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## **HAARSTICK ASYMMETRICAL SPINNAKERS**

Haarstick Cruising Asymmetrical Spinnakers are affordable, easy to use spinnakers that help your boat perform better downwind in light to moderate winds.

Triradial asymmetrical spinnakers are built from Nylon Sailcloth and are designed using our unique CAD-CAM system, then cut on our Gerber cutting machine, the most accurate and sophisticated production system in the world. Most other sail lofts don't even apply this type of technology to their top-of-the-line racing products, let alone every they build! The resulting spinnaker is the smoothest, fairest one you'll ever use.

We use only the finest, in house tested (.75 oz.) or (1.5 oz) Ripstop Nylon to build our Cruising Asymmetrical Spinnakers. We take into consideration the size of your boat and sailing conditions you will typically sail in. Every yard of cloth we receive is tested for strength and longevity, to insure the great sail you buy today will remain strong and smooth for years of cruising enjoyment.

Available in a wide variety of colors, the sail comes equipped with a ChuteSCOOP dousing and launching sock, an adjustable tack lanyard and a hoop turtle bag for storage and launching. An upgrade to the ATN spinnaker sleeve is also available as an option along with the ATN Tacker which keeps the tack of the sail as close to centerline as possible.

You must provide a sheet line to trim the spinnaker. Use a line diameter one size smaller than your Genoa/Jib sheets, and make each sheet (port and starboard) two times the boat's length. If your boat does not have an independent spinnaker halyard, you will have to use the jib halyard (this will complicate gybing as the forestay may interfere with the halyard). Boats with roller furling must have a spinnaker halyard. Call your local Haarstick loft with any questions that you might have about the proper rigging of this sail or to obtain a rigging quote.

## **OPTIMUM SAILING ANGLES**

Use the following chart as a guide to optimum sailing angles for different wind condition:

<b><u>Wind Strength</u></b>	<b><u>Apparent Wind Direction</u></b>
0-6 knots	60-140 apparent
6-9 knots	70-150 apparent
9-12 knots	90-170 apparent
12-15 knots	90-180 apparent
Above 15 knots	100-180 apparent

## **TACK PENNANT ADJUSTMENT**

The pennant (long braided line spliced to tack) should be run through a snap shackle or block near the base of the headstay and cleated at a bow cleat. Alternatively, an extra-long pennant or tack line may be fitted to reach back to the cockpit and through a sheet stopper.

Adjustment is made as your apparent wind direction changes. As you sail closer to the wind, shorten the pennant to lower the tack of the spinnaker and tighten the luff. As you sail further downwind, ease the tack lanyard, allowing the sail to raise even further away from the headstay and rotate around from behind the main. As always this is just a guide and a basis from which to start and it is always recommended to experiment to find the proper settings for your boat.

<b>Close Reaching:</b>	<b>Tack 1' to 3' above deck</b>
<b>Beam Reaching:</b>	<b>Tack 2' to 4' above deck</b>
<b>Broad Reaching:</b>	<b>Tack 3' to 5" above deck</b>

## USING A CRUISING SPINNAKER

### **HOISTING:**

- 1) Clip the turtle bag in the bow pulpit using the two bronze snaps on the outside of the bag
- 2) Pull the tack out of the bag (either loose or at the bottom of the Launch Sleeve). Run the tack pennant through an eye, block or snap shackle near the base of the headstay and secure it at a cleat.
- 3) Attach the halyard to the head of the spinnaker or launch sleeve
- 4) Attach the spinnaker sheets to the clew. Run the tails outside the lifelines and shrouds to blocks on the rail near the corners of the transom. Boats with a perforated toe rail will have infinite adjustment for sheet block location other boats may need to install pad eyes.
- 5) With the wind aft of the beam (ideally 120 degrees or greater), quickly raise the halyard to full hoist and cleat the halyard. If a launch sleeve is being used, raise it up with the provided launch sleeve halyard.
- 6) Trim the Spinnaker sheet until the sails fills.

### **GYBING:**

To gybe the sail safely and quickly, use the following procedure. Practice the procedure first in moderate wind conditions.

- 1) With the wind aft at 155-170 degrees, ease the loaded “old” sheet until the sail is floating in front and to leeward of the headstay.
- 2) Turn the boat downwind until the main boom swings over (gybes). Continue turning until the wind is 160 degrees on the new gybe.
- 3) Wrap the “new” sheet around a winch and start taking tension on it, while easing the “old” sheet off completely. The sail will rotate around the headstay and will actually “turn inside-out”. When the new sheet is trimmed in, both main and Spinnaker will now be on the new gybe.

## **DOUSING WITHOUT A LAUNCH SOCK:**

- 1) With The wind at 120-180 degrees aft, trim the Spinnaker sheet until the sail is blanketed behind the mainsail. Try to keep the course of the boat steady during the entire dousing procedure.
- 2) From the foredeck, grab the lazy spinnaker sheet (the sheet that is not under load) and begin to pull the clew of the sail towards you and into the boat, towards the foredeck hatch.
- 3) Release the halyard slowly and steadily (have at least one wrap around the winch to prevent a runaway halyard.) Also avoid trying to drop the sail in the water.
- 4) When the sails is gathered and safely down the forward hatch, release the sheets, tack pennant and halyard and pack the sail into its turtle.

## **DOUSING WITH LAUNCH SOCK: (ChuteSCOOP or ATN)**

- 1) Lower the Sock around the sail, while slowly releasing tension on the spinnaker sheet (heavier air may require you to turn the boat deeper down wind)
- 2) When the launch Sock is fully lowered, release the halyard and gather the launch Sock on the foredeck
- 3) Pack the Spinnaker and Sock back into the storage turtle.



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