



Growermetal's evolution in the aerospace sector

Through innovation, quality, reliability, as well as obtaining EN/AS 9100 accreditation for its quality management system, Growermetal's history has been characterised by constant investments in the aerospace and defence sector – with the company stepping into a new phase of its evolution.

Thanks to its 70 year long expertise in parts development and manufacturing, the Italian manufacturer offers a wide portfolio of fastening solutions for the widest uses and the most challenging applications, including automotive, railway, construction, transportation, electromechanics, power generation, oil & gas, industrial and aerospace.

The aerospace sector in particular has become central since 2021, which is when Growermetal achieved EN/AS 9100 certification for its quality management system – aligning with the aerospace specifications. This accomplishment represented a significant milestone for Growermetal, as it opened the doors to aerospace and defence markets – setting the company among the most authoritative suppliers in the industry.

Two aspects in particular have contributed to this goal. Firstly, the company's ongoing investments in research and innovation have given life to more and more efficient solutions, leading to the participation in important projects and to the launch of new designs. Secondly, the solidity of the in-house structure and the variety of services make Growermetal stand out as a reference point for customers looking for reliability and flexible solutions.

All this, together with the activity of the two sales branches of Growermetal Do Mercosul in Brasil and Growermetal USA in North America, has contributed to the creation of an international network and to the growing use of Growermetal products for aerospace applications worldwide.

An overview of aerospace and defence

"To understand the recent evolution undertaken by Growermetal, it may be useful to give a brief look at the context of the aerospace and defence market," explains Paolo Cattaneo, CEO of Growermetal SpA. "Domestic commercial aviation lived an upward tendency in 2023, and the aerospace and defence sector in general witnessed a recovery in product demand. The market growth is expected to continue in the next few years, forcing companies involved in the aerospace and defence supply chain to deal with new challenges."

Paolo continues: "The integration of digitalisation and cutting edge technologies in the process will be pivotal in this scenario, where reliability, safety and precision reign supreme. The digital transformation is expected to boost the creation of innovative products and enhance the logistics system – while minimising issues and compensating for longer lead times. At the same time, the unavailability of materials after the pandemic has been causing delays

in production and delivery – consequently causing a rise in costs. Therefore the shortage of raw materials will likely remain an issue for the manufacturers of components around the world."

'Just in Time' philosophy

To deal with this challenging context, Growermetal feels the need to support customers with enhanced services. By maintaining a stock of raw materials and finished products, the washer manufacturer is able to manage potential lack of resources and minimise lead times in this complex situation.

Inaugurated in 2013, the automated warehouse is the expression of Growermetal's focus on customer satisfaction, which has always characterised the company's approach. With its self-supporting structure of more than 1,500m² of automated area, 11,000 storage locations, 17 storage levels, as well as five laser-guided shuttles and stacker cranes, the warehouse handles more than 4,000 items – moving the goods back and forward in an average 800 missions per day.

"Recently, this capacity has been improved through the combination of the packaging department, which has simplified the handling of the products, while expanding the possibilities of customisation," points out Paolo. "All this contributed to a rise in flexibility, which is pivotal for highly demanding sectors such as aerospace and defence."

Such a structure also ensures a 'Just in Time' service, in-line with the requirements of the aerospace ever-evolving market. This enables the company to bring many advantages, including a reduction >>



» of operating costs, while limiting waiting times, as well as easier monitoring and tracking of goods, plus increased production efficiency.

Digitalisation of the supply chain

Another imperative aspect to take into account is the digitalisation of operations. Applied in the production or delivery process, digital technologies open the way to more efficient products and operations, which are essential when addressing the aviation industries that are regulated by demanding requirements and norms. However, to welcome and accelerate this global transformation the suppliers of the aerospace and defence sector are called to modernise their plants, tools and processes. The forward-looking investments in innovation and R&D of Growermetal suit this need, shaping a highly efficient manufacturing system.

From tooling design to surface finishing, every step of Growermetal's integrated production is monitored and carried out to guarantee the alignment with the demanding standards of aerospace, where reliability, safety and precision are mandatory. For instance, in order to eliminate foreign parts and non-compliant parts, mechanical sorting and optical sorting, with sophisticated camera systems, are delivered in-house. In addition, Growermetal's variety of services is combined with the constant upgrading of machinery, as shown by the commitment to equipping internal laboratories with the latest generation of measurement devices. The investments in research and development activities not only enabled the creation of a branded range of washer designs (that include Grower TenKeep®, Grower SpheraTech®, Grower Detecto® and Grower Reaction®) but also encouraged collaboration with partners and universities.

A wide range of solutions for aviation and defence

When it comes to the Growermetal offer, the range of products available includes special stamped parts tailored to customer requirements, as well as flat washers, spring washers, and safety washers, designed by the company's engineers to meet aerospace standards such as MS (Military Standard) and NAS (National Aerospace Standard).

The versatility of Growermetal's offering for aviation extends to the variety of raw materials available, ranging from steel, carbon steel, aluminium, titanium, inconel, brass, copper, bronze, stainless steel, and CRES materials, with an array of surface treatments. Customers can choose from electrolytic zinc plating, cadmium plating, passivation, anodisation, black oxide, mechanical zinc plating, and phosphating, among others, ensuring that their specific needs are met with precision.

"Aerospace applications are subject to high vibrations and extreme environmental conditions, necessitating adherence to rigorous international certifications and standards even down to the smallest detail," reports Paolo. "To further ensure quality, transparency is paramount, which is why we provide customers with all the necessary technical and quality assurance documentation, aligning with the stringent requirements of the aerospace supply chain."



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Present and future projects

Guided by the commitment to the aerospace sector, Growermetal has been forced to reinvent its production models and approach in a transformative way – whilst still maintaining the focus on its flagship products. In this evolution, the relationship with important players of the industry, research centres, and universities, was central and contributed to the creation of an innovation oriented network.

In 2023, another acknowledgment of Growermetal's commitment to the aerospace industry was the company's adherence to the Lombardia Aerospace Cluster, a network that includes more than 100 companies, universities and research centres.

Looking at future steps, participation in important external projects comes along with internal strategic investments, as shown by the building of the GIC – Growermetal Innovation Center. "Started in 2023, this new multifunctional building will be inaugurated in 2024 – becoming central for future projects. It will include new areas dedicated to research and development, laboratories, classrooms for training and spaces for sharing ideas and projects, opening the way to unexplored opportunities for aerospace and defence customers," reports Paolo.

Showcasing capabilities

To promote its services and consolidate its role in the sector, Growermetal has been focusing on some of the most important aerospace international exhibitions worldwide. The company has already taken part in a number of US shows, including HAI HELI-EXPO in Anaheim, Aerospace & Defense Supplier Summit in Seattle and MRO Americas in Chicago, as well as the new edition of the Aerospace and Defense Meetings in Sevilla, Spain.

Growermetal will also be travelling to the United Kingdom with the Lombardia Aerospace Cluster, to join the Farnborough International Airshow. The event will take place from 22nd – 26th July at Farnborough International Exhibition & Conference Centre, bringing together the major international players of the aerospace and defence industry, from SMEs to multinational organisations.

The last pivotal event for the entire aerospace supply chain will be AEROMART 2024, 3rd – 5th December, which will connect OEMs, suppliers and manufacturers at Meett Exhibition Centre in Toulouse, France. Featuring more than 1,200 companies from 40 countries, this event will represent in 2024 the final chapter of Growermetal's journey and another valuable occasion for the manufacturer to introduce its latest products and get in touch with new trends in the aerospace and defence supply chain. +

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