

Verricelli Orizzontale

Horizontal Windlasses

MANUALE DI INSTALLAZIONE E D'USO - INSTALLATION AND USER'S MANUAL
MANUEL D'INSTALLATION ED D'UTILISATION - MANUAL DE INSTALACIÓN Y USO
INSTALLATION UND BEDIENUNG

CONSERVARE QUESTO MANUALE A BORDO
STORE THIS MANUAL ON BOARD
DIESES HANDBUCH AN BORD AUFBEWAHREN
GUARDAR ESTE MANUAL A BORDO

LION 1000 - Cayman 88 - Tigres - Falkon

UK

LION 1000

3
Years Limited
Warranty
*

Tigres

Cayman 88

Falkon

Lofrans[®]
WINDLASSES
THE ORIGINAL WINDLASS



Via Philips, 5 - 20052 Monza (MB) (Italy)
www.lofrans.com - e-mail: contact@lofrans.com



Dear Customer,

Thank you for choosing a Lofrans' product. Lofrans' is a leader company in the production and worldwide distribution of nautical systems manufactured according to the most modern technologies, in compliance with international regulation requirements and the most important certifying bodies. All our products are manufactured with excellent materials suited for operations in marine environments and are subject to continuous checks to improve the qualitative levels and make them without any manufacturing defects. Together with such requirements, Lofrans' anchor windlasses are a synthesis of reliability and efficiency, by guaranteeing the maximum performances during each phase of mooring, even in the most difficult. With a Lofrans' product, years of reliable operations are guaranteed.

Lofrans'©copyright, 2023. All rights reserved.

Lofrans' declines any liability for possible inaccuracies due to print errors in this manual and reserves the right to introduce any changes deemed appropriate.

For this reason, Lofrans' does not guarantee the accuracy of the manual after the date of issue and declines all liability for possible errors and omissions.

TABLE OF CONTENTS

| | | | |
|---|-----------|---|-----------|
| 1 INTRODUCTION _____ | 3 | 6 MAINTENANCE _____ | 12 |
| 1.1 Purpose of the manual _____ | 3 | 6.1 Maintenance programme _____ | 12 |
| 1.2 Assistance _____ | 3 | 6.2 Gipsy maintenance/replacement _____ | 13 |
| 1.3 Receipt and storage _____ | 3 | | |
| 2 SAFETY INFORMATION _____ | 3 | 7 TROUBLESHOOTING _____ | 13 |
| 3 INSTALLATION _____ | 4 | 8 TECHNICAL DATA _____ | 16 |
| 3.1 Contents of the package _____ | 4 | 9 SPARE PARTS _____ | 18 |
| 3.2 Equipment necessary for installation _____ | 4 | 10 OVERALL DIMENSIONS _____ | 26 |
| 3.3 Recommended accessories _____ | 4 | 11 WARRANTY CONDITIONS _____ | 30 |
| 3.4 General requirements for installation _____ | 4 | 11.1 Conditions and limits _____ | 30 |
| 3.5 Prevention from electrolysis _____ | 5 | 11.2 Exceptions _____ | 30 |
| 3.6 Deck installation _____ | 5 | 11.3 Liability _____ | 30 |
| 4 ELECTRICAL SYSTEM _____ | 6 | 11.4 Procedure _____ | 30 |
| 4.1 Electrical cable section _____ | 6 | 11.5 Clause of Termination _____ | 30 |
| 4.2 Solenoid valves (Control Box) _____ | 6 | 11.6 Compliance _____ | 30 |
| 4.3 Circuit breakers _____ | 6 | | |
| 4.4 Remote control electric panel board _____ | 6 | | |
| 4.5 Protection of electrical components _____ | 6 | | |
| 4.6 Wiring diagram _____ | 7 | | |
| 5 USE OF THE WINDLASS _____ | 10 | | |
| 5.1 Lowering the anchor _____ | 10 | | |
| 5.1.1 Lowering the anchor Electrically _____ | 10 | | |
| 5.1.2 Lowering the anchor by gravity _____ | 10 | | |
| 5.2 Weighing the anchor _____ | 11 | | |
| 5.3 Use of the manual override _____ | 11 | | |
| 5.4 Use of the warping drum _____ | 11 | | |
| 5.5 Notes for use _____ | 12 | | |

1 INTRODUCTION

1.1 Purpose of the manual

This manual will supply information on safety and correct use of the product. Follow these warnings carefully to avoid possible accidents or damages.

DANGER!

A warning such as this indicates the existence of a serious risk that has high probabilities to cause death or a serious accident if appropriate precautions are not taken.

ATTENTION!

A warning such as this indicates a reference to the application of safety practices, or draws the attention on unsafe behaviours that might cause personal injuries or damages to the boat.

1.2 Assistance

The Lofrans' products are backed throughout the world by a network of authorised distributors and assistance. In case of need, please contact your local Lofrans' distributor. Details on website www.lofrans.com

1.3 Receipt and Storage

Upon receipt of the package, verify the integrity of packing. Should it be necessary to store the product for a prolonged period, keep it in a dry and protected place.

2 SAFETY INFORMATION

Safety standards and certifying bodies require peremptorily that, during the standing of the anchor, the load must be held by a chain stopper or a high resistance fixing point.

The user is responsible for guaranteeing that during navigation the anchor is properly stowed and fixed. This precaution is more important when the navigation speed is higher and sea conditions are worse. Indeed, an anchor paid out by mistake during navigation can have very serious effects. Considering its position and not always frequent use, the anchor windlass is particularly exposed to oxidation and corrosion risk; therefore, it is necessary to arrange a constant inspection of its parts and a due maintenance.

Make sure to have read and understood every part of this manual before proceeding with installation and use. Only persons who know how to operate should be authorised to use the anchor windlass. Should there be doubts on its installation or use, refer always to a skilled consultant.

- Anchor windlasses used in an appropriate way can cause damages to persons and/or things.
- Pay the utmost attention during the use of powerful equipment.
- Do not put your hands near the windlass when there is power on the unit.
- Even the most careful use can be a source of damages, even serious.
- Lofrans products are supplied exclusively for recreational nautical use. Lofrans declines all responsibility for improper uses.
- Pay the utmost attention so that arms, legs, fingers, hair, and clothes do not get entangled in the chain or gipsy.
- Before operating the capstans, make sure that there are no persons in water in the vicinity.
- When the capstan is not used, the anchor must always be fixed to a solid point in order to avoid damages.
- The anchor windlass must never be used as mooring point. The load must always be held by a specific leat or solid point.
- The capstan must not be used for functions other than paying out or weighing the anchor.
- The chain must never be used on the warping drum.
- The system must always be protected by a suitable circuit breaker.
- Disconnect always the circuit through the circuit breaker when the anchor windlass is not in use.

3 INSTALLATION

3.1 Contents of the package

In addition to the present manual, the package contains:

- ✓ Anchor windlass
- ✓ Control box
- ✓ Handle

3.2 Equipment necessary for installation

- ✓ Drill
- ✓ 10 mm bit for wood and steel
- ✓ 10 mm., 13 mm., and 17 mm. hexagon keys

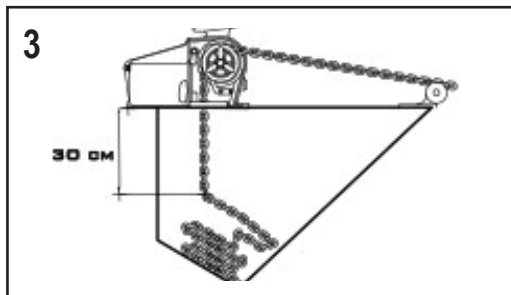
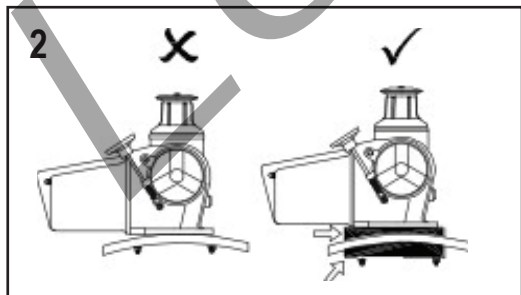
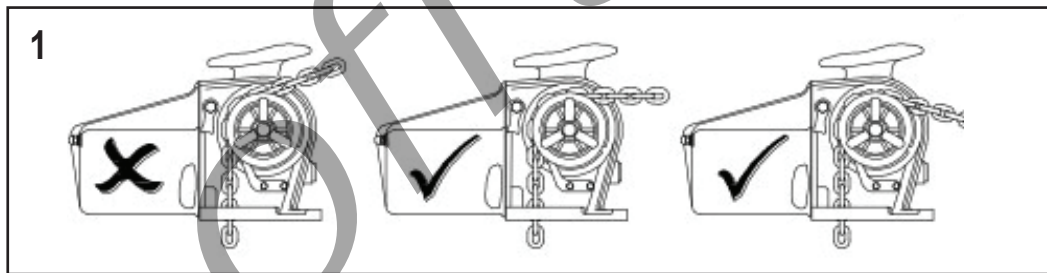
3.3 Recommended accessories

Use exclusively original Lofrans accessories and spare parts, designed and manufactured to ensure performances, duration and for keeping valid the warranty. For information on available spare parts, contact your local reseller or visit website www.lofrans.com.

3.4 General requirements for installation

In order to operate the anchor windlass correctly, it must be installed to meet the following conditions:

- 1 ± Bow roller height: it must be such to guarantee a chain inclination lower than 90 degrees.
- 2 ± The parallelism between deck floors must be guaranteed; should it not occur, duly compensate the difference.
- 3 ± Chain locker depth: the chain fall into the chain locker must be such that when the chain is completely stored, there must be a minimum of 300 mm. between the underside of the deck and the top of the heaped chain.



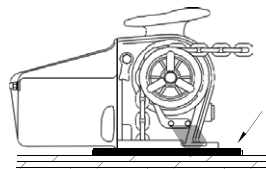
Non-observance of these requirements will cause the malfunctioning of the anchor windlass and voidance of warranty.

3.5 Prevention from electrolysis

Make sure that the anchor and chain are insulated from the hull, including chain locker and fixing systems.

For motors with 2 terminals (LION 1000, CAYMAN with 700W motor), the installer must ground the windlass by connecting a bonding wire to the cathodic protection on board.

For aluminum boats, all windlasses must be insulated from the deck through a non-conductive gasket (not supplied).



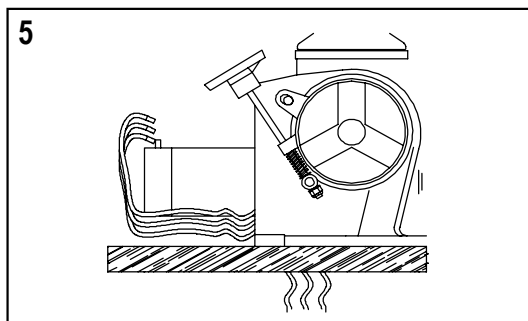
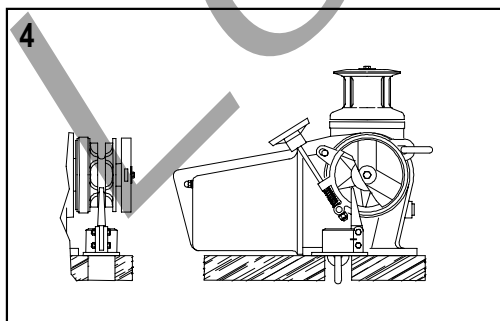
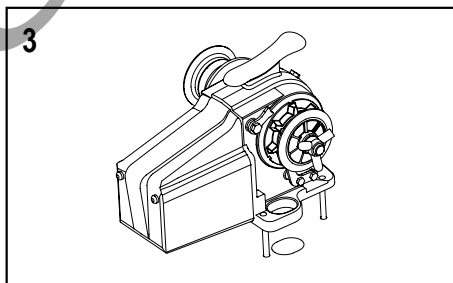
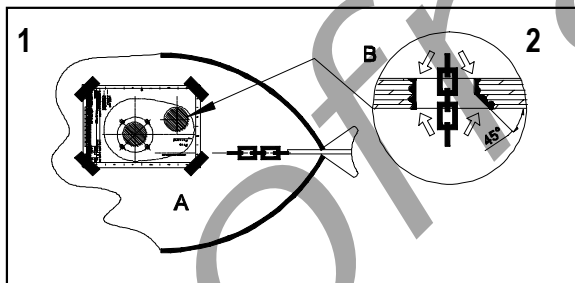
 Without these precautions, the electrolysis phenomenon will lead to a rapid corrosion of the anchor windlass.

3.6 Deck installation

1. Place carefully the drilling template on the deck, by ensuring the **correct alignment** with the bow.
2. Mark and drill as indicated in the gure. Let the edges of the holes sharp, while the edge side of the holes of the chain towards the bow must be smoothed for an angle of 45° degree.
3. Place carefully the upper part of the anchor windlass on the deck.
4. Carefully place the chain stripper pipe so that the chain stripper is aligned and away 4-5 mm from the gipsy throat.
5. Connect the wires from the battery to the electrical engine by passing them out through the openings in the gearbox body.

Note:

It is recommended to seal the base of the anchor windlass to the deck by means of silicone glue.



UK

4 ELECTRICAL SYSTEM

| Model | Motor Power (W) | Voltage (V) | Contactor (A) | Cable sizing according length of cable (positive + negative) | | | |
|----------------------------|-----------------|-------------|---------------|--|----------|--------------------|---------|
| | | | | 15-25 m | 50-75 ft | > 25 m | > 75 ft |
| Atlas/Cayman 88 /Lion 1000 | 600/700/700 | 12 | 70 | 25 mm ² | 3 AWG | - | - |
| Cayman 88 | 700 | 24 | 35 | 16 mm ² | 4 AWG | - | - |
| Cayman 88 | 1000 | 12 | 100 | 35 mm ² | 2 AWG | 50 mm ² | 2 AWG |
| Cayman 88 | 1000 | 24 | 70 | 25 mm ² | 3 AWG | 35 mm ² | 3 AWG |
| Tigres | 1500 | 12 | 100 | 50 mm ² | 2 AWG | 75 mm ² | 000 AWG |
| Tigres | 1500 | 24 | 70 | 35 mm ² | 3 AWG | 50 mm ² | 2 AWG |
| Tigres | 1500 | 48 | 35 | 16 mm ² | 4 AWG | 25 mm ² | 3 AWG |
| Falcon | 1700 | 12 | 125 | 50 mm ² | 2 AWG | 75 mm ² | 000 AWG |
| Falcon | 1700 | 24 | 70 | 35 mm ² | 3 AWG | 50 mm ² | 2 AWG |
| Falcon | 2000 | 24 | 100 | 50 mm ² | 2 AWG | 75 mm ² | 000 AWG |

4.1 Electrical cable section

It is essential that the anchor windlass be wired with cables of sufficient section as suggested in the table.

4.2 Contractor (Control Box)

Place it in a dry place near the capstan.

4.3 Circuit breakers

The circuit breakers recommended by Lofrans have an intervention curve and not a simple plate value. The switches selected for each model guarantee the correct operation of the system.

4.4 Remote control electric panel board

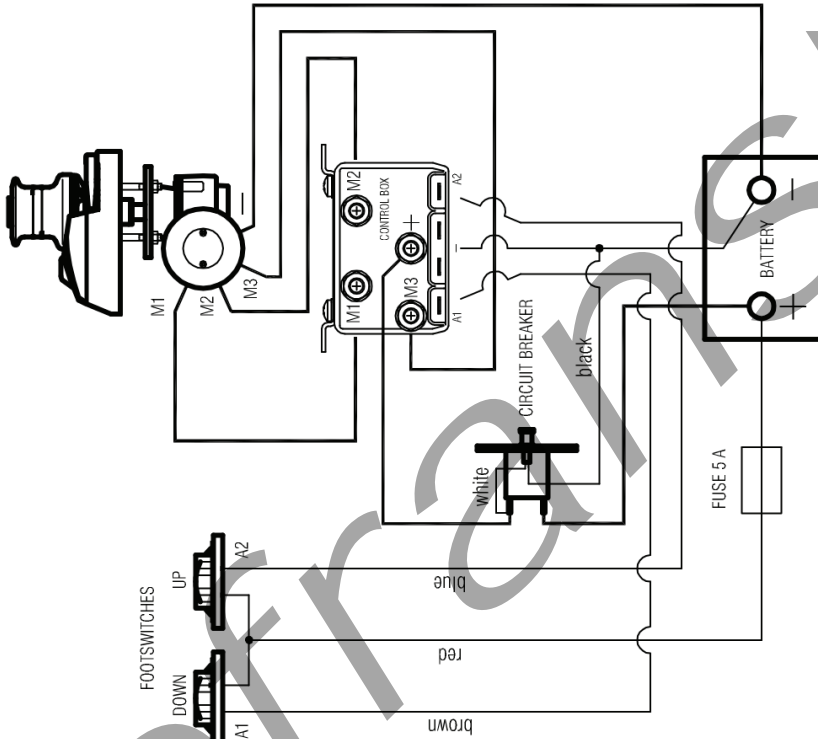
The remote control electric panel board must be mounted in a comfortable position (such as the deck, the rudder or the cockpit), so that the operator can see the capstan during the manoeuvre. Mount and seal the electric panel board so that the terminals remain in a dry place.

4.5 Protection of electrical components

The installer is responsible to properly protect the motor and the electrical components (such as the control box) from direct water contact. Water damage to the electrical components due to water ingress will void the warranty. Also the installer is responsible to ground the windlass unit.

4.6 Wiring diagram

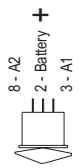
FALKON 2000W WIRING DIAGRAM



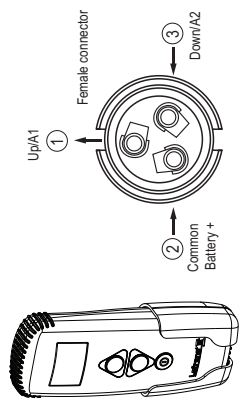
FOOTSWITCHES

UP
DOWN

ROCKER SWITCH TYPE C



HAND HELD REMOTE CONTROL THETIS 1002



UK

LION 1000 WIRING DIAGRAM - 2 TERMINALS ELECTRIC MOTOR

WIRING DIAGRAM - 2 TERMINALS ELECTRIC MOTOR

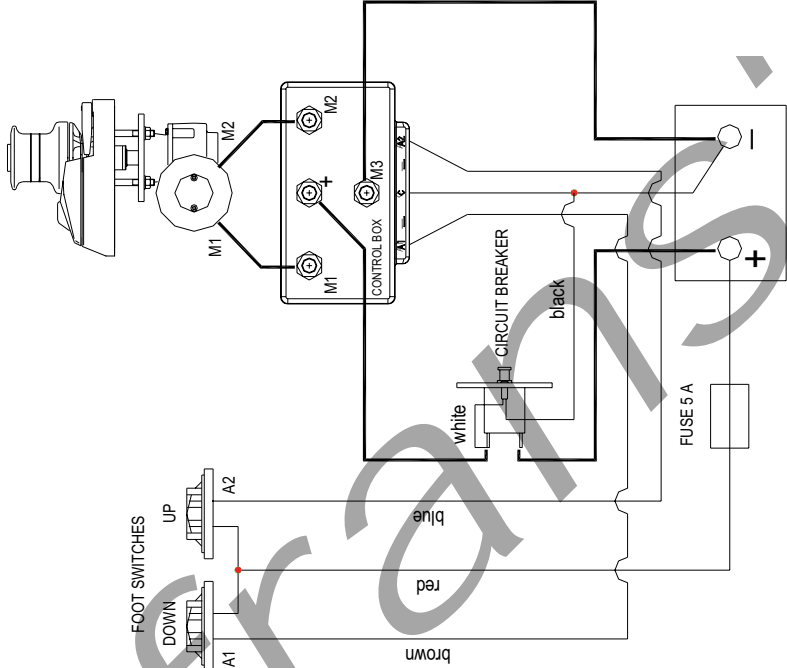
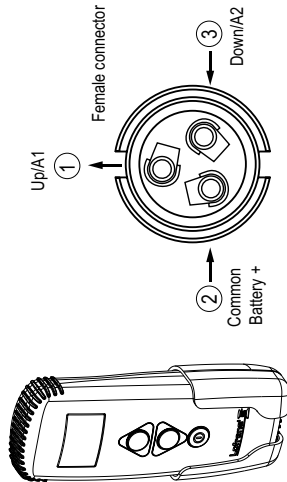


WIRING DIAGRAM CODE: E0016-A

ROCKER SWITCH TYPE C



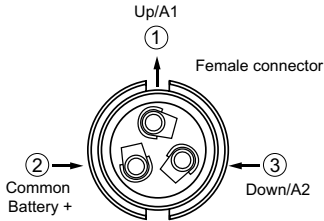
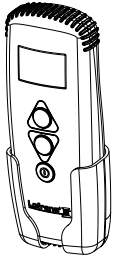
HAND HELD REMOTE CONTROL THETIS 1002



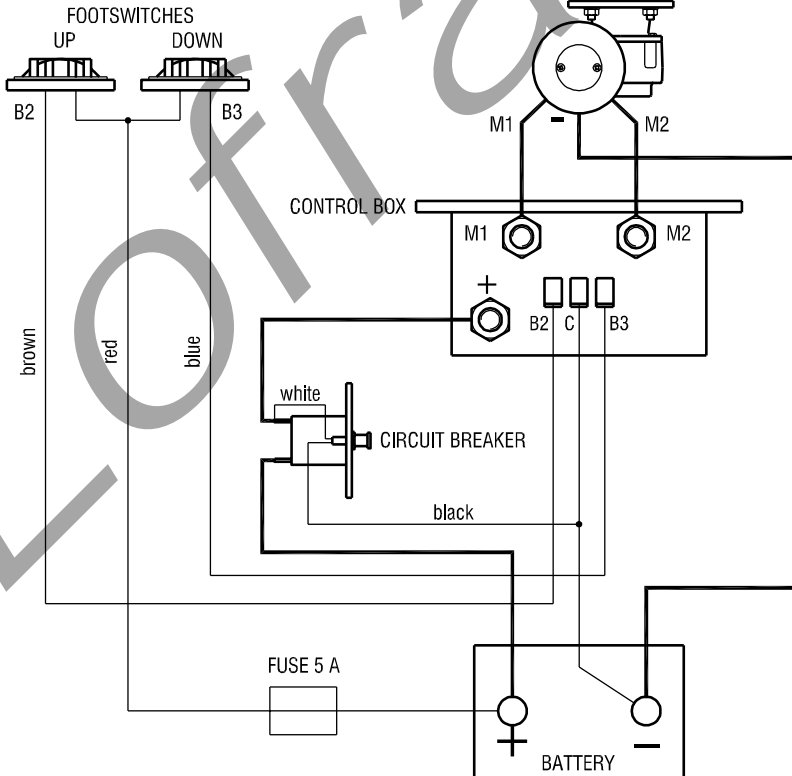
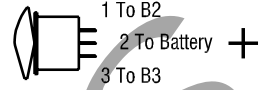
TIGRES 48V WIRING DIAGRAM - 3 TERMINALS ELECTRIC MOTOR



HAND HELD REMOTE
CONTROL THETIS 1002




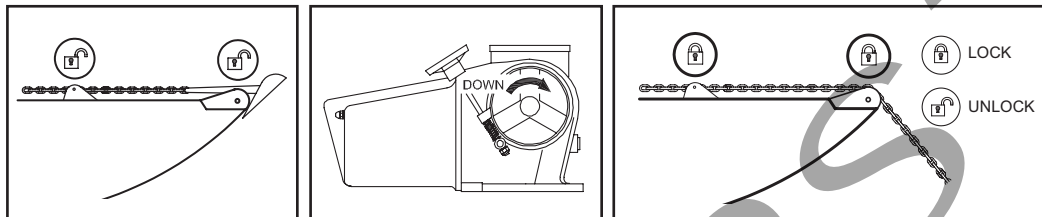
ROCKER SWITCH TYPE C



UK

5 USE OF THE WINDLASS

 During the use of the anchor windlass, do not change directly from one direction to the other but wait until the anchor windlass stops before manipulating the control into the opposite direction




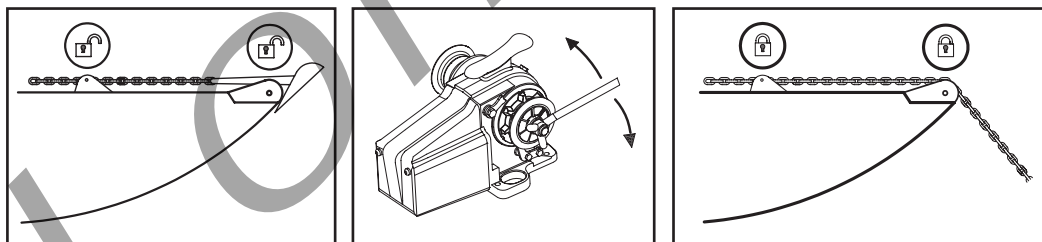
5.1 Lowering the anchor

Lowering of the anchor can be carried out through the electric control or by gravity:

5.1.1 Lowering the anchor electrically

1. Make sure that the clutch is tightened and the brake is disengaged. Disengage all chain fixing devices.
2. Activate the safety switch
3. Press the DOWN button from the control at your disposal. In this way, the lowering of the chain will be perfectly controllable and the unwinding of the chain regular.
4. Once the chain is lowered, deactivate the safety switch.
5. Engage the chain fixing devices.

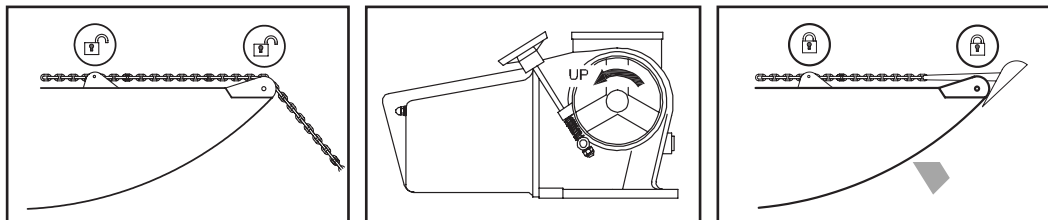
 Make sure the anchor windlass is not powered before carrying out manual interventions.



5.1.2 Lowering the anchor by gravity


1. Make sure that the clutch is tightened and then disengage the chain stopper or safety stops. Disengage the brake.
 2. Disengage the clutch gradually through the manoeuvre handle.
- Note: to adjust the descent speed of the chain act, through the handle, on the clutch. By turning it clockwise, the braking speed of the chain will increase (until complete stop), while by turning it anticlockwise, braking will be reduced.
3. Fix the chain (or the rope) to a strong point.

 By disengaging completely the clutch, the anchor will be lowered at high speed. Consequently, the fast passage of the chain into the hood and bow roller could damage them. It is recommended always to check the speed.




5.2 Weighing the anchor

1. Make sure that the hydraulic magnetic circuit breaker is activated.
2. Make sure that the clutch is well tightened and the brake is disengaged. Take out the manoeuvre handle from the drum or gipsy.
3. Disengage the chain stopper and safety stops.
4. Press the UP button from the control at your disposal until the anchor reaches its position inside the bow roller.
5. Deactivate the hydraulic magnetic circuit breaker.
6. Fix the chain with the chain stopper. In this way a potential damage of the anchor windlass will be avoided as well as unexpected chain releases.

 If possible, do not carry out the anchor recovery operation by relying only on the onboard batteries. Start the motor of the boat (or the generator) to obtain the necessary electromotive force.

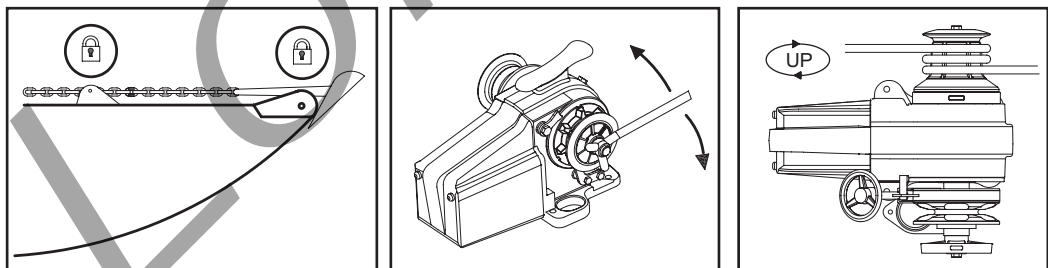
UK

To safeguard the anchor windlass, the hydraulic magnetic circuit breaker is sized so that it comes into action when the anchor windlass is subjected to higher loads than those for which it has been designed. Should it get released owing to an overload reactivate it again and wait some minutes before operating it; waiting for the operation after an overload is necessary to allow the circuits to cool and recover their functionalities.

 The hydraulic magnetic circuit breaker does not protect against an excessive increase in the motor temperature due to a prolonged operation of the anchor windlass. Therefore, give the motor the necessary time to cool, to avoid possible damages to the motor thereof.

5.3 Use of the manual override


Make sure that the clutch is engaged. Disengage the brake, chain stopper, and safety stops. Insert the manoeuvre handle into the hand-wheel and turn clockwise by overcoming the strength of the spring contained in the reducer. In case of deep sea, the effort will turn out to be significant.

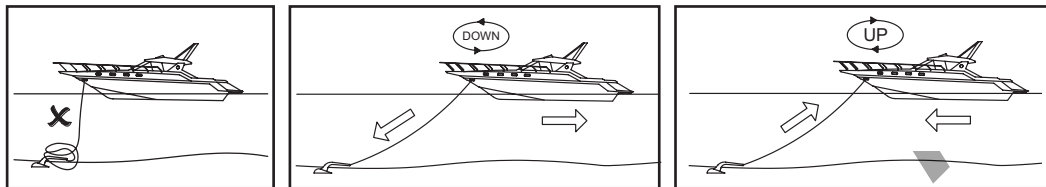


5.4 Use of the warping drum

The warping drum can be used regardless of the gipsy, to help themooing manoeuvres.



1. Tighten the brake and make sure that the anchor is appropriately blocked.
2. Disengage the clutch. This operation will make the drum independent of the gipsy.
3. Turn **clockwise** around the drum with three laps of rope.
4. By keeping the end of the rope, press the UP button and carry out the mooring manoeuvre.
5. Once the manoeuvre is ended, remove the rope from the drum and fasten it to a bollard.
6. Deactivate the safety switch.

 Always remove the manoeuvre handle when not in use.



5.5 Notes for use


During mooring, the load on the chain can be very high due to current, wind and waves.

-  Mooring, do not use the anchor windlass as strong point but always use a chain stopper.
-  If during recovery, the anchor windlass should block, slip or turn into self-protection mode, check the cause before proceeding.

1. By paying out the chain, it is necessary to manoeuvre so that the chain is laid down on the seabed without heaping on itself.
2. To ease the recovery and not overloading the capstan, steer up in a way that the boat slowly moves on the vertical of the anchor.
3. When the anchor is in the vicinity of the bow roller, slow down the recovery to check at best the insertion of the anchor into the seat.

6 MAINTENANCE

| | USE OF THE YACHT (MONTHS) | | | |
|-----------------|---------------------------|----------------|-------------|---------|
| | LESS THAN 2 | FROM 2 UP TO 6 | MORE THAN 6 | CHARTER |
| EVERY 3 MONTHS | | | A - B | A - B |
| EVERY 6 MONTHS | | A - B | | |
| EVERY 12 MONTHS | A - B - C | C | C | C - D |
| EVERY 24 MONTHS | | D | D | E |
| EVERY 36 MONTHS | D - E | E | E | F |

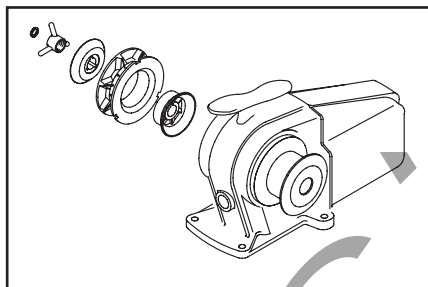
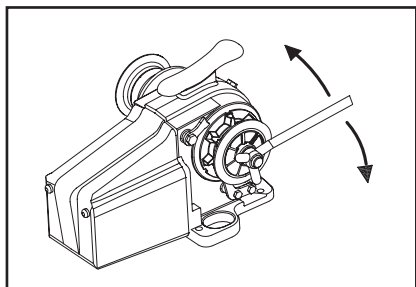
-  Follow strictly the maintenance programme. Not meeting the maintenance programme will cause forfeiture of the warranty.

-  Disconnect power to the anchor windlass before any maintenance.

6.1 Maintenance programme

For obtaining the best performances and the utmost efficiency of the anchor windlass, it is necessary to follow strictly the maintenance programme indicated hereby.

- A. Clean all external surfaces and hidden points with fresh water and remove all salt layers. Use soap water only (no chlorine solutions).
- B. Grease the rotating parts. Particularly, the main shaft threads and clutch cones. Check for evidences of corrosion and mechanical stresses. In case of galvanic corrosion check if windlass is subjected to "stray" currents.
- C. Check the terminals of the electric motor. Test the voltage drop at the terminals. Control box must be in a dry area.
- D. Replace all gaskets and oil.
- E. Remove the anchor windlass from the deck to clean the salt under the base and seal again. Check for corrosion.
- F. Remove inox screws that mount the windlass on the deck and the Stripper on the windlass, apply a chromate free joining compound designed to inhibit electrolytic decomposition.



6.2 Gipsy maintenance/replacement

1. By turning anticlockwise, remove the gipsy through the manoeuvre handle.
2. Slip off from the shaft the upper clutch cone, the gipsy, and the lower clutch cone.
3. Wash with running water. **DO NOT USE WATER UNDER PRESSURE.**
4. Check that there is no evidence of corrosion or mechanical stresses.
5. Reassembly by proceeding in the reverse order, remembering to lubricate threads and all moving parts with grease.

For Tigres 48V with rope kit consult the manual link: www.lofrans.com/product/79-kits/4879-rope-kit-for-tigres-8-iso-5-16-ht



7 TROUBLESHOOTING

| Problem | Possible causes | Solution |
|---|---|--|
| 1. The anchor windlass does not work when a control is operated | <ol style="list-style-type: none"> 1.1 Protection switch in OFF position 1.2 Lack of voltage in the system 1.3 Failure of the control box 1.4 Failure of the control 1.5 Failure of the electric motor | <ol style="list-style-type: none"> 1.1 Check the protection switch and set it in the ON position 1.2 Check the charge status of the battery, check connections 1.3 Check and possibly replace the control box 1.4 Check and possibly replace the control 1.5 Measure the electric motor voltage; if it is OK, check the brushes and clean them. If it does not work, replace the electric motor |
| 2. The chain jams frequently | <ol style="list-style-type: none"> 2.1 The chain locker is not deep enough with respect to the quantity of chain chosen 2.2 The chain is not suitable for the gipsy 2.3 The chain is not calibrated | <ol style="list-style-type: none"> 2.1 Position the anchor windlass in the deepest point of the chain locker or reduce the quantity of chain 2.2 Change the gipsy 2.3 Check the chain: if it does not meet the tolerances, it must be replaced |
| 3. The anchor windlass turns slowly | <ol style="list-style-type: none"> 3.1 Unsuitable cable sections 3.2 Deck floors not parallel 3.3 Bad electrical connections 3.4 Dirty brushes 3.5 Water infiltrations in the electric motor | <ol style="list-style-type: none"> 3.1 Increase cable section 3.2 Make floors parallel by interposing thicknesses 3.3 Check connections 3.4 Clean brushes 3.5 Replace the electric motor |

| Problem | Possible causes | Solution |
|--|--|--|
| <p>4. The electric engine runs but the shaft does not rotate either Up or Down</p> | <p>4.1 Heavy wear or breakage of teeth of the crown / worm screw. 4.2 Breakage of the engine spindle.</p> | <p>4.1 (SERVICE) Uninstall the winch and replace the broken parts. Check out carefully that pieces or splinters of broken parts did not enter into the oil circuit and have ruined other mechanical parts. (*) 4.2 (SERVICE) Replacing of the engine. Care must be taken that the broken part did not remain in the hole of the worm screw. (*) (*) Take advantage of this opportunity to replace any other worn parts, especially gaskets, screws, tabs, seeger, and oil.</p> |
| <p>5. The electric engine runs, the shaft rotates Up, but does not rotate Down</p> | <p>5.1 The chain locker is tangled; therefore, the emergency mechanism becomes operative. 5.2 The chain is of poor quality with burrs and zinc deposits that do not allow the free flow of the links; therefore, the emergency mechanism becomes operative. 5.3 The chain was placed in the locker in block and the links are stuck with each other; therefore, the emergency mechanism becomes operative. 5.4 Wear of the emergency mechanism of the spring control. 5.5 The chain stripper interferes with the gypsy; it is possible to weigh the operation, while to lower, the emergency mechanism becomes operative.</p> | <p>5.1 Check out that immediately after the anchor there is a joint that allows the chain to unfold properly when weighed. 5.2 Remove the chain from the locker and inspect it link by link. Intervene with the appropriate tools to make it as loose as possible and free of obstructions. 5.3 Lower manually all the chain in a sea bed deep enough to enable it to unfold properly. Retrieve it with the winch. 5.4 A (SERVICE) Uninstall the winch from the boat and disassemble it into its parts by replacing the spring. Take advantage of this opportunity to replace any other worn parts, gaskets, screws, tabs, seeger, and oil. B (SERVICE) It is possible to block the EMERGENCY MECHANISM so that the gears are always engaged both in UP and in Down. This operation must be authorized by the shipowner. The solution rules out completely the possibility of carrying out the emergency operation. 5.5 Restore the condition of the chain stripper by repositioning properly in the gypsy centreline. If it is deformed. It must be replaced.</p> |
| <p>6. The electric engine runs but it cannot be bell warped.</p> | <p>6.1 The bell warp is being used wrongly; therefore, the emergency mechanism becomes operative</p> | <p>6.1 To carry out the warping operation the main shaft must run in the same rotation direction of the winch gypsy when it weighs the chain.</p> |
| <p>7. The winch cannot be weighed: the electric engine runs, the shaft runs, but the gypsy is still although the brake belt is loose.</p> | <p>7.1 The gypsy is not closed on the clutch cones and slips under the load effect, or for some reason the closing wheel is at end stroke. Check out all pieces in sequence. 7.2 The clutch cones or the gypsy cones are deformed and the clutch hubs are in contact and prevent closure.</p> | <p>7.1 Check out clutch tightening. If necessary, measure the parts and check out possible deformations. It is possible to add some thickness to stem the problem. Then replace the damaged parts. 7.2 Replace the clutch and/or the gypsy</p> |
| <p>8. The shaft does not run well, is not aligned, and so is the gypsy and/or the bell.</p> | <p>8.1 The shaft bent because the winch was subjected to an excessive load.</p> | <p>8.1 Check out that the procedures of use fall within the specifications of the winch. (SERVICE) Uninstall the winch and replace the shaft. Take this opportunity to replace worn parts, gaskets, seeger, tabs and oil.</p> |

| Problem | Possible causes | Solution |
|--|---|---|
| <p>9. Loss of oil between the engine and the gearbox body</p> | <p>9.1 The coupling of the engine is loose and causes the worm screw into an irregular rotation, leading to loss of oil from the gasket.</p> | <p>9.1 (SERVICE) Find the reasons why the screws or nuts have become loose. Uninstall the engine and check out the status of the spindle and the hole of the worm screw. If an oval form of the cylindrical part of the screw is observed (outer hole and diameter) uninstall the winch and repair the damaged parts on the bench. Check out if the oil has entered into the electrical engine. Take this opportunity to replace all gaskets, tabs, seeger, screws, oil, and any worn parts.</p> |
| <p>10. On installation, it is found that the shaft and the studs are short for a correct coupling with the gearbox.</p> | <p>10.1 The request referred to the deck thickness was wrong.</p> | <p>10.1 If the key shaft works in the gearbox along all its length, the fixing studs can be adapted. Otherwise, a longer shaft must be requested.</p> |
| <p>11. The winch runs slowly and at times jumps the circuit breaker.</p> | <p>11.1 Section of cables not suitable. 11.2 Poor electrical connections. 11.3 Dirty brushes. 11.4 Water leaks in the electrical engine. 11.5 There is no parallelism between upper deck and below deck. 11.6 The gearbox has lost oil. 11.7 The engine strains in one or both directions. 11.8 The winch works only in one direction.</p> | <p>11.1 Increase the cable section 11.2 Check out the connections 11.3 Clean the brushes 11.4 Replace the electrical engine 11.5 Work surfaces and/or add shims to restore parallelism. 11.6 (SERVICE) Uninstall the gearbox and check out its condition. Replace damaged parts after discovering the causes of the leak. Also, replace gaskets and screws. Check out also the engine condition, which may have been damaged during the malfunction. 11.7 (SERVICE) Check out appropriately all connections of the power cables. If they are alright, uninstall the engine (in some cases it is convenient to disassemble also the gearbox). Check out and possibly replace the brushes. 11.8 Check out on the control box that between B2-C and B3-C contacts there are 12/24V when the respective buttons are pressed. If this should happen and one of the relays does not work, replace the control box.</p> |
| <p>12. The finger is broken</p> | <p>12.1 Poor layout of the cable top or rolling of the chain has broken the finger. Check out the suitability of the gypsy to work with the finger.</p> | <p>12.1 Replace the finger. 12.2 In the event that the gypsy cannot work properly with the finger, position the replacement kit (cap).</p> |

UK

8 TECHNICAL DATA

| Model | LION 1000 | | CAYMAN 88 | | |
|---------------------------------------|------------|-------------|-------------|-------------|-------------|
| | 700 W | 700W | 1000W | 1000W | 1000W |
| Motor Power | 700 W | 700W | 1000W | 1000W | 1000W |
| Vessel Length Heavy Duty (ft) | 25-35 | 25-35 | 35-45 | 35-45 | 35-45 |
| Vessel Length Light Duty (ft) | 35-40 | 35-45 | 40-50 | 40-50 | 40-50 |
| Power Supply | 12V | 12V | 24V | 12V | 24V |
| Maximum linear Load/Pull (Kg/lb) | 575 / 1268 | 1050 / 2310 | 1050 / 2310 | 1300 / 2860 | 1300 / 2860 |
| Max Lift Working Load (Kg/lb) | 105 / 232 | 135 / 297 | 135 / 297 | 165 / 363 | 165 / 363 |
| Amps Work Load (A) | 60 | 110 | 110 | 117 | 117 |
| Max Line Speed (mt./min.) / (ft/min.) | 26 / 85 | 30 / 90 | 30 / 90 | 35 / 105 | 35 / 105 |
| Line Speed (mt./min.) / (ft/min.) | 23 / 75 | 25 / 75 | 25 / 75 | 25 / 75 | 25 / 75 |
| Net weight with Drum (Kg/lb) | N/A | 24 / 53 | 24 / 53 | 25 / 55 | 25 / 55 |
| Net weight Low Profile (Kg/lb) | 11 / 25 | N/A | N/A | N/A | N/A |

LION 1000

| Chain supported for gipsy | 6mm | | 8mm | |
|---------------------------|--------------------|---------|-------------|---------|
| | ISO | DIN 766 | ISO | DIN 766 |
| Rope supported for drum | 10-12mm - 3/8-1/2" | | 12mm - 1/2" | |

CAYMAN 88

| Chain supported for gipsy | 6mm | | 8mm | | 5/16" | | 10mm | 3/8" | 10mm | 3/8" |
|---------------------------|-----|---------|----------------------|---------|-------|-----|------|------|---------|------|
| | ISO | DIN 766 | ISO | DIN 766 | G4 | BBB | ISO | G4 | DIN 766 | BBB |
| Rope supported for drum | N/A | | 14mm-16mm-9/16"-5/8" | | | | N/A | | N/A | |

| Model | TIGRES | | | FALKON | | FALKON |
|---------------------------------------|-------------|-------------|-----------|-------------|-------------|-------------|
| Motor Power | 1500W | | | 1700W | | 2000W |
| Vessel Length Heavy Duty (ft) | 40-50 | | | 45-55 | | |
| Vessel Length Light Duty (ft) | 50-55 | | | 55-60 | | |
| Power Supply | 12V | 24V | 48V | 12V | 24V | 24V |
| Maximum linear Load/Pull (Kg/lb) | 1500 / 3300 | 1590 / 3900 | 1000/2200 | 1700 / 3740 | 1700 / 3740 | 2640 / 5820 |
| Max Lift Working Load (Kg/lb) | 190 / 418 | 200 / 440 | 120/264 | 215 / 473 | 225 / 496 | 330 / 727 |
| Amps Work Load (A) | 160 | 90 | 33 | 210 | 100 | 110 |
| Max Line Speed (mt./min.) / (ft/min.) | 33 / 99 | 33 / 99 | 20/60 | 32 / 96 | 32 / 96 | 33 / 99 |
| Line Speed (mt./min.) / (ft/min.) | 14 / 41 | 16 / 48 | 20/60 | 16 / 48 | 16 / 48 | 19 / 57 |
| Net weight with Drum (Kg/lb) | 28 / 62 | 28 / 62 | 28/62 | 55 / 121 | 55 / 121 | 57 / 125 |

TIGRES 12/24V

| Chain supported for gipsy | 8mm | | 5/16" | | 10mm | 3/8" | 10mm | 3/8" |
|---------------------------|----------------------|---------|-------|-----|-----------|------|-----------|------|
| | ISO | DIN 766 | G4 | BBB | ISO | G4 | DIN 766 | BBB |
| Rope supported for drum | 14mm-16mm-9/16"-5/8" | | | | 16mm-5/8" | | 16mm-5/8" | |

FALKON

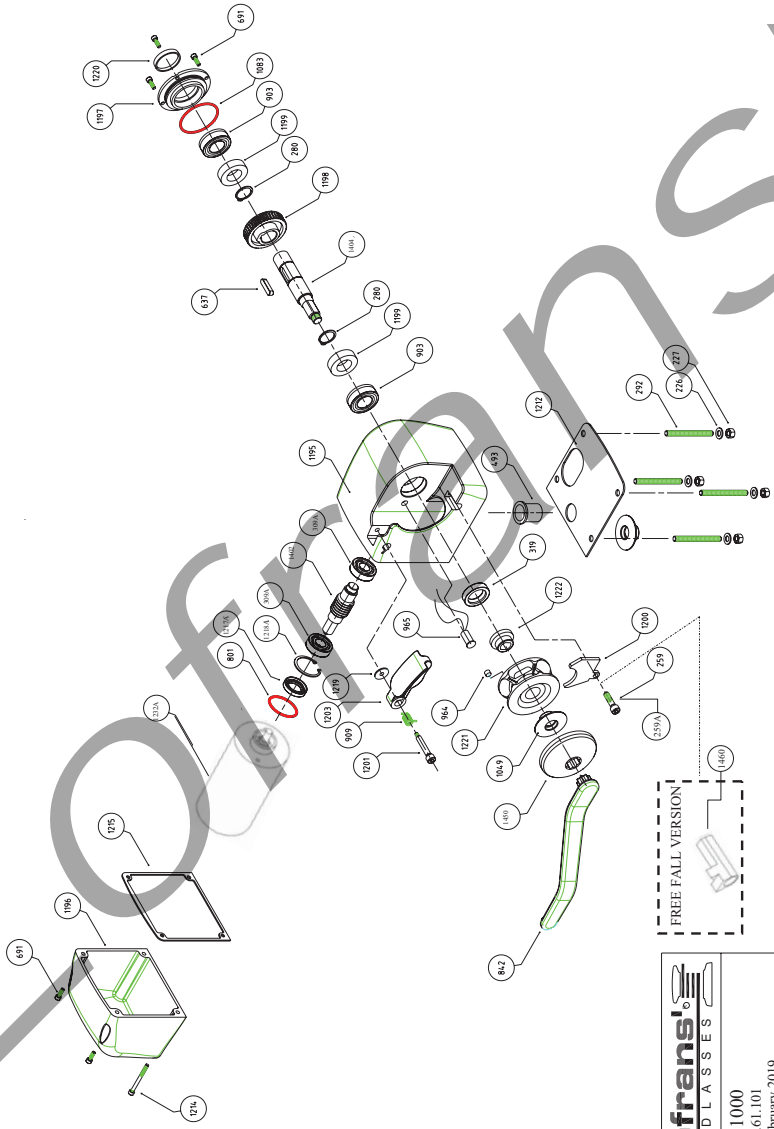
| Chain supported for gipsy | 10mm | 3/8" | 10mm | 3/8" | 12mm | 13mm | 7/16" |
|---------------------------|-----------|------|-----------|------|-----------|---------|-------|
| | ISO | G4 | DIN 766 | BBB | ISO | DIN 766 | G4 |
| Rope supported for drum | 16mm-5/8" | | 16mm-5/8" | | 18mm-3/4" | | |

TIGRES 48V WITH ROPE KIT

| | | |
|-------------------------|-----------------------------|-------------------------|
| Chain support for gipsy | 8mm ISO - 5/16 HT | 10mm ISO - 3/8 HT |
| Rope support for gipsy | 14mm 3strad 8 plaite | 16mm 3strad 8 plaite |
| Rope support for drum | 14mm - 16mm 9/16" - 5/8" | 16mm-5/8" |

UK

9 SPARE PARTS



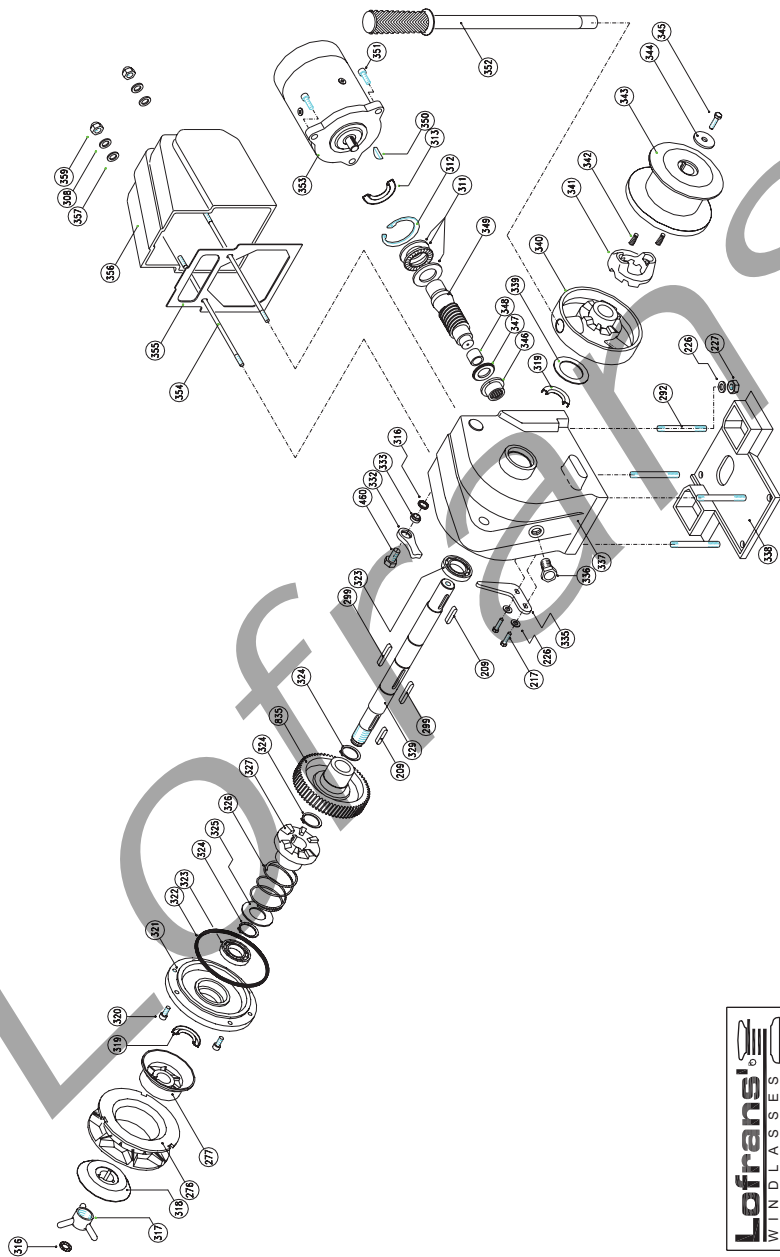
FREE FALL VERSION

| |
|---|
| Lofrans [®] WINDLASSES |
| LION 1000 |
| Code: B.G.1.101 |
| Date: February 2019 |

LION 1000

| Item | Description | Kit | Q.ty |
|---------|---|-------|------|
| 1221a | Gipsy chain 6 - 6 pockets | | 1 |
| 1221c | Gipsy chain 8 - 5 pockets | | 1 |
| 1221b | Gipsy chain 7 - 6 pockets | | 1 |
| 226 | Washer for M8 screw | Kit B | 4 |
| 227 | Nut - M8 | Kit B | 4 |
| 259A | Hd cap screw - M8x42 (Freefall version) | Kit B | 1 |
| 259 | Hd cap screw - M8x16 | Kit B | 1 |
| 280 | Circlip 25 Din 471 | Kit D | 2 |
| 292a | Stud M8x75 | | 4 |
| 309A | Bearing | | 2 |
| 319 | Seal 25x42x7 | Kit A | 1 |
| 493 | Bush | | 1 |
| 637 | Key 8x7x30 | Kit C | 1 |
| 639 | Washer | Kit B | 1 |
| 801 | O Ring - 150 | Kit A | 1 |
| 842a | Handle | | 1 |
| 903 | Bearing | | 2 |
| 909 | Spring | | 1 |
| 964 | Magnet | | 1 |
| 965 | Sensor | | 1 |
| 1049 | Cone Clutch - out | | 1 |
| 1222 | Cone Clutch - in | | 1 |
| 1450 | Gipsy Cap | | 1 |
| 1083 | O Ring - 3250 | Kit A | 1 |
| 1195 | Body | | 1 |
| 1196 | Motor Cover | | 1 |
| 1197 | Cover | | 1 |
| 1198 | Wormwheel | | 1 |
| 1199 | Spacer | | 2 |
| 1200 | Stripper | | 1 |
| 1201 | Screw | | 1 |
| 1202 | Worm | | 1 |
| 1203 | Finger | | 1 |
| 1204 | Main shaft | | 1 |
| 1212 | Gasket | | 1 |
| 1214 | Hd cap screw - M5x80 | Kit B | 2 |
| 1215 | Gasket | | 1 |
| 1232A | Electric Motor 700W | | 1 |
| 1217A | Seal 20x37x7 | Kit A | 1 |
| 1218A | Circlip 37 Din 472 | Kit D | 1 |
| 1220 | Cap | Kit A | 1 |
| 1460 | Freefall | | 1 |
| KA53101 | Kit A - Seals | | 1 |
| KB53101 | Kit B - Screw&Nuts | | 1 |
| KC53101 | Kit C - Keys | | 1 |
| KD53101 | Kit D - Circlips | | 1 |

UK



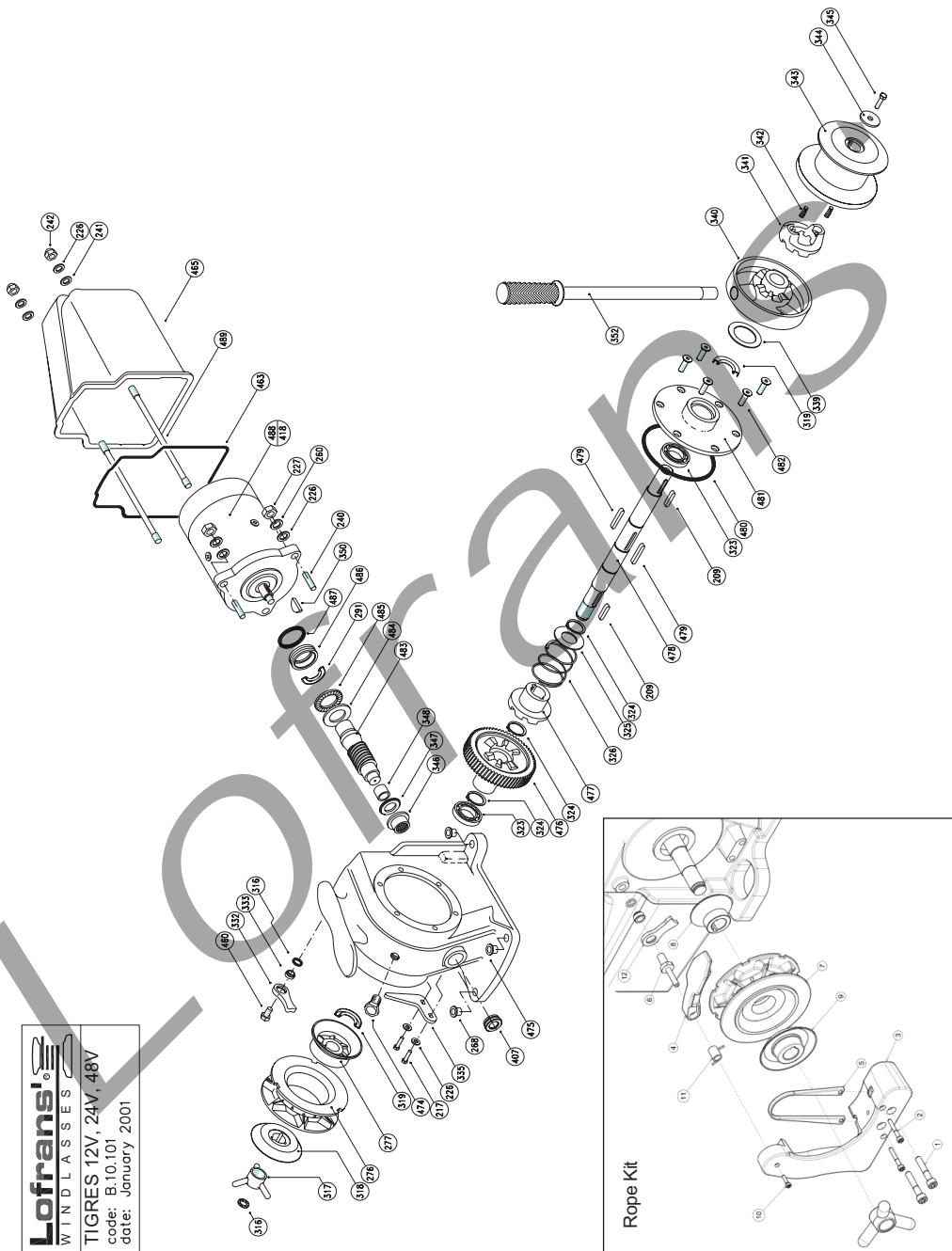
| | |
|--|--------------------|
|  Lofrans [®] WINDLASSES | CAYMAN 88 |
| | code: B.09.101 |
| | date: January 2001 |
| | |

CAYMAN 88

| Item | Description | Kit | Q.ty |
|------|---|-------|------|
| 209 | Key - 6x6x30 | Kit C | 4 |
| 217 | Hex hd screw M8x20 | Kit B | 2 |
| 226 | Washer for screw M8 | Kit B | 6 |
| 227 | Nut - M8 | Kit B | 4 |
| 276a | Gipsy chain 6 Iso - Din 766 | | 1 |
| 276b | Gipsy chain 7 Iso - 1/4" G40 | | 1 |
| 276c | Gipsy chain 8 Iso - Din 766 - 5/16" BBB | | 1 |
| 276d | Gipsy chain 5/16 G40 | | 1 |
| 276e | Gipsy chain 10 Iso - 3/8 G40 | | 1 |
| 276f | Gipsy chain 3/8 Din 766 - 10 Din 766 | | 1 |
| 276g | Gipsy chain 3/8 BBB | | 1 |
| 276h | Gipsy chain 3/8 PC | | 1 |
| 277 | Clutch cone - inner | | 1 |
| 292a | Stud - M8x76 | | 4 |
| 308 | Washer for screw M6 | Kit B | 2 |
| 311 | Thrust bearing - 511105 | | 1 |
| 312 | Circlip - 43 Din 472 | Kit D | 1 |
| 313 | Seal - 25x43x9 | Kit A | 1 |
| 316 | O Ring seal - 117 | Kit A | 2 |
| 317 | Wingnut | | 1 |
| 318a | Clutch cone - outer | | 1 |
| 318b | Clutch cone- outer (for gipsy type e-f-g-h) | | 1 |
| 319 | Seal - 25x42x6 | Kit A | 2 |
| 320 | Hd cap screw - M6x16 | Kit B | 4 |
| 321 | Cover | | 1 |
| 322 | O Ring seal - 4437 | Kit A | 1 |
| 323 | Bearing - 6005 | | 2 |
| 324 | Circlip - 25 Din 471 | Kit D | 3 |
| 325 | Washer | | 1 |
| 326 | Spring | | 1 |
| 327 | Dog clutch | | 1 |
| 329 | Main shaft | | 1 |
| 332 | Pawl | | 1 |
| 333 | Spacer | | 1 |
| 335 | Stripper for gipsy type a - b - c - d | | 1 |
| 335a | Stripper for gipsy type e - f - g - h | | 1 |
| 336 | Oil plug 3/8 | | 1 |
| 337 | Body | | 1 |
| 338 | Gasket | | 1 |
| 339 | Nylon washer | | 1 |
| 340 | Emergency wheel | | 1 |
| 341 | Emergency dog clutch | | 1 |
| 342 | Spring | | 2 |
| 343 | Drum | | 1 |
| 344 | Washer | | 1 |

| Item | Description | Kit | Q.ty |
|---------|----------------------------|-------|------|
| 345 | Hex hd screw M6x20 | Kit B | 1 |
| 346 | Combined bearing - Rax 720 | | 1 |
| 347 | Thrust ring - CP 32035 | | 1 |
| 348 | Ring - IM 1520164 | | 1 |
| 349 | Worm | | 1 |
| 350 | Round key - 4x6,5 | Kit C | 1 |
| 351 | Hd cap screw - M6x20 | Kit B | 3 |
| 352 | Handle | | 1 |
| 353a | Electric motor 700W 12V | | 1 |
| 353b | Electric motor 700W 24V | | 1 |
| 353c | Electric motor 1000W 12V | | 1 |
| 353d | Electric motor 1000W 24V | | 1 |
| 354 | Stud - M6x180 | | 2 |
| 355 | Gasket | | 1 |
| 356a | Motor cover | | 1 |
| 356b | White motor cover | | 1 |
| 357 | Nylon washer for screw M6 | Kit B | 2 |
| 359 | Cap nut M6 | Kit B | 2 |
| 460 | Hex hd screw M10x20 | Kit B | 1 |
| 835 | Wormwheel | | 1 |
| KA08101 | Kit A - Seals | | 1 |
| KB08101 | Kit B - Screw&Nuts | | 1 |
| KC08101 | Kit C - Keys | | 1 |
| KD08101 | Kit D - Circlips | | 1 |

B.09.101 - Rev. A Date: 01-2005



Lofrans!
WINDLASSES
TIGRES 12V, 24V, 48V
code: B.10.101
date: January 2001

TIGRES

| Item | Description | Kit | Q.ty |
|-------------|---|-------|----------|
| 209 | Key - 6x6x30 | Kit C | 2 |
| 217 | Hex hd screw M8x20 | Kit B | 2 |
| 226 | Washer for screw M8 | Kit B | 7 |
| 227 | Nut - M8 | Kit B | 3 |
| 240 | Stud - M8x45 | | 3 |
| 241 | Nylon washer for screw M8 | Kit B | 2 |
| 242a | Cap nut M8 | Kit B | 2 |
| 260 | Spring washer M8 | Kit B | 3 |
| 268 | Nylon bush | | 4 |
| 276a | Gipsy chain 6 Iso - Din 766 | | 1 |
| 276b | Gipsy chain 7 Iso - 1/4" G40 | | 1 |
| 276c | Gipsy chain 8 Iso - Din 766 - 5/16" BBB | | 1 |
| 276d | Gipsy chain 5/16 G40 | | 1 |
| 276e | Gipsy chain 10 Iso - 3/8 G40 | | 1 |
| 276f | Gipsy chain 3/8 Din 766 - 10 Din 766 | | 1 |
| 276g | Gipsy chain 3/8 BBB | | 1 |
| 276h | Gipsy chain 3/8 PC | | 1 |
| 277 | Clutch cone - inner | | 1 |
| 291 | Seal - 25x35x7 | Kit A | 1 |
| 316 | O Ring seal - 117 | Kit A | 2 |
| 317 | Wingnut | | 1 |
| 318a | Clutch cone - outer | | 1 |
| 318b | Clutch cone- outer (for gipsy type e-f-g-h) | | 1 |
| 319 | Seal - 25x42x6 | Kit A | 2 |
| 323 | Bearing - 6005 | | 2 |
| 324 | Circlip - 25 Din 471 | Kit D | 3 |
| 325 | Washer | | 1 |
| 326 | Spring | | 1 |
| 332 | Pawl | | 1 |
| 333 | Spacer | | 1 |
| 335 | Stripper for gipsy type a - b - c - d | | 1 |
| 335a | Stripper for gipsy type e - f - g - h | | 1 |
| 339 | Nylon washer | | 1 |
| 340 | Emergency wheel | | 1 |
| 341 | Emergency dog clutch | | 1 |
| 342 | Spring | | 2 |
| 343 | Drum | | 1 |
| 344 | Washer | | 1 |
| 345 | Hex hd screw M6x20 | Kit B | 1 |
| 346 | Combined bearing - Rax 720 | | 1 |
| 347 | Thrust ring - CP 32035 | | 1 |
| 348 | Ring - IM 1520164 | | 1 |
| 350 | Round key - 4x6,5 | Kit C | 1 |
| 352 | Handle | | 1 |
| 369 | Washer for screw M10 | Kit B | 1 |
| 407 | Sightglass | | 1 |
| 418a | Electric motor 1500W 12V | | 1 |
| 418b | Electric motor 1500W 24V | | 1 |
| 418c | Electric motor 1500W 48V | | 1 |
| 460 | Hex hd screw M10x20 | Kit B | 1 |
| 463 | Gasket | | 1 |
| 465a | Motor cover | | 1 |
| 465b | White motor cover | | 1 |
| 474 | Oil plug 1/4" | | 1 |
| 475 | Body | | 1 |
| 476 | Wormwheel | | 1 |
| 477 | Dog clutch | | 1 |
| 478 | Main shaft | | 1 |
| 479 | Key - 6x6x40 | Kit C | 2 |
| 480 | O Ring seal - 4462 | Kit A | 1 |

| Item | Description | Kit | Q.ty |
|---------|--------------------------|-------|------|
| 481 | Cover | | 1 |
| 482 | Conic hd screw - M6x16 | Kit B | 6 |
| 483 | Worm | | 1 |
| 484 | Thrust ring - CP 3 2542 | | 1 |
| 485 | Thrust bearing - AX 2542 | | 1 |
| 486 | Spacer | | 1 |
| 487 | O Ring seal - 4143 | Kit A | 1 |
| 488a | Electric motor 1000W 12V | | 1 |
| 488b | Electric motor 1000W 24V | | 1 |
| 489 | Stud - M8x218 | | 2 |
| KA10101 | Kit A - Seals | | 1 |
| KB10101 | Kit B - Screw&Nuts | | 1 |
| KC10101 | Kit C - Keys | | 1 |
| KD10101 | Kit D - Circlips | | 1 |

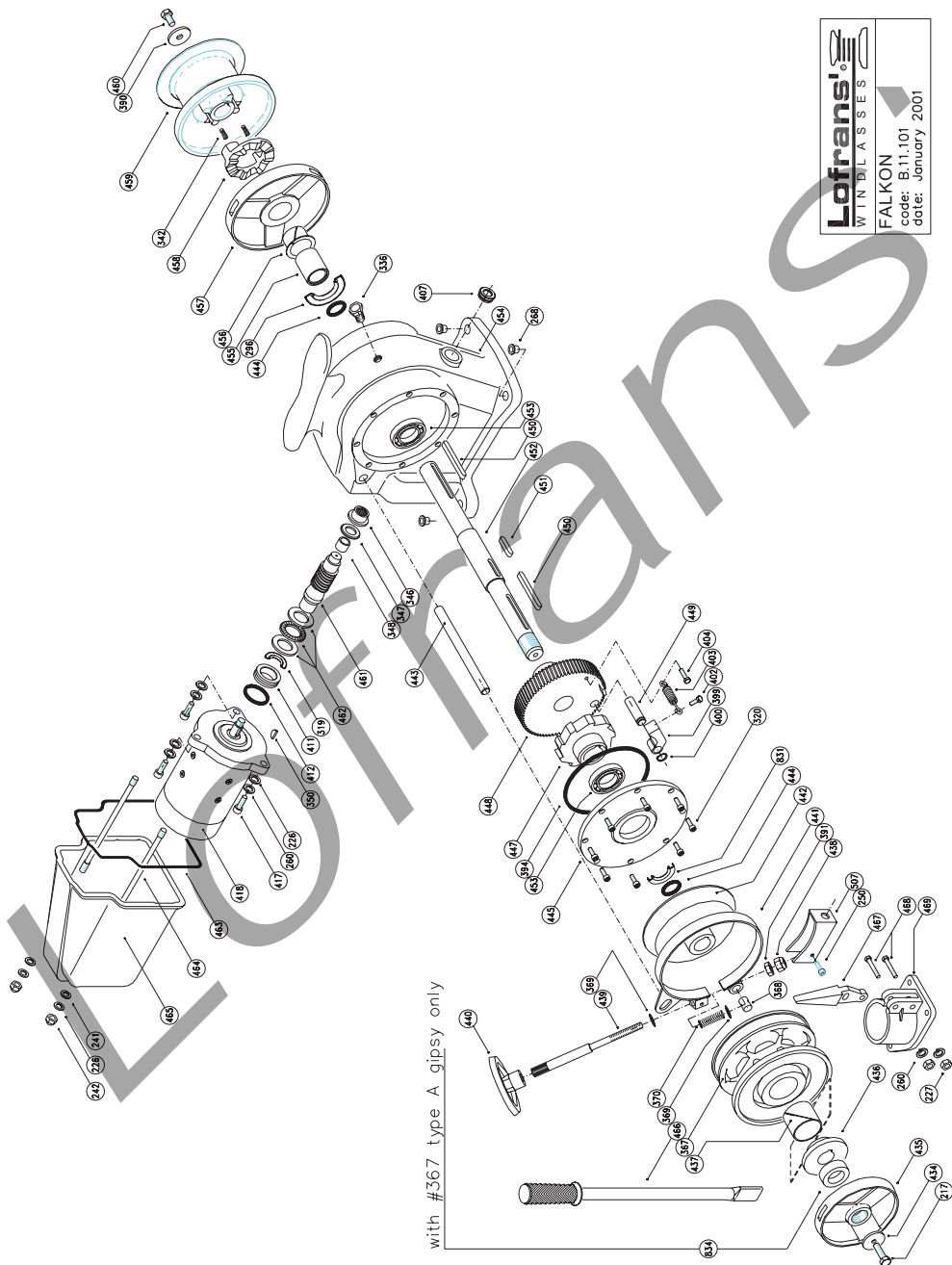
B.10.101 - Rev. A Date: 01-2005

ROPE KIT



| Nr. | Code | Description |
|-----|--------|------------------------------|
| 1 | 04341 | Hexagon Screw M8x45 |
| 2 | 634119 | Hexagon Screw M6x40 |
| 3 | 05989 | Body |
| 4 | 05990 | Finger |
| 5 | 05991 | Stripper |
| 6 | 05992 | Finger Pin |
| 7 | 05993 | Gipsy for Ø 8 or 5/16" chain |
| 8 | 05994 | Inner Cone Clutch |
| 9 | 631842 | Outer Cone Clutch |
| 10 | 05159 | Hexagon Screw M4x16 |
| 11 | 636100 | Spring |
| 12 | 635342 | Pawl |

| | |
|--|--|
|  Lofrans [®] WINDLASSES |  FALCON |
| | code: B.11.101 |
| | date: January 2001 |



FALKON

| Item | Description | Kit | Q.ty |
|------|--|-------|------|
| 217 | Hex hd screw M8x20 | Kit B | 1 |
| 226 | Washer for screw M8 | Kit B | 5 |
| 227 | Nut - M8 | Kit B | 2 |
| 241 | Nylon washer M8 | Kit B | 2 |
| 242a | Cap nut M8 | Kit B | 2 |
| 250 | Hd cap screw - M5x8 | Kit B | 1 |
| 260 | Spring washer for screw M8 | Kit B | 5 |
| 268 | Nylon bush | | 4 |
| 296 | Seal - 40x56x8 | Kit A | 1 |
| 319 | Seal - 25x42x6 | Kit A | 1 |
| 320 | Hex hd screw M6x16 | Kit B | 8 |
| 336 | Oil plug 3/8" | | 1 |
| 342 | Spring | | 2 |
| 346 | Combined bearing - Rax 720 | | 1 |
| 347 | Thrust ring - CP 32035 | | 1 |
| 348 | Ring IM 1520164 | | 1 |
| 350 | Round key 4x6,5 | Kit C | 1 |
| 364 | Clutch cone - outer | | 1 |
| 367a | Gipsy chain 8 Iso | | 1 |
| 367b | Gipsy chain 10 Iso - 3/8 G40 | | 1 |
| 367c | Gipsy chain 3/8 Din766 - BBB - 10 Din766 | | 1 |
| 367d | Gipsy chain 12 Iso - 13 Din766 - 1/2Din766 | | 1 |
| 367e | Gipsy chain 1/2 G40 | | 1 |
| 367f | Gipsy chain 1/2 BBB | | 1 |
| 367g | Gipsy chain 14 Iso | | 1 |
| 367h | Gipsy chain 10 Iso | | 1 |
| 367i | Gipsy chain 3/8" G40 | | 1 |
| 368 | Pivot | | 1 |
| 369 | Washer for screw M10 | Kit B | 2 |
| 370 | Spring | | 1 |
| 385 | Hex hd screw M10x30 | Kit B | 1 |
| 391 | Nut - M10 | Kit B | 1 |
| 394 | O Ring seal - 4625 | Kit A | 1 |
| 400 | Circlip - 15 Din 471 | Kit D | 1 |
| 402 | Hex hd screw M6x16 | Kit B | 1 |
| 403 | Spring | | 1 |
| 404 | Hex hd screw M6x25 | Kit B | 1 |
| 407 | Sightglass | | 1 |
| 411 | Spacer | | 1 |
| 412 | O Ring seal - 153 | Kit A | 1 |
| 417 | Hd cap screw - M8x30 | Kit B | 3 |
| 418a | Electric motor 1200 W 12 V | | 1 |
| 418b | Electric motor 1200 W 24 V | | 1 |
| 418c | Electric motor 1500 W 12 V | | 1 |
| 418d | Electric motor 1500 W 24 V | | 1 |
| 434 | Washer | Kit B | 1 |
| 435 | Wingnut | | 1 |
| 436 | Clutch cone - outer | | 1 |
| 437a | Nylon band for chain Ø8 | | 1 |
| 437c | Nylon band for chain Ø10 | | 1 |
| 438 | Safety nut M10 | Kit B | 1 |
| 439 | Brake pivot | | 1 |
| 440 | Hand-wheel | | 1 |
| 441 | Band brake | | 1 |
| 442 | Clutch cone - inner | | 1 |
| 443 | Brake pivot | | 1 |
| 444 | O Ring seal - 4112 | Kit A | 2 |
| 445 | Cover | | 1 |
| 447 | Ratchet | | 1 |
| 448 | Wormwheel | | 1 |
| 449 | Pivot | | 1 |

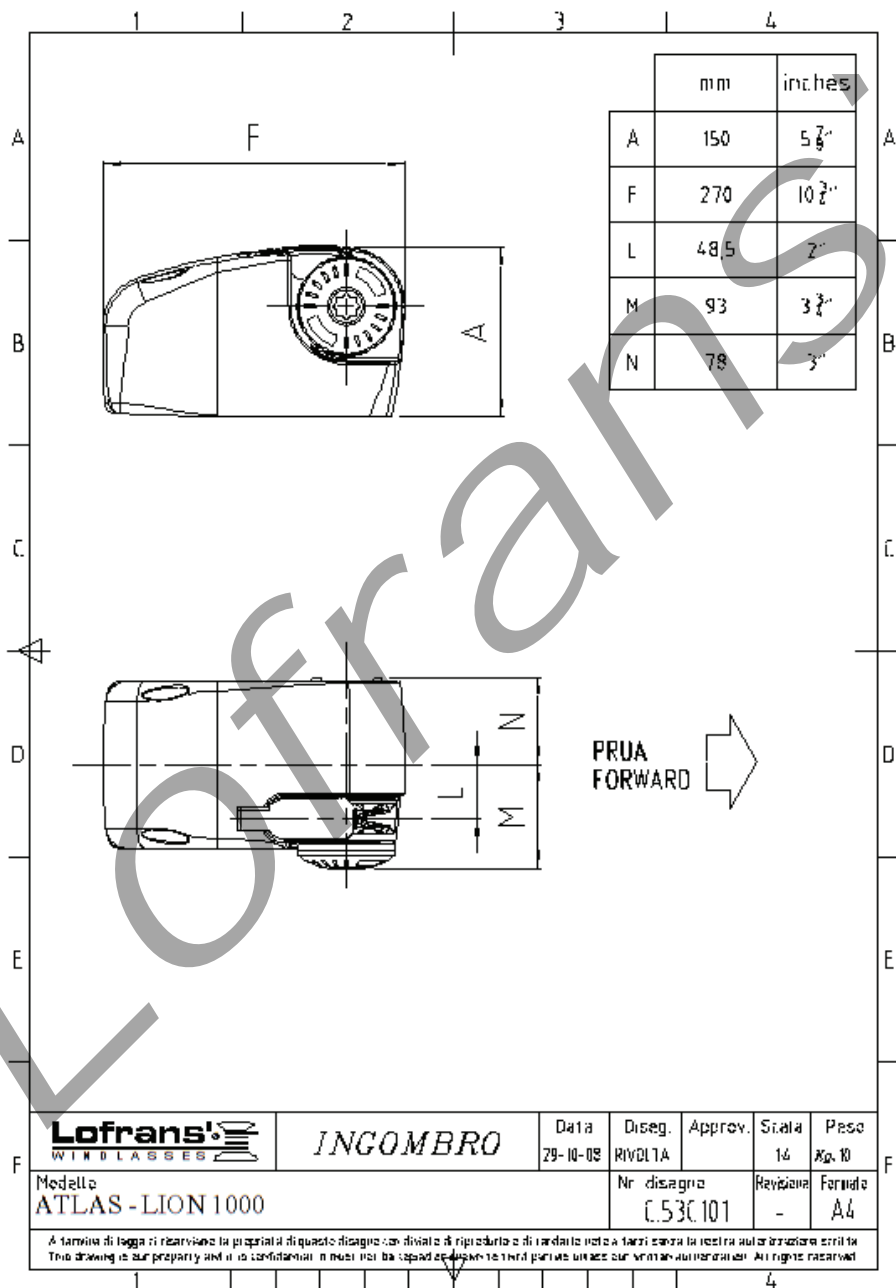
| Item | Description | Kit | Q.ty |
|---------|--------------------------------|-------|------|
| 450 | Key - 8x7x80 | Kit C | 2 |
| 451 | Key - 10x8x40 | Kit C | 1 |
| 452 | Main shaft | | 1 |
| 453 | Bearing - 6206 | | 2 |
| 454 | Body | | 1 |
| 455 | Spacer | | 1 |
| 456 | Nylon bush | | 1 |
| 457 | Emergency wheel | | 1 |
| 458 | Dog clutch | | 1 |
| 461 | Worm | | 1 |
| 462 | Thrust bearing - 51106 | | 1 |
| 463 | Gasket | | 1 |
| 464 | Stud - M8x285 | | 2 |
| 465 | Motor cover | | 1 |
| 466 | Handle | | 1 |
| 467 | Stripper | | 1 |
| 468 | Hex hd screw M8x40 | Kit B | 2 |
| 469 | Chain pipe | | 1 |
| 507a | Brake cover | | 1 |
| 831 | Seal - 42x56x7 | Kit A | 1 |
| 839a | Chromed bronze drum-upper part | | 1 |
| 840 | Chromed bronze drum-lower part | | 1 |
| 1004 | Washer | | 1 |
| 1108 | Pawl | | 1 |
| KA11101 | Kit A - Seals | | 1 |
| KB11101 | Kit B - Screw&Nuts | | 1 |
| KC11101 | Kit C - Keys | | 1 |
| KD11101 | Kit D - Circlips | | 1 |

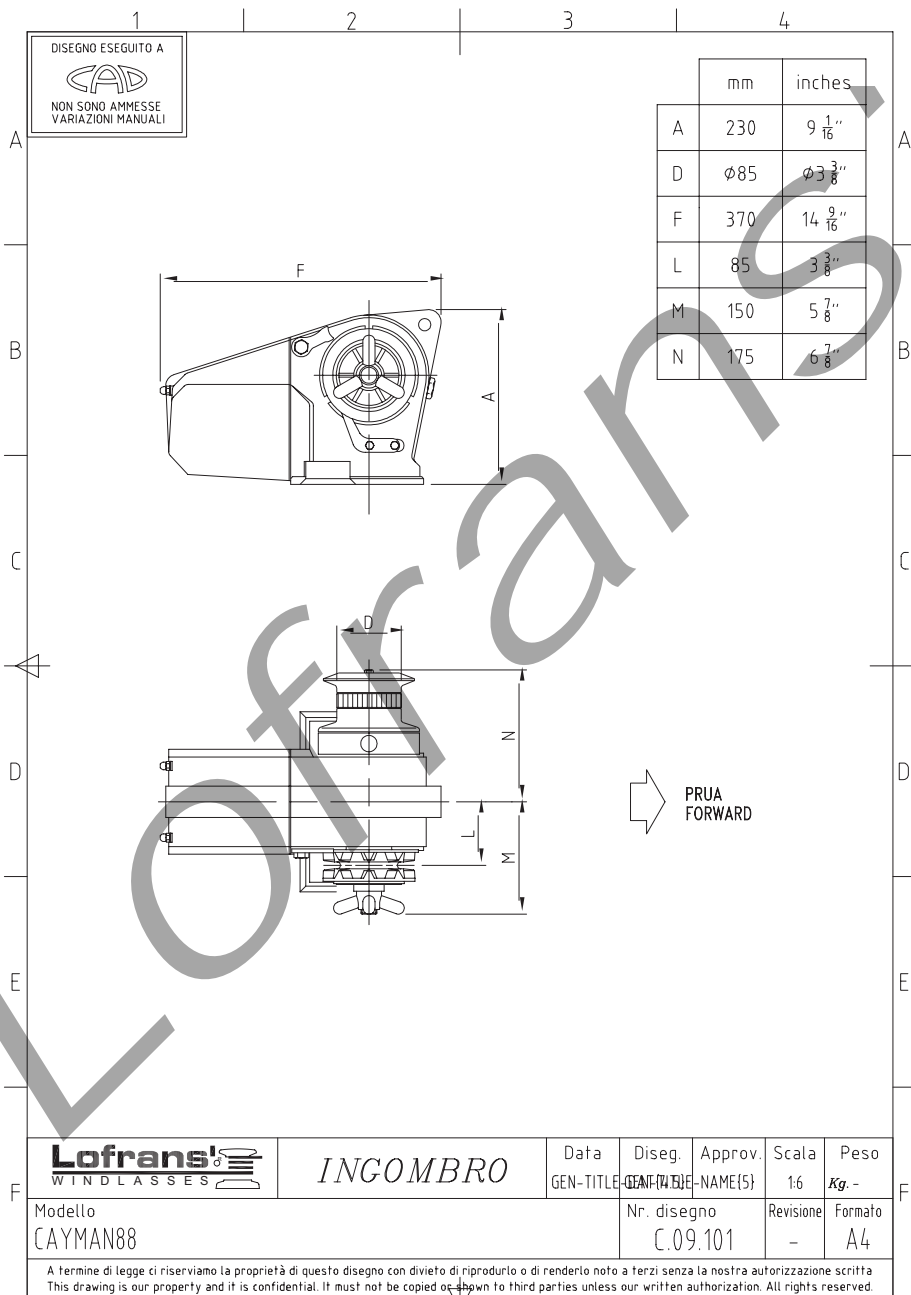
B.11.101 - Rev. B Date: 02-2006

For Falcon 2000W 24V

| Item | Description |
|------|--------------------------|
| 418e | Electric motor 2000W 24V |
| 319a | Seal - 30x42x7 |
| 461a | Worm for 2000W motor |
| 453a | Bearing - 7206 |

10 OVERALL DIMENSIONS





Lofrans!
WINDLASSES

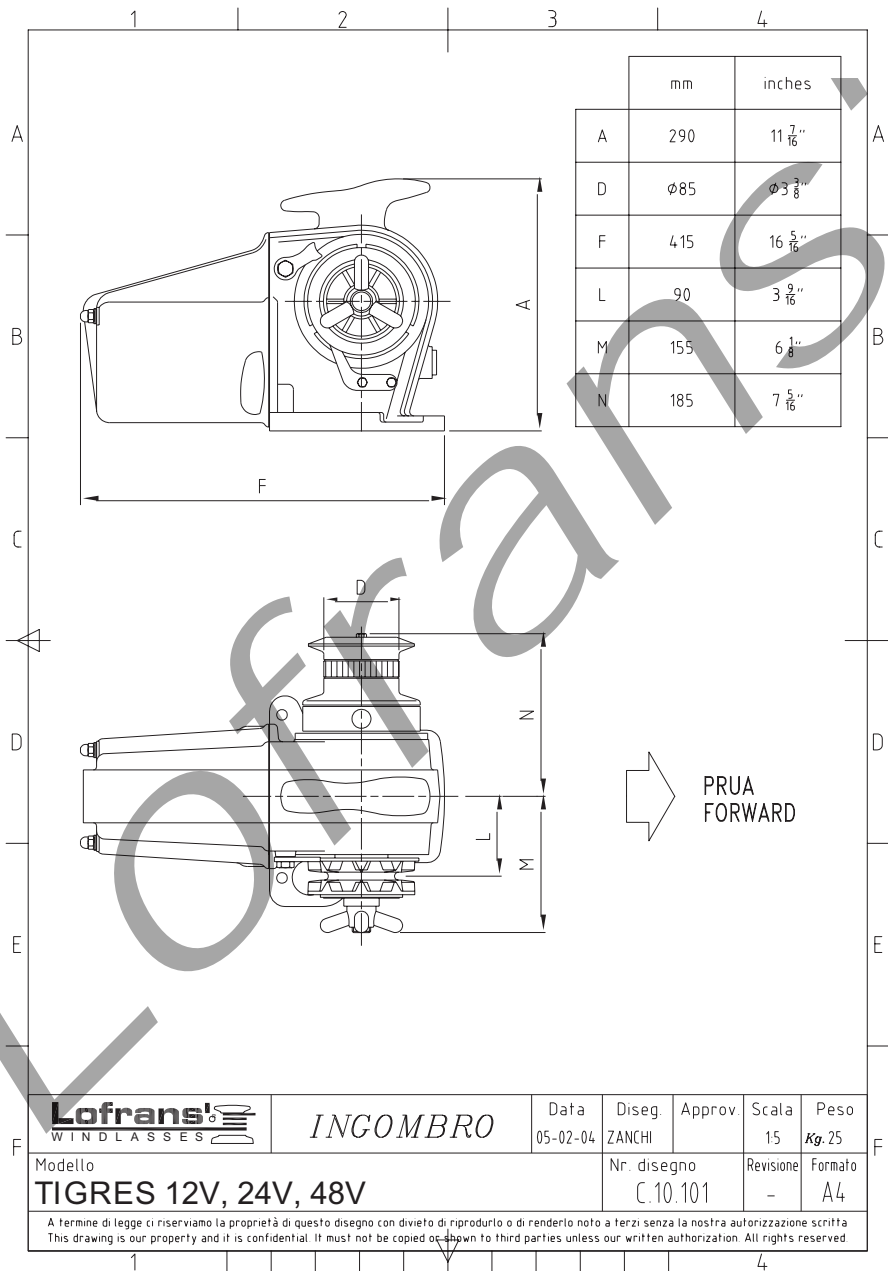
INGOMBRO

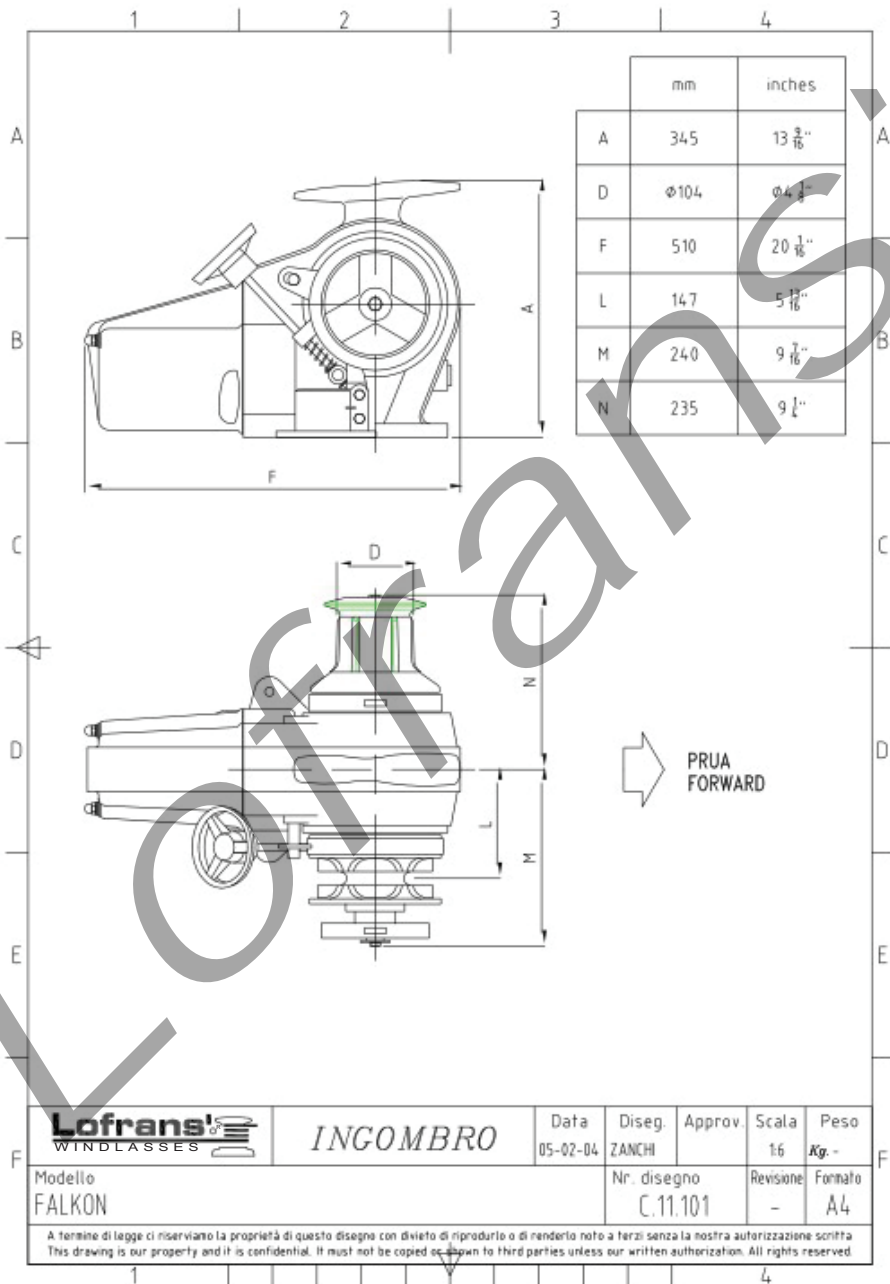
| | | | | |
|-----------|----------|-------------|-------|-------|
| Data | Diseg. | Approv. | Scala | Peso |
| GEN-TITLE | GEN-FILE | GEN-NAME(S) | 1:6 | Kg. - |

Modello
CAYMAN88

| | | |
|-------------|-----------|---------|
| Nr. disegno | Revisione | Formato |
| C.09.101 | - | A4 |

A ferme di legge ci riserviamo la proprietà di questo disegno con divieto di riprodurlo o di renderlo noto a terzi senza la nostra autorizzazione scritta.
This drawing is our property and it is confidential. It must not be copied or shown to third parties unless our written authorization. All rights reserved.





UK

11 WARRANTY CONDITIONS

Lofrans" guarantees that in a normal use and by meeting the maintenance programmes, the anchor windlass is covered by a warranty for a period of **3 years** from the date of purchase by the ultimate user, subject to the conditions, limitations, and exceptions listed hereunder. Any product that proves to be defective in a normal use during this period will be repaired or replaced at the choice of Lofrans".

11.1 Conditions and limits

- Lofrans" liability will be limited to the repair or replacement of all parts of the product that show material or processing defects.
- Lofrans" is not liable for the wrong choice of the anchor windlass by the purchaser.
- Lofrans" will not be liable in any whatsoever manner for failures, or any consequent damage deriving from:
 - use of the anchor windlass in an application for which it was not designed or envisaged;
 - corrosion, degradation by UV rays and wear;
 - non-observance of the maintenance plan;
 - wrong or unsuitable installation of the product;
 - any modification or alteration of the product;
 - conditions of use beyond the specifications and the performances of the product:
- Except for different directives given directly by Lofrans", any product subject to a warranty request must be returned to Lofrans", which will analyse the problem.
- The warranty does not cover the accessory costs met for interventions, removal, transport, and installation of the product;
- Maintenance carried out by persons not authorised by Lofrans" will invalidate this warranty;
- The Lofrans' products are intended to be used only in a marine environment. Lofrans" is not liable should these products be used differently.

11.2 Exceptions

The cover under warranty of the following components is limited to a period of one year from the date of purchase by the ultimate user:

- Electric motors and related electric equipment
- Electronic controls
- Hydraulic pumps, valves, and actuators
- Gaskets and seals
- Products used on charter boats.

11.3 Liability

The liability of Lofrans" on this warranty is intended dependant on meeting the regulations and laws in force. Lofrans" is not liable for any other kind, such as:

- Any loss of turnover, advances, or direct or indirect profits, or any other financial loss;
- Damages, costs or expenses payable to third parties;
- Damages to yachts or equipment;
- Death or personal injuries (unless caused by negligence of Lofrans"). Certain States and Countries do not allow the exclusion or limitation of incidental or consequential damages, therefore the aforementioned limitations or exclusions might not be applicable.

11.4 Procedure

Every request for intervention under warranty will be made promptly and in writing by the ultimate user to the local Lofrans' assistance centre.

11.5 Clause of termination

If any whatsoever clause of this warranty will be invalidated by a Judge or other competent authority, the validity of the remaining clauses of this warranty and the rest of the clause in question will not be affected.

11.6 Compliance

This warranty is governed by the laws and in compliance with the Italian Laws or the State or Country in which the ultimate user is domiciled at the time of purchase of the product.

Lotrans.

Lofrans![®] 
WINDLASSES
THE ORIGINAL WINDLASS

Via Philips, 5 - 20052 Monza (MB) (Italy)
www.lofrans.com - e-mail: contact@lofrans.com