



MTC 72DC Shown

Features

- Compact, modular design for installation flexibility
- Reverse cycle heating and cooling
- Scroll compressors standard
- 24,000 to 120,000 BTU/Hr (2 - 10 tons)
- Oversized heat exchangers for loop temperatures of 40° F (4.4° C) in cooling and 120° F (49° C) in heating
- Removable seawater manifolds to allow cleaning of condenser tubing
- Modulating flow control maintains designed loop water flow rate
- Integrated loop water strainer and flow switch
- Hot gas bypass valve maintains heating performance in cold seawater temperatures, and helps prevent water freezing in the heat exchanger

MTC Models

Cruisair Modular Tempering Units are designed to provide installation flexibility, maximum performance and reliability, and accessibility for easy maintenance and repair.

The reverse cycle tempering unit cools or heats the circulated water loop. Units are available in capacities of 24,000-120,000 BTU/Hr (2 to 10 tons), and multiple modules can be used in any combination to achieve the total desired capacity. Custom frame and water manifold installation for multiple units is also available.

Cruisair 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.

Each tempering unit is made up of two sub-modules, identical in dimensions, which allows 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.

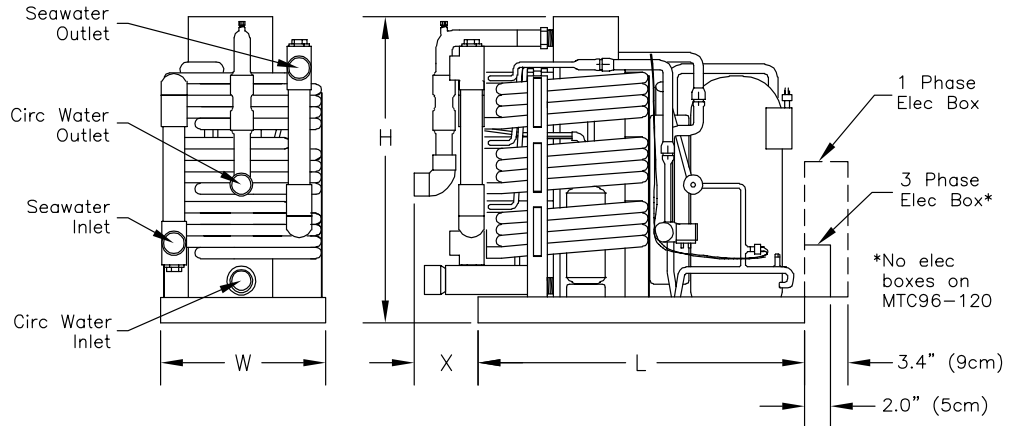
The compressor sub-module contains the scroll compressor, reversing valve, hot gas bypass valve, and high and low pressure switches. The heat exchanger side includes the stainless steel loop water plate coil, coaxial cupro-nickle seawater condenser, receiver, dual “bullet” metering device, flow switch, modulating flow control, and all water connections.

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.

MTC units are available with many different compressors to suit available power systems, including: 230V/60Hz/1Ph, 220V/50Hz/1Ph, 230V/60Hz/3Ph, 380V/50hz/3Ph and 460V/60Hz/3Ph.

Variable Frequency Drives are available which eliminate start-up power surge, and will run a unit at full capacity 60Hz even with 50Hz input. The VFD requires a 3 phase tempering unit, but can operate on 1 or 3 phase input power.

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 & 190-220/50/3
220/50/3	200-220/50/3
460/60/3	440-480V/60/3 & 380-420/50/3
380/50/3	380-420/50/3



TECHNICAL SPECIFICATIONS

Model	Capacity (BTU/Hr) ¹	Power ² Volt/Hz/Ph ³	FLA Cool	FLA RC	LRA	Dimensions (in/cm) ⁴				Connections		Weight ⁴ (lb/kg)
						H	W	L	X	SW	CW	
MTC24C	24,000	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
MTC24CK		220/50/1	7.5	10.4	56							155/70
MTC24DC		230/60/3	5.3	6.9	55							155/70
MTC24EC		460/60/3	2.7	3.5	27							155/70
MTC30C	30,000	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
MTC30CK		220/50/1	9.5	13.1	75							160/73
MTC30DC		230/60/3	6.5	8.3	63							160/73
MTC30EC		460/60/3	3.3	4.4	31							160/73
MTC36C	36,000	230/60/1	12.1	15.9	100	22.0/56	12.8/32	25.3/64	5.0/13	1" FPT	1" FPT	195/89
MTC36CK		220/50/1	11.1	15.2	97							190/86
MTC36DC		230/60/3	7.6	9.7	77							190/86
MTC36EC		460/60/3	3.8	4.9	39							190/86
MTC48C	48,000	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
MTC48CK		220/50/1	15.4	21.7	150							215/98
MTC48DC		230/60/3	9.9	12.7	91							215/98
MTC48EC		460/60/3	4.7	6.3	50							215/98
MTC48ECK	380/50/3	7.1	8.7	59	220/100							
MTC60C	60,000	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
MTC60DC		230/60/3	13.3	16.7	128							220/100
MTC60EC		460/60/3	6.7	8.4	63							220/100
MTC60ECK		380/50/3	6.8	8.9	67							225/102
MTC66ECK	66,000	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	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
MTC72EC		460/60/3	7.0	9.2	75							240/109
MTC96DC	96,000	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
MTC96EC		460/60/3	10.0	12.6	95							350/159
MTC96ECK		380/50/3	12.5	15.9	125							360/164
MTC120DC	120,000	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
MTC120EC		460/60/3	12.9	16.3	125							365/166
MTC120ECK		380/50/3	13.9	17.9	110							380/173

- 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 and 45°F (7°C) evaporating temperature.
- For more information regarding compressor voltages, refer to Field Notice # 192-B3 on Dometic Corporation - Environmental System's Customer News & Information website.
- See the Compressor Electrical Power Specs table above.
- All dimensions are +/- 1/2" (13mm). All weights are +/- 10%.
FLA = Full Load Amperage
LRA = Locked Rotor Amperage

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