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.

Slab reefing with fixed hooks.

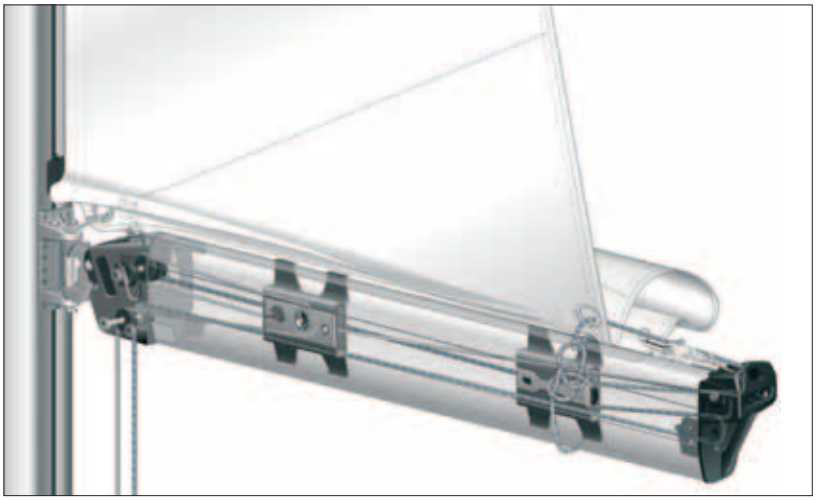
Slab reefing with running S-hooks.

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.



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

Boom fitted with outhaul car for Seldén furling mast.

See the Seldén Single Line Reef in action.

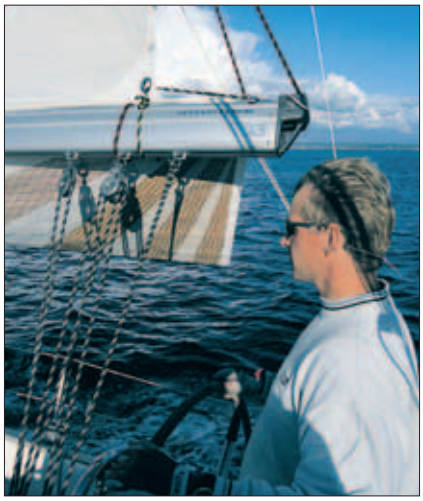
Single Line Reef

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.

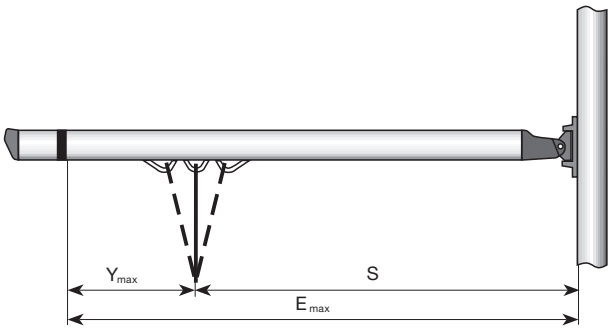
Adjust the Rodkicker.

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 over-length to allow the main sheet to pass a sprayhood.



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

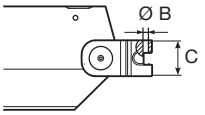
Section		B087		B104		B120		B135		B152		B171		B200		B250		B290		B380	
RM 30 kNm	Displ. tonnes	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}
6	1.2	3.3	1.7	4.0	1.8	4.1	2.1														
8	1.6	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, E_{max} and Y_{max} (m)

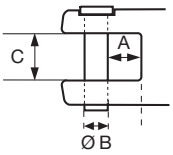
Section		B087		B104		B120		B135		B152		B171		B200		B250		B290		B380	
RM 30 kNm	Displ. tonnes	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}	E_{max}	Y_{max}
6	1.2	3.4	1.4	4.1	1.6	4.1	1.8														
8	1.6	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)



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_{max} 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_{max} 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_{max} 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.