



## **Anchormatic EP-500 Windlass - Instruction Manual**



**MUST BE READ OF ALL THAT WILL BE CARRYING OUT ANY ANCHORING TASK BEFORE USING IT.**

Anchormatic AB  
Kustvägen 8  
SE-87031 Mjällom  
Sweden  
[info@anchor.se](mailto:info@anchor.se)

Anchormatic AB  
Jupitervägen 14A  
SE-18163 Lidingö  
Sweden  
Tel.: +46-(0)8-885 050  
Cell: +46-(0)70-774 88 88

Instruction manual, original  
Issue 2019-03-05  
Programme date 2019-01-03

# 1. CONTENTS

		Page
1	INTRODUCTION	2
2	EU DECLARATION OF CONFORMITY	3
3	POSSESSORS RESPONSIBILITY	3
4	INTENDED USE • TECHNICAL DATA • DESIGNATIONS	4-5
5	ACCESSORIES • ANCHORS • ANCHOR ROLLERS • PULLEYS	6-8
6	SAFE USE	9
7	INSTALLATION, ELECTRIC CONNECTION	10-21
8	CONTROL PANEL • REMOTE CONTROL • CALIBRATION	22-26
9	OPERATION • FAULT TRACING	27-30
10	MAINTENANCE-MAINTENANCE RECORDS	31-32
11	INSTRUCTIONS FOR RECYCLING	32
12	LABELS	33
13	SPARE PARTS	33
14	WARRANTY	33
	DECLARATION OF CONFORMITY	34

## 1. INTRODUCTION

First, we would like to congratulate you on a good choice! We hope you will enjoy your windlass for many years.

You are always welcome to contact us at Anchormatic with any questions and comments.

At [www.anchormatic.se](http://www.anchormatic.se) you will find the current contacts. Please send us pictures on your completed installation to [info@anchor.se](mailto:info@anchor.se) or tag us on instagram @ anchormatic.

It is very important that, everyone who will use the windlass, reads and understands the instructions before using the Anchormatic. Read again, to refresh your skills when a new boating season is about to begin. If you have any questions - please contact us.

This instruction shall be available to all persons concerned, stored in a protected place and shall accompany the product, if it is transferred to another place of use.

### Delivery

The windlass is normally delivered in a corrugated box. The Anchormatic is accompanied by a control panel, a delivery bill, this instruction manual and a drilling template. Check that the delivery is complete and undamaged according to the delivery bill. Deviations shall be notified within one week. Transport damages are reported to the transport company and to us.

Only competent and authorized persons may use the Anchormatic!

In addition to having knowledge using the windlass, people who use it should also have a good seamanship and have knowledge of different anchoring methods for the current boat type.

We recommend beginners to undergo appropriate training, e.g. Driver's certificate for smaller boats or Coaster ship certificate for larger boats.

**Eligibility implies the obligation to read the instructions, as well as to follow them!**

***Proper use, operation, inspections and maintenance are essential for efficient and safe anchoring procedures.***

## **2. EU DECLARATION OF CONFORMITY**

Anchormatic EP-500 windlass is defined as a machine, is CE-marked and is thus declared to comply with the essential requirements regarding function and safety, in accordance with the EU Machinery Directive. The EU declaration of conformity is attached.

## **3. THE MACHINE POSSESSOR IS RESPONSIBLE FOR:**

- Carrying out risk analysis for the complete management of anchoring processes where the windlass is used, and that necessary amendments to achieve adequate safety are taken.
- That the windlass is only used for what it is intended, i.e. anchoring boats in the usual way. The windlass is not allowed to be used for lifting or pulling other than the anchor types that are normal for the boat type.
- Also perform risk analysis on specific tasks to be executed with the windlass, e.g. choice of anchor and connection to a battery.
- To check where you are dropping anchors, so that anchor belts or anchors do not disturb activities around the anchorage site.
- Ensuring that unauthorized persons are not present near anchor and windlass during operation.
- That the operating site is set up so that a good operating environment is obtained, especially regarding ergonomics, temperature and rain cover.
- That those who use the windlass are competent and suitable for the tasks and informed about the risks associated with these tasks.
- Establishment of routines for selecting anchoring method, complementary equipment, operation, controls and maintenance.
- The load's (anchor's) and anchor belt's own risks, e.g. sharp parts, risk of getting caught between ropes and belts and objects in the vicinity or among other anchors or underwater pipes.
- The electrical safety, i.e. connection to battery, suitable protection of cables, and protection against water penetration into the electrical equipment.
- Having suitable equipment for the work tasks, incl. e.g. gloves (the possessor specifies).
- That the windlass is cleaned in an appropriate manner, from an environmental, safety and hygiene point of view. This applies to both the choice of detergent, tools and methods.
- That unauthorized persons cannot get in the vicinity of the equipment when it is in operation.
- That unauthorized persons cannot operate the equipment.
- Performing checks, service and repairs as instructed.
- Only original spare parts should be used when replacing parts. Our guarantee commitment can otherwise be revoked in its entirety.
- Changes to the windlass that affect strength, performance, operating or functional safety are not allowed.

## 4. INTENDED USE - TECHNICAL DATA

The windlass is designed for lifting boat anchors for sailing and motor boats up to 15 tons of weight.

The windlass can be used for anchoring to the lake or seabed, or mooring to the bridge or buoy. Through the dimensioning, the windlass has good safety margins for the maximum permissible load.

The windlass should only be used for what it is intended for, i.e.. anchoring boats in the usual way. The windlass can also be used to pull the boat, which it is mounted on, if the boat's weight and the required power are within the windlass allowed maximum load.

A motor protection stops the engine if the load is too heavy.

The windlass is not allowed to be used for lifting or pulling other than the anchor types that are normal for the boat type.

Towing other boats or water vehicles, lifting or towing other objects or towing persons is not permitted.

### Technical Data:

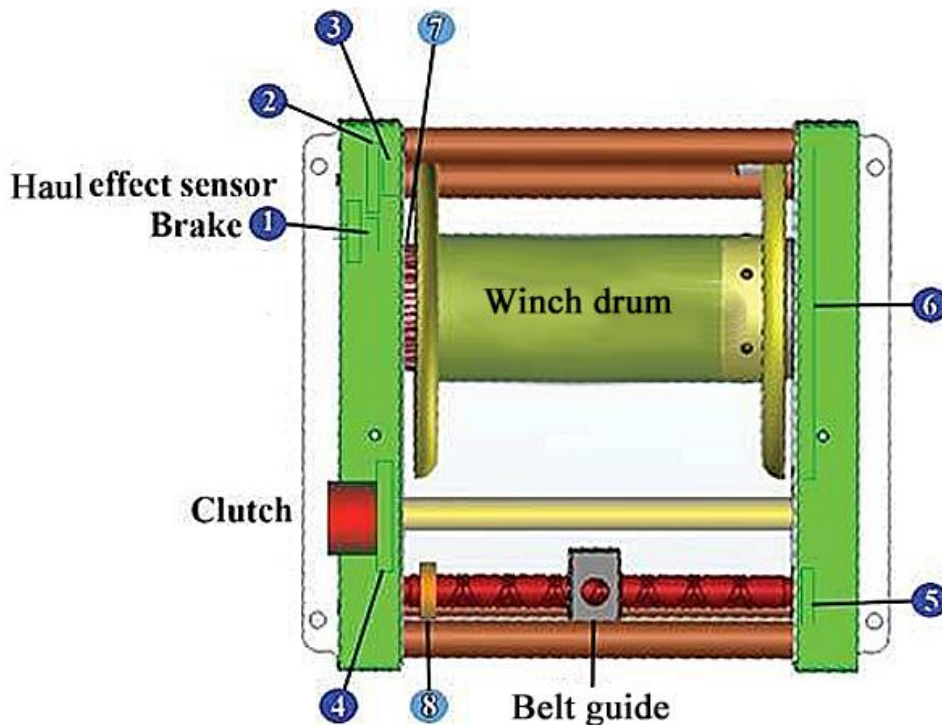
Product:	Anchor winch	<b>Dimensions</b>
Max. load	500 kg	Overall height 20 cm
Self-weight	19 kg	Length 34 cm
Belt length	60 m	Width 32 cm

**The maximum load refers to the weight of the anchor and the force that can be used to pull the boat towards the anchor and pull up the anchor from the seabed.**

The windlass is delivered without anchors, anchor rollers and pulleys. In this manual, see which accessories you may need, to achieve an efficient and safe installation.

## Designations

The windlass comprises winch, control panels and any ordered accessories. The left is called A and the right B. You can also say gable A resp. gable B.



- The visible parts of the windlass are the framework, the drum and the belt guide.
- The electric engine is inside the drum. The brake is placed outside gable A. The coupling is on gable A.
- The wheels are numbered from 1 to 8 in the order of which they are driven from the motor via coupling and drum axle, and from drum to the belt guide screw.
- Chains are used for power transmission to wheels 3 to 6, otherwise belts are used.
- The belt guide controls the rope (the belt) on the drum.
- Control signal and electric power are controlled from a separate electronic box.
- UP refers to hauling the anchor (i. e. pulling the anchor up) and DOWN refers to releasing the anchor (i. e. letting the anchor down).
- The windlass' brake is always activated when
- The winch brake is always in force when the power is broken and prevents the drum from going backwards.
- Hauling releases the brake mechanically, and the belt is rolled up on the drum
- When decoupling, the motor is driven backwards during a fraction of a second, whereby the centrifugal force pulls apart the coupling and the drum can roll freely. The corresponding movement can be achieved manually by turning the coupling handle (the red "knob") clockwise one-tenth of a turn.
- The belt must be unloaded in order to let the rotation to take place - i.e. tighten, release, turn. If the belt cannot be unloaded, you can turn the coupling shaft with a 13 mm (approximately ½ inch) wrench (spanner).
- The calibration / programming sensor is located on the belt guide.
- The hall effect sensor is above the brake and detects 4 magnets on drive 5.

In texts below we use the term "**bathing platform**", which means the platform which is eventually located on the stern of the boat.

## 5. ACCESSORIES

See our website [www.anchormatic.for](http://www.anchormatic.for) all currently available accessories.

### Anchor

The anchor is an important link in a chain of equipment details which are essential for safe and efficient anchoring. In the market there are a lot of different types and models of anchors, with different quality and properties. Many of them work well on different types of anchoring seabed. It is then important to know which model and size of anchor is best for your boat and your area and way of anchoring.

A good anchor must have as many as possible of following characteristics:

1. Work in different types of anchoring seabed conditions (or you have several different anchors for different conditions).
2. Can dig easily and efficiently in the seabed.
3. Have great resilience.
4. Easy to dig back in a new direction, for example at wind shift.
5. Easy to loosen.
6. Be easy to handle.
7. Be easy to store.
8. Have only few parts, and therefore more durable.

Feel free to discuss the choice of anchors with skilled people.

Most anchor manufacturers have recommendations on the weight of the anchor in relation to the size / weight of the boat.

Below is a table that shows the approximate weight of the different anchor types according to the manufacturers' recommendations for different size of boats (can sometimes feel a bit on the low side).



*Anchormatic Anchor  
10 kg or 15 kg of type Bruce  
anchor, in polished stainless  
steel.*



	BOAT WEIGHT, KG		ANCHOR WEIGHT PER ANCHOR TYPE						
	Bruce	Delta	Stock	CQR	Danforth	Fortress	Rocna	Spade	
2 ton	5 kg	6 kg	12 kg	7 kg	3 kg	3,2 kg	4 kg	5,5 kg	
3 ton	7,5 kg	6 kg	15 kg	7 kg	6 kg	3,2 kg	4 kg	9,5 kg	
4 ton	10 kg	10 kg	15 kg	9 kg	6 kg	4,5 kg	6 kg	9,5 kg	
6 ton	10 kg	10 kg	25 kg	11 kg	8 kg	4,5 kg	6 kg	15 kg	
8 ton	15 kg	16 kg	30 kg	16 kg	10 kg	6,8 kg	10 kg	15 kg	
10 ton	15 kg	16 kg	30 kg	16 kg	12 kg	9,5 kg	15 kg	20 kg	
15 ton	20 kg	20 kg	35 kg	20 kg	15 kg	9,5 kg	20 kg	25 kg	
20 ton	30 kg	25 kg	45 kg	27 kg	20 kg	14,4 kg	25 kg	30 kg	



## Anchor rollers and pulleys

See our website [www.anchormatic.se](http://www.anchormatic.se) regarding available accessories.

### Simple anchor roller

The simple anchor roller is mainly used for bath platforms, where the breaking angle is greater than 130 degrees. At a smaller angle, the articulated anchor roller is recommended. Article no. 800



### Articulated anchor roller

Used to facilitate the release and hauling of anchors.

Available in two lengths and has Article nos. 801 and 804.

No. 801 has a bottom plate which is 400 mm long and no. 804 a bottom plate which is 500 mm long.



### Recessed anchor roller

The recessed anchor roller order no. 802 is mostly used for installation in bath bridges where the breaking angle is greater than 130 degrees. At a smaller angle, the recessed articulated anchor roller is recommended.

#### Recessed anchor roller No. 802

Overall dimensions: 300 x 140 mm

Outer dimensions through bath platform 85 x 245



#### Recessed articulated anchor roller No. 803

Overall dimensions: 425 x 160 mm

Outer dimensions through bath platform 100 x 370



Anchor rollers Article nos. 801 och 804 used for sailboats with negative aft, motorboats without bathing platform or motor sailor with or without bathing platform, gig.



**Articulated anchor roller No. 801**



**Articulated anchor roller No. 804**



**Pulley No. 805**



**Pulley extra high No. 806**

Pulleys 805 and 806 can be used separately or combined.

Cover 808 fits only pulley 805. If the pulley 806 is combined with the winch cover 807, the belt opening in it should be enlarged.



**Anchor roller 10 kg No. 809, 15 kg No. 810**



## 6. SAFE USE

**The windlass may only be used by competent and authorized persons. A minimum of education is that you have read and understood these instructions, as well as gained detailed knowledge about manoeuvring and handling of the machine as well as the boat, on which the windlass is used. It is the possessor's responsibility to ensure that those who are granted authorization meet these requirements.**

### PRECAUTIONS

Use very strong attachment points for winch and rollers. Keep in mind that the attachments should not only cope with the windlass self-weight, but also the load that can be up to 500 kg when the windlass pulls with full force.

Place winch and rollers so that you cannot trip over them.

Provide winch and rollers with Anchormatic covers or other device that provides protection against crushing damage.

Provide the belt path with appropriate protection.

Control panels should be placed so that they have control over the anchor. The best thing is to have one control panel at the driver's seat and one at the stern. A control panel at the stern, and or remote control, is especially good, so you can stand on the aft deck and see when the anchor comes up.

Place the control panel so that you can also reach it from any bath bridge, if something unsuitable has stuck in the anchor.

Child safety switch - optional accessory - should be placed near the control panel to act as an emergency stop. If there is a risk that young children can access the switch, it should be hidden.

- Only use the windlass for what it is intended for. See "Intended Use".
- The use assumes that unauthorized persons cannot enter the windlass work area.
- Pay attention to the operation of the control units and the movements they perform.
- Always perform a function check before every work session.
- Never use the windlass if it is faulty.
- Safety devices must not be disabled. Do not use the windlass if any protective device is demounted or not functioning.
- Check that there are no adjacent obstacles or materials in the work area.
- Never put hands or other body parts in the windlass. There is a great risk of getting caught between the anchor belt and adjacent parts.
- Service, repairs and maintenance may only be performed by competent persons. Contact Anchormatic Technical Department for advice or to perform the work, if needed.
- Only Anchormatic original spare parts should be used when replacing parts. Our guarantee commitment can otherwise be cancelled in its entirety.
- Never modify or modify any components that may in any way affect the windlass's safety and performance.

### INSTALLATION, ADJUSTMENT AND MAINTENANCE WORKS – IMPORTANT!

Use only original Anchormatic pulleys and anchor rollers for trouble-free operation. There is a risk of the belt being cut off or entangled if other rollers are used.

The belt guide runs sideways with great force when the anchor runs out or in.

**IF YOU HAVE ONE FINGER IN THE WAY, YOU CAN CRUSH IT.**

Therefore, NEVER hold on the windlass when the anchor goes up or down.

Never make any electrical connections with the power switched on.

Regularly check electrical connections and keep the cable lugs **greased**.

Also, make sure that the windlass with rollers is well secured.

**CAUTIOUS OPERATION, REGULAR MAINTENANCE AND CLEANING REDUCES MAINTENANCE COSTS, THE RISK FOR ANCHORING PROBLEMS AND MAKES THE WINDLASS AREA SAFER!**

## 7. INSTALLATION

Summary:

1. Place the winch drum axel horizontally.
2. Align winch drum, pulleys and anchor roller.
3. Observe measurements B and M.
4. Use a strong mounting place, enough for the expected weight and forces.
5. Place the electric equipment protected from water.
6. Calibrate and program before testing.

### Planning the installation

Consider carefully the installation before starting it. A good way is to place windlass, anchor rollers and pulleys, as you think it is right, but then wait until the day after before you start work. You might then get other ideas that possibly are better.

Then make a preliminary installation using clamps, check belt angles and that the belt runs well on the rollers. Then it is usually best to mount the hull bushing first.

A good way is to use e.g. a strong welding wire or a rod which you can put on the anchor roller and centre in the hull hole, then you can see where the pulley should be placed.

The windlass can be placed anywhere, even upside down, as long as **the drum's axle is horizontal**.

The windlass must **NOT** be placed in spaces which can be water filled or placed so that heavy sea can splash over it. In some cases, you may have to make a platform to place the winch on, made from e.g. strong nylon or plastic.

Keep in mind that some water can go along with the belt, so you can, for example use a gutter to encapsulate the belt. It can also be used as a cover in a storage space. The belt does not absorb water but can be wet on the surface.

It is also possible to guide the tape at all possible angles with the pulleys. Just make sure that the belt cannot slide off. One way is to use an anchor roller that has a bracket that prevents the belt from slipping off if the angle becomes sharp.

Note the dimensions B and M. The distance B between the anchor and the first pulley should be 250 mm, the minimum is 150 mm. The space requirement M for winch and the nearest pulley is dependent on the weight of the boat. E.g. if the boat weighs 3 tons, the measure M must be at least 600 mm.

The dimension M should be as much as possible to reduce the strain on the belt guide.

Use strong attachment points, always use M8 screws and nuts with large washers to absorb the great forces. The biggest force is usually on the pulley.

Use only stainless-steel material. Always take a drop of oil on the thread so that it does not sheave. Use Sikaflex or similar on screws to seal through the boat. The hull bushing must also be glued with Sikaflex.

The windlass should be connected to the boat's starter battery in order to have full power when the anchor is going be hauled in and for the control system to get enough power to operate. If the boat battery is far away, you can place another battery at the windlass. Cable area see the Connection diagram.

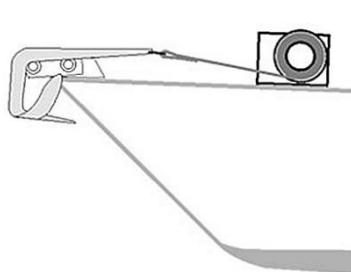
All cable lugs should be greased to eliminate oxidation.

The automatic circuit breaker (fuse) must be easily accessible on the battery's positive cable. The circuit breaker acts as a short-circuit protection and should release if the electric supply to the windlass is short-circuited.

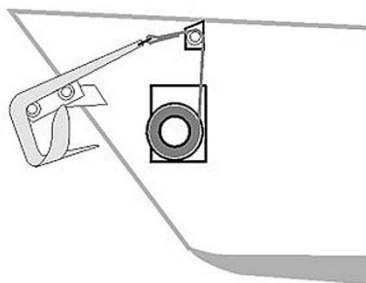
Child safety switch - optional - should be placed near the boat's control box to supervise the anchoring. Several control panels can be placed in series.

## Some suggestions on how the windlass can be mounted:

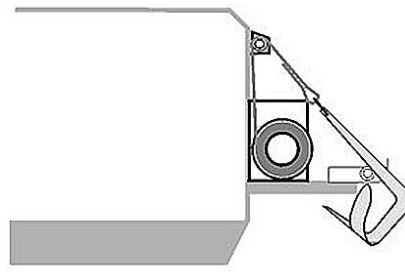
The anchor and anchor roller can be placed both in the fore or at the stern. As the belt can be led and turned in different directions, the windlass can be placed in many ways both inside and outside the boat. When placed inside the boat many inaccessible and unused spaces can be used. The windlass can advantageously be placed e.g. under a berth, towards the inside of the transom, in the keelson, the fore, the engine room, etc.



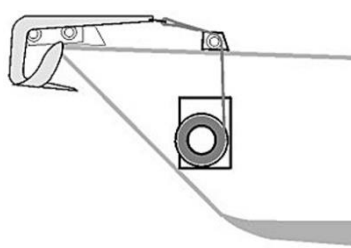
1) Windlass mounted outside, with anchor roller on deck.



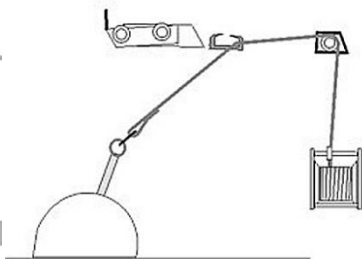
2) Windlass mounted inside, with anchor roller through the bow.



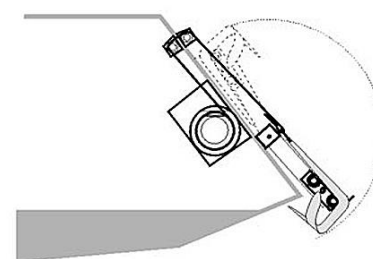
3) Windlass mounted outside, with cover and anchor roller on bath platform.



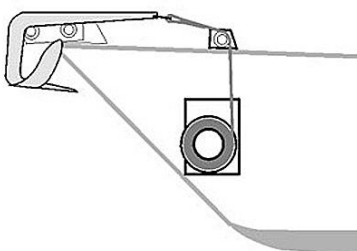
4) Windlass mounted inside, with rollers on deck



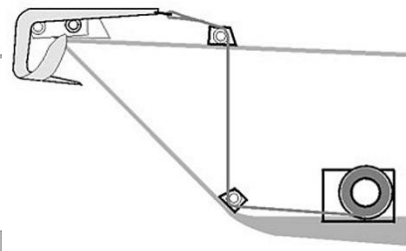
5) Windlass mounted inside. Boat moored to a buoy.



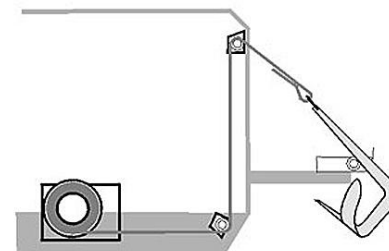
6) For sailing boat with negative stern or for integrated bath platform.



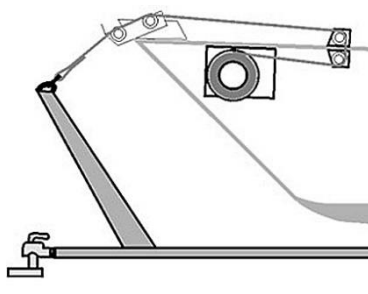
7) Windlass mounted inside, with several rollers.



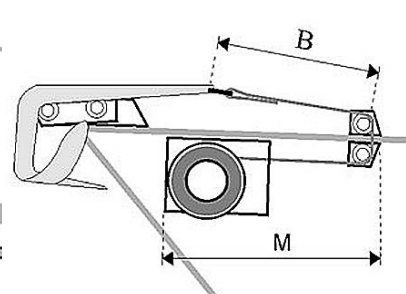
8) Windlass mounted inside the windlass in the keelson and anchor roller on deck.



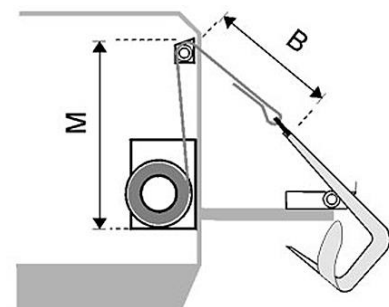
9) Windlass mounted inside the windlass in the keelson and anchor roller on bath platform.



10) Windlass used as winch when transporting boat on trailer.  
NOTE! IF the allowed load capacity is enough.



11) Windlass mounted inside, with windlass under deck.



12) Windlass mounted inside on boat's stern, anchor roller on bathing platform.

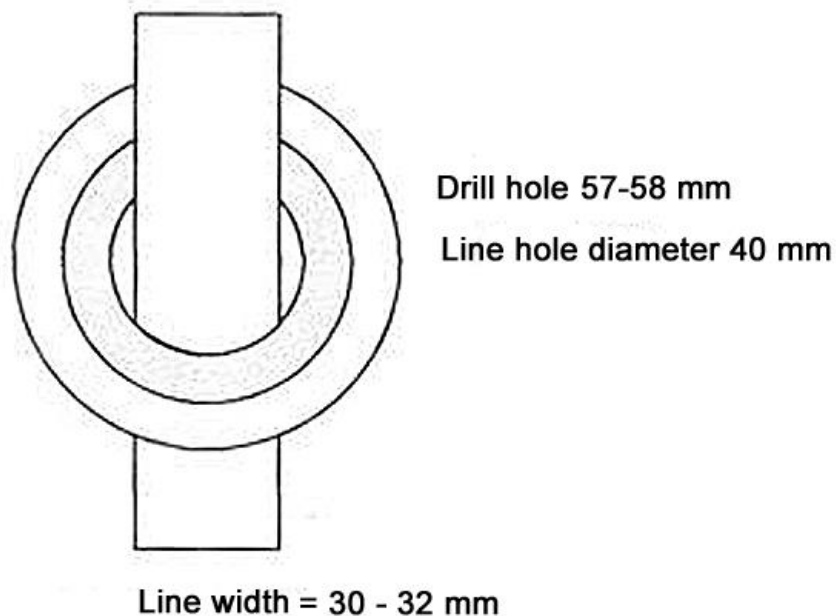
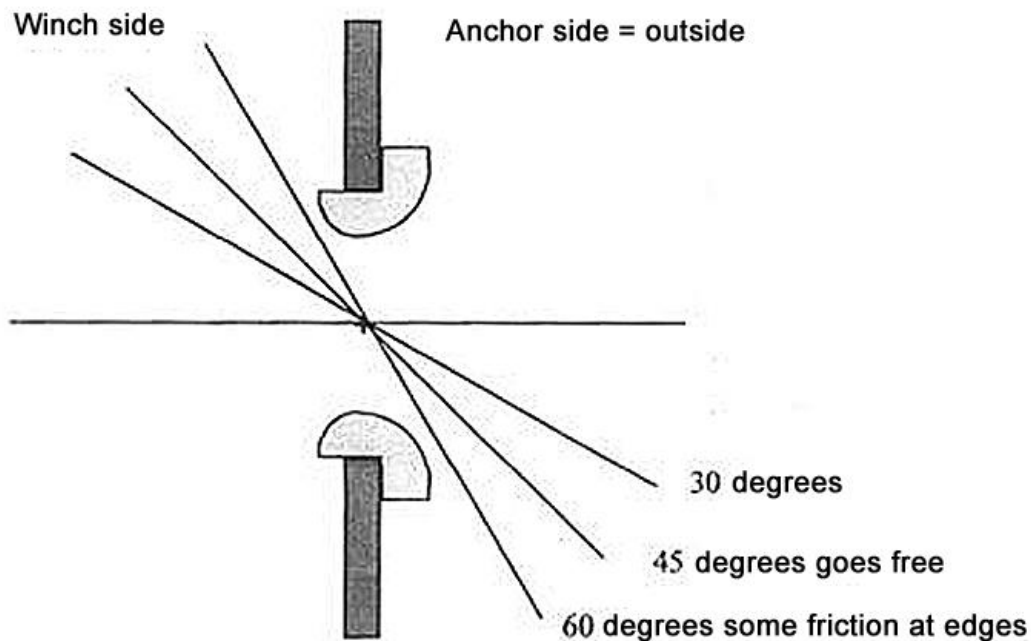
## Hull protection

The hull protection, which protects the belt against edge damage, should be placed centrally in the belt path to avoid friction and possible noise. Larger angle = more accurate fit.

Use a thin metal wire and drill small holes to find the centre of the track. "Horizontal centre" is about 3 mm inside the "outside". Drill hole diameter 57-58 mm for the table penetration.

Install the hull bushing from the anchor side (outside) as the largest side forces are formed during hauling in.

Glue the hull bushing with a sealant type Sikaflex.



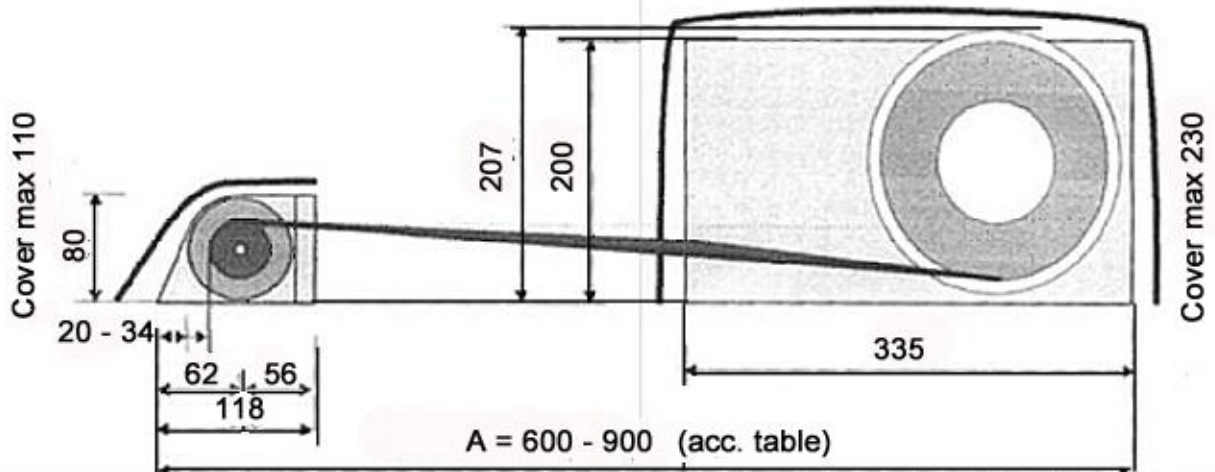
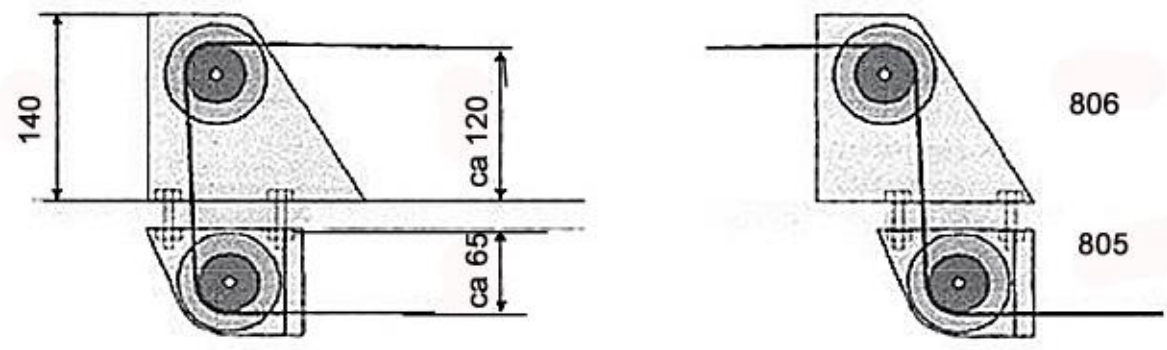
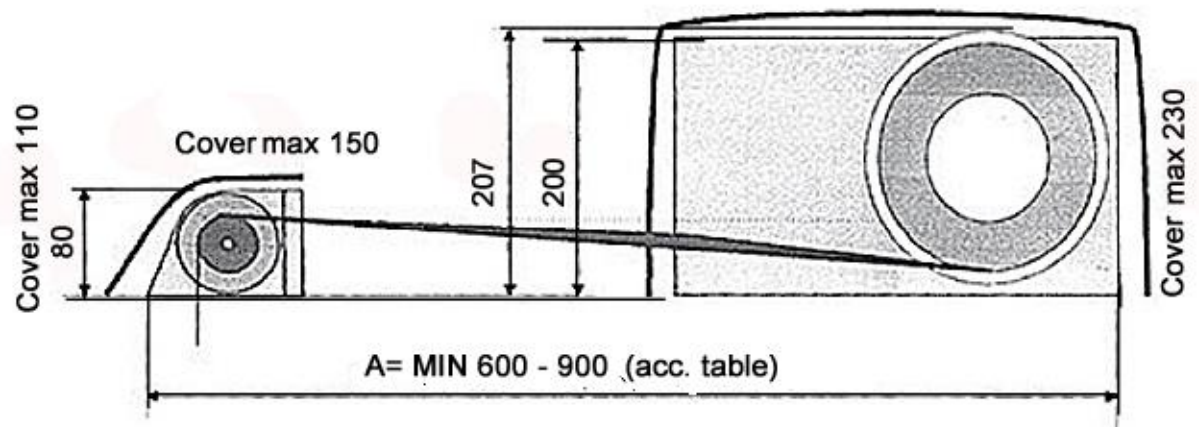
Dimensions

Hole diameter 9 mm, suits screw M8.

The measure A shall be as much as possible, in order to decrease the strain on the belt guide.

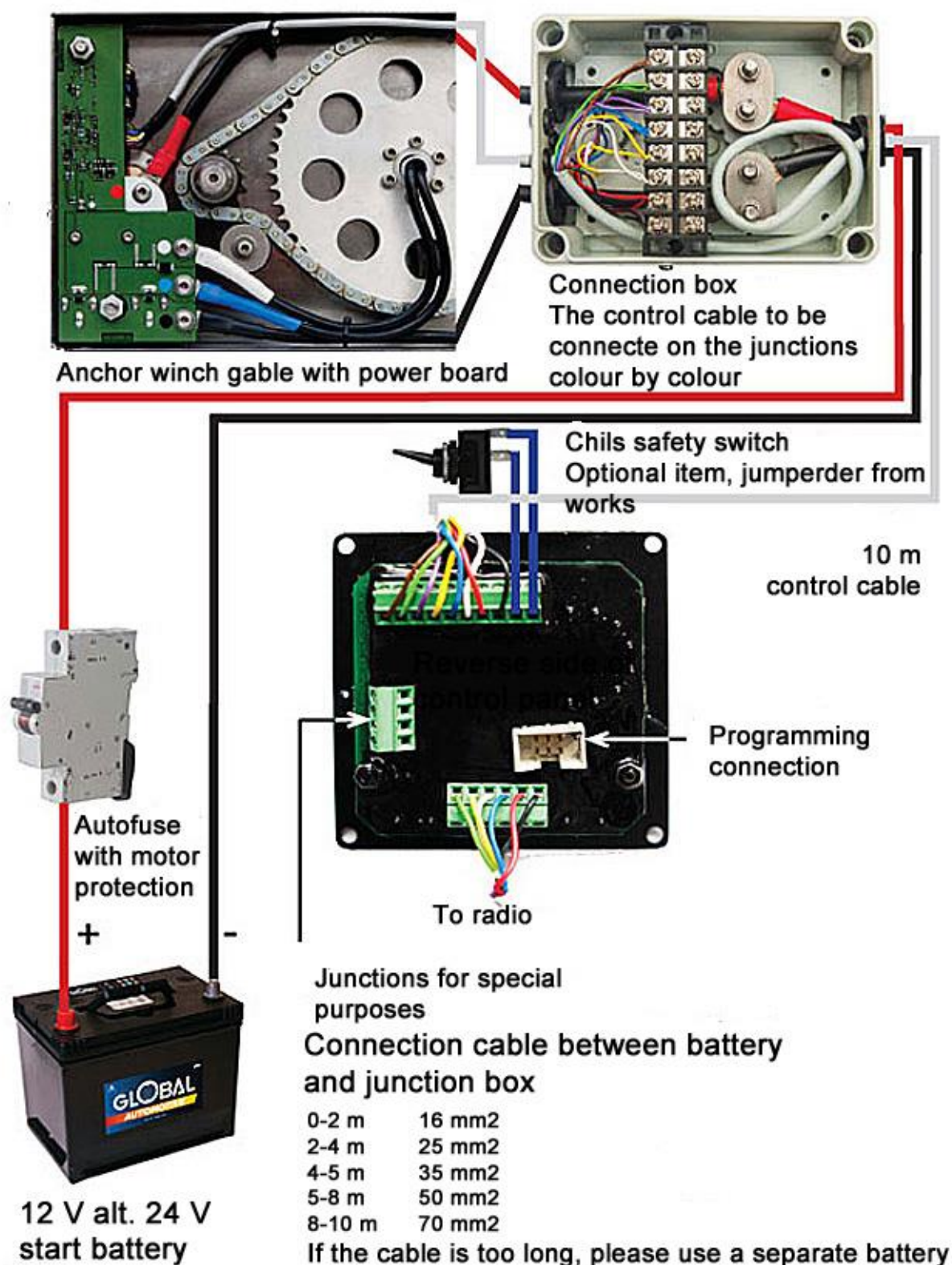
Table for minimum measure A for boats with weight

Tons	A mm
3	600
5	650
8	750
11	850
12	900



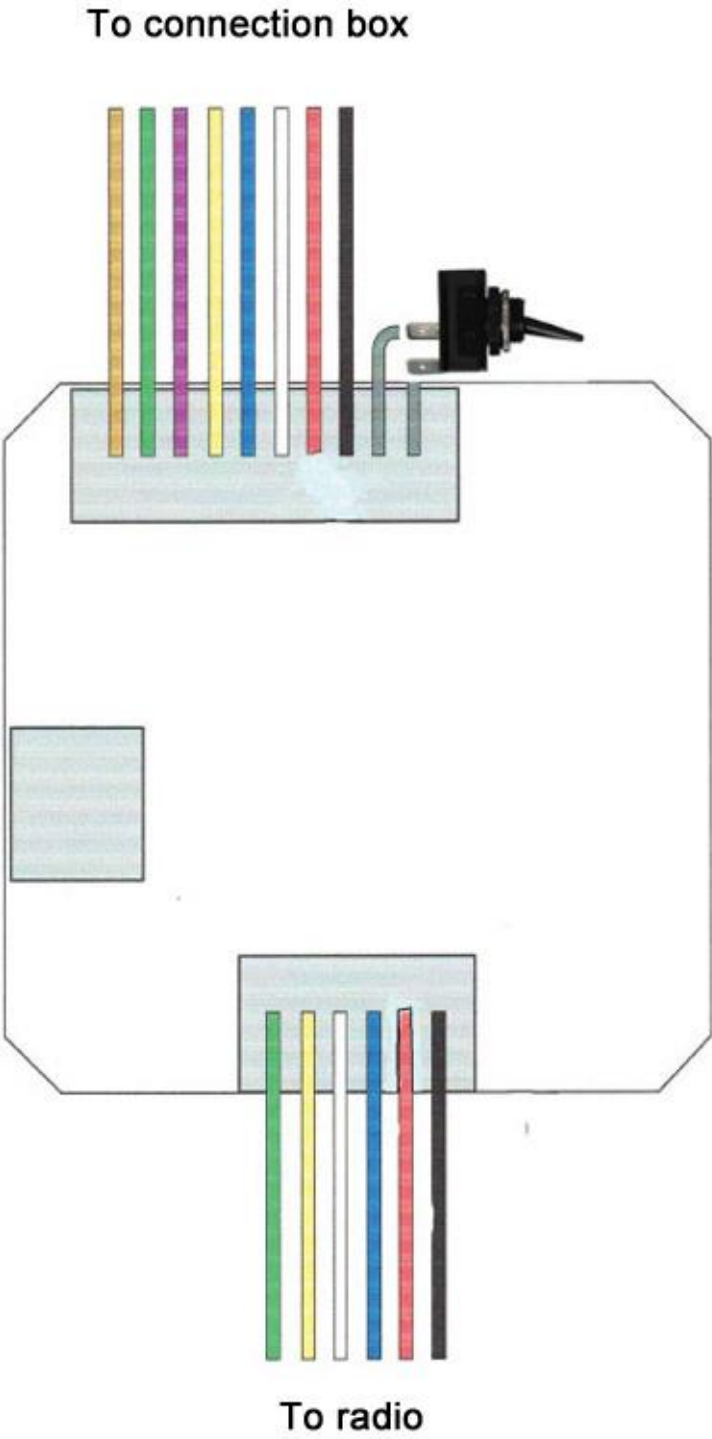


## Connection diagram





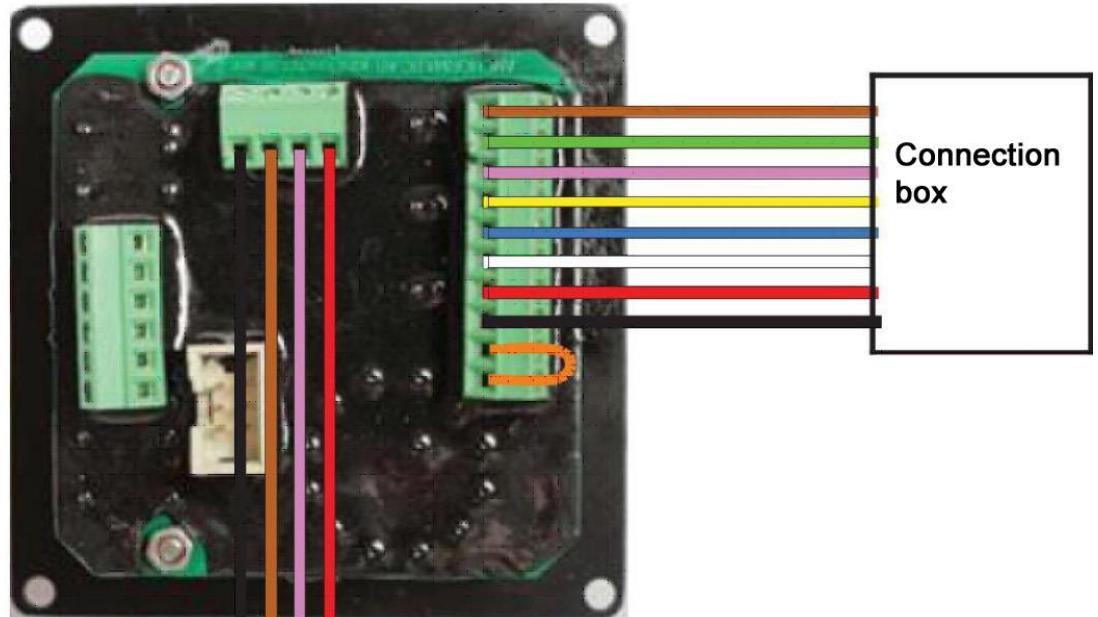
Connections



## Diagram for connection of additional control panels

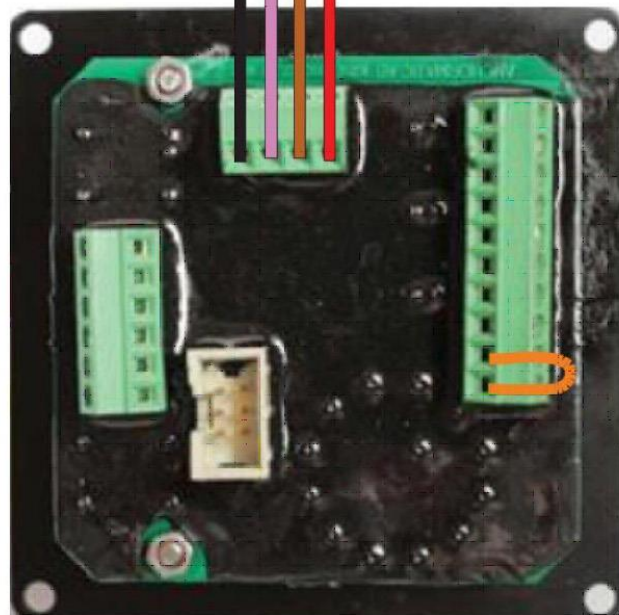
Circuit board rev. 4 or later

Master



**NOTE! Brown and violet cable must be cross-linked**

Slave



## Installation of accessories

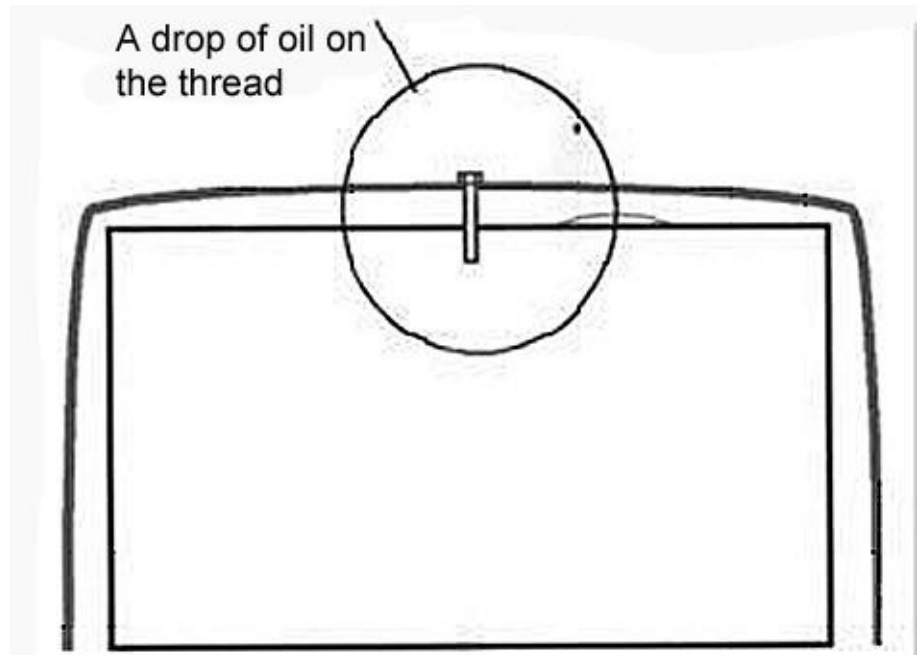
### Covers

#### Windlass cover

Size of windlass cover 360 x 380 x 230 mm. (Do not forget to reassemble the side plates of the winch before mounting the cover permanently)!

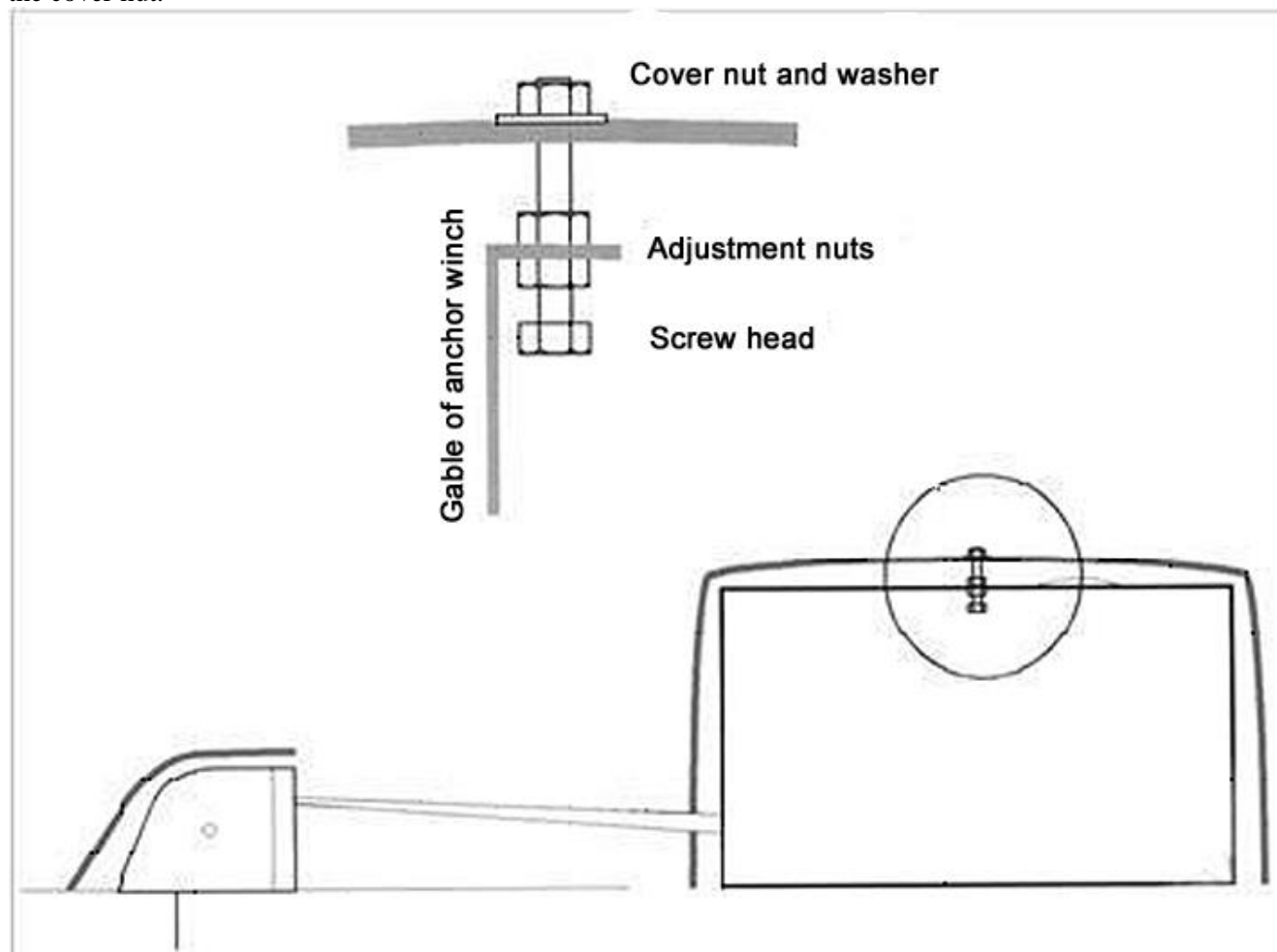
The cover should normally be held in place with two screws, that press the cover against the boat.

The screw holes in the end plates of the winch are threaded.



#### Alternative attachment:

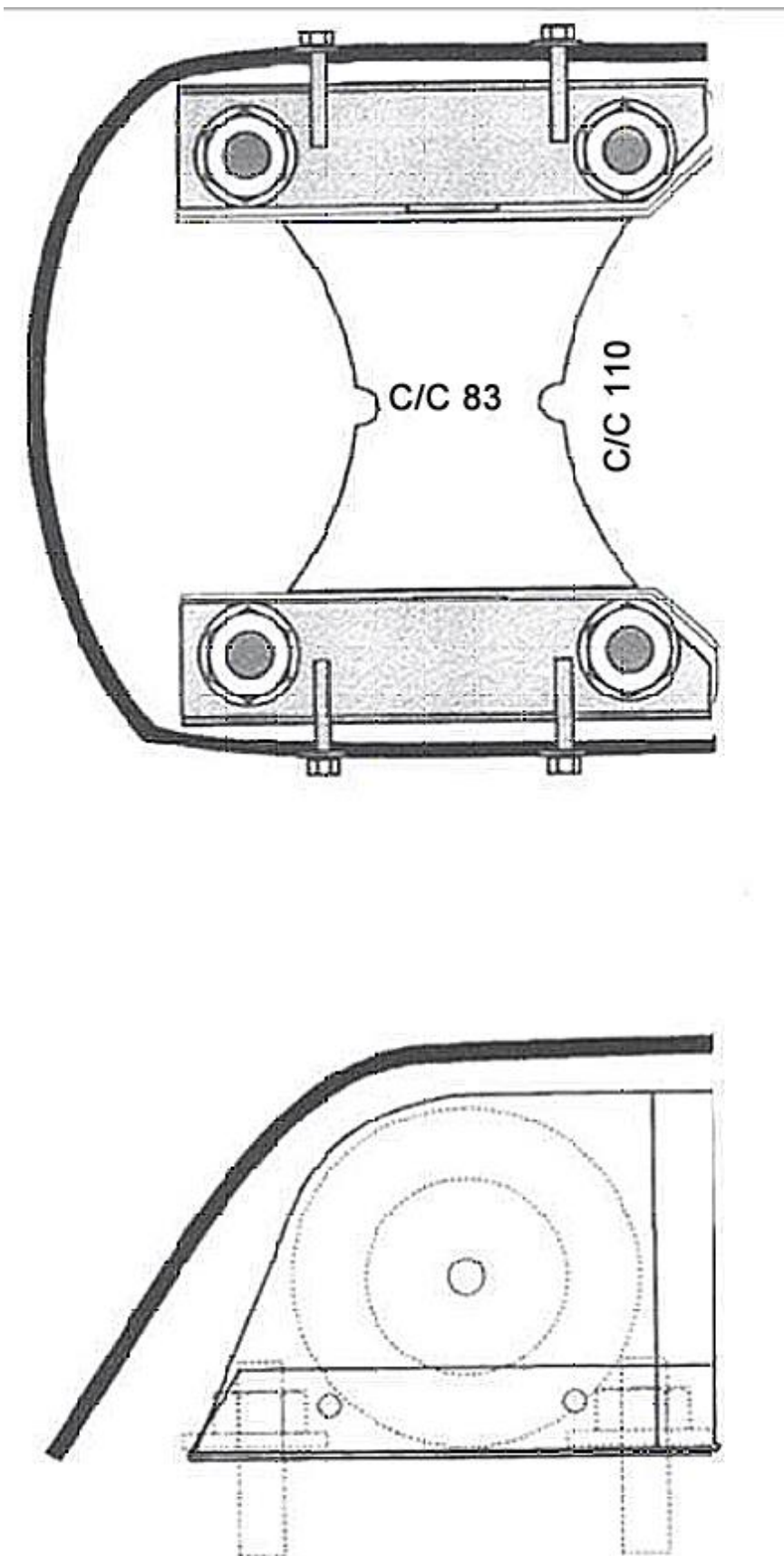
Each screw can be attached to the winch gable with two nuts as shown in the figure. With these two nuts, you also adjust the height of the screw. To minimize the risk of accidents, the screw should end at the top in belt with the top of the cover nut.



## Cover for pulley

Mount the angle profile on top of the pulley foot plates with the pulley screws. Screw the cover screws straight into the angle steel. Use a drop of oil on the thread.

(Check the screw goes easily in the thread.)



## Anchor rollers

### Simple anchor roller

The simple anchor roller is mainly used for bath platforms, where the breaking angle is greater than 130 degrees. At a smaller angle, the articulated anchor roller is recommended.

Attach the anchor roller with at least 4 pcs of screws M8 (recommended). The anchor roller hole is 9 mm with c/c 60 in both directions. Aim for a large distance between the screws in order to reduce the load in the event of any lateral pulling of the anchor belt.

Place the anchor roller as far out towards the water as possible in cases where the anchor can swing against the boat. In other cases, the bottom plate edge should be placed evenly with the outer edge of the boat or bath platform.



### Articulated anchor roller

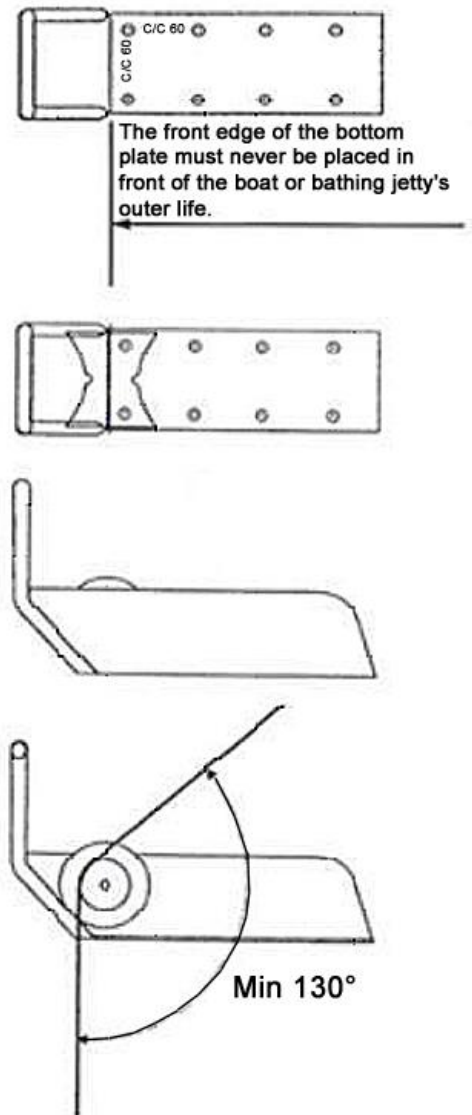
Place the anchor roll so far out that the belt and the anchor are free from the prow or the bath platform.

The front edge of the bottom plate should be placed evenly with the outer edge of the boat or bath platform.

Attach the anchor roller with at least 4 pcs M8 screws.  
The anchor roller hole: Jr Ø 9 mm.

Aim for a large distance between the screws in the hole pattern to increase the loading surface and keep the anchor roller in position when any lateral pulling of the anchor belt.

Available in two lengths and have order nos. 801 and 804. No. 801 has a bottom plate which is 400 mm long and No. 804 a bottom plate which is 500 mm long.



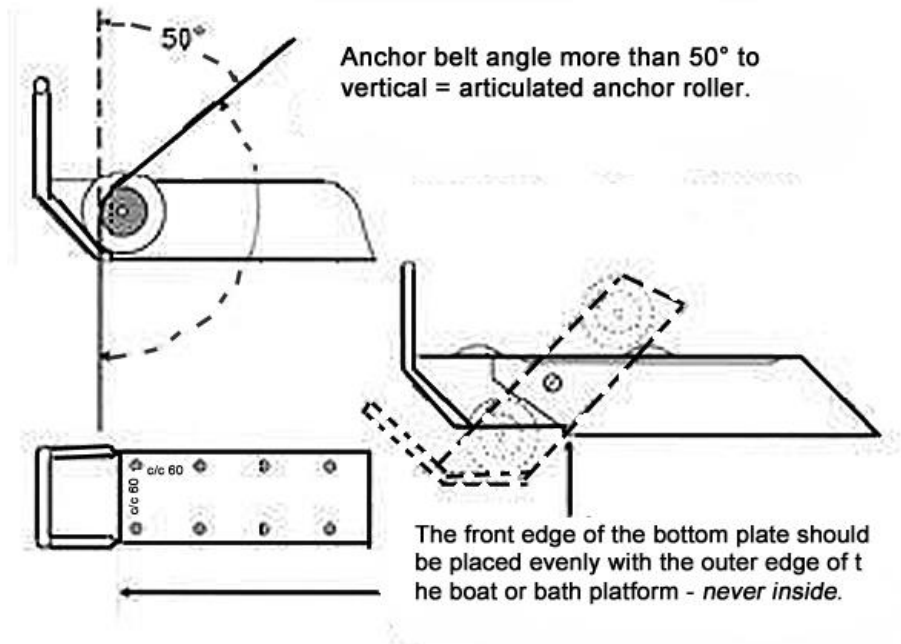
## Pulleys

Pulley 805 has belt height 65 mm.  
Pulley 806 has belt height 120 mm.

Pulley 805 and 806 can be used separately or combined. Hole diameter 9 mm, suits screw M8.

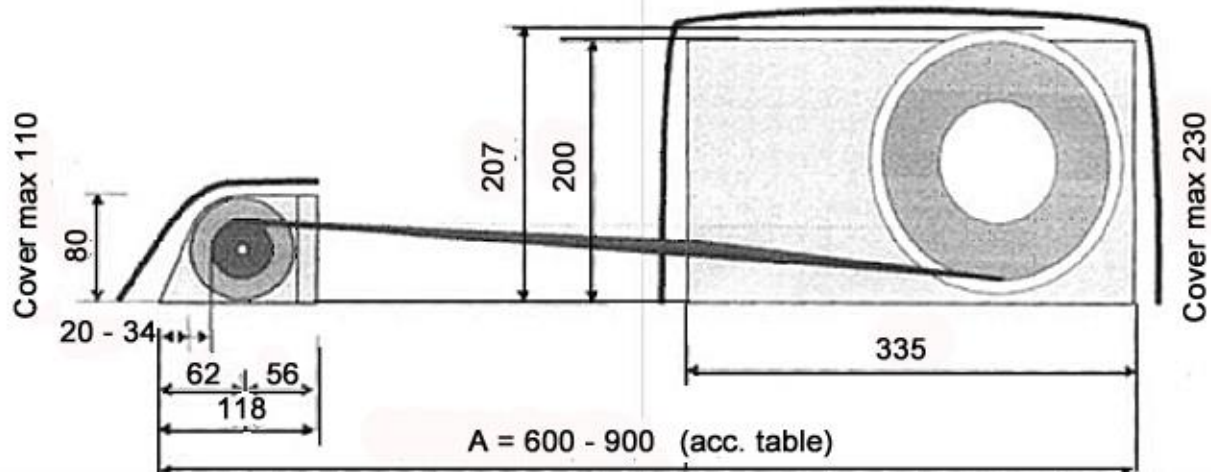
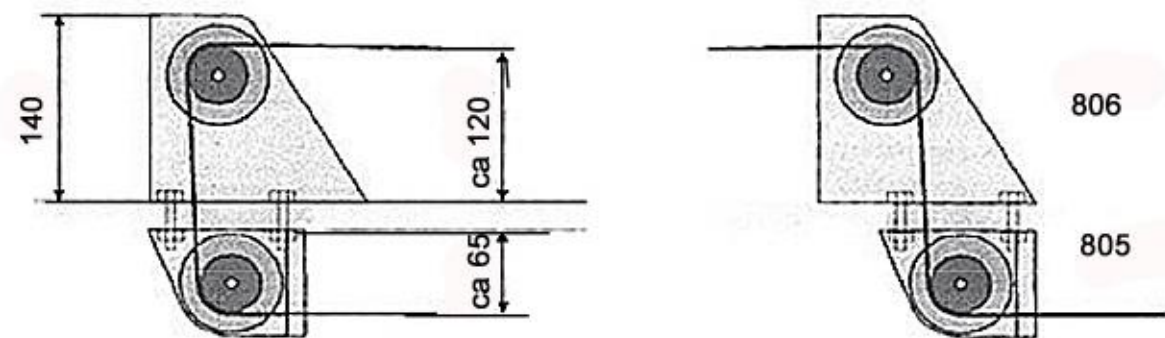
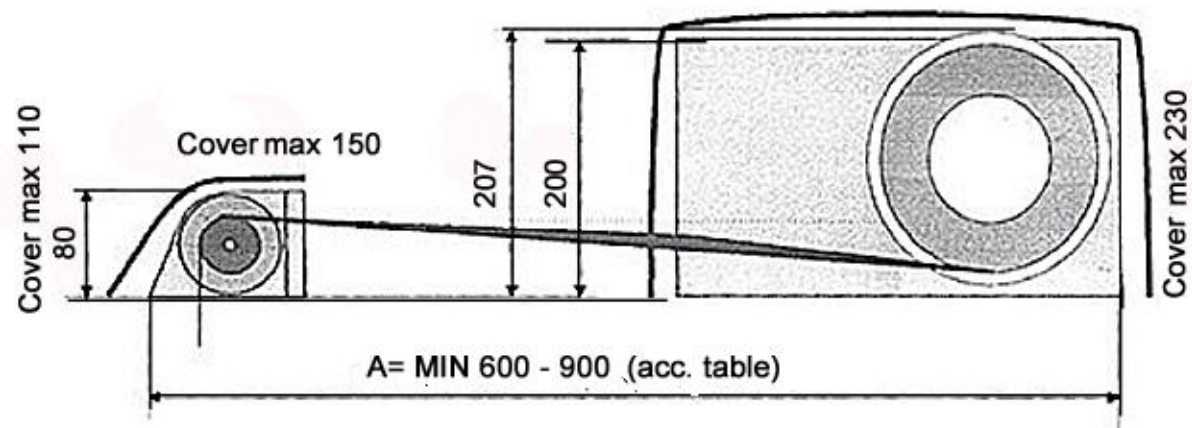
Hole pattern 110 x 83 mm.

Cover 808 suits only pulley 805. If pulley 806 is combined with winch cover 807 the belt opening needs to be enlarged.





Dimensions for combining windlass with anchor rollers and pulleys



## 8. CONTROL PANELS

Control panels should be protected from rain, splashes and strong UV radiation. A cover or a hinged plate is recommended as protection, when mounting outside the cabin, otherwise the control panel is mounted in a water tight space.

**Control panel 710**, included in Anchormatic package EP-500, is water resistant providing a sealant is used during mounting.

Connection of the control panel cable, which is a grey 8-wire cable, must be made in the junction plinths of the terminal box so that respectively colour is connected to the resp. pre-assembled colour.

*See Wiring diagram.*



**Control panel 711**, optional item, is water resistant providing a sealant is used during mounting. The safest is if the control panel is installed in a water tight space.

Control panel 711 has a window showing the position of the anchor.

The length of the retracted belt is shown both graphically (the light blue horizontal bar) and with the digits.

The force with which the winch hauls the anchor is shown with a standing bar (violet colour).

The windlass hauling rate (1-5) is displayed with a digit.

If the windlass is locked, a closed padlock is displayed and if it is not locked, an open padlock is displayed.

If the anchor is in the transport mode, the padlock is green.

If the anchor is in the water, the padlock is red.



## Explanations of the multi-display symbols



The anchor is travelling up or down in the water or is hanging in rinsing position.



The windlass is **unlocked**.



The anchor is in **transport mode**.



The anchor is in transport mode or lies on the seabed.



The windlass is **locked**.



The anchor is in the water or travelling into the water, or it is on its way up.

**2**

**Power setting.** Indicates the value set by the control panel selector. (1-5)

Example:



1. Start position. The anchor is in transport mode. The windlass is **unlocked**. The anchor can now be released by pressing the "DOWN" button on the control panel.



5. The anchor is **hauled in**. The violet standing bar shows the force with which the anchor is hauled in. The power can be increased or decreased by setting the control panel's hauling selector to a higher and lower value, 1-5. The light blue lying bar decreases in length the more the belt is winded in.



2. The anchor is on its way to the seabed. The windlass is unlocked. The light blue, lying bar increases in length to the right the more the belt is fed out.



6. The anchor is in **rinsing position**.



3. The anchor is on the seabed. The windlass is unlocked. The light blue, horizontal bar shows how much of the anchor belt's total length has been discharged. In addition, the discharged belt length is also shown in numbers.



7. The anchor is in transport mode. The windlass is unlocked. When the anchor reaches the transport position, the windlass is locked. The control panel function selector is set to "OFF". Then the anchor is secured for transport



4. The anchor is on the seabed. The windlass is locked. After pressing the button "UP" on the control panel, the windlass has been locked

## REMOTE CONTROL (OPTIONAL)

### Radio control

A radio control unit consists of a hand-held transmitter and a fixed receiver built into the electronics part of the windlass. The range is 30–50 meters for free visibility and normal reception conditions. Protect the radio control from moisture. Especially salty water is harmful to the electronic details. The transmitter is **flush-proof**.

### Transmission

The transmitter control lamp lights up during transmission. NOTE! the light signal is not a confirmation of the received signal.

The radio control works the same way as the control panels:

One press on DOWN = release

One press on UP = locking the release.

Continuous press on the UP = haul of the anchor.

The sender's control lamp lights at transmission. Note!



### Battery replacement

The transmitter's battery should be replaced every year. Carefully unscrew the transmitter's two halves with a Philips screw driver. The battery is located at the outer part of the circuit board. The positive (-) terminal of the battery should be attached to the spring. Push the battery into the battery holder.

The battery is of type 27A 12 Volt.

### Fault tracing

First, check that the windlass works through any control panel.

The transmitter control lamp does not light:

-Check the battery.

Weak or no reception:

- Intense radio traffic. Get closer to the receiver.

- Shielded antenna. Avoid the obstacle.

- The transmitter's battery is weak. Replace battery.

In case of damage, the entire radio control should be handed to us for repair or replacement.

### Risks when using radio control systems

Use of radio control for operation of windlass, i.e. a remote control box that gives signals to a receiver on the machine, which is converted to control pulses.

This type of control system can provide operational advantages in the form of some comfort and proximity to e.g. anchoring in confined spaces.

### However, there are some risks that operators must be aware of:

- **Operation from a place where you cannot see the machine and its dangerous parts.**

Technically, the windlass can be operated at a great distance, perhaps up to 30–50 m or more from the windlass, and you can be completely concealed from the machine, even screened off behind a building or down into the galley. **Close the cover when the remote control is not used, to prevent unauthorized or accidental operation.**

The Machine Directive, states among other things:

***- It must be possible for the operator, from the main operating position, to be able to ensure that no persons are in the risk areas.***

**It is the responsibility of the possessor to establish procedures for the use of the remote control unit, and to educate those who are allowed to use it, regarding the risks of the remote control, and the necessity to prevent unauthorized use.**

#### **Summary of the risks of remote control operation**

- Not to have full supervision of the area of use.
- Unprecise operation. Control signals can be reflected against walls and objects.
- Press the wrong button
- Having the transmitter unit in position or lying down so that you accidentally can place it or other objects on it, and accidentally press a button.
- The function of the emergency stops.
- Unauthorized use
- Unclear instructions cause the risk of mistakes and misuse



## Calibration / Programming of the rinse and stop positions of the anchor

The programming will be performed with the anchor released. The black marking on the anchor belt must come outside the windlass. The easiest way to perform the calibration is to release the anchor to the seabed. The depth should therefore be more than five meters.

1. Push the DOWN-button once. The anchor will be dropped.

**IMPORTANT!** When the button DOWN is pushed and the rope (belt) is released and the anchor runs out, do not push the UP button before the anchor has reached the seabed. The coupling might be damaged by the force of the falling anchor.

2. Check that the black marking on the belt has gone outside of the windlass.

3. Lock the windlass by pushing the UP-button.

4. Push the UP-button till the anchor is in desired rinsing position.

5. In unprogrammed mode, the windlass will automatically move slowly after the black marking on the belt has entered the windlass.

6. Turn the function selector to position P.

7. Push at the same time both the UP- and DOWN-buttons.

**Green** lamp will flash twice, the **rinsing position** has been set.

<b>For windlass WITH an anchor roller: (mostly sailing boats)</b>	<b>For windlass WITHOUT anchor roller: (mostly motor boats)</b>
<p>7. Release the UP- och DOWN-buttons and turn the function selector to position 1.</p> <p>8. Push the UP-button till the anchor is placed in a position for transportation.</p> <p>9. Turn the function selector to position P.</p> <p>10. Push simultaneously once on buttons UP and DOWN.</p> <p><b>Green</b> lamp will flash three (3) times. The stop position is now set.</p> <p>11. Turn the function selector to position Off.</p> <p><b>The positions for rinse and stop are now programmed for windlass WITH anchor roller.</b></p>	<p>7. Release the buttons UP och DOWN.</p> <p>8. Push again simultaneously once on buttons UP and DOWN.</p> <p>- <b>Green</b> lamp will flash three (3) times.</p> <p>9. Turn the function selector to position Off.</p> <p><b>The positions for rinse and stop are now programmed for windlass WITHOUT anchor roller.</b></p> <p><b>Unlike programming with anchor shaft, the anchor is now stopping from the inertia that occurs when the anchor is pulled loose in the anchor roller.</b></p>

If you want to change the programmed rinse and stop modes, turn the function selector to position P and simultaneously press the UP- and DOWN-buttons. The red indicator light then lights up for two seconds to indicate that the modes have been deleted.

**Important!** Both stop and rinse positions **must be programmed** for the safe function of the windlass.

It is optional to use the programming mode that you feel comfortable with.



## 9. OPERATION OF ANCHORMATIC EP-500

It is easy to use the windlass. After using it a few times, you will master the technique.

The most common malfunction is too low battery voltage. Therefore, check the battery before you use your windlass. Make sure you use the correct battery; 12 V DC or 24 V DC

When you turn on the power, the windlass is ready for use.

### Power supply

Anchormatic EP-500 is equipped with a permanent magnet motor. For the machine to have sufficient voltage, it is important to have fully charged batteries and that the boat engine is running. Minor adjustments can be made with the help of the battery only.

### OPERATION

The **function selector** must be in the "OFF" position during travel. Then the tape drum is locked, and the electronics are protected from external electrical impulses. Keep the RADIO CONTROL UNIT out of reach of children and unauthorized persons.

Keep children and unauthorized persons away from the windlass and its moving parts.

Never hold a moving belt. Make sure no foreign objects, e.g. a loose tarp or other item is located near the windlass moving parts when the anchor is used. Particularly exposed is the space at the belt guide and the anchor rollers. See above for "safe use" page 9.

Make sure there is enough space so that you can disconnect the windlass manually.

### MANUAL DRIVING THE WINDLASS with simple toggle switch without control panel

Manual operation of the windlass means that the functions of the electronics do NOT affect the windlass. E.g. the automatic stop is disabled when hauling.

The anchor is hauled in with the engine's maximum speed and full force. Pull in the belt by pulse driving the hauling when the black marking on the belt, which is about 4.5 m from the anchor, has been observed. The haul does not stop in the rinse mode but continues as long as the toggle switch is held in the haul mode.

The force on the anchor is large when the anchor reaches the transport position. The anchor can damage the anchor roller or the anchor roller and also the parts of the boat where these are attached and the places where the windlass and the break rollers are attached.

Keep unauthorized persons away from the windlass during manual driving.

**UTMOST CAUTION RECOMMENDED!**

## Control panel 700-710 -711 Operation

When the function selector is set to "Off", the control current is switched off, the signal lights are switched off and the tape drum is locked.

### Normal anchoring:

1. The signal lights are off.  
The anchor is in transport position. The windlass is locked.
2. Turn the mode selector to any of 1-5.  
Green indicator light is on solid light.
3. Press the DOWN button. The anchor runs out freely. Red indicator light flashes quickly.

**Important!** When pressing DOWN and the anchor goes down, do not press UP until the anchor reaches the bottom. The coupling may be deformed by the force of the falling anchor.

4. When the anchor reaches the seabed, the red indicator light is lighting.  
Press UP. The windlass is now locked.

5. Turn the mode selector to "OFF". The control current is now switched off and the winch drum is locked.

**Important!** It is important to press UP before setting the function selector to "OFF" and turn off the control current!

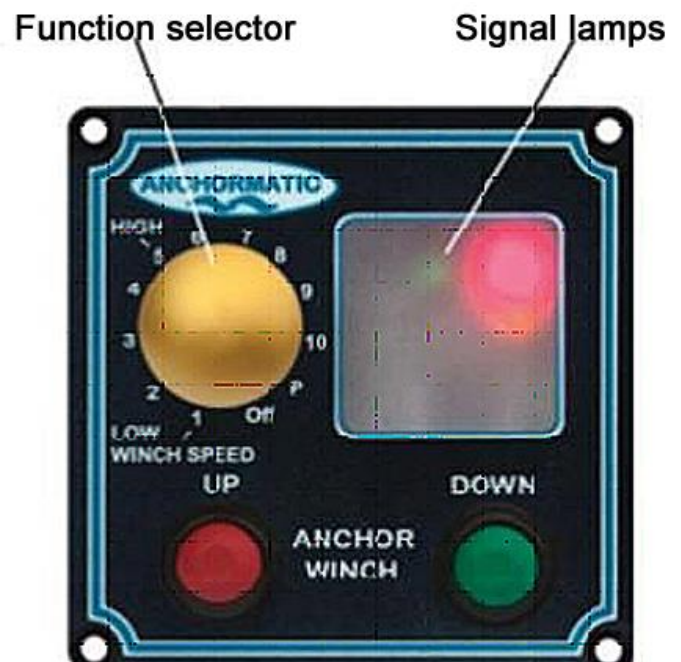
### Normal haul

1. Winch drum locked. Signal lamps switched off
2. Turn the function selector to any of positions 1-5.  
1 = lowest and 5 = highest haul speed.  
Red signal lamp lights steadily.
3. Press button UP.  
Red signal lamp flashes quickly.
4. When the anchor stops in the rinse mode, both the green and the yellow indicator lights flash quickly.  
Release the UP button.
5. When the anchor is to be hauled in to the transport position, press the "UP" button. Red indicator light flashes slowly.
6. When the anchor reaches the transport position the green lamp lights steadily.

7. Turn the function selector to OFF. The control current is now switched off, and the winch drum is locked.

**Practical tip!** When the anchor is hauled in, should start with a low value on the function selector. You then increase the value from time to time the longer you get out.

When the belt goes straight down, you should release the button and let the boat slide backwards in order to release the anchor with the power of the boat. Then press UP until the anchor stops in the rinse position.



## **Anchoring and decoupling**

You unlock the winch drum by pressing on DOWN. The engine starts to assist with the decoupling and the anchor will run out by its own weight.

**Important!** When you press DOWN and the anchor runs out, you must not press UP until the anchor reaches the bottom. The coupling may be deformed by the force of the falling anchor. When the anchor has expired and lies on the seabed, click on UP.

Each operation must be completed with a click on UP, which locks the winch drum. Never leave the boat without clicking on UP! The winch drum is disengaged for a maximum of 30 seconds, then "warning flashes" are displayed (Red / Yellow flash).

## **Hauling**

The hauling continues as long as you press UP. Make sure the belt is stretched during the hauling.

Always watch the anchor during the last bit. You can let the boat drift with the wind and make hauling in the wind. Never back the boat while hauling the anchor!

You can reduce the acceleration by pressing UP at intervals or setting a lower hauling speed on the mode selector. With the automatic stop, the anchor stops automatically in the rinse position so that you can drive with the boat and rinse off the mud from the anchor. With a new press on the control panel at the UP, the anchor goes up to the stop position. Turn the mode dial to "OFF". The control current is now switched off and the winch drum is locked.

Turn the mode selector to any of the 1-5 positions. Start with a low value, so that later, when the boat has gained speed, increase the value. 1 = lowest speed, 5 is highest speed.

Allow the boat engine to charge the battery during haul and supervise the anchor movements.

One click on the DOWN = release of the winch drum.

One click on UP = locking of winch drum.

UP = inhalation as long as the button is pressed. With the automatic stop, the anchor stops first in the water bridge where the anchor can be rinsed off. Then release the button and then press "UP" again until the windlass automatically breaks into the final position and the anchor is completely hauled.

Important! Always make sure the tape is stretched when inhaled in the game. Slack tape can cause tangling on the drum.

Important! The function selector must be in the "OFF" position during travel to lock the anchor in the transport position (inhaled position).

## **Counter (option) Panel 711**

The display shows how many meters of belt are out. The meter number is stored in the processor memory, so you can see how many meters of belt you have out. At 4.7 meters from the anchor there is a black marker. Each time it passes the belt guide on the windlass, the number of meters is calibrated.

## **Radio control (option)**

Align the radio control transmitter with the receiver.

The range of the radio control can be up to 30 meters, depending on the environment. Always end with a click on the UP to lock the tape drum.

## **Fault tracing**

- If the winch drum does not disengage, check the battery voltage.
- If the anchor is stuck in the bottom, circle with the boat so that the draw comes from the side or from opposite direction.
- If the belt is stuck, examine the belt's passage to the windlass. Please put the belt around a bollard to ensure that the winch is not overloaded.
- Always ensure that the belt is stretched when hauling.

If there is no power to the windlass

1. Check the automatic fuse that it is switched on.
2. Check that the function selector is in position "1" to "5".
3. Is there any battery power?

If you can measure the voltage with an instrument, make sure it arrives at the machine. (Measure in the junction box).

For support call or Email us. Please take and send pictures of the windlass and what it is wrong with.

+46-(0)8-885050 or +46-(0)70-774 8888

info@anchor.se

## 10. MAINTENANCE

In order for the windlass to work in the best way, it is important that you regularly perform maintenance in accordance with the following.

- Make sure the windlass is unloaded before carrying out maintenance work.
- Inspections, service and repairs must be carried out by competent personnel.

### **Before start of an anchoring procedure**

1. Make sure the windlass is flawless.
2. Check that the belt runs freely.
3. Make sure that you anchor in a suitable place.

### **Monthly**

1. Check The windlass for all types of defects, cracks, warps, corrosion, etc., and that all locking devices are in place and are properly attached.
2. Check that signs and labels are complete and legible.

### **After season**

The belt shall be pulled out of the winch drum in the fall to be aired during the winter and checked for possible. damage.

See Troubleshooting - "Do you have a long belt out".

In case of damage to the belt, it must be replaced with a new original belt from Anchormatic.

Keep the battery and cable lugs and electrical connections clean and greased.

The radio control unit should be stored in a dry room, e.g. in the home, for longer non-use.

The radio control battery should be replaced every year.

**Important! The function selector must be in the "OFF" position during transportation in order to lock the anchor in the hauled position.**

Allow the boat engine to charge the battery during haul and check the anchor.

If the winds become harsh, put the belt around for example a bollard.

Performed inspections and repairs must be documented in an Maintenance record.

This includes: Date for inspection or repair, inspection status, performed repair and information about who made the inspection or repair.

- Lubricate the lead screw with universal grease.

- Spray oil or otherwise oil the coupling, which is an important part of the windlass function. The coupling is hidden behind the red "hat" for manual release. Spread into the red hat through the hole on its side or loosen the hat by gently prying it off.

- Clean the windlass and anchor rollers regularly and always after the boat season.