

Waroo Pro: Designer Q and A.

Bestkiteboarding was responsible for the best selling kite in 06 the Waroo, for 07 we're absolutely sure that we will have another best seller on our hands. So with the entire 07 product line up due to be announced soon, and questions already being asked on the web, we thought we'd ask the designer about the first of the new kites to be released, and get him to explain why it's being heralded as 'the best kite ever made'.

Q. Best kite ever made? That's a pretty bold statement.

The design brief for the Waroo Pro was to make the best performing, highest jumping, most responsive kite on the market, we knew we had to maintain maximum depower and make it incredibly user friendly. The Waroo Pro is conceived to make kiteboarding, for anyone, at any level, more fun. I know we've achieved that.



It's only natural that when you have access to exclusive materials, that enable you to do things with a design that other manufacturers can't, that you put these materials and your best ideas together to push kite performance and design to the limits. We've done that and the Waroo Pro is simply the best kite ever made.

We set about working with the material specialists at Cuben, developing and refining cloth performance beyond what any other manufacturer can achieve, the result is a custom developed material that is able to resist the high torque loads that the leading edge is subjected to and enables us to set a completely new level of expectation in kite performance.

At the same time as developing the optimal cloth blend we worked on generating and refining new kite shapes and profiles that delivered 100% of the potential performance of this new cloth.

Each and every kite in the Waroo-Pro range is designed from the ground up for maximum performance, with every size built to be the most practical and versatile 'SLE' kite on the market.

Q. How is the Waroo-pro different to the Waroo?

The Waroo Pro is a totally new design from the ground up, it carries only the basic principles forward.

The original Waroo was designed to appeal to the widest range of riders possible; it had performance and handling characteristics that exceeded what other manufacturers delivered from the basic 'BOW' design. With the Waroo Pro we have designed a kite that moves the goalposts once more and is totally unlike anything else available.

The Waroo pro is not just an improved Waroo it is a completely different paradigm and one that is enabled by our use of 'hybrid' cloths and great experience in designing specifically for them.

We've kept that broad base universal appeal that the original Waroo had, but we've tuned it up into a tighter higher performance package that is no less forgiving or versatile.

Q. Which sector of the market is it targeted at?

The 2007 Waroo Pro is targeted at kiteboarders who can stay upwind. It's targeted at anyone who wants a better kite. It's not just for "pro" riders; the use of "pro" in the name simply signifies that this is a kite with Cuben Fiber Genesis material in the leading edge.

From a technical viewpoint it is an exploration of the limits of current kite design.



The fact that we've decided to call it the Waroo Pro, rather than give it another name, shows the faith we have in its mass appeal.

Q. How long has the Waroo-pro been in development?



The Waroo Pro is the latest culmination of Best Kiteboarding's extensive research and development efforts; in reality it's been in development since we first tried Cuben Fiber in a kite 2 years ago.

The new '**Genesis**' custom leading edge material has been a work in progress since we started developing with Cuben; it takes a long time to make things perfect.

Development is always a rolling process so it's unrealistic to try to give everything hard dates. More R&D and testing time has gone into the Waroo Pro than any other kite we've made up to this point.

Q. Where did the development take place?

We've split development around the world this time. A lot of the R&D and all of the final testing always takes place in Brazil. We've also spent a significant amount of time in Australia prototyping new designs and developing and analyzing canopy profiles and kite shape.

We move the R&D base to wherever is best suited for the task at hand, but there's few places on earth better than Brazil for consistent winds and logging riding time on new designs.

Q. Why was it decided to add a kite in the range above the Waroo?

The Waroo Pro is so far ahead of what's available anywhere, that we had to launch the kite, its construction and performance demand that it sits above the Waroo in the range.

Q. What features are new on the Waroo Pro and what do they add to the kite?



The most important single feature on the new kite is the Hybrid leading edge, but there are numerous features that add to the performance of the Waroo Pro, some of these are unique to the Waroo Pro but many of them are seen in the entire 07 range.

The new '**Genesis**' fabric has some exceptional properties, unlike the basic Cuben cloth this custom fabric has a little flex built into the lay-up, but it is tuned to give an incredibly fast rebound, this gives a fast response to torsion loading from the bar and an incredibly agile kite. One of the things we noticed from testing was that the kite spends so much less time flexing back from a turning input

that the kite just feels sharper and tighter all the time. The huge increase in torsional rigidity and in tensile strength over Dacron allows us to build a thinner and higher performance leading edge, which also benefits the kites' auto-relaunch capabilities.

As well as the new Leading edge material we've also introduced exclusive Canopy Framing Technology, '**CFT**'. The entire canopy is framed with higher load bearing, stretch proof material that works in conjunction with the Cuben Fiber in the leading edge to achieve a more responsive kite and a more durable kite. Best's unique Canopy Framing Technology increases the performance, responsiveness and life expectancy of the kite.



The 2007 Waroo Pro is also the first kite in Best's 2007 line up to use 'Profile Shapers'; these battens maintain optimal chord curvature in the front of the canopy. Profile Shapers increase the performance of the kite in many ways by lowering drag and enabling a firm profile shape regardless of the angle of attack of the high

performance wing. Best's Profile Shapers make for a more stable kite in any condition; improving jumping ability and hangtime as well as hugely increasing upwind ability for riders of all skill levels.

The Waroo Pro is just lighter, faster, stiffer, better.

Q. How does the new cloth handle the rough stuff?

'Genesis' has the abrasion resistance of Dacron but the tensional strength of pure Cuben, it's an amazing hybrid. It weighs less than Dacron and we can use a minimum of 30% less in each leading edge due to the strength. For out and out performance and durability there is nothing that comes close.



Q. The Waroo Pro is a fully bridled SLE, how does that differ from hybrid kites?

We tried other LE support configurations on the Waroo Pro and running a 5th line just doesn't give the structural support that such a flat kite really needs. A 5th line is fine for a hybrid c-shape, if what you want is a c-shape with more depower, but if you want 'all' the performance of a true 'SLE' design, then you need to support that shape with a bridle unless you are willing to compromise performance stability and safety.

A Waroo Pro has no 5th line to wrap around the kite if it gets rolled in the waves, and as a result can be flown more safely in a wider range of conditions.

Q. What have you done to improve bridle durability, the bug bear of all SLE kites?

For 07 we have specified a much thicker, more highly abrasion resistant line for the pulley sections of the bridles. These replaceable centre sections, made from spectra rope, will keep you running smoother for longer and with less wear.

Q. Five struts or seven struts?

Once again we've stuck with the five strut design that we proved with the Waroo, it gives more than enough canopy support, especially when you factor in the added stiffness that comes from the new LE configuration.

Five struts allow for much smoother under canopy airflow, this improves upwind efficiency and reduces drag; there would be no benefit to having 7 struts in the Waroo Pro design.

The Waroo started the trend for 5 strut 'SLEs'- the Waroo Pro makes this the standard.

Q. What are the benefits of leading edge battens?



The Waroo Pro '**Profile Shapers**' help prevent canopy flutter when the kite is pushed to maximum depower angles, these also help hold the canopy shaping giving a more accurate, more efficient kite right across the wind range. With many riders pushing the upper wind limits of their SLE kites regularly it pays to give them the most stable and forgiving design you can make.

The leading edge '**Profile Shapers**' are pocketed in a high tenacity cloth, this is separated from the canopy cloth by EVA padding, all covered with carefully designed smoothing patches that guarantee zero line snagging.

Q The Yarga and Nemesis Pro designs had a unique leading edge seam. Is this used in the Waroo Pro?

We've taken the leading edge seam and made it better, stronger and tougher.

The LE-closure on the Waroo Pro has been moved backwards from the inner radius of the incurve of the LE, and rotated it back towards the canopy. This puts the seam out of the airflow, giving improvements in air speed across the underside of the canopy.

The new **“Load Flex”** seam also has a webbing taped outer cover that acts as compressive bedding for the stitching, enabling us to take the LE to much higher inflation pressures than was previously possible without risk of seam failure.

Q. What makes the Waroo pro different to other ‘SLE’ kites?



Best has probably spent more time and money developing the 2007 Waroo Pro and its components than the rest of the top five kite companies combined.

The Waroo Pro has the most accurately shaped and carefully designed airframe and canopy on the market, there isn't another kite out there that has benefited from the attention to detail that has been lavished on the technical aspects of the Waroo Pro.

Q. How does it jump?

It's the easiest and best pure jumping kite on the market. The Waroo Pro has the explosive "pop" of a C kite while maintaining all the fantastic attributes of a flat kite. It really is the best of both worlds, the 2007 Waroo Pro represents

a new era in kiteboarding - our sport just got a whole lot more fun. There is no “getting used to” riding and jumping this kite, from your first jump, you'll fall in love.

Q. How do the improvements in efficiency help the upwind ability?

Reduced drag combined with increased power from any given canopy size all contribute to the Waroo Pro's exceptional upwind ability. Any rider from Pro to beginner will notice this the first time they try a Waroo Pro.

The thinner Cuben Fiber leading edge along with the **‘Profile Shapers’** allow the kite to cut through the wind faster, allowing riders to point upwind at crazy angles compared to any other kite. The 2007 Waroo Pro goes upwind so well, it will enable the average rider to throw 1-2 more tricks per tack.



Q. How does it relaunch?

The Waroo Pro is a cinch to relaunch, but additionally, it's so stable you'll have to 'put' it in the water. When the kite is leading edge down in the water, simply tug on one rear line and the kite will flip over ready for relaunch.

Q. How does it depower?

The Waroo Pro generates more power per square metre than the 06 Waroo, with the improvements in efficiency and shaping it's also able to deliver greater depower. Improvements in stability mean that more of this depower is available to riders more of the time, with less penalty in stability than any 'SLE' kite.

Q. How safe is the Waroo Pro for beginners?

Improved stability and depower make the Waroo Pro more inherently safe, the new 07 Waroo Pro bar, coming soon, will take this even further with greater flexibility in leashing options and improvements in QR design. The new bar is the most flexible control solution on the market; we believe it will be the standard for 07.

Q. Can you sum the Waroo Pro up in a few words?

The Best Kite Ever Made.