

Furling Headsail Outline

For use in Cruising World
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At Neil Pryde Sail, we like to distinguish between what we consider [furling headsails](#) and those we consider [reefable headsails](#). A family that does mostly coastal cruising but with an occasional Thursday night club race, will find that a conventional furling headsail will fit the bill just fine, however, if the customer is either more serious about racing or blue water sailing, we would recommend a reefable headsail. The primary differences between the two types of sails lies in cloth type, panel orientation and in the way in which the sail will be used.

The conventional furling headsail is built from a fill-oriented fabric that makes it ideal for cross-cut applications but gives it a limited application for reefing. The combination of ease of construction, tried and true construction standards and multiple choices in fabrics, make this sail a long lasting and economical choice, as can be seen by the large number of these sails out sailing on any given weekend. The essential draw-back to the cross-cut sail is that when reefed, the base fabric (which is of uniform weight) will be exposed to a freshening breeze and this fabric is then asked to do the job of a much heavier fabric (except in smaller boats where the loads are much smaller) thus increasing the likelihood that the fabric will be permanently deformed, forever degrading the shape of the sail. Case in point: This "typical" 30-40 foot racer-cruiser may carry an all purpose furling genoa that is built from a 6.5 ounce fabric. If the boat is equipped with a working jib, it will be built from a fabric weighing upwards of 7.75 ounces per yard. Why? Because the increased wind velocity, wave action and general loading on the sail will be significantly higher on the jib than on the genoa. These very reasons dictate the need for new fabrics and more importantly, new panel configurations, leading to the development of the *reefable* headsail.

Our *Reefable* headsails are optimized in four ways.

1. Panel orientation

The Neil Pryde *reefable* headsail incorporates the "Bi-Radial" cut. This cut optimizes panel orientation in such a way as to ensure that the threadline of the individual panels is aligned along the highest load paths of the sail and also allows us to build these high load panels out of a heavier weight material than the base fabric of the sail. The net result is a sail that weighs about the same as a conventional furling genoa but has a greater concentration of strength in the areas that will handle the loads in reefing situations.

2. Fabric selection

Fabric selection now turns to those fabrics that are warp oriented (as opposed to fill in the cross-cut headsail) and these fabrics are the next generation of laminates, such as the *CL-Series* from Bainbridge, that combine the best in chafe resistance and shape holding capabilities, along with the brute strength of highly engineered scrim. These fabrics are by far more sophisticated than conventional woven Dacrons and generally will weight less for an equal amount of strength.

3. Patch geometry

Patch geometry becomes important in reefing situations because the patches, when properly shaped, can add additional reinforcement to crucial loading areas when the sail is reefed. Our contoured patches effectively add this additional reinforcement to the sail when reefed.

4. Foam Luff Tape

This option is aimed at the *performance sailor or blue water cruiser*. Foam luffs are intended to assist the mechanical action of the furling gear in helping the sail roll up smoothly and in doing so they help to keep the shape optimized for the stiffer breezes. This innovation has been taken one step further by Neil Pryde with our [Multi Track Foam](#). This system combines precise shaping of the foam pads to match the luff curve of the sail, meaning that the yacht will lose little performance when reefed and because of the individual nature of each foam strip, the foam does not retain a "memory" of being rolled which with conventional foam luff systems can distort the shape of the sail.