

Transom-Mounted Stern Thrusters: External Installation Guide

This guide outlines steps for installing transom-mounted stern thrusters with minimal hull modifications, focusing on bolt-on and shallow-depth solutions.

Key Considerations

1. Mounting Position:

- Install the thruster as deep as possible on the transom to ensure propellers remain $\geq 5"$ (13 cm) below the waterline[34](#).
- Avoid obstructions like trim tabs, jets, or surface drives by using angled cowls or grids to redirect water flow[2](#).

2. Minimal Hull Penetration:

- Use **bolt-on tunnels** (e.g., Sidepower SP series) that require only small holes for mounting bolts and cables[45](#).
- For shallow drafts, attach **composite cowls** to the tunnel to reduce air intake and improve efficiency[2](#).

Step-by-Step Installation

1. Planning and Preparation

- Check internal transom space for obstructions (e.g., wiring, structural supports)[35](#).
- Mark bolt holes using the thruster's backing plate as a template[3](#).

2. Drilling and Sealing

- Drill pilot holes (5/16" or 8 mm) for mounting bolts and cable feed-throughs[3](#).
- Enlarge holes to 3/8" (10 mm) and apply **marine-grade sealant** (e.g., Sikaflex, MS Polymer) to edges[45](#).

3. Mounting the Thruster

- Attach the thruster assembly to the transom using **A4 stainless steel bolts**, washers, and locknuts[4](#).

- Ensure the tunnel flange sits flush against the transom. Grind/sand the transom surface if needed[45](#).

4. Waterproofing

- Apply sealant to:
 - Bolt threads and compression rings (15% compression recommended)[2](#).
 - Cable feed-through points[3](#).

5. Final Assembly

- Install the motor and gear leg, ensuring the motor is supported to avoid stress on the tunnel[5](#).
- Connect cables and test the thruster's operation before securing all components[5](#).

Optional Accessories

- **Cowl/Grid Kits:** Redirect water flow and prevent debris entry in shallow installations[2](#).
- **Extension Posts:** Adjust thruster depth without major hull modifications[3](#).

Materials Checklist

Item	Purpose
A4 stainless bolts/nuts	Secure thruster to transom
Marine sealant (Sikaflex)	Waterproofing
Compression rings	Seal bolt holes
Composite cowls	Shallow-installation optimization

Safety Tips

- Use cordless drills for in-water installations to avoid electrocution[3](#).
- Avoid over-grinding the transom to maintain structural integrity[4](#).

By following these steps, you can achieve a secure, low-impact stern thruster installation. For detailed diagrams, refer to the manufacturer's templates²⁴.

Citations:

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