

# Aluminium booms



D-shaped head of clevis pin.



The split pin sits in a recess preventing damages to sailcloth.



Outboard end with integrated sheaves for two reefs and outhaul.

Seldén booms have a wealth of sophisticated features and can be equipped with a variety of reefing systems and outhaul systems to suit the needs of different sailors.

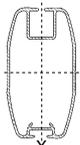
## The ends

The inboard end and the outboard end for the B087 and B104 booms are manufactured from composite. The B120 ends are cast aluminium.

Integrated sheaves for two reefs and outhaul are standard with all models. The horizontal pin connecting the inboard end to the boom toggle has a D-shaped head in order to prevent it from rotating. The advantage with this is that the split pin on the other side of the boom is not affected by the vertical movements of the boom. This seemingly small detail has a great importance to the safety on board. Also, the split pin sits in a recess so the spinnaker is never at risk when setting it or taking it down.

The well rounded and smooth outboard end is secured with screws to make it easier to replace sheaves and ropes.

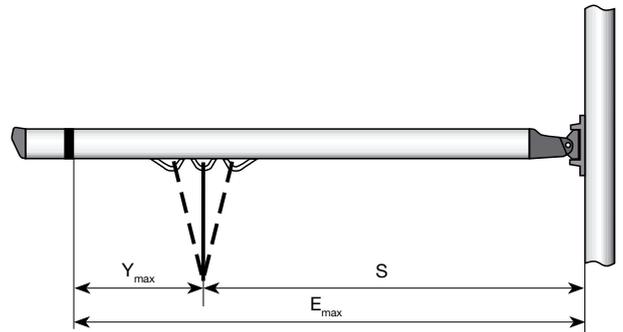
## Boom sections

	Boom section	Dim., mm height/width	$I_y$ cm <sup>4</sup>	$I_x$ cm <sup>4</sup>	Wall thickness mm	Weight kg/m	$W_y$ cm <sup>3</sup>	$W_x$ cm <sup>3</sup>	Sail groove mm
	B087	87/60	60.2	27.7	2.0	1.55	13.4	9.3	5.5
	B104	104/60	97.5	33.6	2.0	1.71	18.5	11.2	5.5
	B120	120/62	155	42.5	2.2 - 2.6	2.12	24.8	13.7	5.5

# 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 Y measurement must also be known for dimensioning purpose. The length of the boom is sometimes determined by other factors than E and therefore we need the S measurement as well.



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

Section	RM 30° kNm	Displ. tonnes	B087		B104		B120	
			$E_{max}$	$Y_{max}$	$E_{max}$	$Y_{max}$	$E_{max}$	$Y_{max}$
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
10	2.0		3.3	1.3	4.0	1.4	4.1	1.6
12	2.4		2.9	1.2	4.0	1.3	4.1	1.5
14	2.8		2.6	1.1	3.5	1.2	4.1	1.4
16	3.2				3.2	1.1	4.1	1.3
18	3.6				3.0	1.1	4.1	1.2
20	4.0				2.8	1.0	3.8	1.1
25	5.0				2.4	0.9	3.3	1.0
30	5.7						2.9	0.9
35	6.3						2.6	0.9

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

Section	RM 30° kNm	Displ. tonnes	B087		B104		B120	
			$E_{max}$	$Y_{max}$	$E_{max}$	$Y_{max}$	$E_{max}$	$Y_{max}$
6	1.2		3.3	1.4	4.0	1.6	4.1	1.8
8	1.6		3.3	1.2	4.0	1.4	4.1	1.6
10	2.0		2.8	1.1	3.7	1.2	4.1	1.4
12	2.4		2.5	1.0	3.3	1.1	4.1	1.3
14	2.8		2.2	0.9	3.0	1.0	4.1	1.2
16	3.2		2.0	0.9	2.7	1.0	3.7	1.1
18	3.6				2.5	0.9	3.4	1.0
20	4.0						3.2	1.0
25	5.0						2.7	0.9



Photo: Fiona Brown. Quarter tonner.

## Outhaul systems

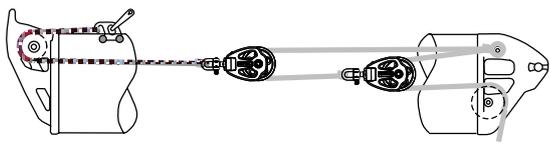
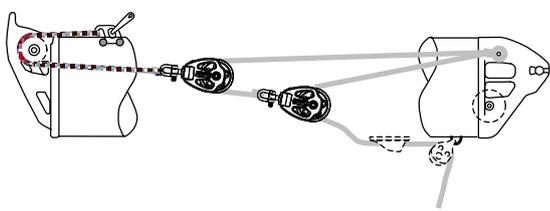
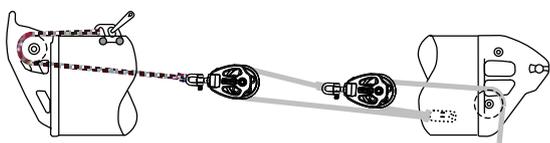
The outhaul can be handled from the cockpit or at the mast and is available with different purchase ratios. Big purchase means less load for the mainsail trimmer to tension the outhaul, but more rope to handle.

If fast adjustment is preferred, both when tensioning and releasing the outhaul, a system with less purchase should be selected.

The Seldén Ball Bearing blocks (BBB) come with stainless ball bearings, hence, high working load in relation to the size of the block. Small size, low weight, low friction and long service life are key factors for superior function.

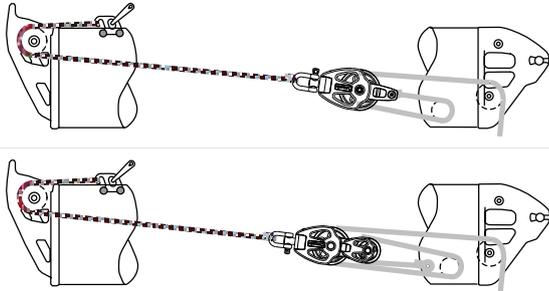
A low weight and low stretch HMPE rope connects the aft slider with the clew of the sail.

### B087, B104

Function	To be combined with...	
2:1 purchase, operation from the cockpit	Slab reef or 1 single line reef	
4:1 purchase, operation from the cockpit		
4:1 purchase, operation at the mast		
2:1 purchase, operation from the cockpit	2 Single line reef	
4:1 purchase, operation from the cockpit		

## B120

Function	To be combined with...
3:1 purchase, operation from the cockpit	Slab reef or Single line reef.
4:1 purchase, operation from the cockpit	



## Main sheet sliders and kicker sliders

The sliders are fitted in the integral track in the underside of boom.

Function	Boom section	Art. no.	
Main sheet slider	B087-B104	511-641-01	
	B120	511-571-01	
Slider for kicking strap or Rodkicker	B087-B104	511-643-01	
	B120	511-800-01	
Slider locating reef lines* and lazy jacks.	B120	511-636-01	

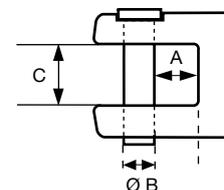
\* The reef line shall be tied around the boom. The slider locates the reef line in the correct position, 100 mm aft from the vertical location of the reef cringle. This ensures that the correct angle is created and the sail will be flattened out.

# Booms for slab reef or Single Line Reef

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.

## Inboard end

Boom section	A mm	B mm	C mm
B087	8	8	16
B104	8	8	16
B120	14	10	20

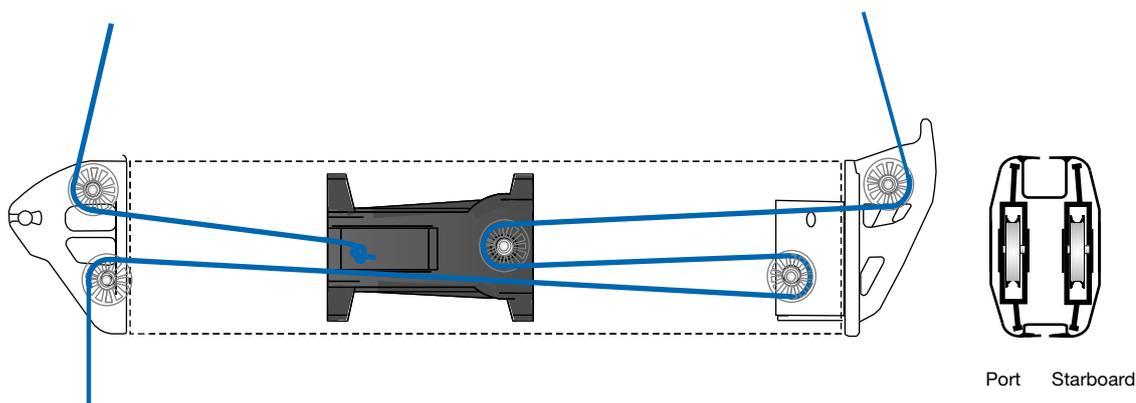


Seldén booms are prepared for either slab reef, or one or two Single line reefs. Single line reefing simplifies reefing considerably. The halyard is released to a calibrated mark, and the reef line tensioned. That's all. The luff and the leech are reefed simultaneously while all the crew stay in the cockpit during the whole manoeuvre.

Art. no.	Boom section	E <sub>max</sub> mm	Remarks
BS087-01	B087	3365	Outhaul (2:1) + 2 reefs, aft
BS087-21		3365	Outhaul (4:1) + 2 reefs, cleat
BS087-61		3365	Outhaul (2:1) + 2 Single Line Reef, aft
BS104-01	B104	3515	Outhaul (2:1) + 2 reefs, aft
BS104-02		4015	Outhaul (2:1) + 2 reefs, aft
BS104-21		3515	Outhaul (4:1) + 2 reefs, cleat
BS104-22		4015	Outhaul (4:1) + 2 reefs, cleat
BS104-61		3515	Outhaul (2:1) + 2 Single Line Reef, aft
BS104-62		4015	Outhaul (2:1) + 2 Single Line Reef, aft
BS120-02B	B120	3640	Outhaul (3:1) + 2 reefs, aft
BS120-03B		4040	Outhaul (3:1) + 2 reefs, aft
BS120-22		3635	Outhaul (3:1) + 2 reefs, cleat
BS120-23		4135	Outhaul (3:1) + 2 reefs, cleat
BS120-62B		3540	Outhaul (3:1) + 2 Single Line Reef, aft
BS120-63B		4040	Outhaul (3:1) + 2 Single Line Reef, aft

Aft = All lines to cockpit  
Cleat = Outhaul operated at the mast, reef lines to cockpit

## Single Line reefing, this is how it works



- 1) Ease off the main halyard to a premarked reefing point.
- 2) Tension reef line 1 (blue) or reef line 2 (red). The luff and the leech are reefed at the same time. Done!



Photo: Dan Ljungsvik.