

## SURFBOARD GUIDE

Since the early 80's, the most popular and best selling surfboard design has been the high performance shortboard. But over the last four to five years, things have changed drastically and these days' surfers are much more open to experimentation and trying different designs. On an average day at Fistral say, you'll see every type of surfboard design under the sun from fishes to eggs, hybrid fun boards to classic noseriders, and quads to traditional thrusters.

In an attempt to reduce any confusion among the less experienced surfers out there or perhaps some of the diehard shortboard enthusiasts, we've written a short description on each of the major design groups including each surfboard's performance characteristics, type of surf they're best suited for, and level of experience required to get the most out of their design.

Please keep in mind that these are only rough guidelines, and each surfer is different. A few surfers may have differing opinions on certain board designs that we suggest for a particular type of wave. Each surfer's preferences and physical ability vary greatly, just like the infinite number of surfboard combinations. The goal of this board guide is to give surfers the general idea behind each design and help you make a better choice when deciding which board is best suited for your needs.

### What Type of Board Should You Start With?

I just started surfing. What kind of board should I ride? If you're a beginner, choosing the right board is easy. You really only need to consider catching as many waves as possible at this point, so don't worry about complex design elements. Instead, concentrate on getting the correct size (length, width, thickness) and type of board. Most people will tell you to get a longboard, which is good advice, but it's not your only option.

If your goal is to manoeuvre you should try a mid size funboard / mini-mal surfboard or egg shape. You'll learn to turn much sooner on a board that's a little shorter, and with the right amount of width and thickness it will allow you to catch waves as easily as you would on a long board. Having less length will also help you to spin around when you start paddling to catch a wave. Lots of beginners have problems getting into position with long boards and if they're not in good paddling condition, all that board can be a disadvantage. However, a very good skateboarder might be able to learn on a shortboard surfboard but you're better off working your way down from a fun board or an egg.

On the other hand, if your goal is to stand up and ride a wave as soon as possible, the long board will usually get you up and riding within the first few hours. We wouldn't suggest a shortboard surfboard for a beginner unless you're a parent who surfs and wants to teach your child, in which case you'll probably be pushing them into the waves from close to the shore.

The next thing to consider is the dimension of your surfboard and as a beginner you'll only need to consider length, width and thickness. Once you get more advanced there are other dimensions and design elements to learn about including outline, rocker, vee, concave, fin placement, fin template, and rail shape. But for now let's stick to the basics.

In order to maximize your surfing potential and fun, your board must fit you. For example, buying the wrong size shoes will cause all types of problems. The same is true for your surfboard.

### A basic scale to help you find the right dimensions

Here's a basic size scale to go by. A small surfer would be someone between 50 - 100 lbs, medium would be 100 - 175 lbs; large would be 175 - 250 lbs, and someone over 250 lbs would be an x-large surfer.

If you're considering a longboard, mediums, larges, and x-larges should be riding something in the 9'0 to 9'6 range. Anything longer than this is really not necessary for most beginners. A light medium or small surfer should consider a mini-mal with a length between 8'0 and 8'6.

On the other hand, if you're considering a fun board or an egg, something between 6'8 and 7'6 (in the correct thickness range) should do well for the small, medium, and large sized rider. An x-large rider would do well on an 8'0.

Thickness is the most important dimension of a beginner's surfboard because it determines how easily paddling and catching waves are. Long boards for riders in the small to medium range should be between 2 ½ - 2 ¾, for large riders 2 ¾ - 3, and for the x-large riders 3 - 3 ¼. You can use the same thickness scale for mini-mals.

For funboards / Minimals and Eggs, the small to medium rider should look for something in the 2 ¼ - 2 ½ range, for the large riders 2 ½ - 2 ¾, and for the x-large surfer 2 ¾ - 3 will suffice.

At the beginner level, the width of your surfboard will be the least important dimension. The best advice we can give you is to gauge your width by how well the board fits under your arm. To gauge this, imagine to carry the board under your arm by measuring using the dimensions on our site. You should feel comfortable carrying it though this might not work as well for very short people as you'll have shorter arms than average.

Below is a Board Selection Chart with dimensions of Shortboards and Minimals for entry and intermediate level surfers in small and medium size waves. This will help you workout what you are possibly looking for in a board.

<b>Shortboards</b>			
<b>Entry and Intermediate Level Surfers</b>			
Surfs less than 1 day per week			
Surfer weight in lbs	Board length	Board width	Board thickness
100 - 140	6' 2" - 6' 4"	18 ¾ - 19 ¼	2 ¼ - 2 ⅜
140 - 160	6' 4" - 6' 8"	19 - 20	2 ⅜ - 2 ½
160 - 180	6' 6" - 6' 10"	19 ½ - 20 ½	2 ½ - 2 ⅝
180 - 200	6' 10" - 7' 4"	20 - 21 ½	2 ¾ - 3
200 +	7' 4" +	21 ½ - 22 ½	3 - 3 ¼

<b>Shortboards</b>			
<b>Entry and Intermediate Level Surfers</b>			
Surfs 1 to 3 days per week			
Surfer weight in lbs	Board length	Board width	Board thickness
100 - 140	6' 0" - 6' 4"	18 ½ - 19	2 ¼ - 2 ⅜
140 - 160	6' 2" - 6' 6"	18 ¾ - 19 ¼	2 ⅜ - 2 ½
160 - 180	6' 4" - 6' 8"	19 - 19 ¾	2 ½ - 2 ⅝
180 - 200	6' 8" - 7' 2"	19 ½ - 20 ½	2 ⅝ - 2 ⅞
200 +	7' 2" +	20 - 21 ½	3 - 3 ¼

**Minimals**  
**Entry and Intermediate Level Surfers**

Surfs 1 to 3 days per week or less

Surfer weight in lbs	Board length	Board width	Board thickness
100 - 140	7' 0" - 7' 4"	20 1/2 - 21	2 1/2 - 2 3/4
140 - 160	7' 2" - 7' 8"	20 3/4 - 21 1/2	2 5/8 - 2 7/8
160 - 180	7' 6" - 8' 0"	21 - 21 3/4	2 3/4 - 3
180 - 200	7' 10" - 8' 4"	21 1/2 - 22 1/4	3 - 3 1/4
200 +	8' 2" - 8' 8"	22 - 22 3/4	3 1/4 +

**Minimals**  
**Entry and Intermediate Level Surfers**

Surfs 4 to 7 days per week

Surfer weight in lbs	Board length	Board width	Board thickness
100 - 140	6' 8" - 7' 2"	20 1/2 - 21 1/4	2 1/4 - 2 1/2
140 - 160	6' 10" - 7' 4"	20 3/4 - 21 1/2	2 1/2 - 2 3/4
160 - 180	7' 2" - 7' 8"	21 - 21 3/4	2 1/2 - 3
180 - 200	7' 6" - 8' 0"	21 1/2 - 22 1/4	2 3/4 - 3 1/4
200 +	7' 10" - 8' 4"	22 - 22 3/4	3 - 3 1/4

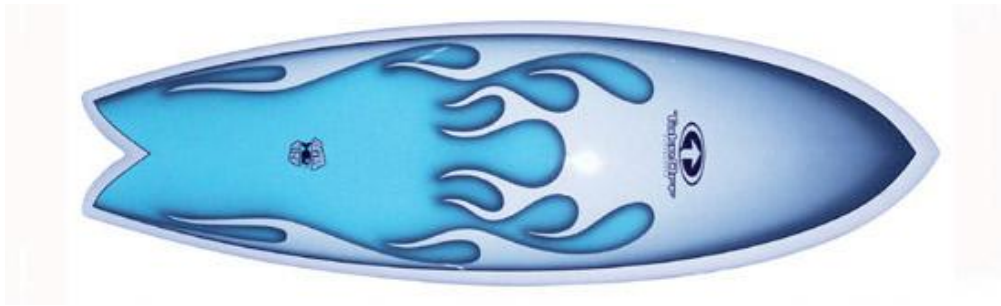
## Board Types

### Fish's

[Fishes](#) are short and wide with flat rocker in the entry and tail. The Modern Fish, also known as the Rocket Fish have three fins. However, the traditional fish (circa 1970's) was designed with twin keel fins. Fish surfboards catch waves surprisingly well despite their lack of surface area (most fishes are significantly shorter than a surfer's normal shortboard), mainly because of its flatter rocker, allowing the board to plane at a lower speed.

The smaller length of this design creates a tight turning radius, making the board better suited to small waves but the above average surfer can also make them work in medium size surf as well.

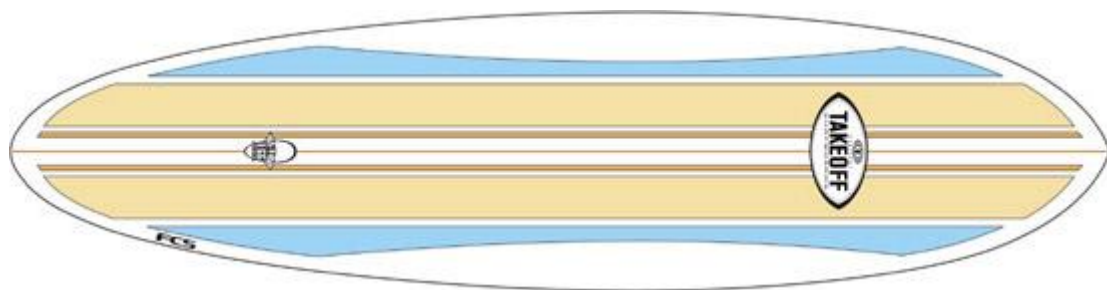
Because of the added width, fish tend to ride flat on the wave and don't transition from rail to rail very well making them difficult to surf vertically. However, the flat rocker and quick planning make this a very fast design that loves to race down the line and fly past slow sections on the wave. The fish is best for intermediate to advanced surfers.



## Egg's

**Eggs** are similar to fishes in that they have flatter rocker and plane quickly, allowing them to catch waves easily. Traditional style eggs have a single fin and today's modern design utilizes a 2+1 fin setup (large centre fin with two smaller side fins). Adding the side bites to the longer centre fin helps the rider perform harder rail turns without the fear of spinning out, which is an inherent drawback of the single fin design. Eggs also have more curves in their outline than fishes which equals better turning.

Like fishes, eggs are usually shorter than 6'0" which makes them best suited for small surf; however, the above average surfer can adapt and make this design work in medium size surf as well. Because of the added curve in their outline, eggs have a smoother rail-to-rail transition than a fish and love carving big round house cutbacks. The egg's flat rocker and quick planning ability create the same speed as fishes and are best suited for intermediate to advanced surfers.



## Shortboards

Due to the highly competitive nature of the [shortboard](#) market, high performance shortboard designs have become very generic in recent years. Most shapers play follow the leader, making only subtle changes in bottom contours and outline to differentiate their designs from one another. Most surfers lacking a trained eye in board design will not notice or feel much difference from one shaper's design to another.

Basic shortboard surfboards feature a single to double concave and three fins (thruster set-up). These boards are thinned down as much as possible creating a board that lacks floatation and offering poor paddling ability. To the novice surfer, shortboards can be very difficult to catch waves on and unless you're a surfer of considerable skill, shortboards prove to be very difficult to ride in weak/small surf. These boards are designed for performance minded surfers and are designed for quality surf.

Shortboards need to be turned continuously to generate speed and if you possess this kind of ability, you'll likely be able to do any type of manoeuvre you can imagine including airs, tail slides, floaters, reverses, etc. The shortboard design is definitely meant for the intermediate to advanced level surfer and will create serious problems for a beginner.



## Funboards / Minimals

[Funboards / Minimals](#) are aptly named because they allow the rider to focus on the purest goal of surfing which is having fun! The outline is basically an overgrown egg which is why some shapers call their funboard designs eggs. This type of board incorporates all the elements of modern surfboard design including moderate rocker and standard rail shape.

Funboards often times utilize thruster fin set ups and their ample volume and length allow the rider to paddle, catch waves, and turn effortlessly. Most shapers will agree that for average surfers, funboards provide the best of both worlds: the paddling power of a longboard and the turning ability of a shortboard all blended into one. The design works well in small to medium size surf; however, funboards lose their charm in large surf. This design is a great all around board that works well for all surfers but is best suited to the beginner or the rider making a step down in length from a longboard towards a shortboard.



## Longboards

[Longboards](#) are loved and hated by all. If you're on a longboard, you love riding them. However, if you're on a shortboard, chances are you'll hate all the longboarders in the line-up. The truth is riding a longboard puts you as close to the roots of surfing as possible. Even hot-dogging, the earliest version of high performance surfing style began on boards over nine feet long.

On a board that catches any wave with ease, you'll increase your wave count and learn, or relearn, depending on your background to appreciate the simple joy of riding a wave. Just try not to get too greedy when surfing in a mixed line-up. Because of its length, width, and thickness, the longboard is often referred to as tanks or tankers. Ironically, these are design attributes that allow any rider the ultimate in paddling ease and stability, making them the best beginner boards available. Depending on the type of surf and how the board is ridden, longboards feature a variety of fin setups from a single fin, 2+1, or thruster fin set up.

The longboard's straight rail line makes it trim effortlessly down the line but requires strength and good technique to perform. Noserider longboards are usually thick and bulky with concave in the nose while high performance designs are thinner with more rocker in the nose and tail. High performance longboards at times also utilize a concaved nose for increased nose riding ability. Most longboard bottoms utilize vee, blending from the centre and flowing off the tail while some high performance models offer vee with concave running through it for added speed. Longboards work in any size wave and for surfers of any skill level including rank beginners to life long veterans.



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# The physical characteristics of a Surfboard.

## Out lines / Templates

The outline of a surfboard is the distribution and configuration of the surface area of the surfboard. This layout is referred to as the plan shape or the template of the surfboard.

Outlines are often referenced by the configuration of specific elements of the surfboard: the tail (roundtail, roundpin, pintail, squash tail, the relative width of the surfboard (narrow board, wide board, narrow nose with wide tail, full nose with tear drop tail.)

## Rocker

**Rocker** is a dimensional curve along the bottom, top, and rail of the surfboard usually referenced from nose to tail.

**Bottom Rocker** - Dimensional curve following a straight line along the bottom of a surfboard. Bottom rocker is the backbone or foundation of a well designed surfboard.

**Deck Rocker** - Dimensional curve following a straight line along the top of a surfboard. The area defined by plotting bottom and deck rocker defines the foil or thickness flow of a surfboard from nose to tail.

**Rail Rocker** - Dimensional curve along the rail of a surfboard. This line follows the outline and the bottom of a surfboard's rail(s). The relationship between a surfboard's bottom rocker and rail rocker helps define the bottom contours of a surfboard.

## Rails

Rails are the primary interface between surfboards and waves. The volume and configuration of rails facilitate control, manoeuvrability, power, and speed. In the same manner as the other primary variables of surfboard design, rail designs will vary according to the design goals of every surfer and the various waves they ride. Rail design is a function of the physical features and technique (board management skills) of the surfer, the various waves they ride, and the other design variables and features incorporated in any surfboard.

Rail volume is significant as it must allow the surfer to penetrate or place the rail in the face of the wave when initiating turns and support the dynamic displacement of the surfer through the turns and manoeuvres they perform.

Rail configuration is significant as it accommodates the other variables included in the design of any surfboard. Fuller - boxier rails are generally applied to shorter lower volume boards. Thinner - crowned, domed, tapered rails are generally applied to higher volume boards.

## Tail Shapes

**Pintails** - Pintails are designed to provide maximum control and surface hold on the wave. They have minimal surface area and come to a point at the end with little curvature. This decreased surface area decreases the lift on the tail and allows the point to dig into the face of the wave, causing the board to "track" or maintain direction. Pintails are used almost exclusively on big wave gun surfboards, where control is the most important element. Pintails are not so manoeuvrable, but when you're speeding down the face of a 20' Waimea bomb it is more important that the board go straight and not suddenly start snaking all over the place.



**Roundpin Tail** - This surfboard tail design is a more versatile version of the pintail with a bit more width and curve. It is the halfway point between round tails and pintails, ideal for medium sized surf, anywhere from shoulder to almost double overhead. Softer curve coming to either a point or a rounded point. This tail design provides a moderate reduction in surface area to maintain control, however it is not as extreme as the pintail. Roundpin tails have less release and create smoother, more drawn out turns. This tail can be found on a variety of boards from shortboards and hybrids to longboards.



**Round Tail** - This is a smoother continuation of the board's contour, coming to a rounded end. The increased surface area helps give the board a bit more lift in the rear and allows for a looser, more turn able board. These are popular on shortboards where manoeuvrability is key. A round tail will provide more release off the top of a wave than a squash or swallow tail, however it makes square turns off the bottom or mid face a bit more difficult without a corner to work with, such as exists on a squash or swallow tail. Round tails help direct the water around the end of the board and provide more stability in hollow, fast surf.



**Squash Tail** - Very responsive, the squash surfboard tail design provides all the surface and planing area of a round tail, contributing to speed and lift and helping to maintain speed in slower spots. The rounded corners provide a bit more bite and control than the round tail, and the square end allows the board to release. The corners allow for more pivotal, abrupt turns off the bottom or on the face, but will provide less release off the top. This tail design relies on the tri-fin setup to maintain control. The squash is the most popular tail for a short board.



**Square Tail** - The square tail is like the squash, but the pointed corners create more square turns with less release and more bite.



**Bat Tail** - (sometimes called a star tail) This is rare surfboard tail design. It's a version of the swallow tail and essentially performs the same way. Helps keep the tail wider so the rails can run straighter down the length of the board. The bat tail is essentially just a cosmetic difference, as it is extremely difficult to perceive any difference between the Bat, Diamond and Swallow. Some say that the centre point of the bat tail adds a bit more stability.



**Diamond Tail** - The diamond tail is a lesser used tail design now that the squash tail has become more popular. The original intent of the diamond tail was to soften up the square tail but keep some of its speed.



## Final Word

We hope this guide has been useful and helped you in a better understanding of surfboard principles, features and surfboard design. By now the type of board you need, for whatever discipline and location should be clear. The boards that Surfing Hardware sells are ranging in price mainly because of the design and construction of the different boards. Our next guide leads to a more in depth look at the different types of board construction and technologies used by the manufacturers we use on our site. Surfing Hardware are happy to answer any further surfboard queries you may