

# dolphin sails



## Racing Sails

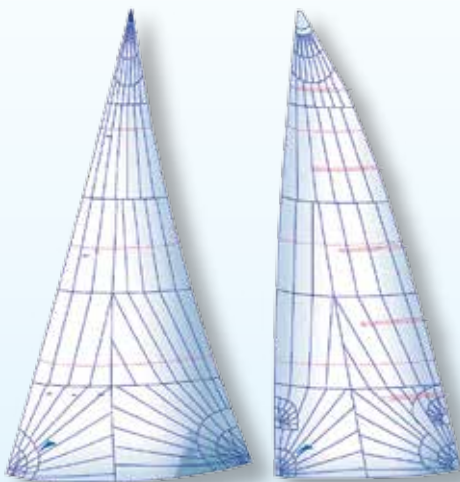


Dolphin racing sails have been developed and fine tuned over a number of years. Our continuous policy of improvement keeps our sails at the top of the results, winning local one design, national and international championships. Before the sail is built we carefully measure the boat, rig set-up and listen to any personal preferences you may have. Our sails are designed to be easy to trim and sail with, the emphasis always being on speed.

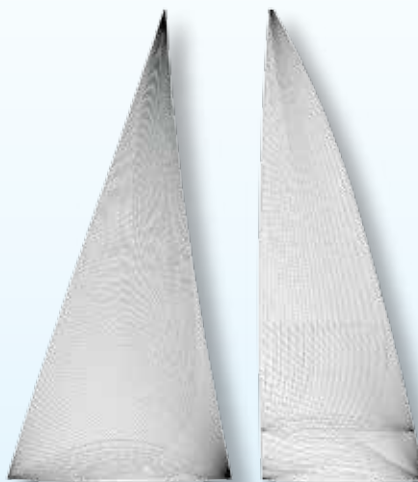
A brief synopsis of the sail and fabric range available is shown here. Consult our sales team for a comprehensive guide to the product for you.

## Sail Design & Construction

Dolphin offer either a Tri radial or Membrane sail construction for our race sails. Some OD class rules stipulate the sail construction and cloth, we can of course design these sails to suit.



*Tri Radial*



*Membrane*



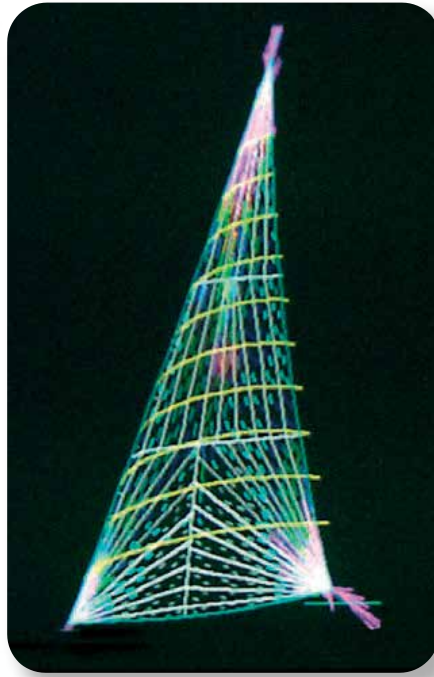
*An X332 using a Membrane mainsail and Tri Radial headsail*

For good shape holding, performance and speed, a tri-radial construction utilising Pentex, Kevlar, Carbon or Dyneema yarn is used. Membrane sails produce the ultimate in performance, weight saving and shape holding capability. Each membrane is designed bespoke to the yacht and customer needs. There are various yarn options that we use to create the sails using Kevlar/Carbon/Dyneema or Vectran to get the best longevity and durability.

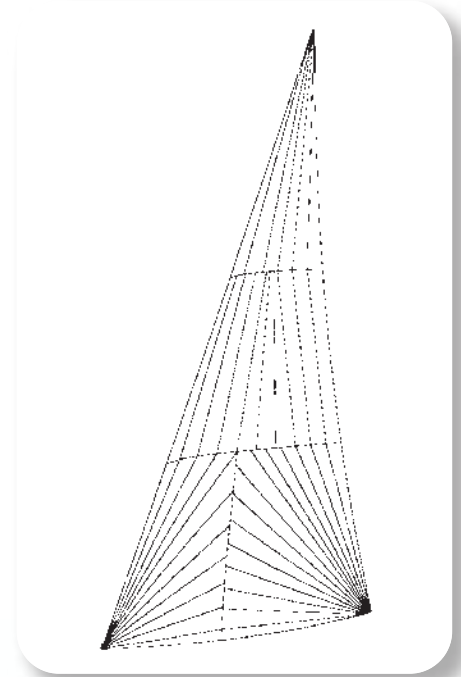
# RELAX Computer Analysis



*RELAX stress analysis*



*RELAX stress analysis  
& seam positions*



*Final seam positions*

A further illustration of the sail construction systems available can be seen from the diagrams above. The RELAX (Finite Element Analysis) of a typical sail shows how the load paths radiate from the corners of a sail in a 'catenary' pattern. The fibres in panelled, tri-radial sails have a quite close correlation to the load path, providing excellent shape holding.

## Cloth Selection

Our cloth is chosen from the world's leading sail cloth manufacturers. Whilst we can supply all fabrics, below is a guide to the recommended cloth options from the Contender and Dimension Polyant

### Laminate options

- Polyester (mylar)
- Pentex
- Kevlar
- Carbon
- Dyneema

### Membrane options

- Twaron yarn
- Carbon yarn
- Dyneema yarn
- Vectran yarn

All available in a mixture of yarns in film/film along with single or double taffetas.

Pentex is a fibre similar to Mylar but with around 40% less stretch. Kevlar is an even lower stretch fibre showing a 300-400% improvement over Pentex.

Carbon has similar initial stretch to Kevlar but due to its total resistance to UV damage exhibits greater longevity.

We draw on the experience gained working over a wide range of boats. The initial sail design is analysed in wind tunnel simulation software to ensure the sail will operate across the wind range intended. On the water testing provides a check that the theoretical sail matches the desired shape and performance requirements. Where possible we will come to check the finished product in action and offer tips to help you improve your boatspeed.

# Sail Specification

## Mainsail Specification

The mainsail is the only sail that is used in all wind speeds. Dolphin mainsails are designed to give adjustability and speed across the range. Each sail is designed to suit the boat characteristics, rig set-up and race crew requirements. The luff curve is carefully cut to suit the mast bend for each individual boat.

## Standard Features

- Highly refined designs
- Superior pre-glued three step seam construction
- Pre-glued step down patch construction
- Epoxy battens with velcro closure pockets, or batten screw adjusters
- Loose footed main shape control where applicable
- Low stretch Dyneema leachline led over headboard down luff
- Flow stripes for shape judgement and adjustment
- Stainless rings
- Sail numbers, insignia and spreader patches on mains where appropriate
- Cunningham for draft positioning and tell tales
- Sailbag

## Extra Features

- Reefs
- Glo flow stripes
- Sail measurement (IHC certified)
- Carbon battens



## Headsail Specification

### Standard Features

- Highly refined designs
- Superior pre-glued three step seam construction
- Pre-glued step down patch construction
- Sail numbers on Genoas with LPs over 130%
- Leach battens on No.3's
- Leach and foot lines
- Tell-tales with window
- Spreader and stanchion patches (where necessary)
- Zip deck bag

### Extra Features

- Sail measurement (IMC certified)
- Glo flow stripes

# Racing Photo Gallery



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