

# Multi-Ton Condensing Units

## With High Efficiency Compressors



CSD36R  
condensing  
unit shown

**The CS series of multi-ton condensing units provide heating and cooling ability in a highly efficient package.** The hermetically sealed, high-efficiency compressor reduces amp draw, while pressure switches, thermal-overload and start components provide constant system protection and proper operation. In addition, the expansion device and check-valve assemblies control load balancing during operation. The system's copper-encased cupronickel condenser coils are highly resistant to corrosion that can be caused by continuous seawater flow.

The symmetrical base design provides optimum space efficiency and installation flexibility for easy handling and positioning of the unit. A built-in hose barb aids in complete condensate removal from the drain pan. Two sets of vibration isolators ensure quiet operation.

The electrical box can be mounted remotely. It has a moisture-resistant design with a corrosion-resistant enclosure. CS Digital (CSD) units include the Passport I/O circuit board.

As with all Marine Air products, quality is assured. Each unit is pre-charged, test-run in all operating modes, and leak-checked at the factory prior to shipping. All surface components are constructed of or coated with materials resistant to fire and corrosion. Charge Guard® protection provides sealed access ports that ensure environmental protection and system integrity. All CS condensing units meet or exceed applicable ABYC and US Coast Guard regulations, CE directives, and general Air Conditioning and Refrigeration Industry (ARI) standards.

### Key Benefits

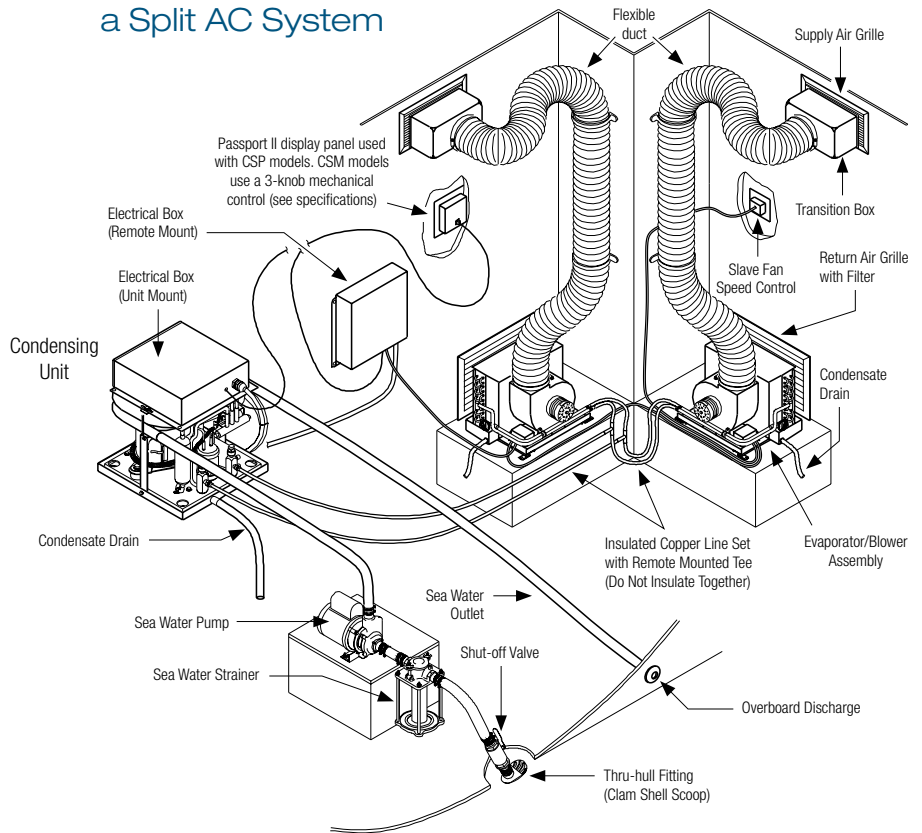
- Models available in 24K, 30K, 36K, 48K, and 60K BTU/Hr (60Hz and 50Hz).
- High-efficiency system with reduced amp draw.
- Valves and switches provide load balancing and constant system protection.
- Symmetrical base for installation flexibility and ease of handling.
- Remote-mountable, moisture-resistant and corrosion-resistant electrical box.
- Passport I/O circuit board included in electrical box of CSD systems.
- Factory pre-charged, tested, and leak-checked prior to shipping.
- Meets or exceeds all applicable standards and regulations

# Technical Specifications for Multi-Ton Condensing Units

Model <sup>(1)(2)</sup>	CS*24R				CS*30R				CS*36R				CS*48R				CS*60R																							
Capacity in BTU/hr	24,000								30,000								36,000								48,000								60,000							
Voltage (VAC) <sup>(3)</sup>	208-230	208-230	220-240	380-415	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	220-240	380-415	440-460																
Cycle (Hz)/Phase (Ph) <sup>(4)</sup>	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	50/1	60/3																	
R-22 Refrigerant (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																					
417A Refrigerant (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																					
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																					
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																					
Locked Rotor Amps (Comp) <sup>(5)</sup>	57.0	48.0	55.0	30.0	66.0	48.0	85.1	65.0	73.0	60.0	87.0	35.0	87.0	70.0	132.2	45.0	132.2	138.0	60.0																					
Kilo-Volt-Amps (KVA) 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	3.7	6.0	4.5	5.1	6.0	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																					
Min. Circuit Ampacity (Amps)	22	15	22	8	26	17	29	25	29	18	35	11	35	23	46	17	46	50	15																					
Base Valves (Disch. X Suct.)	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"																							
Height (in/mm) <sup>(6)</sup>	21.0/546				21.50/546				25.50/648				25.50/648				28.0/732																							
Width (in/mm)	16.00/406				16.00/406				16.00/406				16.00/406				24.00/610																							
Depth (in/mm)	16.00/406				16.00/406				16.00/406				16.00/406				24.00/610																							
Net Weight (lb/kg) <sup>(7)</sup>	115/52.2				127/57.6				135/61.2				145/65.8				173/8.5																							
Gross Weight (lb/kg) <sup>(7)</sup>	120/54.4				132/59.9				140/63.5				150/68.0				181/81.6																							

- Notes:
- <sup>(1)</sup> 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.
  - <sup>(2)</sup> Add a 'Z' or 'Z50' after the 'K' in the 24K-60K model numbers to denote 208-230V/60Hz or 240-220V/50Hz respectively.
  - <sup>(3)</sup> Electrical specifications are for reverse cycle units, straight cool units might use smaller circuit breakers.
  - <sup>(4)</sup> 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 cannot 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.
  - <sup>(5)</sup> Compressor locked rotor amps (LRA) will vary with voltage and load, and may be higher or lower than listed.
  - <sup>(6)</sup> Electrical box height is 3.6"/91mm; subtract that from unit height if box will be remotely mounted.
  - <sup>(7)</sup> Weights are based on 60Hz/1Ph equipment.
- \*D = Elite or Passport I/O Control (CSD), M = Mechanical Control (CSM)

## Typical Installation of a Split AC System



**DOMETIC CORPORATION, ENVIRONMENTAL DIVISION**  
 2000 N. Andrews Ave. Ext. | Pompano Beach, FL 33069 USA | 954-973-2477 | Fax 954-979-4414  
 P.O. Box 15299 | Richmond, VA 23227 USA | 804-746-1313 | Fax 804-746-7248  
 www.DometicEnviro.com | sales@DometicEnviro.com

**United States & Canada Service Only:**  
 8:00 AM to 5:00 PM Eastern Time | Marine Air AC Products: 954-973-2477  
 Cruisair AC Products: 804-746-1313

**24/7 AC SERVICE HOTLINE: 5:00PM to 8:00 AM: 888-440-4494**

**International Sales & Service:**  
 Europe & the Middle East: Call +44(0)870-330-6101  
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Dealer:

