

FEATURES

High Efficiency Components

- Hermetically sealed, high efficiency compressors provide a significant reduction in amp draw.
- Copper encased cupronickel condenser coils are highly resistant to corrosion from continuous seawater flow.
- Expansion valve and check valve assemblies control load balancing during unit operation.
- Pressure switches, thermal overloads and start components afford constant system protection and proper operation.

Symmetrical Base Design

- Provides optimum space efficiency and installation flexibility. Allows ease in handling and positioning.

Electrical Box

- Moisture resistant design, corrosion resistant enclosure. Remote mounting capability. CSD units contain the new Passport I/O circuit board.

Integral Base/Drain Pan

- Complete condensation removal with a built-in hose barb. Two sets of vibration isolators ensure quiet operation. Provides for internal fastening within unit footprint.

Quality Assurance

- Each unit is pre-charged, test run in all operating modes and leak checked at the factory prior to shipping.
- Charge Guard[®] protection provides sealed access ports, ensuring environmental protection and system integrity.
- All units meet or exceed applicable ABYC and U.S. Coast Guard regulations, CE directives and general Air Conditioning and Refrigeration Industry (ARI) standards.



SPECIFICATIONS

Model ^{(1) (2)}	CS*24R				CS*30R				CS*36R				CS*48R				CS*60R																							
Capacity (BTU/Hr)	24,000								30,000								36,000								48,000								60,000							
Voltage (VAC) ⁽³⁾	208-230	208-230	220-240	380-415	208-230	208-230	220-240	220-240	208-230	208-230	220-240	220-240	208-230	208-230	220-240	380-415	208-230	208-230	220-240	380-415	208-230	208-230	220-240	380-415	208-230	208-230	220-240	380-415	208-230	208-230	220-240	380-415								
Cycle (Hz)/Phase (Ph) ⁽⁴⁾	60/1	60/3	50/1	50/3	60/1	60/3	50/1	50/1	60/1	60/3	50/1	50/3	60/1	60/3	50/1	50/3	60/1	60/3	50/1	50/3	60/1	60/3	50/1	50/3	60/1	60/3	50/1	50/3	60/1	60/3	50/1	50/3								
Refrigerant R-22 or 417A ⁽⁵⁾	either	R-22	either	R-22	either	R-22	R-22	417A	R-22	R-22	either	R-22	either	R-22	either	R-22	417A	R-22	R-22	R-22	417A	R-22	R-22	R-22	417A	R-22	R-22	R-22	417A	R-22	R-22	R-22								
Full Load Amps (FLA) cool	7.3	5.4	7.8	3.1	8.4	6.2	9.8	9.8	10.5	6.9	12.0	4.3	13.1	8.2	22.3	5.4	17.2	22.0	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1									
Full Load Amps (FLA) heat	9.0	6.4	9.9	3.7	10.9	7.4	12.1	11.8	12.9	8.3	14.6	5.0	15.9	9.6	24.8	6.3	22.0	24.8	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4									
Locked Rotor Amps (Comp) ⁽⁶⁾	57.0	48.0	55.0	30.0	66.0	48.0	85.1	65.0	76.0	60.0	87.0	35.0	87.0	70.0	132.2	45.0	132.2	138.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0									
K.V.A. (Kilo-Volt-Amps) heat	2.1	2.5	2.4	2.7	2.5	2.9	2.9	2.8	3.0	3.3	3.5	3.6	3.7	3.8	6.0	4.5	5.1	6.0	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9									
Max. Circuit Breaker (Amps)	35	25	35	10	45	30	50	40	50	30	60	15	60	40	80	30	80	80	25	25	25	25	25	25	25	25	25	25	25	25	25									
Min. Circuit Ampacity (Amps)	22	15	22	8	26	17	29	25	29	18	35	11	35	23	46	17	46	50	15	15	15	15	15	15	15	15	15	15	15	15	15									
Refrigerant R-22 (oz/kg)	46/1.3	46/1.3	46/1.3	46/1.3	50/1.4	50/1.4	50/1.4	n/a	56/1.6	56/1.6	56/1.6	56/1.6	76/2.2	76/2.2	76/2.2	76/2.2	n/a	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3	80/2.3									
Refrigerant 417A (oz/kg)	46/1.3	n/a	46/1.3	n/a	50/1.4	n/a	n/a	50/1.4	n/a	n/a	56/1.6	n/a	76/2.2	n/a	76/2.2	n/a	80/2.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a									
Base Valves (disch x suction)	3/8" x 5/8"				3/8" x 3/4"				3/8" x 3/4"				3/8" x 3/4"				5/8" x 3/4"																							
Unit Dimensions (in/mm)																																								
Height ⁽⁷⁾	21.50/546								21.50/546								25.50/648								25.50/648								28.80/732							
Width	16.00/406								16.00/406								16.00/406								16.00/406								12.00/305							
Depth	16.00/406								16.00/406								16.00/406								16.00/406								24.00/610							
Net Weight (lbs/kg) ⁽⁸⁾	115/52.2								127/57.6								135/61.2								145/65.8								173/78.5							
Gross Weight (lbs/kg) ⁽⁸⁾	120/54.4								132/59.9								140/63.5								150/68.0								181/81.6							

(1) BTU and electrical data are based on a 45° F/7.2° C evaporator and 100° F/37.8° C condenser in cool mode, and a 45° F/7.2° C evaporator and 130° F/54.4° C condenser in heat mode.

(2) Add a 'Z' or 'Z50' after the 'K' in the 24K-60K model numbers to denote 208-230V/60Hz or 240-220V/50Hz respectively.

(3) Electrical specifications are for reverse cycle units, straight cool units might use smaller circuit breakers.

(4) Some standard 60Hz units may be operated at 50Hz, at reduced voltages. However, there will be a loss in capacity, and the amp draw may be higher or lower than listed.

Dedicated 50Hz units are available that provide full capacity, but these can not be operated at 60Hz. For more information regarding compressor voltages, refer to field notice FN#192-B3 on Dometic Corporation - Environmental Systems' Customer News & Information website.

(5) The designation of "either" indicates that the unit is available in both types of refrigerant and has the same electrical data in either case.

(6) Compressor locked rotor amps (LRA) will vary with voltage and load, and may be higher or lower than listed.

(7) Electrical box height is 3.6"/91mm; subtract that from unit height if box will be remotely mounted.

(8) Weights are based on 60Hz/1Ph equipment.

*D = Elite or Passport I/O Control (CSD), M = Mechanical Control (CSM)

Installation Guidelines for Multi Ton Condensing Units

When choosing the proper model **Central System Multi Ton Condensing Unit**, primary consideration should be given to calculated BTU loads and available power supply. Special consideration should be given in determining the reverse cycle heating capacities under anticipated conditions. Reverse cycle operation is affected by the seawater temperature. As it decreases, the units heat transfer capacity also decreases and proportionately affects the output of warm air. It is not recommended that the unit be operated in the heat cycle with water temperatures below 40°F/4.4°C.

The location of the condensing unit should be dry and accessible for service, and provide the most direct routing of refrigerant line sets relative to the evaporator location(s). The vibration isolated condensing unit should be secured to a horizontal surface that is designed for the weight of the unit and torsion loads from the vessel's movement. The remote electrical box may be fastened to a bulkhead using the hardware provided.

Refrigerant-grade copper tubing should be properly sized for the specific application. The suction line should be insulated with approved closed cell foam jackets (i.e., Rubatex 1/4" wall thickness). The refrigerant line ends should remain capped until the actual connections are made to prevent contamination. Tube benders are recommended to prevent kinks in the tubing, which will adversely affect the performance and longevity of the system.

When using multiple evaporators with one condensing unit, locate all unions and tee fittings properly in areas accessible for service. Use approved flaring techniques and refrigerant grade components for all connections.

Insulate fittings using insulation tape (only after system has been leak-checked). Wrap fittings sufficiently to equal R-value of tube insulation.

Reinforced marine grade hose should be used for the seawater circuit. All hose fittings should be double clamped. The hose should be routed upward from

the thru hull intake to the condensing unit to prevent air locking and provide draining of the seawater circuit. The condensation drain should be connected and routed downward to a proper sump or overboard discharge.

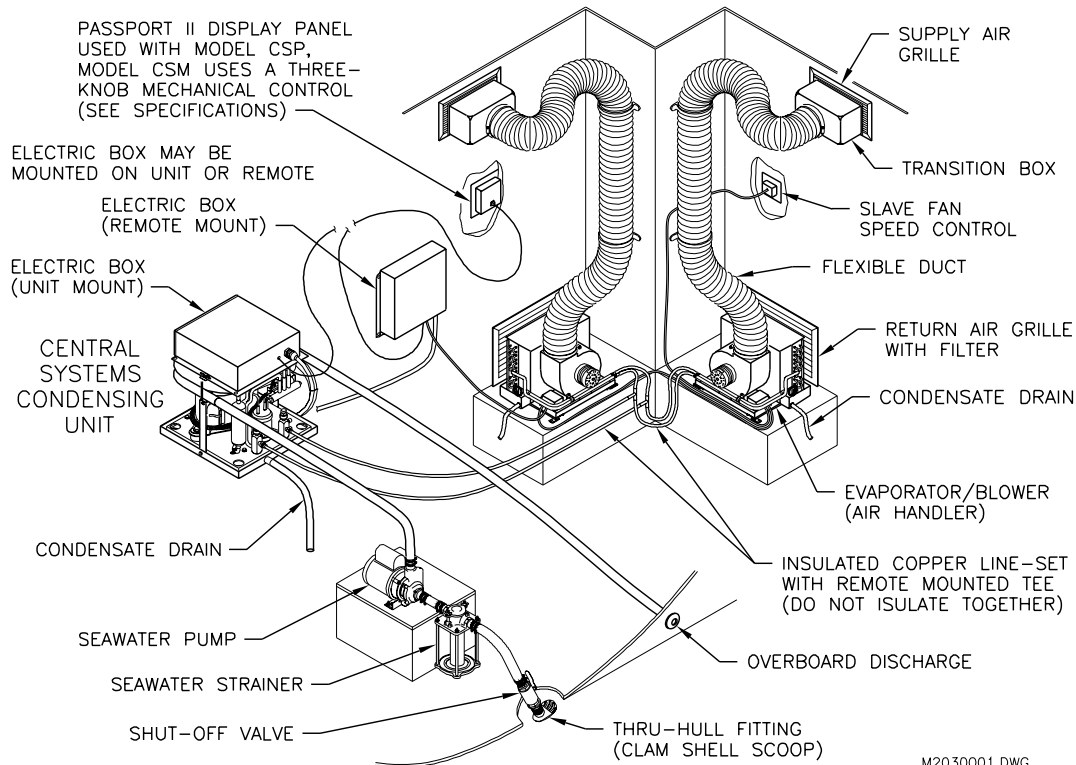
All circuit breakers and wire gauge must be sized according to marine design standards. Only stranded tinned copper wire should be used. All equipment must be properly grounded.

The installed line sets and evaporator(s) must be evacuated to remove air from these components and prevent moisture acidity formation. All connections should be properly leak-checked upon releasing the refrigerant charge from the condensing unit into the system. If the system is to be opened for any reason at this point or for future service, the refrigerant charge must be "pumped down" back into the condensing unit or recovered to prevent it from escaping into the atmosphere.

Refer to other individual component sheets for specifications and details of evaporators, controls and related parts.

In keeping with regulations set forth by the EPA, only certified technicians should perform service on, or make adjustments to, the refrigerant circuit.

Never install your air conditioner air handler in bilge or engine room areas. Insure that the selected location is sealed from direct access to bilge and/or engine room vapors. Do not terminate condensate drain lines within three (3) feet of any outlet of engine or generator exhaust systems, nor in a compartment housing an engine or generator, nor in a bilge (vapors can travel up the drain line), unless the drain is connected properly to a sealed condensate or shower sump pump. Failure to comply may allow bilge or engine room vapors to mix with the air conditioners return air and contaminate living areas.



In the interest of product improvement, specifications and design as outlined herein are subject to change without prior notice.

Dometic Corporation

Environmental Systems

2000 N. Andrews Ave. Ext. • Pompano Beach, FL 33069-1497 USA

Phone: 954-973-2477 • Facsimile: 954-979-4414

P.O. Box 15299 • Richmond, VA 23227-0699 USA

Phone: 804-746-1313 • Facsimile: 804-746-7248

Fleets Industrial Estate • 26 Willis Way • Poole, Dorset BH15 3SU, England

Phone: +44(0)870 3306101 • Facsimile: +44(0)870 3306102

Email: sales@marineair.com • Website: www.marineair.com

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