



SolarVENT®

Model # 70440 – Sunsei® SolarVENT® Marine
Model # 70441 – Sunsei® SolarVENT® Multi-Purpose



IMPORTANT: Please read the following instructions before operating your Sunsei® SolarVENT® unit.

Congratulations! You have just purchased ICP's premium solar/battery powered 24-hour Air Exchange ventilation unit. This wireless vent works all day and all night to circulate fresh air in boats, conservatories, greenhouses, sheds, cabins, RVs and campers.

Installing the Sunsei® SolarVENT® is an ideal way to:

- Prevent mold and mildew
- Keep living areas comfortable
- Improve air quality

PRODUCT DESCRIPTION

Sunsei® SolarVENT® Marine – stainless steel cowl
Sunsei® SolarVENT® Multi-Purpose (clear, green & brown cowls)

Each Sunsei® SolarVENT® includes:

- Solar powered ventilator (Marine unit shown)
- Interior trim/mounting ring
- Watertight black rubber gasket
- Two (2) 2000mAh NiMH AA batteries
- Six (6) stainless steel 1/4" (45mm) machine screws
- Six (6) screw spacers

IMPORTANT!

- DO NOT install the Sunsei® SolarVENT® in an area with more than 1/2" of camber (curvature) over a 12" length.
- Only use polyurethane adhesive sealants like 3M 5200® or Sikaflex® on plastic surfaces. DO NOT use polysulfide compounds, as they can melt plastic surfaces.
- DO NOT use NON-RECHARGEABLE batteries to run the Sunsei® SolarVENT®.

PRE-INSTALLATION

Before you start drilling holes or cutting out openings it is important to **selecting the best mounting location**. In order to get maximum potential air circulation it is important to position your solar ventilator in an unobstructed location that will receive good sunlight. Common mounting locations include boat hatches and decks, as well as roofs of conservatories, greenhouses, shed or campers. For permanent mounting on fixed structures, angle Sunsei® SolarVENT® in such a way that it will be facing the strong midday sun (southerly exposure in the Northern hemisphere, northerly exposure in the Southern hemisphere).

INSTALLATION

The Sunsei® SolarVENT® has the convenience of multiple mounting options, which make it easy to mount on almost any surface. Choose the installation that best applies to your application.

STANDARD INSTALLATION (for all surface materials)

Step 1 – Marking the hole

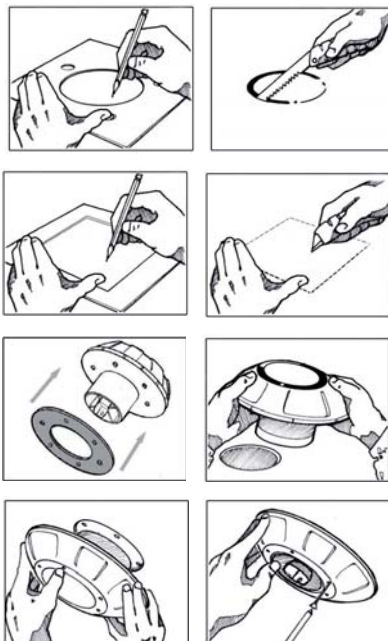
Round opening: Using the template included with the instructions (or the watertight gasket), draw a line around the large interior and outer screw holes with a marker or pencil.

Square opening: Using the template included with the instructions, trace the outline of the square.

Sunsei® SolarVENT® components



Standard installation



Deck plate installation



Installing the batteries



Step 2 – Cutting the hole

Round opening: Cut out the interior hole (4.75"/120 mm diameter) using a suitable tool. For wood, metal, fiber glass or acrylic use an electric jigsaw with a narrow blade. For soft polycarbonate use a hand-held fine tooth saw or utility blade. As for the screw holes, use a 3/8" drill bit. NOTE: It is also possible to cut out a larger interior hole in order to avoid having to drill out the screw holes. Use the larger circle in the template to make a hole around the exterior of the screw holes (5 3/4"/145mm diameter). This will allow the mounting screws to pass through the opening.

Square opening: Cut out the square hole (5 3/4" x 5 3/4" / 145mm x 145mm) using a suitable tool. This will allow for enough space to pass the mounting screws while keeping the unit watertight.

Step 3 – Installing the Sunsei® SolarVENT®

Place the gasket around the barrel of the Sunsei® SolarVENT®, aligning the 6 holes in the gasket with the 6 screw holes in the Sunsei® SolarVENT®. From the outside, place the Sunsei® SolarVENT® through the opening made in Step 2, keeping it well centered.

Step 4 – Installing the interior mounting ring to the Sunsei® SolarVENT®

From the inside, align the holes of the mounting ring with the holes in the Sunsei® SolarVENT® and gasket. Insert the included 1/4" / 45mm machine screws through the ring and into the Sunsei® SolarVENT®. Tighten using a hand-held screwdriver, enough so that the gasket is slightly compressed, providing a watertight seal. Do not over tighten to prevent distorting the vent or mounting ring. NOTE: when installing through a surface that is thinner than 1"/25mm, use the 6 screw spacers by placing them around the machine screws before installing the mounting ring.

MARINE DECK PLATE INSTALLATION

The Sunsei® SolarVENT® was also designed to retrofit standard 4" marine deck plates. This allows for an easy installation when replacing an existing solar or cowl vent.

Step 1 – Removing existing vent from the deck plate

Remove vent as per original manufacturer's recommendations.

Step 2 – Installing the Sunsei® SolarVENT® to the deck plate

Place the gasket around the barrel of the Sunsei® SolarVENT®. In this type of installation it is preferable NOT to align the screw holes of the gasket with those of the vent. Press the vent firmly into the deck plate until it is properly secured and the gasket is compressed between the vent and the deck plate. Rotating or twisting the vent into place might be necessary if it does not press easily into place.

INSTALLING OR REPLACING THE BATTERIES

After a few years of constant usage you may notice that your battery is no longer performing at peak performance (see Troubleshooting). The batteries are located in the center console. To remove the batteries, simply pry off the main center console cap by inserting a dime or flat-head screwdriver into the notch as indicated in the illustration, then unscrew the two small Philips head screws. Pull out the assembly which will expose the battery compartment. Remove the old batteries and install the new ones as indicated in the illustration.

INTAKE, EXHAUST AND OFF FUNCTIONS

The Sunsei® SolarVENT® can be used as both an intake and an exhaust fan. Simply set the rotary switch on the bottom of your vent to the desired position. There is no need to remove the fan blade when switching from one direction of air flow to the other. In general, it is suggested to have the Sunsei® SolarVENT® in the EXHAUST position to evacuate heat and moisture. Setting the rotary switch to the OFF position cuts all current from the solar panels and batteries to the fan motor. All the current produced by the solar array is therefore used to charge the batteries.

SHUT-OFF DAMPER

The Sunsei® SolarVENT® is equipped with a green water shut-off damper which can be sealed manually from below by firmly grabbing the center consol and pulling downwards about 3/4" (20mm) until it locks into place. To prevent unnecessary wear on the motor, switch the vent to the OFF position when the shut-off damper is activated.

CHANGING THE COWLS (for model # 70441)

The Sunsei® SolarVENT® Multi-Purpose model comes complete with three (3) different cowls - clear (pre-installed), green and brown - that are designed to match most shed, conservatories and greenhouses colors. Choose the one that best matches your application.

- Step 1: Remove the six (6) Philips head screws by pushing aside the top gasket.
 Step 2: Remove the clear center cap w/ gasket.
 Step 3: Remove the cowl.
 Step 4: Replace new cowl in reverse order.

TROUBLESHOOTING

If the Sunsei® SolarVENT® stops ventilating:

•Check the rotary switch position

Make sure the switch is set to either the INTAKE or EXHAUST position, and not the OFF position.

•Check the battery

If the switch is in the INTAKE or EXHAUST position and the vent is still not working, the batteries may be dead. In this case the batteries actually cause a short circuit and prevent the energy from the solar panel from reaching the motor. Remove the batteries (see INSTALLING OR REPLACING THE BATTERIES) and place the Sunsei® SolarVENT® in direct sunlight. If the motor turns, than the batteries are dead and need to be replaced. Replace with two (2) new 2000mAmp NiMH AA batteries. Dispose of the old batteries properly.
 NOTE: The Sunsei® SolarVENT® can work without batteries, but it will only ventilate during sunlight hours.

•Contact ICP customer service

If the unit still does not work when the batteries were removed, it may be because the solar array has been damaged or the motor does not work. Please contact ICP customer support for warranty service.

FREQUENTLY ASKED QUESTIONS (FAQ)

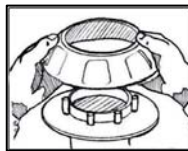
Q: How many Sunsei® SolarVENT® do I need?

A: In order to eliminate the growth of mold, mildew and musty air, the air within your living space should be exchanged once every hour in humid conditions (in boats or in humid coastal regions) or once every two hours (in dryer conditions). The Sunsei® SolarVENT® replaces 1,000 cubic feet (28 cubic meters) of air per hour. Calculate the volume of your living area and divide that number by the Sunsei® SolarVENT®'s airflow to determine the number of vents required. As a general guideline, a typical 30-foot boat contains approximately 800 cubic feet (23 cubic meters) of air.
 NOTE: To increase airflow, we suggest having two Sunsei® SolarVENT® installed at opposite ends of the living area, setting one vent to EXHAUST and the other to INTAKE.

Intake and Exhaust functions



Changing the cowls



Accessories



90150 - LED light



90152 - Insect screen

Product Specifications

SPECIFICATIONS	Marine	Multi-Purpose
Model#	70440	70441
Exterior Cover Finish	Stainless Steel	High Impact ABS Plastic
PERFORMANCE		
Airflow per Hour	1,000 ft ³ (28 m ³)	
Airflow per Day	24,000 ft ³ (680 m ³)	
Run Time without Sunlight	48 Hours	
Unit Dims&Weights		
Exterior Cover Diameter	10.5 inches (265 mm)	
Total Height	6 inches (150 mm)	
Vent Diameter	4 inches (100 mm)	
Weight	2.5 lbs (1.1 kg)	2 lbs (0.9 kg)
Regulatory Approval	CE Approval	
Patents	International Patents Pending	
Made in	Designed in Canada, manufactured in China	
Warranty	2 Years	

Sunsei® SolarVENT® ACCESSORIES

Sunsei® SolarVENT® accessories can be ordered directly on-line on our website www.icpsolar.com, and/or available through select partners.

90150 – LED lighting

Installs on the bottom of the vent to provide sufficient lighting when entering into dark areas. Easy push ON/push OFF switch. Uses very little battery power. Can provide more than 10 hours of lighting per day.

90152 – Insect screen

This nylon screen fits tightly around the outside of the Sunsei® SolarVENT® to prevent insects and other debris from entering through the vent opening. Easy to install and remove for cleaning.

WARRANTY:

Please register online at: www.icpsolar.com

WARRANTY PERIOD: 2 YEARS

A **Limited Warranty** on the power output and materials of the Sunsei® SolarVENT® is granted to the original owner by ICP Solar Technologies. ICP warrants the vent to be free from defects in materials and workmanship under normal applications, installation, use and service conditions for the **Warranty Period** from the purchase date. ICP will, at its option, either repair or replace the product if it becomes inoperable due to a defect in material or workmanship during the Warranty Period.

This warranty does not cover installation or costs derived thereof. ICP shall not be responsible for any costs due to removal, shipment, re-installation or any other loss due to warranty servicing. The maximum liability to ICP under this warranty shall not exceed the purchase price of this product. This warranty does not cover any module, which has been damaged by misuse, neglect, improper installation or acts of God, including lightning, floods, earthquakes, fire and high winds. ICP shall not be responsible for any damage to persons or property caused by improper installation, misuse or improper handling of this product. Some states do not allow exclusion or limitation of accidental or consequential losses so the exclusions may not apply to the purchase. This warranty gives you specific legal rights and you may have other rights, which vary from one state (or province) to another. If warranty service is required, please contact beforehand the dealer or distributor you purchased the product from. For further assistance, please contact ICP's customer service department at customers@icpsolar.com. **Please note that ICP will not accept returns without prior authorization.** The original proof of purchase is required for warranty validation.

Warranty of accessories:

Accessories are covered by a limited 90 day warranty (batteries not covered) on materials and workmanship from purchase date. Refer to instructions included with the accessories for more details.



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