

FURLEX

SELDÉN

Manual Furlex 304S Forestay Ø12 only

Note! THIS MANUAL REPLACES
PAGES 4, 8, 9, 10, 11 AND 12
IN MANUAL 597-132



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1.2 What's included?

Basic pack / Extended pack

The Furlex system consists of a basic pack with drum unit, halyard swivel, sail feeder, bearing halves, top guard and furling rope. The Extended pack also includes halyard leads, stanchion blocks and pre-feeder pack -accessories that will make your system work even better on your boat.

Foil pack, wire pack and eye pack

The Furlex system also includes a foil pack with luff extrusions, distance tubes and connectors. A complete forestay is also supplied with every Furlex, including a swaged stud/eye solution (no adjuster). On new boats delivered with a complete new Seldén rig, the forestay is usually included in the standing rigging and does not come as a separate wire pack.

Basic pack / Extended pack		Foil pack	Wire pack / Eye pack
<ul style="list-style-type: none"> • Drum unit • Halyard swivel • Furling rope • Bearing halves • Top guard • Sail feeder • Manual 	Extended pack also includes: <ul style="list-style-type: none"> • Halyard leads • Stanchion blocks • Pre-feeder pack • Torx bit set 	<ul style="list-style-type: none"> • Luff extrusions • Distance tubes • Connecting plates 	<ul style="list-style-type: none"> • Wire with swaged eye
		Joining sleeve pack <ul style="list-style-type: none"> • Joining sleeves 	

1.3 Main dimensions

All dimensions are given in millimeters and inches.

<p>Fig. 1.4.a</p>					<p>Fig. 1.4.b</p>			
Furlex model	DD	DH	DW	HO	Wire dim.	Pin	TED	TET
304S	Ø220	160	105	110	Ø12	Ø19 (3/4")	Ø19.5	16 (5/8")

2.3 Wire length calculation

Furlex is supplied with a fixed-length forestay, with a swaged eye on one end and a swaged stud in the other end.



On Furlex 304S with $\varnothing 12\text{mm}$ forestay the joining sleeves must be fitted to the wire before the stud terminal is swaged as the stud terminal cannot pass through the joining sleeves as on a standard 10mm Furlex system.

The 325mm lower joining sleeve (closest to stud) is coloured black to distinguish it from the shorter 250mm sleeves. The number of 250mm sleeve must correspond with the number of full length extrusions according to “C” in calculation table 2.

If a stud-terminated stay is to be manufactured by a local rigger it is important to note that WL in this case equals the length of the finished stay, from eye to end of stud, as shown in fig. 2.4.a. WL is calculated in table 1.

1. Slacken the backstay and/or the cap shrouds as much as possible, but make sure that no rigging screws are unscrewed so far that the threads are no longer visible “on the inside” of the rigging screw body. Ideally the forestay setting should not be adjusted. However, if there is insufficient adjustment in the backstay, and the forestay has a rigging screw, this can be adjusted as well. Just make sure to mark the thread with tape before adjusting.
2. Pull the top of the mast forward using the genoa or spinnaker halyard. Secure the halyard using a “D” shackle or tie the halyard to a strong deck fitting. For safety reasons, do not use any halyard snap shackles. Secure the halyard tail after the halyard has been tensioned.
3. Go up the mast. Connect a free halyard to the forestay. Then detach the forestay and lower it using the free halyard. Bring the stay down and place it on a flat surface. If the forestay rigging screw was slackened, adjust it back to the tape mark.
4. Measure the forestay length (FL) with just enough tension to keep the forestay straight on the ground. Forestay length (FL) is the distance between the hole in the swaged top terminal and the hole in whatever lower part that was attached directly to the hole in the chain plate. Enter the measurement into “Table 1” below, in the row marked FL.

Table 1: Calculation of forestay wire cutting length		Your forestay	Example (304S/ $\varnothing 12$)				
FL	Existing forestay length (FL), including rigging screw (See Fig. 2.4.a)		16.243				
T	Deduction for lower terminal: <table border="1" style="margin-left: 20px; width: 100%;"> <thead> <tr> <th>WIRE</th> <th>Without rigging screw:</th> </tr> </thead> <tbody> <tr> <td>304S</td> <td>$\varnothing 12\text{mm}$ wire: 140 mm (5 1/2")</td> </tr> </tbody> </table>	WIRE	Without rigging screw:	304S	$\varnothing 12\text{mm}$ wire: 140 mm (5 1/2")	-	- 140
WIRE	Without rigging screw:						
304S	$\varnothing 12\text{mm}$ wire: 140 mm (5 1/2")						
H	If links or extra toggles are to be used, deduct this length (H) from FL. (See table 6.7).	-	- 0				
WL	For stays with swaged stud, WL equals the length of the finished stay as shown in fig 2.4.a and NOT the cutting length.	=	= 16.103				

2.4 Top extrusions - length calculation

The Furler luff extrusion consists of a number of shorter pieces. Starting from the bottom there is a 1000 mm (39 3/8") luff extrusion connected to the drum unit and extending up to the sail feeder. Then, from the sail feeder and up there are a number of full length luff extrusions (L=2400 mm) and finally there is a 2000 mm top extrusion that has to be cut to length to suite the actual forestay length.



If the calculation gives a top extrusion length (D) that is shorter than 700 mm (27 1/2"), the calculation must be reworked by exchanging one of the 2400 mm (94 1/2") extrusions with the uncut 2000 mm (78 3/4") top extrusion. By doing so the top extrusion will be cut from a 2400 mm (94 1/2") length and its length will then exceed 700 mm (27 1/2"). If the calculation gives a top extrusion length (D) that exceeds 2000 mm (78 3/4"), the top extrusion must be cut from one of the 2400 mm (94 1/2") extrusions. In this case the 2000 mm (78 3/4") extrusion will not be used.

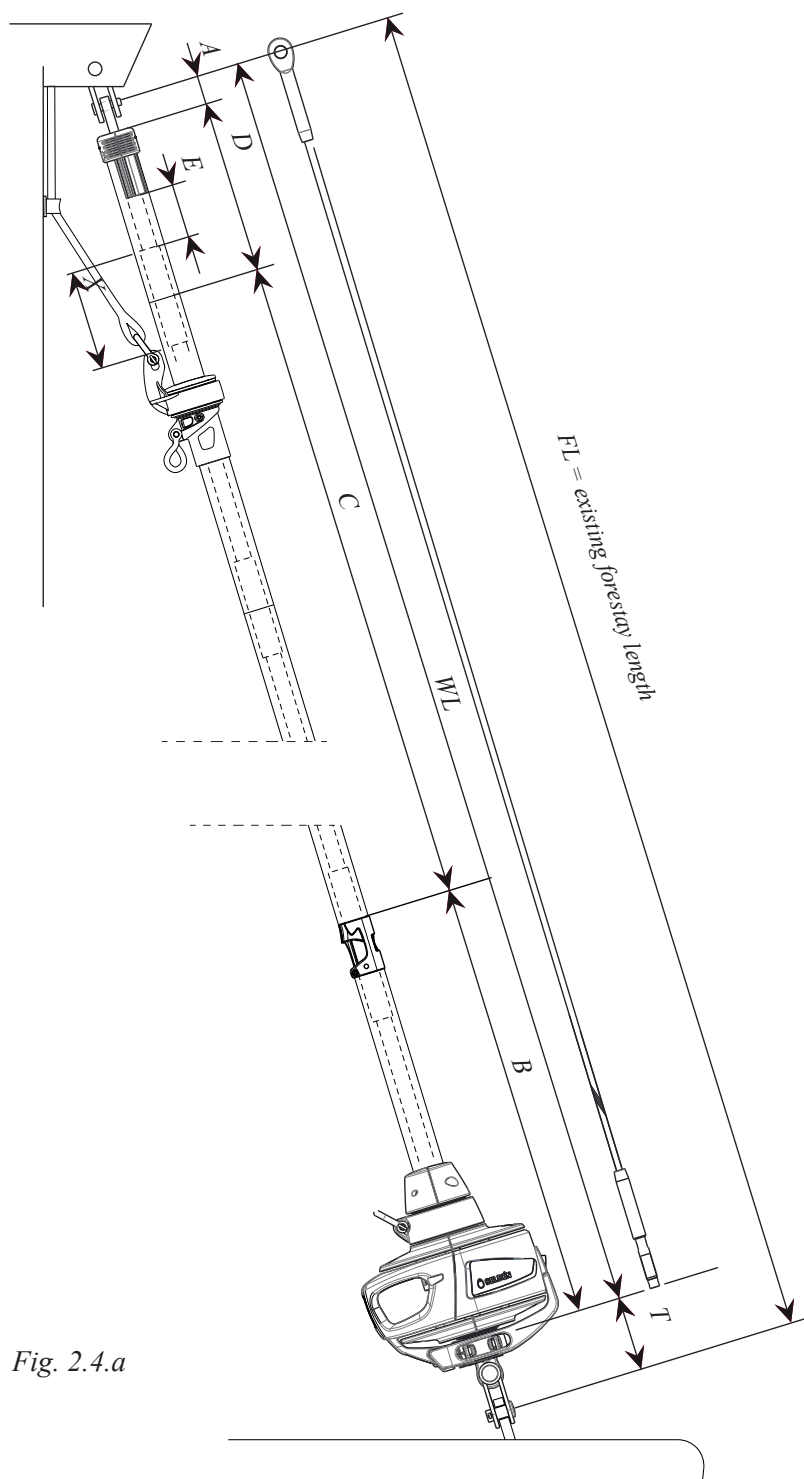


Fig. 2.4.a

To find out the cutting length of the top extrusion (D) and the length of the top distance tube (E), start with the length of the forestay wire (WL) that was calculated in table

1. Then follow the steps in table 2 below. On fixed length forestays (incl. rod stays), verify WL by measuring the stay length from centre of eye to end of stud (wire) or end of rod head.

Note: The length of the top distance tube (E) is deliberate designed with some centimeters vertical space of the distance tubes and joining sleeves in the total length of luff extrusion.

Table 2: Calculation of top luff extrusion length and top distance tube length		Your forestay	Example (204S/Ø8) with rigging screw 50% extended				
WL	Length of the new forestay wire (as per Table 1).		16103				
A+B	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>WIRE</th> <th>Without rigging screw:</th> </tr> </thead> <tbody> <tr> <td>304S</td> <td>Ø12 mm wire: 1520 mm (60")</td> </tr> </tbody> </table>	WIRE	Without rigging screw:	304S	Ø12 mm wire: 1520 mm (60")		1520
WIRE	Without rigging screw:						
304S	Ø12 mm wire: 1520 mm (60")						
N	Number of full length extrusions to be used: $N = (WL - (A+B)) / 2400$ (94 1/2")		$(16103-1520) / 2400 = 6.1$ →N=6				
C	Total length of the number of full length extrusions (2400 mm) to be used: $C = N \times 2400$ (94 1/2")		6 x 2400 = 14400				
D*	Length of top luff extrusion: $D = WL - (A+B) - C$		16103-1520 -14400 = 183				
X	Fixed deduction 304S: 250 mm		250				
E*	Length of the top distance tube: $E = D - X$		183-250 = -67				

*) If, as in our example, D becomes less than 400 mm it is necessary to recalculate as below and cut one of the full length luff extrusions according to D_{new} and one of the full length distance tubes according to E_{new} .

Note that the original top luff extrusion and the original top distance tube will now be used as intermediate extrusions.

Table 2B: Recalculation if D<400 mm		Your forestay	Example
N_{new}	Reduce the number of full length extrusions by one. $N_{new} = N - 1$		N=5
C_{new}	$C_{new} = N_{new} \times 2400 + 2000$ (94 1/2" + 78 3/4")		14000
D_{new}	$D_{new} = D + 400$ (15 3/4")		583
E_{new}	$E_{new} = E + 400$ (15 3/4")		333

Furlex 304 ϕ 12 Luff assembly.

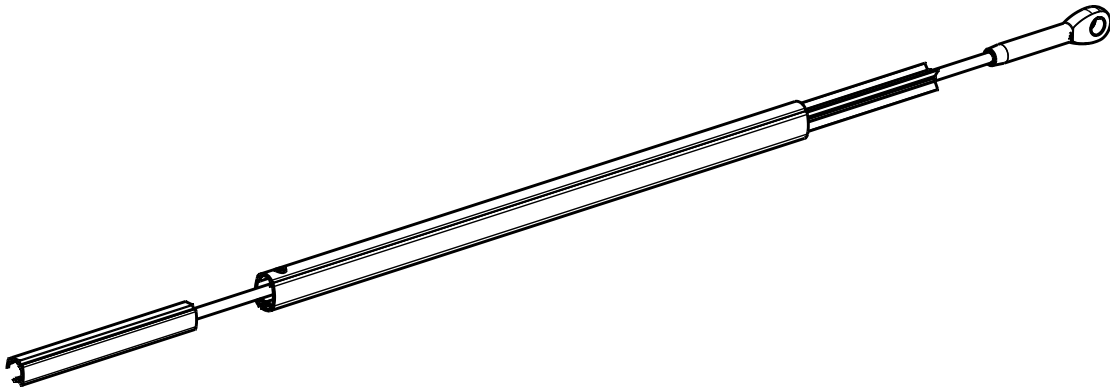


1. Forestay with fitted joining sleeves. Lower 325mm (black) at sail feeder. Number of 250mm joining sleeves to correspond with the number of full-length extrusions according to "C" in calculation table 2 in 597-626-E.
Joining sleeves to be fitted before swaging the stud at lower end.

Note! Before swaging-Check that forestay length (center eye to end of stud) is according to "WL" in calculation table 1.

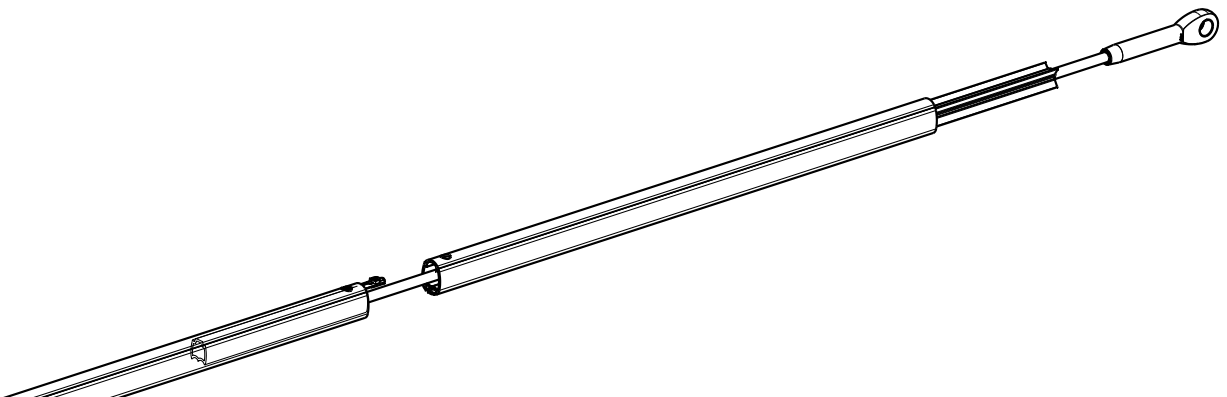
Also check that the correct number/order of joining sleeves is correct.

2.



Fit the upper distance tube "E" over the wire. Slide the top extrusion "D" over the upper most sliding sleeve and the distance tube. Note the orientation off the luff extrusion (hole at lower end).

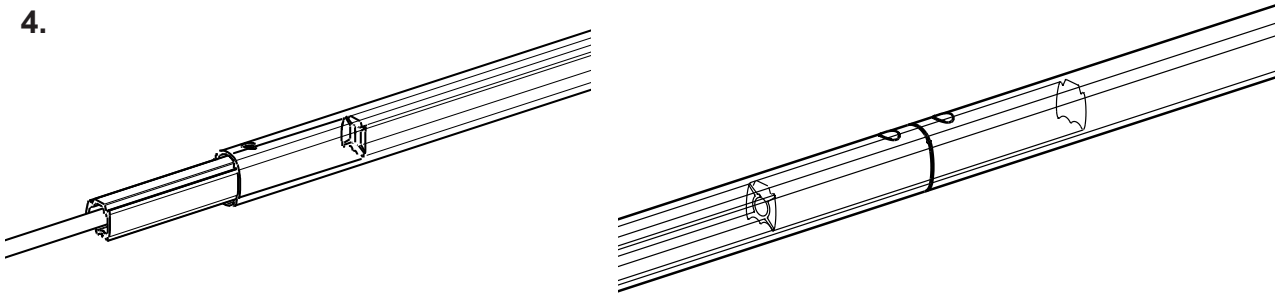
3.



Add a 2400mm extrusion. Fit a short connecting plate in the extrusion and lock it with the joining sleeve. Connect the 2400mm extrusion to the top extrusion.

(Note that this second extrusion can be the 2000mm extrusion if the calculation has resulted in a top extrusion becoming too short.)

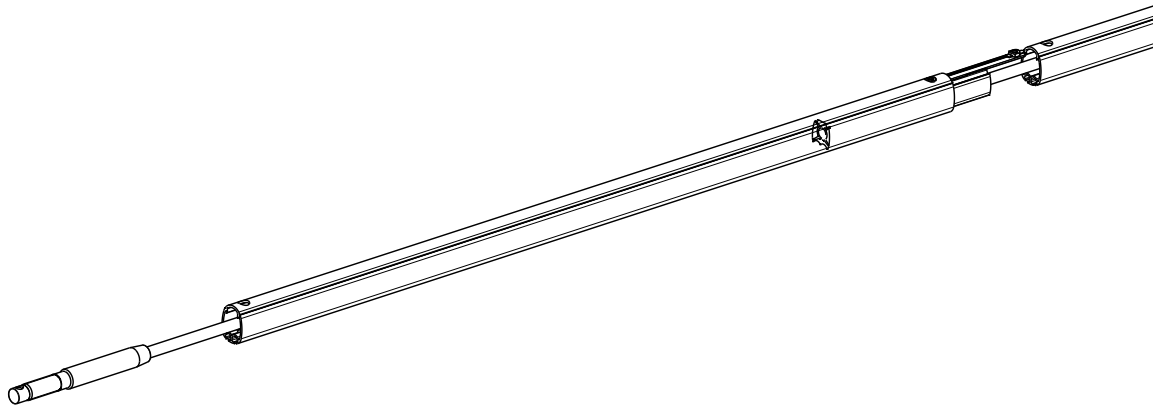
4.



Fit a 2150mm distance tube over the wire and push it into the 2400mm extrusion. Use a sliding sleeve to push in the last portion of the distance tube. Half the length of the sliding sleeve should enter the extrusion. This will position the sliding sleeve in the upper joint as shown.

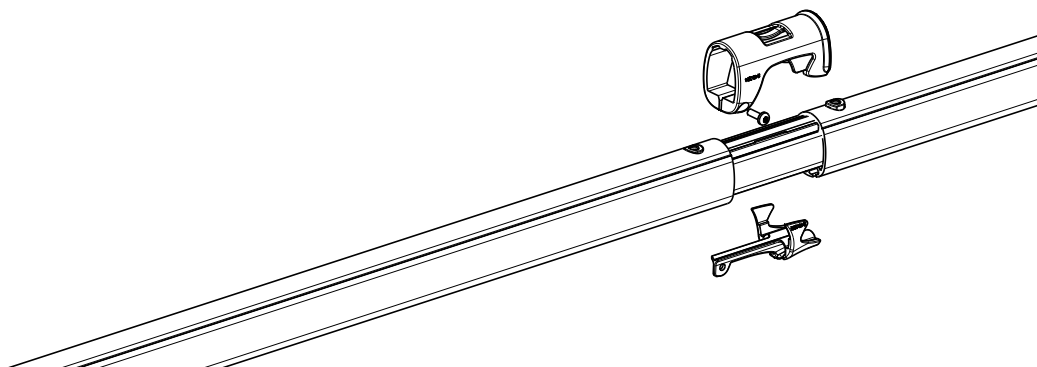
5. Add the remaining distance tubes and 2400mm extrusions in the same way.

6.



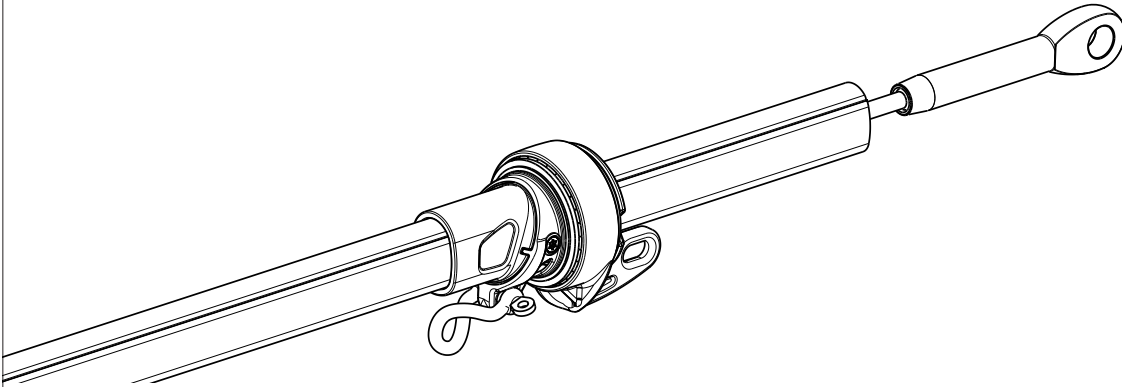
Add the 825mm distance tube and the 1000mm lower extrusion. Note the orientation of the extrusion-lower end has two holes.

7.



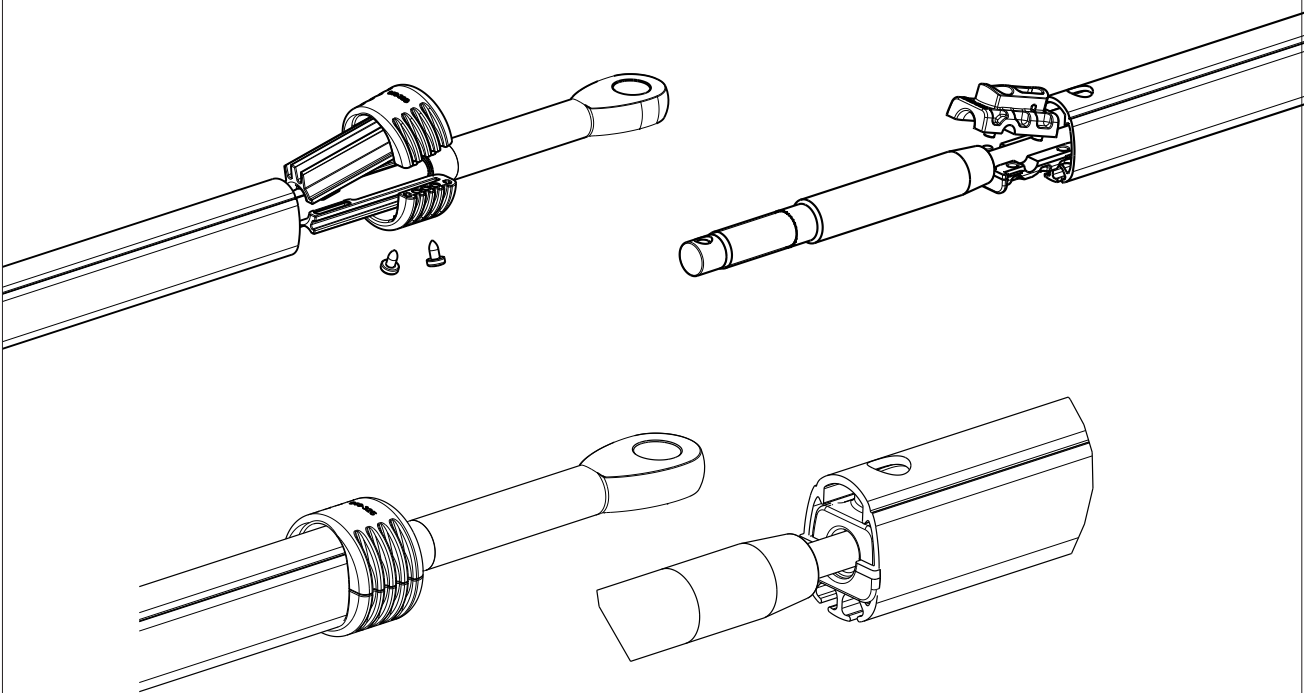
Snap on the sail feeder connector and put the sail feeder in position. Secure with the screw and tighten moderately.

8.



Fit the halyard swivel from the top and slide it down until it stops on top of the sail feeder.

9.



Pull the eye terminal without dislocating the joining sleeves. Push in the top bearing halves and tighten the screws moderately.

Fit the lower bearing.

7 Warranty

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

The guarantee is only valid if the Furlex-system 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 instructions.

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

If the system is repaired 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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