

TWC Series Compact Chillers

Enclosed Units With Small Footprint



TWC48CK shown

Cruisair's TWC Compact is a high-performance, cost effective tempering unit. The reverse cycle TWC cools and heats, and is available in an expanded product range of 24,000 (2-ton) to 72,000 (6-ton) BTU/hr capacities. The three new models include 48,000 (4-ton), 60,000 (5-ton), and 72,000 (6-ton) BTU/hr units. Units can be multiplexed for even larger capacities as required.

Each unit includes a chilled water (CW) flow switch, refrigerant high- and low-refrigerant pressure switches, and inlet and outlet CW temperature sensors. The TWC does not include a chilled water modulating flow control, which means air handlers with or without flow controls can be used.* The brazed platecoil evaporator and coaxial cupronickel seawater condenser allow for superior cooling and heating performance.

On 2- to 3-ton units, an electrical box mounted on top of the chiller houses the control board as well as starting components, and can be mounted remotely up to 6 ft. (1.8 m) away. On 4- to 6-ton units, the electric box is normally contained within the enclosure and does not contribute to height. A remote electric box is available upon request for 4- to 6-ton units.

Two control systems are available. The standard control is our proven Digital Diagnostic Control (DDC) that provides simple, single-stage operation. For multiplexed systems, the Tempered Water Logic Control (TWLC) with LCD screen is available. Depending on the configuration, additional cables, switches, sensors, or a display may be required.

All TWC chillers come with R-410A, the preferred environmentally safe refrigerant used in modern, high-efficiency air conditioning systems.

*On larger boats we always recommend using flow-controlled air handlers to ensure proper water distribution. A balancing flow control (BFC) is not needed when using TWC chillers.

Key Benefits

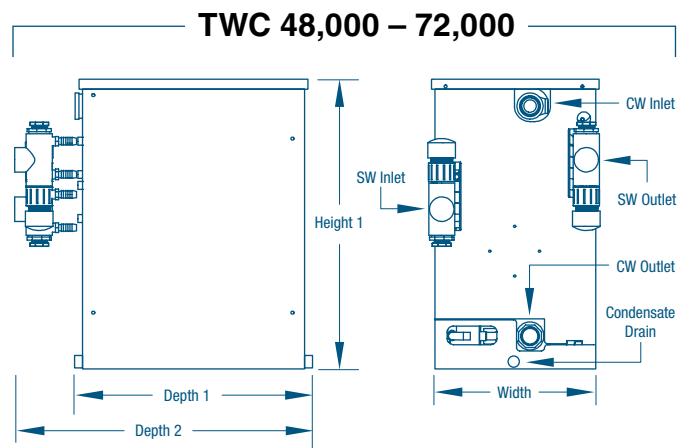
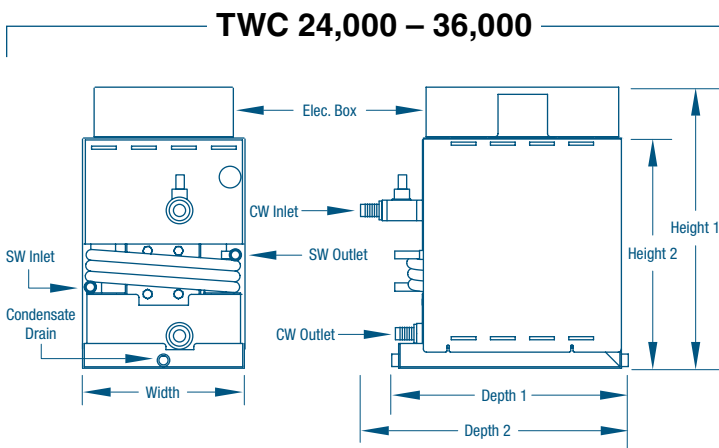
- Compact, enclosed design.
- Reverse cycle for cooling and heating.
- High-efficiency rotary or scroll compressors.
- Includes flow switch, high- and low-pressure switches, and inlet and outlet CW temperature sensors.
- Large heat exchangers for superior performance in both cooling and heating.
- Choice of either TWLC or DDC chiller control (included on unit).
- Electrical box can be mounted remotely (2- to 3-ton units).
- All models use R-410A, an environmentally safe refrigerant.
- 24,000 (2-ton) to 72,000 (6-ton) BTU/hr capacities.

Technical Specifications for TWC Compact Tempering Units

MODEL	CAPACITY (BTU/HR) ⁽¹⁾	VOLTS/HZ/PH ⁽²⁾	FLA COOL	FLA HEAT	HEIGHT 1 ⁽⁴⁾ (IN/MM)	HEIGHT 2 ⁽⁵⁾ (IN/MM)	WIDTH (IN/MM)	DEPTH 1 (IN/MM)	DEPTH 2 (IN/MM)	SW CONNECTIONS ((IN))	CW CONNECTIONS (IN)	WEIGHT ⁽⁶⁾ (LB/KG)
TWC24C	24,000	230/60/1	7.5	9.8	22.6/574	18.6/472	13.0/330	18.8/477	19.4/493	0.63 in. HB	1.00 in. FPT/ 1.00 in. HB	105/48
TWC24CK		220/50/1	9.5	11.0								
TWC24DC		230/60/3	5.7	7.3								
TWC24EC		460/60/3	2.8	3.6								
TWC24ECK		380/50/3	3.3	4.4								
TWC30C	30,000	230/60/1	9.3	13.5	22.6/574	18.6/472	13.0/330	18.8/477	19.4/493	0.63 in. HB	1.00 in. FPT/ 1.00 in. HB	110/50
TWC31CK		220/50/1	10.3	12.0								
TWC32DC		230/60/3	7.2	9.1								
TWC33EC		460/60/3	3.3 ⁽³⁾	4.2 ⁽³⁾								
TWC34ECK		380/50/3	N/A	N/A								
TWC36C	36,000	230/60/1	10.9	15.6	22.6/574	18.6/472	13.0/330	18.8/477	19.4/493	0.63 in. HB	1.00 in. FPT/ 1.00 in. HB	110/50
TWC36CK		220/50/1	9.6	12.7								
TWC36DC		230/60/3	8.0	10.2								
TWC36EC		460/60/3	4.1	5.3								
TWC36ECK		380/50/3	4.0	5.6								
TWC48C	48,000	230/60/1	13.0	19.1	23.4/594	N/A	13.3/338	18.8/478	23.9/607	1.25 in. FPT	1.00 in. FPT	TBD
TWC48CK		220/50/1	14.4	20.7								
TWC48DC		230/60/3	9.1	12.2								
TWC48EC		460/60/3	4.7	6.2								
TWC48ECK		380/50/3	4.9	7.0								
TWC60C	60,000	230/60/1	17.0	24.7	23.4/594	N/A	13.3/338	18.8/478	23.9/607	1.25 in. FPT	1.00 in. FPT	TBD
TWC60CK		220/50/1	21.5	30.1								
TWC60DC		230/60/3	10.5	14.4								
TWC60EC		460/60/3	6.2	8.2								
TWC60ECK		380/50/3	6.8	9.1								
TWC72C	72,000	230/60/1	23.3	32.5	23.4/594	N/A	13.3/338	18.8/478	23.9/607	1.25 in. FPT	1.00 in. FPT	TBD
TWC72DC		230/60/3	14.2	18.2								
TWC72EC		460/60/3	6.9	9.1								
TWC72ECK		380/50/3	9.0	11.7								

- ¹ Nominal capacity shown, as per ABYC guidelines of the compressor manufacturer's ratings.
- ² Nominal compressor voltage shown. Refer to chart at right for operational voltage ranges.
- ³ Preliminary data.
- ⁴ All dimensions ± 1/2 in. (13 mm).
- ⁵ Electric box is contained within the enclosure on TWC48-72 models.
- ⁶ All weights ± 10%.

COMPRESSOR ELECTRICAL POWER SPECS	
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



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