

# Manual 110ST FS

Version 1.0



*Sail Handling by*



Stainless Steel Winches

## **CONGRATULATIONS**

You have purchased an ANDERSEN high quality winch. This product is a result of many years of development and experience in producing winches for sailboats. This winch gives you a high degree of functionality and many years of safe and easy sail handling.

## **TILLYKKE**

De har købt et ANDERSEN spil af høj kvalitet. Dette produkt er et resultat af mange års udviklingsarbejde samt erfaring indenfor produktion af spil til sejlbåde.

Med dette spil får De funktionalisme på højt plan med henblik på at yde Dem en behagelig samt sikker sejlads.

## **Sehr geehrter ANDERSEN kunde,**

wir beglückwünschen Sie zu dem kauf einer ANDERSEN Winde, ein Produkt höchster Qualität, daß ein Resultat jahrelanger Entwicklungsarbeit und Erfahrung in der Produktion von Winden für Segelboote ist. Die funktionalität dieser Winde ermöglicht Ihnen viele Jahre lang eine handliche und sichere Segelführung.

## **FÉLICITATIONS**

Vous venez d'acheter un winch ANDERSEN de grande qualité. Ce produit est le résultat de longues années d'expérience et de développement dans la production des winches pour voilier. Ce winch vous apportera de nombreuses années de fonctionnement sécurisant, pour une voile facile.

Frode Andersen  
Managing Director

# GENERAL INFORMATION

Due to the best choice of materials and high precision in manufacturing, we recommend, for normal use, only to dismantle, clean and lubricate the winch once every second year. Under extensive use, such as racing, charter or blue water sailing, we recommend to lubricate the winch once every year.

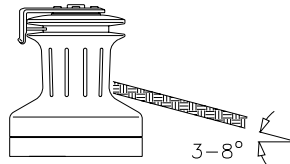
We strongly recommend always using ANDERSEN WINCH GREASE, when lubricating your winch. ANDERSEN WINCH GREASE is a high quality silicone/Teflon grease product. Most other types of grease, including “marine grease” are not suitable for lubrication of winches. Non-suitable grease products can cause malfunction, which could result in fatal injuries for the user and others.

Pawl arm springs should be replaced every second year. Spare arm springs and other parts that may be required are included in the ANDERSEN Service Kit. Please refer to the service instruction for the Service Kit suitable for the specific winch.

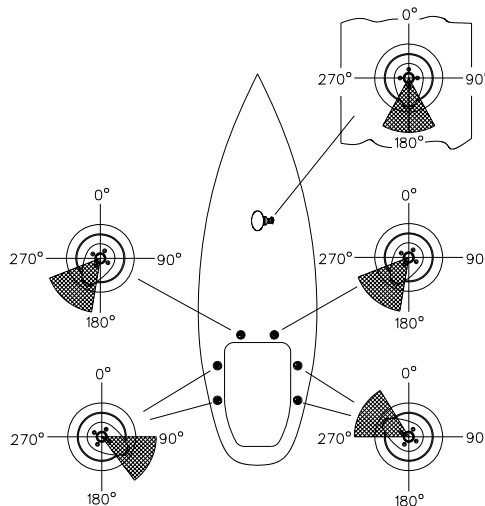
When the winch handle is not in use but the winch is under load, we recommend, from a safety point of view, to remove the winch handle from the winch.

To ensure correct function of the self-tailing unit, only use recommended line sizes. When using the winch with mooring lines **DO NOT** use the self-tailing function and be sure that the mooring line is not in contact with the self-tailing arm.

To ensure the best possible functioning of the winch, we recommend that the winch is placed in accordance with the line entry shown below.



Be also aware that self-tailing arm is positioned correctly. We recommend having the self-tailing arm positioned within the shaded area. On 12ST and 28ST the position of the self-tailing arm is fixed, making it very important to establish the proper location of the holes prior to drilling these in the deck. On all other models, the self-tailing arm can be placed in several different positions after having installed the winch.



# INSTALLATION

110ST FS Version 1.0

Installing the winch is easy, if you follow these instructions. The numbers in ( ) refer to the position numbers in the parts list.

Tools required for the installation:

Allen key (6 mm.).

Allen key (10 mm.).

Drill Ø12,5mm.

6 pcs. M12 Hexagon socket head bolts and corresponding nuts (length depending on deck thickness).

6 x large washers or backing plate.

Ring spanner to match nuts.

Bedding compound

1. Remove screws (1).
2. Remove self-tailing arm (2) and drum (6).
3. Mark location of bolt holes using the lower base (30) as a template.
4. Remove complete winch. Be sure that no dust comes into contact with the winch while drilling.
5. Drill bolt holes ø12,5 mm.
6. Apply a light coat of bedding compound, ensuring that each bolt hole is bedded. Keep drain grooves clear.
7. Fasten lower base (30) into place using 6 pcs. M12 Hexagon socket head screws. Use large washers or a backing plate.
8. Assemble in reverse order.
9. Check that the winch is functioning correctly:  
The drum should operate smoothly, by turning the drum clockwise by hand.  
The drum must not turn when trying to turn the drum anti clockwise.  
While turning the winch handle clockwise the drum should turn slowly.  
While turning the winch handle anti clockwise the drum should turn fast.

# SERVICE INSTRUCTION

110ST FS Version 1.0

Tools required for service:

Allen key (6 mm.).

Allen key (8 mm.).

Spanner (17 mm.).

Screwdriver (small).

Winch handle.

ANDERSEN Winch grease.

1. Remove screws (1).
2. Remove self-tailing arm (2) and drum (6).
3. Remove drive shaft (9).
4. Loosen and remove screws (17+18) and dismantle upper base part (16) with roller bearings.
5. Remove the three free gear units.
6. Remove retaining ring (9+11). Remove roller & ball bearing (10+12+13+14) – be carefully not loosing the bearing balls when dismantling bearings.
7. Dismantle the three gear units; be carefully with the bearing balls (21.5).
8. Clean all parts in benzine including pawls and springs.  
Remember to clean the gear teeth and roller tracks inside the drum.
9. Be sure that pawls run free and secure – notice the IMPORTANT note below.
10. Assemble in reverse order. During assemble, lightly grease all gear teeth, drive shaft, roller bearing, shafts, balls, pawls, springs and composite bushings. Use a small, soft brush.  
Pawls may be lubricated with a very thin film of ANDERSEN WINCH GREASE.  
It is very important that pawls can move freely.

**IMPORTANT:** When assembling the winch, check the function of each pawl by pushing the pawl against the spring. The pawls should smoothly and automatically return to their normal position, where the pawls engage with the teeth. If the pawls do not function correctly, clean and lightly lubricate the pawls and gears again and replace the springs where necessary.

Malfunctioning pawls may lead to unexpected failure of a loaded winch resulting in material damage or fatal personal injury.

Service Kit No: 7 (art. no. 710009) contains spare parts for this winch.

**For current World Wide Distributor list please see:  
[www.andersenwinches.com](http://www.andersenwinches.com)**



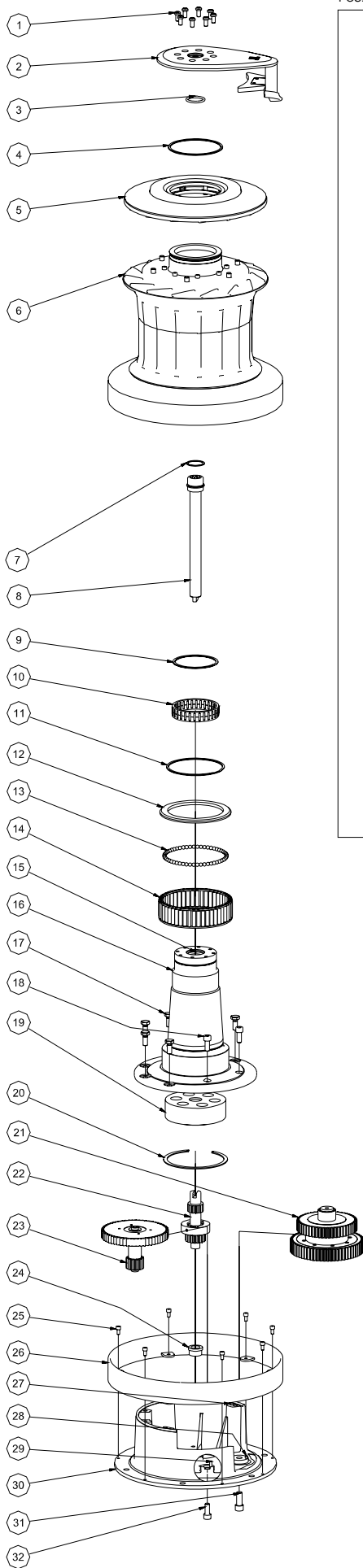
# Parts List

110ST FS Version 1.0

POS	QTY	DESCRIPTION	ART. NO.
1	8	SCREW	588800
2	1	SELF-TAILING ARM	739600
3	1	O-RING	590110
4	1	CIRCLIP	RD102106
5	1	SELFTAILINGTOP	547000
6	1	DRUM, COMPLETE	743610
7	1	DISC	522703
8	1	DRIVE SHAFT, COMPLETE	527900
9	1	CIRCLIP	591102I
10	1	ROLLER BEARING, COMPLETE	528601
11	1	CIRCLIP	592500U
12	1	BEARING	527300
13	54	BALL, POM	526302
14	1	ROLLER BEARING, COMPLETE	739300
15	1	BUSHING	539100
16	1	BASE	743200
17	6	SCREW	DIN 933-A4-M10x25
18	3	SCREW	DIN912-A4-M10X25
19	1	BUSHING	527600
20	1	CIRCLIP	592600I
21	1	LARGE RATCHET GEAR COMPLETE	738901
21.1	1	SHAFT	520400
21.2	1	GEAR WHEEL	738900
21.3	1	DISC	520403
21.4	4	PAWL SPECIAL 10MM	712500
21.5	142	BALL	724900
21.6	1	DISC	520402
21.7	1	BUSHING	520401
21.8	4	SPRING	533500
21.9	1	BALL RING	527400
21.10	8	SCREW	DIN912-A4-M8X25
21.11	4	ROLLER BEARING, COMPLETE	926400
21.12	1	LARGE RATCHET GEAR WHEEL	739000
22	1	GEAR WHEEL, COMPLETE	539701
22.1	1	LOWER DRIVE SHAFT	538500
22.2	1	RATCHET GEAR WHEEL	539700
22.3	2	SCREW	DIN84-A4-M5x8
22.4	2	SPRING	533500
22.5	2	PAWL	533400
22.6	2	PIN	592000
22.7	1	DISC	539900
23	1	SMALL RATCHET GEAR COMPLETE	538002
23.1	2	DISC	522702
23.2	2	BUSHING	537900
23.3	1	COVER	537800
23.4	4	SPRING	533500
23.5	4	PAWL	533400
23.6	1	GEAR WHEEL	538000
23.7	4	SCREW	DIN963-A4-M5X10
23.8	1	SHAFT	537600
23.9	1	SMALL RATCHET GEAR WHEEL	520500
24	1	BUSHING	539800
25	7	SCREW	DIN912-A4-M6X12
26	1	COVER	743910
27	2	PIN	DIN7-A1-8H8x16
28	2	PIN	DIN7-A1-5H8x14
29	1	PIN	DIN7-A1-5H8X18
30	1	BASE, LOWER	743800
31	1	SCREW	DIN912-A4-M12X30

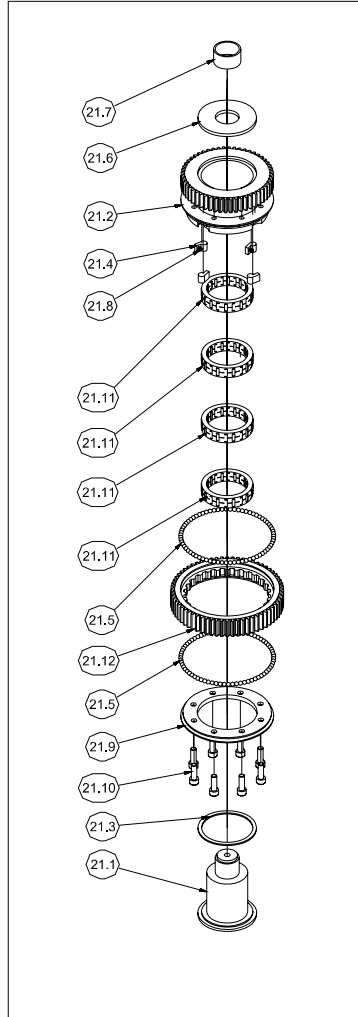
# DRAWING

110ST FS Version 1.0



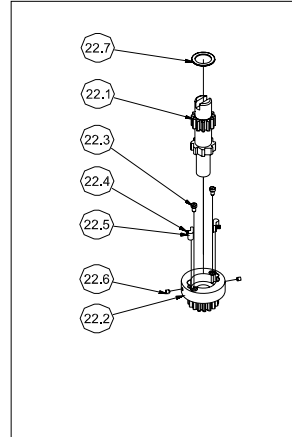
POS. 21

738901



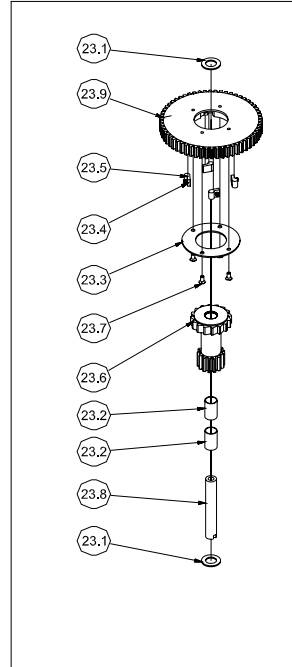
POS. 22

539701



POS. 23

538002



# LIMITED WARRANTY

- 1.1 ANDERSEN issue a three-year warranty on all their products covering manufacturing and material defects on condition that the products are used in normal fashion. The warranty shall apply for three years from the moment ANDERSEN sell the product concerned (to the first buyer).
- 1.2 Within the period of the warranty, and in accordance with the terms of the warranty, ANDERSEN undertake to replace or repair all defective components which have been used in normal fashion.
- 1.3 However, the warranty is subject to the limitations and exceptions outlined below.
2. **Conditions and limitations:**
  - 2.1 ANDERSEN's liability shall be limited to repair or replacement of components which are defective owing to manufacturing or material defects.
  - 2.2 ANDERSEN assume no other liability than this, not even liability for indirect losses caused by defect concerned, including operating losses, loss of profits, or damage caused to real property or moveable property occurring while the product concerned is in the possession of the Buyer.
  - 2.3 The Buyer alone shall bear the responsibility and risk involved as to whether the product is suitable for the application intended. ANDERSEN assumes no liability in this connection.
  - 2.4 ANDERSEN assume no liability for defects which occur due to use of their products for purposes for which they are not intended, or for defects which occur owing to incorrect installation, corrosion, ultraviolet degradation, lack of maintenance, or any alteration or repair of the product carried out incorrectly by the Buyer. Finally, ANDERSEN assumes no liability for normal wear and tear, or for depreciation of value.
  - 2.5 Nor do ANDERSEN assume any liability for service carried out by anyone other than authorised representatives of ANDERSEN, unless such service is carried out pursuant to guidelines laid down by ANDERSEN and in accordance with good craftsmanship.
  - 2.6 The buyer shall inform ANDERSEN in writing of any defects with no undue delay once defects have been registered. Products being dealt with under the warranty shall be returned to ANDERSEN for repair unless any other agreement has been reached in writing.
  - 2.7 ANDERSEN shall not cover costs incurred by the Buyer in connection with the transport or wages involved in a warranty case. Such costs shall be met by the Buyer in full.
3. **Exceptions:**
  - 3.1 The warranty is only valid for one year in respect of components bought for the products concerned, such as electric motors, electric equipment, hydraulic pumps, motors and valves.
  - 3.2 ANDERSEN assume no liability for consequential damage of ships, equipment, property or people by defects in ANDERSEN's products.
  - 3.3 The company's products are subject to continuous development, and consequently ANDERSEN reserve the right to change designs and specifications without prior notice.