



DORADO

MOUNTING , OPERATION AND MAINTENANCE INSTRUCTIONS

ISTRUZIONI PER INSTALLAZIONE ,USO E MANUTENZIONE

ISTRUCTIONS DE MONTAGE, UTILISATION ET MAINTENANCE

INSTALLATIONS-,BEDIENUNGS- UND WARTUNGSHANDBUCHER FUR BOOTEINGENTUMER

INSTRUCIONES PARA MONTAJE, USO Y MANTENIMIENTO

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WARNING ! your windlass is not designed as a strong point to fasten your anchor rode (chain or rope) to when the boat is laying on it's anchor and surging. The anchor rode must be fastened to a strong point such as mooring cleat, bollard or chain storage.

WARNING ! do not exceed a pulling load more than the rating of your windlass. The vessel's engine be running and used to assist in the anchor recovery.

WARNING ! always install the properly rated circuit breaker to protect the electric plant and electric motor from overheating and damages.

WARNING ! when not in use be sure to keep the anchor windlass circuit switch in the **Off** position to prevent accidental engagement of the windlass.

WARNING ! always keep your hands, feet and fingers clear of an operating windlass. If a jam occurs use extreme caution and turn off the windlass circuit before attending to clearing the anchor rode.

WARNING ! do not use the windlass for different purposes it was designed for.

WARRANTY

Lofrans' S.r.l. warrants its products for a period of one (1) year from the date of purchase against defects in materials or workmanship , under normal use and service. Any part which proves to be defective in normal usage during that one year period will be repaired or replaced by Lofrans'. This warranty is subjected to the conditions listed below.

Lofrans' liability shall be limited to repair or replacement of the part defective in materials or workmanship.

Lofrans shall not be liable in any way for failures due to use of products in applications for which they are not intended , improper installation , misuse , incorrect maintenance , corrosion , normal wear and tear , discoloration and unauthorised alteration of the product, conditions that exceed the product 's performance specifications.

The claim of warranty must be promptly notified in writing , to Lofrans or Lofrans' authorised distributor, providing proof of purchase. Repair will be under taken upon return of the defective part , freight prepaid to Lofrans or Lofrans authorised distributor. Lofrans or its authorised distributor will not be responsible for any shipping charges or labour cost associated with any warranty claims. Lofrans shall not be liable for consequential damages to yachts , equipment or other property or persons due to use or installation of Lofrans equipment. Implied warranties are limited to the life of this warranty. all incidental and/or consequential damages are excluded from this warranty. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages , so the above limitation or exclusions may not apply to you.

Lofrans' reserves the right to disclaim the warranty in case the windlass is controlled by not suitable electric accessories and/or in case of non installation of a proper circuit breaker on the windlass electric line.

MODEL CLASSIFICATION

FOR YOUR OWN SAFETY PLEASE READ THESE INSTRUCTIONS BEFORE INSTALLING OR OPERATING YOUR WINDLASS.

Fill in this form to obtain a complete classification of the installed model.

MOTOR	400 Watt 12 Volt	<input type="checkbox"/>	700 Watt 12 Volt	<input type="checkbox"/>
CHAIN	∅ 3/16" BBB	<input type="checkbox"/>	∅ 6 mm	<input type="checkbox"/>
	∅ 1/4" HT	<input type="checkbox"/>	∅ 7 mm	<input type="checkbox"/>
	∅ 5/16" HT.....	<input type="checkbox"/>	∅ 8 mm	<input type="checkbox"/>
ROPE	∅ 1/2"	<input type="checkbox"/>	∅ 12 mm	<input type="checkbox"/>
	∅ 9/16"	<input type="checkbox"/>	∅ 14 mm	<input type="checkbox"/>
OPTIONAL	Free Fall version	<input type="checkbox"/>		

PURCHASE DATE & PLACE

NOTES

SERIAL NUMBER

ELECTRIC PLANT

Check that the motor tension corresponds to the electric plant on board. The following schedule shows the suggest minimum battery feeding the windlass , the minimum suggested cable section and the proper circuit breaker to install on the power line.

MOTOR	BATTERY	CABLES SECTION		CIRCUIT BREAKER
400 Watt 12 V	60 Ah	16 mm ²	4 AWG	35 Amps
700 Watt 12 V	100 Ah	25 mm ²	3 AWG	70 Amps

If the windlass is fed by an inferior battery , the performances will be worse and the battery will be subject rapidly to wear and tear. We recommend the use of excellent quality cables , insulated and heat resistant. It is important underline the cables section should be increased of 30% - 50% approx. if the length of the extended cable , positive and negative , is greater than 10 mts. or 29' length. The cables connected to the electric controls , shown on the wiring diagram as a thin line , should have a section of 1.5 mm² or 16 AWG approx.

Circuit breaker informations referring only to LOFRANS' circuit breaker so they could be incorrect for other circuit breakers.

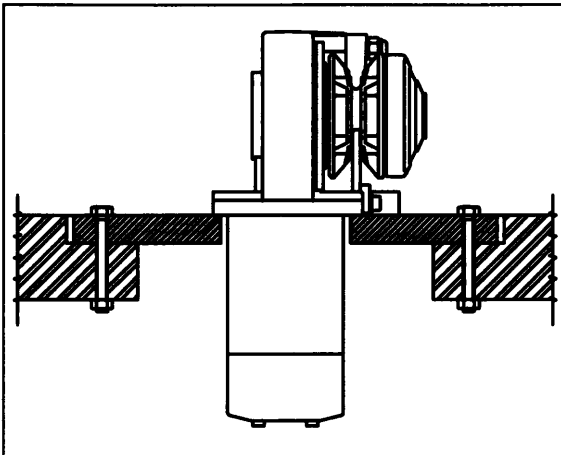
The circuit breaker protects from very dangerous short circuits , protects the windlass motor , avoiding damages due to anomalous absorption and interrupts tension to windlass , when desired. The circuit breaker must be installed in a dry , accessible and visible position . For safety reasons we recommend that the windlass and remote are isolated during navigation and reactivated during anchorage manoeuvring. Install the Control Box preferably in a dry place on board. We recommend to install at least two remote control to drive the windlass in case one of them gets damaged. Install a circuit breaker of 5 Ampere to protect the electric remote controls.

As for the electric remote controls , we recommend You to use original LOFRANS' components only , which are designed for sea water purpose. LOFRANS equipment conforms to European Directives, products are CE approved.

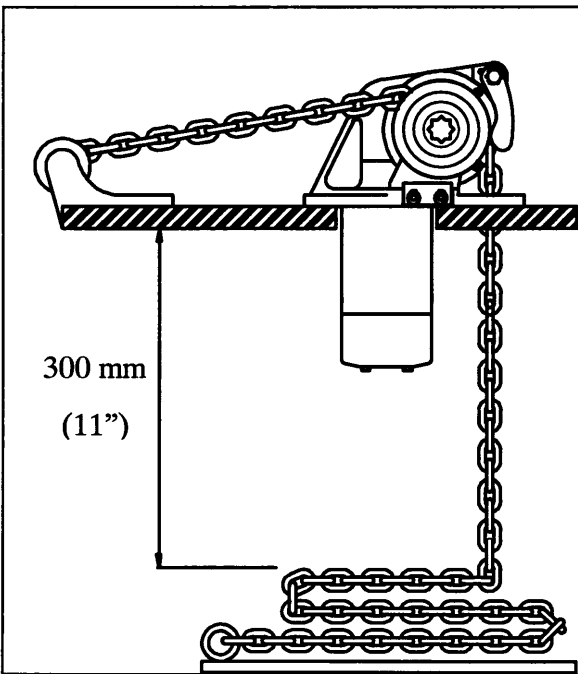
Check if the windlass is complete in every parts. If any parts is missing or damaged , please contact your dealer.

TOOLS AND MATERIALS REQUIREMENTS	Drill \varnothing 11 mm (7/16"), Spanner for M10 nuts Jig Saw, Power Drill , Silicone Sealant
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The electric motor of the windlass is able to operate under spray conditions ; however , if submerged , it could be irreparably damaged.



Ensure there are no deck obstructions. Be sure that there is ample room to enable You to use the handle (201). In order to facilitate maintenance operations Lofrans suggest to install the windlass on a removable panel fixed on the deck by bolts. Deck thickness should be 30 mm (1 3/16") minimum. If the deck is too thin or inadequate , it will be necessary to use a backing pad (plywood , timber) of sufficient dimensions to spread the stress imposed during recovery of chain. **To avoid electrolysis problems do not use stainless steel pad as backing pad.**



When the position of the windlass has been set , drill the necessary holes , using the template we supply. Place the gasket supplied under the base of the windlass. Place the windlass on the deck. The windlass must be located with the gipsy in line with the bow roller .The chain must turn around the gipsy with a rotation of 90° approx. Fix the windlass using 3x7/16"UNC or M10 stainless steel hex head bolts. Ensure the chain locker is of sufficient capacity to store all the chain and leave a minimum of 300 mm (11") between underside of the deck and the top of the heaped chain. Join the cables to the battery as shown on the wiring diagram. Introduce the rope/chain into the gipsy , operate the "UP" switch of the foot switch or remote control and the chain will automatically be fed into your locker. Take care to keep hands and feet well clear of incoming chain. If the windlass runs in wrong direction , change over M1 and M2 cables at the control box. After using the windlass , we strongly recommend that the nuts are checked again to ensure they are well tightened.

WARNING ! = Do not approach with hands or feet near the gipsy and chain , when operating.

WARNING ! = When the windlass is not in use or before use the handle , turn off the windlass at the main switch .

WARNING ! = Engage the chain stopper after anchoring. Windlass must not be used as sole means securing anchor in bow fitting. Anchors should be independently secured to prevent accidental release .

WARNING ! = Be sure the clutch and the chain stopper are well engaged before sailing.

Gipsy Clutch Operation

Gipsy is connected at the main shaft (254) by a clutch , items (212) and (207) .

To engage the clutch insert the handle (201) supplied into the gipsy cap (212) tighten it turning counter clockwise until you cannot move the handle any more. To disengage the clutch loose the gipsy cap turning in the direction of the arrows «LOOSE».

Raising The Anchor

Start the engine of the boat. Be sure that the clutch is well engaged. Draw out the handle from the gipsy cap.

Push the button "UP" of the foot switch or remote control. **Do not use the windlass to pull the boat to the anchor.**

Release the button "UP" to stop the manoeuvre.

When You haul the last metres of the chain , pay attention to the anchor, which may damage the bow of Your boat.

If case the anchor be stranded and the Lofrans circuit breaker gets released , wait some minutes before put it back into service and try the manoeuvre once more. Should the circuit breaker stop again , we suggest You fix the chain to a cleats or bollard , then use the boat engine to break the anchor loose.

For your safety we strongly recommend to turn **OFF** the circuit breaker and engage the chain stopper during navigation. Reactivate the circuit breaker and disengage the chain stopper before anchoring.

Lowering The Anchor

When You wish to lower the anchor very quickly , it is necessary disengage the clutch. The gipsy may freely run on its shaft and release the chain into the water. The chain fall can be controlled tightening the gipsy cap with the handle . At the end of the operation engage the clutch.

Under usual conditions , we suggest to lower the anchor electrically , pushing the button "DOWN" placed on the remote control or foot switch.

You will have always a perfect control of the manoeuvre , which can be interrupted any moment releasing the button "DOWN" .

Once anchored , we suggest in order to reduce the windlass load , to use a chain stopper and fix the chain with a rope to a strong point as a cleat.

MAINTENANCE

WARNING ! = Before operate turn the windlass off at the main switch and remove with attention the chain from the gipsy .

A correct and periodic maintenance operation is essential for the best efficiency of your windlass. At least once every month remove the salt layer , which forms periodically on the outer casting , to avoid electrolysis problems which could prejudice the windlass performances. Wash with a fresh water and clean all the surfaces , particularly in the most hidden points , where salts deposits. We recommended , at least once every six months , to disassemble the windlass gipsy following these instructions.

Unscrew (212) with the handle then unscrew (259 , 260 and 226) , remove (258). Extract (206 and 207).

Clean and check all the parts , spray all with CRC 3097 "LONG LIFE" or WD40. Watch if there are no electrolysis traces and grease the main shaft thread.

If , after a long inactivity period , the electric motor runs slowly we recommend to check and clear the brushes and replace it if necessary.

We strongly recommend to separate , at least once every year , the windlass from the deck to clean and remove the salt layer under the body (257).

The body is proper filled with SAE 90 long life oil. If there is a leak of oil from the body , it will be necessary to disassemble and replace the seals.

For this purpose , it is available a complete set of seals . At the beginning and at the end of the season , check the motor and Control box, removing eventual residues and covering the terminals with grease .

ORDERING SPARE PARTS

To identify a windlass spare parts see the spare part list. When ordering spare parts , please specify for the DORADO model the code **B.22.101** , give us a complete model classification , the serial number , the item number and the quantity.

Contact the nearest authorised LOFRANS' distributor or directly LOFRANS' S.r.l. fax ++39 (039) 2004299 .

TECHNICAL FEATURES

Max Pull - tested by dynamometer

400 kgs (400 W)
600 kgs (700 W)

Line Speed at Kg 25

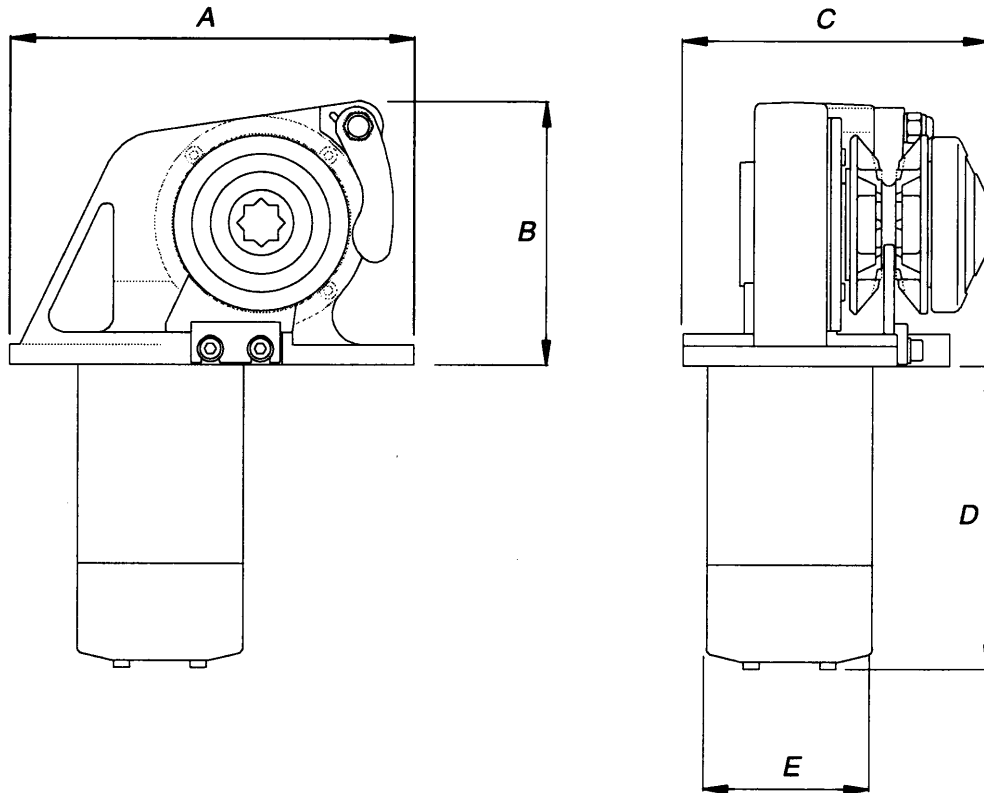
14 mt/min (400 W)
20 mt/min (700 W)

Current Draw

From 20 to 40 Amps (400 W)
From 40 to 70 Amps (700 W)

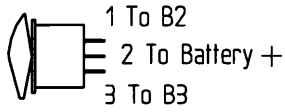
Weight

Kg. 7 (400 Watt) - Kg.9 (700 Watt)

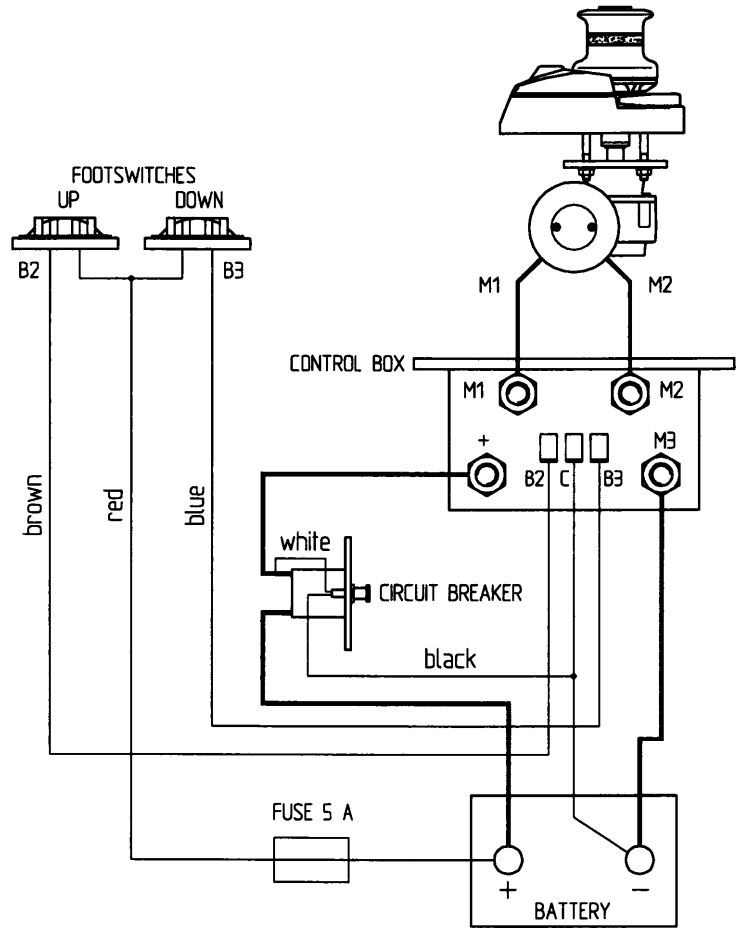
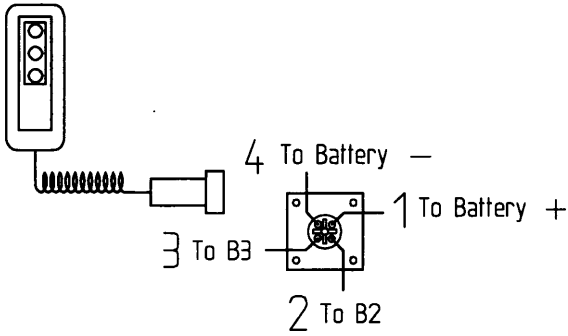


DORADO	A	B	C	D	E
mm	200	130	151	150	Ø82 (400W) Ø94 (700W)
inch	7 7/8"	5 1/8"	5 15/16"	5 15/16"	Ø3 7/32" (400W) Ø3 11/16" (700W)

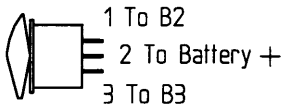
ROCKER SWITCH TYPE C



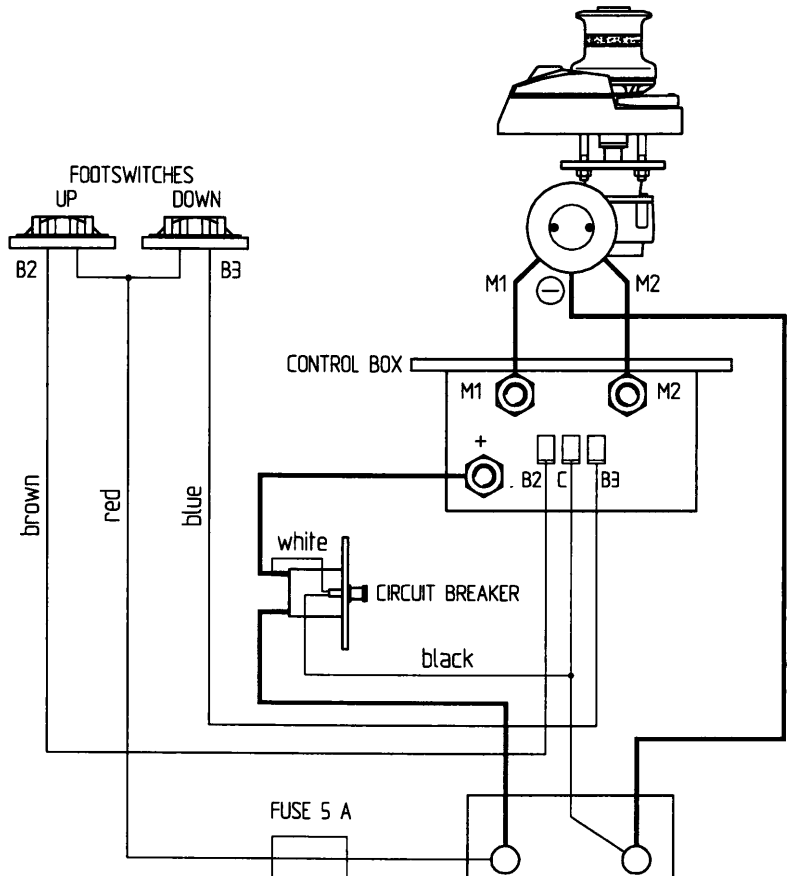
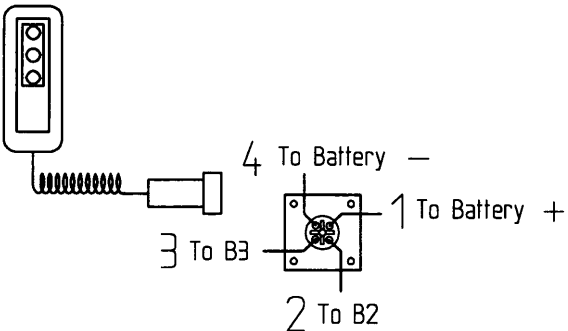
REMOTE CONTROL VEGA



ROCKER SWITCH TYPE C



REMOTE CONTROL VEGA

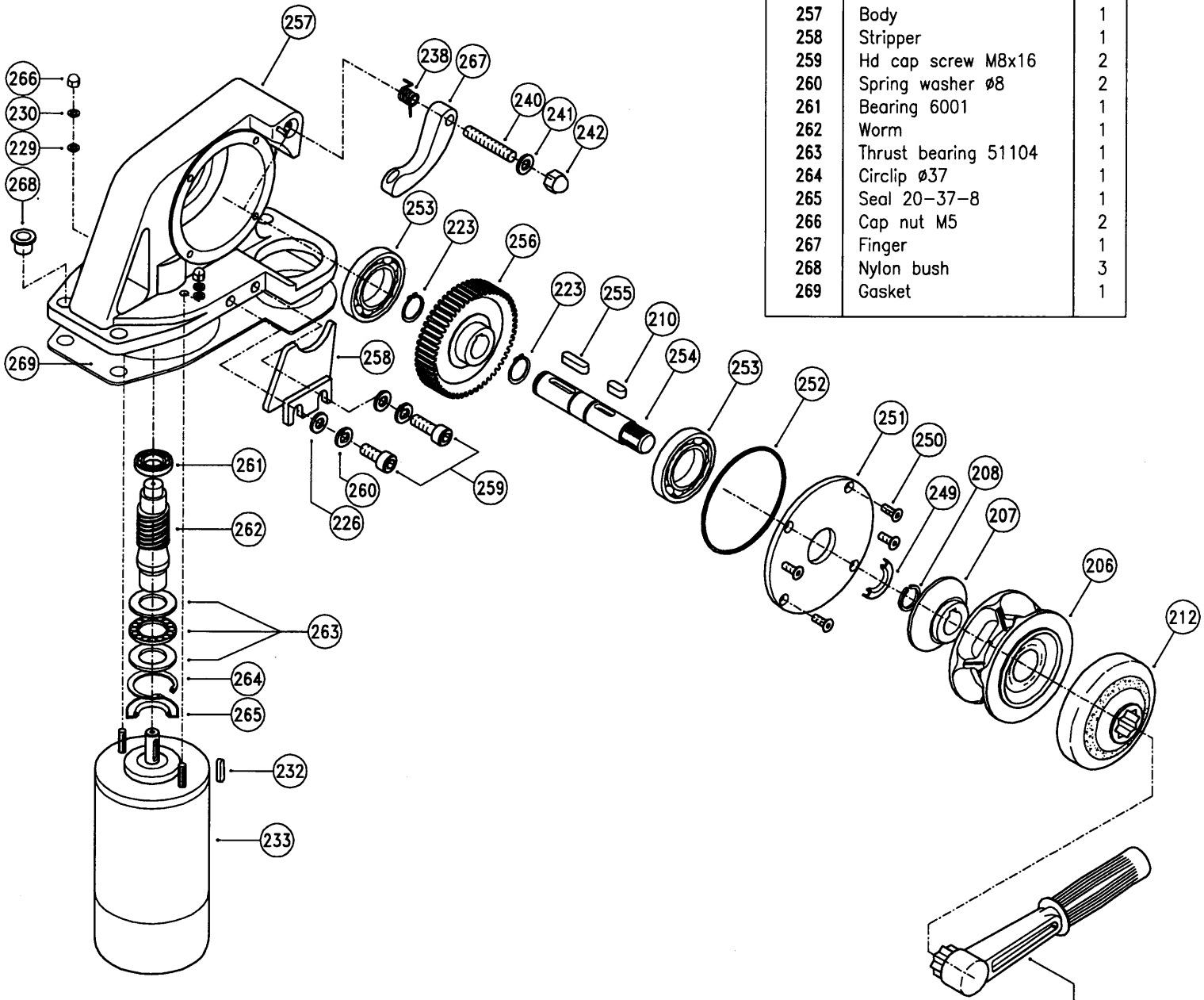




DORADO

code: B.22.101

date: January 99



Item nr.	Description	Q.ty
201	Handle	1
206	Gipsy	1
207	Clutch cone - inner	1
208	Circlip A 18 DIN 7993	1
210	Key 6x6x15	1
212	Gipsy cap	1
223	Circlip 18 DIN 471	2
226	Washer Ø8	2
229	Washer Ø5	2
230	Spring washer Ø5	2
232	Key 4x4x15	1
233	Electric motor	1
238	Spring	1
240	Stud M8x45	1
241	Nylon washer Ø8	1
242	Cap nut M8	1
249	Seal 18-28-7	1
250	Hd cap screw M5x8	4
251	Cover	1
252	O Ring seal 2325	1
253	Bearing 6006	2
254	Main shaft	1
255	Key 6x6x25	1
256	Wormwheel	1
257	Body	1
258	Stripper	1
259	Hd cap screw M8x16	2
260	Spring washer Ø8	2
261	Bearing 6001	1
262	Worm	1
263	Thrust bearing 51104	1
264	Circlip Ø37	1
265	Seal 20-37-8	1
266	Cap nut M5	2
267	Finger	1
268	Nylon bush	3
269	Gasket	1

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