

Chiller Compact

Flexibility In Space, Usage & Layout



CHC16RZ

Marine Air's revolutionary Chiller Compact system is ideal for larger boats in the 45-70' (15-20 m) range. Available in capacities ranging from 16,000 to 24,000 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.

Featuring high efficiency components offering maximum performance, the Chiller Compact uses rotary or scroll compressors which are quieter and consume less power. A custom-fabricated condenser coil is constructed of spiral-fluted cupronickel to provide maximum heat transfer and high corrosion resistance.

The environmentally friendly, hermetically-sealed Chiller Compact units use closed-refrigerant circuits, pre-charged with refrigerant. No additional refrigerant is required during the installation or at initial start-up and operation of the system.

Key Benefits

- Compact base design allows flexibility in space, usage and layouts.
- Individual modules can be multiplexed to provide precise capacity requirements for any application.
- Thermodynamically matched components assure maximum performance.
- Rotary and Scroll compressors provide high efficiency performance with less power consumption and quieter operation. The cylindrical shaped compressor allows for a compact design.
- Fewer moving parts ensure higher reliability.
- Condenser coil is custom fabricated of spiral fluted cupronickel to provide maximum heat transfer and high corrosion resistance.
- Exclusive Digital Diagnostic Controller (DDC) with LED display monitors and protects the system through aquastats, high and low pressure switches, timers, freeze controls and high limit switches.
- Each unit is evacuated to below 500 microns, pre-charged, hermetically sealed, load tested and electronically calibrated at the factory.
- Charge Guard® protection provides sealed access ports, ensuring environmental protection and chiller module integrity.
- Meet or exceed applicable ABYC and U.S. Coast Guard regulations, CE Directives and general Air Conditioning and Refrigeration Industry (ARI) standards.

Technical Specifications for Chiller Compact

Model ⁽¹⁾	CHC16RC (Z, Z50)			CHC20RC (Z, Z50)			CHC24SRC (Z, Z50)							
Capacity Cool/RC (BTU/hr)	16,000/17,600			20,000/22,000			24,000/26,400							
Voltage (VAC)	115	230	220	230	220	220	230	220	230	220	380	230	220	380
Cycle (Hz)/Phase (Ph)	60/1	60/1	50/1	60/1	50/1	50/1	60/1	50/1	60/3	50/3	50/3	60/1	50/1	50/3
Full Load Amps (FLA) Cool	8.0	3.8	4.3	5.3	6.1	6.3	6.6	7.5	4.7	4.7	2.7	6.5	7.5	3.1
Full Load Amps (FLA) Heat	11.9	5.6	6.2	7.6	8.4	9.1	8.9	10.4	6.0	7.1	3.5	9.6	10.4	4.1
Locked Rotor Amps (Comp)	67.0	29.0	32.0	45.0	52.0	52.0	54.0	56.0	45.0	56.0	26.0	56.0	56.0	32.0
Kilo-Volt-Amps (KVA)	1.4	1.3	10.4	1.7	1.8	2.0	2.0	2.3	2.4	2.7	2.3	2.2	2.3	2.7
Max. Circuit Breaker (Amps)	35.0	20.0	20.0	25.0	30.0	30.0	35.0	40.0	20.0	25.0	10.0	35.0	40.0	15.0
Min. Circuit Ampacity (Amps)	22.0	12.0	13.0	17.0	17.0	17.0	20.0	23.0	14.0	15.0	8.0	20.0	25.0	9.0
R-407C Refrigerant (oz/g)	10/283			N/A	12/340		N/A	N/A	N/A			13/367	18/510	
Net Weight 60Hz [50 Hz] (lb/kg)	52/23.6 [58/26.3]			65/29.5 [84/38.1]			84/38.1 [101/45.8]							
Gross Weight 60Hz [50 Hz] (lb/kg)	62/28.1 [68/30.8]			75/34.0 [94/42.6]			94/42.6 [111/50.3]							
Dimensions ⁽²⁾	All CHC16 Units			60Hz CHC20 ⁽³⁾			50Hz CHC20 & All CHC24							
Height (in/mm)	12.75/324			13.50/343			15.75/400							
Width (in/mm)	11.50/292			11.50/292			13.00/330							
Depth (in/mm)	18.00/457			18.00/457			18.00/457							

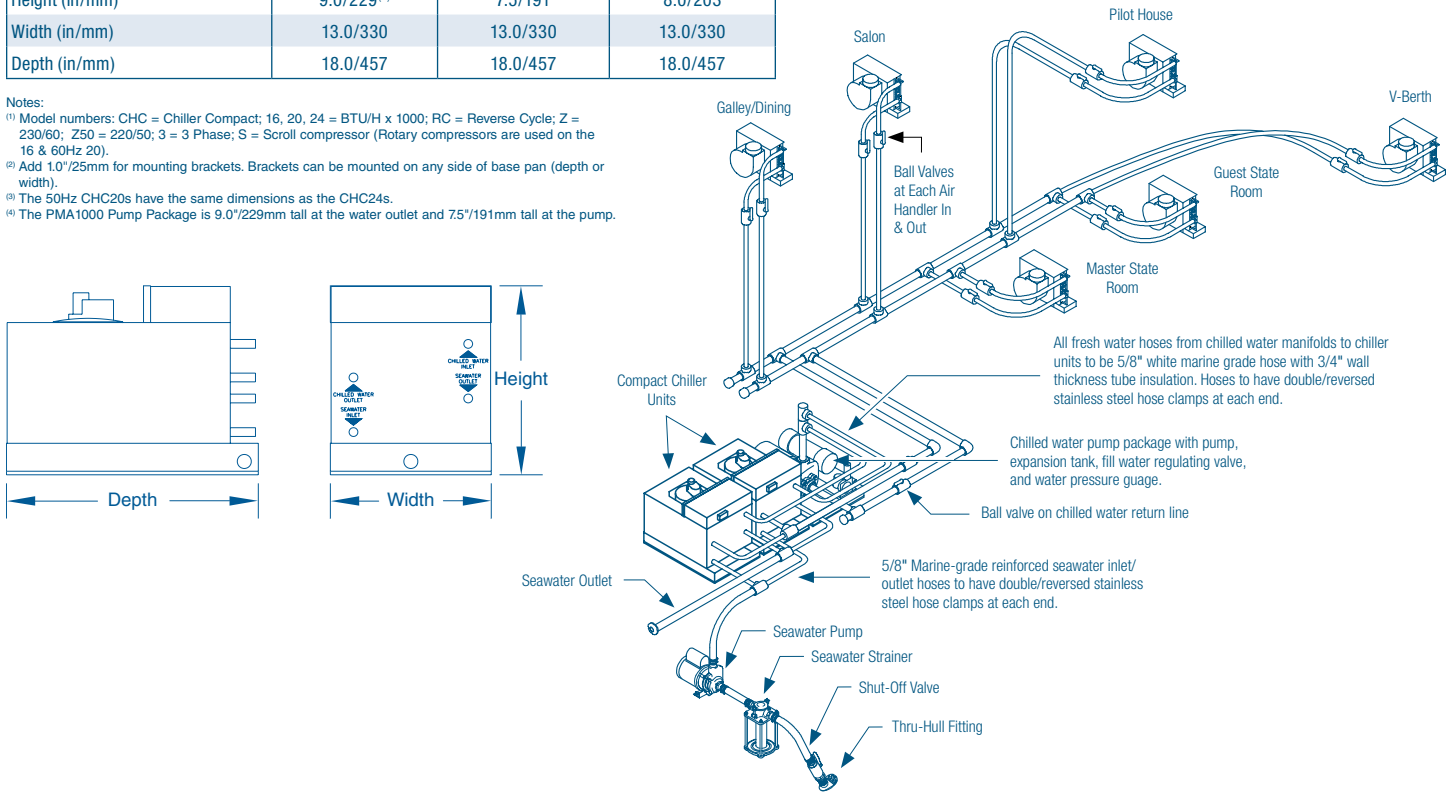
Advantages of a Marine Air Chiller System

- No refrigeration line sets and mechanical flare fittings which are subject to leaking refrigerant over time.
- Environmentally friendly hermetically sealed modules.
- No EPA certified technician required for startup or field installation.
- Flexible hose is easier to install and insulate compared to refrigerant line sets.
- Provide full cooling capacity to areas which require fast pull downs from hot starts.
- Most applications result in fewer compressors, which increases reliability, reduces weight and conserves power.

CHC Pump Packages ⁽¹⁾	PMA1000	P120	P700
Voltage (VAC)	115/230	115/230	115/230
Amps (60Hz/1Ph)	2.1/1.0	4.9/3.5	7.2/3.6
Net Weight (lb/kg)	24/10.9	39/17.7	40/18.1
Gross Weight (lb/kg)	30/13.6	45/20.4	46/20.9
Height (in/mm)	9.0/229 ⁽⁴⁾	7.5/191	8.0/203
Width (in/mm)	13.0/330	13.0/330	13.0/330
Depth (in/mm)	18.0/457	18.0/457	18.0/457

Notes:
⁽¹⁾ Model numbers: CHC = Chiller Compact; 16, 20, 24 = BTU/H x 1000; RC = Reverse Cycle; Z = 230/60; Z50 = 220/50; 3 = 3 Phase; S = Scroll compressor (Rotary compressors are used on the 16 & 60Hz 20).
⁽²⁾ Add 1.0"/25mm for mounting brackets. Brackets can be mounted on any side of base pan (depth or width).
⁽³⁾ The 50Hz CHC20s have the same dimensions as the CHC24s.
⁽⁴⁾ The PMA1000 Pump Package is 9.0"/229mm tall at the water outlet and 7.5"/191mm tall at the pump.

Typical Installation of a Chiller Compact System



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