

Modular MTC Series

The Next Generation of Chillers



MTC72DC

The MTC Series provides installation flexibility, reliability, maximum performance, and accessibility for easy maintenance and repair.

These reverse-cycle modules are available in capacities of 24,000-120,000 BTU/Hr (2 to 10 tons). Two or more modules can be staged to achieve higher capacities.

MTC units have extremely large heat exchangers that make it possible to achieve loop water temperatures of 40° F (4.4° C) in cooling, and 120° F (49° C) in heating. This also allows for reverse-cycle heating effectiveness in seawater temperatures as low as 38° F (3.5° C), eliminating the need for separate fossil fuel or electric water heaters in most applications.

MTCs have two sub-modules, identical in dimensions, which allow a sub-module to be rotated to achieve more convenient water connection locations or compressor access. The sub modules can even be separated for remote mounting when space is limited. Sub-module changes can be handled in the field, or special ordered from the factory.

All units have built-in protection devices, including: high- and low-pressure switches, loop-water flow switch, loop-water strainer, hot-gas bypass valve, and loop-water freeze sensor. A wire harness with polarized plug is included for easy electrical connections.

Key Benefits

- Modular design for installation flexibility.
- Reverse-cycle heating and cooling.
- Scroll compressors standard.
- Dual sub-modules allow more convenient water connections or separation for remote mounting when space is limited.
- Removable seawater manifolds allow cleaning of condenser tubing.
- Integrated loop-water strainer and flow switch.
- Oversized heat exchangers for loop temperatures of 40° F (4.4° C) in cooling and 120° F (49° C) in heating.
- Thermal expansion valves optimize performance over a wide range of conditions.
- Hot-gas bypass valve maintains heating performance in cold seawater and helps prevent water freezing in the heat exchanger.
- 24,000 to 120,000 BTU/hr (2-10 tons).
- Uses environmentally safe R-407C refrigerant.

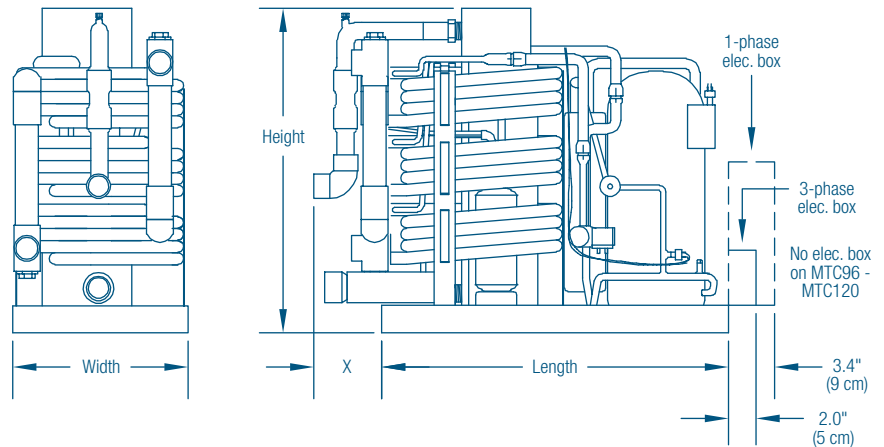
Technical Specifications for MTC Modular Chiller Series

| Model | Capacity BTU/hr (Kcal/hr) ⁽¹⁾ | Volts/Hz/Ph ^{(2) (3)} | Full Load Amps Cool | Full Load Amps Heat | Locked Rotor Amps | Dimensions (in/cm) ⁽⁴⁾ | | | | Connections | | Weight (lb/kg) ⁽⁴⁾ |
|-----------|--|-----------------------------------|------------------------|------------------------|----------------------|-----------------------------------|---------|---------|--------|-------------|-----------|---|
| | | | | | | Height | Width | Length | X | SW | CW | |
| MTC24C | 24,000 (6,048) | 230/60/1 | 7.2 | 9.8 | 59 | 17.0/43 | 12.8/32 | 25.3/64 | 5.0/13 | 5/8" HB | 1" FPT | 145/66 155/70 155/70 155/70 |
| MTC24CK | | 220/50/1 | 7.5 | 10.4 | 56 | | | | | | | |
| MTC24DC | | 230/60/3 | 5.3 | 6.9 | 55 | | | | | | | |
| MTC24EC | | 460/60/3 | 2.7 | 3.5 | 27 | | | | | | | |
| MTC30C | 30,000 (7,560) | 230/60/1 | 9.5 | 12.8 | 84 | 17.0/43 | 12.8/32 | 25.3/64 | 5.0/13 | 3/4" FPT | 1" FPT | 160/73 160/73 160/73 160/73 |
| MTC30CK | | 220/50/1 | 9.5 | 13.1 | 75 | | | | | | | |
| MTC30DC | | 230/60/3 | 6.5 | 8.3 | 63 | | | | | | | |
| MTC30EC | | 460/60/3 | 3.3 | 4.4 | 31 | | | | | | | |
| MTC36C | 36,000 (9,072) | 230/60/1 | 12.1 | 15.9 | 100 | 23.5/60 | 12.8/32 | 25.3/64 | 5.0/13 | 1" FPT | 1" FPT | 195/89 190/86 190/86 190/86 |
| MTC36CK | | 220/50/1 | 11.1 | 15.2 | 97 | | | | | | | |
| MTC36DC | | 230/60/3 | 7.6 | 9.7 | 77 | | | | | | | |
| MTC36EC | | 460/60/3 | 3.8 | 4.9 | 39 | | | | | | | |
| MTC48C | 48,000 (12,096) | 230/60/1 | 13.7 | 19.5 | 137 | 23.5/60 | 12.7/32 | 25.1/64 | 5.0/13 | 1" FPT | 1" FPT | 215/98 215/98 215/98 215/98 220/100 |
| MTC48CK | | 220/50/1 | 15.4 | 21.7 | 150 | | | | | | | |
| MTC48DC | | 230/60/3 | 9.9 | 12.7 | 91 | | | | | | | |
| MTC48EC | | 460/60/3 | 4.7 | 6.3 | 50 | | | | | | | |
| MTC48ECK | | 380/50/3 | 7.1 | 8.7 | 59 | | | | | | | |
| MTC60C | 60,000 (15,120) | 230/60/1 | 18.2 | 25.3 | 169 | 23.5/60 | 12.7/32 | 25.1/64 | 5.0/13 | 1" FPT | 1.25" FPT | 230/105 220/100 220/100 225/102 |
| MTC60DC | | 230/60/3 | 13.3 | 16.7 | 128 | | | | | | | |
| MTC60EC | | 460/60/3 | 6.7 | 8.4 | 63 | | | | | | | |
| MTC60ECK | | 380/50/3 | 6.8 | 8.9 | 67 | | | | | | | |
| MTC66ECK | 66,000 (16,631) | 380/50/3 | 8.7 | 10.9 | 91 | 23.5/60 | 12.7/32 | 25.1/64 | 5.0/13 | 1" FPT | 1.25" FPT | 240/109 |
| MTC72DC | 72,000 (18,144) | 230/60/3 | 14.0 | 18.4 | 156 | 23.5/60 | 12.7/32 | 25.1/64 | 5.0/13 | 1" FPT | 1.25" FPT | 240/109 240/109 |
| MTC72EC | | 460/60/3 | 7.0 | 9.2 | 75 | | | | | | | |
| MTC96DC | 96,000 (24,192) | 230/60/3 | 20.2 | 25.6 | 195 | 26.8/68 | 16.6/42 | 33/84 | 6.0/15 | 1.25" FPT | 1.5" FPT | 350/159 350/159 360/164 |
| MTC96EC | | 460/60/3 | 10.0 | 12.6 | 95 | | | | | | | |
| MTC96ECK | | 380/50/3 | 12.5 | 15.9 | 125 | | | | | | | |
| MTC120DC | 120,000 (30,239) | 230/60/3 | 25.6 | 32.5 | 239 | 26.8/68 | 16.6/42 | 33/84 | 6.0/15 | 1.25" FPT | 1.5" FPT | 365/166 365/166 380/173 |
| MTC120EC | | 460/60/3 | 12.9 | 16.3 | 125 | | | | | | | |
| MTC120ECK | | 380/50/3 | 13.9 | 17.9 | 110 | | | | | | | |

| Compressor Electrical Power Specs ⁽²⁾ | |
|--|-------------------------------|
| Nominal Rating | Acceptable Range |
| 230/60/1 | 208-240/60/1 |
| 220/50/1 | 220-240/50/1 |
| 230/60/3 | 208-230/60/3 and 190-220/50/3 |
| 220/50/3 | 200-220/50/3 |
| 460/60/3 | 440-480/60/3 and 380-420/50/3 |
| 380/50/3 | 380-420/50/3 |

Notes:

- ⁽¹⁾ Cooling capacity at 100°F (38°C) condensing temperature and 35°F (2°C) evaporating temperature. Reverse-cycle heating capacity at 130°F (54°C) condensing temperature and 45°F (7°C) evaporating temperature.
- ⁽²⁾ For more information regarding compressor voltages, refer to Field Notice #192-B3 which is available for download at the Dometic Marine Resource Center (www.Dometic.com/Enviro).
- ⁽³⁾ See the Compressor Electrical Power Specs table above.
- ⁽⁴⁾ All dimensions are ± 1/2" (13mm). All weights are ± 10%.



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