

2 Speed Electric XT Winches

Installation Manual

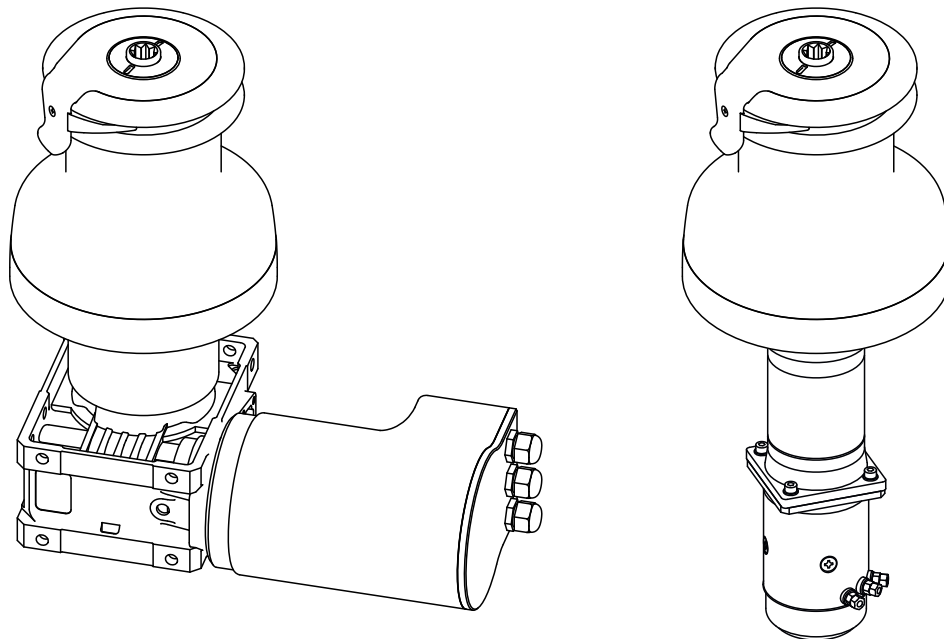
For Models

XT66EH

XT70EH

XT66EV

XT70EV



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XT66EH, XT70EH, XT66EV, XT70EV

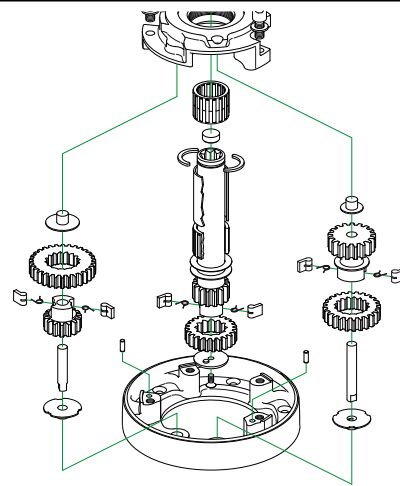
Installation Manual for Antal 2 Speed Electric XT Winches

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Need the exploded view drawing of your XT Winch?

Download the full Installation and maintenance manual from www.antal.it



Contacts

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1. Important Information

The present Installation Manual contains important information for the correct use of 2 Speed Electrical XT winches and you are therefore advised to read it carefully before using the product.

The present manual gives technical information for the installation and the maintenance of the following XT winch models:

XT66EH, XT70EH - Electric Horizontal Drive: These models are equipped with an electric horizontal motor and a speed reducer with a worm screw.

XT66EV, XT70EV - Electric Vertical Drive: These models are equipped with an electric vertical motor and a high efficiency hypocycloid speed reducer.

Use

Simply insert the handle to disconnect the speed reducer-motor unit.

⚠ For Greater Safety: accidental starting of the motor does not affect the winch, avoiding dangerous turning of the handle.

⚠ For Greater Efficiency: the speed reducer-motor unit does not turn in manual use, avoiding needless friction.

Speed

Electric winches retain two speeds both in manual use (inverting the direction of rotation of the handle) and in electric use (pressing one of the two control buttons).

It is of fundamental importance to be able to choose the most suitable speed for the manoeuvre that you want to perform; this allows fast recovery of the first part of the manoeuvre and more careful regulation in the final stage.

In electric winches the speeds are higher than in manual use even if, at maximum load, a speed reduction up to 30% must be considered.

Power

Motors with a power of 1500 Watt are used to drive the winches, depending on the size of the model. Considering a mean reduction gear efficiency of 70%, this gives powers of 1050 Watt at winch intake. It is interesting to compare these figures with the power value in manual use, which is conventionally considered to be 400 Watt.

Winch Drum

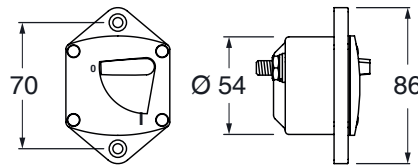
Antal powered winches come supplied with a chrome - plated bronze drum. Black anodized aluminium drums are available on request, in this case the aluminium drum is "reinforced" applying a special toothed crown gear of high resistance alloy or chromed bronze.

XT66EH, XT70EH, XT66EV, XT70EV

2. Electric System

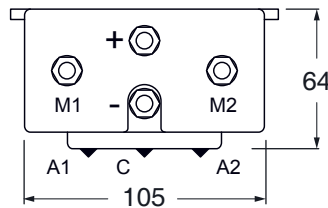
Breaker

The thermal switches indicated in the following table have dimensions calculated to break the circuit in case of exceptional overload; it is possible to consider thermal relays with a setting at a lower level.



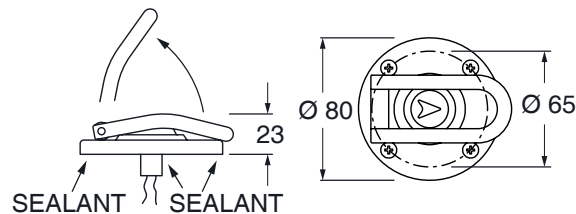
Control Box

Contains the solenoids for activating the motor in button control operation.



Switches - Mod. 251.035

Two switches are needed to activate the two speeds of each winch; these are conventionally the red one for the first and the grey one for the second speed.



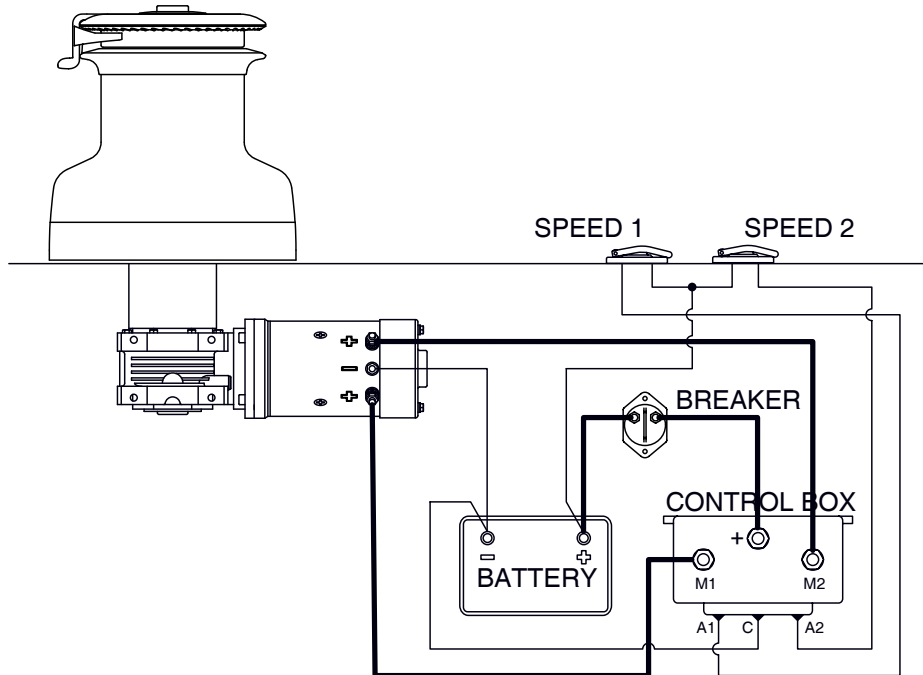
⚠ Although the microswitch is protected by a watertight diaphragm, the stainless steel ring nut is provided with a seat for sealant; more sealant must also be put in the hole through which the electric wire passes.

XT66EH, XT70EH, XT66EV, XT70EV

Electric System

The electric system must be installed by specialised personnel, in compliance with the regulations in force; some general information is given below.

For the electric diagram directions included in the control box should be consulted.



Power Cables

The table lists suggested values for the cable sections; these values must be increased for very long distance or for prolonged use.

Button Cables

2 Recommended section 1.5 to 2.5 mm .

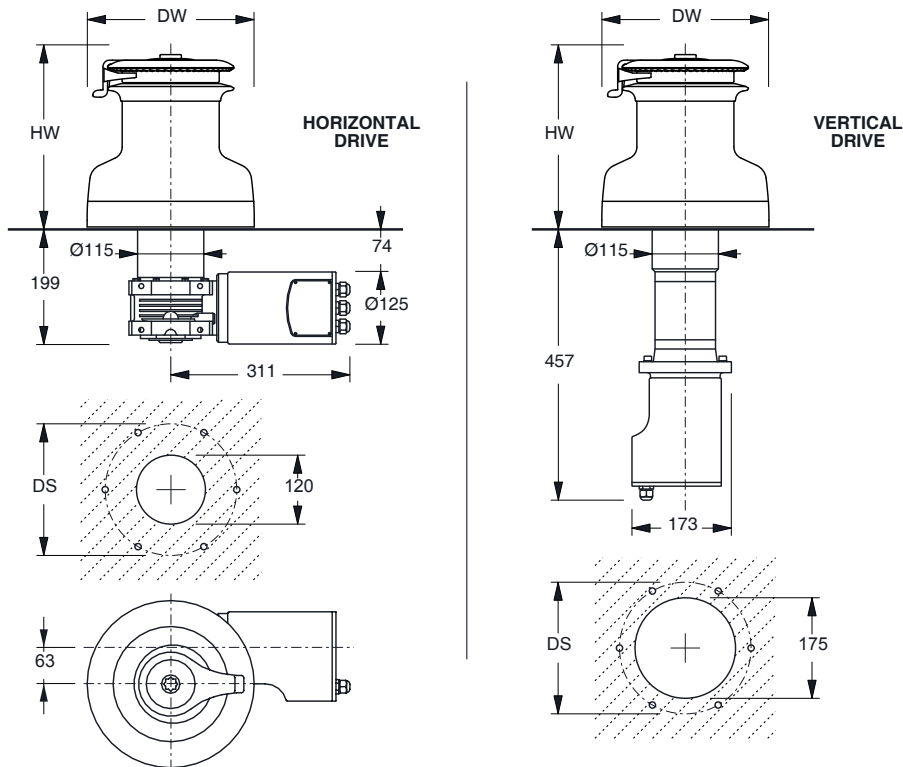
Model	Motor		Battery Amp/H	Cable mm ²	Breaker Amp		Control Box Model
	Watt	Volt					
XT66EH-EV XT70EH-EV	1500	12	225/300	50	mod. A121	120	T6315/12
		24	100/150	35	mod. A071	70	T6315/24

XT66EH, XT70EH, XT66EV, XT70EV

3. Table of overall dimensions

Model	Motor Watt	Speed - m/min		SWL kg	Weight AL kg	Weight CH kg	Deck Screws No. x Ø	DS mm	HW mm	DW mm
		1	2							
Horizontal Motor										
XT66EH	1500	12.0	3.5	2500	31.9	41.7	6 x 10	208	276	248
XT70EH	1500	9.0	3.0	3000	35.9	47.4	6 x 10	229	285	290
Vertical Motor										
XT66EV	1500	12.0	3.5	2500	35.6	45.4	6 x 10	208	276	248
XT70EV	1500	9.0	3.0	3000	39.1	50.6	6 x 10	229	285	290

AL = black aluminium drum / CH = chromed drum



Line Recovery Speed

Recovery speed are indicative values, theoretically calculated without considering the real installation moreover a speed reduction has to be considered in the presence of load about 30% reduction under the max load.

XT66EH, XT70EH

4. Installation

**Valid for models:
XT66EH, XT70EH**

① **Opening the Winch**

First of all, unscrew the upper ring (R) with the provided key (K). Thus lift the drum (D). Finally unscrew the F1 screw to lift the base (B) and access the anchoring holes on the skirt (S) of the winch.

② **Winch Motor Disassembly**

Disassemble the new Winch XT-EH:

Remove the Motor Unit from the flange (F), unscrewing the screws F2.

③ **Install XT-EH**

Drill the deck:

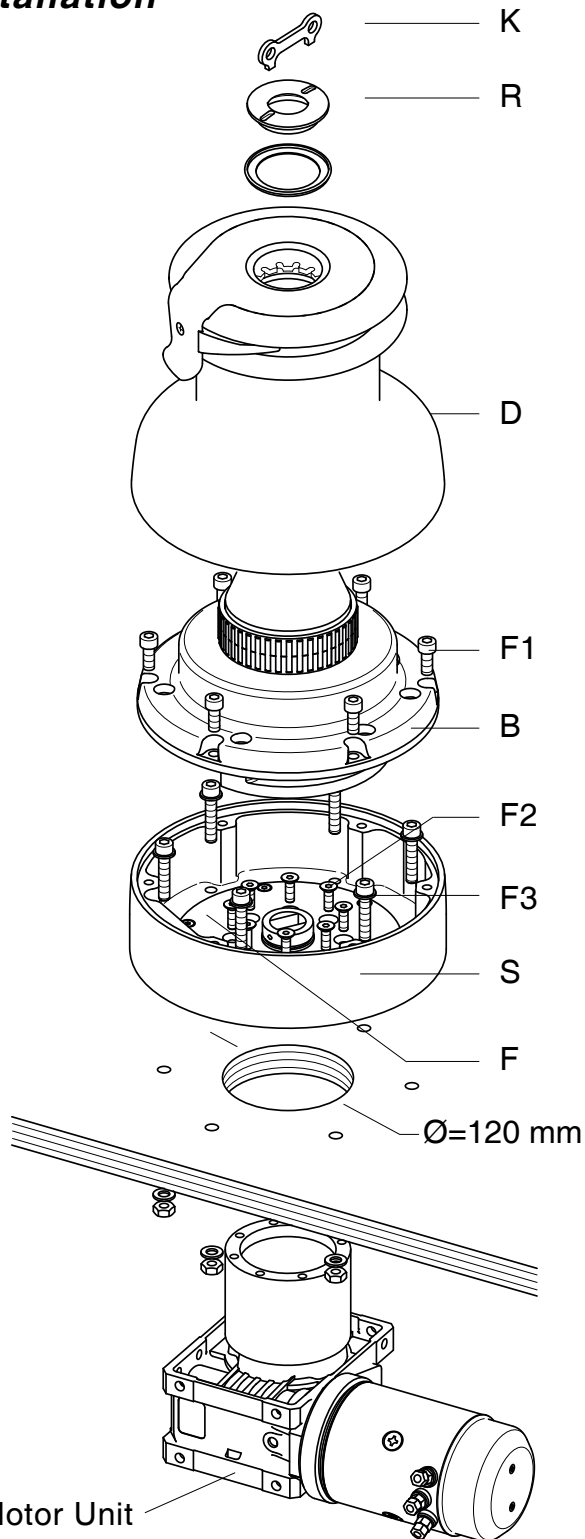
Drill the deck ($\varnothing = 120 \text{ mm}$) to let the reduction-gear motor unit through.

Fix the Motor:

Thus, fix the flange F on the deck with 6 anchoring screws F3 from above (not supplied by Antal). Now, Install the Motor Unit screwing in the F2 screws.

XT-EH Installation:

Finally fix the base (B) by screwing in the F1 screws. Complete by inserting the Drum (D), proceeding as for the opening of the winch, in reverse order. See p. 9.



XT66EV, XT70EV

**Valid for model:
XT66EV, XT70EV**

① **Opening the Winch**

First of all, unscrew the upper ring (R) with the provided key (K). Thus lift the drum (D). Finally unscrew the F1 screw to lift the base (B) and access the anchoring holes on the skirt (S) of the winch.

② **Winch Motor Disassembly**

Disassemble the new Winch XT-EV:

It is not necessary to remove the Motor Unit from the flange (F), you can install the XT-EV anyhow.

③ **Install XT-EV**

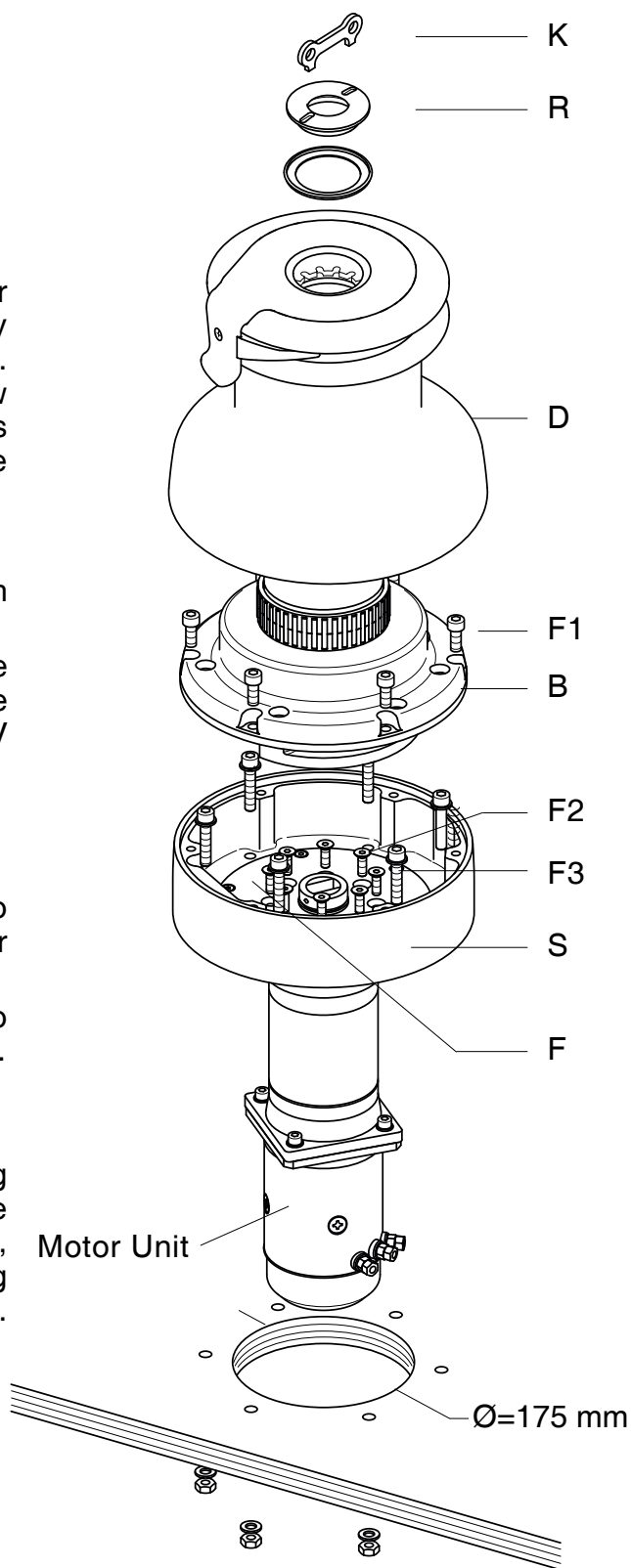
Drill the deck:

Drill the deck ($\varnothing = 175 \text{ mm}$) to let the Motor-Unit altogether through the deck.

Thus, screw the F3 screws to fix the skirt (S) onto the deck.

XT-EH Installation:

Fix the base (B) by screwing in the F1 screws. Complete by inserting the Drum (D), proceeding as for the opening of the winch, in reverse order.

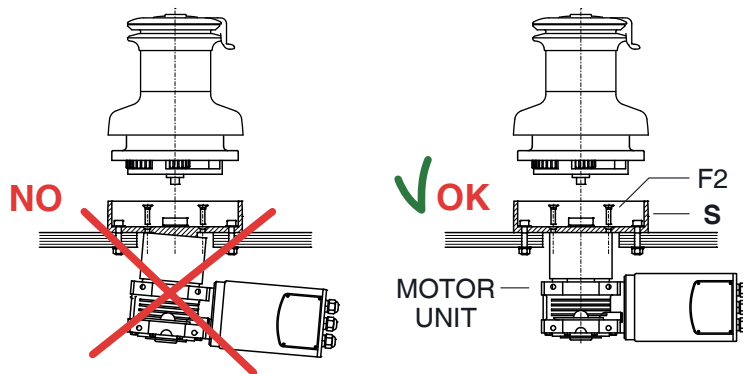


XT66EH, XT70EH, XT66EV, XT70EV

- ⚠ Ensure that the drainage holes of the sub-base are facing in the right direction.
- ⚠ Seal the holes for the anchoring screws and the join between the skirt and the deck with silicone.

④ **Winch Assembly**

Reassemble the winch, inverting the operations described above in points 2 and 1. Fix the motor unit to the sub-base, tighten the 8 screws F2 so that the Motor Unit matches perfectly to the flange (F).



- ⚠ Seal this join with a silicone gasket (such as Motorsil Arexons).

Caution - The weight of the motor unit must be supported from below so as to distribute its tension correctly on the screws F2, the uneven distribution of the unit's weight could cause it to tilt with respect to the flange F, jeopardising perfect coupling and therefore the operation of the electric winch.

- ⚠ For the same reason the motor unit must not «touch» the deck or the structures below it.

⑤ **Lubrication**

During assembly all the steel screws and washers must be generously greased to avoid corrosion phenomena in the areas in contact with aluminium parts.

Antal supplies a special Teflon grease for marine applications: "TLF400" in 100 gr packs.

This product is an excellent lubricant and ensures lasting protection of the aluminium against corrosion phenomena.

XT66EH, XT70EH, XT66EV, XT70EV

5. Maintenance of the Winch

Frequent maintenance. All XT winches should be washed frequently, to avoid the accumulation of salt. Use plenty of fresh water and clean it on all visible surfaces. Ensure the cleaning of the drainage channels placed at the bottom of the winch, to avoid water stagnation.

Complete maintenance. With seasonal frequency XT winches should be inspected visually inside.

Important Concepts

⚠ **The complete maintenance includes** the opening of the winch, the cleaning of the parts from old lubricants and the new lubrication of all moving parts.

Parts in need of maintenance. The most relevant parts are those subject to movement and rubbing. These are the roller bearings, the gears and pawls, the stem and the inside of the drum. For the complete maintenance of the winch, disassemble the winch in order to access the relevant parts.

TFL 400 Antal Grease. We recommend the use of Antal Grease, a Teflon grease especially made for lubrication of winches and protection of aluminum parts in the marine environment (Mod. TFL400).

Cleaning. Remove old lubricant. In order to do so use a soft bristle brush and solvent (use diesel in case you do not have other solvents).

Lubrication. It increases the performance and prolongs the life of the winch. Also, it prevents the natural accumulation of salt to obstruct the inner mechanism. Also, if you are using the TFL 400 Antal Grease, it also protects the aluminum parts from galvanic corrosion, too.

Thus we advise to put a thin layer of TFL 400 Antal Grease; not only to lubricate all moving parts, but also to protect the aluminum surfaces in contact with s.steel parts, e.g. screws.

Kit Winch. Antal provides a repair kit winch containing pawls and springs (Mod. Kit Winch).

All detailed information about Maintenance are contained in the Installation and Maintenance Manual of the XT Winches. To download the manuals, go on internet at the winch page, or digit www.antal.it

XT66EH, XT70EH, XT66EV, XT70EV

6. Warranty

Antal guarantees its equipment to be free of defects in material and workmanship for 3 years from the date of purchase. During this period defective parts will be repaired or replaced by Antal. Warranty does not cover: products incorrectly installed; products used in applications for which they are not intended; products used under loads exceeding the product's stated loads; products not properly maintained. Also, warranty does not cover defects due to corrosion, U-V degradation, and normal wear and tear.

Products subject to warranty claim will be returned to Antal for examination and possible repairing or replacement. Antal is not responsible for installation or shipping costs.