	mm	360	425	425	480	550	550	425	425	480	580	580
B1	mm	560	660	760	760	1.160	1.360	1.160	1.360	1.360	1.660	1.660
C1	mm	840	995	1.105	1.160	1.140	1.240	995	1.105	1.160	1.450	1.450
Weight	kg	40,2	52,1	62,3	67,2	104,7	123,8	89,5	110,8	119,5	203,1	205,1

Version "D" - con batteria calda / hot water exchanger

HCNA		71	117	143	165	216	290	240	293	330	565	685
A	mm	380	440	440	480	570	570	440	440	480	600	600
B	mm	520	620	720	720	1.120	1.320	1.120	1.320	1.320	1.620	1.620
C	mm	870	1.020	1.120	1.160	1.150	1.250	1.020	1.120	1.160	1.470	1.470
Weight	kg	49,5	65,0	77,9	83,9	129,9	154,7	110,7	137,4	197,4	248,4	250,4

*WARNING: verify if the electrical absorption of the units motors are compatible with the remote control contact rating. If the electrical absorption is higher, or the unit is provided with 2 motors, it's recommended to use SDI chart.
(1) All HCNA units are supplied with standard Mammoth type terminal board, without thermostat.
(2) Each control panel can control only one unit (see accessory "SDI").

Fitted accessories

BC Auxiliary heating coil, 2 raws

PFA-S
PFA-D

Ductable air filter section + flat air filter, EU3 filtering level (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

TEL Remote control management system. Motherboard + Air sensor + Water sensor - I.R. reciever + I.R. Remote control (control 2-4 pipe units, with/ without valves). Fan 7A-230Vac. Valves: 2A-230Vac.

PFO-S
PFO-D

Ductable air filter section + HIGH EFFICIENCY undulated air filter H=100mm, EU5 filtering level (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

3V-2,8
3V-5,2
3V-13
3V-16

3-way valve with actuator 230V

2V-2,8
2V-5,2
2V-13
2V-16

2-way valve with actuator 230V

3VM-2,8
3VM-5,2
3VM-13
3VM-16

3-way valve with actuator 24Vac, modulating signal 0-10V

2VM-2,8
2VM-5,2
2VM-13
2VM-16

2-way valve with actuator 24Vac, modulating signal 0-10V

MB Brushless motor with continuos variation 0-100% of the air flow (signal 0..10 Vdc) Digital wall thermostat is an essential accessory for the operation of a unit with Brushless motor. Should not be combined with accessory TEL

Loose accessories

CRA (1) 230V wall thermostat. 3 speeds fan selector + Off/On selector + 2 pipes plant management with or without 230V on-off valves

CBP (1) Digital wall thermostat 230V/24V. On-off or brushless fan, 2 or 4 pipes plant management with or without on-off valve or 0..10V with 230V or 24V alimentation.

AIRMUST 3V Wall-mounted thermostat function control for 3-speed fancoil with Wi-Fi and Modbus, with or without valves

AIRMUST 010 Wall-mounted thermostat function control for Brushless motor 0-10V fancoil, with Wi-Fi and Modbus, with or without valves

(1) Each control panel can control only one unit. To controll more units see SDI accessory

Loose accessories

MOR-TMB

Mammoth type terminal board + water low temperature thermostat. Tset 32°C. All HCN units are supplied with standard Mammoth type terminal board, without thermostat.

SND-W4

Water temperature probe (type NTC 4700 Ohm @ 25°C) with minimum temperature settable. Cable length 1 meter. Alternative to TMB thermostat.

SDI.4X3A

Card with 4 by 3A output (suitable to control up to max No. 4 3-Speed 3A motors ; ex. No. 4 small fan-coils)
Contatti-Contacts: 4x 3(0,3)A 230Vac

SDI.2X10A

Card with 2 by 10A output (suitable to control up to max No. 2 3-Speed motors of 10A ; ex. No. 1 large unit with 2 motors)
Contatti-Contacts: 2x l0A-230Vac

PFT-S
PFT-D

Ductable air filter section+VERY HIGH EFFICIENCY POCKET BAGS air filter h=400mm with EU7 filtering level (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

P2S-S
P2S-D

Closed section +2 regulation/ adjustment louvers (1 louver below + 1 louver on the rear side). Louvers without controls, can be either manual or motorized control. (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

PMA-S
PMA-D

External/internal mixing section "external air 0-33% - internal air 100-67%" (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

MS

Motor "230Vac on-off" suitable for air damper

P90-S
P90-D

90° sectiom (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

PCR-S
PCR-D

Steel section with spigots "Ø", internal insulation.
(S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

PSL-S
PSL-D

Labyrinth noise level attenuator section, suitable for both air intake/supply outlets (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

PMP

Condensate pump including 0,5 litres condensate tank, provided with 4A (250V)

COIL characteristics

	HCNA	71	117	143	165	216	290	240	293	330	565	685
Heat/cool coil	Kvs characteristic	2,33	3,78	4,58	5,65	6,65	9,00	8,22	9,91	11,04	16,36	19,73
	User side connection DN	3/4"M	1"M	1"M	1"M	1"-1/4M	1"-1/2M	1"-1/4M	1"-1/2M	1"-1/2M	1"-1/2M (4R)	1"-1/2M (4R)
Heat coil	Kvs characteristics	1,66	2,56	3,23	3,94	4,64	6,46	5,73	7,14	7,98	9,67	11,53
	User side connection DN	3/4"M	1"M	1"M	1"M	1"-1/4M	1"-1/4M	1"-1/4M	1"-1/4M	1"-1/4M	1"-1/4M	1"-1/4M

Valve characteristics

3-way valve	(1) Every single kit includes 1 intercept valve only			
3V / 3VM	DN 3/4" Kvs 2,8	DN 1" Kvs 5,2	DN 1 1/4" Kvs 13,0	DN 1 1/2" Kvs 16,0
2-way valve	**(1) Every single kit includes 1 intercept valve only**			
2V / 2VM	DN 3/4" Kvs 2,8	DN 1" Kvs 5,2	DN 1 1/4" Kvs 13,0	DN 1 1/2" Kvs 16,0

(1) Each valve kit is suitable for any HCNA unit size.
with on-off valve it is recommended to use valves with high Kvs - with modulating valves it is recommended to use valves with Kvs - comparable with the one of the coil

The heat coil of HCNA units (4-pipes system) require the same type valves. So the 4-pipes system need n°2 valves (n° 2 codes)

OTA1 micro E 25÷130

Energy recovery ventilation unit

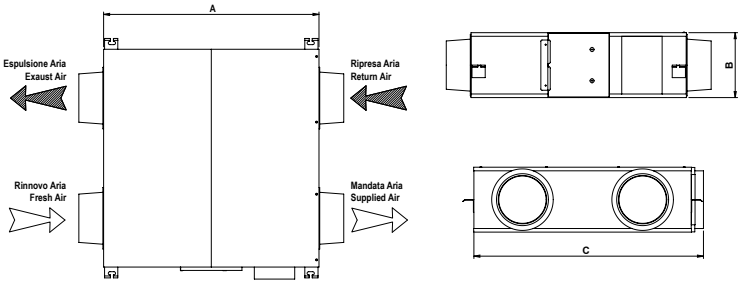
250 m³/h÷1300 m³/h

Technical features

- Galvanized steel self-supporting panels, internally and externally insulated; accessibility from side door.
- ISO 16890 ePM2.5 95% efficiency class filter with synthetic cleanable media and COARSE 50% pre-filter on fresh air, COARSE 50% filter on return air intake.
- Integrated pressure switch for dirty filter signal.
- Motorised heat recovery by-pass device, automatically controlled by unit control to use fresh air free-cooling when convenient.
- Low consumption high efficiency & low noise direct driven fans with 10-speed EC motors.
- Duct connections by circular plastic collars.
- Built-in electric box equipped with PCB to control fan and by-pass function.
- With wi-fi accessory is possible the remote control the unit by app and mobile phone.

Accessories

PTS	Touch screen controller	**BIOX**	Purifying system BIOXIGEN®
QSW	CO2 wall mount sensor	**SBE1**	Electric pre-heater module
USW	Humidity wall mount sensor	**SBE2**	Electric post-heater module
SLC	Duct circular sound attenuator	**WFM**	WiFi module for remote control via app



Mod.		25	35	50	65	80	100	130
A	mm	815	815	895	1185	1185	1200	1200
B	mm	270	270	270	390	390	390	390
C	mm	650	855	955	945	1200	1290	1290
Weight	kg	30	37	43	65	71	83	83

OTA1 micro E		25	35	50	65	80	100	130
Air flow	m³/h	250	350	500	650	800	1000	1300
Nominal external static pressure	Pa	90	140	110	100	140	140	135
Power supply	V/ph/Hz	230 / 1 / 50						
Absorbed current	A	0,5	0,6	0,6	1,2	1,4	2,1	2,7
Fans								
Motor typology		EC						
Number of speeds		10						
Fan control (1)	W	Man / VSD						
Power input	W	80	130	150	230	320	390	490
Sound pressure (2)	dB(A)	34	37	39	40	42	43	44
Heat exchanger								
Winter efficiency (3)	%	73	74	76	74	76	76	74,2
Winter enthalpy effic. (3)	%	65	65	67	65	65	62	59
Summer thermal effic. (4)	%	73	74	76	74	76	76	74
Summer enthalpy effic. (4)	%	62	62	63	60	63	60	58
Dry thermal efficiency (5)	%	73	74	76	74	76	76	74

(1) Man = Manual by selector switch or control panel; VSD = Modulation by air quality or air humidity sensor
(2) Sound pressure level calculated at 1m far from the service side of the casing, at nominal conditions
(3) Outside air at -5° 80% RH; room air at 20°C 50% RH
(4) Outside air at 32° 50% RH; room air at 26°C 50% RH
(5) Refeer to EU 1253/2014 regulation: at nominal pressure; air conditions refer to EN 308 standard

OTA1 40÷500

Heat recovery unit with aluminium counterflow exchanger

400 m³/h÷4700 m³/h

- Constant air flow fans available on OTA1 100 - 500.
- Built in by-pass facility.
- Case made by sandwich panels 23 mm thickness, galvanized inner skin and prepainted outer skin; 45 kg/m3 density foamed polyurethane as heat and sound insulation.
- Full-range controlled direct driven double inlet centrifugal fans; low consumption EC technology motors on OTAE1.
- Filtering sections composed by cell filters with polypropylene media, extractable from side removable panels, ISO 16890 ePM1 55% efficiency for the fresh air flow, and ePM10 55% efficiency for the exhaust air flow.
- Integrated pressure switch for dirty filter signal.
- Condensate drain pan made of galvanized steel plate with water drain connection downwards, that ensure a total drainage.
- With PCUS cntrol is possible the remote control by App for mobile fone in wi-fi network.

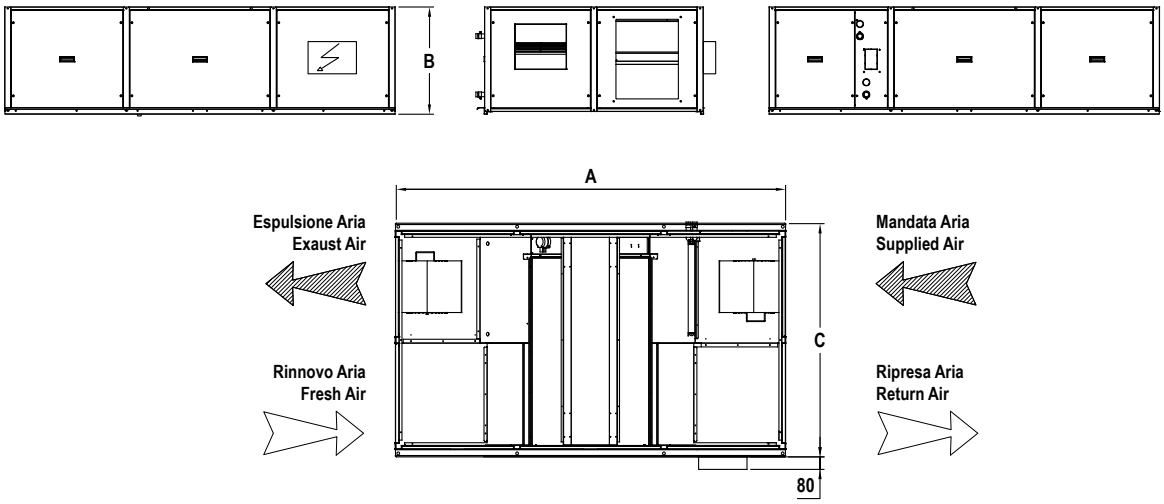
Accessories

ATG	Anti-freeze thermostat
BCR	Post-heating internal water coil
BER	Internal electric post-heating coil
BIOX	Purifying system Bioxigen®
CPA	Kit weather hood for external installation
DSF7/DSF9	High efficiency post-filtration
EXT	Kit for external installation
F7CF	High efficiency filters on exhaust air
KB	Kit bypass management
PCUS	Unit control panel
PCUSM	Unit control panel with modbus
PF	Additional pressure switch
QSC/QSA	CO2 sensor
RMS	3 dampers defrosting section
SBFR	Water cooling or heating coil section
SCMB	Modbus PCB for SIGB / Q
SIGB	Integrated management system on board
SM/SMR230	Damper actuators
3SM/SMR230	Actuators for RMS
SPC	N. 4 connections for circular ducts kit
SR	Regulation damper
SSC	Duct silencers
TUP	Wall mounted remote control panel (only with SIGB)
USD/USW	Humidity sensor
V2O	Kit 2-Way valve with on-off actuator
V3O	Kit 3-Way valve with on-off actuator
V3M	Kit 3-Way valve with modulating actuator
VSD	Constant air flow fans control

Versions

OTA1 Horizontal units with AC fans

OTAE1 Horizontal units with EC fans



Mod.		40	75	100	150	200	320	400	500
A	mm	1480	1940	1940	2200	2200	2500	2500	2500
B	mm	380	480	480	550	550	680	680	680
C	mm	800	990	990	1000	1400	1400	1400	1700
Weight	kg	90	140	140	170	200	230	260	300

OTA1		40	75	100	150	200	320
Air flow	m³/h	400	750	1000	1500	2050	3200
External static pressure	Pa	160	120	180	160	120	180
Maximum external static pressure	Pa	160	120	180	160	120	180
Power supply	V/ph/Hz	230/1/50					
Maximum input current	A	1,5	2,9	6,0	6,0	6,0	14
Fans							
Motor type		AC					
(1) Speed	n°	3	3	3	3	3	3
(2) Sound pressure	dB (A)	50	53	53	56	56	60
Heat exchanger							
(3) Winter efficiency	%	83,6	82,9	81,6	83,3	83,7	86,8
(4) Summer efficiency	%	75,5	75,9	74,5	75,1	75,6	78
(5) Dry efficiency	%	75,9	76,4	75,0	75,6	76,0	76,3

OTAE1		40	75	100	150	200	320	400	500
Air flow	m³/h	400	750	1000	1500	2050	3200	3800	4700
External static pressure	Pa	160	120	180	160	120	180	200	200
Maximum external static pressure	Pa	340	160	520	500	540	375	330	200
Power supply	V/ph/Hz	230/1/50							
Maximum input current	A	2,4	2,4	9,0	9,0	9,0	10,0	8,8	8,8
Fans									
Motor Type		EC							
(1) Speed	n°	Multiple							
(2) Sound pressure	dB (A)	49	52	51	53	51	56	58	60
Heat exchanger									
(3) Winter efficiency	%	83,6	82,9	81,6	83,3	83,7	86,8	84,1	84
(4) Summer efficiency	%	75,5	75,9	74,5	75,1	75,6	78,0	75,0	75,1
(5) Dry efficiency	%	75,9	76,4	75,0	75,6	76,0	76,3	75,5	75,6

(1) Multiple = Multispeed > 3
Man = Manual by selector switch or control panel; 0-10V = By potentiometer or control panel; VSD = Constant flow control or modulation by air quality or air humidity sensor
(2) Sound pressure level calculated at 1 m far from the service side of the casing, with ducted supply, exhaust, return and fresh air vents, at nominal conditions

(3) Outside air at -5° 80% RH; room air at 20°C 50% RH
(4) Outside air at 32° 50% RH; room air at 26°C 50% RH
(5) Refeer to EU 1253/2014 regulation: at nominal pressure; air conditions refer to EN 308 standard

OTA1-P 40÷320

Energy recovery ventilation units

400 m³/h÷3100 m³/h

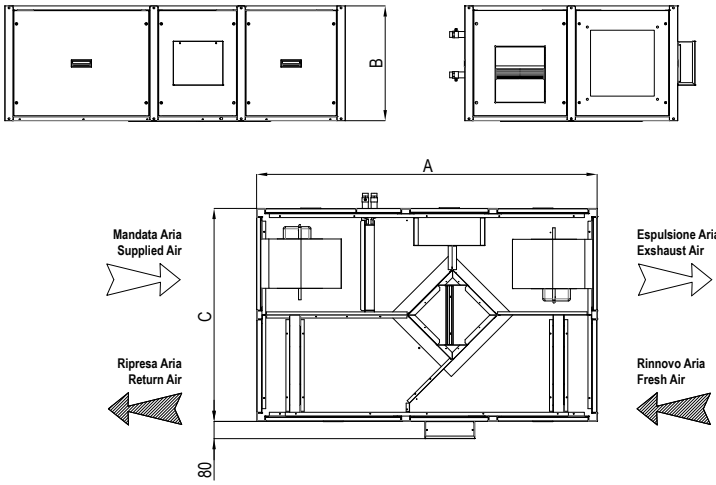
- Constant air flow fans available on OTA1-PE 100-320.
- Ceiling horizontal installation, the heat exchanger is extractable from below for all models.
- Case made by sandwich panels 23 mm thickness, galvanized inner skin and prepainted outer skin; 45 kg/m3 density foamed polyurethane as heat and sound insulation.
- Full-range controlled direct driven double inlet centrifugal fans;
- OTA1-PE version with low consumption EC technology motors available.
- Filtering sections composed by cell filters with polypropylene media, extractable from side removable panels, ISO 16890 ePM1 55% efficiency for the fresh air flow, and ePM10 55% efficiency for the exhaust air flow.
- Integrated pressure switch for dirty filter signal.
- WIth PCUS control is possible to activate remote controll by App in wi-fi network.

Accessories

ATG	Anti-freeze thermostat
BCR	Post-heating internal water coil
BER	Internal electric post-heating coil
BIOX	Purifying system Bioxigen®
CPA	Kit weather hood for external installation
DSF7/DSF9	High efficiency post-filtration
EXT	Kit for external installation
F7CF	High efficiency filters on exhaust air
KB	Kit bypass management
PCUS	Unit control panel
PCUSM	Unit control panel with modbus
PF	Additional pressure switch
QSC/QSA	CO2 sensor
RMS	3 dampers defrosting section
SBFR	Water cooling or heating coil section
SCMB	Modbus PCB for SIGB / Q
SIGB	Integrated management system on board
SM/SMR230	Damper actuators
3SM/SMR230	Actuators for RMS
SPC	N. 4 connections for circular ducts kit
SR	Regulation damper
SSC	Duct silencers
TUP	Wall mounted remote control panel (only with SIGB)
USD/USW	Humidity sensor
V2O	Kit 2-Way valve with on-off actuator
V3O	Kit 3-Way valve with on-off actuator
V3M	Kit 3-Way valve with modulating actuator
VSD	Constant air flow fans control

Versions

OTA1-P	Horizontal units with AC fans	**OTA1-PE**	Horizontal units with EC fans



Mod.		40	75	100	150	200	320
A	mm	1480	1450	1600	2000	2000	2100
B	mm	380	480	550	680	680	680
C	mm	800	990	1000	1290	1290	1400
Weight	kg	80	120	150	190	200	220

OTA1-P		40	75	100	150	200	320
Air flow	m³/h	400	660	1000	1500	2300	3100
Nominal external static pressure	Pa	170	120	160	190	240	190
Maximum external static pressure	Pa	170	120	160	190	240	190
Electrical power supply	V/ph/Hz	230/1/50					
Total full load amperage	A	1,50	2,90	6,00	6,00	14,00	14,00
Fans							
Motor type		AC					
(1) Speeds	n°	4	3	3	3	3	3
Absorbed Fan Power	kW	0,16	0,28	0,55	0,96	1,55	1,67
(2) Sound pressure	dB (A)	50	50	53	56	60	61
Heat exchanger							
(3) Winter thermal effic.	%	75,00	73,70	74,00	73,00	73,02	71,40
(4) Winter enthalpy effic.	%	60,00	58,20	58,80	62,50	62,70	55,50
(5) Summer thermal effic.	%	64,10	59,70	60,20	60,10	60,20	57,04
(4) Summer enthalpy effic.	%	56,70	55,10	55,70	58,30	58,50	52,50
(5) Dry thermal efficiency	%	75,10	73,70	74,20	73,10	73,20	73,00

OTA1-PE		40	75	100	150	200	320
Air flow	m³/h	400	660	1000	1500	2300	3100
Nominal external static pressure	Pa	170	120	160	190	240	190
Maximum external static pressure	Pa	375	250	535	550	447	400
Electrical power supply	V/ph/Hz	230/1/50					
Total full load amperage	A	2,40	2,40	9,00	9,00	9,00	10,00
Fans							
Motor type		EC					
(1) Speeds	n°	Multiple					
Absorbed Fan Power	kW	0,15	0,26	0,48	0,62	1,31	1,50
(2) Sound pressure	dB (A)	49	49	52	53	59	58
Heat exchanger							
(3) Winter thermal effic.	%	75,00	73,70	74,00	73,00	73,20	71,40
(4) Winter enthalpy effic.	%	60,00	58,20	58,80	62,50	62,70	55,50
(5) Summer thermal effic.	%	64,10	59,70	60,20	60,10	60,20	57,04
(4) Summer enthalpy effic.	%	56,70	55,10	55,70	58,30	58,50	52,50
(5) Dry thermal efficiency	%	75,10	73,70	74,20	73,10	73,20	73,00

(1) Multiple = Multispeed > 3
Man = Manual by selector switch or control panel; 0-10V = By potentiometer or control panel; VSD = Constant flow control or modulation by air quality or air humidity sensor
(2) Sound pressure level calculated at 1 m far from the service side of the casing, with ducted supply, exhaust, return and fresh air vents, at nominal conditions

(3) Outside air at -5° 80% RH; room air at 20°C 50% RH
(4) Outside air at 32° 50% RH; room air at 26°C 50% RH
(5) Refeer to EU 1253/2014 regulation: at nominal pressure; air conditions refer to EN 308 standard

OTAE1-RHP 35÷450

Heat recovery units combined to heat pump system

350 m³/h÷4500 m³/h

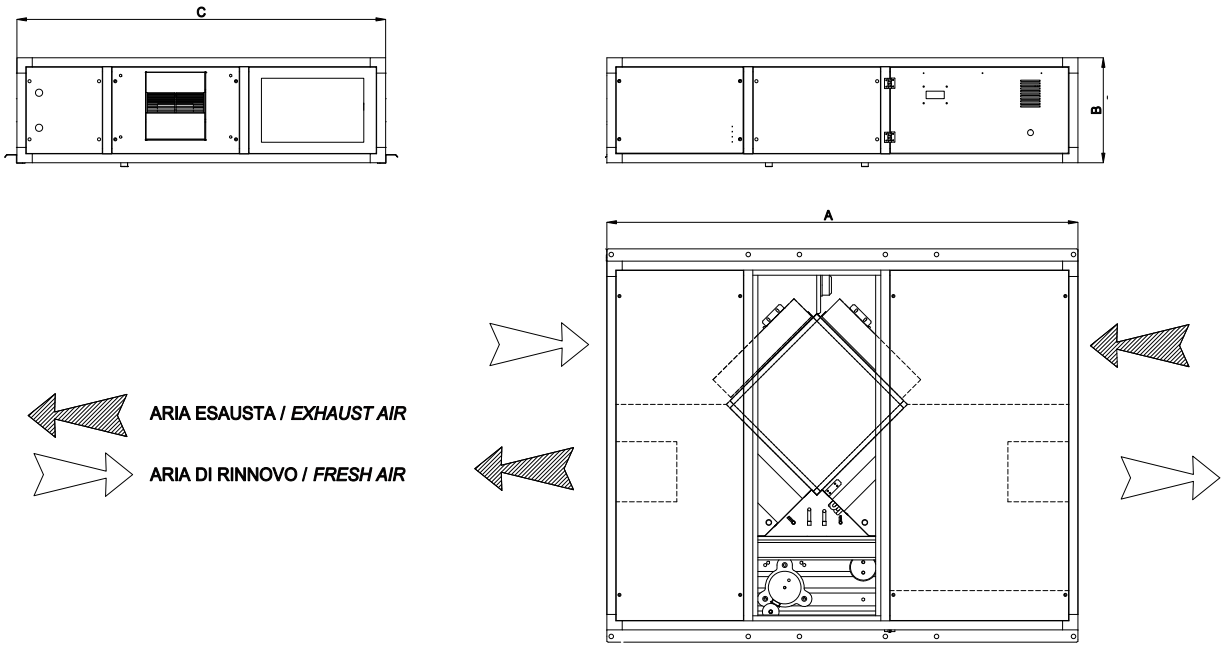
- Global COP >8
- HP mode with very low external temperature without pre-heating

Technical Features

- Series of 7 models for ceiling installation, composed of:
- Frame made from extruded aluminium alloy bars, connected by 3- way reinforced nylon joints.
- Sandwich panels, 23 mm thickness, galvanized steel inner skin and precoated outer skin; 45 kg/m3 foamed polyurethane heat and sound insulation.
- Wide surface ISO 16890 COARSE 55% efficiency synthetic filters on both air intakes; as an option, ePM1 70%.
- Air-to-air crossflow aluminium heat recovery.
- Air-to-air heat pump system (R410A) composed of electric driven on-off compressor, evaporating and condensing reversible copperaluminium finned coils, electronic expansion valve.
- Full-range controlled direct driven double inlet centrifugal fans.
- Low consumption EC technology motors and constant flow regulation mode for 100-450 models.
- Built-in electric box complete with electronics and control panel.
- Possible water or electric integration

Accessories

BER	Additional electric heater post air treatment
BIOX	Purifying system
CPA	Fresh air/exhaust air casing
F7CF	High efficiency filters F7 class
PCUSM	Unit control panel with modbus
PF	Air filter pressure switch
RMS	3 dampers section for low air fresh temperature up to -20°C, with modulating actuators
SBFR	Additional water coil section
SCMB	Modbus serial card
SPC1	Round air duct adaptor
SR230	ON-OFF external dampers with actuators
SR230R	ON-OFF external dampers with actuators spring return
SSC	Duct silencer
TUP	Wall mounted remote control panel
TTP	Weather canopy
V2O	2-way water valve kit with on/off actuator
V3O	3-way water valve kit with on/off actuator



OTAE1-RHP		35	60	100	150	230	320	450
A	mm	1540	1540	1840	1840	2040	2040	2240
B	mm	370	370	410	500	550	650	710
C	mm	1240	1240	1440	1440	1690	1690	1890
Weight	kg	122	125	185	228	267	281	329

Outside air / Return air / Supply air / Exhaust air

OTAE1-RHP		35	60	100	150	230	320	450
Air flow	m³/h	350	600	1000	1500	2300	3200	4500
Supply ext. pressure	Pa	270	285	295	290	365	265	270
Return ext. pressure	Pa	245	215	240	230	305	195	205
(1) Sound pressure	dB (A)	59	64	62	67	65	68	70
Power supply	V/ph/Hz	230/1/50					400/3/50	
Absorbed current	A	5,3	9,0	13,2	20,2	10,0	15,4	16,8
(3) Heating capacities								
Static recovery efficiency	%	62	51	50	50	50	50	50
Heat pump capacity	W	1740	2960	5010	7690	11090	16300	17300
Total heating capacity	W	3580	5790	9410	14390	21190	30260	36010
(4) Unit COP	W/W	10,90	9,60	9,20	8,60	8,90	9,90	12,60
(5) Cooling capacities								
Static recovery efficiency	%	56	50	50	50	50	50	49
Total cooling capacity	W	1810	2860	4890	7270	10580	15310	16990
Total cooling capacity	W	2210	3450	5840	8720	12830	18390	21440
(4) Unit EER	W/W	4,2	3,9	4,2	3,9	3,9	4,1	5,0

(1) Livello di pressione sonora valutata a 1 m da: presa premente canalizzata / presa aspirante / vano compressore.
(2) Riferite alla portata nominale
(3) Aria esterna -5°C 80% UR; aria ambiente 20°C 50% UR
(4) Esclusa la potenza assorbita per la ventilazione
(5) Aria esterna 32°C 50% UR; aria ambiente 26°C 50% UR

Accessories and regulation systems compatibility

The table below shows the compatibility between the various optional accessories and the regulation and control systems.

Versions and optional accessories		*Control and regulation system Unit control system with wall mount display*															
		PCUS															
ID. Configuration		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Version with standard fans	**AC fans**	●	●	●	●	●	●	●	●								
High efficiency EC fans version	**EC fans**									●	●	●	●	●	●	●	●
Internal electric pre-heating coil	**BER-PRR**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Internal electric post-heating coil	**BER-POST**		●				●				●				●		
Post-heating internal water coil	**BCR**			●				●				●				●	
Water cooling or heating coil section	**SBFR**				●				●				●				●
3 dampers defrosting section	**RMS**																
Damper actuators	**SM/SMR**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Kit bypass management	**KBP**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Additional pressure switch for return filters	**PF**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Anti-freeze thermostat	**ATG**			●	●			●	●			●	●			●	●
Kit 2-Way valve with on-off actuator	**V2O**			●	●			●	●			●	●			●	●
Kit 3-Way valve with modulating actuator	**V3M**			●	●			●	●			●	●			●	●
Purifying system Bioxigen®	**BIOX**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Modbus PCB for SIGB / Q	**SCMB**																
Modbus PCB for RTU	**Modbus RTU***	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Wall mount remote control panel	**TUP**																
CO2 sensor	**QSC/QSA**									●	●	●	●				
Humidity sensor	**USD/USW**													●	●	●	●
Kit for external installation	**EXT**																

* Modbus PCB for RTU Only valid for PCUSM control

Versions and optional accessories	ID. Configuration	Control and regulation system																													
		Integrated management system on board																Integrated management system wall mount box														
		SIGB																SIGQ														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Version with standard fans	**AC fans**	●	●	●	●	●	●	●	●									●	●	●	●	●	●	●	●								
High efficiency EC fans version	**EC fans**									●	●	●	●	●	●	●	●									●	●	●	●	●	●	●	●
Internal electric pre-heating coil	**BER - PRR**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Internal electric post-heating coil	**BER - POST**		●				●				●				●				●				●				●				●		
Post-heating internal water coil	**BCR**			●				●				●				●				●				●				●				●	
Water cooling or heating coil section	**SBFR**				●				●				●				●				●				●				●				●
3 dampers defrosting section	**RMS**									●	●	●	●	●	●	●	●									●	●	●	●	●	●	●	●
Damper actuators	**SM/SMR**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Kit bypass management	**KBP**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Additional pressure switch for return filters	**PF**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Anti-freeze thermostat	**ATG**			●	●			●	●			●	●			●	●			●	●			●	●			●	●			●	●
Kit 2-Way valve with on-off actuator	**V2O**			●	●			●	●			●	●			●	●			●	●			●	●			●	●			●	●
Kit 3-Way valve with modulating actuator	**V3M**			●	●			●	●			●	●			●	●			●	●			●	●			●	●			●	●
Purifying system Bioxigen®	**BIOX**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Modbus PCB for SIGB / Q	**SCMB**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Modbus PCB for RTU	**Modbus RTU***																																
Wall mount remote control panel	**TUP**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
CO2 sensor	**QSC/QSA**	●	●	●	●					●	●	●	●					●	●	●	●					●	●	●	●				
Humidity sensor	**USD/USW**					●	●	●	●					●	●	●	●					●	●	●	●					●	●	●	●
Kit for external installation	**EXT**																	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* Modbus PCB for RTU Only valid for PCUSM control

Legend

- Multi speeds
- Auto swing
- Lock Function
- Timer
- Dc Inverter
- Low temperature work
- Low noise fan
- Installations view
- Three BLDC motors
- Hight COP
- Sleep mode
- Odor & dust sensor
- On-Off
- Led display
- Digital signal processing
- Autorestart
- New V415 control
- Compatible with radiant panelsand radiators
- Super Slim
- Flusso a 360°
- Optical detector
- Hot gas valve
- Electric heater
- Self-diagnosis
- Hight EER
- WiFi
- Follow-me function
- Turbo mode
- Hydrophilic aluminium fin
- Anti-rust cabinet
- 3-Way valve
- Hot Sanitary Water
- Built In Hydronic Group
- Reciprocating compressor
- Recyclable material
- Super DC Inverter
- Digital Scroll
- Inverter pump
- Class A Pump
- HP Scroll
- Shell and tube
- Plate
- Rotary
- DC Compressor
- Working logic
- EVI Scroll
- Screw
- Scroll Compressor
- Radial
- Variable rotation pump
- Silver Ions & Bio Filter
- Steam injection technology
- Filter cleaning monitor
- Catechin filter
- Formaldehyde filter
- Filter changed monitor
- Plasma Filter
- Self-cleaning function
- Refrigerant
- Refrigerant
- Refrigerant
- Refrigerant
- Energy class
- While stock lasts
- Hot water up to 40°C
- Build-in Drain water pump
- Water condensed available
- Solar Ready
- Photovoltaic predisposition

Note

Note

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