



### 3. Thruster

Manoeuvring around the dock area can be difficult, but Lewmar's Thrusters make docking simple. The revolutionary design of the Lewmar propeller – the latest in Lewmar's long history of custom thruster solutions – achieves even thrust in both directions for maximum control and manoeuvrability.

All Lewmar Thrusters have been extensively tested, resulting in a smooth, efficient and quiet performance that will have you docking like a pro in no time.



## How to choose the right thruster for your boat

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. From these calculations we can determine what thrust is needed to counter the wind pressure with the given thruster position. To gain total control of your boat, install both a bow and stern thruster, leaving the main engines to propel the boat forward and backward.

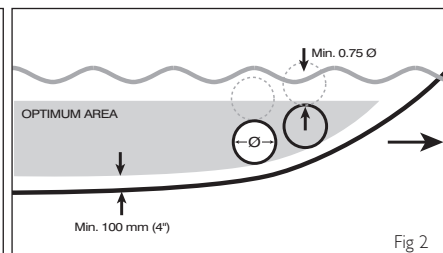
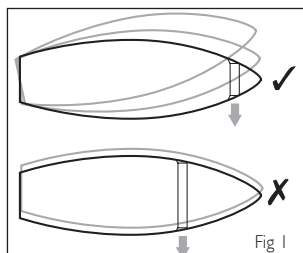
The main factors that decide correct thruster sizing are:

### 1 Position of the thruster

The actual position of the thruster will depend on the internal & external construction of the vessel.

For optimal performance the thruster should be mounted within the following parameters:

- As far forward as possible to maximise the lever effect. (Fig 1)
- $1 \times \varnothing$  (0.75 x  $\varnothing$  minimum) below the waterline to prevent air being sucked into the tunnel. (Fig. 2).  $\varnothing$ =Tunnel Diameter.
- Minimum suggested tunnel length  $2 \times \varnothing$ .



### 2 Boat size, type and shape



Light displacement / low windage

Light control / light displacement



Medium displacement / Medium windage

Medium control / medium displacement



Heavy displacement / High windage

High control / Heavy boat

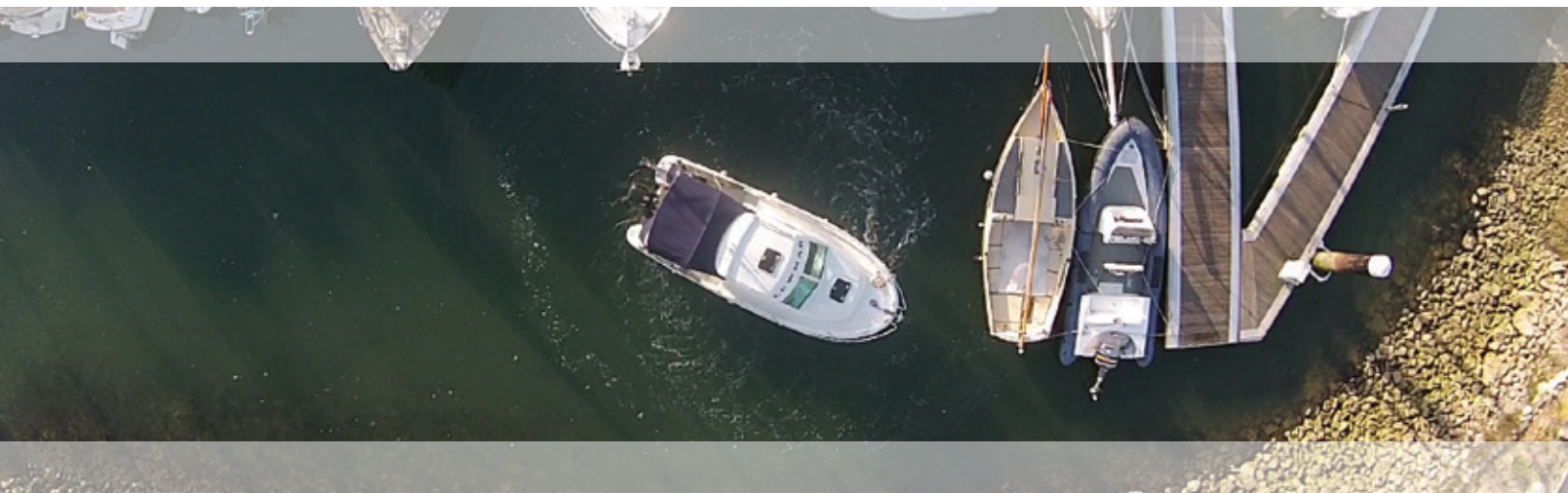
### Boat length overall

	M FT	9 M 30 FT	11 M 35 FT	12 M 40 FT	14 M 45 FT	21 M 50 FT	17 M 55 FT	18 M 60 FT	20 M 65 FT	21 M 70 FT	23 M 75 FT	24 M 80 FT	26 M 85 FT	27 M 90 FT
110TT 1.5														
125TT 2.0														
140TT 2.0														
140TT 2.2														
185TT 3.0														
185TT 4.0														
185TT 5.0														
185TT 6.0														
250TT 8.0														
300TT 10.8 250TT HYD														
300TT 15.0														
300TT HYD														

### Vertical Retracting and Swing Thrusters Size Guide

	10 M 35 FT	12 M 40 FT	15 M 50 FT	18 M 60 FT	21 M 70 FT	24 M 80 FT	27 M 90 FT	30 M 100 FT	33 M 110 FT	36 M 120 FT	39 M 130 FT	42 M 140 FT	45 M 150 FT	48 M 160 FT
250 20HP														
300 30HP														
400 60HP														
500 80HP														
600 100HP														

### 3. Thrusters



#### Lewmar TT Thrusters

Great care and attention to detail goes into the design and manufacture of every Lewmar thruster. High performance, ease-of-use and reliability are our priorities. In order to achieve that, every thruster we make includes the features below.

Custom-made to Lewmar specifications, the motors are highly reliable and high performance. Replacement brushes are available.

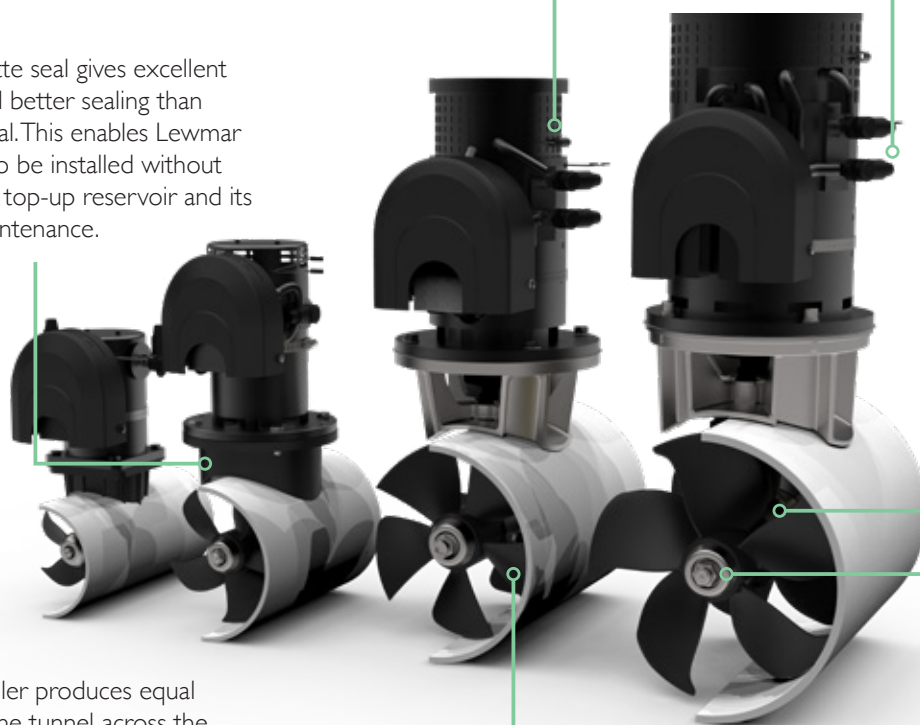
Easy, plug-together switch connections

Lewmar cassette seal gives excellent protection and better sealing than standard lip seal. This enables Lewmar TT thrusters to be installed without the need for a top-up reservoir and its associated maintenance.

Hardened and ground spiral bevel gears for maximum efficiency and quiet power transmission

5-blade propeller produces equal thrust out of the tunnel across the full 110-185 range from a single propeller. The 250 & 300 utilise twin counter rotating props to get the best performance from larger tunnels and higher power outputs.

The Lewmar TT anode has a specially designed stainless steel sheath for optimal retention. Secured with a large nut, it is simple to replace.



### 3. Thrusters



#### Thruster Control Panels

Lewmar's new range of thruster control panels provide superior tactile control of single or dual thruster installations.

The panels are designed for all Lewmar TT, RT, SRT & VRT thrusters fitted with a blue box and can be fitted to thrusters fitted with a black-box using a controller adaptor.

The control panels are installed without the need for rear access and feature a snap-on bezel to neatly hide the mounting screws. A cover (Pad only) is also included, providing additional security against accidental use and giving extra environmental protection. If replacing a previous generation touch panel, joystick panel or dual joystick panel, the existing mounting hole can be reused.

- Ergonomic control 'pad' gives tactile feedback
- Membrane switch panel sealed from dust and moisture ingress
- Single and dual controllers available
- Dual controllers give total control of vessel via multi-axis function pad
- 12-24V dual voltage supply
- Multi-function LED indicator displays system deployment, thruster operation, low voltage, motor temperature warnings & fault conditions.
- Upgrade kit allows installation of single or dual controllers into a thruster system with previous generation controllers
- Fit existing cut-out of Lewmar joysticks
- Removable cover on pad controllers





PART NUMBER	DESCRIPTION
589268	SINGLE JOYSTICK
589223	SINGLE PAD
589267	DUAL JOYSTICK
589222	DUAL PAD



### Single/Dual Controller Connecting Leads and Splitter

- Simply measure the distance from the Thruster to the Panel to choose the suitable lead
- If you are installing a second or third panel, use a Y Connector to divert power back to the Thruster
- Y connectors can only be used with like for like panels (Dual with dual / Single with single)

Y LOOM MX	AUX LOOM MX	LENGTH
589800	589801	2M
	589802	7M
	589803	10M
	589804	18M
	589805	22M

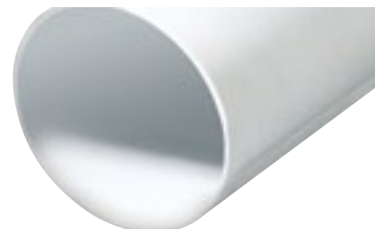


## Thruster Accessories and Spares

### Thruster Tunnels

- Range of high-quality filament-wound GRP tunnels
- Manufactured to Lewmar specifications
- Available in a variety of cut lengths
- Limited range of steel tubes available

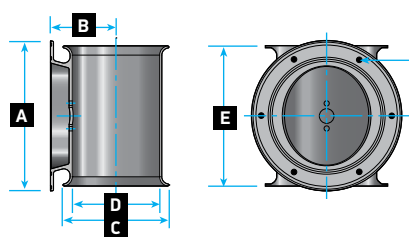
TUNNEL LENGTH		GRP Ø110mm (4 1/8")	GRP Ø140mm (5 1/2")	GRP Ø185mm (7 2/7")	STEEL Ø185mm (7 2/7")	GRP Ø250mm (9 5/8")	GRP Ø300mm (11 4/5")
cm	ft						
60	1' 12"	<b>589401</b>					
75	2' 6"	<b>589402</b>	<b>589101</b>	<b>589300</b>			
100	3' 3"	<b>589403</b>	<b>589102</b>	<b>589301</b>	<b>589320</b>	<b>589501</b>	<b>589700</b>
150	4' 11"		<b>589103</b>	<b>589302</b>	<b>589321</b>	<b>589502</b>	<b>589701</b>
200	6' 7"			<b>589303</b>		<b>589503</b>	<b>589702</b>
300	9' 10"						<b>589703</b>



### Stern Kits

To gain total control of your boat, install both a bow and stern thruster, leaving the main engines to propel the boat forward and backward.

- Sturdy stern kits manufactured from durable GRP
- Available to match Lewmar Thrusters, from 140TT to 300TT



Kit Number	Thruster	A		B		C		D		E		No of Fixings	FIXINGS		FIXING PCD	
		mm	in	mm	in	mm	in	mm	in	mm	in		mm		mm	in
<b>589110</b>	140TT	240	9 7/16	105	4 1/8	170	6 11/16	140	5 1/2	225	8 7/8	6	M8		206	8 1/8
<b>589310</b>	185TT	290	11 7/16	130	5 1/8	235	9 1/4	185	7 5/16	320	12 5/8	6	M10		251	9 7/8
<b>589510</b>	250TT	350	13 3/4	175	6 7/8	310	12 3/16	250	9 13/16	380	14 15/16	6	M10		312	12 5/16
<b>589710</b>	300TT	384	15 1/8	215	8 7/16	375	14 3/4	300	11 13/16	420	16 9/16	8	M12		334	13 1/8

### Recommended Spares

	140TT	185TT	250TT/300TT
<b>Anodes</b>	<b>589150</b>	<b>589350</b>	<b>589550</b>

	110TT	140TT	185TT	250TT LH	250TT RH	300TT LH	300TT RH
<b>Propellers</b>	<b>589451</b>	<b>589151</b>	<b>589351</b>	<b>589551</b>	<b>589552</b>	<b>589751</b>	<b>589750</b>

	110TT	140TT	185TT
<b>Drive Pins</b>	<b>559107</b>	<b>559018</b>	<b>559017</b>

	140TT	185TT	250TT	300TT
<b>Support brackets</b>	<b>589096</b>	<b>589064</b>	<b>589066</b>	<b>589065</b>

#### Anode Kit



#### Propellers





## Electric Tunnel Thruster Accessories and Spares

## Accessories and Spares Selector

DESCRIPTION		110TT	125TT		140TT		185TT								250TT		300TT		
		591101 SIMPLE /590000 1.5 KW 12V	591251 SIMPLE /590002 2.0 KW 12V	590101 /590102 IP 2.0 KW 12V	591482 SIMPLE /590002 590004 IP - 2.0 KW 12V	590003 /590005 IP - 2.2 KW 12V	590006 /590014 IP - 3.0 KW 12V	590007 /590015 IP - 3.0 KW 24V	590008 /590016 IP - 4.0 KW 12V	590009 /590017 IP - 4.0 KW 24V	590010 /590018 IP - 5.0 KW 12V	590011 /590019 IP - 5.0 KW 24V	590012 /590020 IP - 6.0 KW 12V	590013 /590021 IP - 6.0 KW 24V	590024 - 8.0 KW 24V	590022 - 8.0 KW 24V	590034 - 10.8 KW 24V	590035 - 15 KW 48V	590033 - 10.8 KW 24V
GEARBOX MATE- RIAL	COMPOSITE	•	•	•	•	•													
	BRONZE														•		•	•	
	ALUMINIUM															•			•
	STAINLESS						•	•	•	•	•	•	•						
GEARBOX	589454	•																	
	582010		•																
	589156				•	•													
	583051						•	•											
	83052								•	•	•	•	•	•					
	589557														•	•			
	559775																•	•	•
FUSE	589007 130A							•											
	589008 250A							•		•		•							
	589009 325A													•					
	589010 400A									•		•			•	•		•	
	589011 500A													•			•		•
	589012 200A	•			•	•													
FUSE HOLDER	589006 T1	•			•	•	•	•		•		•		•		•	•	•	•
	589013 T2	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
CONTROLLER	589223 SINGLE PAD			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
	589222 DUAL PAD			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
	589268 SINGLE JOYSTICK			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
	589267 DUAL JOYSTICK			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
	589094 SIMPLE JOYSTICK	•	•		•														
POWER SWITCH BOX	559036 12V/24V							•		•		•		•	•	•			
	559037 24V/48V																	•	
	559038 12V/24V H																•		•
SPARE ANODES	589350 185TT ANODE						•	•	•	•	•	•	•	•		•	•	•	•
	589550 250/300TT ANODE														•	•		•	•
SPARE PROPELLERS	589451 110TT PROPELLER	•																	
	589455 125TT PROPELLER		•	•															
	589151 140TT PROPELLER				•	•													
	589351 185TT PROPELLER						•	•	•	•	•	•	•						
	589551 250TT RH PROPELLER														•	•			
	589552 250TT LH PROPELLER														•	•			
	589751 300TT LH PROPELLER																•	•	•
	589750 300TT RH PROPELLER																•	•	•
SPARE DRIVE PINS	559107 110TT DRIVE PIN	•																	
	559018 125TT DRIVE PIN		•	•															
	559018 140TT DRIVE PIN				•	•													
	559017A 185TT DRIVE PIN						•	•	•	•	•	•	•						
SPARE MOTOR SUPPORT BRACKETS	589096 125TT SUPPORT BKT		•	•	•	•													
	589096 140TT SUPPORT BKT																		
	589064 185TT SUPPORT BKT						•	•	•	•	•	•	•						
	589066 250TT SUPPORT BKT														•	•			
	589065 300TT SUPPORT BKT																•	•	•
REPLACEMENT BRUSH KITS	B15279 2.0/2.2KW 12VBRUSH KIT		•	•	•	•													
	B15282 3.0/4.0KW 12V BRUSH KIT						•		•										
	B15283 3.0/4.0KW 24V BRUSH KIT							•		•									
	B17198 5.0 / 6.0KW 12V/ 24V BRUSH KIT										•	•	•	•					
	B15284 8.0KW 24V BRUSH KIT														•	•			
	B13336 10.8KW 24V BRUSH KIT																•		•
	B12373 15.0KW 48V BRUSH KIT																	•	