

Kemp Sails

Racing Sails

Whether you need one headsail or a complete new inventory, it's our business to help you sail faster. Not that you have to buy our Racing sails to make sure of leading the fleet home - many competitive club racers use Kemp Performance Cruising sails to good effect at events like Cowes and Cork Weeks, as well as their local weekend and evening series.

Because we tailor each new sail specifically to your intended use, there's no rigid demarcation between our Performance Cruising and Racing ranges. But there comes a point at which speed and shape stability begin to assume greater importance than economy or ease of handling - and the further you head down this path, the more important it becomes for us to reflect those priorities in our sail design and choice of cloth.

The hard and the soft

Because cloth selection is such a crucial factor, let's take a look at the options you have with fore-and-aft sails.

At the bottom end - in terms of cost and durability - are the conventional woven polyester fabrics, of which Dacron is the best known. The most loosely-woven of these are relatively soft and easy to handle, but lack the stretch-resistance needed in racing sails for all but the smallest boats. Moving up, we come to the harder Dacrons which, thanks to their closer weave and more highly resinated finish, are a popular choice for many club racers. Whether they're fill or warp-orientated (discussed on our radial sail sheet) the best Dacrons still have a place on many racing boats. Besides, a 'Dacron-only' rule applies to certain sails in some one-design classes.

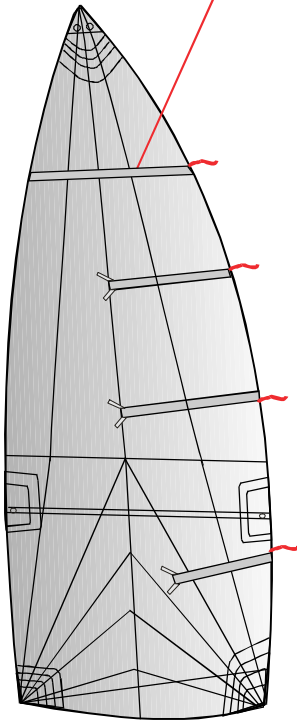
After this, you're into the increasingly-popular laminated cloths. These are made with a woven fabric - called a scrim - laminated between two layers of Mylar film, which hold it in place and provide extra stability, particularly at angles to the thread-line. Laminated cloths are at least three-ply - usually film-scrim-film in racing sails - but a layer of lightweight taffeta (a woven polyester) can be added to the outside for extra chafe-resistance, typically along the foot and around the spreaders. For a longer life, cruising laminates often incorporate an entire taffeta backing on one side - or sometimes both - which, from a distance, makes them look more like conventional woven fabrics.

And what's inside the Mylar? This is what separates laminate from laminate in terms of performance. Virtually all the inner woven substrate fabrics (scrim) are warp-orientated, because laminated cloths are intended primarily for radial construction. But the choice ranges from conventional polyesters to the aramids, of which Kevlar is the most widely used. Kevlar's great asset is its high strength-to-weight ratio, which means you can build lighter sails which will stretch less and hold their shape longer than polyester alternatives. So, although it costs more to buy, a Kevlar sail's longer racing life helps offset the difference. Its drawbacks include relatively low tolerance to flexing and UV light - and, until 1999, a rating penalty under Channel Handicap. That's one reason why polyesters have traditionally been more popular at CHS level - but, when the 'Kevlar tax' is dropped, your choice of scrim fabrics can be based purely on their relative cost, durability and performance.

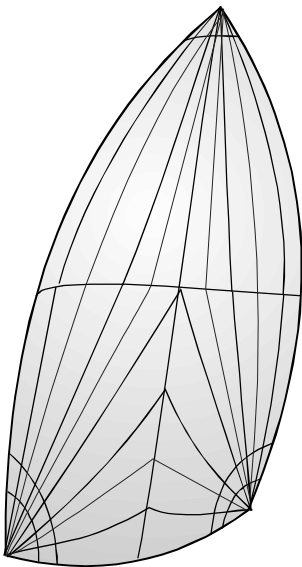
A question of cost

Kevlar's popularity will inevitably increase without the penalty - and this in turn will help bring the price down. Nonetheless, it's still likely to remain more expensive than the alternatives such as Pentex - a new form of low-stretch polyester which, being substantially stronger than conventional polyesters, promises to become one of the most widely-used fabrics in racing sails.

*Graduated,
flexible battens*



*Loose foot
Tri-radial mainsail*



Asymmetric Spinnaker

When you talk racing sails with us, we'll consider your type of boat, the sort of racing you do, your other sails - and, of course, your budget.

For club racing, we generally suggest non-aramid fabrics - aramids are pricier, need more careful handling and, with smaller boats, only offer a marginal performance advantage. In fact for mainsails, a cross-cut design in fill-orientated Dacron is often the best choice. But a tri-radial layout using laminated fabrics will ensure a longer-lasting shape with genoas - a 5oz Dacron No. 1 genoa, for example, will typically have a competitive life of around 18 months if you race twice a week during a full season. After that, the draft will start moving aft and you'll find it more difficult to control the shape. A laminated sail, by contrast, can give you four seasons' fast sailing if looked after. And because laminates stretch less, the sails don't need to be cut flatter to allow for increasing fullness as the wind builds; this way, your smaller headsails will be usable through a greater wind range.

With bigger boats and increasing leech loads, tri-radial laminated mainsails come into their own. As with our tri-radial headsails, we always use at least two horizontal seams; only this way can we orientate the radial panels accurately with the stress pattern in the sails. But we don't want too many, or we increase the chance of 'leech creep'.

Spinnakers

How many spinnakers you carry depends - among other factors - on class rules. If you're allowed several, we'll be happy to discuss your requirements in detail and recommend a suitable wardrobe - which may include a broad-shouldered runner, a narrower-headed all-rounder and an asymmetric reacher.

For an all-purpose spinnaker on larger boats, we usually suggest a full tri-radial design with no horizontal panels. Apart from aligning the panels with the loads accurately throughout the sail, this allows us to incorporate multiple cloth weights for optimum strength and minimum weight - for example, we'll often use 0.9oz nylon in the leeches and 0.5 in the middle. The same applies to asymmetric spinnakers - but here it's especially important to 'rock' the panels around the leech and avoid making them parallel in the centre. More panels are called for, which cost more money; as ever, there are cheaper ways of building sails which don't deliver the results in the long term.

With smaller, less highly-stressed symmetrical spinnakers, on the other hand, horizontal panels at mid-height work perfectly well. And, yes, they do cost less to build than full tri-radials. If we can save you money with a less elaborate sail design, we'll say so. What we won't do is make you a sail down to a price, which won't give you the performance you're looking for. Because when racing, you want sails you can count on to take you round the course faster than the competition. And you can count on Kemp.

