

Grower Econical®: Combining innovation and sustainability

With the launch of its new Grower Econical® washer during Fastener Fair Global, as well as the celebration of its 75th anniversary, Growermetal SpA is focusing on sustainable and innovative fastening technologies that will set the way for the years to come.

Officially unveiled during Fastener Fair Global, Grower Econical® is the most recent addition to Growermetal's portfolio of branded solutions.

Developed entirely in-house by the R&D team, the new washer represents an evolution of the standard conical washer design according to DIN 6796 or NFE 25-510 standards, offering a balanced combination of performance, lightness and surface protection.

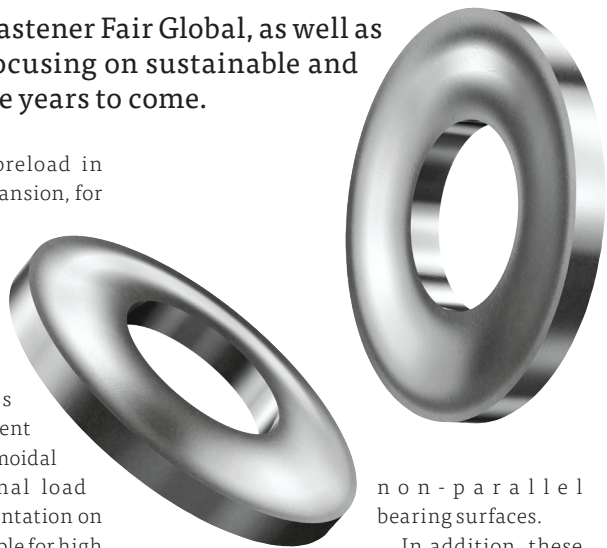
Paolo Cattaneo, CEO of Growermetal, explains: "Grower Econical® is our latest evolution of conical spring washers and is a combination of innovation and sustainability which are the two main milestones of the fastener industry. Our R&D team have created a product with higher performance, less weight, a smaller carbon footprint, as well as being cost-effective."

Grower Econical® features a sigmoidal geometry to improve mechanical performance, while significantly reducing weight. According to internal testing and simulation data, the new design demonstrates 20% less weight compared to conventional conical washers, resulting in raw material savings and a reduction in the product's environmental footprint. The data also reveals 25% more spring force especially near the flattening point, improving resilience under dynamic loads. In addition, the Grower Econical® demonstrates 15% higher residual deflection after load release and improved elastic recovery, which enhances the bolted joint's ability to compensate for

gaps and maintains the bolt preload in presence of heat and thermal expansion, for long-term reliability.

"This solution goes beyond incremental improvement: it rethinks how conical washers should behave in terms of mechanics, material efficiency and sustainability," explains Filippo Pia, new product development manager at Growermetal. "The sigmoidal shape not only ensures optimal load transmission but also avoids indentation on the clamped parts, making it suitable for high performance and sensitive applications where weight reduction and durability are critical, or wherever thermal expansion compensation and the elimination of clearances are needed."

Grower Econical®'s was also recognised during the 2025 edition of the prestigious Route to Fastener Innovation Competition, hosted by Fastener + Fixing Magazine, where it was awarded 1st place among the 20 participants. This was Growermetal's third consecutive success at the contest, following 3rd place in 2019 with Grower TenKeep® - a patented safety washer with two knurled surfaces of different designs offering enhanced locking capability via opposing teeth profiles, ideal for dynamic assemblies prone to loosening; and 2nd place in 2023 with Grower SpheraTech® - an innovative preassembled set of a spherical top washer and a conical seat washer, designed for safe locking function on



non-parallel bearing surfaces.

In addition, these innovations strengthen a growing legacy of proprietary fastener solutions developed by Growermetal over the last decade, which also includes the Grower Detecto® - a monitoring system with sensorised washer featuring a smart sensor embedded in the product, which enables live detection and evaluation of bolt status and loosening; Grower Reaction® - as part of a fastening system that provides full dispersion of the reaction torque, the product is used in combination with Grower TenKeep and eliminates the need for reaction arms during application, improving safety, accuracy and speed in industrial applications; as well as the Grower OhmLock® - engineered for electric mobility, this conical washer is ideal for EV underbody assemblies and battery pack applications, as it provides optimal electrical conductivity while showing high resistance to oxidation and corrosion.

"This evolving family of products illustrates how Growermetal transforms standard components into high performance, application specific solutions," explains Michela Mauri, marketing manager at Growermetal. "Each branded washer represents the union of mechanical engineering with market insight, what we call 'designing with function in mind.'"

International Paris Air Show

Fresh from the success at Fastener Fair Global in Stuttgart, Growermetal is already preparing for its next major international showcase - the International Paris Air Show 2025, taking place from 16th - 22nd June in Le Bourget, Paris. +

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