

Cable Routing & Connecting

CAUTION: If the transducer came with a connector, do not remove it to ease cable routing. Unless a waterproof junction box is used, you can remove the waterproof connector or cut the cable, otherwise the transducer warranty period is invalid.

1. Route the cable at the equipment, and be careful not to damage the cable jacket when the cable pass through the waterproof wall and other parts of the hull. Use a gasket to prevent wear. To reduce electrical interference, separate the transducer cable from other cables and engine. Wrap the excess cable, tie the cable with a cable tie, and securely fix it somewhere to prevent damage.
2. Refer to the detailed dimensional drawing and the equipment's operating manual to connect the transducer cable with the equipment.

Checking for Leaks

When the boat is placed in the water, **immediately** check around the transducer for leaks. Note that very small leaks may not be readily observed. Do not leave the boat in the water for more than 3 hours before checking it again. If there is a small leak, there may be considerable bilge water accumulation after 24 hours. If a leak is observed, solve the problem **immediately**.



Local distributor:

<http://www.ova.technology>

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➤ Installation method of thru-hull transducer

Thru-Hull Mount

The transducer with streamlined shape, such as A-TD26, A-TD47T, A-TD67T etc., this design can be used for thru-hull mounting to make the transducer outside the hull. These transducers are mainly used in smaller boats.

• Flat Hull Bottom

If the hull is flat, transducer can be installed directly. Please note that using the marine sealant to seal the hull joint to ensure the hull is waterproof. Meanwhile, keep the transducer surface flat and the water under the hull flow smoothly over the face of the transducer.

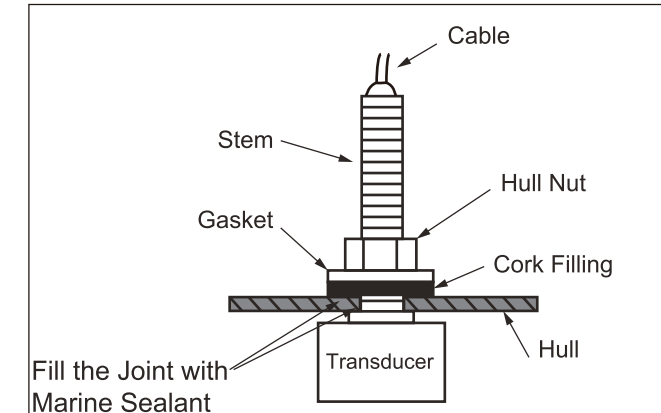


Figure 2 Thru-Hull Mount for Flat Bottom

• Boat Bottom Tilt Section

When installing the transducer in the boat bottom tilt section, using backing block to make the bottom level and transducer face point straight down of the bottom of the ocean

Notes: A fairing is strongly recommended if the deadrise angle exceeds 10°.

Important Hints: If installing the transducer with **NO** fairing, disregarded all the reference to a fairing or backing block.

About steel cover and fairing

Most boats have a tilt where the transducer is installed. If the transducer is mounted directly, the sound beam will have the same slope as the bottom of the boat.

If the hull slope exceeds 10 degrees, it is highly recommended to use a steel cover or a fairing. For the case where the steel cover and the fairing are not used, a device such as a slanting pad should also be used.

- The beam of the transducer must be vertically downward and parallel to the horizontal plane.
- Install the transducer in deep water to allow clear water to flow over its face.

Cutting the Fairing

The fairing should be mounted between the transducer and the hull to adapt the hull's deadrise angle. The material of the fairing could be wooden or steel.

- Measure the rake angle of the hull, cut the fairing according to the angle (see figure 3).

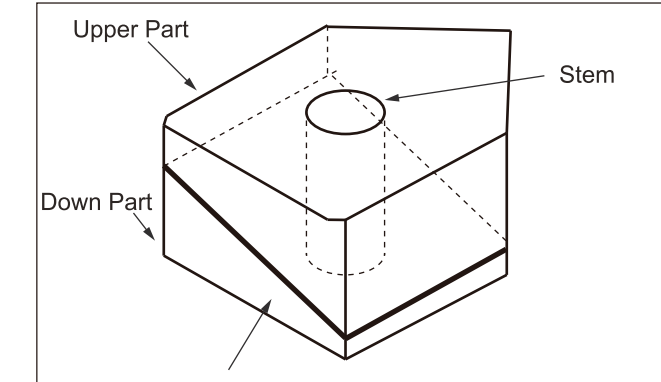


Figure 3 Fairing Cutting Diagram

• Installation Methods

1. Drilling a hole in the bottom of the hull (the size is based on the diameter of the screw in the transducer drawing). Please make sure the hole will be perpendicular to the water surface.
2. Polish the hole with sandpaper and clean the area around the hole, inside and outside, to ensure the marine sealant will adhere properly to the hull. If petroleum residues remain in the hull, wash them off with a neutral household cleaner or a weak solvent (alcohol) before polishing.
3. Seat the transducer firmly against the fairing with the force of pushing torsion. (A liner will be used if there is no fairing to be used). Be sure that the fairing is tightly connected to the transducer and sealed.

4. Apply marine sealant to the connection, such as the surface of the fairing, screw, nut, hull, liner, filler, etc.
5. Pass the transducer screw through the hole, move the liner, and fix the nut. Note: The tip of a transducer with a diversion function must point towards the bow of the boat, while ordinary circular transducer will not be considered. For transducers marked with installation direction instructions, install them in accordance with the instructions.
6. Remove the marine sealant outside the hull and fairing to ensure smooth water flow under the transducer.

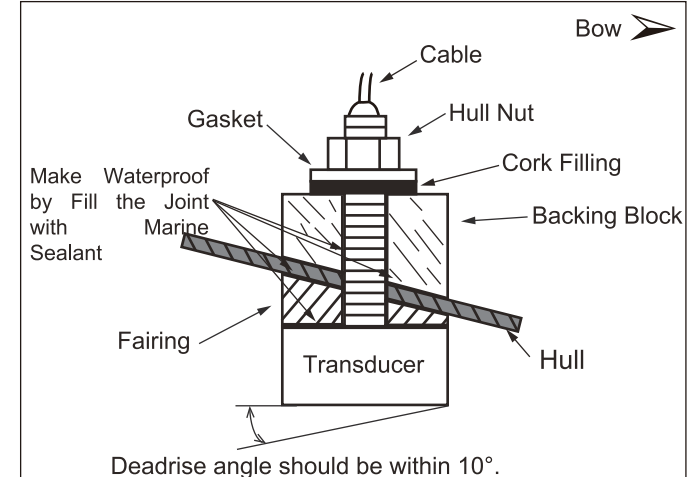


Figure 4 Thru-hull Mount for Boat Bottom Tilt Section

Installation with Steel Fairing

Usually on large hulls with deep bottom, the bottom of the boat does not generate air bubbles. In addition, the boat working in shallow port or in the water cannot be installed by protruding type, a steel fairing will be required and flush mounted inside the hull. The standard procedure for installing a steel fairing on a metal boat is to weld the steel fairing to the bottom of the boat, then fix the transducer.

Split Type Fairing Installation (Thru Hull)

1. Drill a assembling hole according to the outer diameter of the steel fairing body;
2. Weld the steel fairing body to the hull and ensure that there are no welding cracks and pores;
3. Put the rubber gasket and the transducer into the main body of the steel fairing;

4. (Split Type Fairing) Press into the flange, and connect it firmly with the main body of the steel fairing with screws, and the flange fits tightly with the top and bottom of the body;
5. Put thick rubber gasket, flat gasket, and mounting nut in order;
6. Tighten the mounting nut with a wrench to ensure the tightness of the steel fairing.

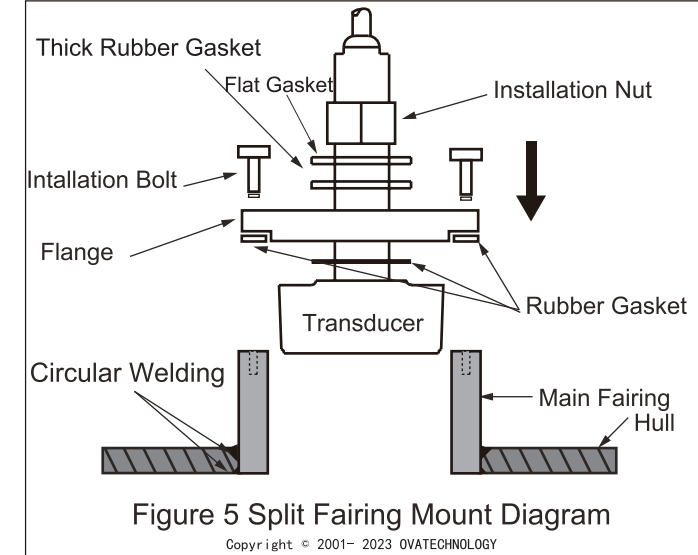
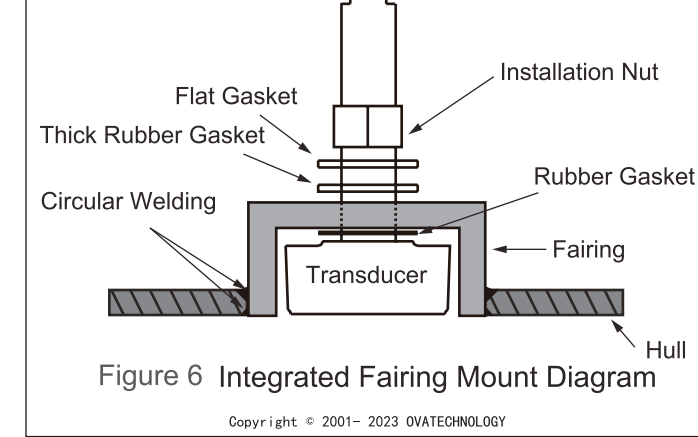


Figure 5 Split Fairing Mount Diagram

• Integrated Fairing Mount



➤ Flush mount transducer installation

Integrated steel fairing installation

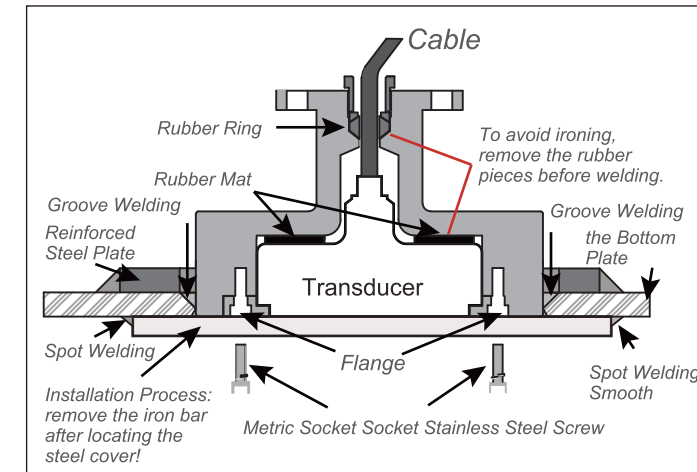


Figure 7 Installation sketch of integral steel cover

1. First remove the stainless steel socket head cap screws next to the flange with an Allen key.
2. Take out the rubber parts in the steel fairing to avoid heat transfer of the steel fairing during welding and burn the rubber parts!
3. Drill a hole in the bottom of the boat, and make the upper and lower bevels, the size of the hole is consistent with the size of the steel fairing. Make sure that the underside of the steel fairing and the bottom of the boat are welded to the same level!
4. After the hole was drilled, two "craft iron bars" were spot-welded at the center of the hole at the bottom of the boat, and the cabin personnel cooperated to put the steel fairing into the hole to cause an accident!
5. After the steel fairing is placed in a good position, low-hydrogen welding electrodes are used around the steel fairing for standardized arc welding. The welding slag at the joint must be cleaned thoroughly and welded in order to ensure watertightness.
6. After the steel fairing is welded and positioned, remove the "process iron bar" in time, and polish the spot weld and the 5 meters in front of the transducer and the 3 meters around it to avoid bubbles and turbulence, which will affect the echo quality!
7. The inside and outside of the steel fairing, the welding place and the polished parts are all coated with anti-rust paint for anti-rust treatment!

8. After the anti-rust paint is dry and solidified, the transducer can be installed with reference to the schematic diagram!
Note: Be careful not to scratch the cable when it is pierced! The position and direction of the cable watertight rubber ring can not be mistaken! The watertight nut and the stainless steel nail on the flange side are moderately twisted to ensure no water leakage!

Split type steel fairing installation

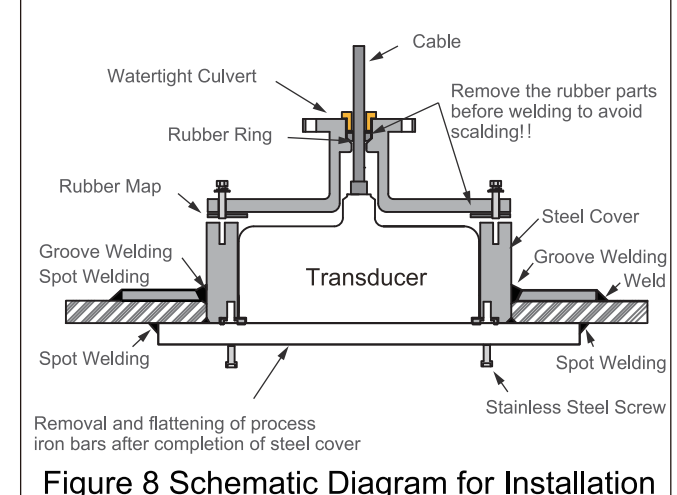


Figure 8 Schematic Diagram for Installation of Split Steel Cover

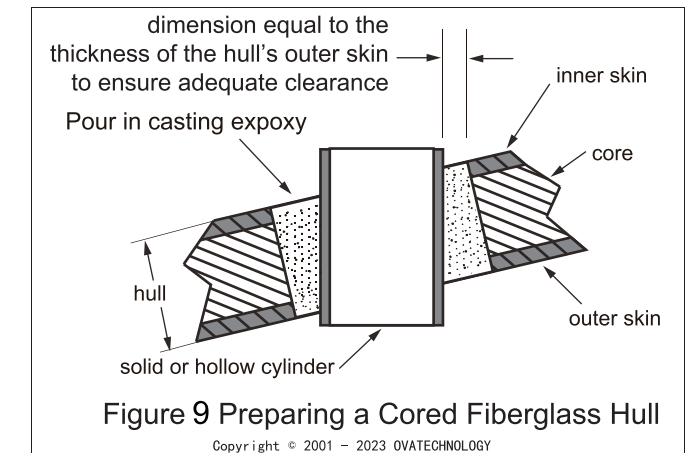
For the welding and installation steps of the split type steel fairing, refer to the integrated steel fairing, pad the rubber gasket, cover the upper cover, tighten the stainless steel screws, lock the watertight culvert, the torque is moderate, and ensure no water leakage.

➤ Installation in a Cored Fiberglass Hull (Thru Hull)

The core (wood or foam) must be cut and carefully sealed. The core must be protected to prevent water leakage, and the hull must be reinforced to prevent the hull under the hull nut from breaking and the probe becoming loose.

CAUTION: Completely seal the hull to prevent water seepage into the hull.

1. Drill a pilot hole perpendicular to the horizontal line from the inside of the hull. If there are ribs, pillars or other irregular parts of the hull near the selected installation location, drill the hole from the outside. (If you drill the hole in the incorrect position, choose a better position to drill a second hole. At the incorrect position, apply sealing tape from the outside of the hull and fill the hole with epoxy.)
2. Using the suitable drill bit, drill a hole from the outer layer of the hull. Make sure the power drill is vertical so that the hole is perpendicular to the horizontal plane.
3. The diameter of the optimal internal hole is affected by the thickness of the hull and the angle of the bottom of the boat. The diameter must be large enough so that the core is completely sealed. Choose the right size drill bit for the hull inner hole, cut most of the inner layer and the hull core, so that the electric drill is perpendicular to the hull. The material of the core may be very soft. After cutting through the inner layer, use slight pressure on the drill to avoid accidentally cutting to the outer layer.
4. Remove the stopper of core material so that the inside of the outer layer of the hull and the inside core are completely exposed. Polish and clean the inner, core and outer layers around the hole.
5. Use wax and tape to fix a hollow or solid cylinder of appropriate diameter in place. Fill the space between the cylinder and the hull with epoxy. After the epoxy has solidified, remove the cylinder.
6. Polish and clean the inside and outside areas of the hole to ensure that the sealant bonds the hull effectively. If there is residual oil stain inside the hull, wash it with a neutral detergent or a weak solvent (alcohol) before polishing.
7. Install according to the installation method



Anti-fouling Paint

Surfaces exposed to seawater need to be painted with antifouling. Use water-based antifouling paint only. Never use a ketone-based paint because ketones can corrode many plastics and may damage the transducer. Reapply anti-fouling paint every 6 months or at the beginning of each boating season.

Maintenance & Cleaning

The growth of aquatic organisms can quickly accumulate on the surface of the transducer within weeks, thereby affecting the performance of the transducer. Clean the surface with a clean cloth and milder household cleaners, taking care not to leave scratches. If the dirt is severe, use fine sandpaper to sand it lightly.

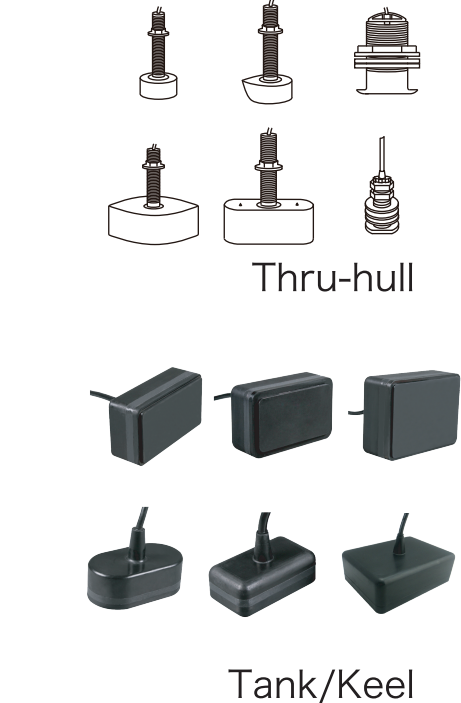
Replacement Transducer & Parts

The information needed to replace transducer is on the cable tag. Do not erase the mark. When purchasing, specify the part number, date, and frequency. For convenient reference, this information can be recorded at the top of the first page. Lost, damaged, worn parts need to be replaced immediately. Contact the manufacturer or nearby distributor for accessories.

Thank you for choosing our products, for further information, please visit our website: <http://www.ova.technology>. The service hotline is (+86)0513-89129288/89129287, you can call directly for any information you need.



User Guide & Installations



Identify Product Type

The type of probe and other information are printed at the end of the connection plug on the label.

Please record the product information on the cable line for reference.

Product model: _____ No. : _____
Frequency: _____ KHz Date: _____

