

# BOAT MEASURING GUIDE

Making sails isn't difficult. But making sails that are well designed and constructed in accordance with strict ISO quality control parameters, requires real dedication. Even more so when those sails are backed up by a global 30-day money-back guarantee and a full 12-month warranty. At Sail Exchange, our sails are made with passion, integrity and transparency, delivered on time and at the right price. It's our promise to clients:

We deliver premium quality sails that fit your boat at unmatchable value, guaranteed.





### **Tools required**

#### 1. TAPE MEASURE

- At least the length of the mast plus 10%.
- The tape measure zero point is preferably 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 fibreglass 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.
- 2. SMALL METAL RULER
- 3. CLIPBOARD
- 4. DIGITAL CALLIPERS
- **5. SMALL LINE OF VB CORD** (3 mm x 300 mm)
- 6. PENCIL
- 7. PHONE OR CAMERA



















## Click above to go to specific sections: 🎇

# Preparation required before measuring

Before you begin, fill out your details in the boxes and select each sail type you are measuring for by ticking the boxes. Please keep all measurements in metres, to two decimal places (e.g. 12.54) and remember the old saying: *'measure twice, cut once!'*Try to measure your boat in the morning on a still day. You may wish to have someone assist you.



Please take photos whenever you see this icon, as you work through the measuring process.

Please begin by taking an overview photo of your vessel's elevation and rigging as shown here:

First Name			
Surname			
Phone			
E-mail			
Brand/Model/Year			
HIN			
Vessel Name			
Sail types you are measuring for	Mainsail	Spinnaker	Headsail









#### Measuring your boat for a headsail

Tie a light line (6-8mm) as long as the height of the mast to the tape measure zero point ring prior to hoisting the tape measure so you can then pull down against it with the tape measure without damaging or breaking it.

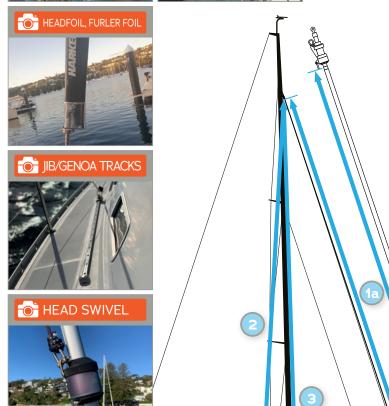
If there is a furling headsail on the furler, drop the headsail and leave on the deck for this exercise and re-hoist when measuring is complete. Leave the genoa halyard attached to the upper furling swivel. Then attach the light line to the zero point of the ring on your tape measure and clip the ring to the shackle on the lower side of the furling head swivel. This is 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.

It is okay for the tape measure to wrap around the shrouds when measuring.









If headfoil or hanked-on jib or genoa, complete 1 A. If RFG (roller furling jib or genoa), complete 1B

1a M

#### **MAX HOIST**

Measure down to tack pin.

Max Hoist

TACK TO DECK TACK/FURLER

Measure down from tack pin
on furling drum to forestay / deck
intersection.

Tack to Deck

2 1

# MAX HOIST JIB/GENOA TRACKS 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.

Genoa Back

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

Genoa Front

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

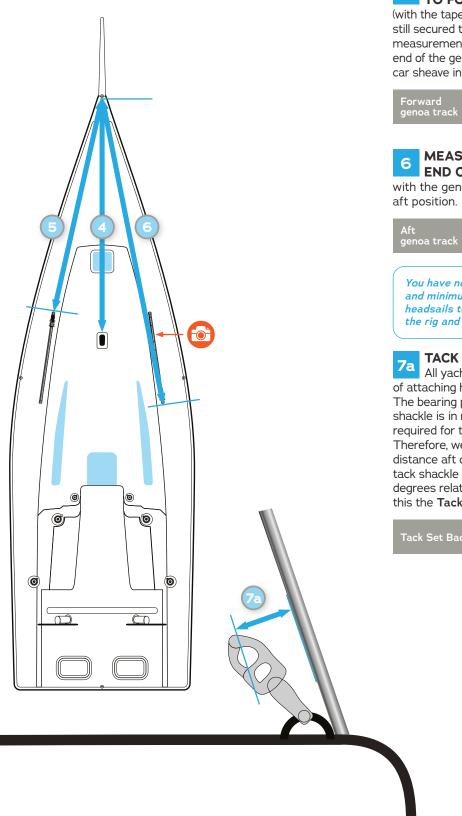
provide the datum point for the LP (luperpendicular) for the percentage of overlap of the headsail.

Meas.

Headsails measurements continue next page









(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.

#### **MEASURE TO THE AFT END OF GENOA TRACK**

with the genoa car sheave in the max

You have now completed the max and minimum triangles for all headsails to sheet correctly with the rig and deck interface.

TACK SET BACK All yachts have various ways of attaching headsails to the deck. 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. We call this the Tack Set Back.

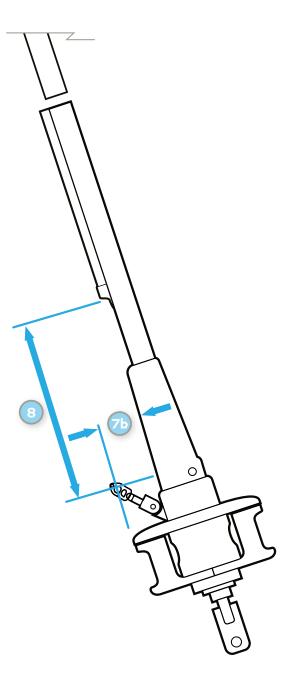
Headsails measurements continue next page













Holding the shackle on the furling drum at 45 degrees, 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

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

## 9 WIRE DIAMETER MEASUREMENT

Wire Diameter measurement is required for hanks.

Wire #

#### 10 LUFF TAPE MEASUREMENT

With your digital callipers 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	









#### Measuring your boat for a mainsail

Tie a light line (6–8 mm) 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 it with the tape measure at max hoist.

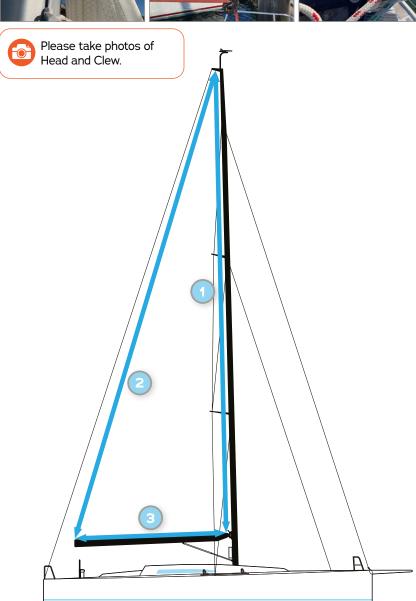
We will allow for the distance from max hoist and max outhaul to allow for the stretch.

**P** = Luff and **E** = Foot









- These measurements need to be exact for boats sailing under one design or racing rules.
- Also important is knowing the maximum measurements to allow for stretch and range.
- MAX HOIST HEAD

  Measure to tack pin at gooseneck.

Max Hoist

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 while sailing. (Drop tape
measure and halyard to deck. Secure halyard).

Max Leech

MAX FOOT
Measure from back of mast
to outhaul pin with outhaul max aft.
Don't measure from the tack pin or
the shackle as the back of the mast is
Datum 'O'.

Max Foot

MAX FOOT - BACKSTAY

Measure from Tack to Backstay

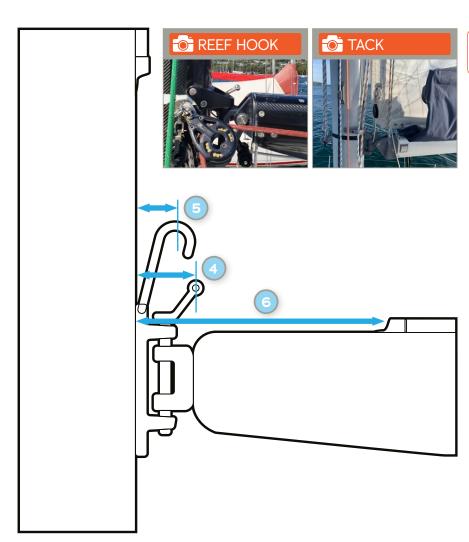
along the boom.

Max Foot

Mainsails measurements continue next page









Please take photos of Gooseneck with Tack and Reef hook.

# Measured from back of mast

TACK SET BACK TACK
Holding the shackle at the
goose neck at 45 degrees, 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

REEF HOOK AFT Holding the shackle or hook at the goose neck at 45 degrees, measure how far aft the bearing point of the shackle or hook is relative to the aft face of the mast.

Reef Hook Aft

5a SINGLE-LINE REEFING
Measure from the tack to the
first and second reef points on the main
sail.

Reef 1 Height

Reef 2 Height

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

Mainsails measurements continue next page ▶













Please take photos of the External Track and Luff Hardware. Please identify and supply the brand if possible.

#### LUFF TAPE OR SLIDE MEASUREMENT

For sail attachment to mast and boom. With your digital callipers 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/Slide



	Type <b>A</b>	Type <b>B</b>	Type <b>C</b>	Rope
Other (Specify)				
Bolt Rope Diameter				
<b>A</b> Width				
B Throat				

#### Full Foot Hardware FOOT HARDWARE

	Type <b>A</b>	Туре В	Type <b>C</b>	Rope
Other (Specify)				
Bolt Rope Diameter				
A Width				
<b>B</b> Throat				



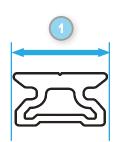


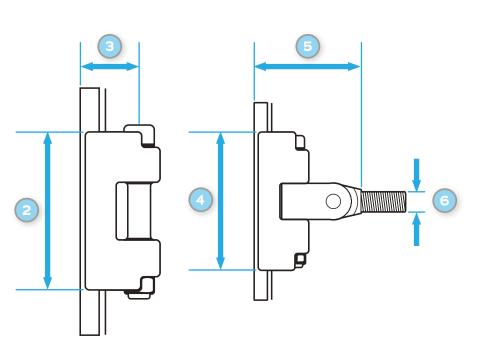


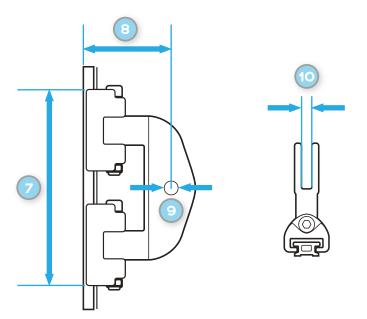
Mainsails measurements continue next page

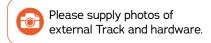












### **External Track System**

We need to identify the brand and part number of the external track.

#### TRACK HARDWARE

- 1 Track Width
- 2 Intermediate car height
- Back of mast to centre pin
- 4 Batten car height
- Back of mast to thread stop
- 6 Thread
- 7 Headboard car height
- Back of mast to headboard carriage pin
- 9 Headboard carriage pin diameter
- 10 Width of headboard carriage

Number of intermediate cars

Luff attachment intermediate cars

Number of full batten cars

Luff attachment at full batten





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

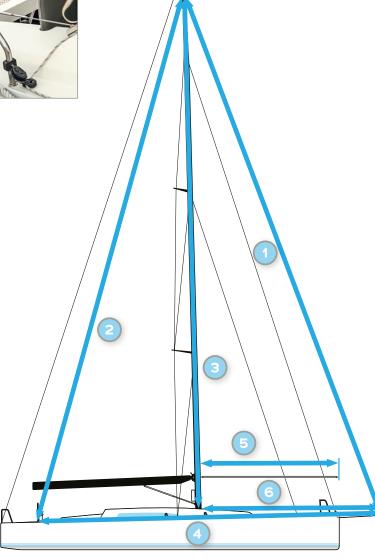
Tie a light line (6–8 mm) to the zero point ring and clip the spinnaker halyard clip to the ring. Pull the halyard until the tape measure zero point ring is hard against the halyard sheave box. Then secure the halyard so you can pull down against it with the tape measure. Write the measurements in the boxes:













Please supply photos of Tack, Bowsprit and Spinnaker Pole.

## MAX HOIST BOWSPRIT/TACK POINT TO TACK PIN/SPIN POLE

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 taut until it stops and then measure by pulling tape taut back to yourself on bow.

Max Hoist

Swing the tape measure aft around spreaders and measure to spin sheet block aft near quarter.

Max Leech

While tape measure is in the same position as for points 1 and 2, measure to the deck shear where deck meets hull. (Drop tape measure and halyard to deck. Secure halyard).

Mast Meas.

Attach tape measure zero point to tack line and pull out taught and measure a straight line (between the shrouds and the mast) back to spinnaker sheet block near aft quarter.

Max Foot

# SPINNAKER SPINNAKER POLE POLE LENGTH

Measure from front face of mast to the end of the spinnaker pole.

Spinnaker pole length

6 SPINNAKER TACK LENGTH Measure from tack point of stem or bow pole to front of mast.

Spinnaker tack length





When you have finished, save this PDF and attach it to an email after clicking below.

### Click here when you are ready to submit your measurements

Alternatively, you can submit your documents manually to info@sailexchange.com.au



www.sailexchange.com.au + 61 (2) 9090 4949 info@sailexchange.com.au



