



## Boat Docking Made Easier and Safer with External Thrusters

As boat builders create wider boats to increase the interior space, marinas become more crowded and slips tighter. Factor in unfavorable wind and/or current conditions and the challenge of safely docking and handling a boat in close quarters is increased. Pleasure boat captains are sometimes reluctant to leave the dock unless the conditions are ideal for fear of damaging their own or someone else's boat, or even the dock, when they return. There *is* a solution to the problem. Easily installed external boat thrusters have come of age, allowing even those who own smaller boats to take advantage of the added control and maneuverability they provide.

So what is a boat thruster? It is a propulsion unit built into, or mounted onto, the bow or stern of a boat to make it more maneuverable from side to side when it otherwise might get out of control due to the wind or current. Specifically, it allows the person piloting the boat to move the boat to port or starboard without using the main engine. A quick tap on a joystick activates an electric or hydraulic motor attached to a propeller that will move the bow in the desired direction.



Most pleasure boaters in need of better control in the wind or current will find that a [bow thruster](#) will solve their piloting problems. Although the stern does not wander as much as the bow, installing a [stern thruster](#) as well will provide the greatest maneuverability from side to side.



### When Maneuverability Is Needed Most

There are two situations where maneuverability is especially critical—when sterning (backing up) and attempting short turns.

- **Sterning** – When the boat is being maneuvered in reverse into a narrow slip or down a corridor between other boats, propeller walk and wind can severely affect the pilot's ability to control the bow of the boat, especially with a single screw boat. It might be a little easier to control with a double screw boat, and some boats stern better than others. However, if the boat will not cooperate, or if either the wind or current become an issue, the situation can become downright nerve racking and even dangerous to both pilot and boat. A thruster is invaluable in these situations.
- **Short Turns** – Few single screw boats can turn in their own length using only an outdrive or rudder. There is a way to spin a boat in a length and a half if the captain knows how to use propeller walk to advantage. Failing that, he or she might end up playing bumper boat. In this situation, a thruster can spin the boat around with a few short bursts of power.



## Deciding Which Thruster Is Best

### *Through-the-Hull Thrusters*

Although occasionally found on smaller boats (less than 30 feet in length), through-the-hull thrusters are usually found on larger boats. While they are generally installed at the factory when the boat is built, they can be added later. There is, however, a downside to retrofitting. First of all, two significantly large holes must be cut or drilled in the hull below the water line for the tunnel/tube that must pass through the boat. Correct tunnel placement is critical and requires a skilled installer experienced in structural fiberglass repairs because the area around the tunnel on the hull's exterior will require fiberglass work, paint and gelcoat. If the boat is new, installing a through-the-hull thruster will most likely void the hull warranty.

The placement of the tunnel and the thruster motor will also reduce storage space in the boat and/or interfere with tanks, bulkheads and other structural components. Finally, in order to be effective the thruster must be placed as far forward as possible and deep enough below the water line to generate the maximum turning moment – something that is not always practical with smaller boats. Additionally, through-the-hull thrusters are known to be noisy.

### *External Thrusters*

In 2001, Steve and Mark Houle invented the [Sideshift](#), an external thruster that can be attached to almost any type of boat—e.g., cruiser, cuddy, trawler, sailboat or houseboat—ranging from 20 to 80 feet in length. And, boat owners can retrofit without cutting or drilling holes below the water line.

Sideshift offers both bow and stern configurations. As the name suggests, bow thrusters are designed to be mounted on the bow of the boat. They can be attached with only three bolt holes for the [mounting](#) hardware and one or two holes for the power cables. All holes are drilled above the water line, thereby eliminating the possibility of a potential boat-sinking leak.

Stern thrusters are also available for those who feel they need better stern control. [Mounted](#) on the swim deck or transom, they allow the captain to push the stern from side to side. For boaters who want to install both bow and stern thrusters Sideshift provides a double joystick that makes it possible to use the bow and stern thrusters separately or together to move the boat sideways. The advantages of that setup will be obvious to anyone who has had to dock a boat between two other boats tied up parallel to the dock. Using the two thrusters simultaneously permits the pilot to simply slide it in sideways.



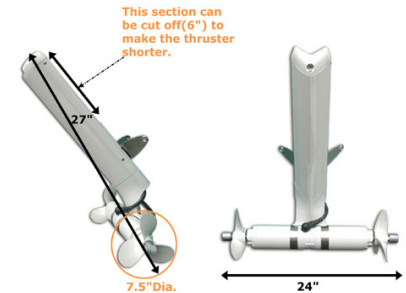


## Construction and Specifications

Sideshift thrusters are constructed of a heavy cast aluminum that is factory painted with underwater primer, epoxy and an [anti-foul coating](#). The concept is simple: One or two (depending on boat size) small, high efficiency, waterproof electric motors with aluminum propellers are mounted on a bracket.



Depending on the size of the boat, the high efficiency motors produce between 2½ to 10 horsepower. The motor for [boats up to 30 feet in length](#) is a single 2½ hp motor mounted on the bow. When the boat is moving slowly, the top of the propellers are approximately five inches below the surface of the water. The motor is reversible, giving it the ability to produce a port or starboard thrust.



**Dimensions SS340 & SS350**



With boats that plane the motor and propellers rise out of the water so there is no drag. When the thruster is mounted on a displacement boat, the drag is insignificant because the motor is mounted forward of the water displacement.

Mounted as far forward as possible, the thruster's propulsion provides the maximum turning moment. A simple touch of the [joystick](#) and the motor responds instantly to push the bow to port or starboard.

## Installation

Installing Sideshift thrusters is easy. Any marine mechanic can do it; boat owners handy with tools can do the job themselves. It generally takes less than a day to complete the project, and the boat can be used the following day.

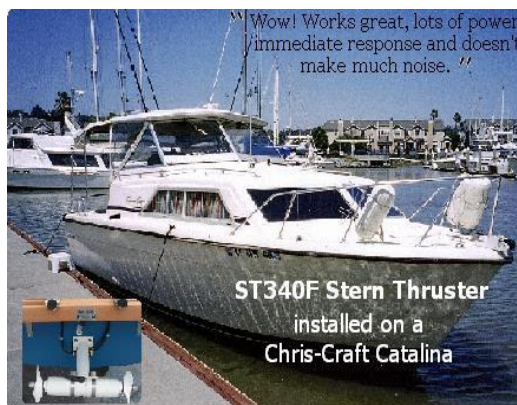
The Sideshift *thruster kit* provides the necessary components and installation hardware—the thruster, mounting bracket, control unit (mounted in a storage locker or other convenient location), and the joystick, which is installed on or near the boat's dashboard. The boat owner only has to add some wire to connect the batteries and joystick.



## Ten Great Reasons to Install Sideshift Thrusters

1. External bow thrusters are mounted as far forward as possible, maximizing their turning power.
2. External thrusters are exceptionally responsive because the propellers, which are exposed directly to open water, do not have to overcome the inertia of water in a tube.
3. Because external bow thrusters are not mounted in the hull, they produce less noise and vibration.
4. Because installation does not require cutting holes in the hull below the waterline, the structural integrity of the boat is not affected.
5. Since an external thruster is lifted above the water, it does not contribute additional drag when the boat is planing.
6. External thrusters are easy to install by either the boat owner or a marine mechanic.
7. External thrusters can be installed on nearly all boats.
8. External thrusters have a longer duty cycle since they are cooled by open water.
9. External thrusters can be removed and installed on a new boat.
10. External thrusters are cheaper to install than through-the-hull thrusters.

Having maximum control of a boat when docking or maneuvering in a limited space is an important advantage for all boat owners. Sideshift external thrusters have made this control both possible and affordable. As a result, the captain and crew can have a better day on the water knowing they will be able to dock the boat as easily as they would park a car.



### What customers are saying about our Stern Thrusters...

The unit worked exactly as advertised, which is exactly what I wanted. The installation took about 5 hours; the directions were clear and the installation straightforward (providing you do a little planning on battery placement beforehand). I have now used the unit for a little over a month in various boating conditions and find that all boat handling tasks are much easier and less stressful.



For more information, visit the Sideshift web site at [www.sideshift.com](http://www.sideshift.com).

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