# YACHT

**PRODUCT CATALOGUE** 



Rig solutions for yachts ranging from 28 to 80 feet.



# **PRODUCT CATALOGUES**

We hope this Seldén Yacht product catalogue will be helpful for you finding accessories and spare parts for your rig. This is one of five product catalogues and it presents our range of products for approximately 28' to 80' yachts. If you need any of the other catalogues you are welcome to pick them up from your local dealer or to download from www.seldenmast.com.

## **Deck hardware**

Blocks, cleats, swivels, tracks, travellers, deck organizers and accessories.



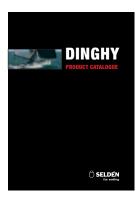
### Keelboat

Rig systems and accessories for 18 to 26 feet boats.



## **Dinghy**

Rig systems and accessories for dinghies.



## Carbon

Presents the entire carbon product range from dinghies to yachts.



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# **DINGHIESKEELBOATSYACHTS**

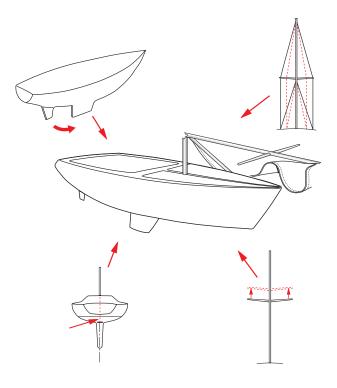


Making the best yacht rigging systems in the world is only part of our business. With a large number of championship medals in the Olympics, World Championships, European Championships and national championships, Seldén has proved to be Number One in rig systems for dinghies and keelboats. So no matter the size of your boat, whether you push your equipment to the very limit, or just enjoy leisurely cruising, go Seldén and you'll benefit from reliable top-class gear.

## **Right from the start**



Heeling test in 1965. The righting moment of the boat is measured at  $30^{\circ}$  heel.



Seldén was founded in 1960 and it has grown from a small company into the world leader, with manufacturing in Europe, the USA and Asia. Precise, meticulous work has always been a characteristic of Seldén. Our manufacturing methods, tools and instruments have been specially developed to meet the demands of large-scale, cost-effective, quality production and the high demands of sailors around the world. However, we still carry out the same heeling tests as we did back in 1965. We started by doing things in the right way, and that is how we have continued.



Heeling test today. Materials change. Good methods don't.

#### Unspecified changes can cause failures

Each rig is carefully designed and sized for the boat in question. We base our mathematical dimensioning on the righting moment of the boat and the boat designer's proposed sail plan. The wishes of the boat owner determine the way the rigging system is equipped. With nearly 50 years of experience, we have built up a tremendous experience bank for the use of our rig designers. As a result, the boat and rig form a well-functioning whole. Because of this, it is important that even seemingly unimportant details on the boat or rig are not changed without first consulting us, as even small changes can lead to big problems.

Each mast and boom from Seldén has a unique serial number. This is engraved in the lower end of the mast extrusion and the front end of the boom extrusion. Quote this number if you want to discuss details relating to your rig.



#### Give us the facts

The key to a correct rig calculation is the quality of the input data at our disposal. This data consists of hard facts, plus what we can learn by listening very carefully when talking to the customer.

The "Seldén Rig Fact sheet" has proven to be a simple and effective way of gathering all the facts required to calculate the mast, boom and standing rigging. It is where you note the data on the envisaged type of rigging, the main dimensions of the sail plan, the location of the chainplates and the righting moment of the boat (or the correct information to help us calculate the righting moment). The "Seldén Rig Fact sheet" is available on our web site, **www.seldenmast.com.** 

#### **Attention to detail**

In our search for perfection, no detail is considered too small. This applies to everything, from the choice of materials to stringent testing of the finished product. Seldén's business philosophy can be summed up as quality thinking and system thinking, and a continuous quest to achieve the best possible function for each product. This catalogue provides an overview of this holistic approach. Read on to learn about our MDS full-batten system, our unique inboard ends, the load distributors in the Furlex jib furling system, and a great many other features and details.





#### Leaders in every detail

Every Seldén rig is carefully thought out, down to the last detail. All the way from the materials and functions of the different parts of the rig, to dimensioning the right rig for each individual boat. Each individual component contributes to the performance of the whole rig. That is the Seldén way – experienced yachtsmen behind every aspect of design, product development and production.

# **MASTS**



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#### All our standard rigs are custom made

Extruded aluminium is an excellent material for making masts. This is where Seldén has earned its reputation as world leader in mast making. Today Seldén offers a full range of masts and rig equipment in both aluminium and carbon including booms, spinnaker poles, Rodkicker rigid vangs, furling systems, rig fittings and deck hardware. All rigs are custom-made, through every calculation and detail, for each individual boat.

We know how much depends on the rig, and there is no room for compromise.

## **Mast sections**

#### C-sections and F-sections

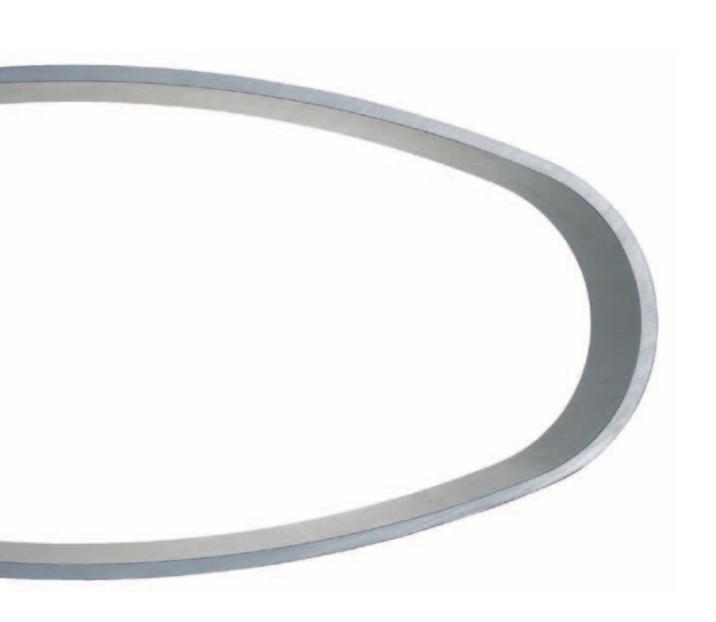
Loads generated by the crew (mainsheet, vang, outhaul, Cunningham etc.) are transferred to the mainsail and on to the mast. As the mainsail is designed according to the expected curve of the mast, a longitudinally stiff mast allows for less luff curve of the sail. Instead, this sail area can be added to the roach of the sail, where it is subjected to the wind and more efficient. The longitudinal rigidity of the mast section makes for higher forestay load created by tensioning the backstay. Running backstays can often be avoided. The risk of mast pumping is also reduced.

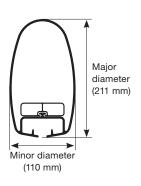


		Mast section	Section dim. mm	l <sub>y</sub> cm <sup>4</sup>	l <sub>x</sub> cm <sup>4</sup>	Wall thickness mm	Weight kg/m	W <sub>y</sub> cm <sup>3</sup>	W <sub>x</sub> cm <sup>3</sup>	Sail groove mm	Sail groove for bolt rope*	MDS car	Sail slides Art. no.
C-sections		C156	156/87	391	144	3.00	3.71	42.8	33.2	10 ± 0.75	5.5 ± 0.75	See page	511-605
		C175	175/93	558	191	3.24	4.18	53.6	41.0			37	or 511-607
		C193	193/102	779	257	3.40	4.74	69.3	50.6				311-007
/ \		C211	211/110	1051	341	3.65	5.34	86.5	62.0				
1	v	C227	227/119	1407	456	3.95	6.15	108.0	76.6				
	'	C245	245/127	1910	614	4.35	7.15	137.0	96.5				
\ <del>``</del>		C264	264/136	2591	830	4.80	8.40	172.0	122.0				
X		C285	285/147	3508	1127	5.20	9.72	214.0	153.3				
X		C304	304/157	4686	1524	5.80	11.44	272.0	194.0				
		C321	321/171	5822	2056	5.5/6.4	13.06	324.4	238.7	16 ± 0.75			511-603
		C365	365/194	9160	3161	5.5/6.8	15.50	447.0	326.3				
F-sections	RA	F176	176/93	526	187	2.89	4.20	58.2	40.0	See table	on next page.	**	
		F194	194/101	709	254	3.04	4.79	70.8	49.8				
	RA/RB	F212	212/109	970	337	3.15	5.49	88.2	61.8				
/ \	RA/RB	F228	228/118	1306	453	3.40	6.35	112.0	76.8				
	RB	F246	246/126	1781	613	3.75	7.44	139.0	97.3				
	√ RB/RC	F265	265/135	2392	828	4.15	8.73	173.0	122.0				
	RB/RC	F286	286/146	3237	1122	4.50	10.10	220.0	154.0				
ل ما	RB/RC	F305	305/156	4389	1513	5.05	11.84	276.0	194.0				
X	RC/RD	F324	324/169	5576	2056	5.5/7.0	13.80	328.8	243.3				
	RD	F370	370/192	8835	3149	5.8/9.0	16.60	468.0	326.0				
	RD	F406	408/207	14321	4725	6.5/10.0	21.20	671.0	451.0				

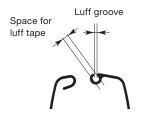
<sup>\*</sup> If a traditional bolt rope is to be used, a plastic profile (Art. No. 535-710), as well as a sail feed (505-526-01) must be added to the luff-groove on the mast.

<sup>\*\*</sup> For more detailed information on Seldén's furling masts, see pages 74-85 or "Sailmakers' Guide" (www.seldenmast.com).

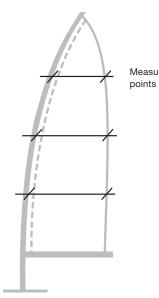


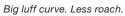


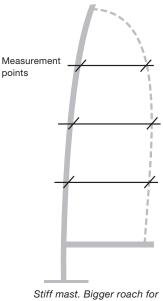
Mast section measurements are given as follows: Major diameter/Minor diameter (i.e. 211/110). This will help identification and the use of correct measurements. The major diameter of the mast can usually be found in the number engraved at the mast heel. For example K23-C211-4475.



	Furling mast luff extrusion										
		Weight kg/m	A mm	B mm							
	RA	0.55	2.8 ±0.25	6.0							
	RB	0.93	$3.25 \pm 0.35$	8.0							
4	RC	1.28	3.25 ±0.25	10.6							
× ø	B RD	2.11	3.25 ±0.25	10.6							







more projected area.





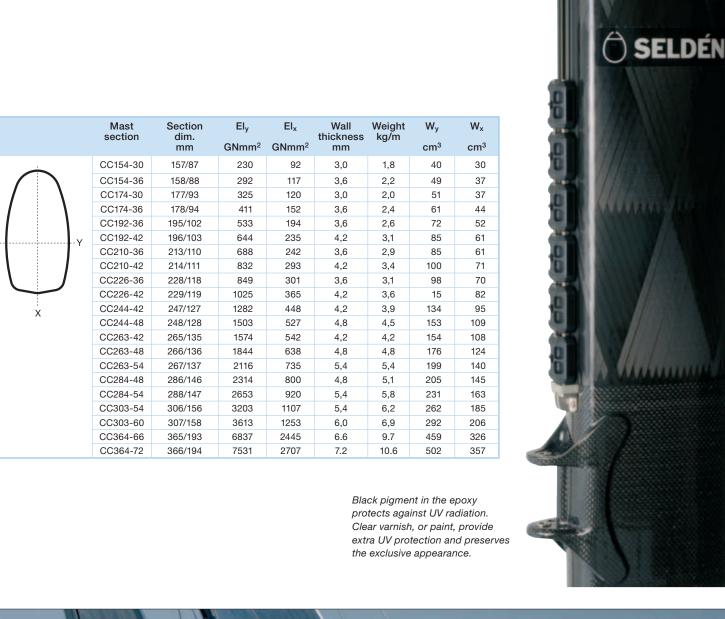
## Seldén carbon spars



#### For everyone who cannot resist speed

Carbon composite combines stiffness and strength with low weight. Seldén low-weight carbon spars have accentuated longitudinal stiffness. This means that forestay tension can be substantially increased. All experienced racing sailors know what this means in terms of increased upwind performance. The combination of greater stiffness and reduced weight will bring you beyond the speed limits.

	Mast section	Section dim. mm	El <sub>y</sub> GNmm²	El <sub>x</sub> GNmm²	Wall thickness mm	Weight kg/m	W <sub>y</sub> cm <sup>3</sup>	W <sub>x</sub>
	CC154-30	157/87	230	92	3,0	1,8	40	30
	CC154-36	158/88	292	117	3,6	2,2	49	37
/ \	CC174-30	177/93	325	120	3,0	2,0	51	37
	CC174-36	178/94	411	152	3,6	2,4	61	44
	CC192-36	195/102	533	194	3,6	2,6	72	52
Y	CC192-42	196/103	644	235	4,2	3,1	85	61
	CC210-36	213/110	688	242	3,6	2,9	85	61
\	CC210-42	214/111	832	293	4,2	3,4	100	71
\	CC226-36	228/118	849	301	3,6	3,1	98	70
	CC226-42	229/119	1025	365	4,2	3,6	15	82
X	CC244-42	247/127	1282	448	4,2	3,9	134	95
Λ.	CC244-48	248/128	1503	527	4,8	4,5	153	109
	CC263-42	265/135	1574	542	4,2	4,2	154	108
	CC263-48	266/136	1844	638	4,8	4,8	176	124
	CC263-54	267/137	2116	735	5,4	5,4	199	140
	CC284-48	286/146	2314	800	4,8	5,1	205	145
	CC284-54	288/147	2653	920	5,4	5,8	231	163
	CC303-54	306/156	3203	1107	5,4	6,2	262	185
	CC303-60	307/158	3613	1253	6,0	6,9	292	206
	CC364-66	365/193	6837	2445	6.6	9.7	459	326
	CC364-72	366/194	7531	2707	7.2	10.6	502	357





## **Headbox**

#### C211-C304 and F212-F406



The headboxes are equipped with a separator, to make it easy to access the top sheaves. Just loosen the separator, which also works as a locking plate, and the sheaves can easily be lifted up for inspection or replacement. This means that you can replace the sheaves without unstepping the mast and removing the headbox. The separator is slightly angled at its front end to lead the spinnaker halyard on to the sheave. The headbox fitting has a gently rounded halyard lead for a masthead spinnaker or gennaker. Conventional spinnaker arrangement with one or two halyard blocks is, of course, still an option.

An instrument base is available for both straight and angled tops. The instrument base is designed to make it easy to dismantle the mid section when you need to access the mast top sheaves.



Well organised and easily accessible.



Separator locks sheaves and also controls spinnaker halyard.



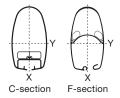
Top access, without unstepping the mast and removing the headbox.



# **Headbox fittings**

	Art. No.	Description	Dimensions length x width mm	Notes
	508-268-01	Instrument base	197 x 74	For 0° headbox Fractional rig C211-C304 Masthead rig C175-C285, F176-F286
9	508-268-02	Instrument base	197 x 74	For 15° headbox C211-C304, F194-F305
	508-314-01	Aerial bracket assy	155x86x20	For 0° headbox
	508-521-01	Windex crane	136 x 74	Incl. pop rivets (4.8 x 16.5) to be fitted on aft edge of headbox. For 15° headboxes, bend crane for horizontal position.
	508-558	Windex base on top of "Aqua" tricolour (white) lamp.	Ø 58	
63 30	508-562-01	For tricolour lamp and anchor light.	60 x 30 x 63	For 0° headbox All sections
	508-526-01	Instrument base	100 x 55	For 0° headbox All sections
	508-561-01	Instrument base	180 x 65	For 0° headbox All sections
	508-527-01	Instrument base	105 x 55	For 15° headbox All sections
	508-541-01	Instrument base	180 x 65	For 15° headbox All sections
	508-549-01	Windex and anchor light base.	20 x 30	For 15° headbox All sections
-	508-551-01	Windex extension	60	
63 30	508-560-01	Bases for tricolour lamp and anchor light.	60 x 30 x 63	For 15° headbox All sections (except C304 and F305)
	508-563-01	Instrument base	100 x 40	For 15° headbox All sections (except C304 and F305)
	508-556-01	Instrument base including 2 supports.	550 x 80	To be combined with the following brackets: For 0° headbox 508-526, 508-561, 508-268-01 For 15° headbox 508-527, 508-541,
	508-559-01	Instrument base including 2 supports.	800 x 80	508-563, 508-268-02
	508-176-02	2 port and starboard wings with support strut.	Length = 500 mm	For 0° headbox without base. For 15° headbox shall base 508-541 be used.

# **Forestay and backstay toggles**











**C-sections and F-sections** 

 $S = Single \ toggle \ D = Double \ toggle$ 

 $S = Single \ toggle \ D = Double toggle$ 

			Forestay and bac	kstay toggle		Backstay an	d triatic toggle
Wire dia. mm	Mast section	Art. No.	Width mm	Masthead max pin dia. mm	Term. pin (bush) dia. mm	Art. No.	Max. triati wire dia mm
4	C156	517-001-01 S	30	10	8		
5	C156, C175, F176	517-001-01 S	30	10	8		
	C193, F194	517-003-01 D	30	10	10		
6	C156, C175, F176	517-002-01 S	30	12	10		
	C193, F194, C211 F212, C227, F228	517-006-01 D	30	12	10		
	C245, F246, C264 F265	517-002-02 S	39	12	10	-	
7	C175, F176, C193	517-004-01 S	30	14	12	517-012-01 S	6
	F194, C211, C211 Tpr C227, C227 Tpr	517-006-01 D	30	14	12	517-014-01 D	6
	C245, F246, C 264 F265	517-048-03 S	36	14	12		
8	C245, F246, C285	517-048-01 S	36	14	14		
	F286, C245 Tpr C264 Tpr, C285 Tpr	517-009-01 D	38	16	16		
	C245, F246, C264	517-060-03 S	38	16	16	517-015-01 S	6
	F265, C285, F286 C304, F305	517-009-01 D	38	16	16	517-016-01 D	6
	C175, F176, C193	517-005-01 S	30	14	14	517-013-01 S	6
	F194, C211, F212 C227, F228	517-006-01 D	30	14	12		
10	C211, F212, C 227 F228	517-005-01 S	30	14	14	517-013-01 S	6
	C245, F246, C264	517-060-03 S	38	16	16	517-015-01 S	6
	F265, C285, F286	517-009-01 D	38	16	16	517-016-01 D	6
	C304, F305	517-017-01 S	47	20	16		
		517-019-01 D	47	20	16		
12	C245, F246, C 264	517-026-01 S	38	16	19	517-028-01 S	6
	F265, C285, F286	517-027-01 D	38	16	19	517-029-01 D	6
	C304, F305, C321, F324	517-052-01 S	47	20	19		
		517-020-01 D	47	22	19		
14	C304, F305, C321, F324	517-053-01 S	47	22	22		
		517-058-01 D	49	22	22		

Tpr = Tapered top

## **Forestay fittings and halyard routing**

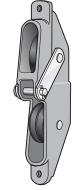
#### **Cutter stay on masthead rigs**

On fractional rigs the forestay fitting is either fitted directly on to the mast or combined with the halyard box (Seldén combi boxes). The forestay is often attached to the fitting with a toggle.

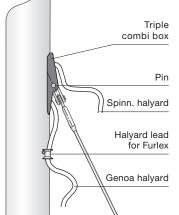
The stainless strap of the combi box wraps around the whole box and serves as a reinforcement that takes up the loads from the forestay. It also locks the sheave axles in the right position. The combi box penetrates deep inside the mast, allowing the spinnaker halyard to run freely past the genoa halyard. This solution substantially increases the durability and service life of the halyards. See illustration on page 21.











#### Combi box

#### Separate genoa box

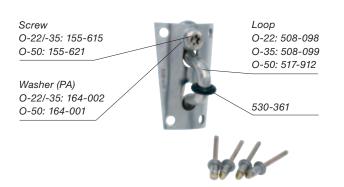
Wire dia. mm	Combi box Art. No.	Max rope dia. mm	Genoa box single Art. No.	Genoa box double Art. No.	Max dia., mm rope/wire, (only rope)
6	505-052-01	16	505-067-10	505-053-01	10/5
7	505-052-02	16	R190, R213:		
			505-040-10		(12)
8	505-052-03*	16	505-037-01	505-059-01	14/7
10	505-058-01	20	505-041-01		(16)

<sup>\*</sup> Bushing for clevis pin, Art. No. 306-577 (in case you drop it).

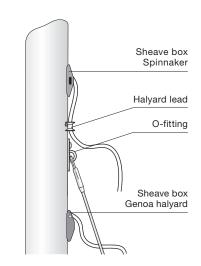
#### **Triple combi boxes**

Wire dia. mm	Triple combi box Art. No.	Characteristics	Max spinnaker halyard dia., mm	Max genoa halyard dia., mm rope/wire (only rope)	Furlex halyard lead Art. No.	Furlex halyard box, single Art. No.	Furlex halyard box, double Art. No.	Max. dia., mm rope/wire (only/rope)
4	505-011-01	1 x spinnaker halyard	12	10/4	508-159-01	505-004-10	-	10/4
5		1 genoa halyard		(12)				(12)









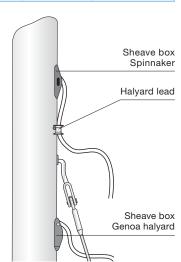
#### **O-fittings**

Wire dia. mm	Fitting	Art. No.	Limits	To be combin Genoa box single	ed with Genoa box double	Spinnaker box single	Spinnaker box double	Single halyard lead	Double halyard lead
4 5	O-22	517-904-01	Max F212, C245 R232, R260, R290	505-004-10	505-053-01	505-004-10	505-053-01	508-159-01	2 x 508-159-01
6	O-35	517-905-01	-	505-006-10		505-006-10			
7	O-50	517-911-01	Max F212, C264 Not E274, R232, R260, R290			505-012-01			508-120-01 or 508-734-01*
8	O-50	517-911-01	Max C227	505-037-01	505-059-01		505-059-01		

 $<sup>^{\</sup>star}$  Intended only for rope (not rope/wire).

For more information about halyard leads, see page 26.





## **Backing plate for T-terminal**



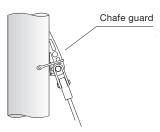
Note. Never put a forestay fitting or a halyard box in the tapered area. Applies to masts with E-sections where the weld for the taper is on the forward side of the mast.

Wire	Art. No.	To be combined with  Genoa Genoa Spinnaker Spinnaker Single Double								
dia. mm	AIL NO.	box single	box double	box single	box double	halyard lead	halyard lead			
3	507-553-01*	505-004-10	505-053-01	505-040-10	505-053-01	508-159-01	2 x			
4	507-551-01*		0				508-159-01			
5	507-552-01*									
6	507-560-01*	505-006-10		505-006-10						
6/E274	507-600-01									
6/R-sections	507-560-02*									
7	507-561-01*			505-012-10			508-120-01			
7/E274	507-601-01						or			
7/R-sections	507-561-02*						508-734-01**			
8	507-562-01*	505-037-01	505-059-01		505-059-01					
8/E274	507-582-01									
8/R-sections	507-562-02*									

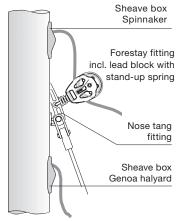
<sup>\*</sup> Min F176

<sup>\*\*</sup> Intended only for rope (not rope/wire).





Nose tang with chafe guard. To be used where the halyard is led above the nose tang. On fractional rigs with a single box for the spinnaker halyard, a good solution is to have its lead block attached to the forestay fitting. Seldén offers complete kits with forestay fitting, including the appropriate lead block. Seldén also offers sheave box kits complete with fasteners.



#### Nose tang fittings, incl. toggle

				To be com	bined with													
Wire dia. mm	Description	Art. No.	Toggle length mm	Spring for spinnaker block	Genoa box single	Genoa box double	Spinnaker box single	Spinnaker box double	Single halyard lead	Double halyard lead								
6	Nose tang fitting/ toggle	517-923-03	40	308-074	505-067-10	505-053-01	505-067-10	505-053-01	508-159-01 or	2x 508-159-01								
	Nose tang fitting/ toggle/chafe guard	517-923-07							508-847-01	or 508-734-01								
	Nose tang fitting/ toggle/lead block	517-923-01																
7	Nose tang fitting/ toggle	517-923-04																
	Nose tang fitting/ toggle/chafe guard	517-923-08	_															
	Nose tang fitting/ toggle/lead block	517-923-02																
8	Nose tang fitting/ toggle	517-924-03	50	50		505-037-01	505-059-01	505-012-10	505-059-01		2x 508-128-0							
	Nose tang fitting/ toggle/chafe guard	517-924-05								or 508-735-0								
	Nose tang fitting/ toggle/lead block	517-924-08																
10	Nose tang fitting/ toggle	517-924-04	55	55	55		505-041-01			505-059-01	508-128-01 or							
	Nose tang fitting/ toggle/chafe guard	517-924-06										508-848-01						
	Nose tang fitting/ toggle/lead block	517-924-09																
12	Nose tang fitting/ toggle	517-925-02	65	308-037	505-041-01	505-059-01 RM<120 kNm	505-038-01 RM<120 kNm	505-051-01 RM<120 kNm		2x 508-128-01								
	Nose tang fitting/ toggle/chafe guard	517-925-03			505-042-01 RM<160					or 508-839-0								
	Nose tang fitting/ toggle/lead block	517-925-05																
14	Nose tang fitting/ toggle	517-915-02	80		505-038-01	505-051-01	505-038-02 RM<160 kNm	505-051-02 RM<160 kNm										
	Nose tang fitting/ toggle/chafe guard	517-915-03																
16	Nose tang fitting/ toggle	517-932-02										-	508-038-02	-02 505-051-02	2 505-116-01	505-113-01	-	508-837-0
	Nose tang fitting/ toggle/chafe guard	517-932-03																

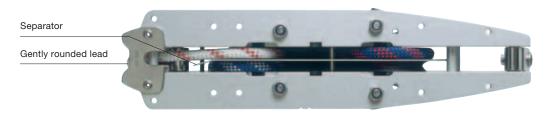
 $<sup>^{\</sup>star}$  Intended only for rope (not rope/wire).  $^{\star\star}$  Only to control genoa halyards.

The routing of halyards is always important, but particularly so on yachts with jib furling and reefing systems.

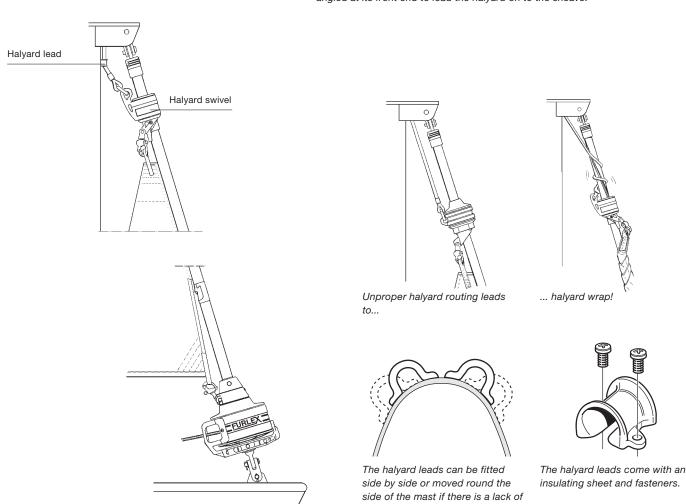
A properly installed halyard box provides optimum halyard routing. Seldén offers a complete range of halyard boxes. You can choose between our range of single- or double halyard boxes shown in the table on the next page. You can also use halyard leads (see below).

Seldén halyard leads are made from chromed bronze, so that the relatively soft bronze will not damage a stainless steel wire halyard. The halyard leads are easily retrofitted to an existing mast.

On yachts with furling systems, correct halyard routing ensures that the halyard does not wrap around the forestay extrusion when furling the foresail.

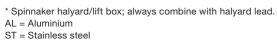


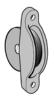
Masthead headbox for C211-C301 and F212-F406. The headbox fitting has a gently rounded lead for a masthead spinnaker and gennaker. The separator is slightly angled at its front end to lead the halyard on to the sheave.



#### **Sheave boxes, slot fittings**

Max rope dia., mm	Max Wire/rope dia., mm	Description	Art. No.	Pin safe work load, kN	Width of slot	Remark
8	-	Sheave box 35 x 10 (composite), screw fix	505-061-02	7		
8	-	Sheave box 35 x 10 (composite), rivet fix	505-061-03	7		
12	-	Sheave box 45 x 13 (composite), rivet fix	505-072-01	8		
12	10/4	AL-45 kit	505-004-10	8		Min F176
12	10/4	AL-57 kit	505-040-10	8		Min F176
12	10/5	AL-70 kit	505-006-10	12		Min F176
12	10/5	C70 kit* (composite)	505-067-10	15		Min C156
12	10/5	Double sheave box Ø 70 x 13 (AL, pop rivets)	505-053-01	12		Min F194 Min C156
12	10/5	Double sheave box Ø 70 x 13 (AL, screws)	505-053-03	12		Min F194 Min C156
16	12/6	Sheave box Ø 70 x 16 (AL)	505-037-01	25		Min F212
16	14/7	AL-90 kit	505-012-10	25		Min F212
16	14/7	Sheave box Ø 90 x 16 (ST)	505-041-01	25		Min F228
16	14/7	Double sheave box Ø 90 x 16 (AL)	505-059-01	25		Min F228
20	16/8	Sheave box Ø 130 x 20, aft (ST)	505-038-01	25		Min F286
20	16/8	Sheave box Ø 130 x 20, aft, extra wide (ST)	505-055-01	25		Min F286
20	16/8	Double sheave box Ø 130 x 20, aft (ST)	505-051-01	25		Min F324
20	16/8	Sheave box Ø 130 x 20, forward (ST)	505-042-01	25		Min F286
20	16/8	Sheave box Ø 130 x 20, aft (ST)	505-038-02	32		Min F286
8	8/4	Slot fitting, small (ST)	505-017-01		10	
14	12/5	Slot fitting, medium (ST)	505-014-01		14	
16	14/7	Slot fitting, large (ST)	505-021-01		18	
20	16/8	Slot fitting, x-large (ST)	505-025-01		24	

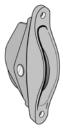




AL-45, Art. No. 505-004-10.



AL-70, Art. No. 505-006-10.

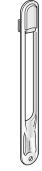


AL-90, Art. No. 505-012-10.

Available as complete kits including fasteners and assembly instructions.



The "aft" sheave box is fitted above the "forward" sheave box in order to avoid halyard wear.



Slot fittings reduce friction and avoid wear from the wire halyards on the mast extrusion.

#### **Halyard leads**

Fitted below a halyard box, the halyard lead prevents a spinnaker halyard, gennaker halyard or Code 0 halyard from chafing against the edges of the box. Also used to lead a jib halyard correctly from a furling system to the halyard box preventing halyard wrap.

Max. c	lia., mm		Max RM	_Max RM	
Rope	Wire/ rope	Halyard lead Art. No.	Fractional kNm	Top hoisted kNm	Remarks
12	10/5	508-159-01	13	15	Single halyard lead in chromed bronze, including pop rivets and insulating plate. Not to be used for a Code 0 halyard.
12	10/5	508-159-03			Single halyard lead in chromed bronze, including $\varnothing$ 5.3 mm self-tapping screws and insulating plate. Not to be used for a Code 0 halyard.
20	16/8	508-128-01			Single halyard lead in chromed bronze, including pop rivets and insulating plate. Not to be used for a Code 0 halyard.
20	16/8	508-128-03			Single halyard lead in chromed bronze, including $\varnothing$ 5.3 mm self-tapping screws and insulating plate. Not to be used for a Code 0 halyard.
12	-	508-734-01	50	57	Double halyard lead fitting in stainless steel. Includes pop rivets. The fitting is to be lacquered inside to insulate it from the mast. This fitting must only be used with rope (not wire halyards). Intended for C156-F212.
14	-	508-735-01	75	85	Double halyard lead fitting in stainless steel. Includes pop rivets. The fitting is to be lacquered inside to insulate it from the mast. This fitting must only be used with rope (not wire halyards). Intended for C227-F286.
12	-	508-847-01	45	50	Single halyard lead fitting in stainless steel. Includes pop rivets. The fitting is to be lacquered inside to insulate it from the mast. This fitting must only be used with rope (not wire halyards). Intended for C156-F212.
14	-	508-848-01	65	72	Single halyard lead fitting in stainless steel. Includes pop rivets. The fitting is to be lacquered inside to insulate it from the mast. This fitting must only be used with rope (not wire halyards). Intended for C227-F286.
14	-	508-839-10	110	125	Double halyard lead fitting in stainless steel. Includes fasteners and insulating washer. This fitting must only be used with rope (not wire halyards). Intended for C304-F305.
16	-	508-837-10	180	200	Double halyard lead fitting in stainless steel. Includes fasteners and insulating washer. This fitting must only be used with rope (not wire halyards). Intended for C365-F370.



Single halyard lead, Art. No. 508-159-01. Art. No. 508-128-01.



Double halyard lead, Art. No. 508-734-01.



Double halyard lead, Art. No. 508-735-01.



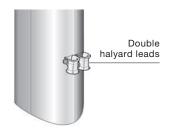
Single halyard lead, Art. No. 508-847-01.



Single halyard lead, Art. No. 508-848-01.



Double halyard lead, Art. No. 508-837-10.



#### Quick sail handling with barber haulers for the halyards

Being able to change the spinnaker set from fractional to masthead in a few seconds can be crucial for the racing sailor. Seldén has developed a system of barber haulers to achieve this. When tightened, the spinnaker has a fractional set. When released, the spinnaker reverts to masthead set.

The halyards run through barber hauler rings and are used for spinnakers and jibs, enabling just two halyards to achieve four functions. What foredeck crew would not appreciate having fewer lines to deal with?

The barber haulers are smaller diameter than the halyards, which saves weight aloft.

**Quick handling** 

Minimum halyards

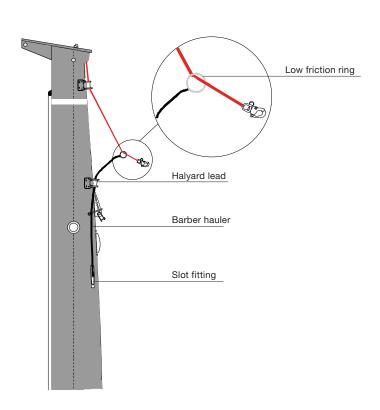
Low weight







Fractional hoist





## **Running backstay attachments**



#### Adding a cutter stay to a masthead rig

Running backstays may be necessary if a cutter stay for a storm jib or staysail is fitted.

#### Option 1:

The cutter stay is located 3-6% of the height of the foretriangle below the existing forestay. In this case, running backstays are not required to tension the cutter stay.

#### Option 2:

The cutter stay is located more than 6% of the height of the foretriangle below the existing forestay. In this case, running backstays are necessary. The forestay fitting should be fitted within 1000 mm of the spreaders, with the running backstays preferably 300-500 mm above. Whichever option is chosen, the amount of material cut out from the mast may be over-concentrated in a small area. Please contact Seldén Mast for advice on the correct fastenings and the correct location of the fastenings, as well as the halyard control system.

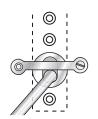
# Conventional fittings for running backstay

Mast section	Art. No. Wire dia., 8/10 mm pin dia., 14 mm
C245	518-031-32
C264	518-031-33
C285	518-031-34
C304	518-031-35
C321	518-031-14
C365	518-031-13
F246	518-031-26
F265	518-031-29
F286	518-031-27
F305	518-031-27
F324	518-031-12
F376	518-031-11
R260	518-031-05
R290	518-031-07



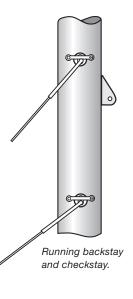
Conventional tang.

# Backing plate including securing strap



T-terminal backing plate + strap.

Wire dia., mm	Art. No.	Mast profile
3	507-553-02	All
4	507-551-02	
5	507-552-02	
6	507-600-02	
7	507-601-02	
8	507-582-02	
10	507-583-12	C245
10	507-583-13	C264
10	507-583-15	C285 - C365 F246 - F370



#### T/Eye toggle for rope runners

Wire dia., mm	Art. No.
3	174-136
4	174-137
5	174-138
6	174-139
7	174-140
8	174-141

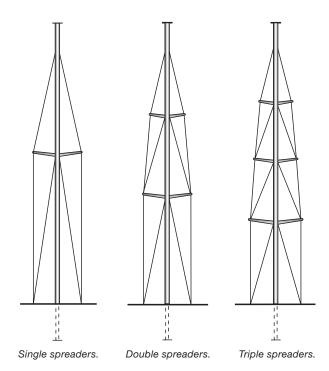


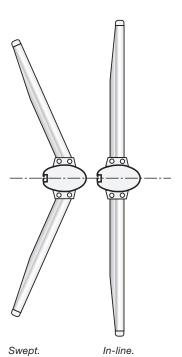
When replacing traditional wire runners with lightweight runners, in for example Dyneema, keep your existing backing plate and add a T/Eye toggle.

## **Spreaders**



Seldén T-spreaders for C-sections and F-sections.





#### Jumper arrangement

This arrangement is almost exclusively designed for fractionally rigged yachts. The jumper struts are normally angled forward. It stays the topmast, not only athwartships but also fore and aft. A jumper arrangement might be necessary when using a masthead gennaker/spinnaker or for stabilising the head of a mainsail.





## **Spreader ends**



Spreader end plug for continuous rigging.



Spreader end plug for V-spreader.



Spreader end plug for linked rigging (from 2008).

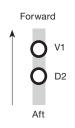


Spreader end cup for Rod Tip Cup.

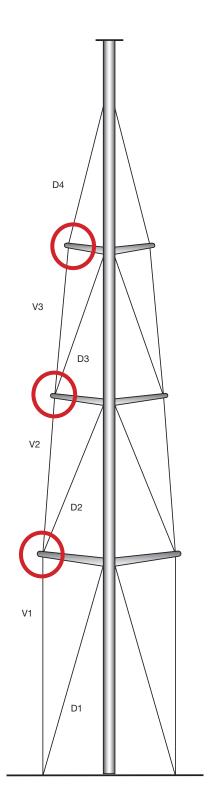
The design of the spreader ends varies with rig type, the number of spreaders, and whether the lateral rigging is linked or continuous.

## Spreader end for linked lateral rigging on 30-70 ft yachts

- Minimal distance from shroud to edge of spreader end. Makes for improved jib trim. Jib can be sheeted close to shroud.
- Large, smooth surface. Gentle on the sail. No tape required.
- No split pins to catch sails or halyards.
- Works with both wire and rod rigging featuring stemball terminals.
- Few parts. Easy to assemble.
- Vertical and diagonal loads well balanced in spreader end. Makes for less stress throughout spreader assembly.
- Lighter than tip-cup versions and most other comparable spreader ends.
- Cast stainless steel, AISI316.



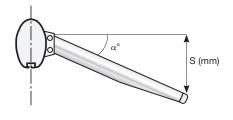
Continuous rigging: Keep shrouds tidy all the way down to the deck.

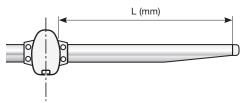


## **How to order new spreaders**

The easiest way to order new spreaders for your mast is to provide one of our dealers with the mast ID-number engraved in to the lower end of the mast section. If this ID-number is inaccessible, the following procedure will do.

- What mast section is it for?
   Measure the mast longitudinal
   and athwartships (mm) and
   compare with sections listed at
   page 10. For masts produced
   earlier than 2002 (E, D, R and P
   sections), see Version 6 of our
   catalogue, www.seldenmast.com.
- What spreader fitting? You will find a part number on the fitting.
- What length? Measure the length of the front edge of the spreader from inner end to outer end, excluding the end plug (L).
- Starboard or port spreader?
   We recommend you to order a complete pair as this will ensure that both spreaders have the same angle.
- For a multi spreader rig, what spreader do you need (lower, intermediate or upper)?
- What angle? Provide us with L and S and we will calculate the angle.







# **Spreader brackets and spreader assemblies**



Spreader brackets, C156-C193, F176-F212.



Spreader brackets, C211-C304, F212-F305.

Mast section	Bracket pair starboard and port	Spreader width, mm	Length, mm (tapered)	Spreader assembly Art. No. (1 pair) incl. clevis pins, excl. end plug	End plug Art. No.
C156	522-108-01	T-90	600 (550)	503-242-01/11	Wire Ø 4-5
C175	522-109-01		650	503-243-01/11	500-636-01
C193	522-110-01		700	503-244-01/11	
F176	522-255-01		750	503-245-01/11	Wire Ø 6-8
F194	522-255-02		800 (700)	503-246-01/11	500-640-01
F212	522-255-03		850	503-247-01/11	
			900	503-248-01/11	
			950	503-249-01/11	
			1000 (900)	503-250-01/11	
			1050	503-251-01/11	
			1100	503-252-01/11	
			1150	503-253-01/11	
			1200	503-254-01/11	
			1300 (1000)	503-255-01/11	
			1600 (1200)	503-256-01/11	
		$\downarrow$	1750	503-257-01/11	
C211	522-116-11*	T-105	600 (450)	503-341-01/02/11	Wire Ø 6
C227	522-116-13*	I	650 (600)	503-342-01/02/11	500-589-01
C245	522-116-15*		700	503-343-01/02/11	
F212	522-253-01		750	503-344-01/02/11	Wire Ø 7-8
F228	522-253-02		800	503-345-01/02/11	500-590-01
F246	522-253-03		850 (750)	503-346-01/02/11	
F265	522-253-04		900	503-347-01/02/11	Wire Ø 10
			950	503-348-01/02/11	500-591-01
			1000	503-349-01/02/11	
			1050	503-350-01/02/11	
			1100	503-351-01/02/11	
			1150 (1000)	503-352-01/02/11	
			1200	503-353-01/02/11	
			1300	503-354-01/02/11	
			1400	503-355-01/02/11	
			1500	503-356-01/02/11	
			1600	503-357-01/02/11	
			1750 (1200)	503-358-01/02/11	
		<b>\</b>	1850 (1400)	503-359-01/02/11	
C264	522-122-11*	T-131	600 (550)	503-460-01/02/11	Wire Ø 6-7
C285	522-122-13*		650 (600)	503-461-01/02/11	500-700-01
C304	522-122-15*		700	503-462-01/02/11	
F265	522-257-01		750	503-463-01/02/11	Wire Ø 8-10
F286	522-257-02		800	503-464-01/02/11	500-701-01
F305	522-257-03		850 (800)	503-465-01/02/11	
			900	503-466-01/02/11	Wire Ø 12
			950	503-467-01/02/11	500-702-01
			1000	503-468-01/02/11	
			1050	503-469-01/02/11	Wire Ø 14
			1100	503-470-01/02/11	500-703-01
			1150 (1100)	503-471-01/02/11	
			1200	503-472-01/02/11	
			1300	503-474-01/02/11	
			1400	503-476-01/02/11	
			1500	503-478-01/02/11	
			1600	503-480-01/02/11	
		\	2100 (1100)	503-481-01/02/11	

<sup>\*</sup> Compression bar to be used only if diagonal shroud is attached via fitting in mast wall (as opposed to attachment in spreader bracket).

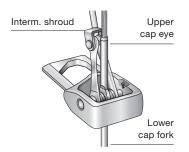
<sup>-01 =</sup> With cut-out for stemball

<sup>-02 =</sup> Without cut-out for stemball

<sup>-11 =</sup> T-spreaders for F-section

## Spreader end plugs, linked rig

Spreader width, mm dia., mm	Upper cap eye dia., mm	Lower cap eye dia., mm	Interm. s Rigging screw dimension	shroud Wire dia., mm	Art. No. Prior to 2008	Remarks	Art. No. From 2008
T-90	5	5	5/16"	4-5	500-637-04		500-998-01
	5	6	5/16"	4-5	500-637-06		
	6-7	6-7*	5/16"	4-5	500-637-05	*Ø 6: Fork hole Ø 12.5 required	
	6-7	6-7*	3/8"	5-6	500-637-01	*Ø 6: Fork hole Ø 12.5 required	
	7	8	5/16"	4-5	500-637-07		
	7	8	3/8"	5-6	500-637-08		
	7	8	7/16"	6-7	500-637-02		
	8	18-10	3/8" - 5/16"	5-6	500-637-09		
	8	8-10	7/16"	6-7	500-637-03		
T-105	7	7	5/16" - 3/8"	5-6	500-555-09		500-998-10
	7	8	5/16" - 3/8"	5-6	500-555-05		
	7	8	7/16"	6-7	500-555-01		
	8	8	3/8" - 7/16"	5-7	500-555-04		
	8-10	10	3/8" - 7/16"	5-7	500-555-08		
	8-10	10	1/2"	7-8	500-555-02		500-996-01
	10	12	7/16"	6-7	500-555-07		
	10	12	1/2"	7-8	500-555-03		
	12	12	5/8"	8-10	500-555-06		
T-131	8	8	3/8" - 7/16"	5-7	500-701-13		500-996-10
	8-10	10*	3/8" - 7/16"	5-7	500-701-10	*Ø 10: Fork hole Ø 16.5 required	
	8-10	10	1/2"	7-8	500-704-01		
	8-10	12	1/2"	7-8	500-704-02		
	12	12	1/2"	7-8	500-704-06		
	8-10	12	5/8"	8-10	500-704-12		500-994-01
	12	12-14	5/8"	8-10	500-704-05		
	12	14	1/2"	7-8	500-704-07		
	12	14	3/4"	10-12	500-704-03		
	14	14	5/8"	8-10	500-704-14		
	14	14	3/4"	10-12	500-704-08		



Linked end plug, T-90, T-105 and T-131 (prior to 2008).



Linked end plug for T-90, T-105 and T-131 (from 2008).

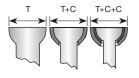
**Clevis pins and stemball terminals** 

# for spreader brackets

#### **Stemball terminals**

The lower shrouds and intermediate shrouds hanging in the spreader brackets have a stemball terminal at the upper end. This terminal is located in the cup of the spreader bracket. If required, it can be used with one or two separate cups to bring it up to the correct size for the cup. Measure the width of the complete assembly, including any cups, to ensure that all the cups are in position.

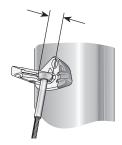
Mast	Spreader width,	Total width of stemball incl.			mm				
section	mm	any cups, mm	Art. No. Ø 4 mm	Art. No. Ø 5 mm	Art. No. Ø 6 mm	Art. No. Ø 7 mm	Art. No. Ø 8 mm	Art. No. Ø 10 mm	Art. No. Ø 12 mm
C156 C175	T-90	27.6	308-558-01	308-552-01	308-553-01	308-554-01	308-555	308-556	-
C193 C211 C227 C245	T-105		(T+C+C)	(T+C+C)	(T+C)	(T+C)	(T)	(T)	
C264 C285	T-131	35.6	-	_	308-553-02	308-554-02	308-555-02	308-556-02	308-557
C304					(T+C+C)	(T+C+C)	(T+C)	(T+C)	(T)



T = Terminal (Stemball) T+C=Terminal + Cup T+C+C=Terminal + 2 Cups

Wire diameter, mm	Art. No. Terminal+cups (radius)	Art. No. Terminal (radius)	Art. No. Cups (inner/outer radius)	Art. No. Cups (inner/outer radius)
3	308-550-03 (R9)	308-550 (R6)	306-594 (R6/9)	_
	308-550-04 (R11)			306-572 (R9/11)
4	308-558 (R9)	308-558 (R9)	-	_
	308-558-04 (R11)		306-572 (R9/11)	_
	308-558-01 (R14)			306-573 (R11/14)
5	308-552 (R9)	308-552 (R9)	-	_
	308-552-04 (R11)		306-572 (R9/11)	_
	308-552-01 (R14)			306-573 (R11/14)
6	308-553 (R11)	308-553 (R11)	-	_
	308-553-01 (R14)		306-573 (R11/14)	_
	308-553-02 (R18)			306-574 (R14/18)
7	308-554 (R11)	308-554 (R11)	-	_
	308-554-01 (R14)		306-573 (R11/14)	_
	308-554-02 (R18)			306-574 (R14/18)
8	308-555 (R14)	308-555 (R14)	-	_
	308-555-02 (R18)		306-574 (R14/18)	_
	308-555-05 (R22)			306-595 (R18/22)
10	308-556 (R14)	308-556 (R14)	-	_
	308-556-02 (R18)		306-574 (R14/18)	_
	308-556-05 (R22)			306-595 (R18/22)
12	308-557 (R18)	308-557 (R18)	-	_
	308-557-05 (R22)		306-595 (R18/22)	_
14	308-559 (R22)	308-559 (R22)	-	_





#### T-spreaders, clevis pins and split pins for spreader brackets

Spreader width, mm	Clevis pin Art. No. (dim., mm)	Split pin Art. No. (dim., mm)
T-90	165-402 (Ø 12 x 33)	301-049 (Ø 2,9 x 16)
T-105	165-505 (Ø 14 x 41)	301-053 (Ø 3,7 x 20)
T-131	165-552 (Ø 16 x 50)	301-051 (Ø 3,7 x 25)

## Sail entry,

**C-sections** 

The sail entry gate is designed for use with our MDS cars or with conventional sail slides. When using it with MDS cars, you simply remove the sail entry gate when installing or removing the cars. When using it with conventional slides, use the springloaded mid section of the sail entry gate.



#### Sail entry gate C156-C304, Art. No. 505-519-01





Sail entry gate easily removed to fit or remove Seldén MDS cars.





Sail entry gate designed for use with Seldén MDS cars or conventional sail slides. For detailed information about our conventional sail slides, please see Sailmakers Guide, www.seldenmast.com.

#### **Bolt rope extrusion and sail entry**

Sails with bolt rope can be used in our C-sections. A new sail feeder is assembled approximately 700 mm above the boom bracket. The PVC bolt rope extrusion is fed into the standard luff groove.





Mast section	Bolt rope extrusion Art. No. and length	Sail entry Art. No.
C156-C304	535-710 (6000 mm)	505-526-01

# The MDS full-batten concept

## for C-sections

See Seldén MDS in action.

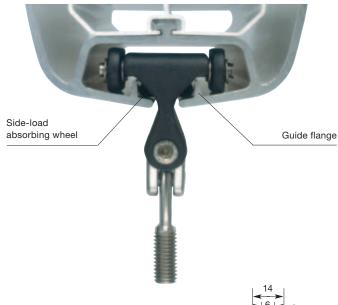


#### Full support in all directions

As the name implies, Seldén's MDS (Multi-Directional Support) cars are supported in all directions, making sail handling simpler. A full batten always creates a side load on the cars, particularly when you release the halyard for taking a reef. Each car has side-load absorbing wheels that run against the guiding flanges in the luff groove. The interaction between the mast section and the MDS car deals with longitudinal loads, as well as side loads. This is the essence of the MDS concept. Since the cars need no external track, there is also less weight aloft.

The MDS cars are easy to keep clean and are easy to install or remove from the luff groove.

The MDS system is a suitable complement to the Seldén Single Line Reef boom. With such a combination on board, you have a simple and easily manoeuvred system for handling the mainsail in all weathers.



- Breaking load 4 kN. Breaking load 6 kN. 2)
- Breaking load 9 kN.
- 3)
- Breaking load 13.5 kN. 5) Breaking load 25 kN.
- Measurement see: Fig 1.



Art. No. 511-723.

#### **Parts and RM-limits**

				Max R	M kNm			
	Mast section	Assembly Art. No.	Mon Mast- head	ohull Frac- tional	Mult Mast- head	ihull Frac- tional	Parts Art. No.	Parts Art. No.
Head- board	C156, C175 C193, C211 C227, C245	511-707-01	90	70	122	95	511-707	166-234-01
	C264 C285 C304	511-708-01	160	120	215	162	511-708	
	C321 C365	511-728-01	250	200	335	270	511-728	165-504-01
Head- board car	C156 C175 C193	511-702-041)	55	40	75	54	511-707-01	511-702-02
	C211 C227 C245	511-701-04 <sup>2)</sup>	90	70	122	95		511-701-02
	C211, C227 C245, C264 C285, C304	511-701-06 <sup>3)</sup> 511-717-06 (MDS 68 ALU)	160 330	120 250	215 440	162 330	511-708-01	
	C321 C365	511-730-06 <sup>4)</sup> (MDS 80) 511-731-06 <sup>5)</sup> (MDS 80HD)	250 550	200 450	335 750	270 600	511-728-01	511-730-02 (MDS 80) 511-731-02 (MDS 80HD)

#### **MDS 45**



Headboard assembly, Art. No. 511-702-04



Headboard assembly, Art. No. 511-701-04 Art. No. 511-717-06 (ALU)

**MDS 68/68ALU** 



**MDS 80/80HD** 

Headboard assembly, Art. No. 511-730-06 Art. No. 511-731-06 (HD)



Full-batten car, Art. No. 511-702-03



Full-batten car, Art. No. 511-701-03 Art. No. 511-717-03 (ALU)



Full-batten car, Art. No. 511-730-03/511-730-09 Art. No. 511-731-03/ 511-731-09 (HD)



Intermediate sail car, Art. No. 511-702-02 Incl. bushing for webbing, Art. No. 511-719



Intermediate sail car, Art. No. 511-701-02 Art. No. 511-717-02 (ALU) Incl. bushing for webbing, Art. No. 511-719



Intermediate sail car, Art. No. 511-730-02 Art. No. 511-731-02 (HD)

	Max RM kNm							
	Mast section	Assembly Art. No.	Mon Mast- head	ohull Frac- tional	Mult Mast- head	tihull Frac- tional	Parts Art. No.	Parts Art. No.
Batten car	C156 C175 C193	511-702-03	90	70	122	95	511-702-02	511-712-01 (M10)
		511-702-08						511-723 <sup>6)</sup>
	C211, C227 C245, C264 C285, C304	511-701-03 511-717-03 (MDS 68ALU)	160 450	120 335	215 600	162 470	511-701-02 (MDS 45)	511-712-01 (M10)
		511-701-08 (MDS 68) 511-717-08 (MDS 68ALU)						511-723 <sup>6)</sup>
	C321 C365	511-730-03 (M10) (MDS 80) 511-730-09 (M12) (MDS 80) 511-731-03 (M10) (MDS 80HD) 511-731-09 (M12) (MDS 80HD)	250 550	200 450	335 750	270 600	511-730-02 511-731-02 (MDS 80HD)	511-727-02 (M10) 511-727-01 (M12)
Sail car	C156, C175, C193 C211, C227, C245 C264, C285, C304	511-702-02	90	70	122	95	511-702-01 (MDS 45)	153-118 (0) 511-719
	C211, C227 C245, C264 C285, C304	511-701-02 <sup>2)</sup> (MDS 68) 511-717-02 (MDS 68ALU)	160 450	120 335	216 660	162 470	511-701-01 (MDS 68) 511-717-01 (MDS 68ALU)	153-117 (i) 511-719
	C321 C365	511-730-02 (MDS 80) 511-731-02 (MDS 80HD)	250 550	200 450	335 750	270 600	511-730-01 (MDS 80) 511-731-01 (MDS 80HD)	153-139



# **Keel-stepped and deck-stepped masts,**

**C-sections and F-sections** 

The T-base and deck ring systems are made to fit both Seldén's conventional mast sections and their matching furling sections. They are also made to create deck order among halyards. The blocks are fastened to the T-base or deck ring with a removable stainless steel shaft, which makes it easy to rearrange the blocks. The deck ring incorporates a state-of-the-art mast wedging system.



T-base for deck-stepped masts with integrated block fastenings. Just remove stainless steel shaft to fit up to eight blocks. A two-piece shaft is available for narrow deck layouts.

## **Keel-stepped masts,**

#### C-sections and F-sections

#### For hydraulic mast-jack systems, see page 116.

The deck ring system for keel-stepped masts has a multipurpose design. The forward composite wedge with rubber chocking is removed while bringing the mast through the deck ring. When refitted and tightened it slides down/aft and secures the mast.

The tie rod has four fixed settings, each with plenty of leeway for adjustment.

The T-base for keel-stepped masts can be adjusted longitudinally (fore-and-aft) with the mast still in place. Just ease off the rigging and turn the adjusting screw of the T-base until the required prebend and rake are achieved.

The underside of the heel plug is convex, in order to allow rake without subjecting the mast section to point loading.



Remove the wedge.



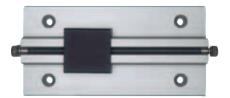
Step the mast and replace the wedge.



Secure the mast by tightening the nut on the wedge.



Block stand-up, rubber.



Adjustable T-base. Adjusts easily with mast still in place.



Convex underside of heel plug – distributes compression load evenly on the mast section.

#### **Deck ring system**

	Deck ring, incl.						Shaped rub	ber wedges
Mast section	4 halyard attachments + axle for integrated blocks*, (dim., mm)	Separate block- axle	Separate 2-piece block axle	Locking screw for block axle	Block stand-up rubber	Wedge	Fore 1 off	Aft 2 of
C156	533-030-01 (275 x 240)	166-274	-	155-624	319-512	530-208	530-209	530-221
C175, F176	533-029-01	166-270	-				530-210	530-213
C193, F194	(316 x 242)						530-209	530-212
C211, F212	533-022-01	166-221	166-260-01		319-669		530-210	530-213
C227, F228	(349 x 300)						530-209	530-212
C245, F246	533-023-01	166-224	166-261-01		319-680	530-211	530-210	530-213
C264, F265	(401 x 344)						530-209	530-212
C285, F286	533-024-01			155-609		530-214	530-210	530-213
C304, F305	(450 x 372)						530-209	530-212
C321, F324	533-039-01 (520 x 382)	166-295	n/a	153-014		530-216	530-241	530-242
C365, F370	533-038-01 (573 x 410)	166-229	n/a			530-218	C365 530-245 F370 530-241	
F406	533-036-01 (603 x 403)	n/a	n/a	n/a	n/a	n/a	530-575	530-575

<sup>\*</sup> Blocks are not included.



Deck ring with moulded mast coat.

Tie rods with four fixed settings - plenty of leeway for adjustment.



# **Mast coats (moulded),** C-sections and F-sections C-sections and F-sections

Mast	Mast coats	Hose clips	s, Art. No.		
section	Art. No.	Upper	Lower		
C156	530-053	312-201	312-204		
C175, F176	530-054	312-202	312-205		
C193, F194	530-055	312-203	312-206		
C211, F212	530-056				
C227, F228		312-204			
C245, F246	530-058		312-206		
C264, F265		312-205			
C285, F286	530-060		2 x 312-203		
C304, F305		312-207			
F324	530-038 + 530-040 (canvas)	-	2 x 312-205		

Replacement coats,
Can be fitted with the mast stepped.

Section	Repl. coat	Section	Repl. coat
C156	530-053-51	C245, F246	530-058-51
C175, F176	530-054-51	C264, F265	530-058-51
C193, F194	530-055-51	C285, F286	530-060-51
C211, F212	530-056-51	C304, F305	530-060-51
C227, F228	530-056-51		

Tie-	rod		T-base					
Tie-rod fittings	Cover	Adjustable	T mm	Fixed	T mm			
508-259-01	508-260	510-152-01	12	-	-			
		510-134-01		510-136	33			
		510-143-01	20	510-141	44			
508-259-03		510-125-02	45	-	-			
		-		-	-			
Tie rod fitted to keelson	-	510-190-01	70	-	-			



# **Deck-stepped masts,**

## **C-sections and F-sections**







Stainless rail, Art. No. 508-727, 508-728 and 508-179

Block stand-up, stainless. Art. No. 308-017.



Block stand-up, rubber. Art. No. small 319-512. Art. No. medium 319-669. Art. No. large 319-680.

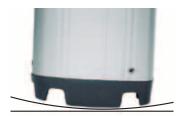
#### T-base

Mast section	T-base (dim., mm)	Rail (stainless) for attaching block, (dim., mm)	Plug	Cable hose (Ø 48 mm)	Block stand-up stainless spring
C211, F212 C227, F228 C245, F246	510-136-01 (275 x 125)	508-727 (285 x 135)	319-649	319-620-02	308-017
C264, F265 C285, F286 C304, F305	510-141-01 (380 x 160)	508-728 (390 x 180)			
C321, F324 C365, F370	510-125-01 (480 x 180)	508-179 (415 x 190)	-	-	-

## T-base with integrated block attachment

Mast section	T-base, including halyard attachment + axle for integrated blocks*, (dim., mm)	Separate block axle	Separate 2-piece block axle	Locking screw for block axle	Block stand-up rubber	Cable hose
C156	510-157-01	166- 272	_	155-807	319-512	319-639-01
C175, F176	(225 x 151)					(Ø42 mm)
C193, F194						
C211, F212	510-135-01	166-221	166-260-01	155-624	319-669	319-620-02
C227, F228	(300 x 220)					(Ø48 mm)
C245, F246						
C264, F265	510-142-01	166-228	166-262-01	155-613	319-680	
C285, F286	(388 x 264)					
C304, F305						

<sup>\*</sup> Blocks are not included.



Convex underside of heel plug distributes compression load evenly on the mast section.



Small protrusion on top side of heel plug - acts as spacer for cable conduit. Allows cables to run freely.



Plugged T-base with built-in block fittings. Cables exit through mast heel for deck connections.



They may also exit straight through the heel plug for deck connections.



# **Deck ring system for larger keel-stepped masts**

The opening is held by a sturdy O-ring, squeezed vertically between two deck rings. The lower deck ring is permanently bolted to the deck head. When in place, it allows sufficient mast movement in all directions.



## **Deck rings**

Mast section	Art. No.	(dim, mm)	Remarks
C321	533-016-01	(358 x 202)	Rails and tie-rods cannot
E365	533-019-01	(405 x 225)	be integrated.
F324	533-016-01	(358 x 202)	
R370	533-019-01	(405 x 225)	
F406	533-036-01	(583 x 383)	

#### **Mast coats**

Mast section	Deck ring size, mm	Inner sealing coat Art. No.	Outer canvas coat Art. No.
C321	358 x 202	530-038	530-040
E365	405 x 225	530-039	530-041
F324	358 x 202	530-038	530-040
R370	405 x 225	530-039	530-041
F406	583 x 383	530-069	-

# **Winch pads**

The Seldén winch pads fit all mast sections and are easy to install. Each winch pad is labelled with instructions for fitting to winch bases. The pads have a 5° angle to prevent override on the winch (reefing winch pads 15°). They are corrosion insulated with plastic insulating sheet and have well-rounded corners to avoid sail chafe. Seldén offers winch pads for halyard winches and reefing winches.





	, , , , , , , , , , , , , , , , , , , ,				15° Reefing winc insulating sheet	h pads incl.	Stopper pad
Art. No.	523-043-01	523-041-01	523-042-01	523-044-01	-	523-045-01	523-048-01
					523-057-01*	523-056-01*	
Dimension, mm	85 x 85	110 x 110	140 x 140	180 x 180	100 x 100	140 x 140	150 x 106
Safe working load	3 kN	5 kN	10 kN	15 kN	5 kN	10 kN	20 kN
Max. winch							
Andersen		6, 10, 12 ST, 16 ST	28, 28 ST 40, 40 ST		6, 10, 12 ST 16	28, 28 ST 40, 40 ST	
Lewmar		6, 7 ,8	16, 26, 30, 30 ST 40, 40 ST		6, 7, 8	16, 26, 30, 30 ST 40, 40 ST	
Seldén				R30, R40, R46, R52			

ST = Self tailing

## **Cleats**



Art. No.	Material	C-C, mm	Length, mm	Fasterners included in kit
511-030-01	Composite	19	110	2 rivets, Ø 4.8
511-016-02	Composite	40	145	2 screws, MRT 6 x 16*
511-015-02	Aluminium	42	165	2 screws, MRT 6 x 16*
511-025-02	Aluminium	53	195	2 screws, MRT 6 x 16*
511-031-02	Composite	42	156	2 screws, MRT 6 x 25*

<sup>\*</sup> Self tapping screws.

<sup>\*</sup> For C-sections with wider luff-grooves.

Art. No. 511-031-02.



# **Cross beams for catamarans**



Non-Slip area on top of the cross beam.



The bridle wire is secured in a slot on top of the bridle support. All prepared for navigational lights.



Fitting for anchor or tender.



Hull brackets can articulate to absorb movements between the hulls and the beam.



Snap-in trampoline sliders



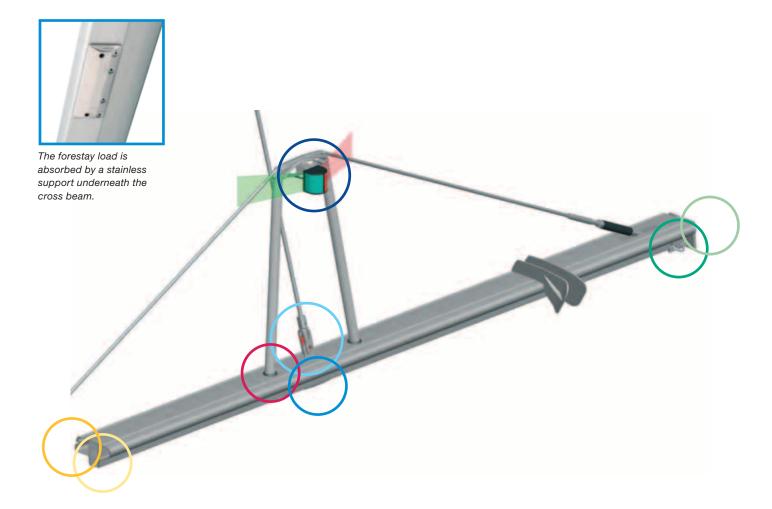
Slider



The cable from the navigational light is fed into the cross beam...



...and in to the cable conduit.



Our cross beams for catamarans are designed to be more than just a structural connection between the hulls. Integrated cable conduits, fittings for navigational lights and a clever attachment for the trampoline are good examples of details appreciated by the boat builders.

Forestay dimension, Ø mm	Forestay fitting, hole diameter, Ø mm	Max length between hulls, mm	Bridle wire, Ø mm	Description of the system
10	16	6400	12	XB240-FS10-6400
12	19	5900	14	XB240-FS12-5900







# **BOOMS** and Rodkickers

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Rodkicker brackets	71

For hydraulic boom vangs, see page 114

## **Booms with a strong profile**

Seldén booms have a wealth of sophisticated features and can be equipped with a variety of reefing systems to suit different boats and the needs of different sailors. The booms can be fitted for traditional slab reefing or Single Line Reef, or be used for furling masts. The boom extrusions are relatively deep in relation to their width, allowing a lighter extrusion with high resistance to vertical bending. This makes them perfect for use with modern, stiff sailcloth and efficient Rodkicker rigid vangs.

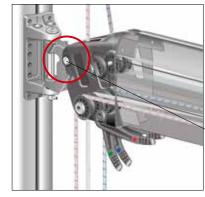
#### **Inboard end**

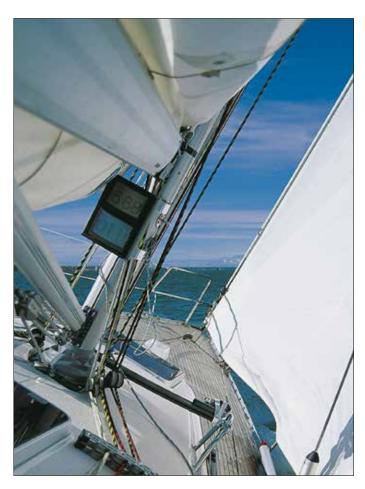
The inboard end fitting contains sheaves for reef lines and outhaul. Spring loaded rope stoppers can be fitted to the inboard end as option. Every stopper is colour-coded to match the relevant line. The clevis pin connecting the inboard end to the boom toggle has a D-shaped head in order to prevent rotation.

#### A perfect end

The boom end is gently rounded. It is fastened with

screws and is open at the back to facilitate maintenance and line replacement. It comes with a cast preventer bracket, a topping lift eye and numbered line compartments.

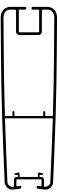




D-shaped head ot clevis pin. See spare parts list for details.

	Boom section	Dim., mm height/widht	l <sub>y</sub> cm <sup>4</sup>	l <sub>x</sub> cm <sup>4</sup>	Wall thickness mm	Weight kg/m	W <sub>y</sub> <sup>min</sup> cm <sup>3</sup>	W <sub>x</sub> <sup>min</sup> cm <sup>3</sup>	Sail groove mm
	B087	87/60	60.2	27.7	2.0	1.70	13.4	9.3	4.5
	B104	104/60	97.5	33.6	2.0	1.90	18.5	11.2	4.5
	B120	120/62	155	42.5	1.8	2.12	24.8	13.7	$5.5 \pm 0.75$
arino	B135	135/71	265	70	2.0-2.8	2.66	39	19.5	$5.8 \pm 0.75$
/ 4 \	B152	152/82	433	126	2.5-2.9	3.59	54.2	30.4	$5.8 \pm 0.75$
Υ	B171	171/94	726	189	2.3-3.2	4.66	80.6	41.2	$5.5 \pm 0.75$
	B200	200/117	1280	343	3.1	5.88	121.5	61.3	$6.25 \pm 0.75$
V.	B250	250/140	2706	692	3.2	7.95	200.1	101.3	6.25 ± 0.75
X	B290	290/155	5209	1524	4.1	11.50	339	196	10.25 ± 0.75
	B380	380/186	12030	3283	4.5-9.0	17.80	586	353	No groove





## Seldén racing booms

Developed jointly with sailors and designers in the World Match Racing Tour. Deep boom profile for maximum vertical stiffness. This retains sail trim, even at very high kicker and sheet loads.

	Boom section	Dim., mm height/width	l <sub>y</sub> cm <sup>4</sup>	I <sub>x</sub> cm <sup>4</sup>	Wall thickness mm	Weight kg/m	$W_{y^{min}}$ cm $^3$	$W_{x^{min}}$ cm $^3$	Sail groove mm
ŒŊ	B190	190/60	732	94	2.5-3.5	4.86	74	31	5.5±0.75
v v	B230	230/70	1399	176	2.7-3.6	6.53	117.8	50.5	6.25±0.75

# **Light booms in carbon fibre**



Seldén supply carbon booms that harmonise with its carbon mast range. Carbon booms offer weight savings of up to 35% compared to aluminium. This means that boom weight on a typical 35 ft boat is reduced from 30 kg to just 20 kg.

A lighter boom makes gybing less dramatic, as the boom has less momentum. This has a positive effect on the whole boat, especially with regard to the service life of the mainsheet attachment.

A lighter boom also reduces the tendency of the boat to roll when sailing downwind and it improves the effect of the Rodkickers' gas spring. The section modulus of a carbon boom is twice as high as that of an aluminium boom with the same weight per meter. A stiff boom makes for improved trim and thus higher boat speed.

Boats that sail IRC, and which are already fitted with a carbon mast, suffer no further rating penalty by upgrading to a carbon boom.







#### **End fittings**

In order to reduce weight, while still providing sheaves for single line reefing, we have made the inboard end fitting as short as possible. The outboard end, which is integrated into the carbon section, is finished with a carbon cover plate.

#### Vang attachment

The carbon booms feature hand laid local reinforcement in the vang attachment area.

#### **Mainsheet attachment**

The mainsheet block is attached using a Dyneema® strop that passes through an aramid tube in the boom. Stainless steel bushings at either end of the tube prevent wear, while local carbon reinforcement provides the extra strength required. Booms with "German" split mainsheet systems have fastening positions for blocks at the inboard end, and two webbing strops to hold up the mainsheet.

## **Reefing options**

Carbon booms can be supplied ready for conventional slab or single line reefing. Clutches can be integrated into the inboard end if you do not wish to lead the reef lines to the cockpit.

#### **Outhaul**

We offer two outhaul systems. The standard version features a Dyneema® outhaul line for leading back to the cockpit. It is also available as an internal, geared cascade system with an outhaul line leading to the cockpit or to a block and cam cleat mounted on the underside of the inboard end. This cascade system is not available with single line reefing.

	Boom section	Section dim.	El <sub>y</sub> GNmm²	El <sub>x</sub> GNmm²	Wall thickness	Weight	W <sub>y</sub> cm³	W <sub>x</sub> cm <sup>3</sup>
X	BC154-30	158/87	292	92	3	2.1	50	30
	BC174-30	179/93	492	120	3	2.5	71	37
1 1 \	BC194-42	198/103	844	235	4.2	3.6	109	61
Ť	BC244-42	249/127	1627	448	4.2	4.4	166	95

## **Reefing systems**

#### Traditional slab reef

This is a simple and efficient reefing system. The reef cringle on the luff is hooked on to fixed hooks at the inboard end. The leech is reefed down with a line running to a winch at the mast. Stoppers at the inboard end allow the same winch to be used with any line on the boom. Lines not in use are kept clear of the winch by a lineguide. Alternatively, the line can lead aft to a cockpit winch.

The boom can also be equipped for slab reefing with hooks on lines. This system is suitable for larger yachts where it can be difficult to hook the reef cringle to a fixed hook in heavy winds.

## S-Hooks for slab reef or Cunningham

Art. No.	Diameter, mm	Ultimate load, N
307-407	6	5000
307-408	8	6500
307-410	10	9500

# Instant reefing with Single Line Reef

Single Line Reef is a familiar concept, but made practical and reliable by Seldén. All you do is ease off the halyard to premarked reefing points and then haul in on the reefing line. The luff and the leech are reefed at the same time. A system of guided blocks inside the boom ensures that the lines do not tangle. The system has a 2:1 gear ratio, making reefing fast and simple, without having to leave the cockpit.

## Seldén furling mast

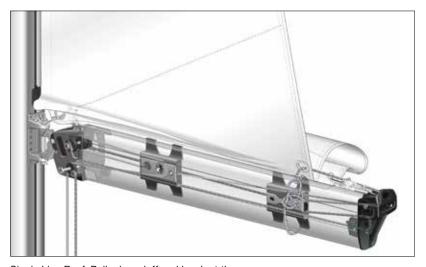
When used with a furling mast, the booms are fitted with low friction outhaul cars. The cars are equipped with horizontal and vertical wheels, enabling them to absorb forces from every direction.



Slab reefing with fixed hooks.



Slab reefing with running S-hooks.



Single Line Reef. Pulls down luff and leech at the same time. Operated from the safety of the cockpit.



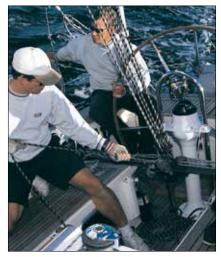
Boom fitted with outhaul car for Seldén furling mast.



## **Single Line Reef**



Release the Rodkicker.



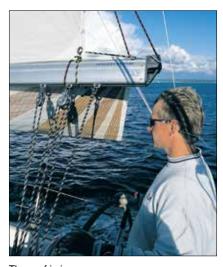
Slacken the mainsheet.



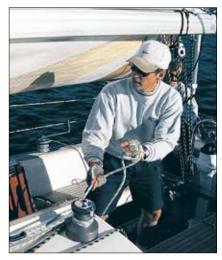
Ease off the main halyard to premarked reefing points.



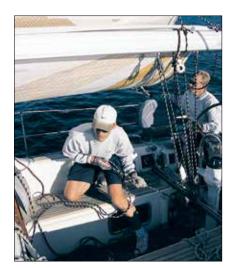
Tension the reef line up to the marked position on the line.



The reef is in.
Remove any slack in other reefs.



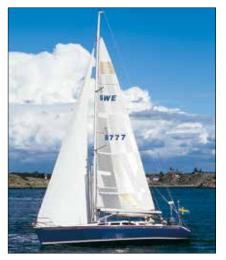
If necessary, apply more main halyard tension.



Adjust the mainsheet.



Adjust the Rodkicker.

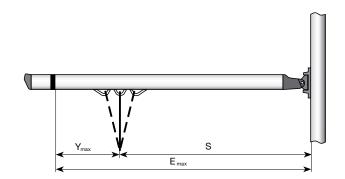


It's as simple as that!

# **Boom sections choice**

To select the correct boom section, you will need to know the sail foot length (E) and righting moment (RM). If the RM is not known, displacement is an alternative.

The E and Y measurements must also be known for dimensioning purposes. The length of the boom is sometimes determined by other factors than E and therefore we need the S measurement aswell. A good example is when the boom extrusion needs an overlength to allow the main sheet to pass a sprayhood.



## Masthead rigs, $E_{max}$ and $Y_{max}$ (m)

	tion	В	87	B1	04	B1	20	B1	35	B1	52	B1	71	B2	200	B2	250	B2	290	ВЗ	880
RM 30 kNm	Displ. tonnes	$\textbf{E}_{\text{max}}$	$\mathbf{Y}_{\text{max}}$	$\textbf{E}_{\text{max}}$	$Y_{\text{max}}$	$\textbf{E}_{\text{max}}$	$\mathbf{Y}_{\text{max}}$	$\textbf{E}_{\text{max}}$	$Y_{\text{max}}$	$\textbf{E}_{\text{max}}$	$\mathbf{Y}_{\text{max}}$	$\textbf{E}_{\text{max}}$	Y <sub>max</sub>								
6	1.2	3.3	1.7	4.0	1.8	4.1	2.1														
8	1.6	3.3	1.4	4.0	1.6	4.1	1.8	4.6	2.5												
10	2.0	3.3	1.3	4.0	1.4	4.1	1.6	4.6	2.2												
12	2.4	2.9	1.2	4.0	1.3	4.1	1.5	4.6	2.0	5.6	2.9										
14	2.8	2.6	1.1	3.5	1.2	4.1	1.4	4.6	1.9	5.6	2.7										
16	3.2			3.2	1.1	4.1	1.3	4.6	1.8	5.6	2.5	6.1	3.3								
18	3.6			3.0	1.1	4.1	1.2	4.6	1.7	5.6	2.4	6.1	3.1								
20	4.0			2.8	1.0	3.8	1.1	4.6	1.6	5.6	2.3	6.1	3.0								
25	5.0			2.4	0.9	3.3	1.0	4.6	1.4	5.6	2.0	6.1	2.7								
30	5.7					2.9	0.9	4.5	1.3	5.6	1.9	6.1	2.4	6.6	3.7						
35	6.3					2.6	0.9	4.0	1.2	5.6	1.7	6.1	2.3	6.6	3.4						
40	7.0							3.7	1.1	5.1	1.6	6.1	2.1	6.6	3.2						
45	7.7							3.4	1.1	4.7	1.5	6.1	2.0	6.6	3.0						
50	8.2							3.2	1.0	4.4	1.4	6.1	1.9	6.6	2.8						
55	9.0									4.1	1.4	6.1	1.8	6.6	2.7						
60	10									3.9	1.3	5.7	1.7	6.6	2.6						
70	11									3.5	1.2	5.1	1.6	6.6	2.4	7.6	3.7				
80	12									3.2	1.1	4.7	1.5	6.6	2.2	7.6	3.5				
90	14									2.9	1.1	4.3	1.4	6.5	2.1	7.6	3.3				
100	15									2.7	1.0	4.0	1.3	6.0	2.0	7.6	3.1				
110	16											3.7	1.3	5.7	1.9	7.6	3.0				
120	18											3.5	1.2	5.3	1.8	7.6	2.8				
130	19											3.3	1.2	5.0	1.8	7.6	2.7	8.5	4.3		
140	20											3.2	1.1	4.8	1.7	7.6	2.6	8.5	4.1		
150	22													4.6	1.6	7.5	2.5	8.5	4.0		
160	23													4.4	1.6	7.2	2.5	8.5	3.8		
170	25													4.2	1.5	6.9	2.4	8.5	3.7	12	6.1
180	26													4.0	1.5	6.6	2.3	8.5	3.6	12	5.9
190	27													3.9	1.5	6.4	2.3	8.5	3.5	12	5.8
200	28													3.7	1.4	6.1	2.2	8.5	3.4	12	5.6
220	31															5.7	2.1	8.5	3.3	12	5.4
240	34															5.4	2.0	8.5	3.1	12	5.1
260																		8.5	3.0	12	4.9
280																		8.2	2.9	12	4.7
300																		7.9	2.8	12	4.6
320																				12	4.4
340																				12	4.3
360																				12	4.2
380																				11.6	4.1
400																				11.2	4.0



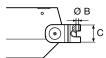
# Fractional rigs, $\textbf{E}_{\text{max}}$ and $\textbf{Y}_{\text{max}}$ (m)

Sec	tion	В	)87	B1	04	B1	20	B1	35	B1	52	B1	71	B2	200	B	250	B2	90	ВЗ	380
RM 30 kNm	Displ. tonnes	$\textbf{E}_{\text{max}}$	$Y_{\text{max}}$	$\textbf{E}_{\text{max}}$	$\mathbf{Y}_{\text{max}}$	$\textbf{E}_{\text{max}}$	$\mathbf{Y}_{\text{max}}$	$\textbf{E}_{\text{max}}$	$\mathbf{Y}_{\text{max}}$	$\textbf{E}_{\text{max}}$	$Y_{\text{max}}$	$\textbf{E}_{\text{max}}$	$\mathbf{Y}_{\text{max}}$	$\textbf{E}_{\text{max}}$	$\mathbf{Y}_{\text{max}}$	$\textbf{E}_{\text{max}}$	$Y_{\text{max}}$	$\textbf{E}_{\text{max}}$	$\mathbf{Y}_{\text{max}}$	$\textbf{E}_{\text{max}}$	Y <sub>max</sub>
6	1.2	3.4	1.4	4.1	1.6	4.1	1.8														
8	1.6	3.3	1.2	4.1	1.4	4.1	1.6	4.6	2.1												
10	2.0	2.8	1.1	3.7	1.2	4.1	1.4	4.6	1.9												
12	2.4	2.5	1.0	3.3	1.1	4.1	1.3	4.6	1.8												
14	2.8	2.2	0.9	3.0	1.0	4.1	1.2	4.6	1.6	5.6	2.3										
16	3.2	2.0	0.9	2.7	1.0	3.7	1.1	4.6	1.5	5.6	2.1										
18	3.6			2.5	0.9	3.4	1.0	4.6	1.4	5.6	2.1	6.1	2.7								
20	4.0					3.2	1.0	4.6	1.4	5.6	2.0	6.1	2.6								
25	5.0					2.7	0.9	4.3	1.2	5.6	1.7	6.1	2.3	6.6	3.4						
30	5.7							3.8	1.1	5.2	1.6	6.1	2.1	6.6	3.1						
35	6.3							3.4	1.0	4.7	1.5	6.1	1.9	6.6	2.9						
40	7.0							3.1	1.0	4.3	1.4	6.1	1.8	6.6	2.7						
45	7.7									3.9	1.3	5.8	1.7	6.6	2.6						
50	8.2									3.7	1.2	5.4	1.6	6.6	2.4						
55	9.0									3.4	1.2	5.1	1.5	6.6	2.3	7.6	3.6				
60	10									3.2	1.1	4.8	1.5	6.6	2.2	7.6	3.5				
70	11									2.9	1.0	4.3	1.4	6.5	2.1	7.6	3.2				
80	12											3.9	1.3	5.9	1.9	7.6	3.0				
90	14											3.6	1.2	5.4	1.8	7.6	2.8				
100	15											3.3	1.1	5.0	1.7	7.6	2.7				
110	16											3.1	1.1	4.7	1.6	7.6	2.6				
120	18													4.4	1.6	7.3	2.4				
130	19													4.2	1.5	6.9	2.3	8.5	3.7		
140	20													4.0	1.5	6.6	2.3	8.5	3.5		
150	22													3.8	1.4	6.2	2.2	8.5	3.4		
160	23													3.6	1.4	6.0	2.1	8.5	3.3		
170	25													3.5	1.3	5.7	2.1	8.5	3.2	12.0	5.2
180	26													3.3	1.3	5.5	2.0	8.5	3.1	12.0	5.1
190	27													3.2	1.3	5.3	1.9	8.5	3.0	12.0	5.0
200	28															5.1	1.9	8.5	3.0	12.0	4.8
220	31															4.8	1.8	8.1	2.8	12.0	4.6
240	34															4.5	1.7	7.6	2.7	12.0	4.4
260																		7.2	2.6	12.0	4.2
280																		6.8	2.5	11.9	4.1
300																		6.5	2.4	11.4	3.9
320																				10.9	3.8
340																				10.4	3.7
360																				10.0	3.6
380																				9.6	3.5
400																				9.3	3.4

# **Booms for slab reef,**

# **Single Line Reef and furling masts**

After you have determined the correct boom section for your yacht (previous tables), all you have to do is decide what kind of reefing system you prefer. Then check the tables below to find the complete boom in question. If you are in any doubt about which boom to choose, please contact your Seldén dealer for expert advice. When fitting a Seldén boom to a mast of another brand, check the existing toggle's dimensions for compatibility.



\* Boom connects directly to gooseneck bracket. (B190 and B230)

# C A

B087-B300

#### Inboard end

Boom section	A mm	B mm	C mm
B087	8	8	16
B104	8	8	16
B120	14	10	20
B135	14	12	20
B152	14	12	20
B171	16	12	20
B200	20	16	30
B250	18	16	30
B290	30	16	30
B190*	-	12.2	78
B230*	-	12.2	78

# Booms for furling masts

Art. No.	Boom section	E <sub>max</sub> mm
BS 120-72	B120	3605
BS 120-73		4105
BS 135-72	B135	4055
BS 135-73		4555
BS 152-73	B152	4555
BS 152-74		5055
BS 152-75		5555
BS 171-71B	B171	4575
BS 171-72B		5075
BS 171-73B		5575
BS 171-74B		6175
BS 200-71B	B200	5605
BS 200-72B		6705
BS 250-71B	B250	5610
BS 250-72B		6110
BS 250-73B		7110
BS 250-74B		7610
BS 290-71	B290	6885
BS 290-73		8385

#### **Slab reef and Single Line Reef booms**

Art. No.	Boom section	E <sub>max</sub> mm	Remarks
BS 087-01	B087	3365	Outhaul (2:1) + 2 reefs, aft
BS 087-21		3365	Outhaul (4:1) + 2 reefs, cam cleats
BS 087-61		3365	Outhaul (2:1) + 2 Single Line Reef, aft
BS 104-01	B104	3515	Outhaul (2:1) + 2 reefs, aft
BS 104-02		4015	Outhaul (2:1) + 2 reefs, aft
BS 104-21		3515	Outhaul (4:1) + 2 reefs, cam cleats
BS 104-22		4015	Outhaul (4:1) + 2 reefs, cam cleats
BS 104-61		3515	Outhaul (2:1) + 2 Single Line Reef, aft
BS 104-62		4015	Outhaul (2:1) + 2 Single Line Reef, aft
BS 120-02B	B120	3540	Outhaul (3:1) + 2 reefs, aft
BS 120-03B		4040	Outhaul (3:1) + 2 reefs, aft
BS 120-22		3635	Outhaul (3:1) + 2 reefs, jam levers
BS 120-23		4135	Outhaul (3:1) + 2 reefs, jam levers
BS 120-62		3635	Outhaul (3:1) + 2 Single Line Reef, aft
BS 120-63		4135	Outhaul (3:1) + 2 Single Line Reef, aft
BS 135-02	B135	4105	Outhaul (3:1) + 2 reefs, aft
BS 135-03		4605	Outhaul (3:1) + 2 reefs, aft
BS 135-22		4105	Outhaul (3:1) + 2 reefs, jam levers
BS 135-23		4605	Outhaul (3:1) + 2 reefs, jam levers
BS 135-62		4105	Outhaul (3:1) + 2 Single Line Reef, aft
BS 135-63		4605	Outhaul (3:1) + 2 Single Line Reef, aft
BS 152-03	B152	4605	Outhaul (3:1) + 3 reefs, aft
BS 152-04		5105	Outhaul (3:1) + 3 reefs, aft
BS 152-05		5605	Outhaul (3:1) + 3 reefs, aft
BS 152-23		4605	Outhaul (3:1) + 2 reefs, jam levers
BS 152-24		5105	Outhaul (3:1) + 2 reefs, jam levers
BS 152-25		5605	Outhaul (3:1) + 2 reefs, jam levers
BS 152-63		4605	Outhaul (3:1) + 2 Single Line Reef, aft
BS 152-64		5105	Outhaul (3:1) + 2 Single Line Reef, aft
BS 152-65		5605	Outhaul (3:1) + 2 Single Line Reef, aft
BS 171-01B	B171	4625	Outhaul (3:1) + 3 reefs, aft
BS 171-02B		5125	Outhaul (3:1) + 3 reefs, aft
BS 171-03B		5625	Outhaul (3:1) + 3 reefs, aft
BS 171-04B		6225	Outhaul (3:1) + 3 reefs, aft
BS 171-21B		4625	Outhaul (3:1) + 3 reefs, jam levers
BS 171-22B		5125	Outhaul (3:1) + 3 reefs, jam levers
BS 171-23B		5625	Outhaul (3:1) + 3 reefs, jam levers
BS 171-24B		6225	Outhaul (3:1) + 3 reefs, jam levers

Art. No.	Boom section	E <sub>max</sub> mm	Remarks
BS 171-61B	B171	4625	Outhaul (3:1) + 2 Single Line Reef, aft
BS 171-62B		5125	Outhaul (3:1) + 2 Single Line Reef, aft
BS 171-63B		5625	Outhaul (3:1) + 2 Single Line Reef, aft
BS 171-64B		6225	Outhaul (3:1) + 2 Single Line Reef, aft
BS 200-01B	B200	5665	Outhaul (4:1) + 3 reefs, aft
BS 200-02B		6765	Outhaul (4:1) + 3 reefs, aft
BS 200-21B		5665	Outhaul (4:1) + 3 reefs, jam levers
BS 200-22B		6765	Outhaul (4:1) + 3 reefs, jam levers
BS 200-61B		5665	Outhaul (4:1) + 2 Single Line Reef, aft
BS 200-62B		6765	Outhaul (4:1) + 2 Single Line Reef, aft
BS 230-01	B230	4540	Outhaul + 2 reefs, aft
BS 230-02		4940	Outhaul + 2 reefs, aft
BS 230-03		5440	Outhaul + 2 reefs, aft
BS 230-04		5940	Outhaul + 2 reefs, aft
BS 230-61		4540	Outhaul + 2 Single Line Reef, aft
BS 230-62		4950	Outhaul + 2 Single Line Reef, aft
BS 230-63		5440	Outhaul + 2 Single Line Reef, aft
BS 230-64		5940	Outhaul + 2 Single Line Reef, aft
BS 250-01B	B250	5670	Outhaul (4:1) + 3 reefs, aft
BS 250-02B		6170	Outhaul (4:1) + 3 reefs, aft
BS 250-03B		7170	Outhaul (4:1) + 3 reefs, aft
BS 250-04B		7670	Outhaul (4:1) + 3 reefs, aft
BS 250-21B		5670	Outhaul (4:1) + 3 reefs, jam levers
BS 250-22B		6170	Outhaul (4:1) + 3 reefs, jam levers
BS 250-23B		7170	Outhaul (4:1) + 3 reefs, jam levers
BS 250-24B		7670	Outhaul (4:1) + 3 reefs, jam levers
BS 250-61B		5670	Outhaul (4:1) + 2 Single Line Reef, aft
BS 250-62B		6170	Outhaul (4:1) + 2 Single Line Reef, aft
BS 250-63B		7170	Outhaul (4:1) + 2 Single Line Reef, aft
BS 250-64B		7670	Outhaul (4:1) + 2 Single Line Reef, aft
BS 290-01	B290	6885	Outhaul + 2 reefs, aft
BS 290-03		8385	Outhaul + 2 reefs, aft
BS 290-61		6885	Outhaul (3:1) + 2 Single Line Reef, aft
BS 290-63		8385	Outhaul (3:1) + 2 Single Line Reef, aft

Aft = Lines to cockpit. Jam levers/cam cleats = Lines operated at gooseneck.

# **Boom brackets**

## **Boom brackets,** E-sections, D-sections and R-sections

Fitting	Mast section	Boom bracket Art. No.	Boom type	Boom section	Dimension, mm	Fasteners Art. No.	Separate pin, hooks Art. No.	
	For pear- shaped mast sections P100, P111	508-052-11 508-052-12	Single line reef (no hooks) Slab reef (with hooks)	B087 B104	Bracket Height: 80 Width: 63 Back angle: 45 Toggle Width: 13 Hole: Ø 8.2	4 pop rivets 167-004	Pin incl. reef hooks: 536-101-01	
***		508-052-13 508-052-14	Single line reef (no hooks) Slab reef (with hooks)	B120	<b>Toggle</b> Width: 20 Hole: Ø 10			
	D109, D121 D129, D137 D146, D160 E122, E130 E138, E155 E170, E177, E189	508-040-07 508-040-01	Slab reef (with hooks) Single line reef (no hooks)	B120 111/75 128/90	Bracket Height: 138 Width: 44 Back angle: 10° Toggle Width: 20 Hole: Ø 10.5	8 pop rivest 167-002	Pin incl. reef hooks: 536-102-01	
	E170, E177 E189, E206 E224, E237 E274	508-168-53 508-168-52	Slab reef (with hooks) Single line reef (no hooks)	143/76 B171	Bracket Height: 179 Width: 63 Back angle: 10° Toggle Width: 20	12 pop rivets 167-027	Separate reef hooks: 536-113-01 Max. RM. Masthead 60 kNm Fractional 45 kNm	
	R190, R213 R235	508-168-21	Furling mast RA (no hooks)		Hole: Ø 12.5	12 pop rivets 167-002		
•	E189, E206 E224, E237 E274	508-152-03	Slab reef (with hooks)	B200	Bracket Height: 275 Width: 70	200/117 boom: 18 pop rivets 167-027	Separate reef hooks: 507-651 Max. RM.	
	E206, E224, E237, E274 E321, E365	508-152-23		B250	Back angle: 10°  Toggle  Width: 30	250/140 boom: 18 screws 155-803 +	Masthead 120 kNm Fractional 90 kNm	
	E189, E206 E224, E237 E274	508-152-02	Single line reef (no hooks)	B200	Hole: Ø 16.5	2 screws 162-024 +		
	E206, E224, E237, E274 E321, E365	508-152-22		B250		backing plate	_	

## **Boom brackets,** C-sections and F-sections

Fitting	Mast section	Boom bracket Art. No.	Boom type	Boom section	Dimension, mm	Fasteners Art. No.	Separate pin, hooks Art. No.				
	C156-C193	508-788-03	Single line reef (no hooks)	B087 B104	Bracket Height: 130 Width: 55	10 pop rivets 167-006	536-118				
		508-788-05	Slab reefing (with hooks)		Toggle (AL) Width: 15 Hole: Ø 8						
		508-788-04	Single line reef (no hooks)	B120	Toggle (AL) Width: 20 Hole: Ø 10		536-119				
		508-788-06	Slab reefing (with hooks)								
	F176-F194 C156-C193	508-231-33	Furling mast	B120	Bracket Height: 160	· ·	536-113-01 Max. RM:				
0		508-231-34	Single line reef (no hooks)		Width: 61 Toggle (AL) Width: 20		Masthead 55 kNm Fractional 40 kNm				
	5040 5040	508-231-35	Slab reefing (with hooks)	D400	Hole: Ø 12.5						
	F212-F246 C211-C245	508-257-33	Furling mast  Single line reef (no hooks)	B120	<b>Bracket</b> Height: 174 Width: 71		20				
		508-257-35	Slab reefing (with hooks)		Toggle (AL)		Toggle (AL)				
	F176-F194	508-231-06	Furling mast	B135	Hole: Ø 12.5						
	C156-C193	508-231-07	Single line reef (no hooks)	143/76 B152	Height: 160 Width: 61 Toggle (AL) Width: 20 Hole: Ø 12.5	•	Width: 61	Width: 61	Width: 61		
d		508-231-08	Slab reefing (with hooks)	5102							
	F212-F246	508-257-03	Furling mast	B135	Bracket Height: 174						
	C211-C245	508-257-04	Single line reef (no hooks)	143/76 B152	Width: 71 Toggle (AL)						
		508-257-05	Slab reefing (with hooks)	B171	Width: 20 Hole: Ø 12.5						
	F265-F286 C265-C285	508-233-03	Furling mast	B171	<b>Bracket</b> Height: 242 Width: 81	12 pop rivets 155-622 (MRT 6 x 25, in	Separate reef hooks: 507-651 Max. RM:				
		508-233-04	Single line reef (no hooks)		Toggle (ST) Width: 20	Width: 20	backing plate) 12 pop rivets	Masthead 120 kNm Fractional 90 kNm			
		508-233-05*	Slab reefing (with hooks)		Hole: Ø 12.5	155-621 (MRT 6 x 20, in backing plate)					
	F228-F246	508-233-36	Furling mast	B200	Bracket Height: 242 Width: 81 Toggle (ST) Width: 30 Hole: Ø 16.5	12 pop rivets 167-027					
المقر	F211-C245	508-152-37*	Single line reef (no hooks)		Bracket Height: 272 Width: 70	12 pop rivets 167-002 + 6 pop rivets					
		508-152-38*	Slab reefing (with hooks)		Toggle (ST) Width: 30 Hole: Ø 16.5	167-025					
	F265-F305 C264-C304	508-233-08	Furling mast	B200 B250 B290	<b>Bracket</b> Height: 242 Width: 81	12 pop rivets 155-622 (MRT 6 x 25, in					
		508-233-09	Single line reef (no hooks)	B300	Toggle (ST) Width: 30 Hole: Ø 16.5	backing plate) 12 pop rivets 155-621					
<u>aca</u> 9		508-233-06*	Slab reefing (with hooks)		110.0. 2 10.0	(MRT 6 x 20, in backing plate)					

 $AL = Aluminium \qquad ST = Stainless \ steel \qquad {}^{\star} \ Masthead \ RM30^{\circ} > 120 \ kNm \ or \ Fractional \ RM30^{\circ} > 90 \ kNm, \ use \ {}^{\star} floating \ hooks".$ 



## Boom brackets, Racing boom

Fitting	Mast section	Boom bracket Art. No.	Boom type	Boom section	Dimension, mm	Fasteners Art. No.	Separate pin, hooks Art. No.
	C175-C193	508-231-10	Slab reefing (with hooks)	B190 B230	<b>Bracket</b> Height: 160 Width: 71	12 pop rivets 155-621 (MRT 6 x 20)	536-113-01 Max. RM: Masthead 55 kNm
		508-231-14	4 Single line reef (no hooks) B190				Fractional 40 kNm
		508-257-07	Slab reefing (with hooks)	B190 B230	<b>Bracket</b> Height: 174 Width: 71		
		508-257-15	Single line reef (no hooks)				

## **Universal boom brackets**

Fitting	Art. No.	Boom type	Boom section	Fasteners Art. No.
	508-237-05	Furling mast	B120	10 pop rivets
	508-237-08	Single line reef (no hooks)		167-002
	508-237-11	Slab reefing (with hooks)		(Ø 6.4 x 17.8 MNL)
	508-237-06 Furling mast B135	B135		
	508-237-09	Single line reef (no hooks)	143/76	
	508-237-12	Slab reefing (with hooks)	B152 B171	
	508-237-07	Furling mast	B200	
	508-237-10	Single line reef (no hooks)		
	508-237-13	Slab reefing (with hooks)		

These boom brackets are adjustable and fit most mast sections. Ideal when upgrading an old mast with a modern Seldén boom.

## **Reef line kits and sliders**

#### Main sheet sliders

Fitting	Art. No.	Boom section
16	511-555-02	86/59
19 4	511-641-01	B087 B104
82	511-571-01	B120 B135 143/76 B152 B171 B190*
98	511-572-01	B200 B230* B250
30 6	511-616-01	B290 B300

Single Line Reef kits

Boom section	Rope dia mm	Complete kit (reef 1 and 2 + outhaul) Art. No.	Excl. reef lines Art. No.
B120	8	611-007-10*	611-007-11
B135	10	611-011-14	611-011-15
143/76	10	611-011-04*	611-011-09
B152	10	611-011-16	611-011-17
B171	10	611-011-12*	611-011-13
B171 (2008-)	10	611-011-24	611-011-25
B200	12	611-015-04	-
B200 (2008-)	12	611-015-24	-
B250	12	611-015-25	-

<sup>\*</sup> Outhaul included.

#### Jam lever kits

Boom section	Art. No.
B135	511-074-21
143/76	511-072-11
B152	511-074-22
B171	511-072-12 (-2007) 511-072-22 (2008-)
B200	511-071-11 (-2007) 511-071-21 (2008-)
B250	511-071-22

Complete kit of colour coded jam levers with pins.

#### Lazyjack slider

Two part polyamide slider for Lazyjacks. Fits in the groove without removing the boom end. For use with Lazyjacks and reef lines for loose footed sails only.

Fitting	Art. No.	Includes	В	Boom section
100x	511-636-01	One slider	18	B120-171
	511-636-02	Two sliders with M6 screws (selftapping) and Ø 5.3 drillbit		
В	511-637-01	One slider	25	B200-250
7	511-637-02	Two sliders with M6 screws (selftapping) and Ø 5.3 drillbit		



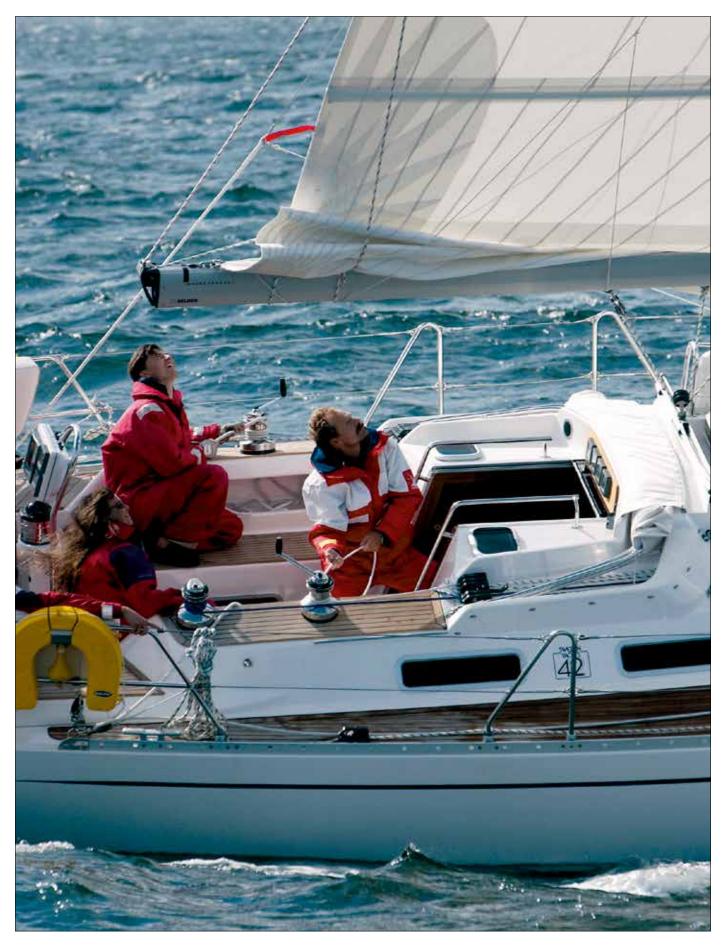
#### Retrofit outhaul track

This track can be retrofitted to an old boom and significantly improve the outhaul function.

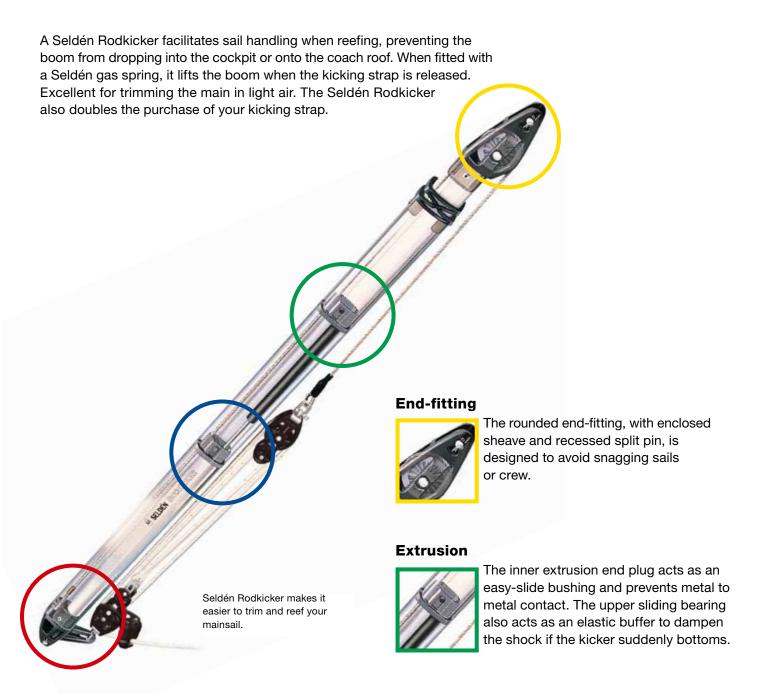
A 400 mm long track with a ball bearing car is mounted in the sail track to simplify adjustment of the outhaul tension of a loose footed sail. A complete kit including track, traveller, end caps and fasteners (8 x 16 mm) for the sail track. Just remove the boom end, slide in the track and tighten the screws. Art. No. 511-580-11R.



<sup>\*</sup> Webbing is often used as sheet attachment.



## **Rodkicker rigid vang**



#### Easily installed, easily operated



The extended block attachment lug allows the block to turn, enabling the tackle to be operated from either port or starboard. The Rodkicker is supplied with detailed instructions and is easily fitted. If a Rodkicker is retrofitted to an existing

rig, the original kicking strap tackle can still be used. Seldén Rodkickers are made of anodised aluminium and are carefully tested to meet stringent quality and performance standards.

#### **Gas spring**



The Rodkicker can be supplied with an optional integral gas spring. This lifts the boom when the kicking strap is released, opening the leech of the sail. A Rodkicker with a gas spring replaces the topping lift, making reefing fast and simple. The gas

spring is easily retrofitted to a Rodkicker that does not have a spring. For spare gas springs, see page 69.





Operation from cockpit.

#### **Choosing the right size**

The choice is based mainly on the righting moment of the yacht, a measure of its ability to carry sail. This is approximately proportional to displacement. The second input is the rig type (masthead or fractional). The table below shows the correct type for monohulls.

Gas springs are available in a range of strengths, to cover variations in boom weight (including the stowed sail) and the Rodkicker angle. The angle varies with gooseneck height and kicker length. If in doubt, ask your dealer for more information.

			Type 05	Тур	e 10	Тур	e 20	Тур	e 30	
	Max. righting moment:	frac. rig masthead rig	12.5 kNm 15.0 kNm		kNm kNm		kNm kNm	120 kNm 160 kNm		
	Max. displacement:	frac. rig masthead rig	2.5 tonnes 3.9 tonnes		5 tonnes 6 tonnes		9 tonnes 11 tonnes		20 tonnes 25 tonnes	
	Current Seldén boom Previous Seldén/Kem		B087-B120 86/59-111/75	B087- 86/59-111/	-B152 75, 128/90		B200 132, 206/139	B200	-B250	
	Height of boom (XBH	)	< 900 mm	≤ 1100 mm	> 1100 mm	≤ 1400 mm	> 1400 mm	≤ 1800 mm	> 1800 mm	
A	Type of Rodkicker		05 Standard	10 Standard	10 Long	20 Standard	20 Long	30 Standard	30 Long	
	Min. length (L)		1150 mm	1360 mm	1670 mm	1720 mm	2260 mm	2200 mm	2700 mm	
	Without gas spring*	Art. No.	058-036-05	058-036-10	058-036-13	076-046-10	076-046-13	094-056-10	094-056-13	
1	With gas spring (normal)*	Art. No. Spring force =	058-036-06 0.7 kN	058-036-11 0.6 kN	058-036-14 0.6 kN	076-046-11 1.2 kN	076-046-14 1.2 kN	094-056-11 2.5 kN	094-056-14 2.5 kN	
1	With gas spring (hard)*	Art. No. Spring force =	-	058-036-12 1.2 kN	058-036-15 1.2 kN	076-046-12 2.5 kN	076-046-15 2.5 kN	094-056-12 5 kN	<b>094-056-15</b> 5 kN	
	With gas spring (extra hard)*	Art. No. Spring force =	-	058-036-16 2.5 kN	058-036-17 2.5 kN	076-046-16 5 kN	076-046-17 5 kN	-	-	
•	Safe working load		8 kN	12 kN		18	kN	38	kN	
	Supplementary kit with normal gas spring	cit with normal Spring force =		308-070-03 0.6 kN 308-070 (gas spring only)		308-071-03 1.2 kN 308-071 (gas spring only)		2.5	72-03 kN s spring only)	
	Supplementary kit with hard gas spring	Art. No. Spring force =	-	1.2	71-04 kN s spring only)	2.5	72-04 kN s spring only)	51	73-04 «N s spring only)	
	Supplementary kit with extra hard gas spring	Art. No. Spring force =	-	308-0 2.5 308-072 (gas	kN	5	73-05 kN s spring only)	-	-	
Lowe	Lower fitting  C		Lower fitting $A = 9$ , $\varnothing B = 10$ , C = 20 Clevis pin 165-207	Lower fitting A = 9, Ø B = 10, C = 20 Clevis pin 165-207		Lower fitting A = 11, Ø B = 12, C = 20 Clevis pin 165-404		Lower fitting A = 14, Ø B = 16, C = 30 Clevis pin 165-556		
ØB			Upper fitting $S = 7$ , $\emptyset$ $T = 10$ , W = 12 Clevis pin 165-205	Upper fitting S = 7, Ø T = 10, W = 12 Clevis pin 165-205		Upper fitting S = 12, Ø T = 12, W = 14 Clevis pin 165-409		Upper fitting S = 11, Ø T = 16, W = 16 Clevis pin 165-555		

<sup>\*</sup> Kicking strap tackle not included.

## Gas spring, conventional mast

Boom section	86/59	B087	B104	B120	B120	B135	143/76	B152	B171	B200	B200	B250
Weight, kg/m	2	1.75	2.0	2.5	2.5	2.9	3.3	4.0	4.6	6	6	7.5
Circ., mm	240	240	300	330	330	370	390	420	460	550	550	680
XBH, mm					N	laximum E* n	ormal spring/	hard spring/e	xtra hard spr	ing		
Rodkicker		Тур	e 05			Type 1	0 (S/L)		Type 2	0 (S/L)	Type 3	0 (S/L)
600	3.4	3.6	3.4	3.1	3.0/4.0/5.4 (S)	2.6/3.6/4.9 (S)	2.4/3.3/4.6 (S)					
700	3.7	3.8	3.7	3.4	3.3/4.4/- (S)	2.8/3.9/5.3 (S)	2.7/3.6/5.0 (S)					
800	3.9	4.0	3.8	3.6	3.4/4.6/- (S)	3.0/4.2/5.7 (S)	2.9/3.6/5.4 (S)	2.7/3.7/5.1 (S)	3.4/4.7/- (S)			
900	4.0	4.1	4.0	3.8	3.6/4.8/- (S)	3.2/4.4/- (S)	3.1/4.1/5.7 (S)	2.9/3.9/5.3 (S)	3.6/5.1/- (S)	-/4.4/6.0 (S)	4.4/5.9 (S)	3.9/5.4 (S)
1000					3.7/5.0/- (S)	3.4/4.5/- (S)	3.2/4.3/5.9 (S)	3.0/4.1/5.5 (S)	3.8/5.3/- (S)	3.3/4.7/6.3 (S)	4.7/6.3 (S)	4.2/5.8 (S)
1100					3.9/5.2/- (S)	3.5/4.7/- (S)	3.4/4.6/6.2 (S)	3.1/4.3/5.9 (S)	4.0/5.5/- (S)	3.5/4.9/6.6 (S)	5.0/6.7 (S)	4.5/6.1 (S)
1200					4.0/5.4/- (L)	3.7/4.9/- (L)	3.5/4.7/6.4 (L)	3.2/4.4/6.0 (L)	4.2/5.7/- (S)	3.7/5.2/6.9 (S)	5.2/7.0 (S)	4.7/6.4 (S)
1300					4.2/ - (L)	3.7/5.0/- (L)	3.6/4.8/6.5 (L)	3.3/4.5/6.2 (L)	4.3/5.8/- (S)	3.8/5.3/7.1 (S)	5.4/7.2 (S)	4.9/6.6 (S)
1400							3.6/4.9/6.6 (L)	3.4/4.6/6.3 (L)	4.4/6.0/- (S)	3.9/5.4/7.3 (S)	5.6/7.4 (S)	5.0/6.8 (S)
1500									4.6/6.3/- (L)	4.0/5.5/7.4 (S)	5.7/7.7 (S)	5.2/7.0 (S)
1600									4.7/6.4/- (L)	4.3/5.9/7.9 (L)	5.9/7.8 (S)	5.3/7.2 (S)
1700										4.3/6.0/8.0 (L)	6.0/8.0 (S)	5.4/7.4 (S)
1800											6.2/8.3 (L)	5.5/7.5 (L)
1900												5.8/7.8 (L)
2000												5.9/8.0 (L)









Rodkicker Type 05.

## Gas spring, furling mast

Boom section	B120	B120	B135	143/76	B152	B171	B200	B200	B250
Weight, kg/m	2.5	2.5	2.9	3.3	4	4.6	6	6	7.5
Circ., mm	330	330	370	390	420	460	550	550	680
XBH, mm			N	laximum E* nor	mal spring/hard	d spring/extra	hard spring		
Rodkicker	Type 05		Type 1	0 (S/L)		Type 2	20 (S/L)	Type 3	0 (S/L)
600	3.5	3.3/4.5/- (S)	2.8/4.0/- (S)	2.3/3.4/5.0 (S)					
700	4.0	3.7/5.4/- (S)	3.2/4.5/- (S)	2.7/3.9/5.7 (S)	2.5/3.6/5.3 (S)				
800	4.3	4.0/5.8/- (S)	3.5/5.0/- (S)	3.0/4.3/6.4 (S)	2.8/4.0/5.8 (S)	3.6/5.2/- (S)			
900		4.3/5.9/- (S)	3.7/5.3/- (S)	3.3/4.7/6.9 (S)	3.0/4.4/6.3 (S)	3.9/5.7/- (S)	-/4.6/6.6 (S)	4.4/6.3 (S)	3.8/5.4 (S)
1000		4.5/- (S)	3.9/5.5/- (S)	3.5/5.0/- (S)	3.2/4.7/- (S)	4.2/6.2/- (S)	-/5.1/7.3 (S)	4.9/7.0 (S)**	4.2/6.0 (S)
1100		4.7/- (S)	4.1/5.9/- (S)	3.7/5.4/- (S)	3.4/4.9/- (S)	4.5/6.6/- (S)	-/5.5/7.9 (S)	5.4/7.6 (S)	4.6/6.6 (S)
1200		5.0/- (L)	4.2/- (L)	3.9/5.6/- (L)	3.6/5.2/- (L)	4.7/6.8/- (S)	3.9/5.8/8.4 (S)	5.8/8.2 (S)	4.9/7.1 (S)
1300		5.2/- (L)	4.3/- (L)	4.0/5.8/- (L)	3.7/5.3/- (L)	4.9/7.1/- (S)	4.1/6.1/8.7 (S)	6.1/8.7 (S)	5.2/7.5 (S)
1400				4.1/5.9/- (L)	3.8/5.4/- (L)	5.0/7.3/- (S)	4.3/6.3/9.0 (S)	6.4/9.2 (S)	5.5/7.9 (S)
1500						5.3/- (L)	4.4/5.6/9.3 (S)	6.7/- (S)	5.8/8.2 (S)
1600						5.4/- (L)	4.7/6.9/- (L)	6.9/- (S)	5.9/8.5 (S)
1700							4.9/7.1/- (L)	7.1/- (S)	6.2/8.8 (S)
1800								7.4/- (S)	6.3/9.0 (S)
1900								7.6/- (L)	6.6/9.4 (L)
2000									6.7/9.6 (L)

S = Standard L = Long XBH: See page 65.

Circ. = Circumference (lists extend beyond the Seldén boom range, to allow selection of the correct Rodkicker for other booms).

\* The maximum E (sail foot length). \*\* Boom slider 511-599-01 required.

# **Rodkicker brackets**



## Rodkicker mast brackets, C-sections and F-sections

	Mast section	Boom section	Rodkicker brackets Type 05, 10 och 20 Art. No.	Rodkicker Type 30	Bracket dimensions	Fasteners Art. No.
	C156-C175	B087-B104	508-788-12 Toggle (AL): Width: 20 mm Hole: Ø 10 mm		Height: 130 mm Width: 55 mm	10 pop rivets 167-006
	F176-F194 C156-C193	B120-B171	508-231-12 Toggle (AL): Width: 20 mm Hole: Ø 12,5 mm		Height: 160 mm Width: 61 mm	12 pop rivets 167-002
	C211-C245	B120-B200	<b>508-257-12</b> Toggle (AL): Width: 20 mm Hole: Ø 12,5 mm	<b>508-257-14</b> Toggle (ST): Width: 30 mm Hole: Ø 16,5 mm	Height: 174 mm Width: 71 mm	
	F212-F246	B120-B200	<b>508-257-22</b> Toggle (ST): Width: 20 mm Hole: Ø 12,5 mm	<b>508-257-24</b> Toggle (ST): Width: 30 mm Hole: Ø16,5 mm		
	C264-C285	B171	<b>508-233-12</b> Toggle (ST): Width: 15 mm Hole: Ø 16,5 mm		Height: 242 mm Width: 81 mm	12 screws 155-621 (MRT 6 x 20, in backing plate)
	F265-F285	B171	<b>508-233-22</b> Toggle (ST): Width: 15 mm Hole: Ø 16,5 mm			12 screws 155-622 (MRT 6 x 25, in backing plate
	F265-F305	B200-B250		<b>508-233-24</b> Toggle (ST): Width: 30 mm Hole: Ø 16,5 mm		+ 2 pop rivets 167-008)
	C264-C304	B200-B250		<b>508-233-14</b> Toggel (ST): Width: 30 mm Hole: Ø 16,5 mm		12 screws 155-621 (MRT 6 x 20, in backing plate)



## **Rodkicker mast brackets,** E-sections, D-sections and R-sections

Fitting	Mast section	Kicker brackets (incl. fasterners) Art. No.	Dimensions mm	Boom section	Rodkicker Type	Fasteners Art. No.	Fasterners dia. x length mm
	For pear shaped mast sections	508-052-03	Bracket Height: 80 Width: 63 Back angle: 45° Toggle Width: 20 Hole: Ø 10.5	86/59 85/58	05 10	4 pop rivets 167-004	6.4 x 12.7
	D109, D121, D129, D137, D146, D160 E122, E130, E138, E155, E170,	508-040-03	Bracket Height: 138 Width: 44 Back angle: 10° Toggle Width: 20 Hole: Ø 10,5	B120 111/75 128/90	05 10	8 pop rivets 167-002	6.4 x 17.8
	E-sections from E170	508-168-62	<b>Bracket</b> Height: 179 Width: 63	143/76 B171	10 20	12 pop rivets 167-027	6.4 x 25
	R190, R213, R235	508-168-32	Back angle: 10° Toggle		10 20	12 pop rivets 167-0002	6.4 x 17.8
	R232, R260	508-151-12	Width: 20 Hole: Ø 12,5		10 20	10 pop rivets 167-027 + backing plate	6.4 x 25
	E-sections from E189	508-152-12	Bracket Height: 275 Width: 70 Back angle: 10° Toggle Width: 30	B200	30	18 pop rivets 167-027	6.4 x 25
		508-152-32		B250	30	18 screws 155-803 + 2 screws 162-024	MRT 6 x 50 +MFT 6 x 40 + backing plate
	R-section	508-153-32	Hole: Ø 16.5	B200 B250	30	10 screws 155-802 + 9 x 155-622 + 6 x 162-032 + backing plate	MRT 6 x 30 + MRT 6 x 25 + MFT 6 x 25



#### **Rodkicker boom brackets**

Description, mm	Art. No.	Boom section	Rodkicker Type
70	511-643-01	B087, B104	05 10
140 6 25 3 x 9 MC6S 8 x 16 Ø13	511-800-01	B120, 111/75 B135, 128/90 143/76, 150/105 B152, 162/125 B171, B190	05 10 20
3 x	511-801-01	B200, B230 B250	30
300	511-599-01	B300 B290	30
R34 or R50 L = 420	Slider 511-513-01 Track 515-504-05 (Radius 34) 515-501-03 (Radius 50)		10
Ø 12 0 0 112 112	Slider 511-513-02 Track 515-501-04 (Radius 50)		20

## **Universal boom brackets**

instructions.

	Art. No.	Dimen- sions mm	Rod- kicker Type	Fasteners
	508-403-01	Length: 250 Width: 9	10 20	6 screws included
14 ONV	508-403-02	Hole: Ø 13		6 pop rivets included

Please visit: www.seldenmast.com for assembly

## **Universal mast brackets**

Art. No.	Dimen- sions mm	Rod- kicker Type	Fasteners
508-237-01	Bracket Height: 185	10 20	No fasten- ers incl.
508-237-02	<b>Toggle</b> Width: 20		10 screws included
508-237-03	Hole: Ø 12.5		10 pop rivets incl.



A Seldén furling mast lets you operate your mainsail from the cockpit, simply and easily. Its unique features for reducing friction and initial sail resistance make furling and reefing child's play. And it also makes sailing safer and far easier for you and your crew.

# **FURLING MASTS**

# manual and electric drive



The benefits of furling masts 76
Furling masts, manaul 79
Furling masts, electric drive 82
Furling mast specification 84

For hydraulic furling masts, see page 118.

With a powered furling mast and a powered Furlex jib furler it is even easier to set, reef and handle your sails. You can work your sails single handed, without leaving the helm. Powered systems are available for yachts ranging from 35 to 70 feet.

# Let your rig do the hard work



#### **Simple**

You hoist the sail just once a season, so a small crew can manage a much larger boat.

#### **Easy**

A Seldén furling mast makes it easy to unroll and set your mainsail. Rolling it in is just as quick and easy. As your sail is neatly stowed out of the way the instant it is rolled in, you have a clear view when manoeuvring under power.

#### Safe

You can set your sail to suit the weather conditions, from the safety of the cockpit.

#### **Efficient**

By furling the sail vertically into the mast, you don't have to furl very much to get a substantial decrease of the sail area.



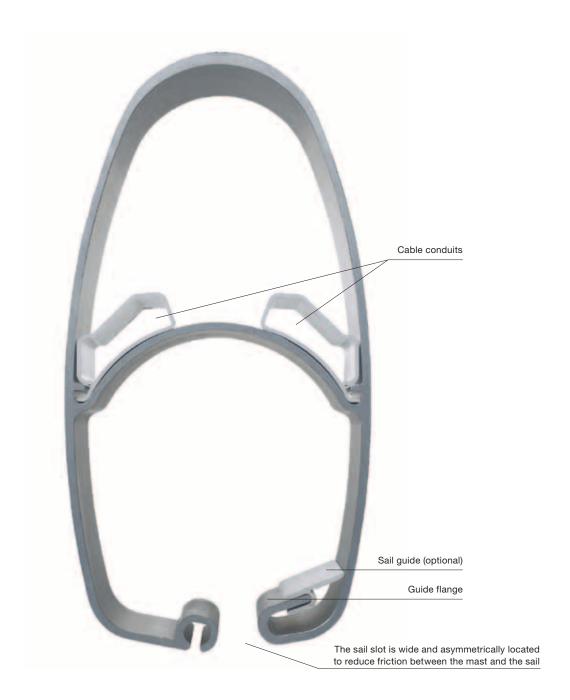
#### Well balanced

There are no fixed reef points, so the number of combinations between furling genoa and main are unlimited.

## More enjoyable

Due to the easy handling, with a furling mast you will do more sailing and less motoring.

Vertical battens allow for a positive roach on the furling mainsail. A fine combination of performance and convenience.





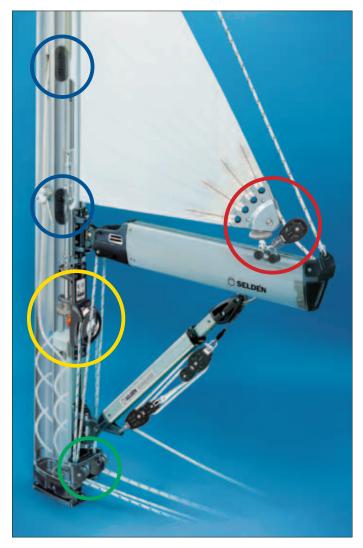
Cross-section of a Seldén furling mast.

#### The Seldén furling principle

The wide sail slot allows for vertical battens and a positive roach of the main sail. The actual sail slot is placed asymmetrically to reduce furling resistance and to lead the sail straight on to the internal luff extrusion.

The furling system is based on Seldén's proven technology. Geared line driver winch, tensioned luff extrusion, asymmetrically located sail slot and the patented load distributor of the halyard swivel. All to make furling an easy and fast operation. The Seldén furling masts come with twin cable conduits, enabling the cables to run freely and well protected from all running rigging. The cable conduits also facilitate cable replacement.





#### Easy to operate

There is an outhaul line for rolling out the sail, and an endless line for rolling it in. It's as simple as it sounds. Or if you wish, you can operate the sail at the mast using a winch handle. The geared reefing winch mechanism runs on ball bearings, so it takes little effort to roll in the sail. Greasing holes in the mast facilitate maintenance.

#### Accessible

Two oval holes on the port side of the mast allow for easy access to the tack attachment, sail feed, tensioning screw and halyard swivel. Just remove the composite covers and the rest speaks for itself. You can inspect the halyard swivel and carry out annual maintenance through the upper access hole.

#### Absorbs all sail forces

The outhaul cars are fitted with horizontal and vertical wheels, enabling them to absorb forces from every direction.

#### Turning block for control lines

Turning blocks at the base of the mast are designed to enable the ready-spliced, endless line to be easily threaded into position. Seldén deck blocks have the same feature.



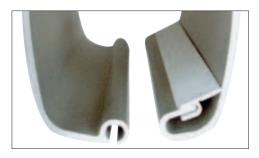


The Seldén load distributor prevents...

... point loading!

### Seldén's unique load distributor

The furling mechanism rotates easily even under high load. This is largely due to the unique bearing system in the halyard swivel, which was originally developed for the Furlex jib furling system. The cleverly designed load distributor has three fulcrums, distributing the load over the entire bearing race and all the bearings, rather than over small areas of the race.



Asymmetric sail slot wide enough for vertical battens. Extra long guide flange. Optional sail guide for sails with horisontal battens.



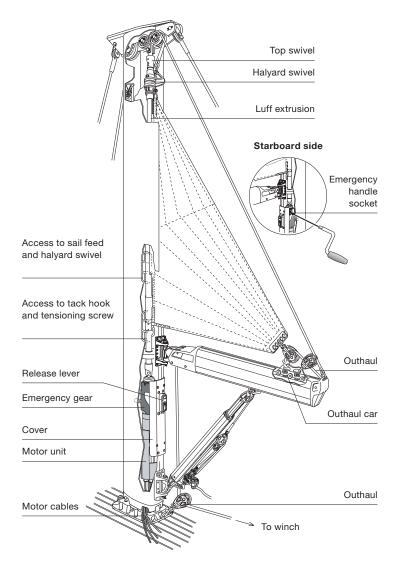
The Seldén furling masts come with twin cable conduits, enabling the cables to run freely and well protected from all running rigging.

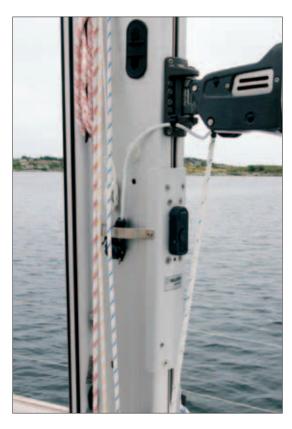


## **Electric cruise control**

#### New mast or retro-fit

Is your deck layout giving you a hard time leading a furling line back to the cockpit? Are you fed up with operating your furling mast with a winch handle at the mast? Upgrade with electric drive and stay in the safety of the cockpit. Seldén electric furling is available as a retro fit kit for manual furling masts or custom built for new Seldén furling masts.





- · Completely built-in.
- Operated from the safety of the cockpit.
- Planetary gear with permanently set brake.
   Released only when the motor is running.
- Drive release for emergency furling.
- Control box with factory-set rotation speed and maximum torque. Current cuts out at maximum torque and is automatically reconnected after two seconds.
   Prevents overloading.
- Asymmetric and tensioned luff extrusion in combination with stainless steel ball bearings with load distributor makes for low furling resistance.
- Wide sail slot allows for vertical battens and positive roach.
- Retro-fits to manually operated furling mast.

#### **Technical information**

Mast section	Mo Type	odel Voltage	E <sub>max</sub> mm	Speed rpm	Max running torque, Nm		cable, mm² y and control box) >8 m 12V / 24V	Fuse (A) 12V / 24V
F228	RB	12	4900	38-40	150	25 / –	35 / –	125 / –
F246			5400					
F265			6000					
	RC	12 / 24	5800		230	35 / 25	50 / 35	160 / 125
F286			6300					
F305			6700					
F324			7000					



#### **Retro-fit installation kits**

# Cables for installation below deck

(from mast to control pack)

Art. No.	Area, mm <sup>2</sup>	Length, m
531-026-03	16	3
531-026-04	16	4
531-026-05	16	5
531-026-06	16	6
531-026-07	16	7
531-026-08	16	8
531-026-09	16	9
531-026-10	16	10
531-029-03	25	3
531-029-04	25	4
531-029-05	25	5
531-029-06	25	6
531-029-07	25	7
531-029-08	25	8
531-029-09	25	9
531-029-10	25	10

Mast section	Model		Kit	Contro	ol pack
(max bom section)	Type	Voltage	Art. No.	Incl. switches	Excl. switches
R232 (B143, B171)	RB	12	532-501-30	532-505-11	532-505-12
R232 (B200, B250)	RB	12	532-501-29	532-505-11	532-505-12
R260 (B143, B171)	RB	12	532-501-32	532-505-11	532-505-12
R260 (B200, B250)	RB	12	532-501-31	532-505-11	532-505-12
R290 (B143, B171)	RC	12	532-502-31	532-505-21	505-505-22
		24	532-503-31	532-505-31	505-505-32
R290 (B200, B250)	RC	12	532-502-30	532-505-21	505-505-22
		24	532-503-30	532-505-31	505-505-32
R324	RC	12	532-502-23	532-505-21	505-505-22
		24	532-503-23	532-505-31	505-505-32
R228	RB	12	532-501-20	532-505-11	532-505-12
F246	RB	12	532-501-21	532-505-11	532-505-12
F265	RB	12	532-501-22	532-505-11	532-505-12
F265	RC	12	532-502-20	532-505-21	505-505-22
		24	532-503-20	532-505-31	505-505-32
F286	RC	12	532-502-21	532-505-21	505-505-22
		24	532-503-21	532-505-31	505-505-32
F305	RC	12	532-502-22	532-505-21	505-505-22
		24	532-503-22	532-505-31	505-505-32
F324	RC	12	532-502-24	532-505-21	505-505-22
		24	532-503-24	532-505-31	505-505-32
F324	RD	N/A			

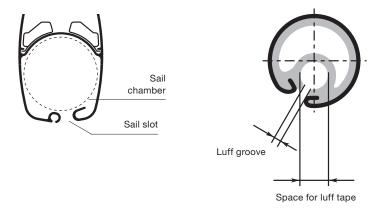
<sup>\*</sup> Includes control box, junction box, lubricating grease, instructions and switches. For more information please see our instructions for installation, www.seldenmast.com



# **Seldén furling mast specifications**

Mast section	Type	Sail chamber dia., mm	Sail slot mm	Max foot length E, mm	Manual	Drive options Hydraulic	Electric (Voltage)	Gear ratio manual drive	Diameter mm	Luff groove mm	Max space for luff tape dia., mm
F176	RA	85	15±3	3750	Χ			1.75:1	25	$2.75 \pm 0.25$	6
F194	RA	93		4200	Χ						
F212	RA	100		4500	Χ						
	RB			4400	Χ			2:1	30	$3.25 \pm 0.35$	8
F228	RA	108		5000	Χ			1.75:1	25	2.75 ± 0,25	6
	RB			4900	Х		X (12)	2:1	30	$3.25 \pm 0.35$	8
F246	RB	114		5400	Χ	X	X (12)				
F265	RB	123	17±3	6000	Х	X	X (12)				
	RC			5800	Х	X	X (12/24)		38	$3.25 \pm 0.25$	10
F286	RB	133		6500	Χ	X			30	$3.25 \pm 0.35$	8
	RC			6300	Χ	X	X (12/24)		38	$3.25 \pm 0.25$	10
F305	RB	141		6900	Χ	X			30	$3.25 \pm 0.35$	8
	RC			6700	Χ	X	X (12/24)		38	$3.25 \pm 0.25$	10
	RD			6000		X		-	58		
F324	RC	154	15±3	7000		X	X (12/24)	2:1	38		
F370	RD	171	22±3	7500		X		-	58		
F406	RD	190	24±3	9500		X					





## **Covers and plugs**

	Description	Art. No.
9	Cover for access to sail-feeder and tack attachment. 57 x 126 mm. F194-F246.	540-026
0	Cover for access to sail-feeder and tack attachment. 72 x 207 mm. F265-F406.	540-120
	Grease hole cover, Ø 44 mm.	319-609



The Furlex jib furling and reefing system was first introduced in 1983. The basic concept was not new, but Furlex broke new ground with innovative design, attention to detail, good value and worldwide service backup. Today, Furlex is the world market leader, and a normal feature on any well equipped yacht.



The 4th generation of Furlex.

# **FURLEX**

# jib furling and reefing system



Furlex 50S (Standard)	88
Furlex 104-404S (Standard)  • Choose the right Furlex  • Toggles  • Furlex with rod forestay	90 92 96 97
Furlex TD (Through-Deck)	98
Furlex E (Electric)	101

For Furlex H (Hydraulic), see page 122.

# **Furlex 50S**

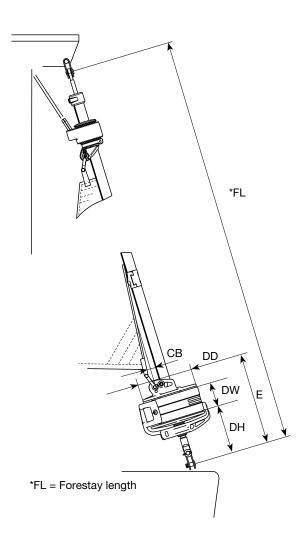
#### jib furling system for boats 18-26 ft

The Furlex 50S is the perfect choice for every sailor who wants a compact, low weight furling system. It shares many features with the larger members of the world-famous Furlex family.

The patented load distributor in the halyard swivel and the full length distance tubes for smooth rotation are the same as on all the other Furlex models.

Furlex 50S is supplied as a complete kit including forestay wire, halyard lead, stanchion block, prefeeder and furling line. Easy to order and easy to install.





#### **Choose the right Furlex**

Furlex series	Fore- stay, dia., mm	_	ng moment t 30° heel Fractional rig	App displacement Masthead rig	ent, tonnes Fractional rig	DH mm	DW mm	DD mm	CB mm	E mm	Halyard sheave box Art. No.
50S	4	6.5	8	1.4	1.7	100	60	120	25	215	505-004-10
	5	8.5	11	1.8	2.5	100	60	120	25	215	505-004-10

Furlex series	Forestay, dia., mm	Max forestay length (FL), m	Furlex system Art. No.
508	4	7.7	022-015-51
	4	10.1	022-015-52
	5	7.7	022-015-53
	5	10.1	022-015-54
	5	12.5	022-015-55

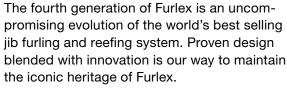
Furlex series	Internal diameter of luff groove (DLG), Ø mm	Width of luff groove (WLG), mm
50S	6.0	2.6





# Furlex 104S-404S (Standard)

#### The 4th generation of an icon





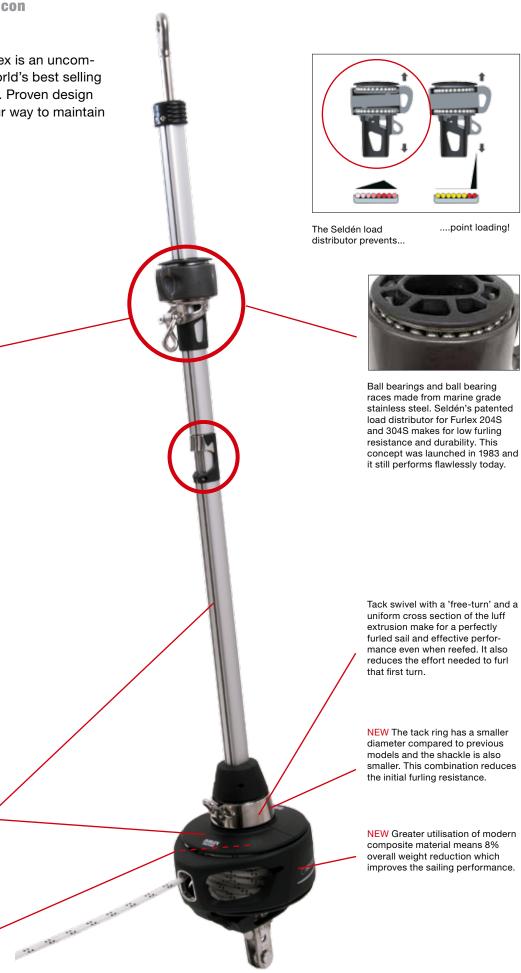
The halyard swivel for Furlex 104S and 404S features stainless ball bearings. The load is centered by the attachment of the Dyneema® lashing.



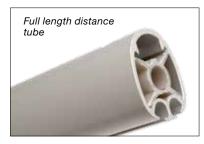
The sail feeder is marine grade stainless steel. It is well rounded and kind to the sail.

The twin-groove luff extrusion and the split drum allow the racing sailor to convert the Furlex for racing. The cruising sailor can use the extrusion for 'wing on wing' downwind sailing with two genoas poled out to either side.

NEW Two sets of stainless ball bearings and one additional set of roller bearings for low friction and low lateral deflection.





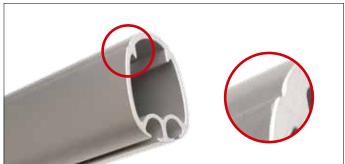




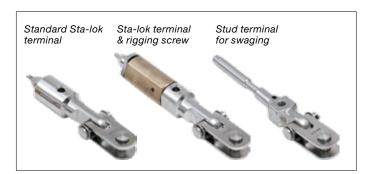
The forestay wire is centred and insulated the full length of the extrusion enabling the extrusion to rotate evenly around the wire. The furling resistance is reduced and chafe between the wire and the extrusion is eliminated.



NEW The luff extrusion consists of 2400 mm sections connected with an aluminium joining sleeve and a stainless steel connecting plate. The joining sleeve transmits the torque within the extrusions, and the connecting plates keep the sections together with a slight gap between them. This way chafe is avoided on both the extrusions and the sail.



**NEW** The Furlex Aero Groove system reduces drag and creates improved flow over the luff extrusion and consequently, the sail.



Similar to previous Furlex models, the standard kit requires that the wire is cut to length and fixed with a 'Sta-lok' mechanical wire locking system. A completely integrated rigging screw is offered as an option. It allows for adjustment of the forestay length without altering the height of the tack attachment.

NEW To simplify the final assembly at the dock, Furlex can now also be ordered with the forestay wire pre-cut to a specific length. Both ends of the wire are fitted with swaged terminals and the lower stud terminal can pass through the extrusions. This method of assembly does not include the option of an integrated rigging screw.



Furlex, as in previous generations, comes as a complete kit including all parts needed for reliable and convenient furling of the foresail. It even includes a new forestay wire, furling line, stanchion lead blocks, a halyard lead and a prefeeder. A simple purchase.

**NEW** If you already have a jib furler on your boat and do not need another set of stanchion blocks, halyard lead, prefeeder and Torx bits you can order a Basic kit in which these parts are excluded.

# **Choose the right Furlex**



Complete kit.

# Complete kit

Furlex	Forestay	Max.	Co	mplete kit including	g	
	dia. Ø mm	forestay length, mm	Standard Sta-lok terminal Art. No.	Sta-lok terminal & rigging screw Art. No.	Stud terminal for swaging Art. No.	
104S	4	8100	030-020-51	030-020-61	030-020-91	
		10500	030-020-52	030-020-62	030-020-92	
	5	8100	030-020-53	030-020-63	030-020-93	
		10500	030-020-54	030-020-64	030-020-94	
		12900	030-020-55	030-020-65	030-020-95	
	6	10500	030-020-56	030-020-65	030-020-96	
		12900	030-020-57	030-020-67	030-020-97	
204S	6	10550	035-025-51	035-025-61	035-025-91	
		12950	035-025-52	035-025-62	035-025-92	
		15350	035-025-53	035-025-63	035-025-93	
	7	12950	035-025-54	035-025-64	035-025-94	
		15350	035-025-55	035-025-65	035-025-95	
		17750	035-025-56	035-025-66	035-025-96	
	8	15350	035-025-57	035-025-67	035-025-97	
		17750	035-025-58	035-025-68	035-025-98	
304S	8	15450	042-031-51	042-031-61	042-031-91	
		17850	042-031-52	042-031-62	042-031-92	
	10	15480	042-031-53	042-031-63	042-031-93	
		17880	042-031-54	042-031-64	042-031-94	
		20280	042-031-55	042-031-65	042-031-95	
404S	12	17700	052-038-51	052-038-61	052-038-91	
		20100	052-038-52	052-038-62	052-038-92	
		22500	052-038-53	052-038-63	052-038-93	
	14	20100	052-038-54	052-038-64	052-038-94	
		22500	052-038-55	052-038-65	052-038-95	



In the basic kit of Furlex, stanchion blocks, pre feeder, halyard lead and Torx bits have been excluded.



A stainless steel cover is available as an option. Art. No. 549-228-10 (204S), 549-328-10 (304S) and 549-428-10 (404S).

#### Basic kit

Furlex	Forestay	Max.	E	Basic kit including	
	dia. Ø mm	forestay length, mm	Sta-lok terminal (Standard) Art. nr.	Sta-lok terminal & rigging screw Art. No.	Stud terminal for swaging Art. No.
104S	4	8100	030-020-510	030-020-610	030-020-910
		10500	030-020-520	030-020-620	030-020-920
	5	8100	030-020-530	030-020-630	030-020-930
		10500	030-020-540	030-020-640	030-020-940
		12900	030-020-550	030-020-650	030-020-950
	6	10500	030-020-560	030-020-660	030-020-960
		12900	030-020-570	030-020-670	030-020-970
204S	6	10550	035-025-510	035-025-610	035-025-910
		12950	035-025-520	035-025-620	035-025-920
		15350	035-025-530	035-025-630	035-025-930
	7	12950	035-025-540	035-025-640	035-025-940
		15350	035-025-550	035-025-650	035-025-950
		17750	035-025-560	035-025-660	035-025-960
	8	15350	035-025-570	035-025-670	035-025-970
		17750	035-025-580	035-025-680	035-025-980
304S	8	15450	042-031-510	042-031-610	042-031-910
		17850	042-031-520	042-031-620	042-031-920
	10	15480	042-031-530	042-031-630	042-031-930
		17880	042-031-540	042-031-640	042-031-940
		20280	042-031-550	042-031-650	042-031-950
404S	12	17700	052-038-510	052-038-610	052-038-910
		20100	052-038-520	052-038-620	052-038-920
		22500	052-038-530	052-038-630	052-038-930
	14	20100	052-038-540	052-038-640	052-038-940
		22500	052-038-550	052-038-650	052-038-950





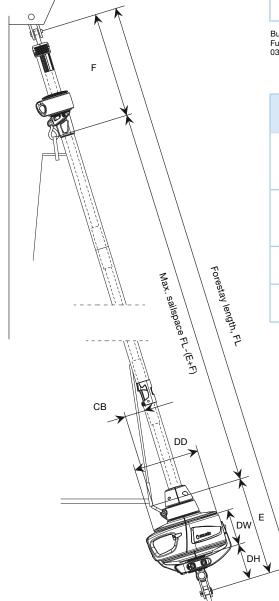
19-strand wire



Compact wire (Dyform®)



Rod

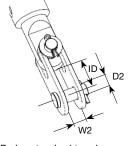


Furlex	Forestay dia. mm	Rod dia. mm		ng moment 30° heel	Approx. displacement, tonnes			
			Mastheadrigg	Partialrigg	Mastheadrigg	Partialrigg		
104S	4	-	6.5	8	1.4	1.7		
	5	-	10	14.5	2.1	3		
	6	-	17	22	3.5	4		
204S	6	-8 (5.7)	19	23	3.9	4.5		
	7	-10 (6.4)	27	34	5.5	7		
	8	-12 (7.1)	37	45	7.5	9		
		-15 (7.5)						
304S	8	-12 (7.1)	40	50	8	10		
		-15 (7.5)						
	10	-17 (8.4)	70	80	14	15		
		-22 (9.5)						
404S	12	-30 (11.1)	120	160	20	26		
	14	-40 (12.7)						

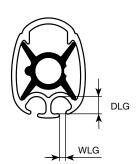
Bushings for Navtec, BSI and OYS rods are available from Seldén. See page 97. Furlex is available with compact wire. Just add "C" to the article number, for example 035-025-51C.

Furlex	Forestay dia. mm	DH mm	DW mm	DD mm	CB mm	E mm	F mm	ID mm	W2 mm	D2 Clevis pin	Forestay adjustment dia., mm
104S	4	85	65	155	60	205	410	17	8.5	8	60
	5	90	65	155	60	205	410	19	11	10	60
	6	100	65	155	60	220	425	24	11	10	60
2048	6	115	90	185	60	265	425	24	11	10	60
	7	115	90	185	60	265	425	24	12.5	12	60
	8	115	90	185	60	275	425	31	15.5	14	60
304S	8	125	105	220	60	310	430	31	15.5	14	80
	10	125	105	220	60	315	530	34	16	16	80
404S	12	170	135	205	80	390	630	40	21	19	100
	14	188	135	205	80	410	630	50	23	22	100

Furlex	Internal diameter of luff groove (DLG), Ø mm	Width of luff groove (WLG), mm
104S	6.0	2.75
204S	6.0	3.0
304S	7.0	3.0
404S	8.0	3.0









# **Toggles**

Eye/fork toggle	Forestay dia., mm	Art. No.	Length H mm	Ø Clevis pin D <sup>2</sup> mm	Fork width W <sup>2</sup> mm	Ø Eye D¹ mm	For rigging screw diam	
	3	174-101-01	21	6.5	7	7	1/4"	
	3, 4	174-102-01	26	8	8	8	5/16"	
D <sup>1</sup> 🚁	5	174-103-01	33	9.5	10	10	3/8"	
	6	174-104-01	39	11	12	12	7/16"	
H D <sup>2</sup>	7	174-105-01	43.5	13	14	14	1/2"	
	8	174-106-01	49.5	15.8	16	16	5/8"	
	10	174-107-01	65	15.8	22	16	3/4"	
		174-132-01	65	19	22	16	3/4"	
W <sup>2</sup>	12	174-125-01	95	19	22	20	7/8"	
Can be used to lengthen a		174-134-01	91	19	22	22.5	7/8"	
Furlex system. Fit it underneath	14	174-133-01	95	22	22	23	7/8"	
the standard fork/fork toggle or		174-135-01	91	22	22	23	7/8"	
at the top end of the Furlex wire.	16	174-135-01	120	22	25	23	M24	
Standard Furlex fork/fork toggle	Forestay dia., mm	Art. No.	Length H mm	Ø Clevis pin D <sup>1</sup> mm	Ø Clevis pin D <sup>2</sup> mm	Fork width W <sup>1</sup> mm	Fork width W <sup>2</sup> mm	
	4	517-056-02	25	8	8	7.5	8.5	
W <sup>1</sup>	5	517-054-02	30	10	10	10	11	
	6	517-046-02	40	12	10	11	11	
D1	7	517-047-02	40	12	12	11	12.5	
W2	8	517-048-02	50	14	14	14	12.5	
	10	517-060-04	55	16	16	14	16	
H	12	517-052-02	65	19	19	20.5	21	
$D^{2}$	14	517-053-02	80	22	22	20.5	23	
	16	517-074-02	85	25	22	22	26	
T/fork toggle	Forestay dia., mm	Art. No.	Length H	Ø Clevis pin D <sup>2</sup> mm	Fork width W <sup>2</sup> mm			
$\sim$	4	174-127-01	68	8	8			
	5	174-128-01	80	9.5	10			
	6	174-120-01	93	11	12			
W <sup>2</sup>	7	174-122-01	100	13	14			
H	8			-				
$D^2$	8	174-124-01	112	15.8	16			
Needed to connect the Furlex to a Seldén backing plate for T-terminals.								
Stemball/eye toggle with fork/fork toggle	Forestay dia., mm	Art. No.	Length H mm	Ø Clevis pin D <sup>2</sup> mm	Fork width W <sup>2</sup> mm	Height HB mm	Radius R mm	Ø Stemball D <sup>1</sup> mm
nı 🖈 🖈 R	5	517-065-01	138	10	11	8.5	10	26
	6	517-066-01	152	10	11	8	10	26
	7	517-067-01	157	12	12.5	9	15	34
HB D <sup>2</sup>	7	517-097-01	153	12	12.5	11	13	26
	8	517-068-01	197	14	15.5	9	15	34
Н	10	517-068-02	202	16	16	9	15	34
<b>→</b> /W²	12	517-069-01	226	19	21	8.5	15	34
Needed when fitting Furlex to some masts of other origin than Seldén.	12	017 003 01	220	10	21	0.0	10	0.4
Eye/fork extension link*	Forestay dia., mm	Art. No.	Length H mm	Ø Clevis pin D <sup>1</sup> mm	Fork width W <sup>1</sup> mm	Ø Eye D <sup>2</sup> mm	Gauge W² mm	
W <sup>1</sup> /	6	517-063-01	90	12	11	12	6	
5.2	7	517-063-01	90	12	11	12	6	
D <sup>2</sup>	8	517-062-01	130	16	14	16.5	10	
	10	517-062-01	130	16	14	16.5	10	
	12	517-075-01	190	19	20.5	20	12	
H								
_ /	14	517-076-01	190	22	20.5	22.5	16	

<sup>\*</sup> If the boat is fitted with a bow anchor, it may be necessary to permanently raise the lower bearing assembly for anchor clearance. A selection of extension links are available. If the lower bearing assembly is raised by means of an extension link, a Furlex fork/fork toggle, should be fitted between the link and the forestay attachment. This in order to secure proper articulation in all directions.

# Furlex 204S-404S with rod forestay

#### Bush packs and join sleeve kits

Bush packs for Navtec, BSI and OYS rods are available from Seldén. Your rod rig manufacturer will supply the rod forestay and upper terminal parts, slide on rod bushing and hole screw, and form your rod heads. In some cases, the rod rig manufacturer also needs to slide on the join sleeves before forming the rod heads.

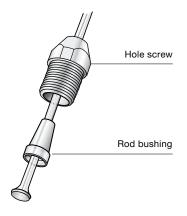
Bush packs include a bushing and a hole screw. Always needed for rod installation.

Join sleeve kits are only needed for some combinations.

Rod	Diameter mm	Type of Furlex	Bush pack	Join sleeve kit
Navtec -8	5.7	204S	301-407-42	-
Navtec -10	6.4	204S	301-408-42	-
Navtec -12	7.1	204S/304S	301-409-42	-
Navtec -17	8.4	304S	301-413-42	-
Navtec -22	9.5	304S	301-410-42	-
Navtec -30	11.1	404S	301-411-42	549-434-01
Navtec -40	12.7	404S	301-412-42	549-434-01
OYS R-8	5.7	204S	301-401-42	-
OYS R-10	6.4	204S	301-402-42	-
OYS R-15	7.5	204S	301-403-42	549-234-01
		304S	301-403-42	549-334-01
OYS R-17	8.4	304S	301-423-42	549-334-01
OYS R-22	9.5	304S	301-404-42	549-334-01
OYS R-30	11.1	404S	301-405-42	549-434-01
OYS R-40	12.7	404S	301-406-42	549-434-01
BSI -8	5.7	2048	301-418-42	-
BSI -10	6.4	2048	301-419-42	-
BSI -12	7.1	204S/304S	301-415-42	-
BSI -15	7.5	204S/304S	301-420-42	-
BSI -17	8.4	304S	301-417-42	-
BSI -22	9.5	304S	301-721-42	549-334-01
BSI -30	11.1	404S	301-422-42	549-434-01
BSI -40	12.7	404S	301-416-42	549-434-01

All Furlex systems include slotted distance tubes to be snapped on to the headed rod.  $\label{eq:constraint}$ 

For more information on installations of Furlex for rod forestay, see instruction of assembly Art. No. 597-180-E, www. seldenmast.com.



## **Furlex TD**

(Through-Deck)

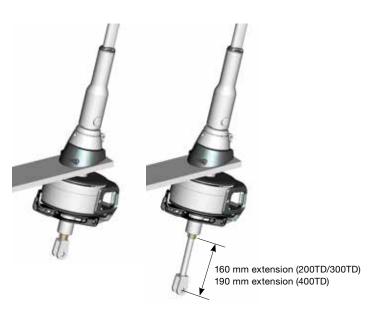


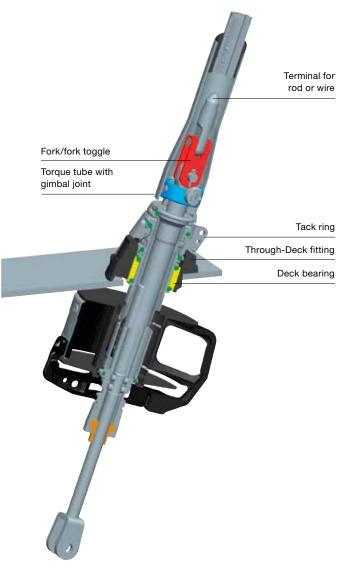


Maximize your luff length and gain performance by a through deck installation. The free turn of the tack swivel is the same as in all other Furlex models. The tack fitting, however, is fixed to the deck. This gives you a more efficient trim of the sail. More space on the foredeck will be an extra bonus!

The Furlex TD is designed for mounting through the deck. A torque tube with gimbal joint allows for full toggle articulation of the forestay. With the Furlex TD you avoid having lots of water splashing into your anchor well. The very small amount of water that seeps through is easily handled by a normal drainage.

The Furlex TD is designed for installation on a wide range of yachts. The fork under the drum is extendable to reach down to the forestay attachment below deck.

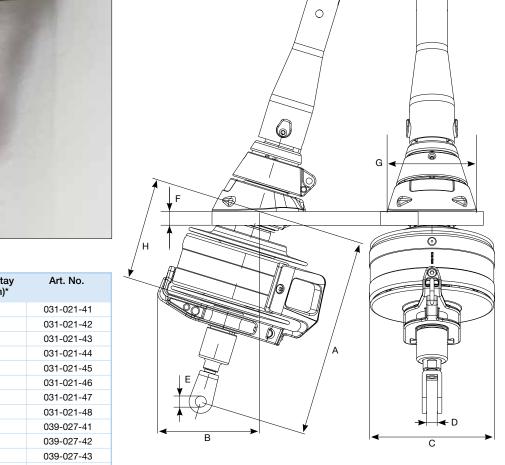












Туре	A mm	B mm	C mm	D, mm (forestay dia., mm)	E, mm (forestay dia., mm)	F max. mm	G mm	H mm
200TD	290-450	150	182	14 (6 and 7) 16 (8)	14 (6 and 7) 16 (8)	20	130	150
300TD	330-490	170	214	20 (8 and 10)	16 (8 and 10)	20	142	175
400TD	440-630	210	255	22 (12 and 14)	20 (12 and 14)	26	194	210

Max forestay length (m)\* Forestay Type dimension, mm 200TD 6 10.4 6 12.8 6 15.2 7 12.8 7 15.2 7 17.6 8 15.2 8 17.6 300TD 8 15.2 8 17.6 10 15.2 10 17.6 039-027-44 10 20.0 039-027-45 400TD 12 17.4 049-034-41 12 19.8 049-034-42 12 22.2 049-034-43 14 19.8 049-034-44 14 22.2 049-034-45

<sup>\*</sup> From deck to attachment in mast.



## **Furlex E/TDE**

(Electric)

#### All the power you need

The new Furlex Electric is available as a complete kit or as an upgrade kit for an existing Furlex 200S, 300S or 400S series. The push-button performance of a Furlex Electric makes pulling on the furling line a thing of the past.

#### **Reliable function**

Furlex Electric is designed around a highly efficient 12V or 24V electric motor. Power is transmitted to a self-locking worm gear to rotate the luff extrusion at a max torque of 60Nm (200E), 90Nm (300E) and 135 Nm (400E) respectively. These high torque levels mean that you can always rely on being able to furl your foresail – even when the wind and sea are doing their worst. The motor uses only 30 amps at normal load and it takes 25-30 seconds to furl a genoa. Once the required sail area is set, the worm drive provides a mechanical lock.

In order to prevent accidental overloading, the system comes with a built-in circuit breaker. If you attempt to reef the sail without first releasing the sheet, the power is immediately switched off. This safety feature is automatically re-set a few seconds after the control switch is released. In the event of power failure, the sail is simple to reef manually. An emergency line-driver system is included as standard and can be used for both on-deck and through-deck installations. An emergency handle with ½" socket is available as an option.

Like all other Furlex models, Furlex Electric is equipped with Seldén's unique load distributor in the halyard swivel for low friction. Low friction means low power consumption and long service life.



# On-deck or through-deck. The choice is yours

Furlex Electric is available for either on-deck or throughdeck installations. The main advantage of a throughdeck installation is better sailing performance as a result of maximised luff length. More space on the foredeck is an added bonus!



Installation of a Furlex 200TDE.
The connection box is water-tight.

#### **Upgrade your manual Furlex 200S - 400S (1997-2014)**

Push-button performance is an easy upgrade for anyone who already has a manual Furlex 200S, 300S or 400S series on their yacht. The furling line, drum and line guard assembly are simply replaced with a Furlex Electric motor unit. No sail conversion is required as the luff length of your existing sail is unaffected.



Manual Furlex 200S.



Remove line guard, line guide, rope and drum halves.



Ready to get powered up.



Slide on Furlex 200E from below and install the cables. Done!



Heavy-duty toggle to withstand torsional loads. An extension link is available to provide anchor clearance.

In case of power failure, Furlex Electric can be operated manually.



Manufactured from highgrade materials for rugged reliability and long service life.



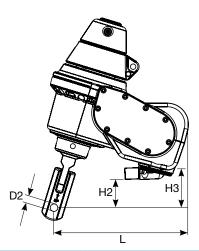
Adjustment screws enable the Furlex housing to be aligned precisely.

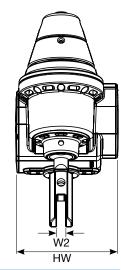


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## **Furlex Electric specifications**

Туре	Forestay diameter mm	L mm	H3 mm	HW mm	W2 mm	D2 diam. mm	H2 mm
200E	6	225	60	160	12	10	45
	7				14	12	
	8				14	14	
300E	8	260	80	210	14	14	65
	10				16	16	
400E	12	314	314 159	218	21	20	135
	14				23	22.5	





Туре	Forestay diameter mm	Max. forestay length, m	Furlex Electric assemblies (excl. control pack)  TDE version Standard version Incl. rigging screw (Through-Deck) Art. No. Art. No. Art. No.					Control pack* Art. No.		
			12V	24V	12V	24V	12V	24V	12V	24V
200E	6	10.6	031-021-11	-	031-021-21	_	031-021-31	_	532-448-01	-
	6	13.0	031-021-12		031-021-22		031-021-32			
	6	15.4	031-021-13		031-021-23		031-021-33			
	7	13.0	031-021-14		031-021-24		031-021-34			
	7	15.4	031-021-15		031-021-25		031-021-35			
	7	17.8	031-021-16		031-021-26		031-021-36			
	8	15.4	031-021-17		031-021-27		031-021-37			
	8	17.8	031-021-18		031-021-28		031-021-38			
300E	8	15.5	039-027-11	039-027-16	039-027-21	039-027-26	039-027-31	039-027-36	532-449-01	532-459-01
	8	17.9	039-027-12	039-027-17	039-027-22	039-027-27	039-027-32	039-027-37		
	10	15.5	039-027-13	039-027-18	039-027-23	039-027-28	039-027-33	039-027-38		
	10	17.9	039-027-14	039-027-19	039-027-24	039-027-29	039-027-34	039-027-39		
	10	20.3	039-027-15	039-027-20	039-027-25	039-027-30	039-027-35	039-027-40		
400E	12	17.7	049-034-11	049-034-16	049-034-21	049-034-26	049-034-31	049-034-36	532-468-01	532-469-01
	12	20.1	049-034-12	049-034-17	049-034-22	049-034-27	049-034-32	049-034-37		
	12	22.5	049-034-13	049-034-18	049-034-23	049-034-28	049-034-33	049-034-38	_	
	14	20.1	049-034-14	049-034-19	049-034-24	049-034-29	049-034-34	049-034-39		
	14	22.5	049-034-15	049-034-20	049-034-25	049-034-30	049-034-35	049-034-40		

#### Cables & fuses included:

Furlex  $\rightarrow$  connection box. Control box  $\rightarrow$  switches. Control box  $\rightarrow$  control panel. Fuse for control circuit in control box.

#### Cables & fuses not included:

Connection box  $\rightarrow$  control box. Control box  $\rightarrow$  battery. Fuse for power supply.

Туре	Forestay diameter	Retro-fit installation kit incl. control pack							
	mm	Type : Art.	S → E No.	Type TD → TDE Art. No.					
		12V	24V	12V	24V				
200E	6	539-620-11	_	539-620-51	-				
	7 539-620-13								
	8	539-620-15							
300E	8	539-638-11	539-638-21	539-638-51	539-638-61				
	10	539-638-13	539-638-23						
400E	12	539-763-11	539-763-21	539-763-51	539-763-61				
	14	14 539-763-13 539-763-23							

\* Includes deck gland, control box, connection box, instructions and switches.

Control pack is ordered separately, often prior to the delivery of the Furlex Electric assembly.

Optional items	Art. No.
Remote control, receiver card included	532-510-01
Remote control, receiver card excluded	532-460-11
Additional receiver card	532-465-01
4-function upgrade kit	532-466-10
Stainless steel panel for switches (100 x 56 x 3 mm	540-462-01
Emergency handle (1/2" socket)	533-922
Ø 6/7 mm eye/fork extension link, L=90 mm	517-070-01
Ø 8/10 mm eye/fork extension link, L=130 mm	517-071-01
Ø 12 mm eye/fork extension link, L=190 mm	517-072-01
Ø 14 mm eye/fork extension link, L=190 mm	517-073-01
Belt replacement kit Furlex 200E	539-633-01
Belt replacement kit Furlex 300E	539-651-01
Belt replacement kit Furlex 400E	539-776-01

For further technical information, please see our instructions for installation, **www.seldenmast.com**.



## Watch our furlers in action!



**Seldén CX** For Code 0



**Seldén GX** For asymmetric spinnakers

# **SELDÉN CX AND GX**

# **Furling systems for Code 0 and asymmetric spinnakers**



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## Seldén CX and GX



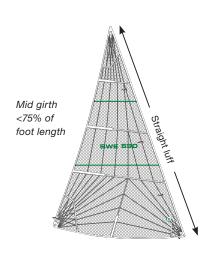
#### Want to see your crew smile?

The power and acceleration achieved when unfurling a Code 0 or an asymmetric spinnaker is spectacular. It will make your sailing more fun.

Simply hoist the furled sail, release the furling line, pull on the sheet and you have added horse power to your sailing and given your crew a positive sailing experience. To douse the sail, ease the sheet, pull the continuous furling line and secure it in the purpose made Twin Cam block. Once the sail is furled it can be neatly dropped and coiled into a bag or left hoisted for later use. Seldén provide all necessary accessories for safe and carefree furling of "off-the-wind" sails.

# The sails Code 0

The Volvo Ocean Race was the break through for the Code 0 concept, but lately the benefits of this type of sail have become recognized and appreciated also amongst ordinary sailors for the extra power it brings to light wind sailing. The luff is straight, set under tension and made for furling which simplifies the handling of this large sail. An AT-cable is integrated in the luff and fitted with thimbles in head and tack, and the entire luff length is furled simultaneously. The Code 0 is hoisted as high as the mast dimension permits and is tacked to the bow or to a sturdy bowsprit. The design is quite flat and reaches its maximum performance in apparent wind angles between 40° and 90°. Seldén CX is the right furler for this sail.



#### **Asymmetric spinnaker**

This sail is often called "gennaker" or "cruising chute". The mid girth is >75% of the foot length and the sail is defined as a spinnaker in most international measurement rules. The luff is at least 2% longer than the leech and this is what makes the sail asymmetric. This sail is furled with a Seldén GX system and fitted at the tack to the swiveling tack attachment and at the head to the halyard swivel. An AT-cable connects the drum and the halyard swivel and transmits the rotation of the drum enabling the furling to start at the top and work its way down until the entire sail is stowed away. This is called top-down furling. The Seldén GX furler is fitted to the bow of the boat or preferably on a retractable Seldén bow sprit to expose the sail to the wind and to get clearance from the forestay. The halyard tension is moderate and the sail is hoisted using the spinnaker halyard. This sail performs at its best in apparent wind angles between 70° and 110°.



#### The furlers

Seldén CX and Seldén GX are operated with an endless furling line running over a line driver drum. The furling line is preferably led all the way back to the cock pit and Seldén offer the Double Fairlead and the Twin-Cam block for a well organized set up. A purpose made AT-cable has been developed to secure the function of the system and as the performance of top-down furling is dependant on the torsional rigidity of the AT-cable, it is included in the Seldén GX furlers.

- Metal "teeth" in the drum make for a good grip on the line when furling the sail.
- A wedge in the line guide separates the line from the drum when unfurling the sail and the drum spins freely.

- Sealed steel bearing in the drum and in the halyard swivel for long service life.
- Rubber fender prevents the halyard swivel from chafing the mast while hoisting the furled sail.
- CX. Spring loaded lock makes it easy to connect the thimbles to the drum and the halyard swivel.
- GX. Patented line lock for easy mounting of the AT-cable to the drum and to the halyard swivel.
- All structural parts are made of high-strength Duplex stainless steel. This means reduced material and low weight.
- Non-structural parts are made of impact resistant glass fibre reinforced polyamide composite.

#### Seldén GX, for top-down furling of an asymmetric spinnaker/gennaker

Seldén GX drum and halyard swivel and an AT-cable is included in the kit. The drum and the halyard swivel are permantly fitted to the sail with the Seldén line lock. Connect the drum to the bow and the spinnaker halyard to the halyard swivel. Lead the furling line to the cockpit by using Seldén Double Fairleads on the stanchions, tighten the furling line and secure it in the Twin-Cam block. Thereafter hoist the furled sail.

Seldén GX	Kit including GX drum, halyard swivel and AT-Cable Art. No.	Max length of the system	Drum size, Ø mm	Dimension of included AT-cable, Ø mm	Max suggested sail area m²	Max working load, kN
GX7.5	545-018-21	13000	105	9	50	7.5
	545-018-22	16000				
	545-018-23	19000				
GX10	545-118-21	13000	120	11	80	10
	545-118-22	16000				
	545-118-23	19000				
	545-118-24	22000				
GX15	545-218-21	16000	150	13	115	15
	545-218-22	19000				
	545-218-23	22000				
	545-218-24	25000				
	545-218-25	28000				
GX25	545-418-21	19000	190	15	200	25
	545-418-22	22000				
	545-418-23	25000				
	545-418-24	28000				



#### Selden CX, for Code 0

The AT-cable is integrated in the luff of the sail and thimbles connect the luff to the drum and to the halyard swivel. Special cable clamps are required to fit the thimbles to the Seldén AT-cable. A dedicated halyard for Code 0 is required and 2:1 purchase is recommended to obtain the required luff tension and to reduce the load on the halyard sheave and on the line stoppers. The drum and the furling line can be permanently mounted to the bow and along the stanchions.

Seldén CX	Kit including drum and halyard swivel Art. No.	Drum size, Ø mm	Safe working load, kN	Max suggested sail area, m <sup>2</sup>	Max RM at 30° heel, kNm	Approx. displacement, tonnes
CX10	545-010-10	105	10	50	25	5
CX15	545-100-10	120	15	80	45	7,7
CX25	545-200-10	150	25	115	90	14
CX45	545-433-10	190	45	200	200	28







A Seldén CX15 Code 0 furler and a Race80 Bowsprit from Båtsystem, Sweden. www.batsystem.se. The luff load on a Code 0 is more than the double compared to an asymmetric spinnaker. Therefore, a sturdy bowsprit is required.

#### Seldén CX, for top-down furling of an asymmetric spinnaker/gennaker

This is an alternative to GX allowing the drum and the furling line to be mounted permanently. Snap in the furled gennaker and hoist it using the spinnaker/gennaker halyard.

A Seldén CX drum is combined with a Free Tack Adapter and a GX halyard swivel, both of them with Seldén line lock. The furled sail with the Adapter is connected to the drum and the sail is hoisted with the spinnaker hal-yard. The drum and the furling line can be permanently mounted to the bow and along the stanchions.

Seldén CX	CX drum Art. No.	Kit including Free Tack Adapter & GX halyard swivel Art. No.	AT-cable Dimension, Ø mm	This combination equals	Max suggested sail area, m <sup>2</sup>
CX10	545-010-11	545-028-10	9	GX7.5	50
CX15	545-100-11	545-128-10	11	GX10	80
CX25	545-200-11	545-228-10	13	GX15	115
CX45	545-433-11	545-428-10	15	GX25	200





#### Seldén CX, for Code 0 & top-down furling of an asymmetric spinnaker/gennaker

This is an all-in-one solution for the sailor using both Code 0 and gennaker and prefers using one halyard for both applications.

A Seldén CX drum and halyard swivel for thimbles are used both for the Code 0 sail and an additional gennaker. Connect the sail suitable for the prevailing conditions to the drum and to the halyard swivel and hoist the furled sail using the Code 0 halyard. The Free Tack Adapter is permanently fitted to the tack of the asymmetric spinnaker/gennaker with the Seldén line lock. The drum and the furling line can be permanently mounted to the bow and along the stanchions.

Seldén CX	CX drum and halyard swivel Art. No.	Adapter Art. No.	AT-cable Dimension, Ø mm	This combination equals	Max suggested sail area of the gennaker, m <sup>2</sup>
CX10	545-010-10	545-028-11	9	GX7.5	50
CX15	545-100-10	545-128-11	11	GX10	80
CX25	545-200-10	545-228-11	13	GX15	115
CX45	545-433-10	545-428-11	15	GX25	200





#### **Accessories**

#### **Seldén AT-cables (Anti-Torsion)**

The more torsional rigid AT-cable, the quicker and safer the sail will furl.

Seldén provide the most rigid cable on the market, three times more rigid than the second best, and it is included in the Seldén GX kit.

Art. No.	Length, mm	Dimension, Ø mm	To be used for
613-020-01 613-020-02 613-020-03	13000 16000 19000	9	CX10 CX15 GX7,5 CX10 + GX7,5 adapter
613-021-01 613-021-02 613-021-03 613-021-04	13000 16000 19000 22000	11	CX25 GX10 CX15 + GX10 adapter
613-022-01 613-022-02 613-022-03 613-022-04 613-022-05	16000 19000 22000 25000 28000	13	GX15 CX25 + GX15 adapter
613-023-01 613-023-02 613-023-03 613-023-04	19000 22000 25000 28000	15	CX45 GX25 CX45 + GX25 adapter

#### **Endless furling line**

Art. No. Line only	Art. No. Line with Twin cam block installed	Length, mm	Dimension, Ø mm	To be used for
611-007-06 611-007-07 611-007-09 611-007-08	611-007-31 611-007-32 611-007-33 611-007-34	2 x 4000 2 x 8000 2 x 10000 2 x 12000	8	CX10 CX15 GX7,5 GX10
611-011-05 611-011-06 611-011-07 611-011-18 611-011-19	611-011-31 611-011-32 611-011-33 611-011-34 611-011-35	2 x 5000 2 x 7000 2 x 9000 2 x 12000 2 x 15000	10	CX25 GX15
611-015-06 611-015-07 611-015-08 611-015-09	611-015-31 611-015-32 611-015-33 611-015-34	2 x 5000 2 x 9000 2 x 12000 2 x 17000	12	CX45 GX25

# Unique and patented line lock system



Line terminal with a conical shape. Set of wedges.



Pull the terminal over the line and fold the core of the line over the wedges. Insert the wedges to the terminal.



Install the drum/halyard swivel and tighten the locking screw.



Twin cam block for furling line PBB50 Art. No. 405-001-40R (max Ø10 mm line) PBB60 Art. No. 406-001-40R (Ø12 mm line)

#### **Double Fairlead**

Ordinary blocks cannot be used to lead the endless furling line back to the cockpit. Seldén Double Fairlead consist of a composite bracket fitted to a 25 mm or 30 mm stanchion and a spring loaded "push-and-twist" bracket in stainless steel. Easy to open to attach the line and just as easy to close. The Double Fairlead prevents the line to get tangled up and the smooth stainless bracket prevents friction. Art. No. 480-501-01R.



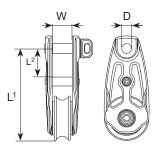
#### Code 0 halyard with 2:1 purchase

To boost the performance when using a Code 0, the halyard load must be higher than what normal halyard boxes and stoppers can handle. Therefore, a 2:1 purchase needs to be arranged by fixing the dead end of the halyard in the mast and letting it run through a block attached to the halyard swivel. Position on the mast must be specified by Seldén. In most cases Code 0 sails need to be hoisted lower than gennakers and spinn-akers.



#### **Block for 2:1 purchase**

Art. No.	Dim.	Weight, g	Ľ¹	L <sup>2</sup>	W	D	Safe working load, kg	Breaking load, kg	Max line size, mm	To be used for
403-501-01R	30	130	66	21	13	8	1500	3000	10	CX15
404-501-01R	40	245	83	26	18	10	2500	5000	12	CX25, GX25
405-501-01R	50	505	104	31	24	12	4000	8000	16	CX45



#### **Dead end fitting**

Art. No.	Mast section	Max rope, Ø mm	Max RM at 30° heel, kNm
508-843-01R	C156-F228	12	45
508-844-01R	C245-F305	14	180
508-838-01R	C321-F406	16	350



#### **Thimbles for AT-cable**

Art. No. (2 pcs)	For AT-Cable, Ø mm	To be used for
545-114-01	8-9	CX10, CX15
545-116-01	10-11	CX10, CX15
545-214-01	10-11	CX25
545-216-01	12-13	CX25
545-416-01	14-16	CX45



#### Cable clamps

To fit thimbles to the Seldén AT-cable. Heat shrink tubing included.

Art. No. (2 pcs)	For AT-Cable, Ø mm
301-311-01	9-11
301-312-01	12-13
301-313-01	14-15



For CX25 and CX45 double clamps at each end of the AT-cable are required.

#### **Adapters**

An adapter adds a tack swivel to a CX furler. The CX drum can now be used both for Code 0 and for asymmetric spinnaker/gennaker. The adapters feature the patented Seldén line lock and Torlon ball bearings.

Art. No.	Converts	to
545-028-11	CX10	GX7.5
545-128-11	CX15	GX10
545-228-11	CX25	GX15
545-428-11	CX45	GX 25



#### **Anti-Twist shackle**

The Anti-Twist shackle is an optional shackle connecting the halyard to the halyard swivel. The long pin will lean against the mast and prevent a "soft" halyard from twisting.

This shackle is not necessary for a 2:1 halyard set up nor is it for a high quality Dyneema® halyard.

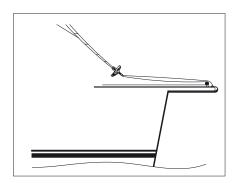
Art. No.	Dimension	To be used for
545-030-01R	M6, L = 220 mm	CX10, GX7.5, GX10
545-130-01R	M8, L = 220 mm	CX15, GX15
545-230-01R	M10, L = 280 mm	CX25, GX25
545-430-01R	M12, L = 390 mm	CX45

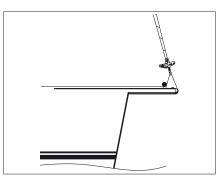


#### Low friction shackle

This snap shackel has a big, well rounded loop allowing the rope to slide with low friction and it can be used to tension a Seldén CX with 2:1 purchase. This not only makes for better performance but it also makes it easier to connect the Seldén CX to a bowsprit, from the foredeck. The shackle is made of high strength Duplex steel and has a quality mirror finish.

Art. No.	Dimension	Weight, g	Safe working load, kg	Breaking load, kg	To be used for
307-435-01R	50	70	900	1800	CX10, GX7,5, GX10
307-436-01R	60	118	1500	3000	CX15, GX15
307-437-01R	80	278	2500	5000	CX25, GX25
307-438-01R	100	540	4000	8000	CX45





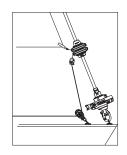


#### **Adjustable Tack Swivel (ATS)**

This accessory for Seldén GX furlers enables the sailor to easily trim the luff of the asymmetric spinnaker/gennaker. The Adjustable Tack Swivel slides up and down over the AT-cable and is handled from the cockpit with a down haul. As opposed to trimming the luff by slacking the halyard, the AT-cable can now be permanently tensioned and always ready for furling.

Art. No.	To be used for
545-040-10	GX7.5
545-140-10	GX10
545-240-10	GX15
545-440-10	GX25





The sliding sleeve of ATS consists of two halves and therefore it is easy to retrofit the swivel to a GX furler.





Hydraulics are used for efficient trim of the sails and for pure convenience.

# **HYDRAULICS**



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## **Mast jack system**

A mast jack from Seldén ensures that you always retain the right rig tension for racing. It also lets you relieve the load on the rig and boat when you are in port. The mast jack system consists of a hydraulic cylinder located inside the mast. The cylinder piston moves down vertically through the heel of the mast to a steel plate in the boat's T-base, thereby lifting the mast and increasing the tension.

In order to make it easier to jack up the mast, the system includes a two-stage pump that switches to its lower gear as the pressure increases. When the mast reaches its upper position, shims are placed between the heel and the T-base. Release the pressure and remove the pump.

Now, the rig is set in accordance with the predetermined requirements. So is the boom height, I-measurement and other rating measurements recorded by the measuring official.

The pump is connected to the cylinder with stainless steel couplings, and can easily be disconnected and left ashore prior to racing. The hydraulic hose is then stored in a purpose-designed hose garage to keep it out of the way. The hose garage itself is fitted inside the mast.

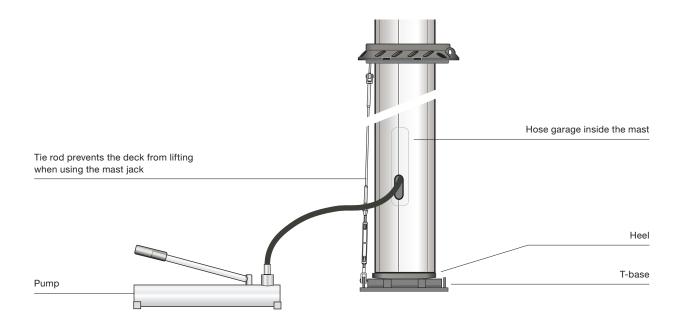
The T-base has the same pattern of holes as Seldén's standard T-base, and its position can be adjusted in fore and aft direction to obtain the optimal mast rake.

The hose is stored in a hose garage...



...and can easily be fitted to the pump to adjust the rig tension.





## **Technical specifications**

System	Mast extrusion	Max pressure (bar)	Max working load (kN)
D65/300	C193 CC192	300	100
D63/400	C211-C245 CC210-CC244	400	125
D80/400	C264-C304 CC263-CC303	400	200

Mast jack cylinder fitted on mast heel and 2-metre hose with quick coupling (male)	Mast extr. Alu- minium	Art. No.	Mast extr. Carbon	Art. no
	C193	502-196-01	CC192	502-196-03
	C211	502-190-01	CC210	502-190-03
	C227	502-191-01	CC226	502-191-03
	C245	502-192-01	CC244	502-192-03
	C264	502-193-01	CC263	502-193-03
	C285	502-194-01	CC284	502-194-03
	C304	502-195-01	CC303	502-195-03

Pump with manometer	System	Art. No.
	D65/300	550-150-01
9	D63/400	550-160-01
ė a	D80/400	550-160-02

	T-base with shims and U-bolts for attaching tie rod	System	Art. No. (dim., mm)
Guide ro	ds	D65/300	510-208-01 (205x140x15)
		D63/400	510-180-01 (300x125x15)
		D80/400	510-185-01 (370x160x25)
U-bolt fo	or tie rod Shims		

Tie rod kit, includes conversion parts for standard deck ring	Mast extrusion	Art. No.
	C193, CC192	601-003-54
	C211, C227, CC210, CC226	508-309-02
	C245, CC244	508-309-03

Accessories	Art. No.
Hose garage, including pop rivets	507-537-01
Shim, 2 mm (D65/300)	510-209
Shim, 5 mm (D65/300)	510-210
Shim, 10 mm (D65/300)	510-211
Shim, 2 mm (D63/400) (Optional)	510-214
Shim, 5 mm (D63/400)	510-181
Shim, 10 mm (D63/400)	510-182
Shim, 15 mm (D63/400)	510-183
Shim, 2 mm (D80/400) (Optional)	510-215
Shim, 5 mm (D80/400)	510-186
Shim, 10 mm (D80/400)	510-187
Shim, 20 mm (D80/400)	510-189
Locking bolts for shims (D65/300)	165-107
Locking bolts for shims (D63/400)	165-207
Locking bolts for shims (D80/400)	166-011
1/4" hydraulic hose, 2 metres, with couplings	540-965-01
Quick coupling (male)	540-966
Protective plastic cover for 540-966	540-968
Quick coupling (female)	540-967
Protective plastic cover for 540-967	540-969
Sealing washer for coupling	540-885
U-bolt for securing tie rod	508-023-02
Silicone spray, 250 ml, for rubber wedges for deck ring	312-506
Safety wire with Talurit eye. Some racing rules stipulate safety wire between mast and T-base.	508-010-10

# **Hydraulic cruise control**

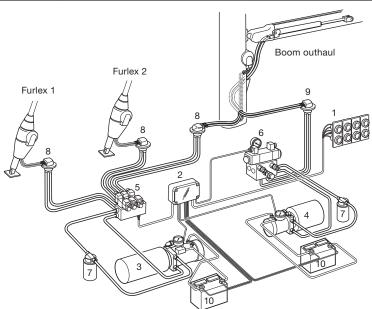


Seldén's hydraulic furling system for mainsail and foresail are:

- Furlex Hydraulic for headsails
- Hydraulic furling mast
- Hydraulic outhaul

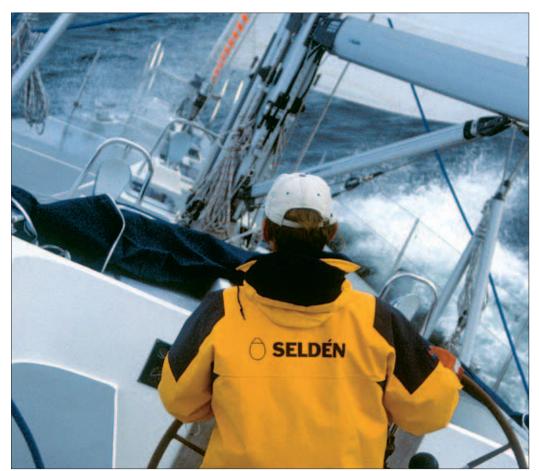
The picture to the right shows the principle of a hydraulic system with hydraulic pump, valve units and drive units, all connected by hydraulic hosing. The system is operated from the cockpit by control switches connected to the system through a control box.





- Control buttons
- 2. 3.
- Control box Pump unit, furling mast + Furlex
- 4. Pump unit, outhaul
- Valve unit, furling mast + Furlex Valve unit, outhaul
- 6. 7. 8. Filter
- Pillel
   Deck gland, furling mast + Furlex
   Deck gland, outhaul
   Battery







Långedrag 501 equipped with Seldén hydraulic furling mast, hydraulic outhaul and double hydraulic Furlex jib-reefing systems.

# Sailing from the cockpit at the press of a button

A powered furling mast enables you to reef, furl and trim the sail area to suit the wind conditions at the touch of a button. The patented, built-in motor has a direct drive to the worm gear, to keep moving parts to a minimum and increase power, efficiency and reliability. The worm gear, which is self-braking, locks the sail in the required position. In an emergency, the mainsail can also be manually furled and unfurled with an ordinary winch handle.

# Hydraulic clew outhaul - the ultimate control

The push-button controls in the cockpit give you complete command of your mainsail. You can also trim the outhaul when sailing close hauled – a task which would ordinarily require the full strength of a crew member using a manual winch. Furthermore, there is no clew outhaul line to clutter up the cockpit.

#### Booms available for hydraulic outhaul.

B200, B250, B290 and B380

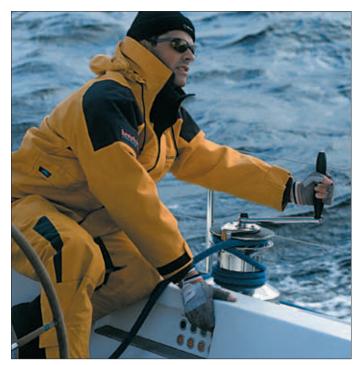


#### **Specifications of hydraulic motors**

Model	Motor designation	Max. torque at max. pressure, Nm	Nominal speed luff extrusion (n), rpm	Nominal oil flow (Q), I/min	Nominal oil pressure (p), bar	Max. oil pressure (p), bar	Rec. min. power hydraulic pack (P) kW	Max. sail area m²
Type RB	OML 12.5	158	40	10	40	120	1.5	60
Type RC	OML 12.5	158	40	10	40	140	2.0	60
Type RD	OML 12.5	158	40	10	40	140	3.0	80
Type RD	OML 20.0	230	40	20	40	140	4.0	120
Type RD Built-in	OML 20.0	255	40	20	40	140	3.0	120

## **Furlex H**

## (Hydraulic)



With a Furlex Hydraulic, the cruise control is complete. All you need to do is press a button in the cockpit and adjust the sheet.

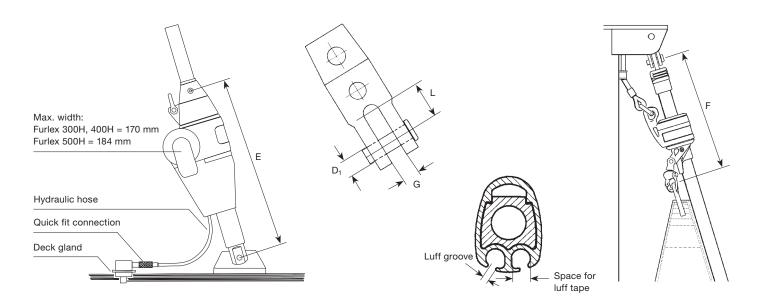
The Furlex Hydraulic is designed to provide a harmonious visual interplay of stainless steel and aluminium. The hydraulic motor is located inside the worm gear, in the same way as it is with the furling mast system. The positioning of the motor contributes to the compact design of the Furlex Hydraulic.

Туре	Forestay dia., mm	Max. forestay length, m	Motor designation	Art. No.
300H	8	15.5	OML 12.5	039-027-70
		17.9		039-027-71
	10	15.5		039-027-72
		17.9		039-027-73
		20.3		039-027-74
400H	12	17.7	OML 12.5	049-034-75
		20.1		049-034-76
		22.5		049-034-77
		17.7	OML 20	049-034-95
		20.1		049-034-96
		22.5		049-034-97
	14	20.1	OML 12.5	049-034-78
		22.5		049-034-79
		20.1	OML 20	049-034-98
		22.5		049-034-99
500H	16	23.0	OMM 20	060-046-50
		27.8		060-046-51
	-60 rod	27.8		060-046-70
		32.6		060-046-71
	-40 rod	23.0		060-046-80
		27.8		060-046-81
	-48 rod	23.0		060-046-90
		27.8		060-046-91
		32.6		060-046-92



Furlex Hydraulic, deck gland and deck gland protection.





## **Furlex Hydraulic specifications**

Туре	Total weight drive unit, kg	Luff extrusion kg/m	Halyard swivel, kg	Extrusion dim., mm	Luff groove mm	Max space for luff tape, dia., mm	Max. luff tape dia., mm	"Cut-Back" mm
300H	16	0.76	1.7	40 x 27	3.0	7	6	80
400H	25	1.06	3.3	50 x 34	3.0	8	6	100
500H	37	1.93	7.0	60 x 46	3.0	9	7	100

Туре	Forestay wire dia., mm	Rod dia. mm	Nav- tec	OYS* (Riggarna)	BSI		M (kNm) ° heel Fractional	Clevis dia., mm	G mm	L mm	E mm	F mm	Forestay adjust- ment
300H	8	-12 (7.1)	X		Х	40	50	14	15	30	490	540	100
		-15 (7.5)		X	Χ								
	10	-17 (8.4)	X		Χ	70	80	16	15	30			
		-22 (9.5)	X	X	Х								
400H	12	-30 (11.1)	Х	X	Χ	120	160	19	19	35	610 620	620	110
	14	-30 (11.1)	X			180	190	22	23	40			
		-40 (12.7)	X	X	Χ								
500H	16	-				230	250	25.4	26	45	675		100
		-40 (12.7)	X	X		180	190	25.4	26	45			
		-48 (14.3)	X	Х	Χ	230	250	28.6	29	50			
		-60 (16.8)	Х	X	Х	330	-	31.8	32	55			

 $<sup>^{\</sup>star}$  The upper eye terminal must be of the MNY type.

Туре	Motor designation	Max. torque at max. pressure, Nm	Nominal speed luff extrusion (n), rpm	Nominal oil flow (Q), I/min	Nominal oil pressure (p), bar	Max. oil pressure (p), bar	Rec. min. power hydraulic, pack (P) kW	Max. sail area m²
300H	OML 12.5	158	40	10	40	140	1.5	80
400H	OML 12.5	175	40	10	40	140	2.0	125
400H	OML 20.0	255	40	20	40	140	3.0	150
500H	OML 20.0	290	40	20	40	140	4.0	200

## **Hydraulic cylinders**

#### Hydraulic adjusters and vangs

Fast and convenient adjustment of the backstay and the vang is vital both for the racing sailor and for the cruising sailor. Being able to tension the forestay, adjust the pre-bend of the mast and control the power in the mainsail will make any boat point higher, sail faster and under better control. Seldén has developed a range of hydraulic cylinders based on functional design, ease of use, reliability and long service life. The rods are marine grade stainless steel and the cylinders black anodized or clear anodized aluminium. The tensioners have long stroke making it possible to try out different mast rakes.

#### Hydraulic Tensioners Integral (HTI) Hydraulic Tensioners (HT) for Seldén control panels

- A 2-speed function permits fast tensioning until a pre-set pressure is obtained. Then the tensioner shifts down to low speed and reduced resistance in the handle. The level of pressure needed to gear down is easily adjusted to suit the individual trimmer.
- Available for Ø8 14 mm backstay wires (equals -17 to -40 rod).
- HTI: The gauge is at the top of the tensioner making it easy to check the achieved pressure (bar).
- Releasing the pressure is done by twisting the control of the release valve.
- An adjustable relief valve prevents overload.





## **Hydraulic Backstay Tensioners**

Art. No.	Tensioner	Anodization	Max wire size, Ø mm (rod size)	Max pulling force at 5000 psi, kN	Max working pressure, bar	Stroke, mm	Contracted length, mm	Lower pin diameter, Ø mm	Cylinder dia, Ø mm	Piston rod thread	Weight, kg	2-speed function	Dual Action
580-001-10	HTI-W8/10 Backstay tensioner with	Clear	10 (-17)	44	345	420	1028	15,8	62	UNF 5/8" – 18	8,1	Yes	No
580-002-10	integral pump	Black							Left hand				
580-003-10	HT-W8/10	Clear					826				4,3		Yes
580-004-10	Backstay adjuster for pump station	Black											
580-005-10	HTI-W12/14	Clear	14 (-40)	85	345	480	1156	22	80	UNF	13		No
580-006-10	Backstay adjuster, integral pump	Black								7/8" - 14 Left hand			
580-007-10	HT-W12/14	Clear					912				8		Yes
580-008-10	Backstay adjuster for pump station	Black											

## **Upper terminals**

Tensioner	Anodization	Fork Art. No.	Upper pin diameter, Ø mm		g screw body d split pin Art. No.	
HTI-W8/10	Clear	581-400-01	15,8	5/8"	174-326-99	
HT-W8/10	Black	581-401-01				
HTI-W12/14	Clear	Clear 581-402-01		7/8"	174-328-99	
HT-W12/14		581-412-01 (for -22 rod)	19			
	Black	581-403-01	22			
		581-413-01 (for -22 rod)	19			





## Toggle

Tensioner	Art. No.	Lower pin diameter, Ø mm		
HTI-W8/10 HT-W8/10	174-107-01	15,8		
HTI-W12/14	174-135-01	22		
HT-W12/14	174-134-01 (for -22 rod)	19		



## Hydraulic boom vangs (HV)

Art. No.	Description	Anodization	Max pulling force at 5000 psi, kN	Max working pressure, bar	Maximum return force, kN	Stroke, mm	PCLC (Pin Center Length Closed), mm	Pin diameter, Ø mm	Cylinder dia, Ø mm	Weight, kg	2-speed function	Dual Action
580-009-10	HV-26	Clear	ear 22 345	5	250	1720	12	50	5,4	Yes	Yes	
580-010-10	Boom vang	Black										
580-013-10	HV-44	Clear	44,2		8,4	280	2700	15,8	70	12		
580-014-10	Boom vang	Black										
580-015-10	HV-57	Clear	ear 56,7		12	280	2950	19	80	15,8		
580-016-10	Boom vang	Black										

#### **Control panels**

- Available for single function or 4-functions.
- The panels have a Dual Action function which means the pump is active both when pushing and when pulling the handle.
- An adjustable relief valve prevents overload.
- A 2-speed function permits fast tensioning until a pre-set pressure is obtained. Then the panel shifts down to low speed and reduced resistance in the handle. The level of pressure needed to gear down is easily adjusted to suit the individual trimmer.
- The panels are black anodized or clear anodized aluminium.





Pump station, 1-function

#### **Control panels**

Art. No.	Number of functions	Anodization	2-speed function	Dual Action		
586-500-10	1	Clear	Yes	Yes		
586-501-10		Black				
586-500-14	4	Clear				
586-501-14		Black				





Pump station, 4-function



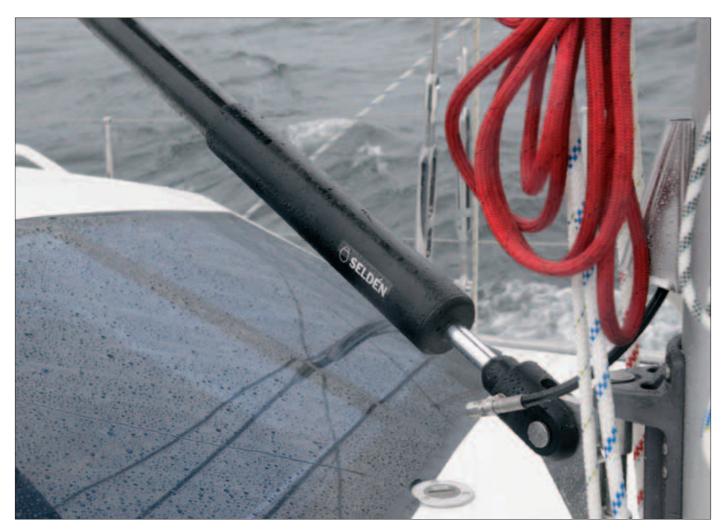


Oil reservoir, Art. No. 585-300-01





First 40 featuring a HT-W8/10 tensioner and control panels both sides in the cockpit.



HV-57 hydraulic boom vang.



#### The exhilarator

Once you have experienced the thrill of the wind filling the spinnaker, you are sure to be hooked on spinnaker sailing. Seldén brings this sensation to yachtsmen all over the world through its complete range of easy-to-use aluminium and carbon spinnaker poles and accessories.

# **SPINNAKER & GENNAKER**

# poles and accessories



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## **Aluminium spinnaker poles**



Seldén aluminium spinnaker poles give you fast and safe spinnaker handling. All the fittings have well-rounded edges to prevent personal injury and damage to equipment. The extrusions are lightweight and very durable, and are fitted with pole savers to shield the pole against damage from forestay and shrouds.

Composite end fittings are available for our Ø 48-Ø 96 poles. These fittings are normally used for end-for-end gybing but can be used for vertical pole stowage and dip gybing as well.

Our traditional aluminium fittings for dip gybing are available for the  $\emptyset$  72- $\emptyset$  111 sections.

#### **Trip trigger**

All aluminium fittings and composite fittings for  $\emptyset$  72- $\emptyset$  111 poles are available with a trip trigger function. You open the end fitting with a control line and the sheet locks it automatically. This makes life easier for the foredeck crew.

#### Four good ways

There are four basic ways to handle the spinnaker. The end-for-end method, with the topping lift and downhaul attached to the centre of the spinnaker pole, is most suitable for boats up to 25 feet in length. Another end-for-end method, with the topping lift at the centre of the pole and





The aluminium extrusions are fitted with pole savers to shield the pole against damage from forestay and shrouds.

the downhaul attached to the outboard end, is best for masthead rigged boats (max. 33 ft) and fractionally rigged boats (max. 40 ft). The third method, dip pole, is suitable for larger boats. The fourth way, twin pole arrangements, is recommended for yachts ranging from 40 feet and upwards. Twin poles make it much easier and safer to gybe with the spinnaker on a big yacht.

#### **Section data**

	Section dia., mm	l <sub>y</sub> cm⁴	I <sub>x</sub> cm <sup>4</sup>	Wall thick- ness, mm	Weight kg/m
$-\bigoplus_X^Y$	48/48	7.65	7.65	2.0	0.75
	60/60	15.4	15.4	2.0	1.00
	72/72	29.9	29.9	2.2	1.38
$\leftarrow$	84/84	48.0	48.0	2.2	1.53
**** <b>}</b> Y	96/96	72.3	72.3	2.2	1.76
$\overline{}$	99/99	123	123	3.6	2.65
X	111/111	197	197	4.1	3.38
-CY	140 x 3*	303	303	3.0	3.17

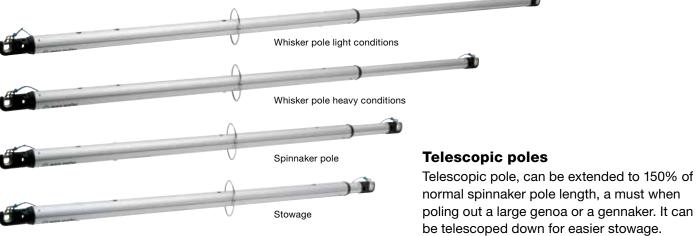
#### \* Only available with Harken end fittings.

#### **Composite spinnaker pole fittings**

A lightweight composite fitting for fast and easy spinnaker handling. Stainless, spring loaded plunger. These fittings can be used for end-for-end gybing as well as vertical pole stowage and dip gybing.

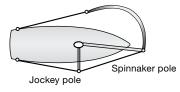
Spinnaker poles with composite fittings come with Dyneema-core bridles for topping lift and downhaul. Can be secured in place without removing the fittings from the tube, which also makes it easier to change or adjust the bridles.





Telescopic pole. Maximises your downwind performance. Minimises your stowage problem.

Art. No.	RM 30° kNm	Displ. tonnes	Section	Section dia., mm		Min. length for stowage	Spinnaker pole postion	Whisker pole heavy conditions	Whisker pole light conditions	
			Inner	Outer	kg	mm	mm	mm	mm	
060-060-58	18	3.6	48	60	6	2530	3000	3600	4500	
072-072-61	35	6.3	60	72	10	2950	3500	4200	5250	
084-084-60	55	9.0	72	84	13	3280	3900	4875	5820	



The jockey pole reduces the loads and minimises the wear on guys and life lines.

#### **Jockey poles**



 $^{*}096\text{-}096\text{-}59$  includes inboard end 534-778-04 and requires male fitting 508-149-01 at the mast.

Art. No.	RM 30° kNm	Sec- tion	Total length mm
060-060-55	26	60/60	1810
060-060-56	35	60/60	2010
072-072-58	43	72/72	2030
072-072-64	55	72/72	2230
084-084-58	90	84/84	2480
096-096-58	250	96/96	2760
096-096-59*	250	96/96	2840

# Ready, set, go



Hook up the spinnaker. Set up the spinnaker pole, topping lift and downhaul. Adjust the pole to suitable sailing trim. Haul in the windward guy. Also, haul in the leeward sheet to prevent the sail from twisting.



Hoist the spinnaker. It is a good idea if someone assists at the mast. Let the halyard run through a closed rope stopper. That way, you will not lose it if it fills early.



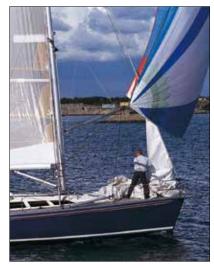
Make sure that the spinnaker runs free from the bag or through the forepeak hatch.



Call out "Top!" when the spinnaker is fully hoisted.



Adjust the guy and sheet.



Tidy up and hand in the jib.



When taking down the spinnaker, release the halyard first, followed by the leeward sheet. Do not release the windward guy until the spinnaker is fully down. If you want to read more about spinnaker sailing please order our free brochure, Using a spinnaker, Art. No. 595-560-E.

# **Carbon spinnaker poles**



#### Seldén quality

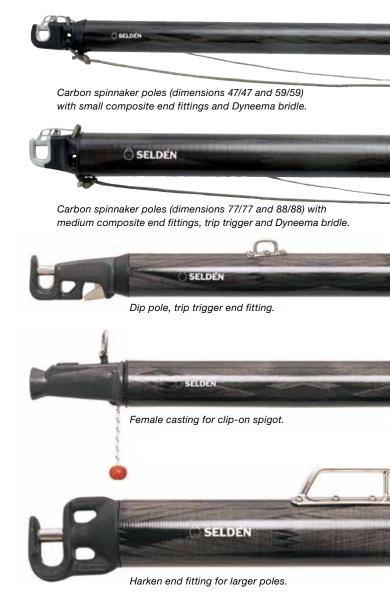
We have developed our own computer controlled manufacturing method in which prepreg (pre-impregnated) tows are wound onto a mandrel (cylinder) prior to oven curing. This method enables us to exercise full control over every stage of the manufacturing process and guarantee products of consistently high quality. One of the big advantages of this Seldén production method is that it enables us to achieve sufficient durability in the areas subject to the greatest loads and wear.

#### In all sizes

Seldén carbon spinnaker poles are suitable for dinghies and for yachts up to 30 tonnes. The larger poles are tapered to optimise weight/strength requirements, and facilitate handling.



Seldén spinnaker poles are designed to make light work of spinnaker handling. The big advantage of carbon fibre is its low weight. The weight savings enable the crew to handle the spinnaker faster, with less effort.



Weight comparison – aluminium and carbon spinnaker poles (equal strength). Aluminium spinnaker pole Section 99/99, length 5150 mm, weight 16.9 kg. Carbon spinnaker pole Section 102/102, length 5150 mm, weight 9 kg.

#### Seldén carbon spinnaker poles

Туре	Section dia., mm	Weight kg/m	Inertia Al-equivalent cm <sup>4</sup>
Untapered tube	47	0.33	5.4
	59	0.42	10.8
	61	0.59	18.5
	77	0.65	42.3
	88	1.00	63
	90	1.26	88
Tapered tube	102	1.15	134.6
	119	1.68	217
	137	1.94	335
	156	2.69	508
	158	3.15	642



Twaron protection can be supplied as an option. Twaron filaments protect the pole from damage caused by the forestay and shrouds.

# Selecting the right pole

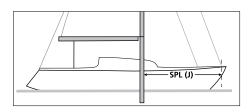
Just look in the appropriate table for your yacht's displacement or righting moment (RM) at 30° heel, then look right for the value exceeding your SPL or J value (shown in the sail plan).

Example: For an aluminium spinnaker pole. Yacht displacement 8.0 tonnes, SPL is 6100 mm. The correct section is 99/99.



#### **Table terminology**

RM: Righting moment at 30° of heel.



SPL (J): Maximum spinnaker pole length for your yacht.

A whisker pole should be approximately as long as the foot of the sail you intend to pole out.

#### **Topping lift**

When SPL is within 500 mm of a dimension shown in **bold blue**, a bridle topping lift is recommended if downhaul is at outboard end of pole. For 99/99 and larger diameter poles, use outboard end lift only.

#### Downhaul

Poles should have downhaul attached via a bridle or at outboard end. If a central attachment is desired, the pole diameter must be increased to the next size up.

#### Aluminium spinnaker pole selection max SPL (mm)

RM 30° kNm	Displ. tonnes	48/48	60/60	72/72*	84/84*	96/96	99/99	111/111	140/140
8	1.6	3000							
10	2.0	2700							
12	2.4	2500	3600						
14	2.8	2400	3500						
16	3.2	2350	3400						
18	3.6	2300	3300						
20	4.0	2250	3200	4650					
25	5.0		3000	4250					
30	5.7		2850	3905	5010				
35	6.3		2730	3720	4710				
40	7.0		2600	3520	4460	5480			
45	7.7			3360	4260	5230			
50	8.2			3220	4080	5010	6530		
55	9.0				3930	4820	6290		
60	10					4660	6070		
70	11					4380	5710	7230	
80	12					4150	5410	6580	
90	14						4950	6540	8110
100	15						4770	6270	7770
110	16						4600	6030	7480
120	18							5830	7230
130	19							5640	7000
140	20							5330	6790
150	22							5190	6600
160	23							4950	6440
180	26							4750	6140
200	28								5890
220	31								5670
240	34								5480

<sup>\*</sup> Max available SPL with composite end fittings, attached to a fixed mast ring. If the pole is to be "Dip Gybe", max available SPL is increased by 165 mm.



#### Aluminium whisker pole selection max pole length (mm)

RM 30° kNm	Displ. tonnes	48/48	60/60	72/72	84/84	96/96	99/99
12	2.4	3200					
14	2.8	3200					
16	3.2	3200					
18	3.6	3200					
20	4.0	3150	4700				
25	5.0	2800	4700	5240			
30	5.7	2550	4700	5240	5240		
35	6.3		4400	5240	5240		
40	7.0		4100	5210	5240		
45	7.7		3800	4970	5240		
50	8.2		3650	4770	5240	6280	
55	9.0			4590	5240	6280	6530
60	10			4430	5240	6280	6530
70	11				5240	6280	6530
80	12				5010	6140	6530
90	14					5860	6530
100	15						6530
110	16						6530



#### Downhaul

Poles should have the downhaul attached via a bridle or at the outboard end. If a central attachment is desired, the pole diameter must be increased to the next size up.

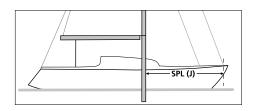


#### Topping lift/Downhaul

Central attachment points for lift and downhaul are not available.
End-for-end poles have optional bridles made from the core of spectra rope.
Poles for dip gybe always use the outboard end attachments.

#### **Table terminology**

RM: Righting moment at 30° of heel.



SPL (J): Maximum spinnaker pole length for your yacht.

A whisker pole should be approximately as long as the foot of the sail you intend to pole out.

#### Carbon spinnaker pole selection max SPL (mm)

RM 30° kNm	Displ. tonnes	47/47	59/59	61/61	77/77	88/88*	90/90*	102/102	119/119	137/137	156/156	158/158
8	1.6	2850										
10	2.0	2610	3710									
12	2.4	2430	3450	4490	4810*							
14	2.8	2280	3420	4220	4810*							
16	3.2	2160	3070	4000	4810*							
18	3.6	2070	2930	3820	4810*							
20	4.0		2810	3660	4810*	5450*						
25	5.0		2750	3350	4810*	5450*						
30	5.7		2390	3110	4710	5450*	5450*					
35	6.3			2930	4430	5440	5450					
40	7.0				4200	5160	5450	6500				
45	7.7				4000	4920	5450	6500				
50	8.2				3840	4720	5450	6500	8500			
55	9.0					4540	5330	6500	8360			
60	10					4390	5150	6360	8080			
70	11					4120	4840	5980	7590	9370		
80	12					3910	4590	5670	7200	8950		
90	14					3730	4380	5410	6870	8540	9370	
100	15						4200	5190	6590	8180	9370	
110	16							4990	6340	7880	9370	
120	18							4820	6120	7610	9360	
130	19							4670	5930	7370	9070	
140	20							4530	5760	7150	8800	9370
150	22								5600	6960	8560	9370
160	23								5460	6780	8340	9370
180	31								5210	6470	7960	8980
200	32								4990	6200	7630	8610
220	34								4810	5970	7350	8290
240	35									5770	7090	8000
260										5590	6870	7750

<sup>\*</sup> Max available SPL with composite end fittings, attached to a fixed mast ring. If the pole is to be "Dip Gybe", max available SPL is increased by 65 mm.



## Carbon whisker pole selection max pole length (mm)

RM 30° kNm	Displ. tonnes	47/47	59/59	61/61	77/77	88/88*	90/90*	102/102	119/119	137/137	156/156
8	1.6	3700									
10	2.0	3700									
12	2.4	3580	5100								
14	2.8	3380	4800	5230							
16	3.2	3200	4550	5230							
18	3.6	3060	4340	5230	4810*						
20	4.0	2930	4160	5230	4810*						
25	5.0	2680	3810	4950	4810*	5450*					
30	5.7		3540	4600	4810*	5450*	5450*				
35	6.3		3330	4330	4810*	5450*	5450*				
40	7.0		3150	4100	4810*	5450*	5450*				
45	7.7			3920	4810*	5450*	5450*	6500			
50	8.2			3750	4810*	5450*	5450*	6500			
55	9.0			3610	4810*	5450*	5450*	6500	8500		
60	10				4810*	5450*	5450*	6500	8500		
70	11				4810*	5450*	5450*	6500	8500	9370	
80	12				4710*	5450*	5450*	6500	8500	9370	
90	14					5450*	5450*	6500	8500	9370	9370
100	15					5280	5450*	6500	8500	9370	9370
110	16					5080	5450*	6500	8500	9370	9370
120	18						5450*	6500	8500	9370	9370
130	19						5450*	6500	8500	9370	9370
140	20						5430	6500	8500	9370	9370
150	22							6500	8290	9370	9370
160	23							6360	8080	9370	9370
180	31							6070	7710	9370	9370
200	32							5820	7390	9180	9370
220	34								7110	8840	9370
240	35								6870	8540	9370
260										8270	9370

<sup>\*</sup> Max available SPL with composite end fittings, attached to a fixed mast ring. If the pole is to be "Dip Gybe", max available SPL is increased by 65 mm.

## **Spinnaker pole kits**

There is no need to wait for Seldén to build your customized spinnaker pole. You can easily build it yourself from one of our kits. Your local Seldén dealer will, of course, be happy to do the job for you.





#### Aluminium spinnaker pole kits

Fittings designed for:

End-for-end gybing, dip pole gybing and vertical pole stowage.

Art. No.	Section, dia., mm	Max spinnaker pole length, mm	Type of end fitting
048-048-54	48	3180	2 of 534-865
060-060-54	60	3720	4
060-060-68		5220	
072-072-57	72	4180	2 of 534-854*
072-072-68		5180	(10.30
084-084-57	84	4720	l'
084-084-68		5220	
096-096-68**	96	6260	

<sup>\*</sup> Trip trigger retrofit kit, Art. No. 534-857-01. \*\* Only to be used as a whisker pole.

#### Aluminium spinnaker pole kits

Fittings designed for: Dip pole gybing and vertical pole stowage.

Art. No.	Section dia., mm	Max spinnaker pole length, mm	Type of end fitting
072-072-67	72	5245	534-854* Outboard end
084-084-67	84	5285	534-778 Inboard end
096-096-67	96	6500	534-777 Outboard end
099-099-67	99	6500	534-778 Inboard end

<sup>\*</sup> Trip trigger retrofit kit, Art. No. 534-857-01.

#### Carbon spinnaker pole kits

Fittings designed for:

End-for-end gybing, dip pole gybing and vertical pole stowage.

Art. No.	Section dia., mm	Max spinnaker pole lenght, mm	Type of end fitting
047-047-01	47	2680	2 of 534-865
047-047-02		3180	
047-047-03		3680	
059-059-01	59	3220	
059-059-02		3720	
059-059-03		4220	
061-061-01	61	3220	
061-061-02		3720	
061-061-03		4220	
061-061-04		5220	
077-077-01	77	3680	2 of 534-854*
077-077-02		4480	
077-077-03		4780	
088-088-01	88	4230	MIDEN
088-088-02		4930	
088-088-03		5430	
090-090-01	90	4230	
090-090-02		4930	
090-090-03		5430	

<sup>\*</sup> Trip trigger retrofit kit, Art. No. 534-857-01.

#### Carbon spinnaker pole kits

Fittings designed for: Dip pole gybing and vertical pole stowage.

Art. No.	Section dia., mm	Max spinnaker pole lenght, mm	Type of end fitting
077-077-21	77	3755	Inboard end, 534-778
077-077-22		4555	1
077-077-23		4855	
088-088-21	88	4295	-
088-088-22		4995	Outboard end,
088-088-23		5495	534-854*
090-090-21		4295	CHARGE
090-090-22	90	4995	-
090-090-23		5495	

<sup>\*</sup> Trip trigger retrofit kit, Art. No. 534-857-01.

#### Tools for working with carbon fibre

Art. No.	Description	Used for section, dia., mm
592-079	Drill Ø 4,1	-
592-080	Drill Ø 4,8	47, 59, 61
592-081	Drill Ø 6,4	77, 88, 90
592-102	Hacksaw blade	All

Warning: Always use breathing protection when drilling or cutting carbon products.

#### **Twaron protection**

Protects the pole from damage from the forestay, rail impact, etc. Two protectors needed for endfor-end poles.

For section, mm	One protector, for dip pole gybing, Art. No.	Two protectors, for end-for-end gybing Art. No.
59	-	535-586-02
61	-	535-593-02
77	535-599-01	535-599-02
88	535-588-01	535-588-02
90	535-594-01	535-594-02



#### **Bridle kit**

Includes  $\emptyset 4 \text{ mm HMPE}^*$  rope and stainless steel ring.

Art. No.	For max spinnaker pole lenght, mm
613-051-04	3250
613-051-05	4500
613-051-06	5500

<sup>\*</sup> High modulus polyethene.

#### **Exit box for trip line**

For dip pole gybing, the trip line must exit through an exit box. For further information, see instruction 595-415-E on www.seldenmast.com.

Art. No.	Dimensions, mm
505-069-	11 21x9



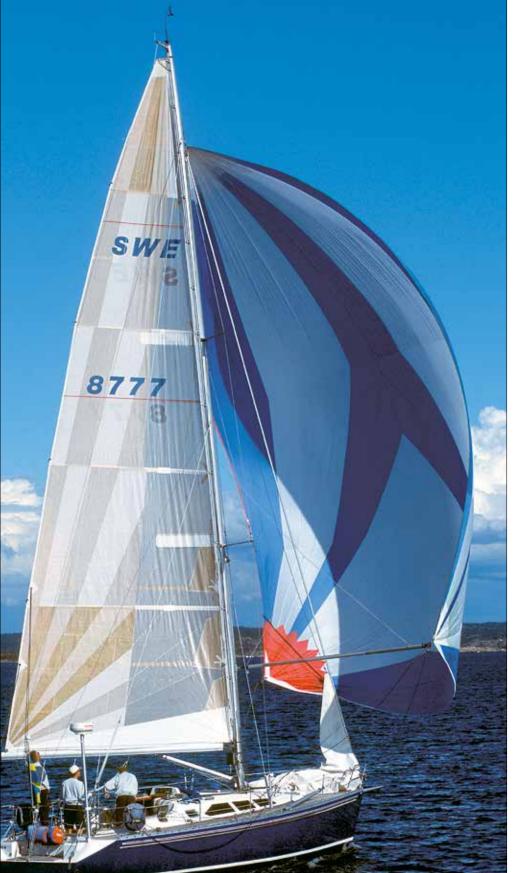
# **Spinnaker halyard attachments**





Masthead rig or fractional. Seldén offers a full range of single and double spinnaker halyard attachments.

	Mast section	Single fitting Art. No.	Dimensions mm	Double fitting Art. No.	Dimensions mm	Remarks
Loop	Fits small mast sections	508-035-01	Ø 6 Width: 50			
Loop		508-034-01	Ø 6 Width: 65			
Bracket	E189-E206 R190-R213 C156-C227 F176-F228	508-182-01	86 x 100	508-191-01	86 x 100	Max. RM: 60 kNm
Bracket	C245-C304 F246-F305	508-247-01	135 x 145 x 6			Max. RM: 60 kNm
U-bolt	E224, E237 R214, R232, R260 C156-C285 F176-F286	508-023-01	Ø 8 Width: 53			Max. RM: 100 kNm
	E274 R290 C304 F305		Ø 12 Width: 70			Max. RM: 180 kNm
	E321, E365 R290-R370 C285-C365 F324-F370		Ø 12 Width: 70			With fitted lower washer Max. RM: 250 kNm



# **Spinnaker pole** attachments

Seldén has the right attachment for all your needs - dip pole or end-forend arrangement, RCB cars and slide cars, including cars for vertical pole stowage.

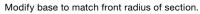
#### Jockey poles, fixed eye

Inner diameter 30 mm

Mast section	Art. No.
E155, E170, E177, E189 E206, E224, E237, E274 D137, D146, D160	534-509-01
R190, R214, R213, R235 R232, R260, R290 All C-sections and F-sections	534-514-01

# **Spinnaker poles, fixed eye** Inner diameter 30 mm

Mast section	Art. No.
P90, E122, C156	534-531-01
P100, P111, E130, D121, D129, E138, E155, D160, R190, R213, C175-C227, F176-F228	534-528-01
E170, E177, E189, E206, D146, R235, R232, R260, R290, C245-C304, F246-F265	534-529-01
E224, E237, E274	534-507-01
F286-F305	534-529-02





Art. No. 534-528.



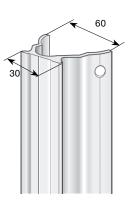
Art. No. 534-529.



Art. No. 511-585-04.

## Spinnaker pole cars, RCB





Type of car		Art. No. 1:1 purchase	Art. No. 2:1 purchase	Track width mm	Spinnaker pole end fitting, Art. No.	Max. RM
and the	10° car	511-585-06	511-585-16	30	-	120 kNm
	10° car for vertical pole stowage	511-585-01	511-585-11	30	534-865 Small 534-854 Medium	120 kNm
	10° bayonet car	511-585-04	511-585-14	30	534-778	120 kNm
	Ring car with eyes for lift and downhaul	511-585-03	511-585-13	30	534-865 Small 534-854 Medium	120 kNm
	10° bayonet	511-585-29	511-585-39	30	534-798-04	120 kNm
	10° vertical pole stowage, double car with bayonet	511-585-05	511-585-15	30	534-778	240 kNm
	0° standard double car with bayonet	511-585-07	511-585-17	30	534-778	240 kNm
	10° vertical pole stowage, double car with bayonet	511-585-28	511-585-38	30	534-798-04	240 kNm
	0° standard double car with bayonet	511-585-30	511-585-40	30	534-798-04	240 kNm



#### Spinnaker pole sliders

Type of slider		Art. No.	Ring inner dia., mm	Track width mm	Spinnaker pole end fitting, Art. No.	Max. RM	Sliding inserts Art. No.
هسه	Ring slider with	511-505-01	30	25	534-865/534-854	45 kNm	530-705
	locking device.	511-526-01		32			530-712
Bin Bin	Ring slider	Ring slider 511-536-01 30		32		45 kNm	530-712
	with eyes for	511-536-02		RCB 30		120 kNm	530-717
	lift and downhaul.	511-720-01		25		45 kNm	530-705
	10° slider fore vertical pole	511-553-01*		25		45 kNm	530-705
	stowage.	511-554-01*		32		45 kNm	530-712
	_	511-554-03*		RCB 30	<b>Y</b>	75 kNm	530-717
		511-553-04	With bayonet	25	534-778	45 kNm	530-705
_		511-554-02	With bayonet	32		45 kNm	530-712
0	Slider with	511-554-04	With bayonet 10°	RCB 30		75 kNm	530-717
	eyes for lift and downhaul.						

 $<sup>^{\</sup>star}$  These sliders include toggle 534-800, designed for our composite end fittings (page 146).





Composite spinnaker pole fitting, Art. No. 534-865.



Composite spinnaker pole fitting, Art. No. 534-854.



Inboard end fitting, for bayonet slider. Art. nr. 534-778.



Outboard aluminium end fitting. Art. No. 534-777.

#### Spinnaker pole fittings

End fitting	Material	Art. No.	Trip trigger function	Pole section	Adaptor Art. No.	
Small	Composite	534-865-01	No	48/48	-	
		534-865-03		60/60	534-779	
Medium		534-854-01	No	72/72	-	
		534-854-11	Yes			
		534-854-03	No	84/84	534-781	
		534-854-13	Yes			
		534-854-04	No	96/96	534-782	
		534-854-14	Yes			
Outboard	Aluminium	534-777-01	Yes	72/72	-	
		534-777-03		84/84	534-781	
		534-777-12		96/96	534-782	
		534-777-12		99/99	534-782	
		534-777-06		111/111	534-801	
Inboard		534-778-01	-	72/72	-	
		534-778-02		84/84	534-781	
		534-778-04		96/96	534-782	
		534-778-04		99/99	534-782	
		534-778-06		111/111	534-801	

## Jockey pole fitting, outboard end



Jockey pole fitting.

End fitting	Art. No.	Pole section dia., mm	Adaptor Art. No.	
Small	534-964-01	48	-	
	534-964-02	60	534-779	
Medium	534-965-01	72	-	
	534-965-02	84	534-781	
	534-965-03	96	534-782	

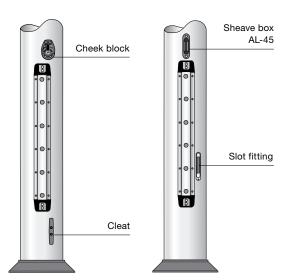


## Spinnaker pole heel lift system



The heel lift system provides effortless spinnaker handling and allows the crew to set the spinnaker in the perfect position.

Tracks not included in the heel lifting system. See page 149.

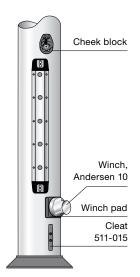


C175-F246, E122-E206: Art. No. 405-001-81 (cleat Art. No. 511-016\*). C227-F246, E177-E206:

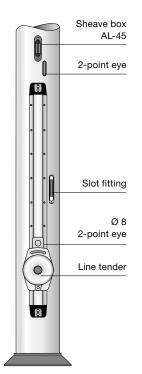
C264-F305, E237-E274:

Operation from cockpit.

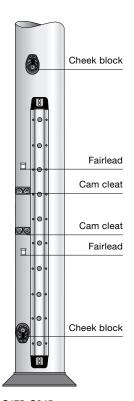
Art. No. 538-508-06.



Art. No. 406-001-87.



Art. No. 538-508-11.



C175-C245:

Art. No. 405-001-85.

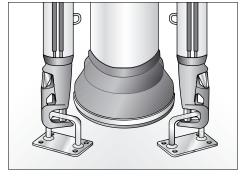
Art. No. 406-001-85.

Art. No. 406-001-83 (cleat Art. No. 511-015\*).

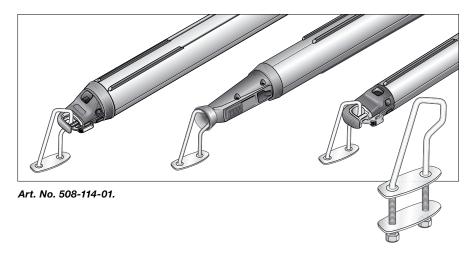
Art. No. 405-001-82 (cleat Art. No. 511-031\*).

\*For more information about cleats, see page 48.

#### **Stowage brackets**



Art. No. 508-145. Art. No. 508-398.



## **Vertical pole stowage**

Mast section		Track width 25 mm, radius 34*, ** Length 1700 mm, <b>Art. No. 515-504-01</b> Length	th 3400 mm, <b>Art. No. 515-512-01</b>		
E122, E130 D137, E138	<b>A</b>	Vertical pole stowage			
E155, D160 R190, R213 R235 C156-C264 F176-F265	Track length	End-for-end slider for pole sections 48/48-96/96 Carbon 47/47 and 88/88 Art. No. 511-553-01	Bayonet slider for pole sections 72/72 and 84/84 Carbon 77/77-118/118 Art. No. 511-553-04	Ring slider with locking device Art. No. 511-505-01	
		Spi-pole lift syste			
		Loop + support <b>Art</b>			

<sup>\*</sup> For yachts with an RM over 25 kNm fit track with double pop rivets. Art. No. 167-018 (Ø 4.8x12.7 mm). 14 extra pop rivets/track.

<sup>\*\*</sup> End stops and pop rivets included.

Mast section	Track incl. Ø 6.4x17.8	7 mm pop rivets: <b>t. No. 515-567-02</b> Length 340			
Ø 6.4x12.7	Vertical pole stowage	•		End-for-end spinnake	r pole slider
pop rivets:	End-for-end slider for pole sections 72/72-96/96 Carbon 77/77-88/88 Art. No. 511-554-03	End-for-end RCB spinnaker pole car for sections 72/72-96/96 Carbon 77/77-88/88 Art. No. 511-585-01	Bayonet RCB spinnaker pole car for sections 72/72 and 111/111 Carbon 77/77-118/118 Art. No. 511-585-04	Ring slider with eyes for lift and downhaul Art. No. 511-536-02	RCB ring slider with eyes for lift and downhaul Art. No. 511-585-03
R232, R260 C285	<u> </u>	Spi-pole lift system, see page			
F286	L	oop + support Art. No. 508-09			
Ø 6.4x12.7 mm pop rivets: E177, E189 E206, E224 E237	Length 4800 mm, Ar	7 mm pop rivets: Length 2400 t. No. 515-553-02 3 mm pop rivets: Length 2400	,		
C321*	Vertical pole stowage	<del>)</del>		End-for-end spinnake	r pole slider
C304*  Ø 6.4x17.8 mm pop rivets: E274*, E365* R290*, F324* F305*, C365, F370*	End-for-end slider for pole sections 72/72-96/96 Carbon 77/77-88/88 Art. No. 511-554-03	for pole sections RCB spinnaker pole car pole car for section 72/72-96/96 for sections Carbon 77/77-118/1 Carbon 77/77-88/88 72/72-96/96, 72/72-111/111 Art. No. 511-585-0			RCB ring slider with eyes for lift and downhaul Art. No. 511-585-03
	1	Spi-pole lift system, see page			
		.00p - 0upport Ai t. 110. 000-08	, o o_		

Calculate track length: Min. = Spinnaker Pole Length (SPL) minus 1500 mm. Max. = SPL minus 600 mm. If the spinnaker pole track passes a P-spreader bracket, "bedding" must be used. Art. No. 535-125 (L = 4000 mm).

Calculate length of pole heel lift rope: 2 x SPL + 2 metres. \* Use stowage bracket Art. No. 508-145 or 508-398.

<sup>\*\*</sup> End stops and pop rivets included.



## **Gennaker bowsprit**

Extendable gennaker bowsprit sold as a kit for deck mounting. Just fit the two stainless steel pad eyes to the deck in line with the bow bracket. The bracket is a stainless ring with a low friction polyamide inner lining through which the bowsprit slides into its "active" position. After the gennaker is doused, the bowsprit can slide back and be secured to the aft eye. If required, it can be quickly removed and stowed securely below.

The gennaker tackline runs through the bowsprit, entering and leaving via well rounded holes, and then aft to the cockpit. An alternative is to fit an external tack block at the outboard end.

- Gives the gennaker more clear air
- Facilitates rapid gybing
- Always ready for quick extension
- Makes for fast and efficient gennaker handling
- Improves performance when gennaker sailing
- Can be fitted to most yachts
- Available in carbon or aluminium









Spring-loaded locking device for safe and easy handling.

#### **Bowsprit kits**

The kit includes: Aluminium or carbon bowsprit section, inboard end fitting with plunger, outboard end fitting, 2 stainless steel pad eyes, instructions.

	Description	Dimension	(mm)	Art. No.
	G072	Ø72/72	L=< 2080 mm	072-072-70
Aluminium	G075	Ø75/75	L=< 2230 mm	075-075-70
	G087	Ø87/87	L=< 2270 mm	087-087-70
	G099	Ø99/99	L=< 3160 mm	099-099-70
	GC076	Ø76/76	L=< 3000 mm	076-076-70
	GC088	Ø88/88	L=< 3000 mm	088-088-70
Carbon	GC089	Ø89/89	L=< 3000 mm	089-089-70
	GC100	Ø100/100	L=< 3000 mm	100-100-70
	GC101	Ø101/101	L=< 3000 mm	101-101-70

#### **Bow bracket**

		Bowsprit, diameter (mm)	Art. No.
-	Stainless steel bow bracket with	Ø 72/72	508-783-01
	PA inner lining. To be bolted to deck or rail.	Ø 75/75   Ø 76/76	508-783-02
	5. 74	Ø 87/87   Ø 88/88   Ø 89/89	508-783-04
		Ø 99/99   Ø 100/100   Ø 101/101	508-794-05
	Stainless steel bow ring with PA inner	Ø 72/72	508-758-01
	lining. Can be welded to bow anchor fitting or sturdy pulpit.	Ø 75/75   Ø 76/76	508-758-02
	many or otal ay parpin	Ø 87/87   Ø 88/88   Ø 89/89	508-758-04
		Ø 99/99   Ø 100/100   Ø 101/101	508-757-05
	Stainless steel bow fitting with PA inner	Ø 72/72	508-782-01
	lining bushing. Can be integrated with some bow anchor fittings (e.g. Jeanneau).	Ø 75/75   Ø 76/76	508-782-02
	Width of base: 175 mm. Fitted with Ø 12 mm bolt.	Ø 87/87   Ø 88/88   Ø 89/89	508-782-04
	90° bracket and bow ring for assembly on	Ø 72/72	508-834-11
	bow anchor fitting.	Ø 75/75   Ø 76/76	508-834-12
		Ø 87/87   Ø 88/88   Ø 89/89	508-834-14
		Ø 99/99   Ø 100/100   Ø 101/101	508-834-15



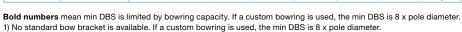
Bow fittings on some boats can be integrated with the bow anchor fitting.



Side mounted installation on stem head anchor fitting

#### **Dimensioning for gennaker, Aluminium**

RM	Approx.	G	072	G	)75	G	)87	G	99
30° (kNm)	displ. (tonnes)	Max USL	Min DBS	Max USL	Min DBS	Max USL	Min DBS	Max USL	Min DBS
8	1.7	1500	580						
10	2.1	1500	580						
12	2.4	1500	580						
14	2.8	980	580						
16	3.1	890	580	1580	600				
18	3.4	820	580	1450	600				
20	3.7	760	580	1340	600				
25	4.5	650	580	1140	600	1460	700	1930	800
30	5.2	570	580	1000	600	1280	700	1690	800
35	5.9	510	580	900	600	1150	730	1510	880
40	6.7	460	580	820	610	1040	780	1380	930
45	7.3			750	650	960	830	1270	990
50	8.0			700	700	890	890	1170	1050
55	8.7			650	750	830	960	1100	1120
60	9.3			610	810	780	1030	1030	1200
65	10.0			580	880	740	1130	970	1280
70	10.6					700	1220	920	1380
75	11.3					670	1350	880	1500
80	11.9					640	1490	840	1640
85	12.5					610	1650	800	1780
90	13.1							770	1960
95	13.8							740	1)
100	14.4							720	1)
105	15.6							690	1)
110	16.0							670	1)
115	16.1							650	1)
120	16.7							630	1)
125	17.3							610	1)
130	17.9							600	1)
135	18.5							580	1)
140	19.0							570	1)
145	19.6							550	1)
150	20.2							540	1)
155	21							530	1)



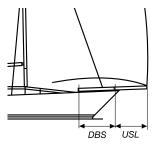
**Dimensioning for Code 0, Aluminium** 

#### G072 G075 G087 G099 RM Approx. 30° (kNm) displ. Max USL Max Max Max (tonnes) USL DBS DBS USL DBS USL DBS 1.7 2.1 2.4 2.8 3.1 3.4 3.7 4.5 5.2 1) 1) 1) 5.9 1)

**Bold numbers** mean min DBS is limited by bowring capacity. If a custom bowring is used, the min DBS is 8 x pole diameter.

1) No standard bow bracket is available. If a custom bowring is used, the min DBS is 8 x pole diameter.

1)



DBS = Distance between support. USL = Unsupported length.



6.7

#### **Dimensioning for gennaker, Carbon**

RM	Approx.	GC	076	GC	088	GC	089	GC	100	GC	101
30°	displ.	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
(kNm)	(tonnes)	USL	DBS	USL	DBS	USL	DBS	USL	DBS	USL	DBS
8	1.7	1500	610								
10	2.1	1500	610								
12	2.4	1500	610	1500	700						
14	2.8	1490	610	1500	700						
16	3.1	1360	610	1500	700						
18	3.4	1240	610	1500	700	1500	710				
20	3.7	1150	610	1500	700	1500	710				
25	4.5	980	610	1300	700	1470	710	1500	800		
30	5.2	860	610	1140	700	1290	710	1500	800		
35	5.9	770	610	1020	700	1150	730	1500	870		
40	6.7	700	610	930	700	1050	780	1430	970	1500	1010
45	7.3	650	610	860	740	970	840	1320	1030	1500	1170
50	8.0	600	610	800	800	900	900	1220	1090	1470	1310
55	8.7	560	650	740	850	840	970	1140	1170	1380	1410
60	9.3	530	700	700	930	790	1040	1070	1240	1290	1500
65	10.0	500	760	660	1000	740	1130	1010	1340	1220	1610
70	10.6			630	1100	700	1220	960	1440	1160	1740
75	11.3			600	1210	670	1350	910	1550	1100	1880
80	11.9					640	1490	870	1690	1050	2040
85	12.5					610	1650	840	1860	1010	2240
90	13.1							800	2040	970	2470
95	13.8							770	1)	930	1)
100	14.4							740	1)	900	1)
105	15.6							720	1)	870	1)
110	16.0							700	1)	840	1)
115	16.1							670	1)	810	1)
120	16.7							650	1)	790	1)
125	17.3							640	1)	770	1)
130	17.9							620	1)	750	1)
135	18.5							600	1)	730	1)
140	19.0							590	1)	710	1)
145	19.6							570	1)	690	1)
150	20.2							560	1)	670	1)
155	21							550	1)	660	1)
160	22									640	1)
165	24									630	1)
170	25									620	1)
175	26									600	1)

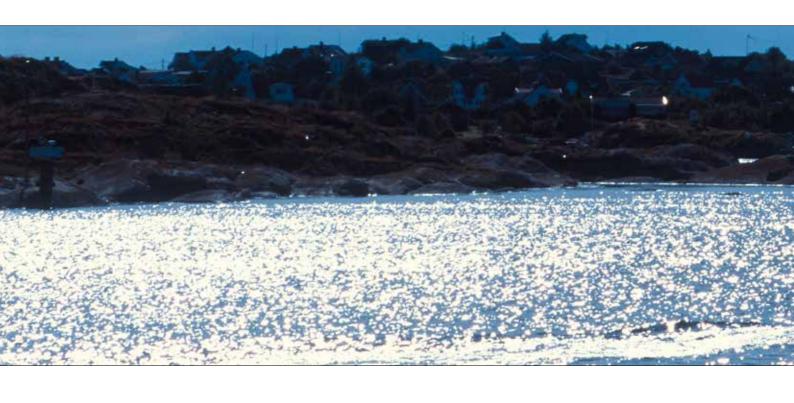
**Bold numbers** mean min DBS is limited by bowring capacity. If a custom bowring is used, the min DBS is 8 x pole diameter.

1) No standard bow bracket is available. If a custom bowring is used, the min DBS is 8 x pole diameter.

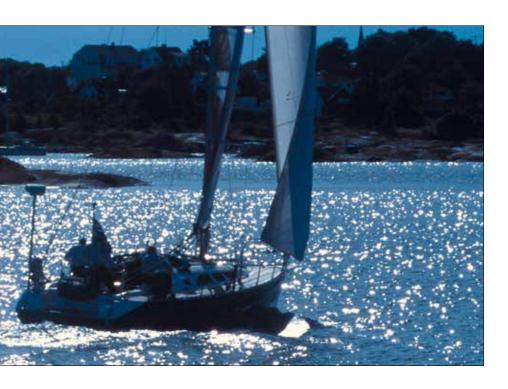
#### **Dimensioning for Code 0, Carbon**

RM 30° (kNm)	Approx. displ. (tonnes)	GC Max USL	076 Min DBS	GC Max USL	088 Min DBS	GC Max USL	089 Min DBS	GC Max USL	100 Min DBS	GC Max USL	101 Min DBS
8	1.7	880	610	1160	705	1310	710	1500	800		
10	2.1	750	610	990	705	1120	750	1500	920		
12	2.4	660	610	870	730	980	830	1330	1010	1500	1140
14	2.8	590	620	780	810	880	920	1190	1110	1440	1340
16	3.1	530	680	710	910	800	1030	1090	1230	1310	1480
18	3.4	490	770	650	1020	730	1150	1000	1360	1210	1650
20	3.7	460	890	600	1160	680	1310	930	1530	1120	1840
25	4.5			520	1770	580	1970	790	2130	950	2570
30	5.2							690	1)	840	1)
35	5.9							620	1)	750	1)
40	6.7							570	1)	680	1)
45	7.3							520	1)	630	1)
50	8.0									580	1)
55	8.7									540	1)
60	9.3									510	1)

**Bold numbers** mean min DBS is limited by bowring capacity. If a custom bowring is used, the min DBS is 8 x pole diameter. 1) No standard bow bracket is available. If a custom bowring is used, the min DBS is 8 x pole diameter.



# **LIGHTS**



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#### **Compulsory lights**

International Regulations for Preventing Collisions at Sea, 1972, stipulate compulsory lights on all yachts. Seldén offers all the necessary lighting equipment to comply with the rules.



**Tricolour/white** with or without anchor light.



Anchor light Art. No. 526-163.



Anchor light/steaming light Aquasignal series 50. Art. No. 526-022/-002.



Steaming light
Available in two versions, for yachts less than 12 m and for yachts between 12 m and 20 m.
Available in black composite or in stainless steel.

#### Masthead lights, LED Aquasignal 34



Art. No. 526-036

Item	Conditions	Fitting	Art. No.	Type of masthead	Required cable Art. No.
Anchor light	For boats LOA <50 m	Base 508-560 incl.	526-036-02	15°	531-003
	Visibility 2nm	Base 508-562 incl.	526-036-03	0°	
Tricolour lamp	For boats LOA <20 m	Base 508-560 incl.	526-075-02	15°	531-003
	Visibility 2nm	Base 508-562 incl.	526-075-03	0°	
Anchor light and	For boats LOA <20 m	Base 508-560 incl.	526-038-02	15°	531-007
Tricolour lamp	Visibility 2nm	Base 508-562 incl.	526-038-03	0°	
Steaming light with	For boats LOA <20 m	Base 508-560 incl.	526-070-02	15°	531-007
anchor light	Visibility 2nm	Base 508-562 incl.	526-070-03	0°	

#### **Masthead lights**

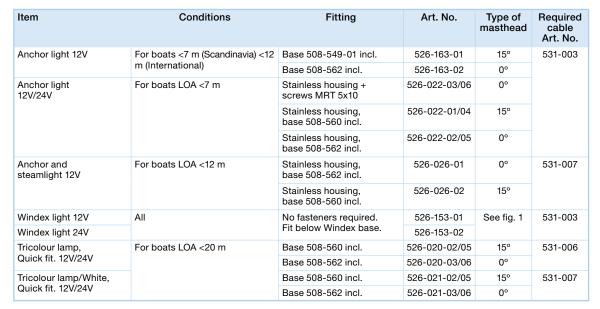




Fig 1.



**V-spreader integrated**In-spreader lighting is a good solution for improving working light on board. The in-spreader light is available for Seldén V-spreaders.



Floodlight
Suits bigger mast sections.
Completely protected against
halyards and sails. Light guard,
Art. No. 508-172-01.

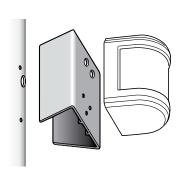


In-boom light
The Seldén in-boom light comes in handy to light the cockpit or as a guide light when going down below. The in-boom lights are available for new Seldén boom section from 135/71 and upwards. Not available for retrofit.

#### Floodlight and steaming lights

Item	Conditions	Fitting	Art. No.	Remarks	Required cable Art. No.
Floodlight, 12V/35W	All masts, front mounted	Black housing	526-156-01*	Pop rivets	513-006
Floodlight, 24V/50W			526-156-02*	incl.	
Floodlight, 12V/35W		White housing	526-156-03*		
Floodlight, 24V/50W			526-156-04*		
Floodlight, 12V/35W	All masts, side mounted	Black housing	529-156-11*		
Floodlight, 24V/50W			529-156-12*		
Floodlight, 12V/35W		White housing	529-156-13*		
Floodlight, 24V/50W			529-156-14*		
Steaming lights, 12V/10W	For boats LOA <7 m (Scandinavia) <12 m (international)	Base 508-566 incl.	526-015-01		531-003
Steaming lights, 12V/25W	For boats LOA <12 m (Scandinavia)	Base	526-009-03	Screws	531-006
Steaming lights, 24V/25W	<20 m (international)	508-614 incl.	526-009-04	incl.	
Steaming lights, 12V/25W	For boats LOA <20 m	Protection loop	526-002-01	Fasteners	
Steaming lights, 24V/25W		508-519 incl.	526-002-02	incl.	
Protection loop, alum. (2 pcs)	For use with Aquasignal steam	ming lights	508-519-02		
Protection loop, stainless	E274, C304, F305 and bi	igger	508-172-01		

<sup>\*</sup> Light insert: 12V (Art. No. 532-154), 28V (Art. No. 532-155). O-ring for floodlights Art. No. 530-365.

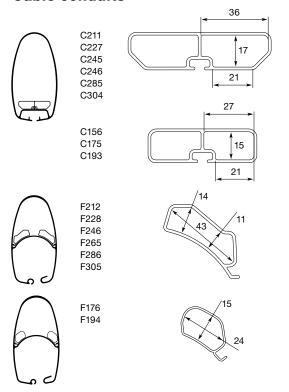


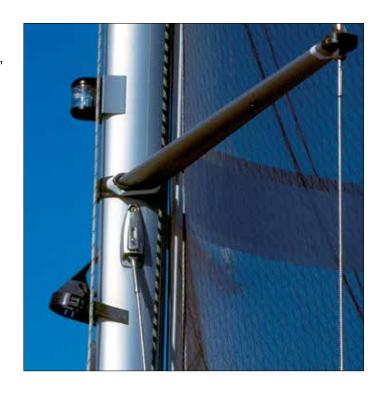
**Nylon base for light.** Suits most lights and mast sections. Art. No. 535-614.

#### **Retro-fitting cables**

For all D-sections, E-sections, P-sections and R-sections, please see our instruction "Running cables" 595-557-E. Also available from www.seldenmast.com.

#### **Cable conduits**

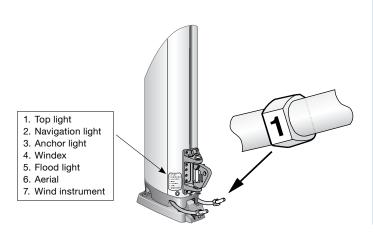




#### **Cables and dimensions**

Light	Effect	Cable length, m	Required cable area, mm <sup>2</sup>
Anchor light	10W	0-33	1.5
		33-55	2.5
Steaming lights	10W	0-13	1.5
and navigation		13-22	2.5
lights	25W	0-5	1.5
		5-9	2.5
		9-14	4
Floodlight	45W	7-12	2.5
		12-20	4

All Seldén masts have a cable identification to facilitate connection when stepping the mast.



Cable for:	Cable area, mm²	Art. No.	Remarks
Wind instrument	10 x 0.25	531-012	Ø 7.3 mm
Windex light, anchor light and steaming lights	2 x 1.5	531-003	Ø 6.9 mm
Tricolour/white/strobe	4 x 2.5	531-018	Ø 8.6 mm
Tricolour lamp, flood- light and steaming lights	2 x 2.5	531-006	Ø 7.6 mm
Tricolour lamp/white, anchor and steaming lights	3 x 2.5	531-007	Ø 8.1 mm
Aerial	RG 213U	531-010	50 ohm (min. for VHF- radio according to German standard) Ø 10.2 mm (Cable terminal Art. No. 532-021)
	RG 58U	531-024	50 ohm, Ø 5.4 mm (Cable terminal Art. No. 532-023)







#### Cable support

Protects the cable from wear in the exit area. Lead the cable out through a  $\emptyset$  14 mm hole, jam the support onto the cable and plug the hole. Max cable size:  $2 \times 2.5$  mm<sup>2</sup> ( $\emptyset$  7.6 mm). Art. No. 532-105.



All our rig fittings are manufactured using the very latest in production technology, to achieve maximum durability and corrosion resistance. All product development work is carried out at Seldén's own development department in Sweden.

We retain complete control over every aspect of the whole design and manufacturing process. By doing this, we can guarantee quality, and ensure that you get the most out of your rig.

# **RIG FITTINGS**



Chrome bronze rigging screws	162
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Split pin, split rings and clevis pin	175
Sheaves, bridles plates and insulators	177

## **Chrome bronze rigging screws**







Bronze, like stainless steel, is very strong and highly resistant to corrosion. By making the body of the rigging screw in chrome plated aluminium bronze and the terminals in high grade marine stainless steel, we have reduced the risk of the thread seizing up under heavy loads. A design feature which gives you a product that performs better and lasts even longer. All Seldén rig screws are locked with split pins through the threaded terminals. A safe and proven method.

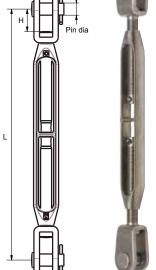
# Important note on 5/8" rigging screws



Conversion kit, Art. No. 306-558-03.

Back in 1998 we changed the clevis pin diameter from  $\varnothing$  13 mm to  $\varnothing$  15.8 mm. When upgrading to new rigging screws on a boat built prior to this change, the clevis pin will most likely be bigger than the chain plate hole. The  $\varnothing$  15.8 mm clevis pin has to be replaced by one  $\varnothing$  13 pin and two bushings.





Art. no. Thread				Clevis pin	Internal	Internal	Breaking
	size UNF	Min. mm	Max. mm	dia. mm	fork height mm (H)	fork width mm (W)	load kN
174-321-01	1/4"	135	199	6.5	12.5	7	15.5
174-322-01	5/16"	166	238	8	15	8	24.5
174-323-01	3/8"	198	285	9.5	18	10	34.5
174-324-01	7/16"	233	342	11	18	12	47.5
174-325-01	1/2"	268	399	13	24	14	62
174-326-01	5/8"	318	466	15.8	31	16	95
174-327-01	3/4"	369	544	15.8	32	20	125
174-327-02	3/4"	369	544	19	32	20	125
174-328-01	7/8"	444	648	19	45	22	180
174-328-02	7/8"	444	648	22	45	22	180
174-329-01	1"	606	906	22	46	25.5	280
174-329-02	1"	606	906	25	46	25.5	280

#### Chrome bronze rigging screws Fork + Stud terminal

Art. no. Thread		Wire	Leng	th (L)	Clevis pin	Internal	Internal	Breaking
	size UNF	dia. mm	Min. mm	Max. mm	dia. mm	fork height mm (H)	fork width mm (W)	load kN
174-321-05	1/4"	3	139	204	6.5	6.5	7	15.5
174-321-06	1/4"	4	139	204	6.5	12.5	7	15.5
174-322-05	5/16"	4	164	237	8	15	8	24.5
174-322-06	5/16"	5	176	249	8	15	8	24.5
174-323-05	3/8"	5	201	290	9.5	18	10	34.5
174-323-06	3/8"	6	200	289	9.5	18	10	34.5
174-324-05	7/16"	6	231	338	11	18	12	47.5
174-324-06	7/16"	7	231	338	11	18	12	47.5
174-325-05	1/2"	7	261	390	13	24	14	62
174-325-06	1/2"	8	258	387	13	24	14	62
174-326-05	5/8"	8	298	446	15.8	31	16	95
174-326-06	5/8"	10	303	451	15.8	31	16	95
174-327-05	3/4"	10	354	532	15.8	32	20	125
174-327-06	3/4"	12	356	534	15.8	32	20	125
174-327-07	3/4"	10	354	532	19	32	20	125
174-327-08	3/4"	12	356	534	19	32	20	125
174-328-05	7/8"	12	428	635	19	45	22	180
174-328-06	7/8"	14	436	648	19	45	22	180
174-328-07	7/8"	12	428	635	22	45	22	180
174-328-08	7/8"	14	436	648	22	45	22	180

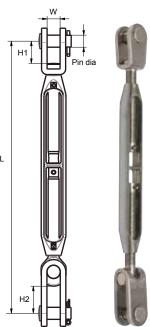


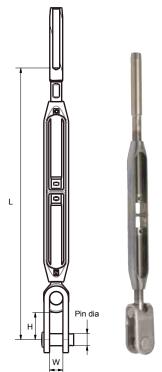
Art. no.	Thread Length (L)		th (L)	Clevis pin dia.	Toggel fork	Internal fork	Internal fork width	Breaking load
	UNF	Min. mm	Max. mm	mm	height, mm (H <sup>2</sup> )	height, mm (H <sup>1</sup> )	mm (W)	kN
174-321-13	1/4"	150	214	6.5	15	12.5	7	15.5
174-322-13	5/16"	183	255	8	19	15	8	24.5
174-323-13	3/8"	221	308	9.5	22	18	10	34.5
174-324-13	7/16"	255	364	11	23.5	18	12	47.5
174-325-13	1/2"	294	424	13	30	24	14	62
174-326-13	5/8"	353	501	15.8	39.5	31	16	95
174-327-13	3/4"	412	587	15.8	40.5	32	20	125
174-327-14	3/4"	412	587	19	40.5	32	20	125
174-328-13	7/8"	496	700	19	55	45	23	180
174-328-14	7/8"	496	700	22	55	45	23	180

#### Chrome bronze rigging screws Toggle fork + Stud terminal

Art. no. Thread		Wire Length (L)		jth (L)	Clevis pin	Toggel fork	Internal Breakin	
	size UNF	dia. mm	Min. mm	Max. mm	dia. mm	internal fork height, mm (H)	fork width mm (W)	load kN
174-321-39	1/4"	3	155	225	6.5	15	7	15.5
174-321-40	1/4"	4	155	225	6.5	15	7	15.5
174-322-39	5/16"	4	178	262	8	19	8	24.5
174-322-40	5/16"	5	178	262	8	19	8	24.5
174-323-39	3/8"	5	223	324	9.5	22	10	34.5
174-323-40	3/8"	6	223	324	9.5	22	10	34.5
174-324-39	7/16"	6	250	371	11	23.5	12	47.5
174-324-40	7/16"	7	250	371	11	23.5	12	47.5
174-325-39	1/2"	7	292	437	13	30	14	62
174-325-40	1/2"	8	292	437	13	30	14	62
174-326-39	5/8"	8	337	507	15.8	39.5	18	95
174-326-40	5/8"	10	337	507	15.8	39.5	18	95
174-327-39	3/4"	10	402	603	15.8	40.5	20	125
174-327-40	3/4"	12	402	603	15.8	40.5	20	125
174-327-41	3/4"	10	402	603	19	40.5	20	125
174-327-42	3/4"	12	402	603	19	40.5	20	125
174-328-39	7/8"	12	482	705	19	55	25	180
174-328-40	7/8"	14	482	705	19	55	25	180
174-328-41	7/8"	12	482	705	22	55	25	180
174-328-42	7/8"	14	482	705	22	55	25	180
174-329-11	1"	14	612	912	25	46	25.5	280
174-329-12	1"	16	612	912	25	46	25.5	280

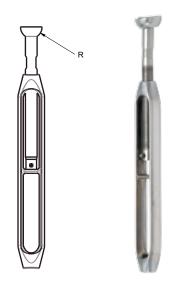






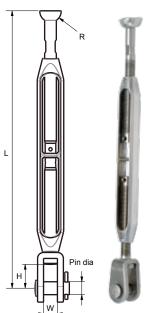
#### Chrome bronze rigging screws Open + Stemball

Art. No.	Thread size UNF	Radius (R)	Breaking load kN
174-321-18	1/4"	9	15.5
174-321-19	1/4"	11	15.5
174-322-18	5/16"	9	24.5
174-322-19	5/16"	11	24.5
174-322-20	5/16"	14	24.5
174-323-18	3/8"	11	34.5
174-323-19	3/8"	14	34.5
174-324-18	7/16"	11	47.5
174-324-19	7/16"	14	47.5
174-325-18	1/2"	11	62
174-325-19	1/2"	14	62
174-326-18	5/8"	14	95



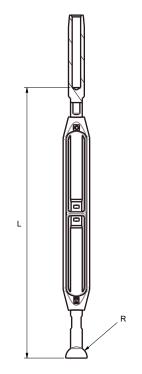
#### Chrome bronze rigging screws Fork + Stemball

Art. No.	Thread size UNF	Leng Min. mm	th (L) Max. mm	Clevis pin dia. mm	Radius (R)	Internal fork height mm (H)	Internal fork width mm (W)	Breaking load kN
174-321-34	1/4"	156	220	6.5	9	12.5	7	15.5
174-321-35	1/4"	156	220	6.5	11	12.5	7	15.5
174-322-34	5/16"	183	255	8	9	15	8	24.5
174-322-35	5/16"	183	255	8	11	15	8	24.5
174-322-36	5/16"	183	255	8	14	15	8	24.5
174-323-34	3/8"	213	300	9.5	11	18	10	34.5
174-323-35	3/8"	213	300	9.5	14	18	10	34.5
174-324-34	7/16"	248	357	11	11	18	12	47.5
174-324-35	7/16"	248	357	11	14	18	12	47.5
174-325-34	1/2"	280	410	13	11	24	14	62
174-325-35	1/2"	280	410	13	14	24	14	62
174-326-34	5/8"	326	474	15.8	14	31	16	95



#### Chrome bronze rigging screws Stemball + Stud terminal

Art. No.	Thread	Wire	Leng	ıth (L)	Radius (R)	Breaking
	size UNF	dia. mm	Min. mm	Max. mm		load kN
174-321-15	1/4"	3	161	231	9	15.5
174-321-16	1/4"	3	161	231	11	15.5
174-321-17	1/4"	4	161	231	11	15.5
174-321-23	1/4"	4	161	231	9	15.5
174-322-15	5/16"	5	191	271	9	24.5
174-322-16	5/16"	5	191	271	11	24.5
174-322-17	5/16"	5	191	271	14	24.5
174-323-15	3/8"	6	211	312	11	34.5
174-323-16	3/8"	6	211	312	14	34.5
174-324-15	7/16"	7	248	369	11	47.5
174-324-16	7/16"	7	248	369	14	47.5
174-325-15	1/2"	8	273	418	11	62
174-325-16	1/2"	8	273	418	14	62
174-326-15	5/8"	10	314	484	14	95





## Chrome bronze rigging screws Open + Stud terminal

Art. No.	Thread size UNF	Wire dia. mm	Breaking load kN
174-321-30	1/4"	3	15.5
174-321-31	1/4"	4	15.5
174-322-30	5/16"	4	24.5
174-322-31	5/16"	5	24.5
174-323-30	3/8"	5	34.5
174-323-31	3/8"	6	34.5
174-324-30	7/16"	6	47.5
174-324-31	7/16"	7	47.5
174-325-30	1/2"	7	62
174-325-31	1/2"	8	62
174-326-30	5/8"	8	95
174-326-31	5/8"	10	95
174-327-30	3/4"	10	125
174-327-31	3/4"	12	125
174-328-30	7/8"	12	180
174-328-31	7/8"	14	180



#### Chrome bronze rigging screws Eye + Stud terminal

Art. No.	Thread	Wire	Leng	th (L)	Eye,	Breaking	
	size UNF	dia. mm	Min. mm	Max. mm	Ø mm	load kN	
174-321-45	1/4"	3	60	125	6.5	15.5	
174-321-46	1/4"	4	60	125	6.5	15.5	
174-322-45	5/16"	3	76	149	8.5	24.5	
174-322-46	5/16"	4	76	149	8.5	24.5	
174-323-45	3/8"	5	92	180	10.5	34.5	
174-323-46	3/8"	6	92	180	10.5	34.5	
174-324-45	7/16"	6	107	215	11.5	47.5	
174-324-46	7/16"	7	107	215	11.5	47.5	
174-325-45	1/2"	7	119	248	13.5	62	
174-325-46	1/2"	8	119	248	13.5	62	
174-326-45	5/8"	8	138	285	16.5	95	
174-326-46	5/8"	10	138	285	16.5	95	
174-327-45	3/4"	10	167	345	19.5	125	
174-327-46	3/4"	12	167	345	19.5	125	
174-328-45	7/8"	12	195	402	22.5	180	
174-328-46	7/8"	14	195	402	22.5	180	



#### Chrome bronze rigging screws Stud + T-terminal

Art. No.	Thread	Wire	Leng	Breaking	
	size UNF	dia. mm	Min. mm	Max. mm	load kN
174-322-21	5/16"	4	182	256	24.5
174-323-21	3/8"	5	222	313	34.5
174-324-21	7/16"	6	242	364	47.5

#### Chrome bronze rigging screws Open + Toggle

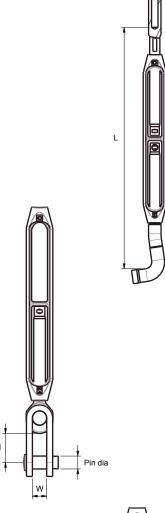
Art. No.	Thread size UNF	Clevis pin, dia. mm	Internal fork height mm (H)	Internal fork width mm (W)	Breaking load kN
174-321-26	1/4"	6.5	12.5	7	15.5
174-322-26	5/16"	6	15	8	24.5
174-323-26	3/8"	9.5	18	10	34.5
174-324-26	7/16"	11	18	12	47.5
174-325-26	1/2"	13	24	14	62
174-326-26	5/8"	15.8	31	16	95
174-327-26	3/4"	15.8	32	20	125
174-327-27	3/4"	19	32	20	125
174-328-26	7/8"	19	45	22	180
174-328-27	7/8"	22	45	22	180
174-329-27	1"	25	46	25.5	280

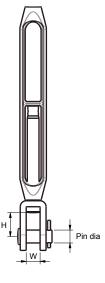


Art. No.	Thread size UNF	Clevis pin, dia. mm	Toggel fork internal fork height, mm (H²)	Internal fork width mm (W)	Breaking load kN
174-321-28	1/4"	6.5	15	7	15.5
174-322-28	5/16"	6	19	8	24.5
174-323-28	3/8"	9.5	22	10	34.5
174-324-28	7/16"	11	23.5	12	47.5
174-325-28	1/2"	13	30	14	62
174-326-28	5/8"	15.8	39.5	18	95
174-327-28	3/4"	15.8	40.5	20	125
174-327-29	3/4"	19	40.5	20	125
174-328-28	7/8"	19	55	25	180
174-328-29	7/8"	22	55	25	180

#### Chrome bronze rigging screws Open + Eye

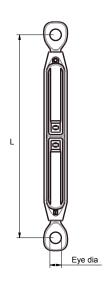
Art. No. Thread size UNF		Eye, Ø mm	Breaking load kN
174-324-48	7/16"	11.5	47.5
174-326-48	5/8"	16.5	95





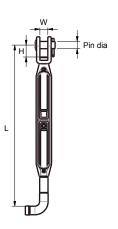
## Chrome bronze rigging screws Eye + Eye

Art. No.	Thread	Leng	th (L)	Eye,	Breaking
	size UNF	Min. mm	Max. mm	Ø mm	load kN
174-324-47	7/16"	205	325	11.5	47.5
174-326-47	5/8"	269	437	16.5	95



#### Chrome bronze rigging screws Fork + T-terminal

Art. No.	Thread size UNF	Leng Min. mm	th (L) Max. mm	Clevis pin, dia. mm	T dia.	Breaking load kN
174-324-22	7/16"	244	365	11	6	47.5



#### Rigging screw oil

Art. No.	Volume ml
312-502	100



All rigging screws should be lubricated every year.

## **Backstay adjuster, mechanical**

For hydraulic backstay adjusters, see page 124.



Seldén backstay tensioners have smooth, clean surfaces. Even the wire terminal is fully covered. These low-weight backstay tensioners are simple to use. All you do is insert a standard winch handle and turn. The tensioner has a maximum working load of 30 kN. The stroke is an ample 250 or 400 mm, depending on the length of the tensioner. Clevis pins and bushes are supplied with every adjuster to suit small chainplates for  $\emptyset$  6 and  $\emptyset$  7 mm wire. When using the backstay adjuster with a  $\emptyset$  10 mm backstay, the following limitations apply:

- forestay and backstay are both Ø 10 mm, 1 x 19 wire or other stay material with an ultimate strength of 88 kN (8800 kg/19499 lbs) or less
- the backstay-to-mast angle must be at least 40% greater than the forestay-to-mast angle.

#### Works as a halyard tensioner too

The backstay tensioner can also be used as genoa and main halyard tensioner, suitable for yachts up to 70-80 feet. It is permanently fitted to the mast, and connects directly to the wire halyard. The halyard's detachable rope tail simplifies stowage.



Halyard tensioners.

#### Backstay tensioners for Ø 6-8 mm wire

Art. No.	Stroke mm	Min/max length, mm	Breaking load, kN	Safe working load, kN
174-601-01	250	518/768	65	30
174-601-02	400	818/1218	65	30

#### **Halyard tensioners**

Art. No.	Stroke	Min/max	Breaking	Safe working
	mm	length, mm	load, kN	load, kN
174-601-03	400	818/1218	65	30

## **Rigging screw covers**

## Aluminium rigging screw covers with PVC top-plug

The round rigging screw covers are kind to your sails, sheets and clothing. Nothing can get snagged or chafed on the rigging screws. The rigging screws can be kept well greased, without having to worry about staining the sails or sheets.

Art. No.	For rigging screw	Tube dia., mm outer/inner	Tube length mm	Spare top plug Art. No.
319-580-01	7/16" (6 mm)	38/35	650	319-580 x 2
319-581-01	1/2" (7 mm)	43/40	650	319-581 x 2
319-582-01	5/8" (8 mm)	50/46	700	319-582 x 2
319-583-01	3/4" (10 mm)	57/53	800	319-583 x 2
319-584-01	7/8" (12 mm)	67/63	1100	319-584 x 2
319-585-02	1" (14-16 mm)	87/76	1550	319-585 x 2



When the backstay has been fully tightened, mark the stay with a piece of tape (see Fig. 1) at the top of the backstay tensioner. The tape marker will enable you to avoid overtensioning. Intermediate values can be marked with different colours.

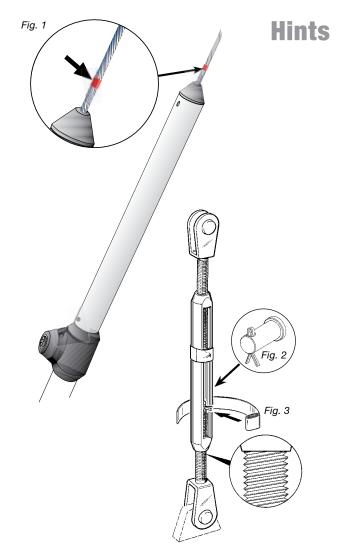
The length of the split pin should be 1.5 x the diameter of the clevis pin or the threaded terminal. The ends of the pin should be spread approx. 20° apart when the pin is locked (see Fig. 2). To protect the ends, fold a length of tape into a cushion, place the cushion over the ends and wrap the remaining tape a couple of times around the rigging screw (see Fig. 3).

Adjust the rigging screw using two ordinary or adjust-

"able spanners (see picture). Never insert a screwdriver through the body of the rigging screw, as this can seriously damage the screw.



Read more about rigging and tuning in Seldén's publication "Hints and advice".



## **Fittings**



#### Stud terminals for rigging screws (right-hand thread)

For stainless steel rigging screws, Art. No.	For bronze rigging screws Art. No.	Thread size UNF	Wire mm
308-344	308-344	1/4"	3
308-408	308-408	1/4"	4
308-345	308-345	5/16"	4
308-409	308-409	5/16"	5
308-346	308-346	3/8"	5
308-418	308-418	3/8"	6
308-347	308-347	7/16"	6
308-414	308-414	7/16"	7
308-413	-	1/2"	6
308-348	308-426	1/2"	7
308-349	308-427	1/2"	8
308-385	308-428	5/8"	8
308-419	308-429	5/8"	10
308-386	308-430	3/4"	10
308-420	308-431	3/4"	12
308-421	308-432	7/8"	12
308-422	308-433	7/8"	14
-	308-708	1"	14
-	308-643	1"	16

#### Eye terminals for metric wire

Eye dia.

mm

6.5

8.3

10.5

12.5

13.5

16.5

16.5

19.5

23

25.5

25.6

28.8

Eye thickness mm

3.5

5.6

6.6

8.6

9.6

10.6

12.6

16

17

17

21.2

25.2





#### Fork terminals for metric wire

Art. No.	Wire dia. mm	Clevis pin dia. mm	Internal fork height mm (H)	Internal fork width mm
308-311-01	3	6.5	12.5	7
308-312-01	4	8	15	8
308-313-01	5	9	18	10
308-314-01	6	5	18	12
308-315-01	7	11	24	14
308-316-01	8	15.8	31	16
308-318-01	10	15.8	32	21.5
308-319-01	12	19	39	21.5
308-590-01	14	22	45	22
308-384-01	16	25.5	50	25.5
308-740-01	19	28.5	70	31



#### Lifeline terminal with removable fork

Art. No.	Wire dia. mm	Clevis pin dia. mm	Internal fork height mm (H)	Internal fork width mm
308-339-01	3	6.5	12.5	7
308-337-01	4	8	15	8
308-338-01	5	9.5	18	10

#### **Stemball terminal and washers**

Wire diameter, mm	Art. No. Terminal+cups (radius)	Art. No. Terminal (radius)	Art. No. Cups (inner/outer radius)	Art. No. Cups (inner/outer radius)
3	308-550-03 (R9)	308-550 (R6)	306-594 (R6/9)	_
	308-550-04 (R11)			306-572 (R9/11)
4	308-558 (R9)	308-558 (R9)	-	-
	308-558-04 (R11)		306-572 (R9/11)	-
	308-558-01 (R14)			306-573 (R11/14)
5	308-552 (R9)	308-552 (R9)	-	-
	308-552-04 (R11)		306-572 (R9/11)	_
	308-552-01 (R14)			306-573 (R11/14)
6	308-553 (R11)	308-553 (R11)	-	_
	308-553-01 (R14)		306-573 (R11/14)	_
	308-553-02 (R18)			306-574 (R14/18)
7	308-554 (R11) 308 308-554-01 (R14)	308-554 (R11)	_	_
			306-573 (R11/14)	_
	308-554-02 (R18)			306-574 (R14/18)
8	308-555 (R14)	308-555 (R14)	_	_
	308-555-02 (R18)		306-574 (R14/18)	_
	308-555-05 (R22)			306-595 (R18/22)
10	308-556 (R14)	308-556 (R14)	_	_
	308-556-02 (R18)		306-574 (R14/18)	_
	308-556-05 (R22)			306-595 (R18/22)
12	308-557 (R18)	308-557 (R18)	_	_
_	308-557-05 (R22)		306-595 (R18/22)	_
14	308-559 (R22)	308-559 (R22)	_	_



## Stemball terminals

for rigging screws (Stemball cups - see page 36)

		· -
Art. No.	For rigging screws	Radius
308-560	1/4"	6
308-561	5/16"	9
308-562	3/8"	9
308-563	7/16"	11
308-564	1/2"	11
308-565	5/8"	14
308-566	3/4"	18
308-567	7/8"	18

#### T/Eye toggle for rope runners

Wire dia., mm	Art. No.
3	174-136
4	174-137
5	174-138
6	174-139
7	174-140
8	174-141



When replacing traditional wire runners with lightweight runners, in for example Dyneema, keep your existing backing plate and add a T/Eye toggle.

#### Sta-lok wedge for compact ("Dyform") wire

When re-using a Sta-lok wire terminal, the wedge needs to be replaced.

Art. No.	Wire dia. mm
301-622-01	5
301-623-01	6
301-624-01	7
301-625-01	8
301-626-01	10
301-627-01	12
301-628-01	14
301-629-01	16



#### Sta-lok wedge for 1x19 wire

When re-using a Sta-lok wire terminal, the wedge needs to be replaced.

Art. No.	Wire dia. mm
301-150	4
301-151	5
301-152	6
301-153	7
301-154	8
301-155	10
301-156	12
301-162	14
301-613	16



Wire ter	<b>minal</b> Sta	a-lok®
Art. No.	For wire dia. mm	Type of terminal
301-117	4	Eye
301-118	5	
301-119	6	
301-120	7	
301-121	8	
301-122	10	
301-123	12	
301-124	14	
301-633	14L	
301-132	16	
301-125	4	Fork
301-126	5	
301-127	6	12
301-128	7	
301-129	8	P
301-130	10	

#### **Lifeline Pelican hook terminal**

Art. No.	Wire dia. mm
174-356	4
174-357	5



#### Stud Sta-lok®

Art. No.	Wire dia. mm	Thread size UNF
308-434	3	1/4"
308-435	4	1/4"
308-436	4	5/16"
308-437	5	5/16"
308-438	5	3/8"
308-439	6	3/8"
308-440	6	7/16"
308-441	6	1/2"
308-443	7	1/2"
308-444	8	1/2"
308-445	8	5/8"
308-446	10	5/8"
308-447	10	3/4"
308-448	12	3/4"
308-449	12	7/8"
308-450	14	7/8"
308-455	14	1"
308-575	16	1"





#### T-terminals for metric wire

Art. No.	Wire dia. mm	Lateral shroud angle
308-321	3	Max 20°
308-322	4	Max 20°
308-323	5	Max 20°
308-328	5	18° - 25°
308-324	6	Max 20°
308-329	6	18° - 25°
308-325	7	Max 20°
308-326	8	Max 20°
308-327	10	Max 20°



**Backing plates** for T-terminal (see also pages 22)

Art. No.	Wire dia. mm	Rod	Remarks
507-553-01	3	-	
507-551-01	4	-3	
507-552-01	5	-4	
507-600-01*	6	-6	
507-601-01*	7	-8	
507-582-01*	8	-10, -12	C174-C245
507-583-01*	10	-15, -17	C227
507-583-02*	10		C245
507-583-03*	10		C264
507-583-04*	10		C285-C304
507-583-05*	10		F-228-F305

<sup>\*</sup> Use only as shroud attachment.



## **Toggles**

Eye/fork toggle	Forestay dia., mm	Art. No.	Length H mm	Ø Clevis pin D <sup>2</sup> mm	Fork width W <sup>2</sup> mm	Ø Eye D¹ mm	For rigging screw diam	
	3	174-101-01	21	6.5	7	7	1/4"	
n1	3, 4	174-102-01	26	8	8	8	5/16"	
	5	174-103-01	33	9.5	10	10	3/8"	
	6	174-104-01	39	11	12	12	7/16"	
702	7	174-105-01	43.5	13	14	14	1/2"	
	8	174-106-01	49.5	15.8	16	16	5/8"	
H CONTRACTOR	10	174-107-01	65	15.8	22	16	3/4"	
		174-132-01	65	19	22	16	3/4"	
∕ <b>™</b> W²	12	174-125-01	95	19	22	20	7/8"	
Can be used to lengthen a		174-134-01	91	19	22	22.5	7/8"	
Furlex system. Fit it underneath	14	174-133-01	95	22	22	23	7/8"	
the standard fork/fork toggle or	14	174-135-01	91	22	22	23	7/8"	
at the top end of the Furlex wire.	16			22	25	23	M24	
	16	174-126-01	120					
Standard Furlex fork/fork toggle	Forestay dia., mm	Art. No.	Length H mm	Ø Clevis pin D <sup>1</sup> mm	Ø Clevis pin D <sup>2</sup> mm	Fork width W <sup>1</sup> mm	Fork width W <sup>2</sup> mm	
	4	517-056-02	25	8	8	7.5	8.5	
W <sup>1</sup>	5	517-054-02	30	10	10	10	11	
	6	517-046-02	40	12	10	11	11	
D1	7	517-047-02	40	12	12	11	12.5	
Two was	8	517-048-02	50	14	14	14	12.5	
	10	517-060-04	55	16	16	14	16	
H	12	517-052-02	65	19	19	20.5	21	
$D^{2}$	14	517-053-02	80	22	22	20.5	23	
	16	517-074-02	85	25	22	22	26	
T/fork toggle	Forestay dia., mm	Art. No.	Length H	Ø Clevis pin D <sup>2</sup> mm	Fork width W <sup>2</sup> mm			
	4	174-127-01	68	8	8			
	5	174-127-01	80	9.5	10			
				1 1				
W <sub>2</sub>	6	174-122-01	93	11	12			
H S	7	174-123-01	100	13	14			
D <sup>2</sup>	8	174-124-01	112	15.8	16			
Needed to connect the Furlex to a Seldén backing plate for T-terminals.								
a				~ ~				~ ~
	Forestay dia., mm	Art. No.	Length H mm	Ø Clevis pin D <sup>2</sup> mm	Fork width W <sup>2</sup> mm	Height HB mm	Radius R mm	Ø Stemball D <sup>1</sup> mm
	dia., mm	Art. No. 517-065-01		<b>D</b> <sup>2</sup> mm 10	<b>W</b> <sup>2</sup> mm	•		<b>D</b> <sup>1</sup> mm 26
	dia., mm		mm	D <sup>2</sup> mm 10 10	W <sup>2</sup> mm	8.5 8	mm	D¹ mm 26 26
	dia., mm	517-065-01	mm 138	<b>D</b> <sup>2</sup> mm 10	<b>W</b> <sup>2</sup> mm	<b>mm</b> 8.5	<b>mm</b> 10	<b>D</b> <sup>1</sup> mm 26
with fork/fork toggle	<b>dia., mm</b> 5	517-065-01 517-066-01	mm 138 152	D <sup>2</sup> mm 10 10	W <sup>2</sup> mm 11 11	8.5 8	mm 10 10	D¹ mm 26 26
with fork/fork toggle	dia., mm 5 6 7	517-065-01 517-066-01 517-067-01	mm 138 152 157	D <sup>2</sup> mm  10  10  12	W <sup>2</sup> mm 11 11 12.5	8.5 8	mm 10 10 15	D¹ mm 26 26 34
with fork/fork toggle	dia., mm 5 6 7	517-065-01 517-066-01 517-067-01 517-097-01	138 152 157 153	D <sup>2</sup> mm  10  10  12  12	W <sup>2</sup> mm 11 11 12.5 12.5	8.5 8 9	mm 10 10 15 13	D¹ mm 26 26 34 26
THE STATE	dia., mm  5  6  7  7  8	517-065-01 517-066-01 517-067-01 517-097-01 517-068-01	138 152 157 153 197	10 10 10 12 12 12	W <sup>2</sup> mm  11  11  12.5  12.5  15.5	8.5 8 9 11	mm 10 10 15 13	26 26 34 26 34
with fork/fork toggle  D  R  H  H  Needed when fitting Furlex to some masts of other origin than Seldén.	dia., mm  5  6  7  7  8  10	517-065-01 517-066-01 517-067-01 517-097-01 517-068-01 517-068-02	138 152 157 153 197 202	D <sup>2</sup> mm  10  10  12  12  14  16	W <sup>2</sup> mm  11  11  12.5  12.5  15.5  16	8.5 8 9 11 9	mm 10 10 15 13 15 15	26 26 34 26 34 26 34 34
with fork/fork toggle  D  R  HB  H  Needed when fitting Furlex to some masts of other origin than Seldén.	dia., mm  5 6 7 7 8 10 12	517-065-01 517-066-01 517-067-01 517-097-01 517-068-01 517-068-02 517-069-01	mm  138  152  157  153  197  202  226  Length H	D <sup>2</sup> mm  10 10 12 12 14 16 19	W <sup>2</sup> mm  11  11  12.5  12.5  15.5  16  21	8.5 8 9 11 9 9 8.5	mm 10 10 15 13 15 15 15 15	26 26 34 26 34 26 34 34
with fork/fork toggle  D1  HB  H  Needed when fitting Furlex to some masts of other origin than Seldén.  Eye/fork extension link*	dia., mm  5 6 7 7 8 10 12  Forestay dia., mm	517-065-01 517-066-01 517-067-01 517-097-01 517-068-01 517-068-02 517-069-01 Art. No.	mm 138 152 157 153 197 202 226  Length H mm	D <sup>2</sup> mm  10  10  12  12  14  16  19  Ø Clevis pin D <sup>1</sup> mm	W <sup>2</sup> mm  11  11  12.5  12.5  15.5  16  21  Fork width W <sup>1</sup> mm	8.5 8 9 11 9 9 8.5	mm 10 10 15 13 15 15 15  Cauge W <sup>2</sup> mm	26 26 34 26 34 34
with fork/fork toggle  D  R  HB  H  Needed when fitting Furlex to some masts of other origin than Seldén.	dia., mm  5 6 7 7 8 10 12  Forestay dia., mm 4	517-065-01 517-066-01 517-067-01 517-097-01 517-068-01 517-068-02 517-069-01 Art. No.	mm 138 152 157 153 197 202 226  Length H mm 90	D <sup>2</sup> mm  10  10  12  12  14  16  19  Ø Clevis pin D <sup>1</sup> mm  8	W <sup>2</sup> mm  11  11  12.5  12.5  15.5  16  21  Fork width W <sup>1</sup> mm  7	8.5 8 9 11 9 9 8.5	mm 10 10 15 13 15 15 15  6 Gauge W <sup>2</sup> mm 4	26 26 34 26 34 34
with fork/fork toggle  D1  HB  H  Needed when fitting Furlex to some masts of other origin than Seldén.  Eye/fork extension link*	dia., mm  5 6 7 7 8 10 12  Forestay dia., mm 4 5	517-065-01 517-066-01 517-067-01 517-097-01 517-068-01 517-068-02 517-069-01 Art. No. 517-944-01 517-945-01 517-063-01	mm 138 152 157 153 197 202 226  Length H mm 90 90 90	D <sup>2</sup> mm  10  10  12  12  14  16  19  Ø Clevis pin D <sup>1</sup> mm  8  10  12	W <sup>2</sup> mm  11  11  12.5  12.5  15.5  16  21  Fork width W <sup>1</sup> mm  7  9.5  11	8.5 8 9 11 9 9 8.5 Ø Eye D <sup>2</sup> mm 8	mm 10 10 15 13 15 15 15 15 4 Gauge W <sup>2</sup> mm 4 4	26 26 34 26 34 26 34 34
with fork/fork toggle  D1  HB  H  Needed when fitting Furlex to some masts of other origin than Seldén.  Eye/fork extension link*	dia., mm  5 6 7 7 8 10 12  Forestay dia., mm 4 5 6 7	517-065-01 517-066-01 517-067-01 517-097-01 517-068-01 517-068-02 517-069-01 Art. No. 517-944-01 517-945-01 517-063-01	mm 138 152 157 153 197 202 226  Length H mm 90 90 90 90	D <sup>2</sup> mm  10  10  12  12  14  16  19  Ø Clevis pin D <sup>1</sup> mm  8  10  12  12	W <sup>2</sup> mm  11  11  12.5  12.5  15.5  16  21  Fork width W <sup>1</sup> mm  7  9.5  11  11	8.5 8 9 11 9 9 8.5 Ø Eye D <sup>2</sup> mm 8 10 12	mm 10 10 15 13 15 15 15 4 Gauge W <sup>2</sup> mm 4 4 6 6	26 26 34 26 34 34
with fork/fork toggle  D  H  Needed when fitting Furlex to some masts of other origin than Seldén.  Eye/fork extension link*	dia., mm  5 6 7 7 8 10 12  Forestay dia., mm 4 5 6 7 8	517-065-01 517-066-01 517-067-01 517-097-01 517-068-01 517-068-02 517-069-01 Art. No. 517-944-01 517-945-01 517-063-01 517-063-01 517-062-01	mm  138  152  157  153  197  202  226  Length H mm  90  90  90  130	D <sup>2</sup> mm  10  10  12  12  14  16  19  Ø Clevis pin D <sup>1</sup> mm  8  10  12  12  14  16  19	W <sup>2</sup> mm  11  11  12.5  12.5  15.5  16  21  Fork width W <sup>1</sup> mm  7  9.5  11  11	8.5 8 9 11 9 9 8.5  Ø Eye D <sup>2</sup> mm 8 10 12 12 16.5	mm 10 10 15 13 15 15 15  6 Gauge W <sup>2</sup> mm 4 4 6 6 6 10	26 26 34 26 34 26 34 34
with fork/fork toggle  D1  HB  H  Needed when fitting Furlex to some masts of other origin than Seldén.  Eye/fork extension link*	dia., mm  5 6 7 7 8 10 12  Forestay dia., mm 4 5 6 7	517-065-01 517-066-01 517-067-01 517-097-01 517-068-01 517-068-02 517-069-01 Art. No. 517-944-01 517-945-01 517-063-01	mm 138 152 157 153 197 202 226  Length H mm 90 90 90 90	D <sup>2</sup> mm  10  10  12  12  14  16  19  Ø Clevis pin D <sup>1</sup> mm  8  10  12  12	W <sup>2</sup> mm  11  11  12.5  12.5  15.5  16  21  Fork width W <sup>1</sup> mm  7  9.5  11  11	8.5 8 9 11 9 9 8.5 Ø Eye D <sup>2</sup> mm 8 10 12	mm 10 10 15 13 15 15 15 4 Gauge W <sup>2</sup> mm 4 4 6 6	26 26 34 26 34 34

<sup>\*</sup> If the boat is fitted with a bow anchor, it may be necessary to permanently raise the lower bearing assembly for anchor clearance. A selection of extension links are available. If the lower bearing assembly is raised by means of an extension link, a Furlex fork/fork toggle, should be fitted between the link and the forestay attachment. This in order to secure proper articulation in all directions.

# Split pins, split rings and clevis pins for rigging screws





#### **Split pins**

Art. No.	Diameter x length, mm	For rigging screw dia.	For fork terminal, wire dia., mm
301-003	2.5 x 12	1/4"	3
301-004	2.5 x 15	5/16", 3/8"	4, 5
301-011	3.2 x 20	7/16", 1/2"	6, 7
301-020	3 x 25	5/8", 3/4"	8, 10
301-051	3.7 x 25 (28)	5/8", 3/4"	8, 10, 12
301-007	4.6 x 38	7/8"	12, 14
301-029	4 x 30	3/4", 7/8"	12
301-522	4 x 40	7/8", M24	14
301-036	5 x 50	M24	-

#### **Split rings**

Art. No.	Diameter x thickness, mm	For rigging screw dia.
301-014	16 x 1	1/4", 5/16", 3/8"
301-015	20 x 1.5	7/16"
301-016	25 x 1.5	1/2", 5/8"





#### **Clevis pins**

Art. No.	For rigging screw and toggle dia.	For fork terminal wire dia., mm	For life line terminal wire dia., mm	Diameter mm	Length = L mm
168-010	1/4"	3	3	6.5	17.5
168-011	5/16"	4	4	8	20.5
168-012	3/8"	5	5	9.5	23
168-013	7/16"	6		11	28
168-014	1/2"	7		13	32
168-021*	5/8"	8		15.8	38
168-022	3/4"	10		15.8	45
168-023	3/4"	12		19	45
168-018	7/8"			19	54
168-024	7/8"	14		22	54
168-025	M24			22	60
168-015*				13	40
168-019*				11	40

 $<sup>\</sup>star$  = Included in backstay tensioners and halyard tensioner Art. No. 174-601-01, 174-601-02 and 174-601-03.





Art. No.	Dia. mm	Length mm	Matching dia. of split pin, mm
165-601	5	28	1.8
165-603	5	34	
165-604	5	41	
165-606	5	47	
165-005	6	26	
165-006	6	30	
165-007	6	36	
165-101	8	18	2.3
165-103	8	22	
165-113	8	27	
165-105	8	32	
165-107	8	36	
165-128 (D-bolt)	8	40	
165-108	8	50	
165-119	8	55	
165-118	8	63	
165-112	8	70	
165-127	8	80	
165-202	10	22	
165-203	10	28	
165-212	10	24	
165-205	10	32	
165-221	10	35	
165-211	10	40	
165-207	10	42	
165-129 (D-bolt)	10	45	
165-208	10	46	
165-206	10	50	
165-213	10	58	
165-216	10	79	
165-209	10 12	97 25	2.9
165-401 165-402	12	33	2.9
165-402	12	37	
165-405	12	41	
165-404	12	46	
165-403	12	53	
165-410	12	61	
165-411	12	137 (hole Ø5)	4.6
165-412	12	150 (hole Ø5)	
165-413 (D-bolt)	12	61 (hole Ø4.5)	3.7
165-415	12	162 (hole Ø5)	4.6
165-501	14	31	3.7
165-504	14	35	
165-505	14	41	
165-503	14	49	
165-502	14	53	
165-507	14	61	
165-557	5/8"	30	
165-558	5/8"	33	
165-560	16	34	
165-554	16	37	
165-552	16	50	
165-555	16	57	
165-556	16	69	
165-551	16	76	
165-559 (D-bolt)	16	76 (hole Ø 5.5)	4.6
165-581	19	42	
165-582	19	60	
165-584	19	84	
165-594	22	49	
165-595	22	60	
165-597	1"	102	5.9
165-598	1"	66	
165-586	25	82	



#### Split pins stainless steel

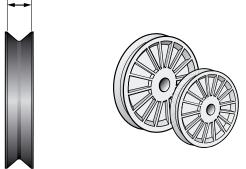
Art. No.	Dia., mm	Length, mm
301-046	1.8	10
301-047	2.3	12
301-048	2.3	16
301-006	2.3	25
301-049	2.9	16
301-050	2.9	18
301-013	2.9	24
301-044	2.9	27
301-011	3.2	20
301-061	3.7	18
301-053	3.7	20
301-051	3.7	25
301-045	3.7	33
301-062	3.7	40
301-010	3.7	50
301-054	4.6	28
301-055	4.6	33
301-057	5.9	37
301-059	5.9	43
301-058	5.9	45
301-060	5.9	48

The recommended length of the split pin is approx. 1.5  $\times$  the diameter of the clevis pin.

#### Sheaves composite

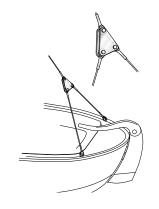
Art. No.	Outer dia. mm	Hole dia. mm	Width mm	Max. rope dia. mm	Max. rope/wire dia., mm
504-310 (PA)	23	6	10	8	-
504-319	28	8	13	10	-
504-316	28	10	13	12	10/4
504-505	38	10	11	10	-
504-320	45	8	13	10	8/3
504-321	45	10	13	12	10/4
504-502	45	12	16	14	12/5
504-504	45	10	11	10	-
504-322	57	8	13	12	10/4
504-323	57	10	13	12	10/4
504-324	57	12	13	12	10/4
504-348	57	14	13	12	10/4
504-382	57	14	11	8	-
504-325	70	10	13	12	10/5
504-326	70	12	13	12	10/5
504-332	70	12	16	16	12/6
504-327	70	14	13	12	10/5
504-333	70	14	16	14	10/6
504-334	70	16	16	14	10/6
504-328	90	10	13	12	10/6
504-329	90	12	13	12	10/6
504-335	90	12	16	16	14/7
504-330	90	14	13	12	12/7
504-336	90	14	16	16	14/7
504-337	90	16	16	16	14/7
504-338	90	20	20	20	16/8
504-339	130	20	20	20	16/8





#### **Bridle plates**

Wire, dia., mm (perm. backstay)	Art. No.	Hole dia., mm
4, 5	528-005-01	3 x Ø10
6, 7	528-006-01	3 x Ø12
8	528-013-01	2 x Ø14 + 1 x Ø16
10	528-033-01	3 x Ø16
12	528-032-01	2 x Ø16 + 1 x Ø20
14	528-035-01	2 x Ø20 + 1 x Ø23



#### **Insulators**

Convert your wire backstay to a short wave antenna with one insulator at each end.

\A/:		Nylon
Wire, dia. mm	Art. No.	Isolator + 2 talurit- eyes, Art. No.
5	319-515	319-515-02
6	319-515	319-515-01
7	319-524	319-524-01
8	319-524	319-524-02



All experienced sailors appreciate smart solutions and features that simplify sail handling and life on board in general. Sometimes they are the most obvious items like furling gear, Rodkickers and single line reef booms. Other times, they can be less self-evident, the things you tend not to think about, but appreciate even more when you use them.

We, ourselves, are experienced sailors. You'll find some of our favourite solutions on the following pages of this "Just Smart" section. We hope they will become yours, too.

## **JUST SMART**



Backstay flicker	180
Lazyjacks system	180
Rigging screw covers	181
Mast climbing steps	182
Cutter stay stowage	182
Trysail system	183
Cable glue	184
Sealing kits	184
Winch handle pocket	185
Aero strips	185

#### **Backstay flicker**

#### - gives the mainsail space to move

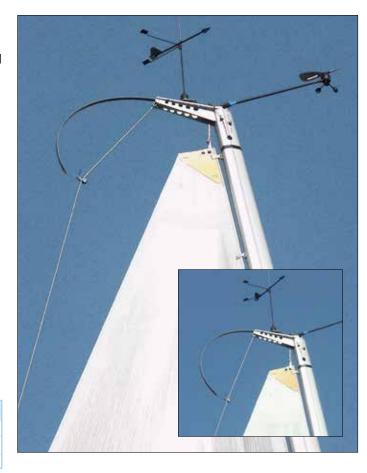
The backstay flicker is a glass fibre rod fitted to the head box on a fractional rig with swept spreaders. It lifts up a wire or rope backstay to allow for free passage of a full roach mainsail.

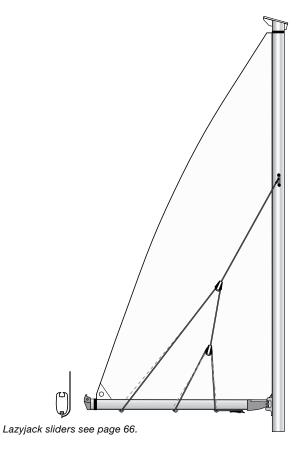


The backstay flicker comes complete with fasteners and backstay block.

## Complete kit with fasteners and instruction for assembly

Art. No.	Batten length, mm	Boat size, ft
511-120-01	1200	< 30 fot
511-121-01	1400	30-37 fot
511-123-01	1800	37-43 fot





#### Lazyjack - contains the mainsail

A lazyjack system is an active aid for containing the mainsail when reefing and dousing. Our lazyjack system works exceptionally well with fully-battened mainsails, but it is also very handy for use with conventional sails. Seldén supplies complete lazyjack kits with all the necessary blocks, eye straps, lines, fasteners, boom sliders and full instructions.

Descript	ion	Art. No.	Boom sections	Remarks
	2-leg system	511-636-05 511-637-05	120/62-171/94 200/117-250/140	P <sub>max</sub> = 12 m
V	3-leg system	511-636-06 511-637-06	120/62-171/94 200/117-250/140	P <sub>max</sub> = 20 m



## Aluminium rigging screw covers with PVC top-plug

The round rigging screw covers are kind to your sails, sheets and clothing. Nothing can get snagged or chafed on the rigging screws. The rigging screws can be kept well greased, without having to worry about staining the sails or sheets.

	Art. No.	rigging screw		dia., mm outer/inner	length mm	top plug Art. No.
	319-580-01	7/16"	(6 mm)	38/35	650	319-580 x 2
	319-581-01	1/2"	(7 mm)	43/40	650	319-581 x 2
	319-582-01	5/8"	(8 mm)	50/46	700	319-582 x 2
	319-583-01	3/4"	(10 mm)	57/53	800	319-583 x 2
	319-584-01	7/8"	(12 mm)	67/63	1100	319-584 x 2
ı	319-585-02	1"	(14-16 mm)	87/76	1550	319-585 x 2

#### **Mast climbing steps**

#### - for extra climbing safety

Mast climbing steps are an easily fitted safety feature. Seldén mast climbing steps are available as fixed steps (an outer guard wire can be used for extra safety) or as foldable climbing steps. The well-rounded shape of the foldable steps reduces windage and sail chafe.



Always use a safety harness when working aloft.









#### Climbing steps, fixed

Art. No.	Radius	Mast section
508-539-01	R155	E138-E274
		D121-D160
508-565-01	R300	C321, E365
		All furling masts
		All C-sections and F-sections

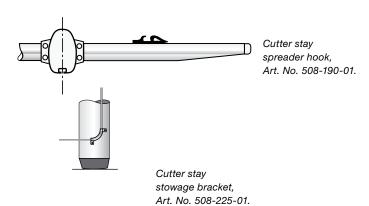
#### Climbing steps, foldable

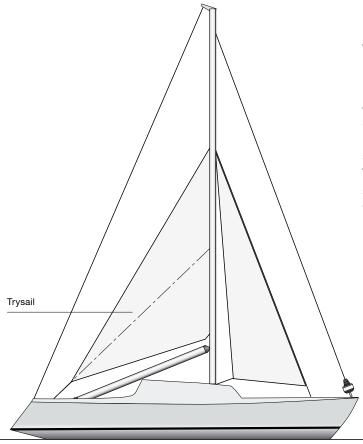
Art. No.	Radius	Mast section	Remarks
508-183-03	R290		Incl. screw, for wall
	C321, E365	C321, E365	thickness > 4 mm
508-183-04		All C-sections	Incl. rivets, for wall
			thickness < 5 mm
508-185-03	R122	E170-E274	Incl. screw, for wall
		D137-D160	thickness > 4 mm
508-185-04			Incl. rivets, for wall
			thickness < 5 mm

**Hint:** With a foldable mast step 0.5 m up from deck, it will be a lot easier to attach the halyard to the head of the mainsail.

#### Cutter stay spreader hook Cutter stay stowage bracket

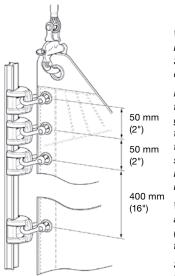
With a Seldén cutter stay spreader hook mounted on the spreader, and a cutter stay stowage bracket mounted on the mast, your cutter stay will always be ready for use, stand-by secured by its pelican hook (or similar) to a deck bracket. Safely out of the way until you actually need it!





#### **Trysail system**

In stormy weather, when your 2nd or 3rd reef of the mainsail just isn't enough, the way to go is with a trysail. A trysail is a loose-footed, fairly flat sail made from heavy sailcloth, but with a luff length and foot length considerably shorter than your regular mainsail. It is hoisted on a separate track, independent of the normal luff groove. The trysail track is fitted beside the luff groove on the aft side of the mast and runs all the way to deck level. That way you can always have your trysail fitted to the track, ready to be used.



When using a trysail, the end of the main boom is secured to the deck. Sheeting point should be according to the illustration.

If trysail luff length is not available from the yacht designer, our general recommendation is that the trysail should reach 55-65% of the foretriangle height. The track should end approximately 0.5 m below checkstays/ runner attachments, if any.

We recommend fitting three sliders at the head and tack of the sail (c/c 50 mm), remaining sliders to be fitted c/c 400 mm.

Seldén Silicone lubricant (Art. No. 312-506) can be used on the track to minimise friction.



Trysail with track gate, end stop, sliders and fasteners. Art. No. 515-525-31.

#### **Tracks and sliders**

Mast section	RCB 22 track L = 2300 mm incl. pop rivets and 6 trysail sliders	Trysail gate track, end stops, fasteners 12 trysail sliders	Separate sliders
All E-, D- och R-profiles C227-C304 F212-F305	515-525-35	515-525-31	511-713

Track

## At your service

#### Cable glue

In masts not featuring a dedicated cable conduit, you need to fix your cables with glue. We provide a PU glue (Cascol 1809) complete with instructions.



Gluing cables.



Art. No. 312-301-03.

Mast section	300 ml glue and instructions, Art. No.
Older E-sections and P-sections	312-301-03





Rigging screw oil, Art. No. 312-502.

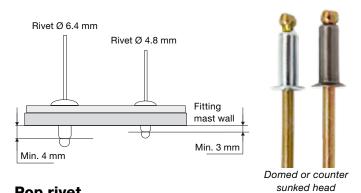


Lubricating grease, Art. No. 312-501.





Type of sealing	Sealing kit, Art. No.	Instruction
Sealing of open conduits	312-301-02	595-548-E
Secondary sealing of a	312-322-10	595-814-E
keel-stepped mast		



#### Pop rivet

Art. No	Dim., Ø mm	Length, mm	Material	Head	Pcs/ package
167-007-10	4.8	9.9	Monel	Domed	10
167-018-10	4.8	12.7	Monel	Domed	10
167-022-05	4.8	12.7	Monel	Counter sunked	5
167-006-05	4.8	16.5	Monel	Domed	5
167-005-05	4.8	20.3	Monel	Counter sunked	5
167-008-05	4.8	25.4	Aluminium	Domed	5
167-004-10	6.4	12.7	Monel	Domed	10
167-003-05	6.4	14.5	Monel	Counter sunked	5
167-002-10	6.4	17.8	Monel	Domed	10

Monel® = a highly corrosion resistant nickel alloy commonly used with aluminium in harsh environments.

#### Winch handle pocket

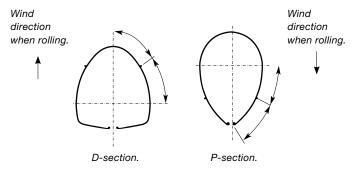
The Seldén winch handle pocket is suitable for most modern winch handles. The pocket has a drainage hole and is easy to fit on both flat and curved surfaces, on the mast or in the cockpit.



Art. No. 533-925-01 (incl. poprivets)

#### Aero strips - to prevent mast rolling

Rolling is the rhythmic heeling back and forth around a longitudinal axis when the wind is blowing from the general direction of the bow or stern. The aerodynamic force causing the rolling can be eliminated by mounting aero strips that deflect the air flow (30 cm from the masthead and 3-4 m downwards).



Mast section	8 x 1000 mm alu- minium aero strips incl. pop-rivets
D-section	535-013-01
P-section	



#### **Stanchion blocks for Furlex**

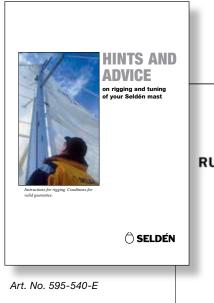
Fit  $\emptyset$  25-30 mm stanchions.

Art. No.538-971-01 For Furlex 50S, 104S, 204S/TD and 304S/TD.

### Seldén worldwide

Seldén is represented worldwide by more than 750 authorised dealers. We use comprehensive information material, manuals and films to impart our quality thinking to dealers and service centres. We arrange regular dealer training courses to enable our dealers to live up to our requirements for technical expertise and gain a full understanding of the Seldén product philosophy. Our strong local presence on all marine markets means that yachtsmen can access spare parts and know-how wherever they are.





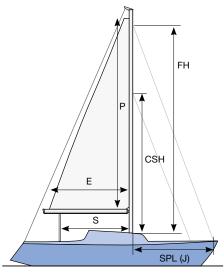
# Useful publications

Our well known "Hints and advice", for example, is regarded as an essential part of any yachting library. Download the Seldén publication you need from www.seldenmast.com



## **Conversion factors**





E = Mainsail foot length
P = Mainsail luff length
S = Main sheet distance from mast
FH = Forestay height
CSH = Cutter stay height
SPL (J) = Spinnaker pole length

	Multiply number of	by	to obtain equivalent number of	Multiply number of	by	to obtain equivalent number of
_	Inches (in)	25.4	millimetres (mm)	Millimetres	0.03937	inches
ŧ	Inches (in)	2.54	centimetres (cm)	Centimetres	0.3937	inches
Length	Feet (ft)	30.48	centimetres (cm)	Metres	39.3701	inches
1	Feet (ft)	0.3048	metres (m)	Metres	3.2808	feet
	Sq. inches (in <sup>2</sup> )	645.16	sq. millimetres (mm²)	Sq. millimetres	0.00155	sq. inches
æ	Sq. inches (in <sup>2</sup> )	6.4516	sq. centimetres (cm <sup>2</sup> )	Sq. centimetres	0.1550	sq. inches
Area	Sq. feet (ft²)	929.0304	sq. centimetres (cm <sup>2</sup> )	Sq. metres	10.7639	sq. feet
_	Sq. feet (ft²)	0.092903	sq. metres (m²)	Sq. metres	1.19599	sq. yards
	Sq. yards (yd²)	0.836127	sq. metres (m²)			
Ħ	Ounces (oz)	28.3495	grams (g)	Grams	0.03527	ounces
Weight	Pounds (lb)	453.59237	grams (g)	Kilograms	35.274	ounces
≥	Pounds (lb)	0.4536	kilograms	Kilograms	2.20462	pounds

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Spinnaker pole

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**Notes** 

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The Seldén Group is the world's leading manufacturer of mast and rigging systems in carbon and aluminium for dinghies, keelboats and yachts. Since 2008 the product range has been extended with deck hardware, winches and sailmaker hardware.

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