KRAKEN SAILS

SPINNAKER AND CODE SAIL MEASUREMENT WORKSHEET

Date _____

This sheet is for: ☐ Code sail ☐ Asymmetric spinnaker ☐ Symmetric spinnaker

HOW TO USE THIS

1. Work through the boxes in order. Each one has a picture showing where the tape goes, marked in red.
2. Each box shows its unit. Everything is in **metres**, to two decimal places (for example 4.35), or in **millimetres** for fittings and tape offsets. There are no centimetres. If your tape is in feet and inches, write those clearly instead (46' 7") and we will convert them.
3. Do not do any sums. Where a box asks for a full width or for parts, write what the tape says.
4. If you cannot measure something, leave it blank and carry on. We will sort it out with you.
5. This worksheet covers all three flying sails. Fill in the parts for the sails you ticked at the top and leave the rest blank.
6. Photograph or scan the finished pages and email them back to us with your photos.

WHAT YOU NEED

- A long tape measure, 30 m (100 ft) or more for most keelboats. A fibreglass builder's tape is fine.
- A short steel tape for the small measurements, and calipers if you have them.
- A helper. One person holds the tape, the other reads it.
- A mousing line or a spare sheet, longer than your mast, to pull the halyard back down.
- A ball of string.
- A calm day, with the boat floating as it normally does.

BEFORE YOU START

ABOUT YOU AND YOUR BOAT

Which units is your tape measure in?

☐ Metric (metres and millimetres) ☐ Imperial (feet and inches)

Your name

Email We send you a copy of your measurements. We only use your details for your sail.

Phone

Boat make and model

Boat name

Year built

Sail number

Do you race under a rating or class rule? Choose all that apply.

☐ None, cruising ☐ IRC ☐ ORC ☐ AMS ☐ PHRF ☐ ORR ☐ IMS ☐ CHS ☐ One Design

☐ Not sure

WHAT ARE YOU MEASURING?

Not sure? Choose My boat. The guide offers the old sail as an optional extra for each sail you measure for.

What would you like to measure?

☐ My boat (the rig and deck, so we can design a new sail to fit. You can add your old sail's measurements along the way.)

☐ An old sail only (the sail is off the boat and you can lay it out flat. We work from the sail itself.)

ABOUT YOUR RIG

Two quick questions so we know what your boat has.

With three stays, we call the one just behind the forestay the solent and the one behind that the staysail.

How many stays in front of the mast carry a sail?

☐ 1 (just the forestay. Most boats) ☐ 2 (the forestay and one inner stay)

☐ 3 (the forestay and two inner stays)

What is the inner stay?

☐ Solent (just behind the forestay, running to near the top of the mast)

☐ Staysail (further back on the foredeck and lower on the mast: a cutter stay or a removable inner forestay)

Do you fly, or want, any of these? These are sails that are not attached to a stay. Tick all that apply, or leave it blank.

☐ Code sail (a flat reaching sail on its own furler: code zero, screecher, FRO)

☐ Asymmetric spinnaker (a gennaker or A-sail, tacked to the bow, a prodder or a bowsprit)

☐ Symmetric spinnaker (a traditional kite flown from a spinnaker pole)

YOUR SETUP

HOW ARE YOUR FLYING SAILS RIGGED?

Flying sails are the ones that are not attached to a stay: code sails and spinnakers.

Where does the front bottom corner (the tack) of the sail attach?

☐ Fixed bowsprit (a sprit that is always out)

☐ Retractable prodder (a pole that slides out from the bow or the deck)

☐ Bow fitting (the stem, the anchor roller or a padeye on the bow)

☐ Spinnaker pole (flown from the pole, like a symmetric kite)

☐ Not fitted yet (tell us what you are planning in the final comments)

Where does the sheet for your code sail or asymmetric lead to?

☐ Fixed block (a block on the back corner of the boat) ☐ Track (a car on a track along the back corner)

☐ Not sure (send us a photo)

Where does the spinnaker halyard come out of the mast?

☐ Masthead (right at the top) ☐ Fractional (part-way down, near where the forestay meets the mast)

☐ Not sure

How do you launch and drop the asymmetric?

☐ Hoist and drop (straight out of the bag or the hatch) ☐ Sock (a snuffer that pulls down over the sail)

☐ Furler (a top-down furler)

Length of the strop at the top of your sock The short line or webbing between the halyard and the head of the sail. We allow for it so the luff is not too short.

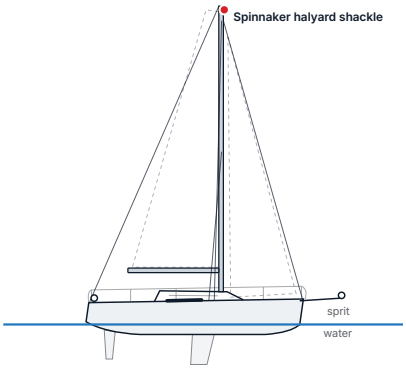
_____ **mm**

Do you use tweakers on the sheets? Also called twing lines: a block part-way along the deck that pulls the sheet down.

☐ No ☐ Yes

UP THE MAST

SEND THE TAPE UP ON THE SPINNAKER HALYARD

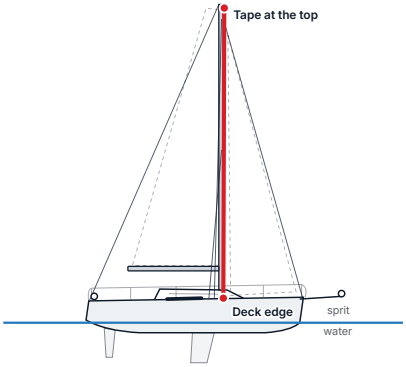


1. Attach the end of the long tape to the **bar of the spinnaker halyard shackle**, the part the sail hangs from.
2. Tie a **mousing line or a spare sheet** to the shackle as well, so you can pull the halyard back down.
3. Check where the zero of your tape sits against the shackle bar, and write it in the box below.
4. Hoist the halyard until it stops, then cleat it. The next measurements are all read off the tape from here.
5. More than one spinnaker halyard? Use the one this sail will fly from, and tell us in the final comments.

What does the tape read at the inside of the shackle bar? Write 0 if the zero of the tape sits exactly on the bar, 20 if the zero is 20 mm above it, -20 if it hangs 20 mm below. We do the sums.

_____ **mm**

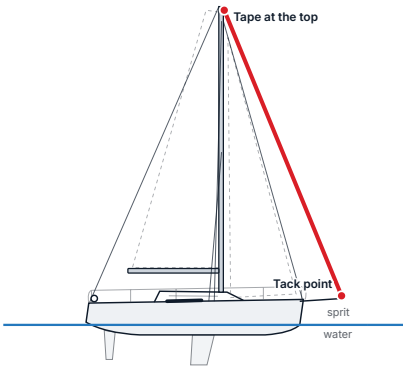
F1 TOP OF THE SPINNAKER HOIST TO THE DECK EDGE BESIDE THE MAST



1. Take the tape out to the **side of the boat**, level with the mast.
2. Read it at the deck edge (the gunwale, where the deck meets the hull side).

_____ **metres**

F2 TOP OF THE SPINNAKER HOIST TO THE TACK POINT

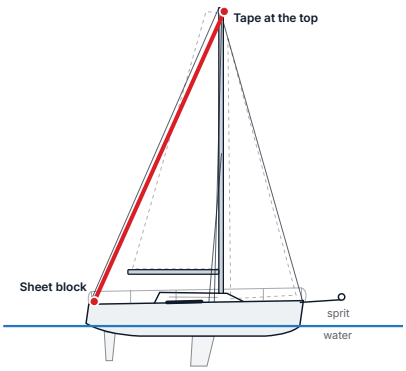


1. The **tack point** is where the front bottom corner of the sail is held: the block or ring at the end of the bowsprit or prodder, or the fitting on the bow.
2. If you have a prodder, pull it **all the way out** first.
3. Read the tape where the tack line turns through the block, or at the inside of the fitting.

Nothing fitted yet? Leave it blank. and tell us what you are planning in the final comments.

_____ **metres**

F3 TOP OF THE SPINNAKER HOIST TO THE SPINNAKER SHEET BLOCK



1. The spinnaker sheet block is the block near the back of the boat that the spinnaker sheet turns through.
2. Read the tape where the sheet runs through the block.

Tape will not reach around the shrouds and lifelines cleanly? Lead it outside everything, the way the sail would go. Sheet on a track? Measure to the car at the back of the track.

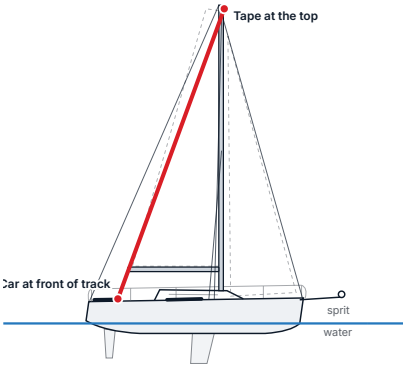
_____ **metres**

F3b TOP OF THE SPINNAKER HOIST TO THE FRONT OF THE SHEET TRACK

SHEET ON A TRACK

1. Slide the sheet car to the very **front** of its track.
2. Read the tape at the car, where the sheet runs through it.

_____ **metres**

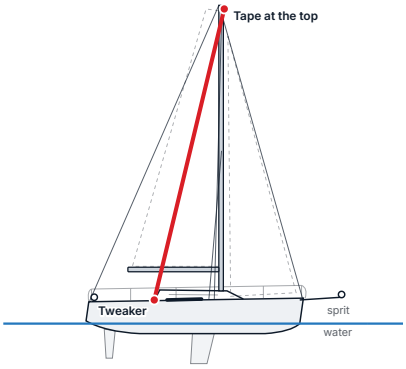


F4 TOP OF THE SPINNAKER HOIST TO THE TWEAKER

BOATS WITH TWEAKERS

Read the tape at the tweaker block or ring on deck, pulled down to where it sits when it is on hard.

_____ **metres**



BRING THE TAPE DOWN

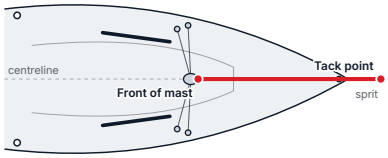
1. Use the mousing line to pull the spinnaker halyard and tape back down.
2. The rest of the flying sail measurements are taken on deck.

ON DECK

F5 FRONT OF THE MAST TO THE TACK POINT

With the prodder all the way out, measure from the **front face of the mast** straight forward to the tack point.

_____ **metres**

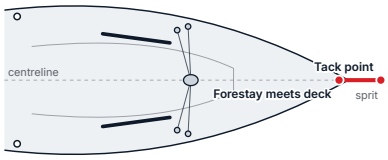


F6 FORESTAY AT THE DECK TO THE TACK POINT

Measure from where the forestay meets the deck forward to the tack point.

Tack point right at the forestay fitting? Write 0. Behind the forestay? Tell us in the final comments.

_____ **metres**

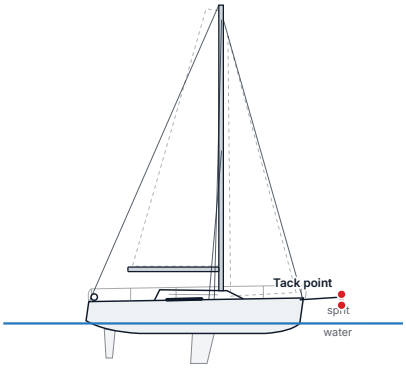


F7 HEIGHT OF THE TACK POINT ABOVE OR BELOW THE SURFACE OF THE DECK

1. The tack point can sit higher or lower than the deck. A sprit that comes out of the hull, for example, puts it below.
2. Hold a batten or a straight edge flat on the **surface of the deck** at the bow, pointing forward.
3. Measure straight up or down from that line to the tack point.

Tack point below the surface of the deck? Write it as a minus number, for example -150. Above the deck, write it as a normal number.

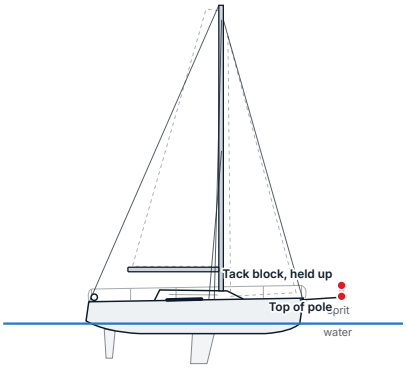
_____ **mm**



F8 HEIGHT OF THE TACK BLOCK ABOVE THE POLE BOWSPRIT, PRODDER OR POLE

1. Hold the tack block or ring up, as if the sail were pulling on it.
2. Measure from the top of the pole up to where the tack of the sail would sit.

_____ **mm**

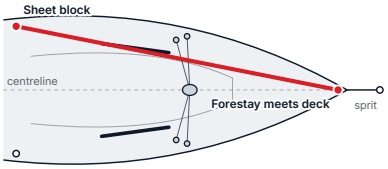


F9 FORESTAY AT THE DECK TO THE SPINNAKER SHEET BLOCK

1. Hook the tape where the forestay meets the deck.
2. Measure in a straight line back to the spinnaker sheet block.

Sheet on a track? Measure to the car at the back of the track.

_____ **metres**

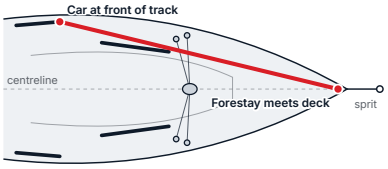


F9b FORESTAY AT THE DECK TO THE FRONT OF THE SHEET TRACK

SHEET ON A TRACK

1. Slide the sheet car to the **front** of the track.
2. Measure from where the forestay meets the deck back to the car in a straight line.

_____ **metres**

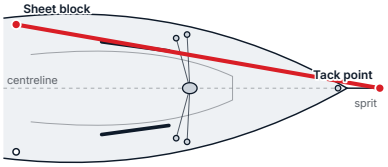


F10 TACK POINT TO THE SPINNAKER SHEET BLOCK

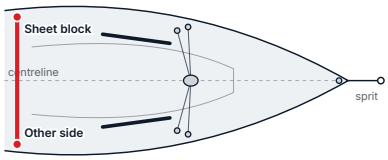
With the prodder all the way out, measure in a straight line from the tack point back to the spinnaker sheet block.

Sheet on a track? Measure to the car at the back of the track.

_____ **metres**



F11 WIDTH ACROSS THE BOAT BETWEEN THE SPINNAKER SHEET BLOCKS



1. Measure **right across the boat**, from the sheet block on one side to the matching block on the other side.
2. Write the full width. We do the sums.

Sheet on a track? Measure to the car at the back of the track.

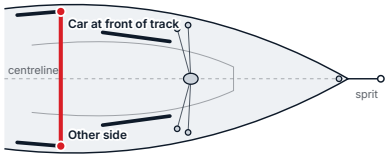
Across the boat, sheet block to sheet block

_____ **metres**

Write the full width. We halve it.

F11b WIDTH ACROSS THE BOAT BETWEEN THE FRONTS OF THE SHEET TRACKS

SHEET ON A TRACK



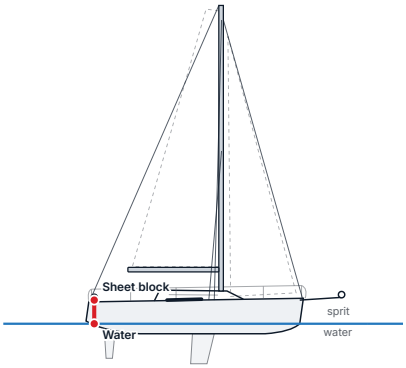
1. With both cars at the **front** of their tracks, measure right across the boat from one car to the other.
2. Write the full width. We do the sums.

Across the boat, front of track to front of track

_____ **metres**

Write the full width. We halve it.

F12 SPINNAKER SHEET BLOCK DOWN TO THE WATER



1. Hold the sheet block up as though it were loaded with the sail.
2. Measure the height of the sheet block above the gunwale beside it, then from the gunwale straight down to the water.

Block level with the gunwale? Write 0 for the first part. Sheet on a track? Measure to the car at the back of the track.

Sheet block down to the gunwale

_____ **mm**

Gunwale down to the water

_____ **metres**

Write each part. We add them up.

PHOTO: THE TACK POINT, FROM THE SIDE

Take a photo from the side showing the bow, the bowsprit or prodder (all the way out) and the tack block or fitting.

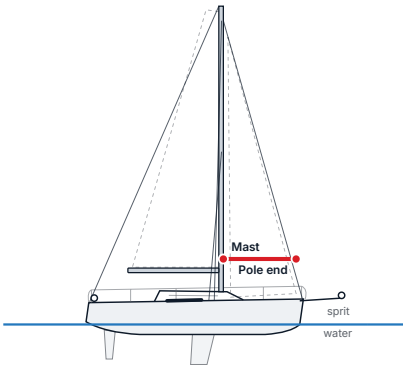
☐ The tack point, from the side taken

SYMMETRIC SPINNAKER: POLE

SY1 LENGTH OF THE SPINNAKER POLE

1. Clip the pole onto the mast and hold it level, pointing straight forward.
2. Measure from the **front face of the mast** to the outer end of the pole, where the guy runs through it.

_____ **metres**

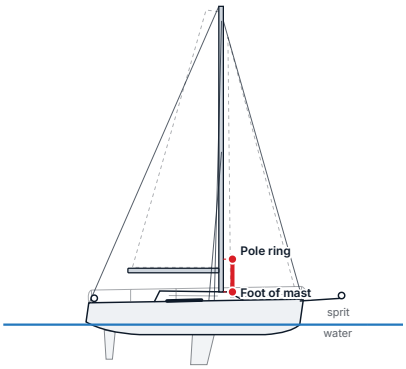


SY2 HEIGHT OF THE POLE RING ABOVE THE FOOT OF THE MAST

Measure straight down the front of the mast from the ring the pole clips onto, to the foot of the mast.

Ring on a sliding track? Measure it where you normally set it, and tell us the lowest and highest it goes in the final comments.

_____ **metres**

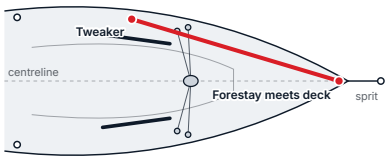


TWEAKERS

SY3 FORESTAY AT THE DECK TO THE TWEAKER BOATS WITH TWEAKERS

Measure from where the forestay meets the deck back to the tweaker block or ring.

_____ **metres**



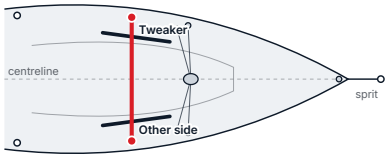
SY4 WIDTH ACROSS THE BOAT BETWEEN THE TWEAKERS BOATS WITH TWEAKERS

1. Measure **right across the boat** from one tweaker to the other.
2. Write the full width. We do the sums.

Across the boat, tweaker to tweaker

_____ **metres**

Write the full width. We halve it.



SY5 TWEAKER DOWN TO THE WATER BOATS WITH TWEAKERS

Measure the height of the tweaker above the gunwale beside it, then from the gunwale straight down to the water.

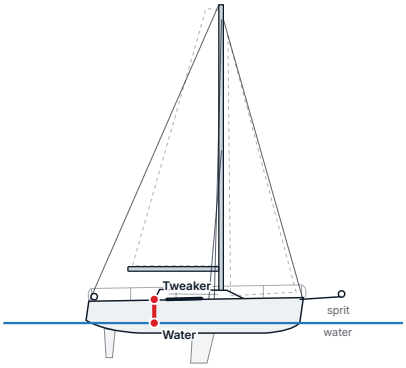
Tweaker down to the gunwale

_____ **mm**

Gunwale down to the water

_____ **metres**

Write each part. We add them up.



CODE SAIL: FURLER

ABOUT YOUR CODE SAIL FURLER

A code sail rolls up on its own furler: a drum at the tack point and a swivel on the halyard.

Do you have a furler for this sail?

☐ Have one (i already have the drum and swivel) ☐ Need one (please quote one with the sail)

☐ Not sure

Furler make and model Usually printed on the drum.

_____

☐ Photo of the furler drum and swivel taken

How is the halyard for this sail rigged?

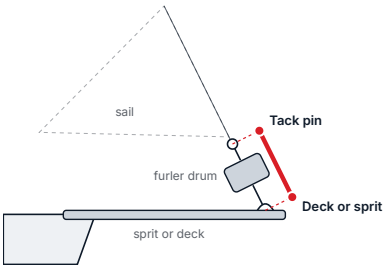
☐ 1:1 (the halyard clips straight onto the swivel)

☐ 2:1 (the halyard runs through a block on the swivel and back up to the mast) ☐ Not sure

CS1 STEP UP FROM THE DECK TO THE TACK PIN ON THE FURLER

IF YOU HAVE THE FURLER

1. Clip the furler onto the tack point and hold it up along the line the sail takes, as if the sail were pulling on it.
2. Measure from the deck (or the bowsprit) up to the **pin the tack of the sail attaches to**.
3. Measure **along the luff, on the diagonal**, not straight up from the deck.



_____ **mm**

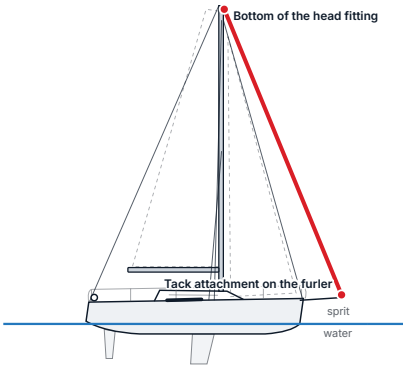
CS2 LENGTH OF THE TOP SWIVEL IF YOU HAVE THE FURLER

Measure the swivel from the **pin the head of the sail attaches to** up to the point the halyard clips onto.

_____ **mm**

CS3 PIN TO PIN: THE LONGEST LUFF IF YOU HAVE THE FURLER

1. This tells us the longest luff we can build with your current furling hardware.
2. Attach your tape to the **bottom of the head fitting** (the top swivel), then hoist it right to the top.
3. With the furler on the tack point, measure to the **tack attachment on the top of the furler**.



_____ **metres**

CODE SAIL: YOUR OLD SAIL

YOUR OLD CODE SAIL

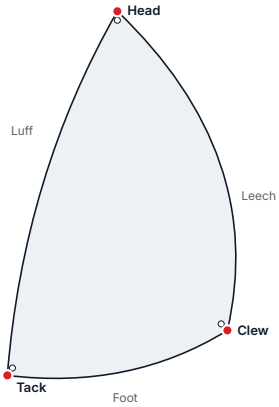
1. **This part is optional.** If you still have the sail you are replacing, its measurements help us design the new one. They are also what a rating or handicap certificate is based on.
2. It is done off the boat, with the sail laid out flat. You can do it on another day.
3. If the sail has a measurement stamp, or you have a rating certificate that lists it, a photo of that is enough.

Do you want to give us the measurements of your old sail?

☐ Yes (i will lay it out and measure it)

☐ Photo only (it has a measurement stamp, or my rating certificate lists it) ☐ No (skip this part)

LAY THE SAIL OUT FLAT



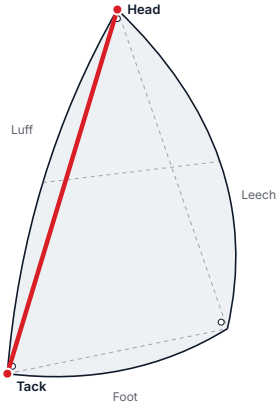
1. The sail must be **dry** and lying on a **flat surface**.
2. For each measurement, pull the sail just tight enough to take the **wrinkles out along the line you are measuring**. Do not stretch it.
3. Keep the tape **straight** from one point to the other. Where the edge of the sail curves, let it curve away from the tape.
4. Measure to the corners of the **cloth**, where the two edges of the sail would meet. Do not measure to the ring, the eye or a webbing strap.
5. The three corners have names. **Head**: the top corner. **Tack**: the bottom front corner, which attaches at the bow or the sprit. **Clew**: the bottom back corner, where the sheets tie on.
6. This sail will not lie completely flat, and it does not need to. Pull out one edge at a time as you measure it.

- The sail, dry, and a clean flat space big enough to spread it right out: a lawn, a dock or a hall floor.
- A tape measure longer than the longest edge of the sail.
- A helper to hold the other end of the tape.
- Masking tape or a soft pencil, to mark points on the sail.

Light cloth blows around. Pick a still day, or do it indoors.

SLU

LUFF: THE FRONT EDGE, HEAD TO TACK



1. The **luff** is the front edge, from the head down to the tack.
2. Pull the edge out straight, just tight enough to take the wrinkles out.
3. Measure along it from the **head** to the **tack**.

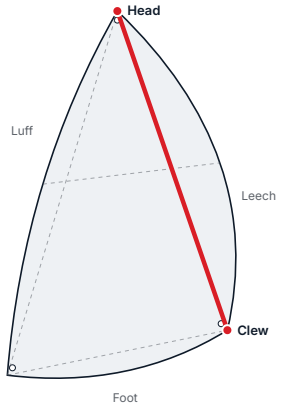
Cable or rope in the luff? Pull it straight and measure the sail from corner to corner.

_____ **metres**

SLE LEECH: THE BACK EDGE, HEAD TO CLEW

1. The **leech** is the back edge, from the head down to the clew.
2. Pull the edge out straight, and measure along it from the **head** to the **clew**.

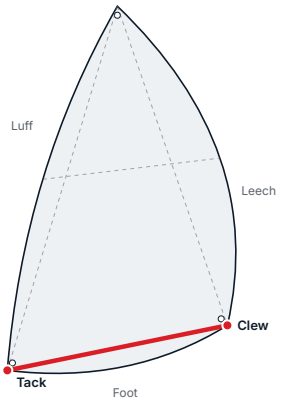
_____ **metres**



SFL FOOT: THE BOTTOM EDGE, TACK TO CLEW

1. The **foot** is the bottom edge of the sail.
2. Pull the two bottom corners apart until the foot is just straight, and measure from corner to corner.

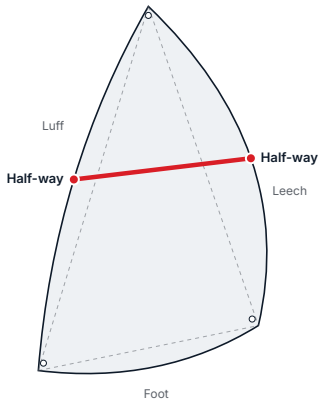
_____ **metres**



SHW HALF WIDTH: ACROSS THE MIDDLE OF THE SAIL

For half width measurements, fold the head to the clew, pull the leech tight and mark the half-way point with a marker or masking tape. Then fold the head to the tack, pull the luff tight and mark it the same way. Finally, measure from half-way mark to half-way mark, being sure to pull the belly of the sail tight.

_____ **metres**



PHOTOS AND NOTES FOR THIS SAIL

Before you fold the sail up, take a photo of it laid flat, from far enough back to get the whole sail in.

Area of the sail, if you know it

☐ The whole sail, laid flat taken

☐ The measurement stamp or your rating certificate, if there is one taken

Is there anything you want different on the new sail?

ASYMMETRIC SPINNAKER: YOUR OLD SAIL

YOUR OLD ASYMMETRIC

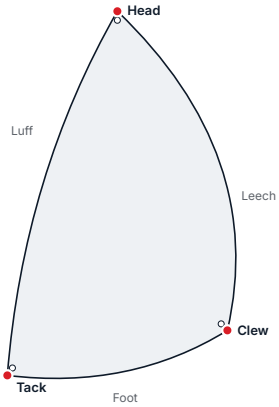
1. **This part is optional.** If you still have the sail you are replacing, its measurements help us design the new one. They are also what a rating or handicap certificate is based on.
2. It is done off the boat, with the sail laid out flat. You can do it on another day.
3. If the sail has a measurement stamp, or you have a rating certificate that lists it, a photo of that is enough.

Do you want to give us the measurements of your old sail?

☐ Yes (i will lay it out and measure it)

☐ Photo only (it has a measurement stamp, or my rating certificate lists it) ☐ No (skip this part)

LAY THE SAIL OUT FLAT



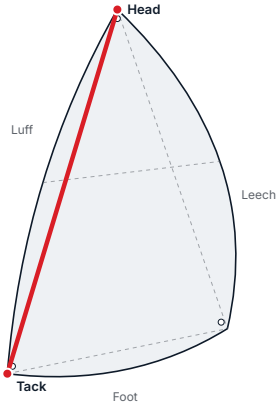
1. The sail must be **dry** and lying on a **flat surface**.
2. For each measurement, pull the sail just tight enough to take the **wrinkles out along the line you are measuring**. Do not stretch it.
3. Keep the tape **straight** from one point to the other. Where the edge of the sail curves, let it curve away from the tape.
4. Measure to the corners of the **cloth**, where the two edges of the sail would meet. Do not measure to the ring, the eye or a webbing strap.
5. The three corners have names. **Head**: the top corner. **Tack**: the bottom front corner, which attaches at the bow or the sprit. **Clew**: the bottom back corner, where the sheets tie on.
6. This sail will not lie completely flat, and it does not need to. Pull out one edge at a time as you measure it.

- The sail, dry, and a clean flat space big enough to spread it right out: a lawn, a dock or a hall floor.
- A tape measure longer than the longest edge of the sail.
- A helper to hold the other end of the tape.
- Masking tape or a soft pencil, to mark points on the sail.

Light cloth blows around. Pick a still day, or do it indoors.

SLU

LUFF: THE FRONT EDGE, HEAD TO TACK



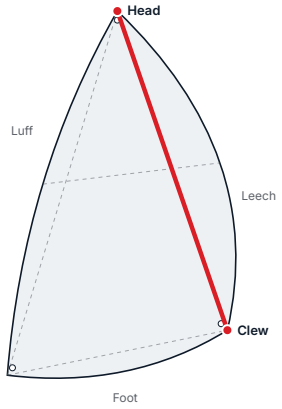
1. The **luff** is the front edge, from the head down to the tack.
2. Pull the edge out straight, just tight enough to take the wrinkles out.
3. Measure along it from the **head** to the **tack**.

_____ **metres**

SLE LEECH: THE BACK EDGE, HEAD TO CLEW

1. The **leech** is the back edge, from the head down to the clew.
2. Pull the edge out straight, and measure along it from the **head** to the **clew**.

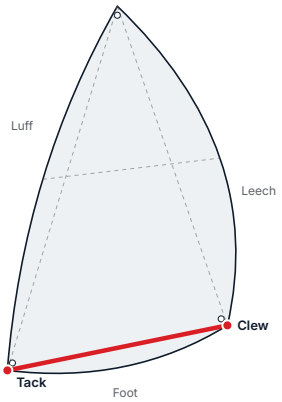
_____ **metres**



SFL FOOT: THE BOTTOM EDGE, TACK TO CLEW

1. The **foot** is the bottom edge of the sail.
2. Pull the two bottom corners apart until the foot is just straight, and measure from corner to corner.

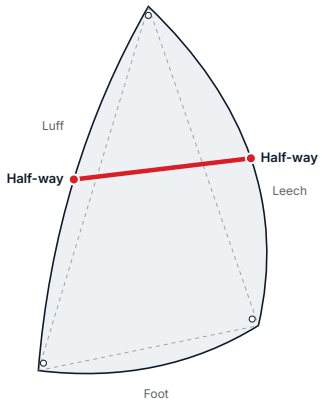
_____ **metres**



SHW HALF WIDTH: ACROSS THE MIDDLE OF THE SAIL

For half width measurements, fold the head to the clew, pull the leech tight and mark the half-way point with a marker or masking tape. Then fold the head to the tack, pull the luff tight and mark it the same way. Finally, measure from half-way mark to half-way mark, being sure to pull the belly of the sail tight.

_____ **metres**



PHOTOS AND NOTES FOR THIS SAIL

Before you fold the sail up, take a photo of it laid flat, from far enough back to get the whole sail in.

Area of the sail, if you know it

☐ The whole sail, laid flat taken

☐ The measurement stamp or your rating certificate, if there is one taken

Is there anything you want different on the new sail?

SYMMETRIC SPINNAKER: YOUR OLD SAIL

YOUR OLD SYMMETRIC SPINNAKER

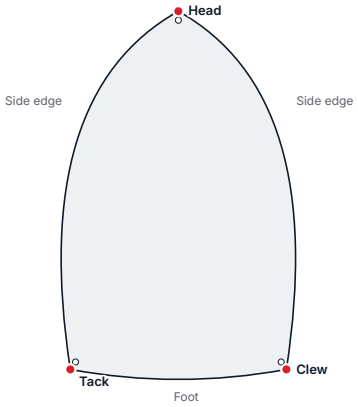
1. **This part is optional.** If you still have the sail you are replacing, its measurements help us design the new one. They are also what a rating or handicap certificate is based on.
2. It is done off the boat, with the sail laid out flat. You can do it on another day.
3. If the sail has a measurement stamp, or you have a rating certificate that lists it, a photo of that is enough.

Do you want to give us the measurements of your old sail?

☐ Yes (i will lay it out and measure it)

☐ Photo only (it has a measurement stamp, or my rating certificate lists it) ☐ No (skip this part)

LAY THE SAIL OUT FLAT



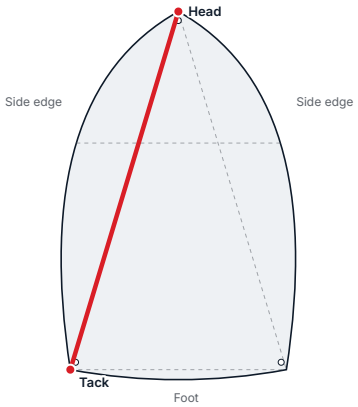
1. The sail must be **dry** and lying on a **flat surface**.
2. For each measurement, pull the sail just tight enough to take the **wrinkles out along the line you are measuring**. Do not stretch it.
3. Keep the tape **straight** from one point to the other. Where the edge of the sail curves, let it curve away from the tape.
4. Measure to the corners of the **cloth**, where the two edges of the sail would meet. Do not measure to the ring, the eye or a webbing strap.
5. The top corner is the **head**. The two bottom corners of a symmetric spinnaker are the same, so call one the **tack** and the other the **clew**.
6. This sail will not lie completely flat, and it does not need to. Pull out one edge at a time as you measure it.

- The sail, dry, and a clean flat space big enough to spread it right out: a lawn, a dock or a hall floor.
- A tape measure longer than the longest edge of the sail.
- A helper to hold the other end of the tape.
- Masking tape or a soft pencil, to mark points on the sail.

Light cloth blows around. Pick a still day, or do it indoors.

SLU

FIRST SIDE EDGE: HEAD TO TACK



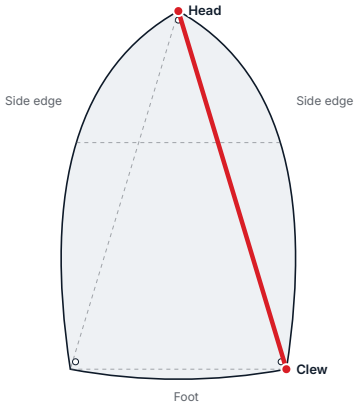
1. A symmetric spinnaker has two matching side edges. Start with either one.
2. Pull the edge out straight, just tight enough to take the wrinkles out.
3. Measure along it from the **head** to the **tack**.

_____ **metres**

SLE SECOND SIDE EDGE: HEAD TO CLEW

1. Now the other side edge. It should be the same length as the first, which makes it a good check.
2. Pull the edge out straight, and measure along it from the **head** to the **clew**.

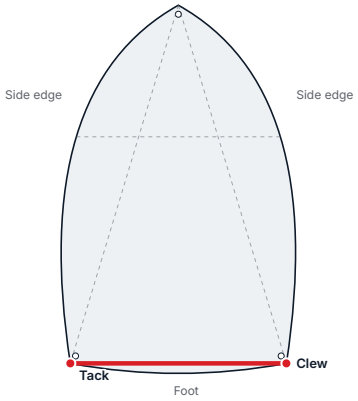
_____ **metres**



SFL FOOT: THE BOTTOM EDGE, TACK TO CLEW

1. The **foot** is the bottom edge of the sail.
2. Pull the two bottom corners apart until the foot is just straight, and measure from corner to corner.

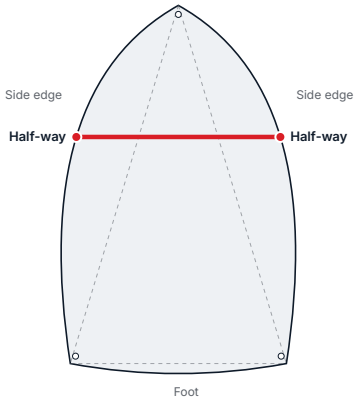
_____ **metres**



SHW HALF WIDTH: ACROSS THE MIDDLE OF THE SAIL

For half width measurements, fold the head to the clew, pull the leech tight and mark the half-way point with a marker or masking tape. Then fold the head to the tack, pull the luff tight and mark it the same way. Finally, measure from half-way mark to half-way mark, being sure to pull the belly of the sail tight.

_____ **metres**



PHOTOS AND NOTES FOR THIS SAIL

Before you fold the sail up, take a photo of it laid flat, from far enough back to get the whole sail in.

Area of the sail, if you know it

_____

☐ The whole sail, laid flat taken

☐ The measurement stamp or your rating certificate, if there is one taken

Is there anything you want different on the new sail?

FINISH

PHOTO: THE WHOLE BOAT FROM THE SIDE

One last photo: the whole boat from the side, from the dock or another boat.

- [ ] Whole boat from the side taken

FINAL COMMENTS

Anything unusual about your boat, anything you were unsure of, or how you use the boat.

Numbers in red match the numbering on the sailmaker's production form. Boxes tagged with a label (for example "Boats with tweakers") only apply to those boats.