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

Verricelli Verticali

Vertical 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

XP800

3 Years Limited Warranty

UK

Lofrans' WINDLASSES
THE ORIGINAL WINDLASS

UCINA

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

CE MADE IN EU

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.

TABLE OF CONTENTS

PRODUCT COMPLIANT WITH EC REGULATIONS

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 s.r.l distributor. Details on website www.lofrans.com.

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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 authorized 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 inappropriate way can cause damages to persons and/or things.
- Pay the utmost attention during the use of powerful equipment.
- 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 windlass, make sure that there are no persons in water in the vicinity.
- When the windlass 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 a point. The load must always be held by a cleat or solid point.
- The windlass must not be used for functions other than paying out or weighing the anchor.
- 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:

1. Anchor windlass complete with gearmotor
2. Control box (for DC variants) and its cable crimps
3. Handle
4. Circuit breaker
5. Control Switch

3.2 Equipment necessary for installation

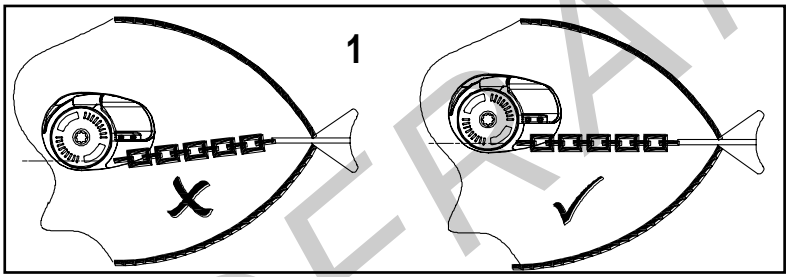
1. Drill
2. 9mm - 23/64" inches and 12 mm-31/64" inches bit for wood and steel
3. 105 mm- 4-1/8"inches diameter hollow drill bit
4. 50 mm- 2" inches diameter hollow drill bit
5. 10 mm- 3/8" inches wrench

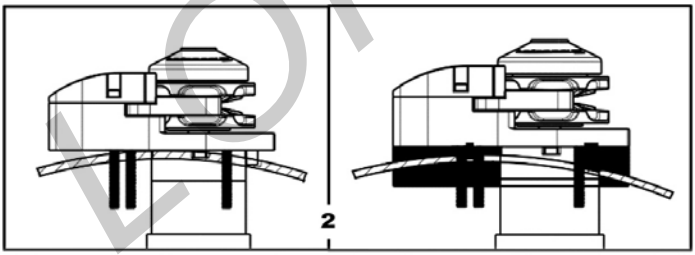
3.3 Recommended accessories

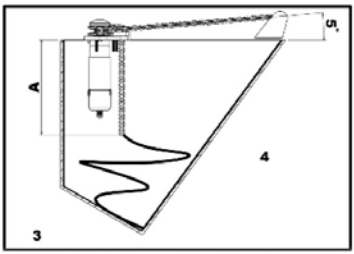
Use exclusively original Lofrans accessories and spare parts, designed and manufactured to ensure performances, duration and for keeping valid the warranty. For information on available spare parts, contact your local reseller or visit website www.lofrans.com

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 alignment: the precise alignment of the anchor windlass to the bow roller is essential for the correct operation of the anchor windlass.

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.

4. Bow roller height: it must be such to guarantee a chain inclination lower than 5 degrees.

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

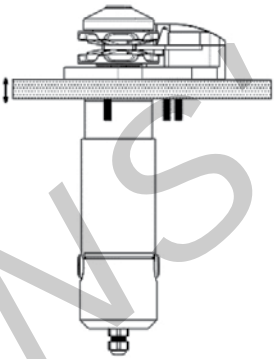
3.5 Prevention from electrolysis

For aluminium boats, it is essential that the anchor windlass be insulated from the deck through a non-conductive gasket (not supplied). In addition, it is important that also the anchor and the chain be insulated from the hull, including chain stopper and fixing systems.

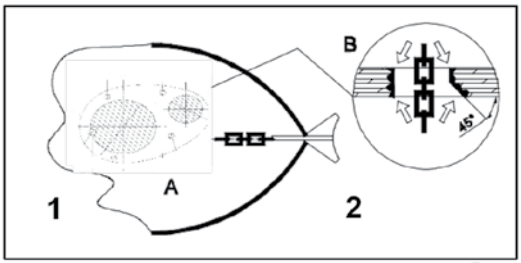
Without these precautions, the electrolysis phenomenon will lead to a rapid corrosion of the anchor windlass.

3.6 Deck thickness

The area of the deck where the windlass is mounted must be solid and resistant so to be able to support the stresses due to the recovery of the anchor. The standard series studs allow an admissible range of deck thickness from 10 to 30 mm (for bigger deck thickness use bigger studs).



3.7 Deck installation

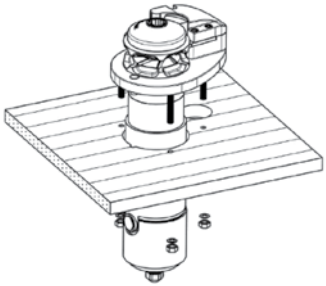


1. Place carefully the drilling template on the deck, by ensuring the correct **alignment** with the bow.
2. Let the edges of the holes sharp, while the edge side of the holes of the chain towards the bow must be smoothed for an angle of 45° degrees.
3. Place carefully the upper part of the anchor windlass on the deck.
4. Drill first the 12 mm hole, which concerns the chain counting sensor and then proceed with the rest of the drillings according to the template. By using a 10 mm (3/8 ‘’) diameter drill prepare the four holes for the deck mounting studs. Use hole saws of 105 mm (4-1/8”) and 50 mm (2”) diameter to complete the required cutouts.
5. When all the holes have been made, remove the drilling template. To help avoid water absorption by the deck, apply an appropriate marine sealant to the freshly cut hole edges.
6. Assemble and fully tighten the four studs into the windlass base (#1041c).

Note:
It is recommended to seal the base of the anchor windlass to the deck by means of silicone glue. Do not use a permanent glue to fix the base of the anchor windlass to the deck since this will make difficult the removal in case of maintenance or intervention.

3.8 Under deck installation

1. Tighten the washers and related nuts to the studs by fastening them appropriately
2. Connect the cables coming from the gearmotor to the control box and the battery by following the indications of the wiring diagram.



ATTENTION! Always disconnect electrical power to the anchor windlass before carrying out any action.

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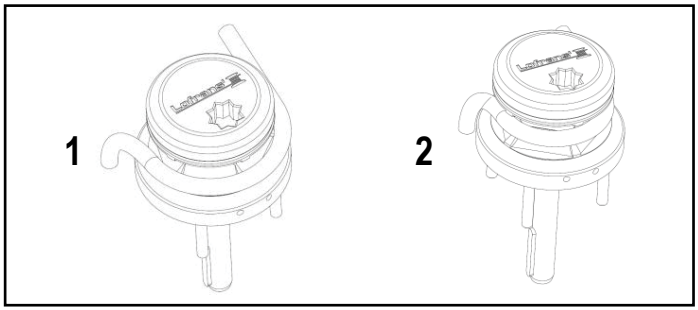
3.9 Chain insertion

In order to guarantee performances and reliability, it is recommended to use a calibrated chain of the measure corresponding to the gipsy supplied.



1. Insert the chain into the hole and fix to a safe point.
2. Wrap the chain in the gipsy.
3. Recover all the chain by using the motor, taking care that the chain enters into the gipsy well aligned.

Insert always an articulated joint between the chain and the anchor so that the chain itself does not twist.

4 ELECTRICAL SYSTEM

Model	Motor Power (W)	Voltage (V)	Contactor (A)	Cable sizing according length of cable (positive + negative) Insulation Temp. Rating ≥105°C	
				0-10 m	0-33 ft
XP800	500	12	40	10 mm^2	8 AWG

4.1 Electrical cable section

In order to obtain the maximum performances from the anchor windlass and safeguard the electrical system, it is essential that the anchor windlass be wired with cables of sufficient section as suggested in the table. Note that the two cables coming out of the gearmotor input require 6 mm crimp lugs. The minimum cable cross-section for the two cables coming from the control box—one green and one black—which connect using the crimp bullet connectors provided in the windlass package, should be no less than 2.5 mm^2 (14 AWG). The gearmotor will include from factory 30cm positive and negative cables for the power supply (Maximum allowed voltage drop 10% for power and command circuit).

4.2 Control Box

Place it in a dry and well ventilated place near the windlass, the control box needs to be protected against direct water contact. Do not mount the control box near flammable material since during operation it might get hot.

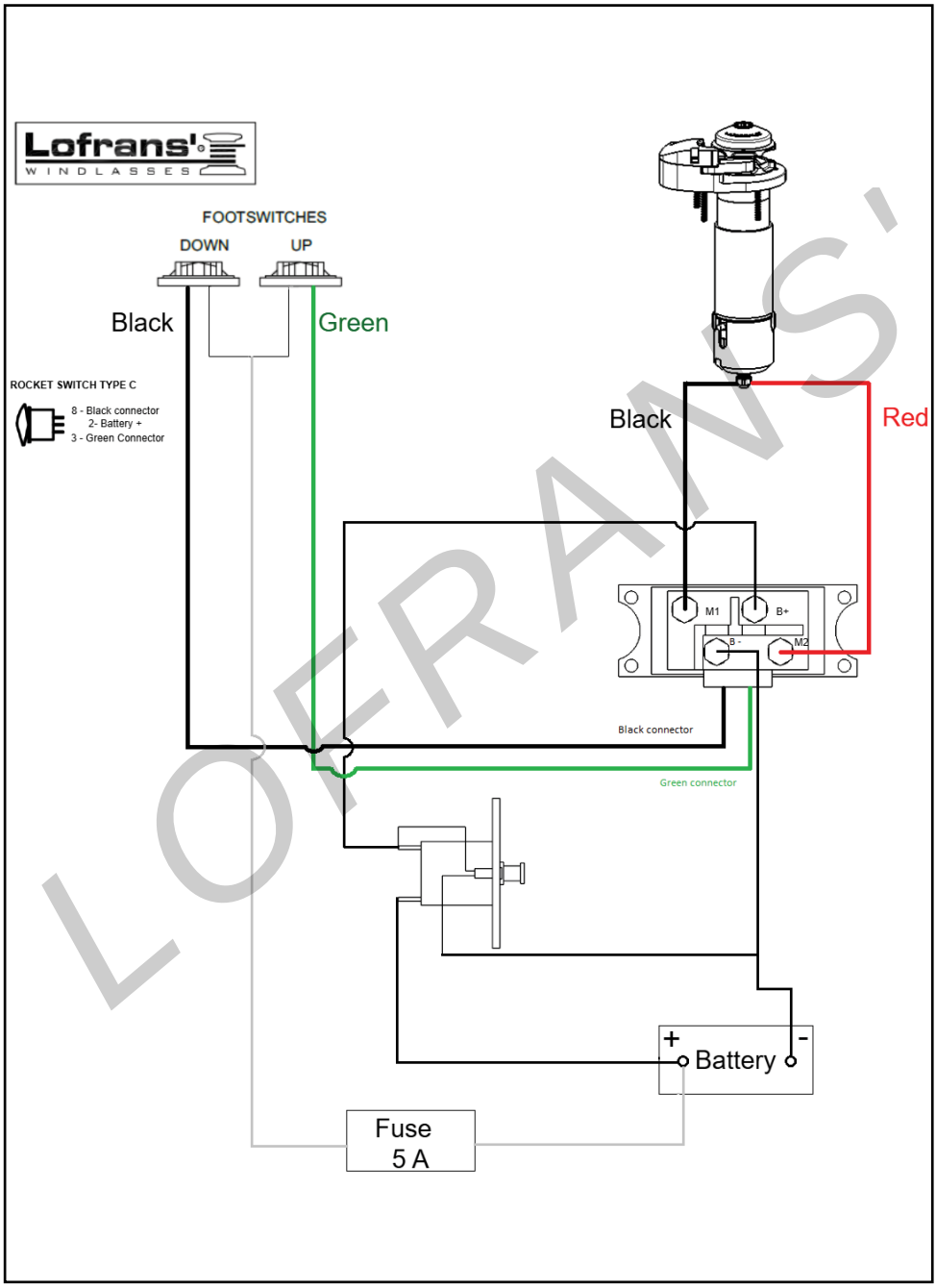
4.3 Circuit breakers

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 windlass during the anchoring. Mount and seal the electric panel board so that the terminals remain in a dry place.

4.5 Wiring Diagram



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5 USE OF THE ANCHOR WINDLASS

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. Disengage all chain fixing devices.

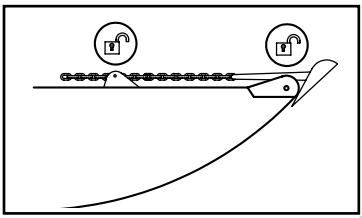
2. Activate the safety switch

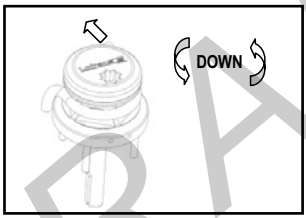
3. Press the DOWN button from the control at your disposal. In this way, the lowering of the chain will be perfectly controllable and the unwinding of the chain regularly.

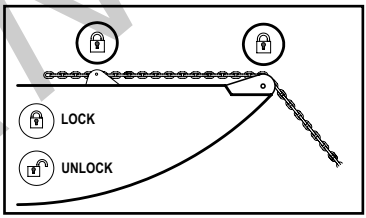
4. Once the chain is lowered, deactivate the safety switch.

5. Engage the chain fixing devices.

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







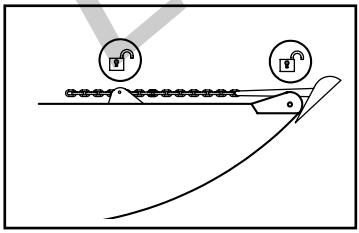
Make sure the anchor windlass is not powered before carrying out manual interventions.

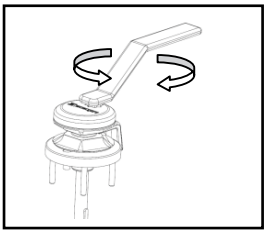
5.1.2 Lowering the anchor by gravity

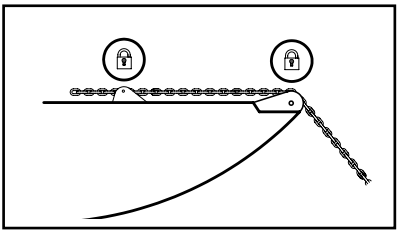
1. Make sure that the clutch is tightened and then disengage the chain stopper or safety stops.

2. Disengage the clutch gradually through the maneuver handle. Note: to adjust the descent speed of the chain act, through the handle, on the clutch. By turning it counterclockwise, the braking speed of the chain will increase (until complete stop), while by turning it clockwise, braking will be reduced.

3. Fix the chain to a strong point.







It is very important to always regulate the speed in which the windlass releases the chain/anchor.

5.2 Weighing the anchor

1. Make sure that the circuit breaker is activated.

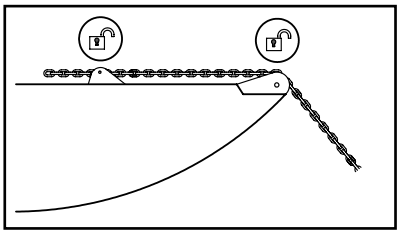
2. Make sure that the clutch is well tightened. Take out the handle from the gipsy.

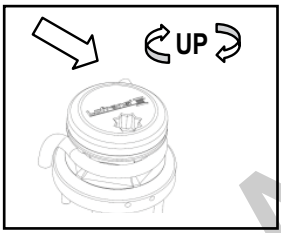
3. Disengage the chain stopper and safety stops.

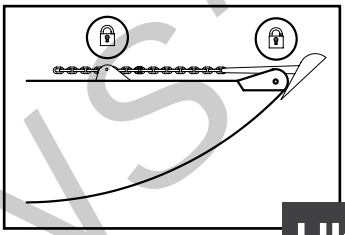
4. Press the UP button from the control at your disposal until the anchor reaches its position inside the bow roller.

5. Deactivate the 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.







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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.

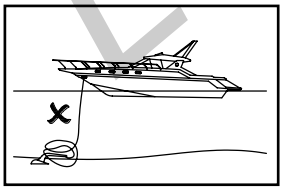
To safeguard the anchor windlass, the circuit breaker is sized so that it comes into action when the anchor windlass is subjected to higher loads than those for which it has been designed. Should it get released owing to an overload reactivate it again and wait some minutes before operating it; waiting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

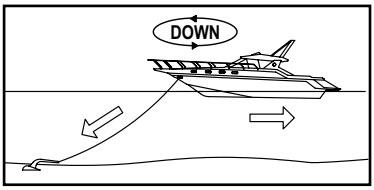
The circuit breaker does not protect against an excessive increase in the motor temperature due to a prolonged operation of the anchor windlass. Therefore, give the motor the necessary time to cool, to avoid possible damages to the motor thereafter (5 min Duty Cycle).

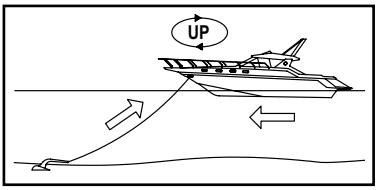
5.3 Notes for use

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

1. By paying out the chain, it is necessary to maneuver so that the chain is laid down on the seabed without heaping on itself.
2. To ease the recovery and not overloading the windlass, 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.







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 continuing.

6 MAINTENANCE

	USE OF THE YACHT (MONTHS)			
	LESS THAN 2	FROM 2 UP TO 6	MORE THAN 6	CHARTER
EVERY 3 MONTHS	A - A		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	

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

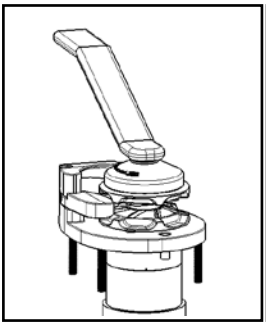
Disconnect power to the anchor windlass before any maintenance.

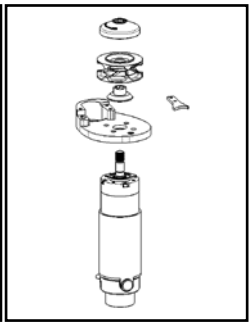
6.1 Maintenance programme

A. Clean all external surfaces and hidden points with fresh water and soft cloth or nonabrasive sponge to remove all salt layers. Do not use chlorine, bleach or acid solutions to clean the windlass as this will damage the INOX parts and the seals. Apply metal polish compound and coat all INOX parts to remove oxidation and renew the bright finish of the material.
B. Grease the rotating parts with yellow marine grease that is nonconductive. Particularly, the main shaft threads of the gear motor and clutch cones. Check for evidences of corrosion and mechanical stresses. Apply anti-seize grease to the threads of the shaft and gypsy cap, the studs and base, as well as to the chain cap and the screws that seal the base.
C. Check that crimps are secured on the cables exiting the water gland of the gear motor. Test the voltage drop at the terminals.
D. Replace the main seal on the base.
E. Remove the anchor windlass from the deck to clean the salt under the base and seal again.
F. The gearmotor consists of the planetary gearbox which is filled with grease lubrication therefore no oil is required.

6.2 Gipsy maintenance/replacement

1. By turning clockwise the handle, remove the gypsy cap (#212).
2. Remove the three M6 screws from the base that connect the chain cap (#1042) to the base. Remove the chain cap and the stripper to access the gypsy.
3. Slip off from the shaft the gypsy, and the lower clutch cone.
4. Wash with running water. DO NOT USE WATER UNDER PRESSURE.
5. Check that there is no evidence of corrosion or mechanical stresses.
6. Reassemble by proceeding in the reverse order, remembering to lubricate threads and all moving parts with grease.





7 TROUBLESHOOTING

Problem	Possible causes	Solution
1. The winch does not work when a control is operated.	***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 panel. ***1.5*** Failure of the electric motor. ***1.6*** The gearmotor overheats and the circuit breaker trips.	***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.	***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.	***2.1*** Position the anchor windlass in the deepest point of the chain locker or reduce the quantity of chain. 2.2 Change the gypsy or the chain accordingly. 2.3 Check the chain: if it does not meet the tolerances, it must be replaced.
3. The winch runs slowly and at times trips the circuit breaker.	***3.1*** Section of cables not suitable. ***3.2*** Poor electrical connections. ***3.3*** Water leaks in the electric motor or planetary gearbox. ***3.4*** The planetary gearbox lost the lubrication grease. ***3.5*** The engine strains in one or both directions. ***3.6*** The winch works only in one direction. ***3.7*** The eloctrobrake does not disengage properly.	***3.1*** Increase the cable section. ***3.2*** Check out the connections. ***3.3*** Replace the gear motor. ***3.4 (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. ***3.5 (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. ***3.6*** 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. ***3.7*** Check the voltage of gear motor.
4. The gear motor runs but the shaft does not rotate either Up or Down.	***4.1*** Heavy wear or damage of the planetary gears. ***4.2*** Damage of the gear motor shaft.	***4.1*** **(SERVICE)** Uninstall the winch and replace the planetary gearbox. (*) ***4.2*** **(SERVICE)** Replace the gear motor. (*) (*) Take advantage of this opportunity to replace any other worn parts, especially seals, screws, circlips.
5. The clutch cone of the windlass are tightened but the windlass cannot hold the anchor.	***5.1*** The internal electrobrake is malfunctioned	***5.1*** Remove the bottom plastic cover and inspect the internal cable wiring in case there is no cable loose connection. Replace the gear motor.

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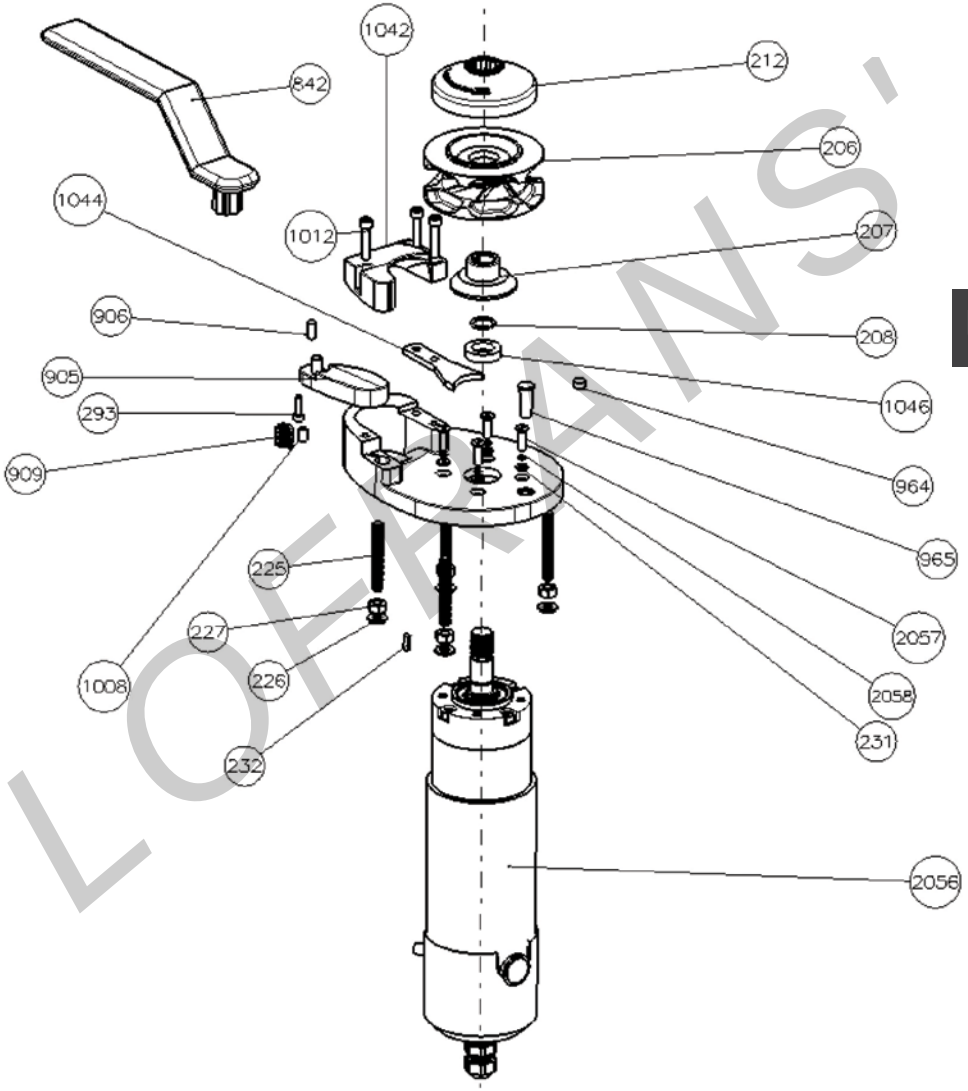
Problem	Possible causes	Solution
6. The winch cannot be weighed: the gear motor runs, the shaft runs, but the gypsy is still.	***6.1*** The gypsy is not closed on the clutch cones and slips under the load effect, or for some reason the closing wheel is at end stroke. Check out all pieces in sequence. ***6.2*** The clutch cones or the gypsy cones are deformed and the clutch hubs are in contact and prevent closure.	***6.1*** 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. ***6.2*** Replace the clutch and/or the gypsy.
7. The shaft does not run well, is not aligned, and so is the gypsy.	***7.1*** The gear motor shaft bent because the winch was subjected to an excessive load.	***7.1*** Check out that the procedures of use fall within the specifications of the winch. **(SERVICE)** Uninstall the winch and replace the planetary gearbox. Take this opportunity to replace worn parts, gaskets, screws, tabs.

8 TECHNICAL DATA

Motor Power	**500W**
Up to Vessel Length (mt. / ft)	11 / 36
Supply (power & command)	**12V**
Maximum linear Load/Pull (Kg / lb)	160 / 353
Max Lift Working Load (Kg / lb)	95 / 210
Amps Work Load (A)	35
Max Line Speed (mt./min. / ft/min.)	21 / 69
Line Speed (mt./min. / ft/min.)	17 / 56
Net weight Low Profile (Kg / lb)	10 kg

Gipsy	6mm			7mm				8mm			
Chain supported	6mm	6mm	3/16”	7mm	7mm	1/4”	1/4”	8mm	8mm	5/16”	5/16”
	ISO	DIN 766	BBB	ISO	DIN 766	G4	BBB	ISO	DIN 766	G4	BBB
Rope supported	10-12-1/2” mm 3-strand 14mm 3-strand rope			10-12-1/2” mm 3-strand 14mm 3-strand rope				10-12-1/2” mm 3-strand 14mm 3-strand rope			

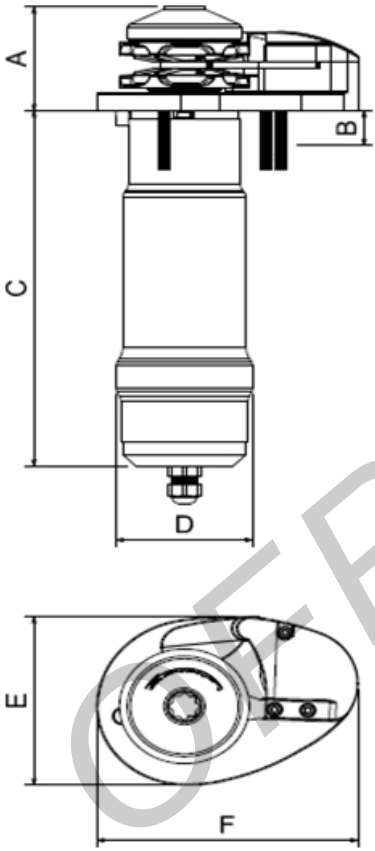
9 SPARE PARTS



UK

XP800			
Item	**Description**	**Maintenance Kit**	**Q.ty**
206E	GYPSY 8mmISO4565/DIN766 #206B		1
206F	GYPSY 7mmISO4565/DIN766 #206D		1
206A	GYPSY 6mmISO4565/DIN766 #206F		1
207	Clutch cone - inner		1
208	Ring DIN 17224 #208		1
212	GYPSY CAP #212 CRO		1
226	Washer for M8 screw	√	4
227	Nut - M8	√	4
231	Washer for M5 screw	√	4
232	Key - 4x4x15	√	1
293	Hd cap screw M5X16	Finger kit	3
225a	STUD M8X58	√	4
619	Hd cap screw M6x10	√	1
842a	Handle		1
906	SPACER #906	Finger kit	1
905A	FINGER #905A NYL	Finger kit	
909	SPRING #909	Finger kit	1
964	Magnet		1
965	Sensor		1
1008	Pivot 7x14	Finger kit	1
1012	Hd cap screw M6x40	√	3
1041C	BASE XP800 #1041C INOX STB		1
1042C	CAP CHAIN X800 INOX #1042C		1
1044	STRIPPER X1 #1044		1
1046	RING SEAL 18-30-7	√	1
2056	Gearmotor XP800		1
2057	Countersunk screw M6X25	√	4
2058	Ring for screw M6X25	√	4

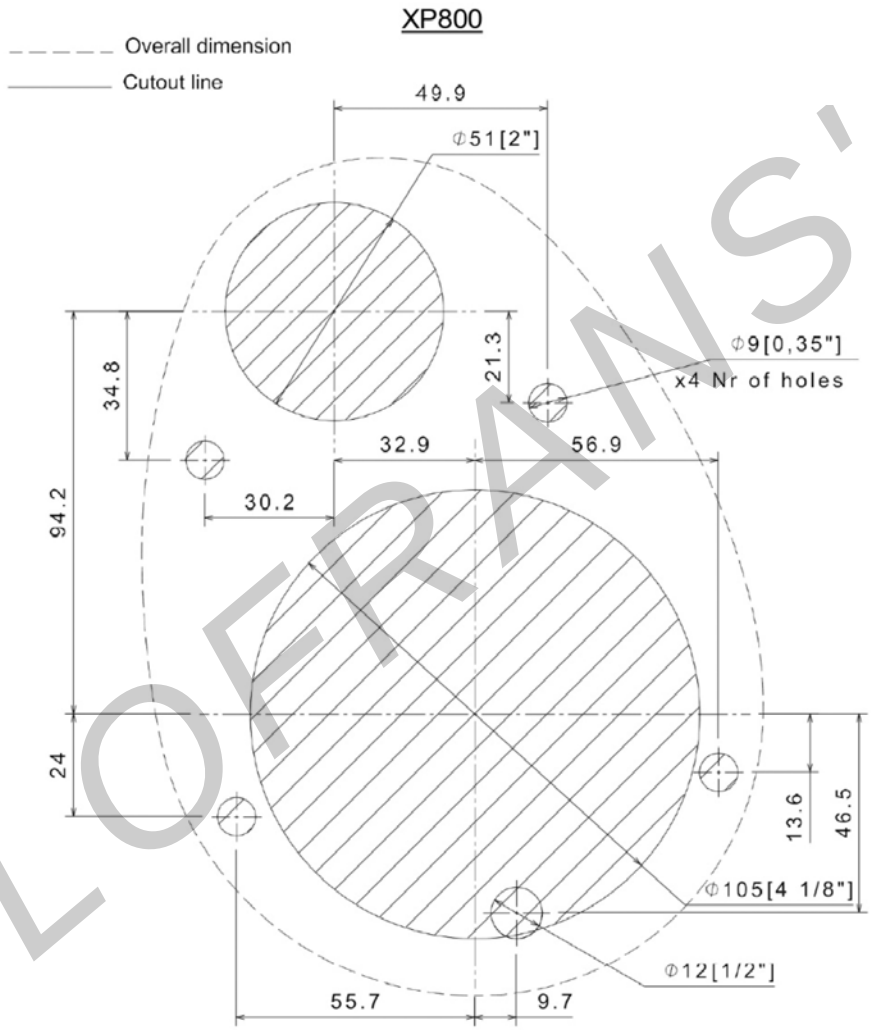
10 OVERALL DIMENSIONS



	mm	inches
A	90	3.54”
B	Min 10 - Max 30	Min 0.39”- Max 1.18”
C	305	12”
D	103	4.05”
E	145	5.70”
F	197	7.75”

UK

11 DRILLING TEMPLATE



INSTRUCTIONS:
1) WARNING!! Drawing should not be scaled. Prior to drilling, please verify the dimensions of the print out.
2) Drill Φ12 first and then proceed with rest of the drillings

12 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.

12.1 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 s.r.l is not liable for the wrong choice of the anchor windlass by the purchaser.
- Lofrans s.r.l 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.

UK

12.2 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.

12.3 Liability

The liability of Lofrans on this warranty is intended dependant on meeting the regulations and laws in force.
Lofrans s.r.l 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 s.r.l).

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.

12.4 Procedure

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

12.5 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.

12.6 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.

Lofrans'®

WINDLASSES

THE ORIGINAL WINDLASS

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

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