

THRUSTERS

As marinas get smaller and berths get tighter, safely docking a boat is more challenging than ever. Thrusters give you total control of your boat and allow you to manoeuvre into and out of tight spots with ease.

Some good reasons why thrusters improve your boating.

- Docking your boat is easy; it makes you look like a professional skipper.
- Boating is meant to be fun. Why end your day or week on the water with a stressful experience?
- A thruster offers the help you need to be in full control when docking and departing regardless of wind conditions and currents.
- Short of crew? A thruster makes you less dependent on having a skilled crew. The independence a thruster provides will allow you to use your boat whenever you want, whether alone or with others.
- Every boat can benefit from having a thruster installed.

Choosing the right Lewmar thruster for your boat.

Today most yachts or motorboats over 45' have a bow thruster fitted as standard. The thruster will usually meet the expectations of most customers when using the boat under normal weather conditions. The sizes used by boat builders will vary depending on the boat's intended usage and price level. In

today's production boats of around 45'-50', the typical thruster will push the boat's bow against a direct side wind of 20-22 knots.

For boat owners who use their boats in more demanding conditions or have a strong current in their local marina, Lewmar can offer upgrades to a higher performance thruster. However, few pleasure craft need a thruster that can push the bow against a direct side wind of more than 25 knots.

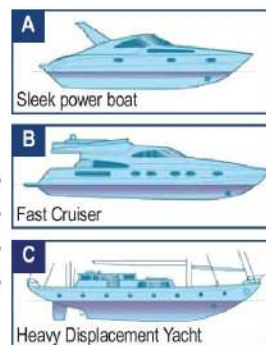
The boat's wind area, the 'lateral wind draft area' and the thruster's tunnel position in the hull determine the thruster's performance on a boat. By knowing these factors we can calculate the wind pressure on the boat and the centre point of this wind pressure. However the wind pressure is seldom from right angles and many boat superstructures are quite streamlined so we can reduce the factor slightly. From these calculations we can determine what thruster is needed to counter the wind pressure with the given thruster position. *The selection chart to below gives you a general guide.*

To gain total control of your boat in combination with a bow thruster the solution is to install a stern thruster, leaving the main engines to propel the boat forward and backward as they were intended.

For thruster accessories see pages 15 & 16

FORCE FACTOR GUIDE

	Force Factor	A	B	C
	Wind Effects (Conditions)	Light Displacement/ Low Windage	Medium Displacement/ Medium Windage	Heavy Displacement/ High Windage
Slight	5-8M/S, 11-16 Knots, Beaufort F4, 12-18mph	1	2	3
Moderate	8-11M/S, 17-21 Knots, Beaufort F5, 19-24mph	4	5	6
Rough	11-14M/S, 21-26 Knots, Beaufort F6, 25-30mph	7	8	9



THRUSTER SELECTION GUIDE

After deciding FF above, locate boat LOA and appropriate TT Thruster

FF	LOA (m) 30 LOA ft (9)	35 (10.5)	40 (12)	45 (13.5)	50 (15)	55 (16.7)	60 (18.2)	65 (19.7)	70 (21.2)	75 (22.7)	80 (24.2)	85 (26)	90 (27.3)
1	140TT 2.0	140TT 2.0	140TT 2.2	185TT 3.0	185TT 4.0	185TT 5.0	185TT 6.0	250TT 8.0	250TT 9.6	300TT 10.8	300TT 10.8	300TT 15.0	300TT 15.0
2	140TT 2.0	140TT 2.0	140TT 2.2	185TT 3.0	185TT 4.0	185TT 5.0	185TT 6.0	250TT 8.0	250TT 9.6	300TT 10.8	300TT 10.8	300TT 15.0	300TT 15.0
3	140TT 2.0	140TT 2.2	185TT 3.0	185TT 4.0	185TT 5.0	185TT 6.0	250TT 8.0	250TT 9.6	300TT 10.8	300TT 10.8	300TT 15.0	300TT 15.0	300TT Hyd
4	140TT 2.0	140TT 2.2	185TT 3.0	185TT 4.0	185TT 5.0	185TT 6.0	250TT 8.0	250TT 9.6	300TT 10.8	300TT 10.8	300TT 15.0	300TT Hyd	300TT Hyd
5	140TT 2.2	185TT 3.0	185TT 4.0	185TT 5.0	185TT 6.0	250TT 8.0	250TT 9.6	300TT 10.8	300TT 10.8	300TT 15.0	300TT 15.0	300TT Hyd	300TT Hyd
6	140TT 2.2	185TT 3.0	185TT 4.0	185TT 5.0	185TT 6.0	250TT 8.0	250TT 9.6	300TT 10.8	300TT 10.8	300TT 15.0	300TT Hyd	300TT Hyd	300TT Hyd
7	185TT 3.0	185TT 4.0	185TT 5.0	185TT 6.0	250TT 8.0	250TT 9.6	300TT 10.8	300TT 10.8	300TT 15.0	300TT Hyd	300TT Hyd	300TT Hyd	300TT Hyd
8	185TT 3.0	185TT 4.0	185TT 5.0	185TT 6.0	250TT 8.0	250TT 9.6	300TT 10.8	300TT 15.0	300TT Hyd	300TT Hyd	300TT Hyd	300TT Hyd	300TT Hyd
9	185TT 4.0	185TT 5.0	185TT 6.0	250TT 8.0	250TT 9.6	300TT 10.8	300TT 15.0	300TT Hyd	300TT Hyd	300TT Hyd	300TT Hyd	300TT Hyd	300TT Hyd

Note: The 250TTHyd can be used in all areas that the 300TT10.8 appears

THRUSTER FEATURES

- 1 Sealed gear leg with long-life "mechanical" seal allow Lewmar thrusters to be fitted without the need for a top up reservoir, they are pre-filled with special gear oil for lifetime lubrication.
- 2 The gearbox is fitted with a spline drive and all bronze drive legs are fully galvanically protected.
- 3 We offer a composite drive leg in the 140TT, which does not require anodes.
- 4 The Lewmar thruster controller intelligently protects the thruster from potential inherent problems in all high current applications as well as user faults. It includes several important safety features imperative in a product with such high power, run by DC electric, as a thruster.
- 5 The 5 blade special propellers are the result of much testing over a number of years of development work and thousands of tests. They have been designed to reduce the noise level, while maintaining the exceptional efficiency. This goal was achieved, and even making them a little bit more aggressive on some models, increasing the thrust on some thrusters. The Lewmar thruster is quieter and more efficient. Please see individual information on each new thruster for more details.
- 6 To provide reliable and safe thruster installations in more boats, there are modified versions of the DC electric thrusters in watertight housings for use in stern and other locations that may get wet or are exposed to gasoline fumes. These IP thrusters are fully ignition protected (ISO 8846) for use in boats with gasoline engines. They have a hermetically sealed composite housing around all electric parts. This provides the ignition protection as no gasoline fumes can enter and be ignited by sparks. All electric parts that could be damaged by water are covered and protected, making Lewmar's thrusters the ideal choice for stern thruster installations where it is difficult to ensure that the thruster will always remain dry.

