

<http://www.sdsurfstore.com>

Why do I need a custom made Surfboard?

Everyone's surfing style is different.
Everyone's weight and height is different.

When it comes to waves and surf locations many location requires a different surfing style and a different surfboard to get the most out of your surfing.

The intention of this guide is to help you understand what makes a surfboard tick and how you can customize a surfboard to your exact needs.
You may have been happy with off the shelf surfboards up till now.
The difference a custom surfboard makes is amazing and it often brings back new excitement for the sport.

You may love the way X professional surfer rides.
Just because the professional surfer rides X, length, width and thickness surfboard doesn't mean that X brand surfboard is right for you.
This is where many surfers can go wrong.
They buy an of the shelf surfboard and often become disappointed that they cannot master a certain maneuver just like the pro' can and most likely its not the surfers fault, it is the simple fact that the surfboard is wrong for them.

They need a different surfboard, but what surfboard do they need?
The answer is a custom surfboard made specifically for them.

Our years of building custom made surfboards have given us the knowledge to help you.

You may have always wanted a surfboard made perfectly to fit you and your surfing style.

We will show you how to have a surfboard custom made to suit you and your surfing style perfectly.

Some people believe that it is too expensive to have a surfboard custom made for them.

This could not be further from the truth.

[A custom made surfboard by SD](#) will set you back around the same price as you would pay in the shops for an of the rack job.

[We at SD](#) are here to help you through every step of customizing your surfboard with advice on every option free of charge.

Surfboard Buoyancy

The first thing you have to consider is your size, weight and your surfing style. How well do you paddle on to waves?

Generally the bigger you are and more you weigh the bigger board you need. Surfing fitness is also an important in the decision making.

The volume of the board controls its buoyancy.

Simply put, the volume of water that the surfboard can displace is equal to the weight the surfboard can support.

For example one of our [Retro fish surfboard](#) with a length of 6' width 20" and thickness 2 1/2" has a volume of approximately 35 Liters.

35 liters of water has a mass of 35Kg.

Therefore that surfboard can support 35Kg of surfer when paddling.

This is why [Longboard riders](#) have an advantage when paddling onto waves.

More volume of the [Longboard](#) means the surfer is higher out of the water when paddling.

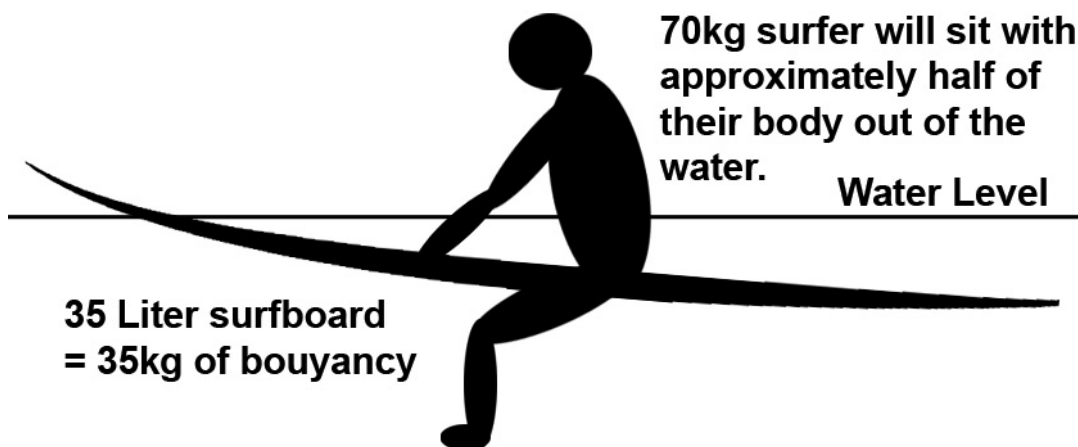
For example our [9' Nose rider](#) has a volume of 66 liters and therefore can support 66Kg of surfer easier.

How to decide length, width and thickness

A little bit of physics helps here.

The human body is generally neutrally buoyant and therefore if you have the [retro fish](#) in the example above giving you have 35Kg of buoyancy from the surfboard + neutral buoyancy of your body that is in the water, then you will have 35kg of body mass out of the water.

Therefore if you weighed 70Kg on this board you would have half your body above the waters surface.



In general [SD](#) does not recommend you to have less than half of your body

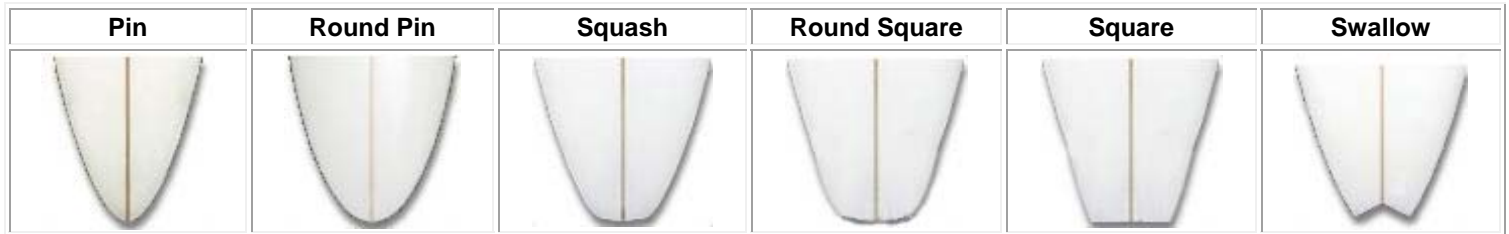
under the waters surface to be able to paddle onto waves easily. However exceptions are always made depending on your fitness and ability. It's all about paddling onto waves, if you have the skills to paddle with less body mass out of the water then you decide. You must also decide the style of surfboard you want. In accordance with your height and weight and ability you need to make these decisions.

On [funboards](#) to [longboards](#) this is usually not an issue due to the buoyancy you get from these larger boards. For example if you were 70Kg and were on the [9' nose rider in the example above](#) you would already have approximately 90% of your body out of the water when sitting on the surfboard.

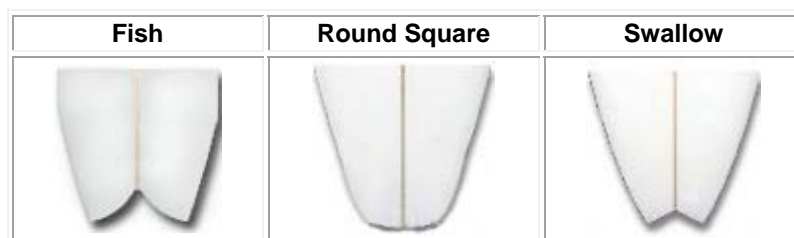
It is also important to remember that the more buoyancy one has in their surfboard the harder it is to duck dive under a wave. It is nice to have an easy to paddle surfboard but you have to get it out the back somehow.

It then depends on what you get used to. If you have the skills then you could ride an ironing board.

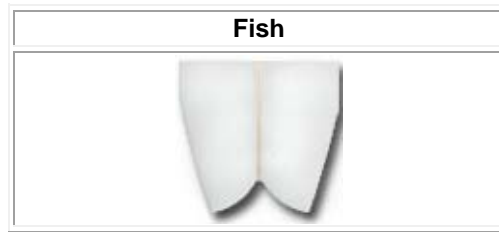
How to decide Tail Shape?
[Shortboards](#) and [XL shortboards](#) have the following tail shape options



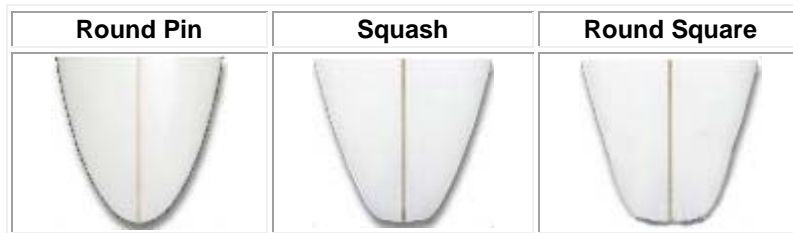
[Fish Surfboards](#) have the following tail options



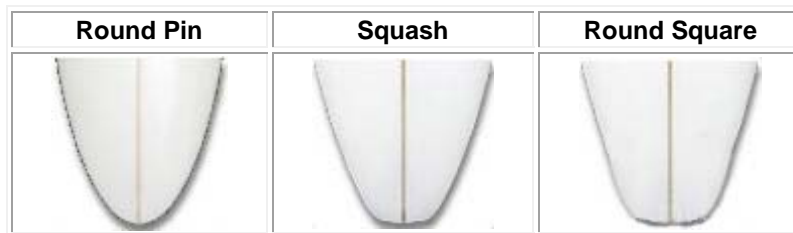
Retro Fish only have fish tail



Funboards have the following tail options



Longboards have the following tail options



Gun Surfboards only have a pin tail



Tail shapes have many different purposes. More tail shapes have been added in recent years as surfing has evolved. We have listed the main features of tail shapes below. Basically an angled tail will give a sharper turn where as a rounded tail will make more elliptical turns.

Pin Tail

Pin tails are generally used on [XL shortboard](#) (mini Gun) and [Gun surfboards](#). These are a perfect down the line tail shape for these styles of surfboards. They

should track in one direction for optimum speed. They are for freight train fast waves of medium to large size.

Round Pin Tail

Round pin tails are generally used on [shortboards](#), [XL shortboards](#), [Funboards](#) and [Longboards](#).

These also have characteristics of a Pin tail but a lot looser but with a smoother turning ability. Pin tails are excellent for larger and more powerful waves. They have the ability to pull out of the wave when you need to. Pin tails have less surface area and allow the tail to burry into the face of the wave. This allows the surfboard to be more stable. Pintails are less maneuverable however they are made for large waves and you don't really want to be making any sudden movements on these waves.

Squash Tail

Squash tails are generally used on [shortboards](#), [XL shortboards](#), [Funboards](#) and [Longboards](#). Squash tails are the most common on [shortboards](#). The squash tail is highly responsive and excellent for maintaining speed in slow sections of the waves. The roundness allows the surfboard to dig into the wave and give more control.

Round Square Tail

Round Square tails are generally used on [shortboards](#), [XL shortboards](#), Fish surfboards, [Funboards](#) and [Longboards](#).

Square Tail

Square tails are generally used on [shortboards](#) and [XL shortboards](#). The round square tail gives more surface area at the back of the surfboard. This allows more tail area to turn. Large square tails are excellent in small waves and also for the larger surfer.

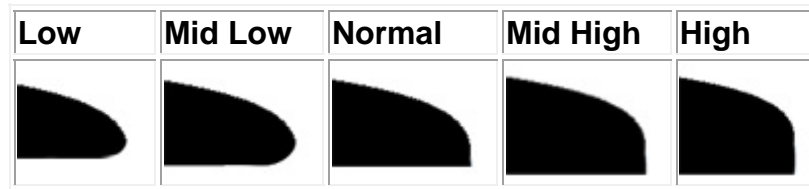
Swallow Tail

Swallow tails are generally used on [shortboards](#), [XL shortboards](#) and Fish. The swallow tail is excellent for maintaining control in sharp turns because of the larger planning surface.

Fish Tail

Fish tails are generally used on [shortboards](#), [XL shortboards](#) and Fish. Fish tails are excellent for small and less powerful waves.

Rail Shapes.



Rails are the edges of the surfboard where the deck meets the bottom. The shape of the rails controls the way in which the surfboard responds during planning and turning.

Height of the rail determines the surfboards buoyancy and response.

Before choosing a rail height, think about how much buoyancy you require and your surfing style.

In the middle of the surfboard the rails are larger with more roundness so they won't catch or dig into the wave.

Rail volume is one of the most important features of the surfboard.

Hard rails will make the surfboard generally easier to turn depending on where the hard edge blends into the rest of the rail. While soft rails are for a more laid back style of riding.

Harder rail edges forward of the front fins will generally make the surfboard track more in one direction.

If you make a hard turn at the bottom of a wave and you have hard rails at the tail then the surfboard will tend to grip more to the face of the wave, without sliding.

If you want a surfboard that will make fast turns and quick wave release then you need a hard rail from the tail up to the back of the front fins.

How to choose the rail height?

The options are:

Low, Mid low, Normal, Mid high and high.

Rail Height depends on the kind of waves you will be surfing and the style of surfboard e.g. [shortboard](#), fish, [funboard](#) etc.

Generally the lower you go on rail height the less buoyant the surfboard will be and would be suited more for an advanced surfer who is selective about their wave choices.

High rails are more suited toward beginner surfers however pro surfers will usually have a higher rail board for smaller sloppier conditions.

Rocker



Nose Rocker

Nose rocker is the curve at the bottom of the surfboard from the middle of the surfboard up to the nose.

This is one of the most important parts of the surfboard.

A low nose rocker will make the surfboard plane easier.

A high rocker will make the surfboard more maneuverable and is important in steep waves to avoid the front of the board digging in to the wave (nose diving).

You need to decide what kind of waves you will be riding more often.

Many surfers have a few surfboards with different nose rocker to suit the wave conditions.

So if you are surfing small waves you need low nose rocker and it follows that nose rocker should increase as wave height increases.

Tail Rocker

Tail rocker is the curve at the bottom of the board from the middle of the surfboard back to the tail.

Low tail rocker will generally make a surfboard track easier and likewise a higher tail rocker will make the surfboard looser depending on the wave.

Low tail rocker also will make the surfboard faster in fuller waves.

High tail rocker will make the surfboard slower but give it more maneuverability in fuller waves.

Nose and Tail rocker working together

Nose and tail rocker must work together.

In sucky waves for example you need a lot of tail rocker to basically fit into the shape of the wave in order to be able to release earlier for a bottom turn. If not you will get held up high on the lip and get lip launched. If you are surfing reef then this is the last thing you want. At the same time in this situation you also need substantial nose rocker so you do not burry the nose into the chop up the face of the wave.

The correct marriage between the nose and tail rocker should not affect the planning surface of the bottom of the board, because obviously in this situation you need a fast board.

You want to be able to lean forward on your board (this is your accelerator) to get out of there when you want to without digging the nose of the surfboard and losing speed.

On a full wave for example depending on conditions, generally less tail rocker is sufficient because you do not have to fit into the wave as it generally crumbles of the top.

Nose and tail rocker options.

Full, average or flat for both.

You can choose these options both together or each can be different depending on where you will be surfing.

For example:

Full Nose and Tail rocker will suit more hollow waves and allow you to weave in the pocket of the wave and get more drive from inside the pocket.

Flat Nose and Tail rocker will suit more fuller waves and give you greater speed.

Full nose and low Tail rocker will suit a choppy fuller wave without hindering your speed.

Flatter nose rocker and high tail rocker will suit late take off waves (hollow) but these waves would need to be more glassy (smooth) so the surfboard will not dig the nose in.

Fins.

Glass on or system.

Ask a surfboard sander which one he prefers and he will tell you fin system every time.

Glass on fins makes the surfboard harder to manufacture and sand.

They usually add around \$50 to \$100 to the price of the surfboard.

However the feel of glass on fins is hard to beat.

They are stronger, faster and you can put more force into turns without the fear of ripping your fins out.

The advantage of fin systems is you have the flexibility to change your fin size and shape.

Also for traveling, having the option to remove your fins reduces the chance of a baggage handler destroying your board as it gets loaded onto the plane.

Single

Single fins are usually used on Funboards and Longboards, but it does not mean they can not be used on other surfboards.

A single fin will make you understand how to ride the wave as it relies on the power point of the wave to drive from. Generally, a longer smoother turn.

Twin

Twin fins are usually used on retro style surfboards.

They generally make the surfboard very loose in all conditions.

Thruster

Thruster is the most common setup on shortboards at present because it has been shown to hold on well and in general makes the surfboard more stable. Thruster setup is tried and proven to be able to drive hard and also be loose at the same time. It will make the surfboard go where you want it to go with more ease and control.

Quad

Quad fins are excellent on Fish surfboards and have the characteristics of thruster and twin fins being that they are relatively stable and also easy to maneuver. Perfect for performing circus stunts, great for the stuntman.

Tri

Tri fins are most common on mini mals and longboards for their stability and their holding ability on bottom turns. A Tri fin set up will allow you to hang onto the face of the wave with more confidence knowing you have an extra fin buried into the wave.

5 fin setup

With a 5 fin setup most people do not have all 5 fins at once fitted in their surfboards at one time. Suited for the surfer who can not make up his/her mind what style of surfboard they would like. Many surfboards have this option due to not being able to decide on the surfboard style and wave conditions. Yet to be convinced of its merits.

Plastic fins verses fiberglass and composite fins

We believe fiber glass fins, composite fins (carbon fiber) and timber insert fiber glass are all much better than plastic fins. Plastic fins are cheaper, however if you leave them in your car in summer temperatures they do tend to deform their shape. Also plastic fins don't perform as well or suit a high end surfboard.

Surfboard Cloth and weight of cloth

Fiberglass for surfboards comes usually in 4 ounce or 6 ounce cloth.

Most shortboards are glassed with 4 ounce cloth usually single bottom layer and 2 layers on the top. This would suit the average surfer who wants to keep his/her surfboard for more than one year. The more advanced surfer would prefer a lighter weight surfboard and usually requests 1 layer of 4 ounce glass top and bottom. This surfer needs to have the lightest weight possible to meet his expectations of the surfboard and is not so concerned about life of the board. Performance is everything.

6 ounce cloth is usually used on Longer surfboards like mini mals, longboards, guns and in many cases retro surfboards because a bit of extra weight is a good thing on these kind of surfboards. This replicates how these surfboards were

made in their era. However a combination of cloth can be used on any kind of surfboard.

[Volan Fiberglass Cloth](#)

[Volan fiberglass](#) cloth is the original cloth used on surfboards. Volan has the appearance of green tint. It is much stronger than modern fiberglass which is specifically made for surfboards. The method for manufacturing a [Volan](#) cloth surfboard is much different from a modern surfboard. A [volan](#) surfboard, if looked after will last a lifetime. It is excellent for retro designs and [longboards](#) with its nostalgic appearance. [Volan](#) adds extra weight as it is a heavier cloth. Extra weight is often a good thing on [longboards](#).

[Carbon Fiber](#)

[Carbon fiber](#) is excellent for impact resistance and tensile strength. It is at least 7 times stronger than fiberglass. [Carbon fiber](#) does reduce flex. [SD carbon fiber surfboards](#) have a foam core like the regular surfboards. They can be made with epoxy resin or Poly Ester resin. We believe having a solid foam core (either Poly Urethane or Poly Styrene) makes the surfboard much stronger. Also if the board does snap you have something to keep you afloat. The upside is, it is a much stronger surfboard. A certain amount of care needs to be taken to keep the surfboard cool as they tend to retain heat.

[Carbon fiber](#) is also excellent for deck patches.

Please visit <http://www.sdsurfstore.com> and check out the surfboards we have in stock and the options we have to customize your surfboard for you.

We manufacture our surfboards on the Gold Coast Australia. We are 100% Australian owned and run.

Direct links to some of our pages.

Carbon Fiber custom surfboard

<http://www.sdsurfstore.com/carbon-fibre-boards>

Fiberglass custom surfboard page

<http://www.sdsurfstore.com/custom-boards>

Surfboards in stock

<http://www.sdsurfstore.com/boards-in-stock>

A guide on how to order your surfboard

<http://www.sdsurfstore.com/how-to-order-your-surfboard>

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