



Growermetal: Securing the future

Developed through years of research and testing, as well as an underlining commitment to innovation in order to meet the evolving needs of the fastening industry, Growermetal SpA now offers six reliable safety critical fastener solutions: Grower TenKeep®, Grower SpheraTech®, Grower Reaction®, Grower Detecto®, Grower Ohmlock® and the Grower Econical®.

Together, these six branded products represent Growermetal's 'branded line', as well as its ongoing effort to push the limits of fastening technology. The Italian manufacturer is committed to developing solutions that are not only technically advanced, but also practical, safe and future oriented.

Designed to ensure exceptional locking performance under dynamic loads, the original member of the branded line is the Grower TenKeep® flat safety washer. This washer guarantees the highest level of safety in joints subject to strong vibrations. Its unique geometry with combined conical and flat surfaces ensures double locking action and durability.

Next up is the Grower SpheraTech®, which is ideal for connections on non parallel or irregular surfaces as it compensates for angular misalignments while maintaining even load distribution. The Grower SpheraTech® is an assembly set consisting of a spherical washer and a conical seat and is the preferred choice in applications where precision assembly and mechanical integrity are critical.

Also available is the Grower Reaction®. Developed to ensure maximum operator safety, Grower Reaction® allows the mounting and tightening of bolts without a reaction arm, simplifying the process and reducing the risk of strain injuries. The solution has been widely appreciated in assembly lines where ergonomics and speed make a difference.

Furthermore, the Grower Detecto® is a 'Smart' washer equipped with a built-in sensor capable of monitoring the status of bolted joints in 'real time'. By using advanced algorithms, it detects any loosening or anomalies and sends an alert, making it ideal for predictive maintenance and safety critical applications.

The penultimate washer in the branded family is the Grower Ohmlock®. Born as an innovation of Growermetal's R&D team for Electric Vehicle (EV) battery pack applications, Grower Ohmlock® brings together electrical conductivity, corrosion resistance and mechanical strength. Its dual surface geometry, with knurling on the top side and embossments on the bottom, ensures efficient energy transfer and long-lasting protection, making it a key component for the eMobility sector.

Finally, Growermetal's latest innovation to the branded family is the Grower Econical®. Winner of Fastener + Fixing Magazine's Route to Fastener Innovation Competition during Fastener Fair Global 2025, Grower Econical® represents Growermetal's most sustainable innovation yet. Developed with optimised geometry and lighter



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materials, it reduces the overall environmental footprint while maintaining the same standards of resistance and reliability.

"Behind each of Growermetal's branded solutions lies a combination of experience, innovation and technical excellence," proudly states Paolo Cattaneo, CEO of Growermetal. "Behind every component there's a world of research, expertise, and people who turn complexity into precision – driven by the Growermetal Innovation Centre. That vision has guided the development of six products, each designed to meet specific industrial challenges while sharing the same mission of delivering safety, performance and reliability."

This commitment to innovation is further reinforced through strategic partnerships with institutions such as the Politecnico di Milano. Together with the university, Growermetal has been working on two research projects that perfectly embody its technological vision.

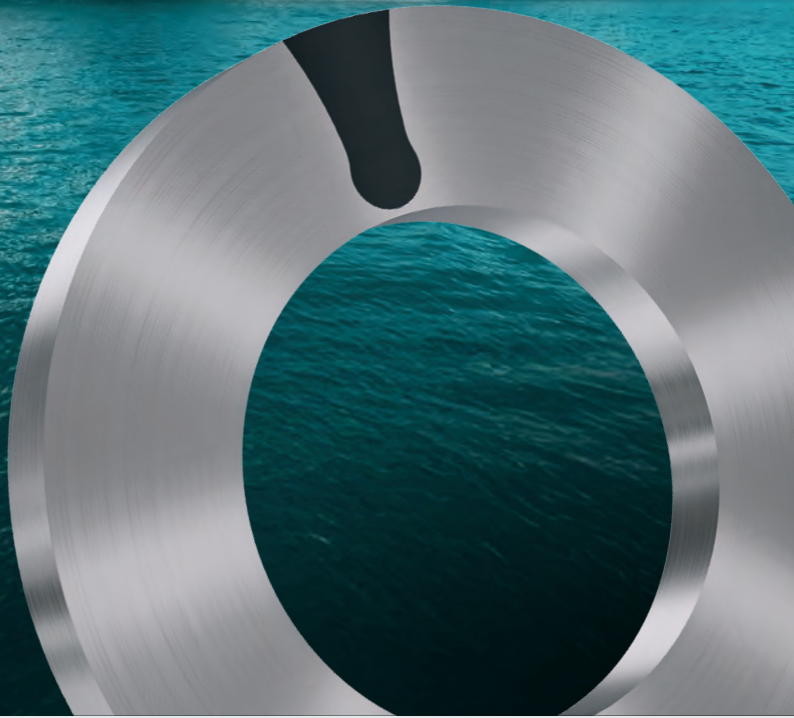
The first is Artificial Intelligence (AI) based analysis of technical documentation, aimed at accelerating quotation processes and improving the precision of project evaluations. The second project focuses on data analysis for Grower Detecto® systems, using AI to interpret large data sets and strengthen the predictive capabilities of this 'Smart' product.

"We don't innovate to replace human experience, but amplify it to make every decision faster, more informed and more effective," highlights Paolo. "This mindset positions Growermetal at the forefront of digital transformation in the fastening industry, blending mechanical engineering excellence with the intelligence of data. As the fastener industry evolves, driven by new technologies, sustainability goals, and global connectivity, Growermetal continues to stand out for its ability to unite technological excellence and human value." +

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KEEP YOUR SAFETY UNDER CONTROL

**GROWER
DETECTO®**
LIVE BOLT MONITORING



SMART SENSORIZED WASHER

Grower Detecto® is a **smart sensorized washer** for bolt monitoring, made of a smart sensor embedded in the washer. This system allows a live **detection of the**

bolt loosening and the **evaluation of the bolt joint connection status** through an Electrical Mechanical Impedance method.

**DISCOVER THE
FULL RANGE**

