

Industrial Chiller

Air Cooled Water Chiller - MRS

MRM industrial grade water chillers are available in cooling capacity range from 13 to 75 kW, with water working temperatures ranging from 0°C to 25°C and suitable for indoor or outdoor installation. The standard configuration is designed for an ambient temperature up to 45°C

These units are equipped with up to four hermetic rotary Scroll compressors in one or two refrigeration circuits with ozone-friendly refrigerant R410A, axial-flow fans and microchannel full-aluminium condenser.

Characterized by very small footprints, these chillers are particularly suited for installation close to processing machines.



Versions

- ▶ Fan Type
 - ▶ **AC:** on-off asynchronous fans
 - ▶ **EC:** brushless EC variable speed fans
 - ▶ **EH:** high pressure EC fans, suitable for ducting indoor installation
- ▶ Evaporator Type
 - ▶ **BP:** Brazed-plate
 - ▶ **S&T:** shell-and-tube
- ▶ Water Configuration Type
 - ▶ **N:** no pumps and tanks
 - ▶ **M:** with evaporator pump only
 - ▶ **P:** with tank and process pump

Advantages

- ▶ Reduced footprint
- ▶ FC version with integrated Free Cooler (saving more than 60% of energy)
- ▶ Microchannel condenser and free cooler with low refrigerant charge and with low air pressure drop
- ▶ Easily cleanable microchannel condenser using pressure washer



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Technical Features

Chiller System

- ▶ Scroll compressor;
- ▶ 1 refrigerant circuit;
- ▶ R410A refrigerant;
- ▶ High and low pressure gauges

High efficiency microchannel aluminium condenser

- ▶ Higher efficiency and performances
 - ▶ Heat exchange from +20% to +40% compared with finned tube models
 - ▶ Reduction of air-side pressure drops
 - ▶ Lower weight and reduced dimensions
 - ▶ Thinner profile than finned tube models
 - ▶ 60% lower weight compared to finned tube models
- ▶ Proven reliability
 - ▶ Robust design and easy to clean with pressurised water
 - ▶ Process and materials proven over time
 - ▶ Engineered with long-life aluminium alloys
- ▶ Low cost
 - ▶ Lower refrigerant charge
 - ▶ Optimised material cost

Fan Type

- ▶ AC: asynchronous on-off fans
 - ▶ For temperatures greater than -15°C
- ▶ EC: brushless fans with variable speed
 - ▶ For ambient temperatures greater than -25°C
- ▶ EH: high head EC fans
 - ▶ Suitable for ducting on indoor installations (heat recovery)
 - ▶ For ambient temperatures greater than -25°C

Evaporator

- ▶ BP: brazed plates
 - ▶ All configurations available
 - ▶ SS316L copper brazed plates
 - ▶ Oversized exchange surface
 - ▶ Reduced dimensions and high-efficiency herringbone pattern
- ▶ S&T: shell
 - ▶ Available on MRS121-161-191 no-tank configurations only
 - ▶ Cleanable
 - ▶ Gas and water low approach
 - ▶ Carbon steel body and copper pipes
 - ▶ Anti-corrosion extra thick design



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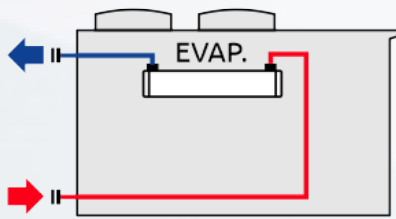
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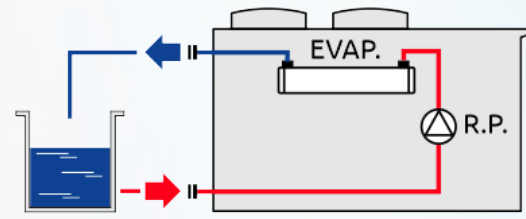
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Technical Features

- ▶ Self water-filling
- ▶ Chilled-water storage tank pressurized and insulated
- ▶ Galvanized steel frame and panels, painted with polyester powders
- ▶ Stainless steel pumps



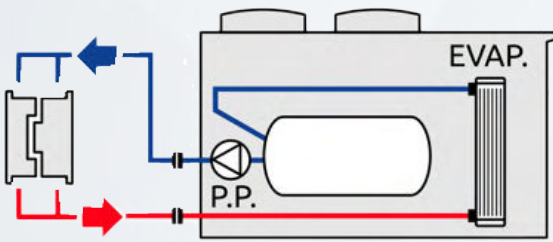
N: without pumps and tank



M: with evaporator's pump only

Process pumping stations available on request for GPP/GPV series, with and without inverters, recirculating pumping stations and its storage tanks.

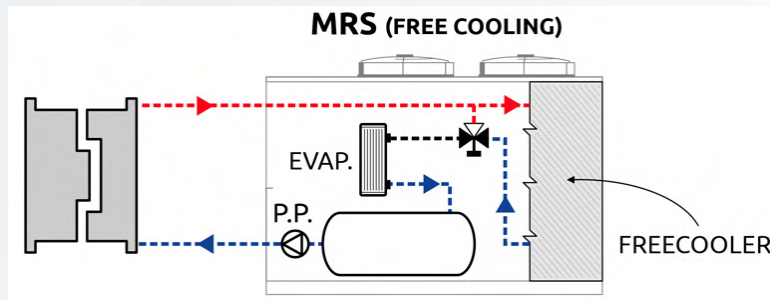
Process pumping stations available on request for GPP/GPV series, with and without inverters.



P: with tank and process pump

Built-in Freecooling option

Some versions are available with built-in freecooler system. This version, using the ambient air, allows to cool the wa-ter from the process, by shutting down, partially and/or completely, the refrigerating unit, resulting in energy savings.



Options

- ▶ Cold Climate for no glycol systems when $T_{amb} < 0^{\circ}\text{C}$
- ▶ Electrical cabinet heater for glycol systems when $T_{amb} < 0^{\circ}\text{C}$
- ▶ Remote control with 30m of cable
- ▶ Y water filters
- ▶ Wheels
- ▶ Opened loading tank option
- ▶ Metal air filter on condenser



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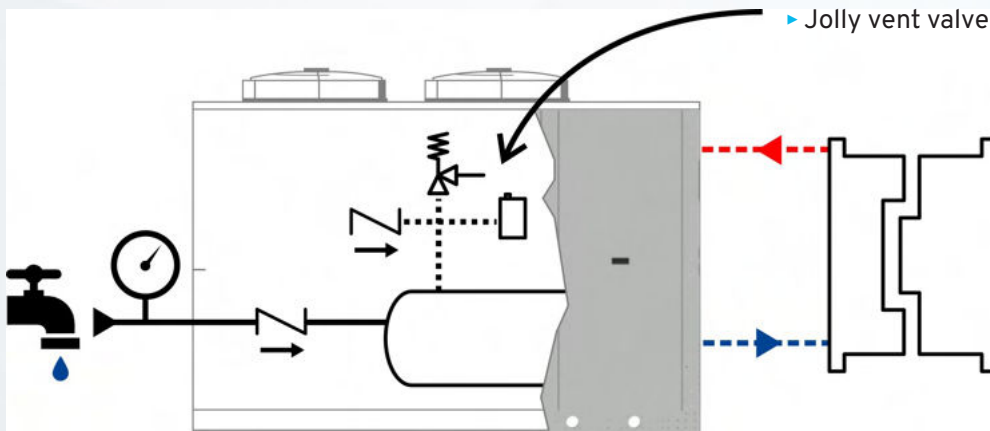
Hydraulic Supply

Standard models with internal tank "P"

- ▶ Filling by water system
- ▶ The pressure of the inner tank is determined by the water supply
- ▶ External water and glycol charging kits available

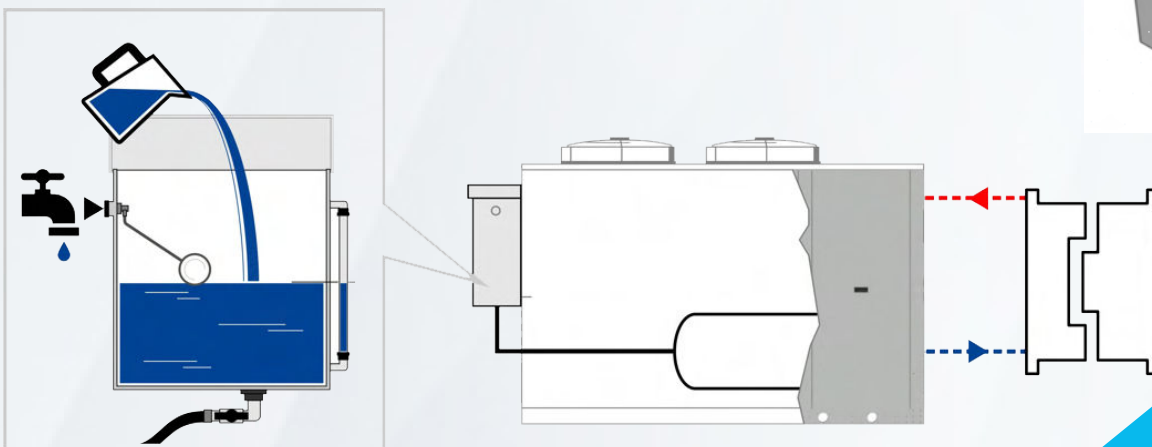
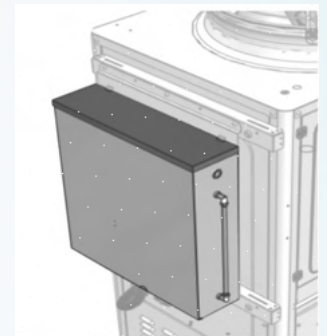
Safety Devices

- ▶ Vacuum breaker valve
- ▶ Safety valve
- ▶ Jolly vent valve



Models with internal tank "P" and tray for manual loading

- ▶ Consisting of a stainless steel tray with flap lid
- ▶ Allows manual loading of water, or water-glycol mixture
- ▶ Allows automatic loading with float if connected to water system
- ▶ Equipped with internal visual level indicator



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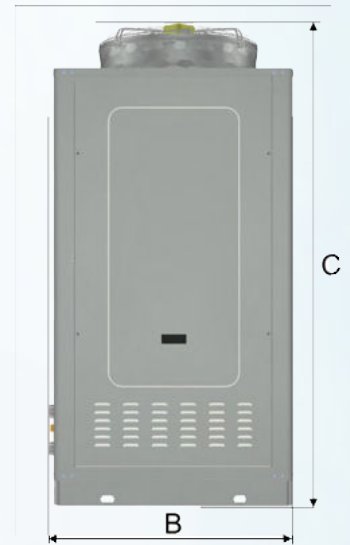
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Technical Data - 60Hz

Industrial Chiller Air - MRS (Heavygel)										
Model		21	31	51	71	91	121	161	191	201
A	mm	820	820	1,360	1,360	1,360	1,810	1,810	1,810	1,810
B	mm	688	688	690	690	690	890	890	890	890
C	mm	1,631	1,631	1,827	1,827	1,827	1,865	1,865	1,865	1,865



Order Code

N M R S 0 2 1 0 S A P P 0 0

Product name ———

021 071 161
031 091 191
051 121 201

Size ———

Assembly revision ———

Standard temperature ———

A = AC fans – on-off fans
C = EC fans – brushless fans
H = EH fans – high pressure brushless fans

Fans ———

P = Brazed plate
T = Shell & tube

Evaporator type ———

M = chiller + evaporator pump
P = chiller + process pump + tank

Water configuration ———

0 = Not installed
F = Installed

Free cooling ———

0 = 400V-50Hz
1 = 460V-60Hz
3 = 380V-60Hz
5 = 460V-60Hz UL electrical panel

Power supply as voltage/frequency combination ———

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