



NOT ALL CARBON IS CREATED EQUAL



3K WEAVE



1K WEAVE



Uni Direction Pre-Preg

Trigon has been a manufacturer of carbon products for the last 25 years. However, the owners and workers have near 30 years of experience in manufacturing and designing carbon layup.

Trigon has sourced the best carbon in the world. Then we have taken their knowledge of the properties of each weave. Its strengths and weakness and has been able to choose the best carbon layup for our frames and components. The 4 different carbon choices of Trigon have been carefully selected and Trigon has found a unique, strong resin that has helped aid to create the strong, unique light products that Trigon is known for producing.

All carbon components are hand wrapped, so the details of production and layup are crucial. Trigon has learned how to reduce the weight and increase the strength or products by the use of the proper carbon layup. Something that can only come from experience and Knowledge.

Proprietary Technologies

TRIGON has its own high-grade materials and technology to optimize composite design and fabrication.



NCC-Nano Carbon Composite

Nano Carbon- The next level of carbon material! Nano carbon is stronger, more flexible and lighter than our Venus C 8 composite. The nano carbon allows our engineers to build stronger, lighter, stiffer carbon parts with a higher strength than before. It is 27% stronger than other carbon materials. It is also more flexible and has a higher fatigue resistance.



VENUS C8-Carbon Composite-The new generation

Venus C8 carbon fiber with additives developed a Super strength, Super-modulus and Super-fatigue strength material. Resulting in even greater strength to weight ratio and an approximate 20% improvement over the mechanical properties of Trigon's Venus C7 composites.



VENUS C7-Carbon Composite

High modulus and high strength prepreg raw material, cured at a high temperature using TRIGON proprietary forming techniques, producing a composite with unsurpassed fatigue resistance and vibration dampening.



FDC-Flex Directional Fusion

Careful fiber orientation allows us to tune lateral stiffness, vertical compliance, toughness and dampening properties of the carbon.



ENCRIM-Carbon-Alloy Fusion

tough aerospace adhesives with precision designed and manufactured alloy interfaces.



HIPACT-High-Pressure Solid-Compaction

By using solid inner forms during the curing stage, compared to typical air-bladder processes, we produce high-pressure compaction which means more consistent products with denser material and minimal voids.

Structural Forms

TRIGON from proprietary composite materials into optimized structural shapes, optimized for bicycles.



OBLIX- Geometric Cross-Sections

Tubing cross-section varied in shape depending on the needs of strength, stiffness or compliance.



MONO-BOX-Chain Stay Box Structure

Both chainstays are formed as a single mono-stay unit with a massive box-section connected to the BB shell for extreme lateral stiffness.



INTEGRATED-Unified Structures

Integration of frame parts and components, made feasible by composites, having high-strength, low-weight and striking style.

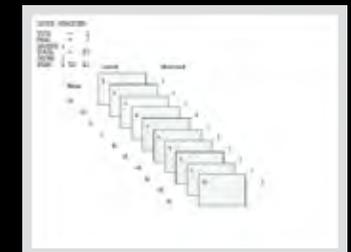


FEA-Finite Element Analysis

Trigon engineers, make use of sophisticated computer software, to establish design optimization through a process of virtual and error estimation. This enables the best possible strength to weight ratio, carbon lay-up and design improvement to manufacture safe but high performance products.



Finite Element Analysis (FEA) Results





Trigon is not only a brand, Trigon is the factory.

Being the factory and not just a brand outsourcing our products, we have the ability to oversee the entire process of our production line and ensure the quality is up to our standard. Not only does Trigon design and develop our own designs in house, we also have all our own testing machines and ensure each and every handlebar, stem, carbon tube, frame, fork etc passes testing. Every item is tested to ensure that its strength passes a machine pressure test. Trigon's testing process is not only meeting EN standards, but we test our products to EN standard plus an additional 30% higher. 1% of production is tested. So for example, out of every 100 frames, 1 is put through the full stress testing to ensure the production is up to our quality control standards.

By being a factory well established in Taiwan, our employees average time of employment is 10 years. We believe that by staying stable and having experienced employees we are able to offer the highest quality carbon products in the world.

Trigon also does all our painting in house. This way, we can ensure the quality of painting meets our standards and quality control is very stringent.



RoHS standard

TRIGON products compliance with RoHS standard by SGS