



Self-Contained Reverse Cycle Air Conditioners

Model SAB05

General Description

Marvair's water source self-contained reverse cycle air conditioner models SAB05 are designed for use in either fresh or salt water and have a nominal cooling capacity of 5,000 BTUH. These self-contained units are complete packaged units, factory charged and wired.

Units are available for operation on 115V, 60 Hz; 208/230V, 60 Hz and 220/240V, 50 Hz. The units are built using R410A refrigerant. R410A is environmentally friendly, non-ozone depleting and accepted for use throughout the European Community.



The SAB05 reverse cycle air conditioners feature rotary compressors with a suction line accumulator and high and low refrigerant pressure switches. The coaxial tube-in-tube condenser is constructed of corrosion resistant cupronickel water tubing and copper refrigerant tubing.

To ensure years of dependable performance, the units feature:

- A stainless steel base pan with multiple condensate drain openings allows the rapid disposal of condensate. The base pan is embossed to add rigidity and to keep the components out of the condensate. An insulated pad minimizes movement and sound.
- Structural supports and control box constructed of superior corrosion resistant aluminum. The aluminum is primed and then a white heat cured polyester finish is applied for the optimum in durability and aesthetics.
- A five foot long (151 cm), heavy duty multiwire cable harness facilitates the remote mounting of the control box. This complete cable assembly seals all the wires into the harness to minimize the chance of corrosion.
- The evaporator coil is constructed of lanced fins and rifled copper tubing for optimum heat transfer. The coil has a baked polyester enamel finish - no paint - and is rated to 1,000 hours when tested to ASTM B117.
- A compact, centrifugal type blower moves the conditioned air quietly and efficiently through duct work. Maintenance free ball bearings never need oiling.

All units are built to the requirements of UL standard 484, 7th Edition. Marvair® is an ISO 9001-2000 registered company. All units (unless designated otherwise) meet applicable ABYC and US Coast Guard regulations, CE directives and all applicable Air Conditioning and Refrigeration Institute standards.

Installation

Installation on the SAB05 self contained units is simplified with a readily accessible terminal strip for both the power and control (low voltage) wiring. A five foot (151 cm) multiwire cable harness provides a durable and quick electrical connection between the unit and the control box. Condensate line ports (5/8" nylon tube) on both ends and both sides of the base pan facilitate the drain line connections. Factory provided hold-down clamps are included.

Thermostats

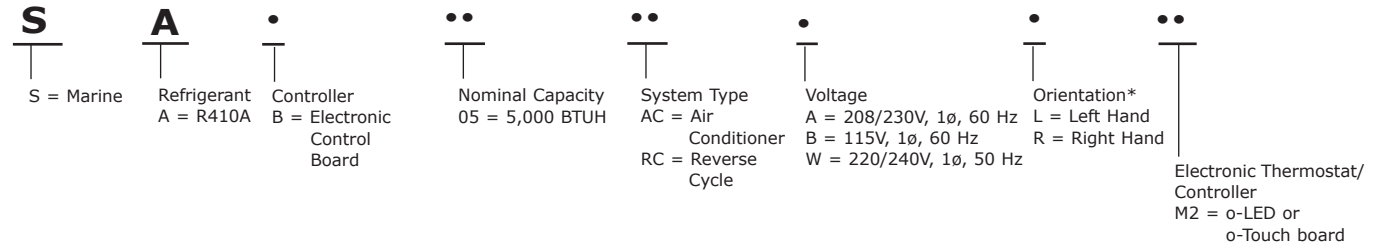
All units can be controlled by either the o-Touch, the o-LED, or the MachAir I thermostat/controller. The o-Touch, the o-LED, and the MachAir I thermostat/controller display shows whether the unit is in the heating, fan only or dehumidification mode, set point temperature (°F or °C), cabin temperature (°F or °C) and fan indicator. The fan speed can be controlled automatically or manually. Includes wall mounted controller/display. See the respective Product Data Sheet for complete information on the thermostat/controllers.

Accessories

Accessories are required and ordered separately.

- Sea Water Pump Kit.
- Air duct, supply grille(s) and return grille.
- Plumbing fittings.
- Thermostat/controller.

Model Identification - Self-Contained Units



* When looking at the compressor from the end of the unit, if the coil is on your right side, the unit is a right handed unit. If the coil is on your left, it is a left handed unit.

Water Flow Chart

Minimum Water Flow*	
Model (BTUH)	Minimum Water Flow at the Unit
5,000	1.4 GPM / 5.3 LPM

* Based upon 85°F (29.5°C) inlet water measured at the inlet of the unit.

Air Flow and Grille Chart

Self Contained Unit	Nominal Air Flow CFM/m ³ per Hour	Minimum Opening for Return Air Grille (in ² /cm ²)	Minimum Opening for Supply Air Grille(s) (in ² /cm ²)	Minimum Hose Size (in/cm)	Marvair P/N for Blower to Hose Adapters	Outside Diameter of Hose Adapter (in/cm)
5,000	150/255	64/415	32/210	4/10.2	Not required. Blower has 4" (10.2cm) round diameter opening.	Not required. Blower has 4" (10.2cm) round diameter opening.

Performance/Electrical Data, (115V, 60 Hz, R-410A Refrigerant)

Basic Model	Nominal Capacity (BTUH)	Voltage (VAC)	Freq. (Hz.)	Run Amps Cooling ¹	Unit Starting Amps ¹	MCA ²	Maximum Fuse/Breaker Size
SAB05RCB	5,000	115	60	4.56	16.0	7.6	10

¹Amps will vary with actual voltage, inlet water temperature and inlet air temperature.

²MCA = Minimum Circuit Ampacity (Wire Size Amps)

Performance/Electrical Data, (208/230V, 60 Hz, R-410A Refrigerant)

Basic Model	Nominal Capacity (BTUH)	Voltage (VAC)	Freq. (Hz.)	Phase	Run Amps Cooling ¹	Unit Starting Amps ¹	MCA ²	Maximum Fuse/Breaker Size
SAB05RCA	5,000	208/230	60	1	2.20	7.70	4.3	10

¹Amps will vary with actual voltage, inlet water temperature and inlet air temperature.

²MCA = Minimum Circuit Ampacity (Wire Size Amps)

Performance/Electrical Data, (220/240V, 50 Hz, R-410A Refrigerant)

Basic Model	Nominal Capacity (BTUH)	Voltage (VAC)	Freq. (Hz.)	Phase	Run Amps Cooling ¹	Unit Starting Amps ¹	MCA ²	Maximum Fuse/Breaker Size
SAB05RCF	5,000	220/240	50	1	2.45	8.60	4.8	10

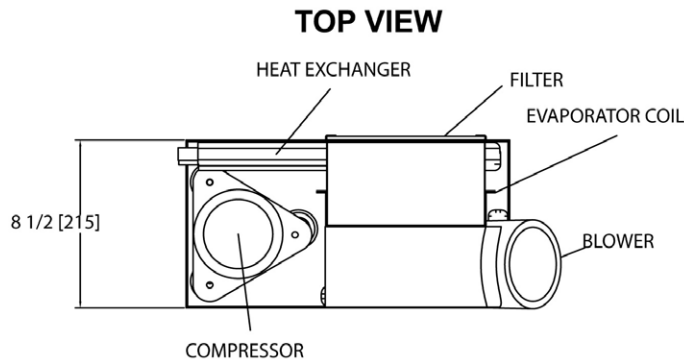
¹Amps will vary with actual voltage, inlet water temperature and inlet air temperature.

²MCA = Minimum Circuit Ampacity (Wire Size Amps)

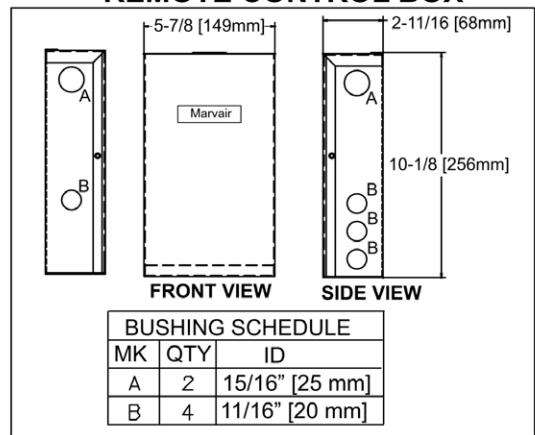
Dimensional Data - Self-Contained Model 05 (inches & mm)



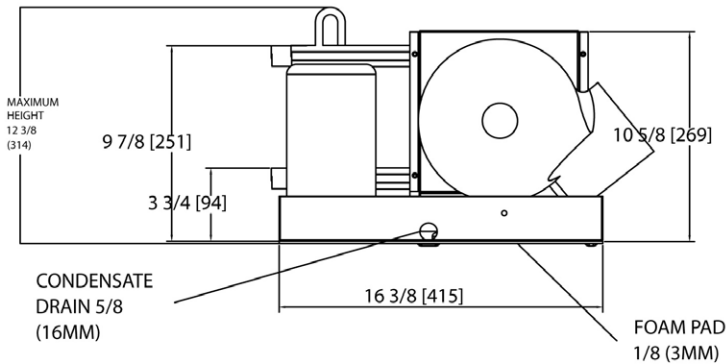
LEFT HAND UNIT



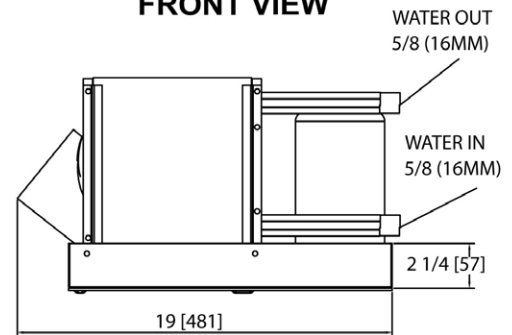
REMOTE CONTROL BOX



BACK VIEW



FRONT VIEW



WEIGHT: 41 LBS / 19 KG

NOTE: THE ELECTRICAL CONTROL BOX FOR ALL 5,000 MODELS IS ALWAYS REMOTELY MOUNTED.

Please consult the Marvair® website at www.marvair.com for the latest product literature. Complete installation instructions are in the Manual. Detailed dimensional data is available upon request. A complete warranty statement can be found in each product's Owner's Manual, on our website or by contacting Marvair at 229-273-3636. As part of the Marvair continuous improvement program, specifications are subject to change without notice.

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