



Thrusters



Selected by many of the world's most prestigious boat builders, Max Power bow and stern thrusters have led the field in performance, quality and design, since 1989.

Max Power has the broadest range of thrusters with solutions available for boats up to 200'. Whether you are a boat owner or boat builder, Max Power's range of thrusters, designed for easy installation, minimum maintenance, and maximum safety, will meet your needs.

With sales and service centers in more than 35 countries, Max Power has over 600 representatives worldwide. Wherever you are located, Max Power service is close at hand.

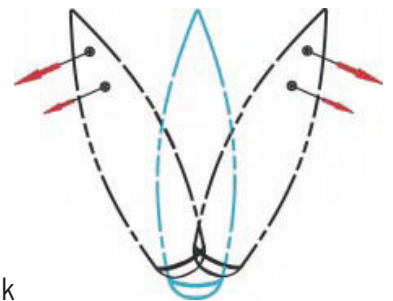
THRUSTERS

Selecting the Right Thruster

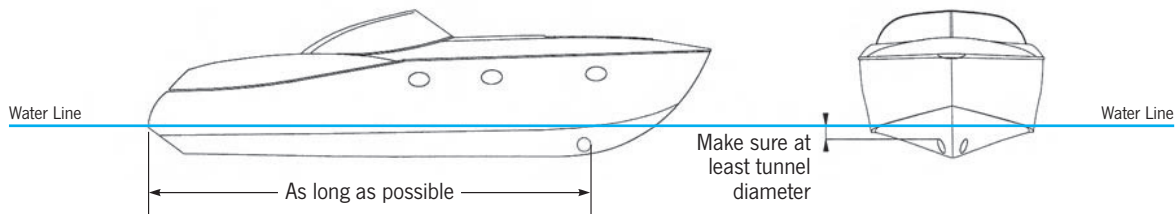
Thruster Selection

Positioning thrusters is often as important as choosing the right thrust output when seeking maximum maneuvering performance for your boat.

- Thruster turbines need to be placed one full propeller diameter under the water line to achieve optimum thrust.
- The thruster must also be positioned as far forward in the bow or as far back in the stern as possible. A thruster stepped back from the bow (or stern) would need to be more powerful than one mounted further forward (or back), to achieve the same turning effect on the yacht.



The further forward your thruster is installed, the greater the thrust.

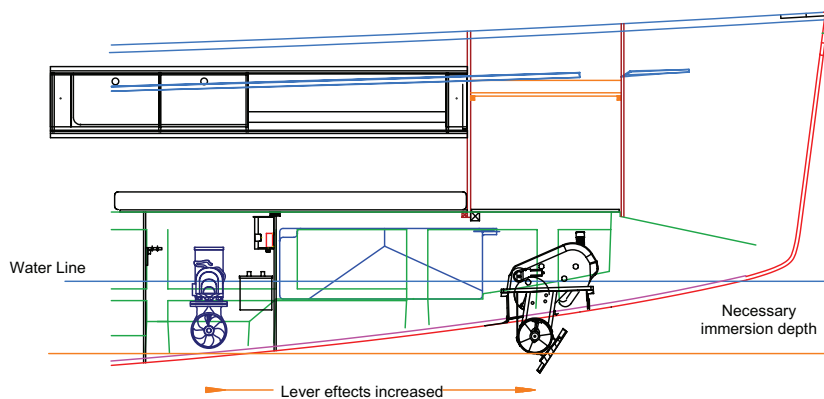




TYPE OF THRUSTER Tunnel or Retractable?

Tunnel thrusters are easy to fit and highly cost effective. When installed at the correct immersion depth and using the shortest tunnel length possible, tunnel thrusters offer an ideal solution for motor yachts, even deep-footed sailing yachts when sailing performance is not paramount.

Most motor yacht designs are well suited to fixed tunnel thruster installations. However, the above-described constraints (depth and positioning) often contradict each other, especially in modern sailboats. Although some sailboats can achieve good results with tunnel thrusters, most modern designs work better using a retractable solution. When retracted these units have no affect on the boat's drag and therefore do not reduce sailing performance in light winds.



Tunnel



Retractable

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STRENGTH Thrust Rating

Whether it be a tunnel or a retractable thruster that suits your needs, choosing the correct thrust rating (or relative power) is important. To help simplify the complicated calculations associated with the many variables in boat design, please see the selection charts on page 55 for each thruster type. To use these charts there are two factors (excluding the length of your boat), you will need to determine:

1. The relative size & wind area of your boat

For a boat of any given length, the area it offers to a direct side wind can vary from one design to another. The underwater shape & total weight can also differ greatly. However, most pleasure craft, both motor and sail, will fit into one of three categories – cruising, fast cruising and super fast cruising.

2. The conditions in which you use your boat (thruster force required)

Different people have different uses for their boat. An expedition yacht on a world cruise would have different needs than a picnic boat docked on a lake. In brief, some people would like a more powerful thruster than others. If the size of your boat intersects more than one thruster on the selection chart, the choice of thruster will depend on the situations and conditions in which it will be used.



POWERING YOUR THRUSTER Electric or Hydraulic?

Bow and stern thrusters require a power source. On a boat this can be either a 12/24V DC (electric) motor or a hydraulic motor. The hydraulic motor will need to draw power from a thermal engine (via a hydraulic pump) or a remote mounted DC motor (also via a hydraulic pump). The DC motor will draw power directly from a battery bank.

The choice of power type will depend on several factors. For each row, select the factor most important to you. The most suitable power method is probably that which has the most selections.

Typical DC Indicators	Typical Hydraulic Indicators
Yachts under 70'	Yachts over 85'
Cost Effectiveness	Lightweight is essential
General Docking	Long runtime required
Easy Installation	Commercial Usage
Used less than 100 days	High frequency usage

Hydraulic Benefits:

- Ideal for commercial and heavy displacement / high windage vessels from 40'-85'
- Can run continuously as long as they are needed
- Can be installed in damp environments where electrical units may not be appropriate
- Hydraulic power provides proportional thrust control through use of an optional proportional control valve located at the helm

For additional technical information on hydraulic thrusters, please go to www.max-power.com.



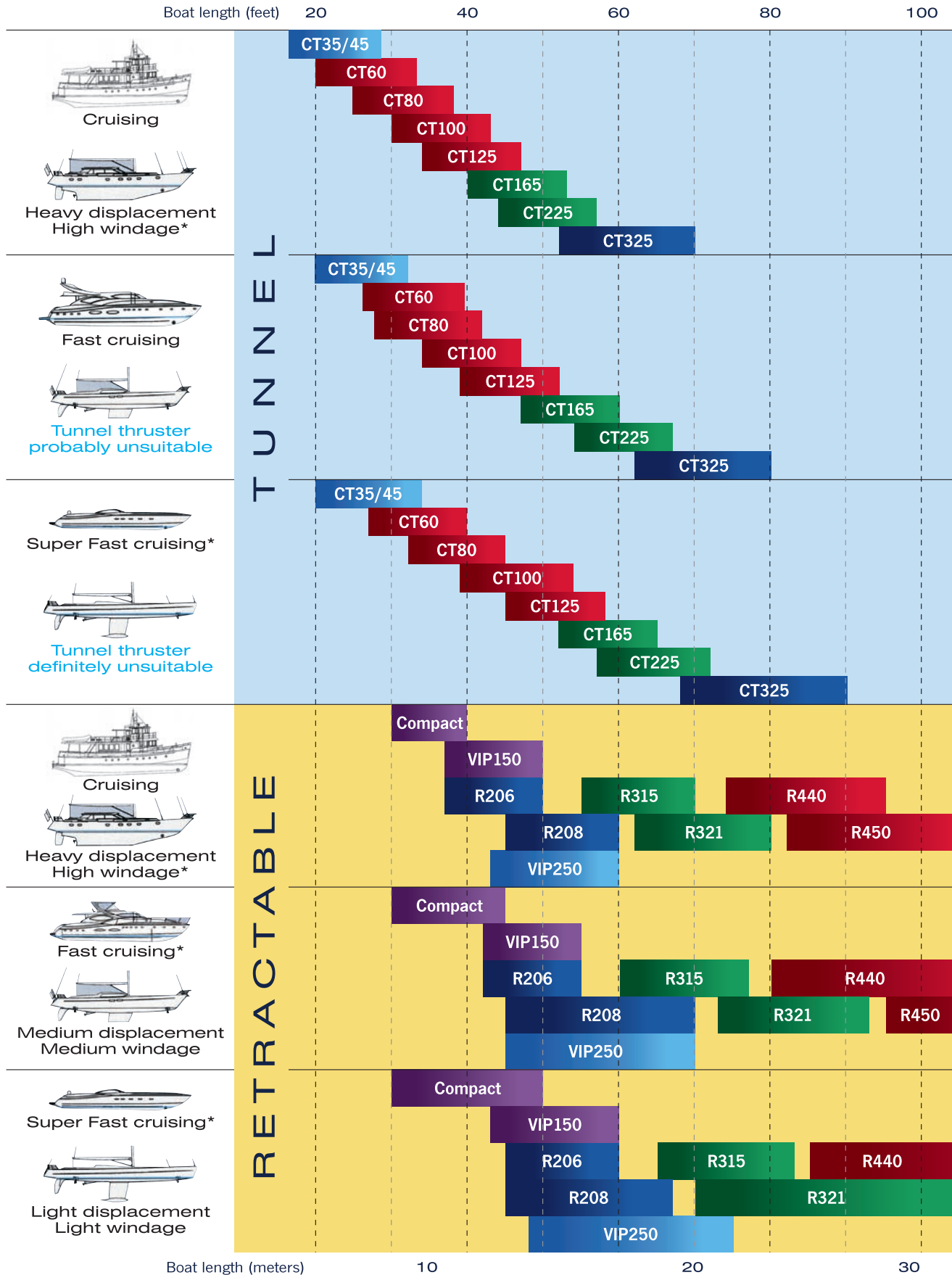
Add a Stern Thruster

The combined use of a bow and stern thruster adds a whole new level of control when maneuvering in difficult conditions or tight corners. Turning on the spot or even stepping the entire boat sideways becomes possible at the flick of a switch. Max Power offers stern thruster adapters for the entire tunnel thruster range.

A range of **Ignition Protected thrusters** is also available.

On boats where conventional tunnel stern adaptors cannot be used due to lack of immersion depth or the positioning of drive systems, retractable stern thrusters offer an attractive & powerful solution.

Selection Chart



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Selection Chart

*Please inquire regarding vessels over 100'.