

## **Manual**

### **2-speed self-tailing winches**

### ***S30, S40, S48, S54***



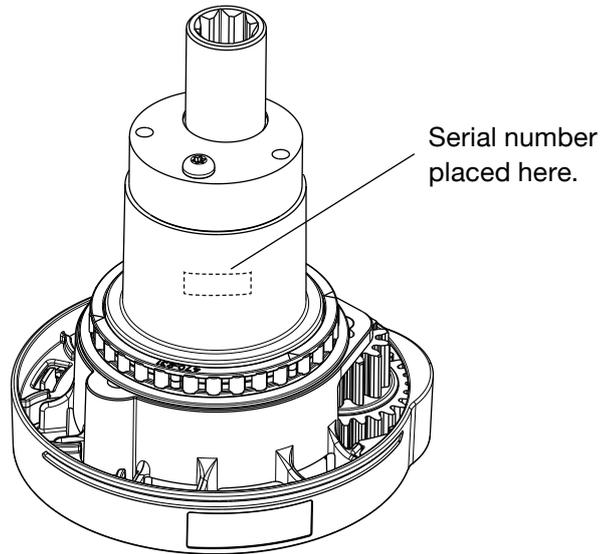
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# 1. Introduction

Congratulations on the purchase of your new Seldén S-Winch.

This manual covers installation and operating instructions for S-winch model S30, S40, S48, S54. The model designation is found on the top of the winch. The serial number is found on the winch base, as shown below, and on the delivery box.



Please read the entire manual before installation and use of the product. The manual shall be kept for future reference.

## Safety Precautions

Follow and pay careful attention to instructions with the following symbols:



This symbol indicates a critical moment in the assembly or technical advice.



This symbol indicates a potentially hazardous situation. If not avoided, this could result in serious personal injury or damage to property.

### **Choosing the correct version of S-winch for your boat:**

The key to a safe and properly working installation is correct dimensioning in relation to the boat size the products shall be used on. Seldén provides dimensioning guidelines in catalogues, leaflets and on the website. If there are any questions about selecting the right product, please consult an authorized Seldén dealer. All dealers are listed at [www.seldenmast.com](http://www.seldenmast.com) and divided in categories describing their competence.



The Seldén winch is designed for line handling on sailboats only!



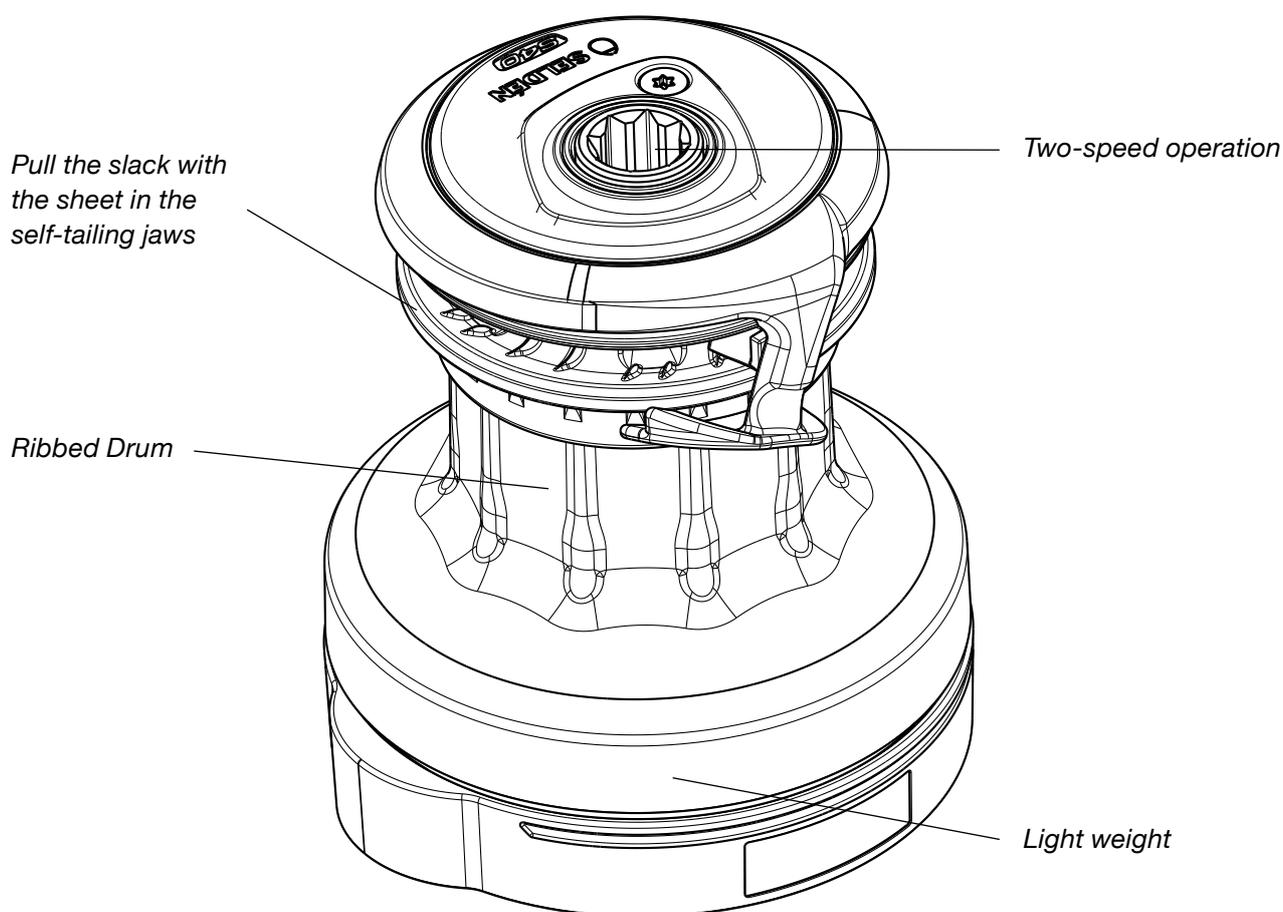
Exceeding the stated maximum working load may lead to winch failure and serious injuries.



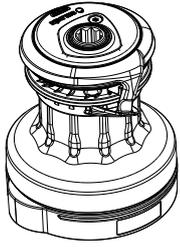
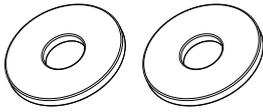
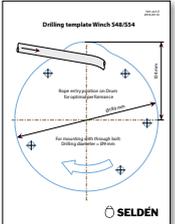
Keep hands, fingers, hair and clothing away from moving parts while winch is in use. It is recommended to let only one person work with the winch at any one time.

## 2 Self-tailing winch

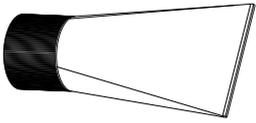
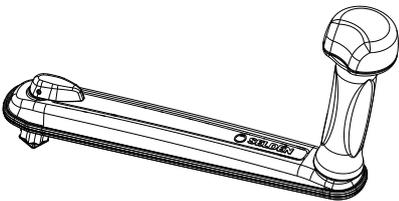
The Seldén winches are manually operated and of self-tailing type with two available speeds. The ribs of the drum provide an extraordinary grip. As a result, fewer coils of the line are required, reducing the risk of an override and allowing the line to be released quickly. An optimized choice of materials makes for low weight and high performance. The unique design of the self-tailer enables the trimmer to pull the slack out of the sheet with the line sitting in the self-tailer and with the winch handle mounted.



## 2.1 Included parts

S30	S40	S48	S54	
472-630-02 S30 winch	472-640-02 S40 winch	472-648-02 S48 winch	472-654-02 S54 winch	
164-088-01 Plastic RBSwasher (5pc) Stainless steel RBSwasher (5pc)	164-088-01 Plastic RBSwasher (5pc) Stainless steel RBSwasher (5pc)	164-089-01 Plastic RBSwasher (5pc) Stainless steel RBSwasher (5pc)	164-089-01 Plastic RBSwasher (5pc) Stainless steel RBSwasher (5pc)	
597-226-E Drilling template	597-226-E Drilling template	597-227-E Drilling template	597-227-E Drilling template	
597-285-E Manual	597-285-E Manual	597-285-E Manual	597-285-E Manual	

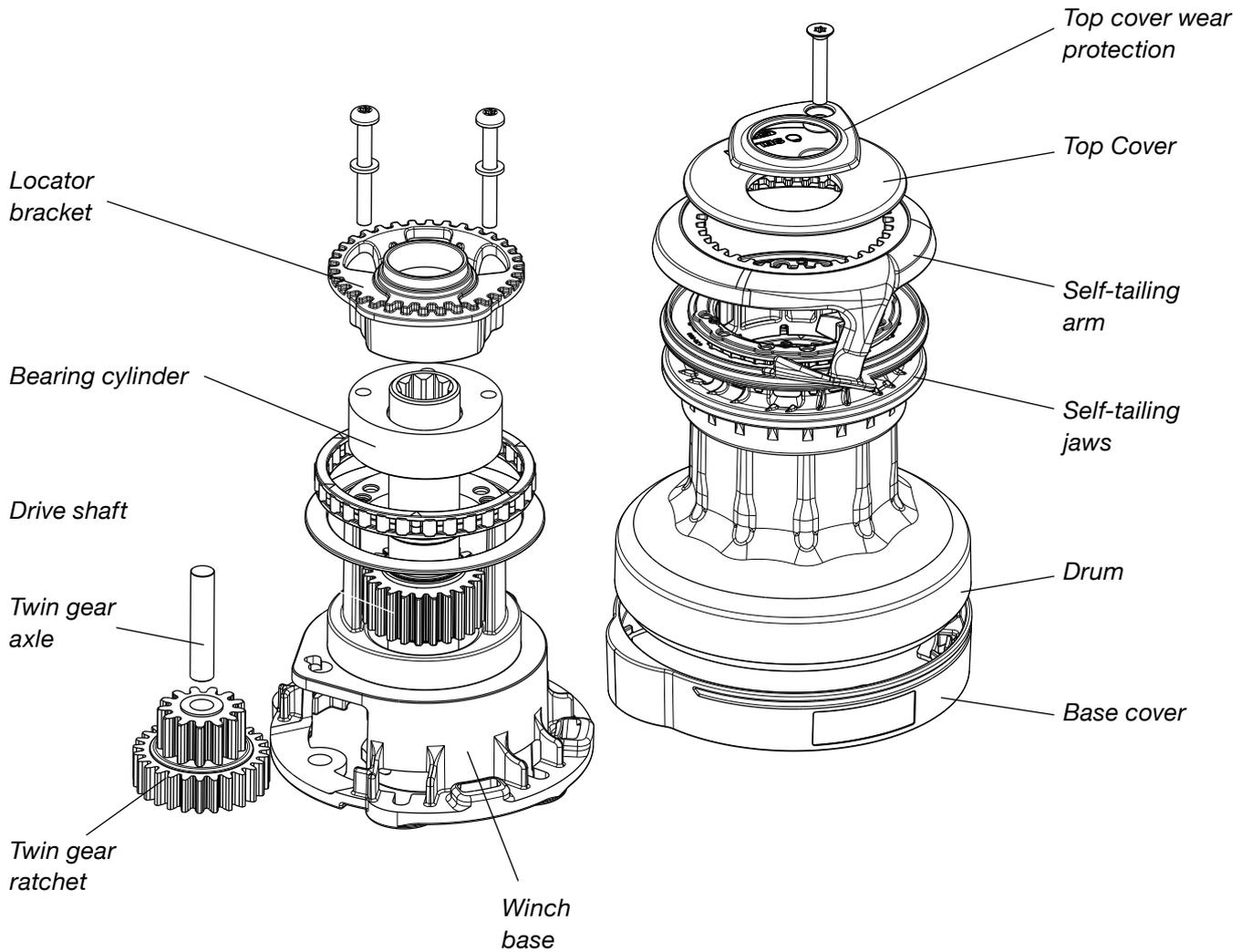
## 2.2 Optional parts

Part	
312-501 Seldén lubrication grease	
533-927-20 Winch handle	

## 2.3 Technical specification

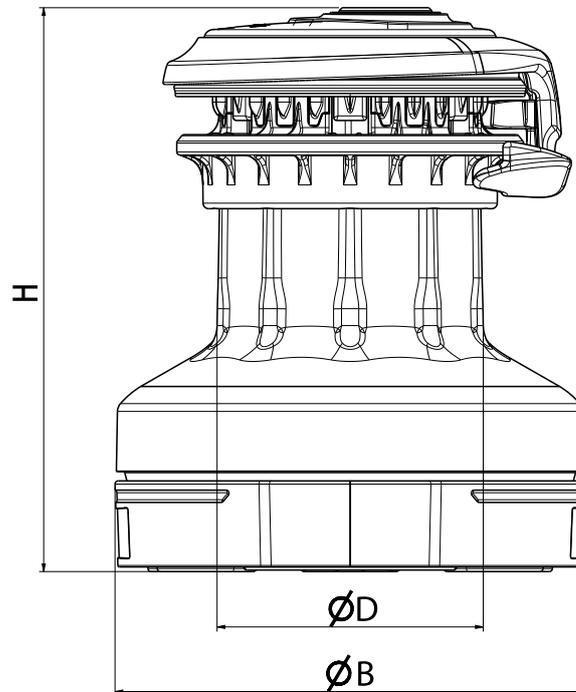
### Parts and nomenclature

In the schematic below, the names of parts referred to in this manual can be viewed.



## Dimensions and technical data

Model	Item. No.	Base diameter (ØB) [mm]	Drum diameter (ØD) [mm]	Height (H) [mm]	Weight [kg]	Suitable Line dimensions [mm]	Gear ratio HIGH GEAR	Gear ratio LOW GEAR	Safe Working Load (SWL) [kN]
S30	472-630-10	150	85	183,5	3,5	8-12	10:1	30:1	8,4
S40	472-640-10	150	85	183,5	3,5	8-12	10:1	40:1	11,2
S48	472-648-10	188	108	218	5,6	10-14	10:1	48:1	13,4
S54	472-654-10	188	108	218	5,6	10-14	10:1	54:1	15,1



Exceeding the stated safe working load may lead to winch failure and/or fatal injuries.

### 3 Installation



Installation of a Seldén Winch must be carried out by a competent installer who has read and understood this installation manual, the purpose and function of the winch and has checked the loads, winch sizing and mounting requirements prior to installation.

Winch orientation, position relative to associated components and location regarding deck reinforcement and suitability must be checked and any reinforcement work carried out prior to installation. The installer takes full responsibility to ensure these checks have been undertaken. This may require the assistance of a boat yard or certified marine engineers.

Seldén Mast does not provide fasteners. The installer is responsible for the sourcing and specifying load capacity of the fasteners, ensuring they are rated for the expected loads from the winch. Any fastener should be made from marine grade stainless steel.

Seldén Mast AB does not take responsibility for the incorrect installation of a winch, the insufficient reinforcement of the deck at the location of the winch, water ingress due to insufficient sealing or any damage to interior as a result of water ingress.

### 3.1 Installation preparation

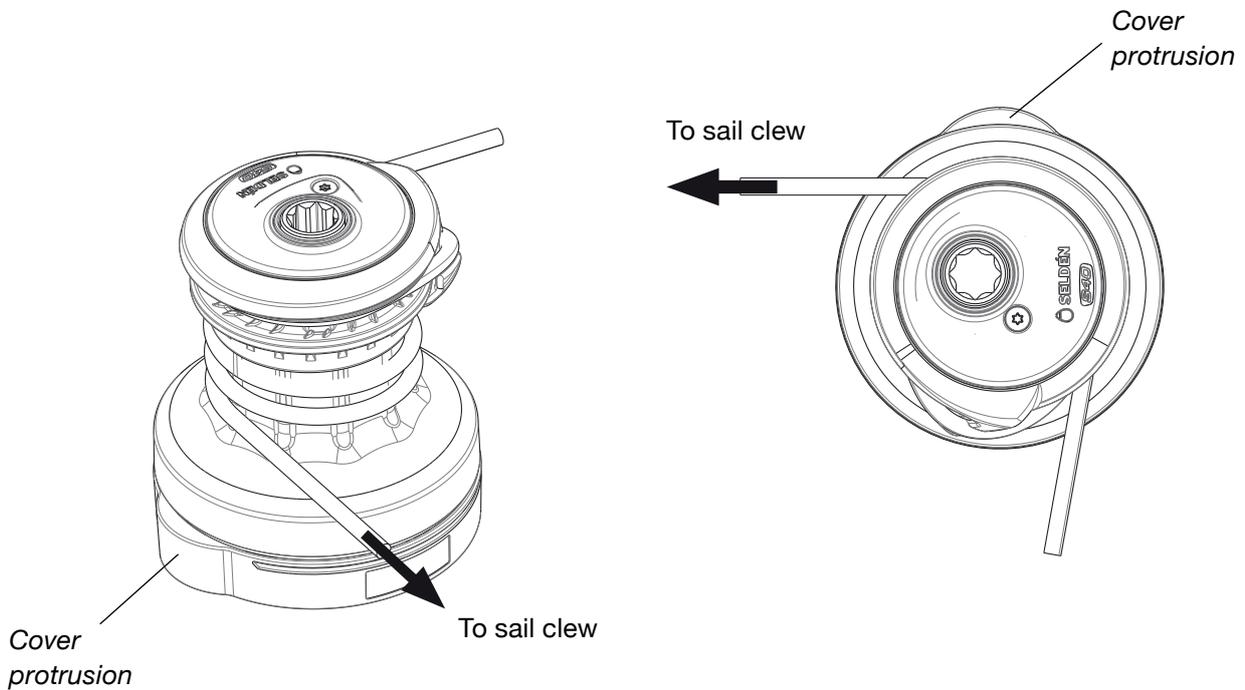
Prior to installation, find a suitable mounting point for the winch. When choosing a mounting point, consider previous and following requirements.

#### Orienting the winch

For optimum performance during use, the winch must be oriented correctly for the intended application. If the winch is to be used for handling of multiple lines, e.g. placed on the coach roof for use as a halyard winch in combination with running spinnaker or gennaker sheets, the winch shall be oriented and optimized for the highest load.



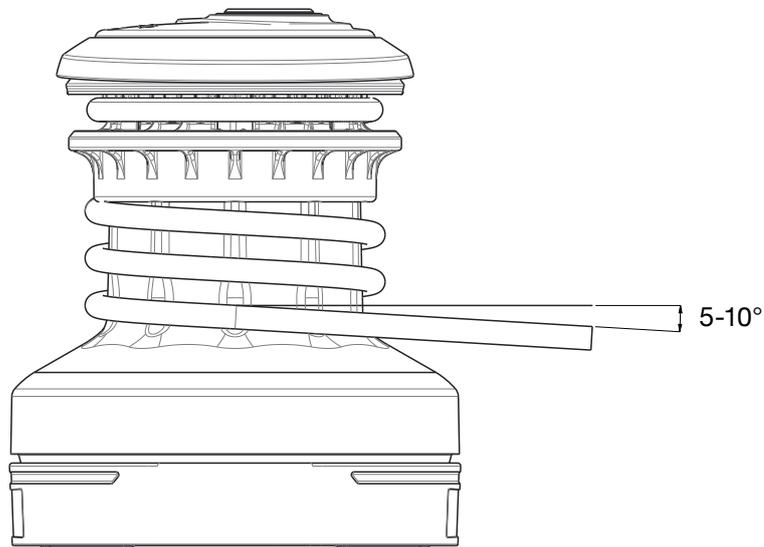
The line shall enter the drum tangential to the base cover protrusion. This is shown in the figure below.



Failing to align the winch in accordance with the figure above may lead to winch failure which may lead to fatal injuries or damages to the boat or equipment.

## Preventing override

To prevent override, the line must be guided onto the winch at an angle of approximately 5-10° to the horizontal plane, as shown in the figure below:



To achieve the correct angle, installing a block or sheet lead to divert the sheet or halyard to the winch may be necessary. Please visit [www.seldenmast.com](http://www.seldenmast.com) to browse our selection of suitable deck hardware.



Failing to lead the rope onto the winch at recommended angle as seen in figure above may lead to winch failure which may lead to fatal injuries or damages to the boat or equipment.

## 3.2 Deck installation

The winches can either be installed with screws secured with nuts below deck or with screws fitted directly in the deck, provided that the hull is prepared with appropriate reinforcement plates.

Follow procedure A or B depending on your installation method:

**A:** Installation with screws and nuts below deck

**B:** Installation directly in the deck



Installing winches directly into the deck is only possible on yachts equipped with aluminium- or stainless-steel deck-inserts intended for mounting winches. If at any point there is uncertainty if the yacht is equipped in this way, please abort the installation and seek assistance at the yard or builder.

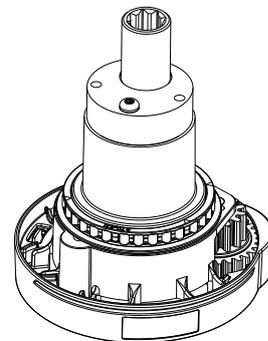
### Equipment

Material and equipment needed for installation:

Material and equipment	S30/40	S48/54	Quantity
Stainless steel and plastic RBS-washers	164-088-01	164-089-01	1 pc
Installation and drilling template	597-226-E	597-227-E	1 pc
Fasteners of suitable length and size	M6	M8	5pc (not included)
Drill and drill bit	Ø4mm A: Ø7mm B: Ø5mm	Ø4mm A: Ø9mm B: Ø6,8mm	(not included)
Thread tapping tool	B: M6x1	B: M8x1,25	(not included)
Masking tape			(not included)
Awl or center punch			(not included)
Countersink			(not included)
Marine sealing compound			(not included)
Methylated spirits, cloth			(not included)
B: Locking adhesive			(not included)

### 1.

A/B:  
Dismantle the winch according to chapter 5.2, steps 1 and 2.



## 2.

A/B:

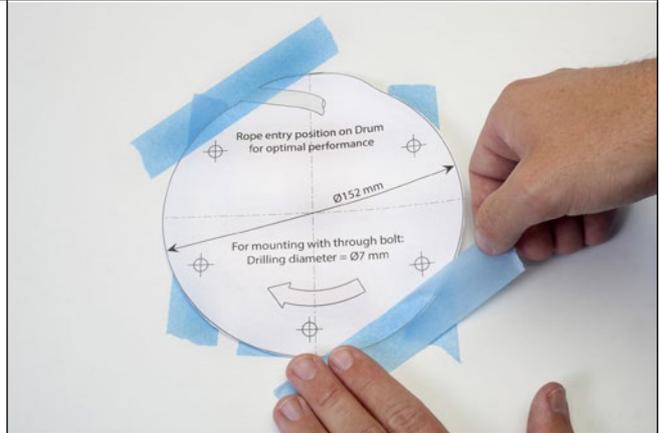
Cut out the drilling template provided in the delivery box.



## 3.

A/B:

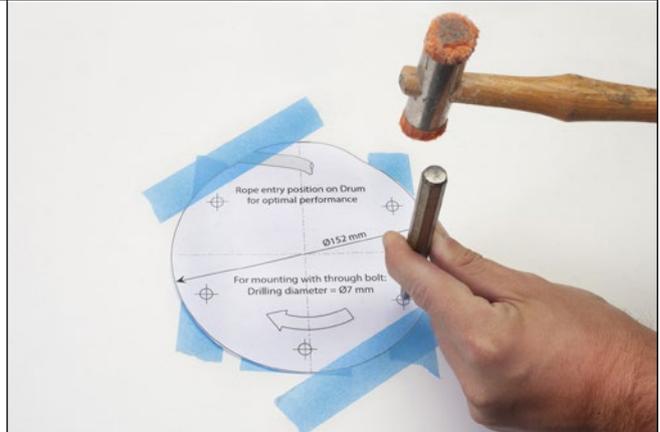
Test-fit and align the drilling template in accordance with chapter 3.1 *Orienting the winch* and attach it to the deck using masking tape.



## 4.

A/B:

Mark all hole positions using an awl or center-punch.



## 5.

A/B:

Remove the template and pre-drill a pilot hole at each position using the 4mm drill bit.



## 6.

A:  
Continue drilling the holes to final size,  
using the larger drill-bit.

**Drill sizes:**

S30/40: Ø7mm

S48/54: Ø9 mm

B:

Continue to drill the holes for the  
recommended internal thread diameter.  
Clean the hole followed by tapping to correct  
thread size.

**Drill and tap sizes:**

S30/40: Ø5mm drill, M6X1 tap

S48/54: Ø6,8mm drill, M8X1,25 tap

## 7.

A/B:  
Countersink each hole approximately 3 mm  
to allow enough marine sealing compound  
to be applied to stop water ingress.



## 8.

A/B:  
Remove any masking tape and debris and  
proceed to wipe the area down using  
acetone or methylated spirits to remove  
any grease.



## 9.

A/B:  
Fill the countersunk hole with marine  
sealing compound and mount the winch,  
ensuring the winch is correctly aligned.



## 10.

A:

Fit screws, placing the included steel and plastic RBS-washers between the winch base and the screw head, with the plastic washers closest to the winch base.

Tighten the winch down to the deck in a crosswise pattern.

! Recommended tightening torques for screws are as follows:  
M6 =7 Nm  
M8=12 Nm

B:

Apply thread locking adhesive to screws intended for mounting the winch.

Fit the screws, placing the included steel and plastic washer between the winch base and the screw head, with the plastic washer closest to the winch base.

Tighten the winch down to the deck in a crosswise pattern.

! Recommended tightening torques for screws are as follows:  
M6=7 Nm  
M8=12 Nm

! Avoid mixing locking adhesive and marine sealant as this may cause either to fail.



### 3.3 Final adjustments

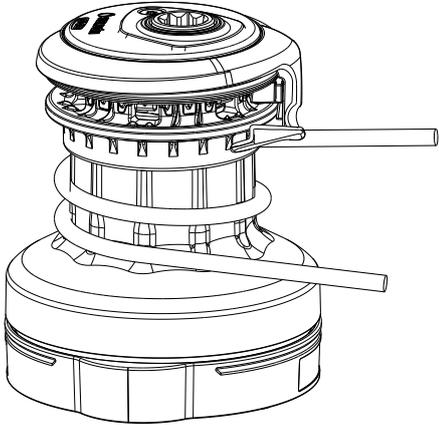
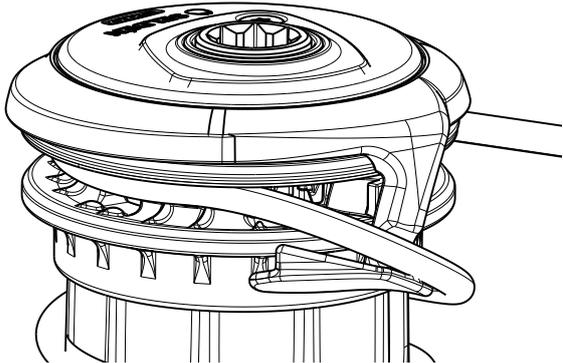
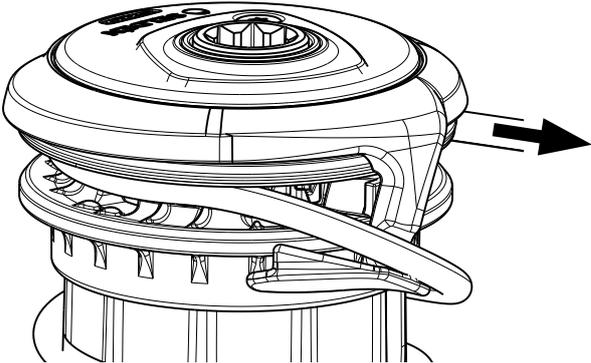
When finished with the installation, the self-tailing-arm (ST-arm) needs to be adjusted to guide the rope in the preferred direction. To adjust the position of the ST-arm, dismantle the winch according to step 1 in chapter 5 *Maintenance and Service*. The ST-arm can then be fitted followed by reassembly of the winch.

It is recommended to guide the line into the cockpit.

# 4 Operation

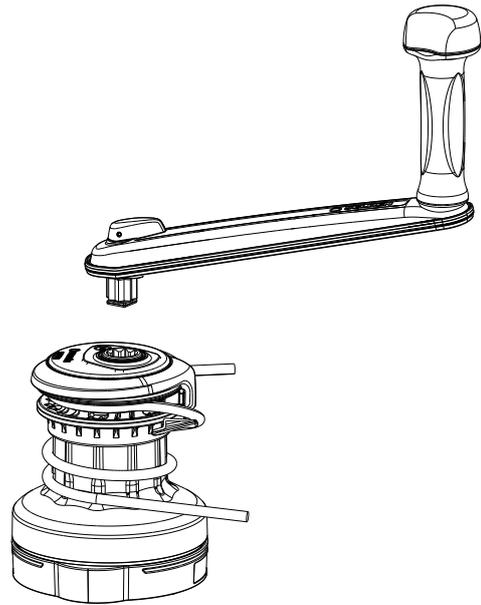
Seldén S-winchches are manually operated and are of self-tailing type with two available speeds.

## Winching

<p><b>1.</b></p> <p>Apply 2-3 turns clockwise around the winch. The number of turns suitable for optimal performance is determined by the wind conditions and the line type.</p>	 A technical line drawing of a winch drum with a line being wrapped around it. The line starts from the right and moves left, then loops around the drum to the right, then left, and so on, showing the initial winding process.
<p><b>2.</b></p> <p>Lead the line over the self-tailing arm and into the self-tailing jaws for <math>\frac{3}{4}</math> of a turn. The line can remain in the self-tailing jaws during the winching operation.</p>	 A technical line drawing of the winch drum. The line is now wrapped around the drum and is being guided over a curved self-tailing arm. The line is then shown entering the self-tailing jaws, which are designed to hold the line in place during operation.
<p><b>3.</b></p> <p>Pull the slack of the line until tensioned.</p>	 A technical line drawing of the winch drum. The line is now fully wrapped and held in the self-tailing jaws. A thick black arrow points to the right, indicating the direction in which the line should be pulled to create tension.

## 4.

Insert the winch-handle into the socket by twisting the lever on the handle to enable insertion into the handle-socket. When inserted, release the lever to secure the handle in the socket.

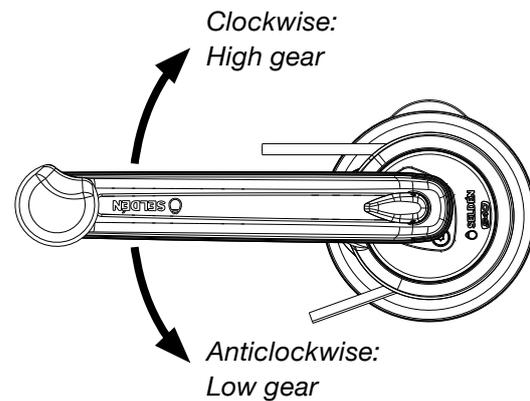


## 5.

Operate the winch by turning the winch handle in either clockwise or anticlockwise direction.

*High gear:* Turn the winch handle clockwise.

*Low gear:* Turn the winch handle anticlockwise.



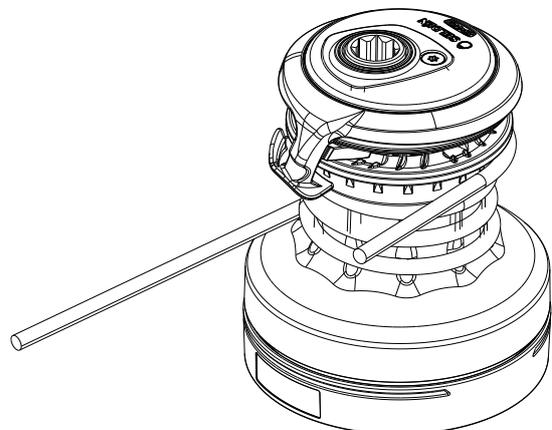
## Release the line

### 1.

While keeping tension in the pulling end of the line, undo the line from the self-tailing jaws. If needed, reduce the number of turns on the drum to 2-3 turns.



Reducing the number of turns under high loads may cause the line to slip in an un-controlled manner, with the potential risk of personal injury.



## 2.

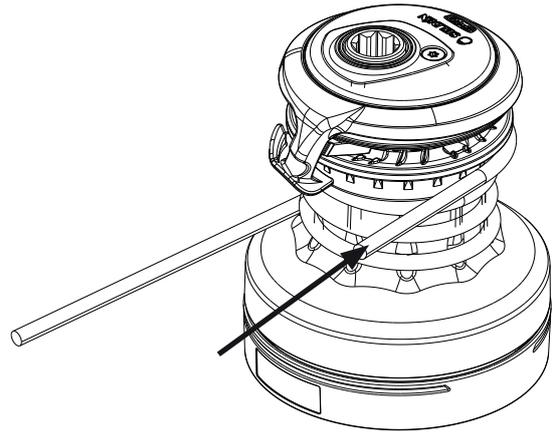
Gently ease the tension in the pulling end to induce slipping over the winch drum, releasing the tension in the sheet.

Do this until the desired tension is obtained.

Lock the line by putting it into the self-tailing jaws.



Keep body parts and clothing away from the winch when releasing the line.



The Seldén winch is designed for line handling on sailboats only!



Keep body parts and clothing away from moving parts while the winch is in use. It is recommended to let only one person work with the winch at any one time.



If a Seldén winch is used for going aloft, double halyards must be used, to be hauled in and eased off at the same time. (Seldén rigging manual “Hints & Advice”, 595-540-E, “Working aloft”).

# 5 Service and maintenance

## 5.1 Frequent maintenance



To aid longevity and performance of the winch it is recommended to rinse the winch with fresh water after sailing. This removes any build-up of salt and will ensure that the winch runs smoothly between services.

## 5.2 Normal maintenance

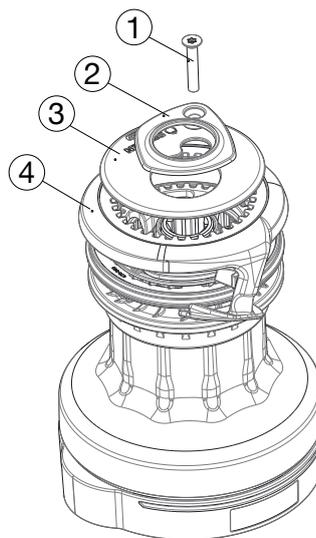
For heavy sailing or racing, a normal service is recommended before any major regatta or event. For the regular sailor, a normal service can be performed once a year adding to the annual extended service.

Material and equipment (not included)	S30/40	S48/54	Quantity
Torx-key	T30	T30, T45	1 pc
Seldén pawl oil	312-709-01	312-709-01	1 pc
Seldén lubricating grease	512-501	512-501	1 pc
Brush	-	-	1 pc
Cloth	-	-	1 pc

## Dismantling

1.

Unscrew the top screw (1) using the Torx-key, T30. Remove the wear protection (2), the top cover (3) and the self-tailing arm (4). Be sure to keep track of any parts removed

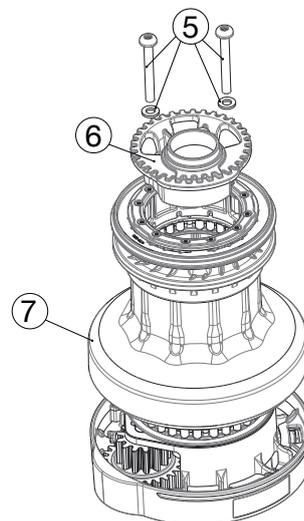


2.

Continue to dismantle the winch by unscrewing the two Torx-screws with the Torx-key, T30 or T45.

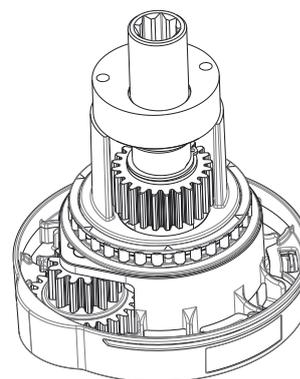
Remove the screws and washers (5).

Follow this by removing the locator bracket (6) and finally the drum assembly (7).



3.

With the winch disassembled, apply Seldén lubrication grease to all visible gears.



4.

Reassemble the winch in reverse order.



Recommended tightening torques for screws are as follows:

M6=7 Nm,

M8=12 Nm

## 5.3 Extended maintenance

The extended service is recommended to be performed at least once a year. For heavy users, racing or blue water sailing, the extended service is part of regular maintenance and should be performed when necessary.

It is recommended to replace any worn bearings and bushings during the extended service. These are supplied as spare parts. For bearings that are not worn, thorough cleaning with water and a mild degreasing agent is recommended.

### Dismantling

1.

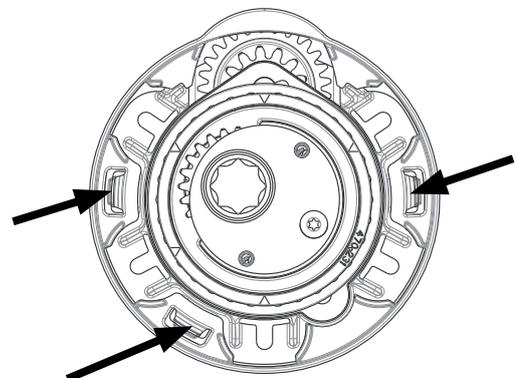
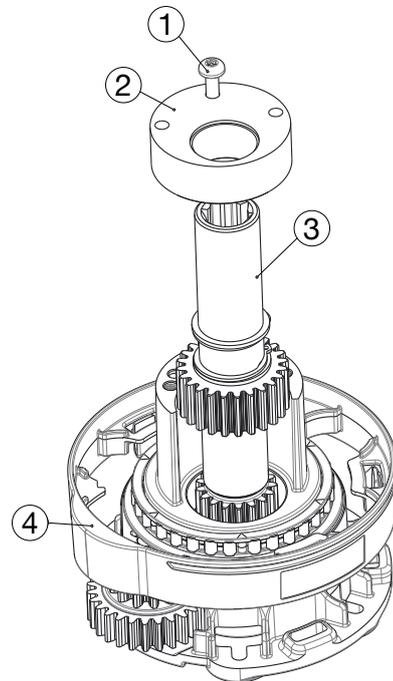
Follow steps 1-2 of chapter  
5.2 *Normal maintenance, Dismantling*

2.

Continue to remove the Torx-screw (1),  
followed by the bearing cylinder (2) and the  
drive shaft (3).

3.

Undo the 3 snap locks and remove the  
base cover (4), this can be done by pushing  
on the snap lock with a flat head  
screwdriver.



## 4.

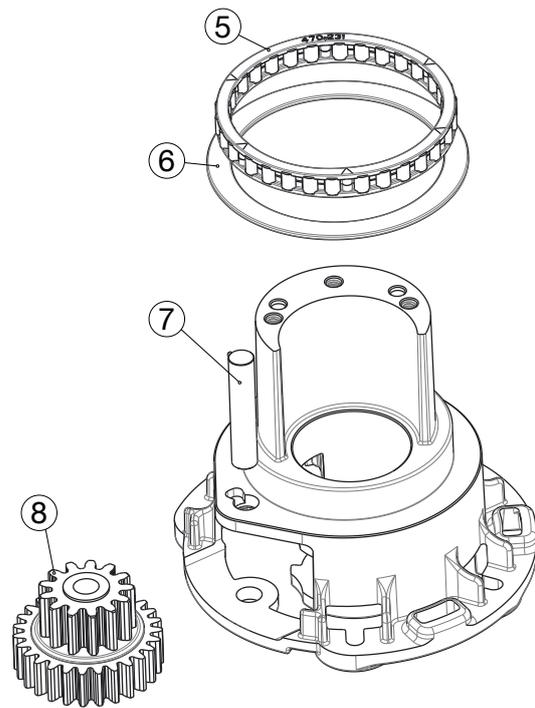
Finally, remove the lower roller bearing (5) followed by the slide-washer (6) to free the twin gear axle (7).

Remove the twin-gear axle using a fine flathead screwdriver, be careful not to damage the winch base.

Remove the twin ratchet gear (8) from the winch base.

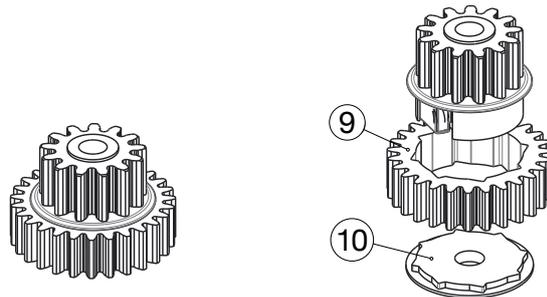
Rinse the base with fresh water to remove any accumulation of salt that might have occurred.

Continue cleaning the base using a mild degreasing agent and a cloth. Be sure to remove any old dirt and grease.



## 5.

Remove the lower gear (9) and gear washer (10) from the twin gear assembly.

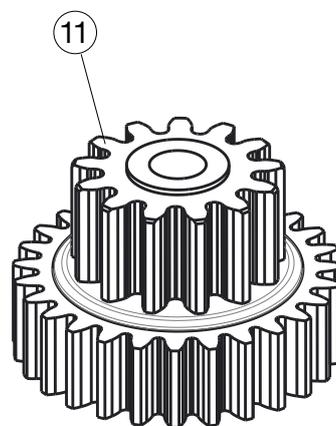


## 6.

Clean the parts of the twin gear ratchet (11). If worn, replace the bushings, springs, pawls and pawl covers. A list of spare parts and kits can be found in chapter 6 *Spare parts*. Lubricate the pawls with pawl oil.

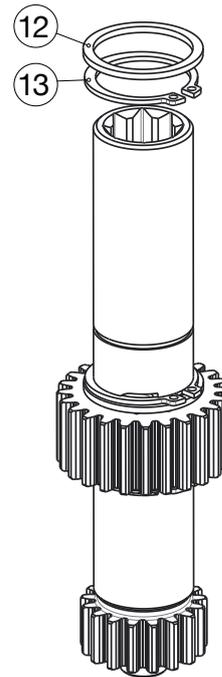
Apply Seldén lubrication grease to the gears only. Reassemble the twin gear ratchet. Place the twin gear ratchet in the winch base.

Clean the twin gear axle and apply Seldén lubrication grease. Fit the axle into the winch base to lock the twin gear ratchet.



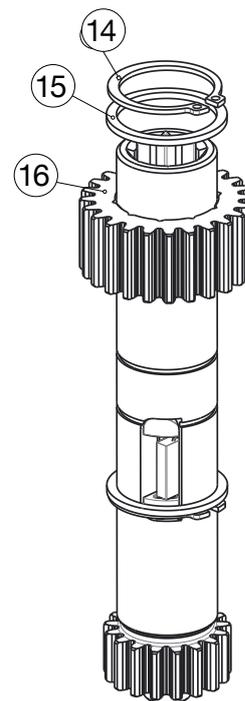
7.

Remove the washer (12) and circlip (13)  
from the drive shaft



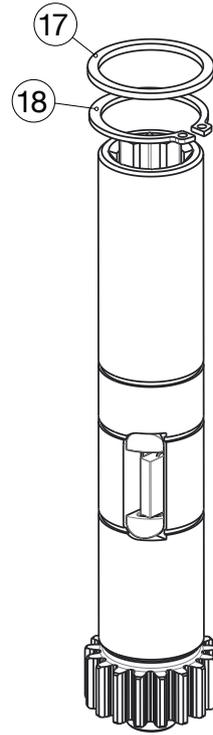
8.

Remove the circlip (14), washer (15) and  
gear (16)



9.

Remove the last washer (17) and circlip (18).



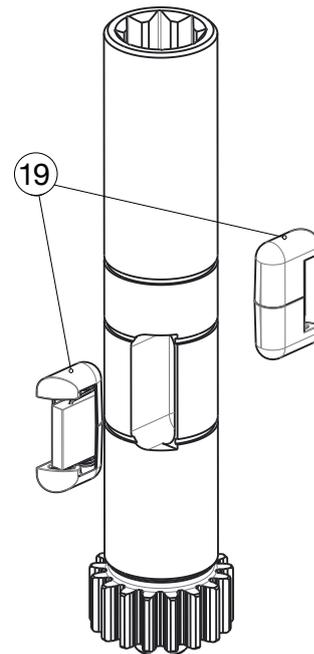
10.

Remove the two springs, pawl and holder-assemblies (19)

Clean the drive-shaft, holders, pawls and springs from grease and dirt. If worn, replace all pawls, holders, springs and washers. A list of spare parts and kits can be found in chapter 6 *Spare parts*.



Grease shall only be applied to the gears, for lubrication of the pawls, use pawl-oil.



11.

Reassemble all parts and the winch in reverse order.

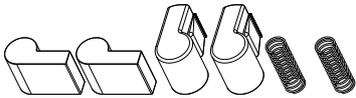
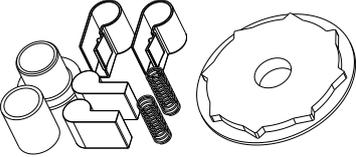
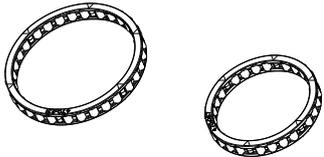
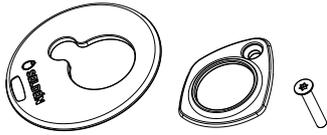
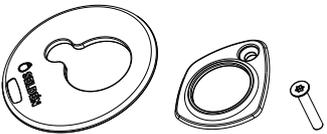
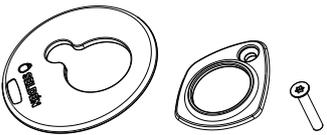
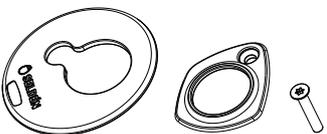


Recommended tightening torques for screws are as follows:

M6=7 Nm

M8=12 Nm

## 6 Spare parts

Description	Art. No.	
Pawl kit, S30-S54	470-029-01R	
Twin gear ratchet spare kit	470-029-20R	
S-Winch drive shaft spare kit	472-026-10R	
Roller bearing kit S30/40	470-231-10R	
Roller bearing kit S48/54	470-267-10R	
Top cover replacement kit, S30	472-022-30R	
Top cover replacement kit, S40	472-022-40R	
Top cover replacement kit, S48	472-042-48R	
Top cover replacement kit, S54	472-042-54R	

## **7 Warranty**

Seldén Mast AB guarantees the S30/S40/S48/S54 winches for 2 years. The guarantee covers faults arising from defective design, materials or workmanship.

The guarantee is only valid if the product is assembled, operated and maintained in accordance with this manual and is not subjected to loads in excess of those indicated in the brochure and on the Seldén website.

Complete shipment and warranty conditions are to be found on Seldéns website [www.seldenmast.com](http://www.seldenmast.com). See Resources/Partners information/General information/General conditions of sale (595-546-E).

If the system is repaired or modified by anyone other than Seldén Mast AB or one of our authorized dealers, the guarantee ceases to be valid.

Seldén Mast AB reserves the right to alter the content and design without prior warning.



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The Seldén Group is the world's leading manufacturer of masts and rigging systems in carbon and aluminium for dinghies, keelboats and yachts. The Group consists of Seldén Mast AB in Sweden, Seldén Mast A/S in Denmark, Seldén Mast Ltd in the UK, Seldén Mid Europe B.V. in the Netherlands, Seldén Mast Inc in the USA and Seldén Mast in France. Our well known brands are Seldén and Furlex. The worldwide success of Furlex has enabled us to build a network of over 750 authorised dealers covering the world's marine markets. So wherever you sail, you can be sure of fast access to our service, spare parts and know-how.



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