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The SILCA Sicuro Carbon Bottle Cage

A Carbon Cage First - Supreme Grip Plus Ease of Use



Tuesday the 16th of October, Amsterdam - The Sicuro Carbon Bottle Cage is the result of combining Silca's 40+ years of carbon fiber engineering and manufacturing experience with their world-first 3-stage bottle cage testing protocols developed during Sicuro Titanium Cage development. True to their namesake, Sicuro (meaning secure), the design of these bottle cages was directly driven from hundreds of lab tests and analysis of high-speed video of cage behavior during these tests, plus more than a year of on road testing.

The design of Sicuro Carbon focuses on three factors: perfectly matched geometry, lateral stability and vibration damping.

The majority of water bottle ejections from carbon cages happen because the cage fails to prevent the bottle from walking upward when exposed to certain frequencies of vibration. Most companies try to solve this by increasing grip force on the bottle, making it harder to insert and remove. The problem with this is that along with wearing out bottles, the tight grip can actually hold the bottle in a semi-ejected state as it walks upward when exposed to washboard type surfaces, perfectly placing it to be ejected with the next large impact.

Using their multi-axis shake rig and high speed cameras, Silca learned they could use less grip force combined with a perfectly designed forward lip geometry and unique 'wings' on the sides of the cage to drive the bottle back down into the cage under these same frequencies. We learned that we could further eliminate walking of the bottle by adding a film of viscoelastic polymer to the layup, allowing the cage itself to reduce the vibration forces on the bottle. The result: No walking, no ejecting.



The SILCA Sicuro Carbon Bottle Cage Media kit

One of the most interesting findings to emerge from testing was the effect that cage bolts have on both bottle retention as well as cage fatigue life. Each SICURO Carbon bottle cage comes with two of Silca's [Premium Titanium Mounting Bolts](#). Each bolt is machined in one operation from 6Al/4V Titanium on a Swiss Lathe. The low-profile flange head design of the bolt distributes load across nearly 3x more surface area than a cap screw and 2x the surface area of a button head for increased rigidity and lower stress. Sicuro Carbon Bottle Cages feature the same elongated mounting slots that Silca pioneered with the Sicuro Titanium Bottle Cages.

These elongated mounting slots give you 12mm of fore/aft adjustment to account for the variance in bottle boss location across different frame manufacturers. Lastly, the bottom of SICURO Carbon bottle cages contain a unique accessory mounting platform, something Silca is excited to expand upon in the near future.

Specs:

- Unidirectional Omni-ply layup
- Exceptional bottle retention
- Extended adjustment mounting
- Low profile 6-4 Titanium mounting bolts
- 26 grams w/o bolts
- **MSRP \$70**



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ABOUT SILCA

SILCA was founded in 1917 by Felice Sacchi outside of Milan, Italy. SILCA was the first company to put gauges on pumps, the first to produce a true 'high-pressure' frame pump and the first to work with revolutionary lightweight material plastic after the end of WWII, and later the first to bring CO₂ to roadside inflation. Today SILCA is located in Indianapolis, IN where it continues to build iconic products that utilize the finest materials and craftsmanship available.

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