

Calculations

1. Determine mast rake with fore and backstays tensioned.
2. Slacken off the backstay as much as possible. Use the genoa halyard to pull the masthead forward. Tie the halyard to the boat, do not use the snap-shackle. Remove the forestay without altering the setting of the rigging screw if fitted. Place the forestay on a smooth surface and measure its length (FL) with the steel measuring tape.
3. Note the forestay length (FL) in the following table. The correct rod length (WL) can then be calculated.



Note! Use caution when opening the roll of rod.

Forestay length (see Fig. 8:1)		Your stay	Ex. Rod 9.5 300 H
FL	Old forestay length (FL) without tension, but including rigging screw (if any). (See fig 8:1)		17650
T	Deduction for lower wire terminal (rigging screw 50% extended): 300 H Rod 7.5: – 360 mm Rod: 9.5 – 370 mm 400 H Rod 11.1: – 490 mm Rod 12.7: – 490 mm	–	– 370
	If a link or an extra toggle will be fitted then deduct its length from FL.	–	–
WL	Cut the new forestay rod at this length (WL, Fig. 8:2)	=	= 17280
Luff extrusion length (see Fig 8.2)		Your extrusion	Ex. Rod 9.5 300 H
WL	New forestay rod length as per table above		17280
A + B	Standard deduction (A + B): 300 H Rod 7.5: – 1350 mm Rod 9.5: – 1340 mm 400 H Rod 11.1: – 1420 mm Rod 12.7: – 1420 mm	–	– 1340
E + F		E + F =	= 15940
E	Max. number of 2400 mm extrusions which together are shorter than $E + F: \dots N \dots \text{off} \times 2400 \text{ mm} = E$	E =	(N=6 profiles) – 14400
F	Cut the top extrusion. Chamfer the cut end with a file. <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>If F is longer than 2000 mm; If F is between 400 and 2000 mm; If F is shorter than 400 mm;</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>300 H \varnothing 8 mm wire/ \varnothing 10 mm \varnothing wire</p> </div> <p>The top extrusion is normally cut from the 1700 mm (67"). If the top extrusion is shorter than 700 mm (27 9/16") the joint will be too near the top. In this case replace the uppermost full-length 2400 mm extrusion with the 1700 mm extrusion. In this way the joint is moved 700 mm down the stay.</p> <div style="border: 1px solid black; padding: 5px;"> <p>400 H \varnothing 12 mm wire/ \varnothing 14 mm \varnothing wire</p> </div> </div> <div style="width: 45%;"> <p>Top extrusion length F =</p> <p>Cut the top section from a 2400 mm extrusion. Cut the top section from a 2000 mm extrusion. Replace the topmost 2400 mm extrusion with a 2000 mm extrusion. (See E). The joint will then be moved down 400 mm. Also adjust E and F as follows: Reduce measurement E by 400 mm. Increase the F measurement by 400 mm. Cut the top section from a 2400 mm extrusion.</p> <p>Adjust the E and F measurements as follows: Reduce the E measurement by 700 mm. Increase the F measurement by 700 mm.</p> </div> </div>	=	= 1540
G	Cut the distance tube for the top extrusion: (fixed measurement) 300 H – 125 mm 400 H – 220 mm	–	220
	Distance tube length. G =	=	= 1320