



## 12V DC Air Conditioners

Model SMB05ACP

### General Description

The Marvair® 12V DC air conditioners are self contained, water cooled units designed for use in either fresh or salt water. All units are factory charged with refrigerant, wired and tested.

The 12V DC is built in a nominal capacity of 5,000 BTUH. All units use the environmentally friendly, non-ozone depleting R-134a refrigerant. R-134a is non-flammable, has an A1 safety classification by ASHRAE and is listed on the EPA on their SNAP list.

The air conditioner without circulating pump draws a nominal 30 amp making it ideal for sailboats, powerboats and any place cooling is desired. The unit can be operated directly from batteries and can be used dockside with a suitable battery charger. To conserve space, the control box is always remotely mounted from the air conditioner on a 4.5 ft. (137 cm) heavy duty cable.



To ensure years of dependable performance:

- Stainless steel base pan
- An insulated base pan prevents sweating and minimizes movement and sound.
- The evaporator coil is constructed of lanced aluminum fins and rifled copper tubing for optimum heat transfer. The coil is dipped in a polyester enamel and is rated to 1,000 hours when tested to ASTM B117.
- A compact, single inlet centrifugal type DC blower. The blower moves conditioned air quietly and efficiently and is designed to be used with ductwork and grille.
- Operating voltage: 9V DC to 17V DC.
- Locked rotor protection. Compressor has locked rotor protection on the control board. Compressor will attempt to start 11 times and then lock out. Blower motor has independent locked rotor protection.
- Over/under voltage protection. Compressor and blower motor will shut down if voltage is less than 9 volts or over 17 volts.
- Over current protection. Blower and motor have separate current protection. Over current limit on the compressor is 45 amps. Over current protection on the blower motor is 27 amps.
- Thermal protection. Compressor and the blower motor both have thermal cut-outs.
- Polarity protection.

Marvair® is an ISO 9001-2000 certified company.

Installation is facilitated by a readily accessible terminal strip for both the 12V DC power input and the thermostat wiring. Condensate line stubs (1/2") on 4 sides of the base pan. Factory provided holddown clamps are included.

### Accessories

- Wall mounted thermostat.
- DC water pump.
- Plumbing fittings.
- Grilles transitions and other duct materials.

## Model Identification

**S**

S = Marine

**M**

Refrigerant  
M = R-134a

**B**

Controller  
B = Electronic  
Control Board

**05**

Nominal Capacity  
05 = 5,000 BTUH

**AC**

System Type  
AC = Air Conditioner

**P**

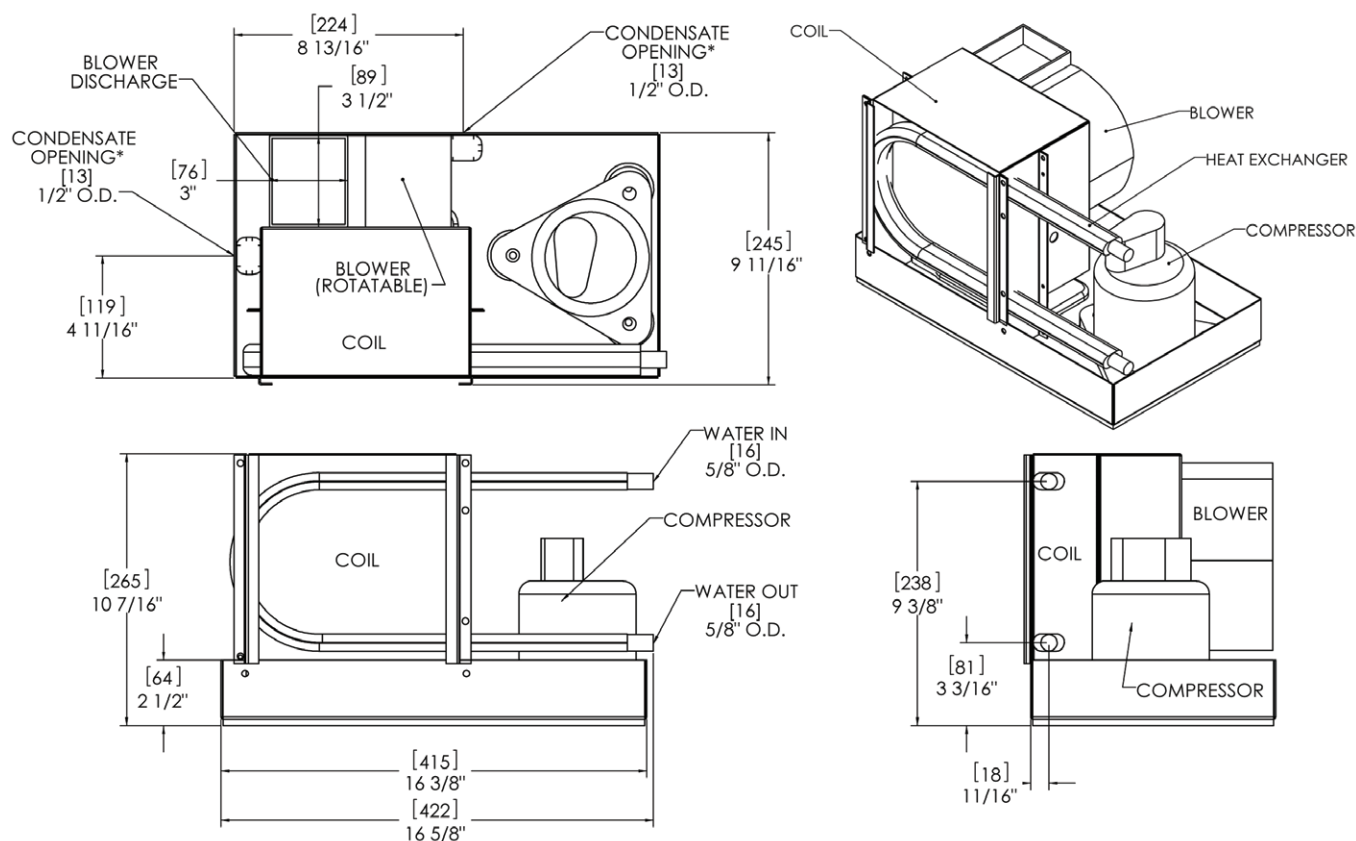
Voltage  
P = 12V DC

## Performance Data

Performance Data at 80°F/26°C Inlet Air at Various Water Temperatures				
Inlet Water Temperature	85°F/29°C	75°F/23°C	65°F/18°C	60°F/15°C
Cooling Capacity (BTUH)	3,050	3,120	3,350	3,500
Unit Amps (DC)	28.9	26.8	24.7	23.2
Unit Watts (DC)	346	321	299	279

Minimum Water Flow: 2.1 GPM, 8 L/m • Weight: 35 Lbs., 15.9 KG

## Dimensional Data (inches/mm)



\* ALL CONDENSATE OPENINGS REQUIRE A 5/8" [16] FITTING. ALL DIMENSIONS IN BRACKETS ARE MILLIMETERS.  
(The control box is always mounted remote from the air conditioner.)

As part of the Marvair® continuous improvement program, specifications are subject to change without notice.

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