

R Series (5K-16K) Condensing Units

Seawater-Cooled Condensers With Reverse-Cycle Heating



R Type remote condensing units are the next generation of seawater-cooled, reverse-cycle heat pumps for cooling and heating in marine applications. Small R Type units are available in capacities from 5,000 to 16,000 BTU/hr.

These condensing units can be installed with up to two Cruisair cooling units, where the total capacity is equal to the condensing unit capacity. In the cooling mode, full performance is available in seawater up to 90°F (32°C). In reverse-cycle heating, they will provide heat in seawater as low as 40°F (4.4°C).

R Type condensers have a number of improvements over the original "F" type condensing units. A one-piece chassis/pan has a smaller footprint, with two 1/2 in. FPT drain connections. New hold-down brackets secure all four corners and allow for easier installation and removal. The one-piece electrical box with 3 ft. (0.9 m) cable can be remotely mounted. (RN models have a secondary box). Additional service ports have been added for ease of charging and servicing. The R type unit is designed as a drop-in for the older F and J type with few modifications.

Type R models are designed for installation in the vessel's engine room or other mechanical space. It is not affected by moisture, normal vibration, or ambient temperatures up to 140°F (60°C). No ventilation is required.

Three different models are available, depending on what type of control is desired. "R" use the SA3 3-knob rotary switch assembly, "RX" is controlled by the SMX II microprocessor, and "RN" uses the SMX Net. SMX models include the respective SMX II or SMX Net power/logic boards. In addition, an SMXir or the new SMXht keypad/ display, a CXP connecting cable, and a TSEP temperature sensor must be purchased separately. If networking RN units, CNP network cables are also needed.

A seawater cooling system, with pump, scoop type through-hull, seacock, strainer, and overboard discharge, is also required.

Key Benefits

- Service ports on refrigerant lines and base valves.
- Compressor vibration-isolation mounts minimize noise and vibration.
- Condensate drain pan with front and rear drain stems.
- Corner mounting brackets for easier installation.
- High-pressure switch (SMX control models also include low-pressure switch).
- Electrical box can be mounted remotely.
- Environmentally safe R-417A refrigerant.
- Ignition protected.
- Additional vibration isolation kit available.
- Charged, tested, and leak checked at the factory.

Cruisair[®]

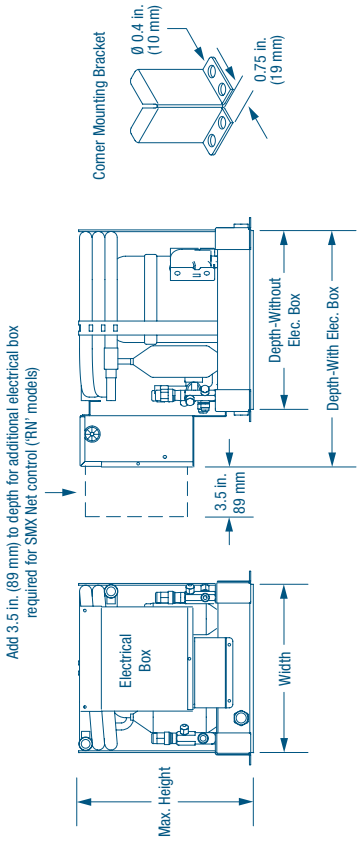
by Dometic GROUP

Specifications for R Series (5K-16K) Condensing Units

| Model ⁽¹⁾⁽²⁾ | R*5 | R*7 | R*10 | R*12 | R*16 |
|---|-----------|-----------|-----------|-----------|-----------|
| Capacity (BTU/h) | 5000 | 7000 | 10000 | 12000 | 16000 |
| Voltage (V) ⁽³⁾ | 115 | 115 | 230 | 240 | 230 |
| Cycle (Hz)/Phase (Ph) | 60/1 | 60/1 | 50/1 | 50/1 | 60/1 |
| Full Load Amps (ELA) Cool (A) ⁽⁴⁾ | 5 | 7 | 3.3 | 3 | 6.1 |
| Full Load Amps (ELA) Heat (A) | 6.2 | 7.7 | 4 | 3.7 | 8.2 |
| Locked Rotor Amps (LRA) (A) | 28 | 34 | 20 | 16 | 47 |
| Max. Circuit Breaker (A) | 28 | 34 | 20 | 16 | 47 |
| Min. Circuit Ampacity (A) | 7 | 13 | 7 | 11 | 18 |
| Refrigerant Type | R417A | R417A | R417A | R417A | R417A |
| Max. Height (in/mm) | 12.5/318 | 12.5/318 | 12.5/318 | 12.5/318 | 12.5/318 |
| Width (in/mm) | 12.2/310 | 12.2/310 | 12.2/310 | 12.2/310 | 12.2/310 |
| Depth-With Elec. Box (in/mm) | 17.1/435 | 17.1/435 | 17.1/435 | 17.1/435 | 17.1/435 |
| Depth-Without Elec. Box (in/mm) | 13.6/346 | 13.6/346 | 13.6/346 | 13.6/346 | 13.6/346 |
| Seawater Connection (in/mm) | 3/8/16 | 3/8/16 | 3/8/16 | 3/8/16 | 3/8/16 |
| Refrigerant Line Connection-Discharge (in/mm) | 1/4/7 | 1/4/7 | 1/4/7 | 1/4/7 | 1/4/7 |
| Refrigerant Line Connection-Suction (in/mm) | 3/8/10 | 3/8/10 | 3/8/10 | 3/8/10 | 3/8/13 |
| Height-Electrical Box (in/mm) | 11.12/283 | 11.12/283 | 11.12/283 | 11.12/283 | 11.12/283 |
| Width-Electrical Box (in/mm) ⁽⁵⁾ | 7.56/193 | 7.56/193 | 7.56/193 | 7.56/193 | 7.56/193 |
| Depth-Electrical Box (in/mm) ⁽⁶⁾ | 4.84/123 | 4.84/123 | 4.84/123 | 4.84/123 | 4.84/123 |

¹ * is the designator for type of control. For mechanical controls, replace "M" with "W". For SMX Net replace with "N" indicate "Y" for SMX II and use "U" for Q-Logic.
² For a specific voltage, add the following after the capacity designator: "C" for 230V/60Hz/1-Phase; "CK" for 220-240/50Hz/1-Phase; "D" for 230V/60Hz/3-Phase; "E" for 460V/60Hz/3-Phase; and "ECK" for 380V/50Hz/3-Phase. Adding nothing will indicate 115V/60Hz/1-Phase (not available for multi-ton models).
³ 115V, 230V, and 440V/60Hz equipment can be operated at 100V, 200V, or 380V, respectively, in a 50Hz environment but at a 17% decrease in capacity. Full-rated capacity can be obtained by specifying "Cruisair" CK" (220V/50Hz) equipment.
⁴ Compressor starting current will vary with voltage but is approximately 3 to 4 times the full-load amps.
⁵ Width shown is for electrical box with Q-Logic control system (RQ models). Width of electrical box with SMX II control (RX models), and with SMX Net control (RN models) the width is 7.69 in. (196 mm).
⁶ Depth shown is for electrical box with Q-Logic control system (RQ models). Depth of electrical box with SMX II control (RX models) is 4.72 in. (120 mm), and with SMX Net control (RN models) the depth is 2.81 in. (71 mm).

Dimensions



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Specifications and availability subject to change without notice.

Dealer

