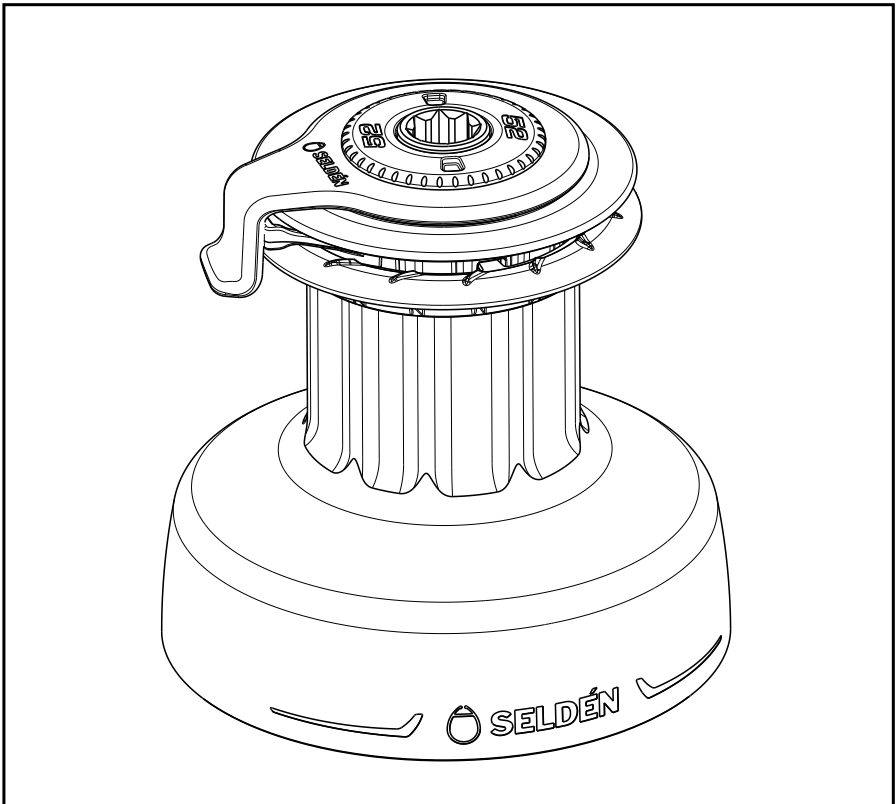


# **2-speed self-tailing winch**

***S30, S40, S46, S52, S60 & S66***

## **Manual for installation and operation**



# Contents

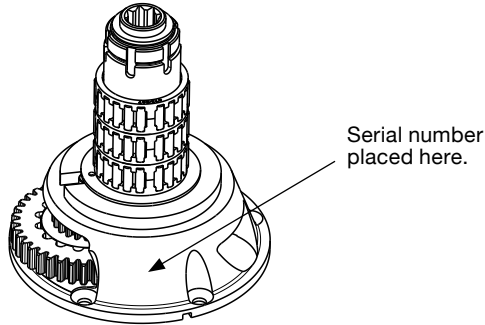
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# 1. Introduction

Congratulations on the purchase of your new Series S, self-tailing winch.

This manual cover installation and operating instructions for the S30, S40, S46, S52, S60 and S66 self-tailing winches. The model designation is found on the top cover of the winch. Serial number is found on the winch base.



Please read the entire manual before installation/usage and keep the manual available for future reference. The latest version of this manual is available at [www.seldenmast.com](http://www.seldenmast.com).

## Safety Precautions

Carefully pay attention to, and follow, the instructions with the following symbols:

 ATTENTION


This symbol indicates technical advice or a critical moment during the installation.

 WARNING

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:

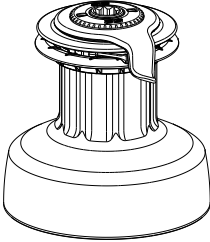
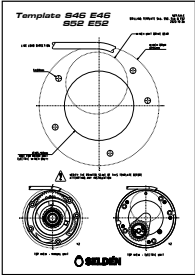


The key to a safe and properly working installation is correct dimensioning in relation to the boat size the products shall be used on. Seldén provides dimensioning guidelines in catalogues, leaflets and on the website. If there are any questions about selecting the right product, please consult an authorized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

 The winch is designed for handling of sail and rig control lines. Mooring, towing, hoisting a person or any other type of misuse may lead to winch failure and/or serious or fatal injuries.

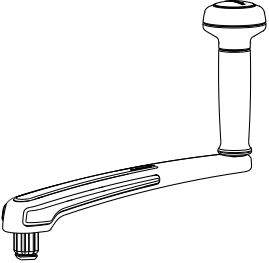
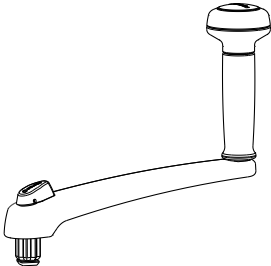
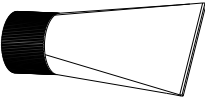

# 2 Seldén Series-S winch, S30-S66

The Seldén S-winches are manually operated and of self-tailing type with two gears forward.

## 2.1 Included parts

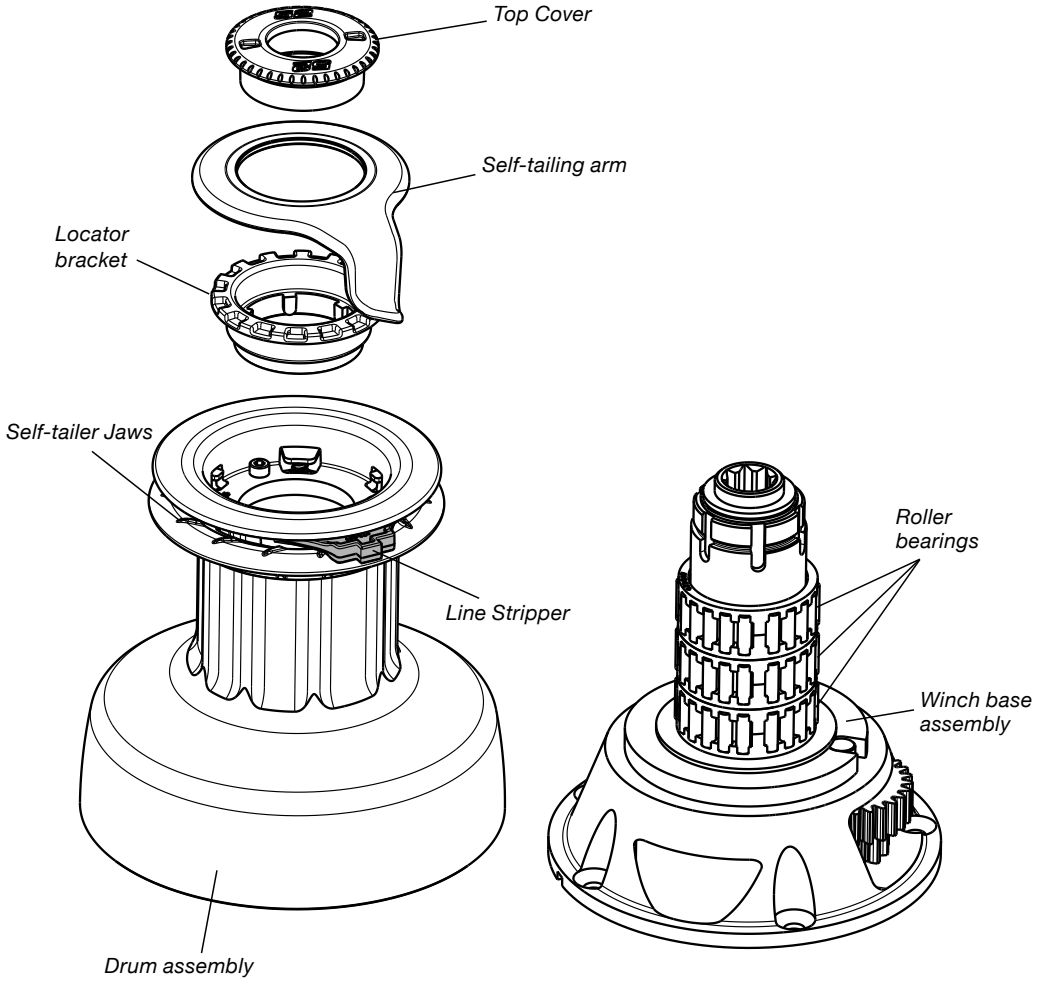
Description		Item No.	Illustration
<b>Seldén Series S-winch</b>			
S30	Aluminium drum	475-130-01	
S40	Aluminium drum	475-140-01	
S46	Aluminium drum	475-146-01	
S52	Aluminium drum	475-152-01	
S60	Aluminium drum	475-160-01	
S66	Aluminium drum	475-166-01	
<b>Drilling template</b>			
S30		597-198-E	
S40		597-509-E	
S46		597-511-E	
S52			
S60		597-512-E	
S66			
<b>Manual for installation and operation</b>		597-489-E	
Winch tool		473-010	

## 2.2 Optional parts

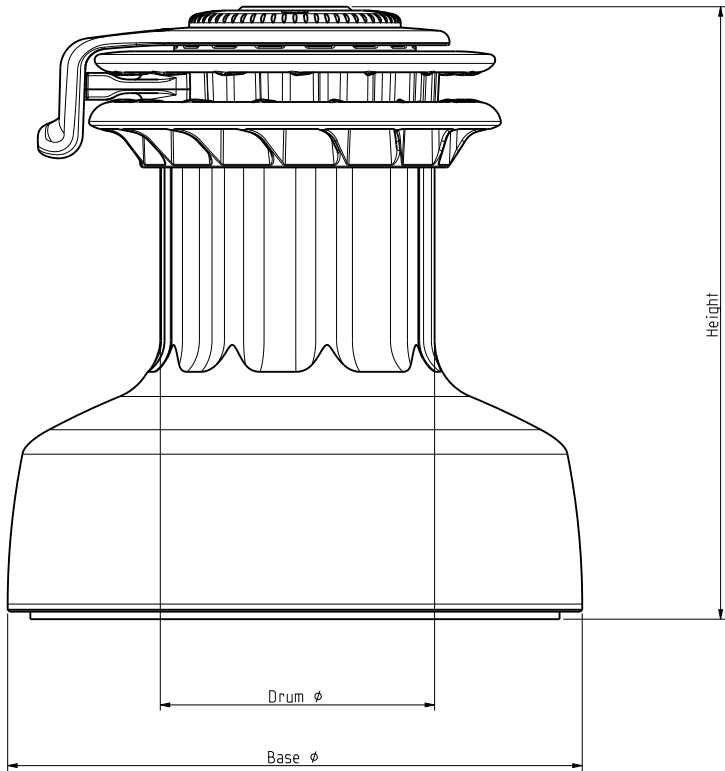
Description	Item No.	Illustration
10" Race GRIP winch handle	474-501-10	
8" Race GRIP winch handle	474-401-10	
10" STANDARD winch handle	474-301-10	
8" STANDARD winch handle	474-201-10	
Seldén lubrication grease	312-501	
Pawl oil (50 ml)	312-709-01	

## 2.3 Technical specification

### Main components



## Dimensions and technical data



Model	Height (mm)	Base Ø (mm)	Drum Ø (mm)	Suitable line dimensions (mm)	Power ratio		Weight (kg)	Safe Working Load (SWL, kN)
					High Gear	Low Gear		
S30	150	Ø139	Ø75	8-12	12:1	30:1	2,9	8,4
S40	162	Ø152	Ø75	8-12	13:1	40:1	3,5	11,2
S46	186	Ø184	Ø90	8-14	13:1	46:1	5,8	12,9
S52	186	Ø184	Ø90	8-14	15:1	52:1	5,8	14,6
S60	239	Ø245	Ø120	8-16	18:1	60:1	13,0	16,8
S66	239	Ø245	Ø120	8-16	20:1	66:1	13,1	18,5



Exceeding the recommended max line dimensions may damage the self-tailing jaws and may also cause other damages and/or injury.

### **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.

Seldén Mast AB does not take responsibility for incorrect installation of a winch, 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

The winch should be mounted on a flat surface. If not, any uneven surface must be compensated with shims.

Winch position relative to associated components and location regarding deck reinforcement and suitability must be checked. The winch should not be mounted on any part of the deck that is laminated using a soft sandwich construction. Any reinforcement work must be 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 marine engineers.

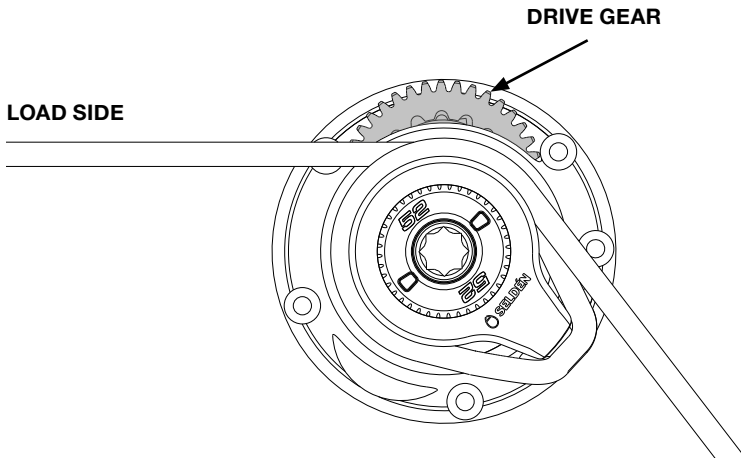
If the winch is mounted on a surface made from stainless steel, steel, bronze or brass, the winch base must be insulated from the mounting surface to prevent galvanic corrosion.

### 3.2 Winch orientation

To allow for the best performance and longevity of the winch the mounting orientation with regards to the drive gear and the direction of the line must be correct. The correct orientation is shown in the figure below.

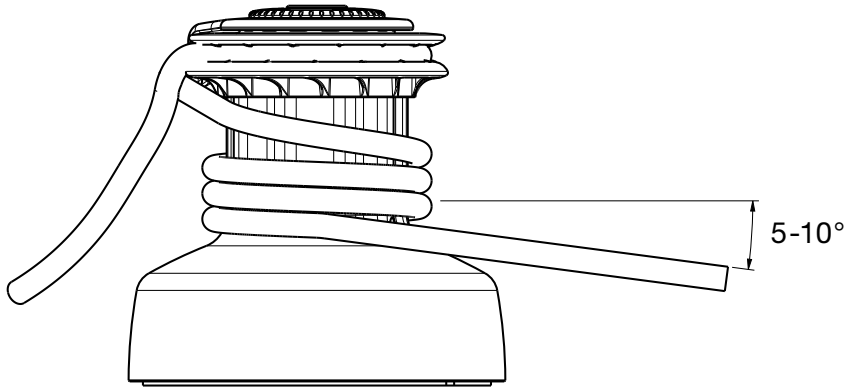
If the winch has multiple uses, such as combined halyard and spinnaker trimming, the winch should be position with regards to the highest load.

Both the drilling template and the winch can be used to ensure the correct orientation.



### 3.3 Line entry angle

To minimize the risk of overrides the line should enter the winch in accordance with the picture below.



### 3.4 Fasteners

The winch could either be mounted by through deck screws with washers and nuts or, if the boat has purpose made metal plates laminated into the deck structure, be threaded into these.

If through deck screws are used, make sure that it's possible to fit washers and nuts below deck.

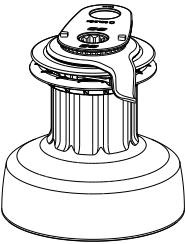
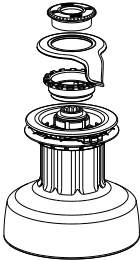
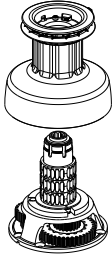
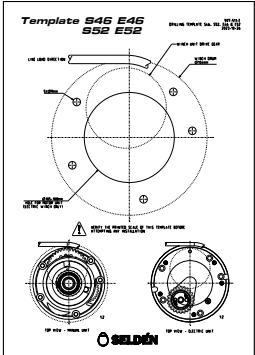
The fasteners are not supplied with the winch. The installer is responsible for sourcing fasteners and ensuring they are rated for the expected loads from the winch. Any fastener should be made from marine grade stainless steel.

Fastener and drill dimensions:

Winch size	Oty of fasteners	Fastener type and dimension	Marking drill size <sup>1)</sup>	Through deck drill size	Drill size for M-thread
S30	5 pcs	Countersunk M6 screws	Ø 6,5 mm	Ø 7 mm	Ø 5,0 mm
S40	4 pcs	Countersunk M8 screws	Ø 8,5 mm	Ø 9 mm	Ø 6,8 mm
S46, S52	5 pcs	Countersunk M8 screws	Ø 8,5 mm	Ø 9 mm	Ø 6,8 mm
S60, S66	5 pcs	Countersunk M10 screws	Ø 10,5 mm	Ø 11 mm	Ø 8,5 mm

<sup>1)</sup> When using the template for marking, use a smaller drill.

### 3.5 Mounting the winch

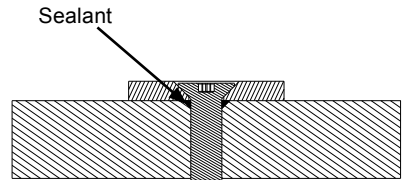
<p><b>1.</b></p> <p>Unscrew the top cover using the winch tool that was supplied with the winch.</p>	
<p><b>2.</b></p> <p>Remove the top cover, the self-tailing arm and the locator bracket.</p>	
<p><b>3.</b></p> <p>Remove the drum.</p> <p>Make sure the roller bearings remain on the winch base.</p>	
<p><b>4.</b></p> <p>Mark the holes in the intended mounting location. Both the template and the winch base can be used for marking.</p> <p>If the screws will be threaded into the deck, Seldèn recommends using the winch base for marking the holes. See table in section 3.4 <i>Fasteners</i> for marking drill recommendations.</p> <p>Take special consideration for the winch orientation before drilling to allow compliance with section 3.2 <i>Winch orientation</i>.</p>	

## 5.

1. Drill the holes according to the intended fastening method. See table in section 3.4 *Fasteners* for drill size recommendations.

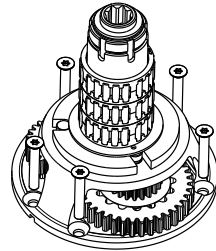
2. Make a countersunk recess at the top of the holes. This is to create a better seal around the fastener.

3. Thread the holes if this is the chosen fastening method.



## 6.

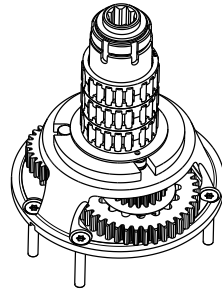
Check with the winch and fasteners that the holes and/or threads are correctly located.



## 7.

Fit fasteners to the winch. Seal around the fasteners to avoid water ingress.

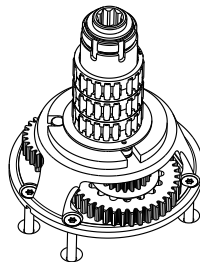
**!** Seldén recommends to not use glue as sealant. A sealing compound that does not solidify, e.g. Butyl compound, will simplify any removal of the winch in the future.

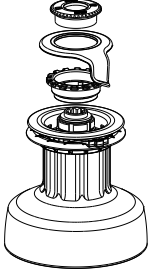
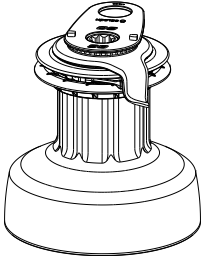


## 8.

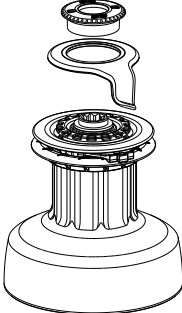
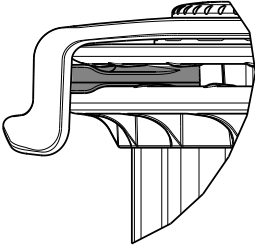
Fit the winch to the boat with the screws still in position.

When using through deck screws it is recommended to tighten the nut while holding the screw stationary.



<p><b>9.</b></p> <p>Refit the drum, the locator bracket, and the self-tailing arm.</p> <p>Make sure that the line stripper is positioned in line with and held captive by the self-tailing arm.</p>	
<p><b>10.</b></p> <p>Adjust the self-tailing arm to have the line exiting the self-tailing jaws in the desired direction.</p> <p>Attach and tighten the top cover using the supplied winch tool.</p>	


### 3.6 Adjusting the self-tailing arm

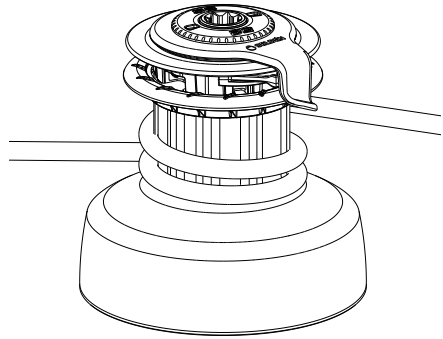
<p><b>1.</b></p> <p>The self-tailing arm can be adjusted to feed the line into the cockpit. To do this, unscrew the top cover and lift the self-tailing arm.</p> <p>The self-tailing arm can now be rotated to allow the line to feed properly. Be sure to refit the self-tailing arm correctly in the grooves on the locator bracket.</p>	
<p><b>2.</b></p> <p>Make sure that the line stripper is positioned in line with, and held captive by, the self-tailing arm before refitting the top cover.</p> <p>Tighten the top cover using the supplied winch tool.</p>	

## 4 Operation

**1.**

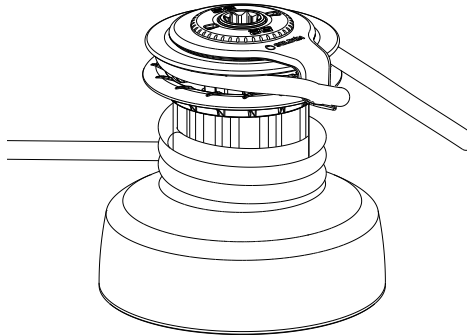
Apply 2-3 turns on the winch drum and pull any slack in the line. Fewer or more turns may be required depending on the conditions.

 More turns on the winch drum increases the risk of over-ride, when pulling the slack.



**2.**

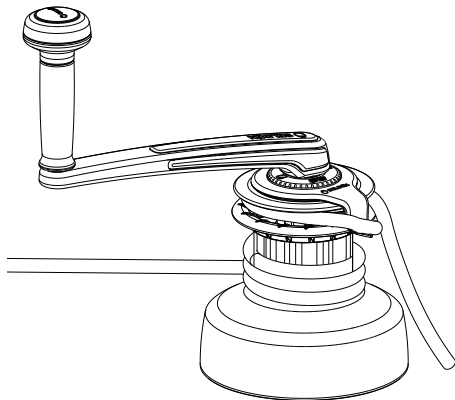
Add more turns if required and then feed the line over the self-tailing arm and lock it in the self-tailing jaws.



**3.**

Use a winch handle to trim the rest of the line until desired shape of the sail and/or tension of the sheet or halyard has been reached.

Rotating the winch handle anti-clockwise will engage the high speed gear. If more power is needed, rotating the winch handle clockwise will engage the low speed gear.



## 5 Trouble shooting

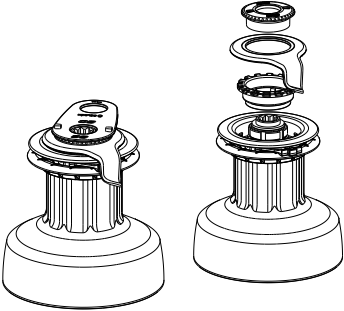
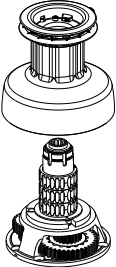
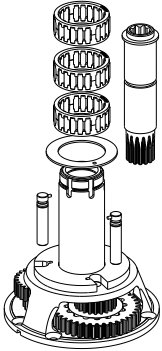
<b>Problem</b>	<b>Problem cause</b>	<b>Action</b>
Loss of self-tailing function	1. Line not properly seated in self-tailing jaws	1. Check line seating in self-tailing jaws.
	2. Too few turns on winch-drum	2. Add turns until self-tailing function is resumed.
	3. Incorrect line size. See table in section 2.3	3. Change to correct line size.
Winch is not ratcheting	1. Faulty reassembly of ratchet gears	1. Flip ratchet gears to match pawl engagement.
	2. Winch is in need of service	2. Perform service, according to section 6

## 6 Service and maintenance

To maintain top performance and assure longevity for all parts of your self-tailing winch, it is recommended to occasionally rinse the winch with freshwater.

### 6.1 Yearly maintenance

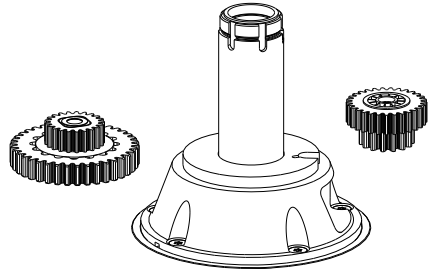
The maintenance described below should be performed at least once every year, for heavily used winches (racing boats, charter boat, etc.) more frequent maintenance than once a year is recommended.

<p><b>1.</b></p> <p>Unscrew the top cover using the winch tool supplied with the winch.</p> <p>Remove top cover, self-tailing arm and locator bracket.</p> <p>Note the position of the self-tailing arm.</p>	 <p>The diagram illustrates the first step of maintenance. On the left, a winch base is shown with its top cover and self-tailing arm attached. On the right, the top cover and self-tailing arm are shown being lifted away from the base, revealing the internal drum assembly.</p>
<p><b>2.</b></p> <p>Remove the drum assembly.</p> <p>Make sure the roller bearings remain on the winch base.</p>	 <p>The diagram shows the drum assembly being lifted from the winch base. The drum assembly consists of a top cap and a central drum. The roller bearings are shown remaining on the base of the winch.</p>
<p><b>3.</b></p> <p>Remove the roller bearings, drum washer and the drive shaft.</p> <p>The drive shaft has a friction lock (O-ring) which means that some extra force may be needed to pull it out. Use a winch handle if necessary.</p> <p>Remove the two gear shafts by inserting a small flatheaded screwdriver into the slot on the shaft and lifting.</p>	 <p>The diagram illustrates the removal of the roller bearings, drum washer, and drive shaft. The roller bearings are shown being lifted from the drum assembly. The drive shaft is shown being lifted from the base of the winch. The gear shafts are shown being lifted from the base of the winch.</p>



**4.**

Remove the two gear assemblies.  
Pay attention to the washers.



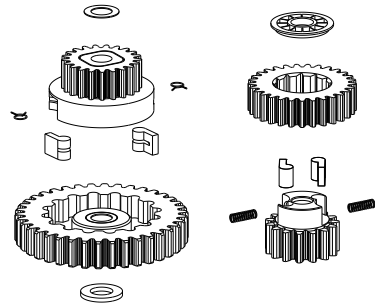
**5.**

Disassemble the gears and clean all parts thoroughly using white spirits. Inspect pawls and springs and replace if worn or damaged.

When clean, apply pawl oil on the pawls and apply a thin layer of grease to the gear teeth and the cylindrical surface of the small hub.

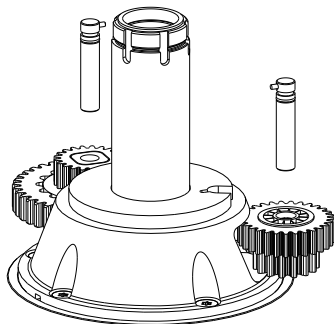
For recommended pawl oil and grease, see section 2.2 *Optional parts*.

Re-assemble the gears.



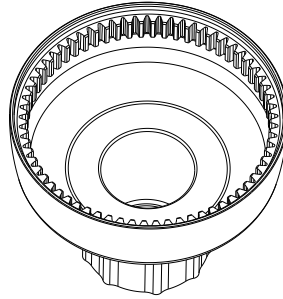
**6.**

Grease the small shafts. Refit the gears and shafts in the winch base.



**7.**

Clean the gear on the inside of the drum and apply a thin layer of grease.

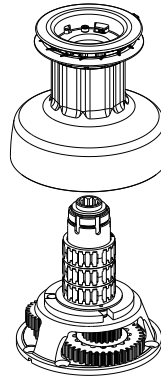


**8.**

Apply a thin layer of grease to the gear on the drive shaft.

Refit drum washer, roller bearings, drive shaft and drum.

Do not grease the roller bearings!

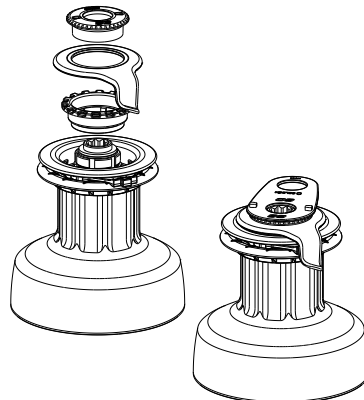


**9.**

Fit the locator bracket and the self-tailing arm.

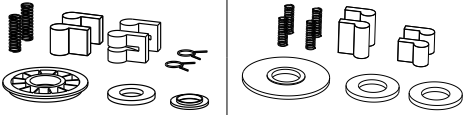
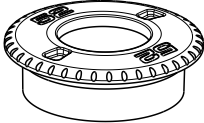
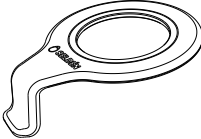
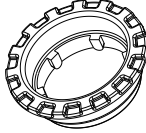

Make sure that the line stripper is positioned in line with, and held captive by, the self-tailing arm before refitting the top cover.

Attach and tighten the top cover using the supplied winch tool.

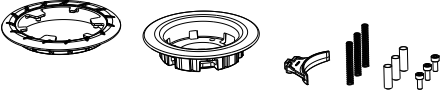
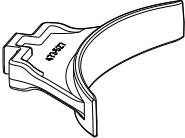
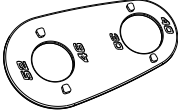


# 7 Spare parts

The following spare parts kits can be purchased for your Seldén winch:

Description	Art. No.			
<b>Gear Service kit</b>		 <p style="text-align: center;">470-029-11, 12                      472-005-11</p>		
S30/40	470-029-11R			
S46/52	470-029-12R			
S60/66	472-005-11R			
<b>Top cover</b>				
S30	473-314R			
S40	473-414R			
S46	473-524R			
S52	473-514R			
S60	473-624R			
S66	473-614R			
<b>Self-Tailing Arm</b>				
S30/40	473-413R			
S46/52	473-513R			
S60/66	473-613R			
<b>Locator bracket</b>				
S30/40	473-412R			
S46/52	473-512R			
S60/66	473-612R			
<b>Bearing kit</b>		 <p style="text-align: center;">473-548-10                      473-547-10                      473-549-10</p>		
S30/40	473-548-10R			
S46/52	473-547-10R			
S60/66	473-549-10R			

continued on next page

<b>Self-tailing jaws kit</b>		
S30/40	473-429-10R	
S46/52	473-525-10R	
S60/66	473-625-10R	
<b>Line stripper</b>		
S30/40	473-427R	
S46/52	473-527R	
S60/66	473-627R	
<b>Winch tool</b>		
S30/40	473-010R	
S46/52		
S60/66		

## 8 Disposal



For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge. Alternatively, in some countries, you may be able to return your products to your local retailer upon purchase of an equivalent new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

Please contact your local authority for further details of your nearest designated collection point.

## 9 Warranty

Seldén Mast AB guarantees the Seldén Series S-winch for 2 years. The guarantee covers faults arising from defective design, materials, or workmanship.

The guarantee is only valid if the product is installed, operated, and maintained in accordance with this manual and is not subjected to loads more than those specified in brochures, manuals and on the Seldén website.

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

If the winch 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.

# Notes

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*Dealer:*

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 Furllex. The worldwide success of Furllex 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.



[www.seldenmast.com](http://www.seldenmast.com)