Galletti
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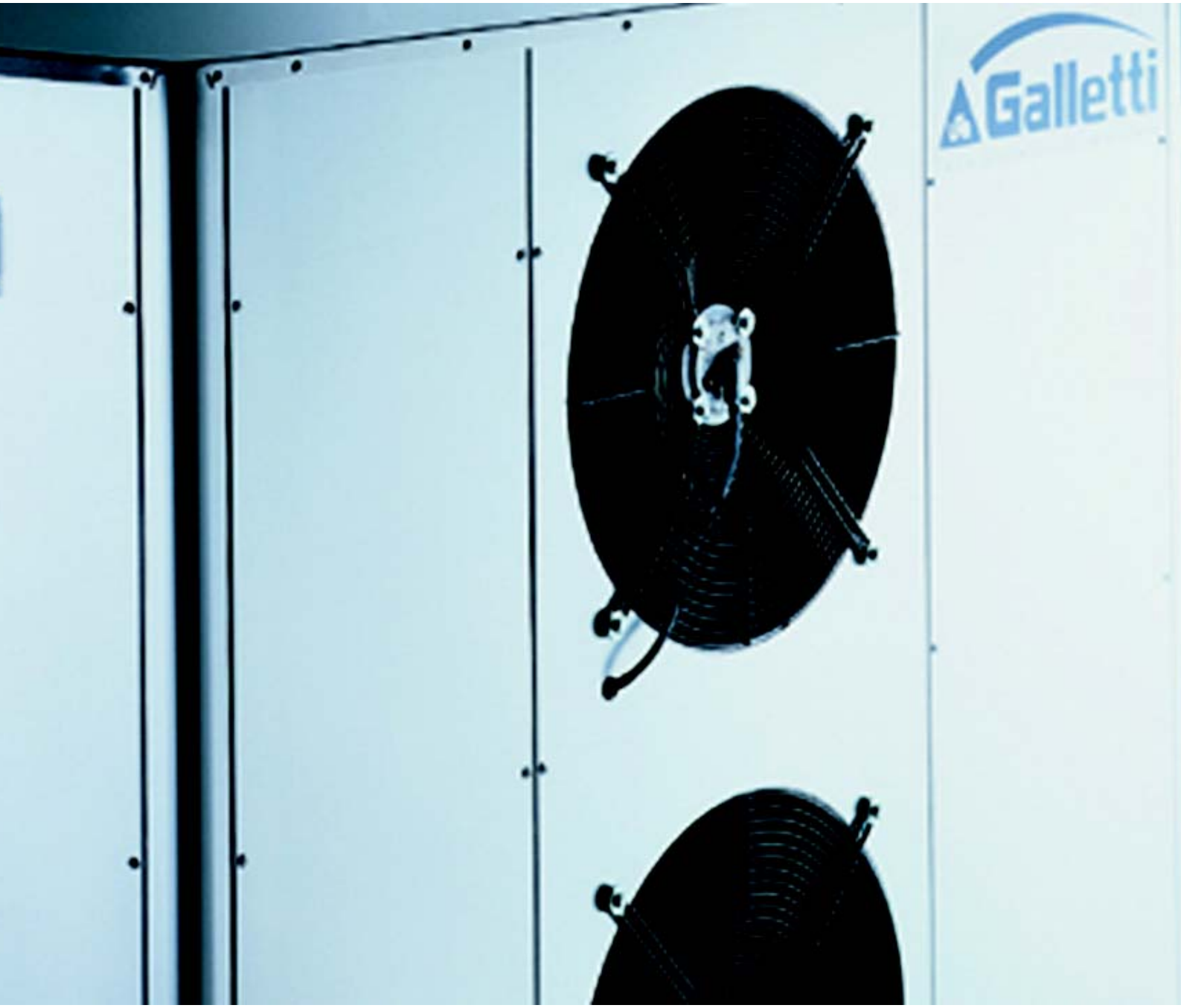
MCA Air condensed water chillers and heat pumps



Galletti
AIR CONDITIONING

Constructive features

The water chillers and heat pumps **MCA** range has been designed for outdoor installation for comfort air conditioning application. The wide range of version and components available, makes the installation of the **MCA** series really easy.

Microprocessor Control

The μChiller control panel allows the full management of the **MCA** units and is easly reachable throw a polycarbonate dorr, with IP 65 protection degree.

Main functions:

- Control of the water inlet temperature in the evaporator
- Management of the defrosting (**MCA-H)**
- Control of the fan speed (optional on the cooling only **MCA-C**)
- Full management of the alarms
- Possibility to be connected to the RS485 serial board for supervision and teleassistance
- Connection with an external terminal

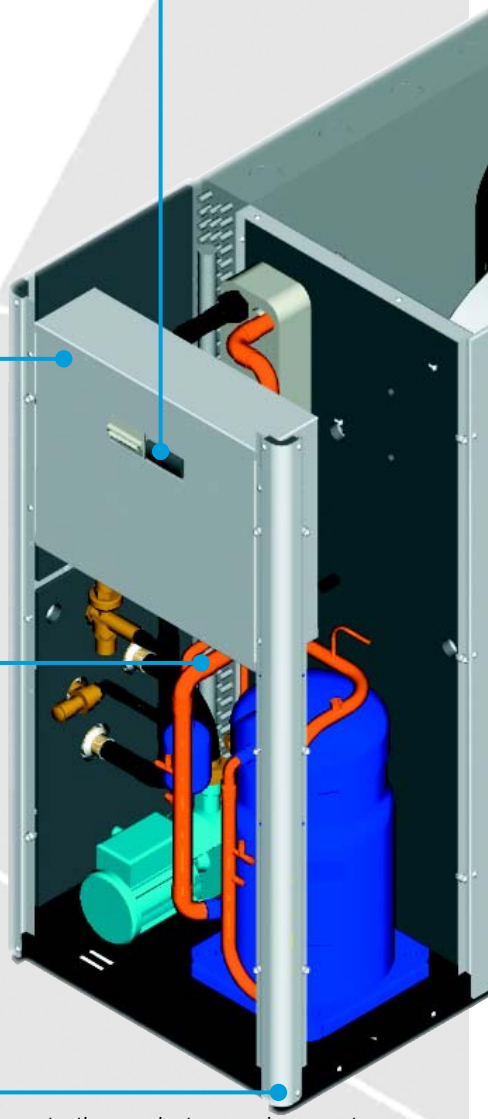
Controlled devices:

- Compressors
- Fans
- Cycle reversing valve (only for heating pump)
- Circulating pump
- Antifreeze resistence (optional)
- Signalling rele allarms.

Electric Panel

The electric panel is built and wired according to the CEE 73/23 directive, to the 89/336 directive for the electromagnetic compatibility and releted standards.

Built with steel panels sheet, complety closed and protected by the enclosing panels of the unit.



Refrigerant circuit

- Scroll compressor fitted in a sound proofed compartment.
- Inox braze - welded plate heat exchangers.
- Finned bolck condenser coil with copper pipping and aluminium fins .
- Dehydration filter.
- Refrigerant sight glass with humidity indicator.
- Thermostatic valve with external equalization and integrated MOP function.
- Cycle - reversing valve (heat pump models only).
- Check valves (heat pump only).
- Liquid receiver (heat pump only).
- High and low pressure switches.
- Safety valve.
- Schrader valves for checks and/or maintenance.
- Refrigerant manometers (options).

Structure

Built with a galvanised sheet steel supporting base and enclosing panels made of peraluman for protection against corrosive agents. All bolts, screws and fastening devices are made of not oxidizable materials, stainless steel a carbon steel protected by a passivity treatments.

The compressor compartment is completely sealed with acoustics insulation and may be accessed on 3 sides thanks to the easy remove of the panels that greatly simplify maintenance and/or ispections.

Configurations

3 different hydraulic kit makes **MCA** range ready for the direct installation to the plant:

MCA CB e **MCA HB** version provided with evaporator only

MCA CP e **MCA HP** version provided with evaporator and expansions vessel

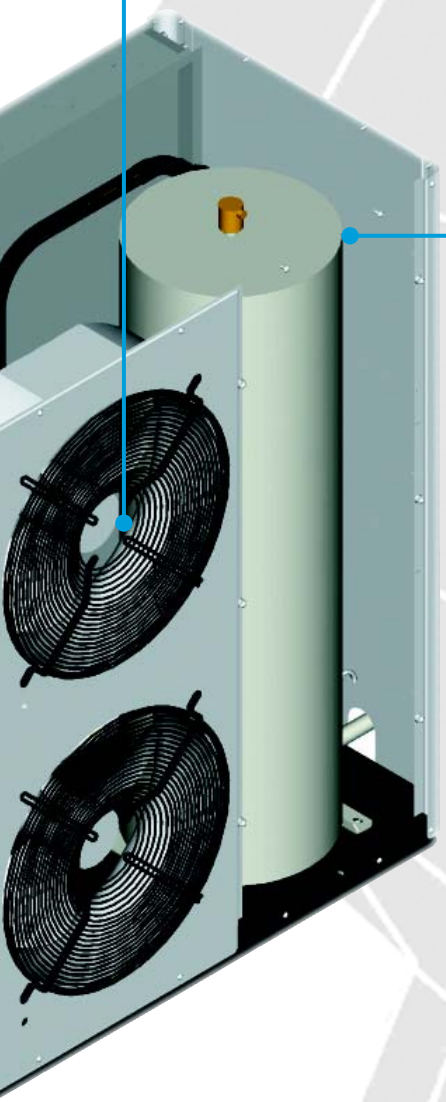
MCA CS e **MCA HS** version provided with evaporator, expansions vessel and buffer tank

Ventilation section: Efficient and silent

The units comprise axial - type fans with airfoil - shaped blades, statically and dynamically balanced on two levels provided with a protective outlet grille with interposed rubber vibration dampers to riduce the propagation of vibrations during speed modulating phases (optional).

The blades are made with thermoplastic material (model 10 out 21).

All the motor are single-phase and are protected with a thermal cutout. All are equipped with low - noise 6 pols motors (900 rpm) with external rotor type to ensure maximun energy efficiency and magnetic noise reduction.



Taylored hydronic kit:

To simplify the connection of the **MCA unit to user plant , 2 different hydraulic kit are available.**:

- Kit including water pump and expansion vessel.
- Kit including water pump and expansion vessel and buffer tank.

The main features are:

- High performance pump with extended warning range: suitable to operate with glycol mix up to 40%.The pump is fitted in the compressors vane, acoustically insulated and of easy access thanks to the openable panels.The pump is provided with internal thermal protection.
- Expansion vessel
- Water safety valve
- Automatic filling system
- Automatic vent valve
- Differential pressure switch and antifreeze thermostat with probe on leaving water side.
- Buffer tank dowstream to the evaporator, best solution to reduce the chilled water variation due to the compressor ON/OFF operation.

Available options

Refrigerant gauges

Antifreeze kit

Electronic expansion valve

Partial heat recovery system 25%(cooling only model)

Special treatment on coils (copper/copper, cataproresys,Blygold)

Available options

Remote control board (PCD)

Simplified remote board (PDCS)

Condensing pressure control with fans speed variation(standard in heat pump version).

Antivibration mounting.

Protecting grid for condensing coils.

RATED TECHNICAL DATA

MCA-C cooling version		10 M	10	12	14	16	21	25	30	37	50	60
Cooling capacity	kW	9,6	9,6	11,2	13,7	16,6	20,1	23,8	32,1	35,3	49,7	60,1
Power supply	V	230	400	400	400	400	400	400	400	400	400	400
Power input	kW	4,09	3,99	5,04	5,70	6,76	8,45	10,00	12,62	14,98	18,7	24,1
Available head	kPa	151	151	154	134	144	132	130	126	125	78	121
Buffer tank	liters	30	30	30	30	82	82	125	125	125	210	210
Sound pressure	dB A	41	41	42	43	44	46	50	51	52	53	53
Overall dimensions - **height H**	mm	1128	1128	1128	1128	1228	1228	1390	1390	1390	1589	1589
Overall dimensions - **lenght L**	mm	1120	1120	1120	1120	1400	1400	1500	1500	1500	1989	1989
Overall dimensions - **width P**	mm	578	578	578	578	628	628	1050	1050	1050	1202	1202
MCA-H heat pump		10 M	10	12	14	16	21	25	30	37	50	60
Cooling capacity	kW	9,2	9,3	10,8	13,2	16,5	19,3	22,9	31	33,9	48,2	58,3
Heating capacity	kW	11,2	11,1	12,9	16,0	19,6	23,1	26,8	37,5	41,8	57,1	71,4
Power supply	V	230	400	400	400	400	400	400	400	400	400	400
Power input	kW	4,10	4,00	4,64	5,56	6,88	8,28	10,05	12,86	14,62	19,60	24,40
Heating available head	kPa	135	136	140	111	125	112	117	107	103	62	95
Cooling available head	kPa	155	154	157	138	145	136	134	130	130	81	125
Buffer tank	liters	30	30	30	30	82	82	125	125	125	210	210
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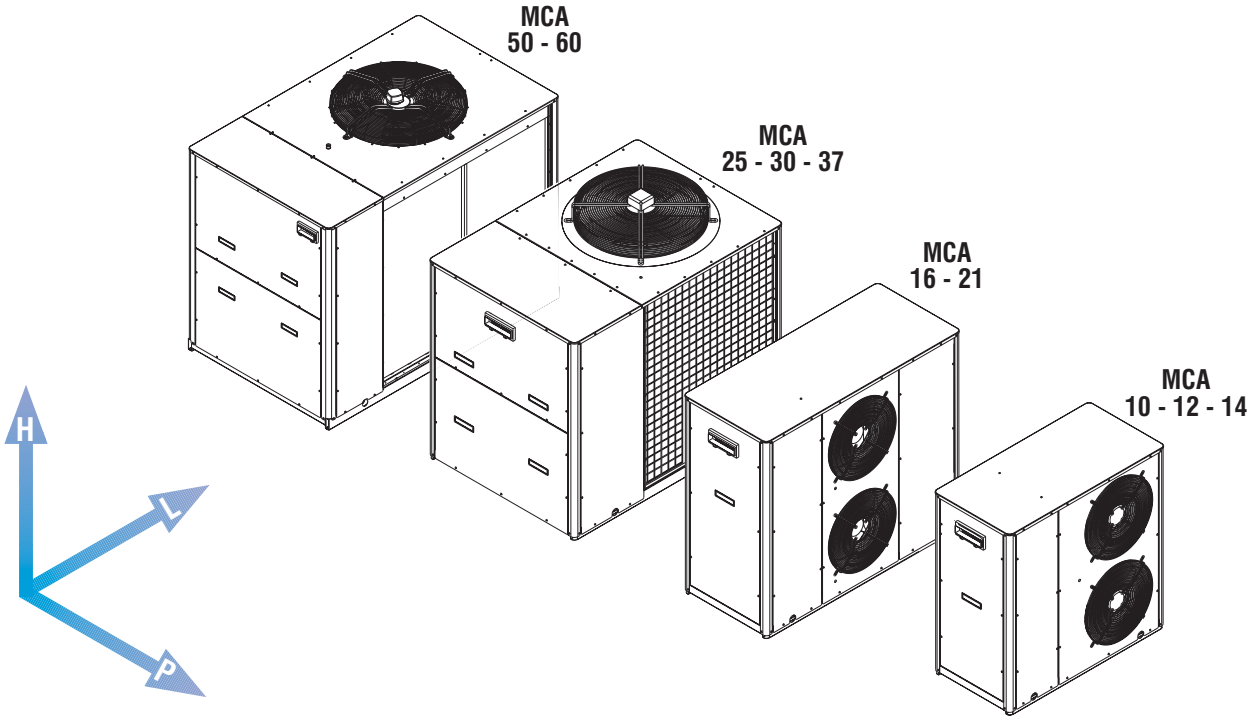
Cooling capacity: evaporator water temp. 12 / 7°C - air temp. to the condenser 15°C
Heating capacity: condenser water temp. 40 / 45°C - air temp. to the evaporator 15°C
Sound pressure: calculated in free field conditions,10 m distance, directional factor 2



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Galletti is partecipating to the Eurovent certification programme

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV
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