

Notes on buying a Sail (rig)

The variety of sail types, sizes, styles etc. can be bewildering. I am writing this basic guide to sail choice to help you in your decisions on what sails to buy as a newcomer to the sport. It is my advice and is only basic information but I hope it helps you in at least asking the right questions when you come to buy a sail and build up a quiver (a quiver is a number of different size sails for different conditions).

- Having a range of different sail sizes is always helpful as you can usually sail in most wind conditions because you have the right equipment, however choosing the right sizes and styles of sails is also as important.
- If you can only afford one or two make sure that the size and style of sail you buy is determined by the location and wind strength you are able to sail in. It would be pointless to have a 4.00mtr wave sail if you only intend to sail at the lake.
- Most people opt for a 5.5 or 6.5mtr sail as their first sail and build up from this.
- When choosing a second or third sail make sure that you get a sail that is reasonably different in size from your other sail. Usually people go for at least a metre difference in mid range sails. For larger sails this can increase to 1.5-2.0 mtr. Differences and for smaller sails 0.5 mtr differences.
- Keeping to one manufacturer can be a good option as the mast and booms you buy that are usually recommended will help the sails set well and get maximum power from them. Mixing sails and different masts can become a “black art”.
- Sail shapes vary depending on the conditions that they are designed for. An example of this are wave sails which will have less material (higher cut) from the bottom of the sail, the bit by the downhaul nearest the deck to the clew, the bit that is nearest the end of the boom. The reason for this is that wave sails don't need excessive power and need to be manoeuvrable in waves so the bottom of the sail doesn't catch in the wave.
- The term rotational sails is often used. This describes a sail that has battens(stiffeners) ap the sail. These battens help keep the sail in shape when sailing. These battens rotate around the mast and help maintain a smooth flow of air around the mast and over the sail. A smooth flow of air increases the sails performance.
- Rotational sails usually have between 4-6 battens.
- Some rotational sails have what are known as camber inducers incorporated into the luff pocket (the bit you put the mast up). The purpose of these inducers is to lock quite rigidly the aerofoil shape in place at the leading edge of the sail to induce or encourage smooth air flow over the sail. These hold the sail nicely in shape whilst sailing but can be to the newcomer a bit more difficult to handle for first waterstarts etc. They also feel heavier at lower speeds until they come into their own at higher speeds. These sails are best suited to full power straight line sailing where they feel solid.
- These sails are also subdivided into categories of use. This means you will hear terms such as freeride, freeride/race, crossover, slalom, speed, wave etc. The terms usually refer to the type of sailing the sails are designed for. Freeride is for general use, wave as the name suggests is best suited to waves, race for racing boards etc. My advice on this is to consider your sailing location and ability and use this to determine what type of sail to buy. As a very general rule the higher the cut of the sail as mentioned above the more wave/freestyle

oriented the sail is. If the sail has a low cut ie. lots of material below the boom it will be more power or speed oriented. Very general I know but looking at photos of the sails in the catalogues will help.

- Most manufacturers do provide good guides in their promotional material for choice of sails. These are not usually sales pitches but good advice to the newcomer.
- Sails are made up of different materials and again depending on purpose more or less of a material will be used in a sail. Most school or centre newcomer sails will be made of Dacron which is a cloth like material that is quite light but durable. It is generally also used in batten pockets. Monofilm is a clear see through material that is light and manoeuvrable and seen on most sails nowadays. Cross ply is another clear material (Mylar) that often has strands of reinforcement in its sandwich construction. This is often found in high stress areas.

Masts

- Most sails have printed on them the length of mast required and a recommended stiffness for the sail. Try and match these up as recommended to get the best shape in your sail. When sails are designed they are designed with the bend characteristics of the sail in mind so setting a sail on the wrong mast will diminish the effectiveness of the sail.
- There are two basic types of mast available. A standard mast or a reduced Diameter Mast (RDM or Skinny). RDM masts feel lighter although they may not be in actual fact and are generally suited to smaller sails below 6.5mtrs. Masts are also generally in two parts a base and a top.
- Masts vary in size from 370cm to 550cm. The most common sizes are 430cm and 460 cm. It is possible also to get mast extensions if your mast is too small for all your sails.
- Masts are made of fibreglass and carbon and the amount of carbon generally determines higher price but better quality in that they are stiffer and lighter. A word of warning here is that high carbon masts do not take kindly to being dropped on sharp objects as it weakens them and they can fail at this weak point.
- The stiffness of masts is measured in IMCS (Indexed Mast Curve Index) Usually the higher the number the stiffer the mast. Longer masts usually have a higher IMCS number. Please refer to your sail or sail bag to match the mast to the sail.

Booms

- Booms can be made of aluminium or carbon. Carbon being more expensive.
- Booms usually have some form of extension system to allow the boom to be made larger or smaller to fit various sails.
- The smallest amount of flex in the boom the better as this help maintain the sail shape and does not distort the sail when under load.
- Most front ends of booms now have good clamps to attach the boom to the mast.
- Keep your boom well maintained and periodically extend the boom arms to ensure that sand and salt haven't locked them in place.

Second hand sails

- Second hand or pre owned sails can be a good buy but beware when buying them.
- Check for obvious signs of damage ie. holes in luff sleeve or sail, excessive wear around the foot of the sail or even the sail delaminating ie. coming apart from the sandwich construction.
- Don't expect when buying a second hand sail for it to be perfect but take account of the price and the condition.
- New sails can cost anywhere between £300-500, so a good second hand sail can be a bargain. Again be aware of what you are buying its age and general condition.
- Look out for monofilm that has become misty and opaque as this is a sign of lots of use or being left in the sun. Try and look at a sail when dry as water does tend to improve a sail's appearance.
- The best advice for old and new sails is try them before you buy them if you can. If you can get to demonstration days this is the best time to see and try a range of sails.
- If in doubt get advice from someone who knows something about sails before buying if you are new to the sport as this can save you buying a load of rubbish.

Happy windsurfing

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