

ON THE RIGHT TRACK

Safety, integrity and reliability are crucial for the fasteners and other items used in the rail sector. We look at some of the organisations meeting these strict demands via technology and innovation.

GROWERMETAL'S TAILORED SOLUTIONS FOR RAILWAY NEEDS

In the realm of railways, every component is crucial in maintaining the integrity of the railroad system. Growermetal, renowned for its precision washers and parts, addresses the rail sector by combining its 70-year-long expertise in washer design with the in-house manufacturing system.

Through investments in cutting-edge technologies, the fastener company delivers solutions that exceed industry standards, developing parts on customers' drawings and integrating the range with branded designs. In this process, attention is given to the conditions of rail operations, subjected to constant vibrations and heavy loads. To meet the requirements of the industry and prevent bolts from loosening or failing, the fastener firm has developed a complete line of safety washers and coiled spring washers in different designs, materials and dimensions, which can be combined with surface treatments and coatings for improved performance.

A COMPLETE PORTFOLIO OF WASHERS AND PARTS

Growermetal's range for railway tracks includes:

- Single, double and triple-coiled spring washers: widely used in railway applications, these spring washers allow the absorption of dynamic loads caused by train transit. The version with ribbed bearing surface combined with a peculiar geometry, provides the parts with a great fastening performance avoiding any risk of cracking. In addition, Growermetal manufactures spring washers according to the UIC 864-3 standard, meeting the request of the European markets. Targeted for the US market, single coil springs are in accordance with the American Railroad Engineering Association standard (A.R.E.A. 1967) completing the railway portfolio.
- Conical elastic Contact and Sperrkant washers: these ribbed washers are designed to create an elastic pre-load in a bolted-joint connection, reducing the risk of unwanted loosening. For this, conical Contact and Sperrkant elastic washers are particularly suitable for electromechanical applications subjected to temperature variation and requiring vibration resistance.
- Conical elastic washers for bolts: used to prevent loosening of assemblies by the elastic compensation of expansion and contraction and the elimination of play.
- Flat washers for bolts: ideal for broader uses, they prevent surface damage from nuts and bolts and provide a greater load-bearing surface.



COMBINING KNOW-HOW AND INNOVATION

"Around Ideas" is the Growermetal motto: an approach that inspires continuous research and innovation. In the last five years, this attitude has led to the creation of exclusive designs, like Grower TenKeep®.

Introduced in 2019, this flat washer has knurls of different geometry on the two surfaces, maximising the performance against loosening of the bolted joints while avoiding damage during the tightening or untightening procedures.

Furthermore, the range is supplied with the zinc flake coating Delta Protekt® KL120, which guarantees a corrosion-resistant performance of 1,000 hours minimum in neutral salt spray (NSS) tests according to ISO 9227. Zinc-flake coatings are particularly suitable for railways applications even in environments with presence of water and humidity, such as in railway tunnels, as they provide outstanding quality with a complete line of base and top coats available. During the coating process no hydrogen is produced and thus there is no danger of any embrittlement due to the application process, ensuring protection against corrosion.

These coatings are performed by Growermetal in-house on a fully automatic coating line specifically designed for washers and railway springs, to guarantee the highest quality of the coating itself and the maximum performance of the product during its use.

Growermetal at InnoTrans 2024

Trade shows are a great opportunity to discover the complete range of rail solutions offered by Growermetal. Among the next events, there will be InnoTrans, the world's leading trade show for transport and rail technology which takes place every two years in Berlin. From 24-27 September, visitors will have the opportunity to discover the made-in-Italy product line of the company at booth 415 hall 8.2 of the Berlin Exhibition Grounds.

The participation is significant for Growermetal's next evolution, as it represents an opportunity to get in touch with participants from all over the world and discover the latest technologies and trends for the sector. As InnoTrans approaches, Growermetal's commitment to innovation stays strong, setting the stage for groundbreaking developments in railway solutions.

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