R-410A Green Gas

Emerald Series (6K-16K) Condensers

Innovative Chassis Conquers Installation Challenges



After listening to boat builders, global service teams and boat owners, Dometic engineers designed the innovative Emerald Condenser series to harness and maximize the impressive performance of R-410A refrigerant while meeting all international clean air standards.

The increase in BTU capacity is due primarily to the improved refrigerant metering design. The bi-flow thermal expansion valve for cooling provides up to a 14% increase in system capacity, which, when combined with a separate metering system for heating, attains an increase of up to 10% in heating performance. The amperage reduction of up to 27% is due to the more efficient design of the rotary compressor and properly sized refrigerant components.

The compact design of the Emerald series incorporates built-in vibration-isolating mounts, two large drain connections and numerous mounting options for installation to a smooth deck, stringer or existing rack. The incorporated lifting handles and smooth bottom allows for easy lifting and quick placement of the unit. The molded composite no-rust drain pan is shaped to provide positive drainage even when the boat heaves and rolls. The amount of standing water in the drain pan is reduced by up to 85%, which is 8x times less than a typical drain pan.

Emerald condensers can be installed quickly and easily. The drain, seawater and refrigerant connections are conveniently located to conquer installation challenges thus reducing installation time by up to fifteen minutes. The electrical box can be easily removed and located up to 5 ft. (1.5 m) away, further reducing the size of the unit while making the system more accessible. The reversing valve, pressure switches and service ports are centrally located, high on the unit for access from any side.



The reversing valve, pressure switches, and service ports are centrally located for easy maintenance access from any side.



Vibration-isolating compressor mounting system reduces noise and vibration.

Key Benefits

- Up to 17.5% increase in BTU capacity
- Up to 41% amperage reduction
- Up to 32% reduced start-up amps
- Up to 16% smaller
- Up to 25% lighter
- Up to 85% reduction in standing water in the drain pan
- Up to 15 minutes faster to install
- Square chassis for easy installation in tight spaces
- Three mounting options adapt to installation environments
- Rust-free composite drain pan
- Reconfigurable chassis allows optimal drain connections
- Compressor vibration-isolation mounts minimize noise and vibration
- Built-in refrigerant line filter drier reduces installation time and protects the compressor from moisture and contaminants
- Reversing valve, pressure switches, and service ports centrally located for easy maintenance access from any side
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant

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Specifications for Emerald Series (6K-16K) Condensers

Model [1]	E*6			E*8			E*10			E*12			E*16		
Capacity (BTU/h) [2]	6000			8000			10000			12000			16000		
Voltage (V)	115	230	240	115	230	240	115	230	240	115	230	240	115	230	240
Cycle (Hz) [3] /Phase (Ph)	60/1		50/1	60/1		50/1	60/1		50/1	60/1		50/1	60/1		50/1
Full Load Amps (FLA) Cool (A)	3.8	1.8	2.4	4.2	2.4		5.6	2.6	2.8	7.6	3.4	2.79	8.8	4.3	3.9
Full Load Amps (FLA) Heat (A)	5.1	2.44	3.3	5.8	3.3		7.7	3.6	3.8	9.8	4.5	3.81	12	5.8	5.3
Locked Rotor Amps (LRA) (A)	36	17.5	17.7	36	17.7		42	22	21	58	28	21	62	34	22
Max. Circuit Breaker (A)	15	10		15	10		25	15	10	30	15	10	40	15	
Min. Circuit Ampacity (A)	11	7	6	11	6		15	9	8	18	10	8	23	11	10
Refrigerant Type	410A			410A			410A			410A			410A		
Water Flow (gpm/lpm)	1.5/5.7			2/7.6			2.5/9.5			3/11.4			4/15.2		
Max. Height (in/mm) [4]	12/305			12/305			13/331			13/331			14.1/359		
Width (in/mm) [5]	13.3/338			13.3/338			13.3/338			13.3/338			13.3/338		
Depth-Without Elec. Box (in/mm) [5]	13.3/338			13.3/338			13.3/338			13.3/338			13.3/338		
Depth-With Elec. Box (in/mm) [5]	15.1/384			15.1/384			15.1/384			15.1/384			15.1/384		
Seawater Inlet Connection (in/mm)	⅝/16			⅝/16			⅜/16			⅜/16			⅝/16		
Seawater Connection Type	cupranickle tube			cupranickle tube			cupranickle tube			cupranickle tube			cupranickle tube		
Refrigerant Line Connection-Discharge (in)	¼			¼			¼			¼			¼		
Refrigerant Line Connection-Suction (in)	⅜			⅜			⅜			⅜			½		
Net Weight (lbs/kg) [4]	43/19.6		42.05/19.1	43/19.6			45/20.5	44.25/20.1	45/20.5	47/21.4			49/22.3	50.5/22.1	50/22.7
Gross Weight (lbs/kg) [4]	50/22.7		49.5/22.5	50/22.7			52/23.6	50.5/22.1	52/23.6	54/24.5			56/25.5	57/25.9	56/25.5
Height-Electrical Box (in/mm)	8.75/223			8.75/223			8.75/223			8.75/223			8.75/223		
Width-Electrical Box (in/mm)	6.5/166			6.5/166			6.5/166			6.5/166			6.5/166		
Depth-Electrical Box (in/mm)	2.63/67			2.63/67			2.63/67			2.63/67			2.63/67		

[1] Cruisair customers, replace '*' in the model name with 'Q' for Q-Logic digital control system, or 'M' for electro-mechanical control. Marine Air customers, replace '*' in the model name with 'D' for Passport I/O digital control system, or 'M' for electro-mechanical control.

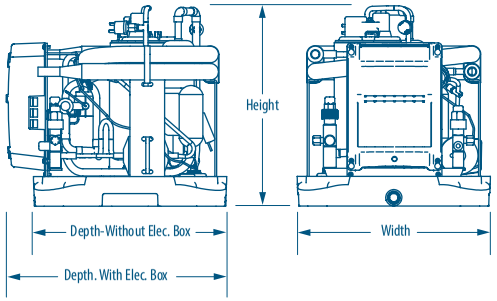
[2] BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat mode.

[3] 60Hz units must not operate at 50Hz and 50Hz units must not operate at 60Hz unless data plate says otherwise.

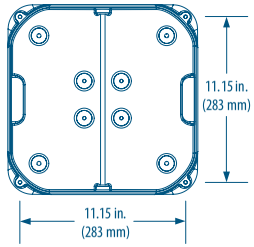
[4] All weights ± 10%

[5] All dimensions ± 10 mm

Dimensions



Top View of Drain Pan To Show Mounting Hole Locations



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