

# Guaranteed riding fun

Bike manufacturer develops high-performance bikes with Solid Edge from Siemens PLM Software



For the design of the components, which are often made of carbon, Pyga uses the design software Solid Edge from Siemens PLM Software.

## Pietermaritzburg/South Africa.

South African company Pyga Industries (Pyga) develops and manufactures high-performance bicycles that are great fun to ride yet competitive on the racetrack. The bikes from Pyga are up among the best in terms of performance and quality. When it comes to design, in addition to pedaling efficiency and agile ride comfort Pyga places great value on incorporating the latest leading edge technologies and materials such as carbon. To simplify the design process and to allow for last minute changes, Pyga uses Solid Edge from Siemens PLM Software. As a result, development times can be reduced from around four months to two and a half months, and short-term adaptations even to advanced design phases can be rapidly implemented.

Patrick Morewood and Mark Hopkins are both passionate mountain bikers, and they founded Pyga Industries (Pyga) in 2011 in South Africa. The company has subsidiaries in the UK, Germany and the USA and specializes in the development and production of high-performance bikes that are among the very best in the

world. Pyga bikes impress particularly with their combination of fun and competitiveness, which is based on high pedaling efficiency and agile ride comfort. The current portfolio comprises five types of full-suspension bikes, and two hardtail versions on which only the front wheel has suspension. In order to optimize the development process and development times, reduce time-to-market and implement complex frame designs under kinematic aspects – i.e. aspects relating to motion and aesthetics – Pyga uses Solid Edge from Product Lifecycle Management (PLM) specialist Siemens PLM Software.

## *Exacting standards*

“Most bicycle companies design their bicycles outright for performance and speed,” says Patrick Morewood. “At Pyga, however, we put a lot more emphasis on making our bikes fun and comfortable to ride.” Pyga does this primarily by relying on innovative technologies and materials in the development and construction of the bikes. The switch from conventional components made of aluminum to compo-

nents made of carbon offers design engineers more freedom in the development and design of the bicycles. At the same time, this greater freedom also demands highly sophisticated design software. Previous CAD (computer-aided design) software was inadequate, particularly when it came to imported CAD models and when creating different size variants. Here, Solid Edge is a user-friendly solution that offers a tangible boost to efficiency. The parametric design tools from Solid Edge are particularly well suited to the rapid scaling of sizes, and with Synchronous Technology it is possible to quickly make changes to CAD models from any source via direct modeling. This additionally reduces the time it takes to create prototypes.

#### *Faster and better*

Thanks to Solid Edge, Pyga now has more design options at its disposal than before. At the same time, it further improves the performance, aesthetics and quality of the bicycles. "The implementation of Solid Edge 3D CAD software with options for designing complex surfaces allows us to create the complicated designs of our high-end carbon composite bikes and to redesign our existing aluminum models," sums up Morewood. Instead of spending three to four months on a new frame design, with Solid Edge the developers now only need two and a half to three months. Last-minute changes no longer take a whole day but just two to three hours, which leads to a shorter time-to-market.

With this Siemens solution, Pyga is able to significantly reduce the development time for new frame models and prototypes and therefore to shorten the product launch time.

Pyga Industries has been developing high-performance bikes since 2011 that are great fun to ride yet competitive on the racetrack.



#### PLM

[www.siemens.com/plm](http://www.siemens.com/plm)

#### Solid Edge

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