SUPERLEGGERO

Is it possible to build a longbord with holes? Yes!

Stradivarius makes experimental longboards, different from the others that you can find in the market, we like difficult challenges and we work hard to realize them.

We started from a Stradivarius "Classic" and decided to modify it **removing material** where not necessary to reduce its weight without changing the functionality.

The first problem was: how many holes?

And: with what shape do we make the holes?

We choose for 8 triangular holes... keep on reading to understand why!



Superleggero walnut

What guarantees the functionality of the board?

- You need the place to put your foot to push.
- Holes don't have to influence the position of feet during turns and pushing.
- You don't have to get into the hole with your foot.
- The board doesn't have to be too much flexible or fragile.

The holes can't be too big, because you risk to go inside with the foot, and also the edges of the triangle must be blunt, in order to prevent the formation of cracks.

Detail on the rounded edge



Pushing position

During pushing you have the perfect place to put your front foot, in this position, all your weight body is supported by the central channel of the board. The side bands (green lines) are wothout forces!



Turning position

During turns and carving almost the whole weight of your body will stand on the tips and on the heels of your feet, because of the deep concave, in this way the board will be very reactive in turning.



Why triangular holes?

Structural optimization is that branch of mechanichs which study how to lighten the chassis mantaing the same rigidity and resistance, **saving materials**. The most common example is a **tower crane**: this is never full of material, usually is made with metal segments that form triangles!

An alternative can be circular or elliptical holes, but we didn't like this idea and prefered to make triangles with segments that follow the shape of the deck Classic.

When you want to lighten a structure you can't use holes with more than 3 segments because it will reduce rigidity and stability too much!

Superleggero Blackstone: 1190 grams deck

The consequence of removing material from the deck is that it get more flexible, for this reason we choose to increase the thickness to compensate.

The ultra-light foam core ensures lightness and absorbs vibrations, maple wood gives the right flexibility and impact resistance, carbon fiber gives rigidity without increasing the weight.

It will be difficult building a 108 x 30 cm deck lighter than this!

... But we are just thinking about building another one with maple wood at the top and painted by hand, with the same weight!



Superleggero Blackstone