



CLIMA
PROCESSOR

a CMC Rail division.

PRECISION AIR CONDITIONING UNITS
FOR TECHNICAL APPLICATIONS

Close Control Unit

April 2024

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PROUDLY MADE IN ITALY, SINCE 1963.



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.



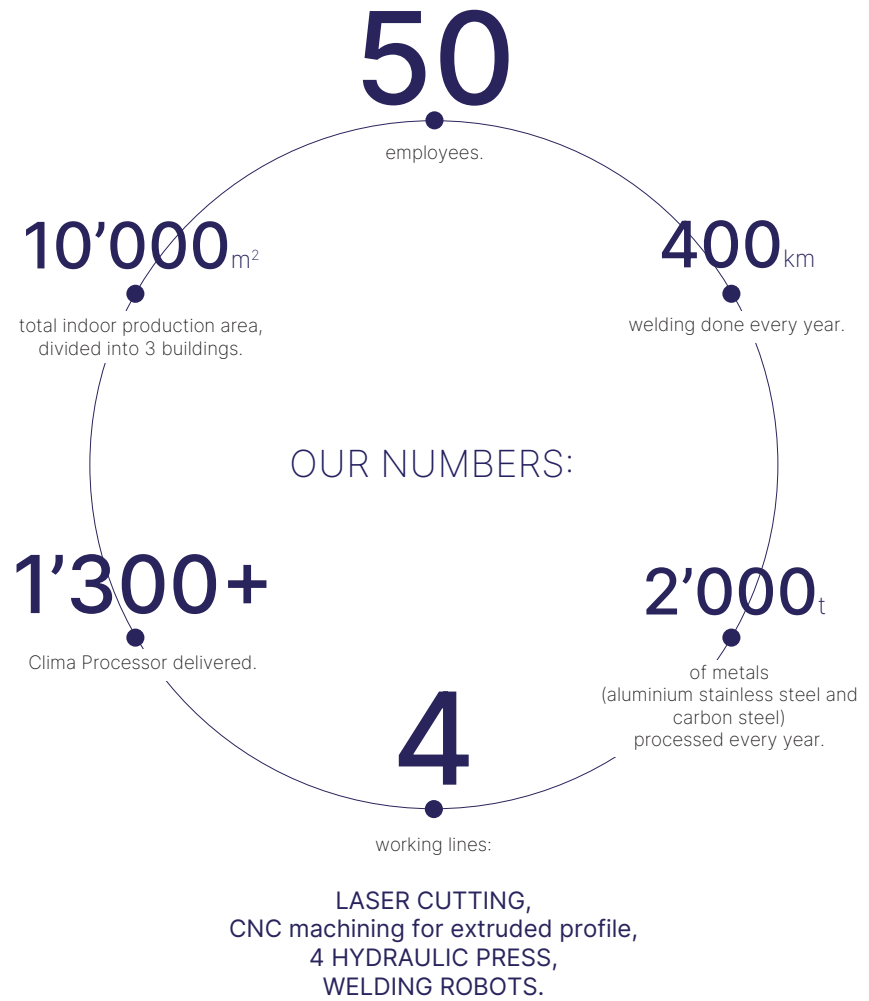
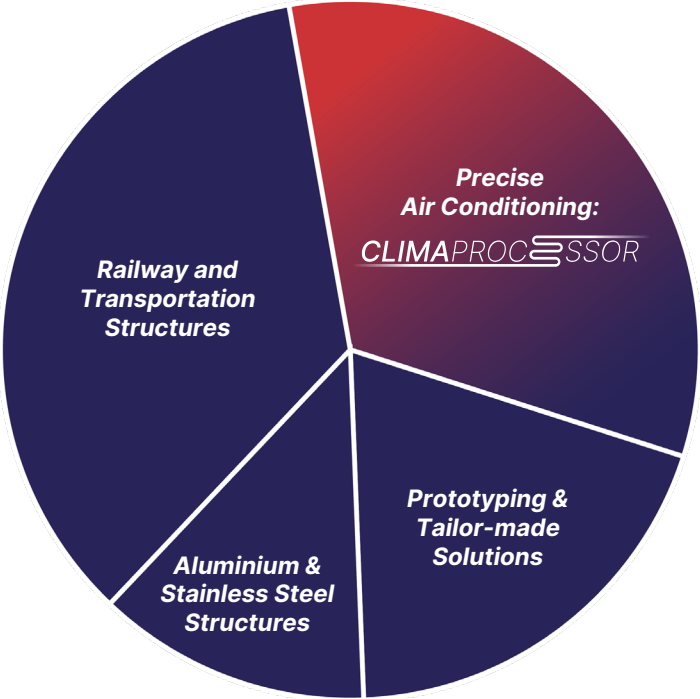
CMC is at the forefront of precision air conditioning systems, particularly in the realm of data centers and computer rooms. Branded as "*Clima Processor*", the product range encompasses a variety of units, including those based on direct expansion or chilled water, available in both cabinet and rack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

WHAT WE DO:

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:



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!

CLOSE CONTROL UNITS:

Close Control Unit is a specialized air conditioning or environmental control system designed to maintain precise conditions, including both temperature and humidity in critical environments. These units are often used in settings where standard HVAC (Heating, Ventilation, and Air Conditioning) systems may not provide the level of control required. Clima Processor design and produce a complete range of Close Control Unit, both direct expansion and water chilled, single or double circuit, specifically designed for maintaining specific temperature and humidity level.

Common applications for Close Control units include data centers, laboratories, clean rooms, and facilities where maintaining specific environmental conditions is crucial for the proper functioning of equipment or processes.



THE CLOSE CONTROL SERIES:

Cooling the way You want it.

SINGLE CIRCUIT:

Direct Expansion:

- **CA SERIES:** CA series is a precision **direct expansion** air conditioning unit for technical application, with **air chilled condenser**. For this series the total cooling capacity goes from 5kW up to 110 kW, for the standard version.
- **CW SERIES:** The CW series comprises a **direct expansion** air conditioning unit designed for technical applications, featuring a **water chilled condenser**. This series enables a cooling capacity up to 95 kW, catering to a diverse range of cooling needs in various settings.

Water Chilled:

- **CC SERIES:** Specifically engineered for applications with an external cooled water source, the CC series is a **water chilled unit** designed to deliver a substantial total cooling capacity of up to 225 kW.

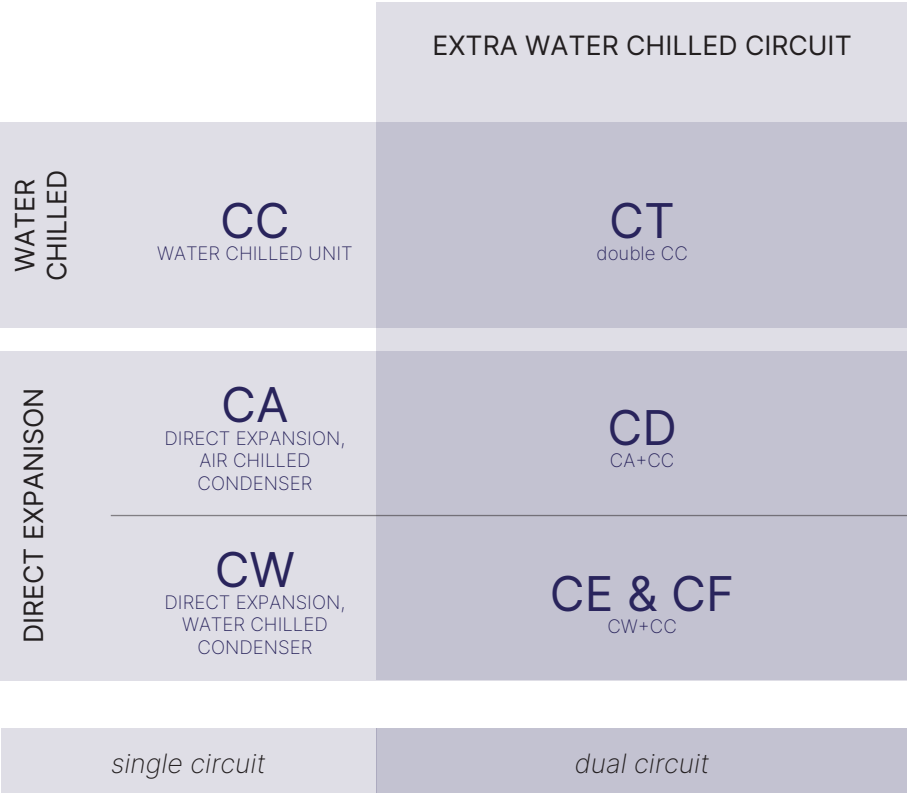
DUAL CIRCUIT:

Direct Expansion+Water Chilled:

- **CD SERIES:** The CD series is a **dual circuit unit** that includes both a **CA** and a **CC** unit, merged together for an efficient and reliable application.
- **CE & CF SERIES:** The CE and CF series are **dual circuit units** that includes both a **CW** and a **CC** unit, merged together for an efficient and reliable application. CF also optimize the waterflow with a freecooling mode with the final aim to improve efficiency.

Dual Water Chilled:

- **CT SERIES:** The CT series is a **dual circuit unit** that includes **two different CC** units, merged together for a most reliable application when an external cooled water source is available.

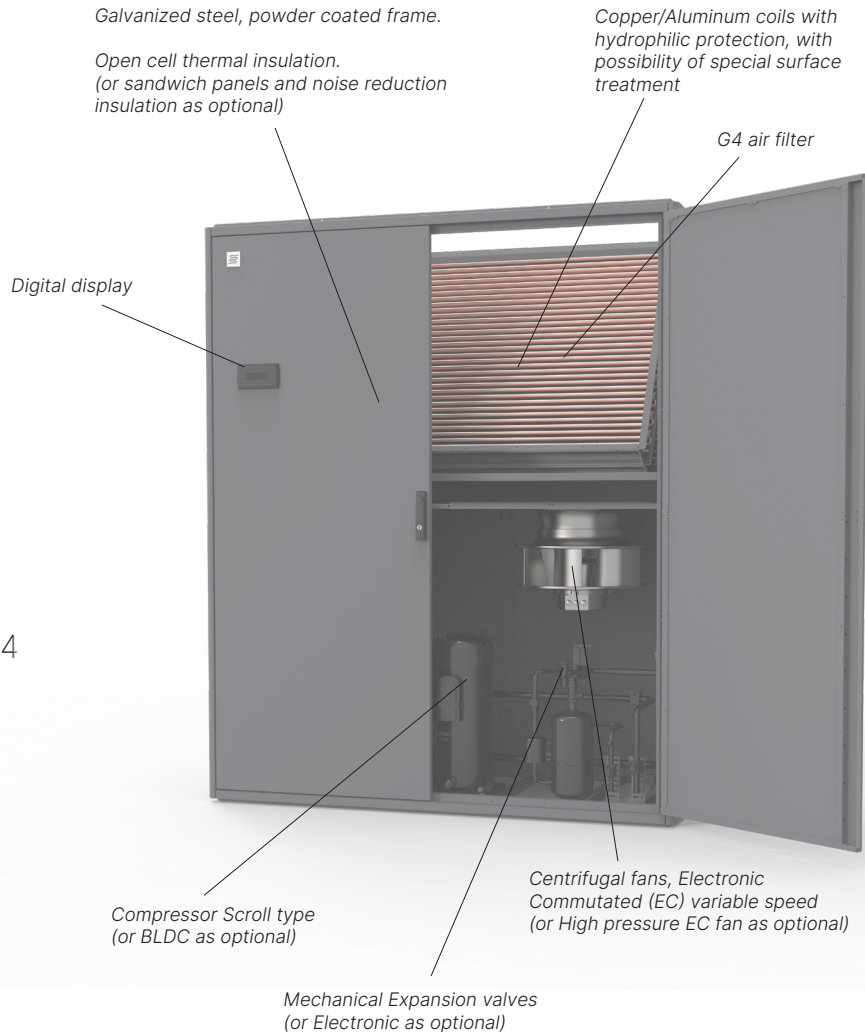


THE ADVANTAGES OF DUAL CIRCUIT:

Having a double circuit cooling system, which typically involves both direct expansion and water chilling, can offer several advantages over a single circuit cooling system. Here are some reasons why a double circuit cooling machine might be considered better in certain situations:

- **Redundancy and Reliability:**
Having two independent cooling circuits provides a level of redundancy. If one circuit experiences a failure or requires maintenance, the other circuit can continue operating, reducing downtime and maintaining system reliability. Furthermore, the redundancy ensures that the cooling system can continue to function even if one part of the system is temporarily out of service.
- **Flexibility and Adaptability:**
Dual circuits allow for greater flexibility in handling variable load conditions. The system can adjust the load distribution between the two circuits based on the cooling requirements, optimizing efficiency and performance. The system can adapt to changing environmental conditions or cooling demands, providing better control over the cooling process.
- **Energy Efficiency:**
The ability to choose between direct expansion and water chilling allows the system to select the most energy-efficient mode based on current conditions. For example, water chilling may be more efficient under certain load conditions, while direct expansion may be more effective under others. Dual-circuit systems can better match the cooling load, leading to improved energy efficiency compared to single-circuit systems that may operate less efficiently at partial loads.
- **Enhanced System Control:**
The ability to control and balance the operation of two independent circuits allows for more sophisticated control strategies. This can result in improved system performance, stability, and responsiveness to changing conditions.
- **Improved Heat Rejection:**
Dual circuits can enhance the heat rejection capabilities of the system. Water chilling, for instance, may be more effective in dissipating heat compared to direct expansion in certain conditions, leading to better overall system performance.

MAIN CHARACTERISTICS & COMPONENTS:



WHY CHOOSE A CLIMA PROCESSOR CLOSE CONTROL UNIT:

Optimized space:

Clima Processor solutions are designed to occupy the least amount of space possible. Precision cooling units reduce the cost resulting from the use of space;

Easy access for inspections and maintenance:

The careful study of the Clima Processor system design allows total frontal inspection in order to make maintenance operations quicker and more efficient;

Noise and energy consumption reduction:

Noise and energy consumption are determining factors in the overall evaluation of the performance of a technological location or data center. For each machine, we developed the possibilities to implement freecooling technology, in order to optimize the energy consumption;

Air distribution flow direction:

The Clima Processor series allows the air to be distributed up or down. Complete range of accessories and functions allows extreme flexibility in use.

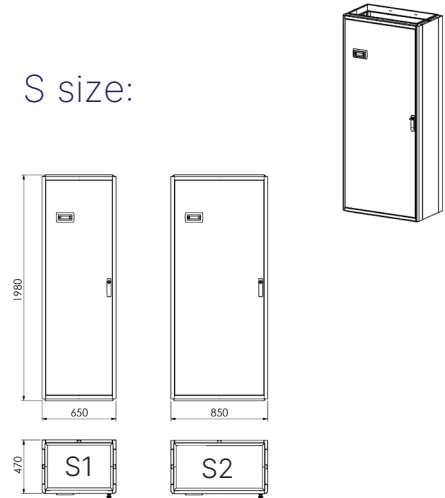
Customization:

We meticulously design, engineer, and manufacture all of our products in strict accordance with our clients' exact specifications. This approach enables us to offer almost any customization to meet Your specific needs. Additionally, we provide thermal analysis services, and our climatic chamber allows us to conduct thorough testing to ensure the highest quality standards.

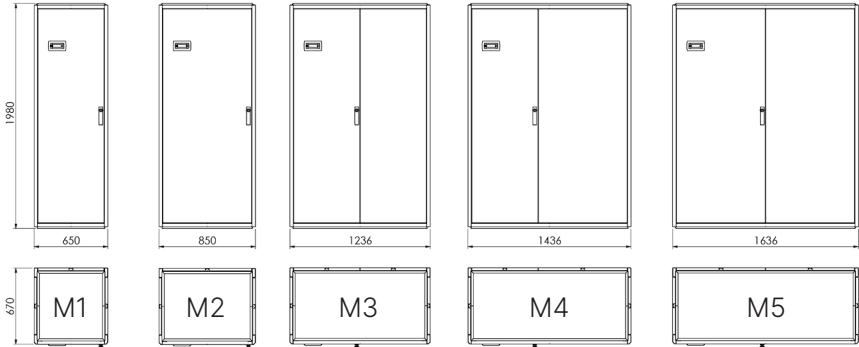
POSSIBLE SIZES:

Our machines are categorized into three main sizes (S, M, L) based on width: 470mm for the smaller, 670mm for the medium, and 870mm for the largest. Within each size category, there are up to three different configurations based on length. Additionally, we can offer special frames to accommodate specific requirements. For more details or if you have specific needs, please feel free to reach out to our sales team. The side image represent a comparison of the side view of the machines.

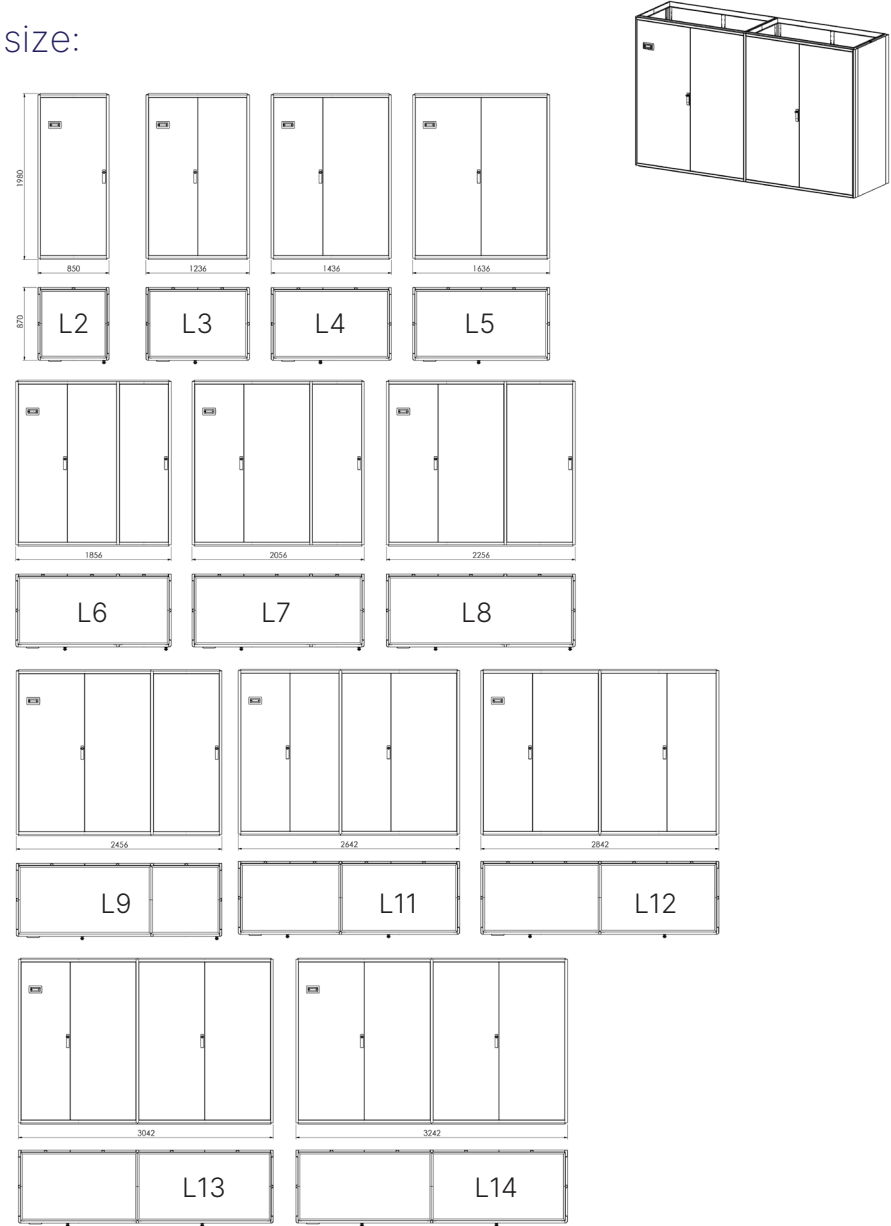
S size:



M size:



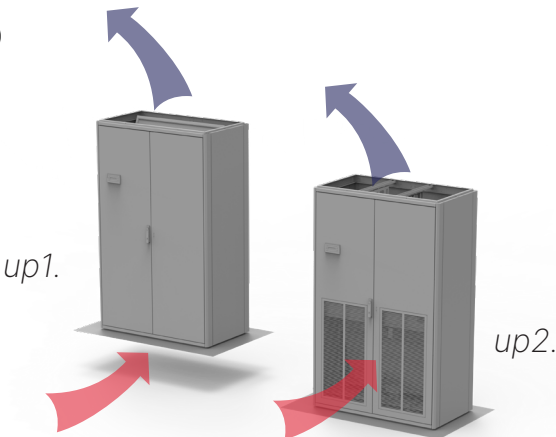
L size:



AIRFLOW SCHEME:

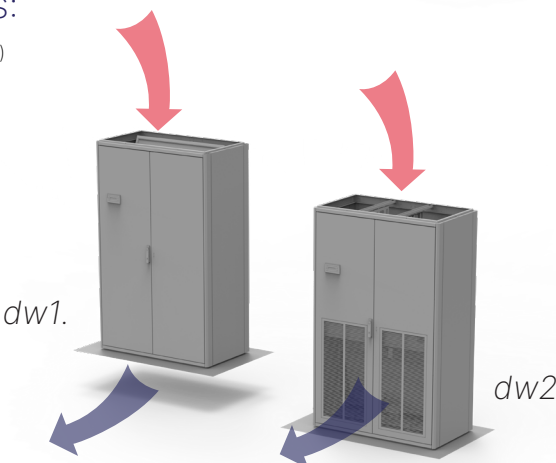
Upflow Versions:

- bottom air intake (up1)
- frontal air intake (up2)



Downflow Versions:

- bottom air outlet (dw1)
- frontal air outlet (dw2)



ACCESSORIES FOR AIRFLOW REGULATIONS:

Top Air Plenum: *for air inlet or outlet*



Bottom Air Plenum: *for air inlet or outlet*



Top and Bottom Air Plenum:



Adjustable Baseframe:



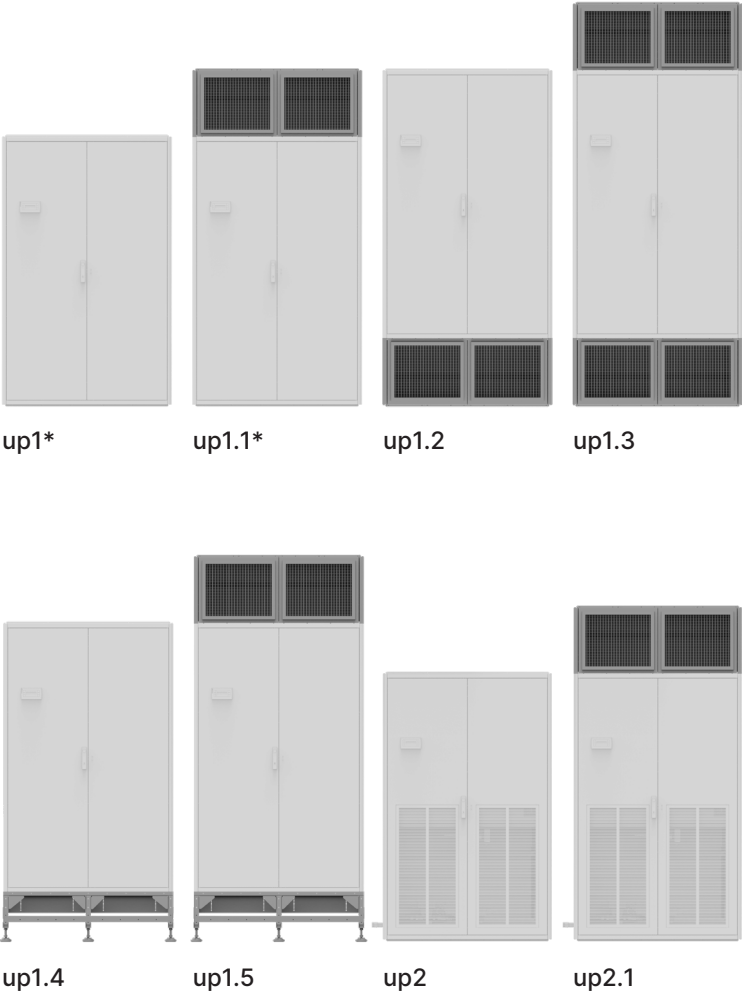
*The curved deflector is available only starting from 300mm baseframe.

AIRFLOW ACCESSORIES
CONFIGURATION TABLE:

■ Upflow Version

		UPFLOW							
		up1						up2	
AIR PLENUM	top plenum air outlet		●		●		●		●
	down plenum air inlet			●	●				
ADJUSTABLE BASEFRAME	normal baseframe					●	●		
	curved baseframe								
CODE		up1	up1.1	up1.2	up1.3	up1.4	up1.5	up2	up2.1

The standard version of the Clima Processor non-compact series for the upflow configuration is the *up1* and *up2*. In this configuration, untreated air is drawn from the bottom air intake (*up1*) or from the frontal grid (*up2*). This airflow scheme can be implemented with our vast range of accessories to create more possible configurations. The air delivery plenum can be installed on the top, on the bottom, or both top and bottom, similar to the adjustable baseframe. The table and examples on the next page show all possible configurations.



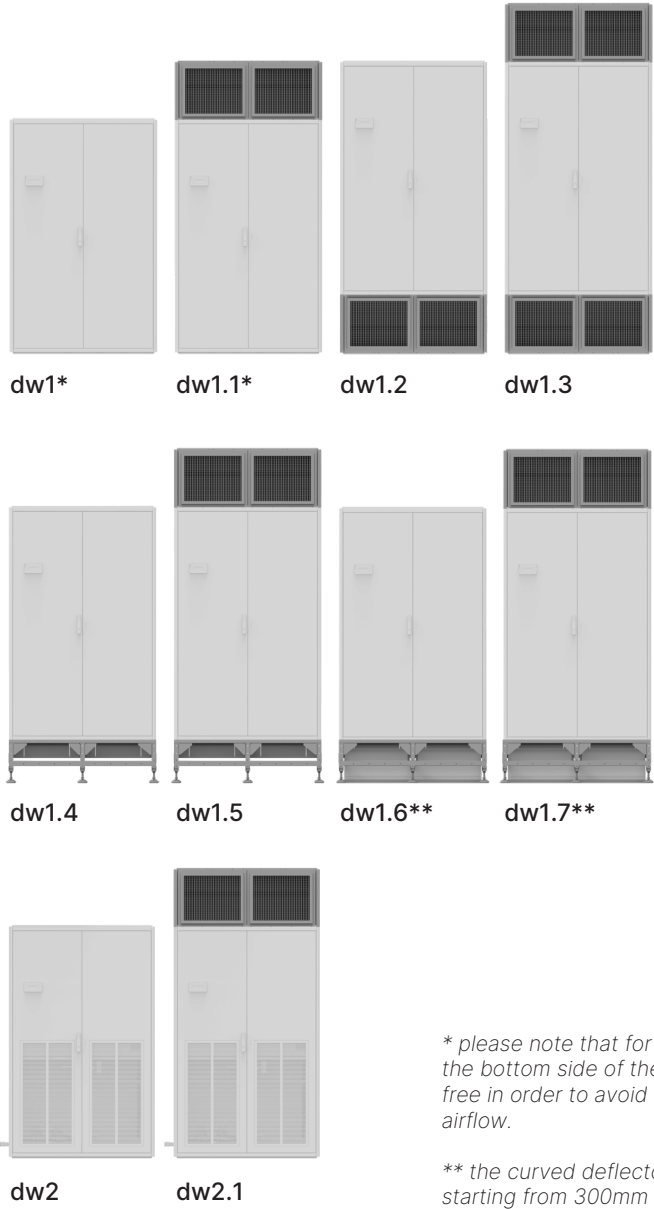
* please note that for this configuration, the bottom side of the unit must be kept free in order to avoid obstructing the airflow.

AIRFLOW ACCESSORIES
CONFIGURATION TABLE:

■ Downflow Version

		DOWNFLOW									
		dw1								dw2	
AIR PLENUM	top plenum air inlet		●		●		●		●		●
	down plenum air outlet			●	●						
ADJUSTABLE BASEFRAME	normal baseframe					●	●				
	curved baseframe**							●	●		
CODE		dw1	dw1.1	dw1.2	dw1.3	dw1.4	dw1.5	dw1.6	dw1.7	dw2	dw2.1

The standard version of the Clima Processor non-compact series for the downflow configuration is the dw1 and dw2. In this configuration, treated air is expelled from the bottom air outlet (dw1) or from the frontal grid (dw2). This airflow scheme can be implemented with our vast range of accessories to create more possible configurations. The air delivery plenum can be installed on the top, on the bottom, or both top and bottom, similar to the adjustable baseframe. The table and examples on the next page show all possible configurations.

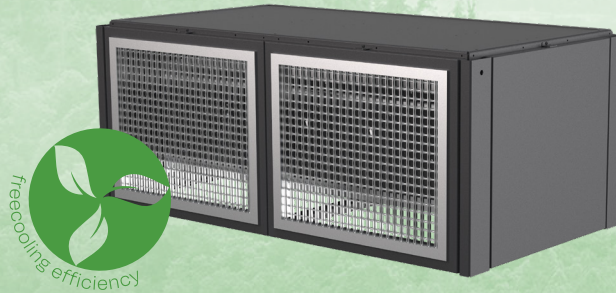


* please note that for this configuration, the bottom side of the unit must be kept free in order to avoid obstructing the airflow.

** the curved deflector is available only starting from 300mm baseframe.

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

FREECOOLING PLENUM:

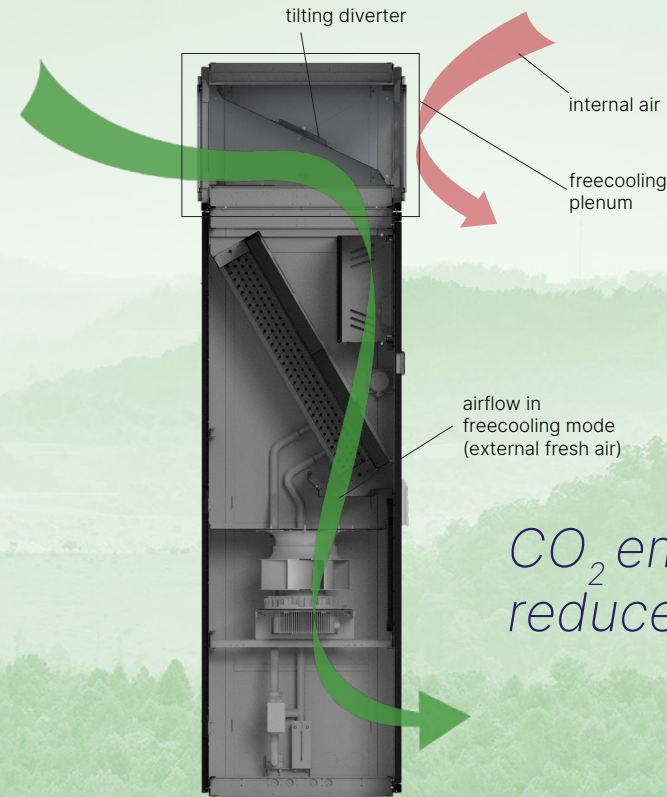


Freecooling technology is a method used to cool spaces or devices without intensive electricity consumption. This system utilizes favorable external climate conditions, such as lower temperatures or natural air currents, to dissipate heat generated inside a building or from equipment. In practice, instead 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.

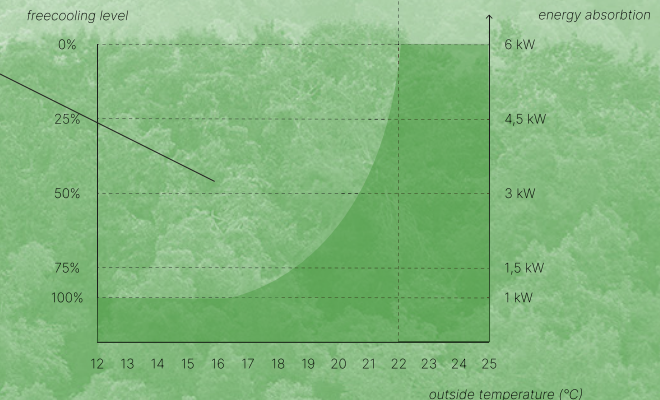
At Clima Processor, we consider sustainability a key priority. It is for this reason that we have decided to offer the option to install a *freecooling plenum* into every model of our air conditioning series.

The functioning of the freecooling system is quite simple: the unit, mounted at the top (for downflow version) or at the bottom (for upflow version), is equipped with two series of tilting diverters. 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. When the external air temperature is not low enough to directly flow inside the room but is lower than the internal room temperature, the untreated air is taken from outside and cooled down up to the desired temperature in order to optimize energy consumption.



*CO₂ emissions
reduced up to 70%*

energy saving attributed to
freecooling mode, considering
a target temperature of 22°C.



freecooling

CA series:

DIRECT EXPANSION, AIR CHILLED
CONDENSER.

The **CA series** is part of the Clima Processors non-compact chilling units, specifically designed for technical applications such as computer rooms, data centers, museums, diagnostic laboratories, and more. This is a **mono-circuit direct expansion** machine with an **air chilled condenser**. The large variety of sizes allows for an extremely wide cooling capacity, ranging from 9 up to over 100 kW. By request, this cooling capacity, as well as the airflow, can be implemented to meet any need. Each machine is specifically designed for each client, allowing full customization to find the best solution for every application.

A large variety of accessories are also available, allowing modulation of the airflow, which can be both upflow or downflow. It is also possible to regulate the cooling capacity by adding a BLDC scroll compressor to improve its versatility.

Clima Processor can also provide thermal analysis and different special standards to help you choose the best configuration for every situation.



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.

GENERAL APPLICATION:

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

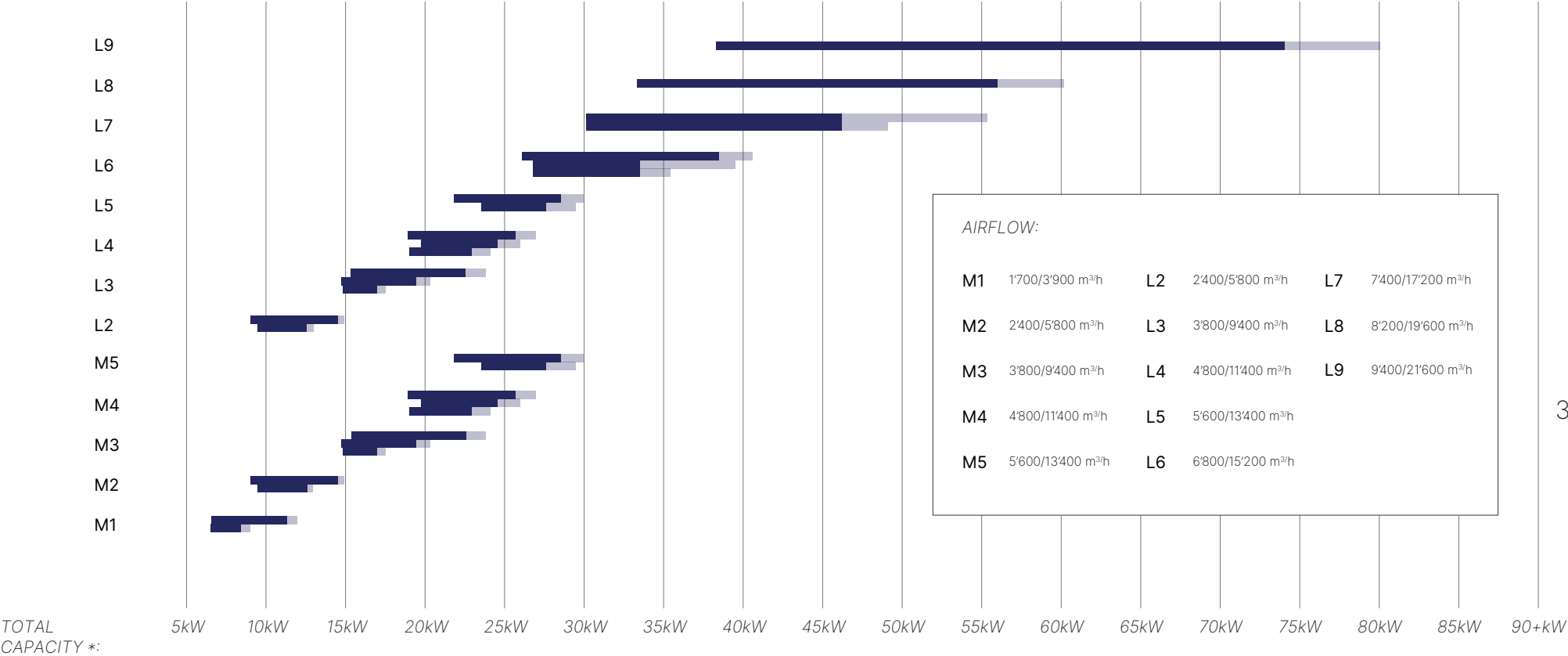
- Computers Rooms
- Data Centers
- Tel-Co Shelters
- Switch Rooms
- Weather Stations
- Museums
- Medical Laboratories
- Diagnostic Scanners
- Others

- Heating systems: hot water or electric (1 or 3 stages)
- Humidity and dehumidity systems
- High prevalence EC fans
- BLDC Scroll compressor
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Air delivery plenum
- Clogged filter alarm
- Smoke and/or fire alarm
- Not return dumper
- Adjustable baseframe
- 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)
- Low temperature kit
- Special RAL color
- R134a or R410A refrigerant

Other customized solutions are possible upon request.

TECHNICAL INFORMATIONS:

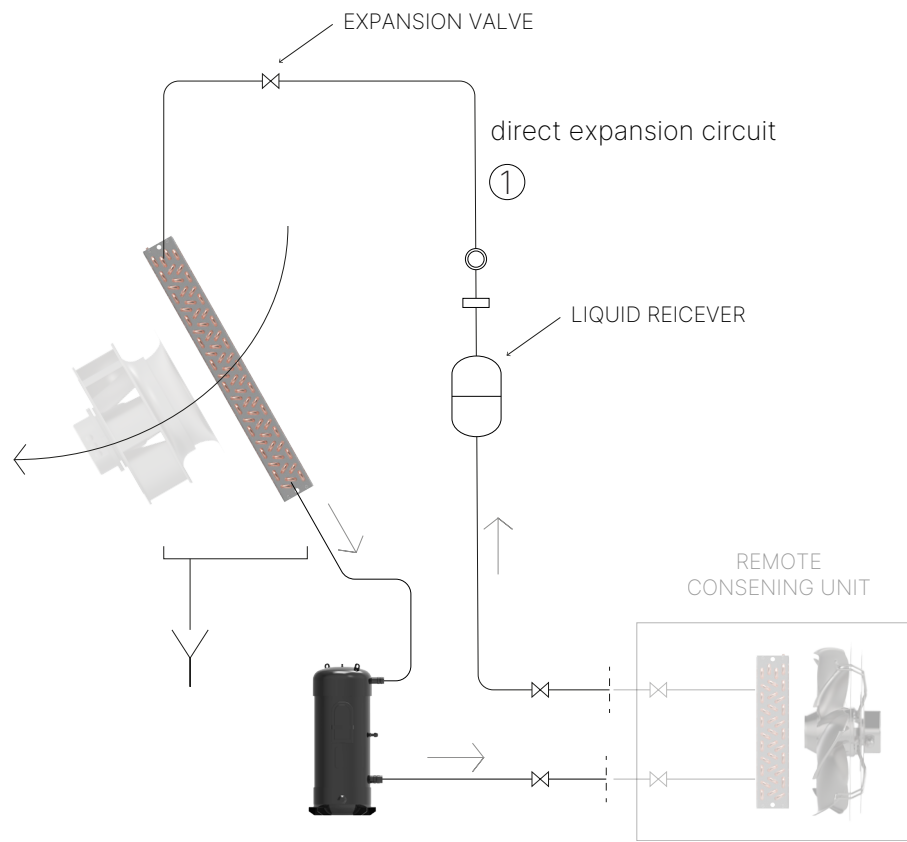
Clima Processor
Sizes:



Note: Multiple power ranges for the same size indicate different compressors installed. This allows for varying the achievable power range without needing to change the machine size.

**The indicated Total Cooling Capacity is based on specific conditions (indoor temperature 25°C, 50% Hr, condensing temperature 54,4°C, evaporating temperature 7,2°C, limit outlet air temperature 14°C, R410a refrigerant). Please note that different working conditions will effect the total cooling capacity.*

CIRCUIT SCHEME:



IDENTIFICATION CODE FOR CA:

Air cooled
Total Compressors
Power (Hp) &
number of compressors
CA M5 12.2 dw1.2
series
size (see pag.16)
airflow layout
(see pag.18)

CA M5 12.1 dw1.2

Equivalent models, the first is equipped with two compressors, each with a nominal power of 6 Hp, the second one has only one compressor with a nominal power of 12 Hp.

SINGLE CIRCUIT

cooling type		direct expansion, air chilled condenser		CA series	
remote condenser required		yes		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.bdc	
	fan	EC radial fan	●	03.002.r	
		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 (60-65% 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 con shut-off damper (manual)	○	04.002.2m	
		fresh air intake con 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	x	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	
	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	○	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	x	09.002	
		low outdoor condensing temperature control	○	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	
		biting indicator	○	10.003.t	

● included in standard configuration

○ possible as optional

x not possible for this unit

MAIN ACCESSORIES COMPATIBILITY:

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

CW series:

DIRECT EXPANSION, WATER CHILLED
CONDENSER.

The **CW series** is part of the Clima Processors non-compact chilling units, specifically designed for technical applications such as computer rooms, data centers, museums, diagnostic laboratories, and more. This **mono-circuit direct expansion** machine features a **water chilled condenser**, making it the ideal choice for situations where a cooled water source is available. The wide range of sizes allows for an extensive cooling capacity, ranging from 9 kW up to over 100 kW. Upon request, both the cooling capacity and airflow can be tailored to meet specific needs. Each machine is custom-designed for individual clients, offering full customization to find the optimal solution for every application.

A large series of accessories is available, enabling modulation of airflow in both upflow and downflow configurations. Additionally, the cooling capacity can be regulated by incorporating a BLDC scroll compressor, enhancing its versatility.

Clima Processor also provides thermal analysis and adheres to different special standards, assisting you in selecting the best configuration for any situation.



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.

GENERAL APPLICATION:

The CW 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

- Heating systems: hot water or electric (1 or 3 stages)
- Humidity and dehumidity systems
- High prevalence EC fans
- BLDC Scroll compressor
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Air delivery plenum
- Pressure actuated water valve
- Water leakage alarm
- Clogged filter alarm
- Smoke and/or fire alarm
- Not return dumper
- Adjustable baseframe
- 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)
- Low temperature kit
- Special RAL color
- R134a or R410A refrigerant

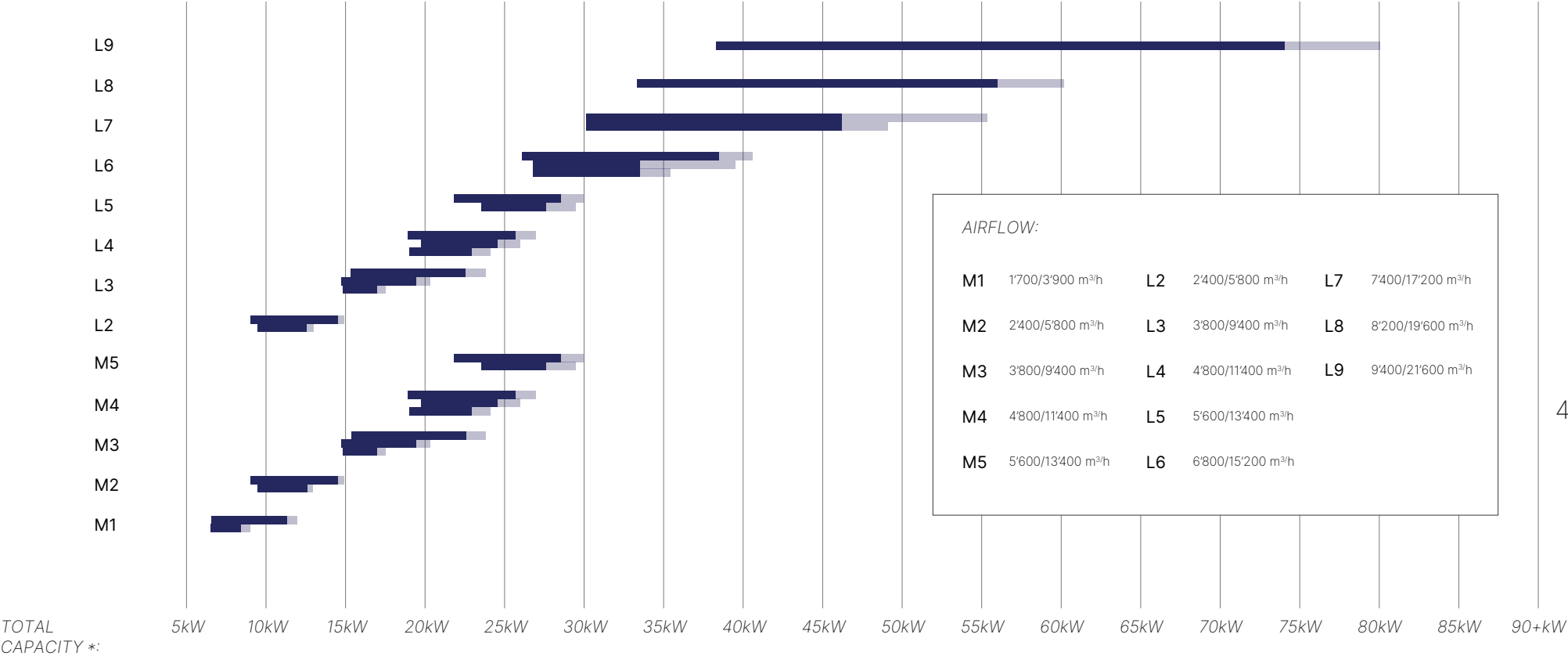
Other customized solutions are possible upon request.

TECHNICAL INFORMATIONS:

Clima Processor
Sizes:

— Total Cooling Capacity achievable with a Scroll compressor (operating optimally between 95 and 100%. 95% is considered as the limit for a maximum singular shutdown of 3 minutes every hour. With a higher number of shutdowns within 1 hour, an inverter BLDC compressor is recommended)

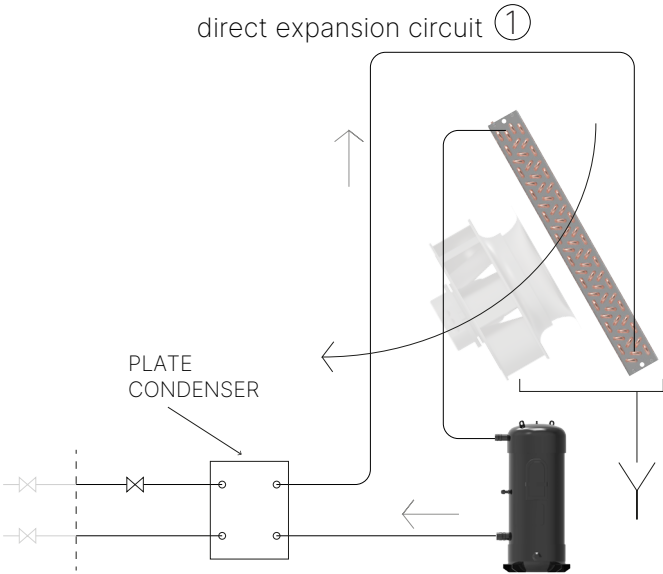
— Total cooling capacity achievable with the use of a BLDC inverter compressor.



Note: Multiple power ranges for the same size indicate different compressors installed. This allows for varying the achievable power range without needing to change the machine size.

**The indicated Total Cooling Capacity is based on specific conditions (indoor temperature 25°C, 50% Hr, condensing temperature 54,4°C, evaporating temperature 7,2°C, limit outlet air temperature 14°C, R410a refrigerant). Please note that different working conditions will effect the total cooling capacity.*

CIRCUIT SCHEME:



CW series

IDENTIFICATION CODE FOR CW:

Water cooled

Total Compressors
Power (Hp) &
number of compressors

CW L7 20.2 up1

series

size (see pag.16)

airflow layout
(see pag.18)

SINGLE CIRCUIT

cooling type		direct expansion, water chilled condenser		CW serie	
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	○	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	x	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	●	02.006	
		plate exchangers	●	02.007	
airflow	compressor	scroll compressor	●	03.001.s	
		BLDC compressor	○	03.001.bdc	
	fan	EC radial fan-HP	●	03.002.r	
		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 (60-65% 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 con shut-off damper (manual)	○	04.002.2m	
		fresh air intake con 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	x	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	
	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	○	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	x	09.002	
		low outdoor condensing temperature control	○	09.003	
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

MAIN ACCESSORIES COMPATIBILITY:

CW series

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

CC series:

WATER CHILLED UNIT.

The **CC series** is part of the Clima Processors chilling units, specifically designed for technical applications such as computer rooms, data centers, museums, diagnostic laboratories, and more. This is a **mono-circuit water chilled** unit, making it the ideal choice for situations where a cooled water source is available. The wide range of sizes allows for an extensive cooling capacity, ranging from 9 kW up to over 225 kW. Upon request, both the cooling capacity and airflow can be tailored to meet specific needs. Each machine is custom-designed for individual clients, offering full customization to find the optimal solution for every application.

A large series of accessories is available, enabling modulation of airflow in both upflow and downflow configurations.

Clima Processor also provides thermal analysis and adheres to different special standards, assisting you in selecting the best configuration for any situation.



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.

GENERAL APPLICATION:

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

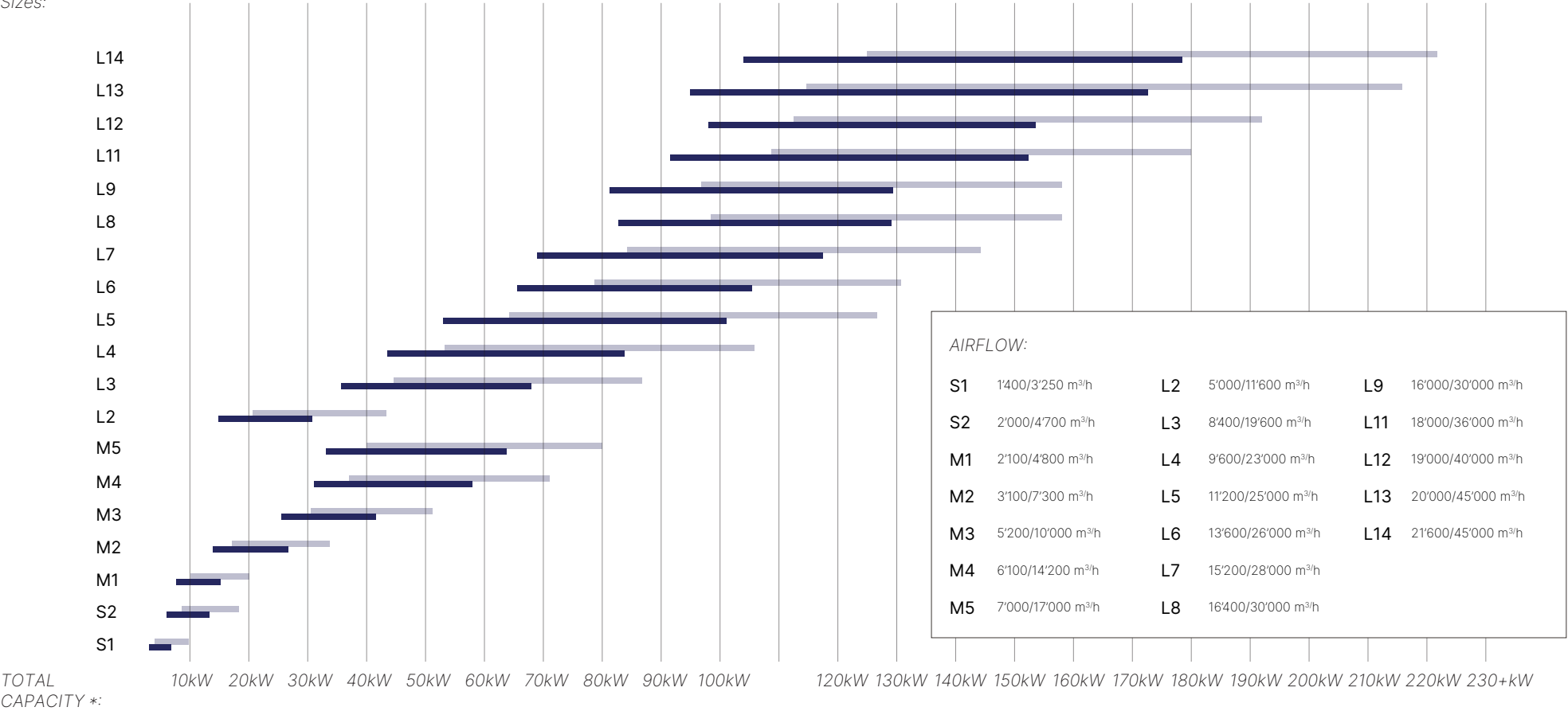
- Computers Rooms
- Data Centers
- Tel-Co Shelters
- Switch Rooms
- Weather Stations
- Museums
- Medical Laboratories
- Diagnostic Scanners
- Others

- Heating systems: hot water or electric (1 or 3 stages)
- Humidity and dehumidity systems
- High prevalence EC fans
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Air delivery plenum
- Pressure actuated water valve
- Water leakage alarm
- Clogged filter alarm
- Smoke and/or fire alarm
- Not return dumper
- Adjustable baseframe
- 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

Other customized solutions are possible upon request.

TECHNICAL INFORMATIONS:

Clima Processor
Sizes:



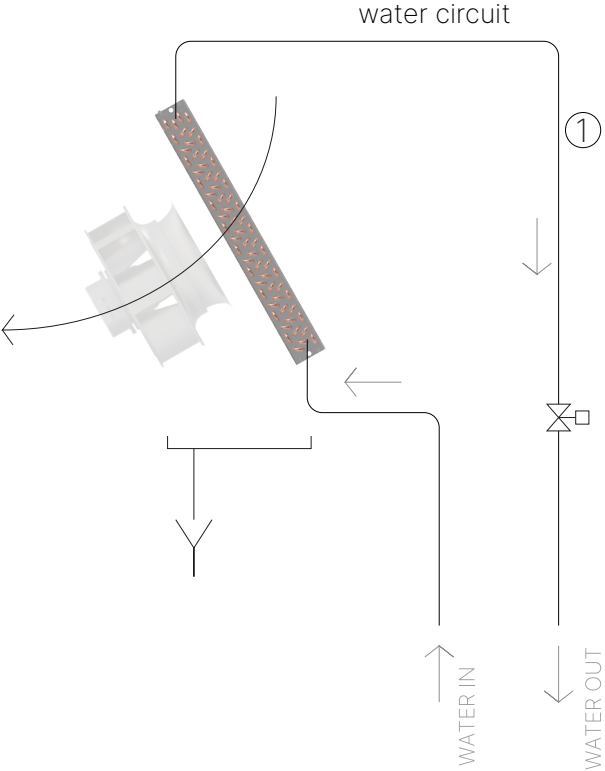
Each unit's size has a specific battery mounted inside. The battery can have either three or four rows, allowing for a wider range of cooling capacity within the same size. For the CC series, which is a single-circuit unit, **only one type of battery (3 or 4 rows) can be chosen.** The number of rows does not effect the airflow.

TOTAL
CAPACITY *:

CC series

*The indicated Total Cooling Capacity is based on specific conditions (indoor temperature of 25°C, 50% humidity, water inlet 7°C, water outlet 12°C). Please note that different working conditions will effect the total cooling capacity.

CIRCUIT SCHEME:



CC series

IDENTIFICATION CODE FOR CC:

number of rows
in the battery (3 or 4)

CC M3 4 up1

series

size (see pag.16)

airflow layout
(see pag.18)

SINGLE CIRCUIT

cooling type		water chilled		CC serie		
remote condenser required		no				
body and structure	color	grey	●	00.c.01	or other RAL colour	
		white	○	00.c.02		
	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	x	02.001.1		
		R134a	x	02.001.2		
		R410a	x	02.001.3		
	expansion valve	modulating condensing pressure control		x	02.002	
		mechanical expansion valve	x	02.004.m		
		electronic expansion valve (EEV)	x	02.004.eev		
	water valve	two way valve	●	02.005.2v		
three way valve		○	02.005.3v			
	pressure actuated water regulating valve		x	02.006		
	plate exchangers		x	02.007		
airflow	compressor	scroll compressor		x	03.001.s	
		BLDC compressor		x	03.001.bldc	
	fan	EC radial fan		●	03.002.r	
		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 (60-65% 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	
		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	fresh air intake	freecooling plenum		○	04.001.fc	
		standard fresh air intake		○	04.002.1std	
		fresh air intake con shut-off damper (manual)		○	04.002.2m	
		fresh air intake con 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		x	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	x	06.003	
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 (diff. pressure switch)	x	08.002.0	
		refrigerant leakage alarm (local sensor)	x	08.002.1	
		refrigerant leakage alarm (remote sensor)	x	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	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	

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

MAIN ACCESSORIES COMPATIBILITY:

CC series

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

CD series:

DIRECT EXPANSION, AIR CHILLED
CONDENSER + WATER CHILLED. (CA+CC)

The Clima Processors **CD series** is part of the non-compact chilling units, specifically designed for technical applications such as computer rooms, data centers, museums, diagnostic laboratories, and more. This **dual-circuit** machine features a **direct expansion air chilled circuit** and also a **water chilled** circuit, making it the ideal choice for a reliable and efficient application, especially where a cooled water source is available. The wide range of sizes allows for an extensive cooling capacity, ranging from 9 kW up to over 100 kW. Upon request, both the cooling capacity and airflow can be tailored to meet specific needs. Each machine is custom-designed for individual clients, offering full customization to find the optimal solution for every application.

A large series of accessories is available, enabling modulation of airflow in both upflow and downflow configurations. Additionally, the cooling capacity can be regulated by incorporating a BLDC scroll compressor, enhancing its versatility.

Clima Processor also provides thermal analysis and adheres to different special standards, assisting you in selecting the best configuration for any situation.



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.

GENERAL APPLICATION:

The CD 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

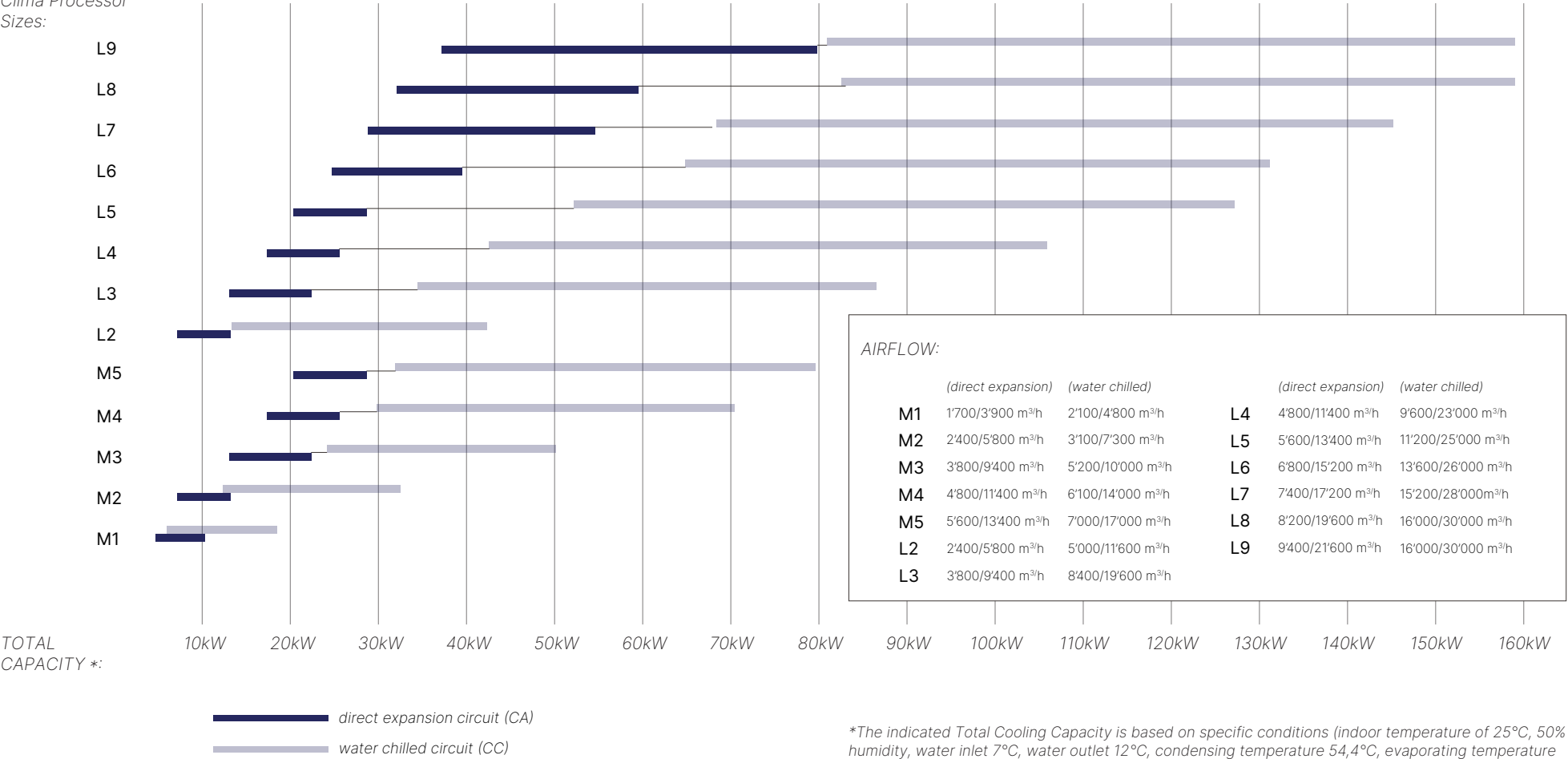
- Heating systems: hot water or electric (1 or 3 stages)
- Humidity and dehumidity systems
- High prevalence EC fans
- BLDC Scroll compressor
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Air delivery plenum
- Pressure actuated water valve
- Water leakage alarm
- Clogged filter alarm
- Smoke and/or fire alarm
- Not return dumper
- Adjustable baseframe
- 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)
- Low temperature kit
- Special RAL color
- R134a or R410A refrigerant

Other customized solutions are possible upon request.

TECHNICAL INFORMATIONS:

ROOM CONDITIONS 25°C, 50% HR. WATER INLET 7°C, WATER OUTLET 12°C, CONDENSING TEMPERATURE 54,4 °C, EVAPORATING TEMPERATURE 7,2°C. R410A REFRIGERANT GAS.

Clima Processor
Sizes:

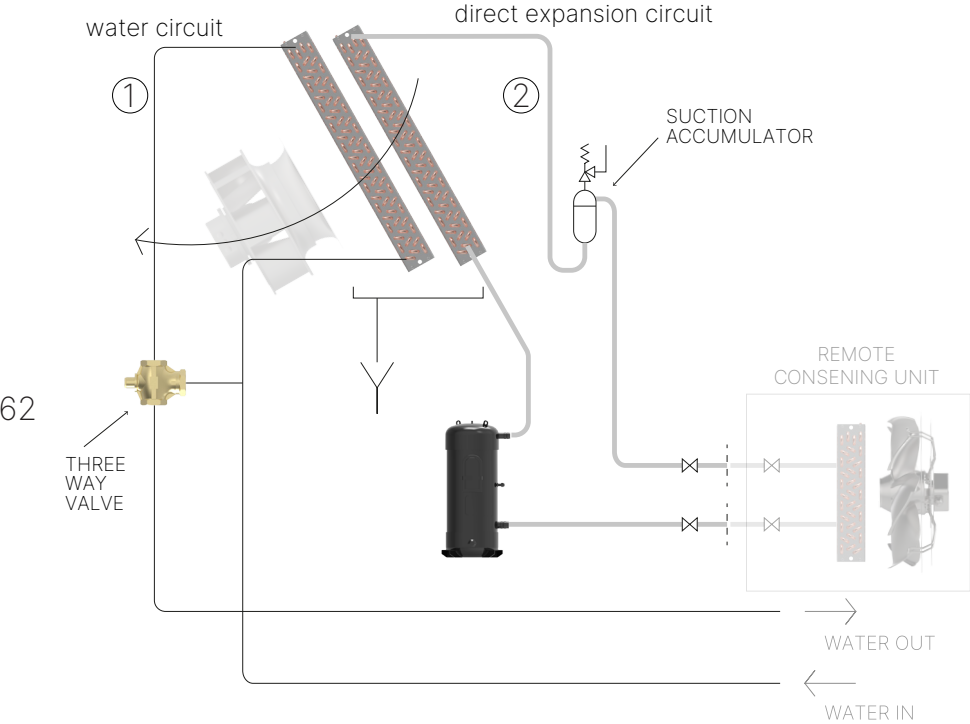


TOTAL
CAPACITY *:

*The indicated Total Cooling Capacity is based on specific conditions (indoor temperature of 25°C, 50% humidity, water inlet 7°C, water outlet 12°C, condensing temperature 54,4°C, evaporating temperature 7,2°C, air outlet temperature max. 14°C, R410 a refrigerant gas). Please note that different working conditions will effect the total cooling capacity.

CIRCUIT SCHEME:

IDENTIFICATION CODE FOR CD:



CD series

Compressor
Power (Hp) and number

CD L3 8.1 4 up1.1

series | size (see pag.16) | airflow layout (see pag.18)

number of rows in the water battery (3 or 4)

DOUBLE CIRCUIT

			CD serie			
cooling type		direct expansion + water chilled				
remote condenser required		yes			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	×	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	×	02.005.2v		
		three way valve	●	02.005.3v		
	pressure actuated water regulating valve	○	02.006			
	plate exchangers	●	02.007			
airflow	compressor	scroll compressor	●	03.001.s		
		BLDC compressor	○	03.001.bldc		
	fan	EC radial fan-HP	●	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 (60-65% ePM10)	○	03.003.2f7		
		F9 filter (85-90% ePM10)	○	03.003.3f9		
		metal G2 (30% ISO Coarse)	×	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 con shut-off damper (manual)	○	04.002.2m		
		fresh air intake con 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 dehumidifying 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	●	07.002	
	communications	remote LCD display	○	07.002.r	
		modbus + rs485	○	07.003.m.rs	
		bacnet + rs485	○	07.003.b.rs	
		modbus/bacnet + ethernet	○	07.003.ip	
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	
	smoke/fire alarm	refrigerant leakage alarm (remote sensor)	○	08.002.2	
		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	x	09.002	
		low outdoor condensing temperature control	○	09.003	
shipping	shipping	sand trap	x	09.004	
		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	

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

MAIN ACCESSORIES COMPATIBILITY:

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

CE & CF series:

DIRECT EXPANSION, WATER CHILLED
CONDENSER + WATER CHILLED. (CW+CC)

The Clima Processors **CE and CF series** are part of the non-compact chilling units, specifically designed for technical applications such as computer rooms, data centers, museums, diagnostic laboratories, and more. These **dual-circuit machines** feature a **direct expansion with water chilled condenser circuit** and a secondary **water chilled circuit**, making them the ideal choice for reliable and efficient applications, especially where a cooled water source is available. In addition to the standard CE series, the CF series installs a three-way valve that, operating as freecooling mode, allows optimal water flow control, enabling extra efficient energy consumption. The wide range of sizes allows for an extensive cooling capacity, ranging from 9 kW up to over 100 kW. Upon request, both the cooling capacity and airflow can be tailored to meet specific needs. Each machine is custom-designed for individual clients, offering full customization to find the optimal solution for every application.

A large series of accessories is available, enabling modulation of airflow in both upflow and downflow configurations. Additionally, the cooling capacity can be regulated by incorporating a BLDC scroll compressor, enhancing its versatility.

Clima Processor also provides thermal analysis and adheres to different special standards, assisting you in selecting the best configuration for any situation.



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.

GENERAL APPLICATION:

The CE and CF series are specifically designed, but not limited, to:

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

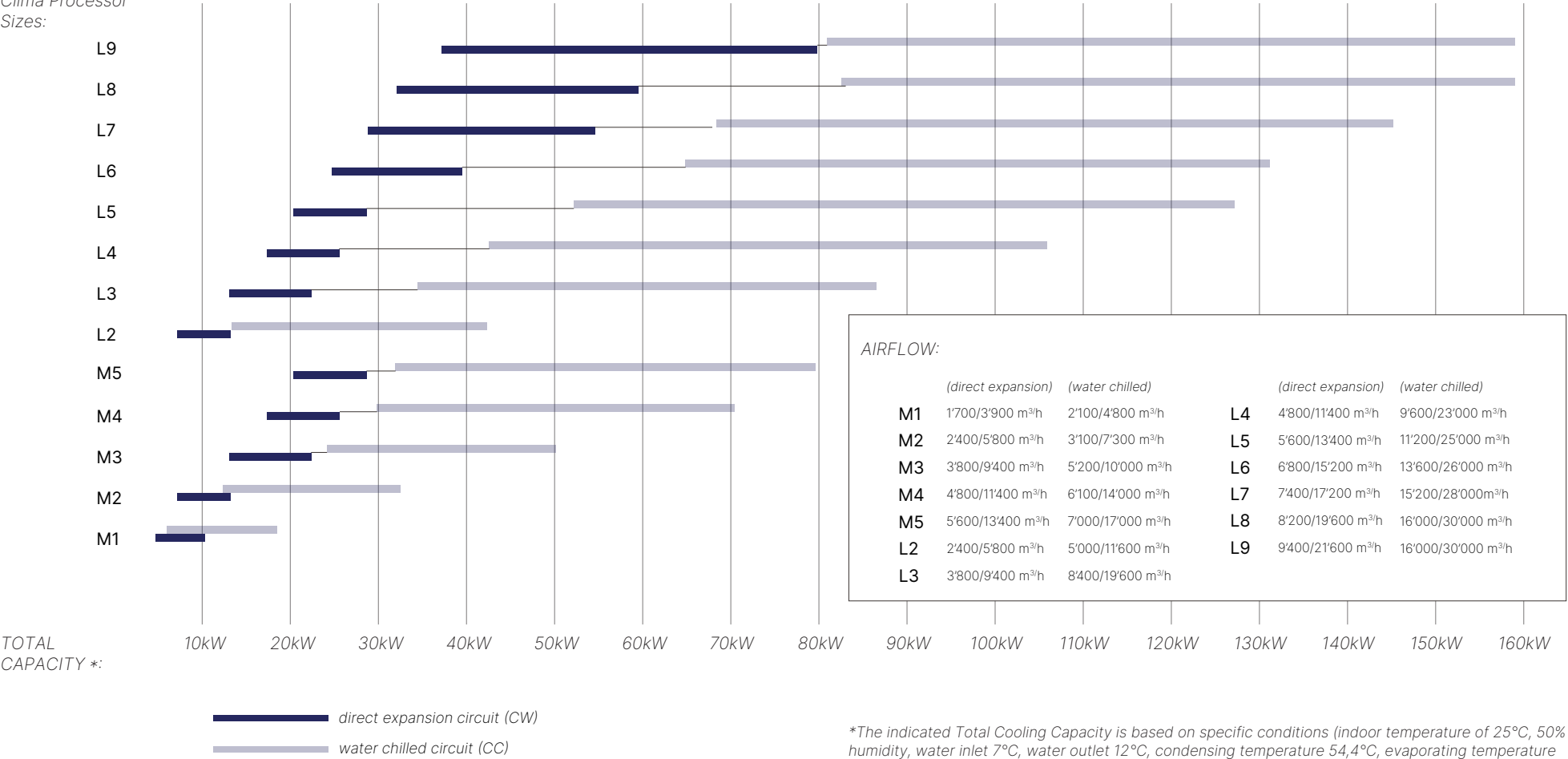
- Heating systems: hot water or electric (1 or 3 stages)
- Humidity and dehumidity systems
- High prevalence EC fans
- BLDC Scroll compressor
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Air delivery plenum
- Pressure actuated water valve
- Water leakage alarm
- Clogged filter alarm
- Smoke and/or fire alarm
- Not return dumper
- Adjustable baseframe
- 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)
- Low temperature kit
- Special RAL color
- R134a or R410A refrigerant

Other customized solutions are possible upon request.

TECHNICAL INFORMATIONS:

ROOM CONDITIONS 25°C, 50% HR. WATER INLET 7°C, WATER OUTLET 12°C, CONDENSING TEMPERATURE 54,4 °C, EVAPORATING TEMPERATURE 7,2°C. R410A REFRIGERANT GAS.

Clima Processor
Sizes:

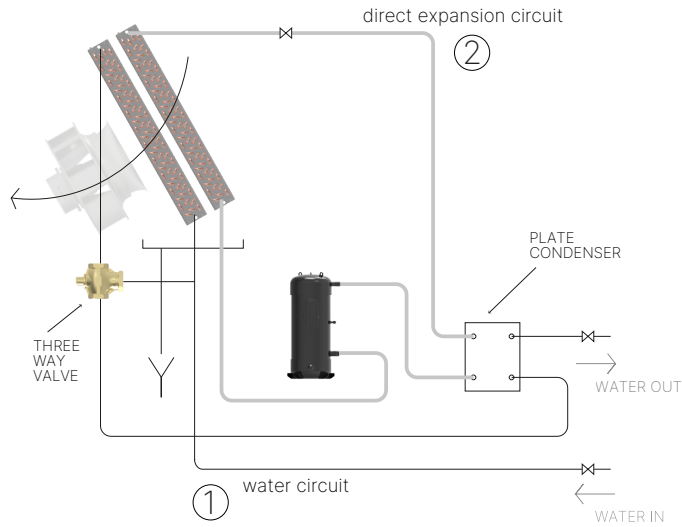


TOTAL
CAPACITY *:

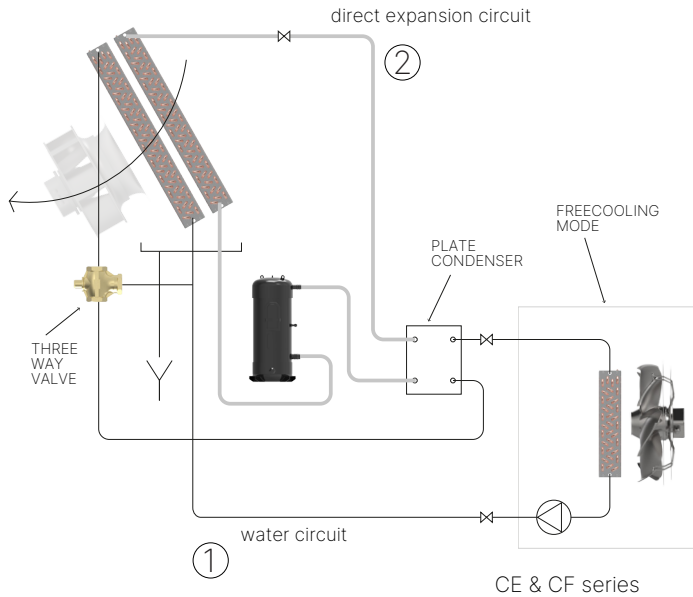
*The indicated Total Cooling Capacity is based on specific conditions (indoor temperature of 25°C, 50% humidity, water inlet 7°C, water outlet 12°C, condensing temperature 54,4°C, evaporating temperature 7,2°C, air outlet temperature max. 14°C, R410 a refrigerant gas). Please note that different working conditions will effect the total cooling capacity.

CIRCUIT SCHEME: (CE)

DOUBLE CIRCUIT



(CF)



IDENTIFICATION CODE FOR CE AND CF:

Compressor
Power (Hp) and number

CE L3 8.1 4 up1.1

series | size (see pag.16) | airflow layout (see pag.18)

number of rows in the
water battery (3 or 4)

CF L3 8.1 4 up1.1

DOUBLE CIRCUIT

			CE/CF serie		
cooling type		direct expansion + water chilled		codification	note
remote condenser required		no			
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	
	baseframe	rockwool sandwich	○	01.003	
		standard baseframe	○	01.004	
refrigerating system	refrigerant	deflector baseframe	○	01.005.d	best with downflow configuration
		R513a	○	02.001.1	
		R134a	○	02.001.2	
		R410a	●	02.001.3	
	expansion valve	modulating condensing pressure control	x	02.002	
		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	●	02.005.3v	
		pressure actuated water regulating valve	●	02.006	
airflow	compressor	plate exchangers	●	02.007	
		scroll compressor	●	03.001.s	
	fan	BLDC compressor	○	03.001.blcdc	
		EC radial fan	●	03.002.r	
		EC High-Prevalence radial fan	○	03.002.hp	
	filters	axial fan (for condenser)	x	03.002.100	
		G4 filter (>60% ISO Coarse)	●	03.003.1g4	
		F7 filter (60-65% ePM10)	○	03.003.2f7	
		F9 filter (85-90% ePM10)	○	03.003.3f9	
		metal G2 (30% ISO Coarse)	x	03.003.4m	
	TH probe	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	
		wall mounted TH probe	○	03.006.th.w	
aeraulic systems	fresh air intake	duct TH probe	○	03.006.th.d	
		freecooling plenum	○	04.001.fc	if installation site allows it
		standard fresh air intake	○	04.002.1std	
		fresh air intake con shut-off damper (manual)	○	04.002.2m	
	air plenum	fresh air intake con shut-off damper (automatic)	○	04.002.2a	
		top air plenum	○	04.003.t	
		bottom air plenum	○	04.003.b	
		rear air plenum	○	04.003.r	
	shut-off damper	non-return damper	○	04.004	
		shut-off damper (manual)	○	04.005.m	
		shut-off damper (automatic)	○	04.005.a	
		airflow protection grid	x	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	
			○	07.002	
	display	LCD display	●	07.002.r	
		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	○	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	x	09.002	
		low outdoor condensing temperature control	○	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

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

CT series:

DOUBLE WATER CHILLED UNIT. (CC+CC)

The **CC series** is part of the Clima Processors non-compact chilling units, specifically designed for technical applications such as computer rooms, data centers, museums, diagnostic laboratories, and more. This is a **dual-circuit water chilled** unit, making it the ideal choice for a reliable application, when a cooled water source is available. The wide range of sizes allows for an extensive cooling capacity, ranging from 9 kW up to over 225 kW. Upon request, both the cooling capacity and airflow can be tailored to meet specific needs. Each machine is custom-designed for individual clients, offering full customization to find the optimal solution for every application.

A large series of accessories is available, enabling modulation of airflow in both upflow and downflow configurations.

Clima Processor also provides thermal analysis and adheres to different special standards, assisting you in selecting the best configuration for any situation.



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.

GENERAL APPLICATION:

The CC 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

- Heating systems: hot water or electric (1 or 3 stages)
- Humidity and dehumidity systems
- High prevalence EC fans
- Modbus Communications (RS485 card): Ethernet, LON, BACnet
- Freecooling plenum
- Air delivery plenum
- Pressure actuated water valve
- Water leakage alarm
- Clogged filter alarm
- Smoke and/or fire alarm
- Not return dumper
- Adjustable baseframe
- 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

Other customized solutions are possible upon request.

TECHNICAL INFORMATIONS:

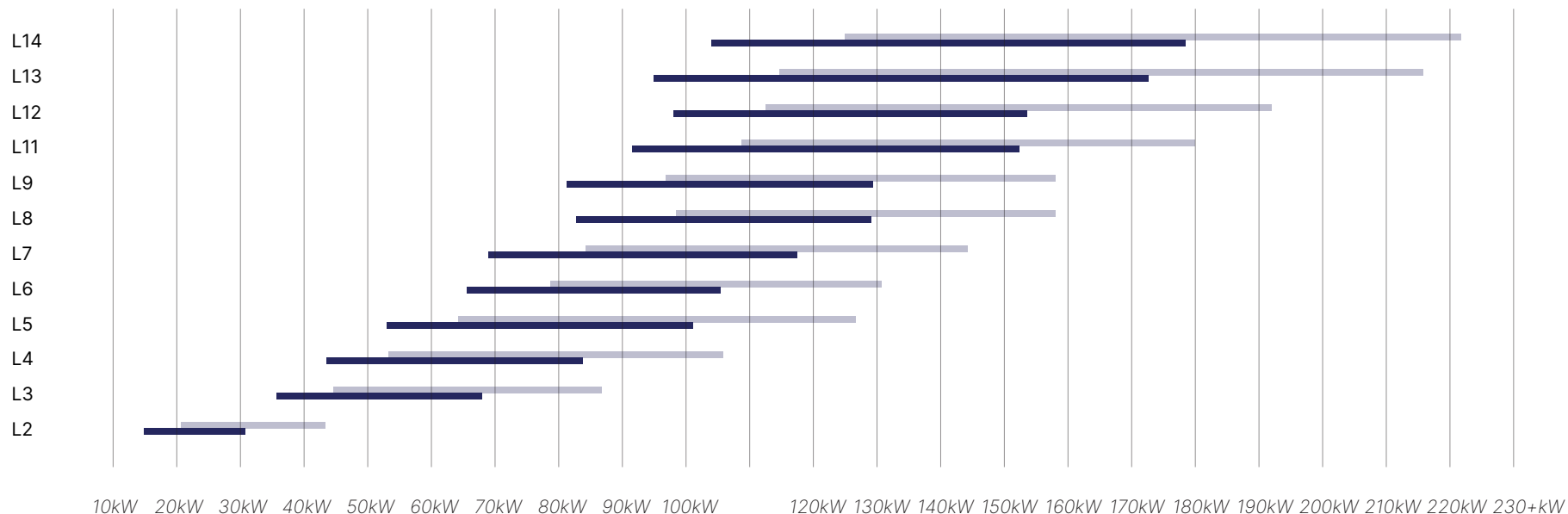
Clima Processor
Sizes:

DOUBLE CIRCUIT

four rows battery
three rows battery

Each unit's size has a specific battery mounted inside. The battery can have either three or four rows, allowing for a wider range of cooling capacity within the same size. For the CT series, which is a double-circuit unit, each circuit can be made using either a 3-row or a 4-row battery.
The number of rows does not affect the airflow.

Data related to a machine with main circuit featuring a 3-row battery and secondary battery with 4 rows. In this way it is possible, within the same machine, to increase the range of refrigeration power.



TOTAL
CAPACITY *:

AIRFLOW:

L2: 5'000/11'600 m³/h	L5: 11'200/25'000 m³/h	L8: 16'400/30'000 m³/h	L12: 19'000/40'000 m³/h
L3: 8'400/19'600 m³/h	L6: 13'600/26'000 m³/h	L9: 16'000/30'000 m³/h	L13: 20'000/45'000 m³/h
L4: 9'600/23'000 m³/h	L7: 15'200/28'000 m³/h	L11: 18'000/36'000 m³/h	L14: 21'600/45'000 m³/h

*The indicated Total Cooling Capacity is based on specific conditions (indoor temperature of 25°C, 50% humidity, water inlet 7°C, water outlet 12°C). Please note that different working conditions will effect the total cooling capacity.

CT series

TECHNICAL INFORMATIONS:

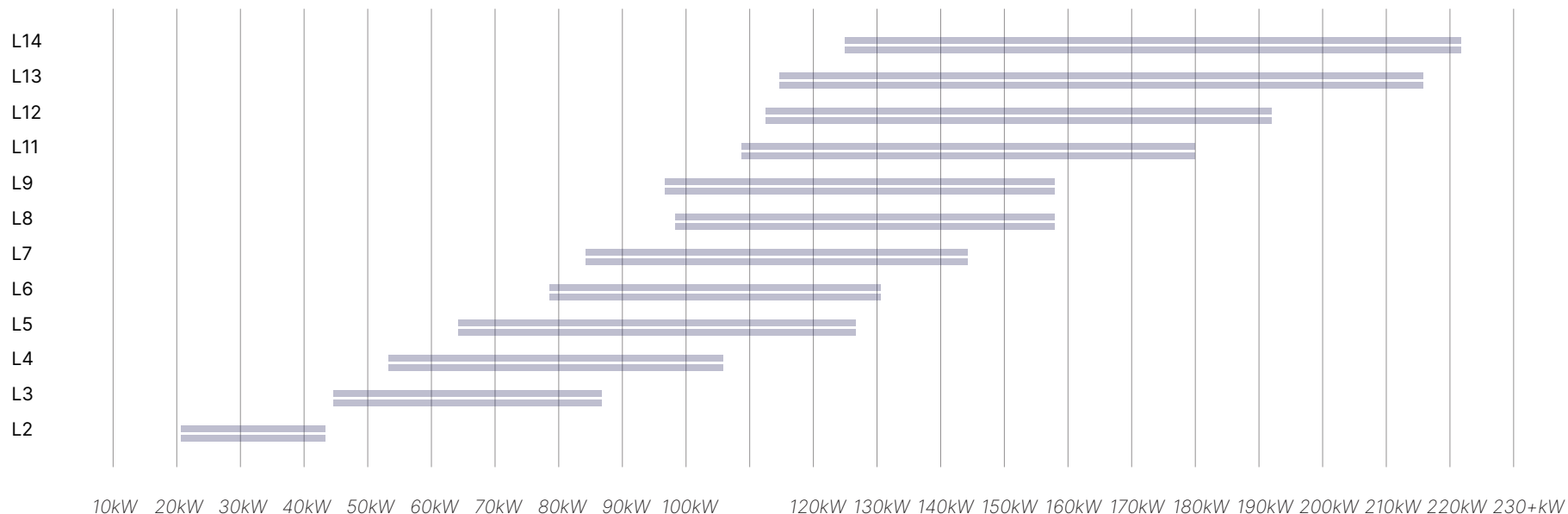
Clima Processor
Sizes:

DOUBLE CIRCUIT

 double four rows
battery circuit

Each unit's size has a specific battery mounted inside. The battery can have either three or four rows, allowing for a wider range of cooling capacity within the same size. For the CT series, which is a double-circuit unit, each circuit can be made using either a 3-row or a 4-row battery. The number of rows does not affect the airflow.

Data related to a machine with a redundant circuit made using a 4-row battery. This configuration is used when the cooling capacity required is defined and does not change over time. The redundancy of the circuit is useful for increasing the safety level related to the conditioning system.



TOTAL
CAPACITY *:

AIRFLOW:

L2: 5'000/11'600 m ³ /h	L5: 11'200/25'000 m ³ /h	L8: 16'400/30'000 m ³ /h	L12: 19'000/40'000 m ³ /h
L3: 8'400/19'600 m ³ /h	L6: 13'600/26'000 m ³ /h	L9: 16'000/30'000 m ³ /h	L13: 20'000/45'000 m ³ /h
L4: 9'600/23'000 m ³ /h	L7: 15'200/28'000 m ³ /h	L11: 18'000/36'000 m ³ /h	L14: 21'600/45'000 m ³ /h

*The indicated Total Cooling Capacity is based on specific conditions (indoor temperature of 25°C, 50% humidity, water inlet 7°C, water outlet 12°C). Please note that different working conditions will effect the total cooling capacity.

CT series

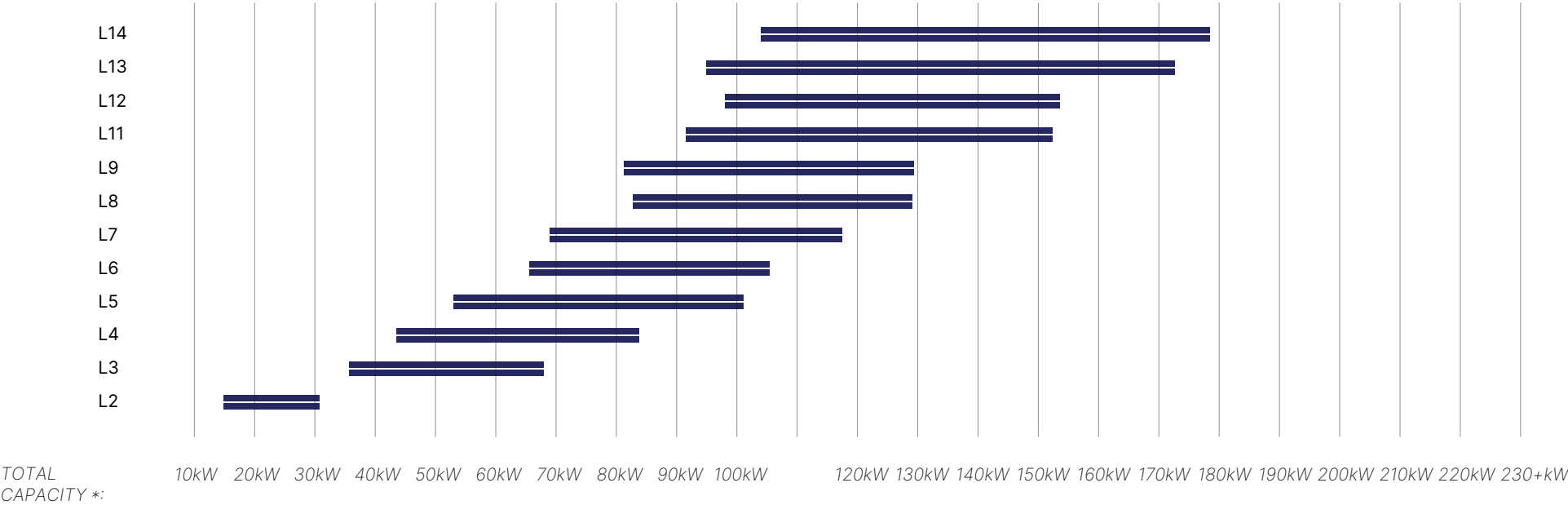
DOUBLE CIRCUIT

 double three rows
battery circuit

Each unit's size has a specific battery mounted inside. The battery can have either three or four rows, allowing for a wider range of cooling capacity within the same size. For the CT series, which is a double-circuit unit, each circuit can be made using either a 3-row or a 4-row battery. The number of rows does not affect the airflow.

Data related to a machine with a redundant circuit made using a 3-row battery. This configuration is used when the cooling capacity required is defined and does not change over time. The redundancy of the circuit is useful for increasing the safety level related to the conditioning system.

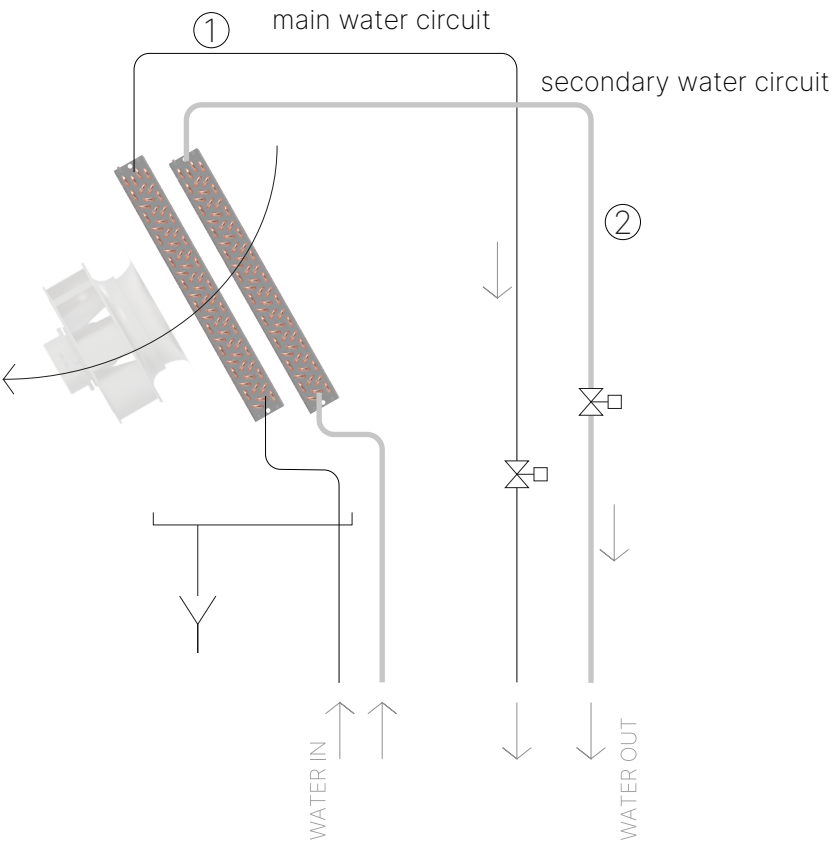
Clima Processor
Sizes:



AIRFLOW:			
L2: 5'000/11'600 m³/h	L5: 11'200/25'000 m³/h	L8: 16'400/30'000 m³/h	L12: 19'000/40'000 m³/h
L3: 8'400/19'600 m³/h	L6: 13'600/26'000 m³/h	L9: 16'000/30'000 m³/h	L13: 20'000/45'000 m³/h
L4: 9'600/23'000 m³/h	L7: 15'200/28'000 m³/h	L11: 18'000/36'000 m³/h	L14: 21'600/45'000 m³/h

*The indicated Total Cooling Capacity is based on specific conditions (indoor temperature of 25°C, 50% humidity, water inlet 7°C, water outlet 12°C). Please note that different working conditions will effect the total cooling capacity.

CIRCUIT SCHEME:



IDENTIFICATION CODE FOR CT:

number of rows in the battery
(for each circuit)

CT L2 34 up1

series

size (see pag.16)

airflow layout
(see pag.18)

CT L2 44 up1

CT L2 33 up1

Three units with the same external dimension, but mounting a double circuit with one made by 3 and one made by 4 rows in the battery, the second units with a double 4 rows battery (44) and the last unit mounting a double 3 row battery (33).

DOUBLE CIRCUIT

cooling type		water chilled		CT serie	
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	○	01.004	
		deflector baseframe	○	01.005.d	best with downflow configuration
refrigerating system	refrigerant	R513a	x	02.001.1	
		R134a	x	02.001.2	
		R410a	x	02.001.3	
		modulating condensing pressure control	x	02.002	
	expansion valve	mechanical expansion valve	x	02.004.m	
		electronic expansion valve (EEV)	x	02.004.eev	
	water valve	two way valve	●	02.005.2v	
		three way valve	○	02.005.3v	
		pressure actuated water regulating valve	○	02.006	
		plate exchangers	x	02.007	
airflow	compressor	scroll compressor	x	03.001.s	
		BLDC compressor	x	03.001.bldc	
	fan	EC radial fan	●	03.002.r	
		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 (60-65% 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	
		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	
	fresh air intake	standard fresh air intake	○	04.002.1std	
		fresh air intake con shut-off damper (manual)	○	04.002.2m	
		fresh air intake con 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	x	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	x	06.003	
electronic and communication system		control board	●	07.001	
		LCD display	●	07.002	
	display	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)	x	08.002.0	
		refrigerant leakage alarm (local sensor)	x	08.002.1	
		refrigerant leakage alarm (remote sensor)	x	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	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	

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

MAIN ACCESSORIES COMPATIBILITY:

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

CONTACTS:

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Close Control Unit

CMC Rail s.r.l.

via Danimarca 15, 20093
Cologno Monzese, MI
Italy