

MTD Series Modular Chillers

Engineered for Environmentally Safe R-410A Refrigerant



The Crusair MTD is a modular chiller engineered for optimal use of the new environmentally safe R-410A refrigerant. This tempered-water unit provides installation flexibility, reliability, maximum performance, and easy accessibility for maintenance and repair.

Flexible hose improves alignment for customer connections, and all seawater connections are reinforced with stainless-steel for added strength. Thermal expansion valves optimize performance over a wide range of conditions, while a hot-gas bypass valve maintains heating performance in cold seawater and helps prevent water freezing in the heat exchanger. With heating performance effective in cold seawater temperatures as low as 38°F (3.5°C), the need for separate fossil fuel or electric water heaters is eliminated in most applications.

The MTD is available in capacities of 24,000 to 120,000 BTU/hr (2 to 10 tons), and you can use multiple modules in any combination to achieve the total desired capacity. Custom frame and water-manifold installation for multiple units are also available. A reverse-cycle unit, the MTD provides reliable cooling and heating.

Each MTD unit has two sub-modules. This lets you rotate a sub-module 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 MTD has many built-in protection devices. A wire harness with polarized plug is included for easy electrical connections.

MTD units are available with several different compressors to suit a variety of power systems, including: 230V/60Hz/1Ph, 220V/50Hz/1Ph, 230V/60Hz/3Ph, 380V/50Hz/3Ph, and 460V/60Hz/3Ph.

Optional Variable Frequency Drives (VFDs) are available, which eliminate start-up power surge and run the 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.

Key Benefits

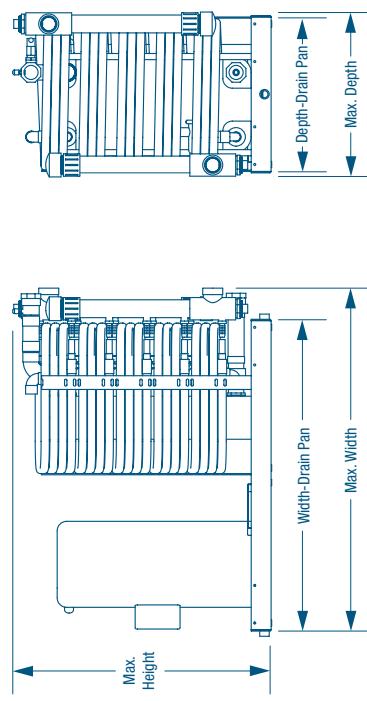
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant.
- Modular design for installation flexibility.
- Reverse-cycle heating.
- Scroll compressors standard.
- Larger drain fittings for faster condensate drainage.
- Stainless-steel reinforced seawater connections.
- Flexible hose improves connection alignment.
- 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 valve for optimal performance over a range of conditions.
- Hot-gas bypass valve maintains heating performance in cold seawater and helps prevent water freezing in the heat exchanger.

Specifications for MTD Series Modular Chillers

Model	MTD/24	MTD/30	MTD/36	MTD/48	MTD/60	MTD/72	MTD/96	MTD/120
Capacity (Btu/h)	24000	30000	36000	48000	60000	72000	96000	120000
Voltage (V)	230 / 220 / 230 / 460	230 / 220 / 230 / 460	230 / 220 / 230 / 460	230 / 220 / 230 / 460	230 / 220 / 230 / 460	230 / 220 / 230 / 460	230 / 380 / 380 / 460	230 / 380 / 380 / 460
Cycle (Hz)/Phase (Ph)	60/1 50/1 60/3	60/1 50/1 60/3	60/1 50/1 60/3	60/1 50/1 60/3	60/1 50/1 60/3	60/1 60/3	60/3 60/3	60/3 60/3
Full Load Amps (FLA) Cool (A)	6.4 9.6 6.9 3.11	8.4 9.9 6.4 3.3	12 12.3 8.3 3.9	13.8 14.7 11.3 5.2	17.8 22.2 11.3 5.9	20.1 14.2 7.1 10.1	22.3 9.2 14.7 10.1	25.3 12.4 15.4
Full Load Amps (FLA) Heat (A)	9.5 11.9 9 4.06	12.2 13 8.3 4.2	15.7 18 10.9 5	20.2 21.4 14 6.6	23 29.1 14.8 7.4	29.3 17.9 8.9 13.3	31.5 13.4 14.9 14.9	31.3 15.3 19.2
Locked Rotor Amps (LRA) (A)	58.3 97 95 45	77 97 71 38	105 102.5 95 45	150 130 120 60	145 130 123 70	145 160 87 100	235 110 110 100	267 142 147
Max. Circuit Breaker (A)	45	70	56 60 35	77 75 50	23 35 90 58	30 33 101 60	33 42 94 81	42 56 101 93
Min. Circuit Amperage (A)	25 28 25	32 34 13	43 41 20	48 50 33	33 17 19	57 34 19	53 45 24	57 24 32 58
Refrigerant Type	R410A							
Max. Height (in/mm) ¹⁾	17/432	17/432	23/597	23/597	23/597	23/597	23/597	27/8707
Width-Drain Pan (in/mm) ¹⁾	25.3/643	25.3/643	25.3/643	25.3/643	25.3/643	25.3/643	25.3/643	33.1/841
Max. Width (in/mm) ¹⁾	25.3/643	28.3/719	28.3/719	28.3/719	28.3/719	28.3/719	28.3/719	36.8/936
Depth-Drain Pan (in/mm) ¹⁾	12.8/326	12.8/326	12.8/326	12.7/323	12.7/323	12.7/323	12.7/323	16.7/425
Max. Depth (in/mm) ¹⁾	12.8/326	13.4/341	13.4/341	13.4/341	13.4/341	13.4/341	13.4/341	17.7/450
Seawater Connection (in/mm)	3/8 / 16	1/26	1/26	1/26	1/26	1/26	1/26	1 1/32
Chilled Water Connection	1	1	1	1	1	1	1	1 1/2
Size (in)	FPT							
Chilled Water Connection type	FPT							

¹ All dimensions ± 0.30 in. (8 mm).

Dimensions



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Specifications and availability subject to change without notice.

Dealer

