

## 6. Winch



### 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 we have gained a great knowledge 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.

- Optimised layup schedule ensures maximum stiffness and efficiency
- 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

#### 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.

#### 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.

#### 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.

#### Overdrive Box

The overdrive box can be used to increase line speeds or heighten 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.



PRODUCT	WEIGHT	
	KG	LB
MODULAR SELF SEEKING CLUTCH	2.4	5.3
INTEGRATED SELF SEEKING CLUTCH	0.75	1.6

PRODUCT	WEIGHT	
	KG	LB
OVERDRIVE BOX	3.1	6.8

### Rotor Pedestal

The new rotor pedestal is over 2kg lighter and is stiffer than its predecessor thanks to the more aggressive I-beam section and use of high-modulus carbon fibre. Large diameter Torlon® roller bearings have been used in the top end to support the high torque and axial loading which occurs during grinding. The top end is removable, making it easy to service from above deck. The complete internals can be disassembled, serviced and put back together within 30 minutes. This also means that the gear ratio can be easily changed on the water to suit the type of racing on the day.

### 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. Precision engineered and oil-filled, Lewmar bevel boxes transmit torque with extremely high efficiency, allowing maximum power delivery to the winches.

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



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### Lewmar Rotor Pedestal

The new rotor pedestal is over 2kg lighter and is stiffer than its predecessor thanks to the more aggressive I-beam section and use of high modulus carbon fibre. Large diameter Torlon<sup>®</sup> roller bearings have been used in the top end to support the high torque and axial loading which occurs during grinding. The top end is removable, making it easy to service from above deck. The complete internals can be disassembled, serviced and put back together within 30 minutes. This also means that the gear ratio can be easily changed on the water to suit the type of racing on the day.

- Lightweight carbon shell
- Developed using high-strength low-weight pre-preg carbon fibre composites from the F1 industry
- Clear coat UV-stable protective lacquer is standard (painted options available)
- Internal composite bearing systems
- Double bearing systems on handle housing
- Carbon or composite racing grip handles





## Oil-Filled Bevel Box

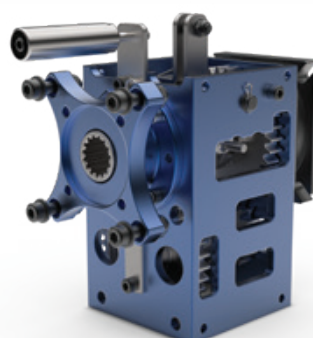
Our new oil-filled bevel boxes are 15% lighter and considerably smaller than its predecessor. By using very hard precision roller bearings, and thin oil lubrication, the bevel boxes are very efficient, requiring very little maintenance due to the high-quality internal bearings and magnetic drain plugs. Integrated clutches can be mounted directly to the bevel box housings to save the weight of additional brackets in the installation.



## Overdrive Boxes

The overdrive units come with two ratio options: [1:1.8] and [1:2.8]

The box can be engaged to speed up the winches (less power) or in slow down the winches (more power). This feature allows optimal load management in different applications and conditions. These overdrive boxes can be mounted on the pedestal or in line, next to the first bevel box.



## Clutches and Disconnect Switches

The clutches have been simplified to make them lighter and easier to service with fewer parts. The small assemblies can be mounted to the bevel boxes, winches or pedestal to disconnect/connect exactly where needed in the system.

