## **VECO CATALOGUE**







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# about us

#### **OUR VISION**

Design and produce state of the art refrigeration, air-conditioning and HVAC systems for the marine business, focusing on quality and reliability.

#### COMPANY

Veco's experience in marine refrigeration and marine air-conditioning systems, together with quality, flexibility and efficiency, makes their solutions the best available in the market.

The brand FRIGOBOAT covers a wide range of refrigeration systems, with DC models suitable up to 400 liters and 230V models, suitable for large cold rooms, standard and custom stainless-steel cabinets, wine cellars and completely customized cold rooms.

With the brand CLIMMA Veco manufactures marine air-conditioning systems, from small self-contained units up to centralized chillers, fancoils and AHU units, boilers and air extractors.

The company is based in Giussano, Italy, with a 5.000 m2 area. With state-of-the-art test room, laser cutting machines and automatic work centers, Veco products perfectly are a perfect representation of Made in Italy.

Veco relies on a worldwide sales and service network, well distributed all over the world to satisfy every request; nowadays our systems are installed everywhere by the world leading shipyards, who have chosen to work with Veco to design their refrigeration and air-conditioning systems on-board their yachts.

#### CERTIFICATION

#### **DNV - DET NORSKE VERITAS**

Since 1996 Veco has obtained the DNV Quality Certification, therefore Veco is now fully compliant with UNI EN ISO 9001:2015 quality management standard.



# our history

Success comes from responding to market demands; the concept has been Veco philosophy since the very beginning, when Franco Formenti studied an innovative refrigeration system for a sailor friend, standardizing this solution for mass production with the company '3F of F.Formenti'.

1978

1971

The brand Frigoboat was born, and it becomes also the company name. Carlo, Franco's son and current CEO, joins the company. 1984 Frigoboat products range evolves in a wide range of sophisticated products. Together with Carlo, the brand Climma starts and the company begins to produce marine air conditioning systems.

1999 The company becomes Veco S.p.A., with more then 50 dealers all over the word and a worldwide service network, is exporting more then 50% of its production abroad.

2022 Now at the third generation, celebrating our 50 years of experience, the company is still a family owned company with the same values, but with the aim of growing its business even more, with innovative products and state of the art solutions.





# distribution network

# our services

#### SERVICE AND SPARE PARTS

HVAC and refrigeration system on-board cannot wait, weather it is a sailing boat or a superyacht, immediate reaction is needed.

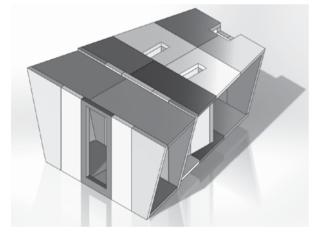
This is why Veco SpA has an important stock of spare parts always in its warehouse or available through its worldwide service network, to ensure working systems and reducing downtime to the minimum.

- O Clear and fast answers
- O On-stock spare parts available though our worldwide service network



#### **REFRIGERATION PROJECTS**

One of the key things on-board is to guarantee food and beverage availability, kept at the right temperature in order to ensure the best experience to the guests.



One of the key things on-board is to guarantee food and beverage availability, kept at the right temperature in order to ensure the best experience to the guests.

This is why it's important to have a reliable partner for the design of the on-board refrigeration systems, to guarantee the best solution based on the requirements.

Since 50 years Veco SpA design custom refrigeration solutions for the marine, starting from the client requirements, going all through the system delivery. Our experience in the marine refrigeration field allow us to always guarantee that temperatures, and humidity when needed, are under control, weather it is fridges or wine cooler, or garbage storage, fishing boxes or blast freezers.

Veco SpA works with state-of-the-art technology and innovative solutions, studying refrigeration plants using low GWP refrigerants, in order to keep sustainability and energy efficiency always as priority.

- O Refrigeration system design
- System sizing and parts design
- O Design of custom refrigerated cabinets, walkable cold rooms, wine coolers and blast freezers
- Design of custom components
- O Installation schematics and complete project electrical schematics
- Custom integration and monitoring solutions
- O Inspections, installation checks, system settings and commissioning
- O Project management

#### MAINTANANCE, REPAIR AND REFIT

Veco SpA can be your ideal partner for different kind of works on your HVAC system or on your refrigeration system onboard; following clients in all the phases, Veco is able to ensure the best result within your budget and time.



#### **HVAC PROJECTS**

Comfort on-board, state of the art technology, unnoticeable; these are Veco SpA objective while designing an HVAC system.

| -  |
|----|
| -> |
|    |

With its 50 years of experience Veco SpA is the perfect partner for designing HVAC system, supporting its clients with their project at 360°.

From the very early stage of design, going through support and inspections during construction, or during refit activities, up to the final commissioning, in order to deliver a perfectly working tailored solution.

The design phase of an HVAC system is important to ensure an adequate comfort level, recreating the perfect ambient conditions, even with extreme climate conditions, giving the guests on-board the feeling of the perfect indoor climate. Weather it's a refit or a new build a good design is the basic to have a good HVAC system.

Selecting the right products for the project is also essential to a good result; state of the art technology, ecologic refrigerants and innovative plant solutions are all important characteristics that have to be looked at with expert eyes.

A proper HVAC system design cannot exist without taking into account regulations by classification societies; Veco SpA works directly with surveyors and classification societies to support its clients on these activities, which are essential to the good HVAC project outcome.

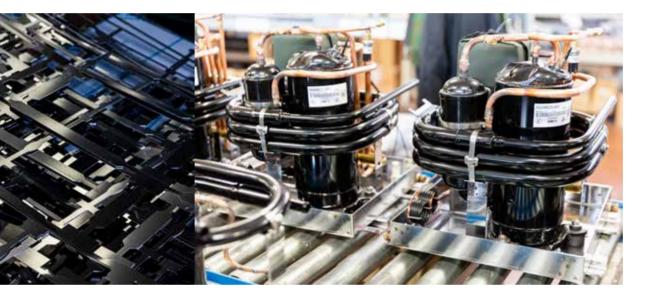
- Heat load calculations
- O HVAC system sizing and parts design
- Aeraulic design
- Hydraulic design
- O Installation schematics and complete project electrical schematics
- O Custom integration and monitoring solutions
- O Inspections, installation checks, system settings and commissioning for new built or refit projects
- Project management







# our company





### 

the eco-friendly independent air-conditioner

- Self-contained independent air-conditioning systems from 3.500 up to 24.000 Btu/h
- Ecologic refrigerant ensures efficiency and lower power consumption
- Very slim high-efficient heat exchanger
- Powerful and adjustable blowers
- Brass threaded condensation outlet pipe and dry pan Climma system

Climma Compact serie of independent air-conditioners are perfect for cooling single or adjacent cabins.

All Climma Compact range has been specifically designed for nautical applications, with water cooled high-efficiency coppernickel condensers, a very compact design, quiet and powerful blowers and an ecologic refrigerant.

They are supplied as standard with the reverse cycle option, but they are also available also with electrical heater.



I condizionatori indipendenti Climma Compact, sono perfetti per condizionare un singolo ambiente oppure ambienti contigui.

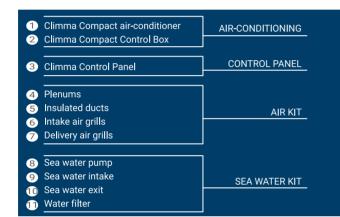
Studiati appositamente per **applicazioni nautiche**, raffreddati ad acqua tramite scambiatori in cupronickel marino ad alta efficienza, compatti, silenziosi e potenti, funzionano con refrigerante ecologico.

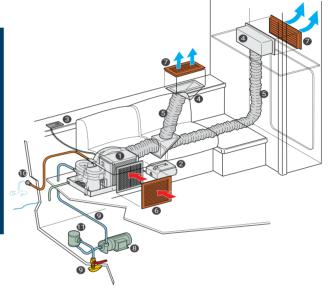
Forniti di standard con l'opzione inversione di ciclo, per poter riscaldare l'ambiente, sono disponibili anche in versione con riscaldamento elettrico.



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|             | Product code  | Capacity cool<br>mode (Btu/h) | Power<br>supply                  | Duct size<br>(mm) | Max air<br>flow (mc/h) | Net weight<br>(Kg) | Shipping<br>weight (Kg) | Size 230/1/50<br>(WxDxH mm) | Optional electric<br>heating (W) |
|-------------|---|-------------------------------|----------------------------------|-------------------|------------------------|--------------------|-------------------------|-----------------------------|----------------------------------|
| Compact 3.5 | 230/1/50 MC35K3RCU<br>230/1/60 MC35K3RCW<br>115/1/60 MC42K3RCI  | 3.500<br>(3.500)              | 230/1/50<br>230/1/60<br>115/1/60 | 100               | 230                    | 12                 | 15                      | 381x204x227                 | N.A.                             |
| Compact 5   | 230/1/50 MCN5K3RCU  | 5.000                         | 230/1/50                         | 100               | 230                    | 25                 | 30                      | 520x300x295                 | 1300 W<br>(MCN5K3EHU)            |
| Compact 7   | 230/1/50 MC7EFRCU<br>230/1/60 MCN7K3CRCW<br>115/1/60 MCN7K3CRCI | 7.000                         | 230/1/50<br>230/1/60<br>115/1/60 | 100               | 230                    | 26                 | 31                      | 425x315x316                 | 1300 W<br>(MC7EFEHU)             |
| Compact 9   | 230/1/50-60 MCN9K3RCJ   | 9.000                         | 230/1/50-60                      | 100               | 230                    | 26                 | 31                      | 520x300x295                 | 1300 W<br>(MCN9K3EHJ)            |
| Compact 12  | 230/1/50 MC12EFRCU<br>230/1/60 MC12EFBRCW<br>115/1/60 MC12EFRCI | 12.000                        | 230/1/50<br>230/1/60<br>115/1/60 | 125               | 560                    | 31,5               | 36,5                    | 523x330x340                 | 1600 W<br>(MC12EFEHU)            |
| Compact 16  | 230/1/50 MC16EFRCU<br>230/1/60 MCN16K3RCW                       | 16.000                        | 230/1/50<br>230/1/60             | 150               | 900                    | 40                 | 46                      | 605x368x352                 | 2000 W<br>(MC16EFEHU)            |
| Compact 17  | 230/1/50 MCN17SK3BRCU<br>115/1/60 MCN17SK3BRCU                  | 17.000                        | 230/1/50<br>115/1/60             | 2x100             | 2x290                  | 42                 | 48                      | 800x398x330                 | 1300 W x2<br>(MCN17SK3BEH        |
| Compact 24  | 230/1/50 MC24SEFRCU<br>230/1/60 MC24SEFRCW                      | 24.000                        | 230/1/50<br>230/1/60             | 2x125             | 2x560                  | 45                 | 55                      | 800x398x415                 | 1300 W x2<br>(MC24SEFEHU)        |





#### CONTROL PANELS



C-TOUCH THERMOSTAT

MK2 THERMOSTAT



MK3 THERMOSTAT

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#### AIR AND SEA WATER KITS

All our compact systems can be easily installed with our premade kits for air and sea water.

Air kits contain all the accessories necessary for the air-distribution of the Compact system, in details:

- O Pre-insulated flexible air duct
- O Duct-plenum connection nipples
- Plenum for air supply grill
- Return and supply air grilles

Water kits contain accessories needed to connect the system to the sea water, in details:

- Sea water intake
- Sea water filter
- Valves
- Sea water outlet

Tutti I condizionatori Compact possono essere installati facilmente con dei semplici kit di installazione aria e acqua.

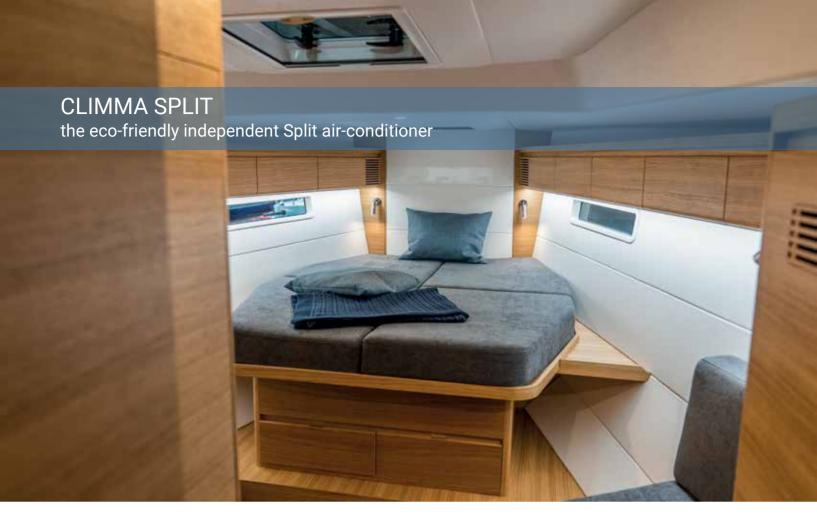
I Kit aria comprendono tutto il necessario per la distribuzione dell'aria di mandata e di ripresa, ed includono:

- Condotta aria pre-isolata e flessibile
- Raccordi condotta-plenum
- o Plenum di alloggio griglie di mandata
- Griglia di mandata e di ripresa

I Kit acqua comprendono invece tutti gli accessori necessari per collegare l'impianto all'acqua di mare, in particolare:

- Presa mare
- Filtro acqua mare
- o Rubinetti
- Scarico acqua mare





- Self-contained independent Split air-conditioning systems from 8.000 up to 24.000 Btu/h
- Ecologic refrigerant ensures efficiency and lower power consumption
- Very slim high-efficient heat exchanger
- Powerful and rotatable fan
- Brass threaded condensation outlet pipe and dry pan Climma system

Climma Split serie of independent air-conditioners are perfect for cooling single or adjacent cabins, specifically when spaces are very limited.

Condensing unit can be installed remotely in an adjacent space, making a better use of spaces and reducing noise, while the evaporator can be installed in the cabin.

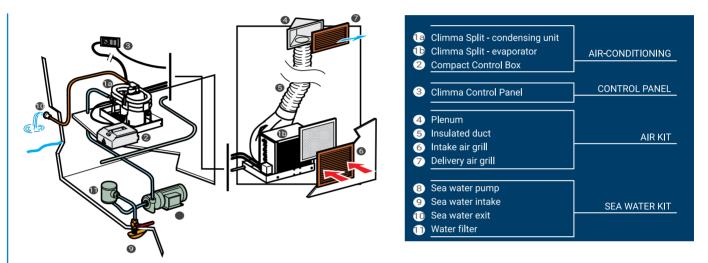
All Climma Split range has been specifically designed for nautical applications, with water cooled condensers in marine-grade coppernickel, a very compact design, quiet and powerful blowers and an ecologic refrigerant. I condizionatori indipendenti Climma Split, sono perfetti per condizionare un singolo ambiente oppure ambienti contigui, quando gli spazi a bordo sono ridotti.

La motocondensante può infatti essere installata in un ambiente adiacente, permettendo di sfruttare meglio gli spazi e di ridurre la rumorosità, mentre l'evaporatore resta installato nella cabina da condizionare.

Studiati appositamente per applicazioni nautiche, tutti i condizionatori Climma Split sono raffreddati ad acqua con scambiatori in cupronickel marino ad alta efficienza, sono compatti, silenziosi, potenti e funzionano con refrigerante ecologico.



|          | Product code                                      | Power<br>supply      | Capacity cool<br>mode (Btu/h) | •  | Shipping<br>weight (Kg) | Duct size<br>(mm) | Max air<br>flow<br>(mc/h) | Size 230/1/50<br>(WxDxH mm)                        | Optional electric<br>heating (W) | Pre-<br>charged |
|----------|---|----------------------|-------------------------------|----|-------------------------|-------------------|---------------------------|--|----------------------------------|-----------------|
| SPLIT 8  | Compressor MSN8K3RCJ<br>Evaporator MESA8K3RCJ     | 230/1/50             | 8.000                         | 26 | 31                      | 100mm             | 230                       | Compressor 305x350x221<br>Evaporator 276x365x285   | 1300 W<br>ask for code           | yes             |
| SPLIT 12 | Compressor MS12EFRCU<br>Evaporator MESA12EFRCU    | 230/1/50             | 12.000                        | 32 | 37                      | 125mm             | 530                       | Compressor 280x350x356<br>Evaporator 400x270x304   | 1600 W<br>ask for code           | no              |
| SPLII 16 | Compressor MS16EFRCU<br>Evaporator MESA16EFECU    | 230/1/50             | 16.000                        | 41 | 47                      | 150mm             | 900                       | Compressor 220x350x328<br>Evaporator 453x376x403   | 2000 W<br>ask for code           | no              |
| SPLIT 17 | Compressor MS17SK3BRCU<br>Evaporator MESA17SK3RCU | 230/1/50<br>115/1/60 | 17.000                        | 42 | 48                      | 2x100mm           | 2x290                     | Compressor 398x235x264<br>Evaporator 639x395x291   | 1300 W x2<br>ask for code        | no              |
| SPLIT 24 | Compressor MS24SEFRCU<br>Evaporator MESA24SEFRCU  | 230/1/50             | 22.000                        | 49 | 55                      | 2x125mm           | 2x560                     | Compressor 355x300x410<br>Evaporator 396x639x n.a. | 1300 W x2<br>ask for code        | no              |



#### CONTROL PANELS



C-TOUCH THERMOSTAT



MK2 THERMOSTAT



MK3 THERMOSTAT

#### AIR AND SEA WATER KITS

All our Split systems can be easily installed with our premade kits for gas, air and water.

Gas kits includes extension gas pipes to bring gas between the condensing unit and the evaporator; extension pipes are precharged in case of self-sealing coupling Split.

Air kits contain all the accessories necessary for the air-distribution of the Compact system, in details:

- O Pre-insulated flexible air duct
- Duct-plenum connection nipples
- Plenum for air supply grill
- Return and supply air grilles

Water kits contain accessories needed to connect the system to the sea water, in details:

- Sea water intake
- Sea water filter
- O Valves
- Sea water outlet

Tutti I condizionatori Climma Split possono essere installati facilmente con dei kit di installazione gas, aria ed acqua.

I Kit gas comprendono prolunghe in rame per portare il gas dalla motocondensante all'evaporatore; i kit sono precaricati in caso di impianto ad innesti rapidi.

I Kit aria comprendono tutto il necessario per la distribuzione dell'aria di mandata e di ripresa, ed includono:

- Condotta aria pre-isolata e flessibile
- Raccordi condotta-plenum
- Plenum di alloggio griglie di mandata
- O Griglia di mandata e di ripresa

I Kit acqua comprendono invece tutti gli accessori necessari per collegare l'impianto all'acqua di mare, in particolare:

- Presa mare
- Filtro acqua mare
- Rubinetti
- Scarico acqua mare





- Compact and easy to install
- Wide range of sizes from 16.000 to 48.000 Btu
- Silent thanks to the anti-vibration mounting system
- Elegant stainless steel frame with condensate tray
- Reverse cycle as standard for winter heating

The new chiller Climma CWS Aquacontrol is the most reliable, efficient and quiet CWS available. A major step forward in design and performance, and reliability guaranteed by Climma 25 years' experience and knowledge in the manufacture of marine air conditioning systems.

The compact design allows us to provide the largest capacity of cooling from the smallest foot print yet. This is achieved by using the latest rotary compressors available (25% lower start current than previous models) combined with large capacity cupronickel sea water condensers for more effective cooling.

Noise and vibration are minimized through Climma's anti-vibration mounts and damper system within the stainless steel condensate base.

Available in 5 sizes from 16.000 to 48.000 BTU/h capacity, reverse cycle as standard for winter heating.



La linea di chiller CWS Aquacontrol, sviluppata da Climma per soddisfare le più strette esigenze del mercato nautico, comprende un'ampia gamma di chiller affidabili, efficienti e silenziosi. L'affidabilità è garantita da un marchio operante nel campo del condizionamento nautico da più di 25 anni.

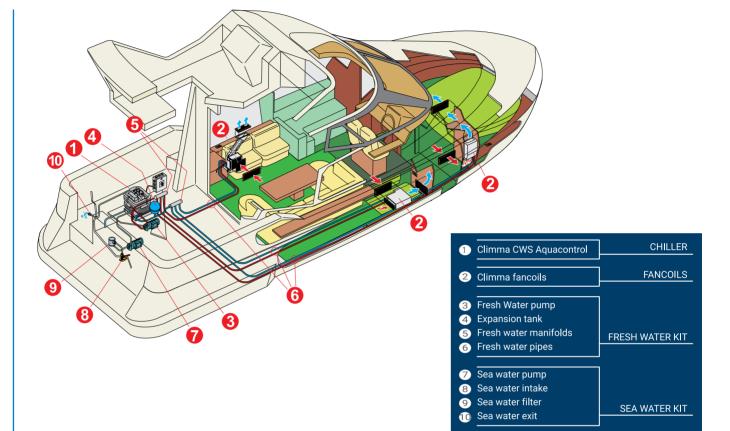
Compressori di ultima generazione e condensatori in cupronickel ad alta efficienza permettono di ottenere un design estremamente compatto di dimensioni minime, garantendo inoltre un rendimento migliore rispetto a macchine tradizionali (c.a. -25% di corrente di spunto).

Il sistema anti-vibrante montato direttamente su struttura in acciaio inox permette di ridurre al minimo rumori e vibrazioni.

I chiller Aquacontrol sono disponibili in 5 misure da 16.000 a 48.000 BTU/h, in versione standard con inversione di ciclo per il riscaldamento invernale.



|         | Product code | Capacity cool<br>mode<br>(Bth/hr) | Power<br>Supply | Net weight<br>(Kg) | Shipping<br>weight<br>(Kg) | Size<br>WxDxH<br>(mm) | Electrical Box<br>WxDxH<br>(mm) |
|---------|--------------|-----------------------------------|-----------------|--------------------|----------------------------|-----------------------|---------------------------------|
| CWS 161 | MEF161RCU    | 16.000                            | 230/1/50        | 36                 | 40                         | 340x340x404           | 243x208x60                      |
| CW3 101 | MEF161RCW    | 16.000                            | 230/1/60        | 36                 | 40                         | 340x340x404           | 243x208x60                      |
| CWS 201 | MEF201RCU    | 20.000                            | 230/1/50        | 39                 | 44                         | 340x340x404           | 243x208x60                      |
| CW3 201 | MEF201RCW    | 20.000                            | 230/1/60        | 39                 | 44                         | 340x340x408           | 243x208x60                      |
| CWS 251 | MEF251RCU    | 25.000                            | 230/1/50        | 43                 | 47                         | 340x340x496           | 243x208x60                      |
| CW3 251 | MEF251RCW    | 25.000                            | 230/1/60        | 43                 | 47                         | 340x340x496           | 243x208x60                      |
| CWS 481 | MEF481RCU    | 48.000                            | 230/1/50        | 70                 | 78                         | 410x420x534           | 243x208x60                      |
| CW3 461 | MEF481RCY    | 48.000                            | 400/3/50        | 70                 | 78                         | 410x420x534           | 300x220x120                     |



#### **OPTIONS**

#### Remote mechanical panel

• A mechanical remote control can be installed allowing to turn on and off the chiller and to change the operation mode from heat to cool.

#### Climma EZ Start kit

• A soft start kit can be added to reduce start-up load up to 60%.

#### WATER KITS

All Climma DC chillers can be easily installed thanks to our sea water and fresh water accessories.

All our Climma water kits contain all the accessories needed to build the correct sea water and fresh water circuit.

To get more details check out our sea water accessories brochure and fresh water accessories brochure, or get in

Tutti I chiller Climma DC possono essere facilmente installati grazie ad un'ampia gamma di accessori per il circuito acqua mare e acqua dolce.

Tutti I nostri kit Climma contengono gli accessori adatti a costruire il circuito acqua dolce e mare in modo corretto.

Per maggiori informazioni consulta le brochure accessori acqua mare e dolce, o contatta il nostro ufficio





MODELS

#### CLIMMA CWS DC CHILLERS

the new chillers with full variable speed technology



- Variable power from a single air-conditioning system
- Water cooled inverter
- Climma control delivers modulated power
- ECO mode
- No start load
- Up to 50% energy saving
- Modular systems up to 1mln Btu

The new Climma DC Inverter chiller is the result of careful design and innovation based on over 40 years manufacturing experience to optimize the energy efficiency of marine air-conditioning chillers. Climma's DC chiller is driven by the unique water-cooled inverter lowering the power requirement by up to 50% compared to traditional chillers.

Climma's new DC chiller is programmed to run at the optimum speed; depending on the heat load requirements the capacity varies automatically from the minimum to the maximum.

Unique in the marine industry, Climma's water cooled inverter protects and controls the compressor, allowing it to be installed in the engine room without additional ventilation, keeping inverter consumption under control.

Climma DC chillers provide further efficiency gain through a special ECO mode. ECO mode enables the chiller to work when only a courtesy/night generator is working or even while on the dock with a limited shore power supply.

Climma DC chiller requires no additional amps to start the compressor



La nuova linea di condizionatori Climma DC brushless è il risultato della continua ricerca Veco volta ad ottimizzare i consumi dei chiller a bordo. Grazie all'innovativa tecnologia ad inverter i nuovi chiller Climma DC migliorano i consumi fino al 50% rispetto ai chiller tradizionali, permettendo inoltre un ottimo e preciso controllo del raffreddamento e riscaldamento a bordo.

I nuovi chiller Climma DC Inverter garantiscono sempre la velocità ottimale rispetto alla richiesta a bordo; a seconda del carico varia automaticamente la potenza dalla minima alla massima.

#### Primi nell'industria nautica, gli inverter Climma con

raffreddamento ad acqua proteggo e controllano il compressore, permettendo un'installazione in sala macchine senza ventilazione e mantenendo i consumi dell'inverter sotto controllo.

Tutta la nuova linea Climma DC è stata studiata con la funzione speciale ECO per ridurre i consumi a bordo. La funzione ECO permette il funzionamento del sistema anche con un generatore ridotto, o notturno, o da banchina con potenza limitata.

Grazie all'innovativa tecnologia ad inverter, i nuovi chiller Climma



|                                   | DC35                     | DC50                     | DC65                     | DC130                    |
|-----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Power supply                      | 230V/1/50-60Hz           | 230V/1/50-60Hz           | 230V/1/50-60Hz           | 400V/3/50-60Hz+N         |
| Power suppry                      | 230 07 17 50-001 12      | ( or 400V/3/50-60Hz+N)   | ( or 400V/3/50-60Hz+N)   | 400 \$737 30-00112+11    |
| Product code                      | MDC00351JNWNNS           | MDC00501JNWNNS           | MDC00651JNWNNS           | MDC01301HNWNNS           |
| (standard single units)           | MDC003313INWININS        | (MDC00501HNWNNS)         | (MDC00651HNWNNS)         | WIDC01301HINWINNS        |
| Capacity cool mode (Btu)          | 0 - 35.000 Btu           | 0 - 50.000 Btu           | 0 - 65.000 Btu           | 0 - 130.000 Btu          |
| Capacity heat mode (Btu)          | 0 -35.000 Btu            | 0 - 55.000 Btu           | 0 - 70.000 Btu           | 0 - 130.000 Btu          |
| Capacity cool mode (kW)           | 0 - 10 kW                | 0 - 14 kW                | 0 - 19kW                 | 0 - 38kW                 |
| Capacity heat mode (kW)           | 0 - 10 kW                | 0 - 16 kW                | 0 - 20,5kW               | 0 - 38kW                 |
| Start current (A)                 | 0 A                      | 0 A                      | 0 A                      | 0 A                      |
| Sea water temp. (heat)            | > 5 °C                   | > 5 °C                   | > 5 °C                   | > 5 °C                   |
| Sea water temp. (cool)            | < 38 °C                  | < 38 °C                  | < 38 °C                  | < 38 °C                  |
| Size (LxDxH in mm)**              | 340 x 342 x 472          | 380 x 422 x 472          | 500 x 425 x 460          | 415 x 650 x 630          |
| Electrical box size (LxDxH in mm) | 250 x 200 x 100          | 250 x 200 x 100          | 250 x 200 x 100          | included in size         |
| Finishing                         | paneled, painted RAL9010 | paneled, painted RAL9010 | paneled, painted RAL9010 | paneled, painted RAL9010 |
| Weight (Kg)                       | 42 Kg                    | 55 kg                    | 55 kg                    | 120 kg                   |

All Climma DC chillers can be installed alone, or they can be installed in a modular system up to 8 modules, for a total power up to 1.040.000 Btu.

Modularity ensures redundancy, garanteeing a minimum downtime during maintenance, a basic requirement in yachting. Moreover, modular Climma DC chillers ensure less power consumption thanks to a centralized control.

Modular Climma DC system also provides lots of options:

- O Frame and manifold to make the installation easier
- Unique central electrical box for power connections

Get more details in our technical datasheets or contact us for more information.

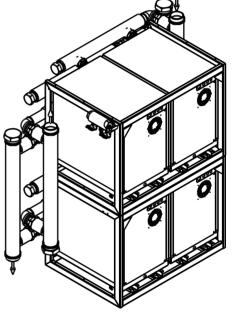
Tutti i chiller Climma DC possono essere installati singolarmente, o in un sistema modulare fino ad 8 moduli per una potenza totale fino a 1.040.000 Btu.

La modularità garantisce ridondanza, e permette di ridurre al minimo i tempi di fermo impianto per manutenzioni, requisito fondamentale per impianti nautici. Inoltre la tecnologia Climma permette di ridurre ulteriormente i consumi grazie ad un controllo centralizzato.

I chiller Climma DC modulari prevedono inoltre molte opzioni:

- O Telaio e collettori acqua premontati per un'installazione semplice
- O Quadro elettrico centralizzato per la gestione della potenza

Scopri tutti I dettagli nelle nostre schede tecniche o contattaci per avere maggiori informazioni.



#### OPTIONS

- Remote secondary digital display (small or big)
- Remote mechanical panel
- Modbus interface
- Sea water sensor (standard in DC130)



#### WATER KITS

All Climma DC chillers can be easily installed thanks to our sea water and fresh water accessories kits.

To get more details check out our sea water accessories brochure and fresh water accessories brochure, or get in contact with our sales office. Tutti I chiller Climma DC possono essere facilmente installati grazie ad un'ampia gamma di accessori per il circuito acqua mare e acqua dolce.

Per maggiori informazioni consulta le brochure accessori acqua mare e dolce, o contatta il nostro ufficio commerciale.



#### CLIMMA CWS MODUL CHILLERS modular, reliable and efficient

- Wide range from 60.000 to 1.152.000 Btu
- Reverse cycle as standard for winter heating
- Optional inverter removes completely start current and improves efficiency by 30%
- Highest capacity from the smallest size
- Flexible modular configuration
- Independent modules allow redundancy and increase reliability

Climma' CWS Modul systems are the perfect solution for air-conditioning on yachts from 60 footers to superyachts of 60 meters and up; the modular design ensures each system is optimized to the yacht's exact size providing the highest power from the smallest space.

Climma's unique microprocessor control monitors all the key parameters of the system to maximize the performance and reliability of the system.

All CWS Modul are also available with Climma water cooled inverter drivers, that completely remove start current and reduce power consumption up to 30%.

Modularity means that Climma CWS Modul chiller are extremely reliable with redundancy built in to the design; each compressor is completely independent and can be bypassed from the system, leaving the rest of the system working perfectly.



Gli impianti chiller Climma CWS Modul sono la soluzione perfetta per yacht di 60 piedi fino a imbarcazioni di 60 metri o più; i chiller modulari Climma CWS Modul permettono di ottimizzare ogni impianto intorno alle necessità dello yacht, sempre con la massima resa nel minimo ingombro possibile.

L'innovativo sistema di controllo a microprocessore centralizzato Climma monitora tutti I parametri del sistema massimizzando le performance e l'affidabilità.

Tutti gli impianti CWS Modul possono essere forniti con l'inverter Climma raffreddato ad acqua, eliminando così la corrente di spunto e riducendo i consumi fino al 30%.

La modularità dei sistemi Climma CWS Modul garantisce una ridondanza intrinseca; ogni compressore è completamente indipendente e può essere escluso dal sistema, lasciando la macchina perfettamente funzionante continuando a garantire il comfort di bordo.



| Product     | Compr.<br>Nr. |           | ninal<br>7 (Bth/hr) |                    | Power Supply       |                          | Size<br>(WxDxH)*    | Net<br>Weight |
|-------------|---------------|-----------|---------------------|--------------------|--------------------|--------------------------|---------------------|---------------|
|             |               | Cool      | Heat                | 230/1/50-60        | 230/3/50-60        | 400/3/50-60              |                     | (Kg)          |
| Solo 601    | 1             | 60.000    | 75.000              | yes, with inverter | yes, with inverter | yes, with or no inverter | 400 x 620 x 506     | 78            |
| Solo 721    | 1             | 72.000    | 90.000              | yes, with inverter | yes, with inverter | yes, with or no inverter | 400 x 620 x 506     | 88            |
| Solo 961    | 1             | 96.000    | 120.000             | yes, with inverter | yes, with inverter | yes, with or no inverter | 400 x 680 x 616     | 140           |
| Solo 1201   | 1             | 120.000   | 150.000             | no                 | yes, with inverter | yes, with or no inverter | 480 x 758 x 625     | 160           |
| Solo 1441   | 1             | 144.000   | 180.000             | no                 | yes, with inverter | yes, with or no inverter | 480 x 758 x 625     | 160           |
| Modul 1202  | 2             | 120.000   | 150.000             | yes, with inverter | yes, with inverter | yes, with or no inverter | 1110 x 718 x 584    | 211           |
| Modul 1442  | 2             | 144.000   | 180.000             | yes, with inverter | yes, with inverter | yes, with or no inverter | 1110 x 774 x 584    | 231           |
| Modul 1803  | 3             | 180.000   | 200.000             | yes, with inverter | yes, with inverter | yes, with or no inverter | 1532 x 731 x 584    | 320           |
| Modul 1922  | 2             | 192.000   | 240.000             | yes, with inverter | yes, with inverter | yes, with or no inverter | 1110 x 790 x 704    | 338           |
| Modul 2163  | 3             | 216.000   | 270.000             | no                 | yes, with inverter | yes, with or no inverter | 1532 x 775 x 584    | 334           |
| Modul 2402  | 2             | 240.000   | 300.000             | no                 | yes, with inverter | yes, with or no inverter | 1274 x 887 x 704    | 385           |
| Modul 2404  | 4             | 240.000   | 300.000             | no                 | no                 | yes, with or no inverter | 1110 x 828 x 1164   | 401           |
| Modul 2882  | 2             | 288.000   | 360.000             | no                 | no                 | yes, with or no inverter | 1276 x 887 x 704    | 385           |
| Modul 2883  | 3             | 288.000   | 360.000             | no                 | yes, with inverter | yes, with or no inverter | 1585 x 770 x 700    | 493           |
| Modul 2884  | 4             | 288.000   | 360.000             | no                 | yes, with inverter | yes, with or no inverter | 1110 x 828 x 1164   | 441           |
| Modul 3603  | 3             | 360.000   | 450.000             | no                 | yes, with inverter | yes, with or no inverter | 1785 x 982 x 704    | 570           |
| Modul 3844  | 4             | 384.000   | 460.000             | no                 | yes, with inverter | yes, with or no inverter | 1110 x 887 x 1400   | 638           |
| Modul 4323  | 3             | 432.000   | 540.000             | no                 | yes, with inverter | yes, with or no inverter | 1786 x 878 x 700    | 570           |
| Modul 4804  | 4             | 480.000   | 600.000             | no                 | yes, with inverter | yes, with or no inverter | 1398 x 1043 x 1400  | 780           |
| Modul 5764  | 4             | 576.000   | 720.000             | no                 | yes, with inverter | yes, with or no inverter | 1398 x 1043 x 1400  | 780           |
| Modul 7206  | 6             | 720.000   | 900.000             | no                 | no                 | yes, with or no inverter | 1751 x 992 x 1400   | -             |
| Modul 8646  | 6             | 864.000   | 1.080.000           | no                 | no                 | yes, with or no inverter | 1751 x 992 x 1400   | -             |
| Modul 9608  | 8             | 960.000   | 1.200.000           | no                 | no                 | yes, with or no inverter | 2500 x 1045 x x1400 | -             |
| Modul 11528 | 8             | 1.152.000 | 1.440.000           | no                 | no                 | yes, with or no inverter | 2500 x 1045 x x1400 | -             |

#### ACCESSORIES

#### Touch screen Climma control panel

 It's possible to install an extra Climma touch screen display to control and monitor the chiller remotely. The panel is available in 2 sizes: 3,5' and 5,7'.

#### Remote mechanical panel

 A mechanical remote control can be installed allowing to turn on and off the chiller and to change the operation mode from heat to cool.



#### **CUSTOMIZATION**

All Climma CWS Modul can be customized to a specific client request. Some of the most common customizations include:

- O Building the system with or without frame and manifolds
- O Custom demountable frame to facilitate installation in case of refit or small spaces
- O Paneled frame, or with custom finishing (RAL painting)
- O Custom water manifolds with respect to the standard version
- O Some accessories premounted on the frame, like pumps and water accessories
- O Custom electrical box with respect to standard version (backup pump management, boiler integration, or others)

#### WATER KITS

All Climma DC chillers can be easily installed thanks to our sea water and fresh water accessories.

All our Climma water kits contain all the accessories needed to build the correct sea water and fresh water circuit.

To get more details check out our sea water accessories brochure and fresh water accessories brochure, or get in contact with our sales office. Tutti I chiller Climma DC possono essere facilmente installati grazie ad un'ampia gamma di accessori per il circuito acqua mare e acqua dolce.

Tutti I nostri kit Climma contengono gli accessori adatti a costruire il circuito acqua dolce e mare in modo corretto.

Per maggiori informazioni consulta le brochure accessori acqua mare e dolce, o contatta il nostro ufficio commerciale.



ACCESSORIES

## CLIMMA FANCOILS - EV SERIE reliable, silent and dry



- Quiet operation, easy to install and maintain
- Wide range of sizes from 3.000 to 24.000 Btu
- Unique 'dry pan' system ensures the condensate tray is fully draining, even when heeling
- Powerful yet quiet blowers with easy alignment system to improve air flow and for an easy installation
- Anti-vibration mounting system as standard

**Climma EV fancoils** are a major step forward in both design and performance, the result of a 25 years experience in the manufacture of marine air conditioning systems.

Our new Climma EV fancoils overcome the main critical issues of marine air conditioning systems: effective removal of condensate water, blower position and efficiency and reduced noise and vibration.

The Climma 'Dry pan' system ensures that all condensation water produced by the fancoil drains away completely.

All Climma fancoils are fitted with powerful blowers; the blowers are extremely quiet in operation and are fully adjustable on installation so they can be aligned correctly to the duct run, maximizing efficiency of the air distribution.

EVA fan coils are all fitted with Climma's specially developed anti-vibration mounts stopping the transfer of structure noises.

Available in a wide range of sizes, from 3.000 to 24.000 Btu, all with optional electrical heaters.



I fancoil Climma della serie EV, risultato di 25 anni di esperienza nel settore del condizionamento nautico, sono la perfetta combinazione di tecnica e di design.

I fancoil Climma EV risolvono infatti le principali problematiche del condizionamento nautico: l'effettiva rimozione dell'acqua di condensa, il posizionamento e l'efficienza dei ventilatori e la rumorosità del fancoil.

Il nuovo concetto Climma 'Dry Pan' è stato studiato per eliminare completamente l'acqua di condensa prodotta dal fancoil.

I fancoil Climma EV sono facili da installare e sono stati studiati con silenzioni ma potenti ventilatori che possono essere ruotati a seconda delle proprie esigenze, così da massimizzare l'efficienza nella distribuzione dell'aria e semplificare l'installazione.

Tutti i modelli sono equipaggiati con l'innovativo sistema anti-vibrazioni Climma, per un fancoil tra i più silenziosi disponibili.

I fancoil Climma EV sono disponibili da 3.000 a 24.000 BTU con l'opzione a riscaldamento elettrico su richiesta.



|                      | Product    | Nominal Power | Power Supply  | Air Flow | Fan  | Duct  | W Fan | Electrical | Weight | Size*           |
|----------------------|------------|---------------|---------------|----------|------|-------|-------|------------|--------|-----------------|
|                      | Code       | (Btu/h)       | r oner ouppry | (mq³/h)  | (nr) | (mm)  | (W)   | Heater (W) | (kg)   | WxDxH (mm)      |
| EVA 3                | MEVA3J     | 3.000         | 230/1/50-60   | 175      | 1    | 75    | 90    | -          | 6,0    | 322 x 178 x 224 |
| EVA 4,5              | MEVA45J    | 4.500         | 230/1/50-60   | 275      | 1    | 100   | 100   | -          | 6,5    | 365 x 276 x 279 |
| EVA 4,5 EH           | MEVA45EJ   | 4.500         | 230/1/50-60   | 275      | 1    | 100   | 100   | 1300       | 6,5    | 365 x 276 x 279 |
| EVA 7                | MEVA7J     | 7.000         | 230/1/50-60   | 275      | 1    | 100   | 100   | -          | 7,6    | 365 x 296 x 285 |
| EVA 7 EH             | MEVA7EJ    | 7.000         | 230/1/50-60   | 275      | 1    | 100   | 100   | 1300       | 7,6    | 365 x 296 x 285 |
| EVA 9                | MEVA9J     | 9.000         | 230/1/50-60   | 570      | 1    | 125   | 260   | -          | 8,0    | 365 x 277 x 284 |
| EVA 9 EH             | MEVA9EJ    | 9.000         | 230/1/50-60   | 570      | 1    | 125   | 260   | 1300       | 8,0    | 365 x 277 x 284 |
| EVA 13               | MEVA13J    | 13.000        | 230/1/50-60   | 570      | 1    | 125   | 260   | -          | 8,7    | 365 x 296 x 285 |
| EVA 13 EH            | MEVA13EJ   | 13.000        | 230/1/50-60   | 570      | 1    | 125   | 260   | 1300       | 8,7    | 365 x 296 x 285 |
| EVA 17               | MEVA17J    | 17.000        | 230/1/50-60   | 930      | 1    | 150   | 355   | -          | 15,0   | 453 x 375 x 345 |
| EVA 17 EH            | MEVA17EJ   | 17.000        | 230/1/50-60   | 930      | 1    | 150   | 355   | 2000       | 15,5   | 453 x 375 x 345 |
| EVA 17 SLIM          | MEVA17SJ   | 17.000        | 230/1/50-60   | 1140     | 2    | 2x125 | 520   | -          | 18,5   | 639 x 396 x 286 |
| EVA 17 SLIM EH       | MEVA17SEJ  | 17.000        | 230/1/50-60   | 1140     | 2    | 2x125 | 520   | 2600       | 18,5   | 639 x 396 x 286 |
| EVA 17 EXTRA SLIM    | MEVVA17SJ  | 17.000        | 230/1/50-60   | 1140     | 2    | 2x125 | 520   | -          | 18,0   | 639 x 289 x 286 |
| EVA 17 EXTRA SLIM EH | MEVVA17SEJ | 17.000        | 230/1/50-60   | 1140     | 2    | 2x125 | 520   | 2600       | 18,0   | 639 x 289 x 286 |
| EVA 24 SLIM          | MEVA24SJ   | 24.000        | 230/1/50-60   | 1140     | 2    | 2x125 | 520   | -          | 18,0   | 639 x 396 x 286 |
| EVA 24 SLIM EH       | MEVA24SEJ  | 24.000        | 230/1/50-60   | 1140     | 2    | 2x125 | 520   | 2600       | 18,0   | 639 x 396 x 286 |
| EVA 24 EXTRA SLIM    | MEVVA24SJ  | 24.000        | 230/1/50-60   | 1140     | 2    | 2x125 | 520   | -          | 18,0   | 639 x 289 x 286 |
| EVA 24 EXTRA SLIM EH | MEVVA24SEJ | 24.000        | 230/1/50-60   | 1140     | 2    | 2x125 | 520   | 2600       | 18,0   | 639 x 289 x 286 |

#### CONTROL PANELS









MECHANICAL THERMOSTAT

#### ELECTRONIC CONTROLS FOR FANCOILS

- O MV8 control 8 speed electronic control for fancoils, compatible with digital displays C-Touch and MK2
- O MSCA control 3 speed control for fancoils, compatible with Climma mechanical thermostat

#### OPTIONS

#### VecoHub centrilized system

The innovative VecoHub system allows for an easy and intuitive integration of all Veco systems on board, through a unique and simple control interface.

- Available on tablets and smartphones
- Optional 10' Veco touch screen
- O Compatible with the most common MFDs and chartplotters

#### Sistema centralizzato VecoHub

L'innovativo sistema VecoHub permette di integrare in modo semplice ed intuitivo tutti i sistemi Veco di bordo, tramite un'unica interfaccia di controllo.

- O Disponibile per tablet e smartphones
- O Display Veco da 10' opzionale
- O Compatibile con i più comuni MDF e chartplotter

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#### AIR KITS

All Climma EV serie fancoils can be easily installed with our premade kits with air accessories; air kits contain all the accessories necessary for the air-distribution of the fancoil, in details:

- Pre-insulated flexible air duct
- Duct-plenum connection nipples
- Plenum for air supply grill
- Return and supply air grilles

Tutti i fancoil Climma serie EV possono essere installati facilmente con dei kit di installazione aria; i Kit aria comprendono tutto il necessario per la distribuzione dell'aria di mandata e di ripresa, ed includono:

- Condotta aria pre-isolata e flessibile
- Raccordi condotta-plenum
- Plenum di alloggio griglie di mandata
- Griglia di mandata e di ripresa



#### CLIMMA FANCOILS - FC SERIE no duct fancoils



- Extremely easy to install
- Wide range from 2.000 to 20,000 Btu
- Powerful yet extremely quiet blowers with no ducting
- Horizontal or vertical installation
- Light aluminum structure with white paint finishing





Climma FC fancoils, with a direct ducting system, have been specifically studied for installation in small spaces and where it's not possible to install air ducts.

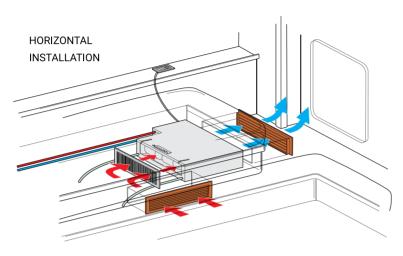
Available in a wide range, from 2.000 up to 20.000 Btu, and in 2 different models, vertical and horizontal, with their size the can accommodate all kind of installation.

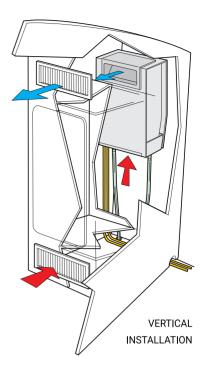
I fancoil Climma serie FC a canalizzazione diretta, sono stati studiati appositamente per installazioni in spazi ridotti e dove non è possibile canalizzare l'aria.

Un'ampia gamma, da 2.000 a 20.000 Btu, divisa in due modelli, verticali e orizzontali, insieme a dimensioni estremamente contenute, permettono di gestire qualsiasi tipo di installazione.



| Product<br>Code | Installation<br>type | Nominal<br>Capacity<br>(BTU/h) | Power<br>supply | Size<br>(WxDxH mm) | Air flow<br>( m3/hr) | Consumption<br>(Watt) |
|-----------------|----------------------|--------------------------------|-----------------|--------------------|----------------------|-----------------------|
| MFC2            | Horizontal           | 2.000                          | 230/1/50-60     | 353x344x167        | 203                  | 42                    |
| MFC4            | Horizontal           | 4.000                          | 230/1/50-60     | 370x444x167        | 389                  | 84                    |
| MFC6            | Horizontal           | 6.000                          | 230/1/50-60     | 422x444x192        | 534                  | 87                    |
| MFC8            | Horizontal           | 8.000                          | 230/1/50-60     | 422x444x220        | 661                  | 175                   |
| MFC12           | Horizontal           | 12.000                         | 230/1/50-60     | 446x544x225        | 850                  | 175                   |
| MFC16           | Horizontal           | 16.000                         | 230/1/50-60     | 446x644x225        | 1052                 | 174                   |
| MFC20           | Horizontal           | 20.000                         | 230/1/50-60     | 446x744x225        | 1096                 | 174                   |
| MFCV25          | Vertical             | 2.500                          | 230/1/50-60     | 370X320X155        | 171                  | 42                    |
| MFCV5           | Vertical             | 5.000                          | 230/1/50-60     | 375X385X155        | 309                  | 84                    |
| MFCV9           | Vertical             | 9.000                          | 230/1/50-60     | 505X385X186        | 441                  | 87                    |





#### **CONTROL PANELS**







MECHANICAL THERMOSTAT

#### ELECTRONIC CONTROLS FOR FANCOILS

- O MV8 control 8 speed electronic control for fancoils, compatible with digital displays C-Touch and MK2
- O MSCA control 3 speed control for fancoils, compatible with Climma mechanical thermostat

#### OPTIONS

#### VecoHub centrilized system

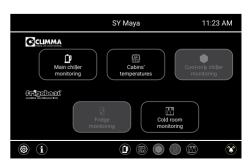
The innovative VecoHub system allows for an easy and intuitive integration of all Veco systems on board, through a unique and simple control interface.

- O Available on tablets and smartphones
- Optional 10' Veco touch screen
- O Compatible with the most common MFDs and chartplotters

#### Sistema centralizzato VecoHub

L'innovativo sistema VecoHub permette di integrare in modo semplice ed intuitivo tutti i sistemi Veco di bordo, tramite un'unica interfaccia di controllo.

- O Disponibile per tablet e smartphones
- O Display Veco da 10' opzionale
- O Compatibile con i più comuni MDF e chartplotter





## CLIMMA AIR HANDLING UNITS



- High efficiency heat exchanger
- Suitable for marine environments
- Powerful and quiet blowers
- Optional automatic bypass for free-cooling
- Modbus interface available as standard

It's important to breathe clean air, even on board yachts.

The quality of the air we breathe is directly connected to its correct exchange on-board, removing polluting particles and reducing the proliferation of bacteria and molds, ensuring the comfort and well-being of the people on board.

**Climma AERO** is the new line of high performance heat recovery units, specifically designed by Veco for the marine market.



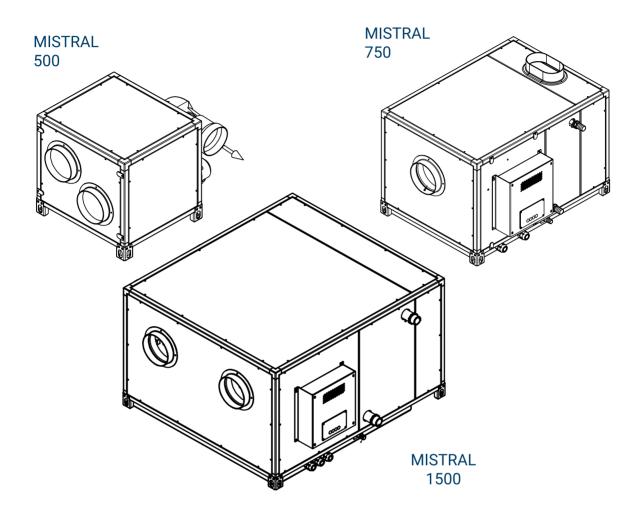
E' importante respirare aria pulita, anche a bordo di yacht.

La qualità dell'aria che respiriamo a bordo è legata al corretto ricambio della stessa, permettendo così la dispersione degli elementi inquinanti e attenuando così la proliferazione di batterie e muffe, garantendo il benessere delle persone a bordo.

Climma AERO è la nuova linea di recuperatori di calore ad alte prestazioni studiati appositamente da Veco per il mercato nautico.



|              | Product<br>Code | Nominal<br>Capacity<br>(Btu/h) | Air flow<br>(m3/h) | Consumption<br>cool<br>mode (A) | Consumption<br>heat<br>mode (A) | Net<br>weight<br>(kg) | Shipping<br>weight<br>(kg) | Size<br>HxWxD<br>(mm) | El. Box size<br>WxHxD<br>(mm) | Post<br>heater<br>(W) |
|--------------|-----------------|--------------------------------|--------------------|---------------------------------|---------------------------------|-----------------------|----------------------------|-----------------------|-------------------------------|-----------------------|
| Mistral 500  | TA2255          | 20.000                         | 500                | 11,0                            | 1,1                             | 27                    | 34                         | 455x552x463           | 280x287x90                    | 2000                  |
| Mistral 750  | TA0656          | 45.000                         | 750                | 16,0                            | 1,6                             | 49                    | 57                         | 535x780x565           | 280x287x90                    | 3360                  |
| Mistral 1500 | TA1285A         | 90.000                         | 1500               | 32,0                            | 2,5                             | 96                    | 96                         | 819x1100x900          | 280x287x90                    | 6720                  |



#### **CONTROL PANEL**

#### **Climma digital AHU control**

All Climma air handling units are supplied with a simple digital display to control the unit and to verify their parameters. Display comes already mounted on the unit electrical box, to make the installation even simpler.

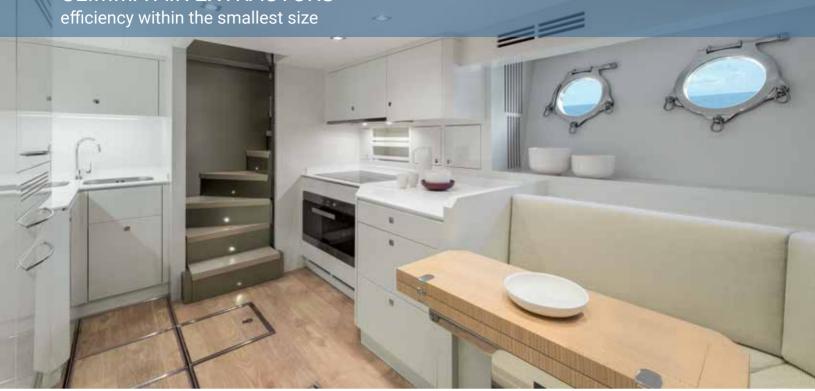
#### **Controllo digitale Climma**

Tutte le unità di trattamento aria Climma sono dotate di un semplice display per il controllo dell'unità e per la verifica dei parametri principali. Il display Climma è già montato a bordo della scatola elettrica dell'unità per semplificare l'installazione.





#### **CLIMMA AIR EXTRACTORS** efficiency within the smallest size



- Smallest size and easy to install
- Powerful yet quiet blowers to improve air flow
- Frame structure
- Insulated cover panels to reduce noise
- Antivibration system 0



Climma air extractors, specifically studied for marine applications, allow to remove air from internal ambient on-board, to ensure an adequate number of air changes.

Usually they are used together with Climma AHU - Air Handling Units, but they can also be installed independently, guaranteeing a fixed amount of air.

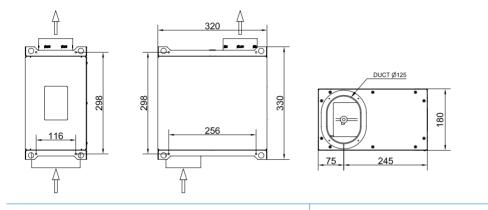
Climma air extractors are all studied with centrifugal high efficiency blowers, mounted on a strong frame with panels, to guarantee the maximum reliability, minimizing the noise. Gli estrattori d'aria Climma, appositamente progettati per applicazioni nautiche, permettono di rimuovere l'aria dalle cabine interne all'imbarcazione, allo scopo di garantirne un adeguato ricambio.

Solitamente utilizzati in combinazione con le Unità di Trattamento Aria Climma, possono essere comunque installati indipendentemente e garantiscono una portata d'aria fissa.

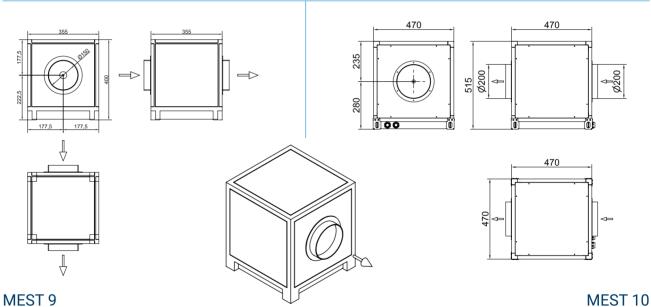
Dotati di ventilatori centrifughi ad alta efficienza, montati su telaio con una struttura a pannelli, garantiscono sempre la massima affidabilità, riducendo al minimo il rumore.



|         | Power<br>Supply | Труе                | Air flow<br>(mc/h) | Connection<br>type  | Inlet duct connection | Outlet duct<br>connection<br>(mm) | Net Weight | Size<br>(HxWxD mm) |
|---------|-----------------|---------------------|--------------------|---------------------|-----------------------|-----------------------------------|------------|--------------------|
| MEST2UA | 230/1/50-60     | centrifugal, in box | 200                | Front in, back out  | 100 mm                | 100 mm                            | 4,5        | 320x180x330        |
| MEST4UA | 230/1/50-60     | centrifugal, in box | 400                | Front in, back out  | 125 mm                | 125 mm                            | 5,0        | 320x180x330        |
| MEST4UA | 230/1/50-60     | centrifugal, in box | 400                | Front in, front out | 125 mm                | 125 mm                            | 5,0        | 320x180x330        |
| MEST6UA | 230/1/50-60     | centrifugal, in box | 600                | Front in, back out  | 125 mm                | 125 mm                            | 5,0        | 320x180x330        |
| MEST6UA | 230/1/50-60     | centrifugal, in box | 600                | Front in, front out | 125 mm                | 125 mm                            | 5,0        | 320x180x330        |
| MEST9U  | 230/1/50-60     | centrifugal, in box | 900                | Front in, back out  | 150 mm                | 150 mm                            | 14,0       | 400x355x355        |
| MEST10U | 230/1/50-60     | centrifugal, in box | 1000               | Front in, back out  | 200 mm                | 200 mm                            | 18,0       | 515x470x470        |



MEST 2/4/6



#### **CONTROL PANEL**

#### Climma mechanical control

All Climma extractors can be supplied as an option with a simple mechanical control panel to turn it on or off, and to switch between speeds.

#### Controllo meccanico Climma

Tutte le unità di estrazione Climma possono essere fornite come opzione con un pannello di controllo meccanico per l'accensione, lo spegnimento e per il controllo delle velocità.



## CLIMMA AERO

heat recuperator systems for yachts

- High efficiency heat exchanger
- Suitable for marine environments
- Powerful and quiet blowers
- Optional automatic bypass for free-cooling
- Modbus interface available as standard

It's important to breathe clean air, even on board yachts.

The quality of the air we breathe is directly connected to its correct exchange on-board, removing polluting particles and reducing the proliferation of bacteria and molds, ensuring the comfort and well-being of the people on board.

Climma AERO is the new line of high performance heat recovery units, specifically designed by Veco for the marine market.



E' importante respirare aria pulita, anche a bordo di yacht.

La qualità dell'aria che respiriamo a bordo è legata al corretto ricambio della stessa, permettendo così la dispersione degli elementi inquinanti e attenuando così la proliferazione di batterie e muffe, garantendo il benessere delle persone a bordo.

Climma AERO è la nuova linea di recuperatori di calore ad alte prestazioni studiati appositamente da Veco per il mercato nautico.



Climma AERO heat recovery units allow to change the air inside cabins while maintaining a constant air-flow, recovering the heat of the cabin itself during the winter, and instead reducing the air intake temperature during the summer.

Thanks to the innovative heat recovery technology with high efficiency cross-flow air exchanger, Climma AERO allows to reduce the thermal load on the chiller itself, with respect to natural ventilation, as the air exchange takes place by reusing the cold already on-board, and also because at certain times of the day the system works in free-cooling mode, thus taking advantage of the cold coming from outside.

Climma AERO adapts to the different volumes of air required thanks to multiple speeds, and it satisfies all installation needs, guaranteeing maximum comfort on board, high filtration, low noise and reduced electricity consumption, as well as high thermal efficiency.

Equipped with integrated Climma electronic control, optional automatic bypass for free-cooling, and very high efficiency exchange battery, Climma AERO heat recuperator system is an optimal and energy efficient solution for on-board air exchange. I recuperatori di calore Climma AERO permettono di cambiare l'aria all'interno di cabine mantenendo un flusso costante, recuperando il calore della cabina stessa durante l'inverno, e invece riducendo la temperatura di immissione dell'aria durante il periodo estivo.

Grazie all'innovativa tecnologia di recupero del calore con scambiatore a flussi d'aria incrociati ad altra efficienza, Climma AERO riduce il carico sul chiller rispetto alla ventilazione naturale, sia perché il ricambio d'aria avviene riutilizzando il freddo già presente a bordo, sia perché in alcuni momenti della giornata l'impianto lavora in free cooling, sfruttando quindi il freddo provenienti dall'esterno.

I recuperatori Climma AERO si addattano alle differenti esigenze e volumi d'aria richiesti grazie alle differenti velocità di funzionamento, e soddisfano tutte le esigenze di installazione garantendo sempre il massimo comfort a bordo, filtrazione elevata, bassa rumorosità e consumi elettrici ridotti, oltre che ad un elevata efficienza termica.

Dotati di controllo elettronico Climma integrato, bypass automatico opzionale, e batteria di scambio ad altissima efficienza, i recuperatori Climma sono una soluzione ottimale per il ricambio dell'aria a bordo.

|   | AERO 500                     |
|---|------------------------------|
| Power supply - Alimentazione                          | 230V/1/50-60Hz               |
| Code - Codice   | without Auto bypass: MRA05BJ |
| code - codice   | with Auto bypass: MRA05NJ    |
| Min air flow - Portata d'aria minima (m3/hr)          | 200 m3/hr                    |
| Max air flow - Portata d'aria massima (m3/hr)         | 500 m3/hr                    |
| Efficiency - Efficienza                               | Class H1, ≥75%               |
| Heat exchanger - Scambiatore di calore                | Air - counterflow plate      |
| Filter - Filtro                                       | G4                           |
| Ciza Dimensioni (LyDydd in mm)                        | 1002 x 404 x 325             |
| Size - Dimensioni (LxDxH in mm)                       | * 1198 x 404 x 325           |
| Weight - Peso (Kg)                                    | -                            |
| Consumption - Assorbimento (W)                        | 520                          |
| Automatic bypass - Bypass automatico                  | optional                     |
| Electrical box size - Scatola elettrica (LxDxH in mm) | included                     |
| Control panel - Pannello di controllo                 | digital, external            |
| Finishing - Finitura                                  | aluminium, painted RAL9010   |
| Supply air duct size IN (mm)                          | 125                          |
| Supply air duct size OUT (mm)                         | 125                          |
| Extraction air duct size IN (mm)                      | 125                          |
| Extraction air duct size OUT (mm)                     | 125                          |

#### **CONTROL PANEL**

#### **Climma digital control**

All Climma AERO units are supplied with a remote and simple digital display to control the unit and to verify their parameters.

#### **Controllo digitale Climma**

Tutte le unità di trattamento aria Climma sono dotate di un semplice display per il controllo dell'unità e per la verifica dei parametri principali.





#### CLIMMA VENTILATION SYSTEMS reliable ventilation solutions for marine applications



- Custom projects
- Marine applications
- O Energy efficiency
- O Centralized control of the on-board ventilation system
- Alarm monitoring system
- Interface for automation systems

Ventilation systems are among the most critical systems on-board, as they ensure the correct functioning of all other systems installed on-board and ensure to keep their temperature under control; this is why it's important to work with a reliable and experienced partner that can guarantee custom projects and quality products, like Veco, which works on marine ventilation systems since a long time.

From engine room ventilation, to kitchen hoods, up to technical rooms ventilation; Veco designs and produces tailored made solutions, always using the latest state-of-the-art technology and integrating the complete system with a centralized control.



L'impianto di ventilazione è uno dei sistemi più critici a bordo fondamentale per il corretto funzionamento degli apparati installati ed evitarne il surriscaldamento; per questo è necessario affidarsi ad un partner affidabile e d'esperienza, che possa garantire una progettazione dedicata e prodotti di qualità, come Veco che da anni si occupa della progettazione di impianti di ventilazione per applicazioni nautiche.

Dalla ventilazione della sala macchine, alle cappe cucina, fino alla ventilazione di vani tecnici, Veco progetta per i sui clienti soluzioni su misura utilizzando sempre le ultime tecnologie disponibili sul mercato ed integrando il sistema completo con un controllo centralizzato.

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#### **KITCHEN HOODS**

While designing an HVAC system, it's important to correctly size the extraction system dedicated to kitchens, as usually regulations require an important amount of air changes per hour in these areas.

It's also very important to correctly size hood filters, based on the filtering requirements, and to perfectly size the extraction fan power, in order to avoid issues and to prevent bad smell going in other ambient on-board. Nel progettare l'impianto HVAC di bordo, è importante dimensionare adeguatamente l'estrazione da dedicare alle cucine, dove solitamente da normative è necessario garantire un importante volume di ricambio aria.

E' fondamentale inoltre anche il corretto dimensionamento dei filtri necessari (in base ai requisiti filtranti) o selezionare correttamente il la dimensione dei ventilatori per evitare malfunzionamenti in estrazione o circolazioni indesiderate di odori a bordo.

#### E.R. VENTILATION

In yachts, E.R. ventilation plays a central role in guaranteeing the correct functioning of all the other on-board systems installed into the engine room; for this reason, it's important to work with a reliable and experienced partner, like Veco, to design such critical systems.

The E.R. ventilation system can be controlled by simple mechanical electrical boxes, or by electronic controls based on PLC, that can work on regulating the ventilation bases on temperature and pressures.

#### Ventilazione A.M.

Nelle imbarcazioni la ventilazione A.M. assume un ruolo fondamentale per garantire il corretto funzionamento delle apparecchiature installate in A.M; proprio per questo motivo è importante affidarsi ad un partner di esperienza, come Veco, per la progettazione di questi impianti critici.

Per tali impianti, si possono prevedere semplici controlli di gestione elettro-meccanici o evoluti controlli automatici da PLC con regolazione in base alle temperature e alle pressioni.



#### TECHNICAL ROOMS VENTILATION

Veco is able to design and study custom technical rooms ventilation systems based on regulations and on client requirements, taking into account the cabin type; some examples may be:

- O Garage, battery rooms, or Atex areas
- Chain locker, bow thruster room, or areas with watertight bulkheads
- Storage rooms
- Rack rooms

#### Ventilazione vani tecnici

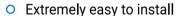
Veco studia e progetta impianti di ventilazione per vani tecnici in base alle normative di riferimento (o ai requisiti del cliente) prendendo in considerazione la tipologia di locale, tra cui:

- O Garage, locali batterie o altre zone ATEX
- Chain locker, bow thuster, locali pinne o altri locali isolati da paratie stagne
- O Locali tecnici generici di stivaggio materiale
- O Rack room





#### CLIMMA WATER HEATERS water heater for centralized CWS systems



- For new installations or refits
- Wide range from 6 to 18kW
- Build in stainless steel for marine applications
- Armoured electric heaters



In case of very cold climate conditions, Climma electric water heaters can be easily integrated in a centralized system, in order to provide the best heating on board.

Specifically studied for marine applications, Climma electrical water heaters are the best solution when sea water gets below 5°C.

Climma water heaters can be easily integrated into a centralized system with chiller and fancoils. Extremely easy to install, Climma water heaters can make the most out of the already existing centralized systems.

in caso di condizioni invernali rigide, gli impianti centralizzati Climma posso essere integrati con i boiler elettrici Climma a passaggio, dedicati al riscaldamento di bordo.

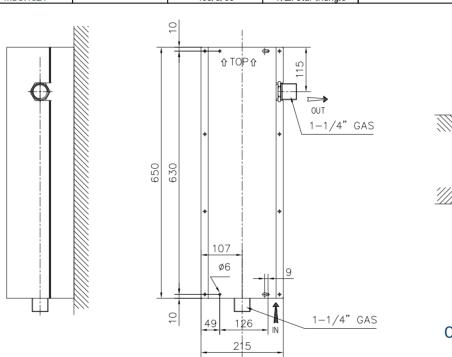
Studiati appositamente per applicazioni nautiche, i boiler elettrici Climma sono la soluzione ideale quando l'acqua mare scende al di sotto dei 5°C.

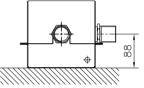
Integrabili facilmente con l'impianto centralizzato di bordo, i boiler a passaggio Climma sono una soluzione semplice che permette di ottimizzare l'installazione sfruttando l'impianto chiller già esistente a bordo.

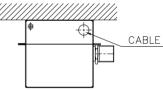


| Product code | Power | Power Supply | Connection Type    | Size **<br>(mm) |
|--------------|-------|--------------|--------------------|-----------------|
| MBOI6U4      |       | 230/1/50     | Parallel           |                 |
| MBOI6U5      |       | 230/1/50     | 2 steps            |                 |
| MBOI6V1      | 6 kW  | 230/3/50-60  | Y/∆: star-triangle | 450x215x176     |
| MBOI6Y1      | U KW  | 400/3/50     | Y/∆: star-triangle | 43082138170     |
| MBOI6Y2      |       | 400/3/50     | ∆: Triangle        |                 |
| MBOI6Z1      |       | 460/3/60     | Y/∆: star-triangle |                 |
| MBOI9U4      |       | 230/1/50     | Parallel           |                 |
| MBOI9U5      |       | 230/1/50     | 2 steps            |                 |
| MBOI9V1      |       | 230/3/50-60  | Y/∆: star-triangle |                 |
| MBOI9V2      | 9 kW  | 230/3/50     | ∆: Triangle        | 450x215x176     |
| MBOI9Y1      |       | 400/3/50     | Y/∆: star-triangle |                 |
| MBOI9Y2      |       | 400/3/50     | ∆: Triangle        |                 |
| MBOI9Z1      |       | 460/3/60     | Y/∆: star-triangle |                 |
| MBOI18V1     |       | 230/3/50-60  | Y/∆: star-triangle |                 |
| MBOI18V2     |       | 230/3/50     | ∆: Triangle        |                 |
| MBOI18Y1     | 18 kW | 400/3/50     | Y/∆: star-triangle | 650x215x176     |
| MBOI18Y2     |       | 400/3/50     | ∆: Triangle        |                 |
| MBOI18Z1     |       | 460/3/60     | Y/∆: star-triangle |                 |









CLIMMA WATER HEATERS

#### ELECTRICAL CONTROL BOX

climma boiler electronic control can be easily integrated into the main climma chiller electrical box, in order to simplify the control and keep it into a single box, or it can be done through a dedicated electrical box.

Il controllo dei boiler Climma può essere integrato direttamente nel q.e. del chiller Climma, così da semplicare l'impanto e centralizzare in un unico punto il controllo, oppure può essere fatto tramite un quadro elettrico dedicato.



#### SAFETY ACCESSORIES

Other then the standard safeties already integrated on each Climma boiler, a flow switch and a safety valve can also be added.

Oltre alle sicurezze standard già integrate nel boiler elettrico, è possibile aggiungere un flussostato Climma, e una valvola di sicurezza.





## **CLIMMA MISTING SYSTEMS**



- Quiet operation and smallest size
- Easy control panel
- High pressure pump Modbus interface
- High efficiency heat exchanger to improve efficiency 0 Timer and calendar function for automatic control
- Remote control 0

Compact and silent, Climma misting systems are the ideal solution to cool down external areas on yachts and supervachts.

Thanks to a precise high-pressure control and to very small nozzles, Climma misting systems have a perfect control of the drops size and of their evaporation, getting the best result and an immediate effect on comfort.

Climma misting systems are provided with a high efficiency heat exchangers that can be connected to the air-conditioning system on-board to reduce water temperature, improving the overall system performances and effectiveness.

Moreover, Climma misting system are provided with a digital timer allowing the unit to work in time frames, optimizing power consumption, and they are all provided with a calendar function to program when the unit shall turn on and off daily.

The axial pump, working with a very low rpm, guarantee the Climma misting system to be quiet, but reliable and efficient.



Gli impianti di nebulizzazione Climma sono la soluzione ideale per raffrescare ambienti esterni di yacht e superyacht in modo discreto e silenzioso.

Grazie un controllo puntuale dell'alta pressione e ad ugelli di diametro molto piccolo, i nebulizzatori Climma permettono un controllo perfetto della dimensione delle molecole d'acqua e della loro evaporazione, ottenendo un risultato ottimale ed immediato.

Inoltre i nebulizzatori Climma sono dotati di uno scambiatore ad alta efficienza che collegato all'impianto di climatizzazione di bordo permette di raffreddare l'acqua da nebulizzare, migliorando l'efficienza ed il rendimento dell'impianto.

Il nebulizzatore Climma è inoltre dotato di timer digitale che permette il funzionamento ad intervalli di tempo per ottimizzare i consumi, e di una comoda funzione calendario per impostare orari di accensione e spegnimento automatici.

La pompa assiale a basso regime di rotazione inoltre, garantisce silenziosità, ma anche affidabilità ed efficienza.



| H2Oasi       | H2Oasi Plus  |
|--------------|--|
| NOASI420ESU  | NOASI420ECU  |
| 25 - 65      | 30 - 90  |
| from 4 to 16 | from 4 to 16   |
| 4,75         | 4,75   |
| 70           | 70   |
| 230/1/50     | 230/1/50   |
| 250          | 250  |
| 1,6          | 1,6  |
| 21           | 25   |
|              | NOASI420ESU<br>25 - 65<br>from 4 to 16<br>4,75<br>70<br>230/1/50<br>250<br>1,6 |



MODELS

| - 296 |    |
|-------|----|
|       | ۵Щ |

Water in (pressurized > 0.5 Bar)

Water out to nozzles

Condensate drain

Drain from end line

N Water out from Chiller

Climma misting system Control panel

T manifold with valve

Power supply M Water in from chiller

Solenoid valve

Water filter

В

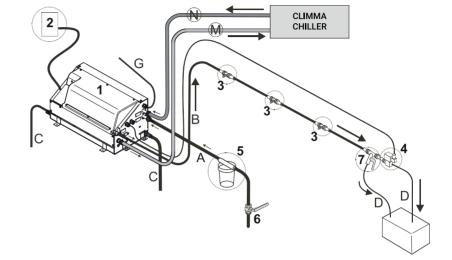
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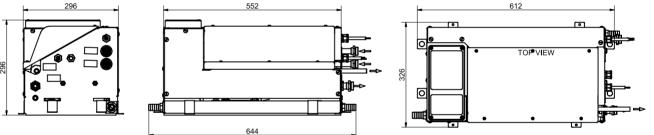
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G

3 Nozzles 4

5 6 Valve 7





#### How does it work?

Thanks to a high-pressure pump, water is brought up to 60-90Bar, and then it's conveyed into a series of very small nozzles; this brings to the creation of very small water "drops", with size of 10 micron. When water drops get in contact with air, they immediately evaporate by thermodynamics laws, consequently reducing their temperature.

#### Come funziona?

Grazie ad una pompa in alta pressione, l'acqua viene portata ad una pressione di 60-90Bar, e viene spinta attraverso una serie di ugelli di dimensione minima; questo porta alla creazione di "gocce" d'acqua della dimensione di 10 micron. L'acqua a contatto con l'aria dell'ambiente evapora istantaneamente per le leggi della termodinamica, abbassando di conseguenza la sua temperatura.

| Does it wet?  | Il nebulizzatore bagna?  |
|---|--|
| No, if the Climma misting system is correctly sized and installed, it does not wet, but it will reduce temperature, increasing the comfort. | No, se correttamente dimensionato un impianto di<br>nebulizzazione Climma non bagna, ma abbassa la<br>temperatura, migliorando il comfort. |
| What are the best working conditions?   | In quali condizioni funziona meglio?   |
|   |  |

Climma misting systems works better with temperatures above 27°C and with relative humidity below 75%.

L'ideale è utilizzarlo con temperature superiori ai 27°C, e quando l'umidità relativa è inferiore al 75%.



# CLIMMA THERMOSTATS control panels for cabins' temperature



- Wide range of mechanical and digital controls to satisfy every request
- Perfect temperature control
- Studied for marine applications
- Compatible with the most used covers

Thanks to Veco's experience in the marine air-conditioning field, Veco is able to offer a wide range of thermostats and control panels to perfectly control the cabin temperature.

From very simple mechanical controls, to digital thermostats, up to the latest touch screen system, Climma offers the perfect on-board climate control solution.



Forti dell'esperienza nel campo della refrigerazione e del condizionamento marino, Veco propone un'ampia gamma di termostati e pannelli per il controllo della temperatura in cabina.

Dal semplice controllo elettromeccanico, al controllo digitale, fino ad arrivare a controlli touch screen, Climma offre un controllo ottimale della temperatura a bordo.



#### C-TOUCH

#### For MV8 fancoil controls - MK3 compact

The new Climma C-Touch thermostat has been designed to be easy to use and simple, to get the best out of your climate control.

- designed for Vimar, compatible with Bticino cover plates
- customizable interfaces and colors
  Weekly scheduler
- weekly schedu
   easy interface
- LCD display 2,4' (320x240 px)

Il nuovo termostato Climma C-Touch, studiato per essere semplice ed intuitivo, permette un controllo a 360° del comfort a bordo.

- Programmazione settimanale
- schermate e colori personalizzabili
- interfaccia semplice
- studiato per placche Vimar, compatibile con placche BTicino
- display LCD da 2,4' (320x240 px)

#### MK2

Climma MK2 thermostat, studied for a perfect cabin temperature control, works for Climma Compact and Climma fancoils. Studied to work alone, or with the Climma Tele remote control.

Il termostato MK2, per un puntuale controllo della temperatura in cabina, è adatto a impianti Climma sia della serie Compact e Fancoil; Progettato per essere utilizzato da solo, o tramite telecomando remoto.

#### MK3

Climma MK3 thermostat ha been specifically studied for Climma Compact units; Climma MK3 digital panel is perfect for a simple and quick control of the cabin temperature.

Studiato appositamente per condizionatori della linea Climma Compact, il pannello digitale Climma MK3, è perfetto per un controllo semplice e immediato della temperatura in cabina.

#### MECHANICAL CONTROL

For an easier control, a mechanical 3 speed control can be installed, allowing to control functioning mode, fan speed an ambient temperature; thermostat is available in a standard version, for cool only fancoils, or for 2 fancoils.

Per un controllo semplice ed immediato, è possibile installare un termostato meccanico a 3 velocità, che permette di controllare il modo di funzionamento, le velocità del ventilatore e la temperatura ambiente; il termostato è disponibile in versione standard, per fancoil solo freddo e per il controllo di due fancoil.

#### CENTRALIZED VECO HUB SYSTEM

The innovative VecoHub system allows for an easy and intuitive integration of all Veco systems on board, through a unique and simple control interface.

- Available on tablets and smartphones, and on a 10' Veco touch screen
- Compatible with the most common MFDs and chartplotters

L'innovativo sistema VecoHub permette di integrare in modo semplice ed intuitivo tutti i sistemi Veco di bordo, tramite un'unica interfaccia di controllo.

- O Disponibile per tablet e smartphones, oppure su un display Veco da 10'
- Compatibile con i più comuni MDF e chartplotter

# For MV8 fancoil controls - MK3 compact

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#### For MK3 compact



For MSCA fancoil controls

#### For MV8 fancoil controls







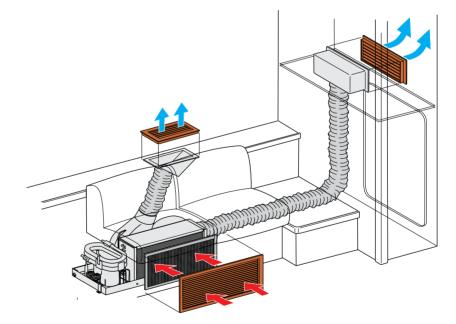
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# **CLIMMA AIR ACCESSORIES**

all the options you need for Compact and Fancoil air installation



- Supply and return air grilles
- Plenum and junction boxes
- o Insulated air duct
- O Custom solutions



Veco offers a wide range of air distribution accessories for every kind of installation on-board.

Air distribution accessories can be selected alone, or in kits to make installation even simpler.

From plenums, air ducts, up to tailored grilles with custom size and finishing, Veco offers the flexibility needed for marine installations. Veco propone un'ampia Gamma di accessori per la distribuzione dell'aria per soddisfare qualsiasi esigenza di installazione.

Gli accessori possono essere selezionati singolarmente, o in modo più semplice tramite dei kit già pronti.

Dai plenum, alle condotte aria, fino ad arrivare a griglie con misure personalizzate e finiture custom; Veco fornisce la flessibilità necessaria per installazioni a bordo di imbarcazioni.



#### STANDARD

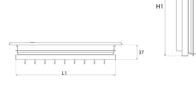
Classic grill, with a strong and light aluminum structure. Available as simple supply, closable or for return air, and with different finishing: aluminum, black, white and teak.

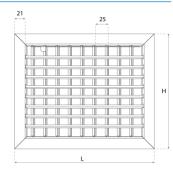
Classica griglia squadrata, con una struttura robusta e leggera in alluminio. Disponibile in versione a singola mandata, chiudibile, o di aspirazione, e in diverse finiture: alluminio, nera, bianca e teak.

#### CUSTOM

Veco design and produces custom grilles, with custom size and different finishings. Contact us for more information.

Veco studia e produce griglie su misura, e con finiture personalizzabili. Contattaci per maggiori dettagli.





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#### PLASTIC CLOSABLE GRILLES

Studied for 75/100mm ducts, black or white finishing, they are ideal for small cabins or bathrooms.

Studiate per tubazioni dell'aria con diametro 75 o 100, in finitura nera o grigia, sono l'ideale per piccole cabine o bagni.

#### **PLENUMS**

ABS insulated plenums, ideal to install behind fornitures where the grill will be mounted; they can be drilled in different positions for the maximum flexibility during the installation.

Plenum in ABS, con isolamento, ideale per installazione dietro arredi dove verrà poi montata la griglia; possono essere forati in diversi punti per una flessibilità massima di installazione.

#### JUNCTION BOXES

ABS insulated plenums, ideal to divide the duct among different grilles.

Plenum in ABS, con isolamento, ideale per dividere la condotta aria su più griglie.

#### INSULATED DUCT

Insulated and flexible duct, reinforce with a spiro, available in different sizes.

Tubazione per aria flessibile e isolata, rinforzata con una spirale in metallo, disponibile in diversi diametri.









# SEA WATER ACCESSORIES

all the products needed for the sea water circuit of a Climma system



- Sea water pumps
- Ball valves
- Calibration valves
- Filters
- Sea water intake and outlet



Veco offers a wide range of accessories for the sea water circuit, needed for independent or centralized Climma systems, for every kind of installation on-board.

Sea water circuit accessories can be selected alone, or in kits to make installation even simpler.

From sea water pumps, valves, up to tailored made manifolds, Veco offers the flexibility needed for marine installations.

Veco propone un'ampia gamma di accessori dedicati al circuito acqua mare necessario per impianti indipendenti e centralizzati Climma, per soddisfare qualsiasi esigenza di installazione.

Gli accessori possono essere selezionati singolarmente, o in modo più semplice tramite dei kit già pronti.

Dalle pompe acqua mare, alle valvole, fino ad arrivare a collettori custom, Veco fornisce tutta la flessibilità necessaria per installazioni a bordo di imbarcazioni.



| Voltage     | Part Number | Max chiller<br>capacity<br>[BTU]** | Material | Power<br>[kW] | Connections   | Inlet<br>connection | Outlet<br>connection | Weight<br>[kg] | Max flow<br>50hz<br>[lit/min] | Max<br>head<br>50hz [mt] |
|-------------|-------------|------------------------------------|----------|---------------|---|---------------------|----------------------|----------------|-------------------------------|--------------------------|
| 115/1/60    | VPP0062II*N | 48.000                             | Plastic  | 62 W          | fittings + hose connectors  | 1' F BSP            | 1' M BSP             | 3,8            | 40 @60hz                      | 3 @60hz                  |
| 115/1/00    | VPS0370II*N | 84.000                             | Bronze   | 370 W         | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 8,85           |                               |                          |
|             |             | 40.000                             | DI .:    | (0)11         | Current and the second s |                     |                      | 0              | 05                            | 0.4                      |
| 000/1/50 60 | VPP0060JI*N | 18.000                             | Plastic  | 60 W          | fittings + hose connectors  | 3/4' F BSP          | 3/4' F BSP           | 3              | 25                            | 3,6                      |
| 230/1/50-60 | VPP0100JI*N | 30.000                             | Plastic  | 100 W         | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 5              | 50                            | 6                        |
|             | VPS0370JI*N | 24.000                             | Bronze   | 370 W         | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 9,1            | 40                            | 4,8                      |
|             | VPP0060JI*N | 18.000                             | Plastic  | 60 W          | fittings + hose connectors  | 3/4' F BSP          | 3/4' F BSP           | 3              | 25                            | 3,6                      |
|             | VPP0120JI*N | 18.000                             | Plastic  | 120 W         | fittings + hose connectors  | 3/4" FPT            | 1/2" MPT             | 3.5            | 30                            | 4.2                      |
| 000/1/50    | VPP0100JI*N | 30.000                             | Plastic  | 100 W         | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 5              | 50                            | 6                        |
| 230/1/50    | VPS0370UI*N | 84.000                             | Bronze   | 370 W         | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 9,1            | 80                            | 12,3                     |
|             | VPS0450UI*N | 120.000                            | Bronze   | 450 W         | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 10,3           | 110                           | 18                       |
|             | VPS0750UI*N | 300.000                            | Bronze   | 750 W         | fittings + hose connectors  | 1-1/2' F BSP        | 1-1/2' F BSP         | 17,9           | 250                           | 19                       |
|             | VPS0370WI*N | 84.000                             | Bronze   | 370 W         | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 9,1            | 80                            | 12,3                     |
| 230/1/60    | VPS0450WI*N | 120.000                            | Bronze   | 550 W         | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 10,3           | 110                           | 18                       |
|             | VPS0750WI*N | 300.000                            | Bronze   |               | fittings + hose connectors  | 1-1/2' F BSP        | 1-1/2' F BSP         | 17,9           | 250                           | 19                       |
|             | VPS0370YI*N | 84.000                             | Bronze   | 370 W         | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 9,1            | 80                            | 12,3                     |
|             | VPS0450YI*N | 120.000                            | Bronze   |               | fittings + hose connectors  | 1' F BSP            | 1' F BSP             | 9,3            | 110                           | 18                       |
|             | VPS0750YI*N | 300.000                            | Bronze   | 750 W         | fittings + hose connectors  |                     | 1-1/2' F BSP         | 16,3           | 250                           | 19                       |
| 400/3/50    | VPS1100YG*N | 600.000                            | Bronze   | 1.100 W       | flanges***  | DN 65               | DN 40                | 33             | 550                           | 14                       |
|             | VPS2200YG*N | 840.000                            | Bronze   | 2.200 W       | flanges***  | DN 65               | DN 40                | 36             | 700                           | 22                       |
|             | VPS3000YG*N | 1.200.000                          | Bronze   | 3.000 W       | flanges***  | DN 65               | DN 50                | 52             | 1100                          | 15,5                     |

PUMPS

**CIRCUIT EXAMPLE** 











Calibration valve

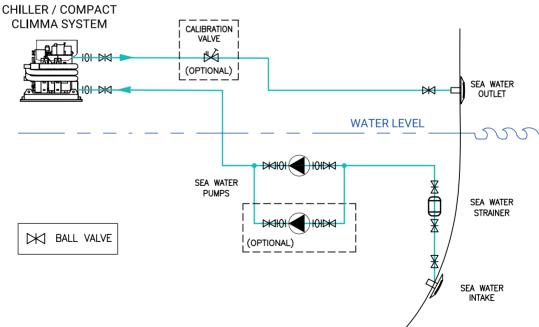
Sea water Intake

Sea water outlet

Sea water filter

Ball valve







# FRESH WATER ACCESSORIES

all the products needed for the fresh water circuit of a centralized system



- Fresh water pumps
- Air bleeders and expansion tanks
- Manifolds and insulated fancoil pipes
- Gauge and charge kits
- Water valves and flow switches
- Filters and insulation kits



Veco offers a wide range of accessories for the fresh water circuit, needed for centralized Climma chiller systems, for every kind of installation on-board.

Fresh water circuit accessories can be selected alone, or in kits to make installation even simpler.

From fresh water pumps, valves, up to tailored made fancoil manifolds, Veco offers the flexibility needed for marine installations.

Veco propone un'ampia gamma di accessori dedicati al circuito acqua dolce necessario in impianti centralizzati Climma, per soddisfare gualsiasi esigenza di installazione.

Gli accessori possono essere selezionati singolarmente, o in modo più semplice tramite dei kit già pronti.

Dalle pompe di circolazione, alle valvole, fino ad arrivare a collettori fancoil custom, Veco fornisce tutta la flessibilità necessaria per installazioni a bordo di imbarcazioni.





| Voltage  | Max fancoil<br>capacity<br>[BTU]** | Part Number | Material  | Power<br>[kW] | Connections                | Inlet<br>connection | Outlet<br>connection | Weight<br>[kg] | Max flow<br>50hz<br>[lit/min] | Max head<br>50hz [mt] |
|----------|------------------------------------|-------------|-----------|---------------|----------------------------|---------------------|----------------------|----------------|-------------------------------|-----------------------|
|          | 48.000                             | VPF0370UI*N | Cast Iron | 370 W         | fittings + hose connectors | 1' F BSP            | 1' F BSP             | 8,5            | 70                            | 22,0                  |
|          | 84.000                             | VPF05700I*N | Cast Iron |               | fittings + hose connectors | 1' F BSP            | 1' F BSP             | 14,4           | 80                            | 31,0                  |
| 230/1/50 | 168.000                            | VPF0750UI*N | Cast Iron | 750 W         | fittings + hose connectors |                     | 1' F BSP             | 14,2           | 200                           | 24,0                  |
|          | 240.000                            | VPF1100UI*N | Cast Iron | 1.100 W       | fittings                   | 2' F BSP            | 1-1/4' F BSP         | 20,2           | 250                           | 23,0                  |
|          | 288.000                            | VPF1500UI*N | Cast Iron | 1.500 W       | fittings                   | 2' F BSP            | 1-1/4' F BSP         | 26             | 280                           | 26,5                  |
|          | 84.000                             | VPF0550YI*N | Cast Iron | 550 W         | fittings + hose connectors | 1' F BSP            | 1' F BSP             | 14,4           | 80                            | 31,0                  |
|          | 168.000                            | VPF0750YI*N | Cast Iron | 750 W         | fittings + hose connectors | 1-1/2' F BSP        | 1' F BSP             | 14,1           | 200                           | 24,0                  |
|          | 240.000                            | VPF1100YI*N | Cast Iron | 1.100 W       | fittings                   | 2' F BSP            | 1-1/4' F BSP         | 19,3           | 280                           | 26,5                  |
|          | 336.000                            | VPF1500YI*N | Cast Iron | 1.500 W       | fittings                   | 2' F BSP            | 1-1/4' F BSP         | 24,1           | 280                           | 29,5                  |
| 400/3/50 | 378.000                            | VPF2200YG*N | Cast Iron | 2.200 W       | flanges***                 | DN 65               | DN 40                | 38,6           | 650                           | 23,0                  |
|          | 660.000                            | VPF3000YG*N | Cast Iron | 3.000 W       | flanges***                 | DN 65               | DN 40                | 46,1           | 700                           | 29,0                  |
|          | 840.000                            | VPF4000YG*N | Cast Iron | 4.000 W       | flanges***                 | DN 65               | DN 40                | 46,1           | 800                           | 37,0                  |
|          | 1.200.000                          | VPF5500YG*N | Cast Iron | 5.500 W       | flanges***                 | DN 65               | DN 50                | 64,1           | 1350                          | 31,0                  |
|          | 1.500.000                          | VPF7500YG*N | Cast Iron | 7.500 W       | flanges***                 | DN 65               | DN 50                | 70,2           | 1350                          | 38,5                  |





Fancoil water valve

Air bleeder



Expansion tank

Pump insulation



Filter



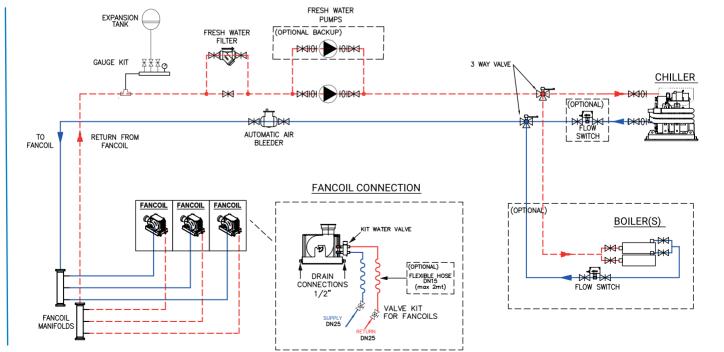
Supply/return manifolds



Gauge/charge manifold



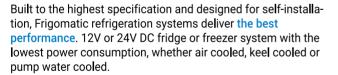
Flow switch





# FRIGOMATIC the 12/24V refrigeration systems for boats

- Easy to install and maintain
- Wide range of solutions
- Unique re-sealing 'quick couplings' system
- Best efficiency and lowest power consumption



Frigomatic has a wide range of evaporator plates and either air cooled, keel cooled or pump water cooled condensing sets to optimize the fridge or freezer system in an existing insulated cool box.

Easy to install with all the components pre-charged with refrigerant and connected by Frigoboat's unique re-sealing 'quick couplings' system and controlled with either mechanical



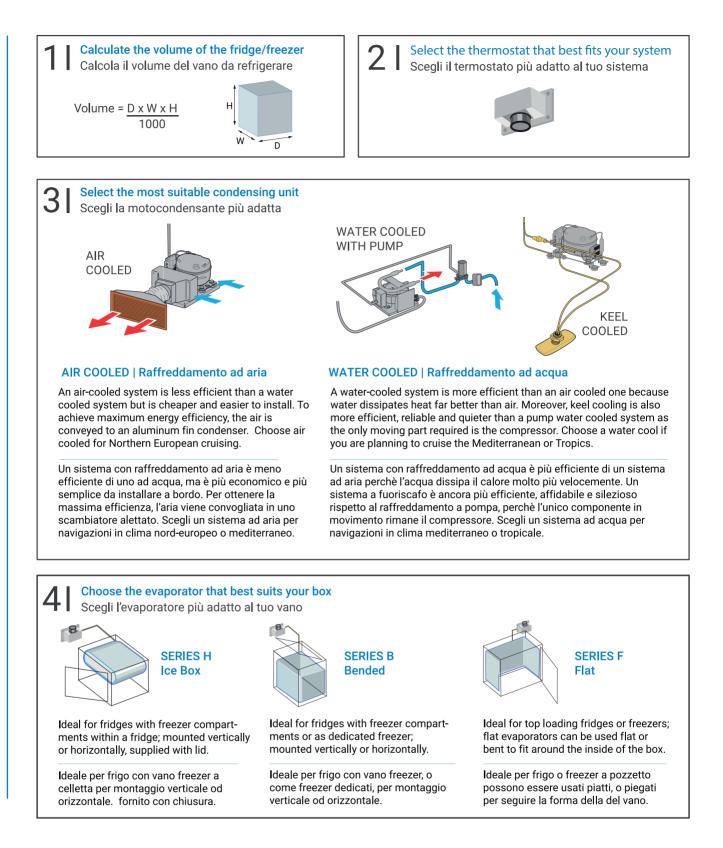
Costruiti per applicazioni nautiche e per un istallazione semplice, i sistemi di refrigerazione Frigomatic sono studiati per ottenere sempre il miglior rapporto tra resa ed efficienza energetica. Studiati per applicazioni a 12V o 24V, per ottimizzare i consumi, sia nella versione ad aria che nelle versioni con raffreddamento ad acqua.

La linea Frigomatic offre inoltre un ambia scelta di evaporatori, e di motocondensanti per ottimizzare e studiare in modo ottimale l'impianto frigo/freezer di bordo.

Facili da installare, tutti i componenti dei kit Frigomatic sono precaricati e dotati dell'innovativo sistema ad innesti rapidi, riutilizzabili, e controllati da termostati meccanici o digitali.







HOW DO I CONFIGURE A SYSTEM?

#### MECHANICAL THERMOSTATS



Mechanical Frigoboat fridge thermostat

Orderstown

Mechanical Frigoboat freezer thermostat

#### DIGITAL THERMOSTATS



Digtal Frigoboat fridge-freezer thermostat

REFRIGERATION

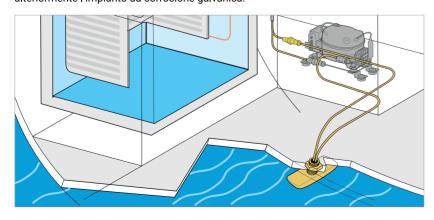
|             | Туре         | Power<br>Supply | Code     | Available AC-DC<br>115-230VAC<br>12-24VDC | Speed<br>regulator | Max fridge<br>capacity<br>(It) | Max freezer<br>capacity<br>(It) | Net<br>weight<br>(kg) | Size<br>(WxDxH) | Max<br>consumption<br>(A) |
|-------------|--------------|-----------------|----------|---|--------------------|--------------------------------|---------------------------------|-----------------------|-----------------|---------------------------|
| MILANO A    | Air cooled   | 12-24V          | EFMC011A | No  | YES                | 380                            | 100                             | 5,50                  | 220x223x157     | 7,5                       |
| MILANO K    | Keel cooled  | 12-24V          | EFMC011K | No  | YES                | 380                            | 100                             | 5,00                  | 225x134x157     | 6,8                       |
| MILANO W    | Water cooled | 12-24V          | EFMC011W | No  | YES                | 380                            | 100                             | 5,50                  | 247x165x157     | 6,8                       |
| MADRID 35 F | Air cooled   | 12-24V          | E51380   | EMADRID35AC                               | NO                 | 100                            | n.a.                            | 5,80                  | 231x128x288     | 3,4                       |
| PARIS 35F   | Air cooled   | 12-24V          | E51135   | No  | NO                 | 100                            | n.a.                            | 6,30                  | 230x300x168     | 3,4                       |
| ROMA 35 F   | Air cooled   | 12-24V          | E51275   | No  | NO                 | 100                            | n.a.                            | 6,20                  | 345x205x171     | 3,4                       |
| FM100       | Air cooled   | 12-24V          | E52270   | No  | NO                 | 100                            | n.a.                            | 6,30                  | 200x224x169     | 3,4                       |
| ELBA 35F    | Air cooled   | 12-24V          | E51435   | No  | YES                | 200                            | 70                              | 7,40                  | 326x238x169     | 5,5                       |
| CAPRI 35F   | Air cooled   | 12-24V          | E51430   | ECAPRI35AC                                | YES                | 200                            | 70                              | 8,50                  | 283x213x170     | 5,5                       |
| FM 200      | Air cooled   | 12-24V          | E52375   | E20035AC                                  | YES                | 200                            | 70                              | 7,40                  | 300x180x164     | 5,5                       |
| AH 35 F     | Air cooled   | 12-24V          | E50035X  | No  | YES                | 340                            | 70                              | 6,30                  | 332x220x166     | 5,4                       |
| AV 35 F     | Air cooled   | 12-24V          | E50025X  | E53090                                    | YES                | 340                            | 70                              | 6,30                  | 218x165x297     | 5,4                       |
| CAPRI 50 F  | Air cooled   | 12-24V          | E52120   | ECAPRI50AC                                | YES                | 340                            | 80                              | 8,50                  | 283x213x170     | 7,5                       |
| K 35 F      | Keel cooled  | 12-24V          | E50345X  | EK35AC                                    | YES                | 340                            | 100                             | 5,80                  | 260x145x170     | 4,6                       |
| K 50 F      | Keel cooled  | 12-24V          | E51975   | EK50AC                                    | YES                | 380                            | 100                             | 5,80                  | 260x145x170     | 6,8                       |
| W 35 F      | Water cooled | 12-24V          | E50045X  | EW35AC                                    | YES                | 340                            | 100                             | 5,80                  | 260x160x180     | 4,6                       |
| W 50 F      | Water cooled | 12-24V          | E51970   | EW50AC                                    | YES                | 380                            | 100                             | 5,80                  | 260x160x180     | 6,8                       |



| Product code | Diameter | Zincs    | Thread lenght | Size (mm)       | Description                               |
|--------------|----------|----------|---------------|-----------------|---|
| E50361       | 38 mm    | No       | 45 mm         | 175 x 130 x 22* | Keel cooler with short thread, no zincs   |
| E50361Z      | 38 mm    | Yes (x2) | 45 mm         | 175 x 130 x 22* | Keel cooler with short thread, with zincs |
| E50362       | 38 mm    | No       | 105 mm        | 175 x 130 x 22* | Keel cooler with long thread, no zincs    |
| E50362Z      | 38 mm    | Yes (x2) | 105 mm        | 175 x 130 x 22* | Keel cooler with long thread, with zincs  |

The Frigoboat Keel cooler uses the water on the outside of the hull to cool and condense the refrigerant in the system; produced in marine bronze, the sintered plate protects the heat exchanger from damage; while offering the best efficiency in terms of heat exchanging capabilities. The internal heat exchanger is manufactured from marine copper-nickel for maximum resistance against sea water corrosion. Frigoboat keel cooler is similar to a regular through-hull fitting. Its threaded, 38 mm diameter shaft passes through the hull, and a nut is threaded onto the shaft and tightened. It is available in 2 versions, one with short thread and one with a longer thread; both models can be ordered with or without sacrificial zincs to further protect the system from galvanic corrosion.

L'innovativo sistema a fuoriscafo Frigomatic usa l'acqua di mare che sfiora lo scafo per la condensazione dell'impianto frigorifero stesso. Studiati in bronzo adatto ad ambiente marino, la piastra sinterizzata protegge lo scambiatore di calore da danni e ne aumenta l'efficienza di scambio termico. Lo scambiatore di calore all'interno, in cupro-nickel marino, massimizza la resistenza alla corrosione. Simile ad una presa per acqua mare, il fuoriscafo Frigomatic, passante a scafo, ha un diametro di 38 mm, e viene fissato tramite un dado filettato. Disponibile in due versioni, con filetto lungo o corto, entrambi i modelli possono essere forniti con o senza zinchi, per proteggere ulteriormente l'impianto da corrosione galvanica.



#### WITH OR WITHOUT ZINCS?

Both keel cooler models are available with or without sacrificial zincs. Zincs are installed on the keel cooler itself, flush with the surface. If the keel cooler is already connected electrically to the boat's sacrificial zinc, then the zincs are not needed, while if the boat does not have a bonding system it would be advisable to use a keel cooler with zincs.

#### **CON O SENZA ZINCHI?**

Tutti i modelli fuoriscafo Frigomatic sono disponibili in versione con o senza anodi sacrificali. Gli zinchi sono installati sul fuoriscafo stesso, a filo con la sua superficie. Se il fuoriscafo è già connesso agli anodi dell'imbarcazione, allora non è necessario aggiungerli al fuoriscafo, mente nel caso in cui manca un sistema di messa a terra, è suggerita l'installazione con zinchi. CONDENSING UNITS



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|           | Serie       | Fridge<br>capacity | Freezer<br>capacity | Code   | Pipe<br>material | Bendable | Installation      | SIZE<br>(mm) | Net weight<br>(Kg) | Shipping weight<br>(Kg) |
|-----------|-------------|--------------------|---------------------|--------|------------------|----------|-------------------|--------------|--------------------|-------------------------|
| 160H      | H - Ice box | 200 Lt             | 80 Lt               | E52475 | aluminium        | no       | Vertical & Horiz. | 320x115x210  | 1,5                | 2,4                     |
| 130H      | H - Ice box | 120 Lt             | 50 Lt               | E50065 | copper           | no       | Vertical & Horiz. | 255x70x210   | 1,3                | 1,8                     |
| 160H      | H - Ice box | 200 Lt             | 80 Lt               | E50090 | copper           | no       | Vertical & Horiz. | 320x115x210  | 1,5                | 2,4                     |
| 200H      | H - Ice box | 200 Lt             | 80 Lt               | E50070 | copper           | no       | Vertical & Horiz. | 360x150x270  | 2,2                | 2,9                     |
| 200B      | B - Bended  | 220 Lt             | 80 Lt               | E50100 | copper           | yes      | Vertical & Horiz. | 325x270x245  | 2,2                | 3                       |
| 250B      | B - Bended  | 250 Lt             | 80 Lt               | E51625 | copper           | yes      | Vertical & Horiz. | 250x285x160  | 1,6                | 2,4                     |
| 340B      | B - Bended  | 340 Lt             | 80 Lt               | E50105 | copper           | yes      | Vertical & Horiz. | 380x290x150  | 2,2                | 3                       |
| 80F       | F - Flat    | 80 Lt              | n.a.                | E50883 | aluminium        | yes      | Horizontal        | 330x245x5    | 1,1                | 2,5                     |
| 130F      | F - Flat    | 160 Lt             | 60 Lt               | E50085 | copper           | yes      | Horizontal        | 590x210x5    | 1,2                | 2,5                     |
| 160F      | F - Flat    | 180 Lt             | 70 Lt               | E52480 | aluminium        | yes      | Horizontal        | 805x210x5    | 1,4                | 2,4                     |
| 160F      | F - Flat    | 180 Lt             | 70 Lt               | E50095 | copper           | yes      | Horizontal        | 805x210x5    | 1,4                | 2,4                     |
| 200F      | F - Flat    | 240 Lt             | 80 Lt               | E50075 | copper           | yes      | Horizontal        | 1020x270x5   | 1,5                | 2,5                     |
| 380F      | F - Flat    | 380 Lt             | 100 Lt              | E52225 | copper           | yes      | Horizontal        | 950x365x5    | 2,1                | 3,3                     |
| 180F inox | F - Flat    | 180 Lt             | 70 Lt               | E52105 | copper           | yes      | Horizontal        | 590x305x8    | 2,2                | 2,8                     |
| 380F inox | F - Flat    | 380 Lt             | 80 Lt               | E52185 | copper           | yes      | Horizontal        | 1020x410x8   | 3,2                | 3,8                     |

Supplied with 2,8 mt of pre-charged, copper refrigerant pipe as standard, all Frigomatic evaporators are provided with Frigoboat self-sealing couplings. Available in 3 different models, each with a wide range of sizes, Frigomatic evaporators can satisfy every installation requirement.

Gli evaporatori sono già precaricati, con tubazoni in rame da 2.8mt; e sono tutti studiati con innesti rapidi Frigoboat per un installazione semplice. Disponibili in 3 diversi tipologie, ciascuna con un ampia gamma di taglie, permettono di soddisfare qualsiasi esigenza di installazione.

#### **EXTENSION PIPES**

A full range of extension pipes fitted with Frigoboat self-sealing couplings allows to locate your Frigomatic condensing unit up to 6 meters from the evaporator.

Una gamma completa di prolunghe, tutte dotate di innesti rapidi Frigoboat, permettono di poter installare il Frigomatic fino a 6 metri dal vano refrigerato.

La pompa autoadescante Frigomatic, ideale per impianti Frigoboat,

con una prevalenza fino a 2mt, può essere usata fino a 3

Frigomatic o un sistema a relè.

motocondensanti Frigomatic, utilizzando l'interfaccia pompa

#### FRIGOMATIC SEA WATER PUMP AND STRAINER

Self-priming pump specifically designed for Frigomatic water cooled systems, self-priming up to 2 mt, it can be used for cooling up to 3 units adding a pump interface or a relay. Pumps needs a sea water strainer; the Frigoboat one comes with a stainless steel support.

#### FRIGOMATIC PUMP INTERFACE

The Frigoboat pump interface is a useful accessory when more Frigomatic units are connected to the same pump.

L'interfaccia pompa Frigomatic permette di collegare fino a 3 motocondensanti ad un'unica pompa Frigomatic a 12V.



#### COMPRESSOR SPEED REGULATOR

Mounts on compressor controller, the Speed Regulator is a manual compressor speed adjustment device (standard on most Frigomatic units).

Montato sul controllo compressore, il Regolatore permette di modificare la velocità manualmente (standard su quasi tutti i modelli Frigomatic).



#### 230V CONTROLLER OPTION

Optional electronic controller studied to work also with a 230V/50-60 and 115V/50-60 power supply; the controller can automatically switch power supply, so when mains is available, this device automatically excludes the battery supply and runs the compressor from mains.

Controllo elettronico per Frigomatic che permette di alimentare il sistema a 230V/50-60 o 115V/50-60; quando l'alimentazione principale è disponibile il dispositivo esclude automaticamente l'alimentazione da batteria e utilizza l'alimentazione principale.







# **REFRIGERATION SYSTEMS**

standard and custom solutions for the on-board refrigeration system



- O Simple and smart solutions
- State of the art technology
- Backup plants for a trouble free navigation
- Customized solutions
- Best efficiency



Weather it is for a cold room, a wine cooler or a blast freezer, Frigoboat always offers the right solution for your needs.

With a 50 years' experience in the marine refrigeration field, Frigoboat designs and produces tailored solutions for its clients, based on their needs.

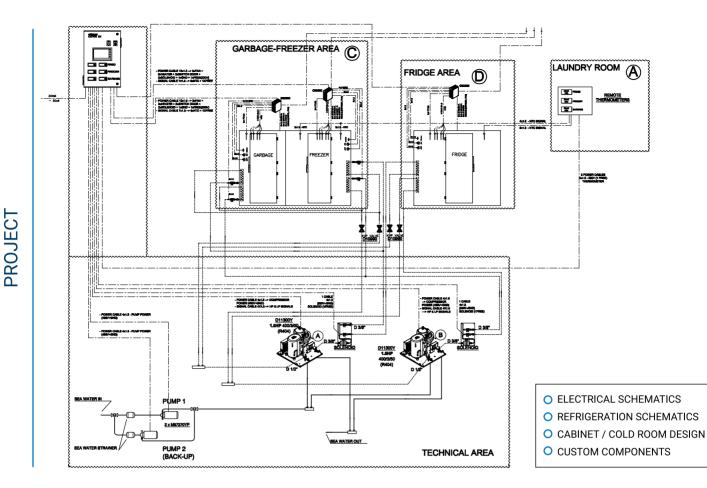
Thanks to marine graded materials, and state of the art products, Frigoboat is able to perfectly controls the cold on board. Che si tratti di un impianto per una cella frigorifera, una vineria, o un abbattitore, Frigoboat ha sempre la soluzione adatta.

Forti di un esperienza di 50 anni nel settore della refrigerazione nautica, Frigoboat studia per i propri clienti delle soluzioni cucite intorno alle loro esigenze.

Grazie a materiali adatti all'ambiente marino, e allo stato dell'arte dei prodotti a catalogo, Frigoboat controlla sempre in modo ottimale il freddo di bordo.



50



#### **CONDENSING UNITS**

AC condensing units from 0.17HP up o 5HP, water or air-cooled, for every kind of installation.

Unita' condensatrici in AC da 0.17HP fino a 5HP, con raffreddamento ad aria o ad acqua, per soddisfare qualsiasi esigenza di installazione nautica.

#### **EVAPORATORS**

Wide range of blown air evaporators for on-board refrigeration plants, from wine cooler, to cold rooms or blast freezers.

Ampia gamma di evaporatori ventilati per impianti frigoriferi a bordo, da celle vino fino a celle frigorifere e abbattitori.

#### FRIGOBOAT ELECTRICAL BOXES

Frigoboat offers standard and custom electrical boxes for every need; thanks to a centralized system all on-board refrigeration systems can be controlled with a unique electrical box.

#### THERMOSTATS AND FRIGOBOAT CONTROL SYSTEMS

Even for basic refrigeration systems, Frigoboat proposes an optimal control, in order to have all parameters always under control, and cooling on-board always guaranteed.

#### ACCESSORIES FOR REFRIGERATION SYSTEMS

Frigoboat offers a wide range of accessories to complete the refrigeration circuit: Thermostatic valves, solenoid valve kits, KVP valves, ...

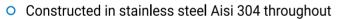
Frigoboat propone q.e. standard e custom per ogni tipo di esigenza; grazie ad un unico controllo centralizzato si possono tenere sotto controllo e sotto monitoraggio tutti gli impianti frigoriferi di bordo.

Anche per semplici impianti, Frigoboat propone sempre un ottimo sistema di controllo, per avere sempre sotto controllo tutti i parametri dell'impianto frigorifero.

Frigoboat propone un ampia gamma di accessori per completare il circuito frigorifero con tutto quanto necessario: valvole termostatiche, kit con valvole solenoidi, valvole KVP, ...



# MS STANDARD REFRIGERATED CABINETS stainless-steel fridges, freezers and wine coolers



- Excellent insulation
- 180° door opening with slam latch catch
- Polished stainless interior
- Stainless steel bottle holders as standard
- Remote cooling unit to maximize volume, reduce noises and improve efficiency

The Frigoboat MS Series are the best quality marine fridge and freezer cabinets available. A complete range of fridges, freezers and wine cellars for blue water cruisers and all other high-end marine applications - nothing else comes close.

The MS Series cabinets are the result of Veco's 50 years' experience in designing and producing marine refrigeration under the Frigoboat brand.

Built in AISI 304 stainless steel throughout, they fit perfectly in every environment.

The elegant polished stainless-steel interior is equipped with height-adjustable shelves, with optional bottle holders for the fridge version. Interiors can also be completely customized.

**Every detail matters.** Frigoboat MS Series cabinets feature excellent door seals with compression slam latches, brushed stainless rolled edge doors, interior lightning and magnetic seals; these are just some of the characteristics that make the product one of the most innovative in the marine refrigeration field, adapting to every navigation condition.



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I mobili frigoriferi Frigoboat serie MS, studiati appositamente per imbarcazioni, sono il risultato della grande esperienza Veco nel settore della refrigerazione marina, abbinando ad un design innovativo la qualità che da cinquant'anni distingue il marchio Frigoboat.

Una gamma completa di frigoriferi, freezer e cantine vino per soddisfare qualsiasi esigenza.

Costruiti completamente in acciaio inox, i mobili frigoriferi Frigoboat serie MS diventano un importante elemento d'arredo.

Gli interni, sempre in acciaio inox, sono forniti con eleganti scaffali regolabili in altezza e portabottiglie nella versione frigo, ma possono essere anche completamente personalizzati grazie alle molte opzioni disponibili.

La cura dei dettagli, la lavorazione dei materiali con tecnologie d'avanguardia, la chiusura con maniglia, gli spigoli arrotondati, la luce interna e la guarnizione magnetica, sono solo alcune delle tante caratteristiche che contribuiscono a rendere il prodotto tra i più innovativi del settore, adattandosi perfettamente a qualsiasi condizione di navigazione.



MODELS

|          | Product code  | Model     | lce<br>box | Size<br>LXDXH (mm) | Insulation<br>(mm) | Shelves | Bottle<br>holders | Can<br>holders | Capacity<br>(It) | Net weight<br>(Kg) | Volume<br>(Lt <sup>3</sup> ) |
|----------|---------------|-----------|------------|--------------------|--------------------|---------|-------------------|----------------|------------------|--------------------|------------------------------|
|          | GMS080I*SSSSS | MS 80     | Yes        | 470 x 435 x 600    | 50                 | 1       | 1                 | 1              | 80               | 32                 | 0,12                         |
|          | GMS115I*SSSSS | MS 115    | Yes        | 480 x 485 x 840    | 50                 | 3       | 1                 | 1              | 115              | 39                 | 0,20                         |
|          | GMS130I*SSSSS | MS 130    | Yes        | 530 x 530 x 745    | 50                 | 3       | 1                 | 1              | 130              | 41                 | 0,21                         |
|          | GMS160I*SSSSS | MS 160    | Yes        | 545 x 550 x 840    | 50                 | 3       | 1                 | 2              | 160              | 43                 | 0,25                         |
| Door     | GMS042F*SSSSS | MS 42 IN  | No         | 380 x 362 x 510    | 50                 | 1       | 1                 | n.a.           | 42               | 26                 | 0,07                         |
| fridges  | GMS080F*SSSSS | MS 80 IN  | No         | 470 x 435 x 600    | 50                 | 1       | 1                 | 1              | 80               | 32                 | 0,12                         |
|          | GMS115F*SSSSS | MS 115 IN | No         | 480 x 485 x 840    | 50                 | 3       | 1                 | 1              | 115              | 39                 | 0,20                         |
|          | GMS130F*SSSSS | MS 130 IN | No         | 530 x 530 x 745    | 50                 | 3       | 1                 | 1              | 130              | 41                 | 0,21                         |
|          | GMS160F*SSSSS | MS 160 IN | No         | 545 x 550 x 840    | 50                 | 3       | 1                 | 2              | 160              | 43                 | 0,25                         |
|          | GMS180F*SSSSS | MS 180 IN | No         | 545 x 550 x 1000   | 50                 | 4       | 1                 | 2              | 180              | 45                 | 0,30                         |
| Door     | GMS080Z*SSSSS | MS 80     | No         | 530 x 530 x 745    | 80                 | 3       | n.a.              | n.a.           | 80               | 41                 | 0,21                         |
|          | GMS090Z*SSSSS | MS 90     | No         | 545 x 550 x 680    | 80                 | 2       | n.a.              | n.a.           | 90               | 42                 | 0,21                         |
| freezers | GMS110Z*SSSSS | MS 110    | No         | 545 x 550 x 840    | 80                 | 3       | n.a.              | n.a.           | 110              | 43                 | 0,25                         |
| Wine     | GMS115W*SSSSS | MSC 115   | No         | 480 x 485 x 840    | 50                 |         | 18 bottles        |                | 115              | 43                 | 0,20                         |
| coolers  | GMS130W*SSSSS | MSC 130   | No         | 530 x 530 x 745    | 80                 |         | 20 bottles        |                | 130              | 45                 | 0,21                         |
| coolers  | GMS160W*SSSSS | MSC 160   | No         | 545 x 550 x 840    | 80                 |         | 23 bottles        |                | 160              | 48                 | 0,25                         |
| Drawers  | GMS080D*SSSSS | MS 115 2D | No         | 480 x 485 x 864    | 50                 | n.a.    | n.a.              | n.a.           | 115              | 44                 | n.a.                         |
| fridges  | GMS130D*SSSSS | MS 130 2D | No         | 530 x 530 x 769    | 50                 | n.a.    | n.a.              | n.a.           | 130              | 46                 | n.a.                         |
| muges    | GMS160D*SSSSS | MS 160 2D | No         | 545 x 550 x 864    | 50                 | n.a.    | n.a.              | n.a.           | 160              | 48                 | n.a.                         |
| Drawers  | GMS080R*SSSSS | MS 80 2D  | No         | 530 x 530 x 769    | 80                 | n.a.    | n.a.              | n.a.           | 80               | 46                 | n.a.                         |
|          | GMS090R*SSSSS | MS 90 2D  | No         | 545 x 550 x 704    | 80                 | n.a.    | n.a.              | n.a.           | 90               | 47                 | n.a.                         |
| freezers | GMS110R*SSSSS | MS 110 2D | No         | 545 x 550 x 864    | 80                 | n.a.    | n.a.              | n.a.           | 110              | 48                 | n.a.                         |

#### **INSULATION**

Frigoboat insists on using the maximum insulation possible to maximize efficiency and minimize power consumption; even with the stylish Wine Cellar version insulation is maintained with insulated double-glazing technology in the door. Grazie all'isolamento in plurioretano espanso i mobili frigoriferi Frigoboat serie MS garantiscono il massimo isolamento minimizzando i consumi; anche nelle eleganti versioni Frigoboat cantina vino l'isolamento viene garantito grazie ai doppi vetri della porta.

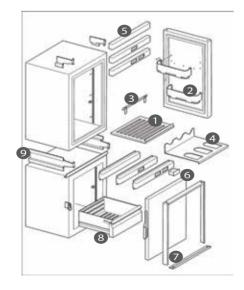
#### EASY INSTALLATION

Frigoboat MS Series cabinets are designed to run with Frigomatic extensive range of air cooled, keel-cooled or pumped water-cooling units allowing you to select the option that gives you the maximum efficiency or optimized for the installation requirements of the boat. An easy installation is guaranteed thanks to the Frigoboat self-sealing coupling system.

I mobili frigoriferi Frigoboat serie MS sono progettati per essere abbinati alle diverse unità refrigeranti della linea Frigomatic, sia con raffreddamento ad aria che ad acqua, per ottenere la massima efficienza del sistema adattando l'installazione alle necessità della propria imbarcazione. Inoltre la semplicità di installazione è sempre garantita dall'innovativo sistema ad innesti rapidi Frigoboat.



#### OPTIONS



- 1 Additional height adjustable stainless steel shelves
- 2 Additional bottle and can holders
- 3 Shelf fiddles
- 4 Wine shelves
- 5 Thermostat stainless steel support
- 6 Thermostat displays
- 7 Wood panel surround
- 8 Internal drawers
- 9 Solution for two units mounting
- 10 Stainless steel AISI 316







#### PREV

CUSTOM REFRIGERATION SOLUTIONS stainless-steel, tailored made fridges, freezers and wine coolers



- Stainless steel aisi 304 316 for externals
- Customized interiors and exteriors
- Led lighting
- Separate temperature controls
- Backup circuits and systems



From 1971, Veco designs and produces custom refrigeration solutions for boats, yachts and superyachts.

Our experience in the marine refrigeration field, together with quality, flexibility and efficiency, makes our solutions the best available in the market.

# Custom fridges, freezers, wine cellars and cold rooms. Any size, any space, for a unique solution.

Frigoboat combine a unique design, all the functionalities expected from a professional kitchen and the style and quality required from a superyacht.

Our refrigeration solutions are specifically designed for the marine; both our air cooled and water-cooled systems guarantee the maximum flexibility, energy efficiency and the maximum storage space available.

Dal 1971, Veco studia e progetta mobili frigoriferi su misura per imbarcazioni, yacht e superyacht.

L'esperienza nel campo della refrigerazione nautica, la qualità in tutte le soluzioni, la flessibilità e l'efficienza, rendono le nostre soluzioni le migliori disponibili sul mercato.

Mobili frigoriferi, freezer, vinerie e celle frigorifere; qualsiasi dimensione, spazio, per una soluzione sempre unica.

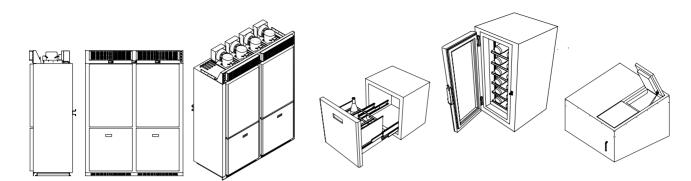
Frigoboat unisce un design unico, con tutte le funzionalità di una cucina professionale, oltre che lo stile e la qualità richiesta per un superyacht.

Soluzioni studiate per la nautica, sia con raffreddamento ad aria che ad acqua; Frigoboat garantisce sempre la massima flessibilità, efficienza energetica e l'ottimizzazione degli spazi disponibili a bordo.





#### FROM YOUR IDEA TO CUSTOM PROJECTS

















### ICE MAKERS perfect crystal-clear ice cubes



- Stainless steel Aisi 304 throughout
- O Spray system for crystal clear ice-cubes
- Air cooled or water cooled, to maximize efficiency
- Automatic production cycles and built-in clean system



Frigoboat ice makers, completely in stainless steel, are ideal for under counter installations; compact and efficient, they are the ideal solution for ice-cube continuous production on-board.

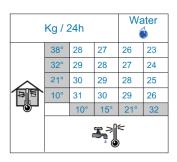
The Frigoboat crystal clear and compact ice cube is perfect for cooling drinks and bottles, with size Ø 27x32 mm.

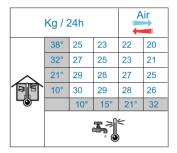
La gamma dei fabbricatori di ghiaccio Frigoboat, completamente in acciaio inox, è ideale per applicazioni sottobanco; efficienti e compatti, sono la soluzione ideale a bordo per la produzione continua di ghiaccio.

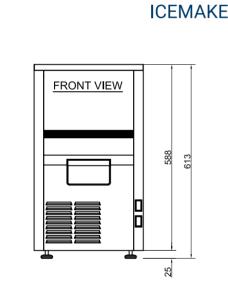
Il cubetto di ghiaccio Frigoboat è ideale per il raffreddamento di bevande e bottiglie, con dimensioni Ø 27x32 mm, cristallino e compatto.



|                            | Ice Maker Frigoboat 24            | Ice Maker Frigoboat 30            |
|----------------------------|-----------------------------------|-----------------------------------|
| Code and cooling type      | L226AU - Air cooling   aria       | L3111AU - Air cooling   aria      |
| Code and cooling type      | L226WU - water pump   acqua       | L3111WU - water pump   acqua      |
| Power supply               | 230/1/50                          | 230/1/50                          |
| Power suppry               | as custom in 115/1/60 or 230/1/60 | as custom in 115/1/60 or 230/1/60 |
| Capacity                   | 24 kg/24h (52Lb/24h)              | 30 kg   24 h                      |
| Ice cube number (nr./24hr) | 1333/24 h*                        | 1660   24 h                       |
| Consumption (W)            | 350                               | 420                               |
| Consumption (A)            | 2,2                               | 2,5                               |
| Refrigerant                | R290                              | R290                              |
| lce cube bin size (Kg)     | 6                                 | 11                                |
| Ice cube size (mm)         | 27x32                             | 27x32                             |
| Ambient temperature (°C)   | min 10 - max 40                   | min 10 <del>-</del> max 40        |
| Water connections          | 3/4'                              | 3/4'                              |
| Water pressure (Bar)       | min 1 - max 6                     | min 1 <del>-</del> max 6          |
| Water temperature (°C)     | min 5 - max 35                    | min 5 - max 35                    |
| Water discharge (lt/hr)    | min 5 - max 10 lt/hr              | min 5 - max 12 lt/hr              |
| Size WXDXH (mm)            | 345x460x588                       | 417x531x654                       |
| Net weight (Kg)            | 32                                | 39                                |
| Shipping volume (M3)       | 0,15                              | 0,20                              |
| Shipping weight (Kg)       | 36                                | 43                                |
|                            |                                   |                                   |
| Water cooled versions      |                                   |                                   |
| Sea water flow             | 2,6 lit/min                       | 2,6 lit/min                       |
| Sea water connections      | diam. 16 mm                       | diam. 16 mm                       |
| Sea water temperature (°C) | min 10 - max 35                   | min 10 - max 35                   |

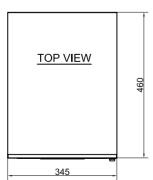






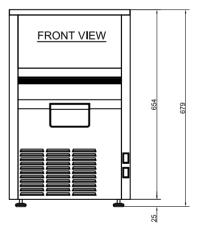


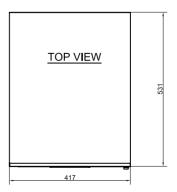
MODELS



# **ICEMAKER L24**

ICEMAKER L30







# <complex-block>

- Easy to install and maintain
- Premium marine grade materials
- Custom projects
- Full backup systems to ensure trouble free navigation



Custom stainless steel walkable cold rooms that can ft any kind of space.

Frigoboat cold rooms provide the best solution for high volumes of food storage with accurate food preservation and temperature control.

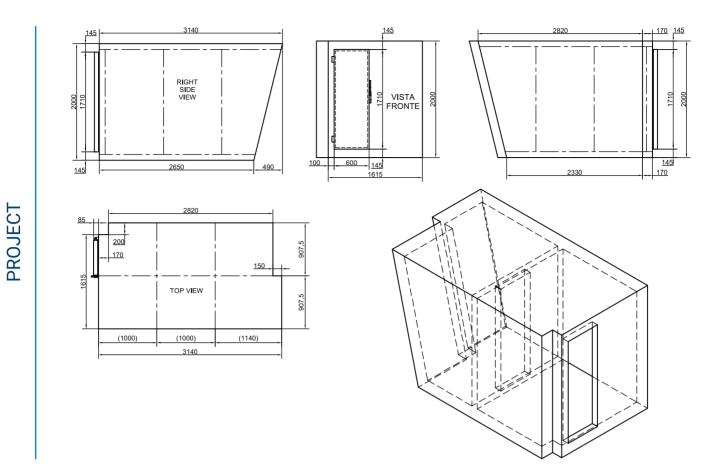
A custom project around your needs.

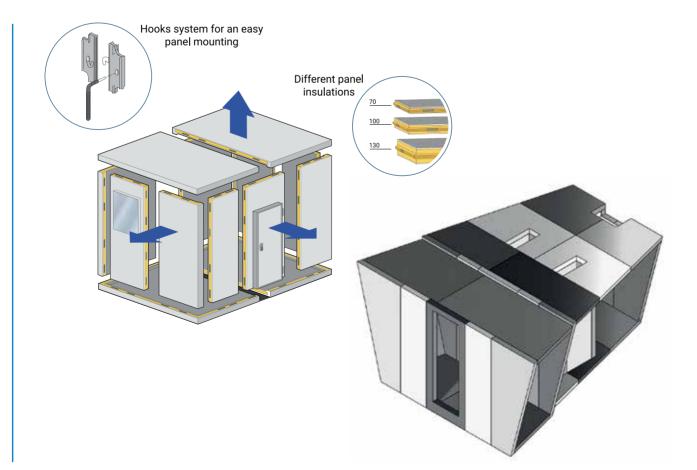
Celle frigorifere su misura, calpestabili e adatte ad ogni tipologia di spazio a bordo.

Le celle frigorifere Frigoboat sono la miglior soluzione per grandi quantitativi di cibo da conservare ad una temperatura controllata.

Un progetto personalizzato al 100%









DETAILS

# VECO HUB centralized control for Veco systems



- O Centralized management of all HVAC and refrigeration systems
- Advanced and real-time remote assistance
- Graphic customization per user/cabin
- O 10' Veco touch screen
- Available on tablets and smartphones, locally and remotely
- O Compatible with the most common MFDs and chartplotters

The innovative VecoHub system allows for an easy and intuitive integration of all Veco systems on board, through a unique and simple control interface.

From the Climma marine air-conditioning systems, to Frigoboat marine refrigeration products, now all can be controlled by your preferred device.

VecoHub can be used via a 10' Veco vTouch touch screen display, via the on-board MFD/chartplotter or directly from your tablet/mobile.

It is also possible to configure different interfaces depending on who uses the system; Administrator users can manage all Climma or Frigoboat on-board systems, while basic users and guests can have views dedicated to individual cabins for superyacht or charter-oriented operation.

Through VecoHub it is also possible to activate a real-time remote assistance on board, with the option to perform advanced troubleshooting even during the boat operation.



L'innovativo sistema VecoHub permette di integrare in modo semplice ed intuitivo tutti i sistemi Veco di bordo, tramite un'unica interfaccia di controllo.

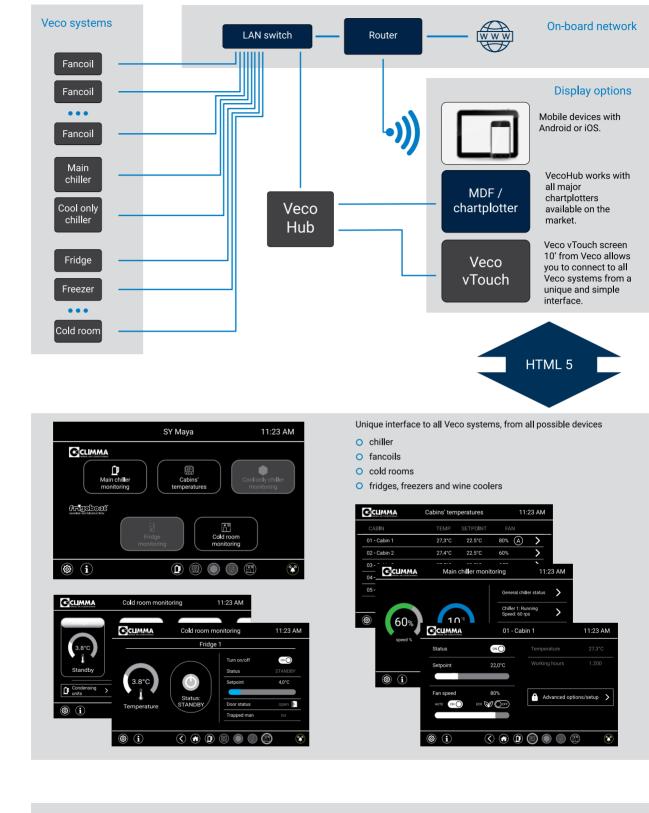
Dagli impianti di aria condizionata Climma, ai sistemi di refrigerazione Frigoboat, è ora possibile controllare tutto tramite il dispositivo che preferisci.

VecoHub permette infatti di essere utilizzato tramite touch screen da 10' Veco vTouch, tramite MFD/chartplotter gia' presente a bordo o direttamente dal tuo tablet/cellulare.

E' inoltre possibile configurare differenti interfacce a seconda di chi utilizza il sistema; utenti amministratori possono gestire tutti gli impianti di bordo Climma o Frigoboat, mentre utenti base ed ospiti possono avere delle viste dedicate alle singole cabine per un funzionamento orientato a superyacht o charter.

Tramite VecoHub è inoltre possibile attivare un servizio di assistenza real-time a bordo, per poter fare troubleshooting avanzati anche durante l'operatività dell'imbarcazione.





VECO APP

INTEGRATION





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#### Veco General Catalogue - Edizione 22.05.2023 Rev.2

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