



CLIMA
PROCESSOR

a CMC Rail division.

PRECISION AIR CONDITIONING AND CHILLER
UNITS FOR TECHNICAL APPLICATIONS

Compact Series

October 2024



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WHO WE ARE:

The CMC Group embarked on its journey in 1963 In Cologno Monzese, Italy, commencing operations with a focus on the production of steel structures. Evolving over the years, the Company delved into the railway market in the 1970s and became a specialist in manufacturing metal structures for locomotives, railway coaches, trams, and metro systems.

In the 80s, CMC expanded its services to include design, collaborating closely with customers to industrialize products using 3D-CAD support and FEM calculation.

Venturing into airport infrastructure in the 90s, CMC introduced air conditioning units and various products like telescopic air ducts and cable retrievers. Over the last decade, the company has excelled in developing structural components for diverse railway vehicles, demonstrating innovation in industrialization techniques derived from the aviation field.

- 2 Certified according to IRIS, EN ISO 9001, EN ISO 3834-2, and EN 15085-2, CMC has garnered numerous orders from leading international players in the railway market, establishing itself as a dynamic and quality-focused entity.





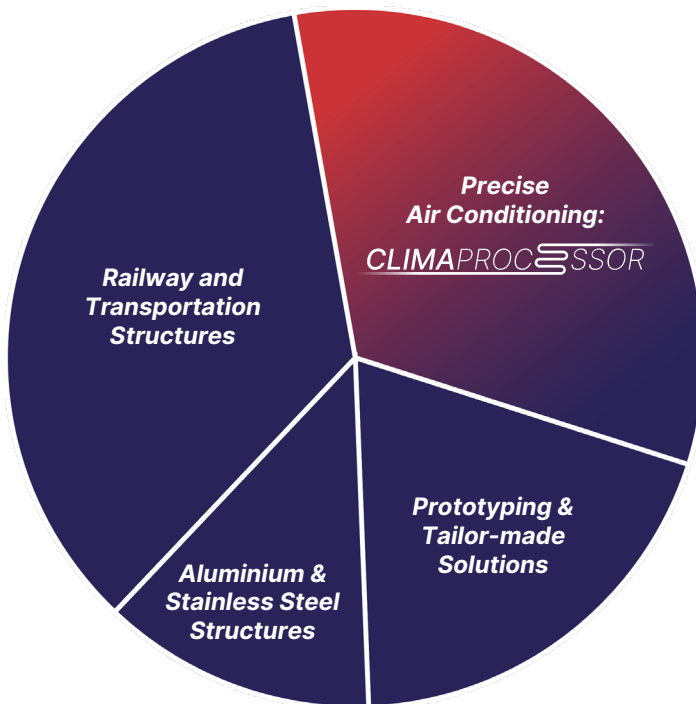
WHAT WE DO:

CMC is at the forefront of precision air conditioning systems, particularly in the realm of data centers and computer rooms. Branded as *"Clima Processor"*, the product range encompasses a variety of units, including those based on direct expansion or chilled water, available in both cabinet and rack configurations.

The Company's commitment to innovation is evident in its industrialization techniques, employing not only welding methodology but also assembly technology featuring rivets and structural adhesives. This approach has been instrumental in securing projects and orders from major international players in the railway market.

CMC stands out for its comprehensive services, offering design collaboration with customers, ensuring industrialization with modern technologies, and maintaining stringent quality standards. The company's diverse portfolio, spanning from steel structures for railways to cutting-edge air conditioning solutions, showcases its adaptability and commitment to excellence.

MAIN APPLICATION SECTORS:



50

employees.

10'000 m²

total indoor production area,
divided into 3 buildings.

400 km

welding done every year.

OUR NUMBERS:

1'300+

Clima Processor delivered.

2'000 t

of metals
(aluminium stainless steel and
carbon steel)
processed every year.

4

working lines:

LASER CUTTING,
CNC machining for extruded profile,
4 HYDRAULIC PRESS,
WELDING ROBOTS.

QUALITY CERTIFICATIONS:



CMC Rail has successfully obtained a multitude of certifications from renowned Certification Bodies. In the railway sector, as in all high-tech industries, the commitment to delivering quality products goes beyond mere production. Achieving and maintaining certifications from prestigious bodies exemplifies our dedication to excellence, adherence to industry standards, and assurance of product reliability. We understand that in the dynamic and exacting field of railway technology, where precision and safety are paramount, certifications serve as a testament to our unwavering commitment to delivering solutions of the highest caliber.



WELCOME TO

CLIMAPROCESSOR

start exploring our products!

The Clima Processor Compact series represents an innovative and advanced line of precision temperature control systems designed for the specific needs of data centers and computer rooms. Within this comprehensive product range, the Compact Series, composed by **four different series with integrated condensing unit**, designed for **indoor** and **outdoor** applications, stands out as a sophisticated solution tailored for efficiency and space optimization.

Space-efficient design, precision cooling, intelligent controls and easy maintenance makes it a versatile and reliable choice for businesses seeking efficient solutions for their data center and computer room cooling needs.

All our conditioning units is produced according to customer specifications, allowing for complete customization and extras.

OUR COMPACT SERIES:

8



10 REASONS TO CHOOSE A COMPACT CLIMA PROCESSOR:

1. **Fast and easy installation:**

With our compact design we are able to offer You an extremely easy installation; once arrived, most of our machines are ready to start in 5 hours.

2. **No HVAC technician needed for setup:**

We deal with the whole refrigerating system, which is sealed and tested before shipping, so the HVAC technician is not needed in the moment of installation.

3. **Low Weight design:**

We specifically designed the compact series in order to minimize the weight; this allowed us to create a two suspended series (CK and RM) which keeps the floor free.

4. **Fully accessible for easy inspection and service:**

A regular maintenance are fundamental to improve the useful lifetime of the products. For this reason our machines are easy accessible for servicing.

5. **Designed to minimize the carbon footprint:**

Sustainability is a fundamental aspect for us. All our machines uses R513a or R410a refrigerant, which has a low GWD. We also use high quality materials (aluminium and self-healing zinc-plated steel) which makes the machines extremely durable.

6. **Reduced noise level;**

7. **Possibility to implement freecooling system:**

The freecooling mode allows to reduce electric consumption up to 70% and, consequently, the environmental impact by directly using the external air without cooling it down when outside conditions allows it.

8. **BLDC inverter compressor version available;**

9. **Smart Connectivity;**

10. **Fully customizable to meet client's need:**

All our clima processor production start only once the order is placed, so they are fully customizable for every needs.

THE PRODUCTS:

Cooling the way You want it.

For indoor application:

CM and CM-W series:

The Clima Processor “CM series” is a compact unit specifically designed for **indoor application**. This is the **freestanding version**, best for technical application like computers rooms, data centers, digital telephone exchangers, switch rooms, weather stations, museums, medical laboratories, diagnostic scanners as well as any other application with sensible heat to be dissipated.

RM and RM-W series:

The “RM” Clima Processor series is a compact **indoor ceiling-mounted** conditioning unit. Designed to maintain precise temperature and humidity condition into shelters used for technical purposes, allows to maintain the external dimensions of the containers unchanged, and at the same time it not reduce the interior floor space.

For outdoor application:

CK and CK-W series:

The “CK series” is a compact direct expansion Close Control air conditioning or water-cooled **wall-mounted** unit for **outdoor installation**. Designed for battery storage, energy converters, and telecommunication shelters (available in 48V/24V versions), the unit is optimized for outdoor applications.

RT and RT-W series:

The “RT series” is a compact **outdoor rooftop** conditioning unit. Designed to maintain precise temperature and humidity condition into shelters used for technical purposes, allows to take advantage of the whole interior volume of the container.

AIR OR WATER ?

*You choose, We deliver.
Your needs, Our commitment.*

Within our Compact Series, each machine is available in both **air cooler** and **water cooler** (chiller) versions. These two technologies provide consistent and controlled cooling, especially suitable for maintaining the correct temperature and humidity. For this reason, the Clima Processor Compact Series is chosen for technical applications such as server room cooling, data centers, and computer rooms, as well as for technical spaces in hospitals, museums, battery rooms, and more.

Each machine is customized according to customer needs, making us the best choice for all your requirements.

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■ **AIR COOLER** series

pag. 14

■ **WATER COOLER** series

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A close-up, high-contrast photograph of a large industrial air cooler unit. The image shows a circular fan with multiple blades, some of which are in sharp focus while others are blurred, creating a sense of depth. The metal surfaces are highly reflective, with bright highlights and deep shadows. The overall color palette is dominated by dark blues and greys, with some lighter metallic tones. The text "AIR COOLER UNITS." is overlaid in the lower-left quadrant in a clean, white, sans-serif font.

AIR
COOLER
UNITS.

THE ADVANTAGES OF AIR COOLING:

There are several advantages to choosing air cooling over water cooling in industrial cooling systems for technical applications.

Here are some of the key benefits:

- **Lower Complexity:**

Air cooling systems are generally simpler to install and require fewer components than water cooling systems. This can simplify system design and maintenance;

- **Lower Initial Cost:**

In many cases, air cooling systems are more cost-effective to implement than water cooling systems. The initial cost can be a decisive factor, especially in environments where the budget is limited;

- **Simpler Maintenance:**

Air cooling systems tend to have simpler maintenance requirements compared to water cooling systems. There's no need to deal with fluids, pipelines, or pumping devices;

- **No Risk of Water Leaks:**

Unlike water cooling systems, air cooling systems do not pose the risk of water leaks that could damage sensitive electronic equipment;

- **Ease of Implementation:**

The installation of air cooling systems is generally more straightforward and does not involve the complications associated with managing water, such as the need for ducts, pumps, and radiators;

- **Environment Adaptability:**

Air cooling systems are often more adaptable to variable environmental conditions without compromising cooling efficiency;

- **No Corrosion Concerns:**

While water cooling systems may be subject to corrosion issues, air cooling systems generally do not carry this risk.

CM:

THE INDOOR FREESTANDING VERSION.

The Clima Processor "CM series" is a compact unit specifically designed for **indoor application**. This **freestanding version** is best for technical application like computers rooms, data centers, digital telephone exchangers, switch rooms, weather stations, museums, medical laboratories, diagnostic scanners as well as any other application with sensible heat to be dissipated.

The series is composed by a variety of dimensions, with a cooling capacity going from 3kW up to 25kW. It is always possible to implement the cooling capacity up to any level requested. It is possible to implement the unit with a freecooling mode, which allows to reduce the energy consumption up to 70%, and by consequence the environmental impact: the Clima Processor can automatically switch to a freecooling mode when the external condition allows it.

The dimensions are extremely compact. Depending by the cooling capacity, they goes from 75cm x 67cm x 198cm high to 120cm x 100cm x 220cm high, which is the biggest standard solution.

The installation is extremely simple, and the complete installation, when the setup is ready, requires no more than 5 hours. Furthermore, this compact solution require no HVAC technician for the setup.

We also offer thermal analysis in order to help you choosing the best configuration for every situation.



CM L16 dw1 fc



GENERAL APPLICATION:

The CM series is specifically designed, but not limited, to:

- Computers Rooms
- Data Centers
- Tel-Co Shelters
- Switch Rooms
- Weather Stations
- Museums
- Medical Laboratories
- Diagnostic Scanners
- *Others*

CUSTOMIZATION & ACCESSORIES:

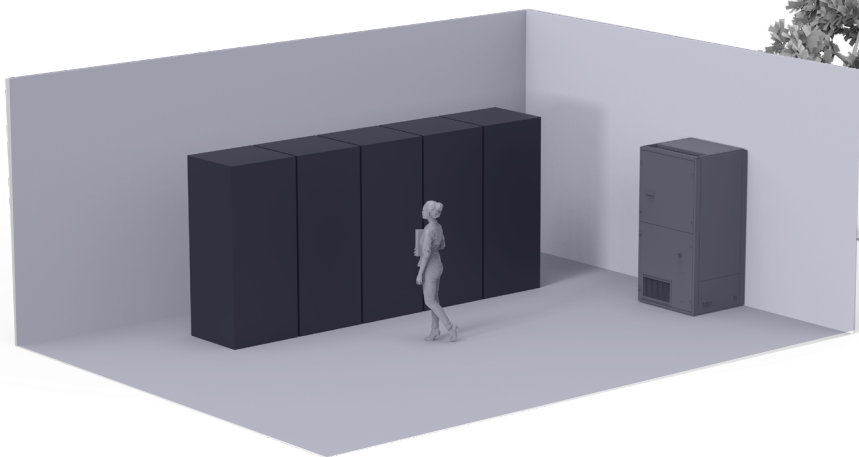
All our solutions are custom-made for every client. We can provide a wide variety of customizations and extras to meet each client's exact specifications.

We offer you all our experience and know-how to find the best solution for every application. All our products are CE certified, and we can also provide US or Japanese standards. Additionally, upon request, we can conduct tests in our climatic chamber.

- Heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- High Prevalence EC fans
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Fire damper
- Fresh air intake
- Adjustable basement
- Air filters F5, F7, F9
- Special coils design / surface treatment
- Sandwich panels
- Low noise insulation
- Reinforced insulation (Certified EN13501-1 class A1/A0 s0 d0)
- Special RAL color
- R134a or R410A refrigerant

Other customized solutions are possible upon request.

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CM SERIES

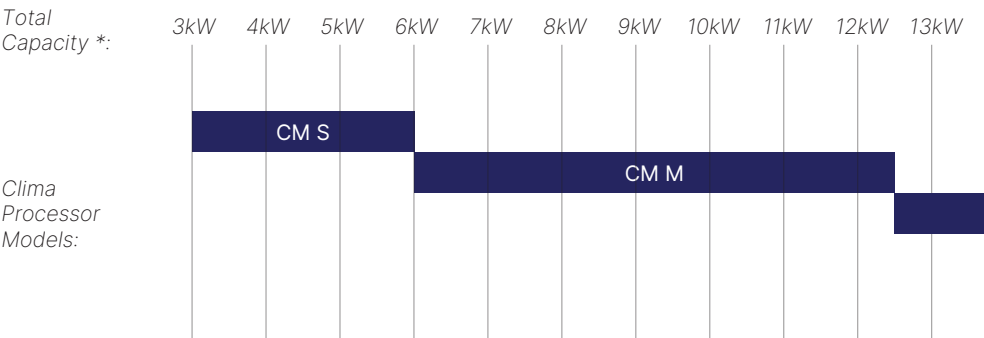
INFORMATION FOR INSTALLATION:

The installation of the Clima Processor CM serie is very simple and does not require any HVAC technician. Being a compact unit, complete with an internal condenser, it does not require any installation on pre-existing circuits. Since fresh air is needed to cool the condenser or for freecooling operation, **the unit must be installed either near a wall directly connected to the outside** or alternatively, the rear air intake can be connected to an existing duct that is connected to an external air source.

Upon request, we can create ducting systems that allow for the intake of fresh air from the outside. In this case, for a linear ducting system without variations in the airflow geometry, the maximum distance achievable is up to 7.5 meters. For further information, please do not hesitate to contact our technical office.

The installation does not require any particular pre-existing circuits, but only an electrical connection and a drain for condensate water. Being a freestanding unit, it does not require wall fixing. Instructions for creating wall outlets will be provided for installation.

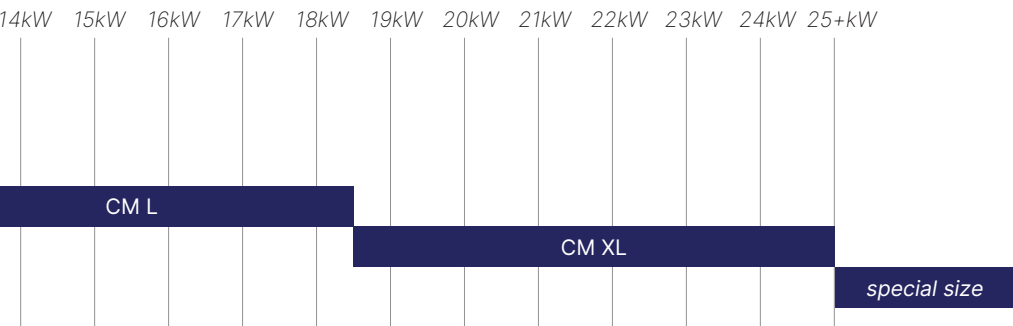
TECHNICAL INFORMATIONS:



**The Total Cooling Capacity depends on the external temperature/humidity conditions, as well as the internal conditions. The depicted ranges indicate the minimum and maximum values achievable with the configuration of that specific machine.*

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	CM S	CM M
Treated airflow	from 800 to 1'200 m³/h	from 1'200 to 2'400 m³/h
Heating Mode (extra)	Yes, Electrical	Yes, Electrical
Freecooling (fc)	On request	On request
Airflow configurable	Yes	Yes
Refrigerant type	R513a (or R410a)	R513a (or R410a)
COP	2,5 - 3,5	2,5 - 3,5
BLDC Compressor	On request	On request
Dimensions (LxWxH)	750mmx670mmx1980mm	850mmx870mmx2180mm
Weight (range)	200-260 kg	290-310 kg



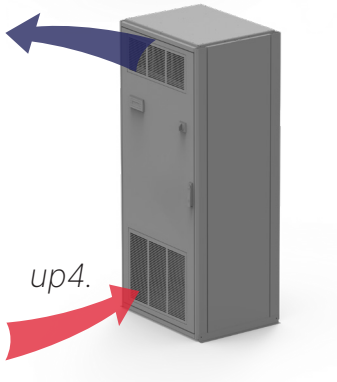
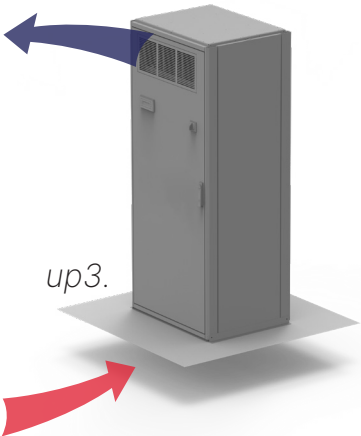
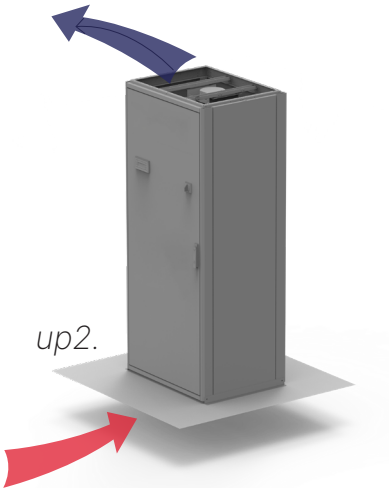
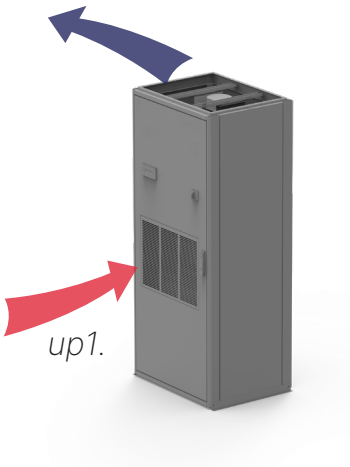
CM L	CM XL	CM special size**
from 2'400 to 3'200 m³/h	from 3'200 to 4'800 m³/h	-
Yes, Electrical	Yes, Electrical	Yes, Electrical
On request	On request	On request
Yes	Yes	Yes
R513a (or R410a)	R513a (or R410a)	R513a (or R410a)
2,5 - 3,5	2,5 - 3,5	-
On request	On request	On request
1000mmx870mmx2180mm	1200mmx1000mmx2200mm	-
300-320 kg	350-510 kg	-

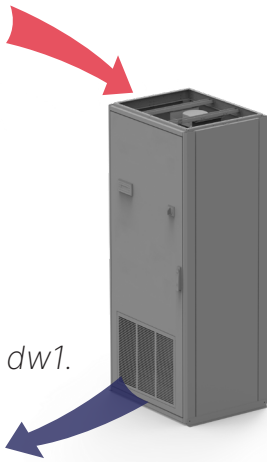
** Alternative configurations are always possible. For any specific requirements, please feel free to contact us, we will be happy to provide you with the necessary details.

AIRFLOW SCHEME:

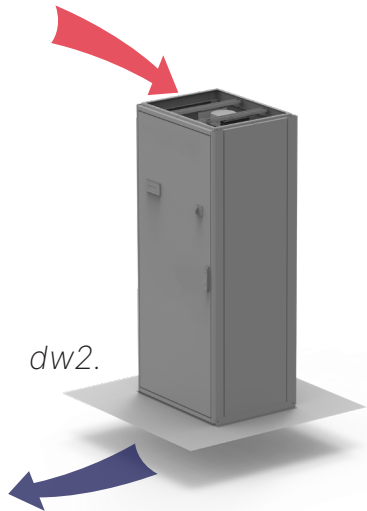
Upflow Versions:

- front-top (up1)
- bottom-top (up2)
- bottom-front (up3)
- front-front (up4)

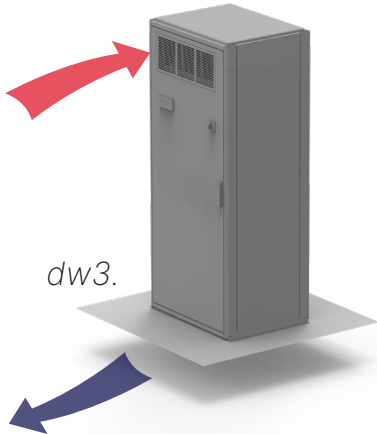




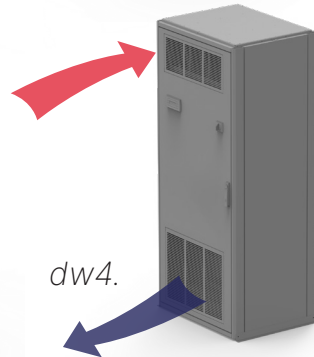
dw1.



dw2.



dw3.



dw4.

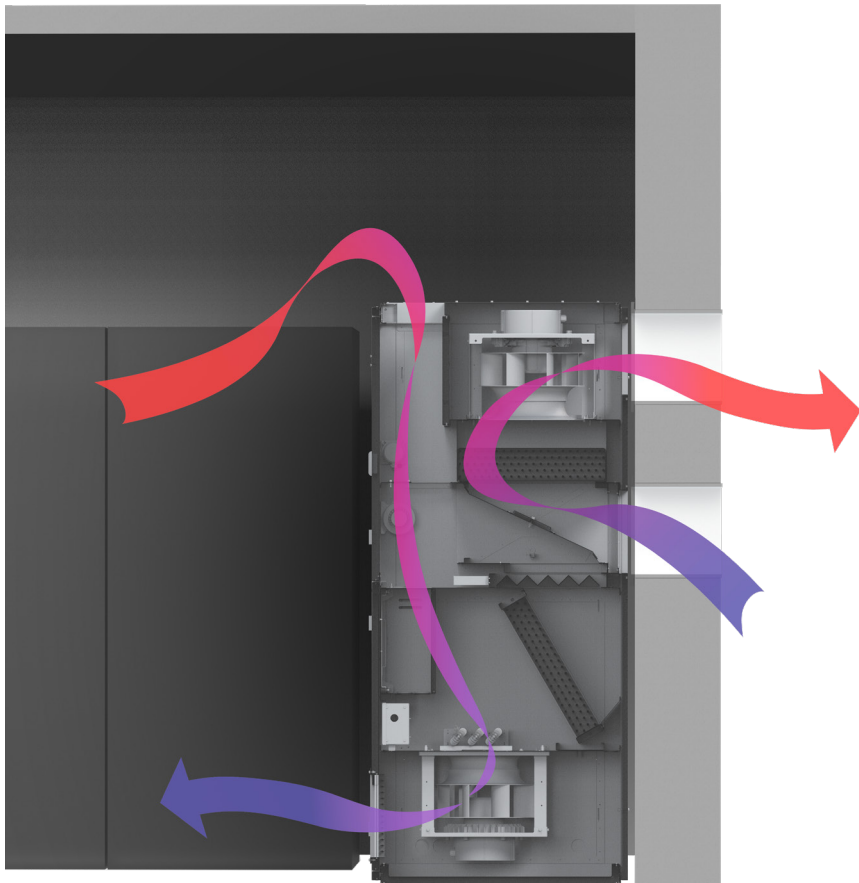
Downflow Versions:

- top-front (dw1)
- top-bottom (dw2)
- front-bottom (dw3)
- front-front (dw4)

All the CM series machines are available with different airflows, fully customizable by demand.

Please note that for the bottom *air inlet* (up2, up3) and *outlet* (dw2, dw3) versions, at least 15 cm of clearance from the floor is required. By request, we can provide different interfaces for raised floor installations.

Airflow Diagram of *Standard Cooling:*

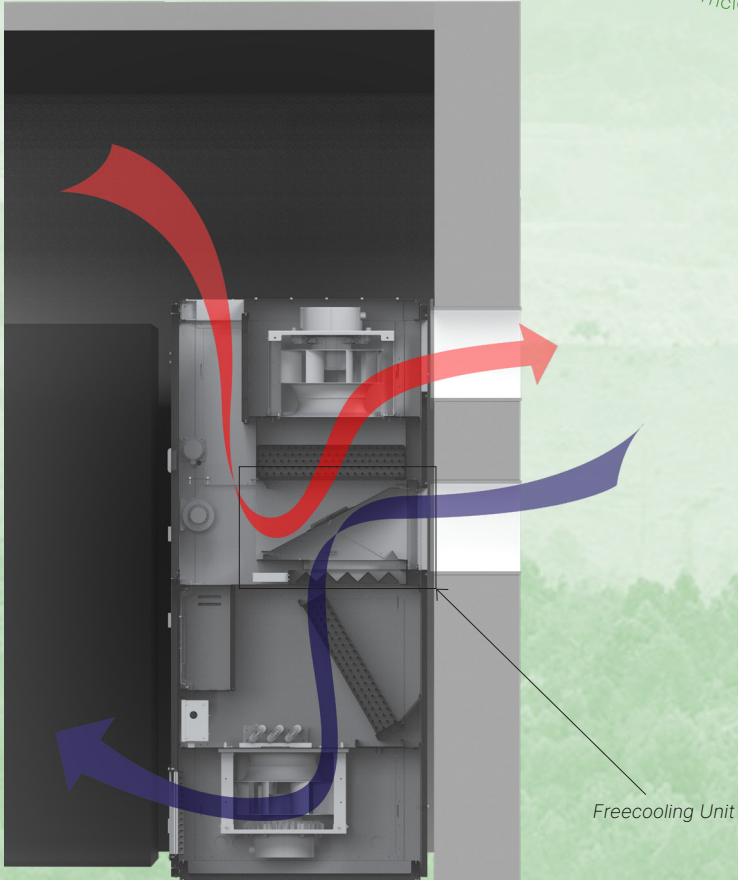


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Airflow Diagram of Freecooling:



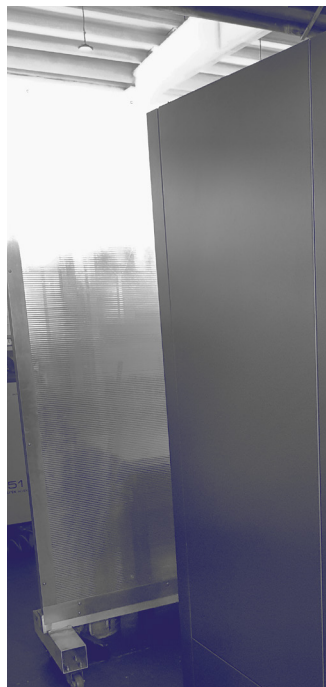
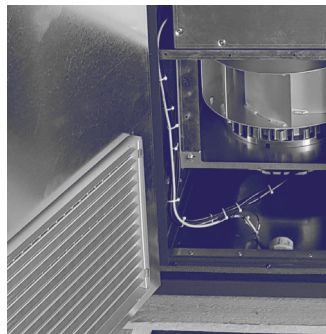
ENERGY SAVING UP TO 70%



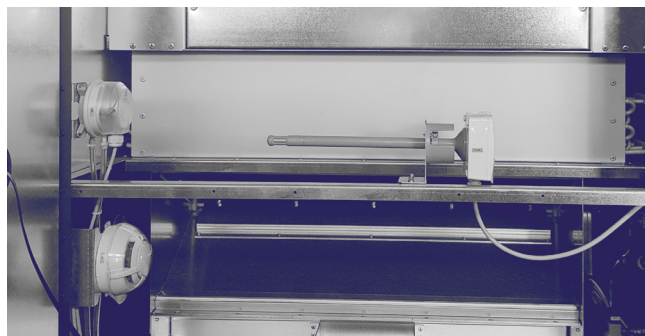
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The freecooling mode allows to drastically reduce the energy consumption up to 70% by directly using the outside air for cooling (only when the external temperature/humidity levels allows it). This is the best solution if the clima processor will be destined to places that are typically fresh year-round.

For CM series, the freecooling module does not effect the final clima processor's dimensions.

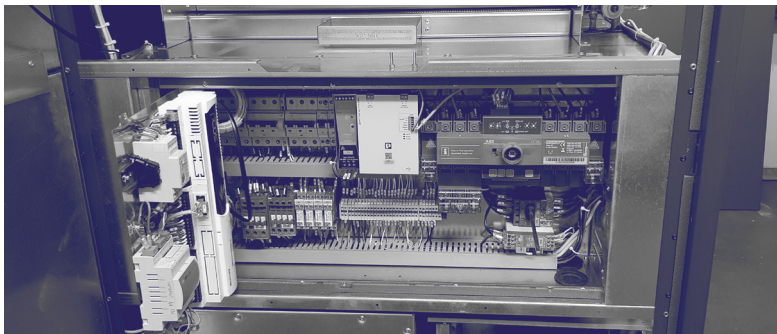
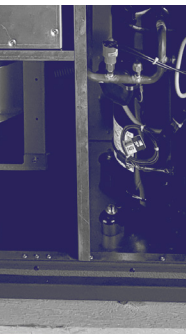


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GALLERY:

CM SERIES



MAIN ACCESSORIES COMPATIBILITY:

cooling type			CM series		
remote condenser required		direct expansion, air chilled condenser			
		no		codification	note
body and structure	color	grey	●	00.c.01	
		white	○	00.c.02	or other RAL colour
	material	aluminium	○	00.m.a	
		galvanized steel	●	00.m.s	
	cladding	non insulated cladding	x	01.000	
		standard insulation	●	01.001	
		polyurethane foam sandwich	○	01.002	
		rockwool sandwich	○	01.003	
	baseframe	standard baseframe	○	01.004	
		deflector baseframe	○	01.005.d	best with downflow configuration
refrigerating system	refrigerant	R513a	●	02.001.1	
		R134a	○	02.001.2	
		R410a	○	02.001.3	
		modulating condensing pressure control	●	02.002	
	expansion valve	mechanical expansion valve	●	02.004.m	
		electronic expansion valve (EEV)	○	02.004.eev	2 press. probe and 1 NTC required
	water valve	two way valve	x	02.005.2v	
		three way valve	x	02.005.3v	
		pressure actuated water regulating valve	x	02.006	
		plate exchangers	x	02.007	
airflow	compressor	scroll compressor	●	03.001.s	
		BLDC compressor	○	03.001.blcdc	
	fan	EC radial fan	●	03.002.r	both for evaporating and condenser
		EC High-Prevalence radial fan	○	03.002.hp	
		axial fan (for condenser)	x	03.002.100	
	filters	G4 filter (>60% ISO Coarse)	●	03.003.1g4	
		F7 filter (80-85% ePM10)	○	03.003.2f7	
		F9 filter (85-90% ePM10)	○	03.003.3f9	
		metal G2 (30% ISO Coarse)	x	03.003.4m	
		steam humidifier	○	03.004	TH probe required
		differential pressure switch	●	03.005.1	
		differential pressure transducer	○	03.005.2	
		temperature probe (NTC)	●	03.006.ntc	
	th probe	wall mounted TH probe	○	03.006.th.w	
		duct TH probe	○	03.006.th.d	
aeraulic systems		freecooling plenum	○	04.001.fc	if installation site allows it
	fresh air intake	standard fresh air intake	○	04.002.1std	
		fresh air intake with shut-off damper (manual)	○	04.002.2m	
		fresh air intake with shut-off damper (automatic)	○	04.002.2a	
	air plenum	top air plenum	○	04.003.t	
		bottom air plenum	○	04.003.b	
		rear air plenum	○	04.003.r	
		non-return damper	○	04.004	
	shut-off damper	shut-off damper (manual)	○	04.005.m	
		shut-off damper (automatic)	○	04.005.a	
		airflow protection grid	○	04.006	
heating and dehumidification systems	reheating systems	electric reheating coil	○	06.001	not with hot water reheating coil
		hot water reheating coil	○	06.002	not with electric reheating coil
		heating pump	○	06.003	can not be used as dehumidifier

electronic and communication system	control board		●	07.001	
	display	LCD display	●	07.002	
		remote LCD display	○	07.002.r	
alarm and security	communications	modbus + rs485	○	07.003.m.rs	
		bacnet + rs485	○	07.003.b.rs	
		modbus/bacnet + ethernet	○	07.003.ip	
	water leakage	konnex	○	07.003.knx	
protection from environment	refrigerant leakage	punctual water leakage alarm	○	08.001.1P	
		linear water leakage alarm	○	08.001.2L	
	smoke/fire alarm	refrigerant leakage alarm (low pressure switch)	●	08.002.0	
		refrigerant leakage alarm (local sensor)	○	08.002.1	
		refrigerant leakage alarm (remote sensor)	○	08.002.2	
	clogged filter alarm (diff. pressure switch)				
			○	03.005.1.cfa	
	fire damper				
			○	08.004	
	moisture evacuation pump				
			○	08.005	
shipping	coils treatment	hydrophilic coils treatment	○	09.001.h	
		cataphoretic coils treatment	○	09.001.c	
	snow kit		x	09.002	
shipping	low outdoor condensing temperature control		x	09.003	
	sand trap		x	09.004	
shipping	shipping	pallet	●	10.001	plus cardboard and plastic film
		fumigated pallet	○	10.001.f	
		wooden crate	○	10.002	
		fumigated wooden crate	○	10.002.f	
	indicators				
		shock indicator	○	10.003.s	
		tilting indicator	○	10.003.t	

● included in standard configuration

○ possible as optional

× not possible for this unit

Discover more about our wide range of accessories and components in the dedicated accessories catalog.

If you are interested, please contact one of our sales team or write us at climaprocessor@cmcrail.it

RM:

THE INDOOR CEILING-MOUNTED.

Clima Processor "RM series" are a compact **indoor ceiling-mounted** direct expansion air conditioning unit.

This sophisticated solution for efficient temperature and humidity control within confined spaces it's designed for installation within containers and shelters. This versatile unit can be centrally positioned with upper air outlet or placed near walls and corners with lateral air outlet, providing adaptability to various spatial configurations.

The RM compact conditioning unit excels in technical applications, offering precise regulation of temperature and humidity. Its suspended design enables the optimization of internal space, making the entire surface usable, and without altering the total external footprint of the container in any way.

With a wide range of cooling capacities, going from a few kW to 18 kW for the standard version, the RM unit is equipped to meet different requirements. Whether for smaller spaces or larger technical applications, the unit's cooling capabilities ensure efficient and reliable performance, even in the more extreme environment.

The RM series is specifically designed, but not limited, to:

- Containers
- Technical Shelters
- Data Centers
- Battery Storage
- Energy Converter Shelters
- Tel-Co Shelters
- Others



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GENERAL APPLICATION:

RM SERIES

CUSTOMIZATION & ACCESSORIES:

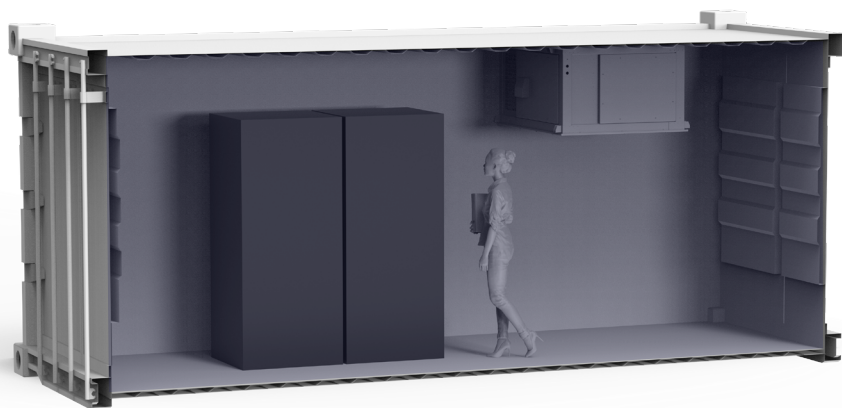
All our solutions are custom-made for every clients. We can provide a large variety of customizations and extras to meet the exact clients specification. We can offer you all our experience and know-how in order to find the best solution for every application.

All our products are CE certified, but we can also provide US or Japanese standards as well.

We can also run, by request, test in our climatic chamber.

- Heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- High Prevalence EC fans
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Snow hood protections
- Sand trap
- Different mounting interfaces (also for containers)
- Fresh air intake
- Air filters F5, F7, F9
- Special coils design / surface treatment
- Sandwich panels
- Low noise insulation
- Reinforced insulation (Certified EN13501-1 class A1/A0 s0 d0)
- Special colour
- R134a or R410A refrigerant

Other customized solutions are possible upon request.



RM SERIES

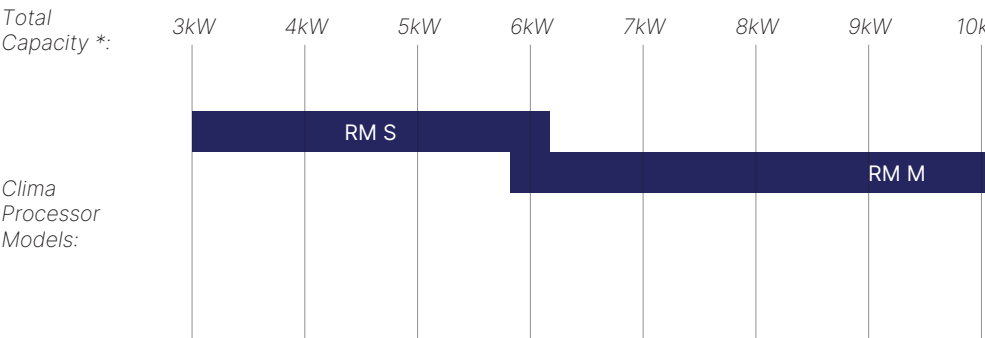
INFORMATION FOR INSTALLATION:

The installation of the Climate Processor RM is very simple and quick. Being a compact unit, it has an internal condenser and therefore does not need to be connected to a remote condensing unit. The presence of an HVAC technician is not required as the refrigerant circuit is a closed system, already sealed and tested before delivery.

Installation takes place on the ceiling, and due to the need for an influx of fresh air from the outside to cool the integrated condenser or to allow direct airflow when operating in freecooling mode, **installation near an external wall is required**. Alternatively, it is also possible to use ducting that still allows direct access to outdoor air. Upon request, we offer the possibility of also creating these ducts.

Designed for standard containers as well, there is the option to purchase a specially made installation kit for the main types of standard containers.

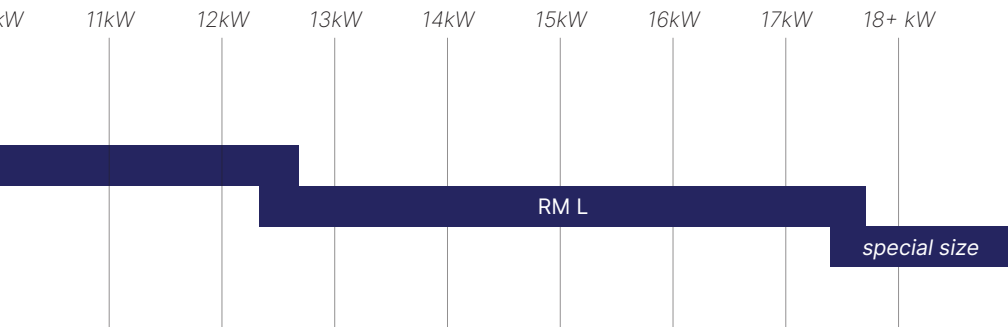
TECHNICAL INFORMATIONS:



**The Total Cooling Capacity depends on the external temperature/humidity conditions, as well as the internal conditions. The depicted ranges indicate the minimum and maximum values achievable with the configuration of that specific machine.*

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	RM S	RM M
<i>Treated airflow</i>	<i>from 800 to 1'200 m³/h</i>	<i>from 1'200 to 2'400 m³/h</i>
<i>Heating Mode (extra)</i>	<i>Yes, Electrical</i>	<i>Yes, Electrical</i>
<i>Freecooling (fc)</i>	<i>On request</i>	<i>On request</i>
<i>Airflow configurable</i>	<i>Yes</i>	<i>Yes</i>
<i>Refrigerant type</i>	<i>R513a (or R410a)</i>	<i>R513a (or R410a)</i>
<i>COP</i>	<i>2,5 - 3,5</i>	<i>2,5 - 3,5</i>
<i>BLDC Compressor</i>	<i>On request</i>	<i>On request</i>
<i>Dimensions (LxWxH)</i>	<i>1825mmx1430mmx925mm</i>	<i>1825mmx1430mmx925mm</i>
<i>Weight (indicative)</i>	<i>200 kg</i>	<i>230 kg</i>



RM L	RM special size**
from 2'400 to 3'200 m³/h	-
Yes, Electrical	Yes, Electrical
On request	On request
Yes	Yes
R513a (or R410a)	R513a (or R410a)
2,5 - 3,5	-
On request	On request
1825mmx1430mmx925mm	-
260 kg	-

AIRFLOW SCHEME:

*RM airflow scheme will be available soon.
Our engineers are working for its definition.*

*If interested, please contact our sales office,
which will provide You with all the information.*

*RM airflow scheme will be available soon.
Our engineers are working for its definition.*

*If interested, please contact our sales office,
which will provide You with all the information.*

Internal Airflow Diagram:

*RM will be available soon.
Our engineers are working for its definition.*

*If interested, please contact our sales office,
which will provide You with all the information.*

Internal Airflow Diagram with *Freecooling* modules:



*RM will be available soon.
Our engineers are working for its definition.*

*If interested, please contact our sales office,
which will provide You with all the information.*

MAIN ACCESSORIES COMPATIBILITY:

cooling type			RM series		
remote condenser required		direct expansion, air chilled condenser		codification	note
		no		00.c.01	
body and structure	color	grey	●	00.c.02	or other RAL colour
		white	○		
	material	aluminium	●	00.m.a	
		galvanized steel	○	00.m.s	
	cladding	non insulated cladding	x	01.000	
		standard insulation	●	01.001	
		polyurethane foam sandwich	○	01.002	
		rockwool sandwich	○	01.003	
	baseframe	standard baseframe	x	01.004	
		deflector baseframe	x	01.005.d	best with downflow configuration
refrigerating system	refrigerant	R513a	●	02.001.1	
		R134a	○	02.001.2	
		R410a	○	02.001.3	
		modulating condensing pressure control	●	02.002	
	expansion valve	mechanical expansion valve	●	02.004.m	
		electronic expansion valve (EEV)	○	02.004.eev	2 press. probe and 1 NTC required
	water valve	two way valve	x	02.005.2v	
		three way valve	x	02.005.3v	
		pressure actuated water regulating valve	x	02.006	
		plate exchangers	x	02.007	
airflow	compressor	scroll compressor	●	03.001.s	
		BLDC compressor	○	03.001.blcdc	
	fan	EC radial fan	●	03.002.r	
		EC High-Prevalence radial fan	○	03.002.hp	
		axial fan (for condenser)	●	03.002.100	
	filters	G4 filter (>60% ISO Coarse)	●	03.003.1g4	
		F7 filter (80-85% ePM10)	○	03.003.2f7	
		F9 filter (85-90% ePM10)	○	03.003.3f9	
		metal G2 (30% ISO Coarse)	x	03.003.4m	
		steam humidifier	○	03.004	TH probe required
		differential pressure switch	●	03.005.1	
		differential pressure transducer	○	03.005.2	
		temperature probe (NTC)	●	03.006.ntc	
	th probe	wall mounted TH probe	○	03.006.th.w	
		duct TH probe	○	03.006.th.d	
aeraulic systems		freecooling plenum	○	04.001.fc	if installation site allows it
	fresh air intake	standard fresh air intake	○	04.002.1std	
		fresh air intake with shut-off damper (manual)	○	04.002.2m	
		fresh air intake with shut-off damper (automatic)	○	04.002.2a	
	air plenum	top air plenum	x	04.003.t	
		bottom air plenum	x	04.003.b	
		rear air plenum	x	04.003.r	
		non-return damper	○	04.004	
	shut-off damper	shut-off damper (manual)	○	04.005.m	
		shut-off damper (automatic)	○	04.005.a	
		airflow protection grid	○	04.006	
heating and dehumidification systems	reheating systems	electric reheating coil	○	06.001	not with hot water reheating coil
		hot water reheating coil	○	06.002	not with electric reheating coil
		heating pump	○	06.003	can not be used as dehumidifier

electronic and communication system	control board		●	07.001	
	display	LCD display	●	07.002	
		remote LCD display	○	07.002.r	
alarm and security	communications	modbus + rs485	○	07.003.m.rs	
		bacnet + rs485	○	07.003.b.rs	
		modbus/bacnet + ethernet	○	07.003.ip	
	water leakage	konnex	○	07.003.knx	
protection from environment	refrigerant leakage	punctual water leakage alarm	○	08.001.1P	
		linear water leakage alarm	○	08.001.2L	
	smoke/fire alarm	refrigerant leakage alarm (low pressure switch)	●	08.002.0	
		refrigerant leakage alarm (local sensor)	○	08.002.1	
		refrigerant leakage alarm (remote sensor)	○	08.002.2	
	clogged filter alarm (diff. pressure switch)				
	fire damper	smoke alarm	○	08.003.s	
		fire alarm	○	08.003.f	
	moisture evacuation pump				
shipping	shipping	hydrophilic coils treatment	○	09.001.h	
		cataphoretic coils treatment	○	09.001.c	
		snow kit	x	09.002	
		low outdoor condensing temperature control	x	09.003	
	indicators	sand trap	x	09.004	
shipping	shipping	pallet	●	10.001	plus cardboard and plastic film
		fumigated pallet	○	10.001.f	
		wooden crate	○	10.002	
		fumigated wooden crate	○	10.002.f	
	indicators				
shipping	indicators	shock indicator	○	10.003.s	
		tilting indicator	○	10.003.t	

● included in standard configuration

○ possible as optional

x not possible for this unit

Discover more about our wide range of accessories and components in the dedicated accessories catalog.

If you are interested, please contact one of our sales team or write us at climaprocessor@cmcrail.it

CK:

THE OUTDOOR WALL-MOUNTED VERSION.

The Clima Processor "CK series" is a compact direct expansion unit specifically designed for **outdoor application**. It is a **wall-mounted unit**, with the advantage of not affecting the interior room volume.

Designed for battery storage, energy converters, and telecommunication shelters (available in 48V or 24V versions), the unit is optimized for outdoor applications. It takes into account specific features of this application, such as low voltage supply and the requirement to dissipate only sensible loads.

The entire structure is made by aluminum in order to minimize the weight and assures high resistance against corrosion and atmospheric agents. A special painting complete the structure, with the possibility to customize it with every RAL color.

Freecooling can be easily implemented in the unit configuration as an optional, which can reduce the energy consumption up to 70%: when the outdoor conditions allows it, the external fresh air directly flows inside the room while the interior hot air is dissipated outside. An air tightness system with special gasket guarantee the absence of air flow leaks.

The installation is made extremely simple thanks to the lifting elements, both at the top and the bottom of the structures; the complete installation, when the setup is ready, requires no more than 5 hours. Furthermore, the clima processors are palletizable for easy transportation. This compact solution require no HVAC technician for the setup.

We also offer thermal analysis in order to help you choosing the best option for every situation.



CK M14 fc

The CK series is specifically designed, but not limited, to:

- Data Centers
- Battery Storage
- Energy Converter Shelters
- Tel-Co Shelters
- *Others*



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GENERAL APPLICATION:

CK SERIES

CUSTOMIZATION & ACCESSORIES:

All our solutions are custom-made for every client. We can provide a wide variety of customizations and extras to meet each client's exact specifications.

We offer you all our experience and know-how to find the best solution for every application. All our products are CE certified, and we can also provide US or Japanese standards. Additionally, upon request, we can conduct tests in our climatic chamber.

- Heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- High Prevalence EC fans
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Fire damper
- Snow hood protections
- Sand trap
- Fresh air intake
- Air filters F5, F7, F9
- Special coils design / surface treatment
- Sandwich panels
- Low noise insulation
- Reinforced insulation (Certified EN13501-1 class A1/A0 s0 d0)
- Special colour
- R134a or R410A refrigerant

Other customized solutions are possible upon request.

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CK SERIES

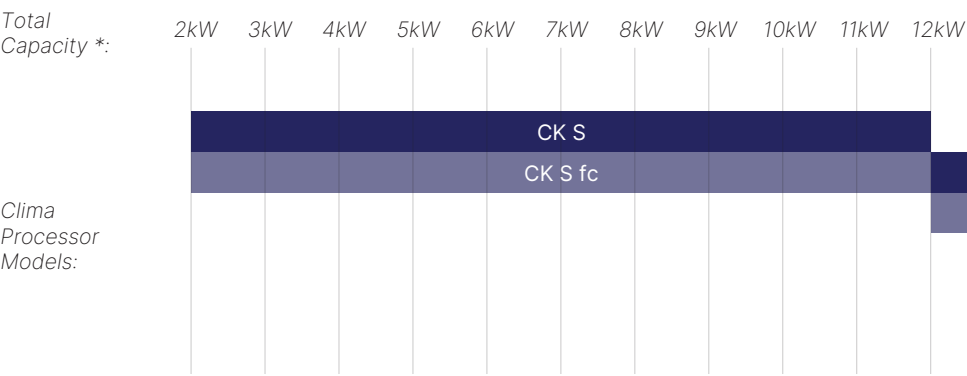
INFORMATION FOR INSTALLATION:

The installation of the Climate Processor CK is very simple and fast. Being a compact unit with an internal condenser, there is no need for connection to a remote condensing system.

The CK is a wall-mounted unit for outdoor installation, and therefore, **installation must take place on the exterior wall adjacent to the space to be cooled**. It is also possible to direct the airflow to a space not directly adjacent to the CK installation wall by ducting the airflow. In this case, it is necessary to equip the CK with EC high-prevalence fans. For more information on ducting, please contact our technical office.

Installation only requires an electrical connection. Guidelines for creating the wall interface will be provided for installation.

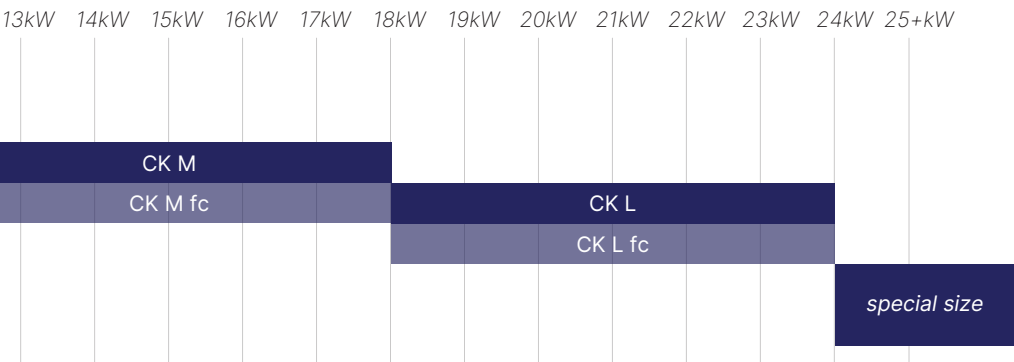
TECHNICAL INFORMATIONS:



*The Total Cooling Capacity depends on the external temperature/humidity conditions, as well as the internal conditions. The depicted ranges indicate the minimum and maximum values achievable with the configuration of that specific machine.

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	CK S	CK S fc	CK M
Treated airflow	from 800 to 1'200m³/h		from 1'200 to 1'600m³/h
Heating Mode (extra)	Yes, Electrical		Yes, Electrical
BLDC Compressor	On request		On request
Refrigerant type	R513a (or R410a)		R513a (or R410a)
COP	2,5 - 3,5		2,5 - 3,5
Freecooling (fc)	No	Yes	No
Dimensions (LxWxH)	970mmx700mm x1250mm	970mmx700mm x1700mm	1000mmx800mm x1350mm
Weight (indicative)	180 kg	230 kg	200 kg

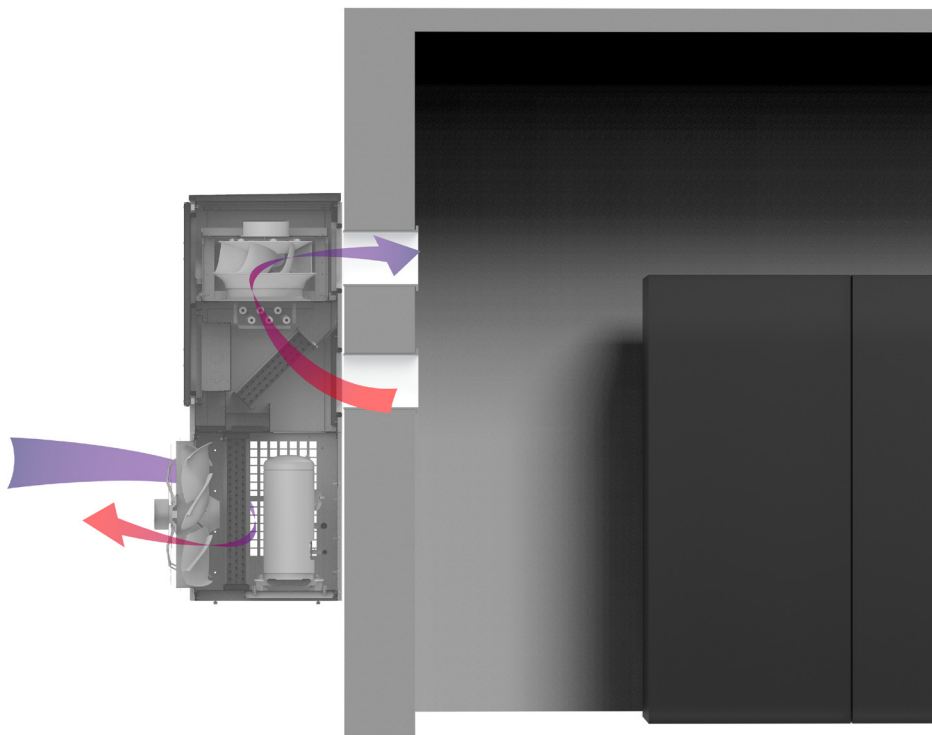


CK M fc	CK L	CK L fc	CK special size**
2'800 m³/h	from 2'800 to 3'400 m³/h		-
Electrical	Yes, Electrical		Yes, Electrical
On request	On request		On request
R410a)	R513a (or R410a)		R513a (or R410a)
3,5	2,5 - 3,5		-
Yes	No	Yes	On request
1000mmx800mm x1800mm	1100mmx920mm x1450mm	1100mmx920mm x1900mm	-
250 kg	210 kg	260 kg	-

** Alternative configurations are always possible. For any specific requirements, please feel free to contact us, we will be happy to provide you with the necessary details.

AIRFLOW SCHEME: Internal Airflow Diagram.

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CK SERIES

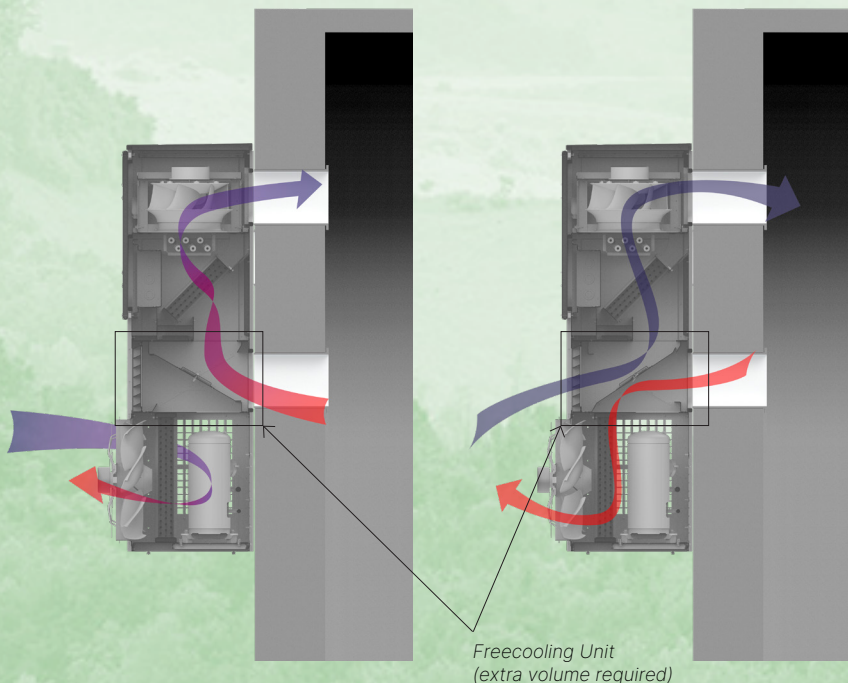
Internal Airflow Diagram with Freecooling modules:



Normal Cooling
(with freecooling predisposition)

Freecooling

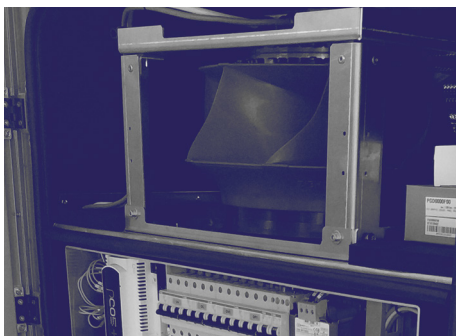
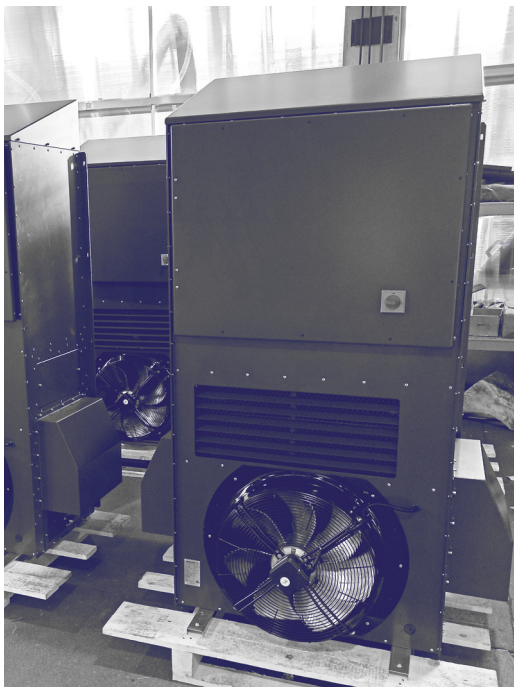
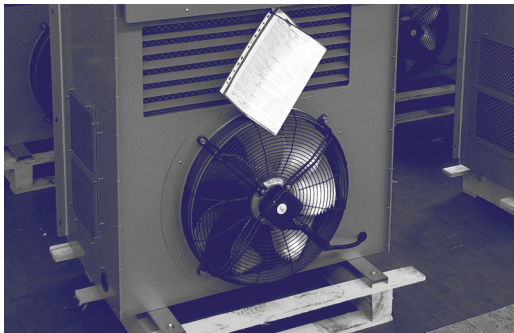
ENERGY SAVING UP TO 70%



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The freecooling mode allows to drastically reduce the energy consumption up to 70% by directly using the outside air for cooling (only when the external temperature/humidity levels allows it). This proves to be the optimal solution when the clima processor is intended for locations characterized by consistently cool conditions throughout the year.

Please consider that the freecooling module for CK series effects the final clima processor's dimensions. The additional space required is delineated in green for easy identification.



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GALLERY:



MAIN ACCESSORIES COMPATIBILITY:

cooling type		direct expansion, air chilled condenser		CK series	
remote condenser required		no		codification	note
body and structure	color	grey	●	00.c.01	
		white	○	00.c.02	or other RAL colour
	material	aluminium	●	00.m.a	
		galvanized steel	○	00.m.s	
	cladding	non insulated cladding	x	01.000	
		standard insulation	●	01.001	
		polyurethane foam sandwich	○	01.002	
		rockwool sandwich	○	01.003	
	baseframe	standard baseframe	x	01.004	
		deflector baseframe	x	01.005.d	best with downflow configuration
refrigerating system	refrigerant	R513a	●	02.001.1	
		R134a	○	02.001.2	
		R410a	○	02.001.3	
		modulating condensing pressure control	●	02.002	
	expansion valve	mechanical expansion valve	●	02.004.m	
		electronic expansion valve (EEV)	○	02.004.eev	2 press. probe and 1 NTC required
	water valve	two way valve	x	02.005.2v	
		three way valve	x	02.005.3v	
		pressure actuated water regulating valve	x	02.006	
		plate exchangers	x	02.007	
airflow	compressor	scroll compressor	●	03.001.s	
		BLDC compressor	○	03.001.blcdc	
	fan	EC radial fan	●	03.002.r	
		EC High-Prevalence radial fan	○	03.002.hp	
		axial fan (for condenser)	●	03.002.100	
	filters	G4 filter (>60% ISO Coarse)	●	03.003.1g4	
		F7 filter (80-85% ePM10)	○	03.003.2f7	
		F9 filter (85-90% ePM10)	○	03.003.3f9	
		metal G2 (30% ISO Coarse)	x	03.003.4m	
		steam humidifier	○	03.004	TH probe required
aeraulic systems	fresh air intake	freecooling plenum	○	04.001.fc	if installation site allows it
		standard fresh air intake	○	04.002.1std	
		fresh air intake with shut-off damper (manual)	○	04.002.2m	
		fresh air intake with shut-off damper (automatic)	○	04.002.2a	
	air plenum	top air plenum	x	04.003.t	
		bottom air plenum	x	04.003.b	
		rear air plenum	x	04.003.r	
		non-return damper	○	04.004	
	shut-off damper	shut-off damper (manual)	○	04.005.m	
		shut-off damper (automatic)	○	04.005.a	
heating and dehumidification systems	reheating systems	airflow protection grid	○	04.006	
		electric reheating coil	○	06.001	not with hot water reheating coil
		hot water reheating coil	○	06.002	not with electric reheating coil
		heating pump	○	06.003	can not be used as dehumidifier

electronic and communication system		control board	●	07.001	
	display	LCD display	x	07.002	
		remote LCD display	●	07.002.r	
	communications				
		modbus + rs485	○	07.003.m.rs	
		bacnet + rs485	○	07.003.b.rs	
		modbus/bacnet + ethernet	○	07.003.ip	
alarm and security		konnex	○	07.003.knx	
	water leakage	punctual water leakage alarm	○	08.001.1P	
		linear water leakage alarm	○	08.001.2L	
	refrigerant leakage	refrigerant leakage alarm (low pressure switch)	●	08.002.0	
		refrigerant leakage alarm (local sensor)	○	08.002.1	
		refrigerant leakage alarm (remote sensor)	○	08.002.2	
	smoke/fire alarm	smoke alarm	○	08.003.s	
		fire alarm	○	08.003.f	
		clogged filter alarm (diff. pressure switch)	○	03.005.1.cfa	
		fire damper	○	08.004	
protection from environment		moisture evacuation pump	○	08.005	
	coils treatment	hydrophilic coils treatment	○	09.001.h	
		cataphoretic coils treatment	○	09.001.c	
		snow kit	○	09.002	
		low outdoor condensing temperature control	x	09.003	
		sand trap	○	09.004	
shipping	shipping	pallet	●	10.001	plus cardboard and plastic film
		fumigated pallet	○	10.001.f	
		wooden crate	○	10.002	
		fumigated wooden crate	○	10.002.f	
	indicators				
		shock indicator	○	10.003.s	
		tilting indicator	○	10.003.t	

● included in standard configuration

○ possible as optional

x not possible for this unit

Discover more about our wide range of accessories and components in the dedicated accessories catalog.

If you are interested, please contact one of our sales team or write us at climaprocessor@cmcrail.it

RT:

THE OUTDOOR ROOFTOP.

Clima Processor "RT series" are a compact **outdoor rooftop** direct expansion air conditioning unit.

Designed to maintain precise temperature and humidity condition into shelters used for technical purposes, can adapt to a large variety of environment, supporting the most extreme weather working conditions (-35°C/+55°C).

The entire structure is made by aluminum in order to minimize the weight and to assure high resistance against corrosion and atmospheric agents. A special painting completes the structure, with the possibility to custom it with every RAL color.

Available with air flow interfaces on the bottom or on the lateral side version, with a complete range of accessories for the installation on different type of surfaces.

An air tightness system with special gasket guarantee the absence of air flow leaks.

The installation is made extremely simple thanks to the lifting elements, both at the top and the bottom of the structures. Furthermore, the clima processors are palletizable for extreme easy transportation.

The cooling capacity of this series goes from 3kW to over 25 kW.

Further customizations are always possible.



RT M10 bc fc

CLIMAPROCESSOR

The RT series is specifically designed, but not limited, to:

- Data Centers
- Battery Storage
- Containers
- Energy Converter Shelters
- Tel-Co Shelters
- Airport finger
- *Others*



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GENERAL APPLICATION:

RT SERIES

CUSTOMIZATION & ACCESSORIES:

All our solutions are custom-made for every clients. We can provide a large variety of customizations and extras to meet the exact clients specification. We can offer you all our experience and know-how in order to find the best solution for every application.

All our products are CE certified, but we can also provide US or Japanese standards as well.

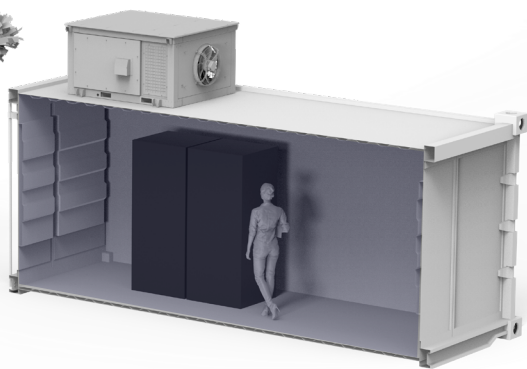
We can also run, by request, test in our climatic chamber.

- Heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- High Prevalence EC fans
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Snow hood protections
- Sand trap
- Different mounting interfaces (also for containers)
- Fresh air intake
- Air filters F5, F7, F9
- Special coils design / surface treatment
- Sandwich panels
- Low noise insulation
- Reinforced insulation (Certified EN13501-1 class A1/A0 s0 d0)
- Special colour
- R134a or R410A refrigerant

Other customized solutions are possible upon request.



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RT SERIES

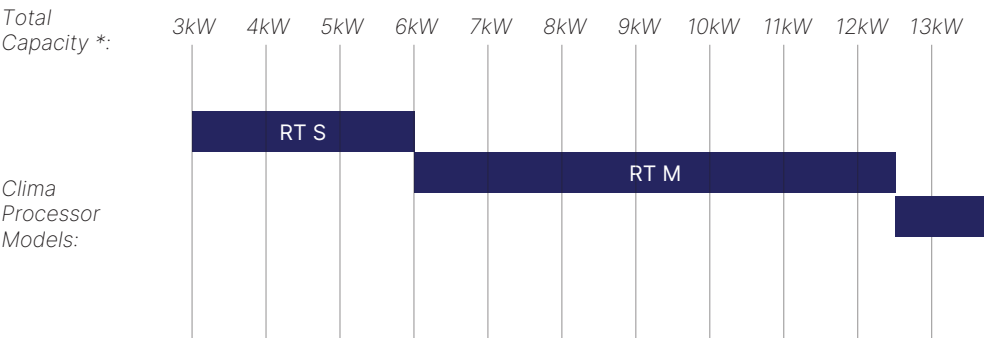
INFORMATION FOR INSTALLATION:

The installation of the Climate Processor RT is very simple and quick. Being a compact unit, it has an internal condenser and therefore does not need to be connected to a remote condensing unit. The presence of an HVAC technician is not required as the refrigerant circuit is a closed system, already sealed and tested before delivery.

For applications different from those in containers, the **installation must take place at the roof above the space to be cooled**. It is possible to direct the treated airflow to a space not directly adjacent to the roof where the unit is installed, but in this case, special ducting will be required. The length of the ducts depends on the power of the installed fans and the geometry of the ducting. Please contact our technical office for further details.

Designed for containers as well, there is the option to purchase a specially made installation kit for the main types of standard containers.

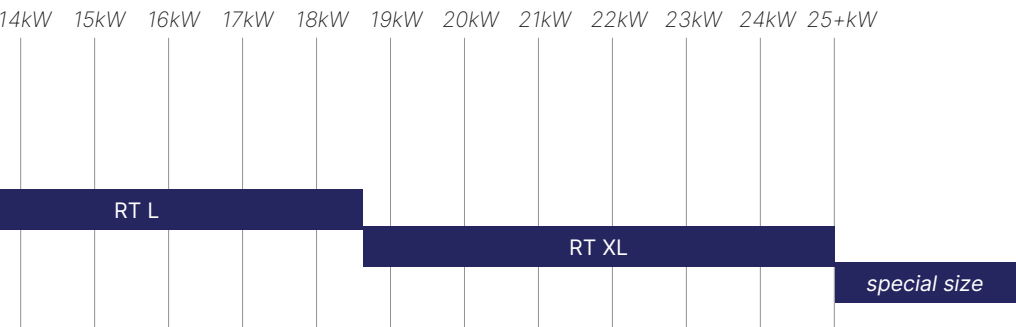
TECHNICAL INFORMATIONS:



**The Total Cooling Capacity depends on the external temperature/humidity conditions, as well as the internal conditions. The depicted ranges indicate the minimum and maximum values achievable with the configuration of that specific machine.*

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	RT S	RT M
Treated airflow	from 800 to 1'200 m³/h	from 1'200 to 2'400 m³/h
Heating Mode (extra)	Yes, Electrical	Yes, Electrical
Freecooling (fc)	On request	On request
Airflow configurable	Yes	Yes
Refrigerant type	R513a (or R410a)	R513a (or R410a)
COP	2,5 - 3,5	2,5 - 3,5
BLDC Compressor	On request	On request
Dimensions (LxWxH)	1825mmx1430mmx925mm	1825mmx1430mmx925mm
Weight (indicative)	200 kg	230 kg

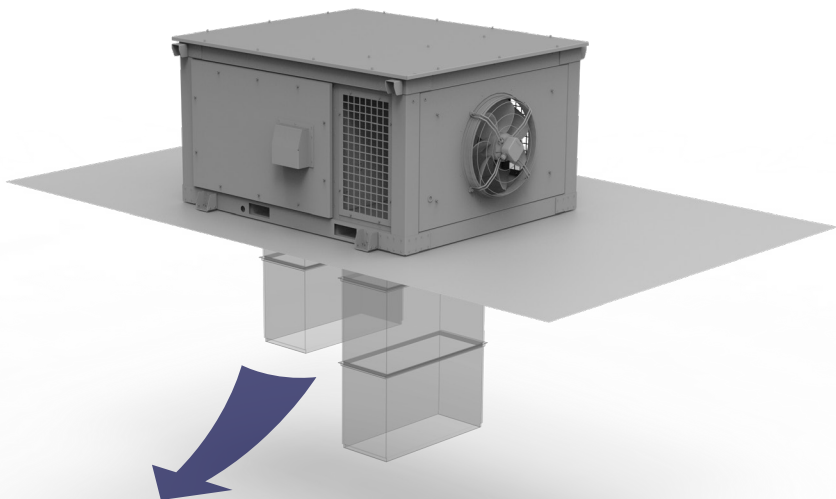


RT L	RT XL	RT special size**
from 2'400 to 3'200 m³/h	from 3'200 to 6'000 m³/h	-
Yes, Electrical	Yes, Electrical	Yes, Electrical
On request	On request	On request
Yes	Yes	Yes
R513a (or R410a)	R513a (or R410a)	R513a (or R410a)
2,5 - 3,5	2,5 - 3,5	-
On request	On request	On request
1825mmx1430mmx925mm	1825mmx1430mmx925mm	-
260 kg	290 kg	-

** Alternative configurations are always possible. For any specific requirements, please feel free to contact us, we will be happy to provide you with the necessary details.

AIRFLOW SCHEME:

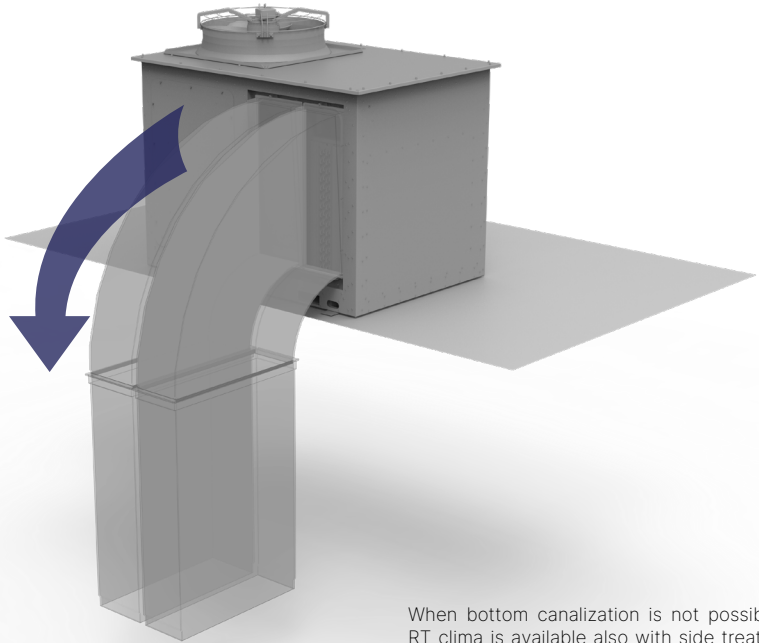
Bottom Canalization (RT bc):



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In the standard version, RT comes with air outlet placed under the unit. Special gaskets ensure the prevention of air flow leaks and water infiltration. This help an easy installation without the requirement for specific air ducts.

Side Canalization (RT sc):



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When bottom canalization is not possible, RT clima is available also with side treated air canalization, as illustrated in the pictures. This versatility enables the compact rooftop cooling system to adapt to a variety of contexts. This is the best option for airport's fingers.

If needed, we can also supply different air duct options to complement the cooling system.

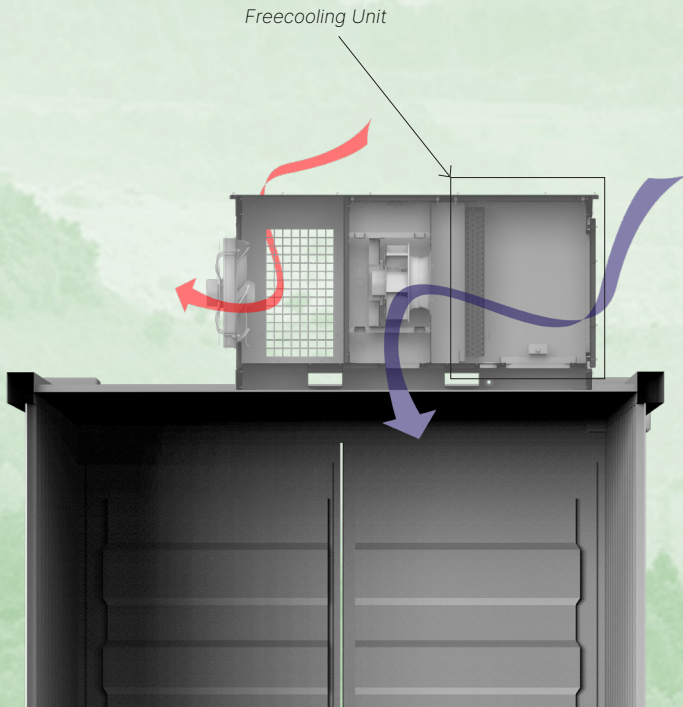
Internal Airflow Diagram (bc version).



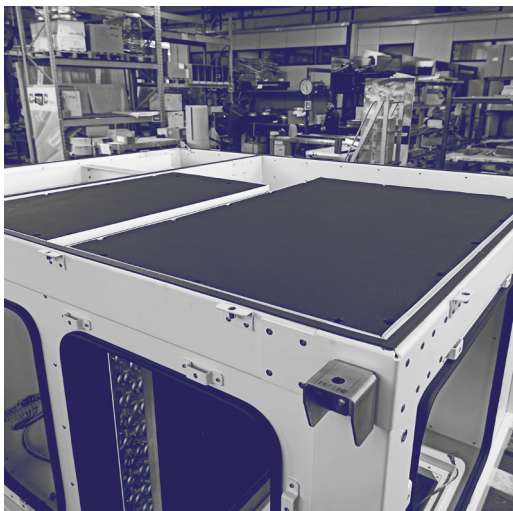
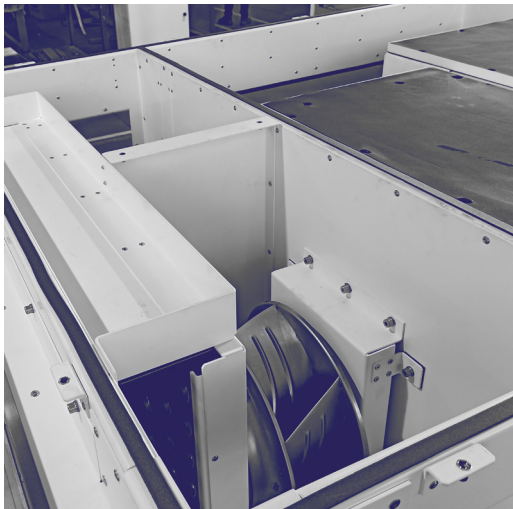
Internal Airflow Diagram with Freecooling modules:



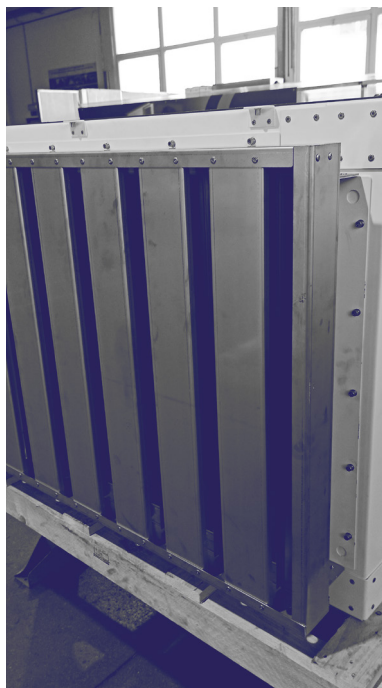
ENERGY SAVING UP TO 70%



The freecooling function can be easily implemented in RT units as well. The freecooling module does not affect the overall dimensions of the cooling unit and can reduce energy consumption by up to 70%, thus cutting costs and emissions.



GALLERY:



MAIN ACCESSORIES COMPATIBILITY:

cooling type			RT series		
remote condenser required		direct expansion, air chilled condenser			
		no		codification	note
body and structure	color	grey	○	00.c.01	
		white	●	00.c.02	or other RAL colour
	material	aluminium	●	00.m.a	
		galvanized steel	○	00.m.s	
	cladding	non insulated cladding	x	01.000	
		standard insulation	●	01.001	
		polyurethane foam sandwich	○	01.002	
		rockwool sandwich	○	01.003	
	baseframe	standard baseframe	x	01.004	
		deflector baseframe	x	01.005.d	best with downflow configuration
refrigerating system	refrigerant	R513a	●	02.001.1	
		R134a	○	02.001.2	
		R410a	○	02.001.3	
		modulating condensing pressure control	●	02.002	
	expansion valve	mechanical expansion valve	●	02.004.m	
		electronic expansion valve (EEV)	○	02.004.eev	2 press. probe and 1 NTC required
	water valve	two way valve	x	02.005.2v	
		three way valve	x	02.005.3v	
		pressure actuated water regulating valve	x	02.006	
		plate exchangers	x	02.007	
airflow	compressor	scroll compressor	●	03.001.s	
		BLDC compressor	○	03.001.blcdc	
	fan	EC radial fan	●	03.002.r	
		EC High-Prevalence radial fan	○	03.002.hp	
		axial fan (for condenser)	●	03.002.100	
	filters	G4 filter (>60% ISO Coarse)	●	03.003.1g4	
		F7 filter (80-85% ePM10)	○	03.003.2f7	
		F9 filter (85-90% ePM10)	○	03.003.3f9	
		metal G2 (30% ISO Coarse)	x	03.003.4m	
		steam humidifier	○	03.004	TH probe required
		differential pressure switch	●	03.005.1	
		differential pressure transducer	○	03.005.2	
		temperature probe (NTC)	●	03.006.ntc	
	th probe	wall mounted TH probe	○	03.006.th.w	
		duct TH probe	○	03.006.th.d	
aeraulic systems		freecooling plenum	○	04.001.fc	if installation site allows it
	fresh air intake	standard fresh air intake	○	04.002.1std	
		fresh air intake with shut-off damper (manual)	○	04.002.2m	
		fresh air intake with shut-off damper (automatic)	○	04.002.2a	
	air plenum	top air plenum	x	04.003.t	
		bottom air plenum	x	04.003.b	
		rear air plenum	x	04.003.r	
		non-return damper	○	04.004	
	shut-off damper	shut-off damper (manual)	○	04.005.m	
		shut-off damper (automatic)	○	04.005.a	
		airflow protection grid	○	04.006	
heating and dehumidification systems	reheating systems	electric reheating coil	○	06.001	not with hot water reheating coil
		hot water reheating coil	○	06.002	not with electric reheating coil
		heating pump	○	06.003	can not be used as dehumidifier

electronic and communication system		control board	●	07.001	
	display	LCD display	x	07.002	
		remote LCD display	●	07.002.r	
	communications				
		modbus + rs485	○	07.003.m.rs	
		bacnet + rs485	○	07.003.b.rs	
		modbus/bacnet + ethernet	○	07.003.ip	
		konnex	○	07.003.knx	
alarm and security	water leakage	punctual water leakage alarm	○	08.001.1P	
		linear water leakage alarm	○	08.001.2L	
	refrigerant leakage	refrigerant leakage alarm (low pressure switch)	●	08.002.0	
		refrigerant leakage alarm (local sensor)	○	08.002.1	
		refrigerant leakage alarm (remote sensor)	○	08.002.2	
	smoke/fire alarm	smoke alarm	○	08.003.s	
		fire alarm	○	08.003.f	
		clogged filter alarm (diff. pressure switch)	○	03.005.1.cfa	
		fire damper	○	08.004	
		moisture evacuation pump	○	08.005	
protection from environment	coils treatment	hydrophilic coils treatment	○	09.001.h	
		cataphoretic coils treatment	○	09.001.c	
		snow kit	○	09.002	
		low outdoor condensing temperature control	x	09.003	
		sand trap	○	09.004	
shipping	shipping	pallet	●	10.001	plus cardboard and plastic film
		fumigated pallet	○	10.001.f	
		wooden crate	○	10.002	
		fumigated wooden crate	○	10.002.f	
	indicators				
		shock indicator	○	10.003.s	
		tilting indicator	○	10.003.t	

● included in standard configuration

○ possible as optional

x not possible for this unit

Discover more about our wide range of accessories and components in the dedicated accessories catalog.

If you are interested, please contact one of our sales team or write us at climaprocessor@cmcrail.it



“Embrace a greener future with our air conditioners, where environmental responsibility meets cutting-edge technology.”

INSIDE FREECOOLING TECHNOLOGY:

The *freecooling* technology is a method used to cool spaces or devices without intensive electricity consumption. This system utilizes favorable external climate conditions, such as lower temperatures or natural air currents, to dissipate heat generated inside a building or from equipment. In practice, instead of relying entirely on traditional air conditioning systems that require significant energy consumption, freecooling harnesses the surrounding environment's capacity to provide the desired cooling.

This approach is often employed to reduce operational costs and environmental impact by limiting the use of electricity for cooling. Freecooling is particularly effective in climates where external temperatures are sufficiently low to meet cooling requirements without constant reliance on mechanical air conditioning systems.

At Clima Processor, we consider sustainability a key priority.

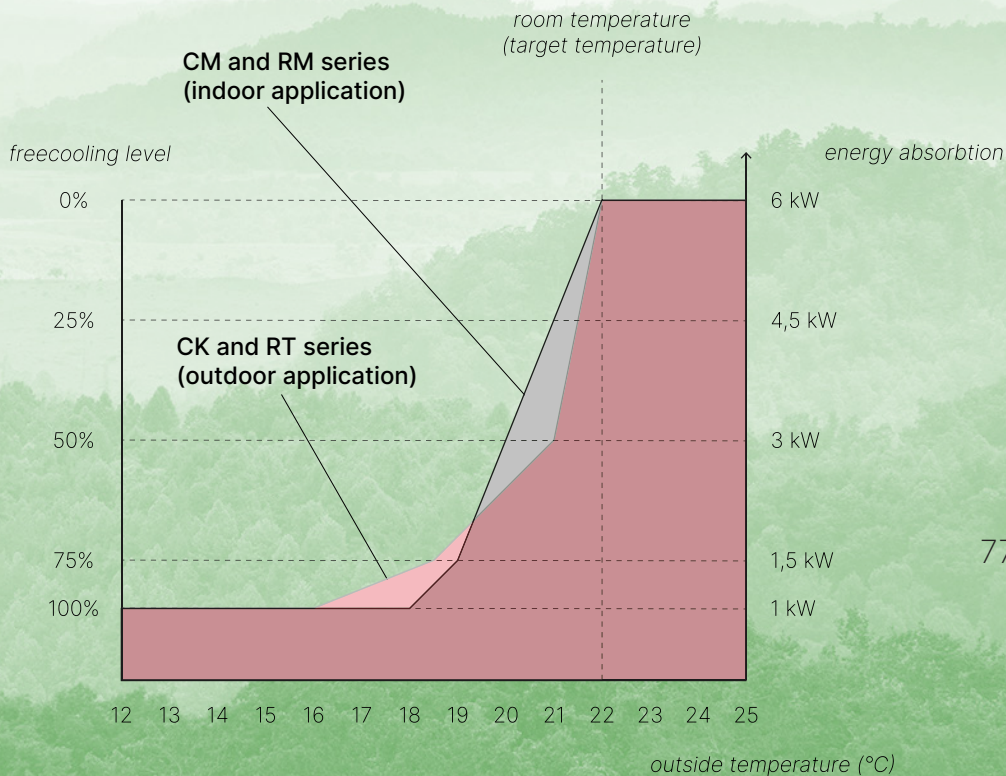
It is for this reason we have decided to incorporate the possibilities of freecooling into every model of our compact air conditioning systems. This allows for a reduction in energy consumption and, consequently, a reduction in emissions, up to 70%.

The functioning of the freecooling system is quite simple: each unit is equipped with a tilting diverter. When the external temperature falls below the room temperature, the diverter, triggered by a sensor, opens up, permitting untreated fresh air to enter the room and cool the internal environment. At the same time, the internal hot air is expelled outside.

For some compact units, the predisposition for freecooling does not affect the overall dimensions, while for others, it may require additional space. Freecooling are always possible.

The benefits from freecooling are tangible: considering a medium-sized CM cooling machine with a cooling capacity of 16 kW operating in freecooling mode for 3 months in a year, the annual energy savings for a single machine would be approximately 10 MWh.

CO₂ emissions reduced up to 70%

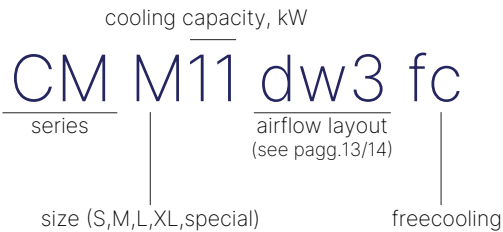


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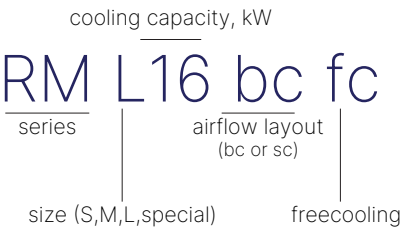
freecooling

CLIMA PROCESSOR CODIFICATION SYSTEM:

For CM series:



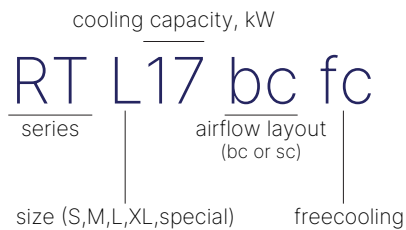
For RM series:

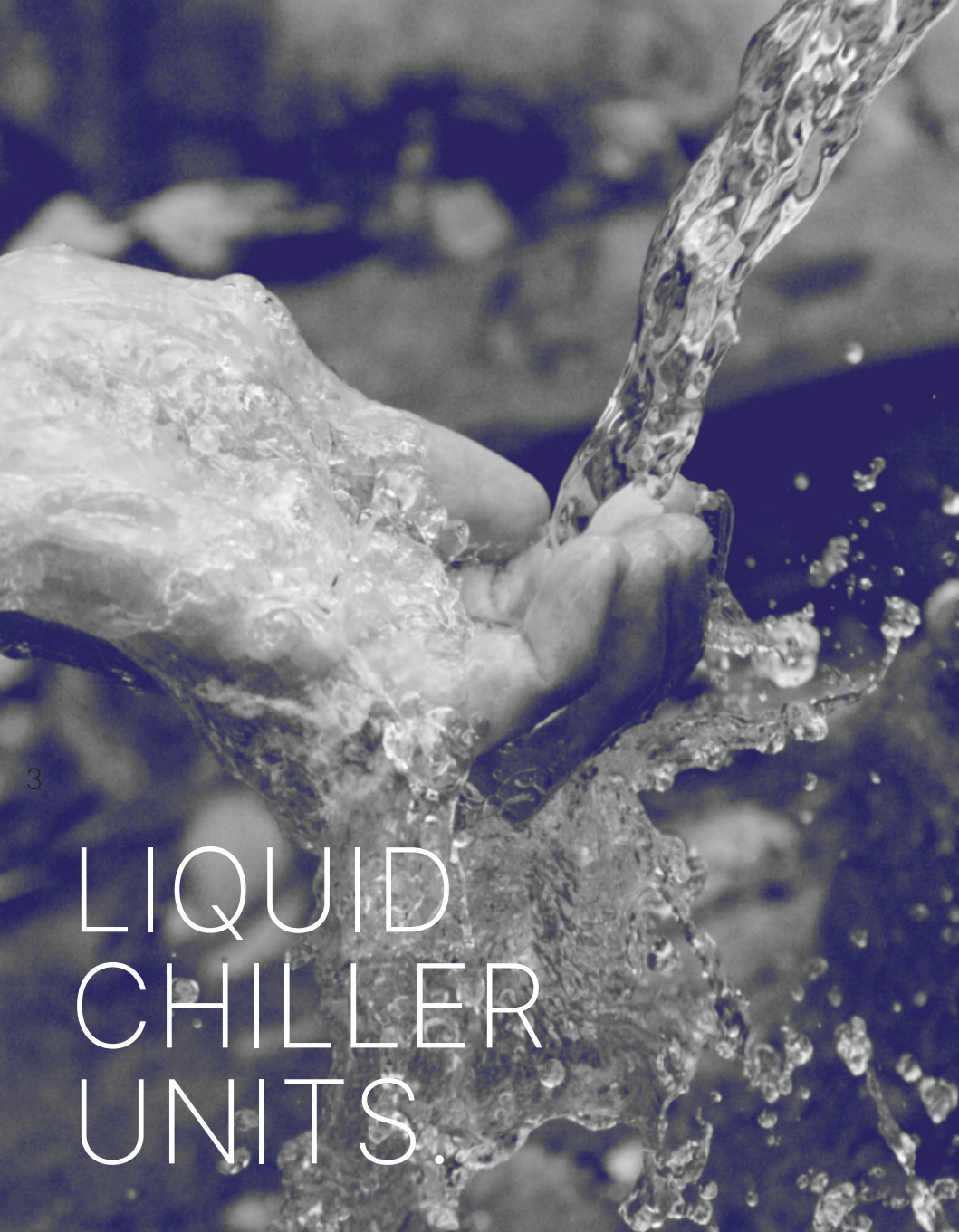


For CK series:



For RT series:





3

LIQUID CHILLER UNITS.

THE ADVANTAGES OF LIQUID COOLING:

Water cooling in industrial and tech application offers several advantages over traditional air cooling; for this reason we developed a compact water chiller series.

Here are some of the key benefits:

- ***Thermal Efficiency:***

Water has a higher heat absorption capacity than air. As a result, water cooling systems can handle higher thermal loads more efficiently;

- ***Precision Control:***

Water cooling systems allow for more precise temperature control. This is particularly important for equipment sensitive to temperature variations, such as servers and advanced electronic components;

- ***Energy Savings:***

In many situations, water cooling systems can be more energy-efficient than air cooling systems. This is particularly relevant in environments where managing large amounts of heat, such as data centers, is necessary;

- ***Reduced Noise:***

Generally, water cooling systems can be quieter than air cooling systems. This is an advantage in settings where a quieter working environment is required;

- ***Space Efficiency:***

Water cooling systems may require less space than air systems, allowing greater flexibility in equipment layout;

- ***Extended Component Lifespan:***

Water cooling can contribute to extending the lifespan of electronic components by maintaining more constant temperatures and reducing thermal stress on devices;

- ***Adaptability to Variable Loads:***

Water cooling systems can better adapt to load variations, ensuring that temperatures remain stable even under variable load conditions.

CM-W:

THE INDOOR FREESTANDING VERSION.

The Clima Processor “CM-W series” is a compact unit liquid chiller, specifically designed for **indoor application**. This **freestanding version** is best for technical application for cooling down computers rooms, data centers, digital telephone exchangers, switch rooms as well as any other application with sensible heat to be dissipated.

The series is composed by a variety of dimensions, with a cooling capacity going from 2 kW up to 26 kW, and with a treated water flow going from 12 up to 50 L/min. It is always possible to implement the cooling capacity and the flow rate up to any level requested. All the machines has an internal tank with a maximum capacity of 25 litres, but it can be implemented up to 95 litres with the Hydronik Kit, which allows to get a service pressure of 6 bar. It is also possible to implement the unit with a freecooling mode, which allows to reduce the energy consumption up to 70%, and by consequence the environmental impact: the Clima Processor can automatically switch to a freecooling mode when the external condition allows it.

The dimensions are extremely compact. Depending by the cooling capacity, they goes from 75cm x 67cm x 198cm high to 120cm x 100cm x 220cm high, which is the biggest standard solution.

The installation is extremely simple, and the complete installation, when the setup is ready, requires no more than 5 hours. Furthermore, this compact solution require no HVAC technician for the setup.

We also offer thermal analysis in order to help you choosing the best configuration for every situation.



CM-W L16

CLIMAPROCESSOR



GENERAL APPLICATION:

The CM-W series is specifically designed,
but not limited, to:

- Computers Rooms
- Data Centers
- Tel-Co Shelters
- Switch Rooms
- Weather Stations
- Museums
- Medical Laboratories
- Diagnostic Scanners
- *Others*

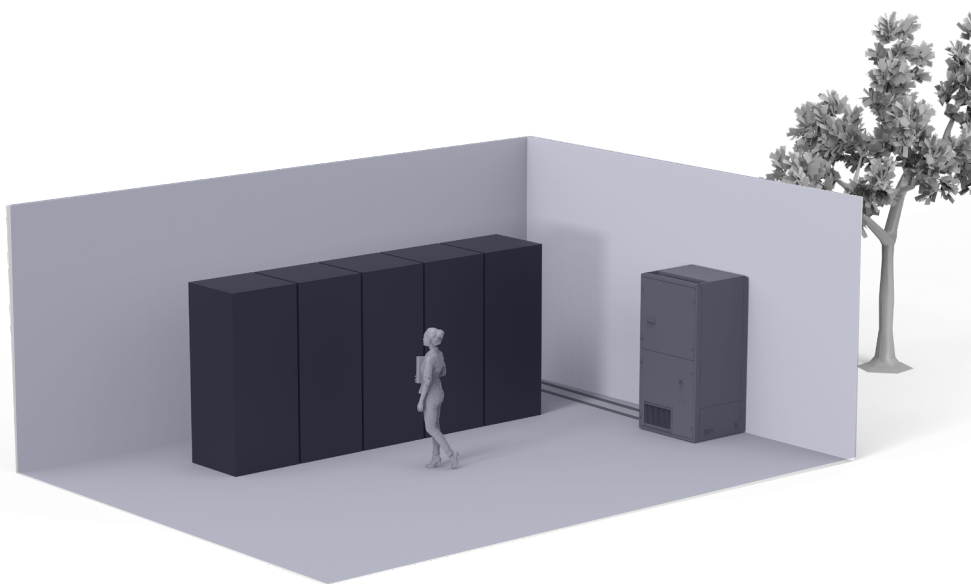
CUSTOMIZATION & ACCESSORIES:

All our solutions are custom-made for every client. We can provide a wide variety of customizations and extras to meet each client's exact specifications.

We offer you all our experience and know-how to find the best solution for every application. All our products are CE certified, and we can also provide US or Japanese standards. Additionally, upon request, we can conduct tests in our climatic chamber.

- R134a or R410A refrigerant
- Special coils design / surface treatment
- Special voltage supply (*standard 400V AC, 50 Hz*)
- Dry Cooler for freecooling integration
- Heating systems: hot water, electric
- Inverter pump
- Water leakage detection system
- Refrigerant leakage detection system
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Adjustable basement
- Low noise insulation
- Reinforced insulation (Certified EN13501-1 class A1/A0 s0 d0)
- Special RAL color

Other customized solutions are possible upon request.

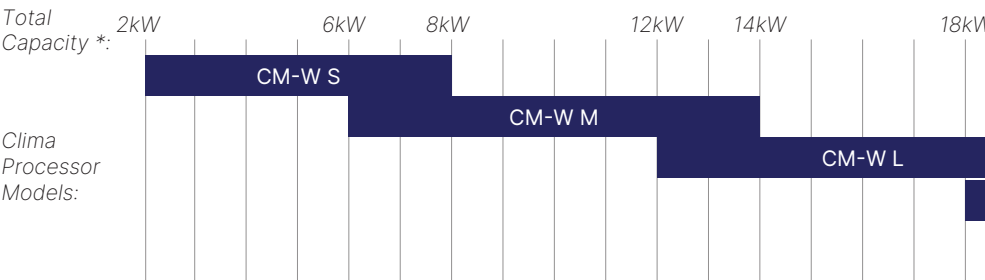


INFORMATION FOR INSTALLATION:

The installation of the Clima Processor CM-W serie is very simple and does not require any HVAC technician. Being a compact unit, complete with an internal condenser, it does not require any installation on pre-existing circuits, except for the water inlet and outlet. Since fresh air is needed to cool the condenser or for freecooling operation, **the unit must be installed either near a wall directly connected to the outside** or alternatively, the rear air intake can be connected to an existing duct that is connected to an external air source.

The installation does not require any particular pre-existing circuits, but only an electrical connection. Being a freestanding unit, it does not require wall fixing. Instructions for creating wall outlets will be provided for installation.

TECHNICAL INFORMATIONS:



*The Cooling Capacity is evaluated at 35°C external temperature, with an outlet liquid temperature between 7 and 25°C.

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	CM-W S	CM-W M
Treated Water Flow	12 L/min (0,75 m³/h)	23 L/min (1,4 m³/h)
Nominal Outlet Temp.	7-25°C (±0,1°C)	7-25°C (±0,1°C)
ΔT In-Out (see Tab.1)	2-6°C	4,3-6,5°C
Outlet Pressure	3 bar (up to 6 bar***)	3 bar (up to 6 bar***)
Internal Water Tank	7,5 L	10 L
Liquid type	Water+25%GLY (max 45%)	Water+25%GLY (max 45%)
Heating Mode (extra)	Yes, Electrical	Yes, Electrical
Refrigerant type	R513a (or R410a)	R513a (or R410a)
COP	2,5 - 3,5	2,5 - 3,5
BLDC Compressor	On request	On request
Dimensions (LxWxH)	750mmx670mmx1980mm	850mmx870mmx2180mm
Weight (range)	245-305 kg	340-360 kg

*** This outlet pressure are possible only with the HYDRONIK KIT (optional). This extra module provides an extra tank with a capacity up to 70L, which can increase the outlet pressure up to 6 bar.



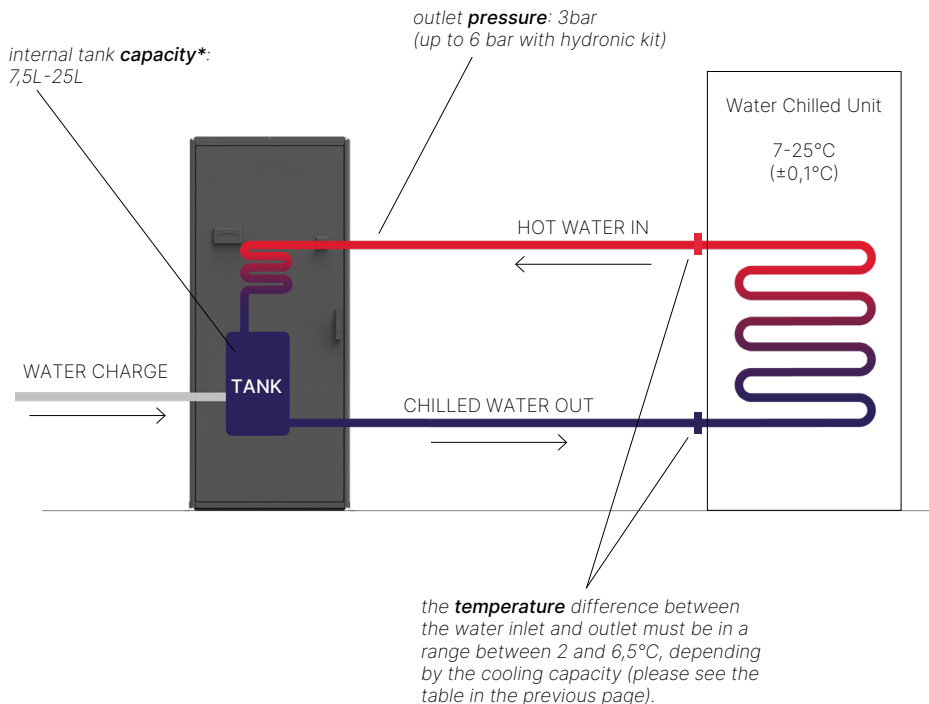
Tab. 1

Total Capacity (kW)		ΔT In-Out (°C)
S	2	2,0
	4	4,0
	6	6,0
M	8	4,3
	10	5,5
	12	6,5
L	14	4,7
	16	5,4
	18	6,0
XL	20	5,0
	22	5,5
	24	6,0
	26	6,5

CM-W L	CM-W XL	CM-W special size**
37 L/min (2,2 m³/h)	50 L/min (3 m³/h)	-
7-25°C (±0,1°C)	7-25°C (±0,1°C)	7-25°C (±0,1°C)
4,7-6°C	5-6,5°C	-
3 bar (up to 6 bar***)	3 bar (up to 6 bar***)	-
15 L	25 L	-
Water+25%GLY (max 45%)	Water+25%GLY (max 45%)	Water+25%GLY (max 45%)
Yes, Electrical	Yes, Electrical	Yes, Electrical
R513a (or R410a)	R513a (or R410a)	R513a (or R410a)
2,5 - 3,5	2,5 - 3,5	-
On request	On request	On request
1000mmx870mmx2180mm	1200mmx1000mmx2200mm	-
352-372 kg	410-570 kg	-

** Alternative configurations are always possible. For any specific requirements, please feel free to contact us, we will be happy to provide you with the necessary details.

COOLING SCHEME:



* The standard tank installed within our machinery has a capacity between 7,5 to 25 liters, depending the machines size, which provides an outlet pressure of 3 bar. Upon request, it is possible to increase the tank capacity up to 70L in order to increase the outlet pressure up to 6 bar.

The *CM-W* liquid cooling system allows for the cooling and maintenance of a constant temperature of the water intended for the precise control of electrical and electronic equipment temperature. This system provides high temperature tolerance for precise cooling, making it the best solution for technical applications.

The positioning of water inlet and outlet ports for manifold connections can be customized during the ordering phase to meet specific customer requirements.

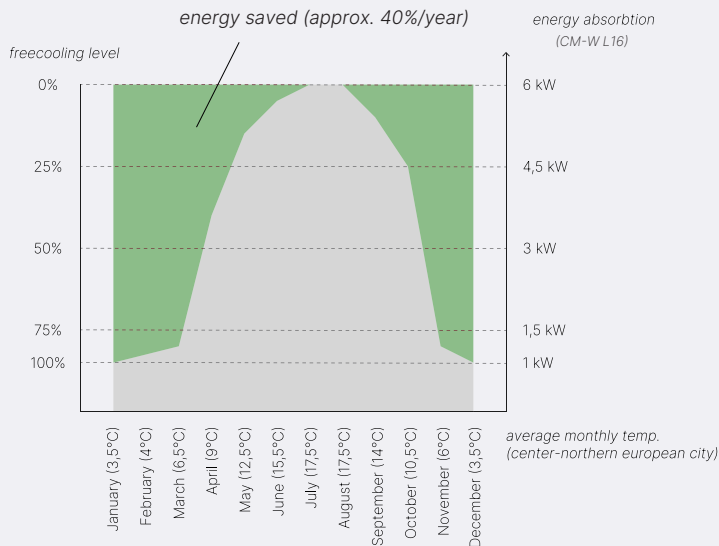
CM-W ACCESSORIES:



Freecooling with dry cooler:

The freecooling system allows, when the external temperature is low enough, to use the external fresh air to directly chill the battery pack instead of using the standard compressor. The graph below illustrates the energy savings achieved with the use of freecooling, assuming a water supply temperature of 25 degrees, with the machine installed in a Central-Northern Europe country. Under these conditions, the estimated annual savings (highlighted in green) are approximately 40%, permitting a total annual energy saving up to 21'000 kWh.

Please consider that freecooling mode requires a minimum glycol concentration of 18%.



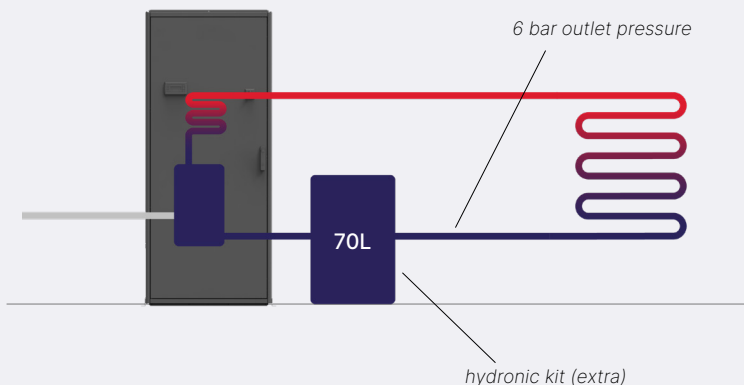
Heating System:

The electric heating system ensures that the cooling water temperature does not fall below the working temperature. This accessory consists of an immersed electric resistance in the internal tank, which activates as needed. This option is recommended if the machine is expected to remain idle for an extended period or if installed in environments that experience very low temperatures for several months each year. The side table displays the required power consumption levels based on the machine's size.

Total Capacity (kW)		Heating Power
S	2	3 kW
	4	
	6	
M	8	5 kW
	10	
	12	
L	14	6 kW
	16	
	18	
XL	20	10 kW
	22	
	24	
	26	

Hydronic Kit:

The Hydronic Kit is an optional add-on that can be installed in any machine from the CM-W series. This kit consists of an additional module containing an extra 70 liter tank, allowing for an increase in discharge pressure up to 6 bar. The dimensions of the hydronic kit depend on the tank capacity. Please contact us for more detailed information.



MAIN ACCESSORIES COMPATIBILITY:

cooling type		water chiller (direct expansion)		CM-W series	
remote condenser required		no		codification	note
body and structure	color	grey	●	00.c.01	
		white	○	00.c.02	or other RAL colour
	material	aluminium	○	00.m.a	
		galvanized steel	●	00.m.s	
	cladding	non insulated cladding	x	01.000	
		standard insulation	●	01.001	
		polyurethane foam sandwich	○	01.002	
		rockwool sandwich	○	01.003	
	baseframe	standard baseframe	x	01.004	
		deflector baseframe	x	01.005.d	best with downflow configuration
refrigerating system	refrigerant	R513a	●	02.001.1	
		R134a	○	02.001.2	
		R410a	○	02.001.3	
		modulating condensing pressure control	●	02.002	
	expansion valve	mechanical expansion valve	●	02.004.m	
		electronic expansion valve (EEV)	○	02.004.eev	2 press. probe and 1 NTC required
	water valve	two way valve	x	02.005.2v	
		three way valve	x	02.005.3v	
		pressure actuated water regulating valve	x	02.006	
		plate exchangers	●	02.007	
airflow	compressor	scroll compressor	●	03.001.s	
		BLDC compressor	○	03.001.blcdc	
	fan	EC radial fan	x	03.002.r	only for condensing
		EC High-Prevalence radial fan	x	03.002.hp	
		axial fan (for condenser)	x	03.002.100	
	filters	G4 filter (>60% ISO Coarse)	x	03.003.1g4	
		F7 filter (80-85% ePM10)	x	03.003.2f7	
		F9 filter (85-90% ePM10)	x	03.003.3f9	
		metal G2 (30% ISO Coarse)	x	03.003.4m	
		steam humidifier	x	03.004	TH probe required
		differential pressure switch	x	03.005.1	
		differential pressure transducer	x	03.005.2	
		temperature probe (NTC)	●	03.006.ntc	
	th probe	wall mounted TH probe	x	03.006.th.w	
		duct TH probe	x	03.006.th.d	
aeraulic systems		freecooling*	○		* made with DRY COOLER
	fresh air intake	standard fresh air intake	x	04.002.1std	
		fresh air intake with shut-off damper (manual)	x	04.002.2m	
		fresh air intake with shut-off damper (automatic)	x	04.002.2a	
	air plenum	top air plenum	x	04.003.t	
		bottom air plenum	x	04.003.b	
		rear air plenum	x	04.003.r	
		non-return damper	x	04.004	
	shut-off damper	shut-off damper (manual)	x	04.005.m	
		shut-off damper (automatic)	x	04.005.a	
		airflow protection grid	○	04.006	

heating and dehumidification systems	reheating systems	electric reheating coil	x	06.001	not with hot water reheating coil
		hot water reheating coil	x	06.002	not with electric reheating coil
		heating pump	x	06.003	can not be used as dehumidifier
electronic and communication system		control board	●	07.001	
	display	LCD display	●	07.002	
		remote LCD display	○	07.002.r	
	communications	modbus + rs485	○	07.003.m.rs	
		bacnet + rs485	○	07.003.b.rs	
		modbus/bacnet + ethernet	○	07.003.jp	
konnex		○	07.003.knxx		
alarm and security	water leakage	punctual water leakage alarm	○	08.001.1P	
		linear water leakage alarm	○	08.001.2L	
	refrigerant leakage	refrigerant leakage alarm (low pressure switch)	●	08.002.0	
		refrigerant leakage alarm (local sensor)	○	08.002.1	
		refrigerant leakage alarm (remote sensor)	○	08.002.2	
	smoke/fire alarm	smoke alarm	x	08.003.s	
		fire alarm	x	08.003.f	
		clogged filter alarm (diff. pressure switch)	x	03.005.1.cfa	
	fire damper	○	08.004		
	moisture evacuation pump	○	08.005		
protection from environment	coils treatment	hydrophilic coils treatment	○	09.001.h	
		cataphoretic coils treatment	○	09.001.c	
		snow kit	x	09.002	
		low outdoor condensing temperature control	x	09.003	
		sand trap	x	09.004	
shipping	shipping	pallet	●	10.001	plus cardboard and plastic film
		fumigated pallet	○	10.001.f	
		wooden crate	○	10.002	
		fumigated wooden crate	○	10.002.f	
	indicators	shock indicator	○	10.003.s	
tilting indicator		○	10.003.t		
specific components and accessories for chiller series					
tank	internal water tank		●		capacity vary according unit's cooling capacity
		hydronic kit	○		
heating		immersion electric heaters	○		
pump	water pump ON/OFF		●		
		water pump INVERTER	○		
pressure control	pressure gauge (analog)		●		
		pressure gauge (digital)	○		
flow control	waterflow switch		●		
		digital waterflow meter	○		

● included in standard configuration

○ possible as optional

x not possible for this unit

Discover more about our wide range of accessories and components in the dedicated accessories catalog.

If you are interested, please contact one of our sales team or write us at climaprocessor@cmcrail.it

RM-W:

THE INDOOR CEILING-MOUNTED.

Clima Processor "RM-W series" is a compact **indoor ceiling-mounted** liquid chiller unit.

This sophisticated solution for efficient temperature control within confined spaces it's designed for installation on containers and shelters. This versatile unit can be centrally positioned or placed near walls and corners providing adaptability to various spatial configurations.

The RM-W compact water cooling unit excels in technical applications, offering precise regulation of water temperature (with a restricted tolerance of $\pm 0,1^{\circ}\text{C}$). Its suspended design enables the optimization of internal space, making the entire surface usable, and without altering the total external footprint of the container in any way.

With a wide range of cooling capacities, going from 2 kW to over 26 kW and with a treated water flow going from 12 up to 50 L/min, the RM-W unit is equipped to meet different requirements. All the machines has an internal tank with maximum capacity of 25 litres, but it can be implemented up to 95 litres with the Hydronik Kit, which allows to get a service pressure of 6 bar.

Whether for smaller spaces or larger technical applications, the unit's cooling capabilities ensure efficient and reliable performance, even in the more extreme environment.

***RM-W will be available soon.
Our engineers are working for its definition.***

***If interested, please contact our sales office,
which will provide You with all the information.***

The RM-W series is specifically designed, but not limited, to:

- Computers Rooms
- Data Centers
- Tel-Co Shelters
- Switch Rooms
- Weather Stations
- Museums
- Medical Laboratories
- Diagnostic Scanners
- *Others*



GENERAL APPLICATION:

RM-W SERIES

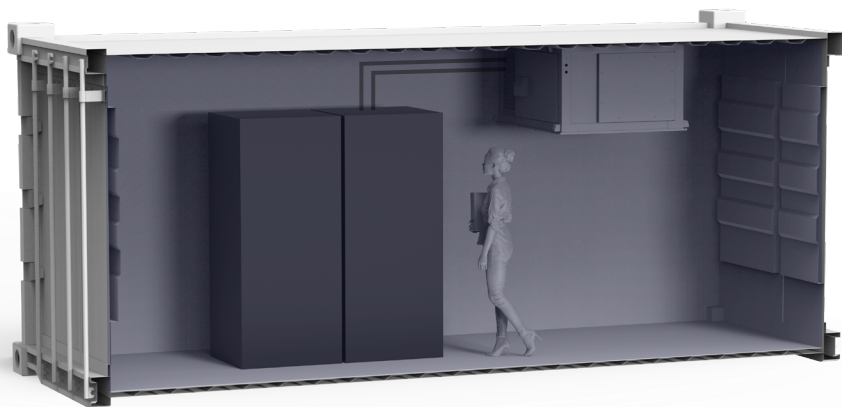
CUSTOMIZATION & ACCESSORIES:

All our solutions are custom-made for every client. We can provide a wide variety of customizations and extras to meet each client's exact specifications.

We offer you all our experience and know-how to find the best solution for every application. All our products are CE certified, and we can also provide US or Japanese standards. Additionally, upon request, we can conduct tests in our climatic chamber.

- R134a or R410A refrigerant
- Special coils design / surface treatment
- Special voltage supply (*standard 400V AC, 50 Hz*)
- Dry Cooler for freecooling integration
- Heating systems: hot water, electric
- Inverter pump
- Water leakage detection system
- Refrigerant leakage detection system
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Low noise insulation
- Reinforced insulation (Certified EN13501-1 class A1/A0 s0 d0)
- Special RAL color

Other customized solutions are possible upon request.



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RM-W SERIES

INFORMATION FOR INSTALLATION:

The installation of the Climate Processor RM-W is very simple and quick. Being a compact unit, it has an internal condenser and therefore does not need to be connected to a remote condensing unit. The presence of an HVAC technician is not required as the refrigerant circuit is a closed system, already sealed and tested before delivery.

Installation takes place on the ceiling, and due to the need for an influx of fresh air from the outside to cool the integrated condenser, **installation near an external wall is required**. Alternatively, it is also possible to use ducting that still allows direct access to outdoor air. Upon request, we offer the possibility of also creating these ducts.

Designed for standard containers as well, there is the option to purchase a specially made installation kit for the main types of standard containers.

TECHNICAL INFORMATIONS:

*RM-W will be available soon.
Our engineers are working for its definition.*

*If interested, please contact our sales office,
which will provide You with all the information.*

*RM-W will be available soon.
Our engineers are working for its definition.*

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COOLING SCHEME:

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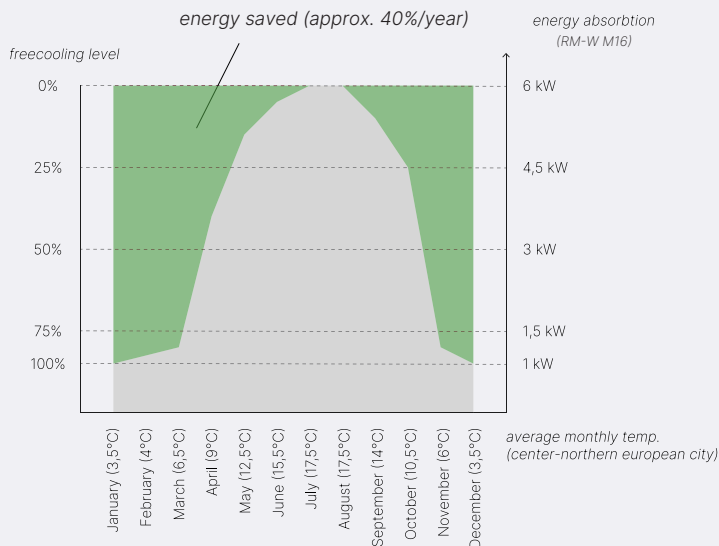
RM-W ACCESSORIES:



Freecooling with dry cooler:

The freecooling system allows, when the external temperature is low enough, to use the external fresh air to directly chill the battery pack instead of using the standard compressor. The graph below illustrates the energy savings achieved with the use of freecooling, assuming a water supply temperature of 25 degrees, with the machine installed in a Central-Northern Europe country. Under these conditions, the estimated annual savings (highlighted in red) are approximately 40%, permitting a total annual energy saving up to 21'000 kWh.

Please consider that freecooling mode requires a minimum glycol concentration of 18%.



Heating System:

The electric heating system ensures that the cooling water temperature does not fall below the working temperature. This accessory consists of an immersed electric resistance in the internal tank, which activates as needed. This option is recommended if the machine is expected to remain idle for an extended period or if installed in environments that experience very low temperatures for several months each year. The side table displays the required power consumption levels based on the machine's size.

Total Capacity (kW)		ΔT In-Out (°C)
S	2	2,0
	4	4,0
	6	6,0
	8	4,3
M	10	5,5
	12	6,5
	14	4,7
	16	5,4
	18	6,0
	20	5,0
L	22	5,5
	24	6,0
	26	6,5

Hydronic Kit:

The Hydronic Kit is an optional add-on that can be installed in any machine from the *RM-W* series. This kit consists of an additional module containing an extra 70 liter tank, allowing for an increase in discharge pressure up to 6 bar. The dimensions of the hydronic kit depend on the tank capacity. Please contact us for more detailed information.

MAIN ACCESSORIES COMPATIBILITY:

cooling type		water chiller (direct expansion)		RM-W series	
remote condenser required		no		codification	note
body and structure	color	grey	●	00.c.01	
		white	○	00.c.02	or other RAL colour
	material	aluminium	●	00.m.a	
		galvanized steel	○	00.m.s	
	cladding	non insulated cladding	x	01.000	
		standard insulation	●	01.001	
		polyurethane foam sandwich	○	01.002	
		rockwool sandwich	○	01.003	
	baseframe	standard baseframe	x	01.004	
		deflector baseframe	x	01.005.d	best with downflow configuration
refrigerating system	refrigerant	R513a	●	02.001.1	
		R134a	○	02.001.2	
		R410a	○	02.001.3	
		modulating condensing pressure control	●	02.002	
	expansion valve	mechanical expansion valve	●	02.004.m	
		electronic expansion valve (EEV)	○	02.004.eev	2 press. probe and 1 NTC required
	water valve	two way valve	x	02.005.2v	
		three way valve	x	02.005.3v	
		pressure actuated water regulating valve	x	02.006	
		plate exchangers	●	02.007	
airflow	compressor	scroll compressor	●	03.001.s	
		BLDC compressor	○	03.001.blcdc	
	fan	EC radial fan	x	03.002.r	only for condensing
		EC High-Prevalence radial fan	x	03.002.hp	
		axial fan (for condenser)	x	03.002.100	
	filters	G4 filter (>60% ISO Coarse)	x	03.003.1g4	
		F7 filter (80-85% ePM10)	x	03.003.2f7	
		F9 filter (85-90% ePM10)	x	03.003.3f9	
		metal G2 (30% ISO Coarse)	x	03.003.4m	
		steam humidifier	x	03.004	TH probe required
		differential pressure switch	x	03.005.1	
		differential pressure transducer	x	03.005.2	
		temperature probe (NTC)	●	03.006.ntc	
	th probe	wall mounted TH probe	x	03.006.th.w	
		duct TH probe	x	03.006.th.d	
aeraulic systems		freecooling*	○		* made with DRY COOLER
	fresh air intake	standard fresh air intake	x	04.002.1std	
		fresh air intake with shut-off damper (manual)	x	04.002.2m	
		fresh air intake with shut-off damper (automatic)	x	04.002.2a	
	air plenum	top air plenum	x	04.003.t	
		bottom air plenum	x	04.003.b	
		rear air plenum	x	04.003.r	
		non-return damper	x	04.004	
	shut-off damper	shut-off damper (manual)	x	04.005.m	
		shut-off damper (automatic)	x	04.005.a	
		airflow protection grid	○	04.006	

heating and dehumidification systems	reheating systems	electric reheating coil	x	06.001	not with hot water reheating coil
		hot water reheating coil	x	06.002	not with electric reheating coil
		heating pump	x	06.003	can not be used as dehumidifier
electronic and communication system		control board	●	07.001	
	display	LCD display	●	07.002	
		remote LCD display	○	07.002.r	
	communications	modbus + rs485	○	07.003.m.rs	
		bacnet + rs485	○	07.003.b.rs	
		modbus/bacnet + ethernet	○	07.003.jp	
konnex		○	07.003.knx		
alarm and security	water leakage	punctual water leakage alarm	○	08.001.1P	
		linear water leakage alarm	○	08.001.2L	
	refrigerant leakage	refrigerant leakage alarm (low pressure switch)	●	08.002.0	
		refrigerant leakage alarm (local sensor)	○	08.002.1	
		refrigerant leakage alarm (remote sensor)	○	08.002.2	
	smoke/fire alarm	smoke alarm	x	08.003.s	
		fire alarm	x	08.003.f	
		clogged filter alarm (diff. pressure switch)	x	03.005.1.cfa	
	fire damper	○	08.004		
	moisture evacuation pump	○	08.005		
protection from environment	coils treatment	hydrophilic coils treatment	○	09.001.h	
		cataphoretic coils treatment	○	09.001.c	
		snow kit	x	09.002	
		low outdoor condensing temperature control	x	09.003	
		sand trap	x	09.004	
shipping	shipping	pallet	●	10.001	plus cardboard and plastic film
		fumigated pallet	○	10.001.f	
		wooden crate	○	10.002	
		fumigated wooden crate	○	10.002.f	
	indicators	shock indicator	○	10.003.s	
tilting indicator		○	10.003.t		
specific components and accessories for chiller series					
tank	internal water tank	hydronic kit	●		capacity vary according unit's cooling capacity
			○		
heating		immersion electric heaters	○		
pump	water pump ON/OFF	water pump INVERTER	●		
			○		
pressure control	pressure gauge (analog)	pressure gauge (digital)	●		
			○		
flow control	waterflow switch	digital waterflow meter	●		
			○		

- included in standard configuration
- possible as optional
- × not possible for this unit

Discover more about our wide range of accessories and components in the dedicated accessories catalog.

If you are interested, please contact one of our sales team or write us at climaprocessor@cmcrail.it

CK-W:

THE OUTDOOR WALL-MOUNTED VERSION.

The Clima Processor "CK-W series" is a compact unit liquid chiller specifically designed for **outdoor application**. It is a **wall-mounted unit**, with the advantage of not affecting the interior room volume.

Designed for the cooling of battery storage, energy converters, and telecommunication shelters (available in 48V or 24V versions), the unit is optimized for outdoor applications. It takes into account specific features of this application, such as low voltage supply and the requirement to dissipate only sensible loads.

The entire structure is made by aluminum in order to minimize the weight and assures high resistance against corrosion and atmospheric agents. A special painting complete the structure, with the possibility to customize it with every RAL color.

Freecooling can be easily implemented in the unit configuration as an optional, which can reduce the energy consumption up to 80%: when the outdoor conditions allows it, the external fresh air is used to cooling down the heat exchanger, improving thermal efficiency.

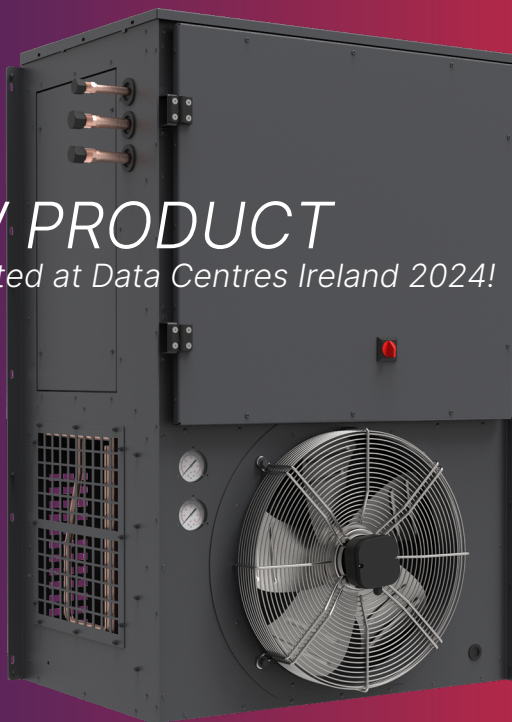
The series is composed by a variety of dimensions, with a cooling capacity going from 2 kW up to 26 kW, and with a treated water flow going from 12 up to 50 L/min. It is always possible to implement the cooling capacity and the flow rate up to any level requested. All the machines has an internal tank with maximum capacity of 25 litres, but it can be implemented up to 95 litres with the Hydronik Kit, which allows to get a service pressure of 6 bar.

The installation is made extremely simple thanks to the lifting elements, both at the top and the bottom of the structures; the complete installation, when the setup is ready, requires no more than 3 hours. Furthermore, the clima processors are palletizable for easy transportation. This compact solution require no HVAC technician for the setup.

We also offer thermal analysis in order to help you choosing the best option for every situation.

NEW PRODUCT

first presented at Data Centres Ireland 2024!



CK-W M10

CLIMAPROCESSOR

The CK-W series is specifically designed, but not limited, to:

- Computers Rooms
- Data Centers
- Tel-Co Shelters
- Switch Rooms
- Weather Stations
- Museums
- Medical Laboratories
- Diagnostic Scanners
- *Others*



GENERAL APPLICATION:

CK-W SERIES

CUSTOMIZATION & ACCESSORIES:

All our solutions are custom-made for every client. We can provide a wide variety of customizations and extras to meet each client's exact specifications.

We offer you all our experience and know-how to find the best solution for every application. All our products are CE certified, and we can also provide US or Japanese standards. Additionally, upon request, we can conduct tests in our climatic chamber.

- Heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- High Prevalence EC fans
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Fire damper
- Snow hood protections
- Sand trap
- Fresh air intake
- Air filters F5, F7, F9
- Special coils design / surface treatment
- Sandwich panels
- Low noise insulation
- Reinforced insulation (Certified EN13501-1 class A1/A0 s0 d0)
- Special colour
- R134a or R410A refrigerant

Other customized solutions are possible upon request.

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CK-W SERIES

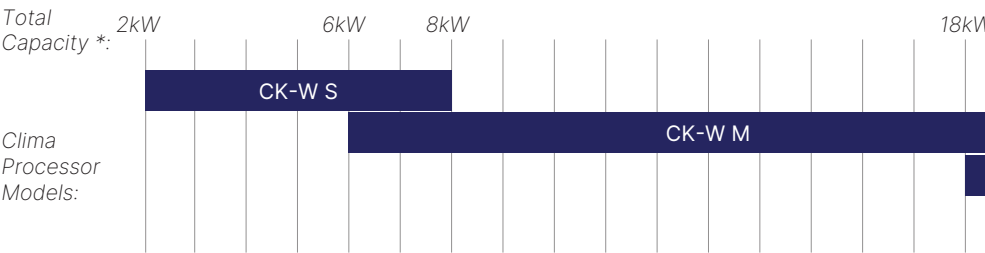
INFORMATION FOR INSTALLATION:

The installation of the Climate Processor CK-W is very simple and fast. Being a compact unit with an internal condenser, there is no need for connection to a remote condensing system.

The CK-W is a wall-mounted unit for outdoor installation, and therefore, **installation must take place on the exterior wall adjacent to the space to be cooled.**

Installation only requires an electrical connection. Guidelines for creating the wall interface will be provided for installation.

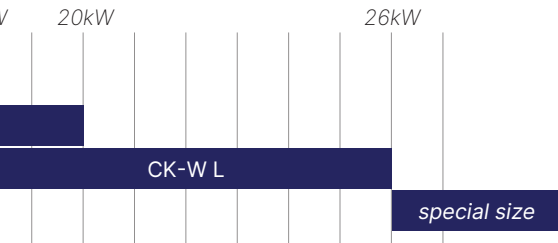
TECHNICAL INFORMATIONS:



**The Cooling Capacity is evaluated at 35°C external temperature, with an outlet liquid temperature between 7 and 25°C.*

	CK-W S	CK-W M
Treated Water Flow	12 L/min (0,75 m³/h)	23 L/min (1,4 m³/h)
Nominal Outlet Temp.	7-25°C (±0,1°C)	7-25°C (±0,1°C)
ΔT In-Out (see Tab.1)	2-6°C	4,3-6,5°C
Outlet Pressure	3 bar (up to 6 bar***)	3 bar (up to 6 bar***)
Internal Water Tank	7,5 L	10 L
Liquid type	Water+25%GLY (min 18%)	Water+25%GLY (min 18%)
Heating Mode (extra)	Yes, Electrical	Yes, Electrical
Refrigerant type	R513a (or R410a)	R513a (or R410a)
COP	2,5 - 3,5	2,5 - 3,5
BLDC Compressor	On request	On request
Dimensions (LxWxH)	970mmx700mm x1700mm	1000mmx800mm x1800mm
Weight (range)	275 kg	300 kg

**** This outlet pressure are possible only with the HYDRONIK KIT (optional). This extra module provides an extra tank with a capacity up to 70L, which can increase the outlet pressure up to 6 bar.*



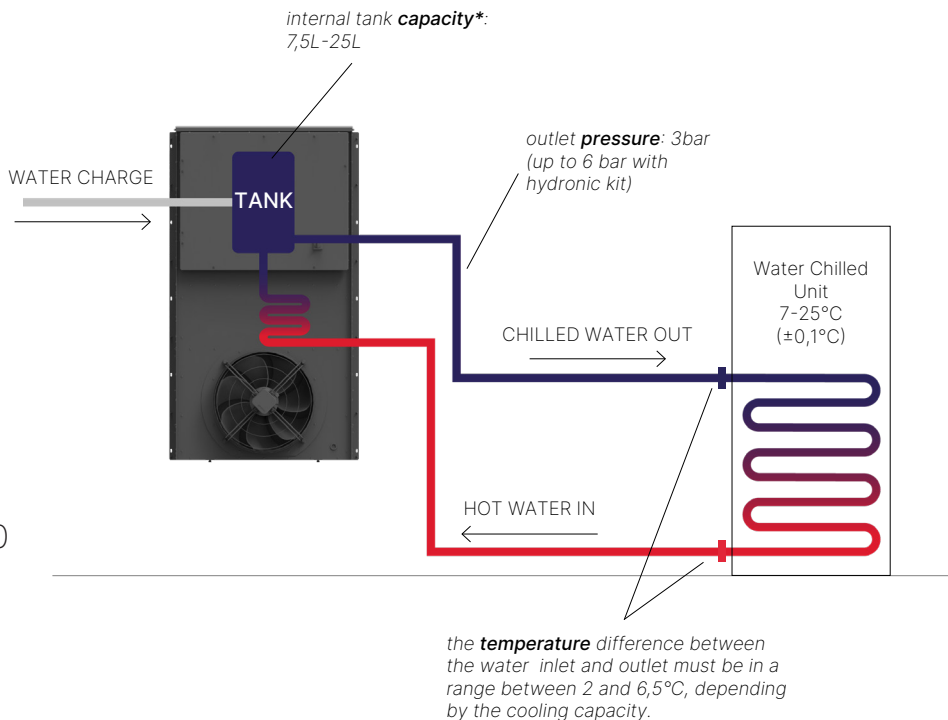
Tab. 1

Total Capacity (kW)		ΔT In-Out (°C)
S	2	2,0
	4	4,0
	6	6,0
	8	4,3
M	10	5,5
	12	6,5
	14	4,7
	16	5,4
	18	6,0
	20	5,0
L	22	5,5
	24	6,0
	26	6,5

V / M	CK-W L	CK-W special size**
37 L/min (2,2 m³/h)	50 L/min (3 m³/h)	-
7-25°C (±0,1°C)	7-25°C (±0,1°C)	7-25°C (±0,1°C)
4,7-6°C	5-6,5°C	-
3 bar (up to 6 bar***)	3 bar (up to 6 bar***)	-
15 L	25 L	-
Water+25%GLY (min 18%)	Water+25%GLY (min 18%)	Water+25%GLY (min 18%)
Yes, Electrical	Yes, Electrical	Yes, Electrical
R513a (or R410a)	R513a (or R410a)	R513a (or R410a)
2,5 - 3,5	2,5 - 3,5	-
On request	On request	On request
1000mmx800mm x1800mm	1100mmx920mm x1900mm	-
305 kg	320 kg	-

** Alternative configurations are always possible. For any specific requirements, please feel free to contact us, we will be happy to provide you with the necessary details.

COOLING SCHEME:



* The standard tank installed within our machinery has a capacity between 7,5 to 25 liters, depending the machines size, which provides an outlet pressure of 3 bar. Upon request, it is possible to increase the tank capacity up to 70L in order to increase the outlet pressure up to 6bar.

The *CK-W* liquid cooling system allows for the cooling and maintenance of a constant temperature of the water intended for the precise control of electrical and electronic equipment temperature. This system provides high temperature tolerance for precise cooling, making it the best solution for technical applications.

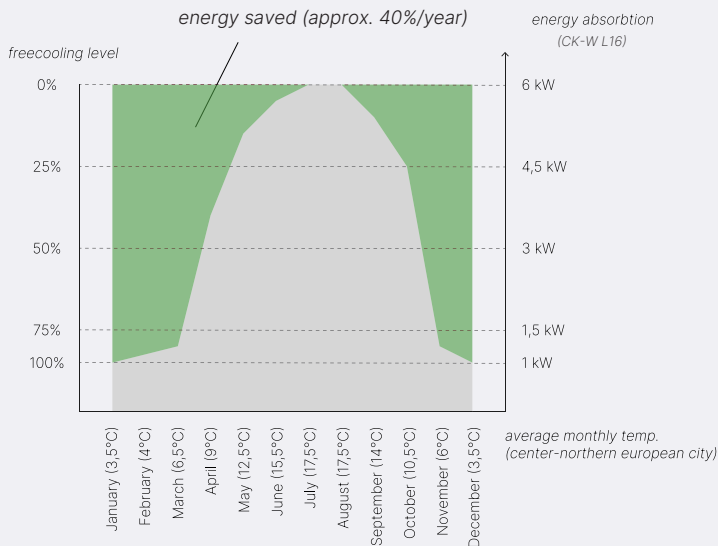
The positioning of water inlet and outlet ports for manifold connections can be customized during the ordering phase to meet specific customer requirements.



Freecooling with dry cooler:

The freecooling system allows, when the external temperature is low enough, to use the external fresh air to directly chill the battery pack instead of using the standard compressor. The graph below illustrates the energy savings achieved with the use of freecooling, assuming a water supply temperature of 25 degrees, with the machine installed in a Central-Northern Europe country. Under these conditions, the estimated annual savings (highlighted in red) are approximately 40%, permitting a total annual energy saving up to 21'000 kWh.

Please consider that freecooling mode requires a minimum glycol concentration of 18%.



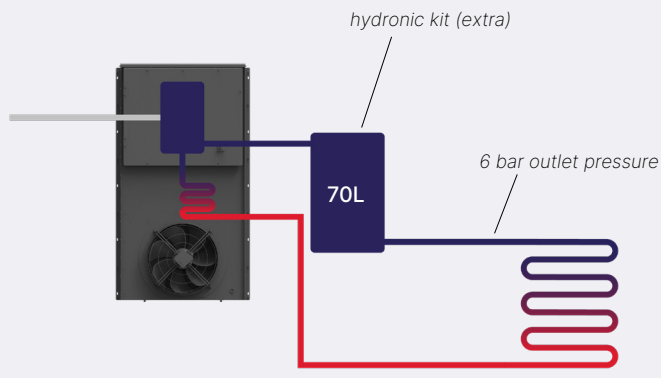
Heating System:

The electric heating system ensures that the cooling water temperature does not fall below the working temperature. This accessory consists of an immersed electric resistance in the internal tank, which activates as needed. This option is recommended if the machine is expected to remain idle for an extended period or if installed in environments that experience very low temperatures for several months each year. The side table displays the required power consumption levels based on the machine's size.

Total Capacity (kW)		Heating Power
S	2	3 kW
	4	
	6	
M	8	5 kW
	10	
	12	
L	14	6 kW
	16	
	18	
XL	20	10 kW
	22	
	24	
	26	

Hydronic Kit:

The Hydronic Kit is an optional add-on that can be installed in any machine from the CK-W series. This kit consists of an additional module containing an extra 70 liter tank, allowing for an increase in discharge pressure up to 6 bar. The dimensions of the hydronic kit depend on the tank capacity. Please contact us for more detailed information.



MAIN ACCESSORIES COMPATIBILITY:

cooling type		water chiller (direct expansion)		CK-W series	
remote condenser required		no		codification	note
body and structure	color	grey	●	00.c.01	
		white	○	00.c.02	or other RAL colour
	material	aluminium	●	00.m.a	
		galvanized steel	○	00.m.s	
	cladding	non insulated cladding	x	01.000	
		standard insulation	●	01.001	
		polyurethane foam sandwich	○	01.002	
		rockwool sandwich	○	01.003	
	baseframe	standard baseframe	x	01.004	
		deflector baseframe	x	01.005.d	best with downflow configuration
refrigerating system	refrigerant	R513a	●	02.001.1	
		R134a	○	02.001.2	
		R410a	○	02.001.3	
		modulating condensing pressure control	●	02.002	
	expansion valve	mechanical expansion valve	●	02.004.m	
		electronic expansion valve (EEV)	○	02.004.eev	2 press. probe and 1 NTC required
	water valve	two way valve	x	02.005.2v	
		three way valve	x	02.005.3v	
		pressure actuated water regulating valve	x	02.006	
		plate exchangers	●	02.007	
airflow	compressor	scroll compressor	●	03.001.s	
		BLDC compressor	○	03.001.blcdc	
	fan	EC radial fan	x	03.002.r	only for condensing
		EC High-Prevalence radial fan	x	03.002.hp	
		axial fan (for condenser)	x	03.002.100	
	filters	G4 filter (>60% ISO Coarse)	x	03.003.1g4	
		F7 filter (80-85% ePM10)	x	03.003.2f7	
		F9 filter (85-90% ePM10)	x	03.003.3f9	
		metal G2 (30% ISO Coarse)	x	03.003.4m	
		steam humidifier	x	03.004	TH probe required
		differential pressure switch	x	03.005.1	
		differential pressure transducer	x	03.005.2	
		temperature probe (NTC)	●	03.006.ntc	
	th probe	wall mounted TH probe	x	03.006.th.w	
		duct TH probe	x	03.006.th.d	
aerualic systems		freecooling*	○		* made with DRY COOLER
	fresh air intake	standard fresh air intake	x	04.002.1std	
		fresh air intake with shut-off damper (manual)	x	04.002.2m	
		fresh air intake with shut-off damper (automatic)	x	04.002.2a	
	air plenum	top air plenum	x	04.003.t	
		bottom air plenum	x	04.003.b	
		rear air plenum	x	04.003.r	
		non-return damper	x	04.004	
	shut-off damper	shut-off damper (manual)	x	04.005.m	
		shut-off damper (automatic)	x	04.005.a	
		airflow protection grid	○	04.006	

heating and dehumidification systems	reheating systems	electric reheating coil	x	06.001	not with hot water reheating coil
		hot water reheating coil	x	06.002	not with electric reheating coil
		heating pump	x	06.003	can not be used as dehumidifier
electronic and communication system	display	control board	●	07.001	
		LCD display	●	07.002	
		remote LCD display	○	07.002.r	
	communications	modbus + rs485	○	07.003.m.rs	
		bacnet + rs485	○	07.003.b.rs	
		modbus/bacnet + ethernet konnex	○ ○	07.003.jp 07.003.knrx	
alarm and security	water leakage	punctual water leakage alarm	○	08.001.1P	
		linear water leakage alarm	○	08.001.2L	
	refrigerant leakage	refrigerant leakage alarm (low pressure switch)	●	08.002.0	
		refrigerant leakage alarm (local sensor)	○	08.002.1	
		refrigerant leakage alarm (remote sensor)	○	08.002.2	
	smoke/fire alarm	smoke alarm	x	08.003.s	
		fire alarm	x	08.003.f	
		clogged filter alarm (diff. pressure switch)	x	03.005.1.cfa	
		fire damper	x	08.004	
	moisture evacuation pump	○	08.005		
protection from environment	coils treatment	hydrophilic coils treatment	○	09.001.h	
		cataphoretic coils treatment	○	09.001.c	
		snow kit	x	09.002	
		low outdoor condensing temperature control	x	09.003	
		sand trap	x	09.004	
	shipping	shipping	pallet	●	10.001
fumigated pallet			○	10.001.f	
wooden crate			○	10.002	
fumigated wooden crate			○	10.002.f	
indicators		shock indicator	○	10.003.s	
	tilting indicator	○	10.003.t		
specific components and accessories for chiller series					
tank		internal water tank	●		capacity vary according unit's cooling capacity
		hydronic kit	○		
heating		immersion electric heaters	○		
pump		water pump ON/OFF	●		
		water pump INVERTER	○		
pressure control		pressure gauge (analog)	●		
		pressure gauge (digital)	○		
flow control		waterflow switch	●		
		digital waterflow meter	○		

- included in standard configuration
- possible as optional
- × not possible for this unit

Discover more about our wide range of accessories and components in the dedicated accessories catalog.

If you are interested, please contact one of our sales team or write us at climaprocessor@cmcrail.it

RT-W:

THE OUTDOOR ROOFTOP.

Clima Processor "RT-W series" are a compact **outdoor rooftop** liquid chiller unit.

Designed to maintain precise temperature into shelters used for technical purposes, can adapt to a large variety of environment, supporting the most extreme weather working conditions (-35°C/+55°C).

The entire structure is made by aluminum in order to minimize the weight and to assure high resistance against corrosion and atmospheric agents. A special painting completes the structure, with the possibility to custom it with every RAL color.

The series assures a cooling capacity going from 2kW up to 26kW, and with a treated water flow going from 12 up to 50 L/min. It is always possible to implement the cooling capacity and the flow rate up to any level requested. All the machines has an internal tank with maximum capacity of 25 litres, but it can be implemented up to 95 litres with the Hydronik Kit, which allows to get a service pressure of 6 bar. It is also possible to implement the unit with a freecooling mode, which allows to reduce the energy consumption up to 70%, and by consequence the environmental impact: the Clima Processor can automatically switch to a freecooling mode when the external condition allows it.

The installation is made extremely simple thanks to the lifting elements, both at the top and the bottom of the structures. Furthermore, the Clima Processors are palletizable for extreme easy transportation.

Further customizations are always possible.



The RT-W series is specifically designed, but not limited, to:

- Computers Rooms
- Data Centers
- Tel-Co Shelters
- Switch Rooms
- Weather Stations
- Museums
- Medical Laboratories
- Diagnostic Scanners
- *Others*



GENERAL APPLICATION:

RT-W SERIES

CUSTOMIZATION & ACCESSORIES:

All our solutions are custom-made for every client. We can provide a wide variety of customizations and extras to meet each client's exact specifications.

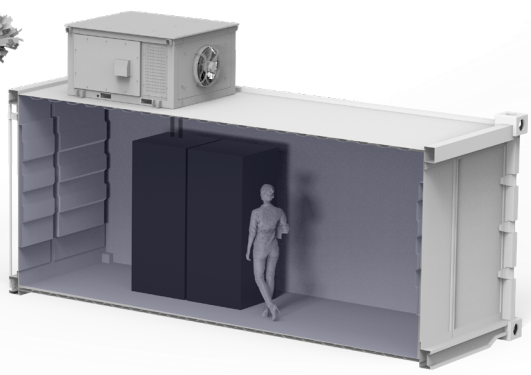
We offer you all our experience and know-how to find the best solution for every application. All our products are CE certified, and we can also provide US or Japanese standards. Additionally, upon request, we can conduct tests in our climatic chamber.

- Heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- High Prevalence EC fans
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Snow hood protections
- Sand trap
- Different mounting interfaces (also for containers)
- Fresh air intake
- Air filters F5, F7, F9
- Special coils design / surface treatment
- Sandwich panels
- Low noise insulation
- Reinforced insulation (Certified EN13501-1 class A1/A0 s0 d0)
- Special colour
- R134a or R410A refrigerant

Other customized solutions are possible upon request.



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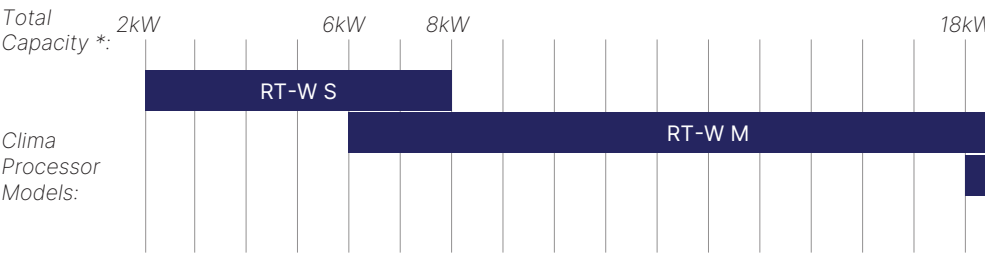
INFORMATION FOR INSTALLATION:

The installation of the Climate Processor RT-W is very simple and quick. Being a compact unit, it has an internal condenser and therefore does not need to be connected to a remote condensing unit. The presence of an HVAC technician is not required as the refrigerant circuit is a closed system, already sealed and tested before delivery.

For applications different from those in containers, the **installation must take place at the roof above the space to be cooled**.

Designed for containers as well, there is the option to purchase a specially made installation kit for the main types of standard containers.

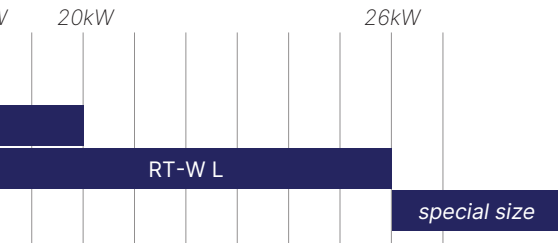
TECHNICAL INFORMATIONS:



*The Cooling Capacity is evaluated at 35°C external temperature, with an outlet liquid temperature between 7 and 25°C.

	RT-W S	RT-W M
Treated Water Flow	12 L/min (0,75 m³/h)	23 L/min (1,4 m³/h)
Nominal Outlet Temp.	7-25°C (±0,1°C)	7-25°C (±0,1°C)
ΔT In-Out (see Tab.1)	2-6°C	4,3-6,5°C
Outlet Pressure	3 bar (up to 6 bar***)	3 bar (up to 6 bar***)
Internal Water Tank	7,5 L	10 L
Liquid type	Water+25%GLY (min 18%)	Water+25%GLY (min 18%)
Heating Mode (extra)	Yes, Electrical	Yes, Electrical
Refrigerant type	R513a (or R410a)	R513a (or R410a)
COP	2,5 - 3,5	2,5 - 3,5
BLDC Compressor	On request	On request
Dimensions (LxWxH)	1825mmx1430mmx925mm	1825mmx1430mmx925mm
Weight (range)	245 kg	280 kg

*** This outlet pressure are possible only with the HYDRONIK KIT (optional). This extra module provides an extra tank with a capacity up to 70L, which can increase the outlet pressure up to 6 bar.



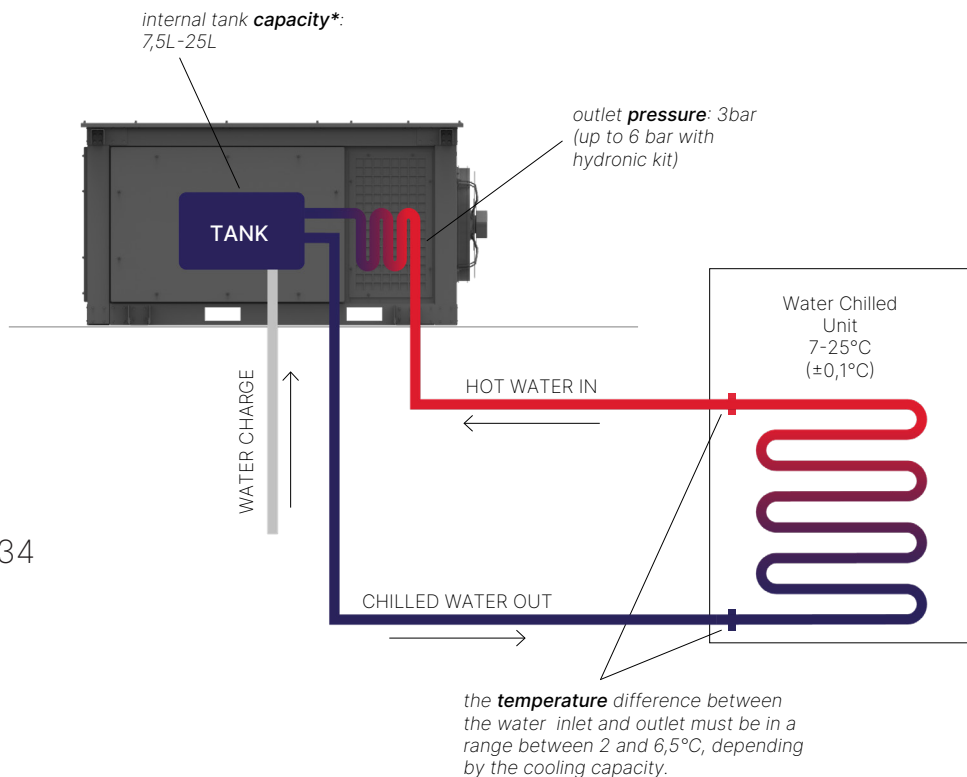
Tab. 1

Total Capacity (kW)		ΔT In-Out (°C)
S	2	2,0
	4	4,0
	6	6,0
	8	4,3
	10	5,5
M	12	6,5
	14	4,7
	16	5,4
	18	6,0
	20	5,0
L	22	5,5
	24	6,0
	26	6,5

V / M	RT-W L	RT-W special size**
37 L/min (2,2 m³/h)	50 L/min (3 m³/h)	-
7-25°C (±0,1°C)	7-25°C (±0,1°C)	7-25°C (±0,1°C)
4,7-6°C	5-6,5°C	-
3 bar (up to 6 bar***)	3 bar (up to 6 bar***)	-
15 L	25 L	-
Water+25%GLY (min 18%)	Water+25%GLY (min 18%)	Water+25%GLY (min 18%)
Yes, Electrical	Yes, Electrical	Yes, Electrical
R513a (or R410a)	R513a (or R410a)	R513a (or R410a)
2,5 - 3,5	2,5 - 3,5	-
On request	On request	On request
1825mmx1430mmx925mm	1825mmx1430mmx925mm	-
315 kg	350 kg	-

** Alternative configurations are always possible. For any specific requirements, please feel free to contact us, we will be happy to provide you with the necessary details.

COOLING SCHEME:



* The standard tank installed within our machinery has a capacity between 7,5 to 25 liters, depending the machines size, which provides an outlet pressure of 3 bar. Upon request, it is possible to increase the tank capacity up to 70L in order to increase the outlet pressure up to 6bar.

The *RT-W* liquid cooling system allows for the cooling and maintenance of a constant temperature of the water intended for the precise control of electrical and electronic equipment temperature. This system provides high temperature tolerance for precise cooling, making it the best solution for technical applications.

The positioning of water inlet and outlet ports for manifold connections can be customized during the ordering phase to meet specific customer requirements.

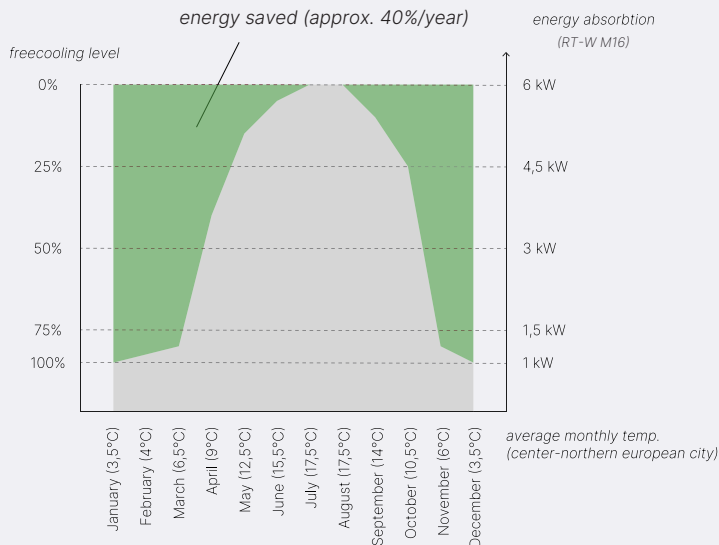
RT-W ACCESSORIES:



Freecooling with dry cooler:

The freecooling system allows, when the external temperature is low enough, to use the external fresh air to directly chill the battery pack instead of using the standard compressor. The graph below illustrates the energy savings achieved with the use of freecooling, assuming a water supply temperature of 25 degrees, with the machine installed in a Central-Northern Europe country. Under these conditions, the estimated annual savings (highlighted in red) are approximately 40%, permitting a total annual energy saving up to 21'000 kWh.

Please consider that freecooling mode requires a minimum glycol concentration of 18%.



Heating System:

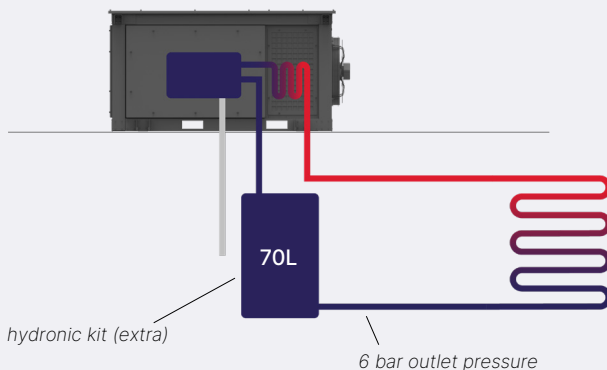
The electric heating system ensures that the cooling water temperature does not fall below the working temperature. This accessory consists of an immersed electric resistance in the internal tank, which activates as needed. This option is recommended if the machine is expected to remain idle for an extended period or if installed in environments that experience very low temperatures for several months each year.

The side table displays the required power consumption levels based on the machine's size.

Total Capacity (kW)		ΔT In-Out (°C)
S	2	2,0
	4	4,0
	6	6,0
	8	4,3
M	10	5,5
	12	6,5
	14	4,7
	16	5,4
L	18	6,0
	20	5,0
	22	5,5
	24	6,0
	26	6,5

Hydronic Kit:

The Hydronic Kit is an optional add-on that can be installed in any machine from the RT-W series. This kit consists of an additional module containing an extra 70 liter tank, allowing for an increase in discharge pressure up to 6 bar. The dimensions of the hydronic kit depend on the tank capacity. Please contact us for more detailed information.



MAIN ACCESSORIES COMPATIBILITY:

cooling type		water chiller (direct expansion)		RT-W series	
remote condenser required		no		codification	note
body and structure	color	grey	●	00.c.01	
		white	○	00.c.02	or other RAL colour
	material	aluminium	●	00.m.a	
		galvanized steel	○	00.m.s	
	cladding	non insulated cladding	x	01.000	
		standard insulation	●	01.001	
		polyurethane foam sandwich	○	01.002	
		rockwool sandwich	○	01.003	
	baseframe	standard baseframe	x	01.004	
		deflector baseframe	x	01.005.d	best with downflow configuration
refrigerating system	refrigerant	R513a	●	02.001.1	
		R134a	○	02.001.2	
		R410a	○	02.001.3	
		modulating condensing pressure control	●	02.002	
	expansion valve	mechanical expansion valve	●	02.004.m	
		electronic expansion valve (EEV)	○	02.004.eev	2 press. probe and 1 NTC required
	water valve	two way valve	x	02.005.2v	
		three way valve	x	02.005.3v	
		pressure actuated water regulating valve	x	02.006	
		plate exchangers	●	02.007	
airflow	compressor	scroll compressor	●	03.001.s	
		BLDC compressor	○	03.001.blcdc	
	fan	EC radial fan	x	03.002.r	only for condensing
		EC High-Prevalence radial fan	x	03.002.hp	
		axial fan (for condenser)	x	03.002.100	
	filters	G4 filter (>60% ISO Coarse)	x	03.003.1g4	
		F7 filter (80-85% ePM10)	x	03.003.2f7	
		F9 filter (85-90% ePM10)	x	03.003.3f9	
		metal G2 (30% ISO Coarse)	x	03.003.4m	
		steam humidifier	x	03.004	TH probe required
		differential pressure switch	x	03.005.1	
		differential pressure transducer	x	03.005.2	
		temperature probe (NTC)	●	03.006.ntc	
	th probe	wall mounted TH probe	x	03.006.th.w	
		duct TH probe	x	03.006.th.d	
aeraulic systems		freecooling*	○		* made with DRY COOLER
	fresh air intake	standard fresh air intake	x	04.002.1std	
		fresh air intake with shut-off damper (manual)	x	04.002.2m	
		fresh air intake with shut-off damper (automatic)	x	04.002.2a	
	air plenum	top air plenum	x	04.003.t	
		bottom air plenum	x	04.003.b	
		rear air plenum	x	04.003.r	
		non-return damper	x	04.004	
	shut-off damper	shut-off damper (manual)	x	04.005.m	
		shut-off damper (automatic)	x	04.005.a	
		airflow protection grid	○	04.006	

heating and dehumidification systems	reheating systems	electric reheating coil	x	06.001	not with hot water reheating coil
		hot water reheating coil	x	06.002	not with electric reheating coil
		heating pump	x	06.003	can not be used as dehumidifier
electronic and communication system	display	control board	●	07.001	
		LCD display	●	07.002	
		remote LCD display	○	07.002.r	
	communications	modbus + rs485	○	07.003.m.rs	
		bacnet + rs485	○	07.003.b.rs	
		modbus/bacnet + ethernet	○	07.003.jp	
	konnex	○	07.003.knx		
alarm and security	water leakage	punctual water leakage alarm	○	08.001.1P	
		linear water leakage alarm	○	08.001.2L	
	refrigerant leakage	refrigerant leakage alarm (low pressure switch)	●	08.002.0	
		refrigerant leakage alarm (local sensor)	○	08.002.1	
		refrigerant leakage alarm (remote sensor)	○	08.002.2	
	smoke/fire alarm	smoke alarm	x	08.003.s	
		fire alarm	x	08.003.f	
		clogged filter alarm (diff. pressure switch)	x	03.005.1.cfa	
		fire damper	x	08.004	
	moisture evacuation pump	○	08.005		
protection from environment	coils treatment	hydrophilic coils treatment	○	09.001.h	
		cataphoretic coils treatment	○	09.001.c	
		snow kit	x	09.002	
		low outdoor condensing temperature control	x	09.003	
		sand trap	x	09.004	
shipping	shipping	pallet	●	10.001	plus cardboard and plastic film
		fumigated pallet	○	10.001.f	
		wooden crate	○	10.002	
	indicators	fumigated wooden crate	○	10.002.f	
		shock indicator	○	10.003.s	
	tilting indicator	○	10.003.t		
specific components and accessories for chiller series					
tank	internal water tank	hydronic kit	●		capacity vary according unit's cooling capacity
			○		
heating		immersion electric heaters	○		
pump		water pump ON/OFF	●		
		water pump INVERTER	○		
pressure control		pressure gauge (analog)	●		
		pressure gauge (digital)	○		
flow control		waterflow switch	●		
		digital waterflow meter	○		

- included in standard configuration
- possible as optional
- × not possible for this unit

Discover more about our wide range of accessories and components in the dedicated accessories catalog.

If you are interested, please contact one of our sales team or write us at climaprocessor@cmcrail.it



*“Embrace a greener future with
our air conditioners,
where environmental responsibility
meets cutting-edge technology.”*

INSIDE FREECOOLING TECHNOLOGY:

The *freecooling* technology is a method used to cool spaces or devices without intensive electricity consumption. This system utilizes favorable external climate conditions, such as lower temperatures or natural air currents, to dissipate heat generated inside a building or from equipment. In practice, instead of relying entirely on traditional air conditioning systems that require significant energy consumption, freecooling harnesses the surrounding environment's capacity to provide the desired cooling.

This approach is often employed to reduce operational costs and environmental impact by limiting the use of electricity for cooling. Freecooling is particularly effective in climates where external temperatures are sufficiently low to meet cooling requirements without constant reliance on mechanical air conditioning systems.

CO₂ emissions reduced up to 50%

At Clima Processor, we consider sustainability a key priority.

It is for this reason we have decided to incorporate the possibilities of freecooling into every model of our compact air conditioning water-chilled systems. This allows for a reduction in energy consumption and, consequently, a reduction in emissions, up to 50%.

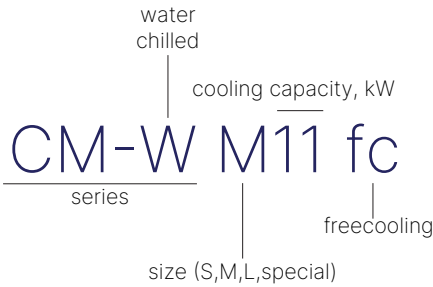
The functioning of the freecooling system is quite simple: each unit is equipped with a tilting diverter. When the external temperature is low enough, the diverter, triggered by a sensor, opens up, permitting fresh air to directly chill the battery pack. If the outside condition is equal to or below the output water temperature, the untreated air flows directly through the battery pack to chill the water at the intended temperature (system also known as *DRY COOLER*). If the outside temperature is in a range between the intended water temperature and the inlet water temperature (return flow), the air is used in combination with the standard refrigerant to improve the efficiency of the system.

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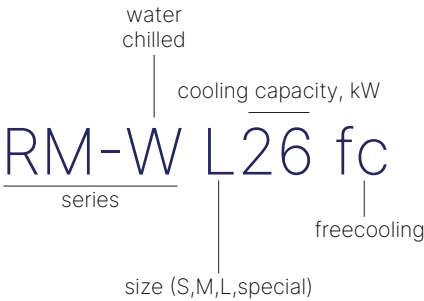
freecooling

CLIMA PROCESSOR CODIFICATION SYSTEM:

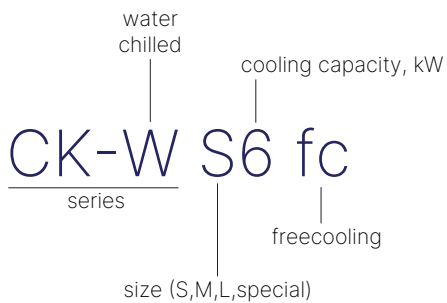
For CM-W series:



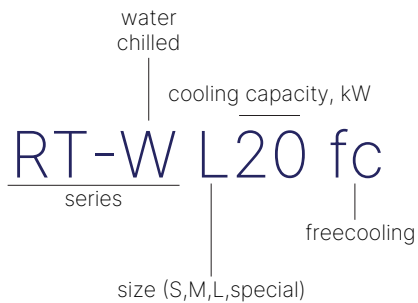
For RM-W series:



For CK-W series:



For RT-W series:



CONTACTS:

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CLIMAPROCESSOR

Compact Series

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