LEWMAR®

Marine Equipment Guide

Edition 14

Since 1946, Lewmar has dedicated itself to making spending time on the water as easy and stress-free as possible; designing and manufacturing innovative and reliable products of the highest quality.

With a portfolio of hardware, winches, hydraulics, windlasses, anchors, thrusters, steering systems, hatches and portlights to suit every boat from the smallest day fisher to largest mega-yacht, Lewmar can supply a complete solution whatever your project and requirements.

Quality remains at the heart of everything we do.
The manufacture of our products takes place within our own factory in the UK, giving us total control from conception right through to delivery. In these days of ever increasing offshore sourcing, this is just one sign of our total commitment to providing superior products to all our customers.


Solaris 72DH

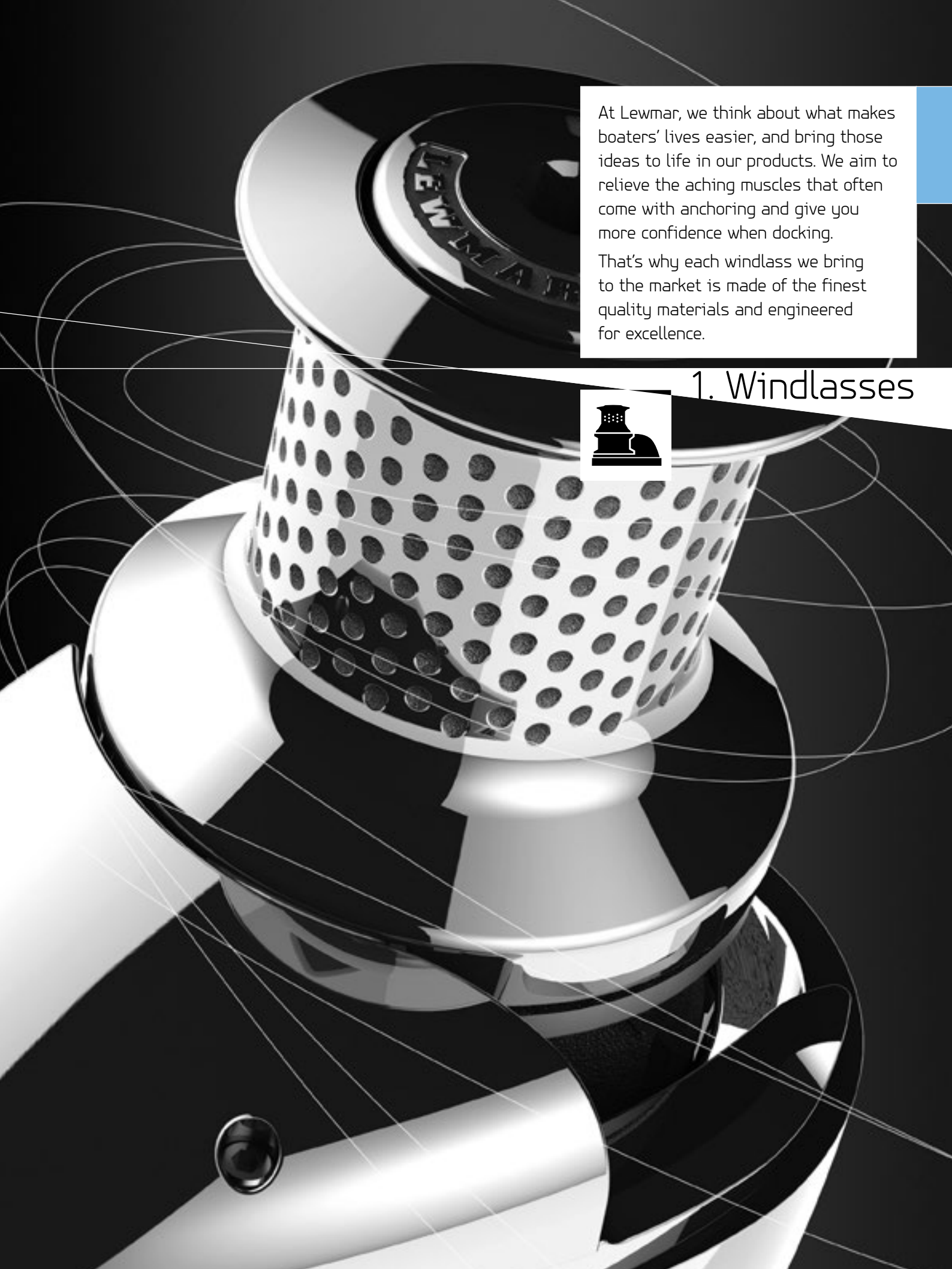
TotalCote

Lewmar's TotalCote is the new go-to product for almost any marine maintenance requirement.

TotalCote protects, displaces, cleans, seals, penetrates and lubricates. Use it on everything from seized bolts to your block and traveller car ball bearings to your luff groove. TotalCote will reduce friction and offer a long-term barrier against rust and corrosion.

EARTH FRIENDLY

Formulated solely from naturally occurring products, TotalCote is incredibly effective yet safe to the environment and sensitive marine eco-systems.



At Lewmar, we think about what makes boaters' lives easier, and bring those ideas to life in our products. We aim to relieve the aching muscles that often come with anchoring and give you more confidence when docking.

That's why each windlass we bring to the market is made of the finest quality materials and engineered for excellence.

1. Windlasses

Lewmar Anchor Windlass Range

Page 10 Captive Reel Windlass

- Rode stowage without the need for a locker
- Self locking – no need for cleat or chain stopper
- Fully remote operation – can be deployed and retrieved from the helm
- High quality materials and construction
- Level-wind technology prevents spooled line bunching
- All stainless steel 316 chassis

Page 11 CPX Vertical Windlass

- 15% lighter than comparable all-stainless windlass
- Sleek styling complements Lewmar V-Series Range
- Minimum parts enhances reliability
- Available in Size 0 and Size 1-4

Page 15 V-Series Vertical Windlass

- Suitable for boats up to 50m (164ft)
- V6 to V12 feature Lloyd's Type Approval
- Innovative features include Fall Safe, optional Fast Fit, and water-resistant IP68 motor gearbox
- Complete range of V-Series accessories available

Page 28 Horizontal Windlass

- Suitable for boats up to 12m (38ft)
- Compact unit ideal where space is limited
- Complete deck mounting allows maximum space for line storage
- Pro-Sport, Pro-Series, and Pro-Fish supplied DIY Ready

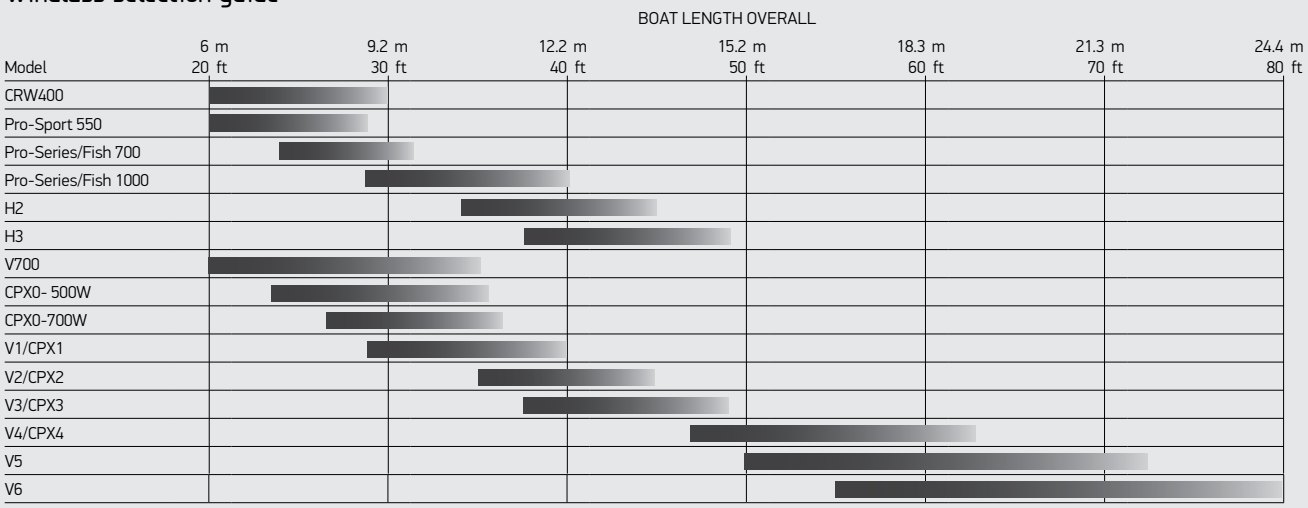
Page 32 C-Series Capstan

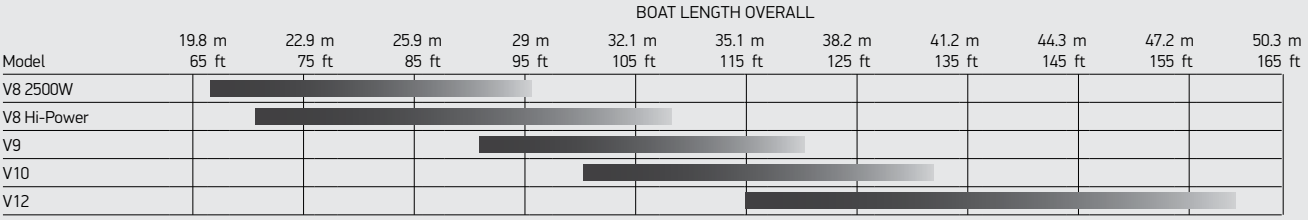
- Suitable for boats up to 50m (164ft)
- Beautifully polished stainless steel provides strength, anti-corrosion, and performance
- Unique WARP® (Wear & Abrasion Resistant Pattern) drum finish reduces rope wear by 30%
- C3 features effortless, on deck, single-handed installation

Easy anchoring starts with a Lewmar windlass

Whether you own a small fishing boat, a 160ft cruiser or a mid-size sailboat, Lewmar has a windlass designed to fit your exact needs. Each one is crafted with durability, convenience and affordability in mind. Both our vertical and horizontal designs are sleek and attractive to complement your boat.

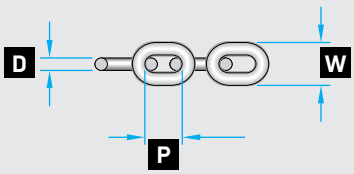
Windlass selection guide





Many parameters have to be taken into account when selecting a windlass, such as displacement, windage, anchor weight etc. In the above chart the boat length corresponds to a vessel with average displacement. If your vessel is of heavy displacement, please consider using a larger windlass model. Lighter shading represents the upper limit of the model. If in doubt, move up a model.

Chain guide



		6 mm DIN 766	6 mm ISO 4565	1/4" ACCO ISO G43 (G4)	7mm DIN 766	1/4" ACCO BBB (3B)	8mm DIN 766	8mm ISO 4565	5/16" ACCO ISO G43 (G4)	LEWMAR 9.5mm G40	3/8" CAMBELL S4	10mm ISO 4565	3/8" CAMPBELL S3	10mm DIN 766	3/8" ACCO ISO G43 (G4)	11mm SHORT LINK	11mm DIN766	7/16" ACCO ISO G43 (G4)	LEWMAR 12mm G30/G40 12mm SHORT LINK	13mm DIN 766	1/2" ACCO ISO G43 (G4)	LEWMAR 14mm G30/G40 14 mm SHORT LINK	14mm DIN 766	14mm STUDLINK	16mm SHORT LINK	16mm DIN 766
D	mm	6	6	7	7	7.14	8	8	8.4	9.5	10	10	10	10	10	11	11	11.8	12	13	13.2	14	14	14	16	16
	inch	0.236	0.236	0.276	0.276	0.281	0.315	0.315	0.329	0.374	0.39	0.394	0.37	0.394	0.394	0.433	0.433	0.464	0.472	0.512	0.520	0.551	0.551	0.551	0.630	0.630
P	mm	18.5	18	21.3	22	22.1	24	24	26.2	31.5	29	30	35	28	31	33	31	35.5	36	36	40.4	42	41	56	48	45
	inch	0.728	0.709	0.840	0.866	0.870	0.945	0.945	1.030	1.240	1.15	1.181	1.36	1.102	1.220	1.299	1.22	1.4	1.417	1.417	1.591	1.654	1.614	2.205	1.890	1.772
W	mm	20.4	21.6	24.4	23.8	25.2	27.2	28.8	29.7	31.6	35	36	34	36	35	39	40	40.1	40.5	47	45.7	49	50	50.4	56	58
	inch	0.803	0.85	0.962	0.937	0.992	1.07	1.134	1.168	1.244	1.3	1.417	1.31	1.417	1.378	1.535	1.575	1.578	1.594	1.850	1.799	1.929	1.969	1.984	2.205	2.283

How to choose the right windlass for your boat

In order to select the correct windlass for your boat, three questions should be answered:

1 What size windlass would best suit my boat?

Use our windlass selection chart found on page X to determine the general size of the windlass to be fitted to your boat by using length and displacement.

2 How long is the anchor rode I wish to use, and will the windlass put the entire rode into my locker?

Examine the depth of the anchor locker to determine the fall that is available.

The fall is the vertical distance between the top of the anchor locker and the top of the anchor rode when the entire rode is completely stored inside.

The windlass is a retrieval device. The windlass retrieves the anchor and rode.

The windlass does not stow the rode inside the anchor locker; gravity stows the rode.

You must know how much rode will fit into your locker by gravity. There has to be a free and clear area under the hawse pipe for the incoming rode. Otherwise, you will have to comb the rode back, keeping a clear and free space under the hawse pipe while retrieving the anchor.

A windlass is not a high-load bearing device. When at anchor your rode should be secured to a chain stopper, a cleat or other mooring point on the bow.

3 How much pulling power should my windlass have?

Having selected a vertical or horizontal windlass and determined the size required using the chart on page X, you can cross-check by using the following formula:

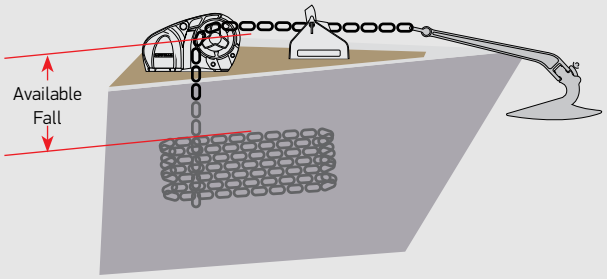
Total weight of ground tackle (anchor and rode) x4[1] = Pulling power required by the windlass

1 Use x4 for all Horizontal windlass and Vertical windlass up to V5
1 Use x2 for V6 Vertical Windlass and above

Working Load, designed to allow prolonged anchor laying and retrieving

Please note this is an indication only. If in doubt please contact your Lewmar representative.

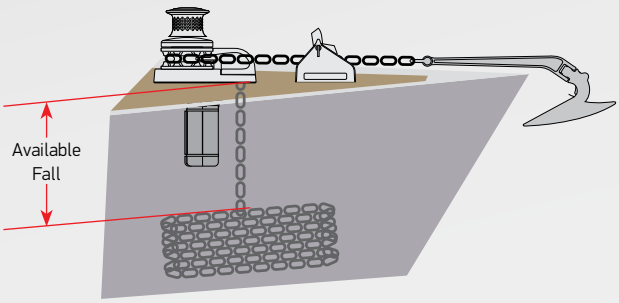
Horizontal Windlass



Horizontal Windlass Key Features

- Most of the windlass unit is on the deck
- Easy installation
- Good for boats with small anchor lockers
- Anchor rode enters the gypsy, makes a 90° turn and feeds into the anchor locker
- Minimum fall of 304mm (12") is recommended in order to have enough gravity to pull the rode down into the locker

Vertical Windlass



Vertical Windlass Key Features

- More of the unit is hidden below deck
- Suitable for large anchor lockers
- Anchor rode makes a 180° wrap around the gypsy providing more security
- Minimum fall of 406mm (18") is recommended in order to have enough gravity to pull the rode down into the locker

Note

The windlasses do not stow the anchor rode in the anchor locker.
Gravity stows the rode in the anchor locker.
From time to time the pile of rode may have to be evacuated from under the windlasses hose pipe entrance to make room for the remaining rode.

Windlass and anchor operation basic safety

Always

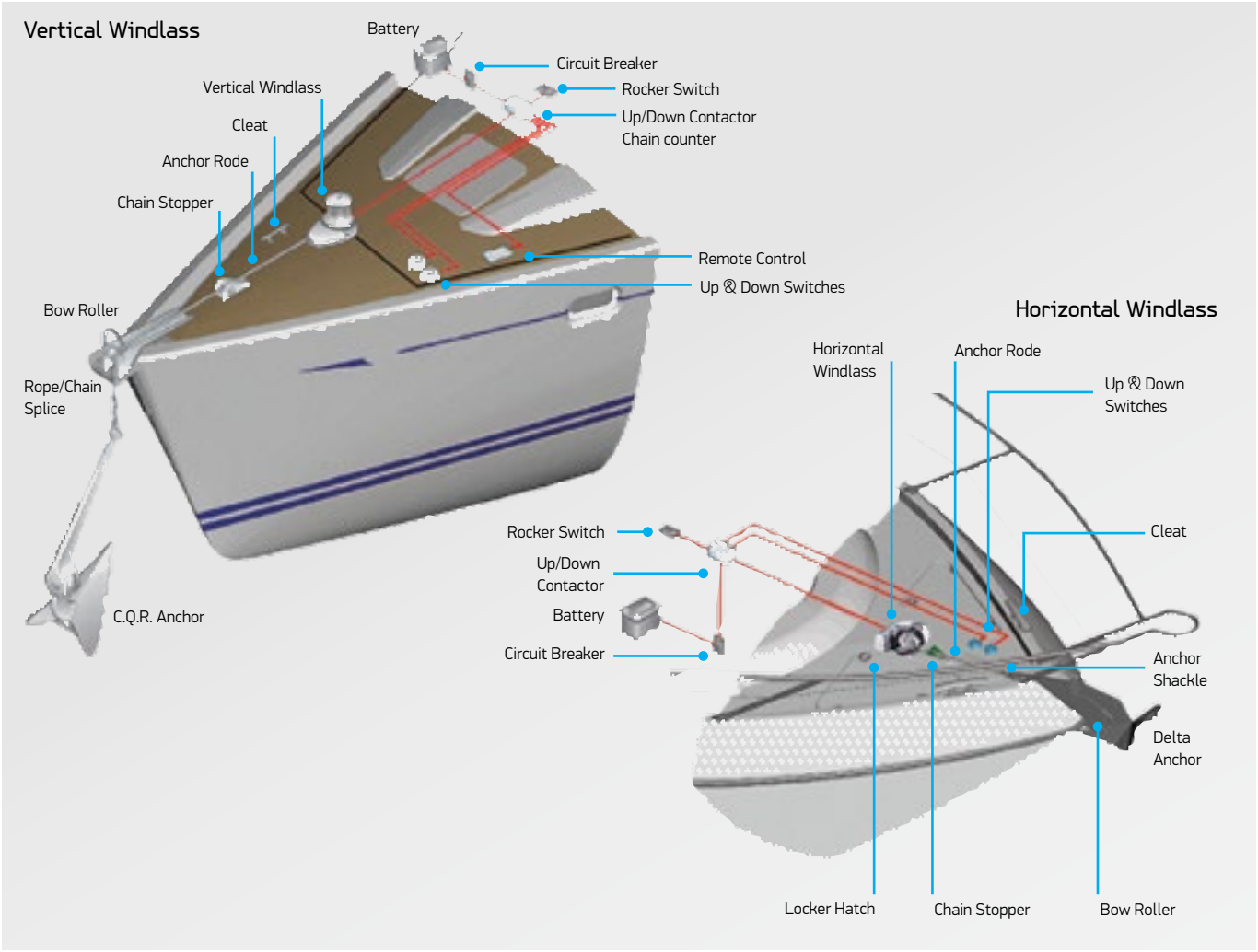
- Always tie off anchor rode to a strong point while at anchor
- Always secure anchor rode/anchor when underway
- Always look before deploying your anchor
- Always motor up to anchor while retrieving
- Always shut off circuit breaker when working on windlass
- Always shut off circuit breaker when windlass is not in use
- Always read the manual and follow safety instructions and warnings.

Never

- Never allow your windlass to hold the boat while at anchor
- Never use your windlass to pull or tow boat
- Never use your windlass to lift a person
- Never stick fingers in or around gypsy while operating
- Never allow loose clothing and hair to come close to windlass when operating

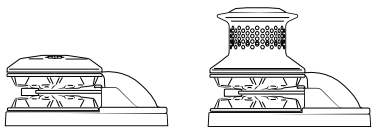
Windlass & Anchoring Know-How

Please see your owner's manual for complete installation diagrams.



Specify your Windlass

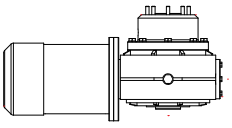
1 Deck Unit



Gypsy only | Gypsy and drum

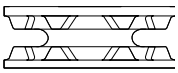
2 Motor Gearbox

- Electric/hydraulic specification



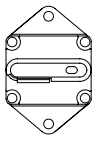
3 Gypsy

- Chain specification

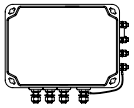


Switch kit and accessories

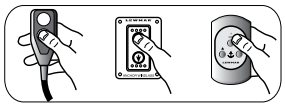
4 Circuit breaker



5 Contactor/ control box



6 Switch and accessories



7 Optional accessories

- A range of optional accessories are available for each model. Refer to the specific windlass model pages.

Captive Reel Windlass CRW400

Lewmar's new CRW400 windlass represents a step-change in engineering and design for small boat windlasses. Built around a stainless steel chassis with composite bearing technology and a robust UV-stabilised ABS shell, the CRW400 is salt-water resistant and suitable for boats up to 30ft.

- Rode stowage without the need for a locker
- Self locking – no need for cleat or chain stopper
- Fully remote operation- can be deployed and retrieved from the helm
- High quality materials and construction
- Level-wind technology prevent spooled line bunching
- All stainless steel 316 chassis / ABS UV stabilised case

2013 DAME DESIGN AWARD NOMINATED

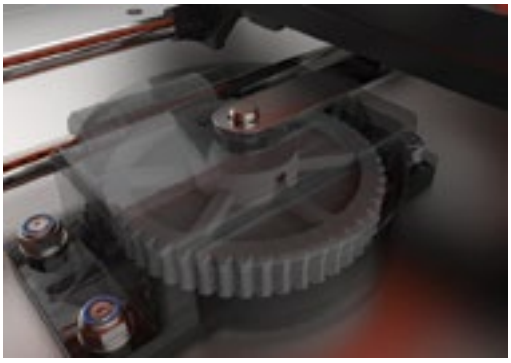
Scan me

Scan the QR code with your smartphone to watch a video of the CRW400 in operation

Lewmar's unique "level wind" feature ensures that the rode is always stowed neatly on the drum, ensuring tangle free anchoring and maximum stowage capacity every time. In addition, the windlass features load detection, allowing effective "drift" fishing to be performed. An auto-stop is also included, ensuring a safe number of wraps remain on the drum when anchoring in deep water.

An integrated switch is fitted to the rear of the housing, or optional remote controls can be fitted. A clear window means that correct functioning of the windlass can be observed, with no risk of trapping fingers or clothing in the winding drum.

Full UV-stabilised ABS housing incorporates clear viewing window, IP67-rated switchgear and integrated protected electronics housing.



Manufactured in robust acetal, a compact worm and wheel gear system powers the rode feeder arm, thereby neatly laying the rode on the drum.

The composite rode feeder arm includes a sprung load-detecting device. This prevents the unit from paying-out when the line is slack.

Heavy-duty timing belt transfers the power of the 400W integrated motor-gearbox via the main shaft to the feeder arm mechanism.

Captive Reel Windlass Specifications

PART NO	MOTOR POWER	MAX PULL		MAX LINE SPEED		NORMAL CURRENT DRAW	MAX ANCHOR WEIGHT		RODE TYPE	DIMENSIONS					
										Length		Width		Height	
	Watt	kg	lb	m/min	ft/min	Amp	kg	lb	Rope only max dims	mm	in	mm	in	mm	in
66910441	400	275	605	25	82	15	16	40	35m (115ft) of 6mm (¼")	365	14 ⅜	303	11 $^{15}/_{16}$	188	7 ⅜

CPX0 Vertical Windlass

Lewmar's CPX0 anchor windlass is aimed at the ever increasing number of smaller craft fitting powered units.

The CPX0 fills the gap at the smaller end of the CPX range for boats between 24ft and 36ft.

The CPX0 feature the tried and tested worm-wheel gearbox architecture and use quality materials throughout - hard anodised aluminium for the base and cast stainless steel for the gypsy top cap and chain pipe cover.

- Lightweight design
- Dual chain gypsy
- 500W or 700W motors
- Highly reliable gearbox design

CPX0 Basic Windlass Kits

PART NUMBER	DESCRIPTION
66910422	500W 6mm-7mm-1/4" with Chain Counter Sensor
66910423	500W 6mm-7mm-1/4" no Sensor
66910424	500W 8mm-5/16" with Chain Counter Sensor
66910425	500W 8mm-5/16" no sensor
66910426	700W 6mm-7mm-1/4" with Chain Counter Sensor
66910427	700W 6mm-7mm-1/4" no sensor
66910428	700W 8mm-5/16" with Chain Counter Sensor
66910429	700W 8mm-5/16" no sensor

Basic windlass kit includes Deck unit, Motor gearbox, Solenoid and Gypsy

CPX0 Extended Windlass Kits

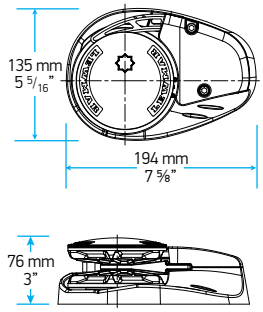
PART NUMBER	DESCRIPTION
66910437	500W 6mm-7mm-1/4" with Chain Counter Sensor and switch kit
66910438	500W 8mm-5/16" with Chain Counter Sensor and switch kit
66910439	700W 6mm-7mm-1/4" with Chain Counter Sensor and switch kit
66910440	700W 8mm-5/16" with Chain Counter Sensor and switch kit

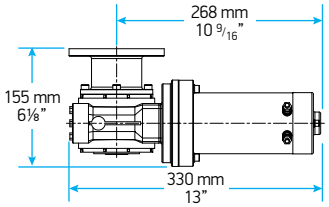
Extended windlass kit includes Deck unit, Motor gearbox, Solenoid, Gypsy, Rocker switch and circuit breaker

CPX0 Specifications

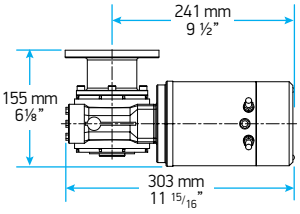
MODEL	MAX PULL		WORKING LOAD LIMIT		MAX LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	APP WEIGHT GYPSY ONLY	
	kg	lb	kg	lb	m/min	ft/min	Amp	Amp	kg	lb
CPX0 - 500W/12V	410	900	103	226	14	46	75	70	9.2	20.2
CPX0 - 700W/12V	600	1320	150	330	15.5	51	105	90	17	37.4

Dimensions Diagram





500 W Motor



700 W Motor

CPX Vertical Windlass

Lewmar's CPX vertical lightweight windlass range compliments the current V Range.

CPX windlasses feature the tried and tested worm-wheel gearbox architecture and use quality materials throughout - hard anodised aluminium for the base and cast stainless steel for the gypsy top cap and chain pipe cover.

- 15% lighter than comparable all-stainless windlass
- Highly reliable, light weight, high performance windlass
- New architecture with reduced parts
- IP68 motor gearbox available on request
- Easier to service

CPX Gypsy/Drum

CPX Gypsy Only

CPX1/2/3 Complete Kit

PART NUMBER		MODEL	GYPSY NO- CHAIN DESCRIPTION	VOLTAGE
Gypsy Only	Gypsy Drum			
6671011006	-	CPX1	006- 6mm ISO 4565, 1/4" G40*, 1/4" BBB	12V
6671011000	-	CPX1	000- 7mm ISO 4565, 1/4" G40*, 1/4" BBB	12V
6671011001	-	CPX1	001- 8mm DIN 766, 8mm ISO 4565, 5/16" G40	12V
6672011006	**6672021006**	CPX2	006- 6mm ISO 4565, 1/4" G40*, 1/4" BBB	12V
6672011000	**6672021000**	CPX2	000- 7mm ISO 4565, 1/4" G40*, 1/4" BBB	12V
6672011001	**6672021001**	CPX2	001- 8mm DIN 766, 8mm ISO 4565, 5/16" G40	12V
6672011002	**6672021002**	CPX2	002- 10mm DIN 766, Campbell 3/8" S4	12V
6672011003	**6672021003**	CPX2	003- 10mm ISO, Campbell 3/8" S3, Lewmar 9.5mm G40	12V
6672012001	**6672022001**	CPX2	001- 8mm DIN 766, 8mm ISO 4565, 5/16" G40	24V
6672012002	**6672022002**	CPX2	002- 10mm DIN 766, Campbell 3/8" S4	24V
6672211000	**6672221000**	CPX3	000- 7mm ISO 4565, 1/4" G40*, 1/4" BBB	12V
6672211001	**6672221001**	CPX3	001- 8mm DIN 766, 8mm ISO 4565, 5/16" G40	12V
6672211002	**6672221002**	CPX3	002- 10mm DIN 766, Campbell 3/8" S4	12V
6672211003	**6672221003**	CPX3	003- 10mm ISO, Campbell 3/8" S3, Lewmar 9.5mm G40	12V
6672212001	**6672222001**	CPX3	001- 8mm DIN 766, 8mm ISO 4565, 5/16" G40	24V
6672212002	**6672222002**	CPX3	002- 10mm DIN 766, Campbell 3/8" S4	24V
6672212003	**6672222003**	CPX3	003- 10mm ISO, Campbell 3/8" S3, Lewmar 9.5mm G40	24V

Windlass Kit includes Deck unit, gypsy, Motor gearbox, rocker switch, circuit breaker and contactor

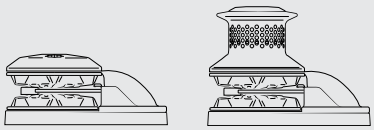
CPX1/2/3/4 Specifications

MODEL	MOTOR POWER	MAX PULL		WORKING LOAD LIMIT		MAX LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	APP WEIGHT GYPSY ONLY		APP WEIGHT GYPSY/DRUM	
	Watt	kg	lb	kg	lb	m/min	ft/min	Amp	Amp	kg	lb	kg	lb
CPX1 12V	700	454	1000	113	250	19	65	80	90	17.5	38.5		
CPX2 12V	700	650	1433	163	358	21	69	80	90	17.5	38.5	20.5	45.1
CPX2 24V	900	760	1675	180	396	24	79	45	50	17.5	38.5	20.5	45.1
CPX3 12V	1000	890	1962	215	473	28	92	85	110	20.0	44.0	23.0	50.6
CPX3 24V	1000	1020	2248	243	535	30	98	60	90	20.0	44.0	23.0	50.6
CPX4 12V	1600	1250	2750	313	688	25	82	125	150	26.5	58.3	33.5	73.7
CPX4 24V	2000	1500	3300	375	825	27	90	70	110	26.5	58.3	33.5	73.7

CPX1/2/3/4 Specify your Windlass

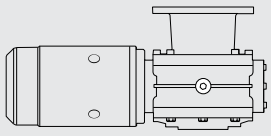
1 Deck Unit

Part No.	Description
69000493	CPX1 Gypsy only
69000480	CPX2/3 Gypsy only
69000483	CPX2/3 Gypsy Drum
69000494	CPX4 Gypsy only
69000495	CPX4 Gypsy Drum



2 Motor Gearbox

PART NO.	DESCRIPTION
68001068	CPX1 – 12V
68001069	CPX2 – 12V
68001070	CPX2 – 24V
68001071	CPX3 – 12V
68001072	CPX3 – 24V
68001077	CPX4 - 12V
68001078	CPX4 - 24V

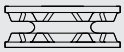


IP68 motor gearbox available for CPX2 & 3

- Water resistant unit won't be damaged even if submerged under water
- Robust composite IP68 Motor Case
- Compression cable clamps included
- No maintenance required
- Provide best motor protection against the elements

PART NO.	DESCRIPTION
68001073	CPX2 12v IP68 Motor Gearbox Assy - No Cables
68001074	CPX2 24v IP68 Motor Gearbox Assy - No Cables
68001075	CPX3 12v IP68 Motor Gearbox Assy - No Cables
68001076	CPX3 24v IP68 Motor Gearbox Assy - No Cables

3 Gypsy



PART NO.	GYPSY NUMBER	CHAIN DESCRIPTION	ROPE SIZE mm	ROPE SIZE in	ROPE DESCRIPTION	TO FIT WINDLASS
68001047	006	6mm ISO 4565, 1/4" G40*, 1/4" BBB	12–14	1/2	3-strand and 8-plait	CPX1/2/3
68001048	000	7mm ISO 4565, 1/4" G40*, 1/4" BBB	12–14	1/2	3-strand and 8-plait	CPX1/2/3
68001049	001	8mm DIN 766, 8mm ISO 4565, 5/16" G40	12–16	1/2–5/8	3-strand and 8-plait (5/8 only)	CPX1/2/3
68001050	002	10mm DIN 766, Campbell 3/8" S4	12–16	1/2–5/8	3-strand and 8-plait (5/8 only)	CPX1/2/3
68001051	003	10mm ISO, Campbell 3/8" S3, Lewmar 9.5mm G40	16	5/8	3-strand and 8-plait	CPX1/2/3
68001063	201	8mm DIN 766, 8mm ISO 4565, 5/16" G40, 5/16" Campbell S4	12–14	1/2	3 strand hard lay up	CPX4
68001064	202	10mm DIN 766, 5/16" Campbell S3, 3/8" Campbell S4, 9.5mm G30	16	5/8	3 strand hard lay up	CPX4
68001065	203	10mm ISO 4565, 3/8" Campbell S3, Lewmar 9.5mm G40	16	5/8	3 strand hard lay up	CPX4
68001066	204	12mm ISO 4565, 13mm DIN 766	18–20	3/4	3 strand hard lay up	CPX4

*G40 = Grade 40 Short Link Chain

Switch kit and accessories

4 Circuit Breakers

PART NO.	DESCRIPTION	FIT WINDLASS
68000348	Circuit Breaker 50A	CPX2 24V
68000349	Circuit Breaker 90A	CPX1/2 12V - CPX3 24V
68000350	Circuit Breaker 110A	CPX3 12V CPX4 24V
68000351	Circuit Breaker 150A	CPX4 12V

5 Contactor

PART NO.	DESCRIPTION	CPX1	CPX2/3	CPX4
Sealed Contactors				
68000937	Compact Dual 12V	•	•	
68000938	Compact Dual 24V		•	
68000318	Dual 12V	•	•	
68000319	Dual 24V		•	
68000320	Dual 12V			•
68000321	Dual 24V			•
Contactors in Boxes				
68000129	Dual 12V	•	•	
68000130	Dual 24V		•	
18000200	Dual 12V			•
18000237	Dual 24V			•

6 Switches & Accessories

Refer to p34-38 for more information

Footswitches

Chain counters

Wireless remote control

CPX Vertical Windlass

7 Optional Accessories

Bulkhead Fittings

3 gland: 68000866

Manual recovery kit for CPX1/2/3

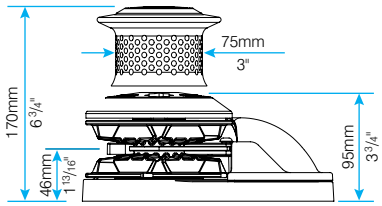
Gypsy only: 66840054

Gypsy/Drum: 66840056

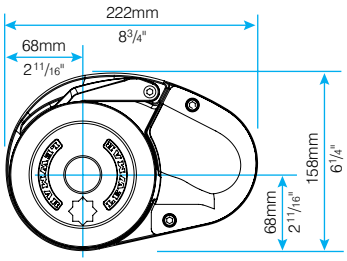
Manual Handle

29140017

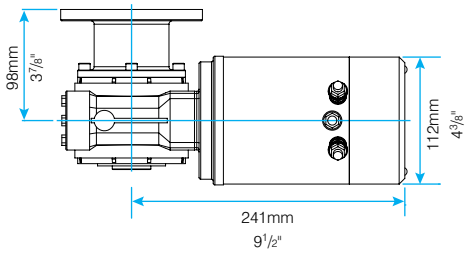
Dimensions Diagram CPX1/2/3



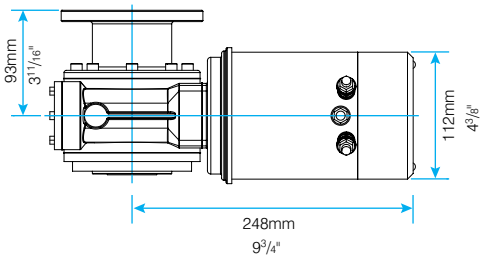
CPX1/2/3



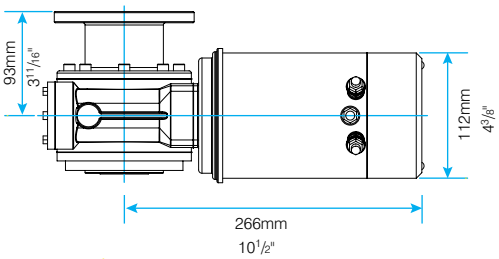
CPX1/2/3



CPX1 Motor Gearbox

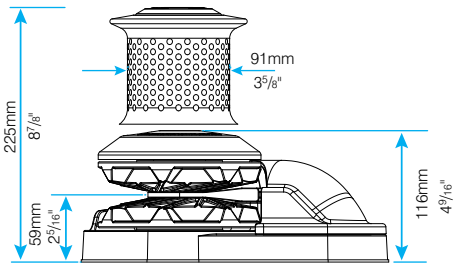


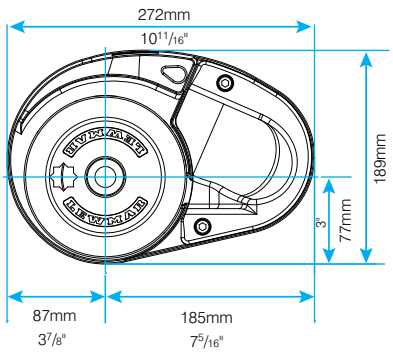
CPX2 Motor Gearbox

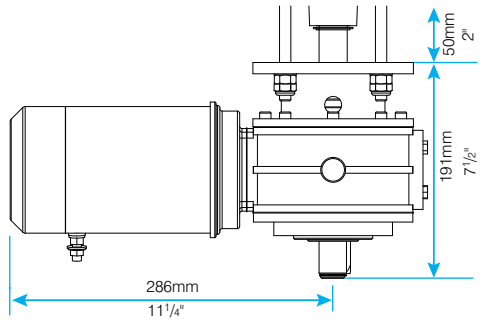


CPX3 Motor Gearbox

Dimensions Diagram CPX4







V700 Vertical Windlass

With 100% 316 stainless steel housing and a sleek flush-mount design, the V700 is one of the most attractive and durable windlasses on the market. It works at the push of a button and has two built-in features that make it unique – motor protection and anchor lock.

- 100% 316 stainless steel deck unit
- IP67 Rated (Water resistant to 1 meter)
- Fall Safe anchor lock
- Fast line speed
- Impact-resistant motor cover
- 5-year warranty
- For boats up to 10.5m (35 ft)

Dual Chain Gypsy

The V700 comes with a gypsy able to accept both 6mm and 7mm (1/4) inch chains.

- Fits calibrated chains: 6mm DIN766, 1/4" G4 or BBB, 7mm DIN766
- Minimal parts for enhanced reliability

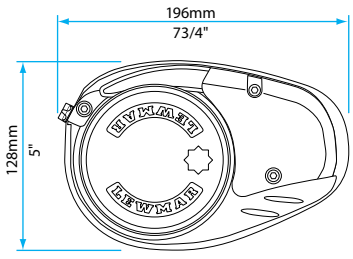
V700 Specifications

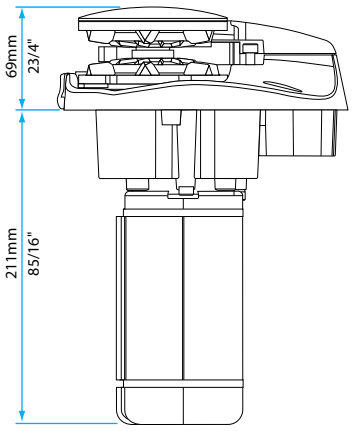
PART NUMBER	DESCRIPTION	GYPSY NO.	MOTOR SUPPLY	MOTOR POWER	MAX PULL		WORKING LOAD LIMIT		MAX LINE SPEED		TYPICAL LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	WEIGHT GYPSY ONLY	
			Voltage	Watt	kg	lb	kg	lb	m/min.	ft/min.	m/min	ft/min	Amp	Amp	kg	lb
6670011108-312	V700 12V 6/7mm/1/4" kit*	603	12	320	320	700	79	175	25	82	15	50	45	35	6.5	14
6670011108	V700 12V 6/7mm/1/4" Windlass only No switch kit	603	12	320	320	700	79	175	25	82	15	50	45	35 (not supplied)	6.5	14

* Kit includes Contactor and Circuit Breaker.

Refer to page 34-38 for switch kit and accessories

Dimensions Diagram





V700 models come DIY ready

V1/V2/V3 Vertical Windlasses

- Rope-chain gypsy
- Manual chain release (Free Fall)
- Cone clutch for smooth, easy control
- Optional manual override motor gearbox
- W.A.R.P Drum
- Fall safe anchor lock
- Robust/reliable worm gearbox
- FastFit™ option for quicker installation and less hassle
- Emergency recovery kit available
- Water resistant IP68 kits available
- For boats up to 14m (48ft)

V1/V2/V3 Specifications

MODEL	MOTOR POWER	MAX PULL		WORKING LOAD		MAX LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	APP WEIGHT GYPSY ONLY		APP WEIGHT GYPSY/DRUM	
	Watt	kg	lb	kg	lb	m/min	ft/min	Amp	Amp	kg	lb	kg	lb
V1	700	454	1000	113	250	19	65	80	90	19	42	–	–
V2 12v	700	650	1433	163	358	21	69	80	90	19	42	22	48.5
V2 24v	900	760	1675	180	396	24	79	45	50	19	42	22	48.5
V3 12v	1000	890	1962	215	473	28	92	85	110	21.5	47	24.5	54
V3 24v	1000	1020	2248	243	535	30	98	60	90	21.5	47	24.5	54

V1/V2/V3 Complete Kit - Include Fastfit™ feature

GYPSY ONLY	GYPSY DRUM	MODEL	GYPSY NO- CHAIN DESCRIPTION	VOLTAGE
6671011107-138 (USA Only)	–	V1	000- 7mm ISO 4565, 1/4" G40*, 1/4" BBB	12
6671011108-138 (USA Only)	–	V1	002- 10mm DIN 766, Campbell 3/8" S4, 5/16" G40	12
6671011196-138	–	V1	006- 6mm ISO 4565, 1/4" G40*, 1/4" BBB	12
6671011197-138	–	V1	000- 7mm ISO 4565, 1/4" G40*, 1/4" BBB	12
6671011198-138	–	V1	001- 8mm DIN 766, 8mm ISO 4565	12
6672011196-138	**6672021196-138**	V2	006- 6mm ISO 4565, 1/4" G40*, 1/4" BBB	12
6672011197-138	**6672021197-138**	V2	000- 7mm ISO 4565, 1/4" G40*, 1/4" BBB	12
6672011198-138	**6672021198-138**	V2	001- 8mm DIN 766, 8mm ISO 4565	12
6672011108-138	**6672021108-138**	V2	002- 10mm DIN 766, Campbell 3/8" S4, 5/16" G40	12
6672011110-138	**6672021110-138**	V2	003- 10mm ISO, Campbell 3/8" S3, Lewmar 9.5mm G40	12
6672012198-140	**6672022198-140**	V2	001- 8mm DIN 766, 8mm ISO 4565	24
6672012108-140	**6672022108-140**	V2	002- 10mm DIN 766, Campbell 3/8" S4, 5/16" G40	24
6672211197-139	**6672221197-139**	V3	000- 7mm ISO 4565, 1/4" G40*, 1/4" BBB	12
6672211198-139	**6672221198-139**	V3	001- 8mm DIN 766, 8mm ISO 4565	12
6672211108-139	**6672221108-139**	V3	002- 10mm DIN 766, Campbell 3/8" S4, 5/16" G40	12
6672211110-139	**6672221110-139**	V3	003- 10mm ISO, Campbell 3/8" S3, Lewmar 9.5mm G40	12
6672212198-142	**6672222198-142**	V3	001- 8mm DIN 766, 8mm ISO 4565	24
6672212108-142	**6672222108-142**	V3	002- 10mm DIN 766, Campbell 3/8" S4, 5/16" G40	24
6672212110-142	**6672222110-142**	V3	003- 10mm ISO, Campbell 3/8" S3, Lewmar 9.5mm G40	24

Above kits all feature Fastfit™ motor gearboxes
Windlass Kit includes Deck unit, gypsy, Motor gearbox, rocker switch, circuit breaker and contactor

FastFit™ Feature

FastFit™ motor gearbox attachement enable the windlass to be fitted by one man alone.

While the gearbox alignment to the deck unit is critical to a standard installation, the FastFit™ clamping system perfectly align the deck unit and motorgearbox for a perfect fit first time.

A FastFit™ enable the motor / gearbox to be rotated and fixed in increments of 45°

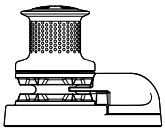
B To install your windlass, simply fix the deck unit to the deck and then slide the gearbox up the shaft, swing the FastFit™ clamp shut and tighten up the bronze nut.

V1/V2/V3 Vertical Windlasses

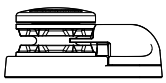
Specify your V1/V2/V3

1 Deck Unit

PART NO. (Non FastFit)	PART NO. (FastFit)	DESCRIPTION
69000481	**68000951**	V1 Gypsy only
69000484	**68000828**	V2/3 Gypsy only
69000485	**68000829**	V2/3 Gypsy Drum



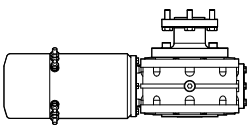
Gypsy and drum



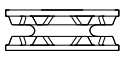
Gypsy only

2 Motor Gearbox

PART NO. (Non FastFit)	PART NO. (FastFit)	DESCRIPTION
68001055	**66810065**	V1-12V
68000527	**68000813**	V2 - 12V
68000538	**68000814**	V2 - 24V
66810007	**68000815**	V3 - 12V
66810008	**68000816**	V3 - 24V



3 Gypsy



PART NO.	GYPSY NUMBER	CHAIN DESCRIPTION	ROPE SIZE		ROPE DESCRIPTION
			mm	in	
68000840	006	6mm ISO 4565, 1/4" G40*, 1/4" BBB	12–14	1/2	3-strand and 8-plait
68000360	000	7mm ISO 4565, 1/4" G40*, 1/4" BBB	12–14	1/2	3-strand and 8-plait
68000361	001	8mm DIN 766, 8mm ISO 4565	12–16	1/2 – 5/8	3-strand and 8-plait (5/8 only)
68000362	002	10mm DIN 766, Campbell 3/8" S4, 5/16" G40	12–16	1/2 – 5/8	3-strand and 8-plait (5/8 only)
68000363	003	10mm ISO, Campbell 3/8" S3, Lewmar 9.5mm G40	16	5/8	3-strand and 8-plait

*G40 = Grade 40 Short Link Chain

IP68 motor gearbox available (non FastFit™)

- Water resistant unit won't be damaged even if submerged under water
- Robust composite case
- Compression cable clamps included
- No maintenance required
- Provide best motor protection against the elements

PART NO.	DESCRIPTION
68001052	V2 12V IP68 Motor Gearbox Assy - No Cables
68001053	V2 24V IP68 Motor Gearbox Assy - No Cables
66810037	V3 12V IP68 Motor Gearbox Assy - No Cables
68001054	V3 24V IP68 Motor Gearbox Assy - No Cables

V1/V2/V3 Vertical Windlasses

V1/V2/V3 switch kit and accessories

4 Circuit Breakers

PART NO.	DESCRIPTION	FIT WINDLASS
68000348	Circuit Breaker 50A	V2 24V
68000349	Circuit Breaker 90A	V1/2 12V - V3 24V
68000350	Circuit Breaker 110A	V3 12V - V4/V5 24V
68000351	Circuit Breaker 150A	V4/V5 12V - V6 24V - V8 2.5kW
68000894	Circuit Breaker 200A	V8 3.5kW

5 Contactor

PART NO.	DESCRIPTION	V1	V2/V3
Sealed Contactors			
68000937	Compact Dual 12V	•	•
68000938	Compact Dual 24V		•
68000318	Dual 12V	•	•
68000319	Dual 24V		•
Contactors in Boxes			
68000129	Dual 12V	•	•
68000130	Dual 24V		•

6 Switches & Accessories

Refer to p34-38 for more information

Footswitches

Chain counters

Wireless remote control

7 Optional Accessories

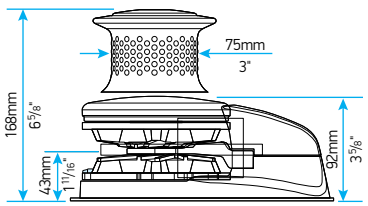
Control arm kit:
66810030

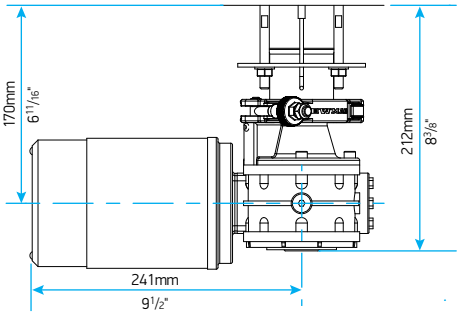
Manual recovery kit
Gypsy only: 66840054
Gypsy/Drum: 66840056

Bulkhead Fitting
3 gland: 68000866

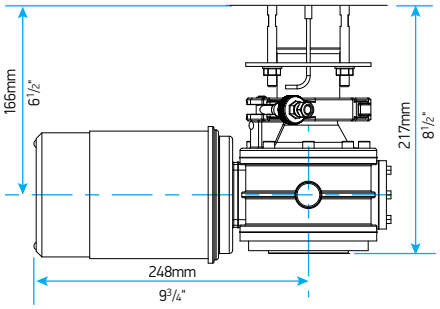
Manual Handle
29140017

Dimensions Diagram

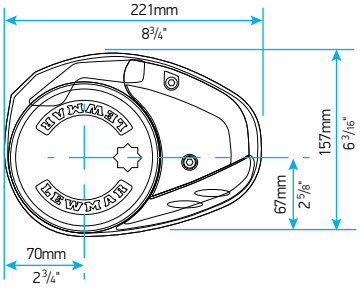


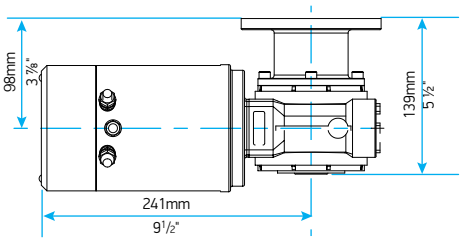


V1 Motor Gearbox
(with FastFit™ feature)

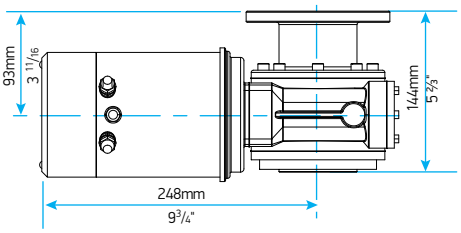


V2/V3 Motor Gearbox
(with FastFit™ feature)





V1 Motor Gearbox
(Non FastFit™)



V2/V3 Motor Gearbox
(Non FastFit™)

V4/V5 Vertical Windlasses

- Rope-chain gypsy
- Cone clutch for smooth, easy control
- Manual Free Fall
- W.A.R.P Drum
- Robust and reliable drive train
- Manual override (optional)
- The largest rope chain windlass in the range

V4/V5 Electric Specifications

MODEL	MOTOR POWER	MAX PULL		WORKING LOAD LIMIT		MAX LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	APP WEIGHT GYPSY ONLY		APP WEIGHT GYPSY/DRUM	
	Watt	kg	lb	kg	lb	m/min	ft/min	Amp	Amp	kg	lb	kg	lb
V4 12V	1600	1250	2750	313	688	25	82	125	150	29	64	36	79
V4 24V	2000	1500	3300	375	825	27	90	70	110	29	64	36	79
V5 12V	2000	1450	3190	363	798	27	90	120	150	31	68	38	84
V5 24V	2000	1600	3520	400	880	29	97	60	110	31	68	38	84

V4/V5 Hydraulic Specifications

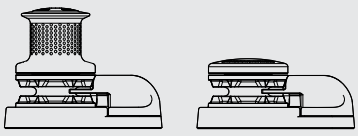
PRODUCT	PRESSURE MAX	FLOW RATE	MAX. PULL		MAX. LINE SPEED	
			kg	lb	m/min	ft/min
V4/5 Hyd	175 bar 2537 psi (cont)	10-40 l/min 2.6-10.6 US gal/min	1100 at 140 bar	2400 at 203 psi	21 at 40 l/min	69 at 10.6 US gal/min

Hydraulic motor gearboxes are suitable for use with both V4/V5 and C4/C5.

Specify your V4/V5

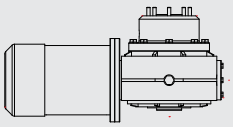
1 Deck Unit

PART NO.	DESCRIPTION
66810024	V4/5 Gypsy Only
66810025	V4/5 Gypsy Drum

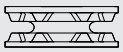


2 Motor Gearbox

PART NO.	DESCRIPTION
68000534	V4 - 12V
68000535	V4 - 24V
66810011	V5 - 12V
66810012	V5 - 24V
68000294	V4/5 Hydraulic



3 Gypsy



PART NO.	GYPSY NUMBER	CHAIN DESCRIPTION	ROPE DESCRIPTION		
			mm	in	
68000356	201	8mm DIN 766, 8mm ISO 4565, 5/16" G40, 5/16" Campbell S4	12–14	1/2	3 strand medium lay up
68000357	202	10mm DIN 766, 5/16" Campbell S3, 3/8" Campbell S4, 9.5mm G30	16	5/8	3 strand medium lay up
68000358	203	10mm ISO 4565, 3/8" Campbell S3, Lewmar 9.5mm G40	16	5/8	3 strand medium lay up
68000359	204	12mm ISO 4565, 13mm DIN 766	18–20	3/4	3 strand medium lay up

V4/V5 Vertical Windlasses

V4/V5 switch kit and accessories

4 Circuit Breakers

PART NO.	DESCRIPTION	FIT WINDLASS
68000350	Circuit Breaker 110A	V4/V5 24V
68000351	Circuit Breaker 150A	V4/V5 12V

5 Contactor

PART NO.	DESCRIPTION	V4	V5
Sealed Contactors			
68000318	Dual 12V		•
68000319	Dual 24V		•
68000320	Dual 12V	•	
68000321	Dual 24V	•	
Contactors in Boxes			
68000129	Dual 12V		•
68000130	Dual 24V		•
18000200	Dual 12V	•	
18000237	Dual 24V	•	

6 Switches & Accessories

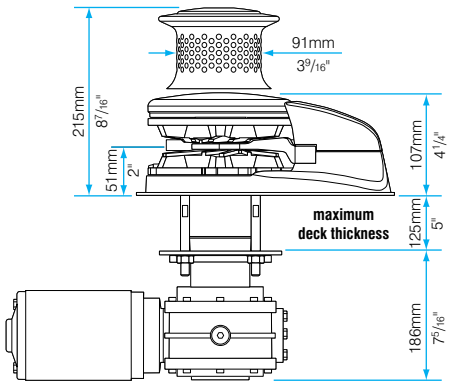
Refer to p34-38 for more information

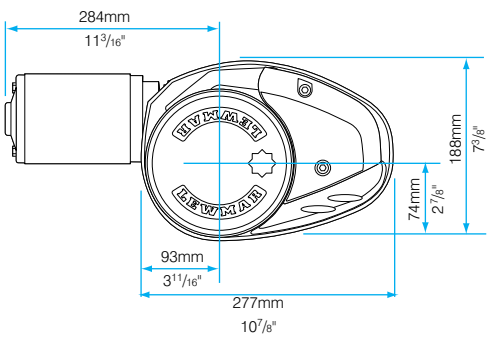
Footswitches

Chain counters

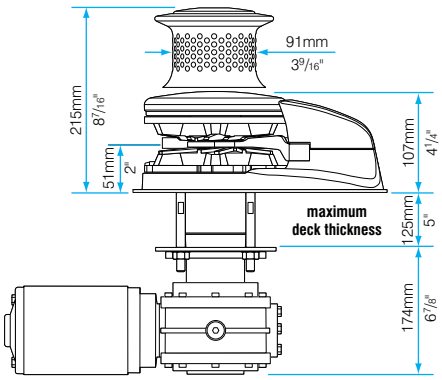
Wireless remote control

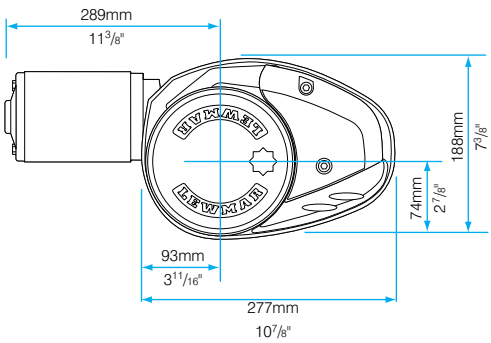
V4 Dimensions Diagram





V5 Dimensions Diagram





7 Optional Accessories

Control arm kit:
66810031

Manual recovery kit kit
Gypsy only: 66840003
Gypsy/Drum: 66840005

Bulkhead Fittings
3 gland: 68000866
4 gland: 68000867

V6 Vertical Windlass

- All stainless steel deck unit
- Powered and manual chain release
- For boats up to 24m (80ft)
- Cone Clutch for smooth, easy control
- Left- and right-hand versions
- Available in 24 V and Hydraulic power options
- Lloyd's Type Approval
- W.A.R.P. Drum (Wear and Abrasion Resistant Pattern)
- Remote chain-pipe version – For use with any size chain, but recomended when using 14mm chain

V6 Electric Specifications

MODEL	MOTOR POWER	MAX PULL		WORKING LOAD LIMIT		MAX LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	WEIGHT	
	Watt	kg	lb	kg	lb	m/min	ft/min	Amp	Amp	kg	lb
V6 24V	2000	1818	4000	606	1333	18	59	90	150	63	139

V6 Hydraulic Specifications

PRODUCT	NORMAL PRESSURE	FLOW RATE	MAX. PULL		MAX. LINE SPEED		WEIGHT	
			kg	lb	m/min	ft/min	kg	lb
V6 Hydraulic	60 bar 882 psi (cont)	20-60 l/min 5.2-15.8 US gal/min	1450 at 190 bar	3190 at 2793 psi	34 at 60 l/min	110 at 15.9 US gal/min	52	114

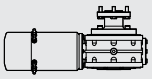
V6 Part Numbers

1 Deck Unit

PART NO.	DESCRIPTION
69000400	V6 Deck Unit LH Gypsy Drum
69000401	V6 Deck Unit RH Gypsy Drum
69000402	V6 Deck Unit LH Gypsy Only
69000403	V6 Deck Unit RH Gypsy Only
69000404	V6 Deck Unit UNI Gypsy /Drum
69000405	V6 Deck Unit UNI Gypsy Only

LH = Left Hand, RH = Right Hand, UNI = Universal (symetrical version)

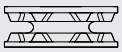
2 Motor Gearbox



PART NO.	DESCRIPTION
69000407	V6 - 24V Motor/Gearbox Assy
69000408	V6 - Hyd Motor/Gearbox
69000409	V6 Hi-Pressure Hyd Motor/Gearbox

Lloyd's Register TYPE APPROVAL

3 Gypsy



PART NO.	CHAIN DESCRIPTION
68000903	10mm DIN 766, 3⁄8" ISO G4, Lewmar 9.5mm G40
68000904	11mm Short Link, Lewmar 12mm G30/G40, 13mm DIN 766
68000905	Lewmar 14mm G30/G40, 14mm DIN 766, 7/16" G40 Recommend remote chain pipe version
68000906	1/2" ISO G4, Lewmar 12mm G30/G40, Lewmar 1/2" G30/G40

V6 Vertical Windlasses

V6 switch kit and accessories

4 Circuit Breakers

PART NO.	DESCRIPTION	FIT WINDLASS
68000351	Circuit Breaker 150A	V6 24V

5 Contactor

PART NO.	DESCRIPTION	V6
Sealed Contactors		
68000321	Dual 24V	•
Contactors in Boxes		
18000237	Dual 24V	•

6 Switches & Accessories

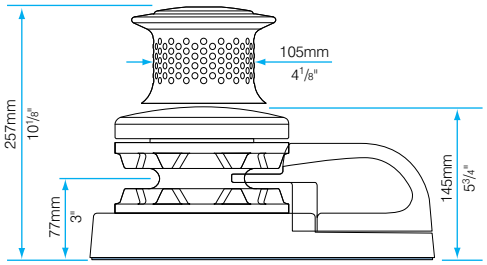
Refer to p34-38 for more information

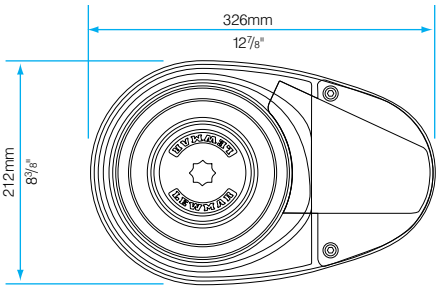
Footswitches

Chain counters

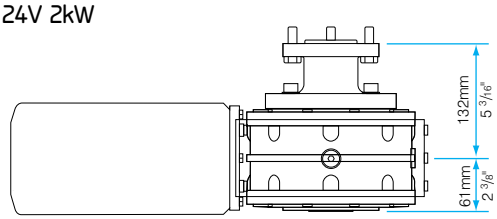
Wireless remote control

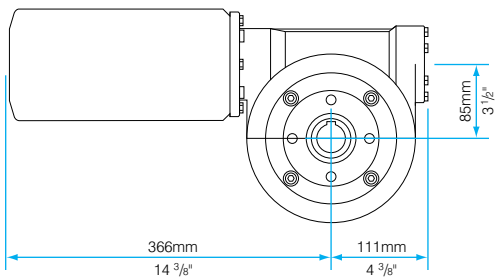
Dimensions Diagram



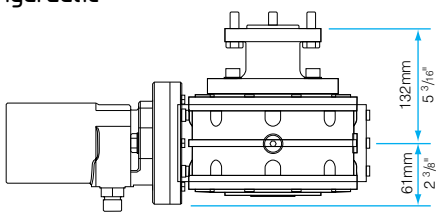


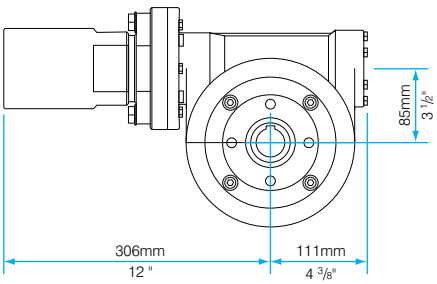
24V 2kW





Hydraulic





7 Optional Accessories

8-13mm Remote Chain Pipe

68000024

14-16mm Remote Chain Pipe

68000037

Blank cover and stripper kit

66000692

V8 Vertical Windlass

- All stainless steel deck unit
- Dog Clutch
- A wide range of metric and imperial chain gypsies are available
- Close-coupled or remote band brake options available
- Two remote hand wheel options
- Full range of power options including AC, DC and hydraulic
- Independent capstan operation
- Powered or manual chain release
- W.A.R.P. Drum (Wear and Abrasion Resistant Pattern)
- Left-and right-hand versions
- Remote chain pipe version
- For Boats up to 33m (108ft)

V8 Electric Specifications

MODEL	VOLTAGE	MOTOR POWER	MAX PULL		WORKING LOAD LIMIT		MAX LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	WEIGHT	
		Watt	kg	lb	kg	lb	m/min	ft/min	Amp	Amp	kg	lb
V8 2500W	24	2500	2273	5000	1137	2500	24	79	150	200	101	222
V8 3500W	24	3500	2727	6000	1364	3000	23	75	200	250	103	227
V8 AC	208		2200	4840	1100	2420	15.5	51	12	16	105	231
V8 AC	400		2500	5500	1250	2750	19	62	9	10	105	231

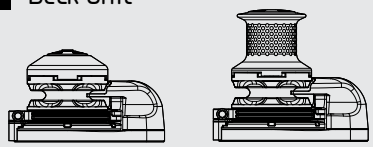
V8 Hydraulic Specifications

MODEL	NORMAL PRESSURE		FLOW RATE		MAX. PULL		MAX. LINE SPEED		WEIGHT	
	bar	psi	l/min	US gal/min	kg	lb	m/min	ft/min	kg	lb
V8 Hyd (165cc/rev)	50	735	20-55	5.2-14.3	1818 @ 155 bar	4000 @ 2278 psi	18 @ 43 l/min	59 @ 11.3 US gal/min	84	185
V8 Hyd (230cc/rev)	50	735	20-55	5.2-14.3	2727 @ 155 bar	6000 @ 2278 psi	14 @ 40 l/min	46 @ 10.6 US gal/min	84	185
V8 Hi-P Hyd (in-line)	50	735	20-55	5.2-14.3	2727 @ 175 bar	6000 @ 2572 psi	21 @ 56 l/min	69 @ 14.7 US gal/min	95	209

V8 Vertical Windlass

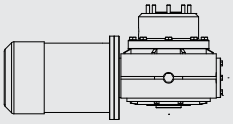
V8 Part Numbers

1 Deck Unit



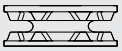
PART NO. Left Hand	PART NO. Right Hand	DESCRIPTION
69000377	**69000378**	V8 Deck Unit Gd, CB
69000379	**69000380**	V8 Deck Unit Gd, HI-P CB
69000381	**69000382**	V8 Deck Unit Go, CB
69000387	**69000388**	V8 Deck Unit Go, HI-P CB
69000390	**69000391**	V8 Deck Unit Gd, RB
69000392	**69000393**	V8 Deck Unit Gd, HI-P RB
69000394	**69000395**	V8 Deck Unit Go, RB
69000396	**69000397**	V8 Deck Unit Go, HI-P RB

2 Motor Gearbox



PART NO.	DESCRIPTION
69000383	V8 24V 2.5kW Motor/Gearbox
69000383M	V8 24V 2.5kW M/Gearbox Mirrored
69000384	V8 24V 3.5kW Motor/Gearbox
69000384M	V8 24V 3.5kW M/Gearbox Mirrored
69000385	V8 Hyd Motor/Gearbox TE230
69000386	V8 Hyd HP Motor gearbox HiP Adan 200
69000416	V8 165cc/rev Hyd Motor/Gearbox TE165
69000444	V8 4kW 400V 3 ph AC braked M/Gearbox
69000444M	V8 4kW 400V AC braked M/Gearbox Mirrored
69000445	V8 4kW 208V 3 Ph AC braked M/Gearbox
69000445M	V8 4kW 208V 3 Ph AC braked M/Gbox Mirrored

3 Gypsy



PART NO.	GYPSY KIT	CHAIN DESCRIPTION
68000900	11mm	11 mm DIN 766
68000877	12-13mm	12 mm Short Link, 13 mm DIN 766, 7/16" ISO G4
68000878	14mm	14 mm Short Link, 14 mm DIN 766
68000879	16mm	16 mm Short Link, 16 mm DIN 766
68000880	1/2"	1/2" ISO G4
68000881	14mm Studlink	14mm Studlink

Description Abbreviations & Explanations

LH	Left Hand are mainly for single installs	Mirrored	Mirror image to allow motor to be on opposite side of gearbox
HI-P	High-Power deck unit can only be used with HP hydraulic motor gearbox	HP	High-performance inline hydraulic drive
CB	Close coupled band brake included. It is operated with a winch handle or with close coupled handwheel assembly 68001023	Gd	Gypsy drum
RB	Remote band brake version ready to accept the brake cable	Go	Gypsy only

V8 switch kit and accessories

4 Circuit Breakers

PART NO.	DESCRIPTION	FIT WINDLASS
68000894	Circuit Breaker 200A	V8 2.5kW
68000895	Circuit Breaker 250A	V8 3.5kW

5 Contactor

PART NO.	DESCRIPTION	V8 - 2500	V8 - 3500
Sealed Contactors			
68000319	Dual 24V	•	
68000321	Dual 24V		•
Contactors in Boxes			
68000130	Dual 24V	•	
18000237	Dual 24V		•

AC control boxes

PART NO.	VOLTAGE	MOTOR POWER	RATED CURRENT
68000973	400 V	4 kW	9 A
68000974	400 V	5.5 kW	12 A
68000975	400 V	7.5kW	16 A
68000981	200 V	4 kW	16 A
68000982	200 V	5.5 kW	20 A
68000983	200 V	7.5kW	27 A

6 Switches & Accessories

Refer to p34-38 for more information

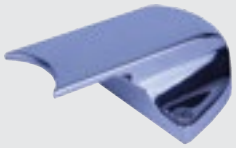
Footswitches

Chain counters

Wireless remote control

7 Optional Accessories

Blank cover and stripper kit can be used in installations where the chain pipe cover is not integrated to the windlass

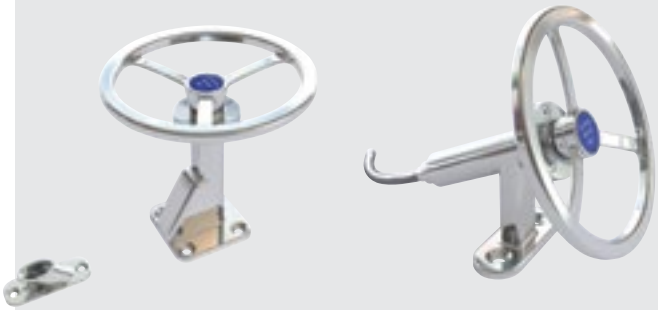


66000691 - Blank cover and stripper kit

Remote chain pipes are efficient ways to deflect the chain in installation where the chain locker is offset

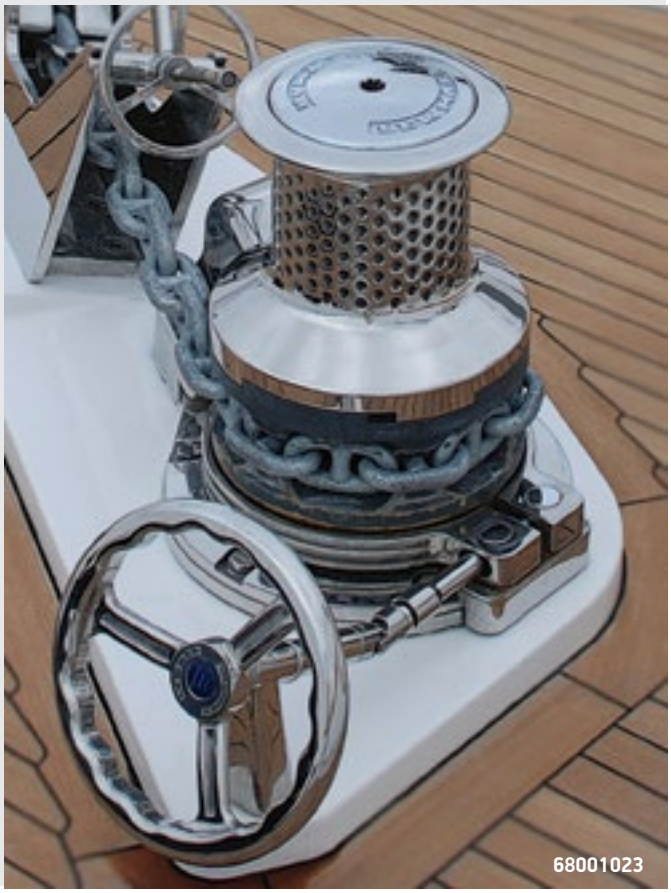
68000024 - 8-13mm Remote Chain Pipe
68000037 - 14-16mm Remote Chain Pipe

Band Brake Controls



68000897 **68000876**

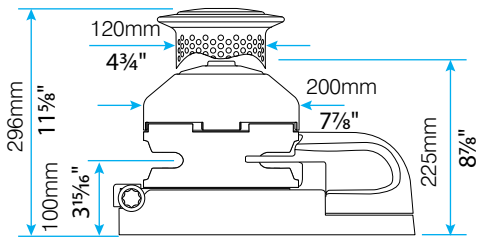
PART NO.	DESCRIPTION
68000897	V8 Horizontal Remote Brake
68000876	V8 Remote Brake Assy
68001023	V8 Closed Coupled Handwheel Assy

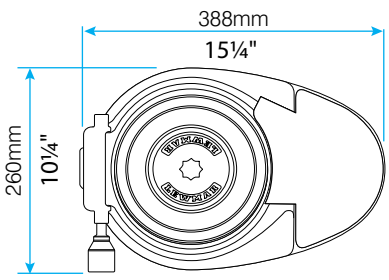


Brake Cables - For use with remote handwheels

PART NO.	DESCRIPTION
65001687	V8 Brake cable 800mm (4mm wire)
65001688	V8 Brake cable 1000mm (4mm wire)

Dimensions Diagram





Scan me

Scan the QR code with your smartphone for CAD drawings of the motor/ gearbox

Motor/gearbox dimensions can be found on the website.

V9/V10/V12 Vertical Windlasses

- All stainless steel deck unit
- All sizes are available as gypsy only and gypsy drum in left hand, right hand and remote chain pipe configurations
- Full range of power options including AC, DC and hydraulic
- Independent capstan operation
- Powered or manual chain release
- W.A.R.P. Drum (Wear and Abrasion Resistant Pattern)
- A wide range of metric and imperial chain gypsies are available including 22mm Studlink
- For boats up to 50m (164ft)

V9/V10/V12 Gypsy Only

V9/V10/V12 Gypsy/Drum

V9/V10/V12

V10/V12 Only

V9/V10/V12 Electric Specifications

MODEL	MOTOR POWER	MAX PULL		WORKING LOAD LIMIT		MAX LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	WEIGHT	
	Watt	kg	lb	kg	lb	m/min	ft/min	Amp	Amp	kg	lb
V9 400V AC	4000	2250	4950	1125	2475	21	69	11	12	183	403
V9 208V AC	4000	2250	4950	1125	2475	21	69	13	14	183	403
V9 400V AC	5500	3182	7000	1591	3500	22	72	15	16	207	455
V10 400V AC	5500	4000	8800	2000	4400	18	59	12	13	301	662
V10 208V AC	5500	4000	8800	2000	4400	18	59	16	20	301	662
V12 400V AC	7500	5000	11000	2500	5500	20	66	15	16	357	785
V12 208V AC	7500	5000	11000	2500	5500	20	66	24	32	357	785

V9/V10/V12 Hydraulic Specifications

MODEL	GEARBOX	MAX PRESSURE		FLOW RATE		MAX. PULL		WORKING LOAD		MAX. LINE SPEED		WEIGHT	
		bar	psi	l/min	US gal/min	kg	lb	kg	lb	m/min	ft/min	kg	lb
V9 – 300 cc/rev		180	2646	20-60	5.2-15.6	3000	6600	1500	3300	30	96	153	337
V9 – 230 cc/rev		180	2646	20-60	5.2-15.6	3000	6600	1500	3300	33	108	150	330
V10 – 500 cc/rev	5:1	155	2279	30–60	7.8–15.6	4000	8800	2000	4400	8–16	26–52	187	411
V12 – 250 cc/rev	13.5:1	155	2279	30–80	7.8–20.8	5000	11000	2500	5500	6–17	20–56	204	449

V9/V10/V12 Vertical Windlasses

1 Deck Unit

PART NO.	DESCRIPTION
69000460	V9 Deck Unit LH Gd
69000461	V9 Deck Unit RH Gd
69000462	V9 Deck Unit UNI Gd
69000463	V9 Deck Unit LH Go
69000464	V9 Deck Unit RH Go
69000465	V9 Deck Unit UNI Go
69000418	V10/12 Gd LH Deck Unit
69000419	V10/12 Gd RH Deck Unit
69000421	V10/12 Gd UNI PIPE Deck Unit
69000422	V10/12 Go LH Deck Unit
69000423	V10/12 Go RH Deck Unit
69000424	V10/12 Go UNI PIPE Deck Unit

LH = Left Hand, RH = Right Hand, UNI = Universal (symetrical version), Go = Gypsy only, Gd = Gypsy drum

2 Motor Gearbox

PART NO.	DESCRIPTION
69000469	V9 Hydraulic Motor/gearbox 230 cc/rev
69000468	V9 Hydraulic Motor/gearbox 300 cc/rev
69000467	V9 208V AC 4kW drive with Brake *
69000466	V9 400V AC 4kW drive with Brake *
69000471	V9 400V AC 5.5kW drive with Brake *
69000427	V10 Hydraulic drive with Brake
69000448	V10 208V 5,5 kW drive with Brake
69000447	V10 400V 5,5 kW drive with Brake
69000428	V12 Hydraulic drive with Brake
69000450	V12 208V 7,5 kW drive with Brake
69000449	V12 400V 7,5 kW drive with Brake

* Mirrored version available add M at the end of the Part No

Optional Accessories

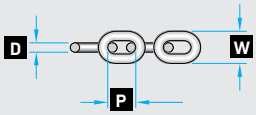
Remote Hand wheel

68001025 - Suitable for V9

68000948 - Suitable for V10/V12

custom brake control solutions are also available

3 Gypsy



PART NO.	CHAIN DESCRIPTION	D mm	D in	P mm	P in	W mm	W in
V9							
66000738	12.5mm studlink	12.5	0.492	50	1.969	45	1.772
66000775	14mm shortlink gypsy kit	14	0.551	41	1.614	50	1.969
66000721	14mm Studlink	14	0.551	56	2.205	50.4	1.984
66000722	16mm Studlink	16	0.630	64	2.520	57.6	2.268
66000723	16mm Shortlink/DIN766	16	0.630	48	1.890	56	2.205
66000724	17.5mm Studlink	17.5	0.689	70	2.756	63	2.480
66000725	18mm DIN 766	18	0.709	50	1.969	65	2.559
V10/12							
68000944	16mm Studlink	16	0.630	64	2.520	57.6	2.268
68000946	17.5mm Studlink	17.5	0.689	70	2.756	63	2.480
68000943	19mm Studlink	19	0.748	76	2.992	68.4	2.693
68000932	20.5mm Studlink	20.5	0.807	82	3.228	73.8	2.906
68000945	22mm Studlink – V12 remote hawse only	22	0.866	88	3.465	79.2	3.118

Switches & Accessories

Refer to p34-38 for more information

Footswitches

Chain counters

Remote hand held controller

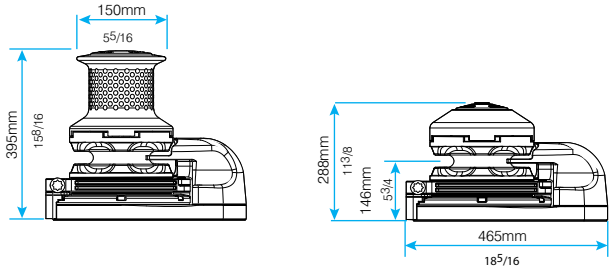
AC control boxes

PART NO.	VOLTAGE	MOTOR POWER	RATED CURRENT
68000973	400 V	4 kW	9 A
68000974	400 V	5.5 kW	12 A
68000975	400 V	7.5kW	16 A
68000981	200 V	4 kW	16 A
68000982	200 V	5.5 kW	20 A
68000983	200 V	7.5kW	27 A

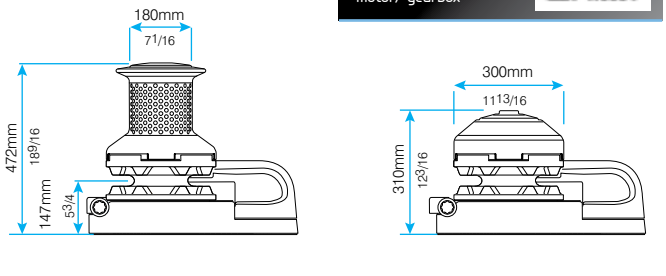
Scan me

Scan the QR code with your smartphone for CAD drawings of the motor/ gearbox

V9 Dimensions Diagram



V10/12 Dimensions Diagram



Pro-Sport Horizontal Windlass

Lewmar's Pro-Sport windlass is designed as an economical package for rope and chain applications, without compromise to quality or performance. Pro-Sport is designed around a highly efficient spur gearbox, using smaller, more powerful permanent magnet motors. Its rugged aluminium centre case and durable composite side covers make Pro-Sport the perfect choice. Complete with push-button control, anchoring has never been easier.

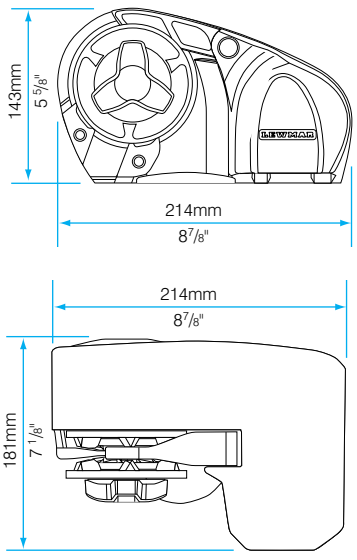
- Low power consumption / current draw
- Dual direction powered operation
- Maximum pulling power: 250kg (550lb)
- Convenient above deck installation
- 3 year warranty
- For boats up to 9m (28ft)
- Manual freefall
- DIY ready

Pro-Sport 550 Windlass Kit Specifications

PART NUMBER	CHAIN DESCRIPTION	ROPE DESCRIPTION			MOTOR SUPPLY	MOTOR POWER	MAXIMUM PULL		MAXIMUM LINE SPEED		WORKING LOAD LIMIT		NORMAL CURRENT DRAW	WEIGHT		CIRCUIT BREAKER
		mm	in		Voltage	Watt	kg	lb	m/min.	ft/min.	kg	lb	Amp	kg	lb	
6656811967-303	6mm DIN766, 1/4" ISO G4, 1/4" BBB, 7mm DIN 766	12mm	1/2	3-strand and 8-plait	12	150	250	550	30	98	62.5	137.5	20	6.5	14	25

Kits include: windlass, base gasket seal, fast mounting studs, installation wrench, contactor (68000939), guarded rocker switch (68000593) and circuit breaker

Dimensions Diagram



Pro-Series + Pro-Fish Horizontal Windlasses

The Pro-Series and Pro-Fish sees a further update for 2013.
Many customers have expressed a wish to mount a windlass on the stern for use with leaded line anchor rodes and the Pro-Fish Pb is ideal for that purpose. The redesigned control arm and new rope guard and gypsy work flawlessly with lead line and will also be available as an upgrade kit for existing Pro-Series windlasses.

- All stainless design
- Automatic freefall mechanism (Pro-Fish only)
- NEW guard optimises performance with rope
- NEW gypsy design for lead line applications
- Powerful motor providing fast line speed
- Manual emergency recovery equipped – all you need is a common 1/2" socket wrench

- Maximum pulling power: 320kg (700 lb) for the 700 and 454kg (1,000 lb) for the 1000
- Convenient above-deck installation
- 5-year warranty
- For boats up to 12m (38ft)
- Free Fall conversion kits
- DIY ready

The Pro-Fish Pb is perfectly suited to installation in the stern of a boat, where it can be utilised for easy Scandinavian style stern anchoring. The automatic free-fall mechanism means access to the windlass is not required to drop or retrieve anchor and the all stainless design is extremely resistant to corrosion.

The gypsy has been specially designed to suit leaded lines up to 16mm in diameter and a revised control arm and new Pro-Guard plate prevent the rope from jumping out of the windlass or snagging during operation

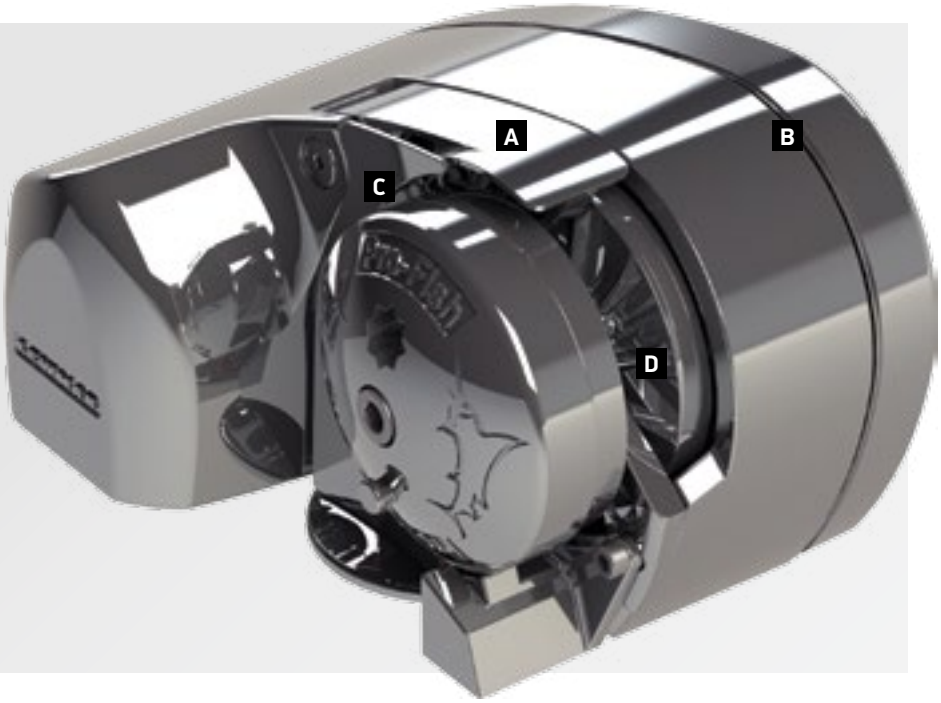
Pro-Fish Horizontal Windlass

A Re-designed control arm features higher spring tension and modified profile to improve performance

B Closed cell neoprene gasket protects internals

C Unique Pro-Guard feature prevents rope jump and snags

D New gypsy designed specifically for up to 16mm leaded anchor rodes



Pro-Series + Pro-Fish Horizontal Windlasses

Specifications

MODEL	MAX.CHAIN		MOTOR SUPPLY	MOTOR POWER	MAXIMUM PULL		WORKING LOAD LIMIT		MAXIMUM LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	WEIGHT	
	mm	in	Voltage	Watt	kg	lb	kg	lb	m/min	ft/min	Amp	Amp	kg	lb
Pro-Series 700	7	1/4	12	500	320	700	79	175	32	105	35	50	8.5	19
Pro-Series 1000	8	5/16	12	700	454	1000	114	250	32	105	50	70	9.5	21
Pro-Fish 700	7	1/4	12	500	320	700	79	175	32	105	35	50	8.5	19
Pro-Fish 1000	8	5/16	12	700	454	1000	114	250	32	105	50	70	9.5	21

Pro-Series Kit

PART NO.	DESCRIPTION	GYPSY SPECIFICATIONS	
		Chain	Rope
6656011967-310	Pro-Series 700 Kit	6mm DIN 766, 7mm DIN 766, 1/4" ISO G4, 1/4" BBB	12mm (1/2") 3-strand and 8-plait
6657011967-311	Pro-Series 1000, 6-7mm (1/4") Kit	6mm DIN 766, 7mm DIN 766, 1/4" ISO G4, 1/4" BBB	12mm (1/2") 3-strand and 8-plait
6657011198-311	Pro-Series 1000, 8mm (5/16") Kit	8mm DIN 766, 5/16" BBB, 8mm ISO 4565	14-16mm (9/16-5/8") 3-strand and 8-plait (5/8 only)

Kits include: Windlass, base gasket seal, fast-mounting studs, installation wrench, circuit breaker, dual-direction solenoid and rocker switch.

Pro-Fish Windlass Kit

PART NO.	DESCRIPTION	GYPSY SPECIFICATIONS	
		Chain	Rope
6656211967-310	Pro-Fish 700 Kit	6mm DIN 766, 7mm DIN 766, 1/4" ISO G4, 1/4" BBB	12mm (1/2") 3-strand and 8-plait
6656411198-311	Pro-Fish 1000 Kit	8mm DIN 766, 5/16" BBB, 8mm ISO 4565	14-16mm (9/16-5/8") 3-strand and 8-plait (5/8 only)
6656411199-311	Pro-Fish PB	14-16 mm (9/16-5/8") Lead-core line	

Kits include: Windlass, base gasket seal, fast-mounting studs, installation wrench, circuit breaker, dual-direction solenoid and rocker switch

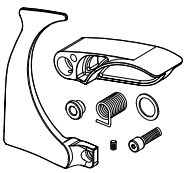
Pro-Fish Conversion Kit

Converts Pro-Series to Pro-Fish

PART NO.	DESCRIPTION
66000616	Conversion Kit

Pro-Series/Fish Rope Guard and Control Arm Upgrade Kit

Compatible with all versions of Pro-Series and Pro-Fish units. However, windlasses fitted with a Ø118mm RC860 gpysy will need to replace the gypsy.



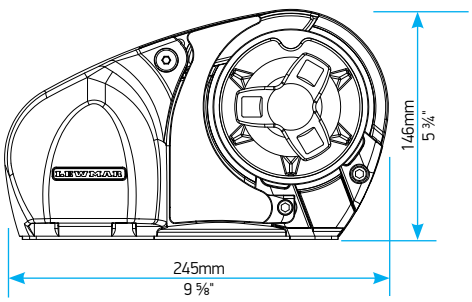
PART NO.	DESCRIPTION
66000766	Pro-Series/Fish Rope Guard and Control Arm Upgrade Kit

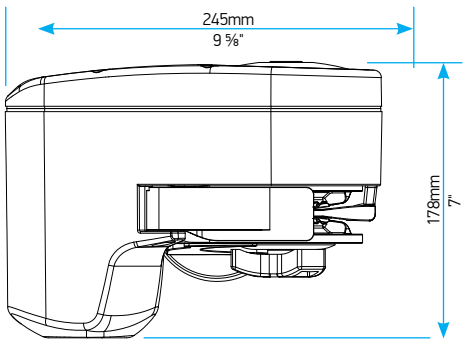
Pro-Fish PB Leaded Rope Gypsy Kit

Suits 14-16mm lead-core line

PART NO.	DESCRIPTION
66000768	Pro-Fish PB Gypsy Kit

Dimensions Diagram





H-Series

The stylish, horizontal H-Series Windlasses use the reliable worm gearbox technology. The integral contactor simplifies wiring and is protected by a durable maincase. The unit's waterproof seal requires minimum maintenance, and since you can install it in one piece, getting started is quick and easy.

- Quick, easy, one-piece installation
- Stainless steel warping drum and unique W.A.R.P. (Wear and Abrasion Reduction Pattern) finish
- Robust horizontal worm motor-gearbox for reliable performance
- Integral contactor protected by maincase
- Sealed waterproof unit requires minimum maintenance
- Aluminium and composite maincase for reduced weight
- For boats up to 14m (48ft)

H2 & H3 Specifications

PART NUMBER	PART NUMBER	MODEL	MOTOR SUPPLY	GYPSY NO.	MOTOR POWER	MAXIMUM PULL		MAXIMUM LINE SPEED		WORKING LOAD LIMIT		NORMAL CURRENT DRAW	NORMAL LINE SPEED		WEIGHT GYPSY ONLY		WEIGHT GYPSY/DRUM		CIRCUIT BREAKER
Gypsy only	Gypsy/Drum		Voltage		Watt	kg	lb	m/min	ft/min	kg	lb	Amp	m	ft	kg	lb	kg	lb	Amp
69600533	**69600537**	H2	12	505	700	650	1433	21	69	163	358	80	17	56	21.5	47	23.5	52	90
69600534	**69600538**	H2	12	506	700	650	1433	21	69	163	358	80	17	56	21.5	47	23.5	52	90
	69600545	H3	12	505	1000	890	1962	28	92	215	475	85	18	59	23.5	52	25.5	56	110
69600542	**69600546**	H3	12	506	1000	890	1962	28	92	215	475	85	18	59	23.5	52	25.5	56	110
	69600548	H3	24	506	1000	1020	2248	30	98	243	535	60	20	66	23.5	52	25.5	56	90

Kits include: Built-in-dual-direction contactor, breaker and rocker switch

H2 & H3 Gypsy Specifications

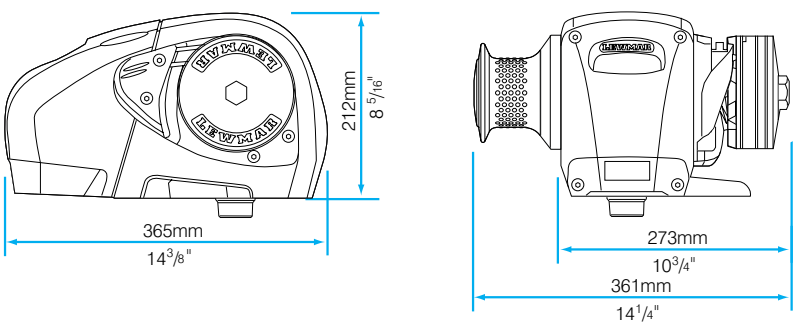
GYPSY NUMBER	SIZE	CHAIN DESCRIPTION	ROPE DESCRIPTION		
	mm		mm	in	
505	8	5/16" BB, 5/16" ISO G4, 8mm DIN 766, 8mm ISO 4565	14-16	$^{9}/_{16}$-$^{5}/_{8}$	3-strand and 8-plait (5/8 only)
506	10	3/8" BBB, 10mm DIN 766, Lewmar 9.5 G40	14-16	$^{9}/_{16}$-$^{5}/_{8}$	3-strand and 8-plait (5/8 only)

Manual Recovery Kit

Available on the H2/H3 as an optional extra, it remains fitted to the unit for user convenience

PART NO.	DESCRIPTION
66840045	M/R Kit H2/H3

Dimensions Diagram

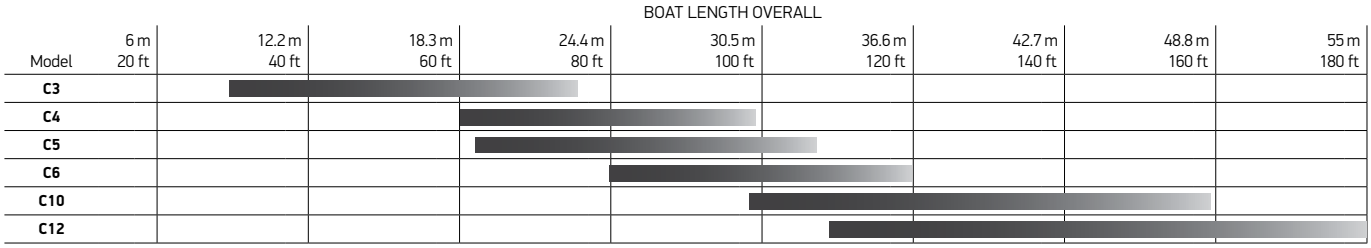


C Series Capstans

Lewmar's C Series Capstans provide almost effortless rope control at the press of a footswitch. The WARP™ (Wear and Abrasion Resistant Pattern) finished drum optimizes performance and reduces rope wear by up to 30%. Stainless steel components combine strength, anti-corrosion and durability with a beautiful, polished finish. Installation of the C3 is quick and simple, as it is fastened entirely from above deck.

- Beautifully crafted stainless steel components ensure enduring strength and performance
- WARP™ finish drum - unique Wear and Abrasion Resistant Pattern reduces rope wear by 30%
- C3 offers quick, easy on-deck installation requiring only one person
- C4–C10s have worm gearbox-inherent anti-runback characteristics acting as a mechanical brake

Capstan selection guide



Lighter shading represents the upper limit of model. If in doubt, move up a model.

C Series Capstan Electric Specifications

DESCRIPTION	MOTOR POWER	MAXIMUM PULL		WORKING LOAD LIMIT		MAXIMUM LINE SPEED		NORMAL CURRENT DRAW	CIRCUIT BREAKER	WEIGHT	
	Watt	kg	lb	kg	lb	m/min	ft/min	Amp	Amp	kg	lb
C3 – 12V	1000	750	1650	188	414	12	39	65	70	12	26
C3 – 24V	1000	850	1870	213	470	12	39	40	50	12	26
C4 – 12V	1600	1250	2750	313	690	25	82	125	150	25	55
C4 – 24V	2000	1500	3300	375	827	27	89	70	110	25	55
C5 – 12V	2000	1450	3190	363	800	27	89	120	150	27.5	60
C5 – 24V	2000	1600	3520	400	882	29	97	60	110	27.5	60
C6 – 24V	2000	1540	3388	770	1698	40	131	90	–	30	66
C6 – 400V AC	3000	1600	3520	800	1760	14	46	7.4			
C10 – 400V AC	4000	2400	5280	1200	2640	20	66	9	10		

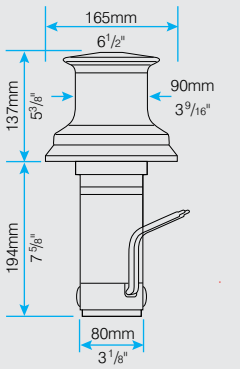
C Series Capstan Hydraulic Specifications

MODEL	NORMAL PRESSURE		FLOW RATE		MAX. PULL		MAX. LINE SPEED	
	bar	psi	l/min	US gal/min	kg	lb	m/min	ft/min
C4/5 Hydraulic	175	2537	10 –40	2.6 –10.6	1100 at 14 bar	2400 at 203 psi	21 at 40l/min	69 at 10.6 US gal/min
C6 Hydraulic	175	2573	10 -60	2.6 -15.8	1600	3520	8 to 30	26 to 98
C10 (200 cc/rev)	175	2573	20 –55	5.2 – 14.3	2420	5324	8–23	26–75
C12 (250 cc/rev) 13.5:1 G/Box	155	2279	30 –80	7.8 – 20.8	5000	11000	6–17	20–56

C3 Capstan Kits

PART NO.	DESCRIPTION
6630331312	C3 - 12V deck unit & motor gearbox assembly
6630332312	C3 - 24V deck unit & motor gearbox assembly

C3 Dimensions Diagram



C3 Deck Unit and Motor Gearbox Assembly

C-Series Capstans

C4/5/6/10/12 Capstans

1 Deck Unit

PART NO.	DESCRIPTION
66810032	C4/5 Deck Unit
69000411	C6 Deck Unit
69000453	C10/12 Deck unit

2 Motor Gearbox

PART NO.	DESCRIPTION
68000534	C4 - 12V Motor Gearbox
68000535	C4 - 24V Motor Gearbox
68000901	C4 - 400V AC
66810011	C5 - 12V Motor Gearbox
66810012	C5 - 24V Motor Gearbox
68000294	C4/5 Hydraulic
69000414	C6 - 24V Motor Gearbox
69000496	C6 - 400V AC
69000415	C6 Hydraulic
69000491	C10 4kW, 400V AC
69000456	C10 Hydraulic
69000458	C12 Hydraulic

Capstans switch kit and accessories

3 Circuit Breakers

PART NO.	DESCRIPTION
68000350	Circuit Breaker 110A
68000351	Circuit Breaker 150A

4 Contactor

Suitable for C3, C4, C5 and C6

PART NO.	DESCRIPTION
Sealed Contactors	
68000933	Single 12V
68000934	Single 24V
Contactors in Boxes	
18000301	Single 12V
18000302	Single 24V
Pre-wired Contactors in Boxes with Fuse	
68000919	Single 12V
68000920	Single 24V

AC control boxes

Suitable for C4, C5, C6 and C10

PART NO.	VOLTAGE	MOTOR POWER	RATED CURRENT
68000976	400 V	2.2 kW	5.5 A
68000977	400 V	3 kW	7 A
68000978	400 V	4kW	9 A
68000979	400 V	5.5 kW	12 A
68000980	400 V	7.5 kW	16 A
68000984	200 V	2.2 kW	9.5 A
68000985	200 V	3 kW	12 A
68000986	200 V	4kW	16 A
68000987	200 V	5.5 kW	20 A
68000988	200 V	7.5 kW	27 A

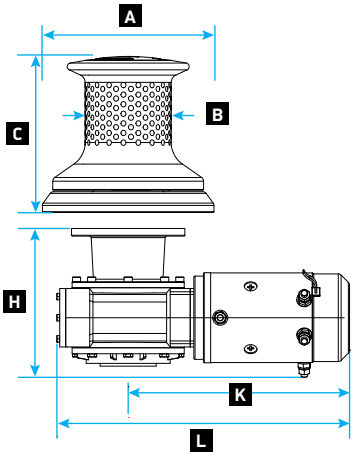
5 Switches & Accessories

Refer to p34-38 for more information

Footswitch

Wireless remote control

Dimensions Diagram



C4/5 & 6 Deck Unit

Above deck dimensions

MODEL	A		B		C	
	mm	in	mm	in	mm	in
C4/5	215	$8^{1}/_{2}$	108	$4^{1}/_{4}$	196	$7^{3}/_{4}$
C6	230	$9^{1}/_{16}$	130	$5^{7}/_{16}$	219	$8^{5}/_{8}$
C10/12	340	13 ⅜	180	7	293	11½

Below deck dimensions

PART NO	MOTOR/ GEARBOX	L		K		H	
		mm	in	mm	in	mm	in
68000534	C4 12V	363	14¼	278	10 ⅞	168	6⅔
68000535	C4 24V	363	14¼	278	10 ⅞	168	6⅔
68000901	C4 400V AC	489	19¼	405	$15^{15}/_{16}$	201	$7^{15}/_{16}$
66810011	C5 12V	390	15⅓	298	11⅔	173	6¾
66810012	C5 24V	390	15⅓	298	11⅔	173	6¾
68000294	C4/C5 Hyd.	319	$12^{9}/_{16}$	235	9¼	179	7
69000414	C6 24V	400	15¾	299	11¾	172	6⅞
69000491	C10 400V AC	697	$27^{7}/_{16}$	555	21⅞	263	10¼

Complementary Electrical Components Summary

1 Circuit Breakers

PART NO.	DESCRIPTION	USE WITH WINDLASS MODEL
68000603	Circuit Breaker 25A	Pro-Sport
68000604	Circuit Breaker 35A	V700
68000348	Circuit Breaker 50A	Pro-Sport/ Pro-Fish 700W - CPX2/V2 24V - C3 24V
68000240	Circuit Breaker 70A	Pro-Sport/ Pro-Fish 1000W - CPX0 500W - C3 12V
68000349	Circuit Breaker 90A	CPX0 700W/ CPX1/ V1 - CPX2/ V2 12V - CPX3/ V3 24V - H2 12V - H3 24V
68000350	Circuit Breaker 110A	CPX3/ V3 12V - CPX4/ V4/ V5 24V - H3 12V - C4/ C5 24V
68000351	Circuit Breaker 150A	CPX4/ V4 12V - V5 12V - V6 24V - C4 / C5 12V
68000894	Circuit Breaker 200A	V8 2.5kW
68000895	Circuit Breaker 250A	V8 3.5kW

2 Contactors

PART NO.	DESCRIPTION	CAPSTANS C3 TO C6	PRO-SPORT	PRO-SERIES FISH 700	PRO-SERIES FISH 1000	V700	CPX0	V1 CPX1	V2/V3 CPX2/3	V4 CPX4	V5	V6	V8 2500	V8 3500
Sealed Contactors														
68000933	Single 12V	•												
68000934	Single 24V	•												
68000937	Compact Dual 12V						•	•	•					
68000938	Compact Dual 24V								•					
68000318	Dual 12V							•	•		•			
68000319	Dual 24V								•		•		•	
68000939	Compact Dual 12V		•	•	•	•								
68000320	Dual 12V									•				
68000321	Dual 24V									•		•		•
Contactors in Boxes														
18000301	Single 12V	•												
18000302	Single 24V	•												
68000129	Dual 12V							•	•		•			
68000130	Dual 24V								•		•		•	
18000200	Dual 12V		•	•	•	•				•				
18000237	Dual 24V									•		•		•
Pre-wired Contactors in Boxes with Fuse														
68000919	Single 12V	•												
68000920	Single 24V	•												

3 Switches

SX Foot Switch

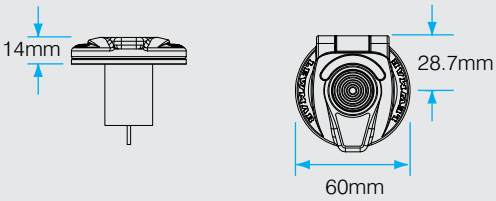
- Suitable for DC electric windlasses running on 12 or 24v
- IP67/5 rated for water resistance
- Twin sealed switch compartment
- Composite plastic body
- Available with polished stainless steel or composite plastic lid
- New lower-profile design with updated styling

68001030
Stainless Steel Closed Lid

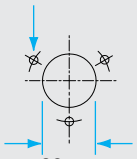
68001031
Black Closed Lid

DESCRIPTION	BLACK Part Number	STAINLESS STEEL Part Number
Closed Lid	**68001031**	**68001030**

SX Dimensions



3 holes 4.5mm diameter equally spaced as shown on a 43.0 PCD



Mounting detail

Grand Prix Foot Switch

CLOSED LID	OPEN LID
48000114	**48000100**

For dimensions contact Lewmar

Deck Foot Switch

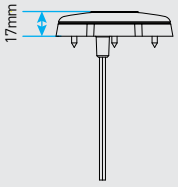
- Suitable for DC electric windlasses running on 12 or 24 v
- Single direction switch
- Hinged cover to prevent accidental operation
- Available in grey, white, or stainless steel
- Normally open contact, 5A (12 & 24v)
- Ready to install
- Must be used with a contactor or control box

68000883
Grey Foot Switch

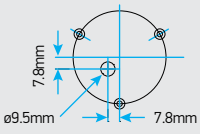
68000930
White Foot Switch

68000888
Stainless Steel Foot Switch

DESCRIPTION	GREY Part Number	WHITE Part Number	STAINLESS STEEL Part Number
Windlass down	**68000883**	**68000918**	**68000888**
Windlass up	**68000884**	**68000917**	**68000889**
Blank	**68000928**	**68000930**	**68000929**



3 holes Ø3,6mm C/SK to Ø7mm on 62 PCD



Mounting detail

Guarded Rocker Switch

PART NUMBER	DESCRIPTION
68000593	Dual direction switch

Hand held cable remote control

PART NUMBER	DESCRIPTION
66830017	AA320 hand held wired remote control

- Ergonomic shape with rubber over-moulding for shock protection and grip
- Can operate in parallel with other control equipment
- Connect to DC, AC and Hydraulic systems
- Rugged cable connectors with moulded plug and socket rated to IP67

Wireless RF Remote Control

- 3-Button Windlass Wireless Remote Control allows wireless remote up/down operation of any Lewmar windlass
- 5-Button Windlass & Thruster Remote Control allows wireless port/starboard thrust operations of any Lewmar Thruster, and wireless up/down operation of any Lewmar Windlass
- Easily retrofitted to existing installations
- Kit includes one wireless fob and one receiver that supports up to eight remote key fobs. Additional fobs sold separately.
- Include a replaceable battery
- The fobs float and are waterproof to IP67 (1 meter deep)
- Using over 1 billion individual codes, our proprietary encryption scheme prevents false triggering from any other device or similar fob
- FCC & CE

3-Button Windlass Wireless Remote Kit

PART NUMBER	DESCRIPTION
68000967	3-Button Windlass Wireless Remote Kit

Kit includes a receiver and a 3 button wireless fob

5-Button Windlass & Thruster Wireless Remote Kit

PART NUMBER	DESCRIPTION
68000968	5-Button Windlass & Thruster Wireless Remote Kit

Kit includes a receiver and a 3 button wireless fob

Additional Fobs

PART NUMBER	DESCRIPTION
68001005	3-button spare fob
68001006	5-button spare fob

10m Remote Antenna Kit

PART NUMBER	DESCRIPTION
68000969	10m Remote Antenna Kit

When reception is poor or distance to the windlass/thruster is long, a remote antenna will improve reception.

All current Lewmar products utilise solenoids, although some of our older products may not. If in doubt, contact your Lewmar representative.

Chain Counters

A chain-counter allows the scope of chain/rope to be more accurately measured, ensuring quicker, safer anchoring under any conditions. Lewmar distribute the full range of AutoAnchor chain counters, ranging from a basic panel-mounted chain counter to a full multi-station capable wireless control.

The AutoAnchor product makes a great add-on to any of Lewmar's vertical windlasses.

New plug and play cables reduces installation time

AA150 – Chain counter

Part No: 66830014

Displays the length of rode deployed through the windlass.

- LCD display shows at a glance how much anchor rode is out.
- Docking alarm sounds when the anchor is close to docking.
- Now plug and play AA sensor installation
- Works with rope/chain or all-chain rode.
- Use with DC, AC and hydraulic windlasses
- Install up to 2 units or combine with the AA560, AA710 or AA300 series for multiple stations on the boat
- Standard 60mm (2.36") marine instrument console

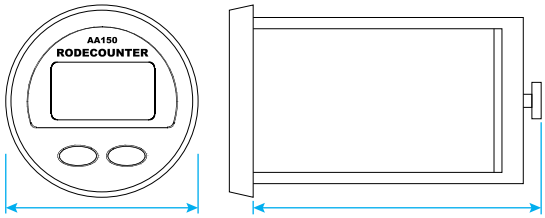
Kit Includes:

- Console with sensor plug and fastening kit
- 1 magnet (10mm x 8mm)
- Grey sensor with 2m sensor cable and plug (Use for all-chain or rope/chain installations)
- Motor load sensor terminators (Use for rope/chain installations)
- Installation instructions and user manual

Specifications

POWER SUPPLY	CURRENT CONSUMPTION	TEMPERATURE RANGE	MAXIMUM VOLTAGE	EMC PROTECTION/CE
12 or 24V DC	30mA	-5 to 60°C (23 to 140°F)	30V DC	EN609945

Dimensions



Chain counter AA560 / AA570

Controls the windlass from the helm station and shows at a glance how much anchor rode is deployed.

- "One touch" automatic function deploys and retrieves a preset length of anchor rode making anchoring easier and safer
- Docking alarm and pre-set stopping point help protect the boat during anchor retrieval
- Use with DC, AC and hydraulic windlasses
- Install up to 2 units or combine with the AA150, AA710 or AA300 series for multiple stations on the boat
- The new AA570 wireless panel-mount rode counter is a wireless version of the AA560

AA560 Part No 66830015 kit includes

- Console with sensor plug and fastening kit
- Grey sensor with 2m sensor cable and plug (Use for all-chain or rope/chain installations)
- 1 magnet (10mm x 8mm)
- Motor load sensor terminators (Use for rope/chain installations)
- Installation instructions and user manual

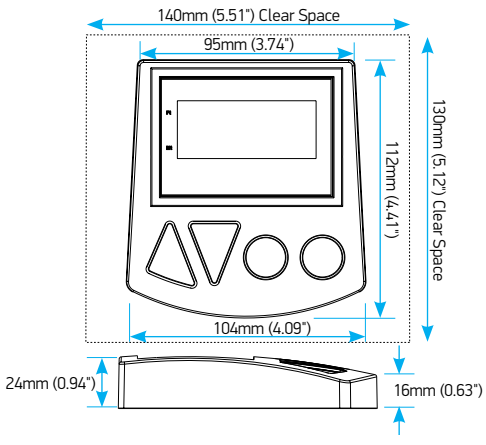
Specifications

POWER SUPPLY	CURRENT CONSUMPTION	TEMPERATURE RANGE	MAX. VOLTAGE	EMC PROTECTION/CE
12 or 24V DC	70mA	-5 to 60°C (23 to 140°F)	30V DC	EN609945

AA570 Part No 66830041 Kit Includes:

- Console with sensor plug and fastening kit
- Base Station (AA702A) with male sensor plug
- Grey sensor with 2m sensor cable and plug (Use for all-chain or rope/chain installations)
- 1 magnet (10mm x 8mm)
- Motor load sensor terminators (Use for rope/chain installations)
- Installation instructions and user manual

Dimensions



AA730 – Wired Remote control with LCD and chain counter

Part No: 66830040

Waterproof control for windlass or thruster with chain counter

- Full windlass control and chain counting
- Controls bow and / or stern thrusters
- 4 metres spiral cable
- Stowage on cradle
- Use with DC, AC and Hydraulic systems
- Operates in parallel with other control equipment eg toggle switches, foot switches and other electronic controllers.

Kit Includes:

One handheld console unit with cradle, one base station, a deck socket with 2m lead, a socket sealing cap, one sensor, 2 magnets, screws for the cradle and socket, installation and operation instructions.

AA710 – Wireless windlass control and chain counter

Part No: 66830011

Hand held device to controls the windlass and other devices with integrated chain counter feature.

- Full windlass control and chain counting
- Controls bow and / or stern thrusters
- Preset the length of rode to deploy
- Auto stop and docking alarm when the anchor is close to docking
- High level wireless transmission security includes unique ID and registration for every unit
- Safety lock reduces unwanted operation
- Displays signal strength and battery level
- Use with DC, AC and Hydraulic systems
- Operates in parallel with other control equipment eg toggle switches, foot switches and other electronic controllers.

Kit Includes:

- Hand Held Radio Remote Control Unit (AA710)
- Base Station (AA702A) with male sensor plug
- Grey sensor with 2m sensor cable and plug (Use for all-chain or rope/chain installations)
- 1 Magnet (10mm x 8mm)
- Motor load sensor terminators (Use for rope/ chain installations)
- Installation instructions and user manual

AA601 – Rode counter for glass bridge PC or PLC display

Part No: 66830035

The AA601 connects to the on board computer for monitoring of the length of rode deployed through the windlass.

- Rode length monitoring from the onboard computer.
- Connection via RS485 serial port or USB direct.
- Pre-programmed calibrations for rope/chain rodes
- An alarm warns skipper when anchor is close to docking
- Use with DC, AC and Hydraulic systems

Spare cables and accessories

- For easy installation the cables have male connectors at both ends (M-M).
- The sensors and console have female connectors.
- Chain counters use 3 wire shielded cables to meet the EN 60945 EMC requirements.

PART NUMBER	DESCRIPTION
66830025	2m dual instrument cable
66830026	Dual instrument T-junction connector
66830030	Sensor male field connector
66830031	Sensor female field connector
66830032	Sensor cable gender change
66830016	Antenna extension 10m
66000639	Sensor and magnet kit

PLUG & PLAY SENSOR EXTENSION CABLES

PART NUMBER	DESCRIPTION
66830021	6.5m cable
66830027	10m cable
66830022	15m cable
66830023	20m cable
66830028	25m cable
66830029	35m cable

2. Anchoring

Nothing beats a night in a secluded bay, but to enjoy it fully you need to have absolute faith in your ground tackle.

That's why every one of Lewmar's anchors is manufactured to the highest standards and to designs perfected over many decades of research. With a Lewmar anchor on the end of your chain, you can sleep soundly whatever the weather.

The Lewmar Anchor Range

Page 41 DTX anchor

Lewmar's new DTX anchor fills the gap between the galvanised and stainless Delta® anchors, allowing boat owners to choose a stainless anchor for a reduced outlay.

The DTX brings the improved aesthetics and anti-corrosion qualities of stainless steel anchors to the mass market.

- Delta® Style Geometry - unique shank profile and ballasted tip for fast, accurate setting
- 316 stainless steel construction
- 3-Year warranty against breakage

Page 42 Delta® Anchor

The Delta® anchor is constructed of high-grade manganese steel and stainless steel for maximum tensile strength. Its unique shank profile and ballasted tip make it self-launching. And its low center of gravity and self-righting geometry ensure that it will set immediately.

Consistent and reliable in performance, the Delta® anchor is guaranteed for life against breakage[1], has Lloyd's Register General Approval of an Anchor Design[2] as a High Holding Power anchor and is specified as the primary anchor used by numerous National Lifeboat organizations.

Page 43 C.Q.R.® Anchor

The C.Q.R.® anchor has gained legendary status for its superior performance. The original drop-forged construction of the C.Q.R.® anchor increases its strength and reliability under load – a genuine C.Q.R.® anchor will not break. Its hinged shank delivers consistent setting and holding even in the very worst conditions. The C.Q.R.® anchor is guaranteed for life against breakage[1] and has Lloyd's Register General Approval of an Anchor Design[2] as a High Holding Power anchor.

Page 44 Claw Anchor

Design based on anchors used to secure oil rigs in the North Sea. The Claw anchor is constructed of high-grade steel cast in a single piece. It sets effortlessly, holds in a variety of seabeds and stows easily on the bow roller of most boats.

Page 45 Anchor Accessories

Lewmar supply every anchor accessories you might need from Bow rollers. to devil's claw chain stoppers

[1] Damage by deformation or bending is not covered by this guarantee.
[2] Lloyd's Test Certificate is available for individual Delta® anchors by arrangement.

DTX Anchor

- 316 stainless steel
- Proven performance
- Lead ballasted tip for fast setting
- 3 year warranty
- Ordinary Holding Power
- Full range from 6kg-63kg

A Lewmar branding guarantees quality and authenticity

B Useful eye for anchor trip line

C Weight concentrated over tip for quick setting

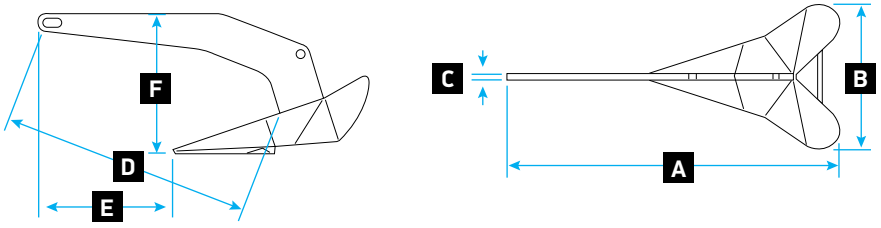
D Support bar to help prevent fluke deformation

Selection guide

ANCHOR WEIGHT		BOAT LENGTH OVERALL							
kg	lb	6 m 20 ft	9.2 m 30 ft	12.2 m 40 ft	15.2 m 50 ft	18.3 m 60 ft	21.3 m 70 ft	24.4 m 80 ft	27.4 m 90 ft
6	14								
10	22								
16	35								
20	44								
25	55								
32	70								
40	88								
50	110								
63	140								

Lighter shading represents the upper limit of model. If in doubt, move up a model.
This information is for guidance only, please consult the relevant Classification Society for specific certification requirements.

Dimensions Diagram



DTX Anchor Specifications

PART NUMBER	ANCHOR WEIGHT		RECOMMENDED CHAIN SIZE		A		B		C		D		E		F	
	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
0057206	6	14	6–7	1/4	593	23 3/8	265	10 7/16	10	3/8	450	17 5/8	243	9 1/2	254	10
0057210	10	22	8	5/16	695	27 3/8	310	12 7/32	13	1/2	526	20 5/8	282	11 1/8	292	11 1/2
0057216	16	35	8	5/16	812	32	362	14 1/4	13	1/2	614	24 1/8	328	13	339	13 3/8
0057220	20	44	10	3/8	877	34 1/2	392	15 7/16	16	5/8	663	26 1/8	357	14	368	14 1/2
0057225	25	55	10	3/8	945	37 1/4	415	16 3/8	16	5/8	713	28	387	15 1/4	398	15 5/8
0057232	32	70	10	3/8	1023	40 1/4	453.5	17 7/8	20	3/4	775	30 1/2	425	16 3/4	432	17
0057240	40	88	10	3/8	1103	43 7/16	489	19 1/4	20	3/4	883	32 3/4	437	17 1/4	461	18 1/8
0057250	50	110	12	1/2	1175	46 1/4	523	20 5/8	20	3/4	890	35	479	18 7/8	486	19 1/8
0057263	63	140	12	1/2	1270	50	567	22 5/16	25	1	963	38	508	20	537	21 1/8

Dimensions subject to +/- 2% tolerance

Delta® Anchor

The Delta® anchor is constructed of high-grade manganese steel or Duplex stainless steel for maximum tensile strength. Its unique shank profile and ballasted tip make it self-launching. And its low center of gravity and self-righting geometry ensure that it will set immediately.

Consistent and reliable in performance, the Delta® anchor is guaranteed for life against breakage[1], has Lloyd's Register General Approval of an Anchor Design[2] as a High Holding Power anchor and is specified as the primary anchor used by numerous National Lifeboat organizations.

Galvanized Delta® Anchor

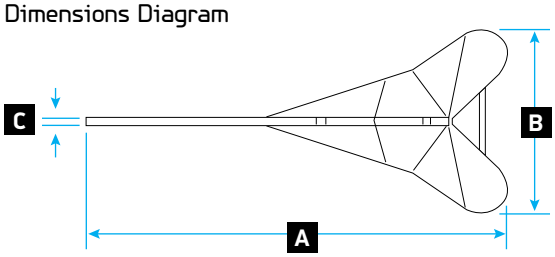
Stainless Steel Delta® Anchor

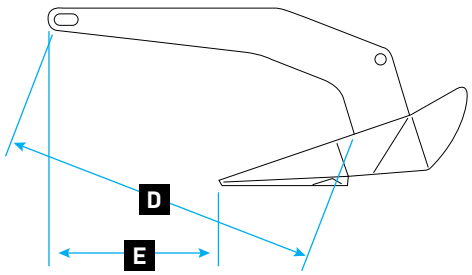
Selection guide

ANCHOR WEIGHT		BOAT LENGTH OVERALL							
kg	lb	6 m 20 ft	9.2 m 30 ft	12.2 m 40 ft	15.2 m 50 ft	18.3 m 60 ft	21.3 m 70 ft	24.4 m 80 ft	27.4 m 90 ft
4	9								
6	14								
10	22								
16	35								
20	44								
25	55								
32	70								
40	88								
50	110								
63	140								

Lighter shading represents the upper limit of model. If in doubt, move up a model.
This information is for guidance only, please consult the relevant Classification Society for specific certification requirements.

Dimensions Diagram





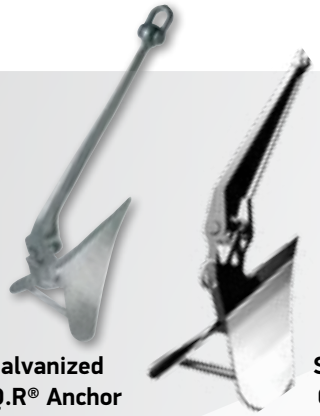
Delta® Anchor Stainless and Galvanised Specifications

GALVANIZED	STAINLESS	ANCHOR WEIGHT		RECOMMENDED CHAIN SIZE		A		B		C		D		E	
Part No.	Part No.	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
0057404		4	9	6–7	¼	514	20 ¼	228	9	8	5/16	387	15 ¼	210	8 ¼
0057406	**0057306**	6	14	6–7	¼	595	23 ⅜	263	10 ⅜	10	⅜	450	17 ⅝	241	9 ½
0057410	**0057310**	10	22	8	5/16	695	27 ⅜	308	12 ⅛	12	½	526	20 ⅝	283	11 ⅛
0057416	**0057316**	16	35	8	5/16	812	32	360	14 ⅛	12	½	614	24 ⅛	334	13
0057420	**0057320**	20	44	10	⅜	877	34 ½	389	15 ¼	16	⅝	663	26 ⅛	361	14 ¼
0057425	**0057325**	25	55	10	⅜	945	37 ¼	417	16 ⅜	16	⅝	713	28	384	15 ⅛
0057432	**0057332**	32	70	10	⅜	1026	40 ⅜	455	17 ⅞	16	⅝	774	30 ½	417	16 ⅜
0057440	**0057340**	40	88	10	⅜	1099	43 ¼	489	19 ¼	20	¾	835	32 ⅞	446	17 ½
0057450	**0057350**	50	110	12	½	1175	46 ¼	520	20 ½	20	¾	890	35	479	18 ⅞
0057463	**0057363**	63	140	12	½	1278	50 ¼	568	22 ⅜	22	⅞	973	38 ¼	518	20 ⅜

Dimensions subject to +/- 2% tolerance

CQR® Anchor

The C.Q.R.® anchor has gained legendary status for its superior performance. The original drop-forged construction of the C.Q.R.® anchor increases its strength and reliability under load – a genuine C.Q.R.® anchor will not break. Its hinged shank delivers consistent setting and holding even in the very worst conditions. The C.Q.R.® anchor is guaranteed for life against breakage[1] and has Lloyd's Register General Approval of an Anchor Design[2] as a High Holding Power anchor.



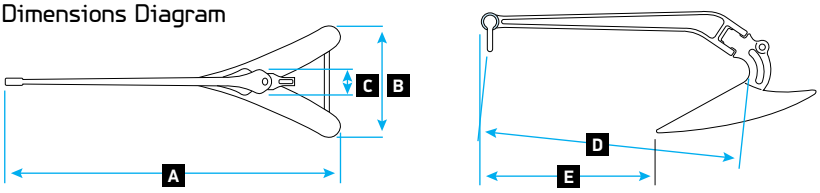
Galvanized C.Q.R® Anchor

Stainless Steel C.Q.R® Anchor

Selection guide

ANCHOR WEIGHT		BOAT LENGTH OVERALL				
kg	lb	6 m 20 ft	12.2 m 40 ft	18.3 m 60 ft	24.4 m 80 ft	30.5 m 100 ft
7	15					
9	20					
11	25					
16	35					
20	44					
27	60					
34	75					
48	105					
66	140					
81	180					
108	240	For larger vessel, Lewmar recommend to follow the recommendation given by the relevant Classification Societies, based on the 'Equipment Number' of the vessel				
137	300					
182	400					
227	500					
273	600					

Dimensions Diagram



Lighter shading represents the upper limit of model. If in doubt, move up a model.
This information is for guidance only, please consult the relevant Classification Society for specific certification requirements.

C.Q.R.® Anchor Stainless and Galvanised Specifications

GALVANIZED	STAINLESS	ANCHOR WEIGHT		RECOMMENDED CHAIN SIZE		A		B		C		D		E	
Part No.	Part No.	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
0056503		7	15	6	1/4	660	26	235	9 1/4	55	2 1/8	552	21 3/4	330	13
0056504		9	20	8	5/16	775	30 1/2	246	9 5/8	60	2 3/8	647	25 1/2	370	14 1/2
0056505		11	25	8	5/16	825	32 1/2	282	11 1/8	65	2 1/2	677	26 5/8	390	15 3/8
0056506		16	35	8	5/16	981	38 5/8	328	13	76	3	776	30 1/2	513	20 1/8
0056507		20	44	10	3/8	1037	40 5/8	355	14	83	3 1/4	828	32 1/2	528	20 3/4
0056508	**0056205**	27	60	10	3/8	1117	44	390	15 3/8	89	3 1/2	913	36	555	21 7/8
0056509	**0056206**	34	75	11	7/16	1190	46 7/8	412	16 1/4	94	3 3/4	978	38 1/2	570	22 1/2
0056510	**0056207**	48	105	11	7/16	1196	47	485	19	120	4 3/4	843	33 1/8	530	20 7/8
0056511	**0056208**	66	140	12.5	1/2	1337	52 5/8	537	21 1/8	128	5	933	36 3/4	583	23
0056513	**0056209**	81	180	12.5	1/2	1450	57	582	23	138	5 1/2	1010	39 3/4	634	25
0056515	**0056210**	108	240	14	9/16	1560	61 1/2	641	25 1/4	146	5 3/4	1105	43 1/2	694	27 3/8
0056530	**0056211**	137	300	14	9/16	1682	66 1/4	693	27 1/4	154	6	1194	47	746	29 3/8
0056540		182	400	16	5/8	1865	73 1/2	763	30	164	6 1/2	1319	52	828	32 1/2
0056550		227	500	17.5	11/16	2109	83	825	32 1/2	174	6 7/8	1430	56 1/4	875	34 1/2
0056560		273	600	17.5	11/16	2138	84 1/8	870	34 1/4	184	7 1/4	1511	59 1/2	949	37 3/8

Dimensions subject to +/- 2% tolerance

Claw Anchor

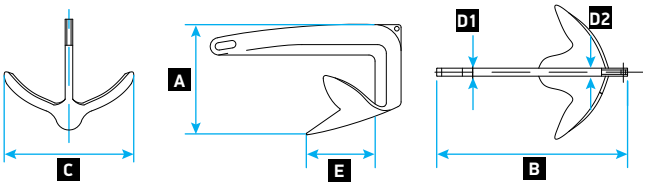
Design based on anchors used to secure oil rigs in the North Sea. The Claw anchor is constructed of high-grade steel cast in a single piece. It sets effortlessly, holds in a variety of seabeds and stows easily on the bow roller of most boats. Also ideal for twin installations

Selection guide

ANCHOR WEIGHT		BOAT LENGTH OVERALL							
kg	lb	6 m 20 ft	9.2 m 30 ft	12.2 m 40 ft	15.2 m 50 ft	18.3 m 60 ft	21.3 m 70 ft	24.4 m 80 ft	27.4 m 90 ft
1	2.2								
2	4.4								
5	11								
7.5	16.5								
10	22								
15	33								
20	44								
30	66								
50	110								
80	176								

Lighter shading represents the upper limit of model. If in doubt, move up a model.
This information is for guidance only, please consult the relevant Classification Society for specific certification requirements.

Dimensions Diagram



Stainless Steel Claw

Galvanised Claw

Claw Anchor Galvanised Specifications

GALVANIZED	ANCHOR WEIGHT		RECOMMENDED CHAIN SIZE		A		B		C		D1		E	
Part No.	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
0057901	1	2.2	5	3/16	133 ±8	5 1/4	295 ±4	11 5/8	182 ±8	7 3/16	7.5 ±2	5/16	95 ±6	3 3/4
0057902	2	4.4	5	3/16	182 ±8	7 3/16	361 ±4	14 3/16	240 ±8	9 7/16	9 ±2	3/8	123 ±6	4 13/16
0057905	5	11	5	3/16	227 ±10	8 15/16	468 ±5	18 7/16	295 ±8	11 5/8	12 ±3	1/2	150 ±6	5 7/8
0057907	7.5	16.5	6	1/4	263 ±10	10 3/8	499 ±5	19 5/8	324 ±10	12 3/4	15 ±3	9/16	151 ±8	5 15/16
0057910	10	22	8	5/16	282 ±10	11 1/8	540 ±6	21 1/4	360 ±10	14 3/16	15 ±4	9/16	182 ±8	7 3/16
0057915	15	33	8	5/16	342 ±12	13 7/16	630 ±6	24 13/16	435 ±10	17 1/8	16.5 ±4	10/16	206 ±12	8 1/8
0057920	20	44	10	3/8	343 ±12	13 1/2	703 ±8	27 11/16	452 ±12	17 13/16	25 ±5	1	238 ±12	9 3/8
0057930	30	66	10	3/8	397 ±12	15 5/8	812 ±8	31 15/16	515 ±12	20 1/4	24 ±5	5/16	283 ±12	11 1/8
0057950	50	110	12	1/2	465 ±12	18 5/16	943 ±10	37 1/8	625 ±12	24 5/8	25.5 ±5	1	313 ±12	12 5/16
0057980	80	176	12	1/2	528 ±12	20 13/16	1074 ±10	42 5/16	699 ±12	27 1/2	26 ±5	1	365 ±12	14 3/8

Claw Anchor Stainless Specifications

STAINLESS STEEL	ANCHOR WEIGHT		RECOMMENDED CHAIN SIZE		A		B		C		D1		D2		E	
Part No.	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
0058901	1	2.2	5	3/16	135 ±8	5 5/16	292 ±4	11 1/2	195 ±8	7 11/16	8 +	5/16	10 ±2	1/2	106 ±6	4 3/16
0058902	2	4.4	5	3/16	177 ±8	6 15/16	358 ±4	14	240 ±8	9 7/16	7 ±2	1/4	9.5 ±2	3/8	127 ±6	5
0058905	5	11	5	3/16	230 ±10	9 1/16	453 ±5	17 7/8	305 ±8	12	9 ±3	1/4	14.5 ±3	5/8	146 ±6	5 3/4
0058907	7.5	16.5	6	1/4	267 ±10	10 1/2	481 ±5	18 15/16	345 ±10	13 9/16	12.5 ±3	1/2	18 ±3	11/16	138 ±8	5 7/16
0058910	10	22	8	5/16	288 ±10	11 5/16	540 ±6	21 1/4	377 ±10	14 13/16	13 ±4	1/2	19 ±4	3/4	165 ±8	6 1/2
0058915	15	33	8	5/16	332 ±12	13 1/16	625 ±6	24 5/8	448 ±10	17 3/4	15 ±4	9/16	22 ±4	14/16	203 ±12	8
0058920	20	44	10	3/8	357 ±12	14 1/16	661 ±8	26	465 ±12	18 5/16	17 ±5	3/4	25 ±5	1	220 ±12	8 11/16
0058930	30	66	10	3/8	405 ±12	15 15/16	782 ±8	30 3/16	540 ±12	21 1/4	18 ±5	11/16	26 ±5	1	265 ±12	10 7/16
0058950	50	110	12	1/2	454	17 7/8	950	37 2/5	607	23 7/8	25	1	45	1 3/4	325	12 13/16
0058980	80	176	12	1/2	545	21 7/16	1080	42 1/2	740	29 1/8	25	1	45	1 3/4	356	14

Anchor Accessories

Anchor Rodes

- Designed to complement the rope-chain gypsies fitted to all Lewmar windlasses
- Calibrated for even pitch
- Hot dip galvanised to minimise corrosion
- Hand-sewn whipping guarantees against unravelling
- Welded for high strength
- Smooth rope-to-chain transition
- Helps your windlass operate smoothly

Premium 3 Strand Rodes (USA only)

PART NUMBER	DESCRIPTION
69000331	5 ¼ G4 X 100 ½ with 5⁄16 shackle
69000332	10 ¼ G4 X 150 ½ with 5⁄16 shackle
69000334	15 ¼ G4 X 200 ½ with 5⁄16 shackle
69000335	15 ¼ G4 X 300 ½ with 5⁄16 shackle
69000339	20 5⁄16 G4 X 200 5⁄16 with ⅜ shackle

Premium 8 Plait Rodes (USA only)

PART NUMBER	DESCRIPTION
HM10HT200PX	10 ¼ G4 – 200 ½ 8PLT with Shackle
HM15HT300PX	15 ¼ G4 – 300 ½ 8PLT with Shackle
HM15H300PX	15 5⁄16 G4 – 300 ⅝ 8PLT with Shackle
HM30B130PX	30 5⁄16 BBB – 130 ⅝ 8PLT with Shackle
HM30B200PX	30 5⁄16 BBB – 200 ⅝ 8PLT with Shackle

Bow Rollers

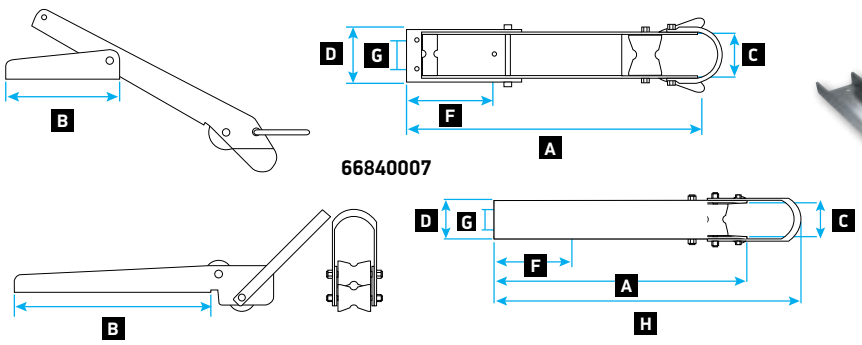
- Friction-free surface to make dropping and weighing anchor easier
- Will not damage the deck or topsides
- Allows you to safely stow anchor while cruising and deploy at short notice
- Constructed of 304 stainless steel
- Range of rollers to fit the most common combinations of anchor, mounting style and boat

66840007

66840008

66840060

Dimension Diagram



66840007

66840008 and 66840009

66840009

66840089

Bow Rollers Specification

PART NUMBER	WEIGHT		ANCHOR TYPE	A		B		C		D		F		G		H	
Part No.	kg	lb		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
66840007	3.6	8	Any Fluke style to 35lb/16kg	524	20	103	8	76	3	99	3 ⅞	153	6	51	2	–	–
66840008	4	9	14, 22 & 35lb (7, 10 & 16kg) Delta® and DTX anchors	495	19 ½	376	14 13/16	67	2 ⅝	80	3⅛	153	6	38	1 ½	602	23 11/16
66840009	4.5	10	14, 22 & 35lb (7, 10 & 16kg) Delta® and DTX anchors	597	23½	478	18 13/16	67	2⅝	80	3⅛	153	6	38	1½	704	27 11/16
66840060	0.5	1	Small bow roller	-	-	102	4	51	2	-	-	-	-	-	-	159	6 ¼
66840085	5	11	22, 35 & 45lb (10, 16 & 20kg) Delta® and DTX anchors	-	-	400	15 ¾	77	3	80	3 1/7	242	9 ½	46	1 13/16	577	22 11/16
66840089	8.2	18	35, 45 & 55lb (16, 20 & 25kg) Delta® and DTX anchors			510	20 1/16	87	3 7/16	90	3 9/16	290	11 7/16	47	1 6/7	730	28 ¾

Chain Stoppers

- A beautiful range of cast stainless chain stoppers
- Made from 316 stainless steel
- Windlasses are not designed to hold high loads while a boat is at anchor
- When the windlass is not in use and the boat is at anchor, the chain should be secured using a chain stopper, or the rope rode should be attached to a load-bearing point such as a cleat
- Perfect for sleep-filled nights and lazy lunches

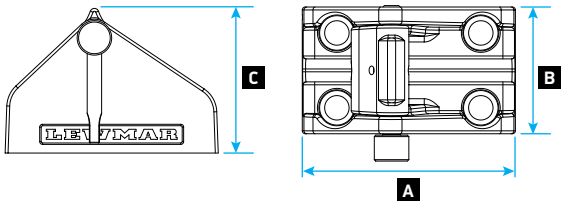
66840079

Chain Stopper Specifications

PART NUMBER	CHAIN SIZE		A		B		C	
	mm	in	mm	in	mm	in	mm	in
66840077	8	5/16	110	4 5/16	65	2 1/2	79	3 1/8
66840079	10	3/8	110	4 5/16	65	2 1/2	79	3 1/8
66840080	12–13	1/2	148	5 7/8	88	3 1/2	101	4
66840081	13–14	9/16	160	6 5/16	100	3 15/16	106	4 3/16
66840083	16	5/8	184	7 1/4	116	4 9/16	122	4 13/16
66840069[1]	6–10	1/4–3/8	79	3 1/8	60	2 3/8	57	2 1/4

[1]Stainless Steel Deluxe Anchor Safety Device (USA only)

Dimensions Diagram



Anchor Safety Straps

- Prevents the anchor from deploying if it is unintentionally released or powers out accidentally
- Simply clipped on the chain, shackle, or anchor
- Does not secure the anchor in the bow roller
- Lewmar recommends securing the anchor to the boat when not in use
- The windlass is not designed to hold the anchor to the boat when not in use.

PART NUMBER (Non PVC coated)	DESCRIPTION	SAFE WORKING LOAD	
		kg	lb
66840027	Anchor Safety Strap 3mm Wire	70	154
66840028	Anchor Safety Strap 4mm Wire	140	309

Min Length 305mm (12") Stainless Steel

SS180007
(Available in the USA only)
3mm diameter wire, PVC coated

Devil's Claw/ Roller/ Stoppers

The Devil's Claw/ Roller/ Stopper units are designed to be used with Lewmar V8 to V12 windlass range.

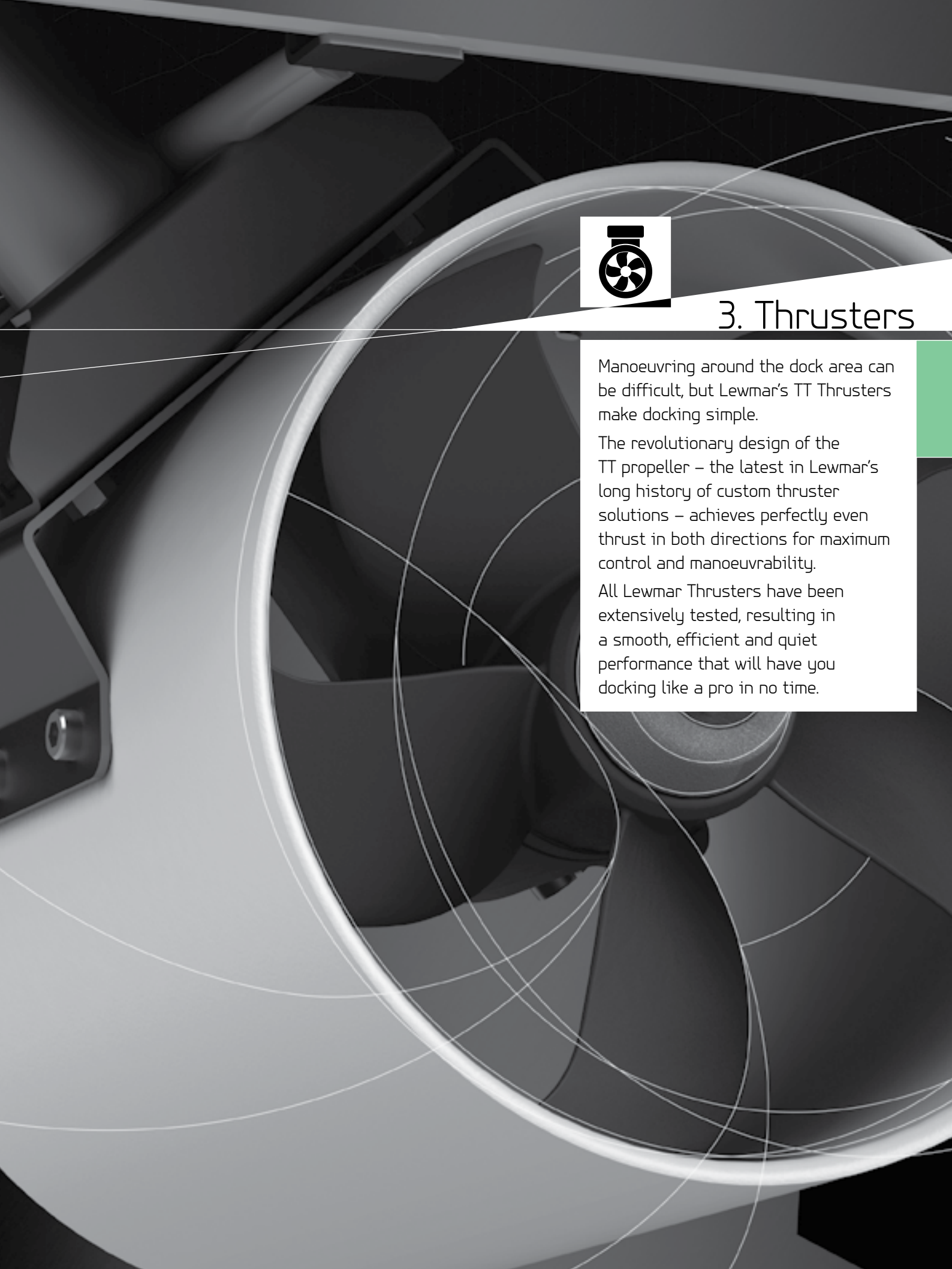
- Paddle holds the load of the anchor and chain when at anchor, taking the load off the windlass
- Devil's Claw is used for tensioning the anchor chain when the anchor is stowed, preventing it from moving when under way.
- As required by classification societies, the breaking load of these units is calculated at 80% of the breaking load of the chain.
- Stopper paddles made from high tensile 17-4PH Stainless Steel, and the main bodies are made from 316 Stainless Steel, combined with an integral high tensile 17-4PH Stainless Steel stopper block.
- Available in horizontal & vertical configurations and a wide range of chain size from 12.5 to 22mm.
- Vertical units have the Devil's Claw operating vertically, while horizontal units have the Devil's Claw operating horizontally.
- The height of chain operation is designated by windlass size. For example, it is possible to use a V8 size unit with a V9 windlass if the Devil's Claw is mounted on a plinth to raise it to the correct height.
- Custom options available. Contact custom@lewmar.com for more information.

Devil's Claw Horizontal

PART NO.	DESCRIPTION
69000499	12.5mm Studlink vertical DCRS (V8)
69000412	14mm Shortlink vertical DCRS (V8)
69000507	14mm Studlink Vertical DCRS (V8)
69000508	14mm Studlink Vertical DCRS (V9)
69000500	16mm Studlink Vertical DCRS (V8)

PART NO.	DESCRIPTION
69000506	16mm Studlink Vertical DCRS (V9)
69000515	16mm Studlink Horizontal DCRS (V9 / V10 / V12)
69000504	17,5mm Studlink Horizontal DCRS (V9 / V10 / V12)
69000510	19mm Studlink Horizontal DCRS (V10 / V12)
69000509	22mm Horizontal DCRS (V12)

Devil's Claw Vertical



3. Thrusters

Manoeuvring around the dock area can be difficult, but Lewmar's TT Thrusters make docking simple.

The revolutionary design of the TT propeller – the latest in Lewmar's long history of custom thruster solutions – achieves perfectly 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.

The Lewmar Thruster Range

Page 50 TT Electric Thruster

- Available from 1.5kW to 15kW (20HP)
- High performance 5-blade propellers give equal thrust in both directions
- No reservoir to install, no leaks, and low maintenance
- Complete range of TT Electric Thruster accessories available

Page 56 Swing Retracting Thruster

- Electronic box with waterproof connectors
- Strong actuator with safety shear pin for rapid deployment
- Corrosion resistant injection moulded hinge mechanism incorporating a teflon coated ring seal system providing multiple sealing surfaces and zero maintenance.
- Customised boat-specific flange versions available for volume requirement
- Conversion box available allowing a swing stern thruster to be integrated with a Lewmar tunnel thruster.

Page 58 TT Hydraulic Thruster

- Enables significant flexibility of vessel movement
- Increases the thrust over appropriate DC Electric version
- 250 and 300 models available with bronze or aluminium hub

Page 59 Custom Thrusters

- Ideal for sail or power vessels up to 150 feet
- Unique Swing and Vertical Retracting Hydraulic Thruster offers a completely fair hull section
- Available with bronze or aluminium legs

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:

• As far forward as possible to maximise the lever effect. (Fig 1)

• 1 x Ø (0.75 x Ø minimum) below the waterline to prevent air being sucked into the tunnel. (Fig. 2). Ø=Tunnel Diameter.

• Minimum suggested tunnel length 2 x Ø.

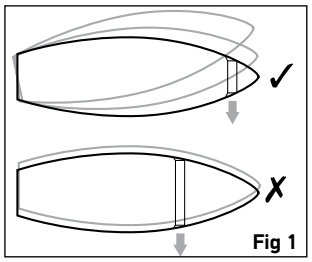


Fig 1

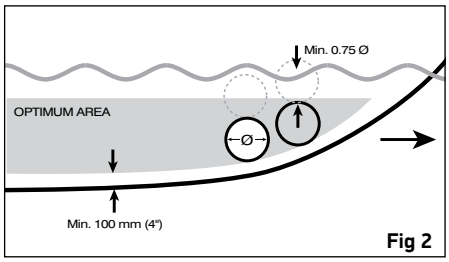


Fig 2

2 Boat size, type and shape


Light displacement / low windage


Medium displacement / Medium windage

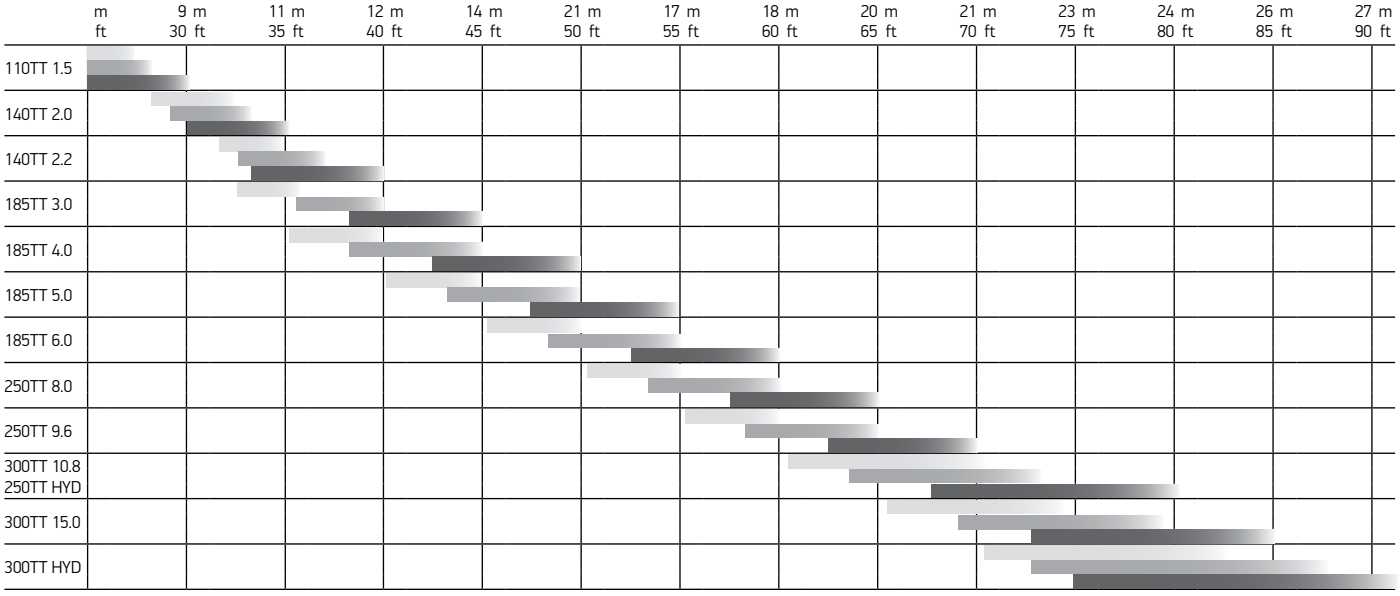

Heavy displacement / High windage

High control / Heavy boat

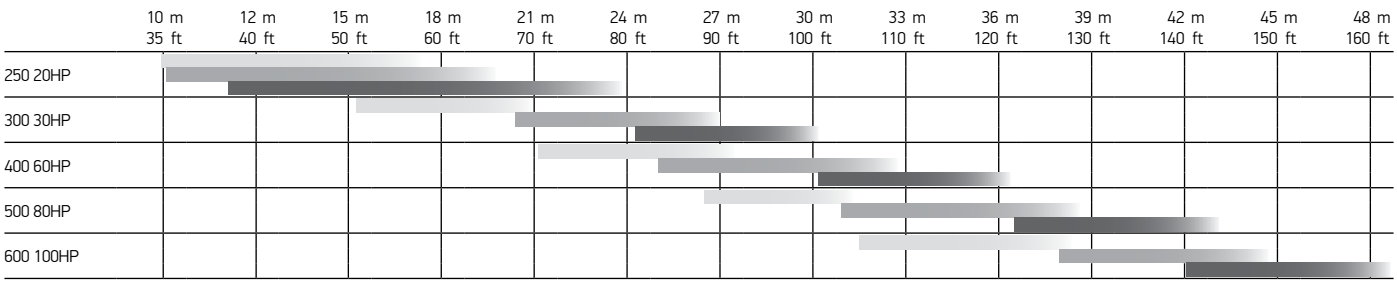
Medium control / medium displacement

Light control / light displacement

Boat length overall



Vertical Retracting and Swing Thrusters size guide



Thruster Features

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. If you choose a Lewmar thruster, one thing is certain; you need never worry about a tricky docking maneouvre again.

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.

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

Easy plug-together switch connections

"Black Box" provides protection for the motor from overheats and incorporates a direction change delay to prevent damage to the motor internals

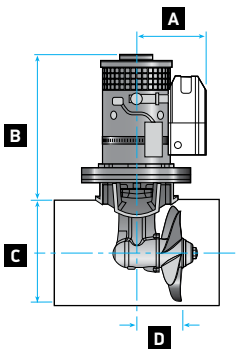
Hardened and ground spiral bevel gears for maximum efficiency and quiet power transmission

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

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.

Small Boat Thrusters

Lewmar now makes thrusters perfect for smaller boats. The 110 thruster is our smallest ever, whilst the 140 2.0kW pairs a smaller motor with the existing 140 hub and propellor.



110TT and 140TT2.0 Thruster Specifications

PART NUMBER	MODEL	VOLTAGE	POWER		TUNNEL	THRUST		WEIGHT		CURRENT DRAW	FUSE RATING	A		B		C		D	
			kW	HP	mm	Kgf	lb	kg	lb	A	A	mm	in	mm	in	mm	in	mm	in
591101	110TT1.5	12	1.5	2	110	28	62	10	22	230	200	123	4 5/6	208	8 3/16	110	4 1/3	64	2½
591482	140TT2.0	12	2	2.7	140	37	81	13	29	270	200	123	4 5/6	213	8 3/8	140	5 1/2	71	2 13/16

TT Electric Thruster

- Range from 2.2kW (3HP) to 15kW (20HP)
- Black box electronics prevents misuse and protects motor
- Hardened and ground bevel gears for maximum efficiency and quiet power transmission
- Self-resetting thermal protection on all motors
- Ignition Protected thruster available
- Wide range of panels

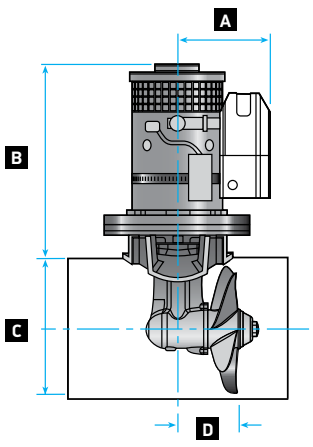
TT Thruster Specifications

PART NUMBER		MODEL	VOLTAGE	POWER		GEARBOX MATERIAL	TUNNEL Ø	PROPS	THRUST		CURRENT DRAW	FUSE RATING	WEIGHT	
TT thruster	IP rated			kW	HP		mm		Kg	lb	A	A	kg	lb
591481	**591404**	140TT2.2	12	2.2	3	Composite	140	Single 5-blade	42	92	280	200	13	29
591801	**591829**	185TT3.0	12	3	4	Bronze	185	Single 5-blade	58	128	330	250	20	43
591802	**591830**	185TT3.0	24	3	4	Bronze	185	Single 5-blade	58	128	160	130	20	43
591807	**591831**	185TT4.0	12	4	5.4	Bronze	185	Single 5-blade	65	143	470	400	20	43
591808	**591832**	185TT4.0	24	4	5.4	Bronze	185	Single 5-blade	65	143	235	130	20	43
591803	**591833**	185TT5.0	12	5	6.7	Bronze	185	Single 5-blade	82	180	480	400	27	59
591804	**591834**	185TT5.0	24	5	6.7	Bronze	185	Single 5-blade	82	180	240	130	27	59
591805		185TT6.0	12	6	8	Bronze	185	Single 5-blade	97	213	740	500	27	59
591806	**591836**	185TT6.0	24	6	8	Bronze	185	Single 5-blade	97	213	370	325	27	59
592501		250TT8.0	24	8	10.8	Bronze	250	Twin CR	160	353	500	400	46	102
592502		250TT9.6	48	9.6	13	Bronze	250	Twin CR	170	374	325	250	50	110
592503		250TT8.0	24	8	10.8	Aluminium	250	Twin CR	160	353	500	400	46	102
593001		300TT10.8	24	10.8	14.5	Bronze	300	Twin CR	250	550	650	500	65	143
593002		300TT15	48	15	20	Bronze	300	Twin CR	280	616	420	400	68	150
593003		300TT10.8	24	10.8	14.5	Aluminium	300	Twin CR	250	550	650	500	65	143

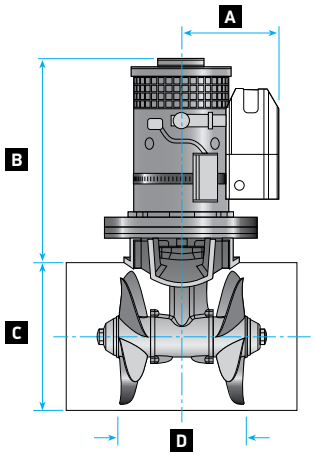
CR = Counter Rotating

Dimensions

MODEL	A		B		C		D	
	mm	in	mm	in	mm	in	mm	in
140TT2.2	123	4 5/6	235	9 1/4	140	5 1/2	71	2 13/16
185TT3.0 / 185TT4.0	148	5 7/8	293	11 1/2	185	7 5/16	83	3 1/4
185TT5.0	162	6 3/8	315	12 3/8	185	7 5/16	83	3 1/4
185TT5.0	162	6 3/8	315	12 3/8	185	7 5/16	83	3 1/4
185TT6.0	161	6 3/8	343	13 1/2	185	7 5/16	83	3 1/4
185TT6.0	161	6 3/8	343	13 1/2	185	7 5/16	83	3 1/4
250TT8.0	165	6 1/2	422	16 5/8	250	9 13/16	256	10 1/16
250TT9.6	183	7 1/4	427	16 13/16	250	9 13/16	256	10 1/16
300TT10.8 / 300TT15	203	8	450	17 11/16	300	11 13/16	320	12 7/8

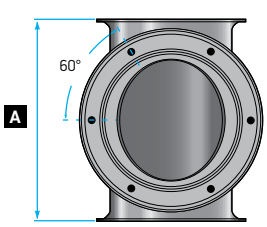


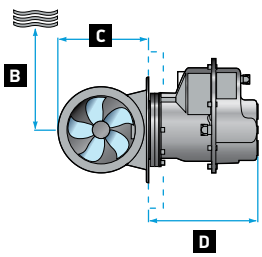
140TT & 185TT



250TT & 300TT

IP Protected Thrusters





MODEL	A		B		C		D	
	mm	in	mm	in	mm	in	mm	in
140 IP Thruster	225	8 7/8	210	8 1/4	190	7 1/2	273	10 3/4
185 IP Thruster	320	12 5/8	278	10 15/16	248	9 3/4	298	11 3/4

Controllers

Lewmar's new range of thruster controls provides superior tactile control of single or dual thruster installations.

The controls can be fitted to any Lewmar thruster using the existing wiring loom.

- Ergonomic control 'pad' gives tactile feedback
- Membrane switch panel sealed from dust and moisture ingress
- Safety 'on' feature stops inadvertent use
- Timeout facility
- LED indicator shows power 'on'
- Single and Dual controller versions available
- Dual Controller gives total control of vessel via multi-axis function pad
- Requires 12-24V supply
- Upgrade kit allows installation of single or dual controller into a thruster system with previous generation controllers

Single Controller

Dual Controller

PART NUMBER	DESCRIPTION
589223	Single Controller
589222	Dual Controller
589225	Upgrade Kit

Simple Installation

Both controllers can be installed without the need for rear access and feature a snap on bezel to neatly hide the mounting screws. If replacing a previous generation touch panel, joystick panel or dual joystick panel, then the existing mounting hole and fixing screw positions can be re-used.

Electric Thruster Accessories

110TT and 140TT 2.0kW Simple Joystick

589094 Joystick

- Ideal entry level control of thrusters
- Features On/Off illumination
- Easy installation connection
- Auto-Shut off not available

589094

Simple Joystick Connecting Leads and Y Connectors

- 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
- For connecting an additional panel, order an extra control loom for the distance to the extra panel

Cable Specifications

4-WIRE CABLE	LENGTH
589021	2m
589016	7m
589017	10m
589018	14m
589019	18m
589206	'Y' Connector

Single/Dual Controller Connecting Leads and Y Connectors

- Lewmar supplies 4-wire cables suitable for standard installations
- Lewmar supplies 5-wire cables suitable for installations where an automatic Battery Switch is used
- 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

Cable Specifications

STANDARD LOOM	STD + ACCESSORY LOOM	LENGTH
589232	**589242**	2m
589233	**589243**	7m
589234	**589244**	10m
589235	**589245**	14m
589236	**589246**	18m
589237	**589247**	22m
589230	**589240**	Extension Adaptor
589231	**589241**	'Y' Connector

Automatic Battery Switch

- Compatible with 140TT 2.2kW and above
- Easy to install
- Installed close to the batteries, it will prevent power from reaching the Thruster until the Panel is activated
- Manual override to disable system
- Automatically activates power when Panel is operated

PART NUMBER
589226

Switch Box

- Enables safe usage of a 24V Thruster on a 12V boat
- Enables safe usage of 48V Thruster on a 24V boat
- Additional batteries required
- For suitability, see selection chart on next page

PART NUMBER	DESCRIPTION
589227	12V/24V
589229	24/48V
589228	12V/24V H*

*Heavy duty

Electric Thruster Accessories and Spares

Accessories and Spares Selector

		110TT	140TT		185TT								250TT			300TT		
		591101 - 1.5 kW 12V	591482 - 2.0 kW 12V	591481/591404 IP - 2.2 kW 12V	591801/591829 IP - 3.0 kW 12V	591802/591830 IP - 3.0 kW 24V	591807/591831 IP - 4.0 kW 12V	591808/591832 IP - 4.0 kW 24V	591803/591833 IP - 5.0 kW 12V	591804/591834 IP - 5.0 kW 24V	591805 - 6.0 kW 12V	591806/591836 IP - 6.0 kW 24V	592501 - 8.0 kW 24V	592502 - 9.6 kW 48V	592503 - 8.0 kW 24V	593001 - 10.8 kW 24V	593002 - 15 kW 48V	593003 - 10.8 kW 24V
GEARBOX MATERIAL	**Composite**	•	•	•														
	Bronze												•	•		•	•	
	Aluminium														•			•
	Stainless				•	•	•	•	•	•	•	•						
FUSE	**589007 130A**					•												
	589008 250A				•			•		•				•				
	589009 325A											•						
	589010 400A						•		•				•		•		•	
	589011 500A										•					•		•
	589012 200A	•	•	•														
FUSE HOLDER	**589006 T1**	•	•	•	•	•		•		•		•						
	589013 T2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
CONTROLLER	**589223 Single Controller**			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	589222 Dual Controller			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	589094 Joystick	•	•															
POWER SWITCH BOX	**589029 12V/24V**					•		•		•		•	•		•			
	589030 24V/48V													•			•	
	589031 12V/24V H															•		•
SPARE ANODES	**589350 185TT anode**				•	•	•	•	•	•	•	•						
	589550 250/300TT anode												•	•	•	•	•	•
SPARE PROPELLERS	**589451 110TT Propeller**	•																
	589151 140TT Propeller		•	•														
	589351 185TT Propeller				•	•	•	•	•	•	•	•						
	589551 250TT LH Propeller												•	•	•			
	589552 250TT RH Propeller												•	•	•			
	589751 300TT LH Propeller															•	•	•
	589750 300TT RH Propeller															•	•	•
SPARE DRIVE PINS	**559107 110TT Drive pin**	•																
	559018 140TT Drive pin		•	•														
	559017 185TT Drive pin				•	•	•	•	•	•	•	•						
SPARE MOTOR SUPPORT BARCKETS	**589096 140TT Support Bkt**		•	•														
	589064 185TT Support Bkt				•	•	•	•	•	•	•	•						
	589066 250TT Support Bkt												•	•	•			
	589065 300TT Support Bkt															•	•	•

Fuse Holders

589006 T1 Fuse Holder

- Designed for ANL fuses
- Comes complete with a polycarbonate safety cover

589006

589013 T2 Fuse Holder

- Higher specification fuse holder for ANL fuses
- Allows for easy fuse replacement
- Cable is clamped independently, so a fuse can be changed without disturbing the cable
- Comes complete with a polycarbonate safety cover

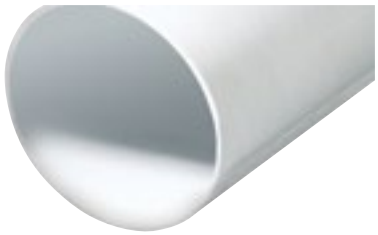
589013

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

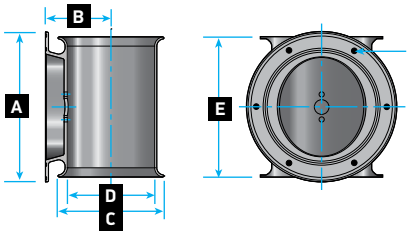
TUNNEL LENGTH		GRP Ø110mm	GRP Ø140mm	GRP Ø185mm	STEEL Ø185mm	GRP Ø250mm	GRP Ø300mm
cm	ft	(4 ⅓")	(5 1/2")	(7 2/7")	(7 2/7")	(9 5/6")	(11 4/5")
60	1'12"	**589401**					
75	2' 6"	**589402**	**589101**	**589300**			
100	3' 3"	**589403**	**589102**	**589301**	**589320**	**589501**	**589700**
150	4' 11"		**589103**	**589302**	**589321**	**589502**	**589701**
200	6' 7"			**589303**		**589503**	**589702**
300	9' 10"						**589703**



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



		A		B		C		D		E			FIXINGS	FIXING PCD	
Kit Number	Thruster	mm	in	mm	in	mm	in	mm	in	mm	in	No of Fixings	mm	mm	in
589110	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
589310	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
589510	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
589710	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

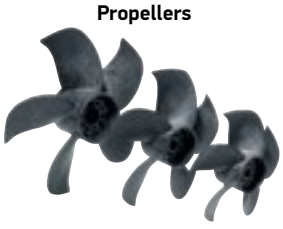
Recommended Spares

Anode Kit

	140TT	185TT	250TT/300TT
Anodes	**589150**	**589350**	**589550**

	110TT	140TT	185TT	250TT LH	250TT RH	300TT LH	300TT RH
Propellers	**589451**	**589151**	**589351**	**589551**	**589552**	**589751**	**589750**

Propellers



	110TT	140TT	185TT
Drive Pins	**559107**	**559018**	**559017**

	140TT	185TT	250TT	300TT
Support brackets	**589096**	**589064**	**589066**	**589065**

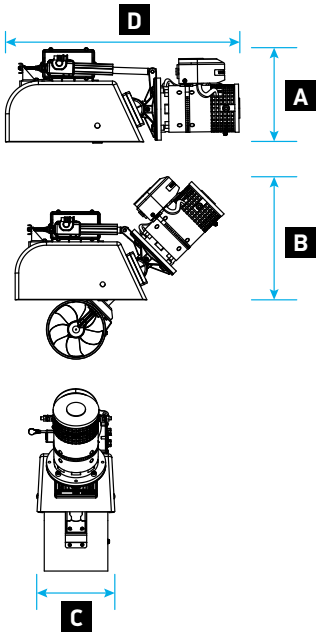
LEWMAR® Swing Thruster

Lewmar has launched of a new range of swing thrusters suitable for boats from approximately 28ft through to 65ft. Developed in conjunction with RMC, the thrusters use components from Lewmar's TT thruster line together with advanced technology developed by RMC.

- Corrosion resistant injection moulded hinge mechanism incorporating a teflon coated ring seal system providing multiple sealing surfaces and zero maintenance.
- Customised boat-specific flange versions of the thrusters can be made available to OEM customers. This dramatically reduces installation time for boat yards performing multiple repeat installations.
- Strong actuators and optimised geometry allow rapid deployment and fine levels of adjustment for a perfect fit every time.
- Conversion box available allowing a swing stern thruster to be integrated with a Lewmar tunnel thruster. These can then be controlled together using a single 2-axis joystick to perform sideways movements and rotations with ease.

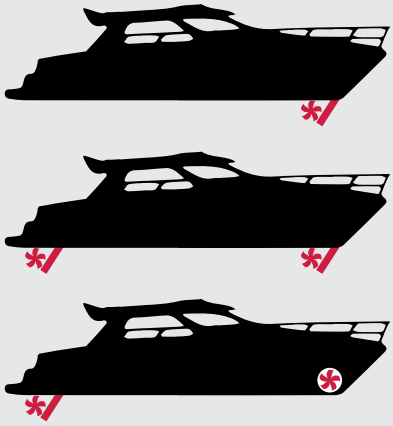
Swing Thruster Specifications

PART NUMBER	TUNNEL SIZE	MOTOR	VOLTAGE	A		B		C		D	
		kW	V	mm	in	mm	in	mm	in	mm	in
59914001	140	2.2	12	269	10 9/16	393	15 ½	220	8 11/16	610	24
59918501	185	3.0	12	308	12 ⅛	441	17 ⅓	255	10 1/16	729	28 11/16
59918502	185	3.0	24	308	12 ⅛	441	17 ⅓	255	10 1/16	729	28 11/16
59918503	185	4.0	12	309	12 ⅛	449	17 ⅔	255	10 1/16	738	29 1/16
59918504	185	4.0	24	309	12 ⅛	449	17 ⅔	255	10 1/16	738	29 1/16
59918505	185	5.0	12	315	12 ⅜	473	18 ⅝	255	10 1/16	767	30 3/16
59918506	185	5.0	24	315	12 ⅜	473	18 ⅝	255	10 1/16	767	30 3/16
59918507	185	6.0	12	315	12 ⅜	473	18 ⅝	255	10 1/16	767	30 3/16
59918508	185	6.0	24	315	12 ⅜	473	18 ⅝	255	10 1/16	767	30 3/16
59918509	185	7.0	Hyd	315	12 ⅜	355	14	255	10 1/16	649	25 9/16
59925001	250	8.0	24	403	15 14/16	623	24 ½	375	14 ¾	996	39 3/16
59925002	250	9.6	48	403	15 14/16	600	23 10/16	375	14 ¾	996	39 3/16
59925003	250	15.0	Hyd	403	15 14/16	450	17 11/16	375	14 ¾	768	30 ¼

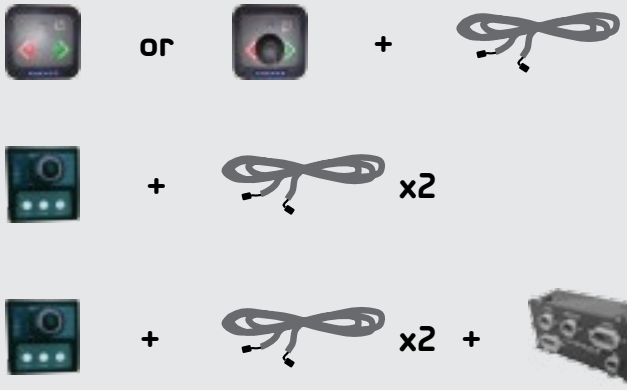


Accessories and Spares Selector

Common Installations



Required accessories



Control options and accessories

PART NUMBER	DESCRIPTION
58990001	Touch Panel
58990002	Joystick Panel
58990004	Joystick for Bow & Stern
58992001	Remote Control - Thruster & Windlass

58990001

58990004

58992001

58990002

PART NUMBER	DESCRIPTION
58991001	5m Connecting Cable
58991002	5m Joystick Extension Cable
58991003	10m Connecting Cable
58991004	10m Joystick Extension Cable
58991005	15m Connecting Cable
58991006	15m Joystick Extension Cable
58991007	20m Connecting Cable
58991008	20m Joystick Extension Cable
58991009	25m Connecting Cable
58991010	25m Joystick Extension Cable
58992004	Interface for Tunnel Thruster
58992003	Water Detector

58992004

Accessories and Spares Selector

		140TT	185TT									250TT		
		59914001 - 2.2 kW 12V	59918501 - 3.0 kW 12V	59918502 - 3.0 kW 24V	59918503 - 4.0 kW 12V	59918504 - 4.0 kW 24V	59918505 - 5.0 kW 12V	59918506 - 5.0 kW 24V	59918507 - 6.0 kW 12V	59918508 - 7.0 kW Hyd	59918509 - 6.0 kW 24V	59925001 - 8.0 kW 24V	59925002 - 9.6 kW 48V	59925003 - 15.0 kW 2Hyd
FUSE	**589007 130A**			•										
	589008 250A		•			•		•					•	
	589009 325A										•			
	589010 400A				•		•					•		
	589011 500A								•					
	589012 200A	•												
FUSE HOLDER	**589006 T1**	•	•	•		•		•			•			
	589013 T2	•	•	•	•	•	•	•	•		•	•	•	
SPARE ANODES	**589350 185TT anode**		•	•	•	•	•	•	•		•			
	589550 250TT anode											•	•	
SPARE PROPELLERS	**589151 140TT Propeller**	•												
	589351 185TT Propeller		•	•	•	•	•	•	•	•	•			
	589551 250TT LH Propeller											•	•	•
	589552 250TT RH Propeller											•	•	•
SPARE DRIVE PINS	**559018 140TT Drive pin**	•												
	559017 185TT Drive pin		•	•	•	•	•	•	•		•			
ACTUATOR SHEAR PINS	**55910071 140 Shear Pin**	•												
	55910072 185 Shear Pin		•	•	•	•	•	•	•	•	•			
	55910073 250 Shear Pin											•	•	•

TT Hydraulic Thrusters

When longer duration is required or weight and space are critical, the hydraulic version of the TT Thrusters are the ideal solution.

- Enable significant flexibility of vessel movement
- Increased thrust in comparison to equivalent Electric TT Thruster
- Hydraulic thrusters typically powered by Main engine or generator PTO driven pump
- Lewmar offers a custom tailored hydraulic solution
- 250TTH and 300TTH available with bronze or aluminium hub
- Proportional control available

TT Hydraulic Thruster Specifications

PART NO	MODEL	TUNNEL	PROPELLER	WEIGHT		POWER		THRUST	GEARBOX	MOTOR SIZE	FLOW	PRESSURE
				kg	lb	HP	kW	kgf		cc/rev	l/min	Bar [delta]
591820	185TTH	185	single	8	17.6	10	7		bronze	6	25	210
591821	185TTH	185	single	8	17.6	10	7		bronze	5	21	250
592522	250TTH	250	Twin CR	13	28.6	20	15	200	bronze	14	44	230
592521	250TTH	250	Twin CR	13	28.6	20	15	200	bronze	17	53	190
592511	250TTH	250	Twin CR	13	28.6	20	15	200	Aluminium	17	53	190
592520	250TTH	250	Twin CR	13	28.6	20	15	200	bronze	26	82	122
592510	250TTH	250	Twin CR	13	28.6	20	15	200	Aluminium	26	82	122
593023	300TTH	300	Twin CR	17	37.4	30	22.5	300	bronze	19	52	290
593022	300TTH	300	Twin CR	17	37.4	30	22.5	300	bronze	22	62	245
593021	300TTH	300	Twin CR	17	37.4	30	22.5	300	bronze	26	72	210
593011	300TTH	300	Twin CR	17	37.4	30	22.5	300	aluminium	26	72	210
593020	300TTH	300	Twin CR	17	37.4	30	22.5	300	bronze	30	82	182
593010	300TTH	300	Twin CR	17	37.4	30	22.5	300	aluminium	30	82	182

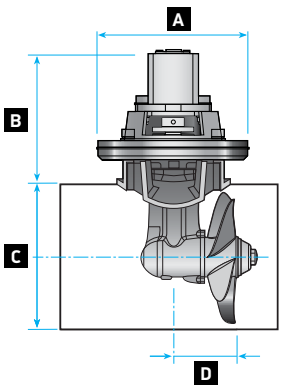
CR = Counter Rotating

Spares

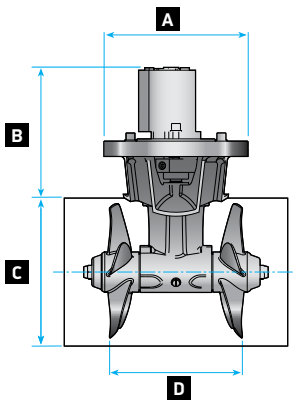
SPARE ANODES	SPARE PROPELLERS
589350 185TT anode	**589351** 185TT Propeller
589550 250/300TT anode	**589551** 250TT LH Propeller
	589552 250TT RH Propeller
	589751 300TT LH Propeller
	589750 300TT RH Propeller

Dimensions

MODEL	A		B		C		D	
	mm	in	mm	in	mm	in	mm	in
185TTH	200	7 7/8	202	7 15/16	185	7 9/32	83	3 9/32
250TTH	258	10 5/32	227	8 15/16	250	9 27/32	257	10 1/8
300TTH	258	10 5/32	256	10 1/16	300	11 13/16	320	12 19/32



185TTH



250/300TTH

Custom Thrusters

Manoeuvring larger vessels in the confines of a busy harbour or marina can challenge even a skilled crew. Cross winds and tides can be difficult to overcome with conventional propulsion and steering gear, particularly when mooring 'stern to'.

Lewmar Custom Thrusters can help provide additional control just when you need it, at the touch of a button or the move of a joystick. The Lewmar range of thrusters is suitable for sail or power vessels up to 164ft.

Vertical Retracting Tunnel Thruster

- Suitable for vessels up to 164ft (50m)
- When not in use, the Thruster retracts into the hull leaving a clean line, so there is no drag
- The 300 VRTT Hydraulic is capable of developing more than 30HP
- Bronze or Aluminium hub option
- Custom extended stroke available
- Better thruster immersion
- Can be mounted further forward
- Better performance per HP than standard tunnel Thruster
- Manual override
- 250/300 VRTT 24V DC electric raise/lower

Vertical Retracting Thruster Electric Specifications

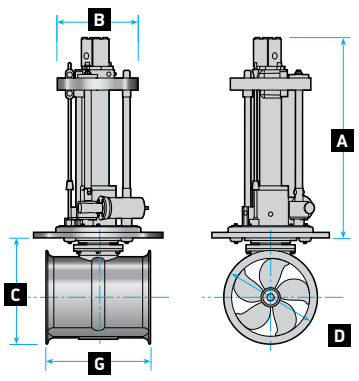
PART NO	MODEL	TUNNEL	PROPELLER	WEIGHT		POWER		THRUST	GEARBOX	VOLTAGE
				kg	lb	HP	kW	kgf		
59127100	250VRTTE	250	Twin CR	98	216	10.7	8	160	BRONZE	24VDC
59127110	250VRTTE	250	Twin CR	102	224.9	13	9.6	170	BRONZE	48VDC

Vertical Retracting Thruster Hydraulic Specifications

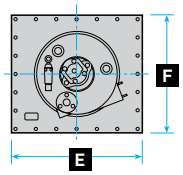
P/N	MODEL	TUNNEL	PROP	WEIGHT		POWER		THRUST	GEARBOX	MOTOR SIZE	FLOW	PRESSURE
				kg	lb	HP	kW	kgf		cc/rev	l/min	Bar [delta]
59127002	250VRTTH	250	Twin CR	65	143.3	20	15	200	BRONZE	26	82	122
59127004	250VRTTH	250	Twin CR	65	143.3	20	15	200	BRONZE	17	53	190
59137001	300VRTTH	300	Twin CR	75	165.3	30	22.5	300	ALUMINIUM	30	82	182
59137002	300VRTTH	300	Twin CR	75	165.3	30	22.5	300	BRONZE	30	82	182
59137003	300VRTTH	300	Twin CR	75	165.3	30	22.5	300	ALUMINIUM	26	72	210
59137004	300VRTTH	300	Twin CR	75	165.3	30	22.5	300	BRONZE	26	72	210

400SVTH/ 500SVTH and 600SVTH available. Contact custom@lewmar.com for more information

Dimensions



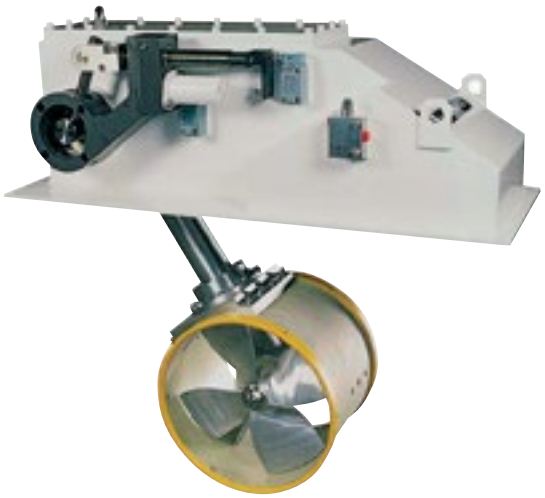
Shroud offset from CL



MODEL	A		B		C		D		E		F		G		STANDARD STROKE	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
250VRTTH	721	28 3/8	310	12 7/32	353	13 7/8	300	11 13/16	450	17 23/32	400	15 3/4	350	13 3/4	300	11 13/16
250VRTTE	911	35 7/8	310	12 7/32	353	13 7/8	300	11 13/16	450	17 23/32	400	15 3/4	350	13 3/4	300	11 13/16
300VRTTH	765	30 1/8	310	12 7/32	407	16	360	14 3/16	500	19 11/16	450	17 23/32	400	15 3/4	350	13 3/4
400SVTH	548	21 9/16	400	15 3/4	533	21	430	16 15/16	580	22 27/32	520	20 15/32	340	13 3/8	500	19 11/16
500SVTH	575	22 5/8	400	15 3/4	645	25 3/8	533	21	700	27 9/16	640	25 3/16	480	18 7/8	650	25 19/32
600SVTH	795	31 5/16	480	18 29/32	801	31 9/16	650	25 19/32	850	33 15/32	850	33 15/32	550	21 5/8	700	27 9/16

Swing Retracting Hydraulic Thruster

- Ideal for higher performance sailing yachts and fast-planing or semi-displacement hulls
- Raised position offers a completely fair hull section causing minimum drag
- No hydraulic motors or hoses are immersed in the water
- Can be mounted further forward in the vessel without additional space intrusion into the forepeak
- Enhanced thrust performance from a lesser power input
- Better performance per HP than standard tunnel Thruster
- Bronze or Aluminium hub
- Manual override
- Extended 500 Swing Retracting Hydraulic Thruster
- Features all the benefits of the Swing Retracting Hydraulic Thruster
- Extended leg section provides deeper thruster immersion
- Can be mounted further forward than standard model, offering greater manoeuvrability

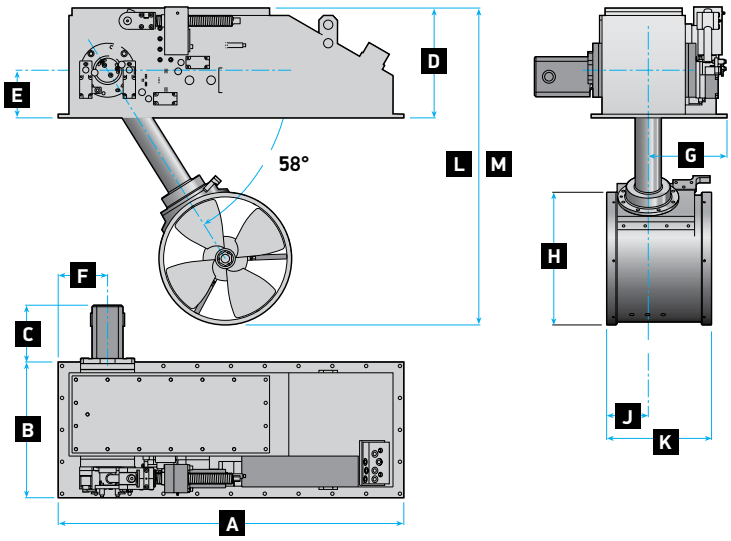


Swing Retracting Hydraulic Thruster Selection Guide

PART NUMBER	MODEL	MATERIAL	POWER	TYPICAL VESSEL SIZE		THRUST
		Aluminium	HP	m	ft	
51000370	**400 S Swing Retracting Hydraulic Thruster Series**	400 SAH	30–60	20–37	65–120	8-10 kg/kW (18-22 lbs/hp)
51000470	**500 S Swing Retracting Hydraulic Thruster Series**	500 SAH	65–75	25–43	80–140	Actual thrust developed is dependent upon depth of immersion and hull shape.

Contact custom@lewmar.com for more information

Dimensions



Swing Retracting Hydraulic Thruster Specifications

MODEL	A		B		C		D		E		F		G		H		J		K		L		M	
	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins
400 Swing 40HP	1120	44 1/8	440	17 5/16	184	7 1/4	390	15 3/8	154.5	6 3/32	160	6 5/16	255	10 1/32	430	16 15/16	135	5 5/16	340	13 3/8	603	23 3/4	1027	40 7/16
400 Swing 50HP	1120	44 1/8	440	17 5/16	190	7 15/32	390	15 3/8	154.5	6 3/32	160	6 5/16	255	10 1/32	430	16 15/16	135	5 5/16	340	13 3/8	603	23 3/4	1027	40 7/16
400 Swing 60HP	1120	44 1/8	440	17 5/16	196.5	7 3/4	390	15 3/8	154.5	6 3/32	160	6 5/16	255	10 1/32	430	16 15/16	135	5 5/16	340	13 3/8	603	23 3/4	1027	40 7/16
500 Swing	1255	49 1/2	590	23 1/4	116	4 9/16	438	17 1/4	154.5	6 3/32	160	6 5/16	250	9 27/32	545	21 15/32	285	11 7/32	480	18 29/32	680	26 3/4	1200	47 1/4

4. Hatches & Portlights

Control of light and ventilation is key to cabin temperature and to your comfort below deck.

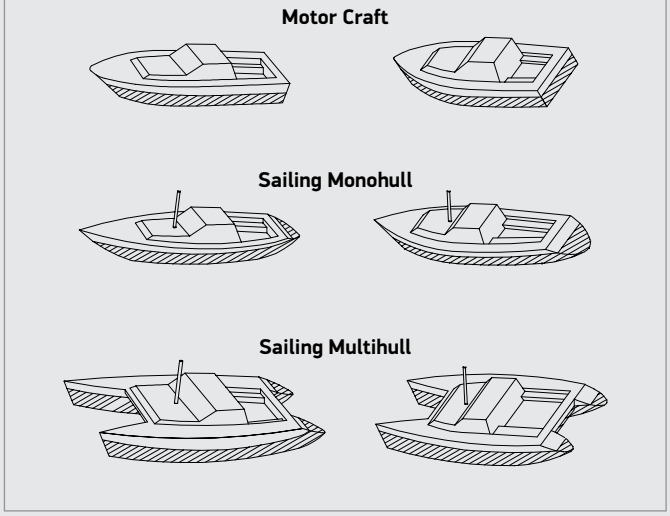
Lewmar's comprehensive range of hatches and portlights offers a solution, whether on a small day boat or superyacht. Combining years of manufacturing experience with the latest in design trends, the Hatch and Portlight Range bears all the features you have come to expect of a high-quality Lewmar product.

CE Regulations

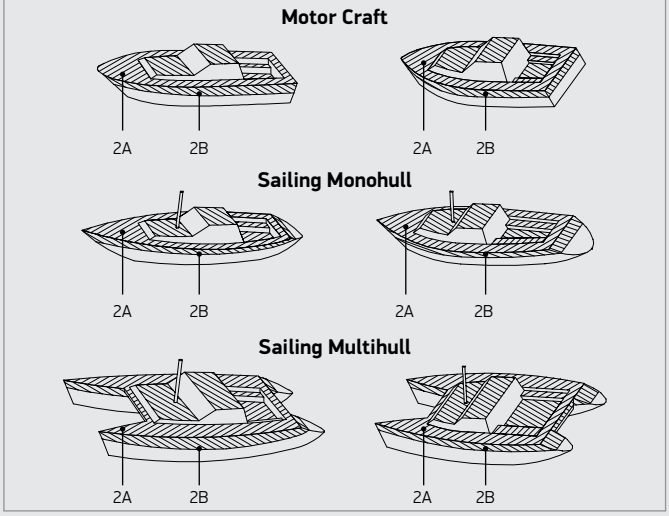
The CE Regulations apply to craft up to 24m in length that are sold in the European Union. Although the Regulations may not apply to your boat, they are a useful guide for small craft throughout the world.

- The Regulations have Design Categories for boats based on their intended usage and propulsion (sail or power). Boats built to CE Regulations are fitted with a plate showing the Design Category.
- All Lewmar hatches and portlights are for Design Category A (Ocean Sailing) or Design Category B (Offshore Sailing).
- The Regulations divide up the hull and deck into four specific 'areas'. These are shown below.
- For craft with a freeboard greater than 1/12 of its overall length, the hull is split into Area 1 and Area 2B. Please refer to the Recreational Craft Directive 94/25/EC.
- A product that is suitable for fitting to an area for which it is approved is suitable for all the areas below its category. For example, a portlight that is approved for Area 2A may also be fitted to Areas 3 and 4, but not Areas 1 or 2B.
- All the hatches and portlights in this publication are CE Approved for the areas indicated on the product pages.
- Lewmar warranties are invalid if the product is installed in an area where it is not intended, and if the installation fails to meet the requirements of the CE Regulations.

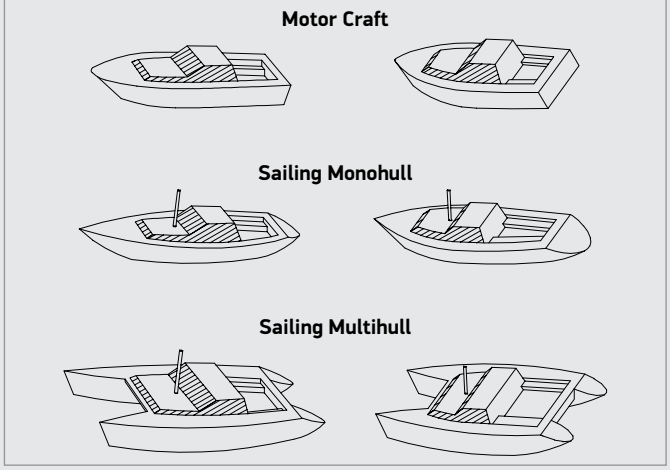
Area 1



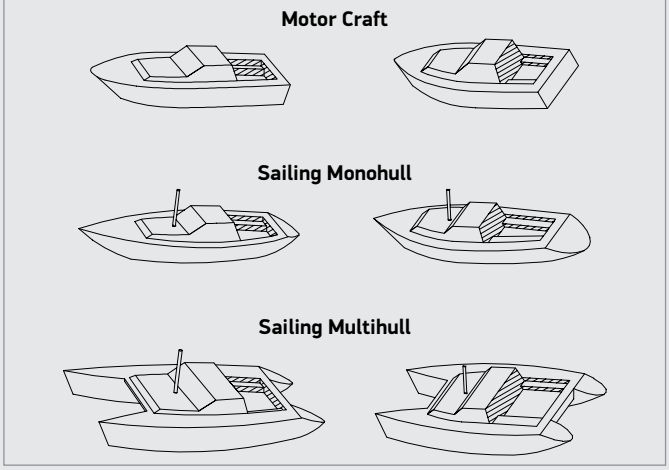
Area 2



Area 3



Area 4



Hatches

DESCRIPTION	SIZES	CATEGORY	AREA
LOW PROFILE	ALL	A	2a, 3 & 4
MEDIUM PROFILE	ALL	A	2a, 3 & 4
OCEAN HATCH	ALL	A	2a, 3 & 4
FLUSH HATCH	ALL	A	2a, 3 & 4
PILOT HATCH	ALL	A	3 & 4

Portlights

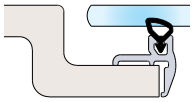
DESCRIPTION	SIZES	CATEGORY	AREA
STANDARD	ALL	A	2a, 3 & 4
ATLANTIC	10, 30, 32	A	1, 2, 3 & 4
ATLANTIC	40, 60	A	2a, 3 & 4
STAINLESS	0,1,1RE,7RE,8	A	2a, 3 & 4

DESCRIPTION	SIZES	CATEGORY	AREA
STAINLESS	0,1,1RE,7RE,8	B	1, 2, 3 & 4
STAINLESS	ROUND	A	1, 2, 3 & 4
FLUSH MITRE	0, 1, 3 & 4	A	2a, 2b, 3 & 4

The Lewmar Hatch Range

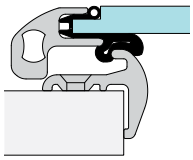

Page 64 Flush Hatch

- Sleek, modern look
- Fits seamlessly into a specially designed recess in the deck
- Seal mounted on the acrylic
- Acrylic has band of paint to conceal deck & frame when installed
- Custom configuration available including stainless steel hinge, handle and stay.




Page 66 Flush Hatch 3G

- All the benefits of the flush hatch
- Lower frame mounted seal
- All external fittings flush to the acrylic




Page 68 Low Profile Hatch

- Soft styling and sleek looks
- Doesnt require deck recess to install
- Available in Round and D-Hatch configuration


Page 70 Medium Profile Hatch

- Ideal as a foredeck hatch on larger offshore yachts
- Provides greater strength and durability
- Thicker acrylic and deeper frame sections
- Medium Profile styled to match Low Profile for mixed deck specifications


Page 71 Ocean Hatch

- Ultimate protection against the elements
- Classical styling and rugged construction
- Fitted to thousands of boats throughout the world
- 2 profiles available with or without flange


Page 72 Pilot Hatch

- Sliding hatch designed for use in the wheelhouse or cockpit canopy
- Opens up enclosed steering positions
- Styling complements the Low Profile and Medium Profile Hatch Ranges
- Operated with a single handlebar that rotates to seal down the hatch

Page 74 Flybridge Hatch

- For use between the flybridge and aft deck
- Available in Low, Medium and Flush profile extrusion to match other hatch on the boat
- Made to measure solution

Page 74 Washboard Hatch

- Lockable from inside and out
- Simple one-handed operation
- Sprung panels
- Choice of acrylic colour
- Optional air vents

Flush Hatch

Lewmar pioneered the high-volume flush hatch platform back in 2006, bringing what was then Superyacht stying into mainstream boat production. The precision of the fit makes for a sleek, modern look and means no more stubbed toes for boat owners.

- Clean aesthetics
- EPDM seal provide completely watertight structure
- Water drained effortlessly away by deck-moulded channels
- Strong, stylish handles and hinges
- Trimkit fit all standard sizes
- Dark grey acrylic option keeps cabin cooler
- Custom sizes available
- Available with stainless steel hatch furniture
- Full range of spare parts available on-line www.lewmar.com

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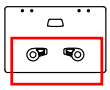
ALL SIZES AREA 2A.
SEE PAGE 62

Flush Hatch Standard Sizes


Size 10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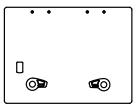
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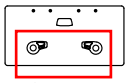
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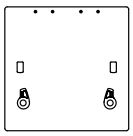
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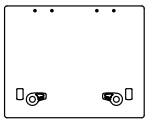
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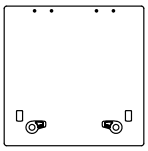
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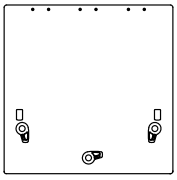
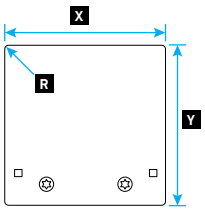

Size 70

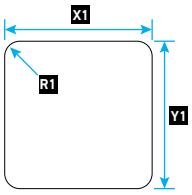
* Minimum size for ISO 9094 escape hatches.

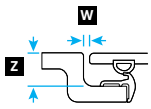
Flush Hatch Standard Specifications

- White lower frame
- Black exterior moulding
- Grey Interior moulding
- Acrylic colours: Grey or Dark Grey
- Size 20 and 41 supplied with friction lever
- Other sizes use 1 or 2 stays

Flush Hatch Dimensions







- Hatches should be fitted to a flat surface with a maximum tolerance of +/-1mm
- Cutout dimensions changes if a trim is used: Add 4mm to X1 & Y1 and 2mm to R1. Refer to p.73 for more info on trim
- Fastening size for lower frame section use 5mm CSK screws No. 10 UNC 2BA
- Fastening size at the hinge section use M6 (1/4")

PART NO GREY ACRYLIC	PART NO DARK GREY ACRYLIC	Size	OVERALL DIMENSIONS W LOWER FRAME FLANGE mm	in	W HINGE GAP mm	in	X WIDTH mm	in	Y LENGTH mm	in	Z DEPTH mm	in	R RADII mm	in	CUT-OUT DIMENSIONS X1 WIDTH mm	in	Y1 LENGTH mm	in	R1 RADII mm	in	ACRYLIC WINDOW THICKNESS mm	in	WEIGHT kg	lb
39910012	**39910812**	10	15	9/16	11	11/64	330	13	330	13	31	1 1/4	10	3/8	260	10 1/4	260	10 1/4	42.5	1 11/16	12	1/2	2.3	5
39920012	**39920812**	20	15	9/16	11	11/64	417	16 7/16	272	10 11/16	31	1 1/4	10	3/8	347	13 11/16	202	7 15/16	42.5	1 11/16	12	1/2	2.4	5.3
39930012	**39930812**	30	15	9/16	11	11/64	527	20 3/4	397	15 5/8	31	1 1/4	10	3/8	457	18	327	12 7/8	42.5	1 11/16	12	1/2	4.7	10.3
39941012	**39941812**	41	15	9/16	11	11/64	491	19 5/16	246	9 1/16	31	1 1/4	10	3/8	421	16 9/16	176	6 15/16	42.5	1 11/16	12	1/2	2.6	5.8
39944012	**39944812**	44	15	9/16	11	11/64	512	20 3/16	512	20 3/16	31	1 1/4	10	3/8	442	17 3/8	442	17 3/8	42.5	1 11/16	12	1/2	5.4	12
39954012	**39954812**	54	15	9/16	11	11/64	577	22 11/16	462	18 3/16	31	1 1/4	10	3/8	507	19 15/16	392	15 7/16	42.5	1 11/16	12	1/2	5.5	12.1
39960012	**39960812**	60	15	9/16	11	11/64	577	22 11/16	577	22 11/16	31	1 1/4	10	3/8	507	19 15/16	507	19 15/16	42.5	1 11/16	15	9/16	7.1	16
39970012	**39970812**	70	15	9/16	11	11/64	697	27 1/2	697	27 1/2	31	1 1/4	10	3/8	627	24 11/16	627	24 11/16	42.5	1 11/16	15	9/16	11	24

Flush Hatch With Stainless Steel Handles and Hinges

At Lewmar, we are constantly seeking to improve our product range to suit evolving design trends. The new range of stainless steel hatch fittings are designed for the Flush Hatch Range, offering a stylish interior and exterior aesthetic.

- Hatch can be opened from the outside using a standard winch handle
- Locking mechanism contained in interior handle
- Effortless operation
- Closer fit to the deck along the hinge edge
- All the features of the Flush Hatch Range

Stainless Steel specification

- White aluminium lower frame
- Stainless Steel handles, hinges and stay
- Grey or Dark Grey Acrylic

PART NO GREY ACRYLIC	PART NO DARK GREY ACRYLIC	Size	LOWER FRAME FLANGE		OVERALL DIMENSIONS X WIDTH		OVERALL DIMENSIONS Y LENGTH		OVERALL DIMENSIONS Z DEPTH		OVERALL DIMENSIONS R RADII		CUT-OUT DIMENSIONS X1 WIDTH		CUT-OUT DIMENSIONS Y1 LENGTH		CUT-OUT DIMENSIONS R1 RADII		ACRYLIC WINDOW THICKNESS	
			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
399441999	**399441910**	44	15	9/16	512	20 3/16	512	20 3/16	31	1 1/4	10	3/8	442	17 3/8	442	17 3/8	42.5	1 11/16	12	1/2
399601999	**399601910**	60	15	9/16	577	22 11/16	577	22 11/16	31	1 1/4	10	3/8	507	19 15/16	507	19 15/16	42.5	1 11/16	15	9/16
399701999	**399701910**	70	15	9/16	697	27 1/2	697	27 1/2	31	1 1/4	10	3/8	627	24 11/16	627	24 11/16	42.5	1 11/16	15	9/16

Please note winch handle opening does not meet the requirements of Designated Fire Exits in the draft for the new version of ISO9094

Custom Sized Flush Hatches

Lewmar manufacture custom size hatches in high volume for many boat builders.
The table below list the most common sizes. Please note that trimkits are not available on custom size hatches.

Standard Specifications

- Silver lower frame
- Grey exterior moulding
- Grey Interior moulding
- Grey Acrylic

White Specifications

- White lower frame
- Black exterior moulding
- Grey Interior moulding
- Grey Acrylic

PART NUMBER	SPECIFICATION	W LOWER FRAME FLANGE		W HINGE GAP		OVERALL DIMENSIONS X WIDTH		OVERALL DIMENSIONS Y LENGTH		OVERALL DIMENSIONS Z DEPTH		OVERALL DIMENSIONS R RADII		CUT-OUT DIMENSIONS X1 WIDTH		CUT-OUT DIMENSIONS Y1 LENGTH		CUT-OUT DIMENSIONS R1 RADII		ACRYLIC WINDOW THICKNESS	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
30190400	Standard	15	9/16	11	11/64	575	22 5/8	284	11 3/16	31	1 1/4	10	3/8	505	19 7/8	214	8 7/16	42.5	1 11/16	12	1/2
30190500	Standard	15	9/16	11	11/64	575	22 5/8	551	21 11/16	31	1 1/4	10	3/8	505	19 7/8	481	18 15/16	42.5	1 11/16	12	1/2
30190600	Standard	15	9/16	11	11/64	575	22 5/8	773	30 7/16	31	1 1/4	10	3/8	505	19 7/8	703	27 11/16	42.5	1 11/16	12	1/2
30195400	Standard	15	9/16	11	11/64	330	13	329	12 15/16	31	1 1/4	10	3/8	260	10 1/4	259	10 3/16	42.5	1 11/16	12	1/2
30193500	White	15	9/16	11	11/64	210	8 1/4	400	15 3/4	31	1 1/4	10	3/8	140	5 1/2	330	13	42.5	1 11/16	12	1/2

Flush Hatch 3G

2013 sees the launch of a new version of this successful product offering an even smaller profile and cleaner aesthetic and with improved manufacturing techniques, the Flush Hatch 3G continues to push the envelope of hatch design and is sure to be seen on a wide range of boats soon. Tough, tinted acrylic panel is all that can be seen on deck.

- Lower frame mounted seal
- Strengthened, extruded aluminium frame hidden discreetly below deck
- Completely flush fittings
- Exterior handle available for foredeck use
- Interchangeable with 2G Flush product
- Built in locking mechanism

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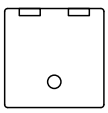
ALL SIZES AREA 2A. SEE PAGE 62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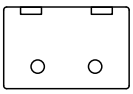
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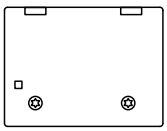
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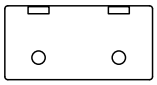
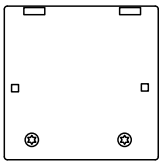

Size 41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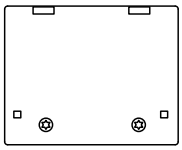
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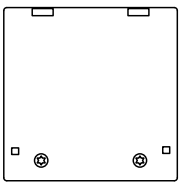
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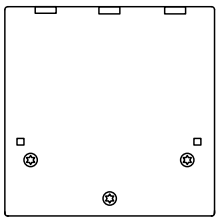
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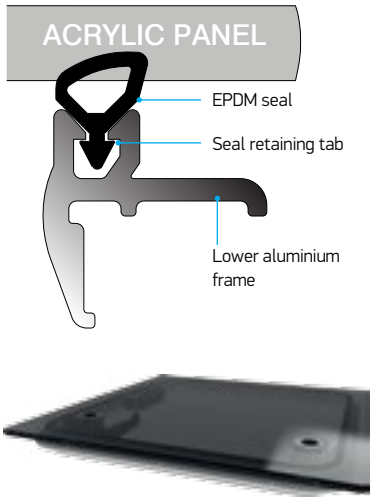
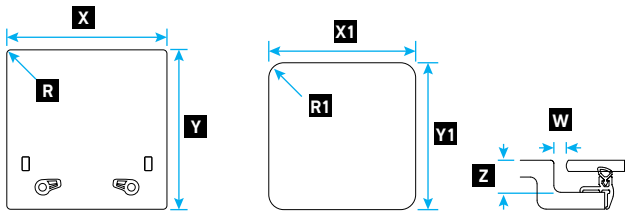


* Minimum size for ISO 9094 escape hatches.
Hatch must have external handle option for use in ISO 9094

Flush Hatch 3G Dimensions



Flush Hatch 3G Standard Specifications

- White lower frame
- Black mouldings
- Acrylic colours grey or dark grey
- Size 10, 20 and 41 supplied with friction hinges and plain flush exterior handle caps.
- Size 30, 44, 54, 60 and 70 supplied with 1 or 2 stays and winch handle opening handles

PART NO GREY ACRYLIC	PART NO DARK GREY ACRYLIC	SIZE	W LOWER FRAME FLANGE		W HINGE GAP		OVERALL DIMENSIONS X WIDTH		Y LENGTH		Z DEPTH		R RADII		CUT-OUT DIMENSIONS X1 WIDTH		Y1 LENGTH		R1 RADII		ACRYLIC WINDOW THICKNESS		WEIGHT	
			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb
399104996	**399104924**	10	15	9/16	11	11/64	330	13	330	13	31	1 1/4	10	3/8	260	10 1/4	260	10 1/4	42.5	1 11/16	10	3/8	2.1	4.6
399204996	**399204924**	20	15	9/16	11	11/64	417	16 7/16	272	10 11/16	31	1 1/4	10	3/8	347	13 11/16	202	7 15/16	42.5	1 11/16	10	3/8	2.2	4.8
399304995	**399304923**	30	15	9/16	11	11/64	527	20 3/4	397	15 5/8	31	1 1/4	10	3/8	457	18	327	12 7/8	42.5	1 11/16	10	3/8	3.9	8.6
399414996	**399414924**	41	15	9/16	11	11/64	491	19 5/16	246	9 1/16	31	1 1/4	10	3/8	421	16 9/16	176	6 15/16	42.5	1 11/16	10	3/8	2.3	5.0
399444995	**399444923**	44	15	9/16	11	11/64	512	20 3/16	512	20 3/16	31	1 1/4	10	3/8	442	17 3/8	442	17 3/8	42.5	1 11/16	10	3/8	4.5	9.9
399544995	**399544923**	54	15	9/16	11	11/64	577	22 11/16	462	18 3/16	31	1 1/4	10	3/8	507	19 15/16	392	15 7/16	42.5	1 11/16	10	3/8	4.6	10.1
399604995	**399604923**	60	15	9/16	11	11/64	577	22 11/16	577	22 11/16	31	1 1/4	10	3/8	507	19 15/16	507	19 15/16	42.5	1 11/16	12	1/2	6.2	13.7
399704995	**399704923**	70	15	9/16	11	11/64	697	27 1/2	697	27 1/2	31	1 1/4	10	3/8	627	24 11/16	627	24 11/16	42.5	1 11/16	12	1/2	9.0	19.8

Please note winch handle opening does not meet the requirements of Designated Fire Exits in the draft for the new version of ISO9094

Custom Flush Hatch

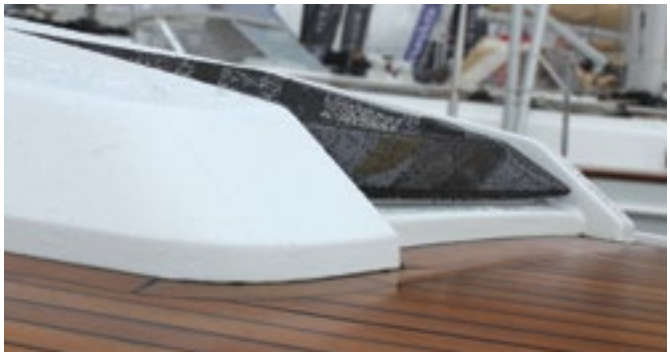
Flush hatches are available with a range of custom features

Custom Radius Corners

As a further styling aid, Lewmar can manufacture flush hatches with custom radii on the corners.

Bent Flush

Lewmar has the capability to bend the framework and acrylic panel to match coachroof curvatures.



Chamfered Acrylic Edges

The edges of flush hatch acrylics can be chamfered. This aids achieve a flush look when the deck recess cannot be made to exact specification.

White Acrylic Option

Opaque white acrylic can be specified. This is particularly useful on heads' ventilation hatches, deck lockers or where privacy is a prime concern.

Alloy Lid

Lewmar can supply flush hatches with a plain aluminium panel in place of the acrylic. Teak, or other deck finishes, can then be applied over the top and appropriate handles fitted.

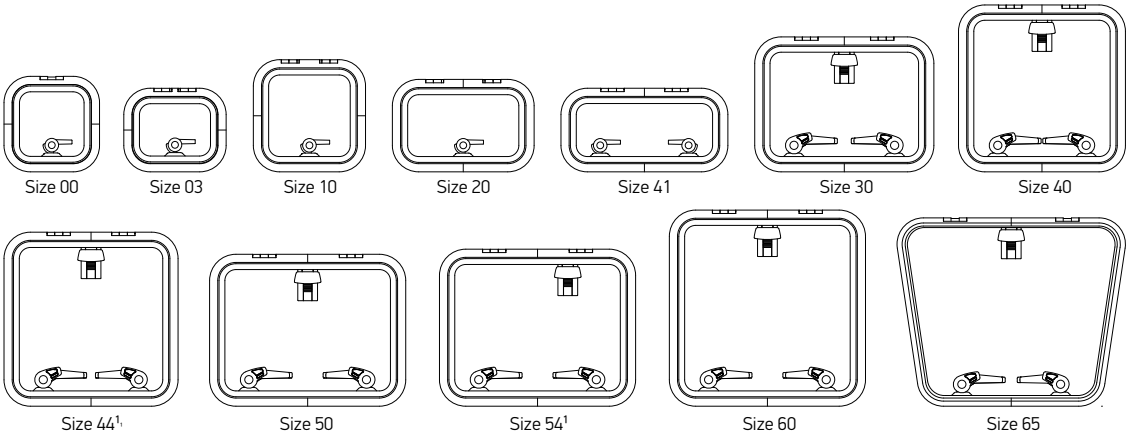
180° Opening

180º opening hatches are particularly useful on the foredeck. These are fitted with quick release clips on the stays, alongside special hinges.

Low Profile Hatch

The Low Profile Hatch has soft styling and sleek looks, ideal for use on a powerboat. Smaller ventilation hatches are suitable for any deck location on sailboats, while the larger sizes can be used as foredeck hatches on smaller to mid size yachts.

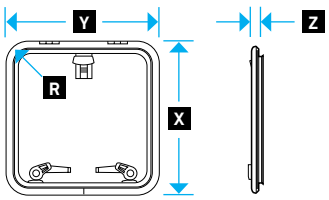
- Outside handles allow the hatch to be opened from on deck if it is not locked
- Low profile hatches open up to 180° (round hatches open to 170°)
- Friction levers hold the lid open in any position up to 95°
- Anodised aluminium frame for corrosion resistance
- Curved upper frame profile for strength as well as modern styling
- Available in Round and D-Hatch configuration
- Full range of spare parts available on-line www.lewmar.com



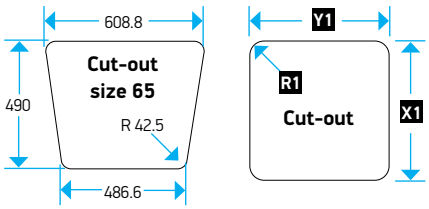
CE Approved
ALL SIZES AREA 2A.
SEE PAGE 62

[1] Minimum size for ISO 9094 escape hatches

Low Profile Hatch Dimensions



Low Profile Hatch Cut-outs



PART NUMBER FRICTION LEVER LID	PART NUMBER HATCH WITH STAY	SIZE	LOWER FRAME FLANGE		OVERALL DIMENSIONS X LENGTH		OVERALL DIMENSIONS Y WIDTH		OVERALL DIMENSIONS Z HEIGHT		OVERALL DIMENSIONS R RADII		CUT-OUT DIMENSIONS CHANGE IF TRIMKITS ARE USED X1 LENGTH		CUT-OUT DIMENSIONS CHANGE IF TRIMKITS ARE USED Y1 WIDTH		CUT-OUT DIMENSIONS CHANGE IF TRIMKITS ARE USED R1 RADII		HATCH WEIGHT		ACRYLIC WINDOW THICKNESS	
			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
39900030		00	15	9/16	281	11 1/16	281	1 11/16	25	1	72.5	2 7/8	211	8 5/16	211	8 5/16	42.5	1 11/16	1.6	3.5	8	5/16
39903030		03	15	9/16	246	9 11/16	301	11 7/8	25	1	72.5	2 7/8	176	6 15/16	231	9 1/8	42.5	1 11/16	1.6	3.5	8	5/16
39910030	**399100303**	10	15	9/16	330	13	330	13	25	1	72.5	2 7/8	260	10 1/4	260	10 1/4	42.5	1 11/16	2.2	4.9	8	5/16
39920030		20	15	9/16	272	10 11/16	417	16 7/16	25	1	72.5	2 7/8	202	7 15/16	347	13 11/16	42.5	1 11/16	2.3	5.1	8	5/16
39930030	**399300303**	30	15	9/16	397	15 5/8	527	20 3/4	25	1	72.5	2 7/8	327	12 7/8	457	18	42.5	1 11/16	4.2	9.3	8	5/16
39940030	**399400303**	40	15	9/16	491	19 5/16	491	19 5/16	25	1	72.5	2 7/8	421	16 9/16	421	16 9/16	42.5	1 11/16	4.6	10.1	8	5/16
39941030		41	15	9/16	246	9 11/16	491	19 5/16	25	1	72.5	2 7/8	176	6 15/16	421	16 9/16	42.5	1 11/16	2.5	5.5	8	5/16
39944030	**399440303**	44	15	9/16	512	20 3/16	512	20 3/16	25	1	72.5	2 7/8	442	17 3/8	442	17 3/8	42.5	1 11/16	4.8	10.6	8	5/16
39950030	**399500303**	50	15	9/16	447	17 5/8	577	22 11/16	25	1	72.5	2 7/8	377	14 13/16	507	19 15/16	42.5	1 11/16	4.8	10.6	8	5/16
39954030	**399540303**	54	15	9/16	462	18 3/16	577	22 11/16	25	1	72.5	2 7/8	392	15 7/16	507	19 15/16	42.5	1 11/16	4.9	10.8	8	5/16
39960030	**399600303**	60	15	9/16	577	22 11/16	577	22 11/16	25	1	72.5	2 7/8	507	19 15/16	507	19 15/16	42.5	1 11/16	6.4	14.1	10	3/8
39965030		65	15	9/16	560	22 11/16	560 min 675 max	22 11/16 26 9/16	25	1	72.5	2 7/8	See drawing above				42.5	1 11/16	6.5	14.3	10	3/8

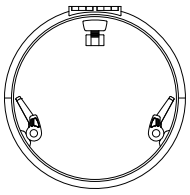
Telescopic Stay

Lewmar's Telescopic Stay features excellent lid positioning and rigid control. The stay allows hatch opening to around 90° – an advantage on smaller to mid size yachts where deck space is a premium.

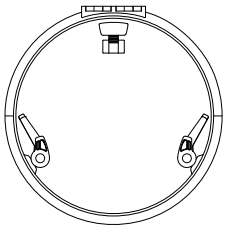
Maintenance

Acrylic or seal can be replaced by sliding the two halves of the frame apart.
Please refer to website for part number.

Low Profile Round Hatch



Size 18



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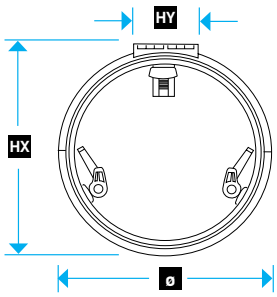
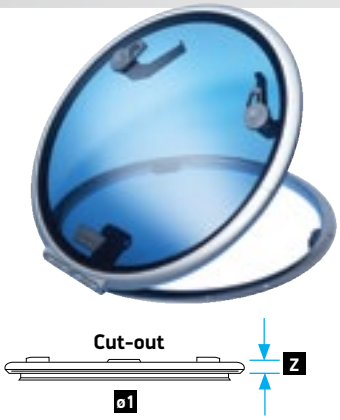
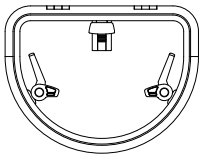


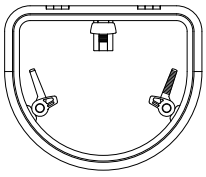


PART NUMBER	Size	LOWER FRAME FLANGE mm	LOWER FRAME FLANGE in	OVERALL DIMENSIONS ø DIAMETER mm	ø DIAMETER in	Z HEIGHT mm	Z HEIGHT in	HX HINGE LENGTH mm	HX HINGE LENGTH in	HY HINGE WIDTH mm	HY HINGE WIDTH in	CUT-OUT DIMENSIONS Change if Trimkits are used ø1 DIAMETER mm	ø1 DIAMETER in	HATCH WEIGHT kg	HATCH WEIGHT lb	ACRYLIC WINDOW THICKNESS mm	ACRYLIC WINDOW THICKNESS in
39918030	18	15	9/16	490	19 15/16	25	1	493	19 7/16	141	5 9/16	420	16 9/16	3.8	8.4	8	5/16
39922030	22	15	9/16	588	23 1/8	25	1	591	23 1/4	173	6 13/16	518	20 3/8	5.8	12.8	10	3/8

Low Profile D-Hatch



Size 51



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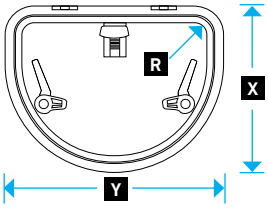
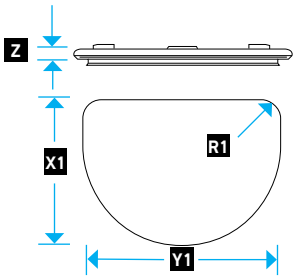




PART NUMBER SELF SUPPORTING LID	Size	LOWER FRAME FLANGE mm	LOWER FRAME FLANGE in	OVERALL DIMENSIONS X LENGTH mm	X LENGTH in	Y WIDTH mm	Y WIDTH in	Z HEIGHT mm	Z HEIGHT in	R RADII mm	R RADII in	CUT-OUT DIMENSIONS Change if Trimkits are used X1 LENGTH mm	X1 LENGTH in	Y1 WIDTH mm	Y1 WIDTH in	R1 RADII mm	R1 RADII in	HATCH WEIGHT kg	HATCH WEIGHT lb	ACRYLIC WINDOW THICKNESS mm	ACRYLIC WINDOW THICKNESS in
39951030	51	15	9/16	448	17 5/8	588	23 1/8	25	1	72.5	2 7/8	378	14 7/8	518	20 3/8	42.5	1 11/16	5.5	12.1	8	5/16
30067300	64	15	9/16	500	19 11/16	600	23 5/8	25	1	72.5	2 7/8	430	16 15/16	530	20 7/8	42.5	1 11/16	6.4	14.1	8	5/16

Low Profile Hatch Custom Options

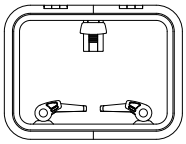
- White acrylic, frame and mouldings
- Stainless steel frame

Please contact your Lewmar representative for more information and part numbers

Medium Profile Hatch

Ideal as a foredeck hatch on larger offshore yachts, the Medium Profile has thicker acrylic and deeper frame sections for greater strength and durability. It features Lewmar's unique sealing system, allowing for easy acrylic replacement. All while retaining the smooth, modern lines of the Low Profile Hatch.

- Outside handles allow the hatch to be opened from on deck if it is not locked
- Friction levers hold the lid open in any position up to 95°
- Anodised aluminium frame for corrosion resistance
- Curved upper frame profile for strength as well as modern styling
- Full range of spare parts available on-line www.lewmar.com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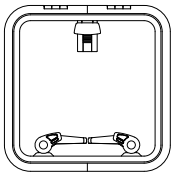
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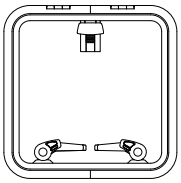
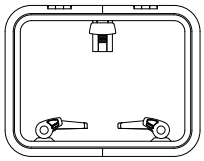

Size 44[1]


Size 50

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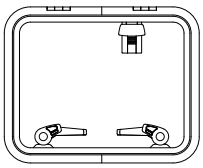
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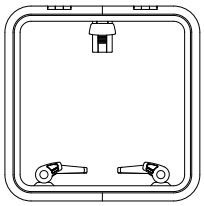
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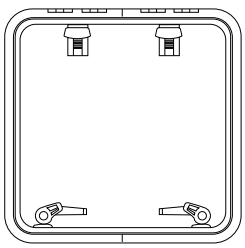
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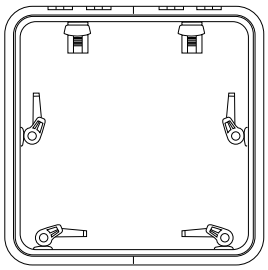
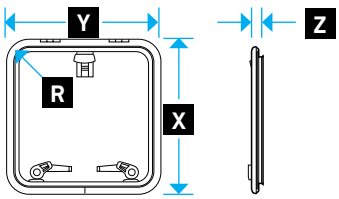
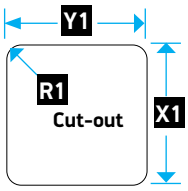

Size 77

[1] Minimum size for ISO 9094 escape hatches

Medium Profile Hatch Dimensions



Medium Profile Hatch Cut-out



Maintenance

Acrylic or seal can be replaced by sliding the two halves of the frame apart. Please refer to website for part number

PART NUMBER	Size	LOWER FRAME FLANGE		OVERALL DIMENSIONS X LENGTH		Y WIDTH		Z HEIGHT		R RADII		CUT-OUT DIMENSIONS CHANGE IF TRIMKITS ARE USED X1 LENGTH		Y1 WIDTH		R1 RADII		HATCH WEIGHT		ACRYLIC WINDOW THICKNESS	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
39930020	30	15	9/16	398	15 5/8	528	20 3/4	32	1 1/4	78	3 1/16	327	12 7/8	457	18	42.5	1 11/16	5	11.1	12	1/2
39940020	40	15	9/16	492	19 3/8	492	19 3/8	32	1 1/4	78	3 1/16	421	16 9/16	421	16 9/16	42.5	1 11/16	5.9	13	12	1/2
39944020	44	15	9/16	513	20 3/16	513	20 3/16	32	1 1/4	78	3 1/16	442	17 3/8	442	17 3/8	42.5	1 11/16	6.4	14.1	12	1/2
39950020	50	15	9/16	448	17 5/8	578	22 3/4	32	1 1/4	78	3 1/16	377	14 13/16	507	19 15/16	42.5	1 11/16	6.3	13.9	12	1/2
39954020	54	15	9/16	463	18 1/4	578	22 3/4	32	1 1/4	78	3 1/16	392	15 7/16	507	19 15/16	42.5	1 11/16	6.5	14.3	12	1/2
39960020	60	15	9/16	578	22 3/4	578	22 3/4	32	1 1/4	78	3 1/16	507	19 15/16	507	19 15/16	42.5	1 11/16	7.8	17.2	12	1/2
39970020	70	15	9/16	698	27 1/2	698	27 1/2	32	1 1/4	78	3 1/16	627	24 11/16	627	24 11/16	42.5	1 11/16	10.6	23.4	12	1/2
39977020	77	15	9/16	770	30 5/16	770	30 5/16	32	1 1/4	78	3 1/16	699	27 1/2	699	27 1/2	42.5	1 11/16	12.7	28	12	1/2

Ocean Hatch

With its classic style, the Ocean Hatch is fitted to thousands of boats around the world. Its rugged construction provides the ultimate protection against the elements, whatever conditions you might face.

- Friction levers hold the lid open in any position up to 95°
- Anodised aluminium frame for corrosion resistance
- Full range of spare parts available on-line www.lewmar.com

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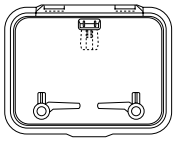
Size 10


Size 20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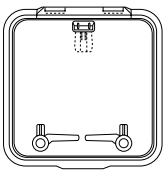
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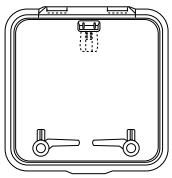
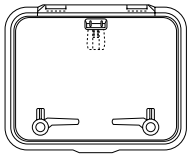

Size 44[1]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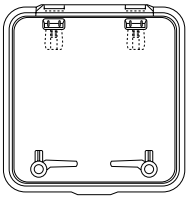
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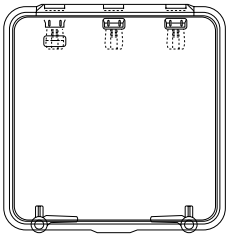
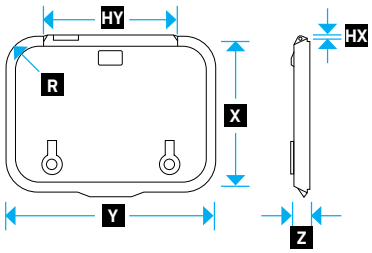
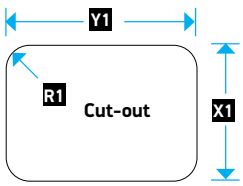

Size 70

[1] Minimum size for ISO 9094 escape hatches

Ocean Hatch Dimensions



Ocean Hatch Cut-out




Flange profile
Flange size 25mm/1in


Flat Base profile

PART NUMBER	Size	LOWER FRAME	OVERALL DIMENSIONS X LENGTH mm	X LENGTH in	Y WIDTH mm	Y WIDTH in	Z HEIGHT mm	Z HEIGHT in	R RADII mm	R RADII in	HX HINGE LENGTH mm	HX HINGE LENGTH in	HY HINGE WIDTH mm	HY HINGE WIDTH in	CUT-OUT DIMENSIONS Change if Trimkits are used X1 LENGTH mm	X1 LENGTH in	Y1 WIDTH mm	Y1 WIDTH in	R1 RADII mm	R1 RADII in	HATCH WEIGHT kg	HATCH WEIGHT lb	ACRYLIC WINDOW THICKNESS mm	ACRYLIC WINDOW THICKNESS in
39610050	10	Flat Base	324	12 3/4	324	12 3/4	39.5	1 9/16	75	2 15/16	5	3/16	138	5 7/16	255	10 1/16	255	10 1/16	40	1 9/16	2.26	5.77	10	3/8
39610070		Flange													260	10 1/4	260	10 1/4	42.5	1 11/16				
39620050	20	Flat Base	266	10 1/2	411	16 3/16	39.5	1 9/16	69	2 11/16	5	3/16	225	8 7/8	197	7 3/4	342	13 7/16	34	1 5/16	2.74	6.04	10	3/8
39620070		Flange													202	7 15/16	347	13 11/16	36.5	1 7/16				
39630050	30	Flat Base	391	15 3/8	521	20 1/2	39.5	1 9/16	75	2 15/16	5	3/16	335	13 3/16	322	12 11/16	452	17 13/16	40	1 9/16	4.5	9.9	10	3/8
39630070		Flange													327	12 7/8	457	18	42.5	1 11/16				
39640050	40	Flat Base	485	19 1/8	485	19 1/8	39.5	1 9/16	75	2 15/16	5	3/16	299	11 3/4	416	16 3/8	416	16 3/8	40	1 9/16	4.76	10.5	10	3/8
39640070		Flange													421	16 9/16	421	16 9/16	42.5	1 11/16				
39644050	44	Flat Base	509	20 1/16	509	20 1/16	43	1 11/16	76	3	4	3/16	302	11 7/8	437	17 3/16	437	17 3/16	40	1 9/16	5	11	12	1/2
39644070		Flange													442	17 3/8	442	17 3/8	42.5	1 11/16				
39650050	50	Flat Base	444	17 1/2	574	22 5/8	43	1 11/16	76	3	4	3/16	367	14 7/16	372	14 5/8	502	19 3/4	40	1 9/16	7.3	16.1	12	1/2
39650070		Flange													377	14 13/16	507	19 15/16	42.5	1 11/16				
39660050	60	Flat Base	574	22 5/8	574	22 5/8	43	1 11/16	76	3	4	3/16	367	14 7/16	502	19 3/4	502	19 3/4	40	1 9/16	8	17.6	12	1/2
39660070		Flange													507	19 15/16	507	19 15/16	42.5	1 11/16				
39670050	70	Flat Base	694	27 5/16	694	27 5/16	43	1 11/16	76	3	4	3/16	487	19 3/16	622	24 1/2	622	24 1/2	40	1 9/16	10.8	23.8	12	1/2
39670070		Flange													627	24 11/16	627	24 11/16	42.5	1 11/16				

Pilot Hatch

The Pilot Hatch is designed for use on the wheelhouse or cockpit canopy of a power craft, and the styling complements the Low Profile and Medium Profile Hatch Ranges.

- Opens up enclosed steering positions
- The handle never moves out of reach
- Operated with a single handlebar that rotates to seal down the hatch
- Can be secured with a 5cm opening when full ventilation is not required
- Acrylic can be replaced without the use of sealant
- Sliding technology from Lewmar's racing hardware track systems, ensuring minimum friction
- The Pilot Hatch uses Lewmar's unique seal system for improved sealing and easy servicing
- Full range of spare parts available on-line www.lewmar.com

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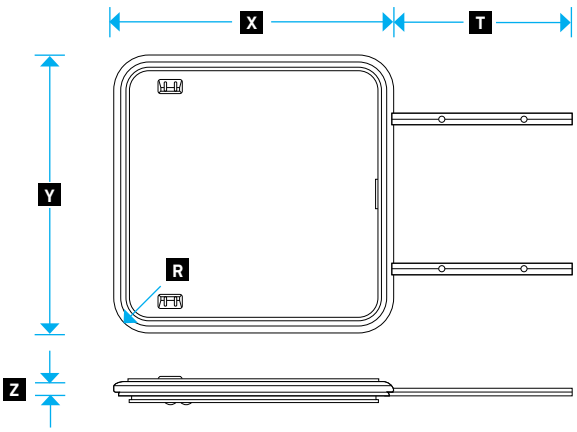
ALL SIZES AREA 3.
SEE PAGE 62

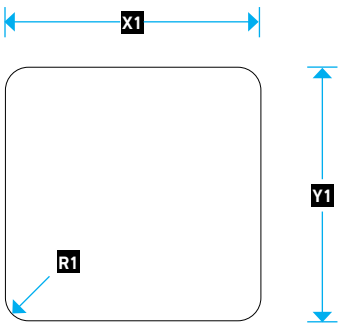
Maintenance

Acrylic or seal can be replaced by sliding the two halves of the frame apart.
Please refer to website for part number

Pilot Hatch Dimensions



Cut-out Dimensions



PART NUMBER	Size	ACRYLIC COLOUR/TINT	LOWER FRAME FLANGE		OVERALL DIMENSIONS X WIDTH		OVERALL DIMENSIONS Y LENGTH		OVERALL DIMENSIONS Z HEIGHT		OVERALL DIMENSIONS R RADII		T TRACK LENGTH		CUT-OUT DIMENSIONS Change if Trimkits are used X1 WIDTH		CUT-OUT DIMENSIONS Change if Trimkits are used Y1 LENGTH		CUT-OUT DIMENSIONS Change if Trimkits are used R1 RADII		ACRYLIC WINDOW THICKNESS	
			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
30211300	40	Smoke Grey	15	9/16	495	19 ½	491	19 5/16	29	1 ⅛	73	2 ⅞	284	11 3/16	421	16 9/16	421	16 9/16	42.5	1 11/16	8	5/16
30074000	60	Smoke Grey	15	9/16	581	22 ⅞	577	22 11/16	29	1 ⅛	73	2 ⅞	373	14 ⅔	507	19 15/16	507	19 15/16	42.5	1 11/16	10	⅜
30229100	70	Smoke Grey	15	9/16	701	27 ⅝	697	27 7/16	29	1 ⅛	73	2 ⅞	486	19 ⅛	627	24 11/16	627	24 11/16	42.5	1 11/16	10	⅜
30069900	78	Smoke Grey	15	9/16	844	33 ¼	790	31 ⅛	29	1 ⅛	73	2 ⅞	638	25 ⅛	770	30 5/16	720	28 ¼	42.5	1 11/16	10	⅜

Trim Kits are not available for size 78, normal Trim Kit fits size 40, 60 and 70

Hatches should be fitted to a flat surface with a maximum tolerance of ± 1mm

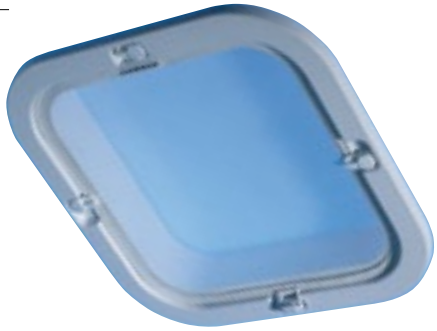
The Pilot Hatch is only for use on wheel houses and cockpit canopies.
It is not suitable for use on normal decks and coachroof applications

Fastening size for lower frame and sliding track use 5mm CSK screws No. 10 UNC 2BA

The pilot hatch cannot be operated from the outside

Hatch Accessories

ABS Plastic Trim and Flyscreen



- Easy and stylish way of finishing a hatch installation inside the cabin
- Trimkits come complete with a flyscreen
- Can only be fitted to boats with a headlining
- Will fit all Lewmar hatches featured in this catalogue except flat base Ocean Hatches or unless otherwise stated

Cut Out Dimensions and Deck Thickness Requirements

CUT OUT DIMENSION INCREASE[1]	Add 4mm to X1 & Y1 and 2mm to R1
Ocean	Min Hull Thickness = 25mm Max Hull Thickness = 72mm
Flush Hatch / Low and Medium Profile	Min Hull Thickness = 15mm Max Hull Thickness = 62mm

[1] Cut Out dimensions for hatches are shown on their relevant pages

PART NUMBER	HATCH SIZE
367400252	00 [2]
367403252	03
367410252	10
367618252	18 ROUND
367420252	20 [2]
367620252	20 OCEAN

PART NUMBER	HATCH SIZE
367622252	22 ROUND
367630252	30
367640252	40
367441252	41
367644252	44
367650252	50

PART NUMBER	HATCH SIZE
367651252	51
367654252	54
367660252	60
367665252	65
367670252	70

[2] Does not fit Ocean, Rollstop or Superhatch

Flyscreen Hinge

- Makes it easier to access the handles when the flyscreen is in place
- Only necessary to undo two tabs and the flyscreen will hinge down – and not fall out
- Flyscreen can be removed and stowed separately if required
- Hinges are also available as retro fit items
- Kit includes all tabs, screws, screw cap etc.

Ivory: 361196995 White: 361196992

Telescopic Stay

- Features excellent lid positioning and rigid control
- Allows hatch opening up to 95°
- An advantage on smaller to mid size yachts where deck space is at a premium

Grey 360918999 Black: 360918992

Retro-Fit Vent

- Vent can be fitted to the acrylic lens of any Lewmar hatch or to the deck
- Made from the same rugged composite used in many Lewmar hatch and winch parts
- Styled to match the Low and Medium Profile hatches
- Captive bung to close the ventilator – it cannot be lost
- Fits deck thickness to 100mm
- Tested to CE ISO 12216 and leak tested
- No sealant required for hatch fitting

Grey 361041990 Black: 361041992

Retro-Fit Lock and Key Kit

- Can be fitted to any Lewmar Hatch by drilling a hole through the acrylic and riveting a catch block to the lower frame
- Lock and key are marinised to prevent corrosion

Part No 360259990

Flybridge Hatch

Lewmar's flybridge hatches offer a safe and attractive way of offering access to the helm station on flybridge motorboats.

Lewmar can customise the shape and size to match designers' wishes and they can be built around the low profile, medium profile or flush hatch platforms.

As with other products acrylic colour, frame finish, lid-support mechanisms etc can be customised to suit.

Contact your Lewmar representative for further information.

Washboard Hatch

Lewmar's washboard hatch offers a simple solution to boat-builders who have traditionally fabricated their own washboard solutions in-house.

Lewmar's solution is highly flexible; as long as the sides of the companionway are parallel, Lewmar can produce a washboard to suit.

Interested? Fill out the enquiry form by scanning the QR code below:

Scan me

Scan the QR code with your smartphone to access the enquiry form

- Lockable from inside and out
- Simple one-handed operation
- Sprung panels
- Choice of 1 or 2 acrylic panels
- Choice of acrylic colour
- Optional air vents
- Comes with hard anodised side runners

The Lewmar Portlight Range

Page 76 Flush Mitre Portlight

- Number of textures, angles and levels is minimised in order to minimise the visual impact of the portlight on the boat
- Acrylic almost flush with the mounting surface
- 12mm acrylic is used in order to achieve the flush effect
- Flat Outer frame
- Outer frame powder coated black to camouflage with the acrylic lens

Page 78 Stainless Steel Portlight

- Polished stainless outer frame with no joint
- Handles and hinges are fitted to the edge of the lens to allow clear visibility
- ABS plastic inside trim can be cut to length
- Friction hinges hold the window open

Page 80 Standard Portlight

- The Standard Portlight is fitted to thousands of boats throughout the world
- Aluminium external frame
- Handles and hinges are fitted to the edge of the lens to allow clear visibility
- Quick-action handles
- ABS plastic inside trim can be cut to length
- Friction hinges hold the window open

Page 81 Atlantic Portlight

- Stronger aluminium outer frame with single welded join
- Lens bonded into alloy frame for additional stiffness
- Stainless 316 handles
- Aluminium inside trim
- Small opening sizes (10,30 & 32) CE Approved for in-hull installation
- Friction hinges hold the window open

Page 82 Custom Portlight

- Concept 3 portlight
- Trimports
- Fabricated stainless steel round portlight
- Aluminium ellipse

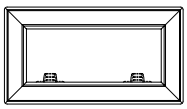
Page 83 Glass

- Fully toughened glass to marine standards
- Ceramic frit printing
- Flat hull-side panels
- Aperture cut-outs
- Custom stainless portlights

Flush Mitre Portlight

Complementing the styling of the Lewmar Flush Hatch, the Flush Mitre Portlight offers a seamless line from the hull across the portlight. When installed into acrylic, the Flush Mitre Portlight offers a ventilation solution within the illusion of a larger opening.

- Development of Lewmar Standard Portlight
- Number of textures, angles and levels is minimised in order to minimise the visual impact of the portlight on the boat
- Acrylic almost flush with the mounting surface
- A thicker acrylic is used in order to achieve the flush effect
- Flat Outer frame powder coated black to camouflage with the acrylic lens
- Flyscreen not supplied as standard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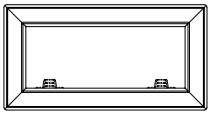
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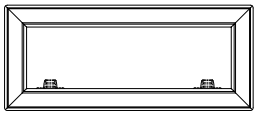
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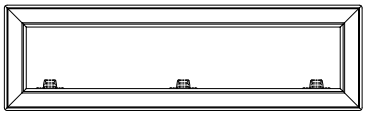
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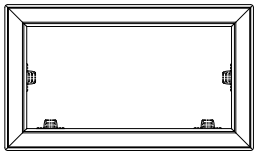

Size 5

CE Approved
DETAILS SHOWN PAGE 62

Specifications options:

- Handles: clip (standard) / twist (option)
- Acrylic window 12mm (½") colour: Grey or Dark grey
- Frame colour: Powder coated Black

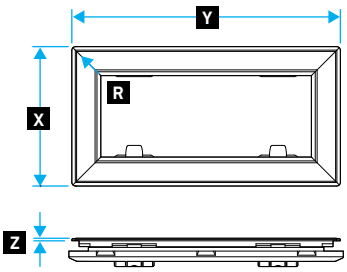
Portlight Valance & Fastening Required

HULL THICKNESS	FASTENING	
3.5 to 6.5 mm	361799999	M5 x 12mm Long
7 to 9 mm	361800999[1]	M5 x 16mm Long

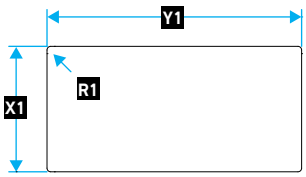
Standard valance suit hull thickness 3.5 to 9mm. Other valance type available for thicker hull up to 17.5mm. Contact Lewmar for more information

[1] Supplied as standard with portlight listed below
Fastenings supplied in bags of 100

Flush Mitre Portlight Dimensions



Cut-out Dimensions



1. Portlights should be fitted to a flat surface with a maximum tolerance of 1mm
2. All Portlights are supplied complete with 12 off M5 x16mm screws

Flush Mitre Portlight Specifications

PART NUMBER GREY	PART NUMBER DARK GREY	Size	OVERALL DIMENSIONS X WIDTH mm	X WIDTH in	Y LENGTH mm	Y LENGTH in	Z HEIGHT mm	Z HEIGHT in	R RADII mm	R RADII in	CUT-OUT DIMENSIONS X1 WIDTH mm	X1 WIDTH in	Y1 LENGTH mm	Y1 LENGTH in	R1 RADII mm	R1 RADII in	PORTLIGHT WEIGHT kg	PORTLIGHT WEIGHT lb
393029800	**393029802**	0	175	6 7/8	322	12 11/16	4	5/32	5	3/16	156	6 1/8	303	11 15/16	5	3/16	1.3	2.9
393129800	**393129802**	1	190	7 1/2	366	14 7/16	4	5/32	5	3/16	171	6 3/4	347	13 11/16	5	3/16	1.6	3.5
393329800		3	190	7 1/2	448	17 11/16	4	5/32	5	3/16	171	6 3/4	429	16 7/8	5	3/16	2.0	4.4
393429800		4	190	7 1/2	645	25 7/16	4	5/32	5	3/16	171	6 3/4	626	24 11/16	5	3/16	2.8	6.2
393529800		5	263	10 11/32	448	17 5/8	4	5/32	5	3/16	244	9 5/8	429	16 7/8	5	3/16	2.6	5.7

Lewmar Flush Mitre Portlight fitted to Hanse 545 cockpit, © 2013 Hanse Yachts

Flush Mitre Custom Size Portlight Specifications

PART NUMBER GREY	PART NUMBER DARK GREY	FLYSCREEN	OVERALL DIMENSIONS X WIDTH mm	X WIDTH in	Y LENGTH mm	Y LENGTH in	Z HEIGHT mm	Z HEIGHT in	R RADII mm	R RADII in	CUT-OUT DIMENSIONS X1 WIDTH mm	X1 WIDTH in	Y1 LENGTH mm	Y1 LENGTH in	R1 RADII mm	R1 RADII in
30216000			115	4 ½	322	12 43/64	4	5/32	5	3/16	96	3 25/32	303	11 15/16	5	3/16
	30179600		180	7 5%4	490	19 9/32	4	5/32	5	3/16	161	6 11/32	471	18 35/64	5	3/16
30183700		**30222000**	150	5 29/32	600	23 5/8	4	5/32	5	3/16	131	5 5/32	581	22 7/8	5	3/16
	30184900		200	7 7/8	490	19 9/32	4	5/32	5	3/16	181	7 1/8	471	18 35/64	5	3/16
30187100			270	10 5/8	900	35 7/16	4	5/32	5	3/16	251	9 7/8	881	34 11/16	5	3/16
30196200		**30206400**	360	14 11/64	500	19 11/16	4	5/32	5	3/16	341	13 27/64	481	18 15/16	5	3/16
30196300		**30206500**	300	11 13/16	564	22 16/64	4	5/32	5	3/16	281	11 1/16	545	21 29/64	5	3/16
30196400		**30206600**	360	14 1⅛4	680	26 49/64	4	5/32	5	3/16	341	13 27/64	661	26	5	3/16
30198700		**30206300**	338	13 19/64	360	14 11/64	4	5/32	5	3/16	319	12 9/16	341	13 27/64	5	3/16
30203300			440	17 21/64	354	13 15/16	4	5/32	5	3/16	421	16 37/64	335	13 3/16	5	3/16

Flyscreen not supplied as standard
CE Approval to Category A, Area 2b for sizes up to 200x600.

Flush Mitre Fixedlight Specifications

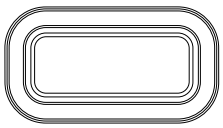
PART NUMBER GREY	PART NUMBER DARK GREY	PART NUMBER CLEAR	OVERALL DIMENSIONS X WIDTH mm	X WIDTH in	Y LENGTH mm	Y LENGTH in	Z HEIGHT mm	Z HEIGHT in	R RADII mm	R RADII in	CUT-OUT DIMENSIONS X1 WIDTH mm	X1 WIDTH in	Y1 LENGTH mm	Y1 LENGTH in	R1 RADII mm	R1 RADII in
30183800	**30192000**	**30192200**	150	5 29/32	600	23 5/8	4	5/32	5	3/16	131	5 5/32	581	22 7/8	5	3/16
30212200			174	6 7/8	423	16 21/32	4	5/32	5	3/16	155	6 7/64	404	15 29/32	5	3/16
	30179600		193	7 19/32	648	25 33/64	4	5/32	5	3/16	174	6 35/64	629	24 49/64	5	3/16
30212200			240	9 29/64	700	27 9/16	4	5/32	5	3/16	221	8 45/64	681	26 13/16	5	3/16

CE Approval to Category A, Area 1 on size 150x600

Stainless Steel Portlight

With its highly polished stainless outer frame, the Stainless Portlight will really shine on your boat. The handles and hinge system were designed to leave the lens clear of obstructions, giving it an uncluttered view and a clean, modern look.

- ABS Plastic Trim
- Can be installed with sealant or closed cell PVC tape
- Trim with clean styling
- Easily fitted by clamping the cabin sides between inner and outer frame with screws provided that are fastened into the outer frame
- Full range of spare parts available on-line www.lewmar.com



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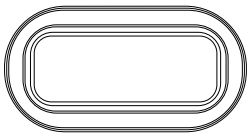

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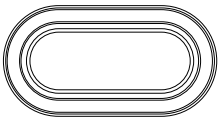

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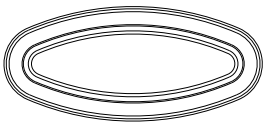

Size 8

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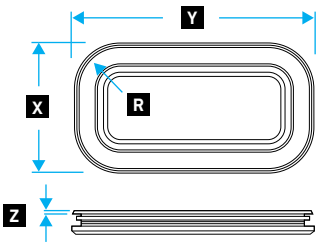
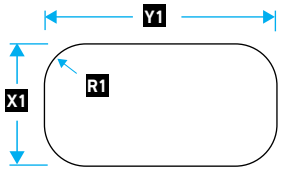
DETAILS SHOWN PAGE 62

Stainless steel Portlight Dimensions



Stainless steel Portlight Cut-out



Specifications options:

- Handles: clip (standard) / twist (option)
- Moulding colour Grey
- Acrylic colour: Grey (standard) other colour optional
- Frame colour: Stainless steel
- Comes complete with trim and flyscreen

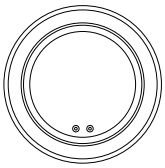
PART NUMBER	Size	TRIM COLOUR	VERSION	OVERALL DIMENSIONS X LENGTH mm	X LENGTH in	Y WIDTH mm	Y WIDTH in	Z HEIGHT mm	Z HEIGHT in	R RADII mm	R RADII in	CUT-OUT DIMENSIONS X1 LENGTH mm	X1 LENGTH in	Y1 WIDTH mm	Y1 WIDTH in	R1 RADII mm	R1 RADII in	PORTLIGHT WEIGHT kg	PORTLIGHT WEIGHT lb	ACRYLIC WINDOW THICKNESS mm	ACRYLIC WINDOW THICKNESS in
393020262	0	WHITE	OPENING	176	6 15/16	323	12 11/16	4	5/32	62.0	2 7/16	156	6 1/8	303	12	52.0	2 1/16	1.5	3.30	8	1/2
393010262	0	WHITE	FIXED	176	6 15/16	323	12 11/16	4	5/32	62.0	2 7/16	156	6 1/8	303	12	52.0	2 1/16	1.5	3.30	10	3/8
393120262	1	WHITE	OPENING	191	7 1/2	367	14 7/16	4	5/32	62.0	2 7/16	171	6 3/4	347	13 5/8	52.0	2 1/16	1.7	3.80	8	1/2
393110262	1	WHITE	FIXED	191	7 1/2	367	14 7/16	4	5/32	62.0	2 7/16	171	6 3/4	347	13 5/8	52.0	2 1/16	1.7	3.80	10	3/8
393180262	1RE	WHITE	OPENING	191	7 1/2	367	14 7/16	4	5/32	95.5	3 3/4	171	6 3/4	347	13 5/8	85.5	3 3/8	1.7	3.74	10	3/8
393170262	1RE	WHITE	FIXED	191	7 1/2	367	14 7/16	4	5/32	95.5	3 3/4	171	6 3/4	347	13 5/8	85.5	3 3/8	1.7	3.74	10	3/8
393780262	7RE	WHITE	OPENING	191	7 1/2	425	16 3/4	4	5/32	95.5	3 3/4	171	6 3/4	405	15 15/16	85.5	3 3/8	1.9	4.18	10	3/8
393770262	7RE	WHITE	FIXED	191	7 1/2	425	16 3/4	4	5/32	95.5	3 3/4	171	6 3/4	405	15 15/16	85.5	3 3/8	1.9	4.18	10	3/8
393820862	8	CHROME	OPENING	196	7 11/16	452	17 13/16	4	5/32	N/A	N/A	SEE DRAWING ON WEBSITE						1.9	4.18	10	3/8
393810862	8	CHROME	FIXED	196	7 11/16	452	17 13/16	4	5/32	N/A	N/A	SEE DRAWING ON WEBSITE						1.9	4.18	10	3/8

Maximum hull thickness 30mm
Minimum hull thickness 9mm

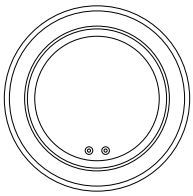
All portlights are supplied with M5 x 20 screws for hull thickness 12-17mm
Portlights should be fitted to a flat surface +/-1mm

Lewmar Stainless Steel Portlight fitted to Beneteau Monte Carlo motorboats

Round Stainless Steel Portlight



Round 250mm



Round 296mm

CE
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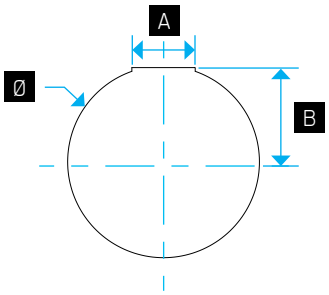
AREA 1.
SEE PAGE 62

Cut-out Dimensions



Round Stainless Steel Portlight Specifications

PART NUMBER	TRIM COLOUR	VERSION	OVERALL Ø mm	OVERALL Ø in	CUT-OUT DIAMETER Ø mm	CUT-OUT DIAMETER Ø in	A mm	A in	B mm	B in	WEIGHT kg	WEIGHT lb	THICKNESS mm	THICKNESS in
30209800	Chrome	Opening	250	9 7/8	230	9 1/16	76	3	113	4 7/16	1.4	3	10	3/8
30209900	Chrome	Opening	296	11 5/8	277	10 7/8	100	3 15/16	136	5 3/8	2.0	4	10	3/8

Maximum hull thickness 24mm
Minimum hull thickness 8mm

All portlights are supplied with M5 x 12 fastenings
No Flyscreen available for the Round Stainless Portlights

Standard Portlight

A perfect match for any hatch in the Lewmar range, the Standard Portlight is stylish, competitively priced and easy to both use and install.

- Easily fitted by clamping the cabin sides between inner and outer frame with screws provided that are fastened into the outer frame
- Can be installed with sealant or closed cell PVC tape
- White ABS Plastic Trim
- Cut out shape available from www.lewmar.com
- Supplied complete with flyscreen (except sizes 4L and 4R)
- Full range of spare parts available on-line www.lewmar.com

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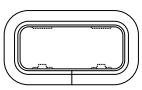
ALL SIZES
AREA 2A.
SEE PAGE 62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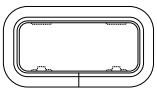
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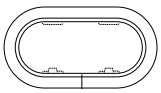
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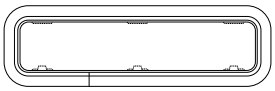
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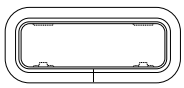
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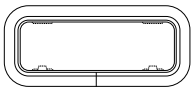
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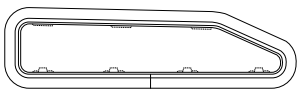
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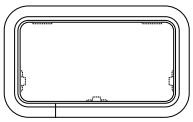
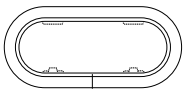

Size 5

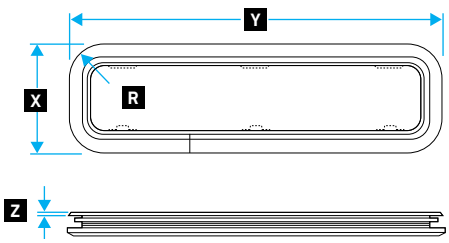

Size 7RE


Optional twist handle, contact your Lewmar representative for part numbers

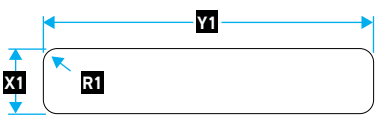
Specifications options:

- Handles: clip (standard) / twist (option)
- Moulding colour Grey
- Acrylic colour: Grey (standard) other colours optional
- Frame colour: Silver anodized (standard) other finishes available
- Come complete with trim and flyscreen

Standard Portlight Dimensions



Standard Portlight Cut-out



PART NUMBER	SIZE	OVERALL DIMENSIONS X LENGTH mm	X LENGTH in	Y WIDTH mm	Y WIDTH in	Z HEIGHT mm	Z HEIGHT in	R RADII mm	R RADII in	CUT-OUT DIMENSIONS X1 LENGTH mm	X1 LENGTH in	Y1 WIDTH mm	Y1 WIDTH in	R1 RADII mm	R1 RADII in	PORTLIGHT WEIGHT kg	PORTLIGHT WEIGHT lb	ACRYLIC WINDOW THICKNESS mm	ACRYLIC WINDOW THICKNESS in
393020200	0	176	6 15/16	323	12 11/16	4	5/32	62.0	2 7/16	156	6 1/8	303	11 15/16	52.0	2 1/16	1.1	2.42	6	1/4
393120200	1	191	7 1/2	367	14 7/16	4	5/32	62.0	2 7/16	171	6 3/4	347	13 11/16	52.0	2 1/16	1.3	2.86	6	1/4
393180200	1RE	191	7 1/2	367	14 7/16	4	5/32	95.5	3 3/4	171	6 3/4	347	13 11/16	85.5	3 3/8	1.3	2.86	8	5/16
393220200	2	176	6 15/16	425	16 3/4	4	5/32	62.0	2 7/16	156	6 1/8	405	15 5/16	52.0	2 1/16	1.4	3.08	8	5/16
393320200	3	191	7 1/2	449	17 11/16	4	5/32	62.0	2 7/16	171	6 3/4	429	16 7/8	52.0	2 1/16	1.7	3.74	10	3/8
393420200	4	191	7 1/2	646	25 7/16	4	5/32	62.0	2 7/16	171	6 3/4	626	24 11/16	52.0	2 1/16	2.4	5.28	8	5/16
393440200	4R	195	7 11/16	708	27 7/8	4	5/32	62.0	2 7/16	175	6 7/8	688	27 1/16	52.0	2 1/16	2.4	5.28	8	5/16
393460200	4L	195	7 11/16	708	27 7/8	4	5/32	62.0	2 7/16	175	6 7/8	688	27 1/16	52.0	2 1/16	2.4	5.28	8	5/16
393520200	5	264	10 3/8	449	17 11/16	4	5/32	62.0	2 7/16	244	9 5/8	429	16 7/8	52.0	2 1/16	2.3	5.15	10	3/8
393780200	7RE	191	7 1/2	425	16 3/4	4	5/32	95.5	3 3/4	171	6 3/4	405	15 15/16	85.5	3 3/8	2.4	5.28	8	5/16

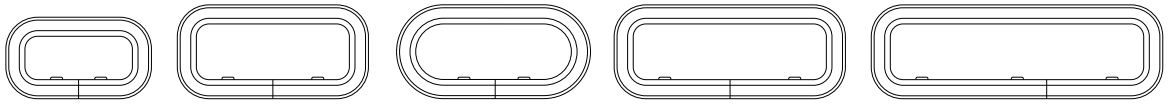
Maximum hull thickness 34mm
Minimum hull thickness 7mm

All portlights are supplied with 12 off M5 x 25 screws for hull thickness 17-25mm
Portlights should be fitted to a flat surface +/-1mm

Atlantic Portlight

The Atlantic Portlight has clean lines and a clear, acrylic window housed in an attractive aluminium frame

- Extensive range
- Flyscreens provided as standard
- Friction hinges
- Screw handles available as an option
- Full range of spare parts available on-line www.lewmar.com



Size 10 | Size 30 | Size 32 | Size 40 | Size 60

CE Approved
ALL SIZES AREA 2A.
SEE PAGE 62

Specifications options:

- Clip handles standard / Screw handles optional
- Acrylic colour: Grey (standard) other colour optional
- Frame colour: Silver anodized (standard) other finish available
- Come complete with alloy valance and flyscreen
- Portlights and fixed lights come complete with fastenings as indicated in the table

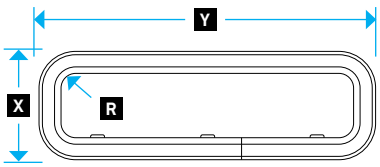
Portlight Valance & Fastening

HULL THICKNESS MM	VALANCE TYPE	FASTENING	
8–10	Thin Hull Valance	**360360999**[1]	M5 x 12mm Long
11–15	Thin Hull Valance	**360361999**	M5 x 16mm Long
16–19	Thick Hull Valance	**360362999**	M5 x 20mm Long
20–24	Thick Hull Valance	**360363999**[2]	M5 x 25mm Long

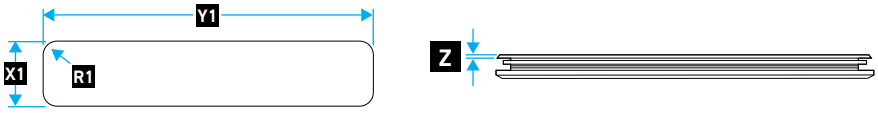
[1] Supplied as standard with thin hull valances
[2] Supplied as standard with thick hull valances

Fastenings supplied in bags of 100

Atlantic Portlight Dimensions



Atlantic Portlight Cut-out



PART NUMBER			OVERALL DIMENSIONS								CUT-OUT DIMENSIONS						PORTLIGHT WEIGHT		ACRYLIC WINDOW THICKNESS	
			X LENGTH		Y WIDTH		Z HEIGHT		R RADII		X1 LENGTH		Y1 WIDTH		R1 RADII					
Thin Valance	Thick Valance	Size	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
39110090	**39110070**	10	174	6 15/16	304	12	6	1/4	71	2 13/16	154	6 1/16	284	11 3/16	61	2 3/8	1.6	3.5	8	5/16
39130090	**39130070**	30	200	7 7/8	400	15 3/4	6	1/4	71	2 13/16	180	7 1/16	380	14 15/16	61	2 3/8	2.2	4.8	8	5/16
39132090	**39132070**	32	198	7 13/16	401	15 13/16	6	1/4	99	3 7/8	178	7	381	15	89	3 1/2	2.1	4.6	8	5/16
39140090	**39140070**	40	200	7 7/8	480	18 7/8	6	1/4	71	2 13/16	180	7 1/16	460	18 1/8	61	2 3/8	2.5	5.5	8	5/16
39160090	**39160070**	60	200	7 7/8	600	23 5/8	6	1/4	71	2 13/16	180	7 1/16	580	22 13/16	61	2 3/8	3.0	6.6	8	5/16

Smoke grey acrylic and silver anodise frames
Should be fitted to a flat surface with a max tolerance of ± 1mm
Come complete with fastenings as indicated on above table

Portlight opening is restricted on very thick hulls.
At 24mm hull thickness opening angle is 115°

Custom Portlight

- Lewmar's in-house design team have huge experience in working closely with customers to provide custom portlight solutions.
- If you have a project requiring custom shapes, sizes or finishes, contact us to discuss your requirements.

Concept 3

The Concept 3 portlight enables the integration of an opening portlight into larger expanses of acrylic. Discrete fastenings and a thin exterior frame minimise the aesthetic compromise as much as possible.

- Supply ventilation into the cabin without compromising sleek design lines.
- Portlight designed to sit flush in a 8mm thick panel/coachroof
- Flyscreen not supplied as standard

PART NUMBER	FLYSCREEN	OVERALL DIMENSIONS X LENGTH mm	OVERALL DIMENSIONS X LENGTH in	OVERALL DIMENSIONS Y WIDTH mm	OVERALL DIMENSIONS Y WIDTH in	OVERALL DIMENSIONS R RADII mm	OVERALL DIMENSIONS R RADII in	CUT-OUT DIMENSIONS X1 LENGTH mm	CUT-OUT DIMENSIONS X1 LENGTH in	CUT-OUT DIMENSIONS Y1 WIDTH mm	CUT-OUT DIMENSIONS Y1 WIDTH in	CUT-OUT DIMENSIONS R1 RADII mm	CUT-OUT DIMENSIONS R1 RADII in	ACRYLIC WINDOW THICKNESS mm	ACRYLIC WINDOW THICKNESS in	CE CERTIFICATION
30193600	**30204400**	319	12 ½	172	6 ¾	61	2 ½	280	11	133	5 ¼	39	1 ½	25	1	Category A, Area 2b
30216100		360	14 3/16	162	6 ⅜	61	2 ½	321	12 ⅝	123	4 13/16	39	1 ½	25	1	Category B, Area 1

Flyscreen not supplied as standard
CE Approval to Category A, Area 2b for sizes up to 200x600.

Trimports

The trimport allows designers almost limitless freedom in the shape and size of coachroof portlights.

- Based on flush hatch platform
- Huge versatility in size and shape of frame and acylic
- Flyscreen not supplied as standard
- Contact Lewmar for further information

LEWMAR Definition glass

- Fully toughened glass to marine standards
- Ceramic frit printing
- Flat hull-side panels
- Aperture cut-outs
- Custom stainless portlights

Over the years, Lewmar has become the most recognised brand in the area of boat hatches and portlights. Utilising aluminium extrusion and stainless steel pressings, Lewmar has developed an extensive range of hatches and portlights suited to almost any style of boat.

These have been available exclusively with acrylic panels....*until now.*

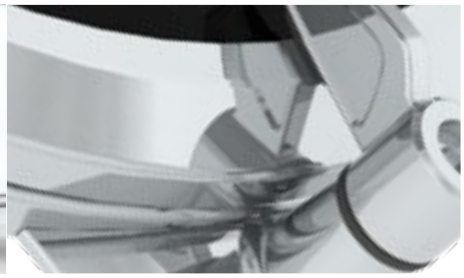
Now Lewmar has invested in new machinery to enable the shaping of custom glass panels which can also be finished in custom ceramic frit-printing.

Equally, manufacturing techniques have been developed to allow custom portlights to be produced using stainless profiles. These can be fitted with either acrylic or Definition glass lenses.

Lewmar also supply custom made glass panel fitted with a portlight. Contact custom@lewmar.com for more information.

Key Features

- Fully toughened glass to marine standards
- Ceramic frit printing
- Flat and curved hull-side panels
- Aperture cut-outs
- Custom stainless portlights



Portlight Accessories

Portlight Flyscreen

Portlight Flyscreen provides easy installation and removal
Note: Portlight cannot be closed with flyscreen in place

Standard Portlight Clip Flyscreens

PART NUMBER	TO SUIT STANDARD PORTLIGHT
367302936	Size 0
367312936	Size 1
367318936	Size 1RE
367322936	Size 2
367332936	Size 3
367342936	Size 4
367352936	Size 5
367378936	Size 7RE

Atlantic Portlight Clip Flyscreens

PART NUMBER	TO SUIT ATLANTIC PORTLIGHT
367110936	Size 10
367130936	Size 30
367132936	Size 32
367140936	Size 40
367160936	Size 60

Stainless Portlight Flyscreens

PART NUMBER	TO SUIT STAINLESS PORTLIGHT
367318966	Size 1RE
367378966	Size 7RE
367382966	Size 8 Elliptical

Portlight Fastenings

PART NUMBER	SCREW SIZE	HULL THICKNESS mm			
		STANDARD PORTLIGHT		STAINLESS STEEL PORTLIGHT	
		MIN	MAX	MIN	MAX
19899000	M5 x 12	7	9	7	9
19899100	M5 x 16	8	13	8	13
19899200	M5 x 20	12	17	12	17
19899300	M5 x 25	17	22	17	22
19899400	M5 x 30	22	27	22	27
19899500	M5 x 35	27	32	27	32
19899600	M5 x 40	32	34	32	34

Screws supplied in quantities of 100

Portlight Spares

Find spares online:

- Handle kits
- Hinge kits
- Spare acrylics
- Seal kits
- Trims

Scan me

Scan the QR code with your smartphone for more information about lewmar spares

5. Winches

Lewmar winches are designed with both cruising sailors and racing crews in mind. The EVO® range of winches meets the needs of sailors and boat builders with a perfect blend of looks, functionality, and reliability. We have a range of new race-inspired winches and for short-handed crews, the revolutionary REVO backwinding winch makes sail handling a breeze.

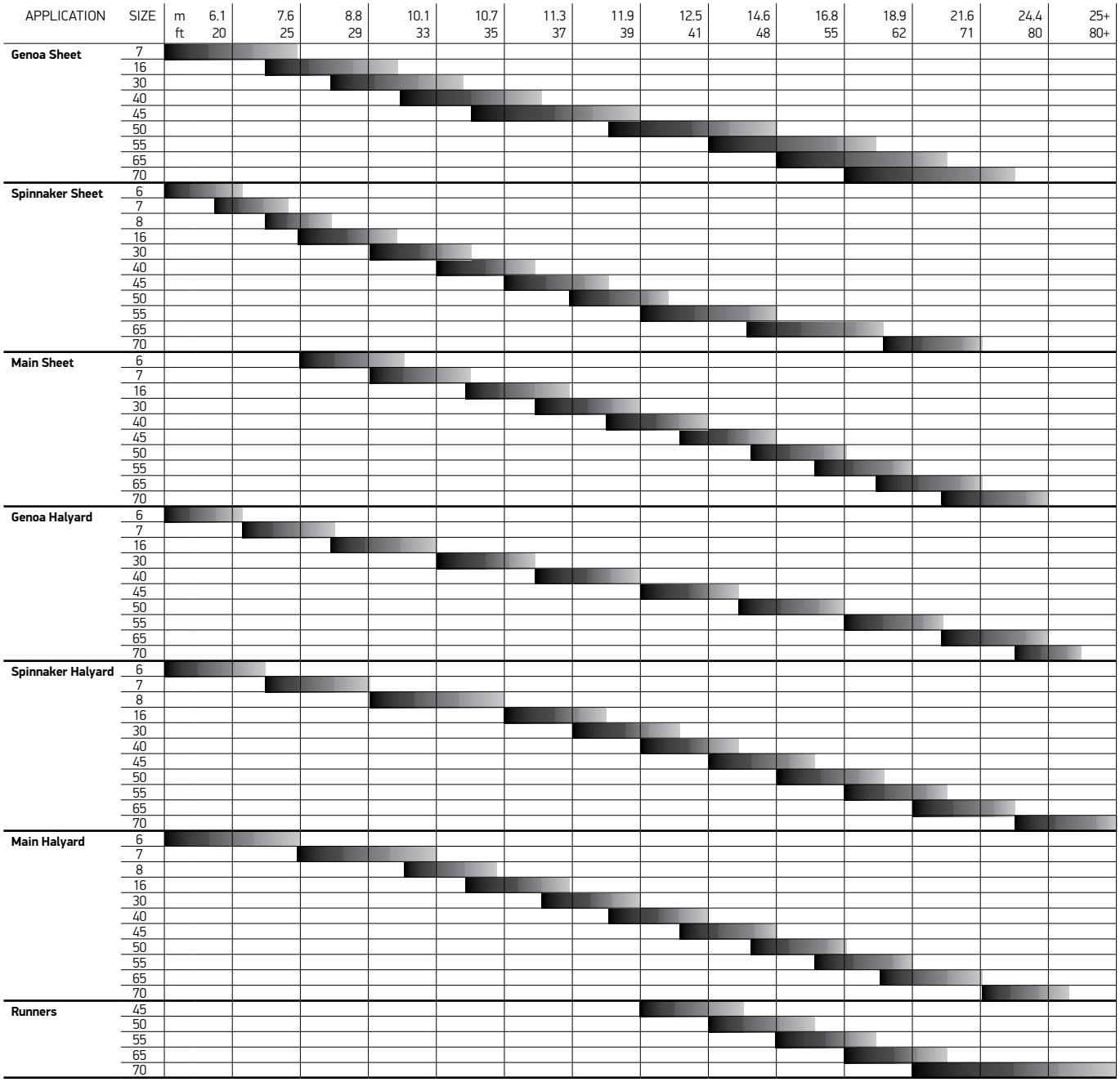
Constant evolution results in our winches being fitted on board many of the World's premier raceboats and performance cruisers.

Winch Selection Guide

Efficient sail handling begins with the selection of the correct winch. To help you select from the winches described in the following pages the chart below is designed as a quick reference to match application, yacht size and winch. Cross reference your yacht size (for masthead rigs) or sail area (fractional rigs) with application, to ascertain the correct winch. You can also send your deck and sail plans to your Lewmar representative, they will be pleased to make individual recommendations. REMEMBER runner winch and mainsheet winch selection depends on the purchase system fitted, and expected loads. Dynamic sail loads can easily increase the loads dramatically. Multihulls generally have a higher righting moment than monohulls of equivalent lengths, resulting in higher dynamic loading, therefore, winch size needs to be larger – consult your Lewmar representative or rigger for further guidance.

Sail Area

Application		BOAT LENGTH OVERALL																					
	m	6.1–7.6		7.6–8.8		8.8–10.1		10.1–10.7		10.7–11.3		11.3–11.9		11.9–12.5		12.8–14.6		14.6–16.8		16.8–18.9		18.9–21.6	
	ft	20–25		25–29		29–33		33–35		35–37		37–39		39–41		42–48		48–55		55–62		62–71	
Genoa (ft^2/m^2)		200	19	300	28	350	33	470	44	550	51	600	56	750	70	900	84	1500	139	1900	177	2300	214
Spinnaker (ft^2/m^2)		300	28	400	37	600	56	800	74	1000	93	1200	111	1400	130	1600	149	3000	279	3800	353	4600	427
Main (ft^2/m^2)		120	11	150	14	180	17	210	20	230	21	260	24	300	28	350	33	750	70	875	81	1000	93



Lighter shading represents the upper limit of the model. If in doubt, move up a model.

The Lewmar Winch Range

Page 88 EVO® Winch

- Available from Size 6 to Size 80
- Easy Servicing – no tools required
- Convertable to electric from size 40 up
- Choice of multiple styles and finishes
- 7 year warranty

Page 93 Ocean Self-Tailing Winches

- Easy Servicing – no tools required
- Convertable to electric from size 40 up
- Available in Size 16 to Size 65

Page 96 REVO® Winch

- Available in five sizes (40, 45, 50, 55,65)
- Uses proven winch internals so retains all the benefits of the EVO® Winch
- Most suitable for genoa sheeting
- Four patents pending

Page 97 Electric Winches

- Purchase complete or retrofit
- Push button power control
- Features manual override
- CW800 Captive Winch for smaller yachts

Page 102 Hydraulic Winches

- Ideal for craft over 15m (50ft)
- Minimal space and weight
- Quiet operation
- Features manual override

Page 104 Custom Winches

- Cutting edge performance
- Wide range of finish and style
- Superior strength
- Easy to service

Page 108 Pedestal Systems

- Lightweight I-beam carbon shell
- Unique belt drive ensures maximum efficiency
- Removable pedestal option for fast cruising market
- Twist or straight pedestal options

Page 110 Line Management System

- Up to 25% lighter than previous models
- Up to 3 speed options
- Unique stowing system ensures low line tension
- Emergency high-load release feature

Page 112 Winch Handles

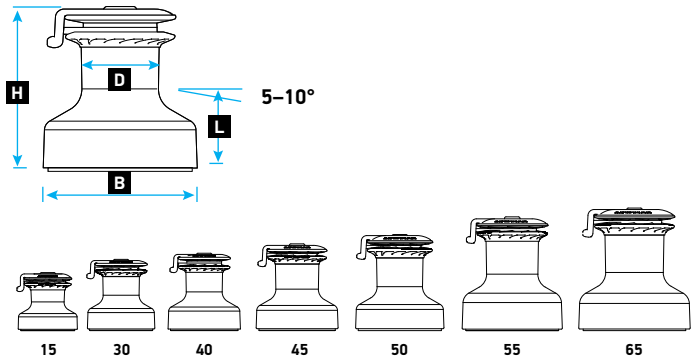
- Award-winning OneTouch offers easy one-handed removal
- Lightweight, forged construction
- PowerGrip makes initial one-handed fast cranking easy
- Corrosion resistant

EVO® Self-Tailing Winches

An evolution of the renowned Lewmar Ocean winch, the EVO® Self-Tailing Winch draws on a wealth of design and manufacturing experience to produce a state-of-the-art winch. With a wide choice of sizes and styles, there is a versatile EVO® for any style or application.

- Easy Servicing – no tools required
- User friendly direction arrows
- Choice of three finishes.
- Convertible (40 and above) to electric
- Available in Size 15 to Size 80
- 7-year warranty

Dimensions Diagram EVO® Self-Tailing Winch



EVO® Self-Tailing Winch Specifications

PART NO	MODEL	FINISH	GEAR RATIO		POWER RATIO		WLL		WEIGHT		D DRUM DIA		B BASE DIA		H HEIGHT		L LINE ENTRY		LINE SIZE	
			1st	2nd	1st	2nd	kg	lb	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in
49515055	15ST	Alloy Black	2:1	-	15.8:1	-	570	1257	2.6	5.7	66.8	2 5/8	121	4 3/4	119	4 11/16	58	2 5/16	8–12	5/16–1/2
49515057	15ST	Alloy Grey	2:1	-	15.8:1	-	570	1257	2.6	5.7	66.8	2 5/8	121	4 3/4	119	4 11/16	58	2 5/16	8–12	5/16–1/2
49515056	15ST	Chrome Bronze	2:1	-	15.8:1	-	570	1257	3.9	8.6	66.8	2 5/8	121	4 3/4	119	4 11/16	58	2 5/16	8–12	5/16–1/2
49530055	30ST	Alloy Black	2:1	4.2:1	13.8:1	29.2:1	685	1510	4	8.8	74	2 15/16	138	5 7/16	145.85	5 3/4	69	2 11/16	8–12	5/16–1/2
49530057	30ST	Alloy Grey	2:1	4.2:1	13.8:1	29.2:1	685	1510	4	8.8	74	2 15/16	138	5 7/16	145.85	5 3/4	69	2 11/16	8–12	5/16–1/2
49530056	30ST	Chrome Bronze	2:1	4.2:1	13.8:1	29.2:1	685	1510	5.4	11.9	74	2 15/16	138	5 7/16	145.85	5 3/4	69	2 11/16	8–12	5/16–1/2
49540055	40ST	Alloy Black	1.9:1	5.8:1	13.2:1	40.2:1	795	1753	4.9	10.7	74	2 15/16	148	5 13/16	158.5	6 1/4	79	3 1/8	8–12	5/16–1/2
49540057	40ST	Alloy Grey	1.9:1	5.8:1	13.2:1	40.2:1	795	1753	4.9	10.7	74	2 15/16	148	5 13/16	158.5	6 1/4	79	3 1/8	8–12	5/16–1/2
49540056	40ST	Chrome Bronze	1.9:1	5.8:1	13.2:1	40.2:1	795	1753	6.5	14.3	74	2 15/16	148	5 13/16	158.5	6 1/4	79	3 1/8	8–12	5/16–1/2
49545055	45ST	Alloy Black	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	7.1	15.6	87	3 7/16	168	6 5/8	177.7	7	84	3 5/16	8–14	5/16–9/16
49545057	45ST	Alloy Grey	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	7.1	15.6	87	3 7/16	168	6 5/8	177.7	7	84	3 5/16	8–14	5/16–9/16
49545056	45ST	Chrome Bronze	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	9.7	21.3	87	3 7/16	168	6 5/8	177.7	7	84	3 5/16	8–14	5/16–9/16
49550055	50ST	Alloy Black	2.6:1	9:1	13.9:1	48.6:1	1250	2756	9	19.8	93	3 5/8	181	7 1/8	197	7 3/4	90	3 1/2	8–14	5/16–9/16
49550057	50ST	Alloy Grey	2.6:1	9:1	13.9:1	48.6:1	1250	2756	9	19.8	93	3 5/8	181	7 1/8	197	7 3/4	90	3 1/2	8–14	5/16–9/16
49550056	50ST	Chrome Bronze	2.6:1	9:1	13.9:1	48.6:1	1250	2756	12.3	27	93	3 5/8	181	7 1/8	197	7 3/4	90	3 1/2	8–14	5/16–9/16
49555055	55ST	Alloy Black	2.8:1	11.2:1	13.8:1	54:1	1480	3263	12.2	26.9	105	4 1/8	205	8 1/16	233	9 11/32	115	4 1/2	8–16	5/16–5/8
49555057	55ST	Alloy Grey	2.8:1	11.2:1	13.8:1	54:1	1480	3263	12.2	26.9	105	4 1/8	205	8 1/16	233	9 11/32	115	4 1/2	8–16	5/16–5/8
49555056	55ST	Chrome Bronze	2.8:1	11.2:1	13.8:1	54:1	1480	3263	18	39.6	105	4 1/8	205	8 1/16	233	9 11/32	115	4 1/2	8–16	5/16–5/8
49565055	65ST	Alloy Black	3.1:1	14.8:1	13.4:1	64:1	1700	3748	16.6	36.5	118	4 5/8	228	9	251	9 7/8	119	4 11/16	8–18	5/16–11/16
49565057	65ST	Alloy Grey	3.1:1	14.8:1	13.4:1	64:1	1700	3748	16.6	36.5	118	4 5/8	228	9	251	9 7/8	119	4 11/16	8–18	5/16–11/16
49565056	65ST	Chrome Bronze	3.1:1	14.8:1	13.4:1	64:1	1700	3748	23.8	52.4	118	4 5/8	228	9	251	9 7/8	119	4 11/16	8-18	5/16-11/16

EVO® Winches

Lewmar fuses its legendary quality with state of the art technology to offer the most advanced winch range ever – the EVO®. We've taken Lewmar's Ocean Winch, the most popular winch ever made, and improved it further. The EVO® winch is a development that contains years of knowledge and understanding of what boat builders and sailors want. No compromises have been made in terms of quality or integrity of design.

Simple Servicing

No tools are required to service a Lewmar EVO® winch. Simply unscrew the top cap with your fingers to remove the drum and provide access to the proven gear train.

Multiple Styles and Finishes

EVO® winches are available in black or grey alloy and chrome bronze for the cruising sailor. Manual winches feature single speed or two speed, while Size 40 to Size 80 are available with electric or Hydraulic operation.

Wave Spring Jaw and Feeder Arm

The integrated investment cast stainless steel feeder arm completely covers the top of the winch, preventing a rope trap above the Wavespring jaws. The feeder arm position can be adjusted to smoothly feed the rope out of the jaws and into the cockpit.

Engineering Excellence

For Lewmar customers, there is no such thing as "just a winch". That's because inside every winch you will find materials developed over many years, designed using the latest techniques, and machined using CNC equipment. When we machine the winches we are looking for the maximum in efficiency, durability, and strength to weight ratio.

Electric Winches

Whatever sailing you do, short handed or long distance cruising, the decision to install electric winches or upgrade your existing winches with one of our conversion kits is simple.

7-Year Warranty

We are so confident about the quality of the EVO® winch range that we are backing it up with a 7-year warranty.

EVO® Race Winches

The new EVO® Race winches combine EVO® architecture with all-new top components to offer a sleeker and racier look.

- "No tools" servicing
- Cast aluminium feeder arm
- Black anodised drum
- Carbon fibre top inlay feature
- Silver trim band and white decals

EVO® Race Self-Tailing Winch Specifications

PART NO	SIZE	GEAR RATIO		POWER RATIO		WLL		WEIGHT		**D** DRUM DIA		**B** BASE DIA		**H** HEIGHT		**L** LINE ENTRY		LINE SIZE	
		1st	2nd	1st	2nd	kg	lb	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in
49730055	30ST	2:1	4.2:1	13.8:1	29.2:1	685	1510	4	8.8	74	$2^{15}/_{16}$	138	$5^{7}/_{16}$	145.85	$5^{3}/_{4}$	69	$2^{11}/_{16}$	8–12	$^{5}/_{16}$–$^{1}/_{2}$
49740055	40ST	1.9:1	5.8:1	13.2:1	40.2:1	795	1753	4.9	10.7	74	$2^{15}/_{16}$	148	$5^{13}/_{16}$	158.5	$6^{1}/_{4}$	79	$3^{1}/_{8}$	8–12	$^{5}/_{16}$–$^{1}/_{2}$
49745055	45ST	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	7.1	15.6	87	$3^{7}/_{16}$	168	$6^{5}/_{8}$	177.7	7	84	$3^{5}/_{16}$	8–14	$^{5}/_{16}$–$^{9}/_{16}$
49750055	50ST	2.6:1	9:1	13.9:1	48.6:1	1250	2756	9	19.8	93	$3^{5}/_{8}$	181	$7^{1}/_{8}$	197	$7^{3}/_{4}$	90	$3^{1}/_{2}$	8–14	$^{5}/_{16}$–$^{9}/_{16}$
49755055	55ST	2.8:1	11.2:1	13.8:1	54:1	1480	3263	12.2	26.9	105	$4^{1}/_{8}$	205	$8^{1}/_{16}$	233	$9^{11}/_{32}$	115	$4^{1}/_{2}$	8–16	$^{5}/_{16}$–$^{5}/_{8}$

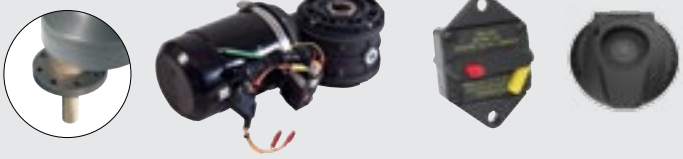
Evo® Winch Electric Conversion Kit

Upgrade your manual winch to an electric model with the Evo upgrade kit.

The kit contains all you need to convert to an electric winch.

Option for models 40 to 50 to have the contactor pre-mounted to the motor gearbox removing any complicated wiring for a more tidy and easier installation. It only requires connecting the battery and the switch supplied.

Kit includes



Power Drive | **Motor Gearbox and Contactor** (Photo shows the contactor pre-mounted version) | **Circuit Breaker** | **Switch**

WINCH SIZE	12V CONVERSION KIT CONTACTOR PRE-MOUNTED	12V CONVERSION KIT WITH SEPARATE CONTACTOR
40ST	**48540301**	**48540300**
45ST	**48545301**	**48545300**
50ST	**48550301**	**48550300**
55ST	-	**48555300**

For complete electric Evo® winches refer to p. 97

Mounting Instructions

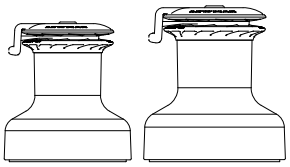
15ST	5 x M6 (¼ in) c'sk head screws on 94mm ($3^{7}/_{10}$ in) PCD
30ST	5 x M6 (¼ in) c'sk head screws on 113mm ($4^{15}/_{32}$ in) PCD
40ST	5 x M6 ($^{1}/_{4}$ in) c'sk head screws on 121mm (4¾ in) PCD
45ST	5 x M8 ($^{5}/_{16}$ in) c'sk head screws on 136mm ($5^{11}/_{32}$ in) PCD
50ST	5 x M8 ($^{5}/_{16}$ in) c'sk head screws on 150mm ($5^{29}/_{32}$ in) PCD
55ST	6 x M8 ($^{5}/_{16}$ in) c'sk head screws on 165mm ($_{6}$½ in) PCD
65ST	5 x M10 (⅜ in) c'sk head screws on 184mm ($_{7}$¼ in) PCD
70-70/3ST	6 x M10 (⅜ in) c'sk head screws on 241mm ($_{9}$½ in) PCD
80-80/3ST	6 x M10 (⅜ in) c'sk head screws on 241mm ($_{9}$½ in) PCD

Expert Advice

When installing a winch, Lewmar recommends the winch must be mounted on a flat surface and that the rope enters the drum at an angle of 5° to 10° to the base axis of the winch. This angle can be achieved by using a base wedge when mounting the winch.

Custom Evo® Winches

Lewmar Evo winches extend to size 80, 3 speed.



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Custom EVO® Self-Tailing Winch Specifications

PART NO	MODEL	FINISH	GEAR RATIO		POWER RATIO		WLL		WEIGHT		D DRUM DIA		B BASE DIA		H HEIGHT		L LINE ENTRY		LINE SIZE	
			1st	2nd	1st	2nd	kg	lb	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in
49570055	70ST	Alloy Black	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	7.1	15.6	87	$3^{7}/_{16}$	168	$6^{5}/_{8}$	177.7	7	84	$3^{5}/_{16}$	8–14	$^{5}/_{16}$–$^{9}/_{16}$
49570057	70ST	Alloy Grey	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	7.1	15.6	87	$3^{7}/_{16}$	168	$6^{5}/_{8}$	177.7	7	84	$3^{5}/_{16}$	8–14	$^{5}/_{16}$–$^{9}/_{16}$
49570056	70ST	Chrome Bronze	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	9.7	21.3	87	$3^{7}/_{16}$	168	$6^{5}/_{8}$	177.7	7	84	$3^{5}/_{16}$	8–14	$^{5}/_{16}$–$^{9}/_{16}$
49570065	70/3ST	Alloy Black	2.6:1	9:1	13.9:1	48.6:1	1250	2756	9	19.8	93	$3^{5}/_{8}$	181	$7^{1}/_{8}$	197	$7^{3}/_{4}$	90	$3^{1}/_{2}$	8–14	$^{5}/_{16}$–$^{9}/_{16}$
49570067	70/3ST	Alloy Grey	2.6:1	9:1	13.9:1	48.6:1	1250	2756	9	19.8	93	$3^{5}/_{8}$	181	$7^{1}/_{8}$	197	$7^{3}/_{4}$	90	$3^{1}/_{2}$	8–14	$^{5}/_{16}$–$^{9}/_{16}$
49570066	70/3ST	Chrome Bronze	2.6:1	9:1	13.9:1	48.6:1	1250	2756	12.3	27	93	$3^{5}/_{8}$	181	$7^{1}/_{8}$	197	$7^{3}/_{4}$	90	$3^{1}/_{2}$	8–14	$^{5}/_{16}$–$^{9}/_{16}$
Contact Lewmar	80ST	Alloy Black	2.8:1	11.2:1	13.8:1	54:1	1480	3263	12.2	26.9	105	$4^{1}/_{8}$	205	$8^{1}/_{16}$	233	$9^{11}/_{32}$	115	$4^{1}/_{2}$	8–16	$^{5}/_{16}$–$^{5}/_{8}$
	80ST	Alloy Grey	2.8:1	11.2:1	13.8:1	54:1	1480	3263	12.2	26.9	105	$4^{1}/_{8}$	205	$8^{1}/_{16}$	233	$9^{11}/_{32}$	115	$4^{1}/_{2}$	8–16	$^{5}/_{16}$–$^{5}/_{8}$
	80ST	Chrome Bronze	2.8:1	11.2:1	13.8:1	54:1	1480	3263	18	39.6	105	$4^{1}/_{8}$	205	$8^{1}/_{16}$	233	$9^{11}/_{32}$	115	$4^{1}/_{2}$	8–16	$^{5}/_{16}$–$^{5}/_{8}$
49580065	80/3ST	Alloy Black	3.1:1	14.8:1	13.4:1	64:1	1700	3748	16.6	36.5	118	$4^{5}/_{8}$	228	9	251	$9^{7}/_{8}$	119	$4^{11}/_{16}$	8–18	$^{5}/_{16}$–$^{11}/_{16}$
49580067	80/3ST	Alloy Grey	3.1:1	14.8:1	13.4:1	64:1	1700	3748	16.6	36.5	118	$4^{5}/_{8}$	228	9	251	$9^{7}/_{8}$	119	$4^{11}/_{16}$	8–18	$^{5}/_{16}$–$^{11}/_{16}$
49580066	80/3ST	Chrome Bronze	3.1:1	14.8:1	13.4:1	64:1	1700	3748	23.8	52.4	118	$4^{5}/_{8}$	228	9	251	$9^{7}/_{8}$	119	$4^{11}/_{16}$	8-18	$^{5}/_{16}$-$^{11}/_{16}$

EVO® Sport Winch

The EVO® Sport complements the EVO® Winch Range. Best suited for sport boats requiring constant trimming and where weight consideration is a premium, the EVO® Sport is also suitable as a mast mounted winch.

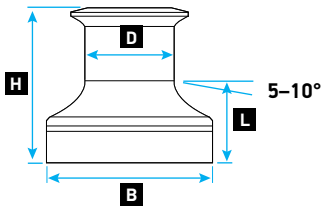
- Architecture based on self tailing EVO® Winch
- Tool-free servicing
- Size 30 and 40 can be converted into an EVO® Self tailing winch retrospectively
- Size 40 convertible to electric
- Choice of finishes: Black alloy or Chrome bronze
- Available in Size 6 to Size 40

EVO® Sport Winch Black Size 40

EVO® Sport Winch Chrome Size 40

EVO® Sport Winch Black Size 7

Dimensions Diagram EVO® Sport Winch



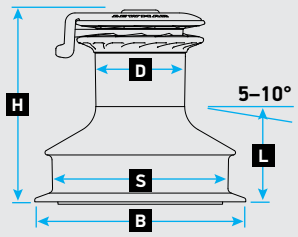
EVO® Sport Winch Specifications

PART NO	MODEL	FINISH	GEAR RATIO		POWER RATIO		WLL		WEIGHT		D DRUM DIA		B BASE DIA		H HEIGHT		L LINE ENTRY		MOUNTING INSTRUCTIONS
			1st	2nd	1st	2nd	kg	lb	kg	lb	mm	in	mm	in	mm	in	mm	in	
49006075	6	Alloy Black	1:1	-	6.8:1	-	341	752	0.5	1.1	59	2 5/16	94	3 11/16	83	3 1/4	35.5	1 3/8	4 x M6 (1/4 in) c'sk head screws on 66mm (2 19/32 in) PCD
19006100	6	Chrome	1:1	-	6.8:1	-	341	752	1.1	2.4	59	2 5/16	94	3 11/16	83	3 1/4	35.5	1 3/8	
49507075	7	Alloy Black	1:1	-	7.9:1	-	341	752	0.8	1.8	65	2 9/16	108	4 1/4	102	4	40	1 9/16	5 x M6 (1/4 in) c'sk head screws on 80mm (3 5/32 in) PCD
49507076	7	Chrome	1:1	-	7.9:1	-	341	752	1.7	3.7	65	2 9/16	108	4 1/4	102	4	40	1 9/16	
49508075	8	Alloy Black	1:1	-	7.9:1	-	455	1003	1.4	3.1	65	2 9/16	108	4 1/4	103	4 1/16	40	1 9/16	5 x M6 (1/4 in) c'sk head screws on 80mm (3 5/32 in) PCD
49508076	8	Chrome	1:1	-	7.9:1	-	455	1003	2.3	5.1	65	2 9/16	108	4 1/4	103	4 1/16	40	1 9/16	
49516075	15	Alloy Black	1:1	2:1	7.9:1	16:1	570	1257	2.1	4.6	67	2 5/8	120	4 3/4	112	4 7/16	55	2 3/16	5 x M6 (1/4 in) c'sk head screws on 94mm (3 11/16 in) PCD
49516076	15	Chrome	1:1	2:1	7.9:1	16:1	570	1257	3.2	7.0	67	2 5/8	120	4 3/4	112	4 7/16	55	2 3/16	
49530075	30	Alloy Black	2:1	4.2:1	13.8:1	29.21	685	1510	3.9	8.6	74	2 15/16	138	5 7/16	145.85	5 3/4	69	2 11/16	5 x M6 (1/2 in) c'sk head screws on 113mm (4 15/32 in) PCD
49530076	30	Chrome	2:1	4.2:1	13.8:1	29.21	685	1510	5.8	12.8	74	2 15/16	138	5 7/16	145.85	5 3/4	69	2 11/16	
49540075	40	Alloy Black	1.9:1	5.8:1	13.2:1	40.2:1	795	1753	5.5	12.1	74	2 15/16	148	5 13/16	158.5	6 1/4	79	3 1/8	5 x M6 (1/2 in) c'sk head screws on 121mm (4 3/4 in) PCD
49540076	40	Chrome	1.9:1	5.8:1	13.2:1	40.2:1	795	1753	7	15.4	74	2 15/16	148	5 13/16	158.5	6 1/4	79	3 1/8	

EVO® Speed Ring Winch

EVO® Speed Ring racing winches offer all the features of the EVO® Range with the additional benefit of two drum diameters. The larger drum is used for fast asymmetric spinnaker gybes or hoists while the standard size drum allows fine tuning, removing the need for additional winches.

- Easy servicing – no tools required
- Available in black or grey alloy finish
- Features two drum diameters for greater control



EVO® Speed Ring Winch Specifications

PART NO	SIZE	FINISH	GEAR RATIO		POWER RATIO		SPEED RING POWER RATIO		WLL		WEIGHT		D DRUM DIA		S SPEED RING DIA		B BASE DIA		H HEIGHT		L LINE ENTRY		LINE SIZE	
			1st	2nd	1st	2nd	1st	2nd	kg	lb	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
49540085	40	Black	1.9:1	5.8:1	13.2:1	40.2:1	6.6:1	20.3:1	795	1753	4.9	10.7	74	2 15/16	145.5	5 3/4	148	5 13/16	158.5	6 1/4	79	3 1/8	8-12	5/16-1/2
49540087	40	Grey	1.9:1	5.8:1	13.2:1	40.2:1	6.6:1	20.3:1	795	1753	4.9	10.7	74	2 15/16	145.5	5 3/4	148	5 13/16	158.5	6 1/4	79	3 1/8	8-12	5/16-1/2
49545085	45	Black	2.36:1	8.0:1	13.86:1	46.8:1	7:1	22.6:1	1200	2643	7.6	16.7	86.8	3 7/16	170.5	6 3/4	205	8	177.5	7	84.5	3 5/16	8-12	5/16-1/2
49545087	45	Grey	2.36:1	8.0:1	13.86:1	46.8:1	7:1	22.6:1	1200	2643	7.6	16.7	86.8	3 7/16	170.5	6 3/4	205	8	177.5	7	84.5	3 5/16	8-12	5/16-1/2

Lewmar Evo Race+™ Winch

Lewmar's EVO Race+ winches use a lightweight cast aluminium base stem and machined aluminium upper stem, together with other advanced material choices, to offer significant weight savings over standard EVO® winches.

- Lightweight centre stem
- Lightened main spindle
- Lightweight cast aluminium feeder arm
- Composite bearing technology
- "No tools" servicing
- Carbon fibre inlay
- Silver trim stripe
- White pad-printed decals.
- Black anodised drum

EVO® Race+™ Self-Tailing Winch Specifications

PART NO	SIZE	GEAR RATIO		POWER RATIO		WLL		WEIGHT		D DRUM DIA		B BASE DIA		H HEIGHT		L LINE ENTRY		LINE SIZE	
		1st	2nd	1st	2nd	kg	lb	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in
49940055	40ST	1.9:1	5.8:1	13.2:1	40.2:1	795	1753	3.6	7.9	74	2 15/16	148	5 13/16	158.5	6 1/4	79	3 1/8	8-12	5/16-1/2
49945055	45ST	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	4.8	10.5	87	3 7/16	168	6 5/8	177.7	7	84	3 5/16	8-14	5/16-9/16
49950055	50ST	2.6:1	9:1	13.9:1	48.6:1	1250	2756	6.3	13.9	93	3 5/8	181	7 1/8	197	7 3/4	90	3 1/2	8-14	5/16-9/16
49955055	55ST	2.8:1	11.2:1	13.8:1	54:1	1480	3263	8.3	18.3	105	4 1/8	205	8 1/16	250	9 13/16	115	4 1/2	8-16	5/16-5/8

Ocean Self-Tailing Winches

Lewmar's Ocean winch range is the most popular winch ever made. Its styling still attracts boat builders looking for a more classic look, or boat owners looking to upgrade or replace their existing winches.

- Easy Servicing – no tools required
- Bronze finish also available - contact your retailer
- Convertable to electric from size 40 upwards
- Available in Size 16 to Size 65

Ocean Self-Tailing Winch Specifications

PART NO	MODEL	FINISH	GEAR RATIO		POWER RATIO		WLL		WEIGHT		DRUM DIA		BASE DIA		HEIGHT		ENTRY LINE		LINE SIZE	
			1st	2nd	1st	2nd	kg	lb	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in
49016000	16ST	Alloy Grey	2:1	-	15.8:1	-	570	1257	2.9	6.4	65.7	2 9/16	121	4 3/4	145.5	5 3/4	58	2 5/16	8–12	5/16–1/2
49016001	16ST	Chrome Bronze	2:1	-	15.8:1	-	570	1257	3.9	8.6	65.7	2 9/16	121	4 3/4	145.5	5 3/4	58	2 5/16	8–12	5/16–1/2
49030000	30ST	Alloy Grey	2:1	4.2:1	13.8:1	29.2:1	685	1510	4.2	9.2	74	2 15/16	138	5 7/16	160.5	6 5/16	69	2 11/16	8–12	5/16–1/2
49030001	30ST	Chrome Bronze	2:1	4.2:1	13.8:1	29.2:1	685	1510	5.6	12.3	74	2 15/16	138	5 7/16	160.5	6 5/16	69	2 11/16	8–12	5/16–1/2
49040055	40ST	Alloy Grey	1.9:1	5.8:1	13.2:1	40.2:1	795	1753	4.9	10.7	74	2 15/16	148	5 13/16	173	6 13/16	79	3 1/8	8–12	5/16–1/2
49040056	40ST	Chrome Bronze	1.9:1	5.8:1	13.2:1	40.2:1	795	1753	6.5	14.3	74	2 15/16	148	5 13/16	173	6 13/16	79	3 1/8	8–12	5/16–1/2
49046055	46ST	Alloy Grey	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	7.2	15.8	87	3 7/16	168	6 5/8	192	7 9/16	84	3 5/16	8–14	5/16–9/16
49046056	46ST	Chrome Bronze	2.4:1	7.6:1	13.9:1	44.8:1	1200	2646	9.7	21.3	87	3 7/16	168	6 5/8	192	7 9/16	84	3 5/16	8–14	5/16–9/16
49048055	48ST	Alloy Grey	2.6:1	9:1	13.9:1	48.6:1	1250	2756	8.8	19.4	93	3 5/8	181	7 1/8	208	8 3/16	86	3 3/8	8–14	5/16–9/16
49048056	48ST	Chrome Bronze	2.6:1	9:1	13.9:1	48.6:1	1250	2756	12.1	26.7	93	3 5/8	181	7 1/8	208	8 3/16	86	3 3/8	8–14	5/16–9/16
49050000	50ST	Alloy Grey	2.8:1	10.5:1	13.8:1	50.6:1	1250	2756	11.3	24.9	105	4 1/8	200	7 7/8	238	9 3/8	106	4 3/16	8–16	5/16–5/8
49050001	50ST	Chrome Bronze	2.8:1	10.5:1	13.8:1	50.6:1	1250	2756	16.3	35.9	105	4 1/8	200	7 7/8	238	9 3/8	106	4 3/16	8–16	5/16–5/8
49054000	54ST	Alloy Grey	2.8:1	11.2:1	13.8:1	54:1	1480	3263	12.0	26.4	105	4 1/8	205	8 1/16	250	9 7/8	115	4 1/2	8–16	5/16–5/8
49054001	54ST	Chrome Bronze	2.8:1	11.2:1	13.8:1	54:1	1480	3263	17.0	37.5	105	4 1/8	205	8 1/16	250	9 7/8	115	4 1/2	8–16	5/16–5/8
49058000	58ST	Alloy Grey	3.1:1	13.5:1	13.5:1	58.1:1	1600	3524	14.3	31.5	118	4 5/8	228	9	266	10 1/2	118.5	4 11/16	8–18	5/16–11/16
49058001	58ST	Chrome Bronze	3.1:1	13.5:1	13.5:1	58.1:1	1600	3524	20.8	45.8	118	4 5/8	228	9	266	10 1/2	118.5	4 11/16	8–18	5/16–11/16
49065000	65ST	Alloy Grey	3.1:1	15.3:1	13.4:1	66:1	1700	3748	16.6	36.5	118	4 5/8	231	9 1/8	271	10 11/16	121.5	4 13/16	8–18	5/16–11/16
49065001	65ST	Chrome Bronze	3.1:1	15.3:1	13.4:1	66:1	1700	3748	23.8	52.4	118	4 5/8	231	9 1/8	271	10 11/16	121.5	4 13/16	8–18	5/16–11/16

Larger models available - see Custom winch section p .104

Mounting Instructions

Ocean 16ST	5 x M6 (1/4 in) c'sk head screws on 94mm (3 11/16 in) PCD
Ocean 30ST	5 x M6 (1/4 in) c'sk head screws on 113mm (4 15/32 in) PCD
Ocean 40ST	5 x M6 (1/4 in) c'sk head screws on 121mm (4 3/4 in) PCD
Ocean 46ST	5 x M8 (5/16 in) c'sk head screws on 136mm (5 11/32 in) PCD

Ocean 48ST	5 x M8 (5/16 in) c'sk head screws on 150mm (5 29/32 in) PCD
Ocean 50-54ST	6 x M8 (5/16 in) c'sk head screws on 165mm (6 1/2 in) PCD
Ocean 58-65ST	5 x M10 (3/8 in) c'sk head screws on 184mm (7 1/4 in) PCD

Ocean Winch Electric Conversion Kit

Upgrade your manual winch to an electric model with the Ocean upgrade kit. The kit contains all you need to convert your existing manual winch to an electric powered version.

Kit includes

Power Drive

Motor Gearbox

Contactor

Circuit Breaker

Switch

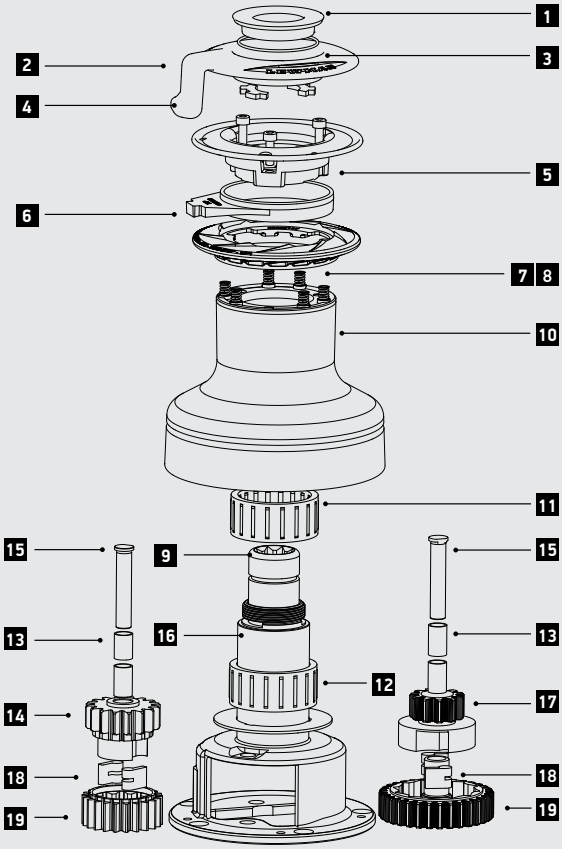
PART NUMBER	DESCRIPTION
48040300	40ST 12V 'E' Conversion Kit
48046300	46ST 12V 'E' Conversion Kit
48048300	48ST 12V 'E' Conversion Kit
48050300	50ST 12V 'ELS' Conversion Kit
48054300	54ST 12V 'ELS' Conversion Kit
48058300	58ST 12V 'ELS' Conversion Kit

Servicing Your Winch

Know your winch

Scan me

Scan the QR code with your smartphone for an instructional video guide



1. Top Cap
2. Feeder arm
3. Collet
4. Upper crown
5. Stripper ring
6. Lower crown
7. Spring
8. Spring cup
9. Main spindle
10. Drum
11. Roller bearing assembly
12. Drum washer
13. Gear spindle sleeve
14. Pawl gear
15. Gear spindle
16. Centre stem
17. Pawl spring (not shown)
18. Pawl
19. Ratchet gear

Frequency of servicing

Lewmar winches must be serviced regularly. Winches are required to carry deceptively high loads. Regular servicing, with attention to correct assembly and condition of parts, is vital to the safety and performance of your boat.

When?

1. Two or three times during active sailing season winches should be stripped, cleaned and re-lubricated.
2. At the end of each sailing season and before starting the new sailing season all Lewmar winches should be completely stripped, cleaned, thoroughly checked for damage and lubricated. (see the latest issue of the Lewmar Winch Service Manual available at www.lewmar.com)

External cleaning of the drum.

Chromed and stainless steel winches – wash drum regularly with fresh water and dry with a cloth. Non-abrasive liquid chrome cleaner can be used occasionally to remove dirt spots.

Alloy winches – wash drum regularly with fresh water and dry with a cloth. DO NOT use polishes or abrasives.

Servicing Winches

All components should be removed and cleaned in a paraffin bath during the course of servicing. If you do not have access to a paraffin bath, use half of an old plastic container with an old toothbrush. Even a cotton cloth soaked in paraffin or white spirit will suffice.

Caution

Some Lewmar winches contain plastic components which may be damaged by inappropriate cleaning agents. Always check the manufacturers directions before using any cleaning agents.

Greasing

Never use grease to lubricate your pawls, as this can lead to pawls sticking in their pockets and disabling the winch. Instead, lubricate with a light engine oil.

Use only a light smear of winch grease when lubricating ratchet tracks, gear teeth and bearings. Otherwise excess grease will be forced out and collect in potentially dangerous areas, such as pawl pockets.

Assembly

Winches must be re-assembled in the reverse sequence to the order of dismantling. After re-assembly, immediately check the winch functions correctly.

Mounting

Winches must be fitted as explain in the product manual (supplied with every winch and downloadable from www.lewmar.com).
Winches are self-draining and care should be taken to ensure the drain holes are not obstructed.

Ratchet Gears – Pawl Engagement

When assembling ratchet gears, check pawl engagement as shown below. Incorrect assembly will lead to back winding of the winch. This is very dangerous, so extreme care should be taken.

✘ **Wrong**

✓ **Correct**

Winch Maintenance Kits

Lewmar offers a full range of winch spares. Service kits include all common servicable spares including pawls, springs, sleeves, o-seals etc.

Full details of winch spares, including exploded diagrams to aid identification, are available from the spares section of www.lewmar.com.

48000014

Suitable for

- Ocean Standard winch sizes 6-40
- Ocean ST winch sizes 14 & 16
- EVO ST winch size 15

48000019

Suitable for

- Ocean ST winch sizes 30-48
- EVO ST winch sizes 30-50

48000017

Suitable for

- Ocean ST winch sizes 50-65
- EVO ST winch sizes 55-65

48000018

Suitable for

- Ocean ST winch size 68
- EVO ST winch size 70

19701500
Winch Maintenance Pack

19701000
Grease — 100g

19701100
Grease - 300g

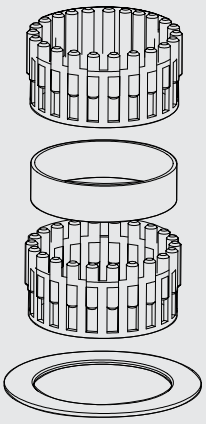
19701600
Race Lube -55ml

Winch Spares Kits

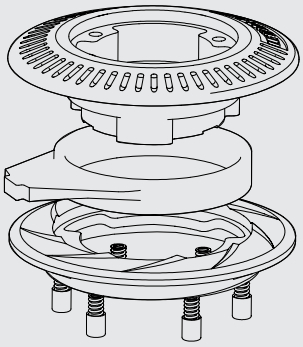
A full rang of spares kits are also available, from bearing packages to jaw kits and everything in between. Contact your local Lewmar supplier or visit the spares section of www.lewmar.com

Scan me

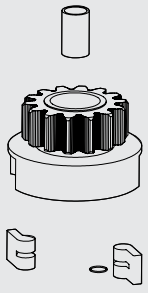
Scan the QR code with your smartphone for more information about lewmar spares



Drum Bearing Kit



Jaw Kit



Pawl Gear Kit

REVO™ Backwinding Winch

Lewmar introduces a complete range of electrically-operated, backwinding winches. With the touch of a button, sailors are able to trim sails both in and out. Push one button and the winch sheets in quickly to the Working Load Limit. A well-specified motor removes the added complication of switching between slow and fast forward gears. Simply push another button to allow the winch to pay out line. The insertion of a winch handle automatically changes to a familiar two-speed manual operation.

- Available in five sizes (40, 45, 50, 55, 65)
- No modification to the standard bolting pattern and deck cut-outs
- Direct size for size upgrade from a standard electric EVO® winch to a REVO™ winch
- Uses proven winch internals so retains all the benefits of the EVO® Winch
- Simple two button operation, one to pull rope in and another to pay rope out
- Operates as a normal two speed manual winch when a winch handle is inserted
- Four patents pending

Available in Sizes 40 to 65, the versatile REVO™ winch is an effortless revolution in sail control!

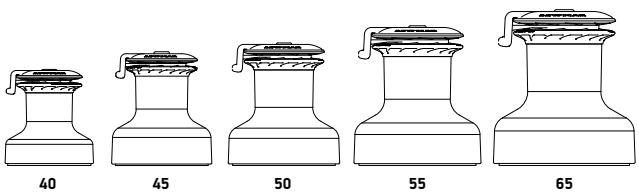
Scan me

Scan the QR code with your smartphone for a product demo video

When back-winding, the REVO relies on load to strip the rope off the drum, thus avoiding tangles and ensuring rope is only released in the right circumstance.

In order to maximise the performance of the REVO winch, applications with minimal mechanical advantage are best, such as genoa/gennaker sheets. Purchase mainsheet systems may present too little load for the backwind feature to work.

In addition, small diameter, hi-tech lines are recommended.



EVO® Electric Winches

A Self-Tailing EVO® Winch that works at the push of a button! That's exactly what you will find with Lewmar's electric winch range. Whether you buy an electrically-operated winch complete or retro-fit the compact electric motor/controller unit, the electric EVO® provides improved sail control.

- Push Button Power
- Quiet operation
- Manual override
- All the benefits of the EVO® range
- Easy to install
- Inclusive of contactor and motor units
- Feature powerful series wound motors
- Choice of two levels of control: E Series or Electric Load Sensing (ELS)
- Available for Size 40, 45, & 50, E Series controller features a thermal trip
- In addition to a thermal trip, the ELS Control Box cuts power when the winch reaches its Working Load Limit (WLL). Power resumes once the loads return below the WLL.
- ELS Control Boxes available for Size 40 to 80

Electric Evo 80 installed on Hallberg Rassy

EVO® Electric Winch Kit

The kit contains all you need to install your electric winch as follows:

Deck unit and motor gearbox

Circuit breaker

Switch

Contactor or Control box

Models 40 to 50 are supplied with the contactor pre-mounted to the motor gearbox removing any complicated wiring for a more tidy and easier installation. It only requires connecting the battery and the switch supplied.

Models size 55 up are supplied with an ELS control box which allows the winch to be operated up to a set current relative to the working load limit of the specific winch. Once this current is exceeded, the winch automatically cuts out. Once the current drops to below the working load limit, the winch can be restarted. The ELS features the additional safety function of a Motor Thermal Trip, which ensures that the motor cuts out in the event of excessive heat build up

EVO® Electric Winch Kits

PART NUMBER		DESCRIPTION
12 VOLTS	24 VOLTS	
49540219	**-**	40EST Alloy Black Electric Winch Kit
49540218	**-**	40EST Chrome Bronze Electric Winch Kit
49540217	**-**	40EST Alloy Grey Electric Winch Kit
49545219	**-**	45EST Alloy Black Electric Winch Kit
49545218	**-**	45EST Chrome Bronze Electric Winch Kit
49545217	**-**	45EST Alloy Grey Electric Winch Kit
49550219	**-**	50EST Alloy Black Electric Winch Kit
49550218	**-**	50EST Chrome Bronze Electric Winch Kit
49550217	**-**	50EST Alloy Grey Electric Winch Kit
49555210	**49555230**	55EST Alloy Black Electric Winch Kit
49555201	**49555221**	55EST Chrome Bronze Electric Winch Kit
49555200	**49555220**	55EST Alloy Grey Electric Winch Kit
49565210	**49565230**	65EST Alloy Black Electric Winch Kit
49565201	**49565221**	65EST Chrome Bronze Electric Winch Kit
49565200	**49565220**	65EST Alloy Grey Electric Winch Kit
-	**49570230**	70EST Alloy Black Electric Winch Kit
-	**49570221**	70EST Chrome Bronze Electric Winch Kit
-	**49570220**	70EST Alloy Grey Electric Winch Kit
-	**49570211**	70/3EST Alloy Black Electric Winch Kit
-	**49570212**	70/3EST Chrome Bronze Electric Winch Kit
-	**49570213**	70/3EST Alloy Grey Electric Winch Kit
-	**49580230**	80EST Alloy Black Electric Winch Kit
-	**49580221**	80EST Chrome Bronze Electric Winch Kit
-	**49580220**	80EST Alloy Grey Electric Winch Kit
-	**49580211**	80/3EST Alloy Black Electric Winch Kit
-	**49580212**	80/3EST Chrome Bronze Electric Winch Kit
-	**49580213**	80/3EST Alloy Grey Electric Winch Kit

Specify Your Own Electric Winch

1 Deck Unit

2 Motor Gearbox

3 Contactor/Control Box

4 Accessories

1 Electric Winch Deck Unit

Electric Winch

PART NUMBER	MODEL	FINISH	WEIGHT	
			kg	lb
48540210	40 EST	Alloy Black	17.8	39.3
48540201	40 EST	Chrome	19.5	43.0
48540200	40 EST	Alloy Grey	17.8	39.3
48545210	45 EST	Alloy Black	22.1	48.6
48545201	45 EST	Chrome	24.6	54.1
48545200	45 EST	Alloy Grey	22.1	48.6
48550210	50 EST	Alloy Black	24.7	54.3
48550201	50 EST	Chrome	28.1	61.8
48550200	50 EST	Alloy Grey	24.7	54.3
48555210	55 EST	Alloy Black	29.0	63.8
48555201	55 EST	Chrome	34.8	76.5
48555200	55 EST	Alloy Grey	29.0	63.8
48565210	65 EST	Alloy Black	33.6	73.9
48565201	65 EST	Chrome	40.8	89.7
48565200	65 EST	Alloy Grey	33.6	73.9

Custom Electric Winch

PART NUMBER	MODEL	FINISH	WEIGHT	
			kg	lb
48570210	70 EST	Alloy Black	42.0	92.6
48570201	70 EST	Chrome	48.8	107.6
48570200	70 EST	Alloy Grey	42.0	92.6
48570208	70/3 EST	Alloy Black	48.0	105.8
48570207	70/3 EST	Chrome	54.8	120.8
48570206	70/3 EST	Alloy Grey	48.0	105.8
48580210	80 EST	Alloy Black	49.3	108.7
48580201	80 EST	Chrome	55.3	121.9
48580200	80 EST	Alloy Grey	49.3	108.7
48580208	80/3 EST	Alloy Black	51.3	113.1
48580207	80/3 EST	Chrome	57.3	126.3
48580206	80/3 EST	Alloy Grey	51.3	113.1

Notes: Weights shown above includes the weight of Motor Gearbox & Control Box.

2 Motor Gearbox

PART NUMBER	DESCRIPTION	MOTOR (Watt)	40ST	45ST	50ST	55ST	65ST	70-70/3	80-80/3
48000116	40-50 12v M/GBOX ASSY	700	•	•	•				
48000117	40-50 24v M/GBOX ASSY	900	•	•	•				
48000075	55-65 12v M/GBOX ASSY	1600				•	•		
48000076	55-65 24v M/GBOX ASSY	2000				•	•		
48000077	70-80 12v M/GBOX ASSY	1600						•	•
48000078	70-80 24v M/GBOX ASSY	2000						•	•

Electric motor including contactor

Lewmar can also supply motor gearboxes with the E-series contactor pre-mounted. This convenient solution removes any complicated wiring for a more tidy and easier installation. The complete wiring is reduced to connecting the battery and the switch.

PART NUMBER	DESCRIPTION	MOTOR (Watt)	40ST	45ST	50ST
48000211	12v Pre-Wired M/GBOX	700	•	•	•
48000212	24v Pre-Wired M/GBOX	900	•	•	•

3 Contactors & Control Boxes

E-series

The E-series contactor is equipped with a thermal trip to monitor the motor temperature, which ensures a cut out if the heat builds up to an unacceptable level.

Available on the EVO® electric winch range 40, 45 & 50.

Electric load sensing – ELS

Pioneered by Lewmar, ELS (Electric Load Sensing) electric winches are controlled by an Overload Protection Control Box, which allows the winch to be operated up to a set current relative to the working load limit of the specific winch. Once this current is exceeded, the winch automatically cuts out. Once the current drops to below the working load limit, the winch can be restarted. The ELS features the additional safety function of a Motor Thermal Trip, which ensures that the motor cuts out in the event of excessive heat build up. ELS is available on the EVO® Electric Winch Range Size 40 to 80.

PART NUMBER	DESCRIPTION	40ST	45ST	50ST	55ST	65ST	70-70/3	80-80/3
68000933	Contactor 12V "E"	•	•	•				
68000934	Contactor 24V "E"	•	•	•				
18000301	Contactor Box 12V "E"	•	•	•				
18000302	Contactor Box 24V "E"	•	•	•				
48000217	ELS Control Box Type 1–3	24V						
48000220	ELS Control Box Type 1–6		24V					
48000221	ELS Control Box Type 1–7			24V	24V			
48000222	ELS Control Box Type 1–8	12V				24V		
48000224	ELS Control Box Type 2–2		12V					
48000225	ELS Control Box Type 2–3			12V				
48000227	ELS Control Box Type 2–5				12V			
48000229	ELS Control Box Type 2–7					12V		
48000178	70-70/3 Control Box 12v "ELS"						•	
48000179	70-70/3 Control Box 24v "ELS"						•	
48000180	80-80/3 Control Box 12v "ELS"							•
48000181	80-80/3 Control Box 24v "ELS"							•

Contactor "E"

"ELS" Electric Load Sensing Control Box

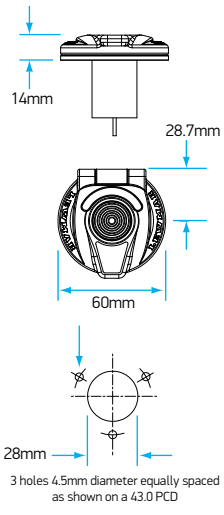
4 Accessories

SX Switch

- Suitable for DC electric winches running on 12 or 24V
- Supplied with decal sheet

68001031 **68001027**

68001030 **68001026**

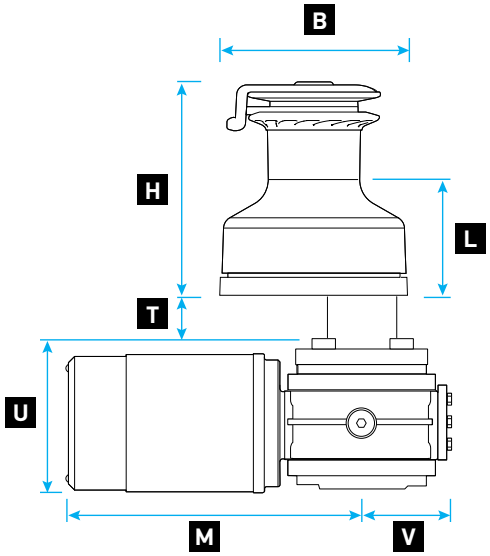


3 holes 4.5mm diameter equally spaced as shown on a 43.0 PCD

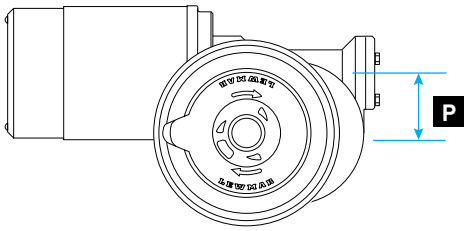
Circuit Breaker

CIRCUIT BREAKER	WINCH SIZE 40	45	50	55	65	70	80	90	110
68000542 40A	24V								
68000348 50A		24V							
68000240 70A			24V			24V	24V		24V
68000349 90A	12V			24V	24V			24V	
68000350 110A		12V							
68000239 120A			12V			12V			12V
68000351 150A							12V	12V	
68000894 200A				12V	12V				

Electric Winch Dimensions



When installing a winch, Lewmar recommends the winch be mounted on a level surface and that the rope enters the drum at an angle of 5° to 10° to the base axis of the winch. This angle can be achieved by using a base wedge when mounting the winch.



WINCH SIZE	H HEIGHT		L LINE ENTRY		M		P		T		U		V		B BASE DIA	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
40EST	175	6 9/10	95.4	3 49/64	238.5	9 25/64	50	1 31/32	34.4	1 23/64	120.7	2 3/4	72.5	2 55/64	154	6 1/16
45EST	194	7 5/8	100.3	3 61/64	238.5	9 25/64	50	1 31/32	64.4	2 17/32	120.7	2 3/4	72.5	2 55/64	174	6 55/64
50EST	246.8	9 2/3	105.2	4 9/64	238.5	9 25/64	50	1 31/32	64.4	2 17/32	120.7	2 3/4	72.5	2 55/64	186	7 21/64
55EST	257.5	10 1/8	135.8	5 3/8	290	11 7/16	62	2 7/16	59.5	2 5/16	160	6 1/4	80	3 1/8	209	8 1/4
65EST	273.8	10 3/4	141.8	5 9/16	290	11 7/16	62	2 7/16	59.5	2 5/16	160	6 1/4	80	3 1/8	234	9 1/4
70EST	274.2	10 13/16	142.1	5 5/8	290	11 7/16	62	2 7/16	67.5	2 11/16	160	6 1/4	80	3 1/8	282	11 1/8
70/3EST	318.5	12 9/16	186.4	7 5/16	290	11 7/16	62	2 7/16	67.5	2 11/16	160	6 1/4	80	3 1/8	294	11 9/16
80EST	320	12 10/16	174.0	6 7/8	290	11 7/16	62	2 7/16	67.5	2 11/16	160	6 1/4	80	3 1/8	294	11 9/16
80/3EST	320	12 10/16	174.0	6 7/8	290	11 7/16	62	2 7/16	67.5	2 11/16	160	6 1/4	80	3 1/8	294	11 9/16
90EST	327	12 7/8	159.5	6 1/4	290	11 7/16	62	2 7/16	–	–	–	–	–	–	326	12 3/4

Mounting Instructions

40EST	5 x M6 (1⁄2 in) c'sk head screws on 121mm (4 3/4 in) PCD
45EST	5 x M8 (5⁄16 in) c'sk head screws on 136mm (5 11/32 in) PCD
50EST	6 x M8 (5⁄16 in) c'sk head screws on 150mm (5 29/32 in) PCD
55EST	6 x M8 (5⁄16 in) c'sk head screws on 165mm (6 1/2 in) PCD
65EST	5 x M10 (3⁄8 in) c'sk head screws on 184mm (7 1/4 in) PCD
70EST	6 x M10 (3⁄8 in) c'sk head screws on 241mm (9 1/2 in) PCD
70/3EST	6 x M10 (3⁄8 in) c'sk head screws on 241mm (9 1/2 in) PCD
80EST	6 x M10 (3⁄8 in) c'sk head screws on 241mm (9 1/2 in) PCD
80/3EST	6 x M10 (3⁄8 in) c'sk head screws on 241mm (9 1/2 in) PCD
90/3EST	8 x M10 (3⁄8 in) c'sk head screws on 270mm (10 5/8 in) PCD

Note: not all holes are symmetrical on all models

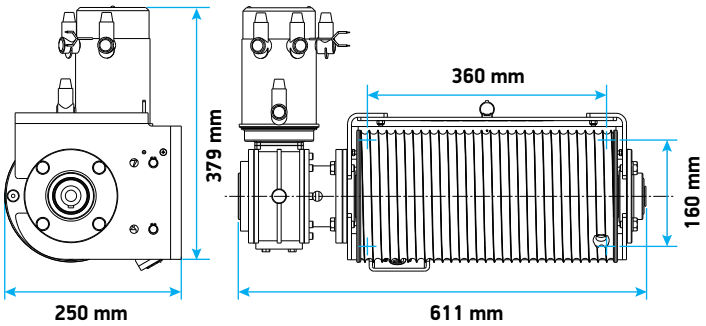
CW 800 – The Captive Winch For The Smaller Yacht

The CW 800 winch is ideal for the main halyard or mainsheet on yachts. The CW 800 offers safe remote controlled line handling and storage on yachts up to 48ft (14.6m).

If you wish to have powered winches but do not have the space on the cabin top, using a CW 800 will allow the halyards to be hauled and stored in a convenient place on board for a very efficient use of space on smaller yachts.

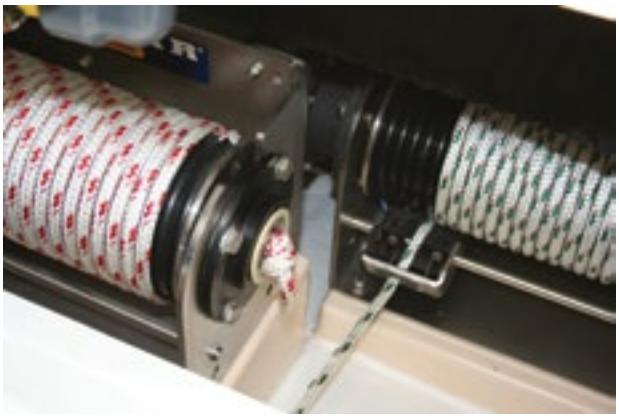
Available in 12V and 24V options, the CW 800 is a viable alternative to managing halyards, or main sheets, dependent on the line speed required.

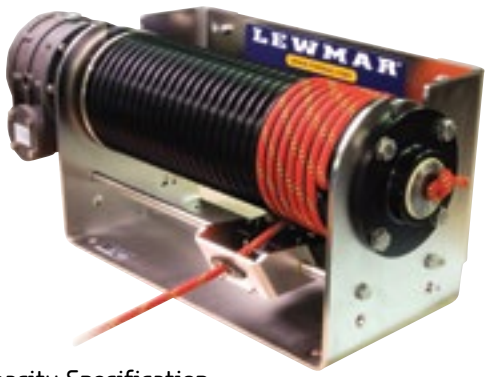
Dimensions Diagram CW 800



PART NUMBER	DESCRIPTION
59600140	CW800 winch 12V
59600142	CW800 winch 24V
59600150	CW800 High Capacity winch 12V
59600152	CW800 High Capacity winch 24V

Line drawing shows high capacity model.
Both CW800 standard and high capacity version have the same footprint. The difference is the drum diameter





Island Packet was first to fit the CW800 to its 41ft cruiser.
Two captive reels are mounted under the aft cockpit floor and are accessible through large floor hatches. Toggle switches at the helm and aft in the cockpit allow to trim either main or jib with a flick of a switch. Captive-reel winches have until now only been available on mega yachts. Now, you can have them on any boat.

CW 800 Standard Specification

SPECIFICATION	METRIC	IMPERIAL
Max line length	10.3 m	34 ft
Line size	10 – 12 mm	$^{3}/_{8}$ – $^{7}/_{16}$ in
Maximum Line Speed	33.5 m/min	110 ft/min
Maximum pull	1400 Kg	3086 lb
Maximum holding power	1500 Kg	3307 lb
Weight	38.3 Kg	84 lb

CW 800 High Capacity Specification

SPECIFICATION	METRIC	IMPERIAL
Max line length	14.6 m	48 ft
Line size	10 – 12 mm	$^{3}/_{8}$ – $^{7}/_{16}$ in
Maximum Line Speed	45 m/min	148 ft/min
Maximum pull	1200 Kg	2645 lb
Maximum holding power	1500 Kg	3307 lb
Weight	39.3 Kg	87 lb

Complete your installation with :

Contactor

MODEL	12V	24V
Sealed Contactors	**68000320**	**68000321**
Contactors in boxes	**18000200**	**18000237**

Circuit Breaker

PART NUMBER	DESCRIPTION
68000351	12V models - 150A
68000350	24V models - 110A

Switch

More information on the SX deck switch can be found on p 99

PART NUMBER	DESCRIPTION
68001027	SX switch Open Lid black
68001031	SX switch Closed Lid black
68001026	SX switch Open Lid St-steel
68001030	SX switch Closed Lid St-steel

Hydraulic Winches- Integrated Engineering From Lewmar

Lewmar's hydraulic powered winches combine the benefits of electric winches with system integration. The installation of a cost-effective, multi-function hydraulic system on boats over 15m (50ft) enables short-handed sailing through push-button control of winches and other integrated deck functions.

- Suitable for craft over 15m (50ft)
- Minimal internal space required for compact motor
- Low weight
- Manual override facility
- Quiet operation
- Push button control
- Choice of styling- Ocean traditional style available as well as the more modern lines of the EVO® range
- Powered by Lewmar's Commander Hydraulic Pack, see page 113 for details

Hydraulic EVO winch

Hydraulic Ocean winch

Push button control

Combining Lewmar's push button operation and Lewmar's Wavespring self-tailer produces simple hands free sailing whatever sheeting operation is to be carried out.

Manual override

Manual override can be effected simply and quickly through winch handle insertion.

Minimal space and weight

The hydraulic motor is extremely compact ensuring minimal internal space used, while being less obtrusive below deck. All achieved without compromising power.

Quiet operation

By using hydraulic power the winch operation is performed in near silence, adding to your sailing experience.

Hydraulic Winch Specifications

OCEAN WINCH PART NO	EVO WINCH PART NO	MODEL	FINISH	APPROXIMATE WEIGHT		LINE SIZE		MOUNTING INSTRUCTIONS
				kg	lb	mm	in	
49046155	**49545100**	46HST Ocean / 45HST Evo	Alloy Grey	15.6	34.4	8–14	5/16–9/16	5 x M8 (5/16 in) c'sk head screws on 136mm (5 11/32 in) PCD
49046156	**49545101**	46HST Ocean / 45HST Evo	Chrome	18.4	40.6	8–14	5/16–9/16	
	49545110	45HST Evo	Alloy Black	15.6	34.4	8–14	5/16–9/16	
49046158		46HST Ocean	Stainless Steel	18.1	39.8	8–14	5/16–9/16	
49046159		46HST Ocean	All Chrome	18.9	41.5	8–14	5/16–9/16	
49048155	**49550100**	48HST Ocean / 50HST Evo	Alloy Grey	17.2	37.9	8–14	5/16–9/16	6 x M8 (5/16 in) c'sk head screws on 165mm (6 1/2 in) PCD
49048156	**49550101**	48HST Ocean / 50HST Evo	Chrome	21.1	46.4	8–14	5/16–9/16	
	49550110	50HST Evo	Alloy Black	17.2	37.9	8–14	5/16–9/16	
49048158		48HST Ocean	Stainless Steel	20.4	45.0	8–14	5/16–9/16	
49048159		48HST Ocean	All Chrome	21.6	47.7	8–14	5/16–9/16	
49050100		50HST Ocean	Alloy Grey	19.8	43.5	8–16	5/16–5/8	6 x M8 (5/16 in) c'sk head screws on 165mm (6 1/2 in) PCD
49050101		50HST Ocean	Chrome	24.7	54.4	8–16	5/16–5/8	
49050104		50HST Ocean	Stainless Steel	25.0	55.0	8–16	5/16–5/8	
49050103		50HST Ocean	All Chrome	25.3	55.8	8–16	5/16–5/8	
49054100	**49555100**	54HST Ocean / 55HST Evo	Alloy Grey	20.5	45.1	8–16	5/16–5/8	6 x M8 (5/16 in) c'sk head screws on 165mm (6 1/2 in) PCD
49054101	**49555101**	54HST Ocean / 55HST Evo	Chrome	26.4	58.2	8–16	5/16–5/8	
	49555110	55HST Evo	Alloy Black	20.5	45.1	8–16	5/16–5/8	
49054104		54HST Ocean	Stainless Steel	30.5	67.1	8–16	5/16–5/8	
49054103		54HST Ocean	All Chrome	27.0	59.5	8–16	5/16–5/8	
49058100		58HST Ocean	Alloy Grey	22.8	50.1	8–18	5/16–11/16	5 x M10 (3/8 in) c'sk head screws on 184mm (7 1/4 in) PCD
49058101		58HST Ocean	Chrome	30.3	66.6	8–18	5/16–11/16	
49058104		58HST Ocean	Stainless Steel	28.5	62.7	8–18	5/16–11/16	
49058103		58HST Ocean	All Chrome	31.1	73.0	8–18	5/16–11/16	
49065100	**49565100**	65HST Ocean / Evo	Alloy Grey	25.1	55.2	8–18	5/16–11/16	5 x M10 (3/8 in) c'sk head screws on 184mm (7 1/4 in) PCD
49065101	**49565101**	65HST Ocean / Evo	Chrome	32.3	71.0	8–18	5/16–11/16	
	49565110	65HST Ocean	Alloy Black	25.1	55.2	8–18	5/16–11/16	
49065104		65HST Evo	Stainless Steel	31.8	69.9	8–18	5/16–11/16	
49065103		65HST Evo	All Chrome	31.1	73.0	8–18	5/16–11/16	
49068100	**49570100**	68HST Ocean / 70HST Evo	Alloy Grey	28.5	62.7	10–20	3/8–3/4	6 x M10 (3/8 in) c'sk head screws on 241mm (9 1/2 in) PCD
49068101	**49570101**	68HST Ocean / 70HST Evo	Chrome	35.3	77.6	10–20	3/8–3/4	
	49570110	70HST Evo	Alloy Black	28.5	62.7	10–20	3/8–3/4	
49068104		68HST Ocean	Stainless Steel	34.0	74.8	10–20	3/8–3/4	
49068103		68HST Ocean	All Chrome	36.2	79.5	10–20	3/8–3/4	
49068105	**49570102**	68/3HST Ocean / 70/3HST Evo	Alloy Grey	40	88	10–20	3/8–3/4	6 x M10 (3/8 in) c'sk head screws on 241mm (9 1/2 in) PCD
49068106	**49570103**	68/3HST Ocean / 70/3HST Evo	Chrome	42.2	92.8	10–20	3/8–3/4	
	49570109	70/3HST Evo	Alloy Black	40	88	10–20	3/8–3/4	
49068109		68/3HST Ocean	Stainless Steel	40.0	88.0	10–20	3/8–3/4	
49068108		68/3HST Ocean	All Chrome	42.2	92.8	10–20	3/8–3/4	
49077100	**49580100**	77HST Ocean / 80HST Evo	Alloy Grey	35.8	78.8	12–22	1/2–7/8	6 x M10 (3/8 in) c'sk head screws on 241mm (9 1/2 in) PCD
49077101	**49580101**	77HST Ocean / 80HST Evo	Chrome	48.8	107.4	12–22	1/2–7/8	
	49580110	80HST Evo	Alloy Black	35.8	78.8	12–22	1/2–7/8	
49077104		77HST Ocean	Stainless Steel	40.5	89.0	12–22	1/2–7/8	
49077103		77HST Ocean	All Chrome	48.8	107.4	12–22	1/2–7/8	
49077105	**49580102**	77/3HST Ocean / 80/3HST Evo	Alloy Grey	42	92.4	12–22	1/2–7/8	6 x M10 (3/8 in) c'sk head screws on 241mm (9 1/2 in) PCD
49077106	**49580103**	77/3HST Ocean / 80/3HST Evo	Chrome	49.8	109.6	12–22	1/2–7/8	
	49580109	80/3HST Evo	Alloy Black	42	92.4	12–22	1/2–7/8	
49077109		77/3HST Ocean	Stainless Steel	42.0	92.4	12–22	1/2–7/8	
49077108		77/3HST Ocean	All Chrome	49.8	109.56	12–22	1/2–7/8	

Larger models available - see Custom winch section p 104

Custom Winches

For the last 50 years, Lewmar has been at the forefront of winch design and manufacture, featuring on cruisers through to superyachts and Grand Prix racing boats. Using the latest finite element analysis and simulation software, we are able to optimise our designs to be the lightest and most efficient winch systems available.

Lewmar winches can be customised to suit individual aesthetic and functional requirements, with some of the many options including ceramic drum coatings, self-tailing jaws, custom top cleats, multiple speeds, free-spinning or ratcheting sheave base additions, and anticlockwise rotations. Each Lewmar winch is available in a choice of polished stainless steel, aluminium, or an individually-specified finish, subject to discussion with your Lewmar representative.

- Cutting edge performance combined with classic styling
- Choice of styles includes rolex, cleat, and flat top and bespoke engraving
- Individual functions to suit requirements, including sheave base
- Compatible with load-pin technology
- Ability to customise gear ratio and hydraulic motors to specific line requirements
- Electric or hydraulic operation options
- Available in bronze-effect finish
- Available in size 68 to size 150

New flat-top custom winches

As Superyacht design trends evolve, so too must the look and feel of the equipment fitted to them. With current design tastes in mind, Lewmar has redesigned its custom line-up of winches to offer a cleaner, more streamlined look.

To achieve this, the winches are flat-topped, with clever integration of the feeder arm into the self-tailing jaws themselves.

- Sleek, modern look
- Integrated stripper ring for easy rope handling
- Patterned top available on request
- New styling available from size 88 upwards

Custom Winch Specifications

PART NO	MODEL	FINISH	LINE SIZE	
			mm	in
49088104	88HST Ocean winch	Stainless Steel	12–25	½–1
49088248	88 Flat Top winch	Stainless Steel	12-25	½–1
49088109	88/3HST Ocean	Stainless Steel	12–25	½–1
49088252	88/3 Flat top	Stainless Steel	12–25	½–1
49111104	111HST Ocean	Stainless Steel	16–38	⅝–1½
49111259	111 Flat top	Stainless Steel	16–38	⅝–1½
49111109	111/3HST Ocean	Stainless Steel	16–38	⅝–1½
49111255	111/3 Flat top	Stainless Steel	16–38	⅝–1½
49122104	122HST Ocean	Stainless Steel	16–38	⅝–1½
49122121	122/3 Flat top	Stainless Steel	16–38	⅝–1½

The parts list table contains just a fraction of the custom winches available.

To assist with individual projects, our team of experts are on hand to help in selecting the perfect winch for the specific requirements.

Please email custom@lewmar.com with any enquiries.

ASTOR Custom Winches

- Drive train based upon the proven Lewmar Ocean Range
- Available in size 40 to size 111
- Electric and hydraulic options available
- Lightweight aluminium construction
- For further details contact custom@lewmar.com

ASTOR Winch Specifications

PART NO	MODEL	FINISH	GEAR RATIO				POWER RATIO				WEIGHT		D DRUM DIA		B BASE DIA		H HEIGHT		L LINE ENTRY		LINE SIZE	
			1st	2nd	3rd	4th	1st	2nd	3rd	4th	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in
49040050	40STR	Black	1.9:1	5.8:1	-	-	13.2:1	40.2:1	-	-	3.4	7.5	74	2 15/16	148	5 13/16	173	6 13/16	80	3 1/8	8-12	5/16-1/2
49044050	44STR	Black	2.4:1	7.6:1	-	-	13.9:1	44.8:1	-	-	4.9	10.8	87	3 7/16	168	6 5/8	192	7 9/16	84	3 5/16	8-14	5/16-9/16
49044014	44/3AOR	Grey	1:1	3:1	8.7:1	-	5.1:1	15.2:1	44:1	-	5.5	12.1	100	3 15/16	184	7 1/4	169	6 5/8	83	3 1/4	8-14	5/16-9/16
49048050	48STR	Black	2.6:1	9:1	-	-	13.9:1	48.6:1	-	-	5.9	13.0	93	3 11/16	181	7 1/8	208	8 3/16	86	3 3/8	8-14	5/16-9/16
49048015	48/3AOR	Black	1:1	3.6:1	10.6:1	-	4.5:1	16.3:1	48:1	-	6.8	14.9	112	4 7/16	207	8 1/8	196	7 3/4	102	4	8-14	5/16-9/16
49050050	50STR	Black	2.8:1	10.5:1	-	-	13.8:1	50.6:1	-	-	7.8	17.2	105	4 1/8	200	7 7/8	238	9 3/8	106	4 3/16	8-16	5/16-5/8
49050015	50/3AOR	Black	1:1	5.4:1	12.8:1	-	31.1:1	20.9:1	49.9:1	-	8.4	18.4	130	5 1/8	225	8 7/8	223	8 3/4	120	4 3/4	8-16	5/16-5/8
49054050	54STR	Black	2.8:1	11.2:1	-	-	13.8:1	54:1	-	-	8.3	18.3	105	4 1/8	205	8 1/16	250	9 13/16	115	4 1/2	8-16	5/16-5/8
49058050	58STR	Black	3.1:1	13.5:1	-	-	13.5:1	58.1:1	-	-	10.2	22.4	118	4 5/8	228	9	266	10 1/2	118.5	4 11/16	8-18	5/16-11/16
49060015	60/3AOR	Black	1:1	5.4:1	9:1	-	3.1:1	16.7:1	59.4:1	-	13.6	26.9	162	6 3/8	238	9 3/8	315	12 3/8	164	6 7/16	8-18	5/16-11/16
49062050	62STR	Black	3.1:1	14.5:1	-	-	13.5:1	62.6:1	-	-	10.8	23.8	118	4 5/8	231	9 1/8	271	10 11/16	121.5	4 3/4	8-18	5/16-11/16
49077035	77/3STR	Grey	2.8:1	8:1	27:1	-	7.9:1	23:1	77:1	-	22.3	49.1	178	7	294	11 9/16	348	8 3/4	174	6 7/8	12-22	1/2-7/8
49088245	88/3STR	Grey Flat Top	3.8:1	8:1	40:1	-	8.4:1	17.8:1	89:1	-	24.7	54.5	228	9	324	12 3/4	333	13 1/8	151	5 15/16	12-25	1/2-1
40000900	111/3STR	Grey	3.6:1	8:1	45.2:1	-	6.5:1	14.6:1	82.2:1	-	29.8	65.7	260	11	404	15 15/16	367	14 7/16	163	6 7/16	12-25	1/2-1
40000901	111/4AOR	Grey	1:1	3.6:1	8:1	45.2:1	1.8:1	6.5:1	14.6:1	89.2:1	29.1	64.2	280	11	404	15 15/16	317	12 1/2	163	6 7/16	12-25	1/2-1

Case study - Hetairos

Lewmar manufactured cutting edge carbon winches for Hetairos, a 67 metre yacht in which ultra modern features and technical innovation are combined with classical looks.

Lewmar was keen to meet the multiple challenges, amongst which were designing, engineering and manufacturing a complete set of on deck winches and under deck line management systems to control the 4000 square meters of main sail, mizzen and blade sails. Special attention had to be paid to the fact that modern sails and sheets have virtually no stretch and exercise enormous shock loads as the yacht travels through the sea.

As a result the biggest, most powerful drum winch ever produced was born, namely the hydraulically driven Lewmar 150 self tailing winch. This winch operates at a massive 15 tonnes with a strong heart made of steel and aluminium with highly rigid Torlon® roller bearings. Keeping the weight down on Hetairos has been a major issue, Lewmar designed winch drums with specially milled surfaces to increase the grip required for the Mathioli and Dyneema sheets and halyards used. The weight was brought down to 150 Kg - a figure approximately 30% lighter than a traditionally built winch of alloy and steel.

Lewmar Racing Winches

Lewmar Racing Winches have been at the forefront of the world's premier races for the last 60 years, including the America's Cup, Vendee Globe, MedCup, and the Volvo Ocean Race. Features such as aluminium and carbon fibre construction, Torlon® polymer bearings, and optional titanium gears are all the result of close relationships with race crews and cutting edge research and design. Lewmar Racing Winches are the first choice for lightweight performance boats that want a winch they can rely on, whether round the cans or around the world!

Grand Prix racing winches can be driven by grinding pedestals or by hydraulic or electric motors. With modern racing rules evolving all the time, the Lewmar winch range has evolved to meet these challenges.

Pedestal-drive winch systems are used for applications demanding speed and power. One or more crew can grind from a powerful optimised standing position.
Pedestal systems are customised to meet the specific needs of each boat.

- Latest Finite Element Analysis (FEA) and simulation software ensures designs are the lightest and most efficient winch systems
- Carbon power range available in Size 50 GPST through to the Size 120-4 GPST, with patented integral four-speed system
- Available with electric or hydraulic operation
- Operated by top handle or bottom pedestal drive
- Many custom options available, including ceramic drum coatings, custom top cleats, and free-spinning or ratcheting sheave base additions.
- Range available in 2 or 3 speed, or with Lewmar's patented integral 4-speed system
- State of the art carbon fibre finish offers weight saving
- Internal components crafted from aerospace industry materials
- Superior strength
- Developed through extensive research and development
- Speed and Power ratios for ultimate flexibility
- Wavespring Self-Tailer
- Extensive range — Self-tailing, cleat top, sheave base combinations
- Easy to service
- Needle Peen Drum

A Slam down 1:1 first speed button

B Carbon Tops & Skirts - Reducing weight

C Torlon Balls – More balls than any other winch!

D Wave Grip self-tailer – Proven, simple & effective design

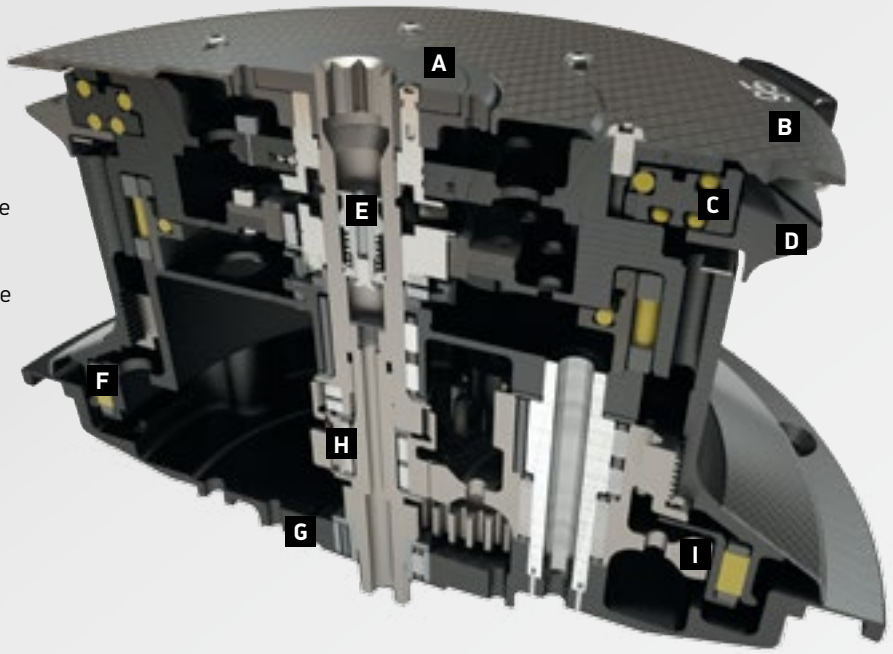
E Drum Release – Unique single release button, for quick maintenance and servicing

F Large Torlon Bearings

G Sunk Base Option — For lower windage and flusher decks

H Internal Roller Bearings – For maximum efficiency

I Optimised Gear Design – Skeletal but strong



Grand Prix Racing Winches

What's inside makes all the difference. In every Lewmar Carbon Fibre Winch, you will find materials developed for the aerospace industry, precision CNC machined for maximum efficiency, durability and strength-to-weight ratio. Once the winch is assembled, we use an aggressive in-house testing program to ensure maximum performance on the world's toughest racecourses.

- Developed in conjunction with some of the top racing classes including GP42, Class 40, TP52, Open 60, Volvo 70, IACC, 100ft - Supermaxi + offshore Maxi-Multihulls
- Range available in 2, 3 or with Lewmar's - Patented Integral four-speed system available on larger winch models
- Self-Tailing, optional cleat top
- Top handle driven or bottom pedestal drive with electric or hydraulic options available
- Carbon and painted finishes

Light, fast and strong!

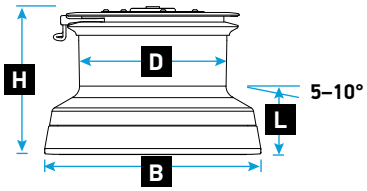
Lightweight and strong, Lewmar's racing winches offer the serious racer outstanding performance and power. Using the best features of our standard range combined with the technology used on America's Cup, Volvo 70's, Vendée Globe etc.

60/3GPST (Self-Tailing)

115/3 GPST

All 3-Speed Grand Prix winches are available in either Self-Tailing, Cleat Top or Sheave Base

Dimensions Diagram Grand Prix Racing Winch



Grand Prix Racing Winch Specifications

PART NO	MODEL	GEAR RATIO				POWER RATIO				WEIGHT		D DRUM DIA		B BASE DIA		H HEIGHT		L LINE ENTRY		LINE SIZE		MOUNTING INSTRUCTIONS
		1st	2nd	3rd	4th	1st	2nd	3rd	4th	kg	lb	mm	in	mm	in	mm	in	mm	in			
49050120	50GPST	3.4:1	11.3:1			15.2:1	50:1			4.7	10.3	115	4½	188	7⅜	168	6⅝	62	2½	8–14	5⁄16–9⁄16	5 x M8 (5⁄16 in) c'sk head screws on 170mm (6⅝ in) PCD
49050130	50GPST SR	3.4:1	11.3:1			15.2:1	50:1			5.1	11.2	115	4½	217	8½	168	6⅝	62	2½	8–14	5⁄16–9⁄16	5 x M8 (5⁄16 in) c'sk head screws on 170mm (6⅝ in) PCD
49060000	60/3GPST	1:1	4.3:1	15.4:1		3.9:1	16.8:1	60.2:1		7.8	17.2	130	5⅛	214	8½	186	7⅜	67	2⅝	8–14	5⁄16–9⁄16	6 x M8 (5⁄16 in) c'sk head screws on 195mm (7⅝ in) PCD
49060009	60/3GP SB	1:1	4.3:1	15.4:1		3.9:1	16.8:1	60.2:1		8.2	18	130	5⅛	236	9⅝	186	7⅜	67	2⅝	8–14	5⁄16–9⁄16	6 x M8 (5⁄16 in) c'sk head screws on 195mm (7⅝ in) PCD
49068001	68ACSTR	3.5	19.2:1			12:1	67:1			9.5	20.9	150	5⅞	250	9 13⁄16	213	8⅜	99	3⅞	8–14	5⁄16–9⁄16	6 x M10 (⅜ in) c'sk head screws on 200mm (7⅞ in) PCD
49068002	68/3ACSTR	1:1	3.4:1	19.2:1		3.5:1	12:1	67:1		10.6	23.3	146	5¾	250	9 13⁄16	227	8 15⁄16	97	3⅞	8–14	5⁄16–9⁄16	6 x M10 (⅜ in) c'sk head screws on 200mm (7⅞ in) PCD
49068021	68/3GP SB	1:1	3.5:1	19.3:1		3.5:1	12:1	67:1		10.5	23.1	146	5¾	275	10 13⁄16	227	8 15⁄16	95	3¾	8–14	5⁄16–9⁄16	6 x M10 (⅜ in) c'sk head screws on 200mm (7⅞ in) PCD
49082000	82GPST	1:1	8.5:1	29:1		2.5:1	24:1	82:1		14.7	32.4	182	7⅛	290	11 7⁄16	215	8 7⁄16	79.5	3⅛	12–16	½–5⁄8	8 x M10 (⅜ in) c'sk head screws on 266mm (10½ in) PCD
49099000	99/3GPST	1:1	9.4:1	40.9:1		2.5:1	23:1	101:1		17.5	38.5	204	8	320	12⅝	234	9¼	90	3½	10–16	⅜–5⁄8	8 x M10 (⅜ in) c'sk head screws on 296mm (11⅝ in) PCD
49099009	99/3GP SB	1:1	9.4:1	40.9:1		2.5:1	23:1	101:1		19.2	42.2	204	8	328	12 15⁄16	234	9¼	92	3 9⁄16	12–16	½–5⁄8	8 x M10 (⅜ in) c'sk head screws on 281mm (11 1⁄16 in) PCD
49095001	95/4GPST	1:1	3.8:1	8:1	40:1	2:1	7.6:1	16:1	80:1	20.5	45.1	254	10	370	14⅝	225	8⅞	98	3⅞	10–16	⅜–5⁄8	6 x M12 (½ in) c'sk head screws on 288mm (11 3⁄32 in) PCD
49095004	95/4GPST SB	1:1	3.8:1	8:1	40:1	2:1	7.6:1	16:1	80:1	21.8	48	254	10	370	14⅝	225	8⅞	98	3⅞	10–16	⅜–5⁄8	6 x M12 (½ in) c'sk head screws on 288mm (11 3⁄32 in) PCD
40005066	105/3STR	1:1	8.3:1	39.6:1		1.6:1	13.6:1	64.8:1		18.5	40.7	280	11	360	14 9⁄32	225	8⅞	93.7	3 11⁄16	8–14	5⁄16–9⁄16	6 x M12 (½ in) c'sk head screws on 288mm (11 3⁄32 in) PCD
49105002	105/4GPST	1:1	3.8:1	8:1	40:1	1.8:1	6.9:1	14.5:1	72.6:1	21.6	47.5	280	11	370	14⅝	237	9⅜	90	3½	10–16	⅜–5⁄8	6 x M12 (½ in) c'sk head screws on 288mm (11 3⁄32 in) PCD
49105006	105/4GP SB	1:1	3.8:1	8:1	40:1	1.8:1	6.9:1	14.5:1	72.6:1	23.4	51.5	280	11	370	14⅝	220	8⅝	90	3½	10–16	⅜–5⁄8	6 x M12 (½ in) c'sk head screws on 288mm (11 3⁄32 in) PCD
49115000	115/3ACSTR	1:1	8:1	45.2:1		1.8:1	14.8:1	82.2:1		39.3	86.5	282	11⅛	432	17	327	12⅞	152	5⅝	12–18	½–¾	10 x M12 (½ in) c'sk head screws on 365mm (14⅜ in) PCD
49120001	120/4ACSTR	1:1	3.6:1	8:1	45.2:1	1.7:1	6:1	13.5:1	75.3:1	47.3	104.1	305	12	450	17¾	312	12¼	143	5⅝	14–20	9⁄16–¾	10 x M12 (½ in) c'sk head screws on 365mm (14⅜ in) PCD

SR - Speed Ring | ST- Self Tailing | SB - Sheave Base

Lewmar Pedestal Systems

Lewmar has been making pedestal systems for over 40 years. Working closely with some of the best teams and sailors over this time has given Lewmar a great pedigree and understanding – we know what it takes to get you over the line. Our design engineers can develop bespoke tailored systems to your exact requirements.

- Unique I-Beam pedestal moulded in carbon fibre
- Optimised layup schedule ensures maximum stiffness and efficiency
- Pedestals available in straight or twisted configuration
- Fat grip racing handles ideal for strong grinders
- Pedestals can be customised to crew strength
- Drive components manufactured in hard anodised aluminium and titanium or 17-4 PH stainless steel
- Ceramic and Torlon® bearings along with carbon-reinforced drive belts provide lightweight, maximum efficiency
- Removable option available to open up cockpit for long-distance racing and cruising

Disconnect Foot Switches

Pedestal system disconnects can be activated with either levers, control lines or a two-position push button. The most popular method is operation via a foot switch.

Drive Shafts

Lewmar offers two types of drive shafts, either extruded splined aluminium drive shafts, or the more popular custom made carbon tubular drive shafts with bonded end fittings. The drive shaft choice is determined by load, cost, and weight considerations.

Drive Shaft Specifications

PRODUCT	WEIGHT (per m)	
	kg	lb
Lightweight Alloy Drive Shaft	1.0	2.2
High Torque Ultralight Carbon Fibre Drive Shaft[1]	0.4	0.9

[1] Illustrated

Clutches

The unique Lewmar dog drive clutches ensure consistent and smooth operation this allows engagement and disengagement even while the grinders are hard at work spinning the handles.

Clutch Specifications

PRODUCT	WEIGHT	
	kg	lb
Modular Self Seeking Clutch[1]	2.4	5.3
Integrated Self Seeking Clutch	0.75	1.6

[1] Illustrated

Pedestals

- Lightweight Carbon Shell
- Developed using high-strength low-weight pre-preg carbon fibre composites from the F1 industry
- Twist or straight pedestal options
- Dual output also available
- Clear coat UV stable protective lacquer is standard (painted options available)
- Internal composite bearing systems
- Double bearing systems on handle housing
- Custom Fat Racing grip handles
- Removable Pedestal options for fast cruising market

Pedestal Specifications

PRODUCT	WEIGHT	
	kg	lb
Carbon Fibre Drive Belt Pedestal – Max Height	5.5	12.1

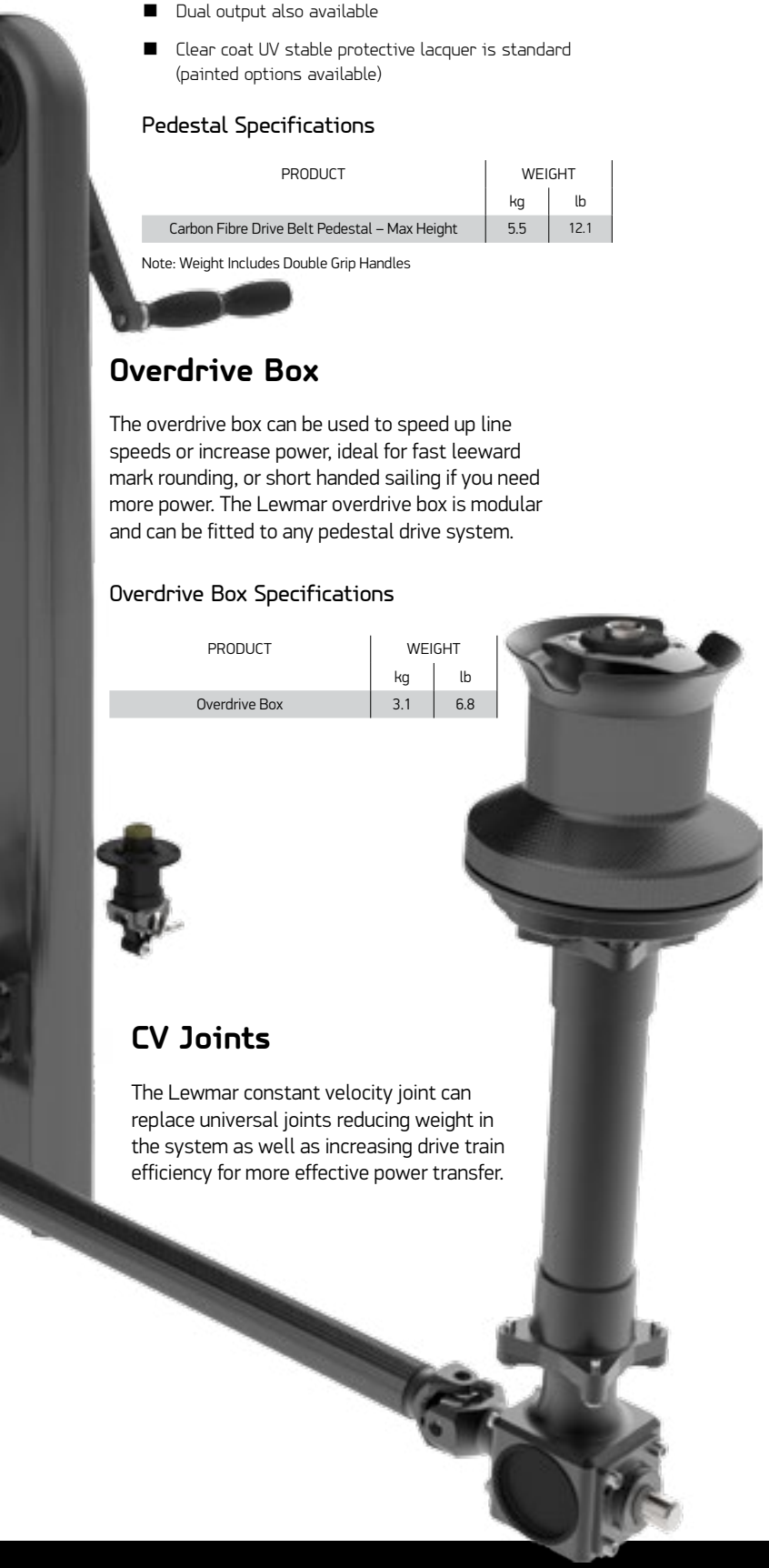
Note: Weight Includes Double Grip Handles

Overdrive Box

The overdrive box can be used to speed up line speeds or increase power, ideal for fast leeward mark rounding, or short handed sailing if you need more power. The Lewmar overdrive box is modular and can be fitted to any pedestal drive system.

Overdrive Box Specifications

PRODUCT	WEIGHT	
	kg	lb
Overdrive Box	3.1	6.8



Universal Joints

Gear boxes are connected to other gear boxes and pedestals by drive shafts fitted with either a universal joint or a coupling at each end. Our CV couplings are extremely light but may only be used where the shafts are in-line. Our high angle universal joint is made of aluminium with 17-4 stainless pins, making it very strong and able to operate efficiently at shaft angles up to 15 degrees.

CV Joints

The Lewmar constant velocity joint can replace universal joints reducing weight in the system as well as increasing drive train efficiency for more effective power transfer.

Bevel box

The bevel gear box is the core building block of the Lewmar drive system. The bevel gear box housings are made of a high-strength aluminium alloy that is Hardkote-anodized for maximum durability. The optimised gears, shafts, and rollers are 17-4 PH stainless steel.

Bevel Box Specifications

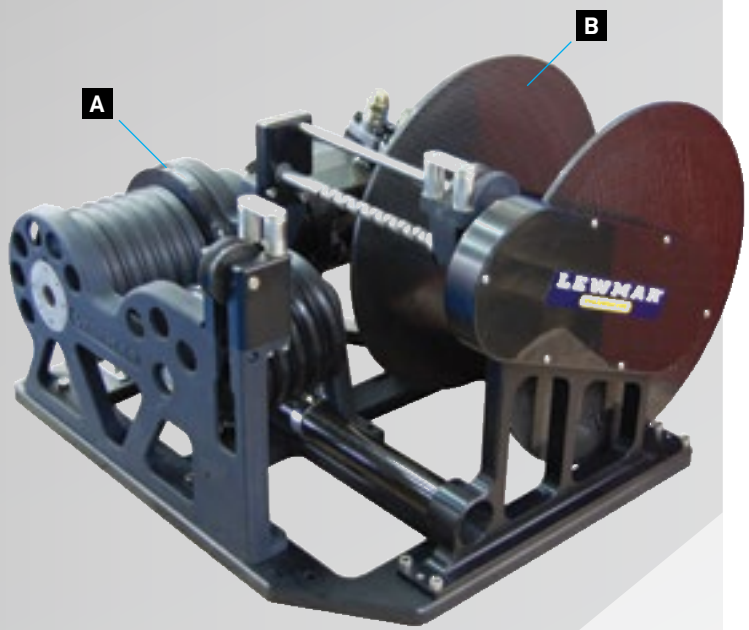
PRODUCT	WEIGHT	
	kg	lb
Alloy Bevel Gearbox	4.5	10
Lightweight 4 Man Alloy Bevel Gearbox	2.5	5.5
High Torque Ultralight Carbon Fibre Bevel Gearbox	2.0	4.4

Captive Winch Line Management System

The Lewmar Captive Winch Line Management System offers safe, remote-controlled line handling and storage for yachts in the 22m (72ft) to 91m (300ft) range. The unique separate hauling drum eliminates the need for long lead entries, while storing the rope at low tension on a separate drum prevents damage to the rope. For small boats where space under the cabin top is limited, we have designed the CW800 – for details refer to Page 101

- Up to 25% lighter than previous models
- Compact size
- Up to 3 speed options
- Carbon stowage drum
- Eliminates long lead entry angles
- Can be used with proportional or non proportional hydraulic control systems
- Self sustaining – no load 'drop back' when the brakes are applied
- Pulls from 2.5 to 18 tons

A separate hauling drum eliminates the need for long lead entries while storing the rope to the separate storage drum, allowing the rope to be stored neatly at low tension and preventing damage to the rope and the possibility of riding turns.



A Unique V groove sheave improves grip and reduces rope damage

B Line stowing system ensures low line tension and good line lay

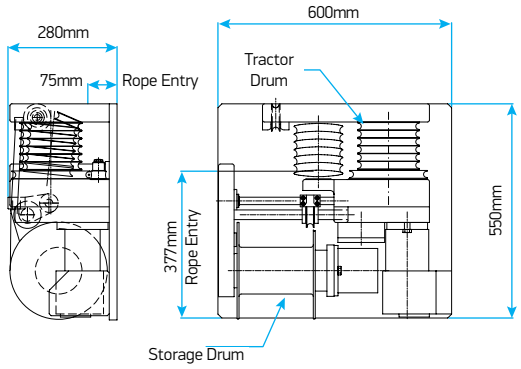
- Automatic hauling system
- Separate hauling and stowing drums, allows more rope storage for a given sizegrip and reduces rope damage
- Emergency high-load release feature

LMS Standard Specifications

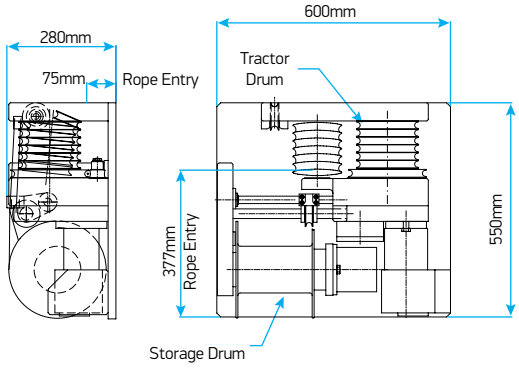
	SPEEDS	MAXIMUM LINE PULL		MAXIMUM LINE SPEED IN EACH GEAR		FLOW RATE AT MAX LINE SPEEDS		LINE DIAMETER		MAXIMUM WORKING PRESSURE		WEIGHT	
		kg	lb	m/min	ft/min	l/min	US gal/min	mm	in	bar	psi	kg	lb
CW2500	1	2500	5512	28	92	60	15.9	12–16	1/2–5/8	160	2321	120	265
CW3500	2	3500	7716	31/15	102/49	55	14.5	12–16	1/2–5/8	150	2176	120	265
CW6000	2 or 3	6000	13228	60/24/15	197/79/49	45	11.9	14–22	9/16–7/8	235	3408	150	331
CW9000	2 or 3	9000	19842	60/22/10	197/72/33	70	18.5	22–28	7/8–1 1/8	200	2901	285	628
CW12000	2 or 3	12000	26455	60/20/13	197/66/43	95	25.1	26–30	1–1 3/16	230	3336	480	1058
CW18000	2 or 3	18000	39683	60/16/10	197/52/33	110	29.1	30–38	1 3/16–1 1/2	220	3191	600	1323

MODEL	CW2500	CW3500	CW6000	CW9000	CW12000	CW18000
Line storage (m)	Ø12mm : 38	Ø12mm : 38	Ø14mm : 110	Ø20mm : 110	Ø26mm : 65	Ø30mm : 65
	Ø14mm : 29	Ø14mm : 29	Ø16mm : 90	Ø22mm : 85	Ø28mm : 55	Ø32mm : 55
	Ø16mm : 27	Ø16mm : 27	Ø18mm : 75	Ø24mm : 65	Ø30mm : 50	Ø34mm : 50
			Ø20mm : 60	Ø26mm : 60	Ø32mm : 40	Ø36mm : 45
			Ø22mm : 50	Ø28mm : 50		
Line storage (ft)	Ø1/2" : 125	Ø1/2" : 125	Ø9/16" : 361	Ø13/16" : 361	Ø1 5/16" : 213	Ø1 3/16" : 213
	Ø9/16" : 95	Ø9/16" : 95	Ø5/8" : 295	Ø7/8" : 279	Ø1 5/16" : 180	Ø1 1/4" : 180
	Ø5/8" : 89	Ø5/8" : 89	Ø11/16" : 246	Ø15/16" : 213	Ø1 3/16" : 164	Ø1 5/16" : 164
			Ø13/16" : 197	Ø15/16" : 197	Ø1 1/4" : 148	Ø1 7/16" : 148
			Ø7/8" : 164	Ø15/16" : 164		

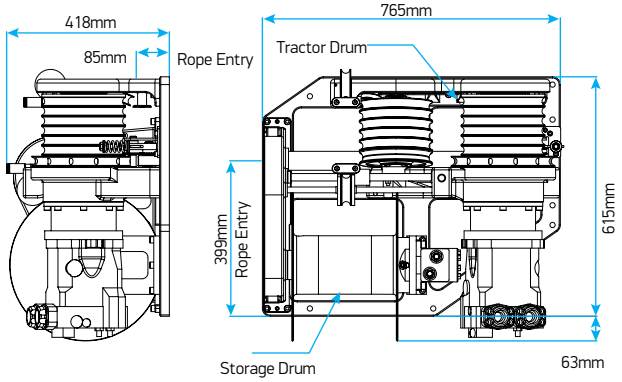
CW 2500



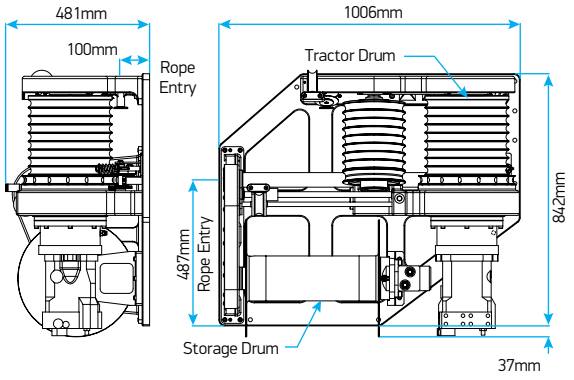
CW 3500



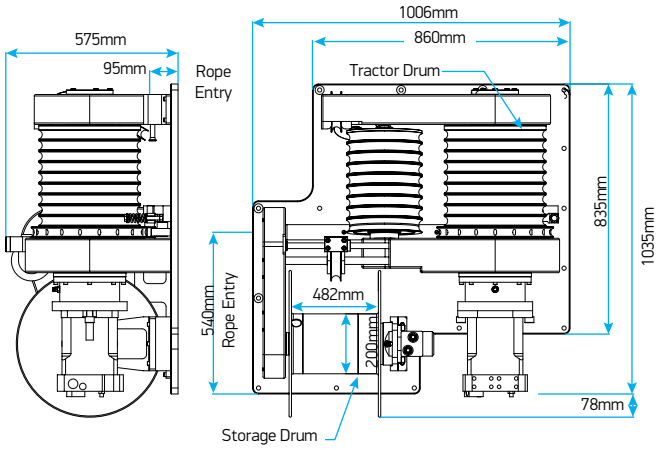
CW 6000



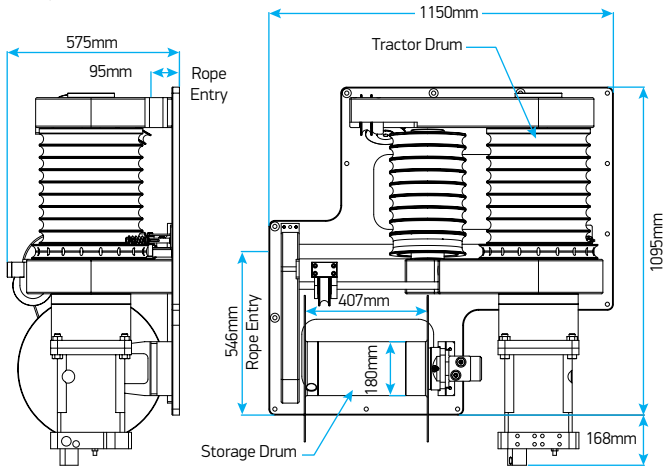
CW 9000



CW 12000



CW 18000



Custom Line Storage

Custom line storage options available.

Contact custom@lewmar.com for more information

Winch Handles

OneTouch Winch Handle

The award-winning OneTouch allows you to lock in and remove the winch handle with one hand. Simply squeeze the release lever, which runs the entire length of the handle, and pull to unlock in one quick, easy motion.

- 8" and 10" Alloy Handle
- Release lever runs entire length of the handle – no twisting, jiggling or fiddling around
- Easy one-handed removal – just squeeze and lift
- Lightweight, forged construction
- Corrosion resistant for years of performance under harsh conditions
- Available in Standard Grip and Power Grip
- As used by the Americas Cup, Volvo and TP52 teams

29140046

29140044

Specifications

PART NUMBER	SIZE		DESCRIPTION
	mm	in	
29140044	250	10	Alloy Handle, Lock-in, Single Grip
29140046	250	10	Alloy Handle, Lock-in, Power Grip
29140040	200	8	Alloy Handle, Lock-in, Single Grip
29140042	200	8	Alloy Handle, Lock-in, Power Grip

Lewmar Winch Handles

- Ball bearings provide maximum efficiency
- Manufactured in durable, lightweight alloy
- 250mm (10") available in chrome
- Optional Power Grip makes initial fast cranking easy and comfortable, with space for a second hand once the load comes on

29141011 200mm (8") Alloy lock-in winch handle

29141111 250mm (10") Alloy winch handle, lock-in (Forged)

29140121 250mm (10") Chrome winch handle, lock-in, power grip

29141010 200mm (8") Alloy winch handle

29141110 250mm (10") Alloy winch handle (Forged)

29141122 250mm (10") Chrome winch handle, lock-in double grip

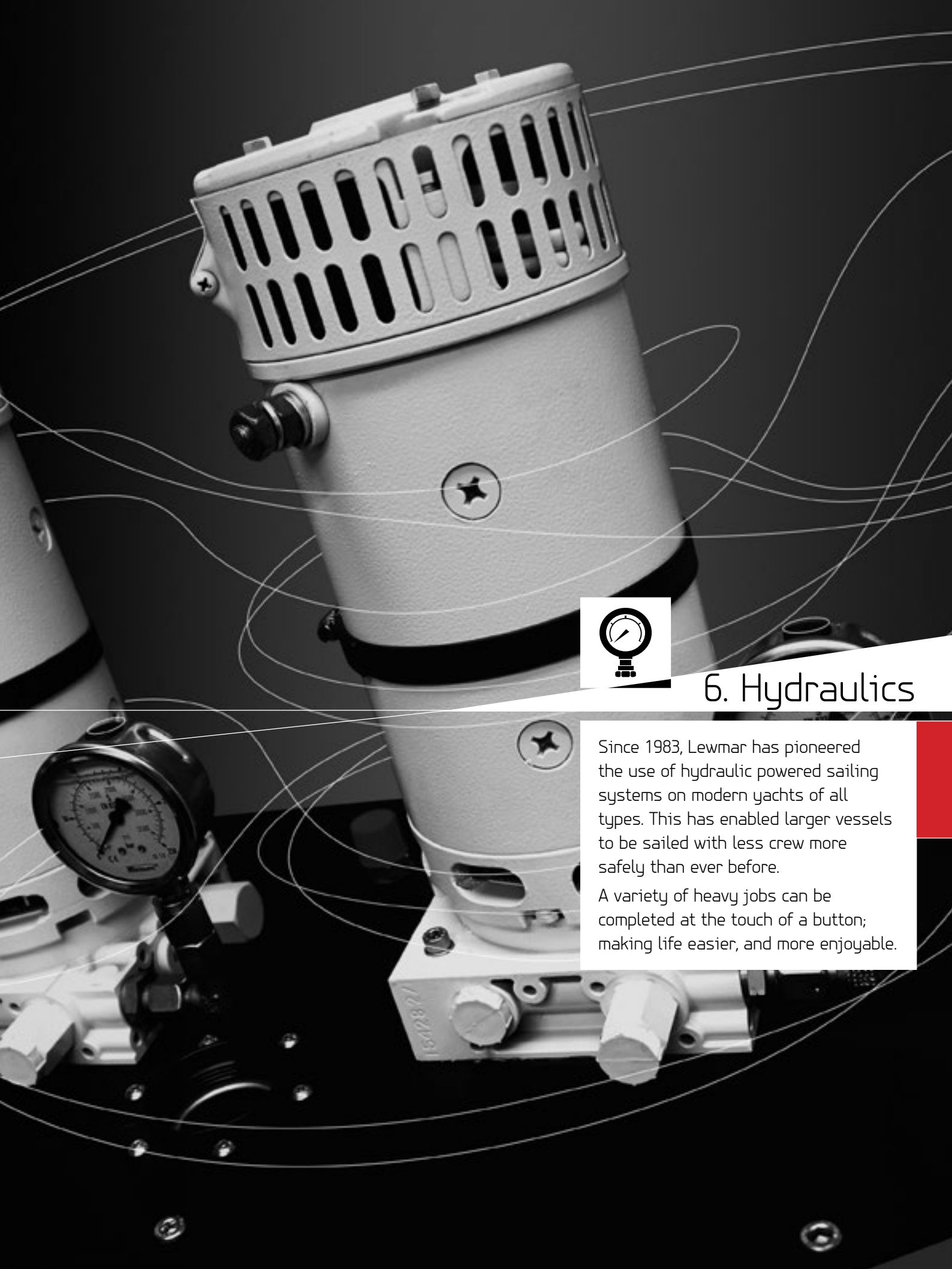
Titan Winch Handles

- Strong composite construction
- Very light-weight
- Handle floats if dropped overboard
- Engineered to withstand rigours of saltwater environment.

PART NUMBER	SIZE		DESCRIPTION
	mm	in	
29145301	200	8	Titan Winch Handle, Red, Locking
29145311	250	10	Titan Winch Handle, Red, Locking
29140017	200	8	Lewmar Winch Handle, Blue, Non-Locking

Universal Winch Handle Pocket

29140020



6. Hydraulics

Since 1983, Lewmar has pioneered the use of hydraulic powered sailing systems on modern yachts of all types. This has enabled larger vessels to be sailed with less crew more safely than ever before.

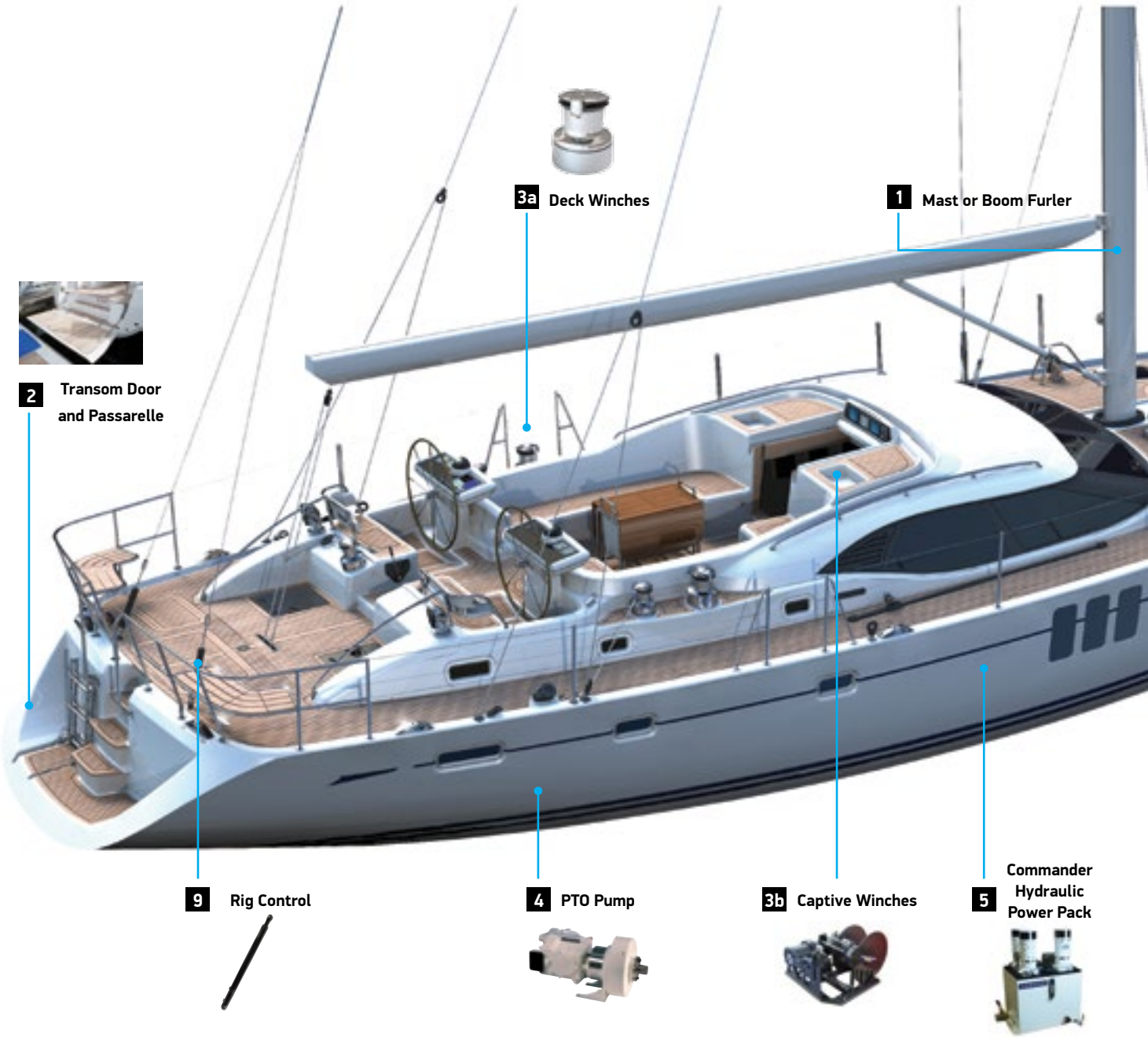
A variety of heavy jobs can be completed at the touch of a button; making life easier, and more enjoyable.

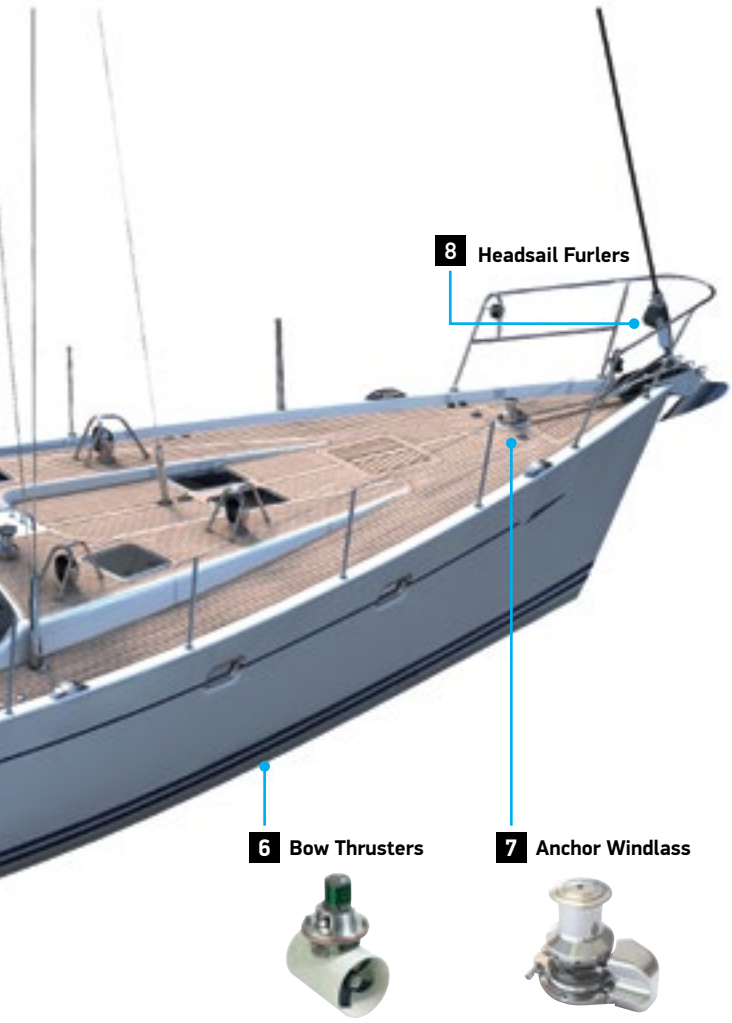
Hydraulic Integrated Engineered Systems - The Totally Compatible Solution

A hydraulic power system can be engineered to perform many tasks, from hauling up the anchor, to furling the sails. With over 30 years of experience, Lewmar can offer a variety of solutions tailor made to suit your particular application.

With our range of power packs and control systems we can offer simple single function packs, to multi-function and multi-source systems for yachts up to 90m (300 ft).

Selection of the most suitable system will depend on a number of factors, but the following pages will give valuable information which will enable owners, designers and builders to construct a working solution specifically to suit their demands.





1 Mast or Boom Furler

Lewmar have a hydraulic system that can control any of the world's furler manufacturer's units.

2 Transom Door and Passarelle

Lewmar can provide various control systems for different actuator methods, whether they are cylinders of rotary actuators, balanced, or unbalanced systems.

3a Deck Winches

Sail handling winches whether conventional or self-tailing.

3b Captive Winches

Powered Line Management System below deck.

4 PTO Pump

Pumps fitted to either main engine or generator, or both. Primarily to power thrusters but also to power all hydraulic systems.

5 Commander Hydraulic Power Pack

A variety of power packs are available. Single/Multiple motor, various voltages, custom reservoirs, the list is endless.

6 Bow Thrusters

Lewmar offer a wide range of thrusters (See Thruster section for details). The thruster can be powered from main engine or generator.

7 Anchor Windlass

The Lewmar anchor windlass is an ideal addition to the system, and affords an excellent level of performance.

8 Headsail Furlers

Hydraulic headsail furlers from various manufacturers are a stylish and reliable way to control the size of the headsail. Valves and control systems are available for headsails.

9 Rig Control

The sail handling system can be also integrated with rig control cylinders such as back stay and boom vang for rapid take-up facility.

Hydraulic Integrated Engineered Systems

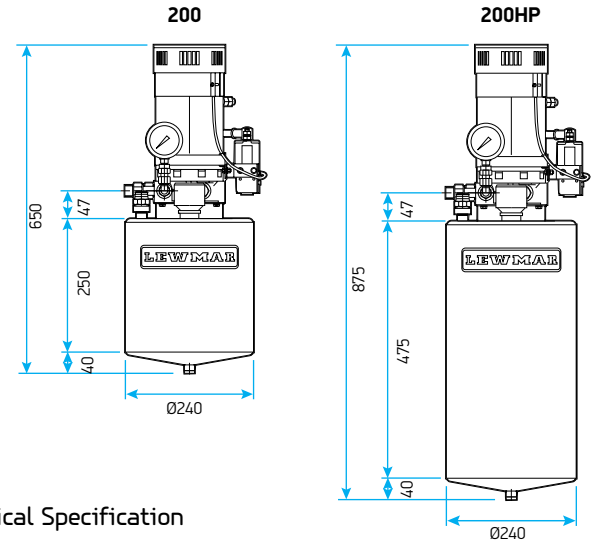
Four main assemblies need to be carefully considered to enable the system to be correctly specified.

- **Power pack** suitably sized to match hydraulic functions namely winches, windlasses, furlers, cylinder etc.
- **Directional control valve** stations, these can be on one manifold block with one to six valves, or in any combination of manifolds and valves. A range of valve assemblies are available to suit operating requirement of hydraulic functions.
- **Control box** containing a printed circuit board (PCB) that provides push button sailing by operating the Commander in conjunction with the valves. More advanced control systems are provided as hydraulic systems increase in size.
- **Return line oil filter** maintains a good level of oil cleanliness which is essential to the performance and reliability to the hydraulic system.

Commander 200 & 200HP

The concept of the Commander system is flexibility, its modular ordering format allows the required specification to be suited to each vessel as necessary.

The Commander 200 is a compact hydraulic power unit capable of operating winches, anchor windlasses, furling systems and auxiliary functions one at a time. Both 12 and 24 volt versions feature a fan cooled electric motor, offering high pressure and flow performance coupled to a long duration running time., together with thermal protection safety switches.



Hydraulic Specification

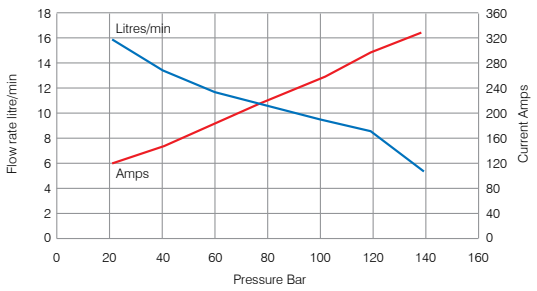
	200	200 Hi-Pressure
Operating Pressure	140 bar (2030 p.s.i.)	230 bar (3300 p.s.i.)
Max flow	16l/min (4.3 US gal)	9l/min (2.3 US gal)
Reservoir Capacity	9 litres (2.4 US gal)	19.5 litres (5.2 US gal)
Hydraulic Oil Type	ISO Viscosity Grade 32	ISO Viscosity Grade 32

Electrical Specification

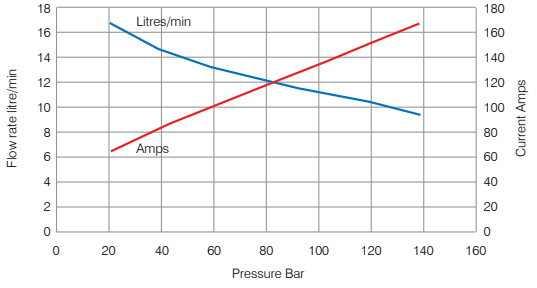
12 and 24 Volt motors nominally rated to 3kW.
Supply voltage limits, ± 15%
At extreme tolerances the unit will operate with de-rated performance.

Small and large tank capacity versions available - contact custom@lewmar.com for details

Performance Characteristics – Commander 200

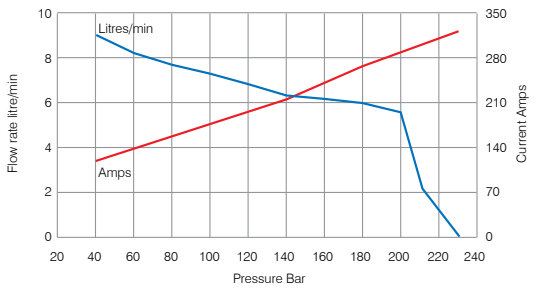


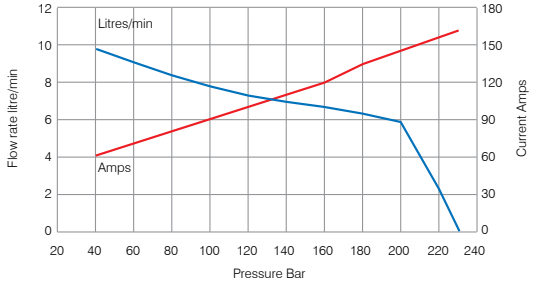
12V



24V

Performance Characteristics – Commander 200HP

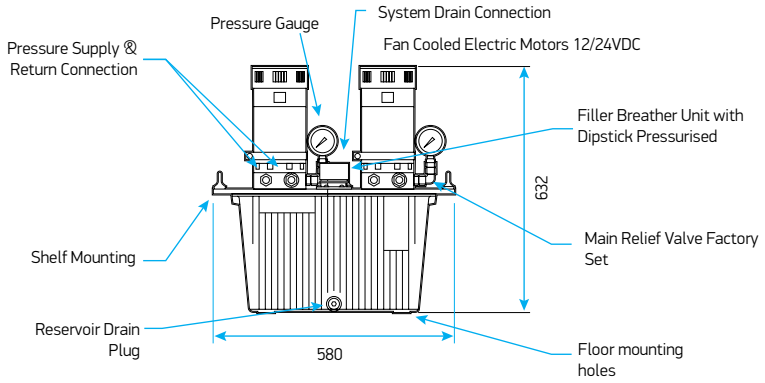




Commander 400

The Commander 400 continues the flexibility of the Commander 200 but with increased power. It is available in 12 or 24 volt versions, both are fan cooled. The Commander 400 is ideal for vessels which require high flow for sailing functions.

Variations of this Commander using high pressure (230 bar/3250 psi) motor-pumps are available, typically suitable for cylinder sheeting applications.



Hydraulic Technical Specification – Commander 400

Operating Pressure	140 bar (2030 p.s.i.)
Max flow	32l/min (8.4 US gal)
Reservoir Capacity	27 litres (7.1 US gal)
Hydraulic Oil Type	ISO Viscosity Grade 32

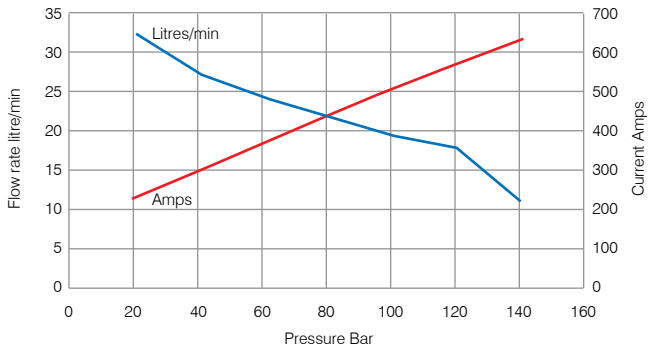
Electrical Specification

12 and 24 volt motors nominally rated to 3kW and fan cooled.

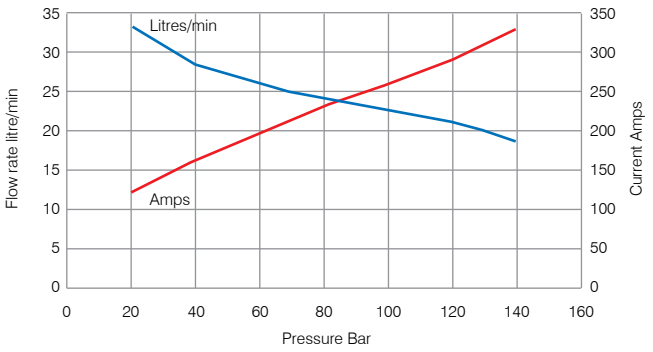
Supply voltage limits, ± 15%

At extreme tolerances the unit will operate with de-rated performance.

Performance Characteristics – Commander 400 12V



Performance Characteristics – Commander 400 24V



Commander 400HP also available. Contact your Lewmar representative for more information.

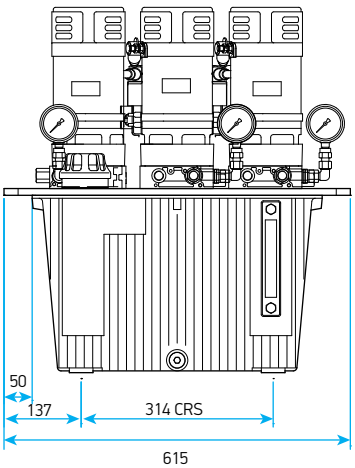
Commander 600

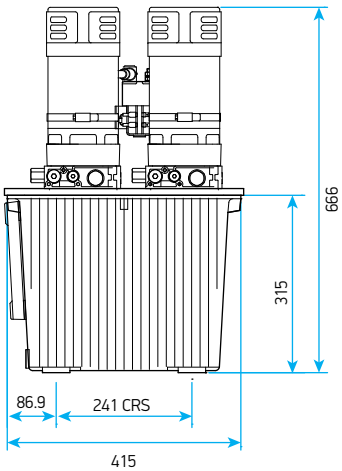
The Commander 600 is a further step up from the Commander 400, where the addition of a third motor-pump provides for greater flexibility in multifunction use.

For example, tacking/gybing where hydraulic furlers are used in conjunction with winches.

12V DC version available on request.

Variations of this Commander using high pressure (230 bar/3250 psi) motor-pumps are available, typically suitable for cylinder sheeting applications.





Hydraulic Technical Specification – Commander 600

Operating Pressure	140 bar (2030 p.s.i.)
Max flow	48l/min (12.7 US gal)
Reservoir Capacity	40 litres (10.6 US gal)
Hydraulic Oil Type	ISO Viscosity Grade 32

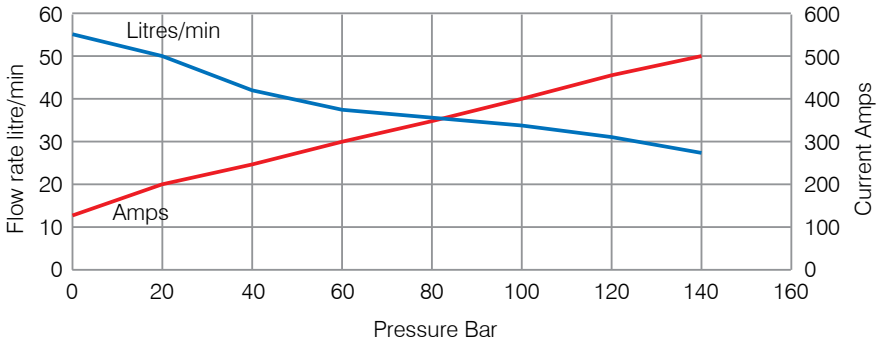
Electrical Specification

12 and 24 volt motors nominally rated to 3kW and fan cooled.

Supply voltage limits, ± 15%

At extreme tolerances the unit will operate with de-rated performance.

Performance Characteristics – Commander 600 24V



Commander 600HP also available. Contact your Lewmar representative for more information.

Custom Commander Systems

The Lewmar range of Custom Commanders is very comprehensive. This type of system allows the design of a fully integrated hydraulic package to be installed, and affords the builder the knowledge that he has a properly engineered package that is not just a mismatch of various manufacturers' components. Custom commander systems can be fully integrated with Lewmar Thrusters powered by PTO Pumps. This allows the use of a single reservoir, saving valuable space.

It also allows the use of the Thruster pump to act as an additional power source for the sailing system hydraulics. This can offer considerable benefits in the reduction of battery charging and provide a more efficient power source. Lewmar Custom Commander Systems have been used on over 200 yachts in the last 15 years, a testament to the popularity, and reliability of the product.

- DC motors from 3–15 kW
- Multi motor combinations
- 3 phase AC versions up to 15kW
- AC/DC versions
- Custom designed reservoirs
- Remote valve groups
- Proportional control
- PLC control
- Field bus control
- Electric soft start / speed control
- Various alarm outputs
- Fan cooled motors
- Thermal overload protection
- Custom program design
- Supported by Lewmar for the lifespan of the system

Custom AC/DC Commander

Power Packs & Reservoirs

Lewmar can provide custom power pack and reservoir design

- Reservoir sized to match the requirements of the hydraulic system to store and condition the oil while shaped to fit into the space available in the yacht.
- Multiple electric motor pump sets can be mounted onto the reservoir to provide a compact power solution using various sizes of AC or DC motor pump units to match the power requirements of the hydraulic system in the most efficient way.
- Bulkhead or Foot mounted reservoirs are available for PTO or stand alone pump only hydraulic systems.

Bulkhead Reservoir

Pump Drives

The real art of achieving an integrated system installation that is efficient and trouble free is the design of the pump drive system. Lewmar have hundreds of designs that have been giving reliable service for years.

The design of such a system is a very careful balance between the performance characteristics of the power source (Main engine, Gearbox or Generator), choice of thruster drive motor, and set up of the control system. Lewmar specify variable displacement pump and fixed displacement pump drive systems dependant on system requirements. These systems offer fingertip control of power selection, are extremely energy efficient as you only generate the power demanded and generate less noise. The various types of drive offer different benefits, but all depend on correct engineering:-

Main Engine Drives

Careful consultation between Lewmar and the engine manufacturer will assure a pump drive that will give a good spread of power from idle to higher RPM. Obviously some engines are better suited than others but most of the higher torque models will offer good results. Lewmar recommend the fitment of an electromagnetic clutch in order that the pump can be disconnected when not required. This saves energy, heat and noise. A speed trip can also be fitted to ensure that the engine is not stalled at low RPM, or the pump is not damaged at high RPM.

Gearbox Drive

Some gearbox manufacturers can provide a PTO output if specified. Some are clutched and some are direct coupled. Again, with careful consultation we can provide a pump drive to suit. Even without a clutch we can provide a speed sensor that will allow the pump to run at standby if the RPM are too low or too high.

Generator Drive

If the generator can provide sufficient usable power, this is an excellent way of achieving thrust without disturbing the main engine. The major generator manufacturers can provide a clutched PTO output if specified. Lewmar can then match a pump to suit. The advantage of this system is that the generator runs at a constant high RPM, so the pump size can be smaller for the same Horsepower. No speed trip is required, as the RPM is constant.

Valves

A range of modular valve solutions are available to tailor the hydraulic power for precise control of any individual hydraulic function

- Simple on-off or fully proportional control is available
- Valves can control pressure ranges up to 350 bar (5000 psi)
- In the case of specialist hydraulic functions a custom designed valve manifold can be supplied.

Control System

A control system is required for the correct and safe operation of the hydraulic system. It is used to make sure that when a deck switch or joystick is pushed, the right amount of hydraulic power is supplied to the hydraulic function from the correct power source.

The control system design is tailored to the needs of the customer and the requirements of the hydraulic system. Depending on complexity, the package can range from a barebone system as available with the Commander 200/400 to a PLC (Programmable Logic Controller) system, with the option to extend to a FieldBus control network for comprehensive control and automation.

Panels

Control panels designed and manufactured in a variety of weather resistant materials and components. Provide overall system and individual function control from a helm station or other location as desired.

Features multicoloured indicating push buttons and switching or proportional joysticks for control of thrusters, captive winches and sail furling systems.

PowerPack

When a system has more than one electric motor-pump, the control system will tailor the operation of each motor to start and stop individually or in conjunction in order to meet the hydraulic requirements efficiently and to reduce motor wear and strain on the power supply. All motors are thermally monitored and made safe in case of overheat. Both AC & DC motors can be provided with an option with variable speed control giving soft starting and idle speed control to improve response times, further reducing wear.

PTO Pump Control

The control system can monitor the main engine speed or a generator status to engage a pump on the PTO when power is available and automatically disengage to reduce wear and power wastage.

Oil Status

The control system monitors the system oil levels, filtration and temperature providing user feedback with audible alarms and indicators and will disable the system should the oil level reach minimum to prevent damage.

PLC Control

- Programmable controller, extremely robust and reliable, simple to install. Every PLC system custom designed to match the complexity and needs of the hydraulic system.
- Easy to troubleshoot using built in input & output indicators.
- Each PLC is individually programmed & tested. Lewmar keeps a copy of the program and can supply operational program modifications and updates as required using plug-in memory cassettes.

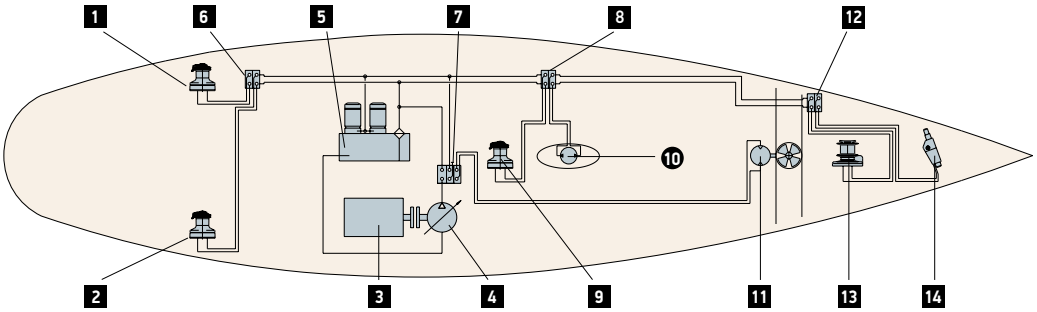
PLC Field Bus

This is a more advanced PLC control system which controls the hydraulics using an ASi (Actuator Sensor Interface) network. This is a simple, robust and reliable network which distributes control of the hydraulic system throughout the yacht using simple wiring and IP65 connection modules making it a perfect match for the environment.

Case Study

A typical hydraulic system which can be found on a 60-70ft yacht featuring a custom designed Commander 400 and a pump off a generator clutched PTO output. The PTO pump is sized to match the thruster and powers the thruster only in docking mode while the Commander powers the rest of the system. However, when sailing the PTO pump will power all non thruster functions leaving the Commander as backup and for night/quiet operation.

The control system is designed to use a barebones Commander 3/8 control box and a custom stainless control panel with a proportional paddle joystick giving fine thruster control.



18m (60ft) Typical Hydraulic Schematic

POSITION	DESCRIPTION	TYPE	PRESSURE FLOW
1	Primary Winch	Lewmar 70/3	140 BAR – 20 l/min
2	Primary Winch	Lewmar 70/3	140 BAR – 20 l/min
3	Generator Set with Clutched PTO	Various	
4	Variable Displacement Pump	41 CC/REV	210 BAR – 53 l/min
5	24 v DC Hydraulic Power Pack	Custom Commander 400	140 BAR – 30 l/min
6	Aft Winch Valve Group	2 Station Valve Group	
7	PTO Backup/Thruster Valve	2 Station Valve Group	190 BAR – 53 l/min 140 BAR – 30 l/min
8	Mast Winch/Furler Valve Group	2 Station Valve Group	
9	Halyard/Outhaul winch	Lewmar 55SHST	140 BAR – 20 l/min
10	In Mast Main Furler	Various	140 BAR – 20 l/min
11	15HP Tunnel Thruster	Lewmar 250TTH	190 BAR – 53 l/min
12	Fwd Windlass/Furler Valve Group	2 Station Valve Group	
13	Gypsy Capstan Anchor Windlass	Lewmar V6	140 BAR – 30 l/min
14	Headsail Furler	Various	140 BAR – 15 l/min

7. Hardware

From the plain bearing Synchro range, to our High-Load Racing blocks hewn from a single piece of aluminium, every Lewmar hardware product benefits from our experience in high-tech materials and design techniques picked up over many years of involvement in the highest level of racing and Superyacht development.

The end result is a range of robust, high-performance products which ease sail handling for every sailor.

Lewmar Block Range

Page 131 Control Blocks – Control lines & hand loads

- Long glass-fibre reinforced composite cheeks
- Stainless steel ball bearings

Page 135 Synchro Cruising blocks

- Stainless steel straps and glass-fibre reinforced cheeks
- High density, free-spin plain bearing
- Easy to use, patented shackle post lock
- Sheave / bearing / pin & line size optimised for efficiency

Page 139 HTX Range – Racing and Cruising Blocks

- Alloy cheeks
- Side thrust ball bearings
- Head design inspired by racing blocks
- High load capacities

Page 143 Racing Range – Racer and Grand Prix

- Monocoque alloy construction
- Ball and roller bearings
- Light weight - High strength to weight ratio
- High level of type optimisation – webbing, runner. Halyard blocks etc

Page 150 Special Application Blocks

- Snatch Blocks
- Pivoting Lead Blocks

Page 153 Custom Hardware for Superyacht Projects

- Performance hardware suitable for high loads generated on superyachts
- Designed to meet individual functional specification
- Customised to blend with overall design aesthetic

Note: Lewmar blocks are intended for sail control line handling on sail boats only.
Buyers intending to use them for any other purpose should seek independent professional advice as to their suitability. Lewmar accepts no liability arising from such other uses.

TotalCote

Part Number : 19701700 (retail carton of 12 cans)
Individual cans available in retail outlets

Lewmar's TotalCote is the new go-to product for almost any marine maintenance requirement.

Formulated solely from naturally occurring products, TotalCote is incredibly effective yet safe to the environment and sensitive marine eco-systems.

TotalCote protects, displaces, cleans, seals, penetrates and lubricates. Use it on everything from seized bolts to your block and traveller car ball bearings to your luff groove. TotalCote will reduce friction and offer a long-term barrier against rust and corrosion.

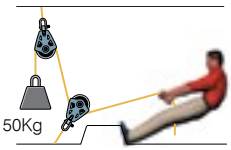
Technical Reference – Choosing the right purchase system

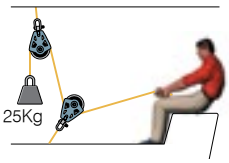
Lewmar manufactures a diverse range of blocks to suit all marine applications. This guide aims to help you to choose the best purchase system and the appropriate Lewmar products to suit your application.

Why do we need purchase systems?

As a guide, the average person can:

- Pull vertically down a force equivalent to their body weight (for a short period)
- When fully braced, pull intermittently sideways with one hand to 25kg and with two hands to 50kg
- Adjust control lines frequently loaded to 25kg
- Exert 15kg single-handed and 25kg double-handed on a winch handle





Human force can be multiplied through a purchase system made up of block systems and/or winches, enabling comfortable operation of high-loaded sailboat controls.

Which purchase system?

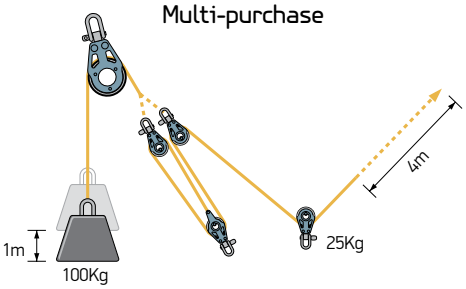
Multi-Purchase System

- Ideal for mainsheet traveller systems
- Provides full range of adjustment

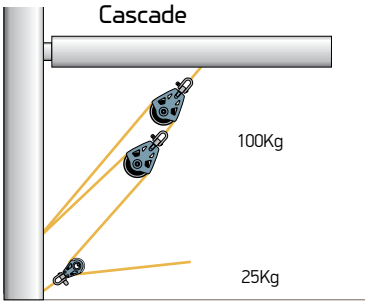
Cascade System

- Ideal for a vang system
- Achieves a smaller range of adjustment
- Provides high purchase with minimum blocks
- Line type and diameter can be specified in line with load on each part of system
- Enables control lines to be led to either side of the boat, for example, with a backstay adjustor
- All blocks must be free to travel their full working length without danger of catching

Multi-purchase



Cascade

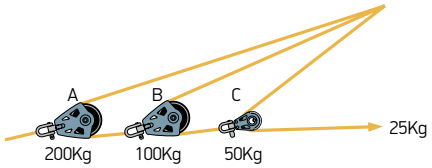


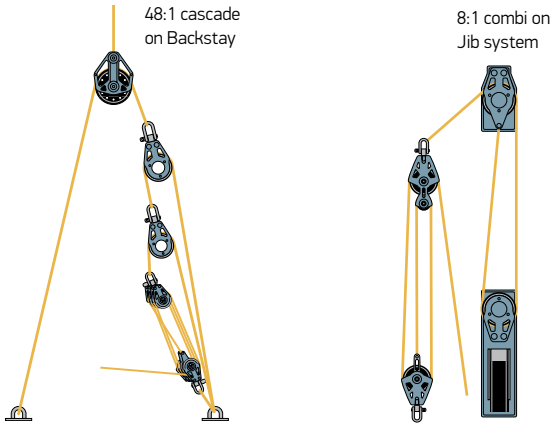
Some typical systems in use on current boats

	BACKSTAY	MAINSHEET TRAVELLER	MAINSHEET COARSE TUNE	EXTRA PURCHASE FOR MAINSHEET FINE TUNE	JIB TRAVELLER	VANG	CUNNINGHAM
Racing dayboat	16:1 cascade	2:1	2:1	4:1 multi-purchase	Plunger	8:1 combination	4:1 cascade
Small cruiser	Fixed	2:1	4:1 multi-purchase	–	Plunger	4:1 multi-purchase	N/A
Small racing yacht	16:1 combination	8:1 multi-purchase	6:1 multi-purchase	4:1 multi-purchase	8:1 combination	20:1 combination	4:1 cascade
Medium cruiser	Fixed	4:1	4:1	N/A	2:1 with plunger	5:1	N/A
Medium racing yacht	Hydraulic	12:1 combination	2:1 Winched	N/A	12:1 combination	36:1 combination	6:1 combination
Large cruiser	Hydraulic	6:1	4:1 Winched	N/A	2:1 with plungers	8:1	4:1
Large racing yacht	Hydraulic	2:1 Winched	2:1 Winched	N/A	2:1 Winched	Hydraulic	6:1 combination

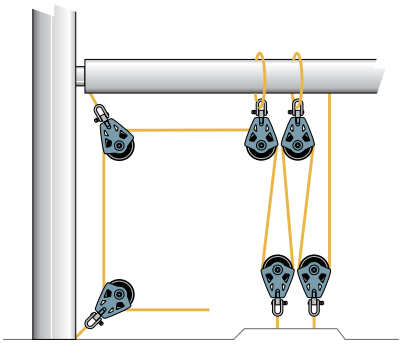
Combination Cascade / Multi Purpose System

- Achieves compromise between power and range requirements
- Ideal for use on backstay, jib, and mainsheet controls



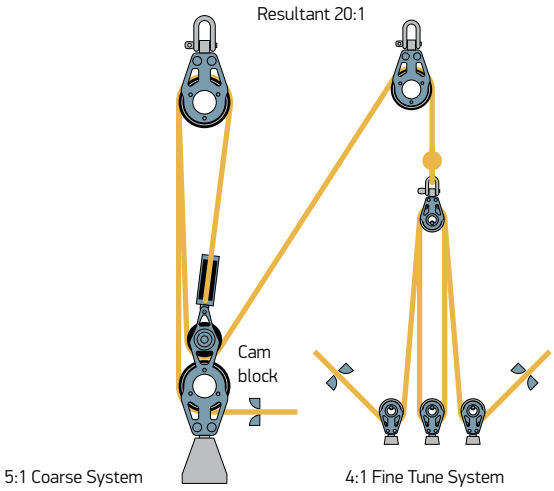


4:1 purchase on Mainsheet



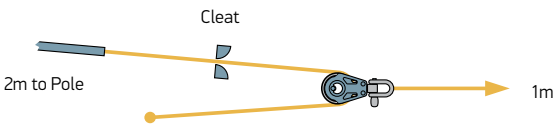
Coarse/Fine Tune System

- Coarse purchase ideal for racing mainsheet systems
- Used for moving large amounts of unloaded mainsheet during mark rounding
- Combination fine purchase perfect for playing the mainsheet when beating



Reverse Purchase

- Ideal for an asymmetric pole launch system
- Offers fast movement and a greater range on lightly-loaded systems
- Cleat is located on control line, which is loaded to twice the pole launch rope



How much purchase power is needed?

To identify the amount of purchase power required, carry out the following calculation:

$$\frac{\text{Output Force}}{\text{Input from Control Line/Winch}} = \text{Purchase Required} \quad \frac{200\text{kg}}{25\text{kg}} = 8{:}1$$

The table gives some examples of typical purchases used by Lewmar customers.

Typical purchase systems

BOAT SIZE	4m/13ft	6m/20ft	8m/26ft	10m/33ft	12m/39ft	14m/45ft	16m/53ft
Mainsheet – Hand	3:1	4:1	4:1	5:1–10:1	8:1– 24:1	–	–
Mainsheet – Winched	–	–	–	3:1	4:1	4:1	4:1
Vang – Cruising	4:1	4:1	4:1	6:1	8:1	10:1	10:1
Vang Racing	5:1	6:1	8:1	12:1	24:1	36:1	48:1
Car tow – Cruising	–	–	2:1	2:1	2:1	3:1	3:1
Car tow – Racing	–	2:1	3:1	6:1	10:1	2:1 (winch)	2:1 (winch)

Winched purchases

To identify the amount of purchase power required in winched purchase, first calculate the winch output:

Winch Model Number (x 15kg (single-handed operation) / x 25kg (double-handed operation)) = Winch Output

$$\frac{\text{Output Force}}{\text{Winch Output}} = \text{Purchase Required}$$

The table suggests the pulling power that can be generated.

Typical winch output loads

WINCH SIZE	30	40	45	50	55
One handed input – 15 Kg on handle = Winch output load	450kg	600kg	660kg	720kg	–
Two handed input – 25 Kg on handle = Winch output load	–	–	1100kg	1200kg	1350kg

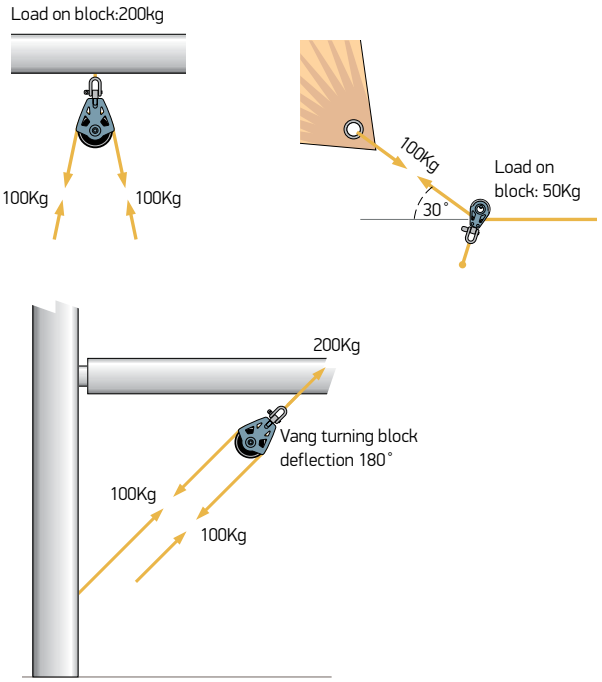
Which Bearing?

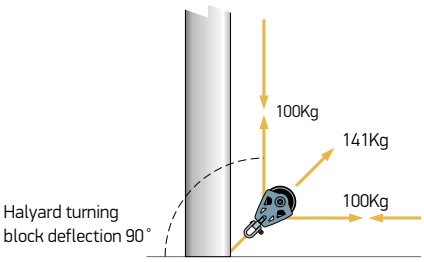
APPLICATION	BEARING	RECOMMENDED LEWMAR RANGE
Frequently adjusted, free, fast-running systems such as sheets or control lines	Ball Bearing Sheave	Control Block
High-static loadings, adjusted less frequently and mainly cleated, such as halyards	Free Spin Bearing	Synchro Block
Frequently adjusted, high loaded systems, using modern line technology with high load on reduced line diameters.	Free spin bearing with ball bearing side thrust.	HTX Block
A combination of the above	Torlon Roller Bearing	Racing Block

Which Size/Load Block?

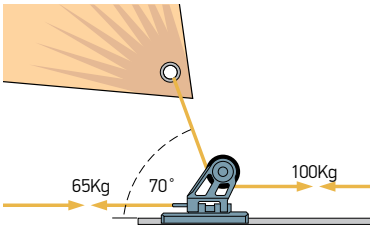
- Each Lewmar block has a specified Working Load Limit (WLL), listed in the product specification table
- Match the input from Control Line/Winch to the WLL of the block
- Note that the line's angle of deflection around the sheave affects the load exerted on the block (see table below)

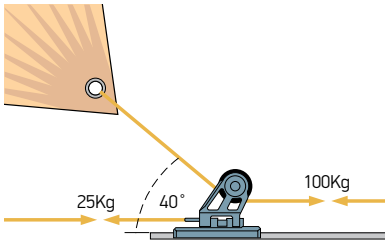
CHANGE OF ANGLE	BLOCK LOAD AS % OF LINE LOAD	CHANGE OF ANGLE	BLOCK LOAD AS % OF LINE LOAD
180°	200%	90°	141%
170°	199%	80°	129%
160°	197%	70°	115%
150°	193%	60°	100%
140°	187%	50°	84%
135°	184%	45°	76%
130°	181%	40°	68%
120°	173%	30°	52%
110°	164%	20°	35%
100°	153%	10°	17%
		0°	0%





VERTICAL GENOA SHEET ANGLE	TOW LOAD AS % OF SHEET LOAD
70º	65%
60º	50%
50º	35%
40º	25%
Mainsheet traveller towing load	
Guide % of mainsheet load	25%



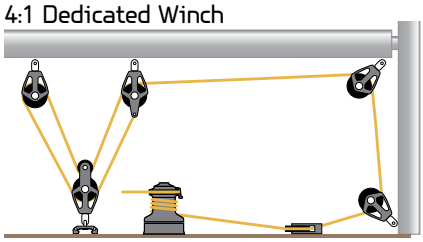


Additional Recommendations

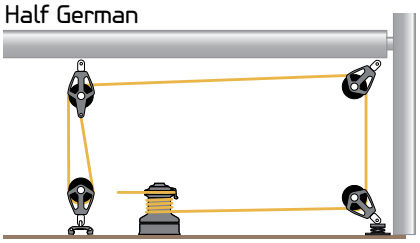
- Always choose a sheave diameter at least 7x the line diameter.
- Ensure that blocks are always fitted so they align with the lines passing through them, particularly on multiple blocks and where lines are periodically slack.
- All Lewmar products have been designed, tested, and developed to achieve best possible efficiency; however, no purchase system is 100% efficient. The force achieved at the working end of the purchase will be slightly less than the human load multiplied by the purchase. When calculating the purchase required to achieve a known load, we would recommend allowing a factor of 1.05 per block. Multiply by the number of 180° turns in the rope make in a system to be certain of 'fingertip' control.

Mainsheet Systems – Typical Arrangement

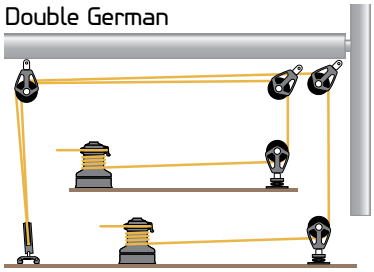
4:1 Dedicated Winch



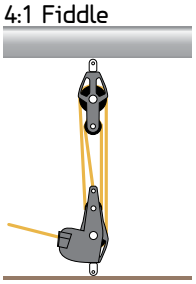
Half German



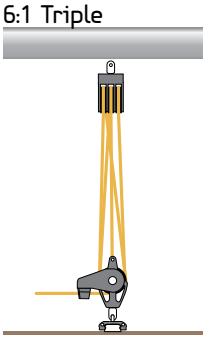
Double German



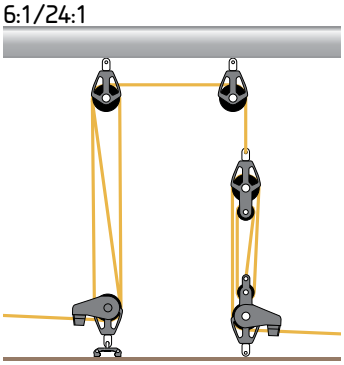
4:1 Fiddle



6:1 Triple

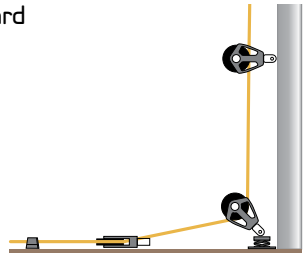


6:1/24:1

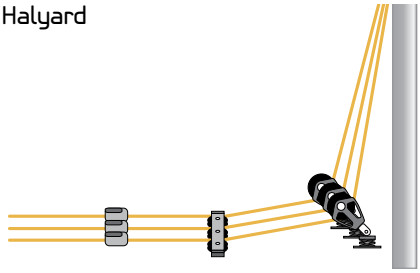


Halyards

Single Halyard

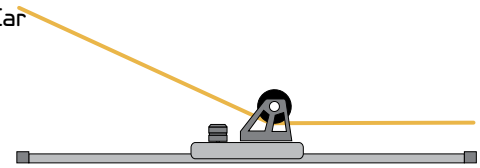


3 Halyard



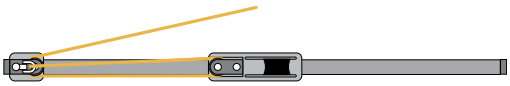
Genoa Systems

Plunger Car

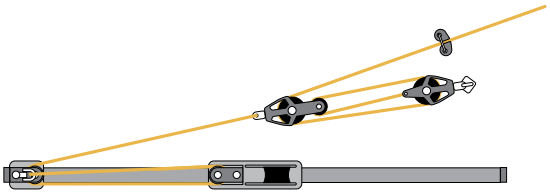


3:1

2:1

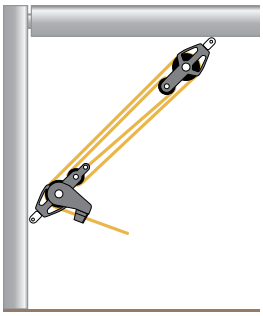


8:1

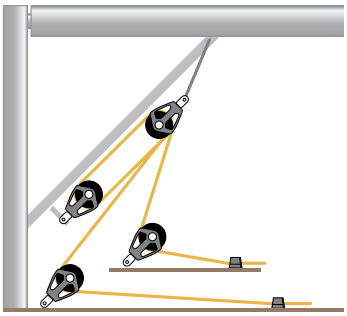


Boom Vang

4:1 Fiddle

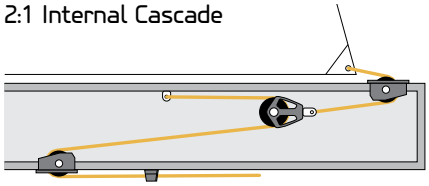


6:1 Double Ended

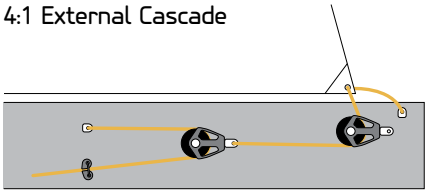


Outhaul

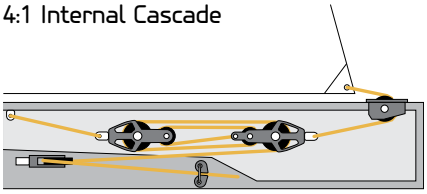
2:1 Internal Cascade



4:1 External Cascade

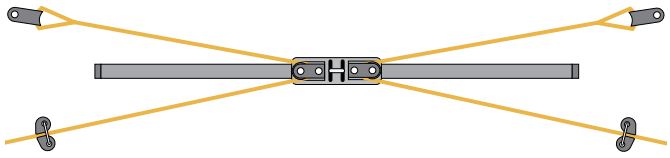


4:1 Internal Cascade



Traveller Systems

2:1



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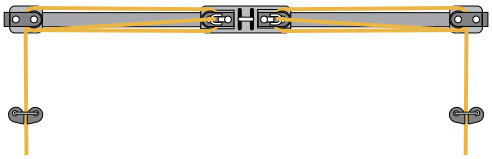

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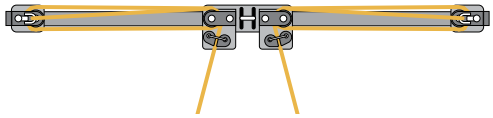
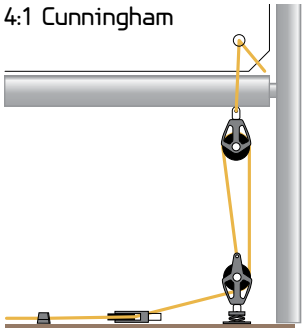


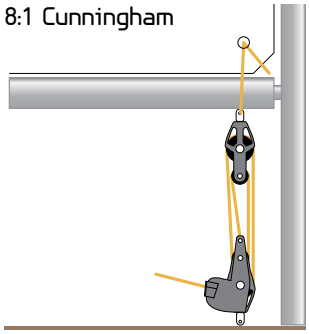
4:1

Cunningham

4:1 Cunningham

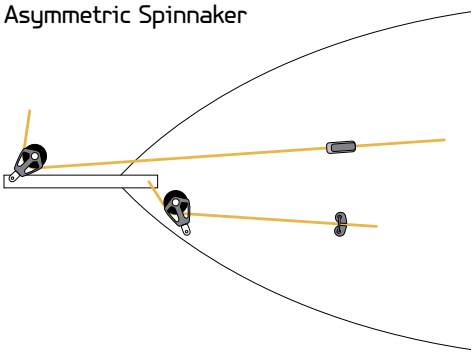


8:1 Cunningham

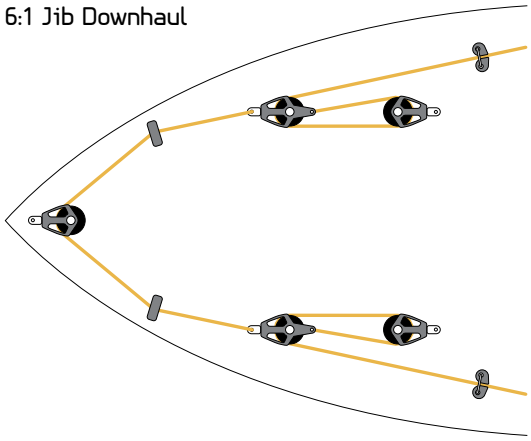


Miscellaneous

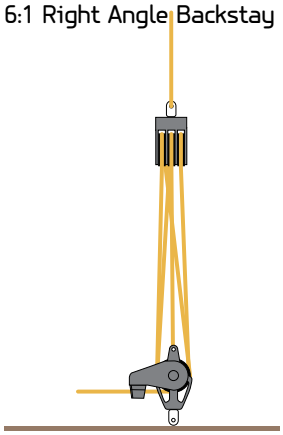
Asymmetric Spinnaker



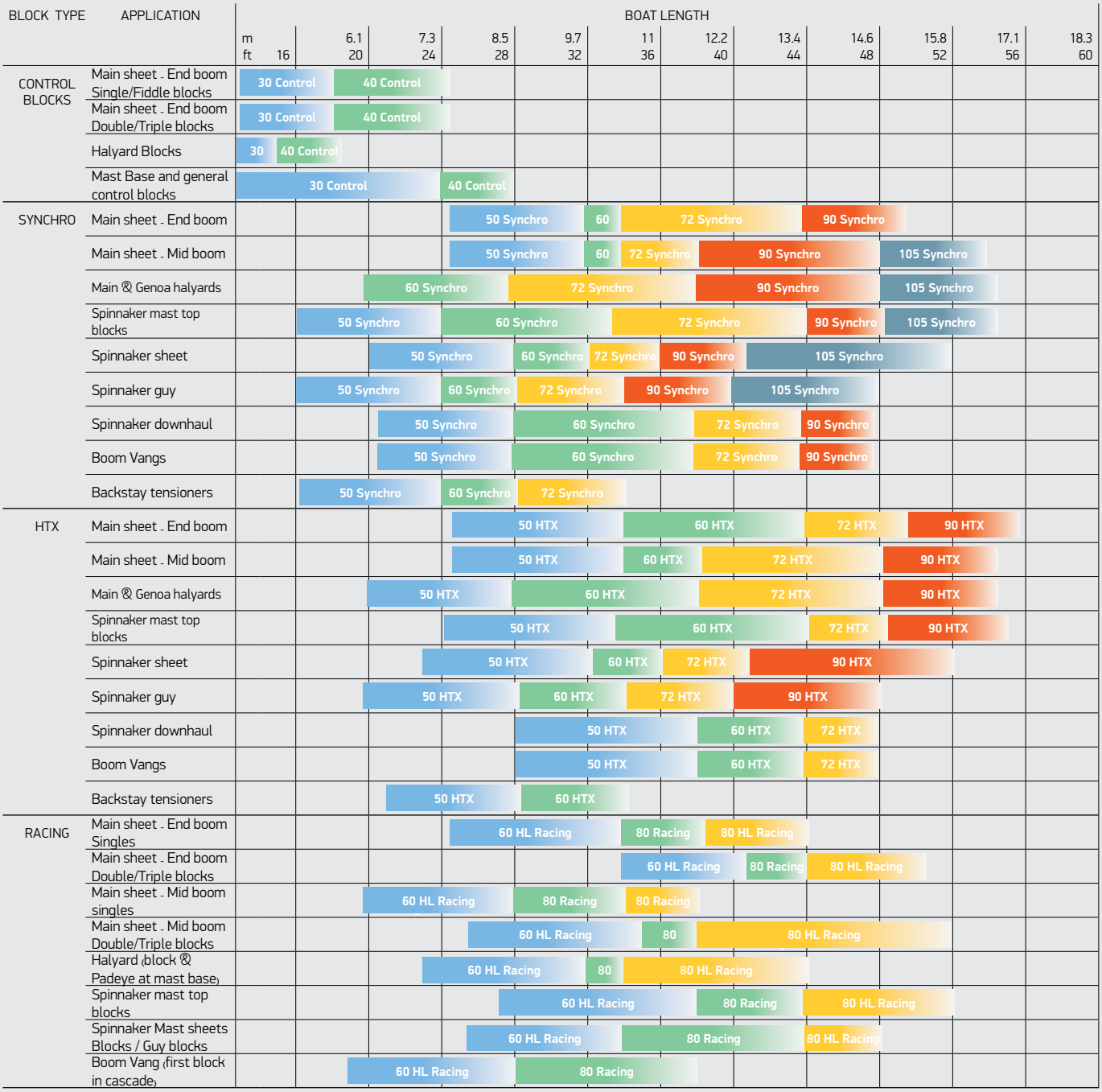
6:1 Jib Downhaul



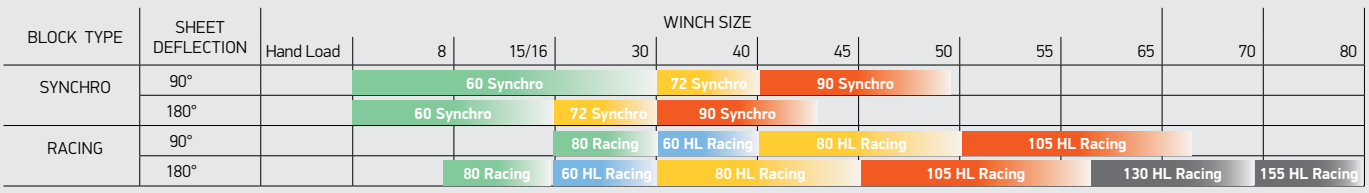
6:1 Right Angle Backstay



Blocks – Selection Guide



Footblock – Selection Guide



Control Blocks
- 30 Control
- 40 Control

Synchro Blocks
- 50 Synchro
- 60 Synchro
- 72 Synchro
- 90 Synchro
- 105 Synchro

HTX Blocks
- 50 HTX
- 60 HTX
- 72 HTX
- 90 HTX

Racing Blocks
- 60 HL Racing
- 80 Racing
- 80 HL Racing
- 105 HL Racing

Control Blocks

Ideal for use with hand-held loads, Lewmar's Control Blocks feature lightweight, performance load-bearing capacity. MRT (Metal Replacement Technology) and a stainless steel central race and balls provide a weight advantage, while Long Fibre Technology offers exceptional strength and durability. The open design allows sand and salt to be flushed out easily, keeping maintenance simple.

- Lightweight
- Very High Strength
- Impact Resistant
- Reduced Friction
- Easy Maintenance
- Optimised for hand control

A Long fiber cheek

B High strength glass-filled sheave

C Marked sheave - Showing line size and safe working load

D Stainless Steel balls and ball groove - Avoids deformation and loss of performance

Applications

Ball bearing blocks are typically used for medium and dynamic loads in :

- Control line applications
- Mainsheets for dinghies and keelboats
- Spinnaker sheets, barber haulers
- Genoa sheets
- Dinghy applications

Single Stand Up

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901320BK	30	200	440	30	1
29901420BK	40	240	528	54	1.9

Single

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901321BK	30	200	440	28	1
29901421BK	40	240	528	52	1.83

Double

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901322BK	30	300	660	47	1.65
29901422BK	40	480	1056	112.5	3.97

Triple

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901323BK	30	500	1100	85	3
29901423BK	40	720	1584	187.5	6.61

Single & Becket

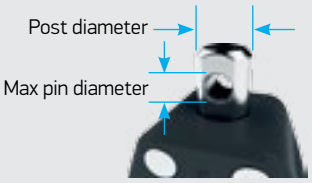
PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901324BK	30	200	440	33	1.16
29901424BK	40	240	528	56.5	1.99

Double & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901325BK	30	300	660	50	1.76
29901425BK	40	480	1056	116.5	4.11

Control Blocks

Shackle Post Dimensions



	POST DIAMETER		TO FIT MAX PIN Ø	
	mm	in	mm	in
30mm Single / Double	7.1	2/7	4	5/32
30mm Triple	9.25	3/8	5	3/16
40mm Single / Double	8.0	5/16	4	5/32
40mm Triple	11.5	7/16	6	1/4

Line Size

	MAX LINE SIZE	
	mm	in
30mm Control	8	5/16
40mm Control	10	3/8

Suitable Block Upstand

30 and 40mm Control blocks fit block upstand part no 29904046

For more info refer to p. 151

Fit Snap Shackle

	FIT SNAP SHACKLE
30mm Control Single / Double	**29925040**
30mm Control Triple	**29926040**
40mm Control Single / Double	**29925040**
40mm Control Triple	**29927240**

For more info refer to p. 151

Cleat Used

Control blocks with cam use the following cleats

	USE CLEAT	WORKING LOAD LIMIT	
		Kg	lb
30 / 40mm control	**29104100BK**	120	264

For more info refer to page 180

Pad Eyes

Wide range of pad eyes available, refer to page 152 for more information

Triple & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901326BK	30	500	1100	90	3.17
29901426BK	40	720	1584	192.5	6.79

Single Fixed Strap

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901341BK	30	200	440	26	0.92
29901441BK	40	240	528	44	1.55

Single Fixed Strap - St. Steel Sheave

Designed for use with wire.

30mm suits max 3mm (1/8") wire

40mm suits max 6mm (1/4") wire

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901301BK	30	240	528	36	1.2
29901401BK	40	400	890	76	2.5

Single Fixed Strap & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901314BK	30	200	440	31	1.09

Triple & Cleat

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29901328BK	30	500	1100	135	4.76
29901429BK	40	720	1584	247.5	8.73

* Block WLL, cleat WLL 120kg

Single with Becket & Cleat

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29901428BK	40	240	528	56.5	1.99

* Block WLL, cleat WLL 120kg

Control Blocks

Triple with Becket & Cleat

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29901330BK	30	500	1100	140	5
29901430BK	40	720	1584	252.5	8.91

* Block WLL, cleat WLL 120kg

Single Web

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901447BK	30	240	528	39.5	1.39

Thru-Deck Block

Single

Tandem

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901361BK	30 single	200	440	26	0.92
29901362BK	30 tandem	200	440	45	1.59

Cheekblock

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901360BK	30	200	440	18.5	0.65
29901460BK	40	240	528	43	1.52

Vertical Lead Block

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901363BK	30	200	440	48	1.69
29901463BK	40	240	528	70	2.4

Pivoting Exit Block

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29901365BK	30	200	440	80	2.82

* Block WLL, cleat WLL 120kg

Linked Blocks

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901311BK	30	200	440	52	1.84
29901411BK	40	240	528	88	3.1
29901412BK	30 / 40	200	440	70	2.47

Footblock

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29194061	40	750	1653	66	2.33

Comes with a stainless steel base plate and can be used as miniature organisers or deflectors for lines being returned to the cockpit.
Use M8 (5/16) fixings - Not included

Double Footblock

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29194062	40	750	1653	121	4.27

Comes with a stainless steel base plate and can be used as miniature organisers or deflectors for lines being returned to the cockpit.
Use M8 (5/16) fixings - Not included

60mm Ratchet Blocks

Only suitable to use with hand loads. For winched loads, refer to the Synchro, HTX or Racing ranges.

Shackle Post Dimensions

	POST DIAMETER		TO FIT MAX PIN Ø	
	mm	in	mm	in
60mm Ratchet Single	9.5	3/8	5	3/16
60mm Ratchet Triple	10.0	2/5	6	¼

Line Size

	MAX LINE SIZE	
	mm	in
60mm ratchet	10	3/8

Fit Snap Shackle

	FIT SNAP SHACKLE
60mm Ratchet single	**29926040**
60mm Ratchet Triple	**29927240**

For more info refer to p. 151

Fit Traveller Upstand

	FIT TRAVELLER UPSTAND
60mm Single Ratchet	Size 1 NTR
60mm Triple Ratchet	Size 2 NTR & HTX

Suitable Block Upstand

60mm triple ratchet blocks fit upstand part no 29904050
For more info refer to p. 151

Cleat Used

	USE CLEAT	WORKING LOAD LIMIT	
		kg	lb
60mm control block	**29104110BK**	180	396

For more info refer to p. 180

Pad Eyes

Wide range of pad eyes available, refer to page 152 for more information

Single Ratchet

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901661BK	60	400	882	126	4.3

Single Ratchet & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901665BK	60	400	882	141	4.8

Single Ratchet & Cleat

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29901667BK	60	400	882	288	10.1

Triple Ratchet & Cleat

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29901668BK	60	1000	2204	524	17.7

Triple Ratchet, Becket & Cleat

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29901670BK	60	1000	2204	538	18.2

* Refers to block WLL, cleat WLL 180kg

Synchro Blocks

Lewmar Synchro blocks are engineered for speed, efficiency and superior handling. We use a combination of scientifically optimised block geometry, a Free-Spin bearing and self-aligning head to reduce friction and increase efficiency by up to 40% over budget blocks on mainsheet systems.

Each component is perfectly synchronised with the movement of the rope, providing you with an easier, smoother transfer of power from deck to sail and less wear on your rope.

- Stainless steel strap for improved strength and longer service life
- Stiff glass fibre reinforced cheeks to prevent lines from wedging
- Innovative design with "tool-free" sliding swivel locking mechanism
- Simple switch to change from swivelling to fixed shackle

A Easy to use shackle post lock

B Shackle post – Fits travellers

C Lock mechanism enables 30° float

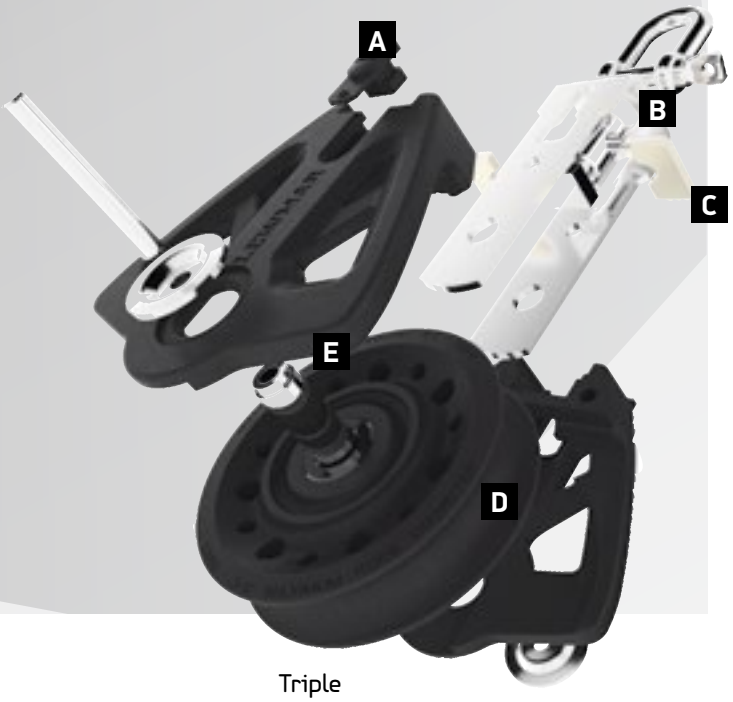
D Larger sheave diameter – Minimises rope friction

E High density free-spin bearing - reduces axle diameter for superior efficiency

Applications

Plain bearing blocks are typically used for heavy and static loads in:

- Halyard tuning
- Mainsheet systems
- Mast foot blocks
- Mast head blocks
- Boom vang



Single

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29925001BK	50	450	990	67	2.36
29926001BK	60	800	1760	115	4.06
29927201BK	72	1100	2420	190	6.69
29929001BK	90	2000	4400	413	14.57

Double

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29925002BK	50	450	990	142	5.01
29926002BK	60	800	1760	251	8.84
29927202BK	72	1100	2420	406	14.29
29929002BK	90	2000	4400	966	34.00

Triple

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29925003BK	50	450	990	226	7.96
29926003BK	60	800	1760	371	13.06
29927203BK	72	1100	2420	618	21.75
29929003BK	90	2000	4400	1389	48.89

Synchro Blocks

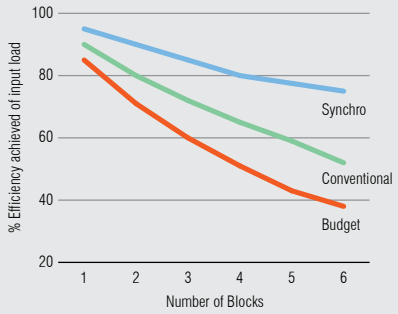
Head Design

Head can be positioned for use in line or at 90 degrees – or left to rotate freely when in unlocked position. When locked allows 30° "float" on shackle post to improve alignment of block.

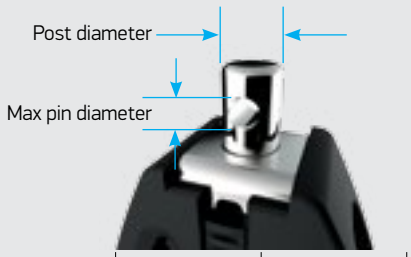
Higher efficiency – for faster sail handling and less rope wear.

Independent tests show Synchro blocks offer increased efficiency over conventional designs. Calculations over a 6-block mainsheet system, indicated Synchro blocks can deliver up to 40% greater efficiency than budget products – resulting in better responsiveness and improved sailing performance.

Efficiency improvements in multi block systems



Shackle Post Dimensions



	POST DIAMETER		TO FIT MAX PIN Ø	
	mm	in	mm	in
50mm Synchro	7.9	5/16	4	5/32
60mm Synchro	9.4	3/8	5	3/16
72mm Synchro	11.9	15/32	6	1/4
90mm Synchro	16.5	21/32	9.8	3/8

Suitable Block Upstands

Spring upstand
29904050 fits 50mm Synchro

Rubber boot upstand kit
29195065 fits 60mm Synchro
29196065 fits 72mm Synchro
29197265 fits 90mm Synchro

For information about block upstand refer to p.151

Suitable Traveller Upstand

	FIT TRAVELLER UPSTAND
50mm Synchro	
60mm Synchro	Size 1 NTR
72mm Synchro	Size 1 HTX/ Size 2 NTR
90mm Synchro	Size 2 HTX/ Size 3 NTR

Suitable Snap Shackles

	FIT SNAP SHACKLE
50mm Synchro	**29925040**
60mm Synchro	**29926040**
72mm Synchro	**29927240**
90mm Synchro	**29929040**

For more info refer to page 151

Cleat Used

	USE CLEAT	WORKING LOAD LIMIT	
		kg	lb
50mm Synchro	**29104100BK**	120	264
60mm Synchro	**29104110BK**	180	396
72mm Synchro	**29104110BK**	180	396
90mm Synchro			

For more info refer to page 180

Line Size

	OPTIMUM LINE SIZE		MAX LINE SIZE	
	mm	in	mm	in
50mm Synchro	6	1/4	10	3/8
60mm Synchro	8	5/16	10	3/8
72mm Synchro	10	3/8	12	1/2
90mm Synchro	12	1/2	14	9/16

Pad Eyes

Wide range of pad eyes available, refer to page 152 for more information

Single & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29925004BK	50	450	990	81	2.85
29926004BK	60	800	1760	127	4.48
29927204BK	72	1100	2420	210	7.41
29929004BK	90	2000	4400	458	16.15

Double & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29925005BK	50	450	990	164	5.77
29926005BK	60	800	1760	261	9.19
29927205BK	72	1100	2420	415	14.61

Single Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29925009BK	50	450	990	123	4.30

* Block WLL, cleat WLL 120kg

Triple, Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT *		WEIGHT	
		Kg	lb	g	oz
29925010BK	50	450	990	282	9.93
29926010BK	60	800	1760	261	9.19
29927210BK	72	1100	2420	820	28.86

* Block WLL, cleat WLLs shown p.136

Single Fiddle

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29925031BK	50	450	990	94	3.31
29926031BK	60	800	1760	156	5.50
29927231BK	72	1100	2420	250	8.80
29929031BK	90	2000	4400	544	19.19

Single Fiddle & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29925034BK	50	450	990	98	3.45
29926034BK	60	800	1760	166	5.85
29927234BK	72	1100	2420	275	9.70
29929034BK	90	2000	4400	589	20.77

Single Fiddle & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29925037BK	50	450	990	139	4.89
29926037BK	60	800	1760	221	7.78
29927237BK	72	1100	2420	339	11.93

* Block WLL, cleat WLL shown p.136

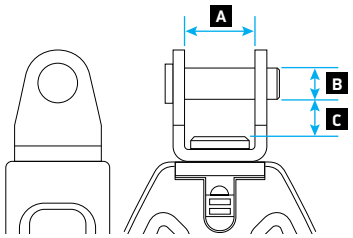
Single Fiddle, Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29925039BK	50	450	990	145	5.10
29926039BK	60	800	1760	234	8.24
29927239BK	72	1100	2420	356	12.53
29929039BK	90	2000	4400	879	27.12

* Block WLL, cleat WLL shown p.136

Halyard Block

The toggle head of the halyard blocks is designed to fit on the studs commonly found at mast bases – check the diameter of the stud against the width of the block jaws (A) and pin diameter (B)



PART NO	SHEAVE DIAMETER	WORKING LOAD LIMIT		WEIGHT		HEAD DETAILS A WIDTH		B PIN		C SPACE TO PIN	
	mm	Kg	lb	g	oz	mm	in	mm	in	mm	in
29925021BK	50	450	990	73	2.57	13	½	5	3/16	8.2	5/16
29926021BK	60	800	1760	122	4.29	15	37/64	6	7/32	6.9	9/32
29927221BK	72	1100	2420	198	6.98	18	45/64	8	5/16	9.6	3/8
29929021BK	90	2000	4400	414	14.57	23	29/32	10	25/64	13.9	17/32

Synchro Footblocks

Synchro Footblocks feature alloy cheeks, fixing isolators, and a moulded base plate to prevent sealant ingress into the sheave.

- Standard and jammer options can be double stacked
- Two-step jammer action keeps lever close to side of the block
- Optimised jammer shape holds line central on the sheave
- Tough alloy cheeks
- Synchro sheave loads match the same sized blocks

Jamming footblocks are designed to hold light hand loads only.

- Twin fixings with inserts
- Wide head for a solid base, block will not "roll" on the deck
- Moulded base plate with recess to hold sealant around fixing screws and prevent ingress onto the bearing and sheave

Aluminium Footblock

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29926061BK	60	800	1764	162	5.70
29927261BK	72	1200	2645	229	8.10
29929061BK	90	2000	4409	430	15.20

Use M8 (5/16) fixings for the 60/72mm sheaves and M10 for the 90mm sheaves - Not included

Also available in grey (remove BK)

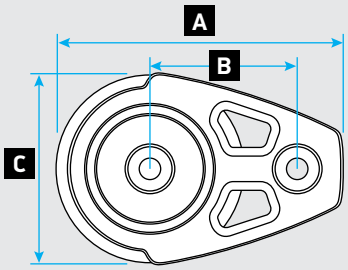
Aluminium Footblock with Jammer

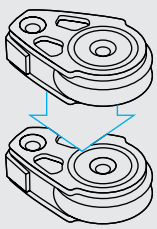
PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29926064BK	60	800	1764	190	6.70
29927264BK	72	1200	2645	250	8.80
29929064BK	90	2000	4409	480	16.90

Use M8 (5/16) fixings for the 60/72mm sheaves and M10 for the 90mm sheaves - Not included

Synchro Footblock Footprint

PART NO	A		B		C	
	mm	in	mm	in	mm	in
60mm Footblock	98.0	3 7/8	51.0	2	59	2 5/16
72mm Footblock	110.6	4 5/16	58.0	2 5/16	71	2 13/16
90mm Footblock	134.0	5 4/16	69.0	2 11/16	89	3 1/2



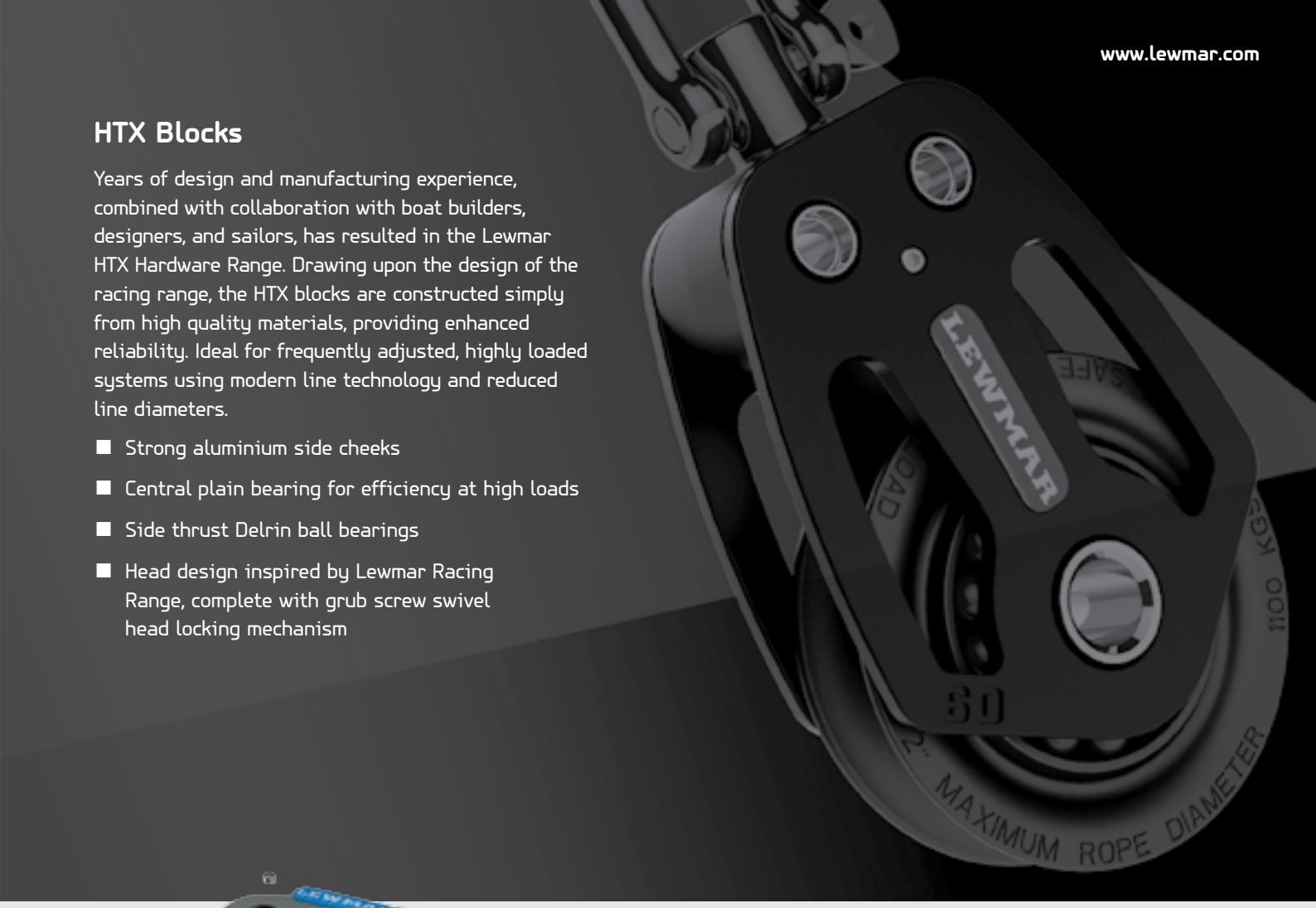


Standard and jammer options can be double stacked
The upper sheave should not be loaded beyond 60% of WLL

HTX Blocks

Years of design and manufacturing experience, combined with collaboration with boat builders, designers, and sailors, has resulted in the Lewmar HTX Hardware Range. Drawing upon the design of the racing range, the HTX blocks are constructed simply from high quality materials, providing enhanced reliability. Ideal for frequently adjusted, highly loaded systems using modern line technology and reduced line diameters.

- Strong aluminium side cheeks
- Central plain bearing for efficiency at high loads
- Side thrust Delrin ball bearings
- Head design inspired by Lewmar Racing Range, complete with grub screw swivel head locking mechanism

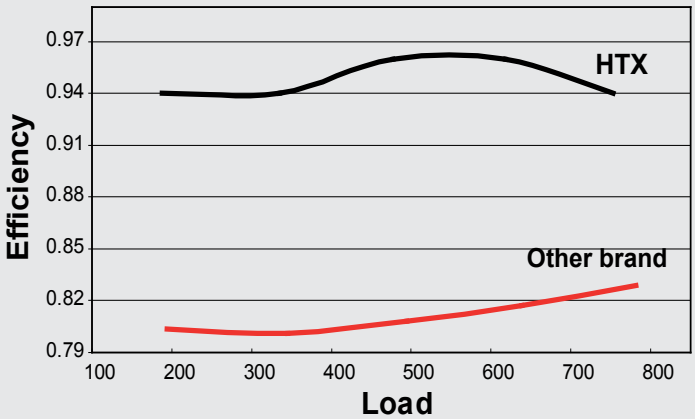


- **A** Alloy cheeks
- **B** Side thrust ball bearings
- **C** Central plain bearing
- **D** Head pin design inspired by Lewmar Racing series block
- **E** High Load capacity and large line size

Higher efficiency – for faster sail handling and less rope wear.

HTX blocks are more efficient than alternative brand using similar material due to machined bearing pin surface.

HTX block efficiency improves above 450kg as acetal sheaves become self-lubricating at this point.



Single

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195001	50	800	1762	135	4.7
29196001	60	1100	2422	215	7.5
29197201	72	2000	4405	445	15.6
29199001	90	3500	7709	735	25.8

Double

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195002	50	800	1762	217	7.6
29196002	60	1100	2422	331	11.6
29197202	72	2000	4405	552	19.3

Triple

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195003	50	800	1762	305	10.7
29196003	60	1100	2422	426	14.9

Single & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195004	50	800	1762	150	5.3
29196004	60	1100	2422	226	7.9
29197204	72	2000	4405	482	16.9
29199004	90	3500	7709	936	32.8

Double & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195005	50	800	1762	232	8.1
29196005	60	1100	2422	319	11.2

Single Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29195009	50	800	1762	320	11.2
29196009	60	1100	2422	414	14.5

* Block WLL, cleat WLL shown p.141

Triple, Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT *		WEIGHT	
		Kg	lb	g	oz
29195010	50	800	1762	511	17.9
29196010	60	1100	2422	710	24.9

* Block WLL, cleat WLL shown p.141

Web Single

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195047	50	800	1762	80	2.8
29196047	60	1100	2422	148	5.2
29197247	72	2000	4405	283	9.9

HTX Blocks

Fiddle

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195031	50	800	1762	165	5.8
29196031	60	1100	2422	257	9.0
29197231	72	2000	4405	530	18.5

Fiddle & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195034	50	800	1762	175	6.1
29196034	60	1100	2422	269	9.4
29197234	72	2000	4405	560	19.6

Fiddle & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT *		WEIGHT	
		Kg	lb	g	oz
29195037	50	800	1762	335	11.7
29197237	72	2000	4405	748	26.2

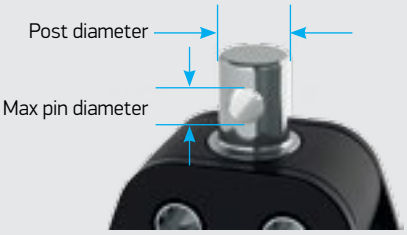
* Block WLL, cleat WLL shown on the right

Fiddle, Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT *		WEIGHT	
		Kg	lb	g	oz
29195039	50	800	1762	346	12.1
29196039	60	1100	2422	460	16.1
29197239	72	2000	4405	776	27.2

* Block WWL, cleat WLL shown on the right

Shackle Post Dimensions



	POST DIAMETER		TO FIT MAX PIN Ø	
	mm	in	mm	in
50mm HTX	9.4	3/8	5	3/16
60mm HTX	11.9	15/32	6	1/4
72mm HTX	16.5	21/32	9.8	3/8
90mm HTX	19.8	25/32	10	25/64

Line Size

	MAX LINE SIZE	
	mm	in
50mm HTX	10	3/8
60mm HTX	12	1/2
72mm HTX	14	9/16
90mm HTX	16	5/8

Cleat Used

	USE CLEAT	WORKING LOAD LIMIT	
		Kg	lb
50mm HTX	**29104100BK**	120	264
60mm HTX	**29104110BK**	180	396
72mm HTX	-	230	507

For more info refer to page 180

Suitable Traveller Upstand

	FIT TRAVELLER UPSTAND
50mm HTX	Size 1 NTR
60mm HTX	Size 1 HTX
72mm HTX	Size 2 NTR and Size 2 HTX
90mm HTX	Size 3 NTR

Pad Eyes

Wide range of pad eyes available, refer to page 152 for more information

HTX Blocks

Suitable Block Upstand

Rubber boot upstand kit:

29195065 fits 50mm HTX
29196065 fits 60mm HTX
29197265 fits 72mm HTX

For more info refer to page 151

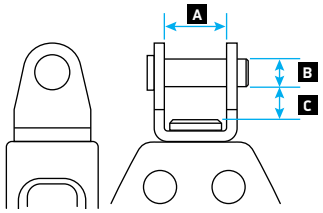
Fit Snap Shackle

	FIT SNAP SHACKLE
50mm HTX	**29926040**
60mm HTX	**29927240**
72mm HTX	**29929040**
90mm HTX	-

For more info refer to page 151

Halyard Block

The toggle head is designed to fit on the studs commonly found at mast bases.
Check the diameter of the stud against the width of the block jaws (A) and pin diameter (B)



PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT		HEAD DETAILS A WIDTH		B PIN		C SPACE TO PIN	
	mm	Kg	lb	g	oz	mm	in	mm	in	mm	in
29195021	50	800	1762	160	5.6	15	37/64	6	7/32	8	5/16
29196021	60	1100	2422	227	7.9	18	45/64	8	5/16	10	37/94
29197221	72	2000	4405	410	14.4	23	67/74	10	37/94	9.5	3/8

Single Stand-Up Block

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT		BASE DETAILS OVERALL DIAMETER		FIXINGS DIAMETER		FIXINGS TYPE
	mm	Kg	lb	g	oz	mm	in	mm	in	
29195011	50	800	1762	280	10	58	2 5/16	40	1 37/64	4 x M6 (1/4")
29196011	60	1100	2422	350	12.4	58	2 5/16	40	1 37/64	4 x M6 (1/4")
29197211	72	2000	4405	645	22.8	73	2 7/8	50	1 31/32	4 x M8 (5/16")
29199011	90	3500	7709	1115	39.3	76	3"	55	2 11/64	4 x M8 (5/16")

HTX Footblock

Use M8 (5/16") fixings for the 60/72mm sheaves and M10 (3/8") for the 90mm sheaves (not included)

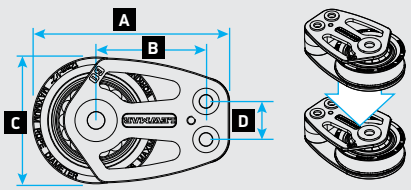
PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195061	50	800	1762	145	5.1
29196061	60	1100	2422	158	5.5
29197261	72	2000	4405	283	9.9
29199061	90	3500	7709	672	23.5

HTX Footblock With Jammer

*Jammer intended to hold hand loads only
Use M8 (5/16") fixings for the 60/72mm sheaves and M10 (3/8") for the 90mm sheaves (not included)

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29195064	50	800	1762	107	3.7
29196064	60	1100	2422	170	6.0
29197264	72	2000	4405	320	11.2

HTX Footblock Footprint



Standard and jammer options can be double stacked
The upper sheave should not be loaded beyond 60% of Working Load Limit (WLL)

SHEAVE Ø	A	B	C	D
	mm	mm	mm	mm
50	78.7	44	50	16
60	93.2	52	60	18
72	111.2	62	72	22
90	140.5	78	90	24

Racing Blocks

Lewmar Racing Blocks represent the pinnacle of Lewmar's standard block range. Manufactured from the best materials, they offer incredible strength to weight ratios.

- Lockable head pin
- Highly efficient central bearing
- Delrin thrust balls
- Ratchet fiddle blocks feature alloy ratchet sheaves and recessed ratchet lever

Single

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901611BK	60	800	1763	162	5.7
29901811BK	80	1000	2204	251	8.8
29901171BK	175	7500	16532	2472	87.2
29901201BK	200	9500	20940	3891	137.3
29901221BK	225	12500	27553	4980	175.5
29901251BK	250	15000	33064	6372	224.8

Single & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901614BK	60	800	1763	170	6.0
29901814BK	80	1000	2204	278	9.8
29901774BK	175	7500	16532	2750	97
29901204BK	200	9500	20940	4175	147.3
29901224BK	225	12500	27553	5341	188.4
29901254BK	250	15000	33064	6835	241.1

Single Stand Up

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901600BK	60	800	1763	283	10.0
29941800BK	80	2400	5280	518	18.0
29901170BK	175	7500	16532	3679	128

For fixing details refer to the website

Cleat Used

	WORKING LOAD LIMIT	
	Kg	lb
29104110BK	180	396

For more info refer to page 180

Snap Shackles

For more info refer to page 151

Suitable Block Upstand

Rubber boot upstand 29196065 fits 60mm Racing single

For more info refer to page 151

Pad Eyes

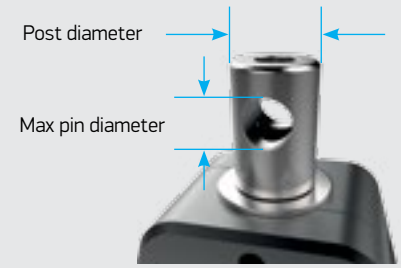
Wide range of pad eyes available, refer to page 152 for more information

Suitable Traveller Upstand :

	FIT TRAVELLER UPSTAND
60mm Racing	NTR 2 / HTX 1
60mm HL Racing	NTR 2 / HTX 1
80mm Racing	NTR 2 / HTX 1
80mm HL Racing	NTR 3 / HTX 2

Racing Blocks

Shackle Post Dimensions



	POST Ø		TO FIT MAX PIN Ø	
	mm	in	mm	in
60mm Fiddles	10.0	3/8	5	3/16
60mm Singles	11.0	3/8	6	1/4
60mm Doubles	13.8	1/2	8	5/16
80mm Singles/ Fiddles	12.5	1/2	6	1/4
80mm Double/ Triple	14	9/16	8	5/16
175mm	31.8	1 1/4	16	5/8
200mm	34.7	1 3/8	16	5/8
225mm	38	1 1/2	20	3/4
250mm	46	1 3/4	24.5	1

Line Size

	MAX LINE SIZE	
	mm	in
60mm Fiddle	10	3/8
60/ 80mm	12	1/2
175mm	22	7/8
200mm	22	7/8
225mm	24	15/16
250mm	26	1

Single Ratchet

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901821BK	80	800	1764	291	10.3

Single Ratchet & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901825BK	80	800	1764	318	11.2

Single Ratchet, Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901829BK	80	800	1764	503	17.7

Double

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901612BK	60	1440	3175	291	10.3
29901812BK	80	1800	3968	487	17.2

Double & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901615BK	60	1440	3175	299	10.5
29901815BK	80	1800	3968	514	18.1

Triple

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901813BK	80	2200	4849	724	25.5

Triple Ratchet & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901828BK	80	2200	4849	949	33.5

Racing Blocks

Triple & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901816BK	80	2200	4849	751	26.5

Triple Ratchet, Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901830BK	80	2200	4849	976	34.4

Fiddle

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901631BK	60	400	882	174	6.1
29901831BK	80	1000	2204	356	12.6

Fiddle Ratchet & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901822BK	80	1000	2204	567	20.0

Fiddle Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901634BK	60	400	882	190	
29901834BK	80	1000	2204	382	13.5

Fiddle, Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901639BK	60	400	882	353	12
29901839BK	80	1000	2204	567	20

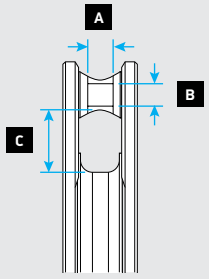
Fiddle Ratchet, Becket & Cam

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901624BK	60	400	882	362	13.0
29901824BK	80	1000	2204	356	21.0

Halyard Block

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29942601BK	60	1400	3080	146	5.2
29942801BK	80	2500	5500	274	9.7

Halyard Block Head Details



	A		B		C	
	mm	in	mm	in	mm	in
60mm Halyard	12.8	½	6.0	¼	26.5	1 1/16
80mm Halyard	14.4	9/16	8.0	5/16	29.5	1 ¼

Racing Blocks

Delrin Balls (Bag of 100)

PART NO	WHERE USED	DIAMETER	
		mm	in
29170022	60 +105 +130 Blocks/ Footblocks	4.6	3/16
29171022	80 +155 +175 Blocks/ Footblocks	6.4	1/4

Footblock Single

Fixings supplied (max 35mm deck thickness):
Size 60 : 3xM6, Size 80 : 3xM8
Size175 : 2xM12/3xM16, Size 250 : 4xM16/2xM20

PART NO	SHEAVE Ø	WLL		WEIGHT	
		Kg	lb	g	oz
29906601BK	60	400	882	160	5.6
29906801BK	80	1000	2204	279	9.8
29906171BK	175	10000	22043	2634	92.9
29906251BK	250	19000	41881	11271	397.6

Footblock Single With Jammer

RH version pictured

Fixings supplied (max 35mm deck thickness):
Size 60 : 3xM6, Size 80 : 3xM6
*Jammer working load limit: 300 Kg / 661lb

PART NO	SHEAVE Ø	WLL*		WEIGHT	
		Kg	lb	g	oz
29906604BK	60 Left Hand	400	882	181	6.3
29906606BK	60 Right Hand	400	882	181	6.3
29906814BK	80 Left Hand	1000	2204	299	11.0
29906816BK	80 Right Hand	1000	2204	299	11.0

Footblock Single With Ratchet

Fixings supplied (max 35mm deck thickness):
Size 60 : 2xM6/1xM10, Size 80 : 2xM8/1xM12

PART NO	SHEAVE Ø / RATCH. DIR.	WLL		WEIGHT	
		Kg	lb	g	oz
29906621BK	60 CCW (Port)	400	882	160	5.6
29906622BK	60 CW (Stbd)	400	882	160	5.6
29906821BK	80 CCW (Port)	1000	2204	341	12
29906822BK	80 CW (Stbd)	1000	2204	341	12

Footblock Double

Fixings supplied (max 35mm deck thickness):
Size 60 : 3xM6, Size 80 : 3xM8
Size 175 : 2xM12/3xM16, Size 250 : 4xM16/2xM20
*Top sheave should not be loaded above 60% of WLL

PART NO	SHEAVE Ø	WLL*		WEIGHT	
		Kg	lb	g	oz
29906602BK	60	400	882	258	9.1
29906802BK	80	1000	2204	415	15.0
29906172BK	175	10000	22043	11271	397.6
29906252BK	250	19000	41881	11271	397.6

Footblock Double With Jammer

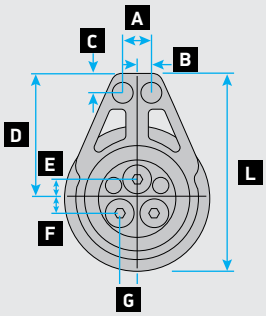
RH version pictured

Fixings supplied (max 35mm deck thickness):
SIZE 60 : 3xM6, SIZE 80 : 3xM8
SIZE 175 : 2xM12/3xM16, SIZE 250 : 4xM16/2xM20
*Jammer designed to hold hand loads only. Top sheave should not be loaded above 60% of WLL

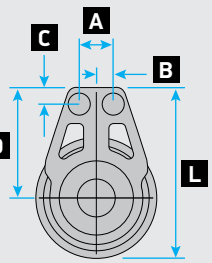
PART NO	SHEAVE Ø	WLL*		WEIGHT	
		Kg	lb	g	oz
29906605BK	60 Left Hand	400	882	258	9.1
29906607BK	60 Right Hand	1000	2204	415	15.0
29906815BK	80 Left Hand	10000	22043	11271	397.6
29906817BK	80 Right Hand	19000	41881	11271	397.6

Racing Footblock Footprint Details

SIZE	L		A		B		C		D		E		F		G	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
60mm	85	3 1/3	20	4/5	10.0	2/5	16	5/8	55	2 1/6						
80mm	111	4 3/8	26	1	13.0	1/2	20	4/5	71	2 4/5						
175mm	243	9 4/7	33	1 2/7	16.5	2/3	23	1	152	6	25	1	12.5	1/2	26	1
250mm	348	13 5/7	44	1 3/4	22	6/7	29	1 1/7	210	8 1/4	28	1 1/9	28	1 1/9	28	1 1/9



175mm = as shown
250mm = 4 central fixings



60 & 80mm Diagram

High Load Racing Blocks

Lewmar Racing Blocks represent the pinnacle of Lewmar's standard block range. Manufactured from the best materials, they offer incredible strength to weight ratios.

- Lockable head pin
- Highly efficient needle roller bearing system
- Delrin thrust balls
- Machined slots in cheeks for easy flushing of bearings

Single

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29941611BK	60	1200	2640	281	9.9
29941801BK	80	2400	5280	337	12
29941101BK	105	3750	8250	605	21.4
29941131BK	130	5000	11000	952	33.6
29941151BK	155	7500	16500	1810	64

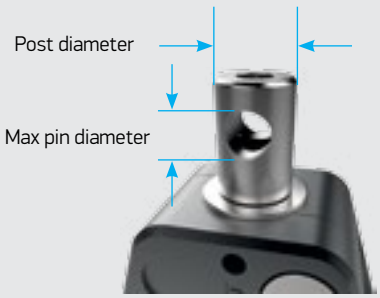
Single Stand Up

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29941600BK	60	1200	2640	281	9.9
29941800BK	80	2400	5280	518	18
29941100BK	105	3750	8250	727	25.7
29941130BK	130	5000	11000	1404	49.6
29941150BK	155	7500	16500	2396	84.7

Single & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29941614BK	60	1200	2640	174	6.1
29941804BK	80	2400	5280	358	13
29941104BK	105	3750	8250	640	22.6
29941134BK	130	5000	11000	986	34.8
29941154BK	155	7500	16500	1737	61.4

Shackle Post Dimensions



BLOCKS	POST DIAMETER		TO FIT MAX PIN Ø	
	mm	in	mm	in
60mm Single	11	3/8	6	1/4
60mm Other	13.8	1/2	8	5/16
80mm Single	15	9/16	8	5/16
80mm Other	19.8	3/4	10	3/8
105mm Single	19.8	3/4	10	3/8
105mm Other	21.8	7/8	12	1/2
130mm Blocks	21.8	7/8	12	1/2
155mm Blocks	25.8	1	14	9/16

Line Size

	MAX LINE SIZE	
	mm	in
60mm Blocks	12	1/2
80mm Blocks	14	9/16
80mm Fiddles	12	1/2
105mm Blocks	14	9/16
130mm Blocks	16	5/8
155mm Blocks	18	11/16

High Load Racing Blocks

Single with Snap Shackle

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29941808BK	80	2000	4400	496	18

Double

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29941612BK	60	2000	4400	320	11.3
29941802BK	80	3400	7480	655	23

Double & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29941615BK	60	2000	4400	343	12.1
29941805BK	80	3400	7480	685	24

Triple

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29941613BK	60	2500	5500	428	15.1

Fiddle

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29941831BK	80	2400	5280	441	16

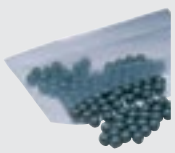
Fiddle & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29941834BK	80	2400	5280	471	17

Web Block

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29901647BK	60	1400	3086	120	4.2
29901807BK	80	2400	5280	242	8.6
29901107BK	105	3750	8250	417	14.7
29901337BK	130	5000	11000	665	23.5
29901157BK	155	7500	16500	1470	51.8

Delrin Balls (Bag of 100)



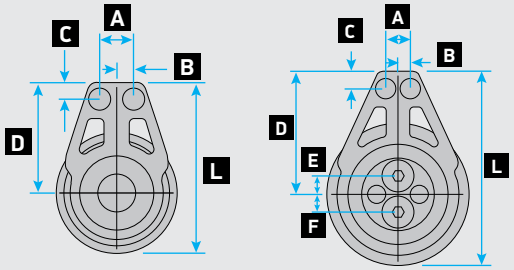
PART NO	WHERE USED	DIAMETER	
		mm	in
29175022	60HL Footblocks	3.2	1/8
29170022	60LL+80HL+105 +130 Blocks/Footblocks	4.6	3/16
29171022	80LL+105+155 +175 Blocks/Footblocks	6.4	1/4

Torlon Rollers for Racing Blocks & CL Sheaves

PART NO	BAG QTY	BLOCK SIZE
		mm
29900010	22	60
29900011	24	80
29900012	35	105
29900013	47	130
29900014	50	155
29900015	59	175
29900016	68	200
29900017	78	225

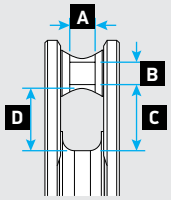
High Load Racing Blocks

Racing Footblock Footprint Details



SIZE	L		A		B		C		D		E		F	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
60mm	85	3 1/3	20	4/5	10.0	2/5	16	5/8	55	2 1/6				
80mm	111	4 3/8	26	1	13.0	1/2	20	4/5	71	2 4/5				
105mm	148	5 5/6	35	1 3/8	17.5	2/3	27	1	95	3 3/4	14	1/2	13.6	1/2
130mm	181	7 1/8	40	1 4/7	20.0	4/5	33	1 2/7	111	4 1/3	18	5/7	18	5/7
155mm	216	8 1/2	54	2 1/8	27.0	1	50	2	138	5 3/7	20	4/5	20	4/5

Halyard and Runner Block Head Details



BLOCK	A		B		C		D	
	mm	in	mm	in	mm	in	mm	in
60mm HL Halyard	12.8	1/2	8.5	21/64	25.3	1	24.0	15/16
80mm HL Halyard	14.4	9/16	11.0	7/16	28.0	1 3/4	27.4	1 3/32
80mm Runner	11	7/16	11	7/16	28.6	1 9/64	27.8	1 3/32
105mm Runner	13	33/64	13	33/64	34.0	1 11/32	32.0	1 1/4
130mm Runner	16	5/8	16	5/8	34.0	1 11/32	32.0	1 1/4

Single Footblock

Fixings NOT supplied:
SIZE 60mm 2xM6 / 1xM10
SIZE 80mm 2xM8 / 1xM12
SIZE 105mm 2xM10 / 1xM12
SIZE 130mm 4xM12
SIZE 155mm 2xM12 / 2xM16

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29946611BK	60	1400	3080	132	4.7
29946801BK	80	2400	5280	268	9.5
29946101BK	105	3750	8250	490	17.3
29946131BK	130	5500	12100	732	25.9
29946151BK	155	7500	16500	1476	52.2

Double Footblock

Fixings NOT supplied:
SIZE 60mm 2xM6 / 1xM10
SIZE 80mm 2xM8 / 1xM12
SIZE 105mm 2xM10 / 1xM12
SIZE 130mm 4xM12
SIZE 155mm 2xM12 / 2xM16

PART NO	SHEAVE Ø	WORKING LOAD LIMIT*		WEIGHT	
		Kg	lb	g	oz
29946612BK	60	1400	3080	252	8.9
29946802BK	80	2400	5280	500	17.7
29946102BK	105	3750	8250	873	30.8
29946132BK	130	5500	12100	1301	46.0
29946151BK	155	7500	16500	2675	94.5

*Top sheave should not be loaded above 60% of WLL

Shackle Posts

Designed to fit Racing halyard and runner blocks.

Can be used with shackle in-line or at 90° to sheave.

PART NO.	SUITS	POST DIA.		PIN DIA.		BREAKING LOAD	
		mm	in	mm	in	kg	lb
29942606	60mm	17.5	11/16	8	5/16	2800	6170
29942806	80mm	23.75	7/8	10	3/8	5000	11000
29942106	105mm	24	1	10	3/8	6400	14100
29942136	130mm	28	1 1/8	12	1/2	10000	22050
29942156	155mm	36	1 3/8	16	5/8	15000	33050

Fixed Halyard Block

PART NO	SHEAVE Ø	WLL		WEIGHT	
		Kg	lb	g	oz
29902800BK	80	2500	5500	300	10.6
29902100BK	105	4000	8817	629	22.2

Halyard Block

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29946612BK	60	1400	3080	252	8.9
29946802BK	80	2400	5280	500	17.7
29902101BK	105	3200	7054	457	16.1
29902131BK	130	5000	11021	839	29.6
29902151BK	155	7500	16500	1545	54.5

High Load Racing Runner Blocks

- Sheaves run on an impregnated composite bearing with dual side thrust bearings for free-running at initial load.
- Optimised cheek design with non-snag bails.
- Also available in Titanium - contact your dealer.
- Breaking load of runner blocks is 2.5 x WLL

Runner Block

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29902808BK	80	2000	4409	256	9
29902108BK	105	2560	5643	448	15.8
29902138BK	130	4000	8817	776	27.4
29902158BK	155	6000	13226	1418	50
29902178BK	175	8400	18516	2074	73.2
29902208BK	200	10000	22043	4003	141

Runner Block & Becket

PART NO	SHEAVE Ø	WORKING LOAD LIMIT		WEIGHT	
		Kg	lb	g	oz
29902809BK	80	2000	4409	265	9.4
29902109BK	105	2560	5643	474	16.7
29902139BK	130	4000	8817	842	29.7
29902159BK	155	6000	13226	1569	55.3
29902179BK	175	8400	18516	2544	89.7
29902209BK	200	10000	22043	4620	163

Snatch Blocks

Ideal for general spinnaker use, the Snatch Block features the Lewmar snap shackle and soft, synthetic rubber cheeks to handle rough treatment. Where a snatch block is attached in a situation which does not permit full movement, such as through some toe rails, a shackle must be used to ensure full articulation.

Designed for line handling on sail boats only.

19810600
Size 1 Snatch Block

19820600
Size 2 Snatch Block

19830500
Size 3 Snatch Block

PART NO	SIZE	BEARING	SHEAVE MATERIAL	WORKING LOAD LIMIT		BREAKING LOAD		SHEAVE Ø		SHEAVE WIDTH		LINE SIZE		WEIGHT	
				Kg	lb	Kg	lb	mm	in	mm	in	mm	in	g	oz
19810600	1	Stainless Steel	Delrin	1135	2500	2270	5000	66	2 5/8	20	3/4	14	9/16	480	17.0
19820600	2	Stainless Steel	Delrin	1590	3500	3180	7000	80	3 1/8	20	3/4	16	5/8	880	31.0
19830500	3	Needle Roller	Aluminium	2155	4750	4310	9500	80	3 1/8	20	3/4	16	5/8	1040	36.5

Pivoting Lead Blocks

Lead blocks are a low profile solution for leading halyards or other rig sail controls back to cleats or jammers. Maintains alignment with a variable line entry-angle. The line passes through the centre of the pivot support, remaining as close to the deck as possible.

- Alloy sheave / Alloy cheeks
- Black carbon Acetal ball bearings
- Torlon® rachet pawl

Pivoting low lead

Pivoting low lead ratchet

Pivoting low lead ratchet with cleat

PART NO	DESCRIPTION	SHEAVE Ø	MAX ROPE Ø		WORKING LOAD LIMIT		WEIGHT		FASTENER Ø		FASTENING CENTRE WIDTH		FASTENING CENTRE LENGTH	
			mm	in	Kg	lb	g	oz	mm	in	mm	in	mm	in
29196012	Pivoting low lead High Load	60	14	9/16	1500	3310	341	12.0	6.0	3/16	45	1 3/4	112.5	4 7/16
29196014	Pivoting low lead ratchet	60	10	3/8	250	550	147	5.2	5.0	3/16	35	1 3/8	105.5	4 5/32
29196013	Pivoting low lead ratchet with cleat	60	10	3/8	250	550	285	10.1	5.0	3/16	35	1 3/8	105.5	4 5/32

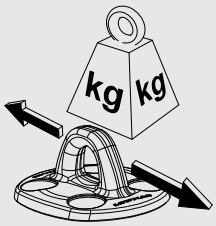
Block Upstands

Lewmar block upstands are designed to hold a block to the deck in a vertical direction for sail control in leisure marine application only.

Their performance depends heavily on the specific application and suitability of installation.

Care must be taken during installation that the block upstand is suitably aligned to the expected load.

Alignment

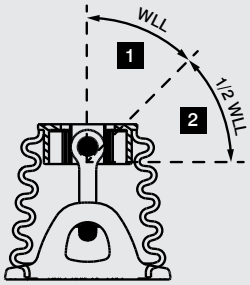


The load direction should be as close to perpendicular with the base as possible (as shown on the Alignment illustration. This will maximise the working load of the pad eye.

In addition, the load should be as close to parallel with the bail as possible.

The Working Load Limit (WLL) Zones illustration shows the recommended WLL relatives to the applied force.

Working Load Limit (WLL) Zones



Spring Block Upstand

PART NO	TO SUIT BLOCK	WORKING LOAD LIMIT ZONE 1		WORKING LOAD LIMIT ZONE 2		WEIGHT		BASE DIA	
		Kg	lb	Kg	lb	Kg	lb	mm	in
29904046	30 & 40mm Control	400	990	200	495	24	0.8	1 3/16	1/8
29904050	60mm Ratchet Triple & 60mm Synchro	400	990	200	495	24	0.8	1 3/4	3/16

Rubber-Boot Block Upstand with Pad Eye

PART NO	TO SUIT BLOCK	WORKING LOAD LIMIT ZONE 1		WORKING LOAD LIMIT ZONE 2		WEIGHT		BASE DIA	
		Kg	lb	Kg	lb	g	oz	mm	in
29195065	50mm HTX 60mm Synchro 60mm Ratchet Single / Fiddle	800	1760	400	990	105	3.7	58	2 1/4
29196065	60mm HTX 72mm Synchro 60mm Racing Low Load Single	1100	2420	550	1211	105	3.7	58	2 1/4
29197265	72mm HTX 90mm Synchro	2000	4400	1000	2200	210	7.4	73	2 7/8

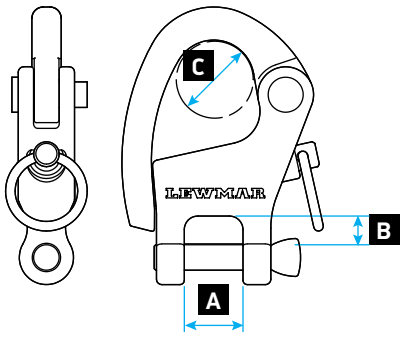
Lewmar Synchro Snap Shackles

29925040

29926040

29927240

29929040



PART NO	FIT BLOCKS	WORKING LOAD LIMIT		BREAKING LOAD		PIN DIA		A		B		C	
		Kg	lb	Kg	lb	mm	in	mm	in	mm	in	mm	in
29925040	50 Synchro / 30 & 40 Control Single / Double	450	990	900	1980	4	1/8	9.0	3/8	4.5	3/16	12	1/2
29926040	60 Synchro / 50 HTX / 30 Control Triple	800	1760	1600	3520	5	3/16	12.0	1/2	6.0	1/4	14	9/16
29927240	72 Synchro / 60 HTX / 40 Control Triple	1100	2420	2200	4840	6	1/4	13.0	1/2	6.5	1/4	18	11/16
29929040	90 Synchro / 72 HTX	2000	4400	4000	8800	9.5	3/8	17.5	11/16	7.5	5/16	22	7/8

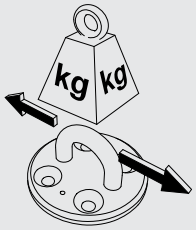
Pad Eyes

Lewmar pad-eyes are designed for leisure marine use and for fixing blocks or similar equipment to the deck.

Their performance depends heavily on the specific application and suitability of installation.

Care must be taken during installation that the pad eye is suitably aligned to the expected load.

Alignment



The load direction should be as close to perpendicular with the base as possible. This will maximise the working load of the pad eye.

In addition, the load should be as close to parallel with the bail as possible.

For more information on the deflection effect on force applied refer to the product manuals.

29192060

29192105

29192130

29904040

29904041

29195066

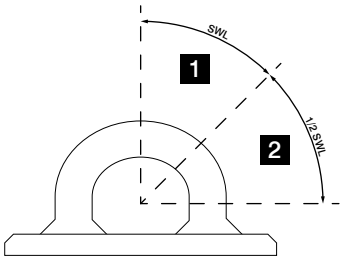
25005083

was
29904060
29904053
29904054
printed numbers do not exist

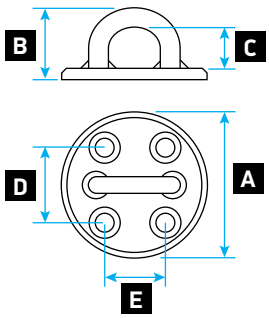
25005088

29197266

Working Load Limit (WLL) Zones



Dimension diagram



Pad Eye Specifications

PART NO	DESCRIPTION	WLL ZONE 1		WLL ZONE 2		WEIGHT		BAR DIA		A		B		C		D		E		FIXINGS NOT SUPPLIED	
		Kg	lb	Kg	lb	g	oz	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
29192060	60/80mm Pad Eye	3200	7055	1600	3527	154	5.4	10.0	3/8	66	2 19/32	33	15/16	18	23/32	34	1 11/32	28	1 3/32	4xM8	4x 5/16
29192105	105mm Pad Eye	5000	11023	2500	5512	435	15.3	12.7	1/2	98	3 27/32	48	1 7/8	28	13/32	50	2 31/32	42	1 21/32	4xM12	4x 7/16
29192130	130mm Pad Eye	7500	16535	3750	8267	787	27.8	15.8	5/8	115	4 17/32	58	2 5/16	34	15/16	60	2 11/32	48	1 7/8	4xM12	4x 7/16
25005083	Small Cast Pad Eye	2500	5511	1250	2756	104	3.7	8.0	5/16	58	2 9/32	27	1 1/16	14	9/16	40	1 37/64	40	1 37/64	4xM6	4x 1/4
25005088	Medium Cast Pad Eye	4500	9921	2250	4960	212	7.5	10.0	3/8	73	2 7/8	35	1 3/8	17	43/64	50	1 31/32	50	1 31/32	4xM8	4x 5/16
29904040	Gibb Diamond Pad Eye	1135	2502	567	1250	45	1.6	6.0	7/32	38	1 1/2	24	15/16	14	9/16	23	15/16	46	1 13/16	4xM5	4x 3/16
29904041	Gibb Square Pad Eye	3180	7011	1590	3505	227	8.0	9.0	5/16	70	2 3/4	37	17/16	21	7/8	38	11/2	38	11/2	4xM8	4x 5/16

Custom Skeletal Block Range

Drawing upon the latest cutting-edge design and material advances, the Skeletal Block offers strength and Grand Prix performance combined with a sleek, on-trend, minimalist look. The structural loads typically found in the head of a block have been re-routed through the cheeks of the Skeletal Block while any non-load bearing material is sculpted out. An evolution of the Lewmar Racing Range, the head is constructed from minimal parts and, with no requirement to support load, is super light. Featured in many configurations, the Skeletal Block is more compact than an equivalent typical block. Available in aluminium, stainless steel, or titanium finish and in a range of sizes.

For detailed information, consult our Custom Component Guide

Custom Pad Eyes

Featuring a single, through-deck base fixing, the Lewmar Pad Eye offers a smaller, more compact footprint than an equivalent multiple-fixed model. The interchangeable tops provide a choice of configuration that can be customised for each specific requirement, from a fixed eye for a web block to a removable loop. Each Pad Eye is compatible with the Skeletal Block Range, complementing the styling and finish to provide a seamless control solution.

Contact custom@lewmar.com to discuss your custom hardware requirements

Traveller Systems – Make sail control easy!

Page 156 Ocean Size 0

- Ideal for cruising yachts up to 8.5 m (28ft)
- Internal control sheave prevents snagging
- Proven performance
- Ocean Car can be adapted to run on curved track
- Now available in black

Page 158 NTR Size 1, 2 & 3

- Popular choice for cruising and racing yachts
- Modular system suits any configuration
- Compatible with Ocean Range Track
- Larger sheaves results in efficient rope handling

Page 169 HTX Size 1 & 2

- Ideal for cruiser/racer yachts
- Complements HTX Block Range
- Unique triple ball race for reduced friction
- Minimal parts enhance performance and reliability
- Captive Ball

Page 174 T-Track

- Specialised genoa systems
- Recently restyled to enhance strength and performance
- Available in 25mm through to 65mm
- Choice of wide range of end stops

Page 175 Size 4 track and cars

- High load control line sheaves
- Torlon balls running in fully machined ball races.
- Machined weight reducing slots
- End stops fixed through deck and track

Page 176 Custom/Racing

- Custom hardware for yachts up to 67m (220ft)
- Ideal for high-performance racing yachts
- Features patented double ball race
- Carries high load with low friction
- Tailored to specific applications
- Choice of finishes to suit individual requirements

Traveller Systems – Selection Guide

This selection guide is designed to be used as a quick reference only. For more detailed product information visit www.lewmar.com. Calculations are based on the average modern cruising yacht. Sail area, different rigs, heavy or light displacement, multihull or monohull, are all factors which effect a yacht's specifications. Loadings should be obtained from the designer and matched to the safe working load of the hardware. Please contact your Lewmar agent if you have any questions regarding the correct hardware for your boat.

Cars Selection Guide

APPLICATION & SHEETING POSITION	SIZE	TOWING PURCHASE (MAXIMUM AVAILABLE PURCHASE)	M / FT	7.3 / 24	8.5 / 28	10.3 / 34	11.5 / 38	13.4 / 44	14.6 / 48	16.4 / 54	18.2 / 60	21.3 / 70
Genoa	0	2:1										
End Boom Mainsheet	0	2:1										
Mid Boom or Multihull	0	2:1										
Genoa	1	4:1 or 2:1 to Winch										
End Boom Mainsheet	1	4:1										
Mid Boom or Multihull	1	4:1										
Genoa	2	4:1 or 2:1 to Winch										
End Boom Mainsheet	2	5:1										
Mid Boom or Multihull	2	5:1										
Genoa	3	5:1 or 2:1 to Winch										
End Boom Mainsheet	3	5:1 or 2:1 to Winch										
Mid Boom or Multihull	3	5:1 or 2:1 to Winch										

Size 0 Ocean Cars

For boats up to 8.5m/28ft. Use 50mm/60mm blocks. Suitable for 6mm (1/4") control line.

Short Car with Delrin Balls & Shackle

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29020701BK	200	440	71	2.79	51	2	142	5.59

Short Car with Delrin Balls, Loop & Single Sheaves

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29330105BK	200	440	73	2.87	51	2	150	6

Car with Delrin Balls, Shackle & Single Sheaves

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29030100BK	450	990	123	4.83	51	2	210	7.39

Car with Delrin Balls, Pivoting Loop & Single Sheaves

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29330107BK	450	990	124	4.88	51	2	250	8.5

Car with Slide Rods, Shackle & Plunger

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29030600BK	450	990	123	4.83	51	2	225	7.92

Genoa Car with Slide Rods & Plunger

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29040600BK	600	1325	123	4.83	51	2	427	15.03

Genoa Car with Delrin Balls & Single Sheave

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29040100BK	600	1325	123	4.83	51	2	427	15.03

Size 0 Ocean End Stops

Control Line End Stop with Single Sheave

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29170030BK	200	440	58	2.3	51	2	78	2.75

Control Line End Stop with Sheave, Becket & Cam

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29170033BK	200	440	65	2.3	51	2	397	13.97

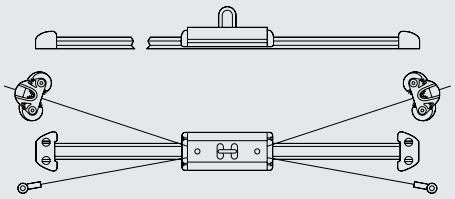
Simple Track End

PART NO	WEIGHT	
	g	oz
29170040BK	10	.35

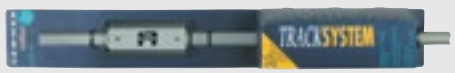
Size 0 Ocean Traveller Kit - 2:1 Purchase System

Lewmar makes selecting your mainsheet system simple — with complete Mainsheet System Kits. Lewmar's Size 0 Ocean Mainsheet System is a complete kit made specifically for yachts up to 28 feet (8.5m).

PART NO	DESCRIPTION
29060152	Size 0 Ocean Traveller System
Comprises:	
29030100	1 x Mainsheet Car
29170040	2 x Simple End Stop
29160112	1 x 1.2m Sliding Bolt Track
29171010	1 x Size 1 Dead Eye
29904100	2 x Small Composite Cleat
29904104	2 x Small Cam Fairlead



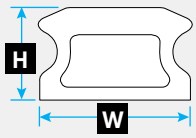
BOAT SIZE	UP TO 8.5M	UP TO 28FT
Max Mainsail Area (End Boom):	16m^2	170ft^2
Max Mainsail Area (Mid Boom):	12m^2	130ft^2
Safe Working Load:	400kg	990lbs



Size 0 Track Specifications and Fixing Details

Drilled Track

Commonly used and particularly useful where through deck fixing is not possible, such as in double skinned boats, where fixing bolts are trapped into a plate in the deck.

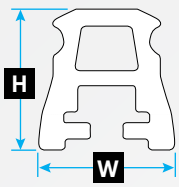


Beam track

Beam track is used when spanning cockpits and across companion way hatches. Three fixing bolts should always be used either side of the span and washers fitted under the head of the bolt and between track and deck.

Some beam tracks can only use metric fasteners

Made of Aluminium 6082T6 extrusion



PART NO	DESCRIPTION	LENGTH		H HEIGHT		W WIDTH		WEIGHT (per metre)		MAX SPAN BETWEEN FIXINGS/ CENTRE HOLE DISTANCE		FIXINGS (NOT INCLUDED)	
		m	ft	mm	in	mm	in	g	oz	mm	in	Metric	Imperial
29160315BK	Beam Track	1.5	4'11"	24.7	0.97	24	0.44	954	33.65	400	16	Hex Hd M6	1/4"
29160405BK	Drilled Plunger Track	0.5	1'8"	11.0	0.43	19	0.75	342	12.06	80	3.1	Csk Hd M5	–
29160410BK		1.0	3'3"										
29160414BK		1.4	4'7"										
29160415BK		1.5	4'11"										

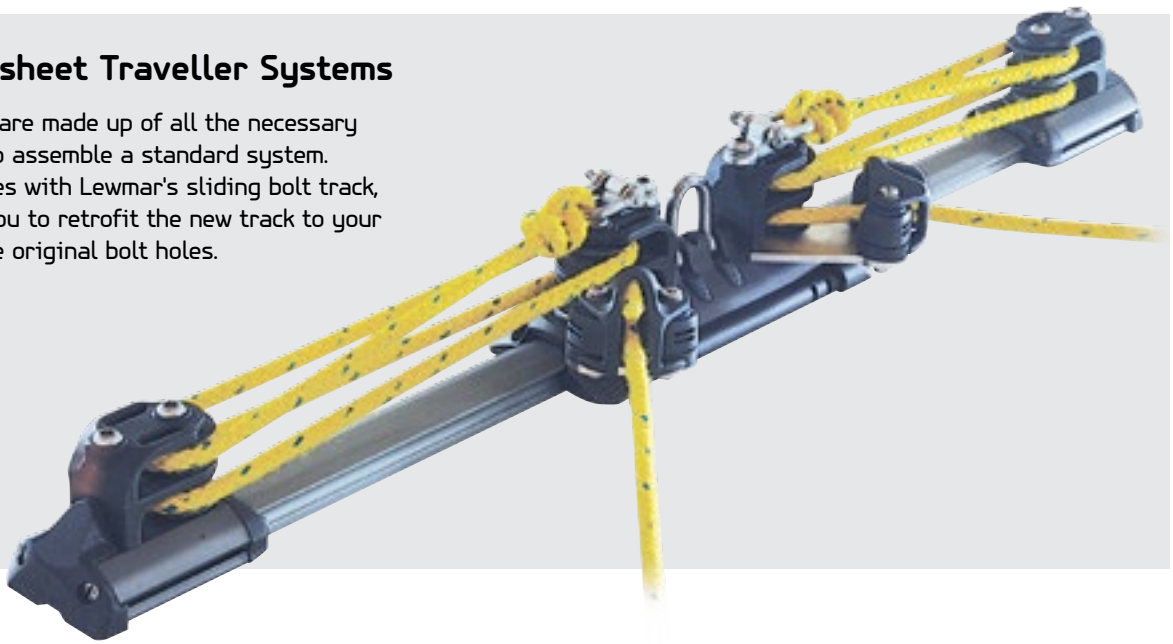
Also available in grey (remove BK from part number)

NTR Cars Size 1 - 2 and 3

- Popular choice for cruising and racing yachts
- Modular system suits any configuration
- Compatible with Ocean Range Track
- Larger sheaves results in efficient rope handling

NTR Mainsheet Traveller Systems

Traveller kits are made up of all the necessary components to assemble a standard system. Each one comes with Lewmar's sliding bolt track, which allow you to retrofit the new track to your deck using the original bolt holes.



Size 1 Mainsheet System

In the Size 1 kit, you'll find all the components necessary to assemble a standard system.

- For boats up to 11m (36ft)
- Suitable for 8mm (5/16") control line

Size 2 Mainsheet System

Like the size 1 system, the Size 2 Mainsheet system comes with everything you need for a complete standard system, including the sliding bolt track.

- For boats up to 15m (49ft).
- Suitable for 10mm (3/8") control line.

Size 1&2 Traveller Kit 4:1 Purchase System

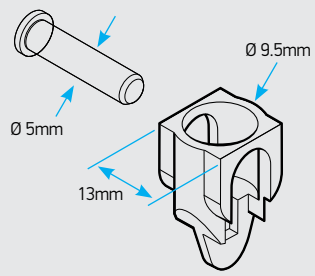
	SIZE 1	SIZE 2
Traveller System	**29461354BK**	**29462354BK**
Comprises:		
1 x Mainsheet Car Shackle with Double Control Line Sheaves, Cleats & Beckets	**29431916BK**	**29432916BK**
2 x End stop with Double Control Line Sheaves	**29471032BK**	**29472032BK**
1 x Sliding Bolt Track	**29161115BK**	**29162118BK**
Track Length	1.5m	1.8m

Sz1 / Sz2

BOAT SIZE	UP TO 11M (36FT)	UP TO 14.6M (48FT)
Max. Mainsail Area:		
End Boom:	34m^2 (366ft^2)	46m^2 (495ft^2)
Mid Boom:	21m^2 (226ft^2)	38m^2 (410ft^2)
Safe Working Load:	900kg (1980 lb)	1000kg (2000 lb)

NTR Cars Size 1 - 2 and 3

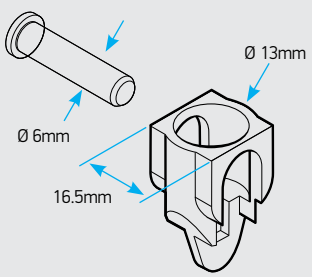
Size 1 Upstand Cup Detail



Size 1 upstand fits the following blocks:

- 60 synchro blocks
- 50 HTX blocks

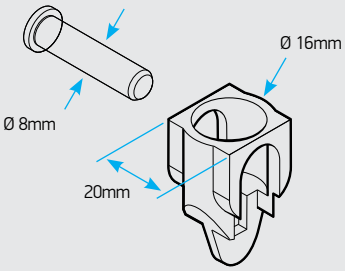
Size 2 Upstand Cup Detail



Size 2 upstand fits the following blocks:

- 72 synchro blocks
- 60 HTX blocks
- 60 / 60HL and 80 Racing blocks

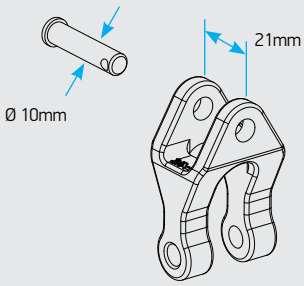
Size 3 Upstand Cup Detail



Size 3 upstand fits the following blocks:

- 90 synchro blocks
- 72 HTX blocks
- 80HL Racing blocks

Size 3 HL Upstand Cup Detail



Size 3 upstand fits the following blocks:

- 105 synchro blocks
- 90 HTX blocks
- 105 Racing blocks

NTR Torlon Ball (TB) Mainsheet Cars Size 1, 2 and 3

TB Short Car with Shackle

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29421300BK	1	600	1329	107	4 3/16	71	2 3/4	228	8.00
29422300BK	2	1100	2420	140	5 1/2	92	3 5/8	386	13.6
29423301BK	3	2000	4400	150	5 15/16	88	3 ½	680	24.0

TB Short Car with Upstand

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29421400BK	1	600	1329	107	4 3/16	71	2 3/4	241	8.50
29422400BK	2	1100	2420	140	5 1/2	92	3 5/8	397	14
29423400BK	3	2000	4400	150	5 15/16	88	3 ½	781	27.3

TB Car with Shackle

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431300BK	1	900	1980	162	6 3/8	71	2 3/4	313	11.0
29432300BK	2	1500	3300	210	8 5/16	92	3 5/8	639	22.5
29433300BK	3	2500	5500	215	8 ½	88	3 ½	924	32.3

TB Car with Upstand

* 29432420 fitted with size 3 upstand

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431400BK	1	900	1980	162	6 3/8	71	2 3/4	364	12.8
29432400BK	2	1500	3300	210	8 5/16	92	3 5/8	767	27
29432420BK*	2*	2000	4400	210	8 5/16	92	3 5/8	839	33
29433400BK	3	2500	5500	215	8 ½	88	3 ½	743	26.0

NTR Torlon Ball (TB) Mainsheet Cars Size 1, 2 and 3 (Cont.)

TB Car with Shackle and Single Control Line Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431311BK	1	900	1980	162	6 3/8	71	2 3/4	374	13.2
29432311BK	2	1500	3300	210	8 5/16	92	3 5/8	747	26.3

TB Car with Upstand and Single Control Line Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431411BK	1	900	1980	162	6 3/8	71	2 3/4	421	14.8
29432411BK	2	1500	3300	210	8 5/16	92	3 5/8	875	30.9
29433602BK	3*	3500	7700	270	10 5/8	88	3 1/2	1595	55.8

TB Car with Shackle, Single CL Sheaves & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431315BK	1	900	1980	162	6 3/8	71	2 3/4	378	13.2
29432315BK	2	1500	3300	210	8 5/16	92	3 5/8	867	34.1

TB Car with Upstand, Single CL Sheaves & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431415BK	1	900	1980	162	6 3/8	71	2 3/4	472	16.6
29432415BK	2	1500	3300	210	8 5/16	92	3 5/8	993	35

TB Car with Shackle and Double Control Line Sheaves

* 29432372 fitted with double ball bearing control line sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431312BK	1	900	1980	162	6 3/8	71	2 3/4	435	15.3
29432312BK	2	1500	3300	210	8 5/16	92	3 5/8	871	30.7
29432372BK	2*	1500	3300	210	8 5/16	92	3 5/8	880	34.6
29433314BK	3	2500	5500	215	8 1/2	88	3 1/2	993	34.8

TB Car with Upstand and Double Control Line Sheaves

* 29431712 fitted with size 2 upstand

* 29432424 fitted with size 3 upstand

* 29443604 fitted with size 3 HL upstand

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431412BK	1	900	1980	162	6 3/8	71	2 3/4	486	17.1
29431712BK	1*	900	1980	162	6 3/8	71	2 3/4	486	17.1
29432412BK	2	1500	3300	210	8 5/16	92	3 5/8	997	35.1
29432424BK	2*	2000	4400	210	8 5/16	92	3 5/8	1050	37
29433414BK	3	2500	5500	215	8 1/2	88	3 1/2	1200	42
29443604BK	3*	3500	7700	270	10 5/8	88	3 1/2	1610	56.8

NTR Torlon Ball (TB) Mainsheet Cars Size 1, 2 and 3 (cont.)

TB Car with Shackle, Double CL Sheaves & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431316BK	1	900	1980	162	6 3/8	71	2 3/4	390	13.7
29432316BK	2	1500	3300	210	8 5/16	92	3 5/8	991	39

TB Car with Upstand, Double CL Sheaves & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431416BK	1	900	1980	162	6 3/8	71	2 3/4	540	19.0
29432416BK	2	1500	3300	210	8 5/16	92	3 5/8	1117	39.4
29433416BK	3	2500	5500	215	8 ½	88	3 ½	1790	62.6

TB Car with Shackle and Plunger

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431337BK	1	900	1980	162	6 3/8	71	2 3/4	364	12.8

TB Car, 2 x Sz3 Upstand, Double CL Sheaves, Becket & Cam

* 29432836 BK fitted with size 3 upstand

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29432836BK	2*	2800	6160	307	12 1/16	120	4 3/4	2173	85.5

TB Car with Shackle, Double CL Sheaves & Cam (4:1)

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431834BK	1	900	1980	162	6 3/8	97	3 3/4		

TB Car with Upstand, Double CL Sheaves & Cam (4:1)

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431814BK	1	900	1980	162	6 3/8	97	3 3/4	759	26.7
29432814BK	2	1500	3300	210	8 5/16	120	4 3/4	1496	52.7

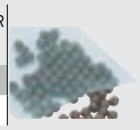
Radius Cars

Radius cars available upon request for all size 1, 2 and 3.

Please contact your Lewmar representative and specify your track Vertical or Horizontal radii.

Spare Bearings: Torlon Balls for Ocean ® NTR Cars

PART NO	DESCRIPTION	WHERE USED	DIAMETER	
			mm	in
29171021	Torlon Balls (per 100)	SZ1 Ocean and NTR Cars	6.4	¼
29172021	Torlon Balls (per 100)	SZ2 Ocean and NTR Cars	7.8	5/16



NTR Torlon Ball (TB) Mainsheet Cars Size 1, 2 and 3 (cont.)

TB Car with Shackle, Double CL Sheaves, Becket & Cam (5:1)

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431916BK	1	900	1980	162	6 3/8	97	3 3/4	799	28.2
29432916BK	2	1500	3300	210	8 5/16	120	4 3/4	1730	68.1

TB Car with Upstand, Double CL Sheaves, Becket & Cam (5:1)

* 29432838BK fitted with size 3 upstand

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29432816BK	2	1500	3300	210	8 5/16	120	4 3/4	1610	56.7
29432838BK	2*	3500	7700	307	12 1/16	120	4 3/4	1786	70.3

TB Car Long, 2x Upstand, Double CL Sheaves

* 29432832BK fitted with size 3 upstand

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29432822BK	2	1800	3960	307	12 1/16	92	3 5/8	1460	51.5
29432832BK	2*	2800	6160	307	12 1/16	92	3 5/8	1560	55
29433832BK	3	3500	7700	270	10 5/8	88	3 1/2	1810	63.8

TB Car Long, 3x Upstand, Double CL Sheaves

* 29432833BK fitted with size 3 upstand

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29432823BK	2	3000	6600	307	12 1/16	92	3 5/8	1460	51.5
29432833BK	2*	3500	7700	307	12 1/16	92	3 5/8	1560	55
29433833BK	3	4000	8800	300	11 3/4	88	3 1/2	2190	77.2

NTR Torlon Ball (TB) Genoa Cars Size 1, 2 and 3

TB Short Genoa Car with Tow Point

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29421366BK	1*	600	1320	107	4 3/4	71	2 3/4	521	18.3

* Limiter supplied non-assembled for a port or starboard application

TB Genoa Car with Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29441301BK	1*	900	1980	162	6 3/8	71	2 3/4	577	20.3
29442301BK	2*	1800	3960	210	8 5/16	120	4 3/4	1327	46.8

* Limiter supplied non-assembled for a port or starboard application

NTR Torlon Ball (TB) Genoa Cars Size 1, 2 and 3 Cont.

TB Genoa Car with Single Control Line Sheave

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29441311BK	1*								
29441321BK	1 port	900	1980	162	6 3/8	71	2 3/4	560	19.8
29441331BK	1 stbd								
29442311BK	2*								
29442321BK	2 port	1800	3960	210	8 5/16	120	4 3/4	1330	46.9
29442331BK	2 stbd								
29443311BK	3	3500	7700	215	8 ½	88	3 ½	1565	54.8
29443611BK	3	5000	11000	320	12 5/8	88	3 ½		

TB Genoa Car with Double Control Line Sheaves

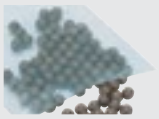
PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29441312BK	1*								
29441322BK	1 port	900	1980	162	6 3/8	71	2 3/4	566	19.9
29441332BK	1 stbd								
29442312BK	2*								
29442322BK	2 port	1800	3960	210	8 5/16	120	4 3/4	1354	47.7
29442332BK	2 stbd								

TB Car Genoa stirrup, single CL sheave and becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29441345BK	1*	900	1980	162	6 3/8	71	2 3/4	566	19.9
29442345BK	2*	1800	3960	210	8 5/16	120	4 3/4	1359	47.9

* Limiter supplied non-assembled for a port or starboard application

Spare Bearings: Torlon Balls for Ocean & NTR Cars



PART NO	DESCRIPTION	WHERE USED	DIAMETER	
			mm	in
29171021	Torlon Balls (per 100)	SZ1 Ocean and NTR Cars	6.4	¼
29172021	Torlon Balls (per 100)	SZ2 Ocean and NTR Cars	7.8	5/16

Expert advice

Current track is NTR specification.

If retrofitting check your track

- Size 3 NTR tracks have 12mm Ø plunger holes
- Size 3 Ocean tracks have 9.5mm Ø plunger holes

NTR Slide Rod (SR) Cars Size 1, 2 and 3

SR Car with Shackle

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29431500BK	1	1000	2200	162	6 3/8	50	2	230	8.11
29432500BK	2	2000	4400	210	8 5/16	65	2 5/8	559	19.7

SR Car with Shackle and Plunger Stop

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29441723BK	1	1000	2200	162	6 3/8	50	2	264	9.3
29442723BK	2	2000	4400	210	8 5/16	65	2 5/8	577	19.6

NTR Slide Rod (SR) Cars Size 1, 2 and 3

SR Car with Shackle and Single Control Line Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29432511BK	2	2000	4400	210	8 5/16	65	2 5/8	667	23.5

SR Car with Shackle and Double Control Line Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29432512BK	2	2000	4400	210	8 5/16	65	2 5/8	791	27.9

SR Car with Upstand and Double Control Line Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29442412BK	2	2000	4400	210	8 5/16	65	2 5/8	795	8

SR Genoa Car

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29441500BK	1*	1000	2200	162	6 3/8	50	2	480	16.8
29442500BK	2*	1800	3960	194	7 5/8	65	2 5/8	1100	38.8

* Limiter supplied non-assembled for a port or starboard application

SR Genoa Car with Plunger Stop

PART NO	SIZE / DESCRIPTION	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
294417BK**	1	1000	2200	162	6 3/8	50	2	480	16.8
294427BK**	2	1800	3960	194	7 5/8	65	2 5/8	1201	42.4
29443700BK	3 (NTR track)	3500	7700	180	7 1/16	70	2 13/16	1410	49.4
29443700CBK	3 (Ocean track)	3500	7700	180	7 1/16	70	2 13/16	1410	49.4
29443702BK	3 (NTR composite sheave)	2250	4950	180	7 1/16	70	2 13/16	1079	37.8

** Insert 00 for limiter non-assembled, 20 for port limiter and 30 for starboard limiter

SR Genoa Car with Single Control Line Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29441513BK	1*	1000	2200	162	6 3/8	50	2	484	17

* Limiter supplied non-assembled for a port or starboard application

NTR End Stops Size 1, 2 and 3

Sz1 Impact End Stop

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29905105BK	1	500	1100	40	1 1/2	46	1 3/4	24	0.8

Sz2 Impact End Stop

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WEIGHT	
		kg	lb	mm	in	g	oz
29905200BK	2	1250	2755	114	4 1/2	158	5.6

Requires extra drilling in the track

Sz3 Impact End Stop

PART NO	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
	kg	lb	mm	in	mm	in	g	oz
29473030BK	2200	4840	93	3 11/16	70	2 13/16	247	8.7

Bare End Stop

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29471030BK	1	585	1287	47	1 7/8	29	1 1/8	99	3.5
29472030BK	2	750	1650	105	4 1/8	65	2 5/8	238	8.4

Mid Track Stop

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29472501BK	2	750	1650	105	4 1/8	65	2 5/8	238	8.4

Mid Track Stop with Single CL Sheave & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29472535BK	2	750	1650	105	4 1/8	65	2 5/8	338	11.9

Friction Stop

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29472038BK	2	975	2145	87	3 3/8	65	2 5/8	261	9.2

End Stop with Single CL Sheave

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29471031BK	1	585	1287	75	1 45/64	50	2	140	4.9
29472031BK	2	750	1650	105	4 1/8	65	2 5/8	301	10.6

End Stop with Single CL Sheave and Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29471035BK	1	585	1287	47	1 55/64	29	1 9/64	165	5.8
29472035BK	2	750	1650	105	4 1/8	65	2 5/8	331	11.7
29473035BK	3	800	1760	93	3 11/16	70	2 13/16	381	13.3
29473135BK	3 (HL)	3000	6600	140	5 1/2	70	2 13/16	537	18.8

NTR End Stops Size 1, 2 and 3 Cont.

End Stop with Double CL Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29471032BK	1	585	1287	75	1 45/64	50	2	172	6.1
29472032BK	2	750	1650	105	4 1/8	65	2 5/8	363	12.8
29473032BK	3	800	1760	93	3 11/16	70	2 13/16	390	13.7

This should be to a higher load(?)

End Stop with Double CL Sheaves and Becket

* Fitted with ball bearing control line sheaves

** Fitted with HD1 control line sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29471036BK	1	585	1287	47	1 55/64	29	1 9/64	185	6.5
29472036BK	2	750	1650	105	4 1/8	65	2 5/8	393	13.8
29472076BK	2*	750	1650	105	4 1/8	65	2 5/8	400	14.1
29472616BK	2**	750	1650	105	4 1/8	65	2 5/8	400	14.1
29473036BK	3	800	1760	93	3 11/16	70	2 13/16	460	16.1
29473136BK	3 (HL)	3000	6600	140	5 1/2	70	2 13/16	769	27.1

End Stop with Double CL Sheaves, Becket & Cam (pair)

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29471836BK	1	585	1287	75	2 61/64	78	3 5/64	258	9.1
29472836BK	2	750	1650	105	4 1/8	112	4 5/8	602	21.2

End Stop Sheet Lead

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29441701BK	1	1000	2200	162	6 3/8	50	2	480	16.8
29442701BK	2	1800	3960	194	7 5/8	65	2 5/8	1134	40
29443701BK	3	2000	4400	140	5 1/2	70	2 13/16	885	31

Plunger Stop

***Size 3 plunger stop:**

If retrofitting check your track :

- 29473037BK fits size 3 NTR tracks (12mm Ø plunger holes)
- 29473037CBK fits size 3 Ocean tracks (9.5mm Ø plunger holes)

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29471037BK	1	650	1430	43	1 11/16	50	2	83	2.9
29472037BK	2	975	2145	87	3 3/8	65	2 5/8	261	9.2
29473037BK	3*	2000	4400	80	3 3/16	70	2 13/16	298	10.4
29473037CBK	3*	2000	4400	80	3 3/16	70	2 13/16	298	10.4

Track End

PART NO	SIZE	WEIGHT	
		g	oz
29171040BK	1	22	0.77
29172040BK	2	30	1.1
29173040BK	3	42	1.5

NTR Car Links

Short Car Link

PART NO	SIZE
29471063BK	1
29472063BK	2
29473063BK	3

Car Link with Sz3 Upstand

PART NO	SIZE
29472062BK	2

For cup details refer to p.159

NTR Spares and Accessories

Beam Track End Cover (Pair)

PART NO	SIZE	WEIGHT	
		g	oz
29471041BK	1	12	0.4
29472041BK	2	26	0.9
29473041BK	3	42	1.5

HD Beam Track End Cover (Pair)

PART NO	SIZE	LENGTH		WIDTH		WEIGHT	
		mm	in	mm	in	g	oz
29471042BK	1	13	1/2	50	2	18	0.6
29472042BK	2	22	7/8	65	2 5/8	40	1.4

Single Control Line Sheaves (Pair)

PART NO	SIZE	SHEAVE Ø		WEIGHT	
		mm	in	g	oz
29471011BK	1	29	1 1/8	82	2.9
29472011BK	2	63	2 1/2	137	4.8

Double Control Line Sheaves (Pair)

PART NO	SIZE	SHEAVE Ø		WEIGHT	
		mm	in	g	oz
29471012BK	1	29	1 1/8	148	5.2
29472012BK	2	63	2 1/2	261	9.2

Double Control Sheaves & Cleats (Pair)

PART NO	SIZE	WORKING LOAD LIMIT		WEIGHT	
		kg	lb	g	oz
29471018BK	1	180	396	180	6.3
29472018BK	2	180	396	625	22

Cleat Assembly for End Stop (Pair)

PART NO	SIZE	WORKING LOAD LIMIT		WEIGHT	
		kg	lb	g	oz
29471015BK	1	180	396	123	4.3
29472015BK	2	180	396	368	12.9

Genoa Stirrup Assembly

PART NO	SIZE	WORKING LOAD LIMIT		WIDTH		WEIGHT	
		kg	lb	mm	in	g	oz
28003225	1	1000	2200	45	1 3/4	227	8
28003226	2	1800	3960	60	2 3/8	620	21.9

Upstand Assembly

PART NO	SIZE
29171024	1
29172024	2
29473024	3

For upstand cup dims and block compatibility see P. 159

Becket Assembly (Pair)

PART NO	SIZE	WEIGHT	
		g	oz
29471010	1	51	1.7
29472010	2	114	4.2

Slide Rods

PART NO	SIZE
25002920	1
25003438	2
25003969	3

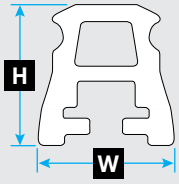
Rubber Buffer Kit

PART NO	SIZE
29171046	1
29172046	2
29173046	3

To fit end stops and slide rod cars

Ocean/NTR Size 1, 2 and 3 Tracks

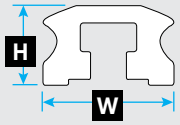
Beam track



Beam track is used when spanning cockpits and across companion way hatches. Three fixing bolts should always be used either side of the span and washers fitted under the head of the bolt and between track and deck. Some beam track can only use metric fasteners

Made of Aluminium 6082T6 extrusion

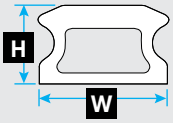
Sliding bolt Track



Sliding bolt track have a smooth clean profile with no visible fixings and can be retro-fitted using original bolt holes – no need to worry about old track pattern holes matching up with a new track. The track is designed to permit a washer to fit on each bolt between the track and deck to ensure a secure seal.

Grey anodised finish

Drilled Plunger Track



Commonly used and particularly useful where through deck fixing is not possible, such as in double skinned boats, where fixing bolts are trapped into a plate in the deck.

Ocean/NTR Size 1, 2 & 3 Track Specifications and Fixing Details

M12

PART NO	DESCRIPTION	TRACK SIZE	LENGTH		H HEIGHT		W WIDTH		WEIGHT (per metre)		MAX SPAN BETWEEN FIXINGS / CENTRE HOLE DIM		FIXINGS	
			m	ft	mm	in	mm	in	g	oz	mm	in	Metric	Imperial
29162315BK	Beam Track	2	1.5	4'11"	35	1.38	35	1.38	1560	54.91	800	31 ½	Hex Hd M10	-
29162320BK			2	6'7"										
29163315BK	Beam Track	3	1.5	4'11"	55	2.16	50	1.97	3640	128.13	900	35 7/16	Hex Hd M12	-
29163320BK			2	6'7"										
29163330BK			3	9'10"										
29161510BK	HD Beam Track	1	1	3'3"	42	1.75	32	1.25	1770	62.4	900	35 7/16	Hex Hd M8	5/16"
29161515BK			1.5	4'11"										
29161520BK			2	6'7"										
29162515BK	HD Beam Track	2	1.5	4'11"	51	2	51	2	3000	105.82	900	35 7/16	Hex Hd M10	3/8"
29162520BK			2	6'7"										
29162115BK	Sliding Bolt Track	2	1.5	4'11"	18	0.71	30	1.18	839	29.56	800	31 ½	Hex Hd M8	5/16"
29162120BK			2	6'7"										
29162130BK			3	9'10"										
29161415BK	Drilled Plunger Track	1	1.526	5'	13	0.5	23	0.9	530	18.65	100	3 15/16	Hex Hd M6	¼"
29161420BK			2.026	6'8"										
29161430BK			3.026	9'11"										
29162415BK	Drilled Plunger Track	2	1.532	5'	15	0.56	30	1.18	764	26.95	100	3 15/16	Hex Hd M8	5/16"
29162420BK			2.032	6'3"										
29162430BK			3.032	10'										
29163615BK	Drilled Plunger Track	3	1.548	5'1"	21	0.84	35	1.38	968	33.88	100	3 15/16	Hex Hd M10	3/8"
29163620BK			2.048	6'9"										
29163630BK			3.048	10'1"										

HTX Size 1 & 2 Cars

Lewmar introduces the HTX Traveller Range to complement the HTX Block Range. This range of travellers has come from many years of design and manufacturing experience and collaboration with boat builders, designers, and sailors.
At the core of the HTX Traveller Range is the Captive Ball Traveller. Featuring the neat, stylish retention of the ball bearings within the car, the Captive Ball Traveller is simple to install and easy to remove for cleaning and maintenance without the risk of losing ball bearings.

- Ideal for boats up to 15 metres (49 foot)
- Minimalistic car body made of fewer parts
- Compact, one-piece aluminium body and composite end caps designed with smoother lines
- Available in multiple configurations, including single or double control line sheaves, becket, and cam cleat
- Compatible slide-rod Genoa car with stirrup
- Three individual ball races: the first two allow fast movement of the car under vertical load, and the third allows smooth running of the car under deflection
- Larger balls means more ball surface exposure, increasing overall efficiency
- Ball bearings circulate through an open structure allowing easy cleaning when installed
- New dowel mechanism provides smooth ball circulation
- Upstand receives shackle or lashed rope, removing need for a becket above the control line sheaves

HTX Size 1 & 2 Torlon Ball (TB) Mainsheet Cars

TB Short Car with Shackle

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291222301	2	1500	3300	140	5 1/2	85	3 3/8	525	18.5

TB Car with Shackle

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291213301	1	1100	2420	160	6 5/16	71	2 13/16		
291223301	2	2200	4850	205	8 1/16	85	3 3/8		

TB Car with Shackle and Single Control Line Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291213305	1	1100	2420	160	6 5/16	71	2 13/16	450	15.9
291223305	2	2200	4850	205	8 1/16	85	3 3/8	880	31.0

TB Car with Shackle and Double Control Line Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291223306	2	2000	4400	205	8 1/16	85	3 3/8	980	34.6

Size 1 Traveller System

For boats up to 11m (36ft)

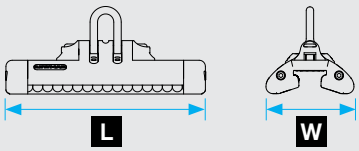
Suitable for 8mm (5/16") control line

Size 2 Traveller System

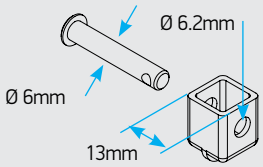
For boats up to 15m (49ft).

Suitable for 10mm (3/8") control line.

Mainsheet Car – Dimension Diagram



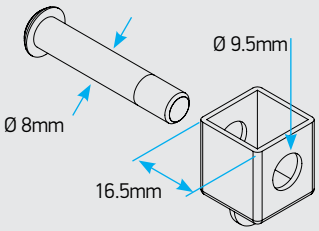
HTX Size 1 Upstand Cup Detail



Size 1 upstand fit the following blocks:

- 72 Synchro blocks
- 60 HTX blocks
- 60 single Racing blocks Size

HTX Size 2 Upstand Cup Detail



Size 2 upstand fit the following blocks:

- 90 Synchro blocks
- 72 HTX blocks
- 80 Triple Racing blocks

TB Car with Shackle, Single Control Sheaves & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291213308	1	1100	2420	160	6 5/16	71	2 13/16	510	18.0
291223308	2	2200	4850	205	8 1/16	85	3 3/8		

TB Car with Upstand, Single Control Sheaves & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291213408	1	800	1764	160	6 5/16	71	2 13/16	545	19.2
291223408	2	2200	4850	205	8 1/16	85	3 3/8	1310	46.2

TB Car with Upstand, Double Control Sheaves & Cleat

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291213412	1	800	1600	167	6 9/16	98	3 7/8	780	27.5
291223412	2	2200	4850	225	8 7/8	132	5 3/16		

TB Car with Upstand and Double Control Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291213406	1	800	1600	160	6 5/16	71	2 13/16		
291223406	2	2200	4850	205	8 1/16	85	3 3/8	1250	44.1

TB Car with Shackle, Double Control Sheaves, Becket & Cleat

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291213315	1	1100	2420	167	6 9/16	98	3 7/8	750	26.5
291223315	2	2200	4850	225	8 7/8	132	5 3/16	1580	55.7

TB Car with Upstand, Double Control Sheaves, Becket & Cleat

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291223415	2	2000	4400	225	8 7/8	132	5 3/16	1880	66.3

HTX Size 2 Double Upstand Torlon Ball (TB) Mainsheet Cars

TB Car with Double Upstand

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291223601	2	2600	5732	305	12	85	3 3/8		

TB Car with Double Upstand and Double Control Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291223606	2	2600	5732	305	12	85	3 3/8		

HTX Size 1 & 2 Slide Rod (SR) Cars

SR Car with Shackle

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291213501	1	1100	2420	160	6 5/16	71	2 13/16		
291223501	2	2200	4850	205	8 1/16	85	3 3/8		

SR Car with Shackle and Plunger

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291213537	1	1100	2420	160	6 5/16	71	2 13/16		
291223537	2	2200	4850	205	8 1/16	85	3 3/8		

HTX Size 1 & 2 Genoa Cars

SR Genoa Car with Plunger

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291214537	1 port	1100	2420	160	6 5/16	71	2 13/16	630	22.2
291215537	1 stbd								
291224537	2 port	2200	4850	205	8 1/16	85	3 3/8	1500	52.9
291225537	2 stbd								

TB Genoa Car with Single Control Line Sheave

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291214305	1 port	1100	2420	160	6 5/16	71	2 13/16	650	22.9
291215305	1 stbd								
291224305	2 port	2200	4850	205	8 1/16	85	3 3/8	1600	56.4
291225305	2 stbd								

TB Genoa Car with Single Control Line Sheave & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291214308	1 port	1100	2420	160	6 5/16	71	2 13/16	650	22.9
291215308	1 stbd								
291224308	2 port	2200	4850	205	8 1/16	85	3 3/8	1600	56.4
291225308	2 stbd								

HTX Size 1 & 2 End Stops

Impact End Stop

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291218818	1	500	1100	83	3 1/4	71	2 13/16	190	6.7
291228818	2	1000	2200	103	4 1/16	85	3⅜	350	12.3

Plunger Stop

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291218837	1	500	1100	83	3 1/4	71	2 13/16		
291228837	2	1000	2200	103	4 1/16	85	3⅜		

End Stop with Single Control Line Sheave

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291218805	1	500	1100	83	3 1/4	71	2 13/16	210	7.4
291228805	2	1000	2200	103	4 1/16	85	3⅜	400	14.1

End Stop with Double Control Line Sheaves

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291218806	1	500	1100	83	3 1/4	71	2 13/16	240	8.5
291228806	2	1000	2200	103	4 1/16	85	3⅜	450	15.9

End Stop with Single Control Line Sheave & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291218808	1	500	1100	83	3 ¼	71	2 13/16	240	8.5
291228808	2	1000	2200	103	4 1/16	85	3 ⅜	450	15.9

End Stop with Double Control Line Sheaves & Becket

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291218809	1	500	1100	83	3 ¼	71	2 13/16	270	9.5
291228809	2	1000	2200	103	4 1/16	85	3 ⅜	500	17.6

End Stop with Double Control Line Sheaves, Becket & Cleat

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291214815	1 port	500	1100	83	3 1/4	98	3⅞	365	12.9
291215815	1 stbd								
291224815	2 port	1000	2200	103	4 1/16	132	5 3/16	740	26.1
291225815	2 stbd								

End Stop Sheet Lead

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
291218817	1	500	1100	160	6 5/16	71	2 13/16	600	21.2
291228817	2	1000	2200	205	8 1/16	85	3 3/8	1400	49.3

HTX Track End

PART NO	SIZE	LENGTH		WIDTH		WEIGHT	
		mm	in	mm	in	g	oz
291219907	1	40	1 ⅝	57.5	2 ¼	20	0.7
291229907	2	45	1 ¾	65	2 ½	40	1.4

Sz 1 & 2 HTX Spares and Accessories

Cleat Assembly for End stop (Pair)

PART NO	SIZE	WORKING LOAD LIMIT	
		kg	lb
291219905	1	200	440
291229905	2	300	660

Spare Slide Rods Kit

PART NO	SIZE
291219910	1
291229910	2

Spare Rubber Buffer Kit

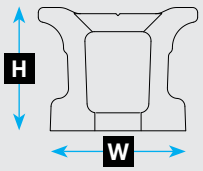
PART NO	SIZE
291219911	1
291229911	2

HTX Upstand Kit

PART NO	SIZE
291219901	1
291229901	2

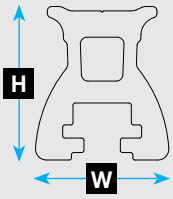
HTX Size 1 & 2 Tracks

Drilled Plunger Track



Commonly used and particularly useful where through deck fixing is not possible, such as in double skinned boats, where fixing bolts are trapped into a plate in the deck.

Beam Track



Beam track is used when spanning cockpits and across companion way hatches. Three fixing bolts should always be used either side of the span and washers fitted under the head of the bolt and between track and deck. Some beam track can only use metric fasteners

- Made of Aluminium 6082T6 extrusion

HTX Track Specifications and Fixing Details

PART NO	DESCRIPTION	TRACK SIZE	ACTUAL LENGTH		H HEIGHT		W WIDTH		WIDTH (overall)		WEIGHT (per metre)		MAX SPAN BETWEEN FIXINGS / CENTRE HOLE DISTANCE		FIXINGS	
			m	ft	mm	in	mm	in			g	oz	mm	in	Metric	Imperial
29181415	Drilled Plunger Track	1	1.526	5'	20	0.78	22.0	0.86	25	0.98	658	23.21	100	3 15/16	M6	¼"
29181420			2.026	6'8"												
29181430			3.026	9'11"												
29182415	Drilled Plunger Track	2	1.532	5'	24	0.94	26.4	1.04	31	1.22	933	32.91	100	3 15/16	M8	5/16"
29182420			2.032	6'3"												
29182430			3.032	10'												
29181315	Beam Track	1	1.5	4'11"	31	1.22	27.8	1.09			1092	38.52	700	27 9/16	M8	5/16"
29181320			2.0	6'7"												
29182315	Beam Track	2	1.5	4'11"	40	1.57	35.1	1.38			1697	59.86	800	31 ½	M10	⅜"
29182320			2.0	6'7"												

Genoa T-Track Cars

T-Track is widely used on cruising boats where car sheeting positions change frequently.

All Lewmar Track cars fit the industry standard 32mm (1 ¼"). The cars are available in three styles and cover three different loading levels to suit boats from 9m (30ft) up to 15.5m (50ft).

- Precision Workmanship
- Three Styles
- Simple to fit
- Low Maintenance

Genoa Plunger Car

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29041700	1	900	1980	111	4 3/8	56	2 ¼	540	19.1
29042700	2	1500	3300	120	4 11/16	56	2 ¼	719	25.3
29043702	3	2350	5170	170	6 ¾	56	2 ¼	1199	47.3

Car with Shackle and Plunger

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29172117	2	1500	3300	120	4 11/16	56	2 ¼	480	17.0

Tri-Roller Genoa Car

PART NO	SIZE	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29442705	2	1500	3300	147	5 ¾	64	2 ½	767	27.1

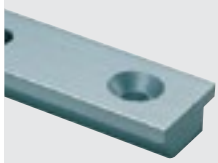
Control Line End Stop

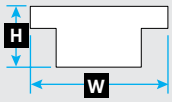
PART NO	WEIGHT	
	g	oz
29172015	120	4.2

Track End Stop

PART NO	WEIGHT	
	g	oz
29172016	19	0.7

T-Track Specification





PART NO	NOMINAL LENGTH		H HEIGHT		W WIDTH		WEIGHT (PER METRE)		CENTRE HOLE		FIXINGS	
	m	ft	mm	in	mm	in	mm	in	g	oz	Metric	Imperial
29166215	1.5	4'11"										
29166225	2.5	8'2"	15	5/8	32	1 ¼	865	30.5	100	3 15/16	CSK M8	5/16"
29166230	3.0	9'10"										

Size 4 Cars and Accessories

For offshore yachts 60ft and over and the performance conscious yachtsman.

- High load 80mm (3 ⅛") control line sheaves for 14mm (9/16") line.
- 12mm (½") torlon balls running in fully machined ball races.
- Additional weight reducing slots machined along the top of the return ball race
- End stops fixed through deck and track
- Custom variants available - contact custom@lewmar.com

Size 4 Racing Mainsheet car

29903402

PART NO	DESCRIPTION	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29903401	Single upstand and single control line sheaves	8000	17634	465	18 ⅜	113	4 7/16	5195	183.2
29903402	Twin upstand and single control line sheaves	8000	17634	465	18 ⅜	113	4 7/16	5195	183.2

Size 4 Racing Genoa car

29903451/2

PART NO	DESCRIPTION	WORKING LOAD LIMIT		LENGTH		WIDTH		LINE EXIT HEIGHT		WEIGHT	
		kg	lb	mm	in	mm	in	mm	in	g	oz
29903451	Genoa stirrup & dead eye- Port	6000	13225	385	15 ⅛	113	4 7/16	137	5 ⅜	6740	236.5
29903452	Genoa stirrup & dead eye- Starboard										
29903453	Genoa stirrup with single CL sheave- Port	6000	13225	385	15 ⅛	113	4 7/16	137	5 ⅜	6740	236.5
29903454	Genoa stirrup with single CL sheave- Stbd										
29903457	Genoa stirrup with slide rod plunger- Port	6000	13225	385	15 ⅛	113	4 7/16	137	5 ⅜	6740	236.5
29903458	Genoa stirrup with slide rod plunger- Stbd										

Size 4 Racing End Stop

29905400

29905401

29905412

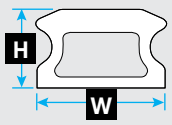
29905414

PART NO	DESCRIPTION	WORKING LOAD LIMIT		LENGTH		WIDTH		WEIGHT	
		kg	lb	mm	in	mm	in	g	oz
29905400	High load impact end stop	4000	8817	185	7 ¼	113	4 7/16	1040	36.7
29905401	Track end	1000	2204	110	4 5/16	113	4 7/16	580	20.5
29905410	Control line end stop	6000	13225	185	7 ¼	113	4 7/16	1500	52.9
29905412	Plunger stop	3000	6613	110	4 5/16	113	4 7/16	897	31.6
29905414	Track plug							36	1.3

Size 4 Tracks

Size 4 Drilled plunger track Specifications & Fixing Details

PART NO	LENGTH		H HEIGHT		W WIDTH		WEIGHT (per metre)		MAX SPAN BETWEEN FIXINGS / CENTRE HOLE		FIXINGS	
	m	ft	mm	in	mm	in	g	oz	mm	in	Metric	Imperial
29917420BK	2.	6'7"	29	1 ⅛	50	2	2228	78.6	100	3 15/16	CSK M12	½
29917430BK	3	9'10"										
29917440BK	4	13'1"										
29917450BK	5	16'5"										



Lewmar Custom Yacht Systems

Custom yacht have individual requirements for sail control equipment, from application and loads to the profile of the deck on which the equipment will be installed. Each Lewmar track is designed with these specific requirements in mind.

Recent innovations included track that can be curved to bespoke dimensions, including multidirectional compound curves. The high load double ball race (DBR) profile offers a stronger, deeper section for use with high load cars, while T-track and DBR track feature machined track ends for a lightweight, low-profile car retention solution.

On Deck Control Systems

Lewmar Custom Mainsheet and Genoa systems are ideal for yachts from 21m (70ft) to 47m (140ft) in length. Each car is available with a choice of recirculating Torlon balls or the shorter, stronger Double Ball Race (DBR) configuration. Styled with snag-free soft edges, Lewmar cars are machined from solid to individual specifications. A full range of end stops are available, including high-load impact, plunger, and control line models.

Below Deck Sheeting System

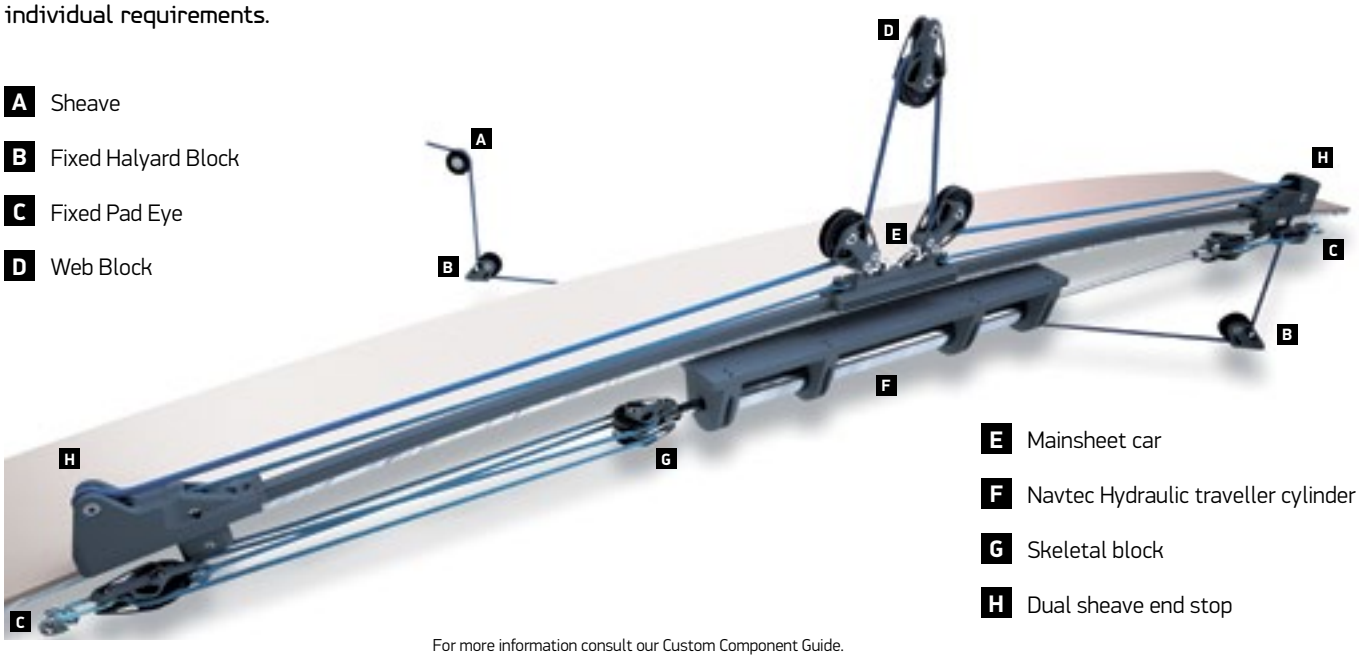
Each element of the Lewmar Custom Hardware Range is compatible with its counterparts, resulting in the ability to supply a complete, bespoke sail control system. For example, an increasing emphasis on beautiful, sleek, minimalistic lines has resulted in the below-deck sheeting system, which offers a light-weight, fully-optimised system that does not clutter the clean lines of the deck. With a choice of configurations and finishes available, Lewmar can provide a system suited to your individual requirements.

A Sheave

B Fixed Halyard Block

C Fixed Pad Eye

D Web Block



E Mainsheet car

F Navtec Hydraulic traveller cylinder

G Skeletal block

H Dual sheave end stop

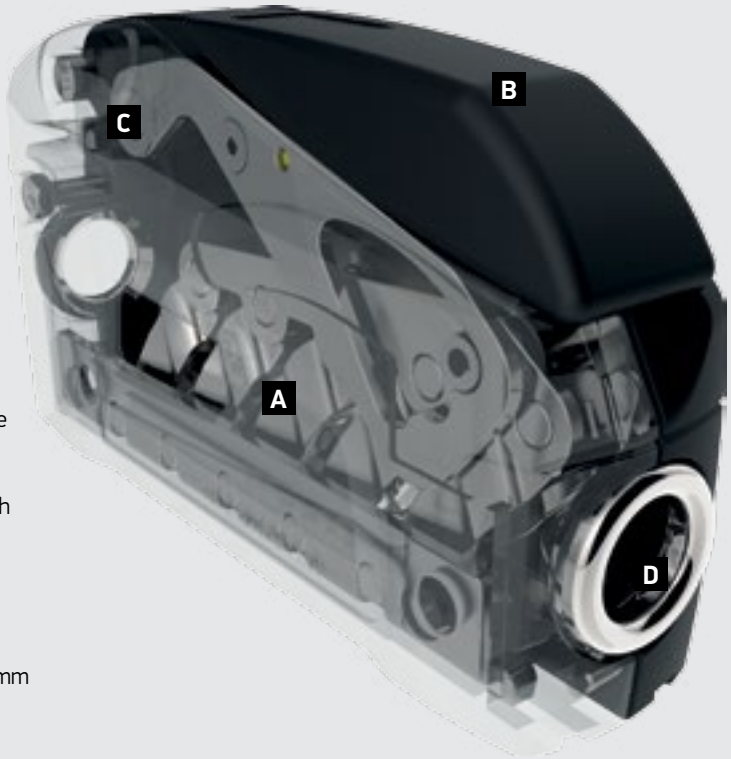
For more information consult our Custom Component Guide.

Clutches – Features

Lewmar continues to define rope clutch technology with a variable geometry handle and unique grip pattern of dominos that prevent rope fray. This revolutionary system has been independently tested time and again and has won awards for its innovative framework.

Instead of just jamming the rope...

... Lewmar's Domino mechanism flexes it for better grip and less rope wear.



A Domino Cluster and longer holding pattern holds line under load without fraying the rope

B Controlled Release – Pull back handle combined with patented clutch and release mechanism provides controlled release even at full holding load

C Handle has a solid link to the domino cluster

D Line Size – Clutches capable of holding lines from 6mm (1/4") to 14mm (9/16")

Clutch Selection Guide

Clutch Selection Guide

APPLICATION		BOAT LENGTH OVERALL										
	m	7.6	8.8	10.1	10.7	11.3	11.9	12.5	14.6	16.8	18.9	21.5
	ft	25	29	33	35	37	39	41	48	55	62	70
HALYARDS	Main											
	Genoa											
	Spinnaker											
GOOSENECK	Reef Lines											
	Outhaul											
	Flattener											
POLE/BOOM LIFT	Spin Pole Uphaul											
	Spin Pole Down Haul											
	Heel Lift											
	Main Boom Topping Lift											
FURLING LINES	Genoa											
	Main											
SHEETS	Mainsheet 4:1 Purchase											
CONTROL LINES	Mainsheet Car (2:1 Purchase)											
	Genoa Car (2:1 Purchase)											
	Pole Outhaul											
	Kicking Strap/Vang											

DC1 Rope Clutch DC2 Rope Clutch

DC Rope Clutches

DC1 Single

DC1 Double

DC1 Triple

DC2 Single

DC2 Double

DC2 Triple

CHange to BK numbers

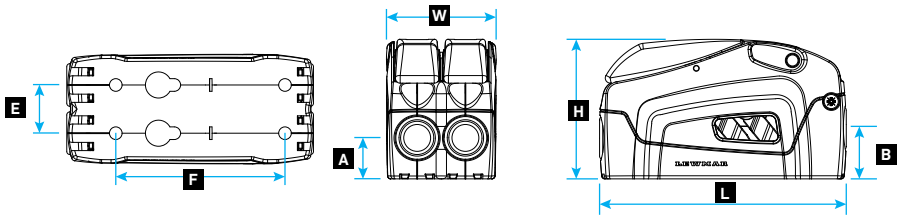
DC1 Rope Clutch Specifications

PART NO	DESCRIPTION	LINE SIZE		MIN HOLDING LOAD		APPROX WEIGHT		WLL	
		mm	in	kg	lb	g	oz	kg	lb
29101108	6–8 mm DC1 Single					330	12	500	1100
29101208	6–8 mm DC1 Double	6–8	¼–5/16	300	661	650	23	500	1100
29101308	6–8 mm DC1 Triple					850	30	500	1100
29101110	8–10 mm DC1 Single					330	12	500	1100
29101210	8–10 mm DC1 Double	8–10	5/16–3/8	400	880	650	23	500	1100
29101310	8–10 mm DC1 Triple					850	30	500	1100
29101112	10–12 mm DC1 Single					330	12	500	1100
29101212	10–12 mm DC1 Double	10–12	3/8–7/16	500	1100	650	23	500	1100
29101312	10–12 mm DC1 Triple					850	30	500	1100
29100010	DC1 Handle Kit								

DC2 Rope Clutch Specifications

PART NO	DESCRIPTION	LINE SIZE		MIN HOLDING LOAD		APPROX WEIGHT		WLL	
		mm	in	kg	lb	g	oz	kg	lb
29101410	8-10mm DC2 Single					650	23	1200	2650
29102410	8-10mm DC2 Double	8–10	5/16–3/8	500	1102	1216	43	1200	2650
29103410	8-10mm DC2 Triple								
29101412	10-12mm DC2 Single					650	23	1200	2650
29102412	10-12mm DC2 Double	10–12	3/8–1/2	700	1550	1216	43	1200	2650
29103412	10-12mm DC2 Triple								
29101414	12-14mm DC2 Single					650	23	1200	2650
29102414	12-14mm DC2 Double	12–14	1/2–9/16	1000	2204	1216	43	1200	2650
29103414	12-14mm DC2 Triple								
29101501	DC2 Handle Kit								

DC1 & DC2 Rope Clutch Dimensions



Notes:
Line entry and exit angle should not exceed 15° from the rope clutch centre line

DC1 :Use pan head M6 – 1/4" fixings – do not tighten beyond 10 Nm torque

DC2 : Use pan head M8 - 5/16" fixings - do not tighten beyond 22Nm torque

SIZE	L LENGTH		W WIDTH		H HEIGHT		A LINE ENTRY		B LINE EXIT		E FIXINGS WIDTH		F FIXINGS LENGTH	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
D1 Single			32	1 5/16							–	–		
D1 Double	126	5	57.85	2 5/16	72	2 13/16	27	1 1/8	29	1 3/16	26	1	79	3 1/8
D1 Triple			83.7	3 5/16							26	1		
D2 Single			38.0	1 1/2							–	–		
D2 Double	156	6 1/8	68.5	2 1/16	88	3 3/8	26	1	32	1 5/16	30.5	1 3/16	107	4 1/4
D2 Triple			99	3 7/8							30.5	1 3/16		

Clutch can be clearly marked and identified with our range of info-graphics specially designed to suit all sailing applications.

Part No: 25002323

Organisers

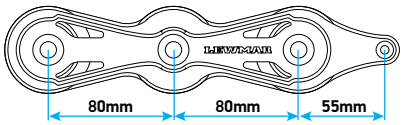
All organisers have space to pass two lines between each sheave

Flush fixings Synchro Organiser

- Bushed sheaves with side thrust ball bearings
- Wide rope entry

2991 6060
Synchro Three Sheave Single

29916042
Synchro Six Sheave
Double Stacked



PART NO	SHEAVE Ø		NO OF SHEAVES	WORKING LOAD LIMIT		MAX WORKING LOAD OF SHEAVE		MAX LINE SIZE		LENGTH		WEIGHT		FIXINGS (NOT SUPPLIED)	
	mm	in		Kg	lb	Kg	lb	mm	in	mm	in	g	oz	mm	in
29916042	60	2 3/8	6	3700	8156	1100	2420	12	1/2	256	10 1/16	602	21.2	M10	3/8
29916060	60	2 3/8	3	2550	5500	1100	2420	12	1/2	256	10 1/16	329	12.9	M10	3/8

40 and 60mm Bushed Sheaves Organiser

- Tough interchangeable acetal or alloy sheaves (40mm only)
- Stackable

40mm Bushed Sheaves Organisers

PART NO	SHEAVE Ø		NO OF SHEAVES	WORKING LOAD LIMIT		MAX WORKING LOAD OF SHEAVE		MAX LINE SIZE		LENGTH		WEIGHT		FIXINGS (NOT INLUDED)		SHEAVE CENTRES	
	mm	in		Kg	lb	Kg	lb	mm	in	mm	in	g	oz	mm	in	mm	in
29139122	40	1 5/8	2	1005	2215	750	1654	10	3/8	142	5 5/8	123	271	M8	5/16	47	1 7/8
29139123	40	1 5/8	3	1507	3322	750	1654	10	3/8	189	7 3/8	206	454	M8	5/16	47	1 7/8
29139124	40	1 5/8	4	2010	4431	750	1654	10	3/8	236	9 1/3	275	606	M8	5/16	47	1 7/8
29139125	40	1 5/8	5	2512	5537	750	1654	10	3/8	283	11 1/8	352	776	M8	5/16	47	1 7/8
29139126	40	1 5/8	6	3015	6646	750	1654	10	3/8	330	13	425	937	M8	5/16	47	1 7/8

60mm Bushed Sheaves Organisers

PART NO	SHEAVE Ø		NO OF SHEAVES	WORKING LOAD LIMIT		MAX WORKING LOAD OF SHEAVE		MAX LINE SIZE		LENGTH		WEIGHT		FIXINGS (NOT INLUDED)		SHEAVE CENTRES	
	mm	in		Kg	lb	Kg	lb	mm	in	mm	in	g	oz	mm	in	mm	in
29139112	60	2 3/8	2	2400	5290	1200	2645	14	9/16	231	9 1/8	325	11.46	M10	3/8	72	2 27/32
29139113	60	2 3/8	3	3000	6613	1200	2645	14	9/16	303	12	435	15.34	M10	3/8	72	2 27/32
29139114	60	2 3/8	4	3600	7935	1200	2645	14	9/16	375	14 3/4	551	19.43	M10	3/8	72	2 27/32
29139115	60	2 3/8	5	4200	9258	1200	2645	14	9/16	447	17 5/8	637	22.46	M10	3/8	72	2 27/32
29139116	60	2 3/8	6	4800	10580	1200	2645	14	9/16	519	20 1/2	775	27.33	M10	3/8	72	2 27/32

Cleats

Made from state-of-the-art materials developed by the automotive industry and refined for the marine market, Lewmar cleats enhance performance in durability, strength and lubrication.

Features

- Low line entry load
- High holding load
- Constant tension springs
- Wash-out bearing slots
- Split base fairlead to facilitate continuous line installations

Cam Cleats

PART NO	DESCRIPTION	WLL		LINE SIZE		FIXING PITCH		FIXING SIZE		WEIGHT	
		Kg	lb	mm	in	mm	in	mm	in	g	oz
29104100BK	Small Composite Cleat	120	264	2–8	5/64–5/16	27	1 1/16	M4	5/32	17.5	0.6
29104110BK	Medium Composite Cleat	180	396	4–12	5/32–1/2	38	1 1/2	M5	3/16	48.5	1.7

Fairlead

PART NO	DESCRIPTION	LINE SIZE		WEIGHT	
		mm	in	g	oz
29104104BK	to fit 29104100	2–8	5/64–5/16	6.0	0.2
29104114BK	to fit 29104110	4–12	5/32–1/2	14.0	0.5

Feeder Loop

PART NO	DESCRIPTION	LINE SIZE		WEIGHT	
		mm	in	g	oz
29104115	Small	2–8	5/64–5/16	6.0	0.2
29104116	Medium	4–12	5/32–1/2	10.0	0.35

Eye Strap (Pair)

PART NO	DESCRIPTION	LINE SIZE		FIXING PITCH		FIXING SIZE		WEIGHT	
		mm	in	mm	in	mm	in	g	oz
29104103	Small	2–8	5/64–5/16	27	1 1/16	M4	5/32	6.0	0.2
29104113	Medium	4–12	5/32–1/2	38	1 1/2	M5	3/16	18.0	0.6

Bulls-Eyes

PART NO	DESCRIPTION	MAX LINE SIZE		FIXING PITCH		FIXING SIZE		WEIGHT	
		mm	in	mm	in	mm	in	g	oz
29904117	Medium	12	1/2	25	1	M4	5/32	12.0	0.4
29904118	Large	18	3/4	32	1 1/4	M5	3/16	32.0	1.1

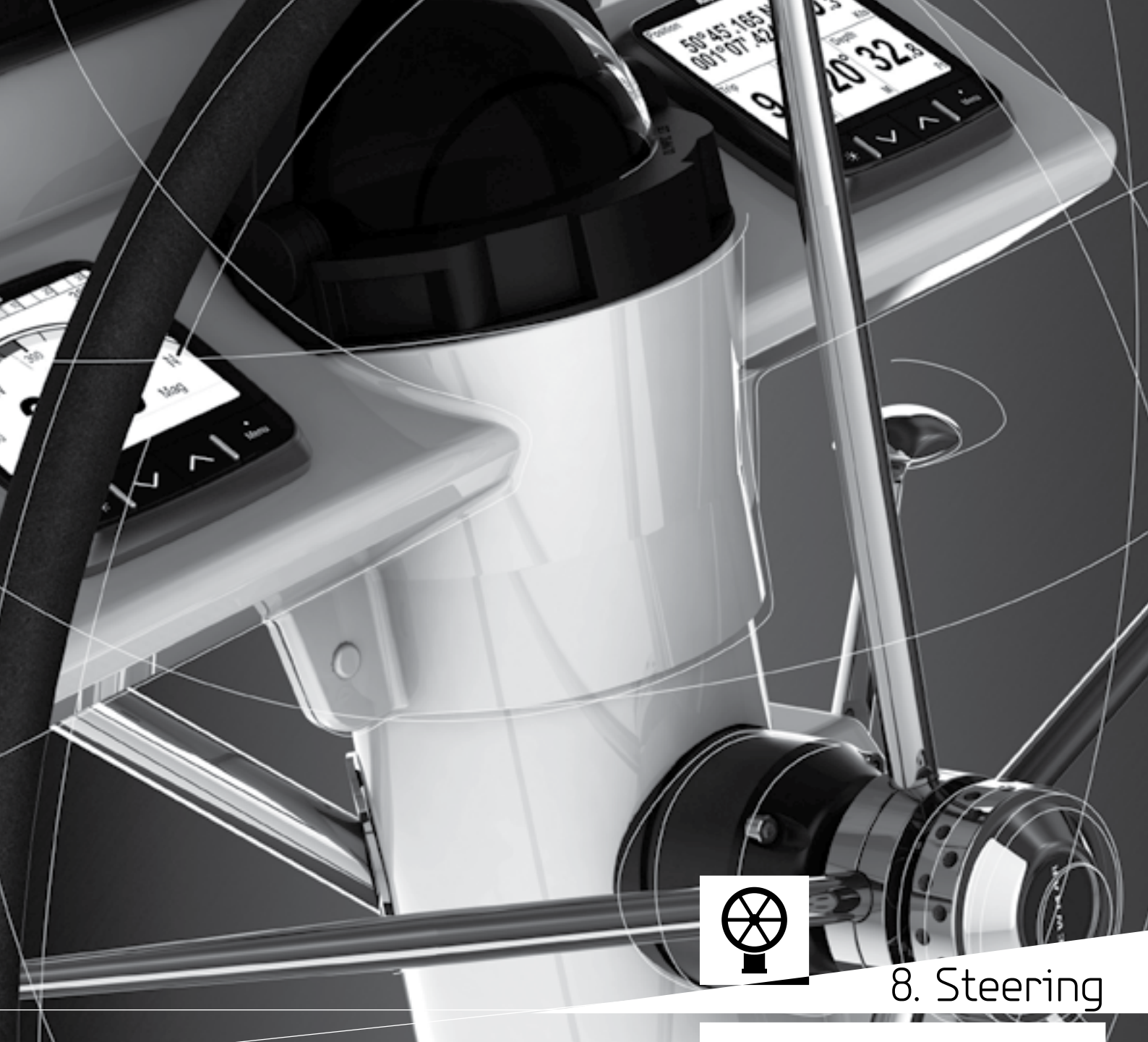
Swivel Cam Base for 60/80mm Blocks

PART NO	WLL		LINE SIZE		FIXING PITCH		FIXING SIZE		WEIGHT	
	Kg	lb	mm	in	mm	in	mm	in	g	oz
29904126	300	661	4-10	5/32–7/16	4x19	4x3/4	M5	3/16	302	10.7

Grey cleat and fairlead also available

Swivel Small Cam with Bull's Eye

PART NO		LINE SIZE		HOLE CENTRES		WEIGHT	
		mm	in	mm	in	g	oz
29904105	Small	2-6	5/64–1/4	3 x 27	3 x 1 1/16	114	4
29904115	Medium	4-10	5/32–3/8	3 x 27	3 x 1 1/16	168	5.9



8. Steering

Lewmar's steering systems have been world leaders for over 50 years, and constantly evolving to meet the performance and aesthetic needs of both cruisers and elite racers. Each product is thoroughly tested in the most adverse conditions possible and then finished with care to suit every type of yacht.

The Lewmar Steering Range

Page 183 Wheels

- Choice of wheels to suit any application
- 25mm/1" tapered keyed shaft ensures positive fit
- Compatible with all Lewmar Steering Systems
- Full range of accessories available

Page 186 Pedestals

- Range of standard and custom pedestals
- Modern composite construction guards against corrosion
- Custom pedestals available for bespoke specification
- Range of accessories available, including guardrails

Page 191 Instrument Pods

- Choice of instrument pods to suit any electronic configuration
- Pods available as retrofit or complete assembly option

Page 193 Cockpit Accessories

- Range of cockpit tables in different finishes
- Tables and pods designed to complement Lewmar Pedestal Range

Page 194 Steering Systems

- Comprehensive range of steering systems with accessories
- Constellation – Open wire and wire-in-conduit steering.
- Cobra – Rack and Pinion
- Mamba – Rotating Torque Tube and Bevelhead

Page 205 Autopilot Drives

- Simple installation
- Compatible with main electronic suppliers
- All units feature electromechanical clutch
- Low current draw

Page 208 Rudder bearing

- Range of rudder bearings complement Lewmar Steering Systems
- Suitable for tiller-steered and wheel-steered yachts
- Full range of accessories

Wheels

- Choice of wheels to suit any application
- 25mm/1" tapered keyed shaft ensures positive fit
- Compatible with all Lewmar Steering Systems
- Full range of accessories available

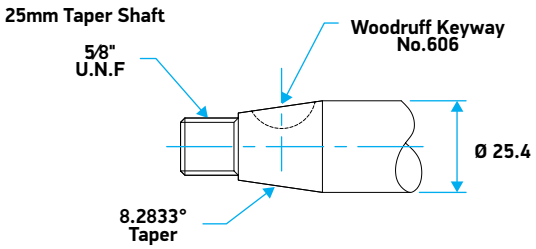
Wheel Selection Guide

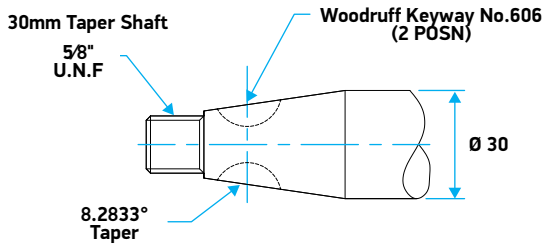
	WHEEL DIAMETER								
cm	66	81	97	112	127	142	157	173	188
in	26	32	38	44	50	56	62	68	74
Folding Wheel									
Commodore Flat									
Commodore Dished									
Mini Maxi									
Carbon									
Fastnet									

The Lewmar Steering Wheel Shaft

All Lewmar wheels listed in this catalogue have the 25mm/1" taper shaft. Angle of taper ensures the wheel is easily removable. Larger wheels (1.6m and up) can also be supplied with the 30mm/1 3/16" taper shaft. The folding wheel dual-hub aso fits a 25mm/1" parallel shaft.

Lewmar uses industry standard 25mm/1" tapered keyed shaft to ensure positive fit of the steering wheel. The 30mm/1 3/16" taper shaft is only used in custom super yacht systems.

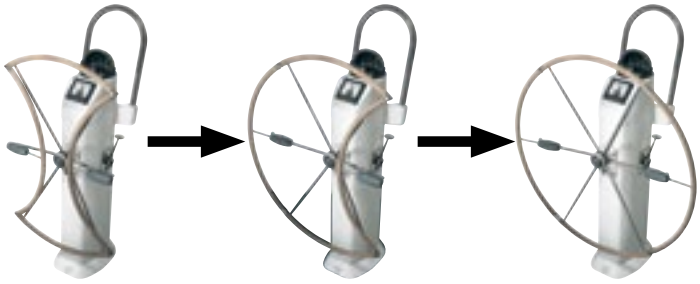




Folding Wheel

Reclaim space in your cockpit with Lewmar's patented folding wheel.
The Folding Wheel has a two-turn, buttress-threaded, split-spoke design, and a unique hinging system with fast-action handgrip release. This allows you to easily fold and unfold the wheel, using a simple twist of the composite handgrip. At a fraction of the cost of custom versions, the Folding Wheel is appealing to both production boat builders and owners looking to improve their deck layouts.

PART NO.	DESCRIPTION	SIZE		FITS SHAFT
		mm	in	
89700375	Folding wheel with hide cover	813	32	1" Taper
89700376	Folding wheel with hide cover	914	36	1" Taper
89700377	Folding wheel with hide cover	1016	40	1" Taper
89700520	Folding wheel with hide cover	1066	42	1" Taper
89700406	Folding wheel with hide cover (dual hub)	813	32	1" Taper & 1" Parallel
89700407	Folding wheel with hide cover (dual hub)	914	36	1" Taper & 1" Parallel
89700408	Folding wheel with hide cover (dual hub)	1016	40	1" Taper & 1" Parallel
89700521	Folding wheel with hide cover (dual hub)	1066	42	1" Taper & 1" Parallel



The Commodore™ Wheel

Durable and elegantly styled, the Commodore is a standard choice for yachtsmen the world over.
Choose from sizes ranging in diameter from 66cm (26") to 122cm (48").

PART NO.	DESCRIPTION	SIZE	
		mm	in
89700264	Flat 5 spoke with hide cover	66	26
89700265	Flat 5 spoke with hide cover	71	28
89700266	Flat 5 spoke with hide cover	76	30
89700267	Flat 5 spoke with hide cover	81	32
89700268	Flat 5 spoke with hide cover	91	36
89700297	Dished 5 spoke with hide cover	66	26
89700298	Dished 5 spoke with hide cover	71	28
89700299	Dished 5 spoke with hide cover	76	30
89700300	Dished 5 spoke with hide cover	81	32
89700301	Dished 5 Spoke with hide cover	91	36
89700593	Dished 5 Spoke with hide cover	102	40
89700024	Flat 8 Spoke with hide cover	107	42
89700025	Flat 8 Spoke with hide cover	122	48
89700063	Dished 8 Spoke with hide cover	107	42
89700064	Dished 8 Spoke with hide cover	122	48

The Mini Maxi™ Wheel

The Mini Maxi™ wheel is designed for use where a larger wheel is required or for exceptional rigidity.

Available up to 1524 mm/ 60" diameter

Supplied with Hide Cover and Spats

PART NO.	DESCRIPTION	SIZE	
		mm	in
89700092	Mini Maxi™ 10 spoke	91	36
89700093	Mini Maxi™ 10 spoke	102	40
89700094	Mini Maxi™ 10 spoke	107	42
89700095	Mini Maxi™ 10 spoke	122	48
89700096	Mini Maxi™ 10 spoke	132	52
89700097	Mini Maxi™ 10 spoke	137	54
89700098	Mini Maxi™ 10 spoke	152	60
89700063	8 spoke dished, polished	107	42
89700064	8 spoke dished, polished	122	48

Custom Wheels

Y-Spoke Carbon Wheel

Lewmar manufactures a range of custom wheels. The Y-Spoke Carbon Wheel combines ultimate weight saving with sleek and slender styling. Ideal for Grand Prix race yachts or as a solution to increasing demand for race technology on cruising yachts. These wheels are built and supplied to order in a variety of sizes ranging from 1m/39" to 1.8m/71".

Fastnet Wheel

The lightweight and stylish Fastnet Wheel is made from Aluminium 6082. The wheels are supplied powder-coat painted, or with leather stitched to the wheel rim in a range of colours. The Fastnet wheel range starts at 122cm/48" with incremental sizes up to 175cm/69".

Other Custom Wheels

Lewmar designs custom wheels to fit a pedestal specific to the customer's requirement.
3D modelling is used to ensure that the wheel fits first time, even in tight spaces.

Custom carbon wheels

Custom dished wheel designed to mount on the back face of the customer's own pedestal for which they have a registered trademark.

Wheel Accessories

Multi Tooth Wheel Disengagement Units

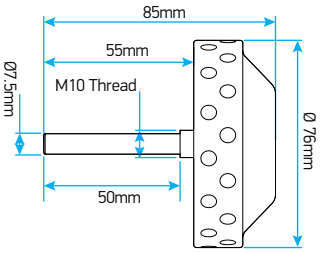
This is a quick, safe and efficient way to disengage the steering wheel whilst still allowing the system to operate. This is particularly useful when using a dual wheel system or operating the steering by Autopilot. The unit incorporates precision multi tooth gears to ensure zero backlash or play.

Note: This product cannot be retrofitted to an existing wheel and must be requested when ordering a new wheel. This multi-tooth disengagement unit can be added to any style newly built Lewmar wheel. For prices and part numbers of wheels incorporating this product please speak to a Lewmar representative.

Brake Spinner

A brake spinner is used to lock the wheel and rudder when in port or at anchor.

- Lewmar uses a powerful and progressive through shaft friction brake.
- Specific to the type of wheel used.



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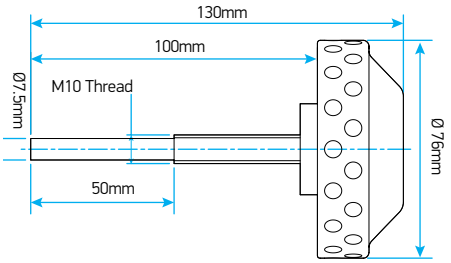


Ref: 89100144

PART NO.	FINISH	FOLDING/COMMODORE WHEEL	MINI MAXI WHEEL
89100143	Stainless Steel	✓	
89800053	White Composite	✓	
89100144	Stainless Steel		✓

Rail Mount Wheel Holder

The Rail Mount Wheel Holder can be used on most boat rails to store the wheel when not in use, thus providing a clear area in the cockpit.

- Manufactured in 316 investment cast Stainless Steel
- Designed to suit 25mm/1" taper or Parallel steering wheel shaft
- Will fit 25mm/1", 28.6mm /1 1/8" & 32mm/11/4" diameter rails

89400327
Rail Mount Wheel Holder

Quick Release Bi-square Wheel Nuts

The quick release wheel nut – with a standard winch handle bi-square. As you always have a winch handle on hand, this is a quick and simple way to remove your wheel. The quick release wheel nut is available in 316 grade stainless steel, to mirror polish finish.

PART NO.	TO SUIT WHEEL TYPE
89700161	Commodore™ wheel
89700162	Mini Maxi™ Fastnet/Carbon

Pedestals

Lewmar pedestals are manufactured from modern composites, which guard against electrolytic action and the corrosive nature of salt water.

All standard Lewmar pedestals measure 710mm/28" from the base to centre of steering shaft. Custom pedestal heights are available upon request.

All Lewmar pedestals are available in Constellation, Cobra and Mamba steering systems.

Guardrails are not included. For guardrail options refer to Page 190.

Lewmar offers a comprehensive range of pedestal accessories and options from guardrails and engine control to compasses, cockpit tables and instrument pods.

Pedestal Selection Guide

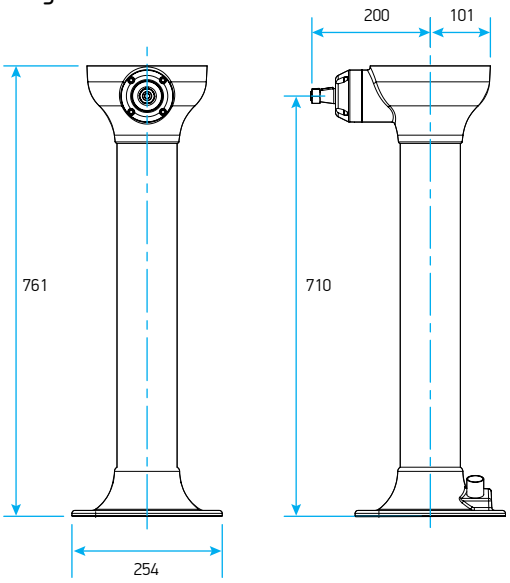
	AFT COCKPIT					CENTRE COCKPIT		TILLER-WHEEL COVERSIONS	
Pedestal	For Boats Up to 60ft Constellation	For Boats Up to 60ft Cobra	For Boats Up to 60ft Cobra	For Boats Up to 60ft Cobra	For Boats Up to 200ft Mamba	For Boats Up to 80ft Constellation	For Boats Up to 80ft Mamba	Constellation	Mamba
Enguard	•	•		•	•	•	•	•	•
Integra		•		•	•	•	•	•	•
Royale	•	•	•		•	•	•		
Maximum Wheel Size	2 m (78 in)	1.2 m (48 in)	1.2 m (48 in)	2 m (78 in)	2 m (78 in)	2 m (78 in)	2 m (78 in)	2 m (78 in)	1.2 m (48 in)

Enguard Pedestal

The Enguard pedestal incorporates an integral guardrail pedestal base, which minimises the footprint area the pedestal takes-up on the deck. The Enguard pedestal can be found fitted to many production boats around the world such as Marlow Hunter.

- Integrated guardrail base providing compact and rapid installation
- Wide range of accessories available
- Custom heights available

Enguard Pedestal Dimensions



Enguard Pedestal Part Numbers

Standard part numbers listed below. Many variations available, contact your Lewmar representative for more information

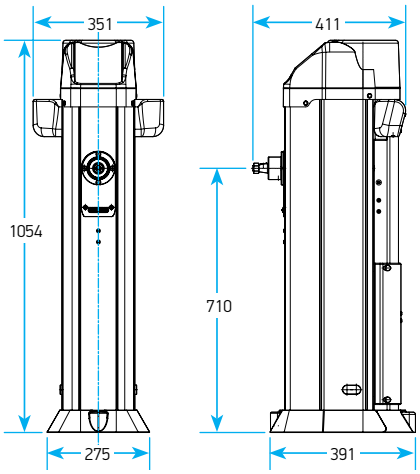
PART NO.	DESCRIPTION
89900003	Constellation Enguard ANSI50 11T
89900031	Cobra cruising OL10STB
89900046	Mamba Enguard BH10 Brake

Integra Pedestal

The Integra pedestal is the latest in Lewmar's range of integrated pedestal steering systems. The Integra offers quick and easy above deck access to fit Lewmar's patented autopilot drive motor. The integra pedestal can be found fitted to many production boats around the world such as Southerly Yachts and Delphia.

- All Integra Cobra pedestals have the ability to install an integrated autopilot drive
- Harness bolts supplied as standard on the forward and aft side of the pedestal deck flange
- Compass mounting platform and integrated housing
- Ability to mount 1 single instrument to the uPVC top moulding
- Pre-installed single lever engine control
- Removable access door for quick and simple autopilot installation
- Pedestal pre-drilled for cockpit table mounting
- Pedestal stop ring included

Integra Pedestal Dimensions



Integra Pedestal Part Numbers

Standard part numbers listed below. Many variations available, contact your Lewmar representative for more information

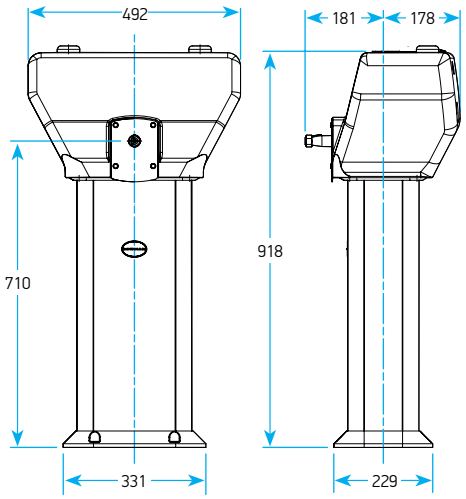
PART NO.	DESCRIPTION
89900014	Constellation Royale ANSI50 11T
89900034	Cobra cruising Royale TMNT Guardrail
89900052	Mamba Royale BH10 Brake Guardrail

Royale Pedestal

The Royale is an evolution of the console style pedestal range. The Royale head provides maximum flexibility for instrument mounting. The Royale pedestal can be found fitted to many production boats around the world such as Hallberg Rassy and Rustler Yachts.

- Mounting areas for single lever engine control on port or starboard
- Accepts 4 Industry standard 110mm / 4.25" yachting instruments
- Flush mount compass platform

Royale Pedestal Dimensions



Royale Pedestal Part Numbers

Standard part numbers listed below. Many variations available, contact your Lewmar representative for more information

PART NO.	DESCRIPTION
89900302	Constellation Integra 11T 5-8P
89900299	Cobra cruising Integra OL10 L2 102l
89900306	Mamba Integra BH10 CU

Custom Pedestal

Gunfleet *Flightdeck®*

For the Gunfleet 43 project, Lewmar designed and specified all of the internal components to fit the customer's own pedestal.

Bavaria Pedestal

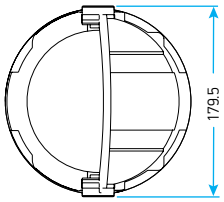
- Custom steering pedestals designed for the Bavaria range of twin helm yachts.
- Aluminium base provides excellent strength and rigidity with minimal weight.
- The GRP head can easily be trimmed to fit the customer's choice of instruments.

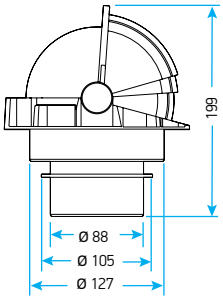
Pedestal Accessories

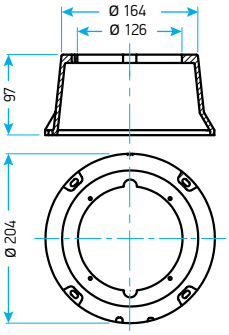
Compasses

The Lewmar 135 Compass is a stylish, precision instrument to compliment any cockpit. The high quality compass is manufactured with precision components. The compass utilises a real sapphire to ensure ultimate reliability and durability. The diaphragms, made of Viton®, are fully waterproof and absorb the fluid variations resulting from differing temperatures and air pressure. Every compass complies with rigorous vibration, temperature, stability and precision specifications.

- Apparent diameter of card: 130mm
- Flush mounting or pedestal mounting (with the addition of a binnacle)
- Minimal flushmount depth
- Double lighting (12 or 24 V mounting)
- Unique 'Lewmar' binnacle
- Black card
- 5 year warranty







PART NO.	MODEL 135 COMPASS
89400000	Flush Mount 135 Compass with hood
89400001	135 Compass complete with Binnacle Housing
89400002	Binnacle only

Lewmar 135 Compass flush mounted in pedestal

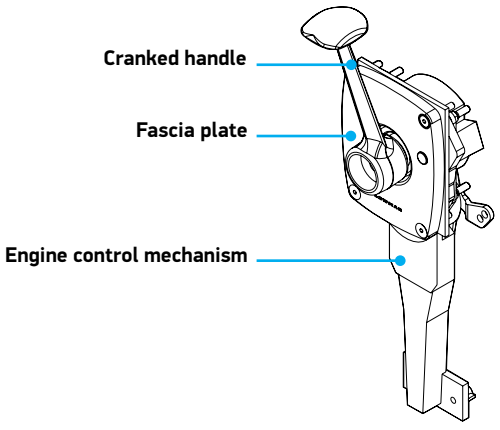
Engine Control Mechanism

Lewmar offers engine and gear controls to complement the steering pedestal of your choice. The engine control designed exclusively for Lewmar is non-magnetic and can be guardrail or pedestal mounted without interfering with the compass.

- Housed in pod
- Guardrail Mounted
- Bulkhead mounted fascia plate
- Exclusive design for Lewmar
- Non-magnetic
- 316 stainless steel cranked handle

89800013
Rubber button plunger kit

89400136
Cranked Handle



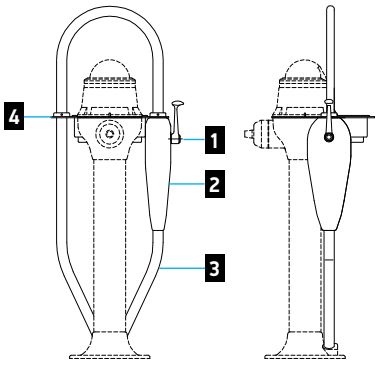
PART NO.	DESCRIPTION
89400109	Control Mech kit Cranked Handle and Fascia Plate
89400133	Fascia Plate
89400136	Cranked Handle Stainless Steel
89400137	Mechanism Only (No Handle)
89400146	Fitting Kit for Control Mechanism
89800013	Rubber Button and Plunger Kit
89400316	Control Mechanism Crank Handle

Guardrails

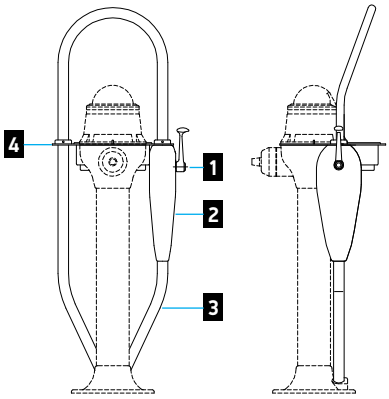
Lewmar Guardrails are designed to protect the compass and pedestal and to provide assistance while moving about the cockpit. Our wide range of straight, kickback and extended guardrails, are manufactured from 32mm/1.25" heavy duty 316 stainless steel tube. The extensive choice of guardrails is complemented by our instrument pod range, see Page 191.

Enguard Guardrail kits

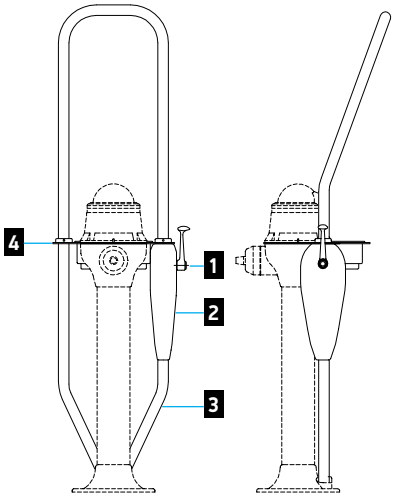
Enguard Guardrail Kits include: Guardrail (straight, kickback or extended kickback), Engine Pod, Top Plate & Cup holder



Straight Enguard Guardrail Kit
89400298



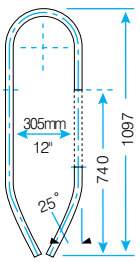
Kickback Enguard Guardrail Kit
89400125



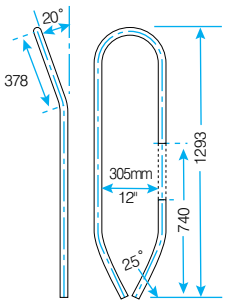
Enguard extended kickback guardrail kit
89400299

Enguard Guardrail Spares

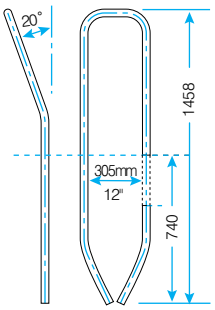
PART NO.	DESCRIPTION	KEY
89400031	Guardrail Straight (Stbd)	
89400033	Guardrail Kickback (Stbd)	
89400035	Guardrail Extended Kickback (Stbd)	
89400109	Control Mechanism	1
89400084	Engine Pod	2
89400120	Drop Tube	3
89400122	Top Plate & Cup Holder	4



89400031



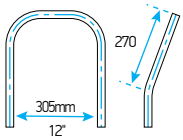
89400033



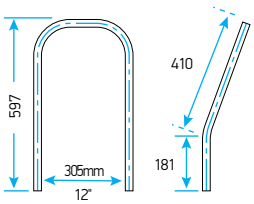
89400035

Royale Guardrail

PART NO.	DESCRIPTION
89400046	Kickback guardrail
89400047	Extended kickback guardrail



89400046



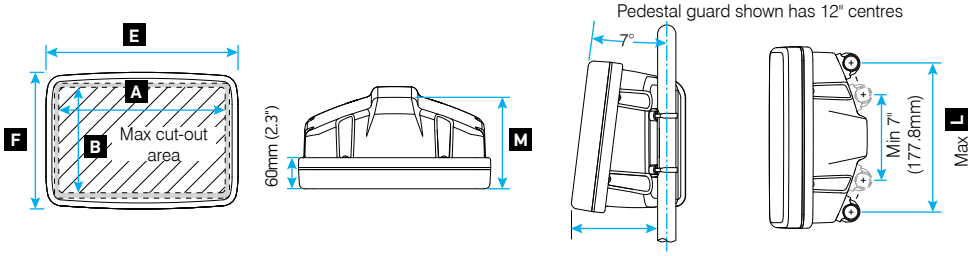
89400047

Instrument Pods

Helm Pod

With great new design features, the Lewmar Helm Pod is a perfect choice for all cockpit configurations.

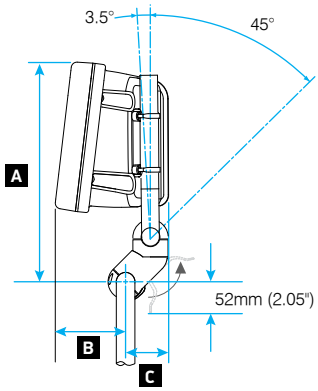
- Range of Models to fit up to 15" displays with options to install a combination of instruments and displays at the helm.
- Universal Helm Fixing fits pedestal rails from 25mm to 33.7mm (0.98" – 1.33"). Using a unique clamping system, the Pod can fit rail widths from 178mm (7") upwards.
- Secure & Watertight Install- Saddle system supports the stainless tubing enabling a secure and rigid fit onto any pedestal and also ensures a watertight seal at cable entry
- No Drill Fixing Kit- Customised U-bolts fit around rail and through the saddles into the back of the pod eliminating the need for time consuming and awkward drilling of the stainless rail.
- Hassle Free Install & Service- Fixings fit from back to front cutting their threads into injection moulded ABS inserts designed into the Pod front.
- Increased Protection Pod seal manufactured from a high tear strength silicone.
- Supplied Uncut



PART NO	DESCRIPTION	A		B		E		F		J		K		L		M	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
89400423	up to 8" display	312	12.3	200	7.9	371	14.6	264	10.4	152	6.0	165	6.5	304.8	12.0	175	6.9
89400425	10®12" display	365	14.4	241	9.5	424	16.7	304	12.0	186	7.3	192	7.6	304.8	12.0	175	6.9
89400427	15" display	423	16.7	333	13.1	482	19.0	396	15.6	176	6.9	185	7.3	381	15.0	175	6.9
89400429	4 x standard instruments	498	19.6	118	4.65	562	22.1	187	7.4	100	4.0	103	4.1	406	16.0	175	6.9
89400430	System pod	541	21.3	274	10.8	600	23.6	336	13.2	205	8.1	207	8.1	381	15.0	175	6.9

Flex Mount

- View your instruments from the perfect angle by using the Flex mount in combination with the Lewmar Helm Pod.
- The Flex-Mount System gives you more options for installing your electronics – simply clamp onto your existing rail or steering binnacle and install the Helm Pod as normal.
- Easy to use quick release lever – tilt display forward / back for improved instrument viewing
- Cables exit the back of the Pod and into the pedestal / rail using watertight grommet
- Fits 1" and 1 1/4" rail sizes and requires minimum of 60mm (2.4") of straight rail to mount
- Three models available to suit 8" - 10" and 12" Helm Pod



PART NO	DESCRIPTION	A		B		C	
		mm	in	mm	in	mm	in
89400440	8" helm pod	365	14.4	116	4.5	84	3.3
89400441	10 ® 12" helm pod	404	16.0	158.5	6.25	72	2.8
89400442	15" helm pod	495	19.5	148.5	5.85	72	2.8

Stainless Steel GPS/ Mobile Phone Holder

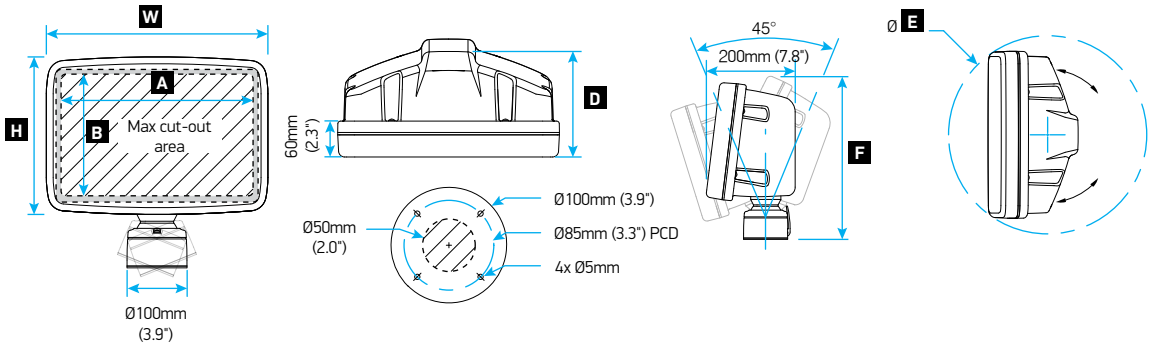
- Manufactured from 316 investment cast stainless steel
- Pod arm will fit 1", 1⅛" and 1¼" diameter guardrail tubes
- All wiring of products mounted to the pod arm is hidden internally.

Part No: 89400328

Instrument Pods cont.

Deck Pod

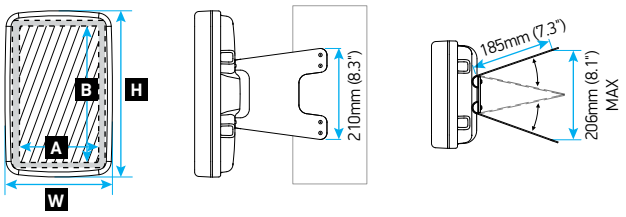
- Solve the challenge of finding a level mounting surface to install your displays onto your powerboat, RIB or sailboat wheelhouse.
- Suitable for 8 to 15" display or am 8" display and 2 standard instruments
- Swivel & Tilt Base – One handed quick release action. Simply release the lever, swivel and tilt to suit your requirements before locking back into position
- Best viewing angle – An adjustable ball joint allows range of movement and multiple mounting angles
- Added Strength – Inner bracing plate secures the Deck Pod base to the pod and gives increased rigidity to the assembly eliminating potential damaged from shock and vibration
- Increased Protection – Pod seal is manufactured from a high tear strength silicone.
- Supplied Uncut



PART NO	DESCRIPTION	A		B		W		H		D		E		F	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
89400435	up to 8" display	312	12.3	200	7.9	371	14.6	264	10.4	175	6.9	440	17.3	367	14.4
89400437	10&12" display	365	14.4	241	9.5	424	16.7	304	12.0	175	6.9	485	19.1	404	15.9
89400439	15" display	423	16.7	333	13.1	482	19.0	396	15.6	175	6.9	535	21.1	490	19.3

Mast Pod

- The Mast Pod range offers a choice of sizes to allow installation of up to 4 standard or larger 20/20 maxi style instruments at the mast.
- Whether racing or cruising, our Mast Pods give you the best view of your instruments.
- Universal Mount – The range has been designed to fit mast sizes from 76mm (3") to 223mm (8.8"). Mast arms pivot about semi circular washers and an additional cross-brace provides stiffness preventing sideways movement.
- Increased Protection – Pod seal is manufactured from a high tear strength silicone.



PART NO	DESCRIPTION	A		B		W		H	
		mm	in	mm	in	mm	in	mm	in
89400434	4 x standard instruments	118	4.65	498	19.6	187	7.4	562	22.1
89400432	3 or 4 x maxi instruments	194.5	7.65	487	19.0	248	9.75	545	21.5

Classic Pod

- Fits directly to the Enguard and Classic style pedestals, via a special top plate.
- Offers increased mounting space for instruments, on the pedestal.
- Available with kickback guardrail for the inclusion of additional instrument pod options.
- Compass mounting point

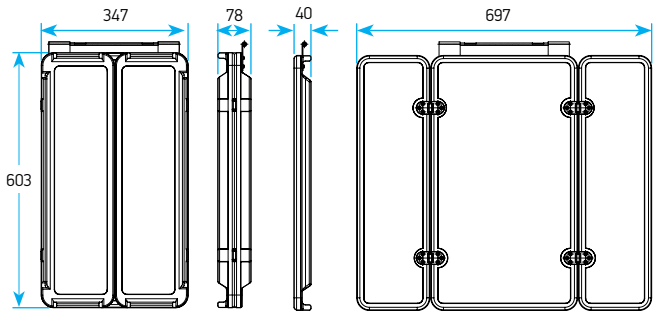
Part No: 89400100

Cockpit Accessories

Cockpit Table

Lewmar offers a range of tables in teak or manufactured from uPVC with high strength composite core supplied with bracket, support and fitting instructions.

- Double-leaf fold out
- All teak from sustainable forests
- Suits all Lewmar pedestal types
- Quick release hinge for simple storage
- Folds against pedestal
- Teak model supplied unvarnished



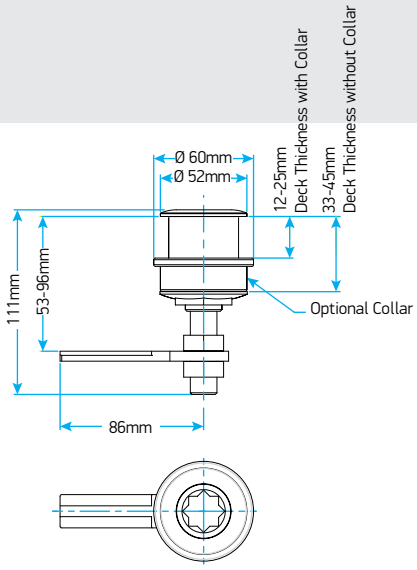
PART NO.	DESCRIPTION
89400283	Table kit for Classic pedestal unvarnished
89400284	Table kit for Enguard pedestal unvarnished
89400285	Table kit for Reliant/Athena pedestal unvarnished
89400286	Table kit for Royale pedestal unvarnished
89400365	Table kit for Integra pedestal unvarnished
89400013	Table Composite double leaf with mounting kit for Enguard pedestal
89400014	Table Composite double leaf with mounting kit for Reliant pedestal
89400024	Table Composite double leaf with mounting kit for Royale pedestal
89400420	Universal table mounting kit to suit Enguard, Reliant, Royale and Integra Pedestals

Stainless Steel Cockpit Locker Latch

The Lewmar locker latch is a high quality product designed for any boat. Easy operation via a winch handle is standard.

- 316 investment cast product
- Easy installation
- Watertight 'O' ring seal
- Easy operation via winch handle
- Adjustable deck thickness

89400061
Cockpit Locker Latch Stainless Steel



Steering Systems

Lewmar offers a comprehensive range of steering equipment based on 3 different mechanical concepts.

- Constellation™ Open Wire Steering & Conduit
- Cobra™ Rack & Pinion
- Mamba™ Rotating Torque Tube & Bevelhead

This product portfolio offers today's boat builders a solution for any steering installation.

Photo: Hallberg-Rassy / Rick Tomlinson

Constellation™ – Wire Steering

Wire steering systems are suitable for yachts from 7m /25' to Maxi's. This diversity has enabled us to develop the Constellation system with feedback from various types of boat builders. Wire systems are ideal for aft cockpit installations, either single or tandem. Wire-in conduit systems are also available for centre cockpit installations. The conduit system overcomes the difficulties that are experienced when using open wire in centre cockpit installations.

Cobra™ – Rack & Pinion

Cobra uses rack and pinion in the head of the pedestal to provide the necessary mechanical advantage required for sensitive steering. Cobra has been designed for use in aft cockpit sailboats and is a world leader in its field. Lewmar also offers customised Cobra systems for use in non aft cockpit applications.

Mamba™ – Rotating Torque Tube & Bevelhead

The ultimate steering system providing feedback and strength; both benefits are inherent to gearbox and bevelhead steering systems. Mamba is a suitable steering system for a diverse range of sailboats from blue water cruisers to America's Cup contenders. It offers unique features such as variable mechanical advantage steering whilst retaining versatility in the type of installation it can be used in i.e. Tandem systems.

Constellation™ Systems

Constellation™ is made up of a complete range of wire steering systems, offering award winning design and high quality construction, for vessels up to 18m/60'. The systems have been developed in conjunction with both production boat yards and the world's racing community. All aluminium parts are etched, alochromed and stoved using powder coated polyester resins.

- Simple installation with minimal components.
- Classic 'tried and tested' chain and wire arrangement
- Open wire arrangements for aft cockpit boats with a wire in conduit option for centre cockpit
- Range of sprocket / quadrant ratios available for different steering speeds and loads
- Autopilot units can be easily incorporated into the system

Constellation™ Open Wire Systems

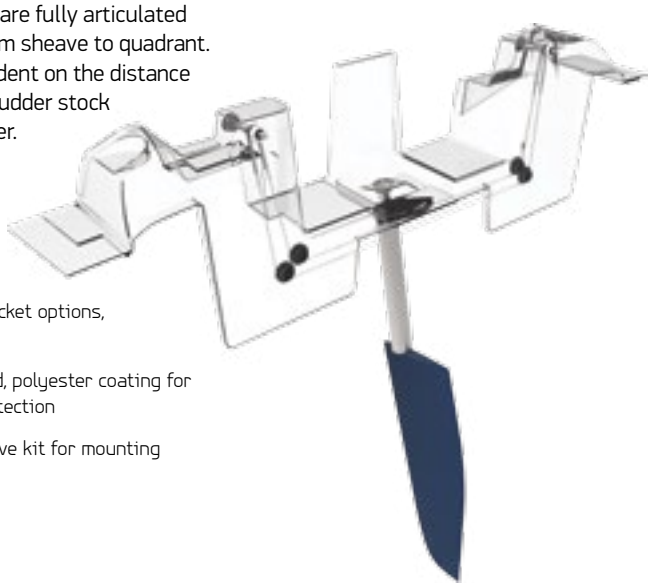
Aft Cockpit Radial Steering Systems

The simplest wire system available for aft cockpit yachts with vertical, or near vertical, rudders using a radial quadrant in conjunction with a cross wire idler, (universal idler if the pedestal is mounted aft of the rudder stock). Dependent on sheave and quadrant sizes, this equipment can be employed on sailing yachts up to approximately 18m /60'.

- Steering shaft supported in triple high efficiency ball bearings, ensuring no axial and radial play
- Cross wire idlers, bevelled & adjustable to ensure perfect cable alignment
- High strength Alloy quadrants for maximum reliability and compactness
- Range of terminal units, sheaves, bulkhead steerers, quadrants and accessories

Please note the sheaves are fully articulated to obtain perfect lead from sheave to quadrant. The splay angle is dependent on the distance from pedestal centre to rudder stock and the quadrant diameter.

- Efficient installation
- Multiple pedestals sprocket options, dependent on boat size
- Electrostatically applied, polyester coating for maximum corrosion protection
- Integrated autopilot drive kit for mounting drive units



Constellation™ Wire-in Conduit Systems

Due to their ease of installation, wire-in conduit systems have largely replaced open wire for centre cockpit yachts. Advances in conduit technology have resulted in Constellation™ systems that are simple to install and easy to maintain. Self contained sheave assemblies have been developed to fit into the conduit route, eliminating the requirement for reinforced pads.

1. Keep the number of bends to a minimum.
2. Do not exceed 270° of total curves.
3. Avoid 'S' bends.

- Simple to install
- Ultimate reliability
- Pedestal or bulkhead mounting for wheels

Lewmar offer a range of components to complete your wire-in conduit installation, including conduit end fittings, conduit greasers and terminal units to align the cables with the quadrants. Most common conduit installation for centre cockpit yachts up to 12m/40'.
To achieve the maximum sensitivity and life from a conduit system please follow the following rules:

4. Orientate the quadrant to achieve the best conduit lead.
5. Minimum bend radius 200mm/8".

- Heavy duty double armoured conduit with low-friction liner to ensure efficiency
- In-line conduit greasers

Constellation™ Chain & Wire Accessories

Breaking Strength

The figures shown in the tables below indicate the minimum breaking load of Lewmar cables and chain. Due to the reduction in strength caused by cable fatigue over time, the load on the cable should never exceed 25% of the breaking strain shown, i.e. Safety Factor = 4.

A 305mm/12" radius quadrant used in conjunction with 6mm/0.23" wire is suitable for the rudder torque, as in the example calculation shown on the right.

- Precision engineered in non magnetic stainless steel
- 2 off master links for easy connection to the cable
- Custom length chain sets available on request
- Cable supplied in 7 x 19 stainless steel stranded construction
- Cable can be supplied to be finished with eyebolts and thimbles
- Fully assembled with pre-swaged eyebolts available

Torque = Breaking Load x Radius
x Safety Factor

Metric Example

= 2040Kg x 0.305m x 0.25
= 155 mKg

Imperial Example

= 4500lb x 12" radius x 0.25
= 13500 in.lb

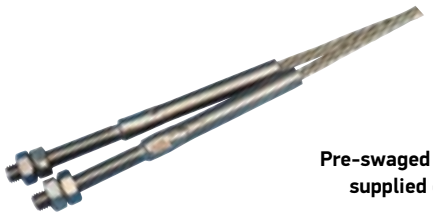
Non-Magnetic Stainless Steel Roller Chain Assemblies

PART NO.	ANSI SPEC	PITCH INCHES	BREAKING LOAD	
			kg	lb
89100090	ANSI 50	5⁄8	2267	5000
89100093	ANSI 60	3⁄4	3175	7000

Wire and Chain assembly

Steering Cable 7 x 19 Stranded Stainless Steel

PART NO.	CABLE DIAMETER		BREAKING LOAD	
	mm	in	kg	lb
89100077	5	0.1	1406	3100
89100078	6	0.2	2040	4500



Pre-swaged cables can be supplied on request

Constellation™ Quadrant, Sprocket & Chain Kit Specification Table

The following table illustrates the turns at the helm for a range of standard sprocket and quadrant sizes.

Lewmar offer custom quadrants in 6082T6 alloy up to 020 mm (40")

Lewmar also offers custom sprockets with any number of teeth in 15.87mm (5/8") or 19.05mm(3/4") or 25.4mm(1") pitch stainless steel or 6082T6 high strength aluminium.

PART NO. APPROPRIATE CHAIN KIT		QUADRANT TYPE	SPROCKET SIZE VS TURNS HO/HO FOR 72° RUDDER TRAVEL			
5⁄8" P SPROCKET	3⁄4" P SPROCKET		5⁄8" P 11T	5⁄8" P 13T	5⁄8" P 15T	3⁄4" P 11T
89100090	**89100093**	152mm/6" radius 260°	1.08	0.92	0.79	0.9
89100090	**89100093**	190mm/7.5" radius 80°	1.35	1.14	1.0	1.12
89100090	**89100093**	203mm/8" radius 260°	1.44	1.22	1.06	1.2
89100090	**89100093**	228mm/9" radius 260°	1.62	1.37	1.18	1.35
89100090	**89100093**	254mm/10" radius 260°	1.8	1.52	1.32	1.5
89100090	**89100093**	304mm/12" radius 80°	2.2	1.86	1.61	1.8
89100090	**89100093**	304mm/12" radius 260°	2.2	1.86	1.61	1.8
89100091	**89100094**	381mm/15" radius 80°	2.71	2.29	1.98	2.25
89100091	**89100094**	381mm/15" radius 260°	2.71	2.29	1.98	2.25
89100091	**89100094**	457mm/18" radius 80°	3.25	2.75	2.38	2.7
89100091	**89100094**	457mm/18" radius 260°	3.25	2.75	2.38	2.7
89100092	**89100095**	508mm/20" radius 80°	3.61	3.05	2.64	3
89100092	**89100095**	609mm/24" radius 80°	4.35	3.68	3.19	3.6
89100100	**89100096**	762mm/30" radius 80°	5.44	4.6	4.0	4.5

Conduit

PART NO.	DESCRIPTION
89100069	Conduit (Sold per meter)
89100116	Conduit end fitting

Constellation™ Self Aligning Steerers

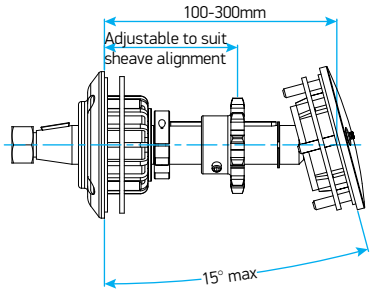
The Bulkhead steerer incorporates twin high efficiency ball races, which are double sealed and pre-lubricated for a long and maintenance free life.

- Self Aligning ball to take up misalignment or draft angle when installing within a console.
- Compact installation with a minimum distance of 100mm/4" between bulkhead faces.
- Available with sliding sprocket to aid line up with multiple sheaves.
- Steering shaft supported by high efficiency sealed-for-life bearings.
- Through-shaft mounted friction brake.
- Forward & aft flange housing manufactured in polymer composite material or Stainless Steel.
- Incorporates twin high efficiency, double sealed ball races
- Rapid and simple installation
- Stainless steel backing plate for maximum rigidity
- Variety of sprocket sizes
- Custom steering shafts available

Stainless Steel Self AligningSteerer

PART NO.	DESCRIPTION
89101097	St/St SA steerer 11T 196mm with brake
89101098	St/St SA steerer 11T 196mm No brake
89100102	Composite SA steerer D200 ANSI 50-11T with brake
89100149	Composite SA steerer D200 ANSI 50-11T No brake

Only standard part numbers listed above. Other variations available, contact your Lewmar representative for more information



Composite Self Aligning Steerer

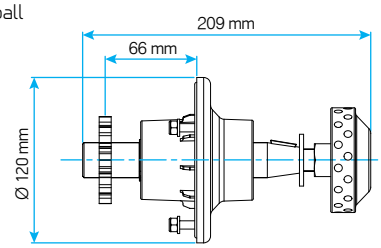
Constellation™ Stainless Steel Bulkhead Steerers

Comes complete with a through shaft friction brake

- Manufactured in investment cast stainless steel
- Steering shaft supported by a pre-lubricated sealed ball race bearing, which provides low friction

PART NO.	DESCRIPTION
89101173	Bulkhead steerer ANSI 50-10T with brake
89101174	Bulkhead steerer ANSI 50-10T No brake

Only standard part numbers listed above. Other variations available, contact your Lewmar representative for more information



Stainless Steel Bulkhead Steerer

Constellation™ Sheave Assemblies

Lewmar offers an extensive range of open wire sheave assemblies from 102mm (4in) to 254mm (10in) diameters in different configuration: upright, flat, articulated, Idlers and conduit to sheave adaptor.

- Available in bronze, aluminium and A100 glass reinforced nylon.
- High operation efficiency and sensitive steering operation – sheaves run on 45mm/1.77" caged roller bearings or closed tolerance plain bearings.
- All open wire sheave assemblies incorporate wire guides to prevent cable jump
- Idlers are designed to prevent chafing when the cable straightens into the sheave track.

Single Articulated Sheave

Double Upright Sheave Assembly

Double Conduit to Sheave adaptor

Cross Wire Idler

Constellation™ Quadrants

Lewmar offers a range of Alloy 80° and 260° quadrants

- Fabricated from 6082 aluminium alloy
- Strong yet ductile, almost impossible to fracture under impact loading
- Compact, where transom space is restricted
- Attachment point for linear drives on larger quadrants
- Quadrants with integral stopping surfaces for use against the rudder stop
- Radial versions supplied pre-drilled for optional bolt on stop block
- Generous groove depths and a large guide bend radii, for longevity of the cable.
- 80° quadrants supplied with cable retaining pins to prevent cable jump

Eye bolt tensioner kits

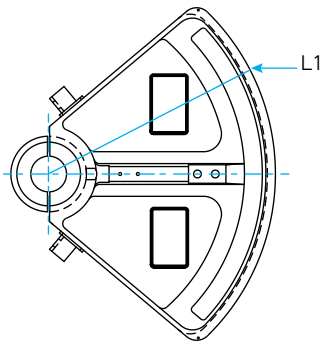
Eye bolt/cable tensioner are not supplied with quadrants and must be ordered separately

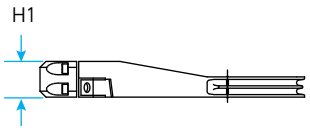
89100196 Eye bolt tensioner kit for 6mm wide cable

80° Alloy High Strength Quadrants

L1 OPERATING RADIUS		MAXIMUM BORE SIZE Ø		H1 BOSS HEIGHT	
mm	in	mm	in	mm	in
190	7.5	80	3	60	2.4
228	9	80	3	60	2.4
305	12	80	3	60	2.4
305	12	100	4	60	2.4
381	15	80	3	60	2.4
381	15	100	4	60	2.4
457	18	100	4	60	2.4
457	18	125	5	80	4.0
508	20	125	5	80	4.0
610	24	125	5	80	4.0

Quadrants can be supplied pilot bored or machined to suit

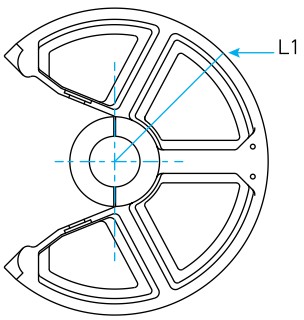


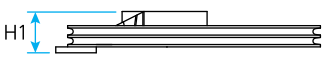


260° Alloy High Strength Quadrants

L1 OPERATING RADIUS		MAXIMUM BORE SIZE Ø		H1 BOSS HEIGHT	
mm	in	mm	in	mm	in
152	6	80	3	60	2.3
203	8	80	3	60	2.3
254	10	80	3	60	2.3
254	10	100	4	60	2.3
305	12	100	4	60	2.3
381	15	125	5	80	4.0
457	18	125	5	80	4.0

Quadrants can be supplied pilot bored or machined to suit





Cobra™ Systems

With over 40 years technological development, Cobra™ has become the first choice for boat builders worldwide for aft cockpit vessels. Cobra™ systems are the world leader in terms of performance, reliability and appearance, for Rack and Pinion.

- Typically designed for aft cockpit boats with a short distance between the helm and the rudder
- Simple installation providing a direct feel and rudder response
- Adaptable for twin helm / twin rudder solutions
- Compact installation for boats with minimal space available
- Strong and light – no parts to fret or chafe
- Minimum maintenance
- Smoother operation
- Greater torque capability
- Full CE Certification available

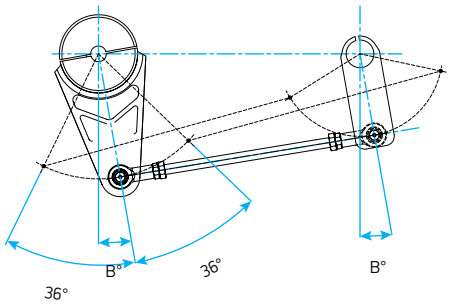
Principle of Operation

The principle of the Cobra™ steering system is based on the precision gearcut circular rack and pinion in the head of the pedestal, providing the necessary mechanical advantage (See wide angle Geometry below). The quadrant gear is connected to a stainless steel downtube, at the base of which is an output lever. This connects to a similar lever, mounted on the rudder stock, via a fully adjustable draglink.

All shaft work is carried through high efficiency sealed ball races and the mesh of gears is controlled via shims under the input, eliminating any lost motion. The input socket also houses a powerful and progressive friction brake for dampening the wheel, when at anchor, for example.

Wide Angle Geometry

The lever geometry for Lewmar transmission systems is based on the principle of Wide Angle Geometry. This results in a very direct steering at amidships and a more indirect and powerful steering at full rudder. Due to this unique feature, the total number of turns of the wheel on a transmission steering system can be reduced by 30-40% compared to a cable system with the same maximum rim loads. This effect is achieved by an unequal length of the output and tiller lever. The output lever has 134mm centres and the tiller lever 203mm. The diagram to the right shows the mechanical advantage (lever reduction) in relation to the rudder angle. Around amidships the reduction is quite constant, and above 15 degrees rudder the mechanical advantage nearly doubles compared to the amidships advantage. The consequence of wide angle geometry is the offset angle of the levers in amidships position. This offset angle is necessary to achieve the same travel to port and starboard. The offset angle varies with the distance from the output lever to the tiller lever. Offset angles can be avoided when the complete gearbox is put on an offset distance.



Cobra™ Steering

Different gear ratios can be used to suit all applications

TYPE	GEAR RATIO	MECHANICAL ADVTANAGE AT MIDSHIPS	TURNS HO/HO	MAX RUDDER TORQUE		TYPICAL BOAT SIZE	
				Nm	ft.lb	m	ft
Cobra™ Cruising	5:1	8:1	1.77	2943	2170	13.7	45
Cobra™ Base Unit	5:1	8:1	1.77	2943	2170	13.7	45
Cobra™ Racing	4:1	6:1	1.4	4557	3360	16.7	55
Cobra™ Ocean	6.7:1	10.2:1	2.45	4905	3617	18.3	60

Cobra™ Racing

4:1 gear ratio provides the ultimate in feel and responsiveness.

- Incorporates reinforced components to handle the higher torque demands of a large wheel installation
- More direct gear ratio offering 1.5 turns lock to lock
- Can be reduced to less than 1 turn where required
- Larger diameter pinion for greater strength and more direct steering
- Light, strong pedestal shell incorporating 101mm/4" diameter tube
- Optimised gear quadrant in super nickel aluminium bronze.

Cobra™ Ocean

6.7:1 Gear ratio for Blue Water yachts, with smaller wheels requiring a greater number of turns lock to lock.

- For yachts up to 18m/60'
- Suitable for maximum rudder torque of 4905Nm/3618 lb ft
- Additional space for a larger gear set
- 2.4 turns lock to lock
- Larger bearings and a 60mm/2.3" stainless steel down shaft
- Royale and Ranger pedestals specific to the Cobra™ Ocean system

Cobra™ Steering

Cobra™ Installation Guidelines

L1 Standard pedestal height
L1 = 710mm/28".
Range from 178mm/7" to 915mm/36".

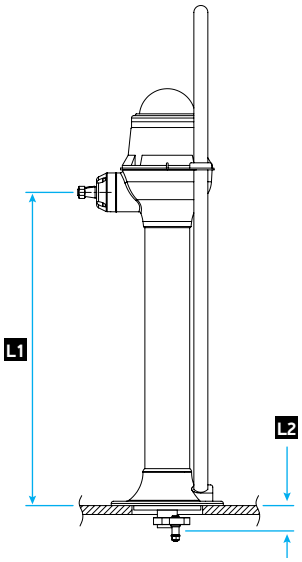
L2 Standard under deck dimension
L2 = 102mm/4". The minimum dimension is governed only by the thickness of the cockpit sole. Where an extended L2 under deck is required, it may be necessary to also add a torque snubber plate.

L3 The distance between the centre of pedestal and the rudder stock, L3 can vary between 120mm /5" – 2000mm/79". Draglinks are made to specification and are adjustable by 20mm/0.78" upon installation.

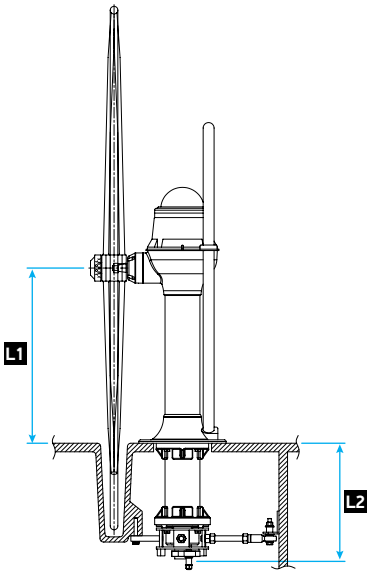
The draglink should not exceed an angle of 5° from the horizontal.

A standard Cobra™ installation can accommodate a rudder rake up to a maximum of 30°. This does however depend on the boat size and type, and the length of L3. Where this angle exceeds 20°, please consult our technical department.

As standard, all levers are mounted to the starboard side and the pedestal is mounted forward of the rudder stock.



Frequently the space directly below the cockpit floor is limited and this special bearing arrangement reduces the intrusion into the accommodation.

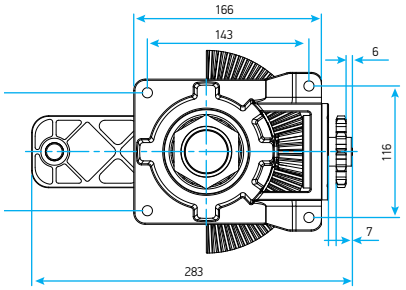


This illustrates the use of a wheel trough and shortened height pedestal which is particularly common on Cobra™ Racing installations where large wheels are fitted.
Besides giving more mechanical purchase, the large diameter wheel enables the helmsman to sit out and still reach the helm. Please note that the use of a torque snubber plate may be necessary, to counteract the extra pitching movement caused by the large L2 dimensions (greater than 152mm/6").

Cobra™ System – Customised for specific installations

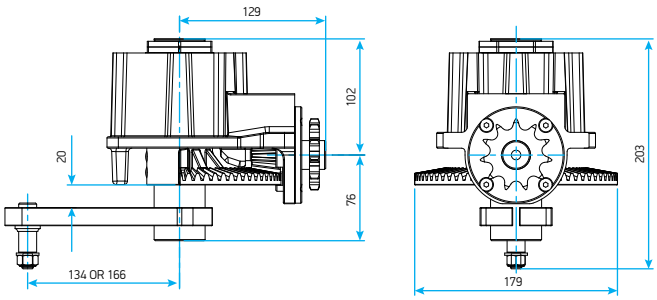
A Cobra™ system can be customised for twin rudder installations, bridge deck consoles, transom mount rudders and centre cockpit vessels Cobra™ offers a simple steering solution for this arrangement that ensure the rudders remain in phase and Ackerman effect can be achieved.

- One-piece Power input assembly, easy maintenance and gear adjustment
- High-efficiency double sealed deep groove ball bearings
- Powerful and progressive, front mount friction brake
- One-piece heavy duty stainless steel down tube
- Computer optimised gear quadrant design
- Gear quadrant secured via twin 10mm/0.39" stake pins with double shear
- High-strength stainless steel output level welded to down shaft
- Stainless steel rose jointed draglink
- Nybrol gear quadrant and pinion for ultra high strength
- Ability to withstand shock loads



Rack & Pinion Base unit

- Remote mountable rack & pinion gearbox
- Suitable for yacht up to 13.7m / 45'
- Direct gear ratio provides 1.77 turns lock to lock with 181 chain drive
- CE certified



Stop Rings

Limiting the amount of rudder travel is essential on all steering arrangements. The Cobra™ system provides an alternative and simpler to install device than conventional rudder stops – the stop ring.

The stop ring, mounted directly below the pedestal, ensures that the output lever travel does not exceed the designed limit. Stops should operate adjacent to operating centres.

Note: Additional rudder stop can be fitted to tiller lever if a stop ring cannot be installed.

89000004
Stop Ring Cobra

Rod Ends

PART NO.	DESCRIPTION
82000356	Rod End AHFT10 Stainless Steel
82000357	Rod End AHFT12 Stainless Steel

Rods ends can be purchased separate from draglink assemblies as spare parts.

Rod Ends

Draglinks

PART NO.	DESCRIPTION	LENGTH ONE END LOOSE		SYSTEM TYPE
		mm	in	
89500011	Draglink Assemblies AHFT 10	1000	40	Cruising
89500012	Draglink Assemblies AHFT 10	2000	80	Cruising
89500013	Draglink Assemblies AHFT 12	1000	40	Racing and Ocean
89500014	Draglink Assemblies AHFT 12	2000	80	Racing and Ocean

The draglinks specified above are supplied with one end fitting loose to enable the tube to be cut to size and welded. If the correct centres for the draglink are known contact your Lewmar dealer prior to order for the part number relating to the centre required.

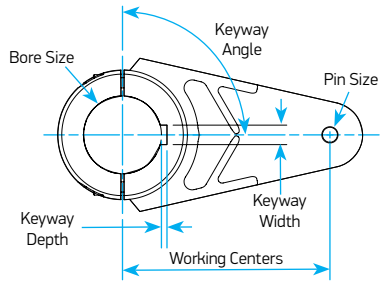
Draglink complete with rod end

Tiller Levers

Lewmar also offers extended versions to enable the fitting of linear drive type autopilots at 250mm/10" and 350mm/13" centres, in conjunction with the standard 203mm/8" position for the steering draglink.

PART NO.	CAN BE MACHINED TO BORE SIZE		DESCRIPTION
	mm	in	
89500002	80	3	Tiller Lever
89500005	100	4	Tiller Lever
89500008	125	5	Tiller Lever

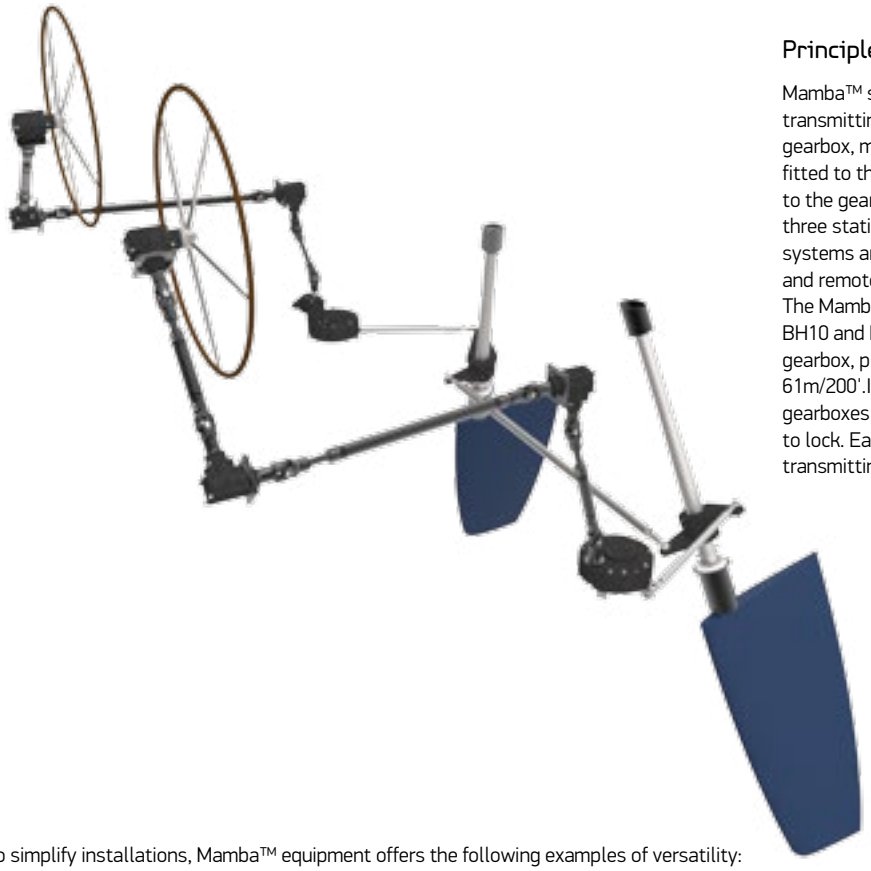
All above part numbers are for standard tiller levers supplied pilot bored at 25mm. Lewmar offer a machining service to supply the tiller lever ready to suit the rudder stock of the boat, please contact your Lewmar distributor for part number and price prior to ordering.



Mamba™ systems

The Mamba™ system provides the ultimate in marine steering, in terms of precision, feedback and strength. Mamba™ systems are chosen for a diverse range of sail and power craft such as blue water cruising yachts, pilot vessels, and sail training vessels.

- Uses rotating torque tubes and bevel gears to transmit the helmsman's input
- Reduction gearboxes can be incorporated in the system to reduce the load felt on the wheel
- Allows twin wheels and multiple rudders applications
- Favoured for its direct feel with almost zero backlash
- Autopilots can be coupled directly into the system giving added flexibility of setup
- Minimal maintenance
- Offers precise rudder feel
- Different gearbox options accomodate high rudder torques seen on larger boats



Principle of Operation

Mamba™ steering is a rotating torque tube and bevelhead system, transmitting the helmsman's input to a high efficiency reduction gearbox, mounted adjacent to the rudder stock. A tiller lever is fitted to the rudder stock and is driven by a similar lever integral to the gearbox, via a fully articulating jointed draglink. Two or three station systems, catamarans and tandem wheel steering systems are regularly supplied. The integration of autopilot drives and remote controlled disengagement units are simply achieved. The Mamba™ range of steering systems is offered in two sizes, BH10 and BH130, which are coupled with 12 models of reduction gearbox, providing equipment to suit all craft from 10.6m/35' to 61m/200'.In most cases, either high efficiency spur, or reduction gearboxes are chosen, offering between 1.0 and 26 turns lock to lock. Each option also provides a high reverse efficiency, transmitting rudder feel to the helmsman.

To simplify installations, Mamba™ equipment offers the following examples of versatility:

- Bevelheads can be supplied with 2, 3 or 4 steering shafts, permitting integration for secondary steering stations, tandem wheel arrangements and direct coupled autopilot drives.
- A choice of mounting plates and brackets for bevel and gearboxes.
- Availability of step ratio gears to adjust overall steering ratio.

The lever geometry for Lewmar transmission systems is based on the principle of Wide Angle Geometry, refer to Page 199

Mamba™ – Bevelheads

BH10

Lewmar BH10 torque tubes are made of marine grade stainless steel depending on the specific installation requirements. Torque tubes are supplied in standard lengths with one end loose for welding by the installer. Or we offer fully welded torque tubes to pre-specified lengths.

BH130 – For boats 60ft and above

Lewmar BH130 torque tubes are made of marine grade stainless steel. Depending on the specific installation requirements, torque tubes are supplied in standard lengths with one end loose for welding by the installer. Or we offer fully welded torque tubes to pre-specified lengths.

Additional information

1 Steering shafts can be made to customer's preferred length
2 Bevelheads are available with either rotation
3 Standard bevelheads have 1:1 ratio, but other ratios are available as detailed in specification
4 Mounting plate (or bracket) can be fitted to all faces to facilitate ease of mounting
5 All bevelheads can be configured to accept the Lewmar direct fit autopilot mount
6 For detailed dimensions contact a Lewmar representative
7 Due to the custom nature of this product, contact Lewmar for part number

Universal Joints

Must be fitted at both ends of a torque tube. Where a self aligning bearing is used, one universal joint connects both torque tubes, as shown in illustrations. Self aligning bearings work up to an angle of 15°. AMK10 universal joints have a maximum permissible working angle of 25°. Where practical, the angle at each joint should be balanced.

The WUJ6 universal joint is suitable for use with large gearboxes 18, 20 and 45, see p191. It has a maximum permissible working angle of 25°. Where practical, the angle at each joint should be balanced.

Mamba Universal Joint and self aligning bearing

Mamba™ – BG Reduction Gearboxes

The BG Series of high efficiency reduction gearboxes employ bevel gears manufactured from either high alloy steel or nickel bronze alloy running in precision roller bearings. Gear casings are manufactured from marine grade aluminium and shaft work is stainless steel or nickel bronze alloy. All gearboxes are grease filled and shimmed for zero backlash.

MECHANICAL GEARBOX TYPE	GEAR RATIO	ADVANTAGE AT MIDSHIPS	TURNS HO TO HO	MAXIMUM RUDDER TORQUE		TYPICAL BOAT RANGE	
				Nm	ft.lbs	m	ft
BG12	5:1	8:1	1.8	2943	2170	up to 14	up to 45
BG12/2	5:1	8:1	1.8	2943	2170	up to 14	up to 45
BG30	6.7:1	10.2:1	2.4	4905	3617	14-18	45'-60'

89200034
Gearbox (BG12)

Additional information

1 Mechanical advantage and turns lock to lock are based on standard lever geometry
2 Reduction gearboxes can be mounted anywhere within the general proximity of the rudder stock 0.2m/7" to 2m/6.5'
3 For detailed dimensions contact your Lewmar representative

Mamba™ – WRG Reduction Gearboxes

The WRG series of high-efficiency gearboxes employs precision cut, stub tooth form, spur gears running in deep groove ball and roller bearings. Gear casings are manufactured from marine grade aluminium, and shaft work is in stainless steel or nickel bronze alloy. All gearboxes are CNC machined and grease filled to ensure a perfect fit and maintenance free life.

89200041
Gearbox (WRG12)

89200046
Gearbox (WRG18)

MECHANICAL GEARBOX TYPE	GEAR RATIO	ADVANTAGE AT MIDSHIPS	TURNS HO TO HO	MAXIMUM RUDDER TORQUE		TYPICAL BOAT RANGE	
				Nm	ft.lbs	m	ft
WRG11	5:1	8:1	1.8	2943	2170	11.5-14	38-45
WRG12	7:1	10.8:1	2.4.8	5150	3798	13-20	45-65
WRG18	10:1	15.2:1	3.5	10800	7965	18-27	60-90
WRG20	12.6:1	19.1:1	4.4	13700	10104	24-33.5	80-110
WRG45	13:1	20:1	4.6	24000	17701	20-46	90-120
WRG60	24.7:1	37.5:1	8.6	36250	26740	33-45	110-150
WRG90	65:1	96:1	21.6	53000	39090	36.5-61	120-200

Additional information

1 Mechanical advantage and turns lock to lock are based on standard lever geometry

2 Overall mechanical advantage and turns lock to lock can be altered via stepped ratio bevels in bevelheads within the system or by non-standard lever centers.

3 Reduction gearboxes can be mounted anywhere within the general proximity of the rudder stock (0.2m/7" to 2m/6.5') For more details please refer to the installation and maintenance handbook.

4 Bevelheads can be directly integrated to all WRG series gearboxes

5 For detailed dimensions contact your Lewmar representative.

Mamba™ – Bevelhead Integration

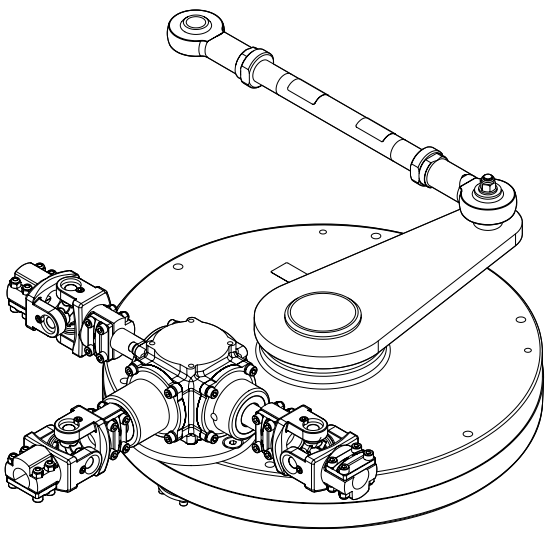
Integration – WRG series of spur reduction gearboxes can be supplied with an integral bevelhead fitted to the input shaft as per illustrations below. The bevelhead can be mounted to either side of the reduction gearbox and rotated at any angle. Custom arrangements are available with greater stand offs between the gearbox and bevelhead. Lewmar provides an in-house design service for Mamba™ installations.

Pedestal Gearbox Integration

Mamba™ pedestal – BG WRG Integration – For larger aft cockpit yachts, the WRG and BG series gearboxes can be directly mounted to the pedestal.

On the WRG12 gearbox and above – a torque adapter plate is provided to transmit the force directly to the underside of the cockpit floor.

For raked rudders (25° and above), it is normal to use the BG series of gearbox, see Page 203.



Gearbox WRG type showing directional movement of outer lever and torque tubes

Autopilot Drives

Our experience has given us insight into the challenges that occur when interfacing autopilot drives to the steering system and how important this aspect is to the correct operation of the autopilot. Our comprehensive range of autopilot drive units helps overcome typical installation problems.

- All units have an electromechanical clutch, virtually eliminating drag on the steering system
- All units are compatible with the majority of electronic suppliers, such as Raymarine, B&G and Simrad
- All drives have low current draw
- Drives available in 1/4, 1/2 and 1HP capacities, suitable for all Lewmar steering types.

Lewmar recommends the following Drive Units for your boat. If your boat is not listed here, please contact Lewmar for further information

BOAT BUILDER/MODEL	DESCRIPTION	PART NO.
Bavaria		
30, 33, 37, 39 Cruisers	Integra	**89300136**
42, 44, 46, 49, 50, Cruisers	Mamba™	**89300137**
Bavaria 45	Direct	**89300163**
Bavaria 50	Direct	**89300169**
Bavaria 55	Direct	**89300152**
Bavaria NC55	Direct	**85008160 + 89500956**
Bavaria 56	Direct	**89300206**
Dufour		
Dufour 34	Constellation™	**89300109**
Dufour 40, 44	Constellation™	**89300086**
Dufour 385, 455	Constellation™	**89300123**
Gib Sea 43	Mamba™	**89300137**
Halberg Rassy		
HR 40, 43	Mamba™	**89300137**
HR 46, 48, 53 - 12v	Mamba™	**89300137**
HR 46, 48, 53 - 24v	Mamba™	**89300054**
HR 62	Mamba™	**89300060**
Hunter		
Hunter 44, 49	Mamba™	**89300137**
Hunter 45CC	Integra	**89300113**
Island Packet		
IP 370	Direct	**89300040**
IP 440	Direct	**89300040**
IP 445	Mamba™	**89300137**
IP 485	Mamba™	**89300137**

BOAT BUILDER/MODEL	DESCRIPTION	PART NO.
Najad		
Najad 400	Mamba™	**89300137**
Najad 460, 490, 511	Mamba™	**89300137**
Southerly		
Southerly 110	Direct	**89300103 + 89300099**
Southerly 32	Integra	**89300203**
Southerly 35RS	Direct	**89300103 + 89300100**
Southerly 38, 42,420	Direct	**89300039**
Southerly 47	Integra	**89300137**
Southerly 535, 57	Mamba™	**89300060**
Vancouver 49	Mamba™	**89300117**
Oyster		
Oyster 62	Mamba™	**89300060**
Oyster 625	Mamba™	**89300166**
Oyster 655	Mamba™	**89300138**
Oyster 72	Mamba™	**89300070**
Oyster 725	Mamba™	**89300129**
Oyster 82	Mamba™	**89300064**
Tartan		
Tartan 3400	Direct	**89300039**
Tartan 3700	Direct	**89300039**
Tartan 4100	Direct	**89300039**
Tartan 4400	Direct	**89300039**
Discovery Yachts		
Discovery 55	Mamba™	**89300054**

Integra Drives

The Integra drive is available in three formats. The Cobra™ and Mamba™ versions mount directly inside the Integra pedestal. This unique installation is only available from Lewmar and provides the installer with a simple and quick installation with no complicated, labour intensive mounting platforms required. We also offer an Integra Sprocket version, which is very popular with Bavaria Cruising yachts from 9m to 12m (30ft to 39ft) in length.

PART NO	DESCRIPTION
89300136	Bavaria Integra Drive
89300203	Cobra™ Pedestal Integra Drive

Mamba™ Drives

These unique autopilot drives directly couple to Mamba™ systems, eliminating the need for separate platforms, chain and sprockets.

Spine Coupling Connection	HP	Voltage[1]	MAX OUTPUT TORQUE Nm	MAX OUTPUT TORQUE ft. lb	Speed RPM	MAX RUDDER TORQUE mkg	MAX RUDDER TORQUE ft. lb	Ave Current Consumption	WEIGHT kg	WEIGHT lb
3/4 × 48	1/4	12	169	125	10	248	1794	4A	9.0	19.8
3/4 × 48	1/4	24	169	125	10	248	1794	2.5A	9.0	19.8
3/4 × 48	1/4	24	169	125	10	248	1794	2.5A	9.0	19.8
3/4 × 48	1/2	24	183	135	13	426	3080	3.5A	10.5	23.1
3/4 × 48	1/2	24	183	135	13	426	3080	3.5A	10.5	23.1

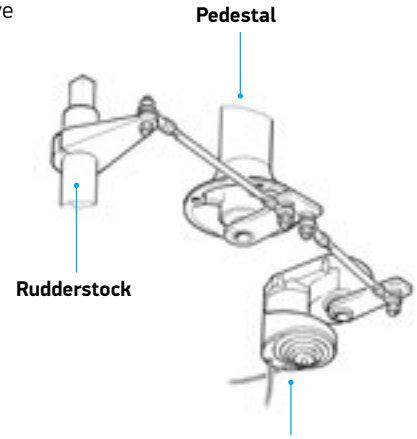
[1] Voltage refers to clutch

Direct Drives

Uniquely, the Direct Drive can operate onto the pedestal or gearbox output lever as an alternative to the rudder lever. This offers the installer and boat designer more options for layout as the Direct Drive can be mounted in any attitude.

- Available in Constellation™, Cobra™ and Mamba™ steering systems
- Extremely powerful, delivering up to 2432Nm/1794ft. lb of torque
- Virtually zero drag – steering performance is not impaired
- Compact Direct Drive, enabling close mounting to the rudder stock, at any attitude

Direct drive connected to a tiller lever via a draglink



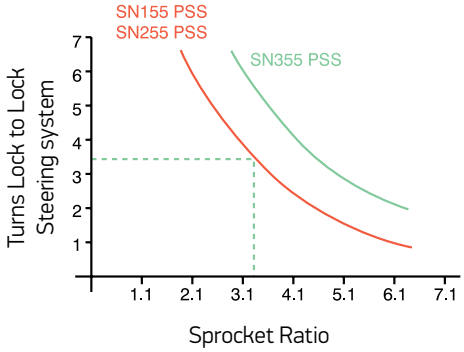
Output Lever Centre	HP	Voltage[1]	NO LOAD SPEED Ho–Ho	MAX RUDDER TORQUE mkg	MAX RUDDER TORQUE ft-lb	Average Current Consumption	WEIGHT kg	WEIGHT lb
166mm Lever	1/4	12	10s	248	1794	4A	8.8	19.4
166mm Lever	1/4	24	10s	248	1794	4A	8.8	19.4
166mm Lever	1/2	24	12s	345	2496	3.5A	24.8	55.0
166mm Lever	1/2	24	17s	493	3566	3.5A	45.5	100.0

[1] Voltage refers to clutch

Rotary Sprocket Drives – To suit Constellation™ & Mamba™

Lewmar offer 3 sizes of powerful and compact rotary drive units, which employ conventional chain and sprocket connection to the steering system. The high efficiency, twin stage, epicyclic gearbox is grease filled, which allows mounting in any attitude. The wide mounting platform is slotted to aid chain tensioning. Rotary drives are generally used on cable and push-pull steering systems and it is necessary to calculate the correct driven sprocket, which is dependent on the turns (mechanical advantage) of the steering system. Lewmar can supply fully machined sprockets for your steering system in steel or stainless steel upon request, as well as chain and master links.

Please refer to the graph to calculate the correct sprocket size. The turns lock to lock is referred to at the position on the steering where the driven sprocket is to be mounted.



Sprocket Size	Type	POWER HP	VOLTAGE[1]	MAX OUTPUT TORQUE Nm	MAX OUTPUT TORQUE ft. lb	NO LOAD SPEED RPM	MAX RUDDER TORQUE mkg	MAX RUDDER TORQUE ft. lb	AVGE CURRENT CONSUMPTION	WEIGHT kg	WEIGHT lb
5/8" P 9T Sprocket	SN255PSS	1/4	12	43	32	44	207	1500	4.0A	8.8	19.4
5/8" P 9T Sprocket	SN255PSS	1/4	24	43	32	44	207	1500	2.5A	8.8	19.4
5/8" P 9T Sprocket	SN355PSS	1/2	24	47	35	55	332	2400	3.5A	10.0	22.0
5/8" P 9T Sprocket	SN455PSS	1	24	466	344	18	1660	12055	6.0A	30.0	66.1

[1] Voltage refers to clutch

Rudder Bearing Solutions

Lewmar offers a range of rudder bearing and rudder stocks to complement yacht steering systems. Lewmar's rudder bearings come in two basic types – plain roller and self-aligning roller. We can provide a rudder bearing solution for any yacht, whether it is tiller steered or a Grand Prix racer. Lewmar roller bearings are designed for production yachts as well as custom one-off yachts. Choose from our range or speak to your Lewmar representative for a specification and design to suit your rudder bearing requirements.

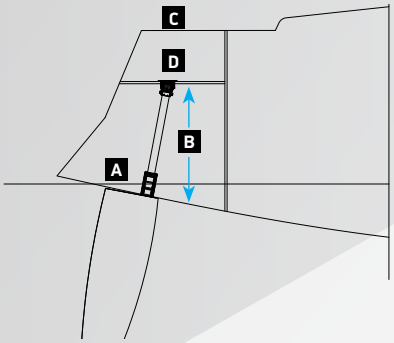
Typical Bearing Installation

A Lower bearings should be positioned so that the seals are above the water line. A gaitor may also be used for added security against leaks.

B Upper and Lower bearings should be spaced apart as far as is practically possible to reduce loading on the rollers.

C A removable deck cover may be used for quick fitting of an emergency tiller

D For tiller steered yachts seals may be incorporated into the upper bearing to prevent water ingress from above deck into the boat.



Upper Bearings

- Manufactured in 6082 aluminium and anodised
- Suit rudder stock diameters 50–109 mm (2 – 4 5/16 in)
- Easy to install flanged housing
- Model with a deck cover offers integral locking ring and vertical thrust race
- No grease or maintenance required

Plain roller bearing

Features precision Delrin rollers with low friction co-efficient

Illustration shows a plain roller bearing with deck cover and thrust race

Self aligning roller bearings

Bearing includes self aligning ball and precision Delrin rollers

Lower Bearings

- Suit rudder stock diameters 50mm–109mm (2 – 4 5/16 in)
- No Grease or Maintenance required

Aluminium roller bearing

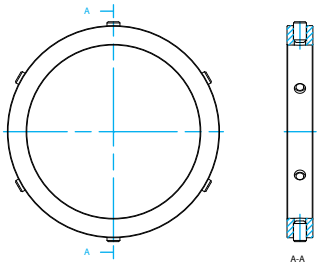
- Manufactured in 6082 aluminium and anodised
- Accepts sealing system for lip seals or rudder tube and gaitor
- Low friction co-efficient
- Available in self-aligning version.

Self aligning GRP tube bearing

- Manufactured with a GRP tube for easy laminating on installation
- Bearing includes s/a ball and precision Delrin rollers
- Accepts sealing system for neoprene gaitor

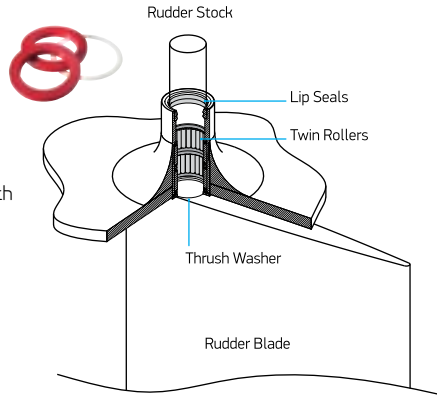
Locking Rings

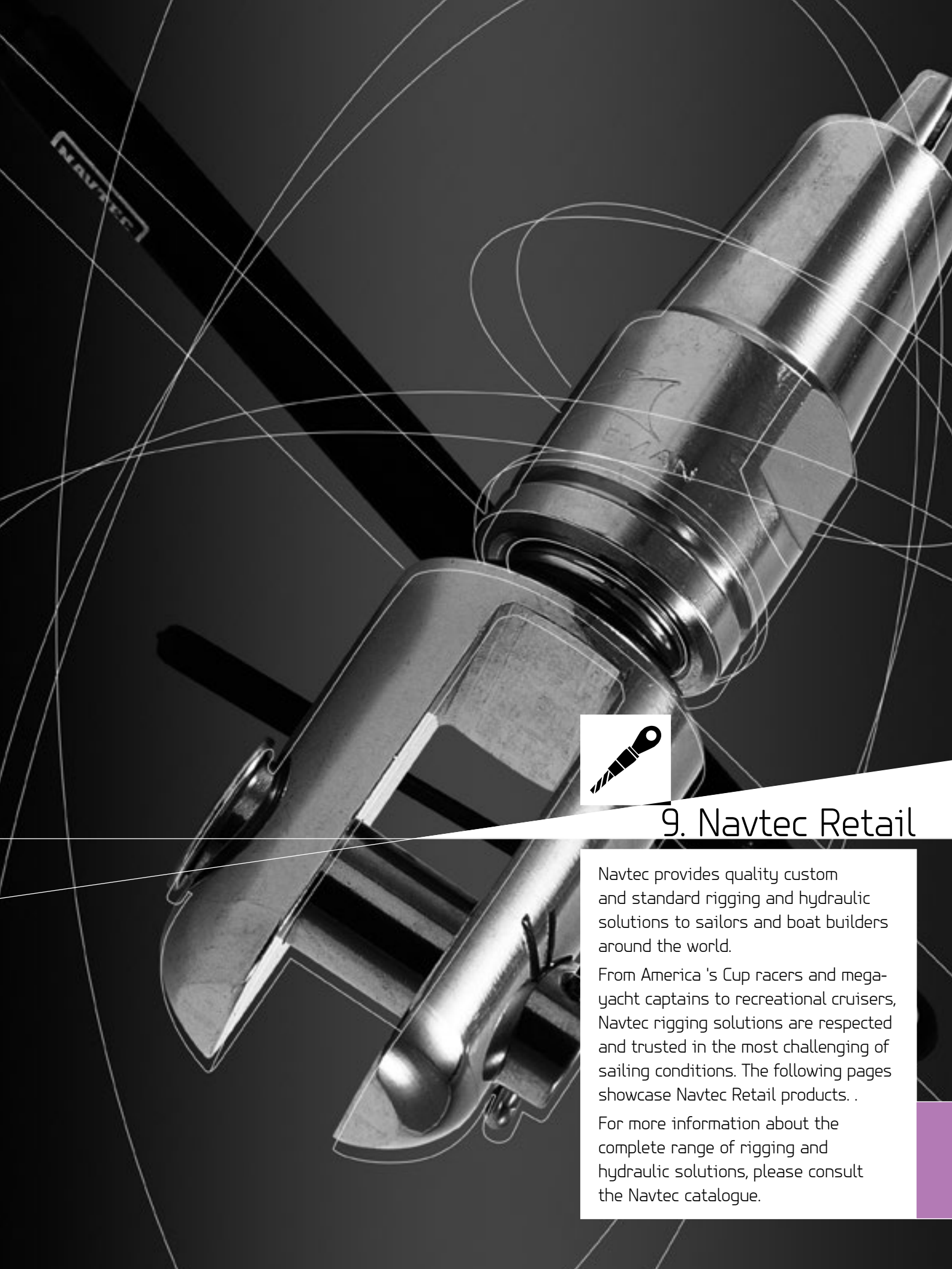
- Used with upper bearings without integral locking ring
- Manufactured in 6082 aluminium and anodised
- Suit rudder stock diameters 40mm–110mm (1 1/2" – 4 5/16")
- Stainless set screws secure locking ring to rudder stock



Lip Seals

- Precision fit seals provide protection against water ingress with minimal friction.
- Can be used in conjunction with a gaitor for added protection.
- Sizes available to suit any rudder stock diameter.
- Manufactured in tough polyurethane material.





9. Navtec Retail

Navtec provides quality custom and standard rigging and hydraulic solutions to sailors and boat builders around the world.

From America 's Cup racers and mega-yacht captains to recreational cruisers, Navtec rigging solutions are respected and trusted in the most challenging of sailing conditions. The following pages showcase Navtec Retail products. .

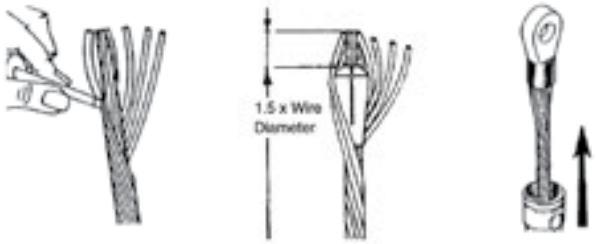
For more information about the complete range of rigging and hydraulic solutions, please consult the Navtec catalogue.

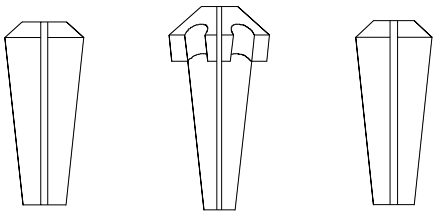
Norseman Swageless Terminals

Norseman terminals provide a fast, secure, corrosion-resistant end fitting on all types of wire rigging and are an ideal replacement part. They can be installed quickly and easily at sea, making them ideal for emergency repairs.

Swageless Fitting Method

No special tools required. Slip the body of the terminal over the diameter of the cable. Unlay outer wires and fit the cone over the center core. Relay the outer wires into the head of the fitting. Draw the body up to the head and screw together. Norseman terminals can be re-used, but please note that a new cone must be installed.



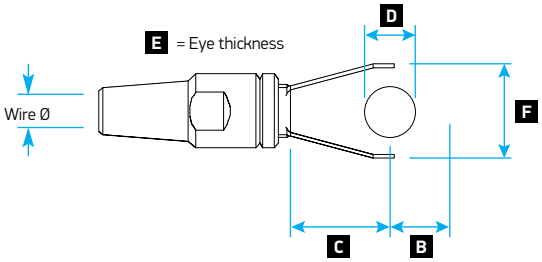


1 x 19 **7 Strand** **Dyform**

PART NO.			SIZE		FINISH		
Cones 1x19 (pair)	Cones 7 strand (pair)	Cones Dyform (pair)	mm	in	1x19	7 Strand	Dyform
NCC-M025	**NCS-M025**		2.5	3/32	BLUE	YELLOW	–
NCC-M03	**NCS-M03**		3.0	⅛	NO PAINT	YELLOW	–
NCC-M04	**NCS-M04**		4.0	5/32	NO PAINT	RED	–
NCC-M05	**NCS-M05**	**NCD-M05**	5.0	–	NO PAINT	RED	WHITE
NCC-M06	**NCS-M06**	**NCD-M06**	6.0	7/32	BLUE	YELLOW	–
NCC-M07	**NCS-M07**	**NCD-M07**	7.0	–	NO PAINT	RED	WHITE
NCC-M08	**NCS-M08**	**NCD-M08**	8.0	¼	GREEN	YELLOW	WHITE

If required in a retail packaging, add R at the end of the Part Number

Swageless Eye

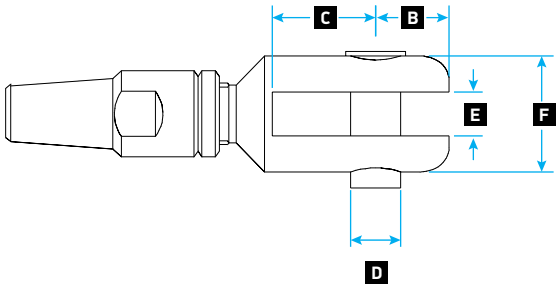


PART NO	DESCRIPTION	WIRE DIA		B		C		D		E		F	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
N010-M02508	2.5MM 1X19 1/4" EYE SWAGELESS	2.5	3/32	7.0	0.276	11	0.433	6.5	0.256	5.5	0.217	13	0.512
N010-M0308	3MM 1X19 1/4" EYE SWAGELESS	3.0	⅛	7.0	0.276	11	0.433	6.5	0.256	5.5	0.217	13	0.512
N010-M0410	4MM 1X19 5/16" EYE SWAGELESS	4.0	5/32	8.2	0.323	11	0.433	8.1	0.319	6.7	0.264	16	0.630
N010-M0510	5MM 1X19 5/16" EYE SWAGELESS	5.0	-	10	0.394	16	0.630	8.1	0.319	8	0.315	16	0.630
N010-M0512	5MM 1X19 3/8" EYE SWAGELESS	5.0	-	10	0.394	18	0.709	9.7	0.382	8	0.315	19	0.748
N010-M0612	6MM 1X19 3/8" EYE SWAGELESS	6.0	-	11	0.433	17	0.669	9.7	0.382	9	0.354	22	0.866
N010-M0614	6MM 1X19 7/16" EYE SWAGELESS	6.0	-	12.5	0.492	19	0.748	11.3	0.445	9.5	0.374	23	0.906
N010-M0616	6MM 1X19 1/2" EYE SWAGELESS	6.0	-	15	0.591	22.5	0.886	13	0.512	9.5	0.374	26	1.024
N010-M0716	7MM 1X19 1/2" EYE SWAGELESS	7.0	7/32	15	0.591	22	0.866	13	0.512	11	0.433	27	1.063
N010-M0816	8MM 1X19 1/2" EYE SWAGELESS	8.0	¼	15	0.591	24	0.945	13	0.512	12.5	0.492	27	1.063
N010-M0820	8MM 1X19 5/8" EYE SWAGELESS	8.0	5/16	18	0.709	28	1.102	16	0.630	12.5	0.492	33	1.299

If required in a retail packaging, add R at the end of the Part Number

Swageless Fork

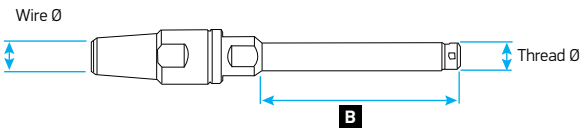
Made from high quality 316 Stainless Steel. Fitting available for 1 x 19 wire.



PART NO	DESCRIPTION	WIRE DIA		B		C		D		E		F	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
N020-M02508	2.5MM 1X19 1/4" FORK SWAGELESS	2.5	3/32	8.00	0.31	13.00	0.51	6.30	0.25	6.30	0.25	14.00	0.55
N020-M0308	3MM 1X19 1/4" FORK SWAGELESS	3.0	1/8	8.00	0.31	13.00	0.51	6.30	0.25	6.30	0.25	14.00	0.55
N020-M0410	4MM 1X19 5/16" FORK SWAGELESS	4.0	5/32	10.00	0.39	16.00	0.63	7.90	0.31	7.90	0.31	19.00	0.75
N020-M0510	5MM 1X19 5/16" FORK SWAGELESS	5.0	-	10.00	0.39	16.00	0.63	7.90	0.31	7.87	0.31	19.05	0.75
N020-M0512	5MM 1X19 3/8" FORK SWAGELESS	5.0	-	12.00	0.47	19.00	0.75	9.50	0.37	9.50	0.37	22.00	0.87
N020-M0612	6MM 1X19 3/8" FORK SWAGELESS	6.0	-	12.00	0.47	19.00	0.75	9.50	0.37	9.50	0.37	22.00	0.87
N020-M0614	6MM 1X19 7/16" FORK SWAGELESS	6.0	-	14.00	0.55	22.00	0.87	11.10	0.44	11.10	0.44	28.50	1.12
N020-M0616	6MM 1X19 1/2" FORK SWAGELESS	6.0	-	16.00	0.63	25.50	1.00	12.70	0.50	12.70	0.50	31.50	1.24
N020-M0716	7MM 1X19 1/2" FORK SWAGELESS	7.0	9/32	16.00	0.63	25.50	1.00	12.70	0.50	12.70	0.50	31.50	1.24
N020-M0816	8MM 1X19 1/2" FORK SWAGELESS	8.0	5/16	16.00	0.63	25.50	1.00	12.70	0.50	12.70	0.50	31.50	1.24
N020-M0820	8MM 1X19 5/8" FORK SWAGELESS	8.0	5/16	20.00	0.79	32.00	1.26	15.80	0.62	15.80	0.62	38.00	1.50

If required in a retail packaging, add R at the end of the Part Number

Swageless Stud



PART NO	DESCRIPTION	WIRE Ø		THREAD Ø	B	
		mm	in	UNF	mm	in
N030-M02508	2.5MM 1X19 1/4" STUD SWAGELESS	2.5	3/32	1/4	57	2.24
N030-M0308	3MM 1X19 1/4" STUD SWAGELESS	3.0	1/8	1/4	57	2.24
N030-M0410	4MM 1X19 5/16" STUD SWAGELESS	4.0	5/32	5/16	48	1.89
N030-M0510	5MM 1X19 5/16" STUD SWAGELESS	5.0	-	5/16	48	1.89
N030-M0512	5MM 1X19 3/8" STUD SWAGELESS	5.0	-	3/8	65	2.56
N030-M0612	6MM 1X19 3/8" STUD SWAGELESS	6.0	-	3/8	65	2.56
N030-M0614	6MM 1X19 7/16" STUD SWAGELESS	6.0	-	7/16	75	2.95
N030-M0616	6MM 1X19 1/2" STUD SWAGELESS	6.0	-	1/2	83	3.27
N030-M0716	7MM 1X19 1/2" STUD SWAGELESS	7.0	9/32	1/2	83	3.27
N030-M0816	8MM 1X19 1/2" STUD SWAGELESS	8.0	5/16	1/2	83	3.27
N030-M0820	8MM 1X19 5/8" STUD SWAGELESS	8.0	5/16	5/8	98	3.86

If required in a retail packaging, add R at the end of the Part Number

Swageless 'T' Terminal

Made from high quality 316 Stainless Steel. Fitting available for 1 x 19, 7 strand, and Dyform wire.

PART NO	DESCRIPTION	WIRE Ø		HEAD HEIGHT		HEAD WIDTH		GRIP DEPTH	
		mm	in	mm	in	mm	in	mm	in
N070-M04	4MM 1X19 "T" TERM SWAGELESS	4	5/32	9.0	0.35	17.5	0.69	6.4	0.25
N070-M05	5MM 1X19 "T" TERM SWAGELESS	5	-	11.1	0.44	20.0	0.79	8.0	0.31
N070-M06	6MM 1X19 "T" TERM SWAGELESS	6	-	14.3	0.56	28.0	1.10	8.3	0.32
N070-M07	7MM 1X19 "T" TERM SWAGELESS	7	9/32	14.3	0.56	28.0	1.10	8.3	0.32
N070-M08	8MM 1X19 "T" TERM SWAGELESS	8	5/16	17.8	0.70	32.0	1.26	12.0	0.47

If required in a retail packaging, add R at the end of the Part Number

Swageless Shroud Terminal

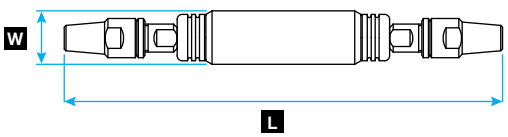
Made from high quality 316 Stainless Steel. Fitting available for 1 x 19, 7 strand, and Dyform wire.

PART NO	DESCRIPTION	WIRE Ø		HEAD HEIGHT		HEAD WIDTH	
		mm	in	mm	in	mm	in
N080-M06	6MM SHROUD TERMINAL 1X19	6		12.5	0.492	22.5	0.886
N080-M07	7MM SHROUD TERMINAL 1X19	7	9/32	14.3	0.563	29.0	1.142
N080-M08	8MM SHROUD TERMINAL 1X19	8	5/16	16.0	0.630	29.0	1.142

If required in a retail packaging, add R at the end of the Part Number

Wire Insulator Swageless Terminal / Terminal 1x19cone

For superior strength and electrical performance in a wire rigging/backstay system. Several end configurations are offered to make an adaptable connection. Withstands high sustained loads in all conditions.



PART NO	DESCRIPTION	WIRE Ø		L LENGTH		W WIDTH	
		mm	in	mm	in	mm	in
NI53-M05M05-1	5mm TERM/TERM INS 1X19	5		211	8.310	29	1.140
NI53-M06M06-1	6mm TERM/TERM INS 1X19	6		229	9.020	29	1.140
NI53-M07M07-1	7mm TERM/TERM INS 1X19	7	9/32	241	9.490	35	1.370
NI53-M08M08-1	8mm TERM/TERM INS 1X19	8	5/16	262	10.320	35	1.370

If required in a retail packaging, add R at the end of the Part Number
Also available for different wire construction types eg 7strand and Dyform

'T' Retaining Plugs

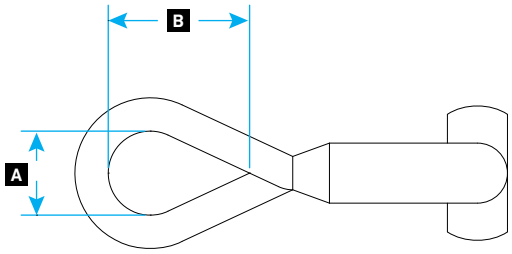
PART NO	DESCRIPTION
N742-M03	3MM T TERMINAL PLUG
N742-M04	4MM T TERMINAL PLUG
N742-M05	5MM T TERMINAL PLUG
N742-M07	7MM T TERMINAL PLUG

If required in a retail packaging, add R at the end of the Part Number

T Terminal Plug

'T' Ring

T Rings enable fiber rope to connect to spars through a T-Terminal backing plate.
Ideal for replacing old wire runners and checkstays with lighter weight alternatives.



PART NO	DESCRIPTION	A		B	
		mm	in	mm	in
N743-M03	3MM T RING	11.4	0.45	18.0	0.71
N743-M04	4MM T RING	11.4	0.45	18.0	0.71
N743-M05	5MM T RING	15.0	0.59	25.4	1.00
N743-M06	6MM T RING	20.0	0.79	33.7	1.33

If required in a retail packaging, add R at the end of the Part Number

Threaded Eyes

PART NO	DESCRIPTION
NLL-1081-M08	SINGLE EYE - M8
NLL-1081-10	SINGLE EYE - $^{5}/_{16}$"
NLL-1082-M08	INTERLINKED EYE - M8
NLL-1082-10R	INTERLINKED EYE - $^{5}/_{16}$"

Single Eye

Interlinked Eye

If required in a retail packaging, add R at the end of the Part Number

Pelican Hooks

PART NO	DESCRIPTION
NLL-812	PELICAN HOOK
NLL-1080-M08	PELICAN HOOK - M8 RH
NLL-1080-10	PELICAN HOOK - $^{5}/_{16}$" RH

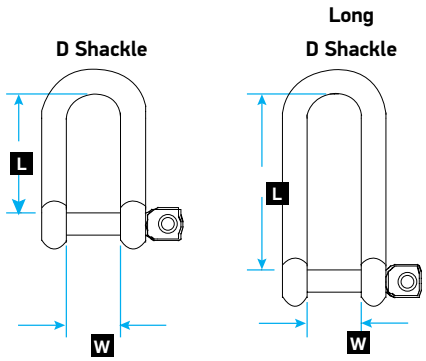
If required in a retail packaging, add R at the end of the Part Number

NLL-812
Pelican Hook

NLL-1080
Pelican Hook

NHS Forged Shackle

Made from high quality 316 Stainless Steel.

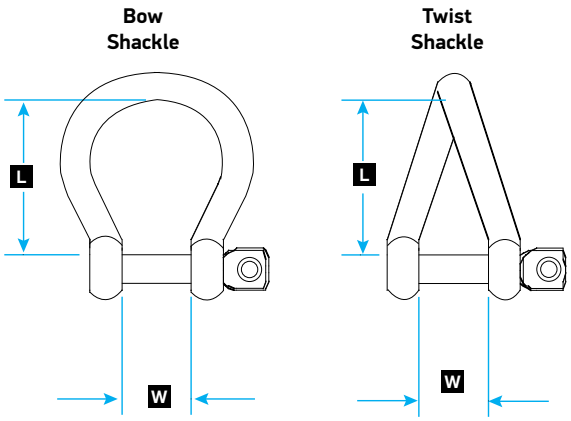


PIN HOLE DIAMETER		W		"D" SHACKLE	L		LONG "D" SHACKLE	L		BREAKING LOAD	
mm	in	mm	in	Part No	mm	in	Part No	mm	in	kg	lb
4.0	5/32	8	0.31	**NSH-05D**	16	0.63				800	1760
5.0	3/16	10	0.39	**NSH-06D**	20	0.79	**NSH-06L**	29	1.14	1500	3300
6.0	¼	13	0.51	**NSH-08D**	25	0.98	**NSH-08L**	43	1.69	1950	4300
8.0	5/16	16	0.63	**NSH-10D**	32	1.26	**NSH-10L**	49	1.93	3000	6600
9.5	⅜	19	0.75	**NSH-12D**	38	1.50	**NSH-12L**	55	2.16	4800	10560

If required in a retail packaging, add R at the end of the Part Number

Bow & Twist Shackle

Made from high quality 316 Stainless Steel.



PIN HOLE DIAMETER		W		BOW SHACKLE	L		TWIST SHACKLE	L		BREAKING LOAD	
mm	in	mm	in	Part No	mm	in	Part No	mm	in	kg	lb
4.0	5/32	8	0.31	**NSH-05B**	18	0.71		13	0.51	600	1326
5.0	3/16	10	0.39	**NSH-06B**	22	0.87	**NSH-06T**	16	0.63	1200	2640
6.0	1/4	13	0.51	**NSH-08B**	28	1.1	**NSH-08T**	20	0.79	1600	3440
8.0	5/16	16	0.63	**NSH-10B**	35	1.38	**NSH-10T**	26	1.02	2400	5280
9.5	3/8	19	0.75	**NSH-12B**	38	1.5	**NSH-12T**	31	1.22	3800	8450

If required in a retail packaging, add R at the end of the Part Number

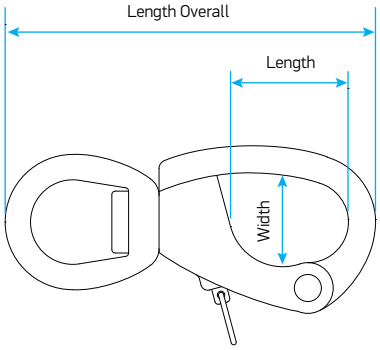
NSS Supersnap Shackles

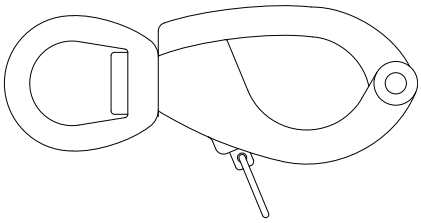
The Navtec Supersnap series owes its popularity to a few key characteristics. They are strong, crafted from heat-treated Stainless Steel, electropolished, and fitted with swivel eyes. Can be opened under load with Racing Fid or with the no-snag side trigger opening mechanism for faster, easier deck work. These traits have earned them a place on the world's finest competition yachts.

PART NO	DESCRIPTION	THROAT WIDTH		THROAT LENGTH		WEIGHT		EYE SIZE	RECOMMENDED WORKING LOAD	
		mm	in	mm	in	g	oz		kg	lb
NSS-719	SUPER SNAP LGE/EYE 1350KG	13.6	0.54	16.1	0.63	53	1.9	Large	1350	3000
NSS-720	SUPER SNAP STD/EYE 2050KG	21.5	0.85	26.2	1.03	155	5.5	Standard	2050	4550
NSS-721	SUPER SNAP STD/EYE 3600KG	21.5	0.85	25.8	1.01	164	5.8	Large	2050	4550
NSS-723	SUPER SNAP LGE/EYE 2050KG	26.7	1.05	29.8	1.17	290	10.2	Standard	3600	8000
NSS-724	SUPER SNAP LGE/EYE 3050KG	26.5	1.04	29.8	1.17	300	10.6	Large	3050	6750
NSS-726	SUPER SNAP LGE/EYE 5650KG	26.0	1.02	29.8	1.17	386	13.6	Large	5650	12500

If required in a retail packaging, add R at the end of the Part Number

Snap Shackles





Snap Shackle Side Opening 17/4PH

PART NO	DESCRIPTION	SIZE	THROAT WIDTH		THROAT LENGTH		LENGTH OVERALL		WEIGHT		RECOMMENDED WORKING LOAD	
			mm	in	mm	in	mm	in	g	oz	kg	lb
NSS-2571	SNAP SHAC S/O S1 17/4	1	17	0.687	22	0.875	68	2.687	0.060	0.125	2270	5000
NSS-2572	SNAP SHAC S/O S2 17/4	2	22	0.875	28	1.125	89	3.500	0.132	0.297	4126	9100
NSS-2573	SNAP SHAC S/O S3 17/4	3	26	1.000	34	1.375	109	4.250	0.255	0.563	6122	13500

Snap Shackle Top Opening 17/4PH

NSS-2511	SNAP SHAC T/O S1 17/4 STD/EYE	1	18	0.687	24	0.937	70	2.750	0.070	0.156	2270	5000
NSS-2512	SNAP SHAC T/O S2 17/4 STD/EYE	2	22	0.875	29	1.125	98	3.875	0.142	0.313	4126	9100
NSS-2513	SNAP SHAC T/O S3 17/4 STD/EYE	2	26	1.000	34	1.375	118	4.625	0.270	0.594	6122	13500
NSS-2522	SNAP SHAC T/O S2 17/4 LGE/EYE	2	22	0.875	29	1.123	107	4.250	0.150	0.328	4126	9100
NSS-2523	SNAP SHAC T/O S3 17/4 LGE/EYE	3	26	1.000	34	1.375	129	5.062	0.280	0.625	6122	13500

If required in a retail packaging, add R at the end of the Part Number

Racing Fid

PART NO	DESCRIPTION
NSS-730-BLACK	RACING FID BLACK
NSS-730-BLUE	RACING FID BLUE

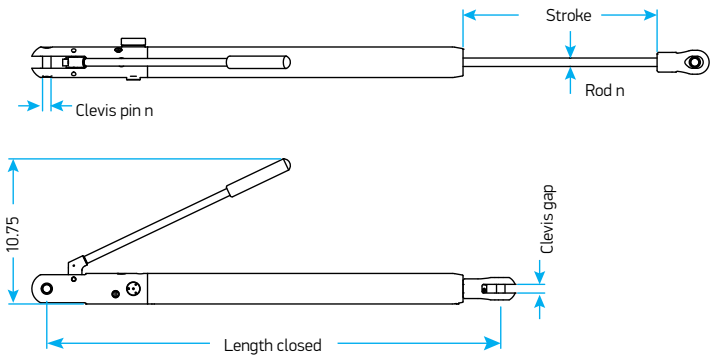
If required in a retail packaging, add R at the end of the Part Number

Rig Rap Waterproof Bonding Tape

PART NO	DESCRIPTION
V100-01	RIGRAP ROLL
V100-02	RIGRAP ROLL box of 24

Series IX Integral Backstay Adjuster (Black)

Ergonomics meets economics. The Navtec Series IX Integral incorporates several key design features while keeping to the high marine standard that Navtec is known for. The Series IX design moves the hydraulic feed tube inside to give the unit a sleek look. The pump piston size has been increased to ½" to increase flow, which produces the faster action needed for today's modern mast. The Integral is designed to be used with the Integral Toggle. Available with a clear finish as an option.



PART NO	DESCRIPTION	MAX FORCE @ RELIEF		LENGTH CLOSED		LENGTH OPEN		WEIGHT		MAX WIRE SIZE	
		kg	lb	mm	in	mm	in	kg	lb	mm	in
A370-BLE-006	-6 SERIES 9 INTEGRAL BLACK	1,590	3,500	790	31.1	1133	44.6	3.18	7.0	5.6	7/32
A370-BLE-010	-10 SERIES 9 INTEGRAL BLACK	2,450	5,400	791	31.1	1134	44.6	3.31	7.3	7.1	9/32
A370-BLE-012	-12 SERIES 9 INTEGRAL BLACK	2,950	6,500	850	33.5	1213	47.8	5.53	12.2	7.9	5/16
A370-BLE-017	-17 SERIES 9 INTEGRAL BLACK	3,950	8,700	850	33.5	1213	47.8	5.53	12.2	9.5	3/8
A370-BLE-022	-22 SERIES 9 INTEGRAL BLACK	5,030	11,100	902	35.5	1283	50.5	7.03	15.5	11.1	7/16

Integral Toggle Assembly

PART NO	DESCRIPTION	LENGTH PIN-PIN	
		mm	in
A371-20A06	-6 INTEGRAL TOGGLE	50.8	2.00
A371-20A10	-10 INTEGRAL TOGGLE	50.8	2.00
A371-20A17	-12/17 INTEGRAL TOGGLE S8	59.2	2.33
A371-20A17A	-12/17 INTEGRAL TOGGLE S9	59.2	2.33
A371-20A22	-22 INTEGRAL TOGGLE	75.7	2.98

Hydraulic Oil

PART NO	DESCRIPTION
V100-06-01	NAVTEC® HYD OIL QUART (0.94L)
V100-06	NAVTEC® HYD OIL QUART (0.94L) Box of 12 bottles

Pump Handles & Handle Holders

PART NO	DESCRIPTION
A031-A11	HANDLE SINGLE/AUTO SPEED PUMP
A371-A25	HANDLE INTEGRAL SERIES 7/8
A021-24-01	HANDLE HOLDER

367660252	73	39941012	64	48540300	90	49060015	105	49545218	97
367665252	73	39941030	68	48540301	90	49062050	105	49545219	97
367670252	73	399414924	66	48545200	98	49065000	93	49550055	88
39110070	81	399414996	66	48545201	98	49065001	93	49550056	88
39110090	81	39941812	64	48545210	98	49065100	103	49550057	88
39130070	81	39944012	64	48545300	90	49065101	103	49550100	103
39130090	81	39944020	70	48545301	90	49065103	103	49550101	103
39132070	81	39944030	68	48550200	98	49065104	103	49550110	103
39132090	81	399440303	68	48550201	98	49068001	107	49550217	97
39140070	81	399441910	65	48550210	98	49068002	107	49550218	97
39140090	81	399441999	65	48550300	90	49068021	107	49550219	97
39160070	81	399444923	66	48550301	90	49068100	103	49555055	88
39160090	81	399444995	66	48555200	98	49068101	103	49555056	88
393010262	78	39944812	64	48555201	98	49068103	103	49555057	88
393020200	80	39950020	70	48555210	98	49068104	103	49555100	103
393020262	78	39950030	68	48555300	90	49068105	103	49555101	103
393029800	76	399500303	68	48565200	98	49068106	103	49555110	103
393029802	76	39951030	69	48565201	98	49068108	103	49555200	97
393110262	78	39954012	64	48565210	98	49068109	103	49555201	97
393120200	80	39954020	70	48570200	98	49077035	105	49555210	97
393120262	78	39954030	68	48570201	98	49077100	103	49555220	97
393129800	76	399540303	68	48570206	98	49077101	103	49555221	97
393129802	76	399544923	66	48570207	98	49077103	103	49555230	97
393170262	78	399544995	66	48570208	98	49077104	103	49565055	88
393180200	80	39954812	64	48570210	98	49077105	103	49565056	88
393180262	78	39960012	64	48580200	98	49077106	103	49565057	88
393220200	80	39960020	70	48580201	98	49077108	103	49565100	103
393320200	80	39960030	68	48580206	98	49077109	103	49565101	103
393329800	76	399600303	68	48580207	98	49082000	107	49565110	103
393420200	80	399601910	65	48580208	98	49088104	104	49565200	97
393429800	76	399601999	65	48580210	98	49088109	104	49565201	97
393440200	80	399604923	66	49006075	91	49088245	105	49565210	97
393460200	80	399604995	66	49016000	93	49088248	104	49565220	97
393520200	80	39960812	64	49016001	93	49088252	104	49565221	97
393529800	76	39965030	68	49030000	93	49095001	107	49565230	97
393770262	78	39970012	64	49030001	93	49095004	107	49570055	90
393780200	80	39970020	70	49040050	105	49099000	107	49570056	90
393780262	78	399701910	65	49040055	93	49099009	107	49570057	90
393810862	78	399701999	65	49040056	93	49105002	107	49570065	90
393820862	78	399704923	66	49044014	105	49105006	107	49570066	90
39610050	71	399704995	66	49044050	105	49111104	104	49570067	90
39610070	71	39970812	64	49046055	93	49111109	104	49570100	103
39620050	71	39977020	70	49046056	93	49111255	104	49570101	103
39620070	71	40000900	105	49046155	103	49111259	104	49570102	103
39630050	71	40000901	105	49046156	103	49115000	107	49570103	103
39630070	71	40005066	107	49046158	103	49120001	107	49570109	103
39640050	71	48000014	95	49046159	103	49122104	104	49570110	103
39640070	71	48000017	95	49048015	105	49122121	104	49570211	97
39644050	71	48000018	95	49048050	105	49507075	91	49570212	97
39644070	71	48000019	95	49048055	93	49507076	91	49570213	97
39650050	71	48000075	98	49048056	93	49508075	91	49570220	97
39650070	71	48000076	98	49048155	103	49508076	91	49570221	97
39660050	71	48000077	98	49048156	103	49515055	88	49570230	97
39660070	71	48000078	98	49048158	103	49515056	88	49580065	90
39670050	71	48000100	35	49048159	103	49515057	88	49580066	90
39670070	71	48000114	35	49050000	93	49516075	91	49580067	90
39900030	68	48000116	98	49050001	93	49516076	91	49580100	103
39903030	68	48000117	98	49050015	105	49530055	88	49580101	103
39910012	64	48000178	99	49050050	105	49530056	88	49580102	103
39910030	68	48000179	99	49050100	103	49530057	88	49580103	103
399100303	68	48000180	99	49050101	103	49530075	91	49580109	103
399104924	66	48000181	99	49050103	103	49530076	91	49580110	103
399104996	66	48000211	98	49050104	103	49540055	88	49580211	97
39910812	64	48000212	98	49050120	107	49540056	88	49580212	97
39918030	69	48000217	99	49050130	107	49540057	88	49580213	97
39920012	64	48000220	99	49054000	93	49540075	91	49580220	97
39920030	68	48000221	99	49054001	93	49540076	91	49580221	97
399204924	66	48000222	99	49054050	105	49540085	92	49580230	97
399204996	66	48000224	99	49054100	103	49540087	92	49730055	89
39920812	64	48000225	99	49054101	103	49540217	97	49740055	89
39922030	69	48000227	99	49054103	103	49540218	97	49745055	89
39930012	64	48000229	99	49054104	103	49540219	97	49750055	89
39930020	70	48040300	93	49058000	93	49545055	88	49755055	89
39930030	68	48046300	93	49058001	93	49545056	88	49940055	92
399300303	68	48048300	93	49058050	105	49545057	88	49945055	92
399304923	66	48050300	93	49058100	103	49545085	92	49950055	92
399304995	66	48054300	93	49058101	103	49545087	92	49955055	92
39930812	64	48058300	93	49058103	103	49545100	103	51000370	60
39940020	70	48540200	98	49058104	103	49545101	103	51000470	60
39940030	68	48540201	98	49060000	107	49545110	103	559017	54,55,57
399400303	68	48540210	98	49060009	107	49545217	97	559018	54,55,57

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