# VERTICAL INLINE CAPSTAN

# VC912

# OPERATING & INSTALLATION INSTRUCTIONS

*(MUST BE READ PRIOR TO INSTALLATION AND OPERATION)*

# Contents

## INTRODUCTION

Thank you for choosing a Windlass. We go to great lengths to develop anchoring systems that not only meet all your requirements for safety and reliability, but also ensure that our products are designed with style and finish that enhances the aesthetics of your vessel. With our commitment to quality and the use of superior materials and processes we know you will be pleased with your investment, and that many years of trouble-free installation, operation and maintenance your new Windlass will give you years of trouble-free performance.

## IMPORTANT INFORMATION

To avoid damage to the capstan cover when lowering the anchor, it is recommended that you mark the capstan at approximately 3 meter intervals on the anchor rode to indicate the anchor position.

Under no circumstances should the windlass be used as a mooring bitts or towing bitts.

## SAFE OPERATION

- Ensure that hands, feet, hair and clothing are kept clear of the windlass and other moving parts when in operation.
- The windlass should never be used for lifting people or stores.
- Do not use a capstan as a substitute for winching, towing or tying vessel.

## INSTALLATION INSTRUCTIONS

Locate the capstan in a suitable position on the deck so that it is not in the way when anchoring and easily accessible from the bitts. There is working room and you can let the line comfortably.

Ensure that there is sufficient room for the electrical cables to the winch underneath the deck.

If the deck is angled or curved an adequately sized mounting deck will be required to spread the load evenly over the deck surface and mount the windlass level and securely. The mounting deck thickness and the thickness of the deck above and below deck may be required to mount the winch. Mark the chosen mounting deck (if required) and the deck like the layout template in the instructions and mark the holes and mark out the holes.

Apply an appropriate sealant to the base plate and mounting bolts (Teflon tape, sealant, etc.) before tightening. Use a Aluminum or Stainless nut washers. It is recommended to use the capstan with a rubber gasket to avoid corrosion. Insulate cables below deck with the mounting bolts nuts and washer. Where the deck consists of fiberglass sandwich construction, plywood stiffeners or cast iron bolt should be fitted to the underside of the deck to spread the load. Install and tighten mounting bolts.

For recommended fastener sizes please review electrical section.

## HANDY HINTS

Ensure sufficient room to run stainless cables to the capstan winch. Follow installation instructions above regarding underdecks fitting, alignment, mounting deck and sealing procedures.

Position the capstan cable chocking device in the pulpit before mounting cable on to your deck.

## TECHNICAL DETAILS

| | |
|---|---|
| Motor | [illegible] |
| Capstan | [illegible] |
| Base Plate | [illegible] |
| Gearbox | [illegible] |
| Deck Studs | [illegible] |
| Weight | [illegible] |
| Rotation | [illegible] |
| Brake | [illegible] |
| Cable Size | [illegible] |
| Accessories | [illegible] |
| Winch Rating | [illegible] |

## ELECTRICAL

See Wiring Diagrams for wiring instructions.

Circuit breaker (If required)

If the winch which is overcurrent protected, the circuit breaker automatically cut off power to the winch and protects the wiring and motor. The circuit breaker should not be used as an isolating switch for safety reasons. It is a circuit breaker manually reset and should not be used as an isolator.

Deck Switches are best located to either port or starboard on the deck where they are easily reached with your hand or knee, preferably where you can view the winch and chain during [illegible].

Isolating Switch should be fitted in an accessible location for safety. Ideally it should be located close to the isolating switch but not a circuit breaker.

Batteries are best located as close as practicable to the winch as possible. Longer cable runs will reduce the voltage drop at the motor and the heat generated when operating the winch. Short cable runs minimise voltage drop considerably. Use the following table as a guide to your minimum wire size. (based on 12V, 24 V, 36 V)

| Distance (one battery to motor) (m) | | |
|---|---|---|
| < 3 | [illegible] | |
| 3 – 13 | [illegible] | [illegible] |
| 13 – 18 | [illegible] | [illegible] |

| Cable Size (mm²) | AWG |
|---|---|
| [illegible] | 5 |
| [illegible] | 2 |
| [illegible] | 1/0 |

| Cable Core Diameter (mm) | |
|---|---|
| 7 | [illegible] |
| 8 | [illegible] |
| 9 | [illegible] |

**Solenoid Installation**

We recommend that the solenoid is installed in an upright position, where it will be exposed to sea water and in close proximity to the winch. [illegible] of the winch.

For wiring information, please refer to www.lofrans.com/schematic

| WINCH MODEL | MOTOR SIZE | MOTOR CYCLE |
|---|---|---|
| [illegible] | [illegible] | 2 POLE |

## OPERATING INSTRUCTIONS

It is advisable to 'shock' the anchor and or the chain/rope (17 and 5 metre [illegible] & [illegible]) intervals which will smooth the rope/chain bunching when the anchor is stowed.

Anchoring: Slow the vessel down as you reverse the boat. This allows the anchor and chain to lay out properly on the sea bed. Lower the anchor until the rope is taut and/or you are in the right position, once there it is recommended to tie off the rope to a stern or bow bollard, or use a snubber.

Take the rope/chain around the capstan drum and the winch and simply wind up a few turns. The capstan or the winch drum will take the rope/chain in the clockwise direction. Maintain a light 'trailing' pull on the free end and start the capstan. As the capstan winds, lightly pull the line hand over hand keeping up with the speed of the winch. The capstan does all the hard work for you. Stop and [illegible] only. **Do not use your hands or feet on the anchor side of the capstan drum to adjust the rope as it may become caught and entangled in the winch drum.**


When recovering your anchor, just start the engine. In strong winds or tides or in deep water, use a little engine power to assist the winch or capstan. Use the capstan power to assist the winch and control the speed of the anchor and chain. Use the combination as shown in the diagram to do the repeatable start/stop. If the anchor sticks, use a little engine power and the weight of the boat to break free.

As the anchor comes in over the bow, the chain/rope and anchor will be dragged in by the winch. Generally, with the bulk of the chain/rope stowed in the anchor locker, allow the anchor to swing up over the roller and hang light, pulling excessive load on the bow roller, which can damage the deck. When the vessel is moored and anchoring overnight or longer, it is recommended to use the capstan as a mooring bollard. Secure the rope around a cleat or bollard, once it is tidied to take the load.

## MAINTENANCE AND SERVICING

### Servicing

[illegible] remove the screw from the end of the coupling [illegible] and lift it off.

Lightly grease the splines [illegible] underneath the drum.

Inspect the gearbox [illegible] in the capstan [illegible] and lightly brush.

The motor is made of steel and may corrode if the paint system is damaged.

Check the motor regularly and keep it dry and clean.

[illegible] spray the motor regularly with a water sealant (CRC or WD40).

In damp or "wet" [illegible] where oil or [illegible] corrosion [illegible] the motor [illegible] regularly with CRC "boil seal" or similar.

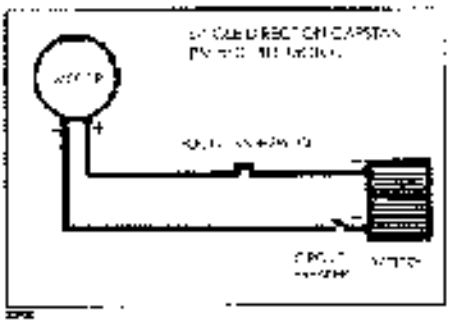
Check all bolts in the screen and protection [illegible] above.

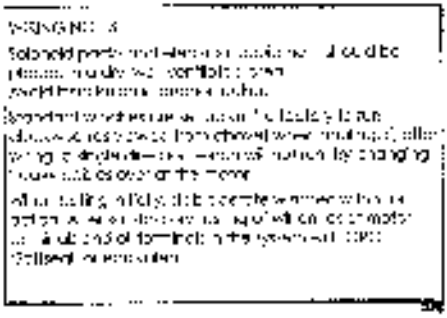
[illegible] Check all vessels are supplied [illegible] more frequently.

### Line Care

The winch [illegible] designed to run on [illegible] the winch has been specially treated with [illegible] coherent [illegible] prevent [illegible] from [illegible]. It is recommended to soak your rope in fresh water remaining [illegible] every 3 months.

## ELECTRICAL DIAGRAM/SCHEMATIC



**ATTENTION !**

VC912 Capstan will ONLY work in clockwise direction.

Always connect Positive (+) Terminal on the Battery to the Positive (+) Terminal on VC912 Electric Motor.
Always connect negative (-) Terminal on the Battery to the negative (-) Terminal on VC912 Electric Motor.

If wired incorrectly it will damage the Electric Motor and VOID the Warranty

**CORROSION PROTECTION - for long life** (general notes for all winches).

The motor and some underdeck parts of your winch are manufactured from marine plus stainless steel specially protected from the marine environment. Paint or other protection systems are applied on the manufacturer, but additional protection and regular inspection is necessary after installation.

Connection after installation: Well, you know the drill. The wiring diagram is provided. Reversing winches have the 3 forward terminals and normal models. Before only when connecting the unit and wire cross-connections. Observe polarity indicated by cable colour. Check all terminals and fastenings are firmly secured. Coat all unused terminals and terminals with CRC "Solvent", or equivalent to prevent corrosion. Control equipment should have protection in the possibility such as the main switch, but if necessary, control equipment should have protection too.

Service: Regular Check winch and movement parts regularly for signs of corrosion and take necessary action immediately. Above all, there is no maintenance required, including cleaning, greasing/oiling parts. Problems usually with the winch. If one cycles (where fitted) are found to be released, it may not give enough the gears to turn or will be hard to turn or jammed. When the clutch has locked, a very light spray with CRC 2-26 will help prevent it from sticking.

WARNING: Motor cases, previous assembly should never be removed in following installation. Any tampering has voided with a leading connection and warranty may be void. If any tools broken, the motor is suspected during the warranty period. DO NOT remove any parts or attempt repairs, but the complete unit to the factory or supplier with evidence of purchase and detail of problem experienced.

FAILURE OF WARRANTY due to improper installation is not covered by warranty.