

Double Ring Transducer

80 / 100 / 120 Watt



Installation and user guide



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Your system is equipped to power transducers of 80, 100 or 120Watt, IP76. The transducers are to be installed with a metal ring that is welded on the object you want to protect from fouling. Standard this ring is normal steel 37. On request Shipsonic can provide rings of aluminium 6082.

The transducer assembly consists of a transducer with ring, and a separate ring to be welded on the substrate. The transducer can be equipped with 3 x M6 or 4 x M8 bolts.



Transducer with installation ring



Transducer installed

# Installation

1. Mark out the spot where the transducer is to be installed. Mark out a circle of about 100mm diameter, or use the lower ring of the transducer to mark out the area.

If you are installing on a box-cooler, you have received a drawing with the exact locations indicated. Do use these locations, they take into account the baffles in the lid (also called water-box) of the cooler. The transducer should never be installed over such a baffle. It can be that the indicated location of a transducer intercedes with the name/serial plate on the cooler. In that case, remove the serial plate and re-weld it on a different location on the box cooler lid.

1. Using an angle grinder with a flapdisk, remove all coating from the spot you just marked out. See to it that the surface is as smooth as possible (flat angle of the grinder).

3. Weld the lower ring of the transducer assembly on the cleaned spot. You can use SMAW or GMAW welding. It is best to weld all around, to avoid water penetration. If that is not possible, make 3 or 4 welds of around 8mm length each. Protect the thread of the 3 threaded rods and the inside of the ring carefully against weld spatter.



Partly welded

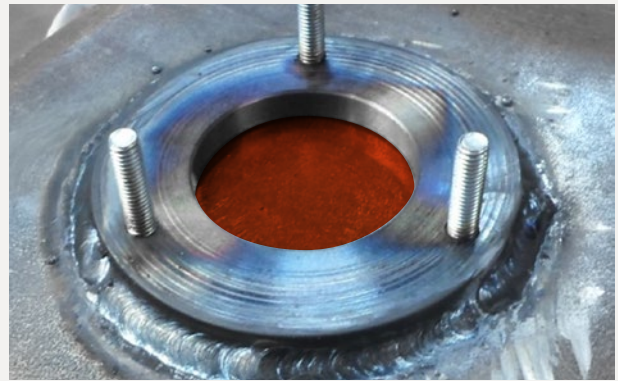


Fully welded

4. Remove all weld spatter that might have ended inside the ring.



- 5.** Paint the entire welded ring against corrosion, with exception of the RED colored inside and the threaded rods. Use any anti corrosion coating. Do not postpone this step, later on in the installation process, the ring will not be accessible!



- 6.** Clean the surface inside the welded ring and clean the foot of the transducer (the aluminium part, not the ring) with a solvent, removing all grease.



Loctite-518



Foot of the transducer

- 7.** Apply a thin, even layer of Loctite-518 or a similar gasketing product at the foot of the transducer.
- 8.** Place the transducer in the welded ring and turn it so that the cable connector points in the desired direction.
- 9.** Install the 3 M6 nuts and tighten with around 15 Nm torque.
- 10.** Let the Loctite-518 or similar gasketing product cure for at least 24 hours.

# Connecting and checking

- 1.** Connect the transducer with the provided cable. The Techno-381 connectors can only be inserted in one way. Do not worry about polarity.
- 2.** Switch on the transducer at the control unit.
- 3.** Place your hand on the transducer. You should be able to feel the transducer vibrate.
- 4.** Listen to the transducer, you should hear a soft, scratching sound. You might not hear this due to the noise in the engine room. If you can feel the vibration but cannot make out any sound coming from the transducer, installation is OK.
- 5.** If you hear a high pitched whistling, like a bird, the transducer is not properly installed (if this is the case you will hear this whistling sound above the engine room noise). Proceed to step 6.
- 6.** Carefully tighten the 3 M6 or the 4M8 nuts a bit more. The sound should disappear. If it does not, remove the transducer (first loosen and remove the 3 M6 nuts, then give a sharp knock on the side of the transducer to loosen the gasketing bond. Remove remaining gasketing product from the foot of the transducer and from the inside of the welded ring. Re-install the transducer making sure the connector points in a slightly different angle than the first time (you want to change the 2 contact surfaces).
- 7.** If, after the second time installation, the whistling sound remains, contact your Shipsonic agent.
- 8.** Corrosion protection. Corrosion of the contact surface of the substrate inside the welding ring will render the transducer useless. The corrosion will act as insulation for the ultrasonic sound. Hence proper corrosion protection of the installed transducer is essential. Protect all steel parts of the entire transducer assembly against corrosion. Only the black transducer cap (made of POM) does not need protection. Do not worry about paint splashing on this cap.
  - You have already painted the lower ring.
  - Preferably with a spray paint, protect the lower side of the upper ring. Spray the paint freely in the small opening between the rings.
  - Paint the upper part of the upper ring.
  - Apply paint freely, closing all openings (between the 2 rings, between upper ring and transducer and between lower ring and transducer). Make sure that no water can penetrate any part of the installed transducer assembly.
  - Close the entire steel combination of weld ring and upper ring and threaded rods with a marine kit.

# Transducer cable

Standard transducer cables have a length of 10 meter. In your order you might have specified a different length. Conduct the transducer cables between transducer and control-unit out of harm's way, using tie-wraps as deemed necessary. When conducting the cables in a cable tray with other cables, please note that the transducer cables are not shielded. Shielded cables can be provided on request.

## Important notes

- 1.** It is absolutely essential that the transducer becomes one integral part of the object you want to protect from fouling. Only then will there be sufficient propagation of the ultrasonic energy into the object to be protected from fouling. Correct transducer installation is absolutely conditional for your system to be effective.
- 2.** Any corrosion of any part of the installed transducer assembly will sooner or later reach the inside contact surface of the substrate on which the transducer is installed. This latter corrosion will render the transducer ineffective.
- 3.** Do not pressure clean installed transducers

## Technical support and after sales service

Technical support is available through email or directly by telephone from your local dealer or from Shipsonic. When calling, please be prepared to provide the information on the identification sticker on the inside of the cabinet door of the control-unit. Requests for parts can also be placed by phone or sent by email to your local agent or Shipsonic.

If a system needs to be returned for repair, contact your local agent or Shipsonic directly. We will arrange the repair and/or eventually the exchange of the system. Shipsonic pays for all repairs/replacements within the warranty period (1 year). Outside that period, your agent and/or Shipsonic will decide on a case by case basis what to do and whom will bear the costs.

## Contact

For any additional information contact your local agent.  
Otherwise, contact the producer of Shipsonic systems directly:  
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