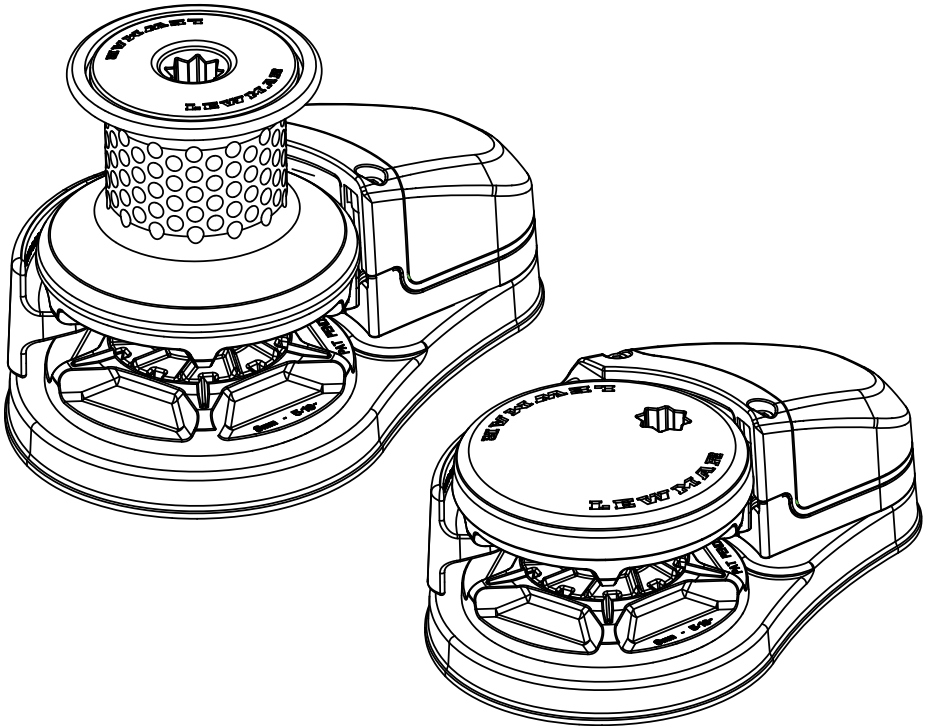


Lewmar VX Vertical Windlasses

65100045 Issue 11



1. Introduction

Dear Customer,

Thank you for choosing Lewmar. Lewmar products are world renowned for their quality, technical innovation and proven performance. With a Lewmar product you will be provided with many years of outstanding service.

Product support

Lewmar products are supported by a worldwide network of distributors and Authorised Service Representatives. If you encounter any difficulties with this product, please contact your national distributor, or your local Lewmar dealer. Details are available at: www.lewmar.com

CE Approvals

For CE approval certificates contact Lewmar.

Important information about this manual

Throughout this manual, you will see safety and product damage warnings. You must follow these warnings carefully to avoid possible injury or damage.

The type of warnings, what they look like, and how they are used in this manual are explained as follows:

 **WARNING!**

This is a warning against anything which may cause injury to people if the warning is ignored. You are informed about what you must or must not do in order to reduce the risk of injury to yourself and others.

 **SAFETY SYMBOL**

When you see the safety symbol it means: "Do not..."; "Do not do this"; or "Do not let this happen".

2. Safety Notice

IMPORTANT: Read these notes before continuing.

 **WARNING!**

2.1 Windlass general

Classification Societies and Lewmar require that a vessel at anchor must have its chain/rode held by a chain stopper or equivalent strong point at all times

At all times it is the responsibility of the boat operator to ensure that the anchor and rode are properly stowed for the prevailing sea conditions. This is particularly important with high-speed powerboats, because an anchor accidentally deploying while under way can cause considerable damage. An anchor windlass is mounted in the most exposed position on a vessel and is thus subject to severe atmospheric attack resulting in a possibility of corrosion in excess of that experienced with most other items of deck equipment. As the windlass may only be used infrequently, the risk of corrosion is further increased. It is essential that the windlass is regularly examined, operated and given any necessary maintenance.

Please ensure that you thoroughly understand the operation and safety requirements of the windlass before commencing the installation. Only persons who are completely familiar with the controls and those who have been fully made aware of the correct use of the windlass should be allowed to use it. If there is any doubt of how to install or operate this unit please seek advice from a suitably qualified engineer.

- Windlasses used incorrectly could cause harm to equipment or crew.
- Windlasses should be used with care and treated with respect.
- Boating, like many other activities can be hazardous. Even the correct selection, maintenance and use of proper equipment cannot eliminate the potential for danger, serious injury or death.
- Lewmar windlasses are designed and supplied for anchor control in marine applications and are not to be used in conjunction with any other use.
- Keep limbs, fingers, clothing and hair clear of windlass, rode and anchor during operation. Severe bodily harm could result.
- Ensure there are no swimmers or divers nearby when dropping anchor.
- Windlasses must not be used as the sole means of securing the anchor to the bow fitting especially under storm conditions. Anchors should be independently secured to prevent accidental release.
- Classification Societies require that a vessel lying at anchor must have its anchor rope/chain secured to a chain stopper or other suitable independent strong point.
- A windlass should never be used as a mooring bollard, the anchor rode **MUST** be secured to a mooring cleat, chain stopper or other designated strong point. Using the windlass to secure the rode will damage the windlass.
- Do not use windlass for ANY purpose other than deployment and recovery of anchor.
- The circuit breaker in this product must never be deactivated or otherwise bypassed, it is intended to protect the motor and cables from overheating and damage.
- Always switch off this windlass at the circuit breaker/isolator when not in use.
- It is the unavoidable responsibility of the owner, master or other responsible party to assess the risk of any operation on the vessel.
- Windlass must not be operated whilst under the influence of alcohol or drugs.

2.2 Fitting

- This equipment must be installed and operated in accordance with the instructions contained in this manual. Failure to do so could result in poor product performance, personal injury and/or damage to your boat.
- Consult the boat manufacturer if you have any doubt about the strength or suitability of the mounting location.

2.3 Electrical

- Make sure that the boat's battery power supply has been switched off before starting the installation.
- This product requires installation by a suitably qualified electrical engineer.

3. Installation

3.1 Basic requirements

Each installation requires the following tools:

Windlass Installation

An appropriate marine sealant and the following:

VX 1

- 10 mm ($\frac{3}{8}$ ") Drill
- 14 mm ($\frac{9}{16}$ ") Drill
- 18 mm ($\frac{45}{64}$ ") Drill
- 40 mm ($1\frac{37}{64}$ ") Hole Saw
- 67 mm ($2\frac{1}{4}$ ")Hole Saw

VX 2/3

- 10 mm ($\frac{3}{8}$ ") Drill
- 14 mm ($\frac{9}{16}$ ") Drill
- 18 mm ($\frac{45}{64}$ ") Drill
- 46 mm ($1\frac{13}{16}$ ") Hole Saw
- 62 mm ($2\frac{7}{16}$ ")Hole Saw

VX 1L

- 10 mm ($\frac{3}{8}$ ") Drill
- 15 mm ($\frac{19}{32}$ ") Drill
- 67 mm ($2\frac{1}{4}$ ") Hole Saw
- 100 mm ($3\frac{15}{16}$ ")Hole Saw

Wiring Installation

- Crimping Pliers / Wire Stripper
- Suitable electrical cable and crimp terminals

3.2 Accessories

Use only genuine Lewmar parts and accessories to ensure top performance and eliminate the risk of voiding your warranty. For replacement parts, please visit your dealer or www.lewmar.com

3.3 Gypsy Suitability

Gypsies fitted to the VX range of windlasses are ideally suited to handling our factory made Rope/Chain combination rodes, which consist of rope spliced to a chain tail. See Specifications section for details.

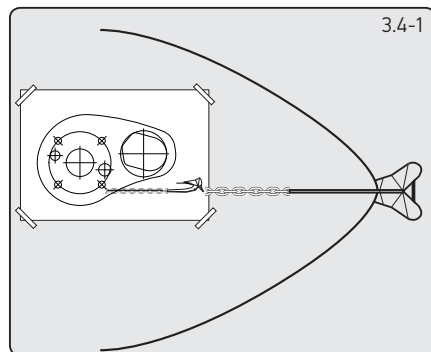
Ropes used must be windlass grade, medium lay nylon. Ropes from different manufacturers have wide variations in stretch and consistency in diameter. Therefore, rope and chain from other manufacturers may require some experimentation to determine the optimum size.

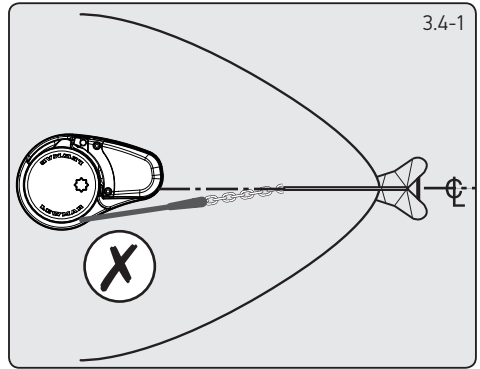
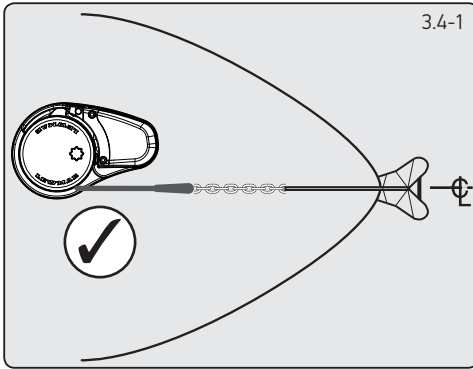
Should you have difficulty in matching a gypsy to your chain please consult your local agent or our international network of distributors.

3.4 Above deck preparation

IMPORTANT - Plan location carefully and allow for the following:

1. Make an accurate drilling template using the product dimensions from the dimension template and decide upon a position for it with reference to the vessel's bow roller and the chain locker below and the rotation of manual operating handle. If possible, select a flat area of deck.

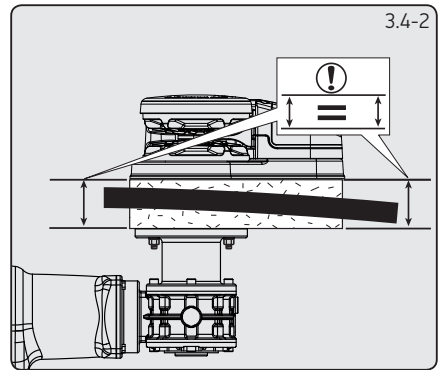




2. If a pad is required for these models, care must be taken to ensure that the windlass base is parallel to the motor/gearbox mounting flange. Shims may be used, before the motor/gearbox is installed, to correct minor misalignment.

Notes

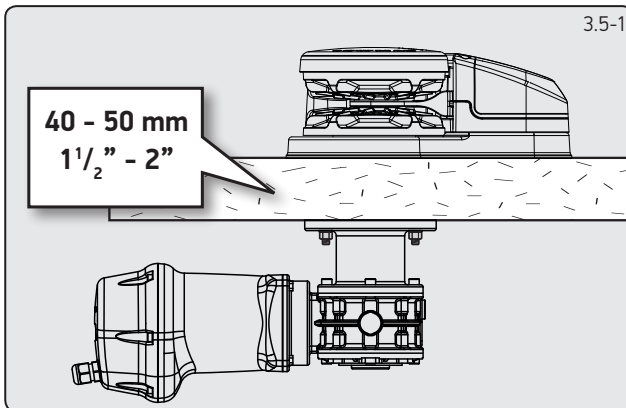
- in doubt about the suitable construction of the pad consult a qualified marine engineer.
- Decks that are thin, or of foam or balsa laminate construction, will require reinforcement in order to spread the loads that will be applied to the deck while the windlass is in use



3.5 Deck thickness

The deck is an integral component of the windlass it has to secure the windlass and be strong enough to cope with the high torque stresses involved in recovering the anchor.

- Lewmar recommends a minimum deck thickness of 40mm (1½”).



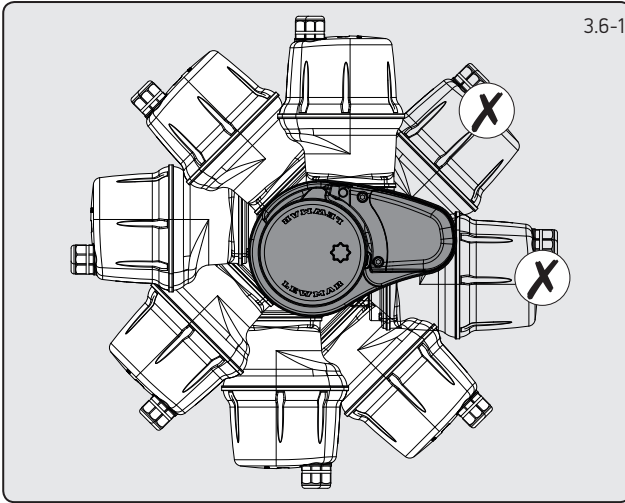
Note: For thicker deck, a longer shaft may be required (not standard). Contact your Lewmar representative for more information

Note: For thinner deck, a deck spacer is available 65100038

3.6 Below deck preparation

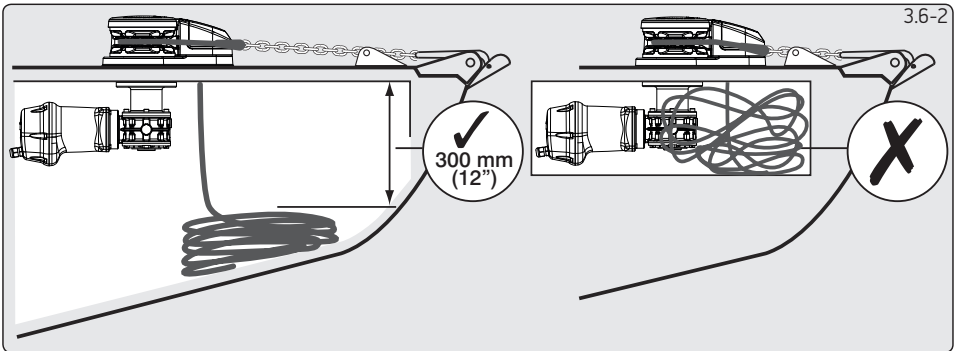
IMPORTANT:

The positioning of the windlass must be checked prior to cutting for deck/hull and bulkhead clearance.



1. The motor/gearbox is bolted via the through deck mounting bolts.

NOTE: Do not position motor/gearbox below rode/chain pipe fall area.

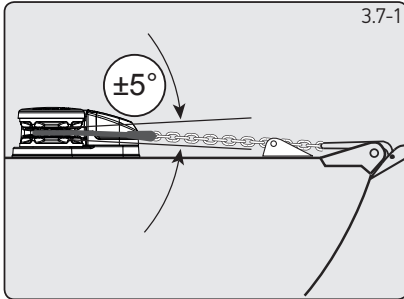


2. There must be sufficient vertical fall for the chain or rope when hauling in.

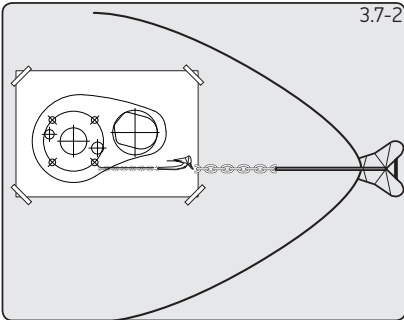
⚠ WARNING!

Failure to provide minimum vertical fall will cause jamming.

3.7 Above deck fitting



1. Lead from the roller should be fed horizontally back to the top of the gypsy and along its centre line within $\pm 5^\circ$.



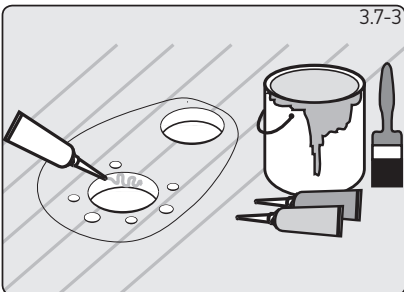
2. Using your template and after you have checked all the above and below deck requirements cut the following holes.

VX1

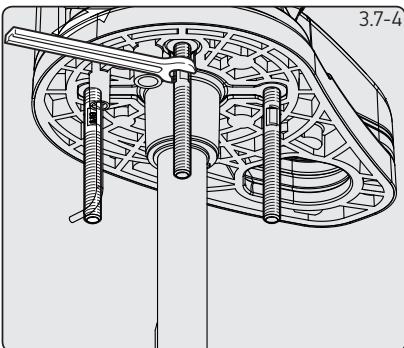
Using a 10mm ($\frac{3}{8}$ ") diameter drill, make the 4 holes for the mounting studs, 14mm ($\frac{9}{16}$ ") and 18mm ($\frac{45}{64}$ ") for the sensors. With a 40mm ($1\frac{37}{64}$ ") and 67mm ($2\frac{1}{4}$ ") diameter hole saw, make two holes for the mainshaft and rode to pass through.

VX2/3

Using a 10mm ($\frac{3}{8}$ ") diameter drill, make the 3 holes for the mounting studs, 14mm ($\frac{9}{16}$ ") and 18mm ($\frac{45}{64}$ ") for the sensors. With a 46mm ($1\frac{13}{16}$ ") and 67mm ($2\frac{1}{4}$ ") diameter hole saw, make two holes for the main unit / Motor gearbox and rode to pass through.

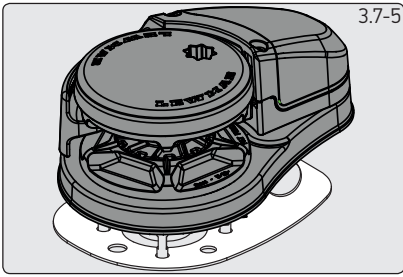


3. When all the holes have been made, remove the template. To help avoid water absorption by the deck, apply an appropriate marine sealant to the freshly cut hole edges.



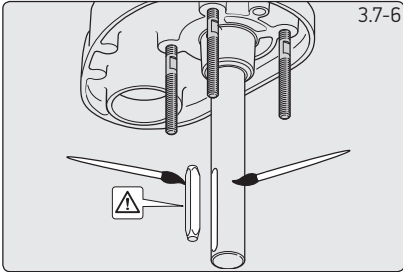
4. Assemble and tighten studs into base until they bottom out in their holes. Some studs have a flat. Position the flats of the studs nearest the base of the windlass.

- VX 1-3 - Studs 21Nm



3.7-5

- Place the base mat in position on the deck. Optionally, apply a suitable sealant to the base of the windlass, any mounting pad or around the studs.
NOTE: If using silicone or other rubbery type sealant, it is advisable to allow curing of the sealant before final tightening of the mounting nuts.



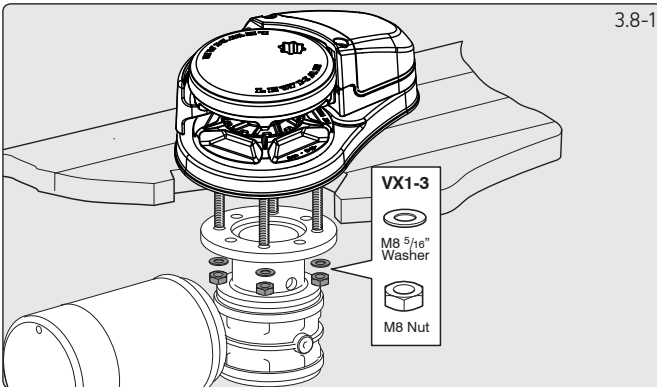
3.7-6

- Lightly coat the shaft with grease and ensure the drive key is in place before assembly to motor/gearbox.

Non-applicable for VX1L

⊘ DO NOT use a permanent adhesive/sealant eg.5200

3.8 Under deck fitting



3.8-1

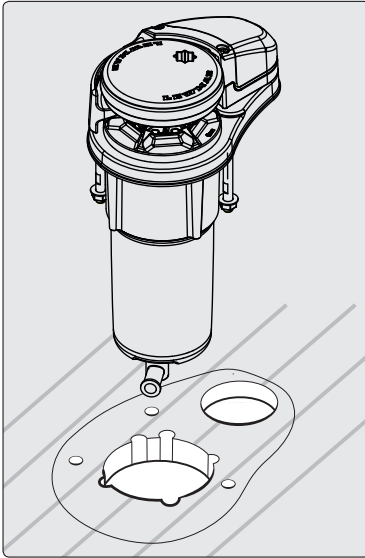
Lightly grease all moving parts.

- Ensure drive key is in place then gently slide the motor/gearbox up the drive shaft until it contacts the deck.
NOTE: Position the motor/gearbox away from the rope/chain pipe fall.

- Check the motor/gearbox and windlass mounting surfaces are parallel.

- VX 1-3 - Assemble the washer then the M8 nut, secure with Loctite® threadlock to 21Nm torque.

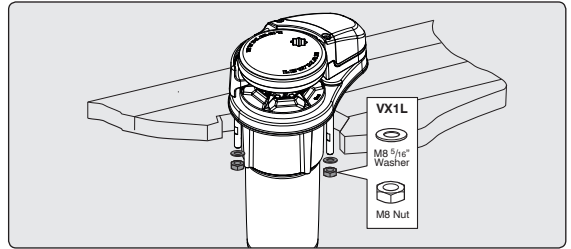
NOTE: If using silicone or other rubbery type sealant, it is advisable to allow curing of the sealant before final tightening of the mounting nuts.



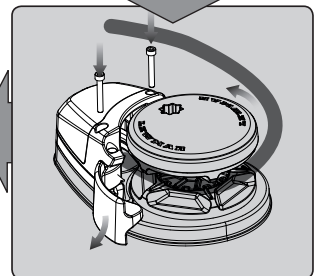
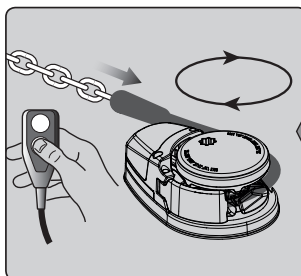
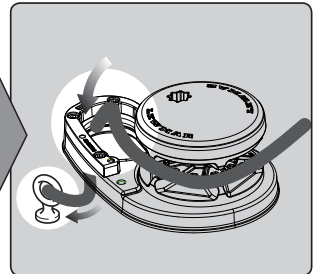
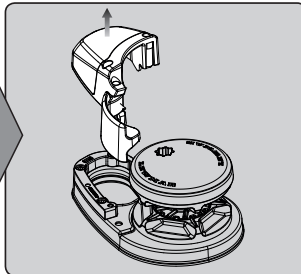
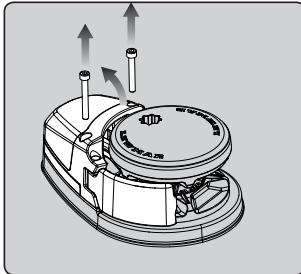
VX1L Fitting

Using a 10mm ($\frac{3}{8}$ ") diameter drill, make the 4 holes for the mounting studs, 15mm ($\frac{13}{32}$ ") for the gearbox fitting. With a 100mm ($3 \frac{15}{16}$ ") and 67mm ($2 \frac{1}{4}$ ") diameter hole saw, make two holes for the mainshaft and rode to pass through.

1. When all the holes have been made, remove the template. To help avoid water absorption by the deck, apply an appropriate marine sealant to the freshly cut hole edges.
2. Assemble and tighten studs into base until they bottom out in their holes. Some studs have a flat. Position the flats of the studs nearest the base of the windlass.



3.9 Loading rope/chain VX1 & VX1L

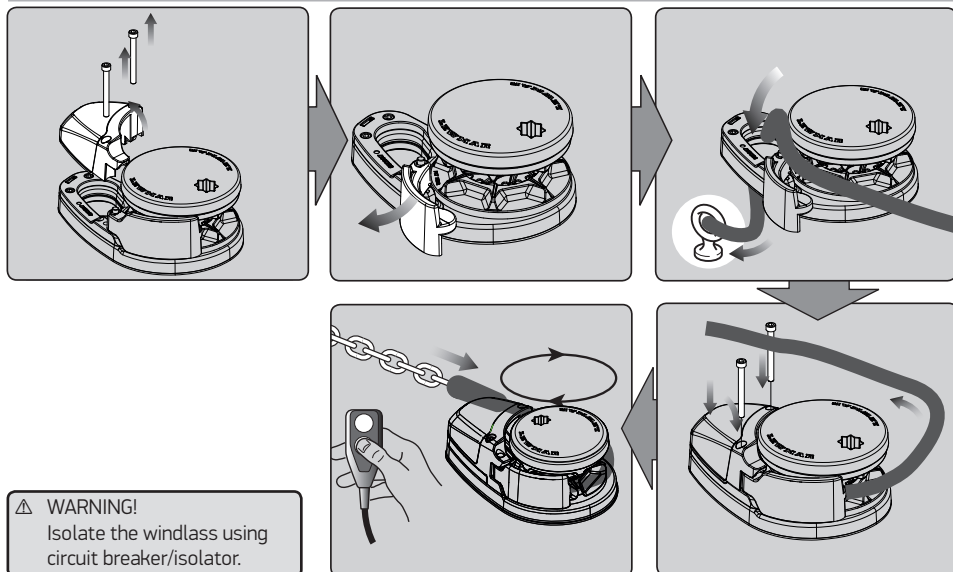


⚠ WARNING!
Isolate the windlass using circuit breaker/isolator.

For safety and performance Lewmar recommends the use of matched Lewmar anchor rodes.

1. Remove cover.
2. Pull out control arm.
3. Feed anchor rope/chain into entry hole. Tie off to suitable strong point.
4. Replace cover. Release control arm and wrap rope/chain around gypsy.
5. Power load rest of anchor rope/chain.

3.10 Loading rope/chain VX2/3



For safety and performance Lewmar recommends the use of matched Lewmar anchor rods.

1. Remove cover.
2. Pull out control arm.
3. Feed anchor rope/chain into entry hole. Tie off to suitable strong point.
4. Replace cover. Release control arm and wrap rope/chain around gypsy.
5. Power load rest of anchor rope/chain.

4. Electrical wiring

4.1 Electric cable selection

Installation of this product should meet the regulations and standards or codes of practice relevant to the craft to which it is being fitted. As a minimum the installer should conform ISO 10133.

Lewmar recommends the installer use cable with insulation rated at 90°C or higher.

Length = Length of cable from battery '+' terminal and back to battery '-' terminal including breaker and switch gear if fitted

Cable size guide given is for guidance only.

It is the responsibility of the installer to confirm the capacity and voltage drop for the installation. If in any doubt, contact your local marine electrician.

MODEL	CURRENT DRAW AT WORKING LOAD	BREAKER SUPPLIED AMPS	CSA TO MEET ISO 10133 ANNEX A FOR 20 M	AWG TO MEET ABYC E11 FOR L= 66 FEET
VX1 300	66	50	25	4
VX1 500	126	70	35	1
VX1L 500	56	50	16	4
VX1L 800	80	70	25	2
VX2 12V	120	90	35	1
VX2 24V	60	50	10	7
VX2+ 12V	131	110	50	1
VX2+24V	74	90	16	6
VX3 12V	132	110	50	1
VX3 24V	70	90	10	7

4.2 Wiring

Plan the installation to suit the controls and give the operator a full view of the windlass. The wiring system should be of the fully insulated type, which avoids possible electrolytic corrosion problems. We recommend the use of type III stranded, tinned copper wire with copper crimp terminals. Most modern installations are negative return (negative ground) but polarity should be checked.

Overload protection, in the form of the circuit breaker/fuse supplied, must be built into the windlass wiring circuit.

Circuit breaker supplied:

50A (Part No 68000348) 70A (Part No 68000240)

90A (Part No 68000349) 110A (Part No 68000350)

⚠ WARNING!

NOTE: The circuit breaker should be positioned close to the battery in a dry, readily accessible place.

The breaker must be manually reset should an overload occur that causes it to trip to the off position.

If you are not sure you understand these guidelines, seek professional help. Ensure that the installation complies with USCG, ABYC, NMMA or other local regulations.

4.3 Control switch installation

The unit is supplied with

- Guarded rocker switch (product ref 68000593)
- Contactor VX1/VX1L (12V- 68000939) • VX2/3 (12V- 68000937) / VX2/3 (24V- 68000938)

Follow the wiring diagrams

NOTE: Optional electric footswitches and remote handheld control available.

Visit www.lewmar.com for more information.

Contactor box used in some installation refer to wiring diagram § 4.4 - 4.8

Optional wireless remote also available see table below for models and references.

WIRELESS REMOTE (3 BUTTON WINDLASS ONLY)	WIRELESS REMOTE (5 BUTTON WINDLASS & THRUSTER)
68000967	68000968

NOTE: In a multi station installation all switches must be wired in a parallel circuit.

4.4 Electric motor terminal connections

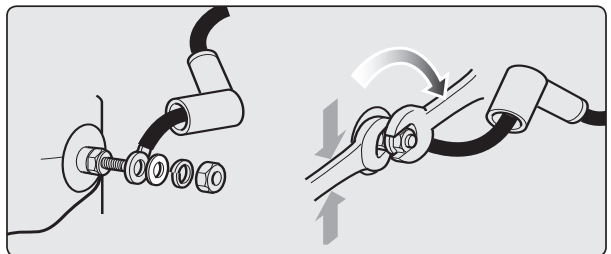
▶ When wiring Lewmar electric motor into the ship's electrical system the following caution must be taken.

⊘ DO NOT overtighten electric motor terminal nuts.

▶ When tightening the front nut hold the back nut with a separate wrench to make sure the back nut does not turn. If the back nut turns, serious damage will occur, voiding Lewmar's warranty on the electric motor.

▶ **VX1/2/3** Tighten M8 front nut to a torque setting of 15Nm to 18Nm

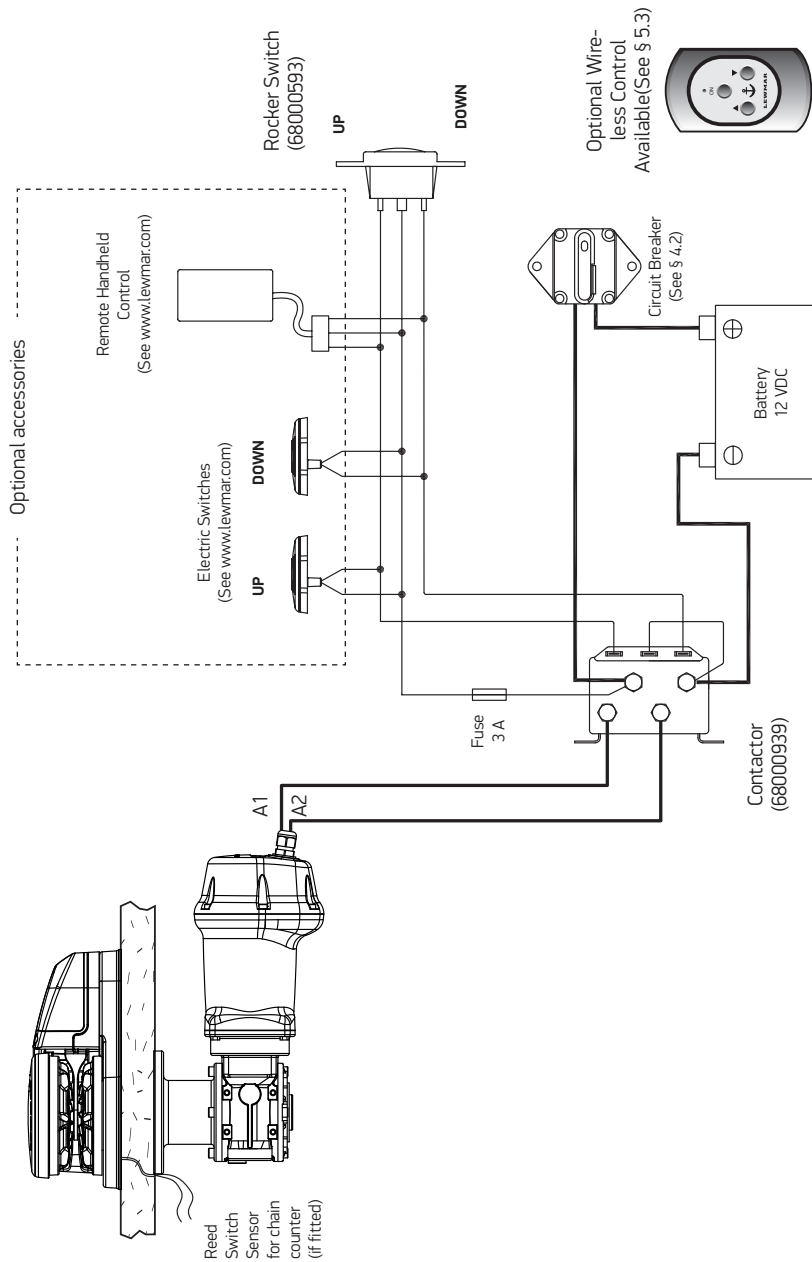
▶ **VX1L** Tighten to a torque setting of 5Nm to 6Nm



4.5 VX1 - Wiring diagram using contactor provided (Part No 68000939)

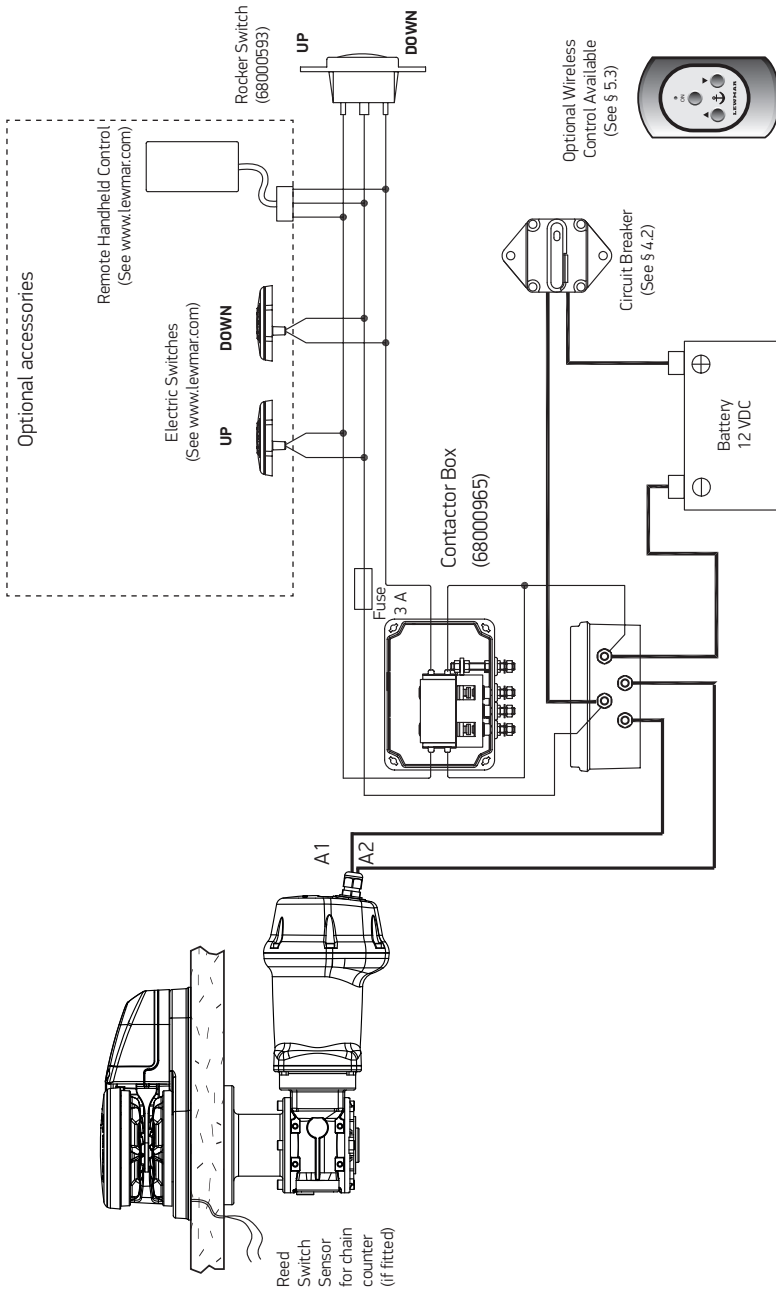
Installation instructions are supplied separately with any accessories.

Switch wire thickness: **1.5 mm²** (16 AWG)



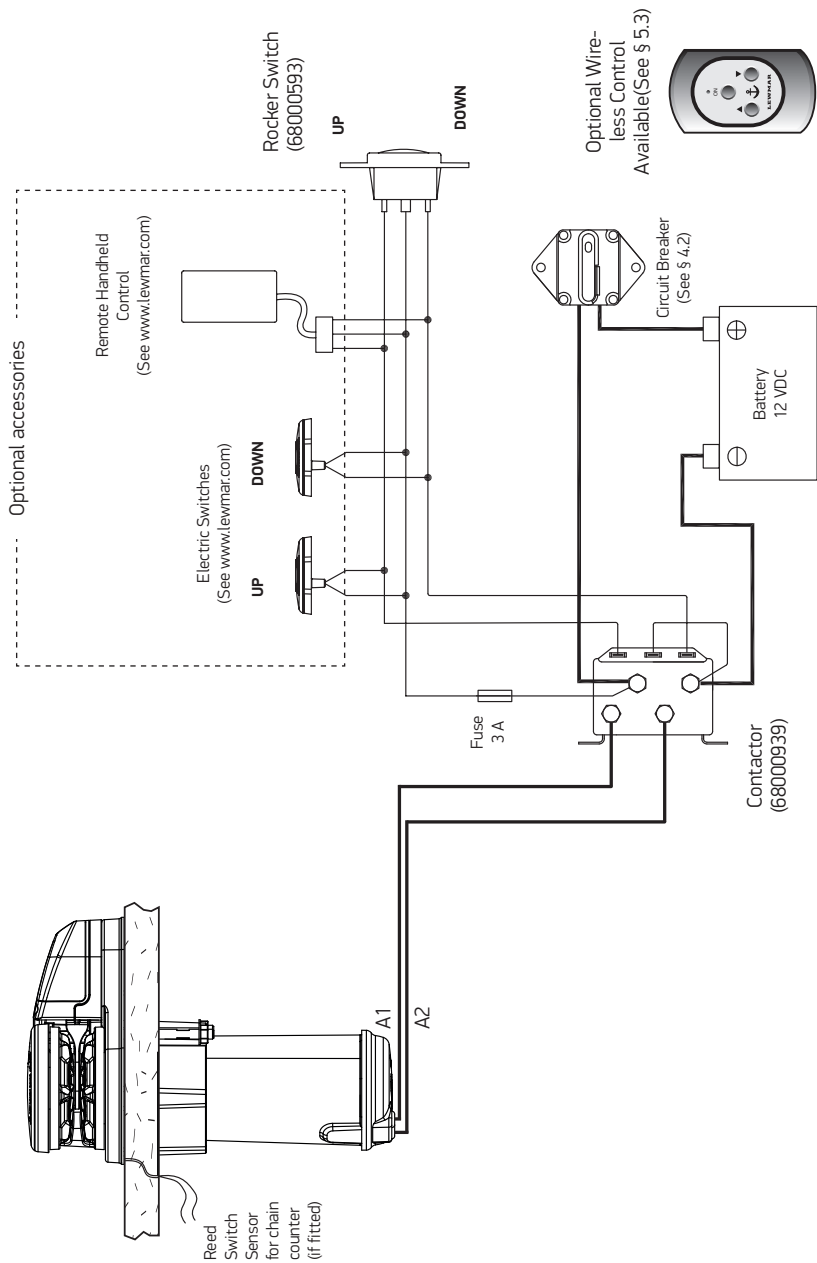
4.6 VX1 - Wiring diagram if a contactor box (Part No 68000965) is used

Installation instructions are supplied separately with any accessories.



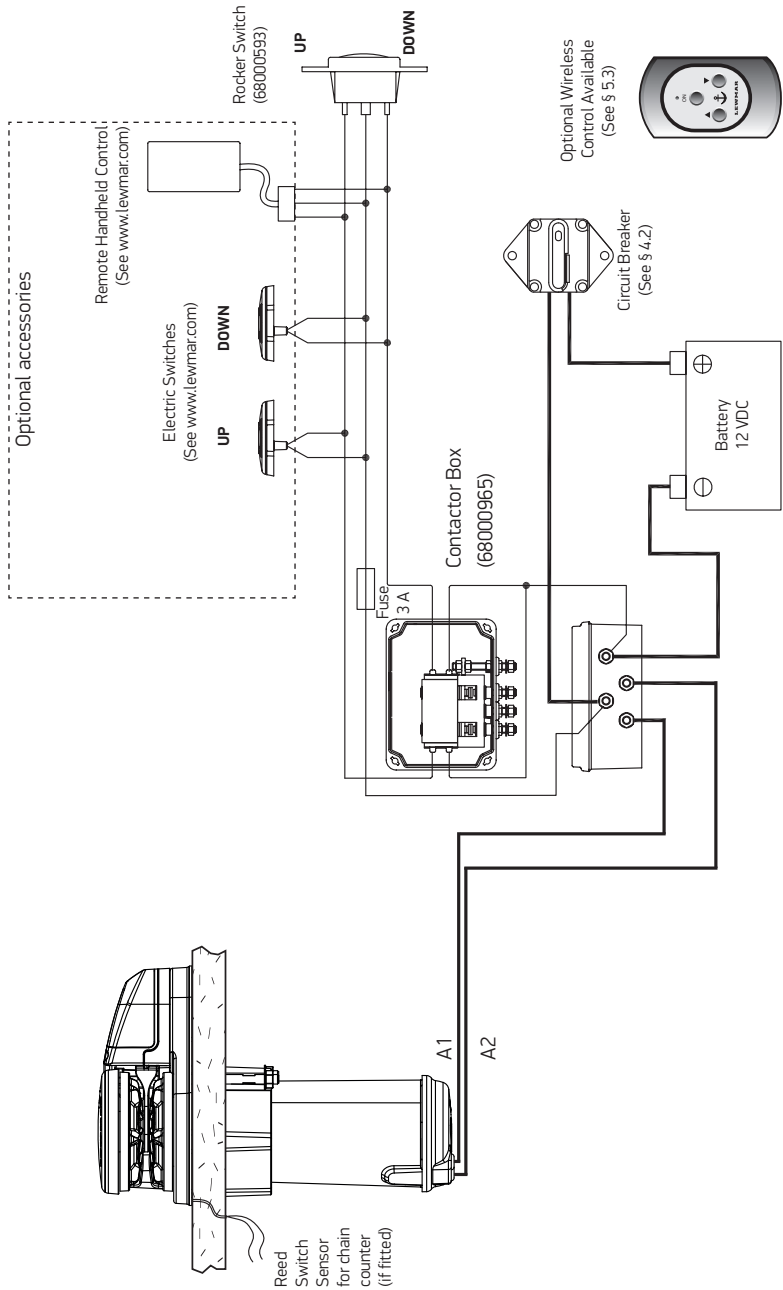
4.7 VX1L - Wiring diagram using contactor provided (Part No 68000939)

Installation instructions are supplied separately with any accessories.



4.8 VX1L - Wiring diagram if a contactor box (Part No 68000965) is used

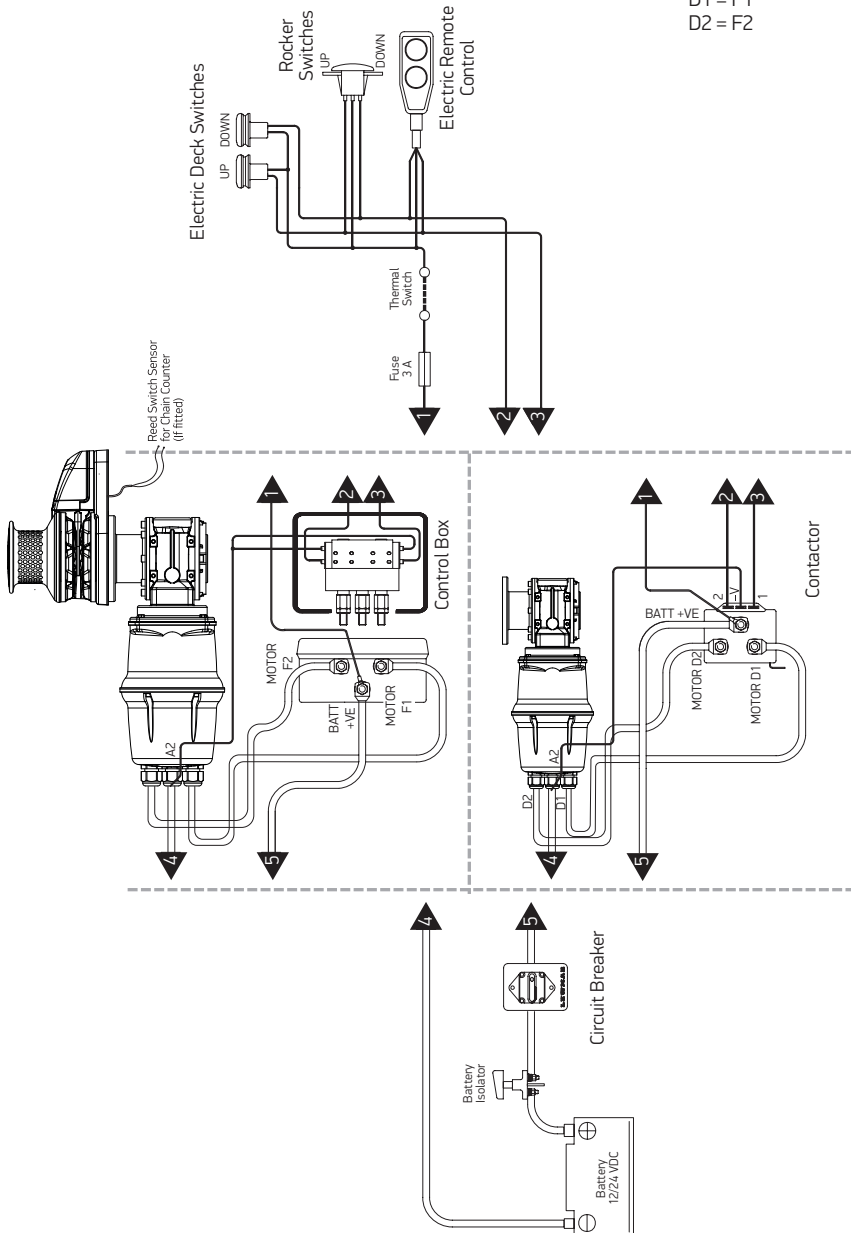
Installation instructions are supplied separately with any accessories.



4.9 VX2/3 Wiring diagram

Installation instructions are supplied separately with any accessories.

- 1. **NOTE:** Motor connections
D1 = F1
D2 = F2



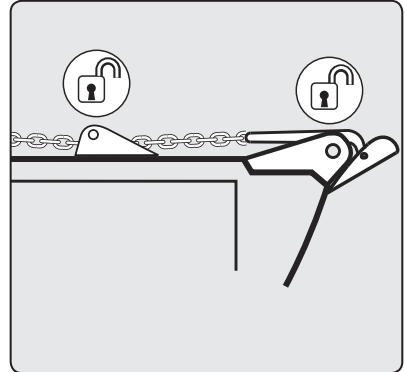
5. Operation

5.1 Braked anchor free-fall

Use this method for quicker anchor deployment and to save battery power.

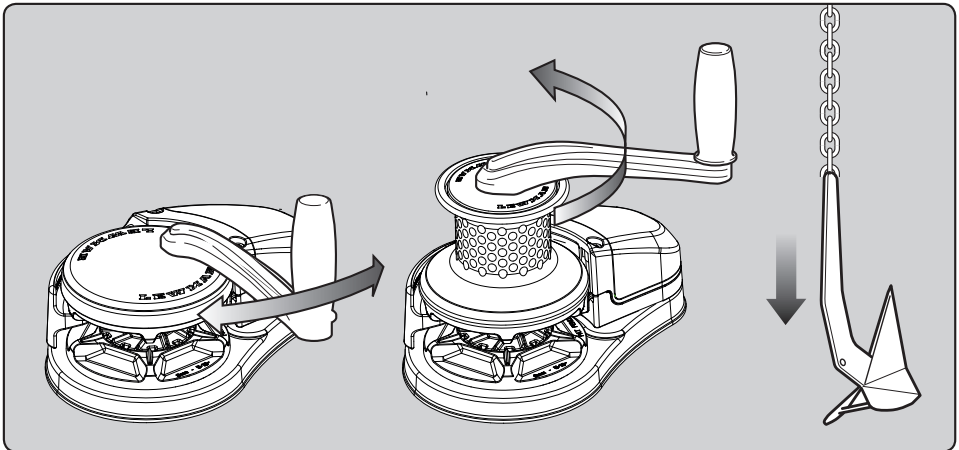
Gypsy only

- Release any anchor locks and when safe rotate handle anti-clockwise until anchor pays out.
- Adjust rate of fall with handle.
Once paid out fully tighten gypsy drive cap.



Gypsy/drum

- Place a Lewmar handle into the drum top nut and operate as gypsy version above.



⚠ WARNING! Isolate the windlass using circuit breaker/isolator.

⚠ WARNING! Always remove winch handle after use.

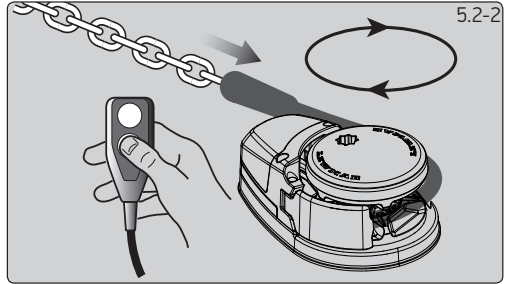
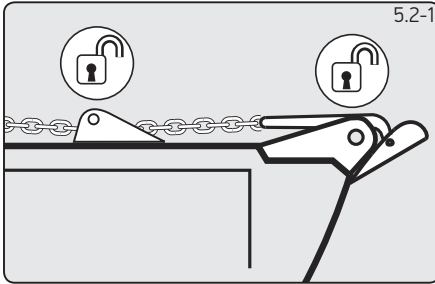
5.2 Power up/down

To release anchor.

1. Release any anchor locks.
2. When safe, operate DOWN control.

To retrieve anchor.

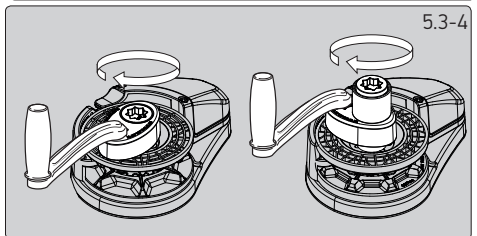
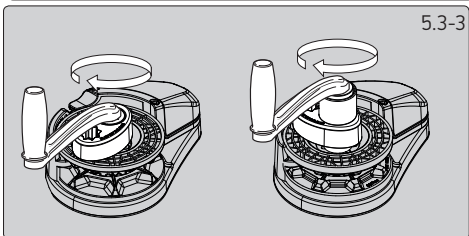
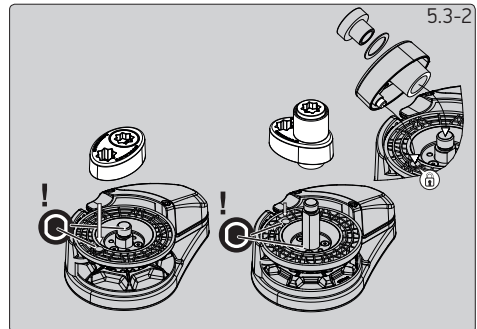
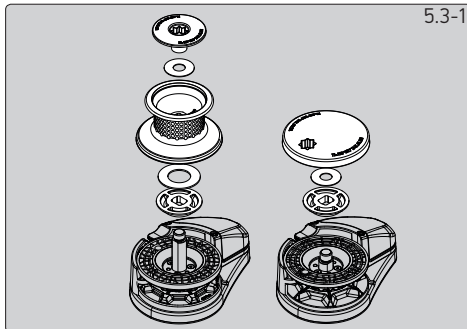
- Retrieving the anchor is the reverse to the above.
- When safe, operate the UP control.
- Once anchor is retrieved, ensure it is adequately secured to an independent strong point.



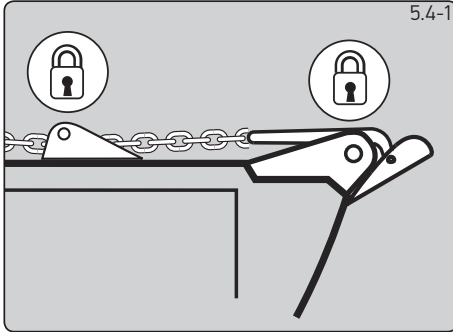
5.3 Optional manual recovery kits (VX2/3 ONLY)

- VX2/3 Gypsy No.66120009
- VX2/3 Gypsy/drum No.66120010

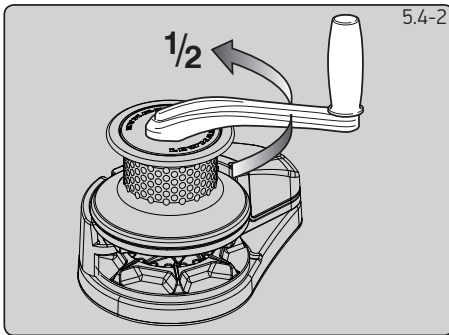
⚠ WARNING! Isolate the windlass using circuit breaker/isolator.



5.4 Independent warping



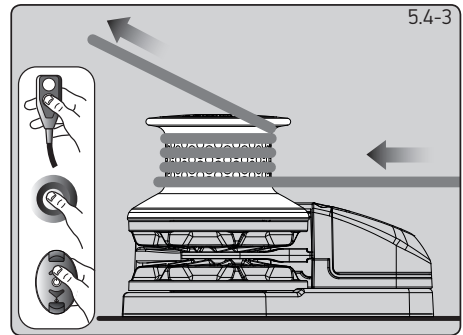
⚠ **WARNING!** Always remove winch handle after use.



Gypsy/drum only

1. Lock anchor chain before warping.
2. Place a Lewmar winch handle into top nut. Disengage clutch by turning anti-clockwise by half a turn. Remove handle.
3. When safe, operate the drum. If warping speed is too fast, ease tension in rope. When finished re-engage clutch by tightening the drum top nut.

⊘ **DO NOT** wrap chain around the capstan drum.



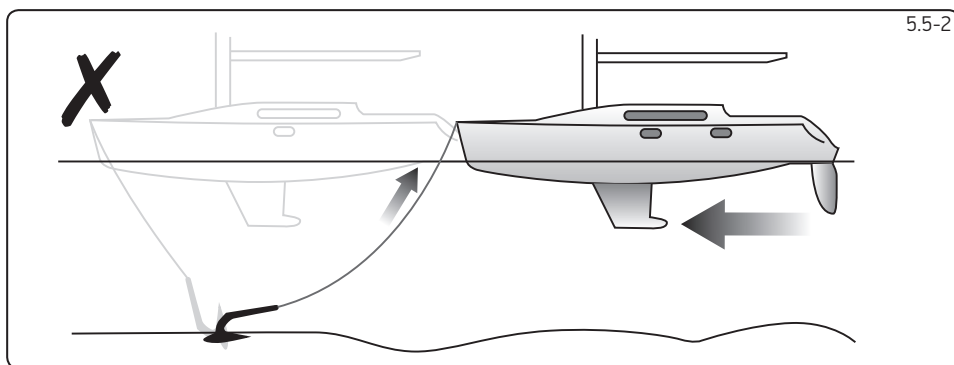
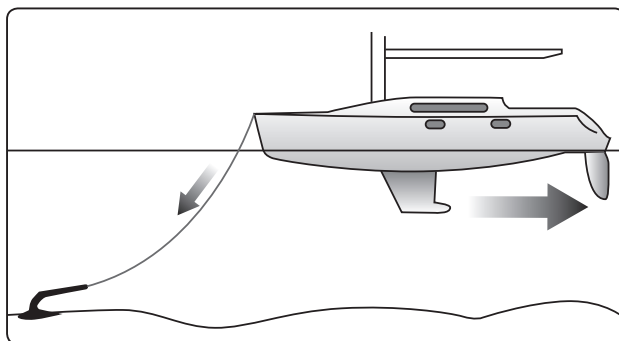
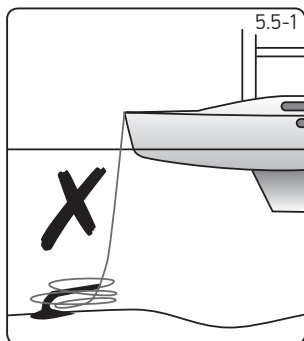
5.5 Operating tips

Vessels at anchor will snub on the rode and this can cause slippage or apply excessive loads to the windlass.

1. When anchoring, power rode out allowing the vessel to take up stern away preventing the rode tangling with anchor. Use this method for mooring stern first to a jetty.
 2. To aid recovery, under power, move vessel towards anchor but not over and beyond, as this can cause damage to topside.
- As anchor approaches the vessel, use careful adjustments of controls to avoid damaging vessel.
 - Scope: As a guide it is recommended that the depth of chain to rope is 7 to 1 at anchor.

⊘ The rode should be secured directly to a bollard, sampson post or cleat and a chain secured by a chain stopper.

⊘ When retrieving anchor do not overload or stall in windlass.



6. Servicing

⚠ WARNING! Ensure rode is adequately secured to an independent strong point.

⚠ WARNING! Isolate the windlass using circuit breaker/isolator.

6.1 Servicing schedule

Regularly:

- Wash down the windlass using fresh water.
- Examine all electrical connections for corrosion, clean and lightly grease.
- Check anchor locker drain to avoid water damage to motor/gearbox.
- If anchor locker fills with water, check motor is dry and free of rust.
- Check anchor rode splice for wear.
- Check gypsy as it is a high wear item and will last longer if properly used. When re-assembling the cone and gypsy, add a small smear of grease to the contact surfaces.
- Check mounting studs after first two or three recoveries and regularly thereafter.

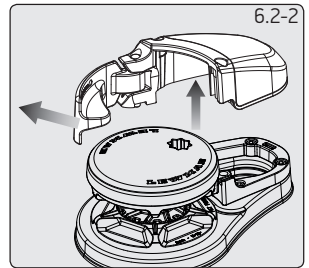
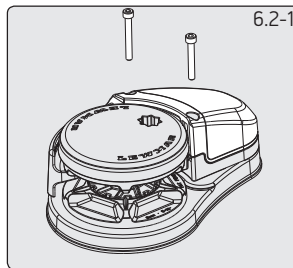
Annually:

- Check electric cables for damage. Repair/renew as required.
- Strip the above deck components, clean and lightly grease.
- Check motor/gearbox for corrosion, clean and repaint with a suitable marine grade oil based enamel paint.
- Remove electric motor cover and blow dust away from brushes using foot pump or similar taking care not to breathe any dust.

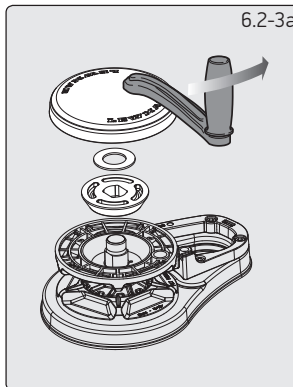
6.2 VX1-VX1L Gypsy replacement/service

⚠ WARNING! Isolate the windlass using circuit breaker/isolator.

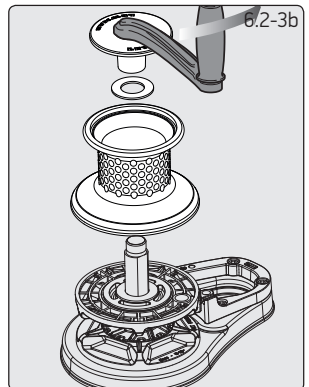
1. Remove chain cover screw using 4mm allen key
2. Pull control arm out and lift chain cover and control arm assembly from deck unit.



- 3a. **Gypsy only**
Using windlass handle remove top cap, washer and upper cone from shaft.

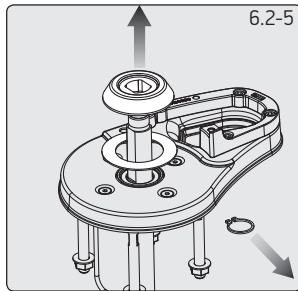
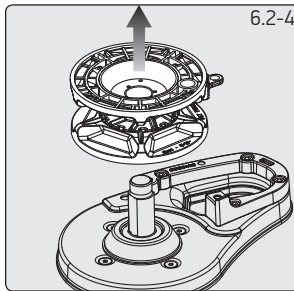


- 3b. **Gypsy/ drum**
Using windlass handle undo drum top cap and remove drum, drum washer, upper cone washer and upper cone from shaft



4. Remove gypsy from windlass

5. If replacing lower cone and washer (included in Gypsy replacement kit), remove the cone retaining circlip from the shaft and lift off the cone and washer from the windlass.



Assemble the new gypsy in reverse order, note that the part number engraved on the stripper ring should face upwards.

When re-assembling the cone and gypsy, add a small smear of grease to the contact surfaces.

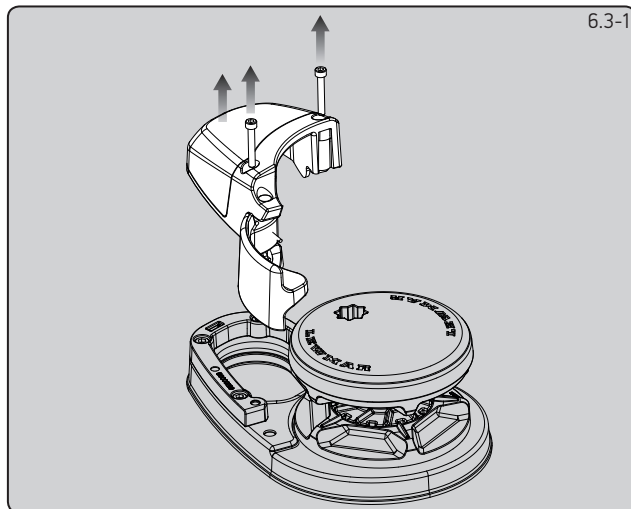
6.3 VX1 - VX1L Control arm replacement/service

VX1 & VX1L are factory fitted with control arms as standard. VX1 & VX1L come with a control arm that is captive with the unit cover.

Remove Chain cover, proceed as sec.6.3-1

1. Unscrew chain cover using a 4 mm Allen key.

- Remove control arm by releasing the t-clip on the hinge pin.
- Wash with clean water (Not Jetwash). Replace components, (if necessary) and assemble in reverse order.
- Grease spring on re-assembly



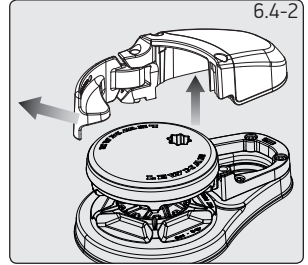
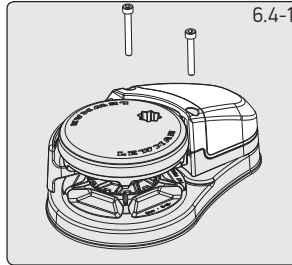
⚠ WARNING! Isolate the windlass using circuit breaker/isolator.

⚠ WARNING! Ensure rode is adequately secured to an independent strong point.

6.4 VX2/3 Gypsy replacement/service

⚠ WARNING! Isolate the windlass using circuit breaker/isolator.

1. Remove chain cover screw using 5mm allen key
2. Pull control arm out and lift chain cover and control arm assembly from deck unit.



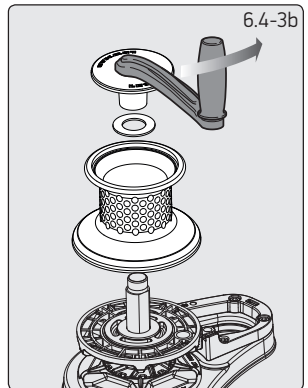
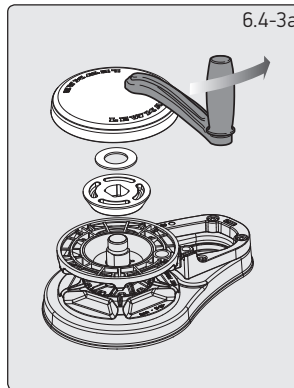
3a. Gypsy only

Using windlass handle remove top cap, washer and upper cone from shaft.

3b. Gypsy/ drum

Using windlass handle undo drum top cap and remove drum, drum washer, upper cone washer and upper cone from shaft.

4. Remove gypsy
5. Replace & re-assemble

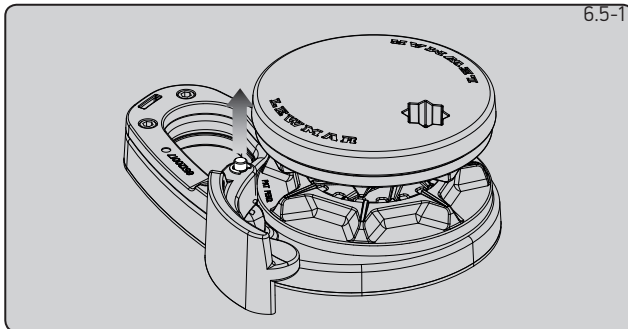


6.5 VX2/3 Control arm replacement/service

VX2/3 are factory fitted with control arms as standard.

Remove chain cover, proceed as sec.6.5-1.

1. Unscrew control arm shoulder screw using a 5 mm Allen key.
 - Remove control arm and torsion spring from the base plate.
 - Wash with clean water (Not Jetwash). Replace components, (if necessary) and assemble in reverse order
 - Grease spring on re-assembly

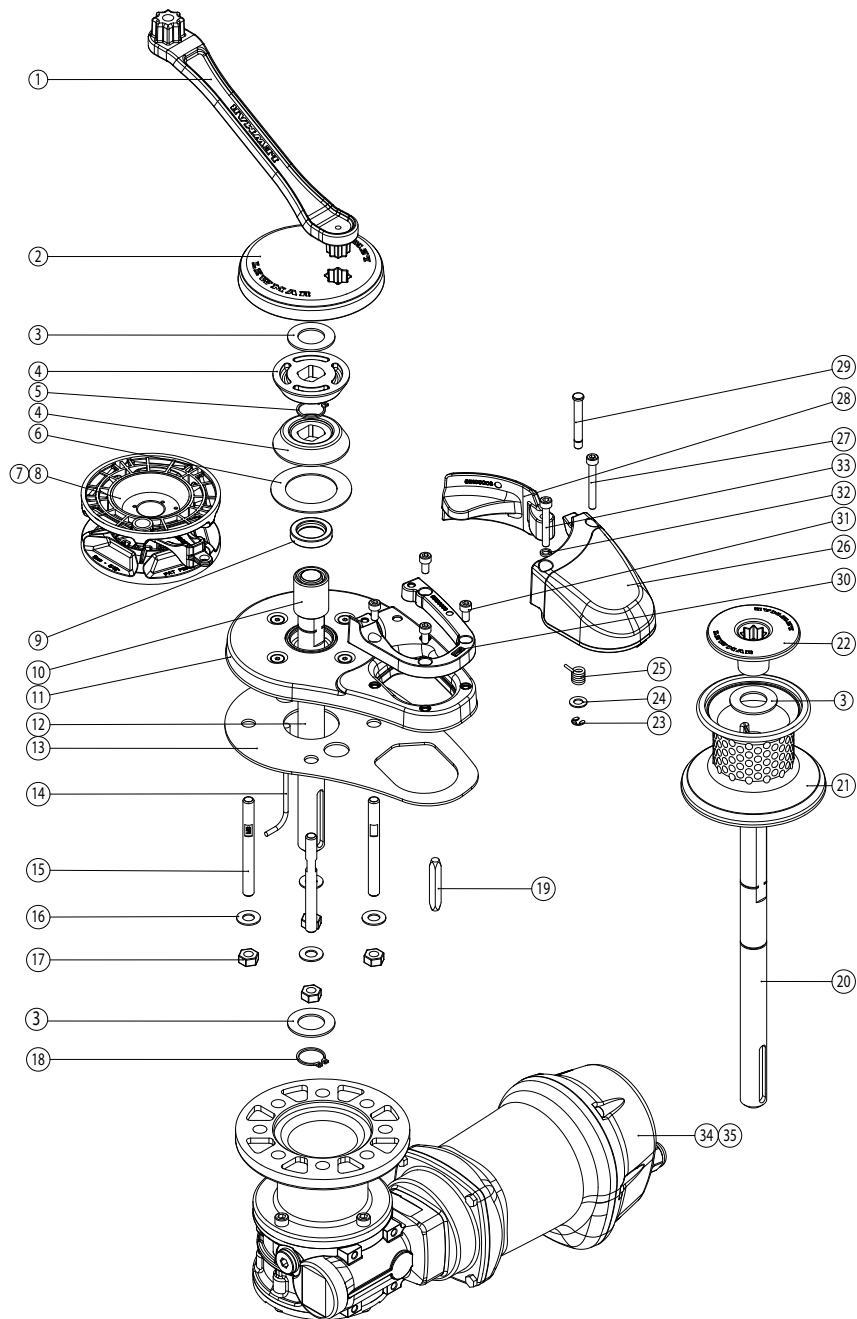


⚠ WARNING! Isolate the windlass using circuit breaker/isolator.

⚠ WARNING! Ensure rode is adequately secured to an independent strong point.

7. Parts List

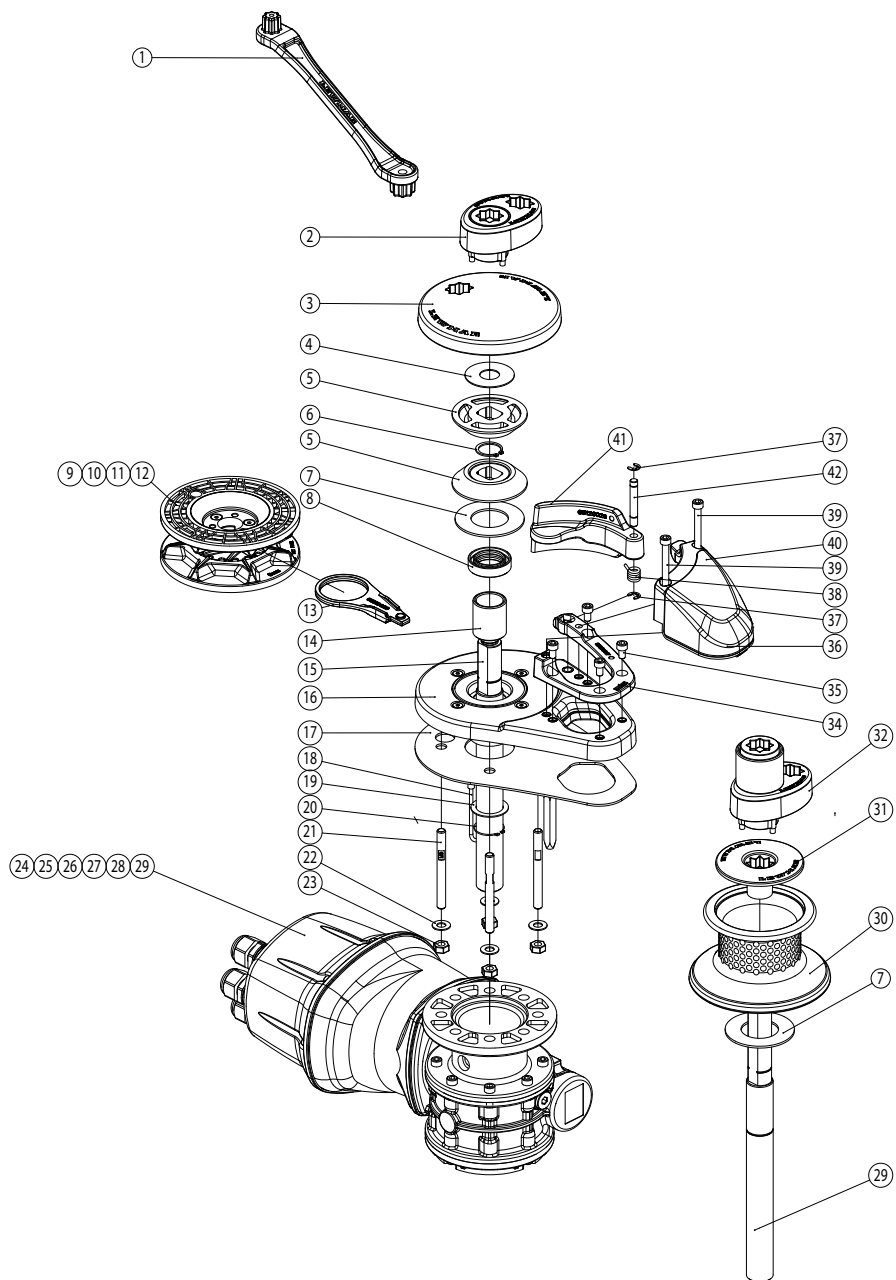
7.1 Parts list VX1



7.1 Parts list VX1

VX1 PARTS LIST		
KIT NO.	KIT DESCRIPTION	ITEMS INCLUDED (QTY.)
66000799	Windlass handle	1(1)
66100120	VX1 Gypsy Only top cap kit	2(1)
66100121	VX1 Base kit	9(1), 10(1), 11(1), 30(1), 31(4)
66100123	VX1 Chain cover and control arm kit	23(1), 24(1), 25(1), 26(1), 27(1), 28(1), 29(1), 32(1), 33(1)
66100124	VX1 Drum kit	3(1), 21(1), 22(1),
66100125	VX1 Gypsy Only drive kit	2(1), 3(1), 5(1), 12(1), 18(1), 19(1)
66100126	VX1 Gypsy Drum drive kit	2(1), 3(2), 5(1), 18(1), 19(1), 20(1), 21(1), 22(1)
66100127	VX1 Manual and kit	1(1), 13(1), 15(4), 16(4), 17(4)
68100033	VX1 8mm Gypsy Ⓢ stripper assembly	3(1), 4(2), 6(1), 7(1)
68100034	VX1 6/7mm ¼" Gypsy Ⓢ stripper assembly	3(1), 4(2), 6(1), 8(1)
68100035	VX1 12v 300W IP67 RMU40 M/GBOX	34(1)
68100036	VX1 12v 500W IP67 RMU40 M/GBOX	35(1)

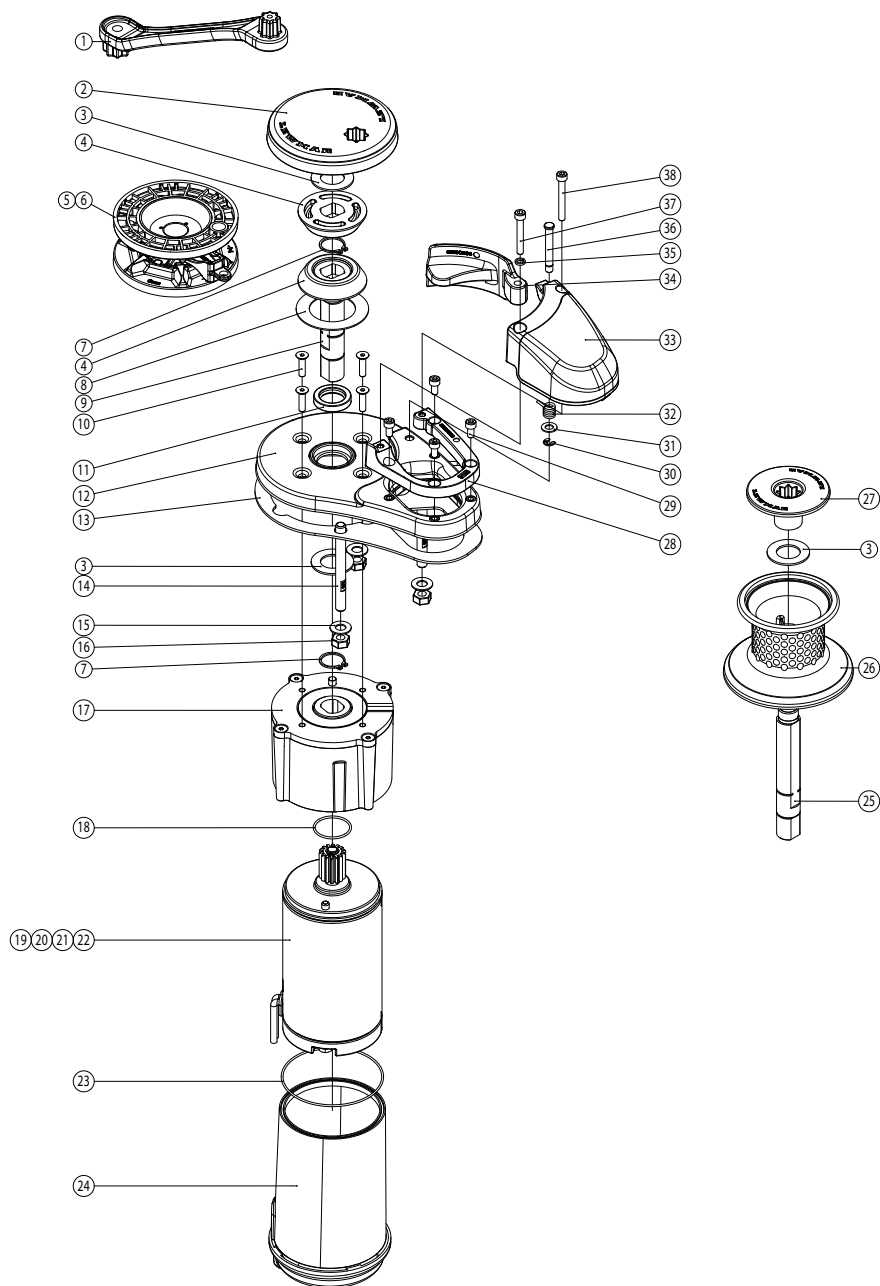
7.2 Parts list VX2/3



7.2 Parts list VX2/3

VX2/3 PARTS LIST		
KIT NO.	KIT DESCRIPTION	ITEMS INCLUDED (QTY)
66000799	WINDLASS HANDLE	1(1)
66120001	VX2/3 GO TOP CAP REPLACEMENT	3(1)
66120002	VX2/3 BASE KIT	8(1), 14(1), 16(1), 18(1), 34(1), 35(4), 37(1), 42(1)
66120003	VX2/3 CHAIN COVER KIT	39(2), 40(1)
66120004	VX2/3 CONTROL ARM KIT	37(2), 38(1), 41(1), 42(1)
66120005	VX2/3 DRUM KIT	7(1), 30(1), 31(1)
66120006	VX2/3 GYPSY ONLY DRIVE KIT	3(1), 6(1), 15(1), 19(1), 20(1)
66120007	VX2/3 DRUM DRIVE KIT	2(1), 2(1), 2(1), 2(1), 2(1), 2(1), 2(1), 2(1)
66120008	VX2/3 MANUAL Ⓢ KIT	1(1), 17(1), 21(4), 22(4), 23(4)
66120009	VX2/3 GO MANUAL RECOVERY RETAIL KIT	2(1)
66120010	VX2/3 GD MANUAL RECVOERY RETAIL KIT	32(1)
68120011	VX2/3 STRIPPER RING REPLACEMENT	13(1)
68120031	VX2 MOTOR G/BOX 700W 12v Sz50 IP ASSY	24(1)
68120032	VX2 MOTOR G/BOX 900W 24v Sz50 IP ASSY	25(1)
68120033	VX2+ MOTOR G/BOX 1000W 24v Sz50 IP ASSY	26(1)
68120034	VX2+ MOTOR G/BOX 1000W 12v Sz50 IP ASSY	27(1)
68120035	VX3 1500W 12v M/G-BOX	28(1)
68120036	vx3 MOTOR G/BOX 1500W 24v Sz50 IP ASSY	28(1)
68120040	GYPSY ASSY 6/7mm VX $\frac{2}{3}$ ST/ST	4(1), 5(2), 7(1), 9(1), 13(1)
68120041	GYPSY ASSY 8mm VX $\frac{2}{3}$ ST/ST	4(1), 5(2), 7(1), 9(1), 14(1)
68120042	GYPSY ASSY10mm DIN VX $\frac{2}{3}$ ST/ST	4(1), 5(2), 7(1), 9(1), 15(1)
68120043	GYPSY ASSY 10mm ISO VX $\frac{2}{3}$ ST/ST	4(1), 5(2), 7(1), 9(1), 16(1)

7.3 Parts list VX1L



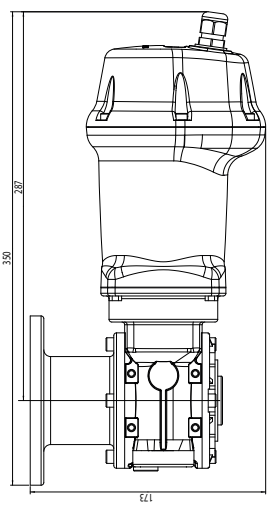
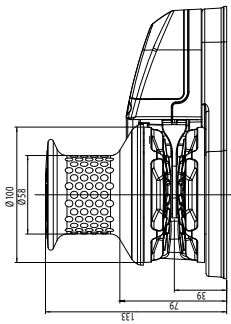
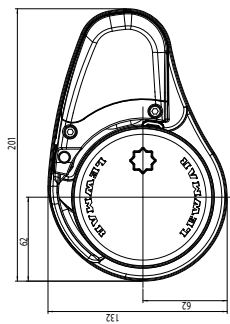
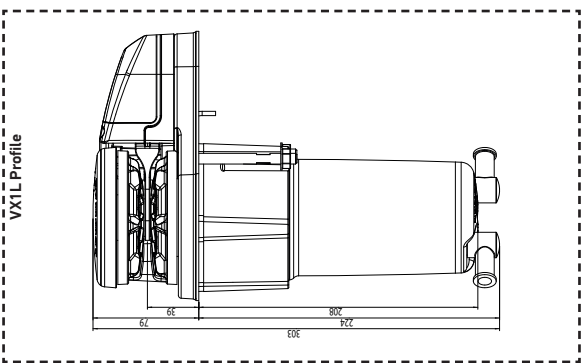
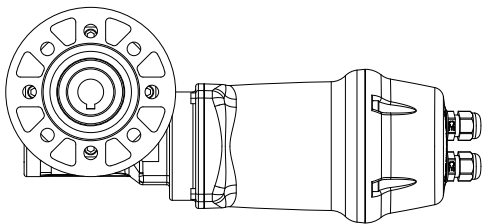
7.3 Parts list VX1L

VX1L PARTS LIST		
KIT NO.	KIT DESCRIPTION	ITEMS INCLUDED (QTY)
66000799	WINDLASS HANDLE	1(1)
66100120	VX1 GO TOP CAP KIT	2(1)
66100122	VX1L BASE UNIT	10(4), 11(1), 12(1), 28(1), 29(4)
66100123	VX1 CHAIN COVER ® C/ARM KIT	30(1), 31(1), 32(1), 33(1), 34(1), 35(1), 36(1), 37(1), 38(1)
66100124	VX1 DRUM KIT	3(1), 26(1), 27(1)
66100128	VX1L MANUAL AND KIT	1(1), 13(1), 14(3), 15(3), 16(3)
66100129	VX1L GO DRIVE KIT	2(1), 3(1), 7(2), 9(1)
66100130	VX1L GD DRIVE KIT	3(2), 7(2), 25(1), 26(1), 27(1)
66100135	VX1L 12v 500 M/G-BOX ASSY	17(1), 18(1), 19(1), 23(1), 24(1)
66100136	VX1L 24v 500 M/G-BOX ASSY	17(1), 18(1), 20(1), 23(1), 24(1)
66100137	VX1L 12v 800 M/G-BOX ASSY	17(1), 18(1), 21(1), 23(1), 24(1)
66100138	VX1L 24v 800 M/G-BOX ASSY	17(1), 18(1), 22(1), 23(1), 24(1)
66100139	VX1L/HX1 12v 500 MOTOR ASSY	19(1)
66100140	VX1L/HX1 24v 500 MOTOR ASSY	20(1)
66100141	VX1L/HX1 12v 800 MOTOR ASSY	21(1)
66100142	VX1L/HX1 24v 800 MOTOR ASSY	22(1)
68100033	VX1 8mm GYPSY ST/ST STRIPPER ASSY	3(1), 4(2), 5(1), 8(1)
68100034	VX1 6/7mm ¼" GYPSY ASSY ST/ST	3(1), 4(2), 6(1), 8(1)



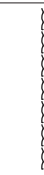

8. Specifications

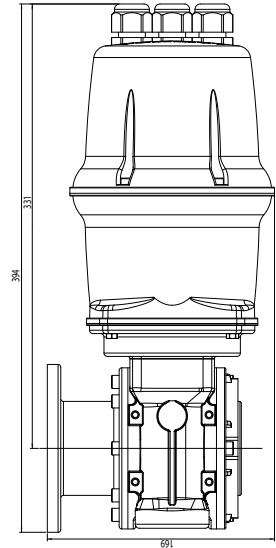
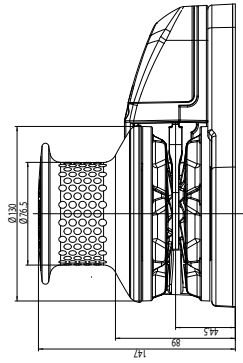
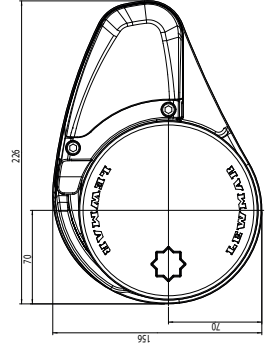
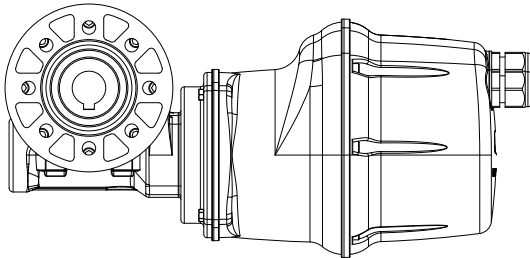
8.1 VX1 Dimensions

D (mm)	D (inch)	P (mm)	P (inch)	W (mm)	W (inch)
6	0.236	18	0.709	21.6	0.85
6 mm ISO 4565		18.5	0.728	20.4	0.803
6 mm Din766		21	0.826	23	0.905
7 mm ISO 4565		22	0.866	23.8	0.937
7 mm Din766		21.3	0.840	24.4	0.962
1/4" G40		22.1	0.870	25.2	0.992
1/4" BBB		8	0.315	24	0.945
8 mm ISO 4565		8	0.315	24	0.945
8 mm Din766		8.4	0.329	26.2	1.030
5/16" G40				29.7	1.168



8.2 VX2/3 Dimensions

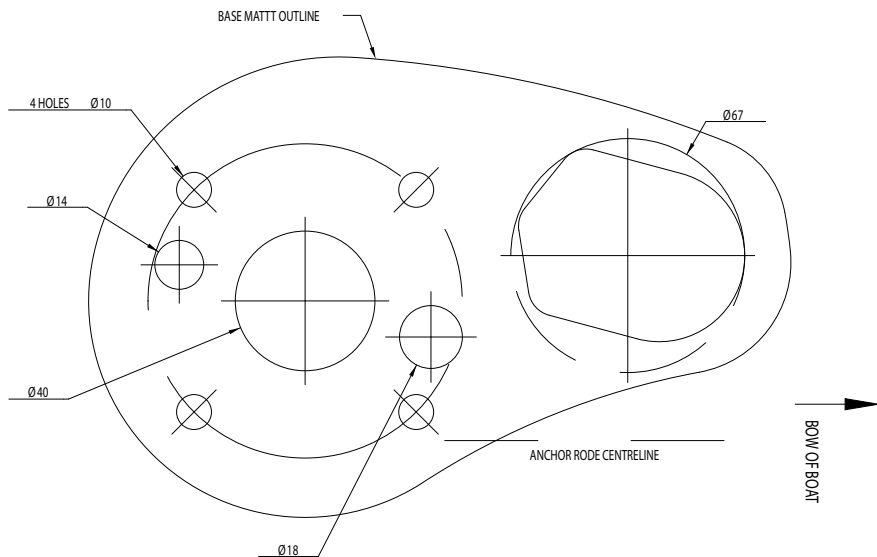
					D		P		W		
					(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	
68120040	12-16 mm (½ - ⅝") 3 Strand and 8 Plait	6 mm ISO 4565	6 mm Din766	7mm ISO 4565	7mm Din766	6	0.236	18	0.709	21.6	0.85
						6	0.236	18.5	0.728	20.4	0.803
						7	0.276	21	0.826	23	0.905
						7	0.276	22	0.866	23.8	0.937
						7	0.276	21.3	0.840	24.4	0.962
68120041	12-16 mm (½ - ⅝") 3 Strand and 8 Plait	¼" BBB	8 mm ISO 4565	5/16" G40	8 mm Din766	7.14	0.281	22.1	0.870	25.2	0.992
						8	0.315	24	0.945	28.8	1.134
						8.4	0.329	26.2	1.030	29.7	1.168
68120042	12-16 mm (½ - ⅝") 3 Strand and 8 Plait	8 mm DIN 766	Lewmar 9.5mm G40	5/16" Campbell S3	10 mm DIN 766	8	0.315	24	0.945	27.2	1.070
						9.5	0.374	28	1.102	32	1.260
						8	0.315	32	1.260	28	1.102
						10	0.394	29	1.142	35	1.378
						10	0.394	28	1.102	36	1.417
68120043	12-16 mm (½ - ⅝") 3 Strand and 8 Plait	Lewmar 9.5mm G40	5/16" Campbell S3	10 mm ISO 4565	10 mm ISO 4565	10	0.394	30	1.181	36	1.417
						9.5	0.374	28	1.102	32	1.260



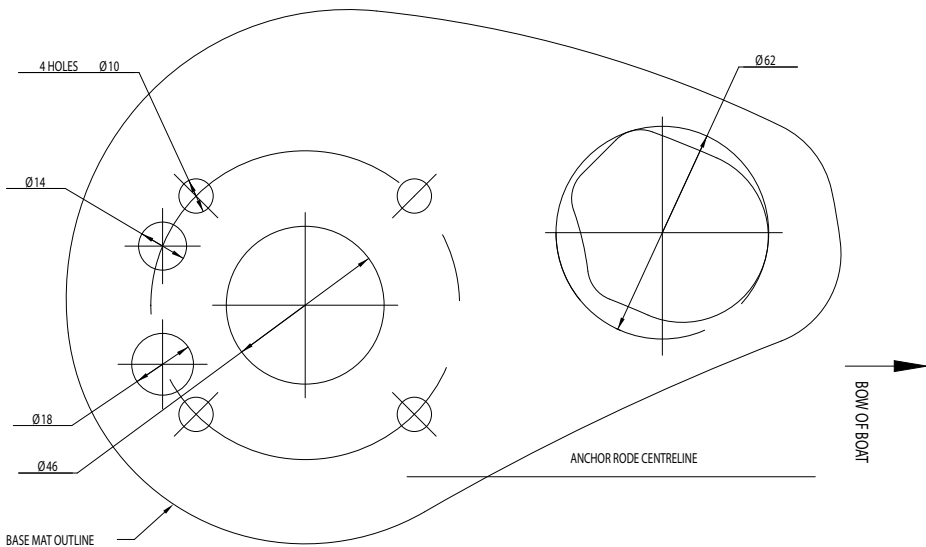
8.3 Deck template guide

⊘ DO NOT use this template as a cutter. It is supplied as a guide only. Check before drilling holes.

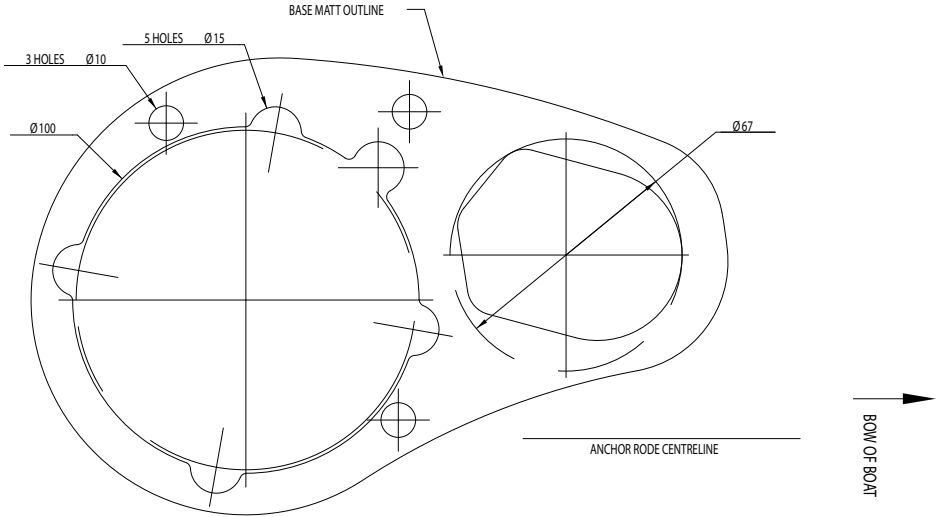
VX1 Deck Mounting Detail



VX2/3 Deck Mounting Detail



VX1L Deck Mounting Detail



8.4 Electric specifications

MODEL	POWER OPTION	MOTOR	TYPICAL MAX. PULL		MAXIMUM LINE SPEED		TYPICAL WORKING LOAD	
	V	W	KG	LB	M/MIN	FT/MIN	KG	LB
VX1	12	300	400	882	25	82	100	220
VX1	12	500	675	1488	25	82	169	373
VX1L	12	500	650	1433	20	60	160	352
VX1L	12	800	920	2028	21	63	230	507
VX2	12	700	850	1874	29	95	213	470
VX2	24	900	850	1874	29	95	213	470
VX2+	12	1000	1025	2260	39	128	257	567
VX2+	24	1000	1025	2260	39	128	257	567
VX3	12	1500	1175	2590	40	131	294	648
VX3	24	1500	1175	2590	40	131	294	648

*Values tested at +/- 10% on 12/24V system typical of electric systems installed on boats

MODEL	CURRENT DRAW AT WORK LOAD	TOTAL WEIGHT GYPSY ONLY		TOTAL WEIGHT GYPSY/DRUM		CIRCUIT BREAKER
	A	KG	LB	KG	LB	A
VX1	66	12.5	28	13.5	30	50
VX1	126	12.5	28	13.5	30	90
VX1L	56	6.0	13.5	7.0	15.4	50
VX1L	80	6.0	13.5	7.0	15.4	70
VX2	120	13.9	31	14.9	33	90
VX2	60	13.9	31	14.9	33	50
VX2+	131	16.1	35	17.1	38	110
VX2+	74	16.1	35	17.1	38	90
VX3	132	16.1	35	17.1	38	110
VX3	70	16.1	35	17.1	38	90

9. Trouble shooting

9.1 Electric windlass

1. Anchor rode pays out independently while windlass is not in use.

This problem is a result of not securing the anchor rode combined with the gypsy drive cap being slack. Tighten the gypsy drive cap using the winch handle and always secure the anchor rode independently of the windlass when not in use.

2. Failure to operate or sluggish operation.

- The majority of these problems are electrical in nature. It is essential that the proper voltage be maintained. The proper voltage on a 12 Volt system is 13.5 Volts (24 Volt system is 26.5 Volts), constant low voltage will damage motor.
- Ensure electrical cable size is large enough to handle the current draw and keep voltage drop within acceptable limits.
- Check control switches, connections, battery condition, isolator switch, fuse and motor for operation failure.

10. Warranty

Limited Warranty and Key Terms of Supply by Lewmar

Lewmar warrants that in normal private pleasure boat usage and with proper maintenance its products will conform with their specification for a period of three years from the date of purchase by the end user, subject to the conditions, limitations and exceptions listed below. Any product, which proves to be defective in normal usage during that three-year period, will be repaired or, at Lewmar's option, replaced by Lewmar.

A CONDITIONS AND LIMITATIONS

- i Lewmar's liability shall be limited to the repair or replacement of any parts of the product which are defective in materials or workmanship.
- ii Responsibility for the selection of products appropriate for the use intended by the Buyer shall rest solely with the Buyer and Lewmar accepts no responsibility for any such selection.
- iii Lewmar shall not be liable in any way for Product failure, or any resulting loss or damage that arises from:
 - a. use of a product in an application for which it was not designed or intended;
 - b. corrosion, ultra violet degradation or wear and tear;
 - c. a failure to service or maintain the product in accordance with Lewmar's recommendations;
 - d. faulty or deficient installation of the product (unless conducted by Lewmar);
 - e. any modification or alteration of the product;
 - f. conditions that exceed the product's performance specifications or safe working loads.
- g. Abuse
- iv Product subject to a warranty claim must be returned to the Lewmar outlet that supplied the product for examination unless otherwise approved by Lewmar in writing.
- v This warranty does not cover any incidental costs incurred for the investigation, removal, carriage, transport or installation of product.
- vi Service by anyone other than authorized Lewmar representatives shall void this warranty unless it accords with Lewmar guidelines and standards of workmanship.
- vii Lewmar's products are intended for use only in the marine environment. 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 use.

B EXCEPTIONS

Cover under this Warranty is limited to a period of one year from the date of purchase by the end user in the case of any of the following products or parts of products:

- Electric motors and associated electrical equipment
- Electronic controls
- Hydraulic pumps, valves and actuators
- Hatch & Portlight weather seals
- Products used in "Grand Prix" racing applications
- Products used in commercial or charter applications
- Anchor rodes

C LIABILITY

i Lewmar's liability under this warranty shall be to the exclusion of all other warranties or liabilities (to the extent permitted by law). In particular (but without limitation):

a. Lewmar shall not be liable for:

- Any loss of anticipated turnover or profit or indirect, consequential or economic loss;
- Damages, costs or expenses payable to any third party;
- Any damage to yachts or equipment;
- Death or personal Injury (unless caused by Lewmar's negligence).

Some states and countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you

b. Lewmar grants no other warranties regarding the fitness for purpose, use, nature or satisfactory quality of the products.

ii Where applicable law does not permit a statutory or implied warranty to be excluded, then such warranty, if permitted by that state or country's law, shall be limited to a period of one year from the date of purchase by the end user. Some states and countries do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you.

D PROCEDURE

Notice of a claim for service under this warranty shall be made promptly and in writing by the end user to the Lewmar outlet that supplied the product or to Lewmar Limited at Southmoor Lane, Havant, Hampshire PO9 1JJ, England.

E SEVERANCE CLAUSE

If any clause of this warranty is held by any court or other competent authority to be invalid or unenforceable in whole or in part, the validity of the remaining clauses of this warranty and the remainder of the clause in question shall not be affected.

F OTHER RIGHTS

This warranty gives you specific legal rights, and you may also have other legal rights, which vary from state to state and country to country.

In the case of European States a Consumer customer (as defined nationally) has legal rights under the applicable national law governing the sale of Consumer Goods; this Warranty does not affect those rights.

G LAW

This warranty shall be governed by and read in accordance with the laws of England or the state or country in which the first end user is domiciled at the time of purchase of the product.

H DISPUTES

Any dispute arising under this warranty may, at the option of the end-user, be referred to alternative dispute resolution under the rules of the British Marine Federation or to the Courts of the State whose law shall govern the warranty or to the Courts of England and Wales.

The British Marine Federation may be contacted at Marine House, Thorpe Lea Road, Egham, England, TW20 8BF

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