

MCG Series 24K-72K Modular Chillers

The Standard In Chilled Water Marine Air Conditioning



Marine Air's MCG chilled water series is available in capacities ranging from 24,000 (2 ton) to 180,000 (15 ton) BTU/hr. Featuring a compact base design, MCG modules can be staged to provide a larger system, which is easily retrofitted and serviced in the field. Up to six 15-ton stages can be configured for a system total of 1,080,000 BTU/hr, or 90 tons.

Each refrigerant circuit is hermetically sealed and factory pre-charged with R-410A refrigerant. This environmentally safe refrigerant has exceptional thermodynamic properties and maximizes system efficiency.

Each condensing unit is monitored and protected with freeze controls, high-limit switches, high and low aquastats, and timers. These condensing units can be installed in any convenient location and are unaffected by vibration, moisture or ambient temperatures up to 140°F/60°C.

MCG chillers are monitored and protected by Marine Air's exclusive Digital Diagnostic Controller (DDC), which can be installed remotely. For staged systems, the Chilled Water Master Controller (CWMC) provides central control over each DDC on each module in the system. Up to six modules are supported. The CWMC coordinates all cooling and heating functions, evenly distributes compressor run times, and operates the seawater and circulated water pumps.

MCGs are available in single phase or three phase, 50Hz or 60Hz, and all standard voltages (208, 230, 380, 460 VAC).

Key Benefits

- Compact footprint for installation flexibility.
- Aluminum construction is corrosion resistant and lightweight.
- Up to six modules can be multiplexed for larger capacities.
- Electrical box can be remotely mounted up to 6 ft. (1.8 m).
- Bi-flow expansion valves balance the system between heat and cool modes.
- Compact stainless-steel brazed plate heat exchangers for maximum efficiency.
- Spiral-fluted cupronickel condenser coil provides maximum heat transfer and corrosion resistance.
- Digital Diagnostic Controller (DDC) monitors and protects the system.
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant.
- Charged, tested, and leak checked at the factory.
- Meets or exceeds all applicable standards and regulation.
- Charge Guard protection provides sealed access ports, ensuring environmental protection and chiller module integrity.

Specifications for MCG Series 24K-72K Modular Chillers

| Model ⁽¹⁾ | MCG124 | MCG136 | MCG148 | MCG160 | MCG172 |
|---|-----------|-----------|-----------|-----------|-----------|
| Capacity (RT/h) | 24000 | 36000 | 48000 | 60000 | 72000 |
| Voltage (V) | 230 | 230 | 230 | 230 | 230 |
| Cycle (Hz/Phase (Ph)) | 60/1 | 60/1 | 60/1 | 60/1 | 60/1 |
| Full Load Amps (ELA) Cool (A) | 6.4 | 9.6 | 12.3 | 17.8 | 22.2 |
| Full Load Amps (ELA) Heat (A) | 9.5 | 11.9 | 7.3 | 4.6 | 3.6 |
| Loaded Rotor Amps (LRA) (A) | 58.3 | 97 | 58 | 45 | 28 |
| Max. Circuit Breaker (A) | 45 | 29 | 20 | 18 | 77 |
| Min. Circuit Ampacity (A) | 25 | 28 | 17 | 13 | 10 |
| Refrigerant Type | R410A | R410A | R410A | R410A | R410A |
| Height-Without Elec. Box (in/mm) ⁽²⁾ | 17,22/438 | 23,57/599 | 23,57/599 | 23,44/596 | 23,44/596 |
| Height-With Elec. Box (in/mm) ⁽²⁾ | 21,74/553 | 23,57/599 | 23,57/599 | 26,08/663 | 26,08/663 |
| Depth-Drain Pan (in/mm) ⁽²⁾⁽³⁾ | 12/305 | 12/305 | 12/305 | 12/305 | 12/305 |
| Max. Width (in/mm) ⁽²⁾⁽³⁾ | 12/305 | 12,5/318 | 12,5/318 | 13,25/337 | 13,25/337 |
| Depth-Drain Pan (in/mm) ⁽²⁾⁽³⁾ | 24/610 | 24/610 | 24/610 | 24/610 | 24/610 |
| Max. Depth (in/mm) ⁽³⁾ | 24,97/635 | 30,78/782 | 30,78/782 | 30,77/780 | 30,07/764 |
| Seawater Connection (in/mm) | 1/26 | 1/26 | 1/26 | 1/26 | 1/26 |
| Chilled Water Connection Size (in) | 1 | 1 | 1 | 1 | 1 |
| Height-Electrical Box (in/mm) ⁽³⁾ | 11/280 | 11/280 | 11/280 | 11/280 | 11/280 |
| Width-Electrical Box (in/mm) | 9,8/249 | 9,8/249 | 9,8/249 | 9,8/249 | 9,8/249 |
| Depth-Electrical Box (in/mm) | 3,7/94 | 3,7/94 | 3,7/94 | 3,7/94 | 3,7/94 |

¹ For information about net weight and shipping weight please contact a Dometic Marine sales representative at 954-973-2477.

² All dimensions ± 0.30 in. (8 mm).

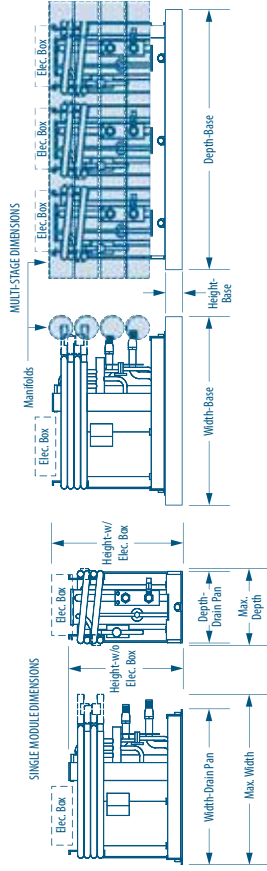
³ The electrical box (DOC) for single-chiller modules can be mounted remotely.

Dimensions for Multi-Stage Systems

| No. of Stages | Height-Base (in/mm) | Width-Base (in/mm) | Depth-Base (in/mm) | Height-CWMC ⁽¹⁾ (in/mm) | Width-CWMC ⁽¹⁾ (in/mm) | Depth-CWMC ⁽¹⁾ (in/mm) |
|------------------------|---------------------|--------------------|--------------------|------------------------------------|-----------------------------------|-----------------------------------|
| MCG24 to MCG72 Modules | | | | | | |
| 2 | 1,50/38 | 41,57/1054 | 31,0/787 | 24,0/610 | 22,0/559 | 7,75/199 |
| 3 | 1,50/38 | 41,57/1054 | 31,0/787 | 24,0/610 | 22,0/559 | 7,75/199 |
| 4 | 1,50/38 | 55,57/1410 | 31,0/787 | 24,0/610 | 30,0/762 | 7,75/199 |
| 5 | 1,50/38 | 69,57/1765 | 31,0/787 | 24,0/610 | 35,0/889 | 7,75/199 |

¹ Indicates dimensions of Chilled Water Master Controller for Marine Air multi-stage chillers. Please refer to L-2133 for additional information.

Dimensions



DOMETIC MARINE DIVISION

2000 N. Andrews Ave. | Pompano Beach, FL 33069 USA | Tel. 954-973-2477 | Fax: 954-979-4414
 www.Dometic.com/Marine | MarineSales@DometicUSA.com

24/7 TECH SUPPORT FOR UNITED STATES & CANADA:

8:00 AM to 5:00 PM Eastern Time: 800-542-2477
 After hours and weekends: 888-440-4494

INTERNATIONAL SALES & SERVICES

Europe & the Middle East: Call +44(0)870-330-6101
 For all other areas visit our website to find your nearest distributor.

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Specifications and availability subject to change without notice.

Dealer

