

Fully automated testing and inspection solutions.

Fully automated visual, dimensional, and eddy current testing for the highest quality requirements - precise, reproducible, and economically scalable.

“We help companies to reliably ensure quality.”

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Where manual inspection reaches its limits.

Rising production volumes, tighter tolerances, growing cost pressures - and at the same time, the demand for 100% inspection reliability. In many production environments, manual inspection methods are increasingly reaching their limits: They are time-consuming, labor-intensive, and hardly scalable in terms of reproducibility.

This is exactly where Technomix's fully automated inspection technology comes in. Since 2020, we have been operating a steadily growing fleet of automated machines that perform visual, dimensional, and eddy current inspections fully automatically, reliably, and at the highest cycle rates - without manual handling and without compromising on quality.



Advantages of automated optical inspection systems.



Fully automated non-destructive inspection and sorting without manual handling



More cost-effective, faster, and more accurate optical inspection compared to manual visual inspections



Comprehensive defect inspection and dimensional accuracy testing thanks to the system's versatile configuration options of the system, specifically tailored to customer requirements



Capability to test a wide variety of materials thanks to state-of-the-art measurement and testing sensors



Highest throughput speeds and thus maximum productivity for large production batches



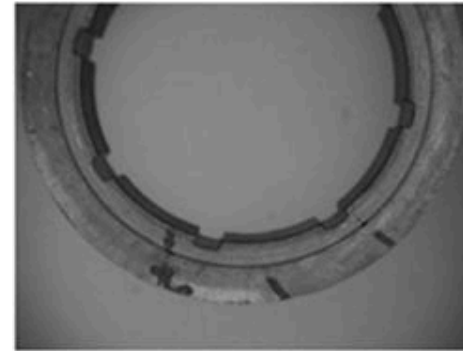
Fully automatic sorting of parts into the categories "good," "bad," "undefined," as well as according to freely selectable parameters

Shape from Shading.

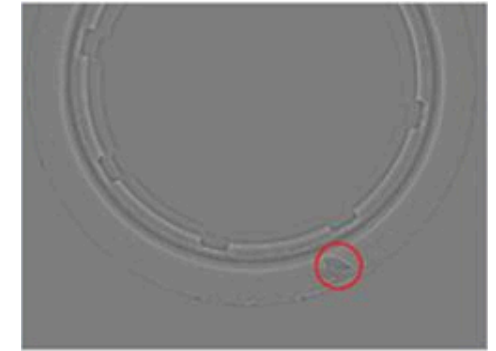
Certain defect characteristics such as dents, burrs, or missing areas are difficult to detect reliably with conventional grayscale or color sensors - they blend in with the surface contours and functional features of the component. Conventional sensor technology quickly reaches its limits, especially with reflective or shiny materials.

That is why our inspection systems rely on Shape from Shading (SFS) technology: Special *trevista*® sensors with topdown dome lighting generate not only traditional grayscale images but also images with precise depth information. This means that irregularities and defects on the component surface are not only made visible - they are clearly classified.

The result: maximum inspection reliability, minimal error rates, and a comprehensive surface inspection with no blind spots.



Standard sensor technology



SFS sensor technology



Standard sensor technology



SFS sensor technology

TAVI.01

HIGH-SPEED



The TAVI.01 is specifically designed for cylindrical test parts and, with cycle times of up to 4 parts per second, offers the highest throughput in the Technomix machine fleet.

Whether turned, stamped, formed, or plastic parts, fasteners, or similar components - the TAVI.01 delivers high-precision inspection results at maximum speed.

- + Single-stage system
- + Topside sensor, inspection of the visible top surface
- + Bottom-side sensor, inspection of the visible bottom surface
- + Outside sensor, inspection of the visible outer surface
- + Dimension sensor, inspection of outer and inner surfaces (Reproducibility $\pm 10 \mu\text{m}$)
- + Height sensor, height measurement (repeatability $\pm 15 \mu\text{m}$)
- + Cycle times of up to **1-4** parts per second
- + Current inspection range:
Diameter: **5-50mm**,
Component height: **5-40mm**
- + Feeding via vibratory spiral conveyor
- + 4x sorting position for "bad 1", "bad 2", "undefined", "good"

TAVI.02 PRECISION



Sealing rings, precision parts made of metal or plastic, components for the automotive, aviation, or aerospace industries - many of these components place special demands on quality assurance.

The TAVI.02 was developed specifically for these requirements: It combines the highest measurement accuracy with impressive speed, making it the ideal solution for 100% inspections in safety-critical areas.

A wide selection of different sensors is available for the TAVI.02, all of which operate with a repeatability of $\pm 1\mu\text{m}$ during measurement:

- + Two-stage system
- + Turning unit
- + SFS "Topside" sensor technology
- + SFS "Bottomside" sensor system
- + Dimension sensor (external \emptyset , internal \emptyset)
- + Height sensor (component height)
- + Measurement range (\emptyset in mm): **5-20 mm**
- + Inspection range (height in mm): **1-9mm**
- + Cycle time (parts per second): **1-2**
- + Feeding via lifting hopper (bulk material)

Examples of possible test parts

System TAVI.02



TAVI.02-XL LARGE PARTS



The TAVI.02-XL inspection system is a flexible, highperformance inspection system that delivers maximum throughput and precision. It offers maximum productivity for large production batches. The TAVI.02-XL is optimized for rotationally symmetrical products ranging in size from 10 mm to 82 mm.

A wide selection of different sensors is available for the TAVI.02-XL, all of which feature repeatability in the measurement of $\pm 1\mu\text{m}$:

- + Two-stage system
- + Turning unit
- + SFS "Topside" sensor technology
- + SFS "Bottomside" sensor system
- + Inside sensors (inside of component)
- + Outside sensor system (component exterior)
- + Dimension sensor (outer \emptyset , inner \emptyset)
- + Acoustic testing unit (crack testing)
- + Test range (\emptyset in mm): **10-82 mm**
- + Test range (height in mm): **5-20mm**
- + Cycle time (parts per second): **0,5-1**
- + Feeding via spiral conveyor (bulk material)
- + Feeding via a turntable (pre-set items)

Examples of possible test parts

System TAVI.02-XL



An overview of our machine fleet.

	TAVI.01	TAVI.02	TAVI.02-XL
Part shape	Cylindrical	Radially symmetrical	Rotationally symmetric
Diameter	5-50mm	5-20mm	10-82mm
Height	5-40mm	1-9mm	5-20mm
Cycle time	up to 4 pts./sec.	up to 15 pts./sec.	up to 1 pt./sec.
Glass trays	Single-stage system	Two-stage system	Two-stage system
Turning unit	-	Yes	Yes
SFS sensors	-	Yes	Yes
Crack detection	-	-	Yes (Acoustic testing)
Typical parts	Turned, stamped, and formed parts; fasteners	Seals, precision parts	Larger rotationally symmetrical components



Not sure which system is right for your components? Contact us - we'll analyze your requirements and work with you to find the optimal solution. In many cases, a no-obligation test run is also possible.

Your testing requirements. Our solution.

Not every testing task can be solved with existing systems. When components, cycle times, or quality requirements demand a customized solution, we develop tailor-made automated testing systems - precisely tailored to your products and processes.

Technomix assumes overall technical responsibility for the project: from feasibility assessment and design of the testing architecture to support during validation and series production approval. Mechanical and electrical implementation is carried out in collaboration with qualified partner companies from our network, which has grown over decades - under our technical leadership and quality control.

Our integration models

Integration into your production:

The testing system is integrated directly into your manufacturing process - either inline within the production flow or as a standalone test cell. You benefit from immediate test results and maximum process control.

Operation at the Technomix site:

The system is operated at one of our locations - exclusively for your company or through a cost-effective shared-use model. You receive high-precision 100% inspection without any investment or commitment of your own personnel





About Technomix.

For over 30 years, the Technomix Group has stood for precise, reliable, and technologically advanced quality assurance.

With more than five locations in Germany and the Czech Republic, over 250 qualified employees, and our own, constantly growing fleet of automated machines, we support industrial companies in securing their production and supply processes. As a technology and solutions partner, we are able to meet virtually any requirement, whether it's standardized series testing, a custom

solution, or a complex technical challenge. We bring together experienced staff, state-of-the-art testing technology, and a network of alliance, technology, and industry partners that has grown over decades - a network we specifically engage when specialized expertise or unique processes are required.

With fully automated camera inspection, we combine one of our core technology areas - optical visual, dimensional, and eddy current testing - into a single inspection process - scalable, cost-effective, and requiring no upfront investment from the customer.

Our locations.



Contact us - easily and directly!



TECHNOMIX GROUP | MEMBER OF THE TIC GROUP

Every project starts with the right decision - with Technomix, you choose a partner that combines quality, reliability, and tailor-made solutions. We look forward to your inquiry!



Technomix Group

Gewerbegebiet Limbach 6
96178 Pommersfelden
Germany



+49 (0)9548 - 9828 0



info@technomix.de



www.technomix.eu



Our certifications:

DIN EN ISO 9001
DIN EN ISO 14001
EN 9100

