

SAIL EXCHANGE BOAT MEASURING GUIDE

Click to go to the following sections

[- Measuring for a Mainsail](#)

[- Measuring for Asymmetrical, Symmetrical or Code Zero Spinnaker](#)

[- Measuring for a Headsail](#)

TOOLS REQUIRED



Tape measure (at least the length of the mast plus 10%)

Preferably the tape measure zero point is large enough to accept a halyard snap shackle

If using a metal tape measure you can whip on a stainless steel ring and then deduct the bearing point from the zero point

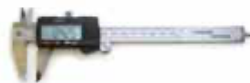
If using a flexible or fiberglass tape measure a good tip is to take the tape measure to a sail maker and have a stainless steel 25mm x 5m ring sewn into the zero point to accept a snap shackle.



Small metal ruler



Clip board for the paper measurement form



Digital calliper
(to measure wire diameters, bolt ropes, foils and mast tracks)



Small line of VB cord
3mm x 300mm



Pencil



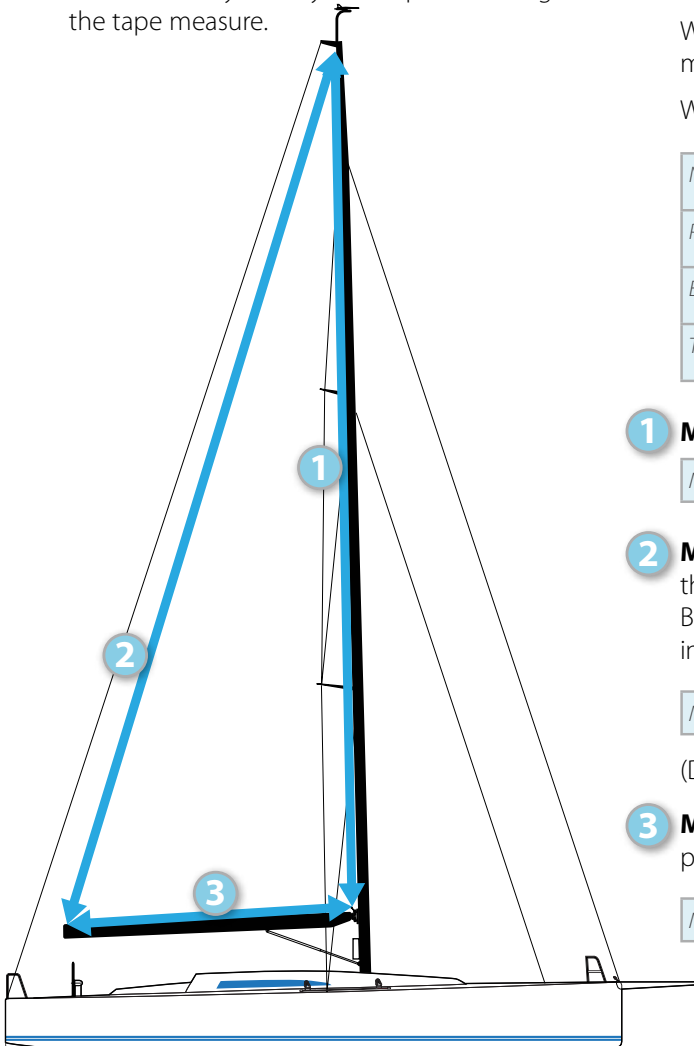
Phone or camera



Measuring your boat for a Mainsail

HOW TO MEASURE YOUR BOAT - TIPS

Tie the light line to the zero point ring on your tape measure and then shackle the ring to the main halyard. Pull to the top of the mast until the tape measure zero point ring is hard against the halyard sheave box for the main halyard. Then secure the halyard so you can pull down against the tape measure.



We will allow for the distance from max hoist and max outhaul or you can supply the P & E measurements.

P = Luff and **E** = Foot

These measurements being exact are required for boats sailing under one design or racing rules normally.

What is more important is knowing the maximum measurements to allow for stretch and range.

Write the measurements in the boxes below each point.

Name	
Phone	
Email	
Type of Yacht	

- 1 Max Hoist** – measure to tack pin at gooseneck

Max Hoist	
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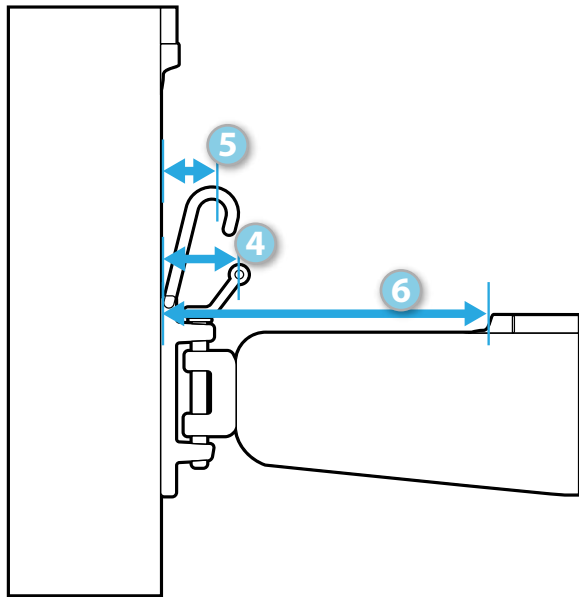
- 2 Max Leech** – generally all leech measurements are with the boom at 90 degrees however if you have a Dodger or Bimini then measure to the outhaul car pin with the boom in its normal position whilst sailing

Max Leech	
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(Drop tape measure and halyard to deck. Secure halyard)

- 3 Max foot** – measure from back of mast to outhaul pin with outhaul max aft

Max foot	
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Measured from Back of Mast

- 4 Tack set back** - Holding the shackle at the goose neck at 45 degrees we need to measure how far aft the bearing point of the shackle is relative to the aft face of the mast or external track. We call this the TACK SET BACK.

Tack set back	
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- 5 Reef Hook Aft** - Holding the shackle or hook at the goose neck at 45 degrees we need to measure how far aft the bearing point of the shackle or hook is relative to the aft face of the mast

Reef Hook aft	
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- 6 Foot Groove Aft** - measure from the mast to where the sail goes into the foot groove of the boom (If your boat has foot groove)

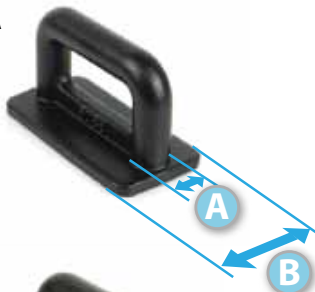
Distance aft	
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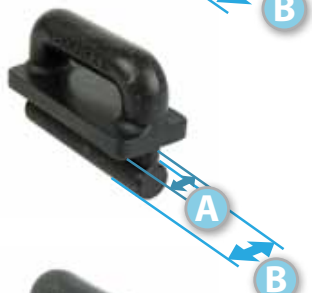
- 10 Luff tape or Slide measurement** for sail attachment to mast and boom. With your digital calipers or ruler measure the diameter of the bolt rope on the luff tape of your existing mainsail. Alternatively measure the external track of both the mast and boom

Luff tape or Slide	
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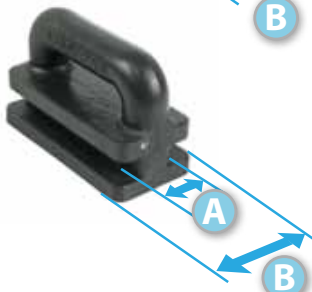
Type A



Type B



Type C



Luff Hardware

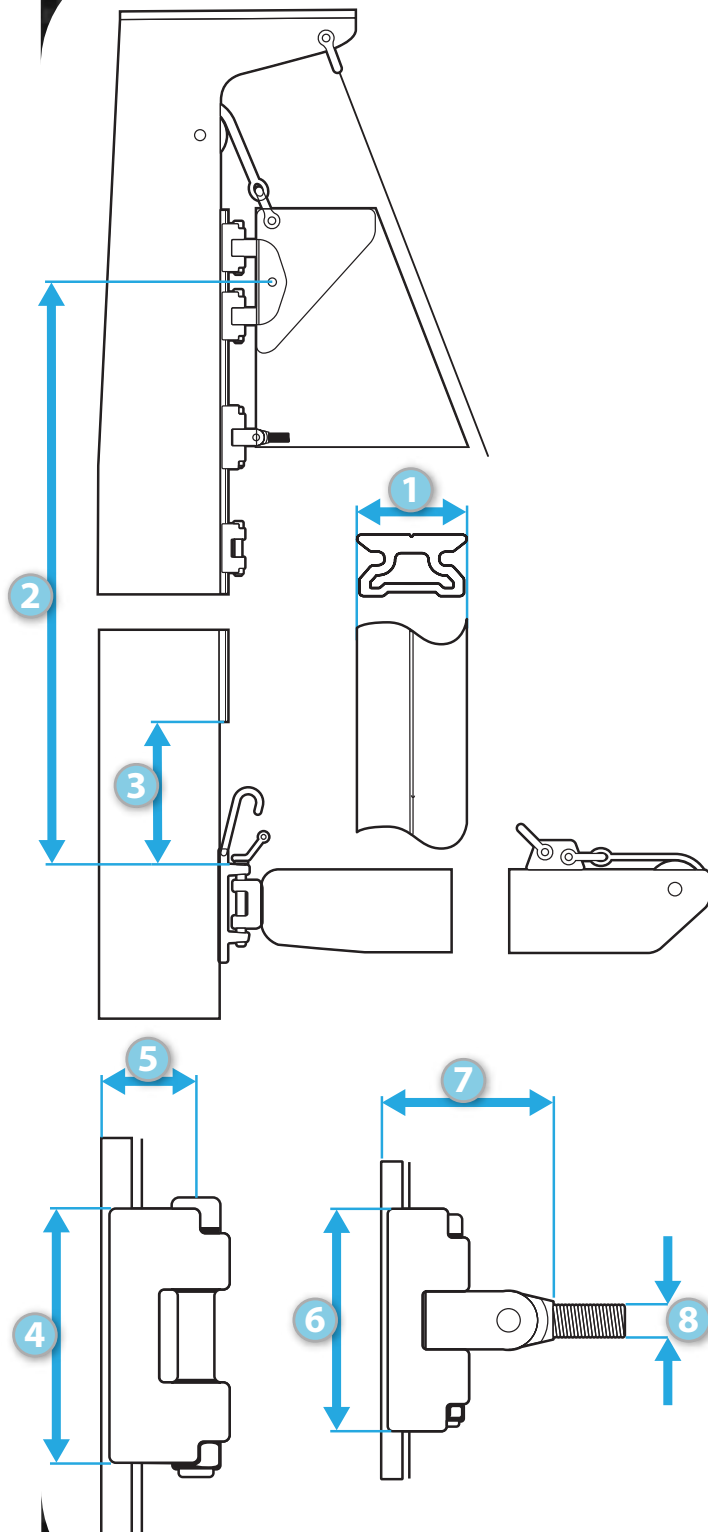
Type A <input type="checkbox"/>	Type B <input type="checkbox"/>	Type C <input type="checkbox"/>	Rope <input type="checkbox"/>
Other Please specify			
Bolt rope diameter			
A Width			
B Throat			

Full foot hardware

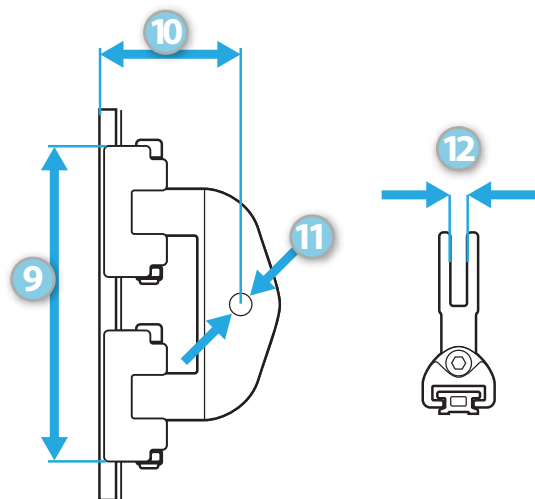
Type A <input type="checkbox"/>	Type B <input type="checkbox"/>	Type C <input type="checkbox"/>	Rope <input type="checkbox"/>
Other Please specify			
Bolt rope diameter			
A Width			
B Throat			



External Track System (if present)



1	Track width	
2	Max height of head board car	
3	Bottom of track	
4	Height if intermediate car	
5	Back of mast to centre of pin	
6	Height of batten car	
7	Back of mast to thread stop	
8	Thread diameter	
9	Height of headboard car	
10	Back of mast to headboard carriage pin	
11	Headboard carriage pin diameter	
12	Width of headboard carriage	
	Number of intermediate cars	
	Luff attachment intermediate cars	
	Number of full batten cars	
	Luff attachment at full batten cars	



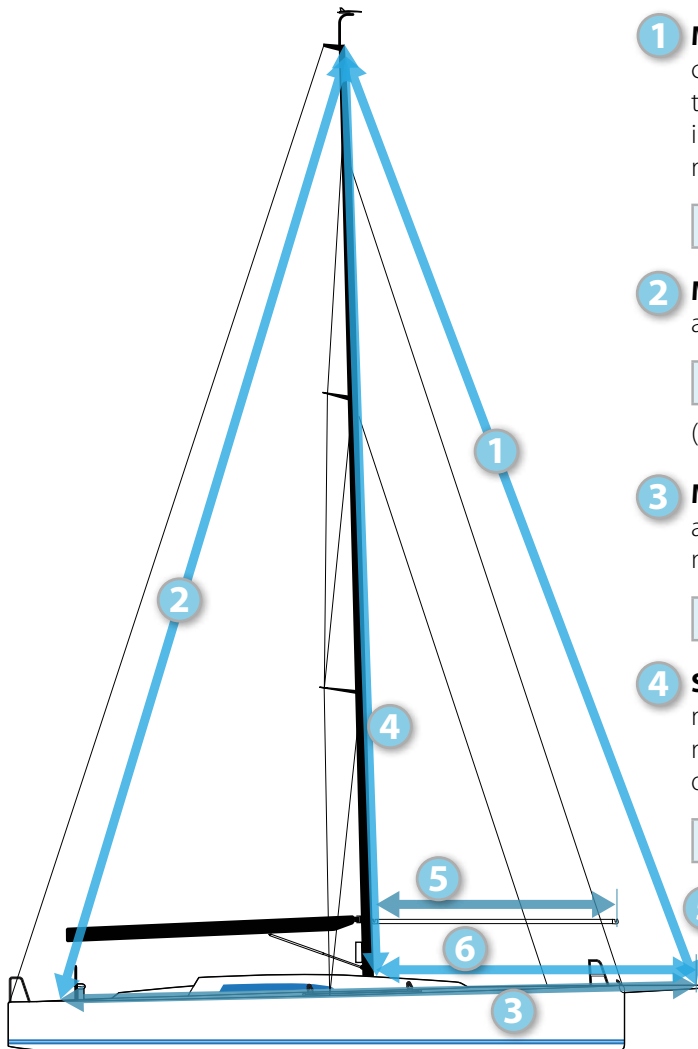
Measuring your boat for an Asymmetrical, Symmetrical or Code Zero Spinnaker

HOW TO MEASURE YOUR BOAT - TIPS

Tie the light line 6 – 8mm to the zero point ring and clip the spinnaker halyard clip to the ring. Pull to the halyard until the tape measure zero point ring is hard against the halyard sheave box. Then secure the halyard so you can pull down against the tape measure.

Measure in the numerical sequence of the measurement forms that Sail Exchange have supplied Write the measurements in the boxes below each point.

Name	
Phone	
Email	
Type of Yacht	



- 1 Max hoist** – measure to tack point or tack line with tack clip max down in position on pole or bow, if measuring to clip out on pole and hard to reach place tape measure in tack clip and pull tack line taught until it stops and then measure by pulling tape taught back to yourself on bow.

Max Hoist	
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- 2 Max Leech** – swing the tape measure aft around spreaders and measure to spin sheet block aft near quarter

Max Leech	
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(Drop tape measure and halyard to deck. Secure halyard)

- 3 Max Foot** – attach tape measure zero point to tack line and pull out taught and measure back to spin sheet block near aft quarter

Max Foot	
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- 4 Spinnaker mast vertical measurement** – whist tape measure is in same position as 3 measure to front face of mast at deck level. Please measure to deck shear where deck meets hull.

Mast measurement	
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- 5 Spinnaker pole length** – measure to front face of mast to the end of the spinnaker pole

Spinnaker pole	
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- 6 Spinnaker tack length** – measure from tack point of stem or bow pole to front of mast.

Spinnaker tack length	
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Measuring your boat for a Headsail

HOW TO MEASURE YOUR BOAT - WITH OR WITHOUT FURLER

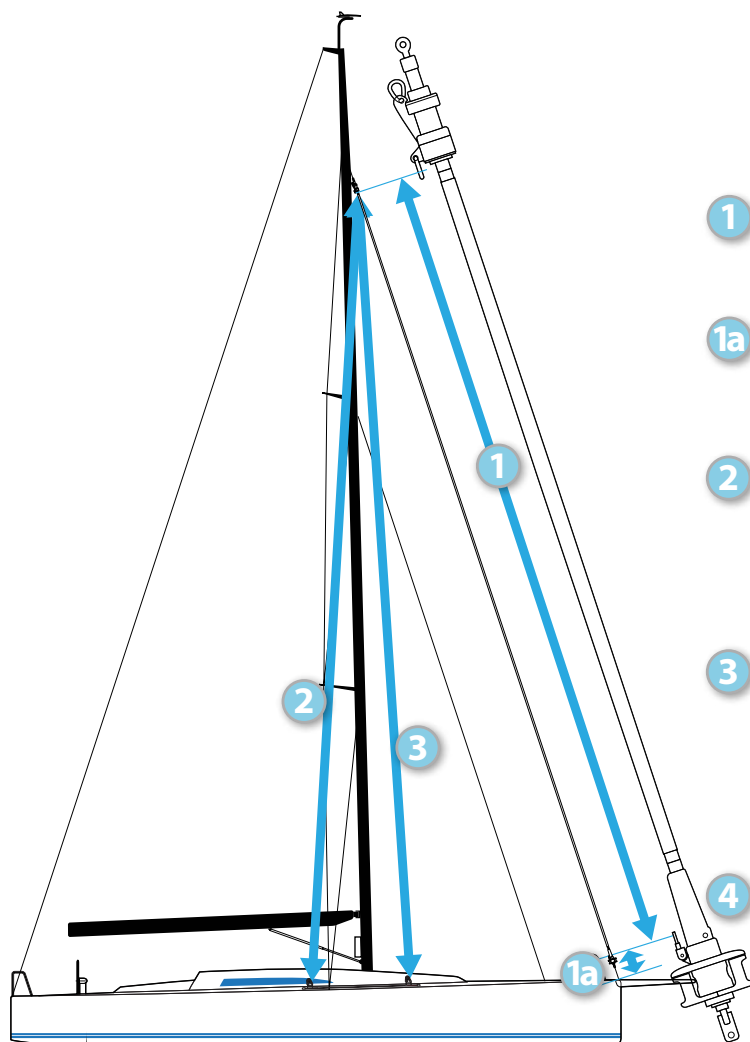
Try to measure in the morning on a still day without any wind. You can have someone to assist you but this is not necessary tie a light line of 6-8mm the height of the mast to the tape measure zero point ring prior to hoisting the tape measure so you can pull the tape measure down without damaging or breaking the tape measure.

If there is a furling headsail on the furler drop the headsail and leave on the deck for this exercise and re hoist when measuring is complete. Leave the genoa halyard attached to the upper furling swivel. Then attach the light line to the zero point of the ring on your tape measure and clip the ring to the shackle on lower side of the furling head swivel. The same shackle the head of the sail was attached to. Now pull to the top of the foretriangle until the head swivel and halyard is hard against the halyard sheave box. Then secure the halyard so you can pull down against the tape measure.

Take photos of all hardware and attachments

Name	
Phone	
Email	
Type of Yacht	

Write the measurements in the boxes below each point.



- 1 Max hoist** – measure down to tack pin

Max Hoist	
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- 1a Tack to Deck** - measure down from tack pin on furling drum to forestay / deck intersection.

Tack to deck	
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- 2 Max hoist to back end of genoa track** – swing tape measure outside cap shrouds and measure to genoa car sheave at the maximum aft of the genoa track

Back of genoa	
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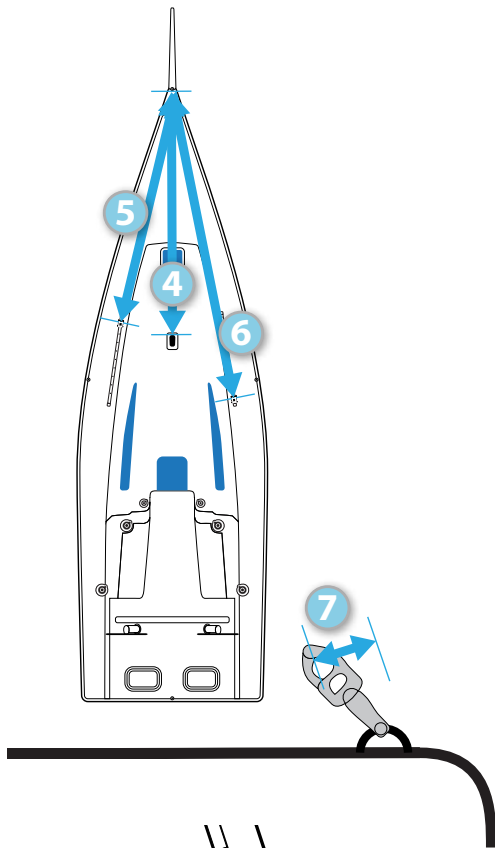
- 3 Max hoist to front end of genoa track**– swing tape measure outside cap shrouds and measure to genoa car sheave at the maximum forward point of the genoa track

Front of genoa	
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(Drop tape measure and halyard to deck. Secure halyard)

- 4 J Measurement.** Attach tape measure to tack pin (using the small piece of string) and measure horizontally aft to the front face of the mast at deck level. This will provide the datum point for the LP (luff perpendicular) for the percentage of overlap of the headsail

J Measurement	
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- 5 Genoa track to forestay deck** (with the tape measure zero point still secured to the tack pin as per measurement 4)

Measure to the front end of the Genoa track with the genoa car sheave in the max forward position

Forward genoa track	
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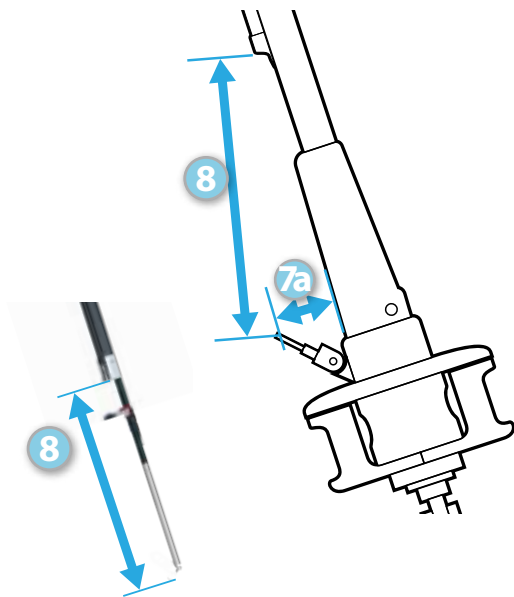
- 6 Measure to the aft end of the genoa track** with the genoa car sheave in the max aft position

Aft genoa track	
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YOU HAVE NOW COMPLETED THE MAX AND MINIMUM TRIANGLES FOR ALL HEADSAILS TO SHEET CORRECTLY WITH THE RIG AND DECK INTERFACE

- 7 Tack set back.** All yachts have various ways of attaching headsails to the deck and the bearing point of where the genoa shackle is in relation to the forestay is required for the sail to set correctly. Therefore we need to measure the distance aft of the bearing point of the tack shackle holding the shackle at 45 degrees relative to the forestay and we call this the TACK SET BACK. (insert photo)

Tack set back	
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- 7a Tack set back for furling headsils.** Holding the shackle on the furling drum at 45 degrees we need to measure how far aft the bearing point of the shackle is relative to the aft face of the foil track. We call this the TACK SET BACK.

Tack set back	
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- 8 Tack pin to feeder** (if you have hanks this is not required) for yachts with foils this measurement allows the correct length of the luff tape

Tack pin to feeder	
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- 9 Luff tape measurement.** With your digital calipers or ruler measure the diameter of the bolt rope on the luff tape of your existing headsail then measure the X/Y of the foil and then record the brand and model of the headfoil.



Bolt rope diameter	
X/Y of the foil	
Brand	
Model	



- 10 Wire Diameter measurement** is required for hanks

Wire #	
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