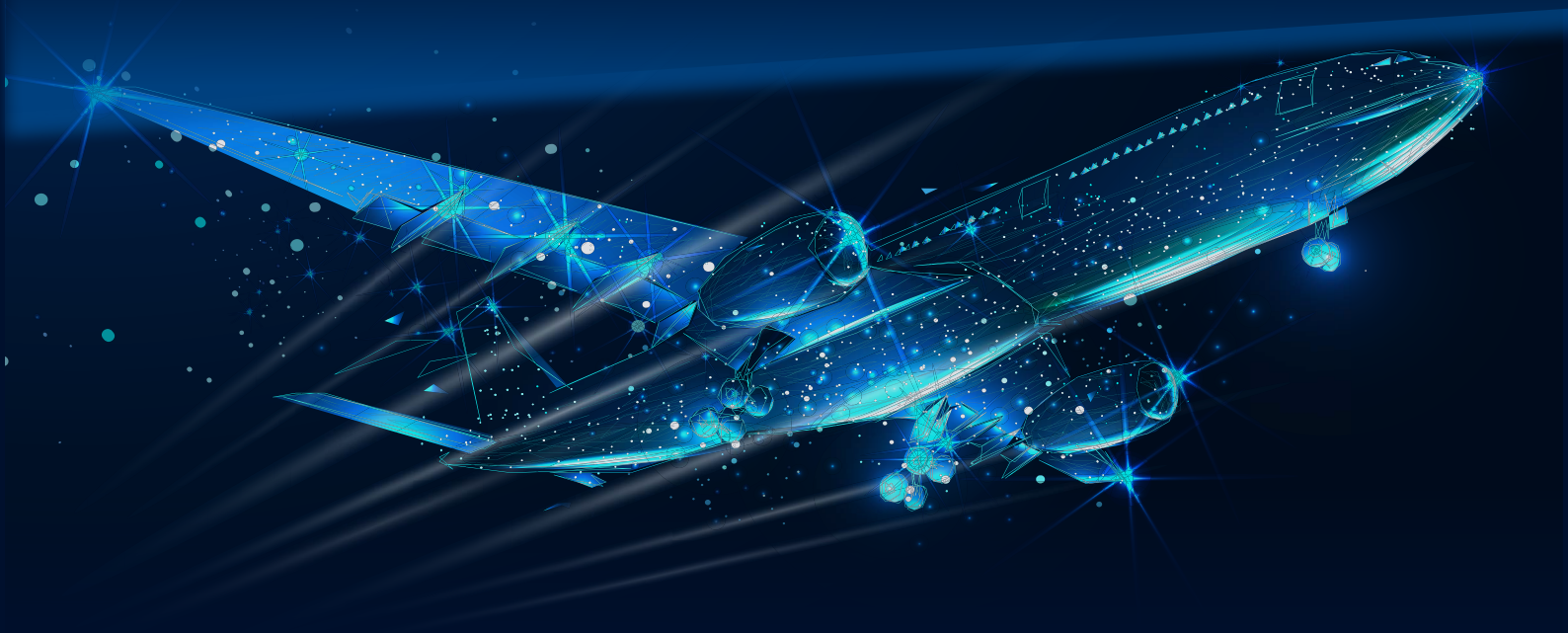




**MARPOSS**



# QUALITY CONTROL SOLUTIONS FOR AEROSPACE & DEFENCE



# MACHINE & PART MONITORING SOLUTIONS

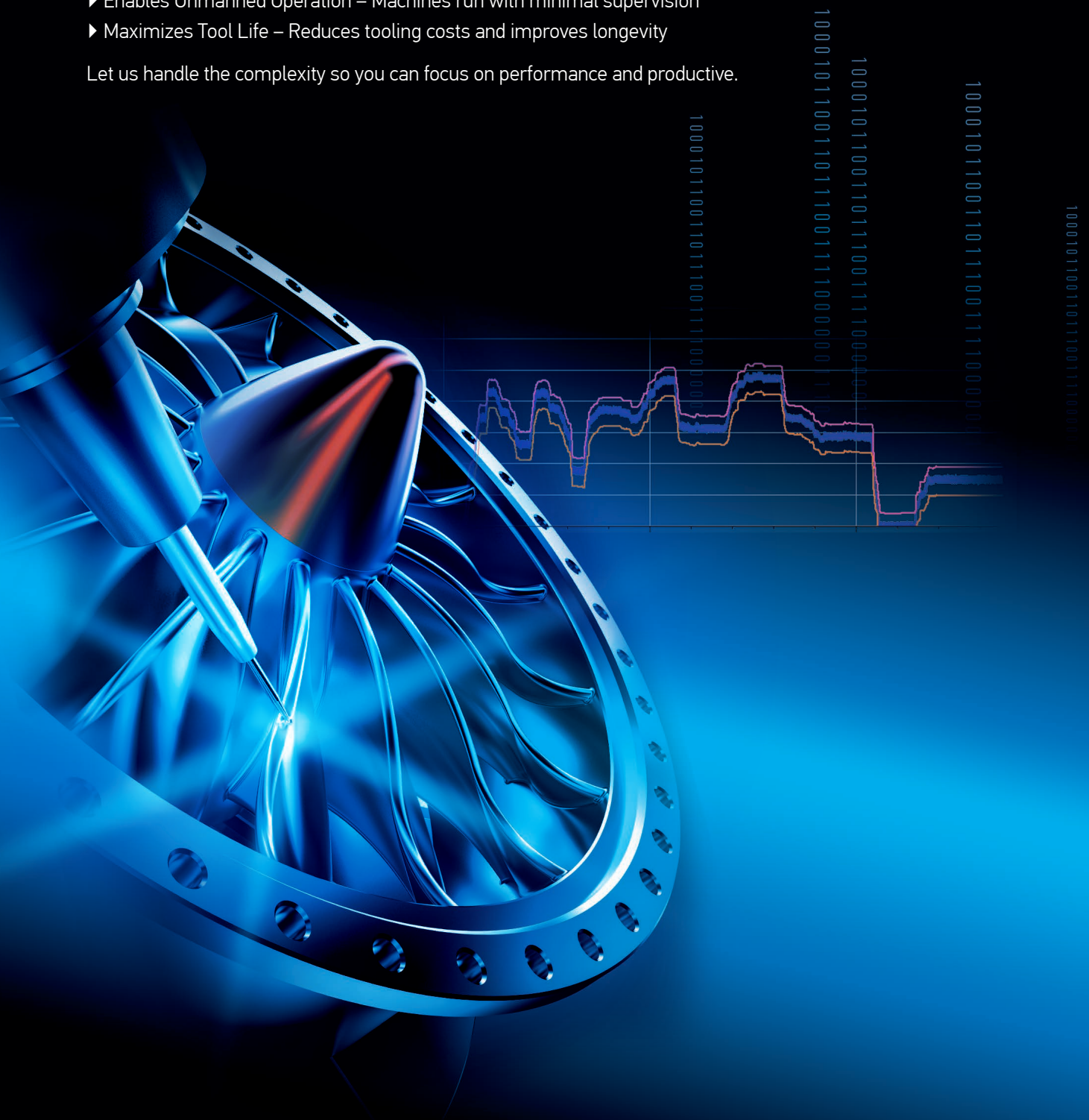
The ability to obtain data from the machine, treat it and obtain real time information about the process and machines combined with the automatic and flexible monitoring strategy and the data analysis capability results in key advantages for the production in the safeguarding of the machine and the automatic supervision of the process:

By extracting real-time data from machine sensors, processing it intelligently, and applying automated, flexible monitoring strategies, we ensure production runs smoothly, efficiently, and without errors.

Key Benefits and Machine Safeguarding:

- ▶ Protection against collision damage
- ▶ Ensures Precision & Repeatability – Every process, every time
- ▶ Prevents Defective Parts – Detects issues before they cause waste
- ▶ Optimizes Production – Increases efficiency and reduces downtime
- ▶ Certifies Quality – Provides real-time verification of part accuracy
- ▶ Enables Unmanned Operation – Machines run with minimal supervision
- ▶ Maximizes Tool Life – Reduces tooling costs and improves longevity

Let us handle the complexity so you can focus on performance and productive.



## FLEXIBLE GAUGING SOLUTIONS



Our complete range of standard plugs is designed for accurate internal diameter and countersink depth measurements. Each plug is fully retoolable, simply replace the nosepiece or the conical/spherical plunger tip to adapt it to new measurement needs.

Measurement results can be displayed using a dial indicator or integrated into advanced systems like Nemo, Merlin, or E9066 industrial computers, with options for wireless connectivity. Hand-held gauges are also available with local displays and the ability to transfer data directly to a PC for storage and statistical analysis, ideal for measuring large parts such as airframes, where freedom of movement is essential.

To support custom setups, we offer a full suite of standard gauging components, including:

- ▶ Probes
- ▶ Interface boxes
- ▶ Gauge software
- ▶ Complete industrial PC packages

These components enable end users and subcontractors to easily configure and build their own measurement stations to meet specific application requirements.

## HELIUM LEAK TEST



In this solution, the Hard Vacuum Helium Leak Detection System, applied to individual components as well as to the entire finished assembly, provides the most reliable method for detecting global leakage on circuits. In the testing method the tracer gas is 100% Helium or mixtures He/N<sub>2</sub> and the analysis system is the mass spectrometer measurement in a vacuum chamber; this method is the best performing among the various leak testing systems, aiming at detecting the smallest quantity of leak, values.

The in-line leak test machines are capable of testing components and assemblies with leak thresholds in the range of 10<sup>-5</sup> mbar·l/s. For a better evaluation, compare this with a traditional nitrogen leak test in a water tank, which gives estimated results in the range of 10<sup>-2</sup> mbar·l/s (one bubble with a radius of 2 mm in 1 second), but taking into account the human guesswork and including undetected bubbles/leaks.

All parts and circuit connections must be guaranteed to have a total leakage lower than that permitted by law (specific thresholds for each chemical compound). That's why not only the components but also the final assembly must undergo this EOL leak test.

## GO/NO GO GAUGES

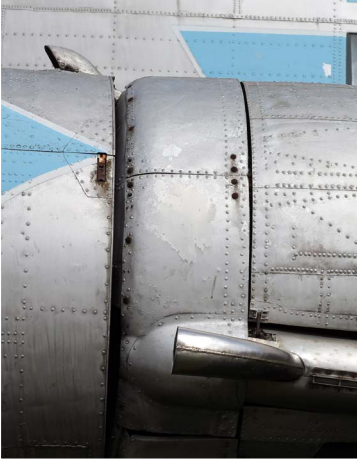


Precision tools for inspecting both external and internal threads.

Our thread attribute gauges are designed for reliable and accurate thread verification, ensuring compliance with dimensional standards. Available in a variety of models, they are manufactured in accordance with major international standards, including DIN, ANSI, JIS, AFNOR, and BS.

Ideal for quality control in production or inspection environments.

## NON DESTRUCTIVE TEST



The Tempest X05 sets a new standard in Eddy Current inspection, combining enhanced mechanical design with improved ergonomics for superior performance and usability. Built with operator feedback in mind and utilizing modern, durable materials, it delivers greater ruggedness and reliability in the field.

Rotary inspection capabilities come standard, and the AeroCheck 3 features a reinforced screen, optimized connector access, and improved overall durability. Optional add-ons like an encoder wheel expands its functionality even further, making it a versatile solution for demanding inspection tasks.

### OFF LINE

DIMENSIONAL TEST

FUNCTIONAL TEST

INTEGRITY DEFECTS TEST

### ON-MACHINE

PART MACHINING

PRODUCTION PROCESS

### SOFTWARE

CONTROL QUALITY &  
ASSURANCE SOFTWARE



AEROSTRUCTURES

ENGINES

HYDRAULIC  
COMPONENTS  
RIVETING  
BLADES

FUSELAGE  
AIRPLANE  
WINDOW  
WHEELS

E-MOTORS

CUTTING  
TOOLS

GEAR AND  
SHAFT

INJECTORS  
AND FUEL  
CASE (TANK)

Optical  
gauges;  
Contact  
diameter and  
Depth gauges

Contact  
diameter and  
depth gauges

Optical  
gauges

Optical  
gauges

Contact  
Gauges;  
Optical Gauges

Scanning  
Gauges

Helium Leak  
Testing

Thread and  
Go/No-go  
gauges

Isolation, Die-  
lectric, Hipot,  
Partial Di-  
scharges

Contact  
Gauges

Helium  
Leak  
Testing

Non Destructive Test

Machine & Part Monitoring Solutions

Optical Gauges;  
Machine & Part  
Monitoring  
Solutions

Machine & Part  
Monitoring  
Solutions

Monitoring  
Solutions

Monitoring  
Solutions

Monitoring  
Solutions

Monitoring  
Solutions

Incoming and Molding Process Controls  
(Check list, sampling, capability, ...)

Incoming and Molding Process Controls  
(Check list, sampling, capability, ...)

# MEASUREMENT, INSPECTION AND TEST FOR QUALITY AND PROCESS CONTROL



worldwide presence in

**34**  
countries

offices worldwide

**80**

exports

**94%**

approx.

**3,300**  
employees

**1,133**  
Italy

**1,043**  
Asia

**768**

Rest of Europe

**319**

Americas

**30**

key acquisitions since 2000

**8%**

resources invested in R&D

Marposs was founded in 1952 and since then has provided shop-floor solutions for quality control in the production environment. Marposs' solutions include gauging equipment of mechanical components, before, during, and after the production process, monitoring solutions on machine tools, assembly, and testing systems, automatic machines, and checking stations for production lines.


Marposs is one of the main suppliers of the top automotive manufacturers, but operates as well in the aerospace, biomedical, hi-tech, and glass industries.

Marposs Group's employees are more than 3300, located around the world, with presence in thirty-four countries with more than eighty sales offices.



**MARPOSS**

[www.marposs.com](http://www.marposs.com)

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