

CHCG Series Compact Modular Chillers

Compact Modules In An Enclosed Design



CHCG20Z shown with the electrical box mounted to the top (standard).

Marine Air's Chiller Compact series is ideal for larger boats in the 45-70 ft. (15-20 m) range. Available in capacities of 16,000 and 20,000 BTU/hr, the Chiller Compact uses circulated water in a closed loop in place of copper refrigerant tubes. The innovative, space-saving compact base of the Chiller Compact was designed to allow individual modules to be multiplexed to provide precise capacity requirements for any application.

The new CHCG series is engineered to maximize the impressive performance of R-410A, a proven and environmentally safe refrigerant. CHCG chillers feature the same footprint as the older-style CHCs, and the chilled water, seawater, and drain connection locations are also the same, making it an ideal "drop-in" replacement.

Featuring high-efficiency components that offer maximum performance, Chiller Compact units have hermetically sealed compressors and custom-fabricated condenser coils constructed of spiral-fluted cupronickel for maximum heat transfer and high corrosion resistance.

The improved sensor location provides better sensor response time. This makes the safeties and the operational controls more responsive and effective while still leaving space for all water connections to be double-hose clamped.

Additional improvements include no interior foam to facilitate easier servicability, and performance and efficiency is equal to or better than older style CHCs. The optional SmartStart™ soft starter can be included in the electrical box to reduce compressor in-rush current.

The electrical box comes installed on top of the unit. However, it has a short harness and hardware allowing the installer to easily move it to the rear of the unit if desired.



The electrical box can be mounted on the rear of the unit for better installation flexibility.



Extended drain pan collects and removes condensate that drips from water connections.



The electrical box has space for the optional SmartStart soft starter.

Key Benefits

- Compact footprint for installation flexibility
- Single modules can produce up to 20,000 BTU/hr; 24,000 BTU/hr models coming soon
- Up to six modules can be multiplexed for larger capacities
- Thermodynamically-matched components assure maximum performance
- High-efficiency rotary or scroll compressors
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant
- Spiral-fluted cupronickel condenser coil provides maximum heat transfer and corrosion resistance
- Includes hot-gas bypass for heat mode operation in water temperatures as low as 40°F
- Digital Diagnostic Controller (DDC) monitors and protects the system
- Charged, tested, and leak checked at the factory
- Meets or exceeds applicable ABYC and US Coast Guard regulations, CE directives, and general Air Conditioning and Refrigeration (ARI) standards
- Charge Guard protection provides sealed access ports, ensuring environmental protection and chiller module integrity

Special Options

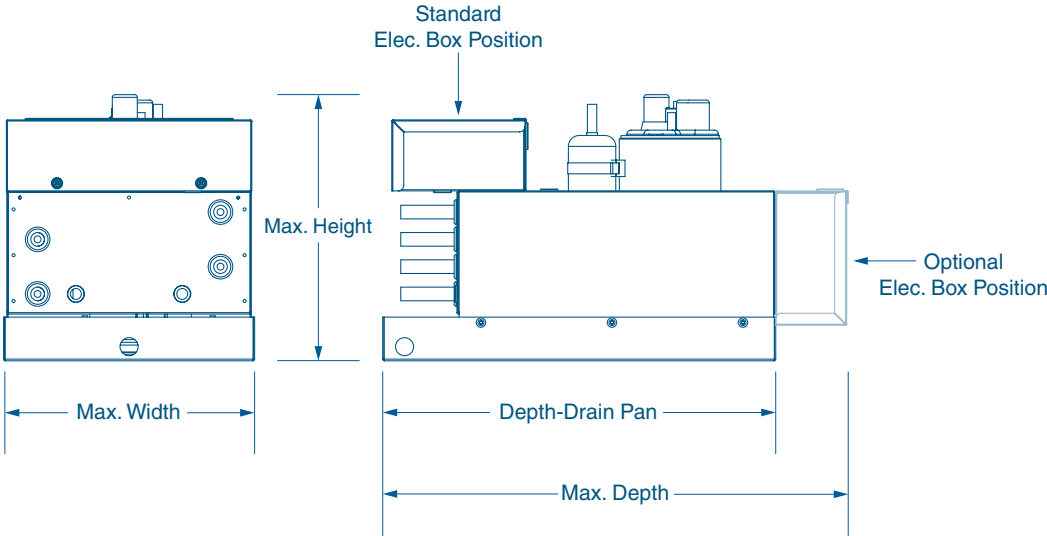
- SmartStart™ soft starter reduces compressor start-up amps by 65%

Specifications for CHCG Series Compact Modular Chillers

Model	CHCG16			CHCG20		CHCG24			
Capacity (BTU/h)	16000			20000		24000			
Voltage (V)	115	230	220	230	220	230	220	230	380
Cycle (Hz)/Phase (Ph)	60/1			50/1	50/1	60/1	50/1	60/3	50/3
Full Load Amps (FLA) Cool (A)	9.7	4.9	4.6	5.8	6.2	9.5	8.2	8.5	3.9
Full Load Amps (FLA) Heat (A)	14	5.8	5.9	7.9	8.7	12.1	11	9.9	4.6
Locked Rotor Amps (LRA) (A)	62	34	26	44	39	68	58	95	45
Max. Circuit Breaker (A)	40	15		20	35	40		45	20
Min. Circuit Ampacity (A)	23	11	12	14	22	25	23	25	13
Refrigerant Type	410A			410A		410A			
Max. Height (in/mm) ⁽¹⁾	13/331	13.25/318	13/331	13.75/415	14.5/356	16.5/420	15.75/400	16.38/417	
Max. Width (in/mm) ⁽²⁾⁽³⁾	21.3/542			21.3/542		21.3/542			
Width-Drain Pan (in/mm)	18/458			18/458		18/458			
Max. Depth (in/mm) ⁽²⁾⁽²⁾	11.5/293			13/331		13/331			
Drain Connection Size (in/mm)	½ /13			½ /13		½ /13			
Drain Connection Type	HB			HB		HB			
Seawater Flow (gpm/lpm)	4/15.2			5/18.1		6/22.8			
Seawater Pressure Drop (PSI/kPa)	1.6/11.1			3.6/24.9	3.2/22.1	4.6/31.8			
Seawater Inlet Connection (in/mm)	⅝ /16			⅝ /16		⅝ /16			
Chilled Water Flow (gpm/lpm)	4/15.2			5/18.1		6/22.8			
Chilled Water Pressure Drop (PSI/kPa)	2/13.8			3.6/24.9	3.2/22.1	7.4/51.1			
Chilled Water Connection Size (in/mm)	⅝ /16			⅝ /16		⅝ /16			
Net Weight (lbs/kg)	53.5/24.3	55.6/25.3	55/25	71.3/32.4	74.4/33.8	92.5/42	92.9/42.2	107.9/49	108.5/49.3
Gross Weight (lbs/kg)	74/33.6	75.5/34.3	75/34.1	91.25/41.4	95/43.1	115/52.2		130/59	
Estimated Availability	Now			Now	Q1 2016	Now	Q3 2015	Now	

¹ All dimensions ± 0.25 in. (6 mm).
² Width when the electrical box is mounted to the side of the unit.

Dimensions



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