SEATITE

HATCH INSTALLATION GUIDE

Weld-In & Bolt-Down Deck Rings

Installation, inspection and maintenance guidance for Seatite marine deck hatches.



WELD-IN INSTALLATION

BOLT-DOWN INSTALLATION

INSPECTION CHECKS

MAINTENANCE & SERVICING

1 Before Installation

This section outlines the scope of this guide, the responsibilities of the shipyard or appointed installer, the use of approved drawings and the key preparation steps before fitting a Seatite hatch. The installer is responsible for determining and implementing appropriate working methods and safety precautions.

1.1 Scope of this Guide

This guide provides general installation, inspection and maintenance guidance for Seatite cast deck hatches with aluminium or steel deck rings.

It covers two installation methods:

Weld-In Installation
(deck rings welded to the deck)

Bolt-Down Installation
(deck rings secured to the deck with fixings)

1.2 Installer Responsibilities & Safety

Installation, maintenance and removal must be undertaken by competent personnel in accordance with:

- ✓ Approved vessel drawings, project specifications and installation requirements.
- ✓ Applicable welding, fabrication and installation procedures.
- ✓ Relevant regulations, risk assessments and permit requirements.
- ✓ Appropriate working methods and safety precautions determined by the shipyard or appointed installer.

1.3 Approved Drawings

Always use the latest Seatite product drawings and dimensions for the correct:

- ✓ Deck-ring size and profile.
- ✓ Cutout dimensions.
- ✓ Fixing hole details (where applicable).

If you do not have the relevant drawings, please contact Seatite before starting installation.

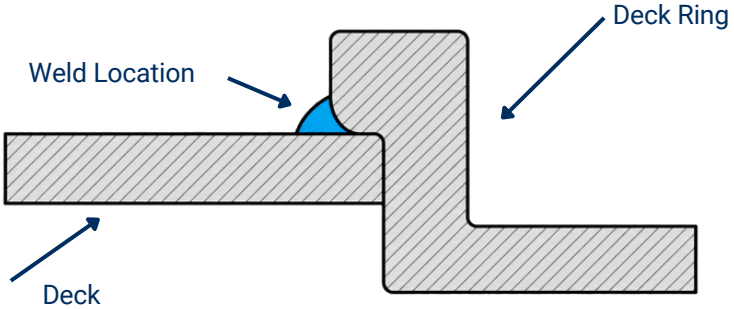
1.4 Preparation

Before installation, ensure that:

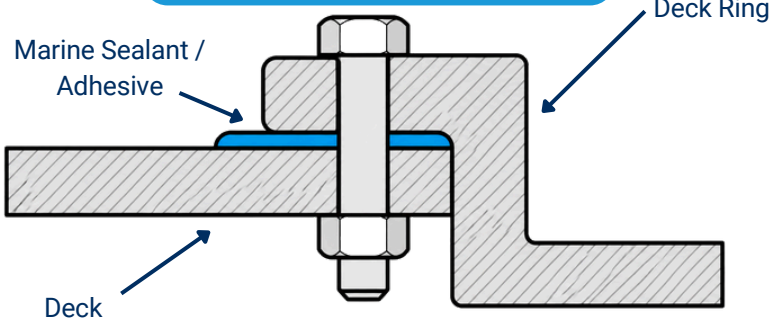
- ✓ The correct hatch and deck ring have been supplied and are a matched pair.
- ✓ The installation area is structurally suitable and the mating surfaces are prepared in accordance with the approved installation requirements.
- ✓ The cutout is prepared in accordance with the Seatite drawing for the selected installation method.
- ✓ The surrounding deck area is flat, level and free from distortion.

Typical Installation Methods

Weld-In (Section View)



Bolt-Down (Section View)



i Important These instructions are provided for guidance only. Installation procedures must be determined by the shipyard or installer in accordance with approved vessel drawings, applicable standards and project requirements.

2 Weld-In Installation

General guidance for welding Seatite deck rings to the deck. The specific welding procedure, method and sequence must be determined by a competent and suitably qualified installer.

2.1 Fit-Up and Positioning

- Position the deck ring centrally within the deck or bulkhead cutout, ensuring uniform clearance on all sides.
- Prepare the cutout to the dimensions and tolerances specified on the approved drawing.
- The surrounding deck plating must be flat, level and free from distortion prior to fit-up.

2.2 Component Preparation

- Remove the hatch cover from the deck ring before welding.
- Protect adjacent surfaces and components as required (e.g. coatings and nearby equipment).

2.3 Welding Guidance

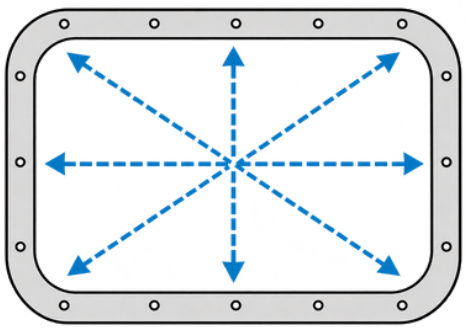
- Attach the deck ring to the deck from the topside using a star pattern (alternating cross-diagonal method) with skip welds to minimise heat-generated distortion.
- Complete the required perimeter welds using an alternating, skip-welding sequence to minimise heat distortion, in accordance with the approved welding procedure.
- Where required by the approved installation procedure, additional welding may be carried out on the underside of the deck ring.

2.4 Distortion Control

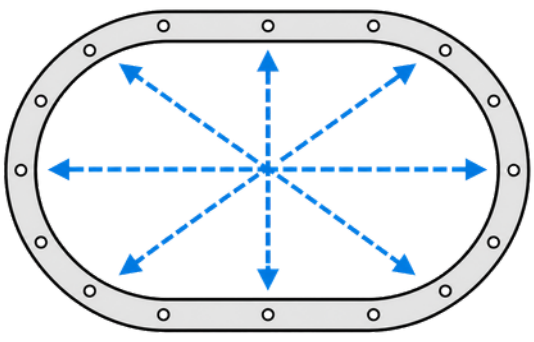
- Use an appropriate welding sequence to balance heat input and minimise distortion.
- Avoid excessive, continuous welding in one area.
- Allow time for cooling between weld segments as part of the welding procedure.
- Check alignment and flatness during the process and make any necessary adjustments in accordance with the installer's approved procedure.

Illustrative Welding Pattern – Alternating / Cross-Diagonal Approach

RECTANGULAR/ SQUARE HATCH



OVAL HATCH



i Important These diagrams are illustrative only to show the principle of a balanced welding sequence. The detailed welding procedure, including weld size, skips and any underside welding, must be determined by the installer in accordance with the project requirements and applicable standards.

3 Bolt-Down Installation

General guidance for installing Seatite deck rings using mechanical fixings. Installation must be carried out in accordance with the approved drawings and project requirements.

3.1 Fit-Up and Positioning

- ✓ Position the deck ring centrally within the deck or bulkhead cutout, ensuring uniform clearance on all sides.
- ✓ Verify the cutout size and fixing hole positions match the approved Seatite drawing for the specific hatch.
- ✓ Ensure the surrounding deck plating is flat, level and free from distortion.

3.2 Sealant / Adhesive

- ✓ Apply a continuous, even bead of suitable marine-grade sealant or adhesive, as specified in the approved installation requirements.
- ✓ Use a type and quantity of sealant compatible with the vessel specification and operating environment.
- ✓ Ensure the sealing surface is clean, dry and free from contamination before application.

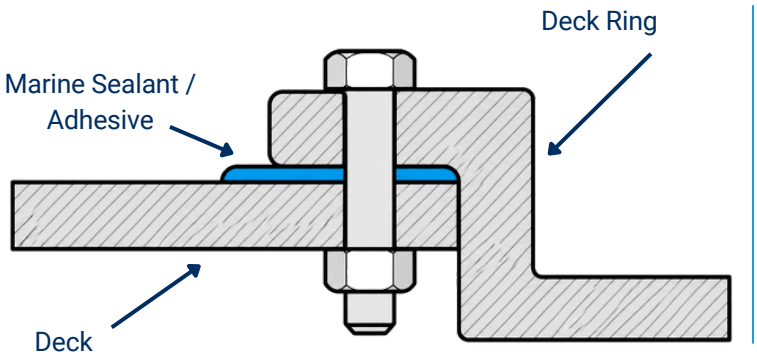
3.3 Installation and Fixing

- ✓ Lower the deck ring into position, taking care not to disturb the sealant.
- ✓ Insert the required fixings (e.g. bolts, washers and nuts) as specified on the approved drawing.
- ✓ Tighten fixings progressively in a balanced sequence, following the approved installation requirements, to achieve even compression of the sealant.
- ✓ Do not overtighten.

3.4 Checks After Installation

- ✓ Confirm the deck ring is correctly aligned and fully secured.
- ✓ Check that the sealant has formed a continuous, even bead around the interface.
- ✓ Remove any excess sealant in accordance with the manufacturer's recommendations.
- ✓ Carry out the post-installation inspection and testing required by the project specification (e.g. watertightness test).

Typical Bolt-Down Installation – Section View



KEY POINTS

- ✓ Use the fixings, sealant and tightening sequence specified on the approved drawing.
- ✓ Ensure even compression of the sealant.
- ✓ Maintain correct alignment during tightening.
- ✓ Do not overtighten fixings.

i Important This illustration is indicative only. Use the approved Seatite drawing for the correct fixing size, quantity, sealant type and installation details for your specific hatch.

4 Post-Installation Inspection & Testing

After installation, carry out the following checks and tests to ensure the hatch is correctly installed and performs as intended.

4.1 Visual Inspection

- Check the deck ring and hatch are correctly aligned and seated.
- Confirm all fixings are installed and fully secured (bolt-down installations).
- Visually inspect accessible welds for signs of visible defects.
- Check the sealing surfaces are clean and free from damage.
- Ensure any sealant is neat and continuous (without gaps or voids).

4.2 Functional Checks

- Open and close the hatch to ensure smooth operation.
- Check the locking mechanism engages correctly.
- Verify the hatch cover sits evenly on the deck ring.
- Inspect hinges and fasteners for correct function.
- Remove any debris or excess sealant.

4.3 Testing (as Required)

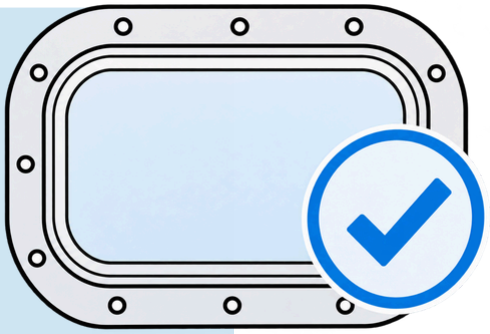
- Carry out watertightness testing in accordance with the project specification (e.g. hose test or pressure test).
- Complete any additional load or pressure testing required by the approved project specification.
- Record test results and retain with the project documentation.

4.4 Final Checks

- Confirm installation complies with the approved Seatite drawing and project requirements.
- Ensure all fixings are tightened to the specified requirements.
- Take final photographs for records (if required).

Important

Inspection and testing requirements may vary depending on hatch type, vessel specification and class approval. Always follow the approved project documentation and applicable standards.



5 Maintenance & Servicing

Regular inspection and servicing will help maintain the watertight integrity, safe operation and continued reliable performance of the hatch.

5.1 Routine Maintenance

- Inspect the hatch at regular intervals (in accordance with the vessel's maintenance plan).
- Keep the hatch, deck ring and surrounding area clean and free from debris.
- Check for signs of corrosion, damage or wear (including the lid, deck ring, fixings and welds).
- Inspect the sealing gasket for condition, correct positioning and signs of deterioration (e.g. hardening, cracking or compression set).

5.2 Service Checks

- Check the locking mechanism operates smoothly and securely.
- Inspect hinges for free movement, correct alignment and secure fastenings.
- Check all fasteners (bolts, nuts and washers) are present, secure and in good condition (bolt-down installations).
- For weld-in installations, visually inspect accessible welds for signs of cracking, damage or corrosion.

5.3 Cleaning

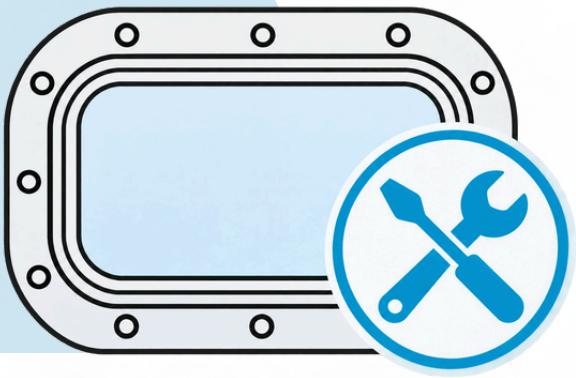
- Clean using mild, non-abrasive detergent and fresh water.
- Rinse thoroughly to remove salt, dirt and contaminants.
- Do not use harsh chemicals, solvents or abrasive cleaners, as these may damage the gasket or surface finish.

5.4 Replacement & Support

- Replace the gasket if it shows signs of wear, damage or loss of sealing performance.
- Use genuine Seatite replacement parts to help maintain compatibility with the approved design and intended performance.
- Contact Seatite for advice on replacement components, servicing or any issues with the hatch.

Important

Maintenance requirements may vary depending on hatch type, operating environment, vessel specification and class approval. Always follow the vessel's maintenance plan and the approved project documentation.



6 Decommissioning & Removal

If the hatch needs to be removed, replaced or decommissioned, refer to the approved project procedures and drawings to support safe removal and protect the surrounding deck structure.

6.1 Planning & Preparation

- Review the project requirements and approved drawings before starting.
- Carry out a risk assessment and ensure appropriate permits (e.g. hot work) are in place, if required.
- Use suitable personal protective equipment (PPE) and follow site safety procedures.
- Isolate and make the area safe, including any nearby systems or equipment (if applicable).

6.2 Removal - Bolt-Down Deck Rings

- Remove all fixings (bolts, nuts and washers) using suitable tools.
- Remove or secure the hatch cover as required by the approved removal procedure.
- If the deck ring is to be removed, clean the mating surfaces and follow the project method statement.
- Set aside components for inspection, re-use or disposal in accordance with site and environmental requirements.

6.3 Removal - Weld-In Deck Rings

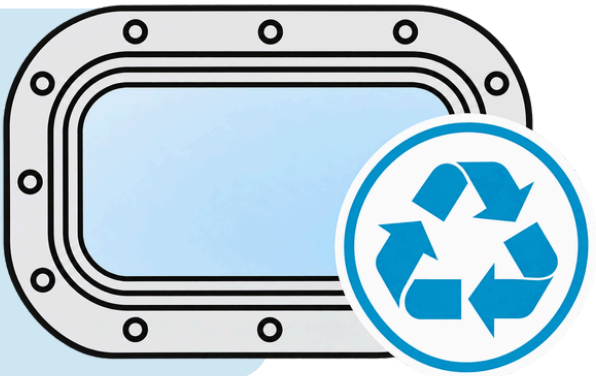
- Where removal of the welded deck ring is required, follow an approved removal method appropriate to the vessel structure.
- Take care to avoid damage to the surrounding deck structure.
- Dress and clean the deck area after removal to a suitable finish, ready for future installation or repair.
- Inspect the deck for any damage and carry out repairs in line with the project specification (if required).

6.4 After Removal

- Inspect the removed hatch and components for wear, damage or other issues, and record findings (if required).
- Store any reusable components in a clean, dry and protected condition.
- Dispose of non-reusable materials responsibly and in accordance with local regulations.
- Record the removal in the project documentation, including any inspections, repairs or follow-up actions.

Important

Decommissioning and removal methods may vary depending on hatch type, vessel specification, class approval and site requirements. Always follow the approved project documentation and applicable standards.



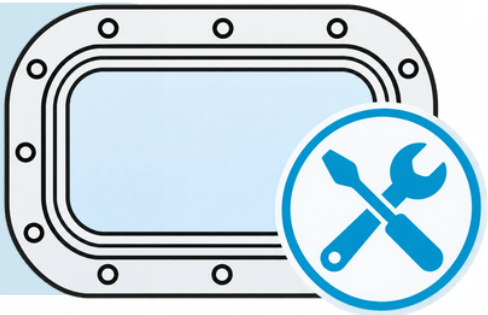
7 Troubleshooting

The table below outlines common hatch issues, possible causes and suggested checks to help identify problems and determine appropriate next steps.

Issue	Possible Cause(s)	Suggested Checks / Actions
Water ingress (leakage)	• Gasket worn, damaged or incorrectly seated • Insufficient clamping of the cove • Debris on the sealing surfaces	✓ Inspect and clean sealing surfaces. ✓ Inspect the locking mechanism and check for correct engagement in accordance with the approved instructions. ✓ Replace the gasket if required.
Cover does not lock securely	• Misalignment of cover and deck ring • Worn or damaged locking components • Debris or contamination	✓ Check alignment and refer any necessary adjustment to a competent person. ✓ Inspect locking components for wear or damage. ✓ Clean and re-test operation.
Stiff or difficult operation	• Lack of lubrication (where applicable) • Misalignment • Corrosion or contamination	✓ Clean and remove any contamination. ✓ Lubricate moving parts (as specified). ✓ Check alignment and refer any necessary adjustment to a competent person.
Excessive movement or rattle	• Loose or missing fasteners (bolt-down installations) • Wear in hinges or locking components • Deck ring or seating surface damage	✓ Check fasteners and tighten only in accordance with the approved installation requirements. ✓ Inspect hinges and locking components for wear and replace if needed. ✓ Inspect the deck ring and refer any damage for appropriate assessment and repair.
Gasket deterioration	• Ageing (hardening, cracking or compression set) • Exposure to harsh environment (e.g. UV, salt or chemicals) • Incorrect gasket specification	✓ Replace the gasket with a genuine Seatite part. ✓ Confirm the gasket material is suitable for the operating environment. ✓ Inspect the gasket at intervals appropriate to the vessel's maintenance plan and replace when required.

Important

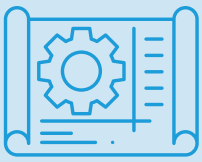
If an issue persists, the hatch cannot be operated or secured correctly, or damage is suspected, do not rely on the hatch for its intended function until it has been assessed by a competent person. Contact Seatite for product-related advice and support.



8 Technical Support & Documentation

Information, documentation and support to help with the installation, maintenance and ongoing use of your Seatite hatch.

8.1 Technical Documentation



Installers should refer to the approved drawings and specifications for their particular hatch, including:

- Hatch dimensions and clear opening.
- Deck-ring configuration (weld-in or bolt-down).
- Installation and fixing requirements.
- Any project-specific or vessel requirements.

8.2 Replacement Parts & Technical Support



Seatite can provide assistance with:

- Replacement gaskets and other hatch components.
- Product identification and part selection.
- Technical enquiries related to installation, maintenance and operation.

8.3 Contact Seatite

For further information, replacement parts or technical support, please contact Seatite:

info@seatite.co.uk

seatite.co.uk

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Important

This guide provides general product guidance and does not replace approved vessel drawings, project specifications or installation procedures. Installation methods, inspection and testing requirements must be determined by the responsible shipyard, customer or appointed installer in accordance with applicable requirements.