



see. control. automate.

TAVI.01



Glass Table System for the Automatic Inspection, Measurement and Sorting of Parts

In many industries, technical components have to meet highest quality standards, meaning that they have to be thoroughly inspected for dimensional and surface defects and sorted according to different aspects. TAVI.01 is an extremely flexible inspection and sorting system, which is suited for a broad variety of materials and part geometries. It can also be easily integrated in your existing production lines. The measurement and inspection sensors are always adapted to your specific requirements, just as the infeed and sorting of your parts. With a capacity of up to 50,000 parts per hour, TAVI.01 is equally suited for large production lots and for complex inspection requirements.

Your benefits:

- ◆ Increase in productivity through fully automatic optical inspection and sorting, eliminating manual handling
- ◆ Process and production safety through 100% nondestructive inspection
- ◆ Integration in your production line possible - thanks to modular design
- ◆ Our experienced team is skilled in design and project planning, machine building and automation technology, as well as in development of our own image processing software



see. control. automate.

Quality is Everything



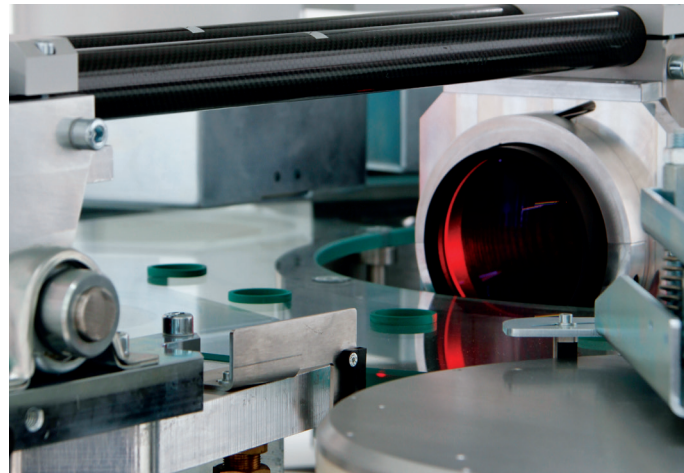
A Range of Raw Materials

As different materials have different characteristics, the defects also vary greatly. To cater to these differences **TAVI.01** is made to optically analyze a range of different raw materials including metal, plastics, rubber, ceramics and sintered parts.



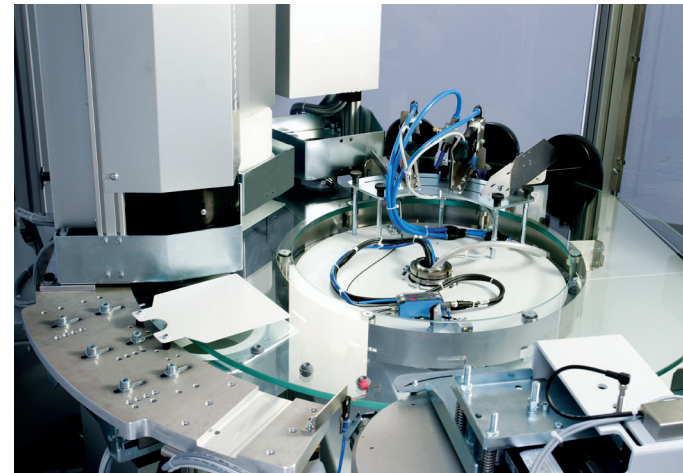
Flexibility and Precision

Thanks to its versatile configuration possibilities, **TAVI.01** is the perfect solution for many different inspection tasks. It ensures a comprehensive defect inspection and highly precise measurement of your parts, which for this purpose are inspected from all sides by sensor units that are tailored to the specific requirements.



Differing Products-Definitive Perfection

No matter if it's rubber stoppers or sintered metal parts, **TAVI.01** provides an impeccable inspection with special care taken to all of the known problem-areas of each part.

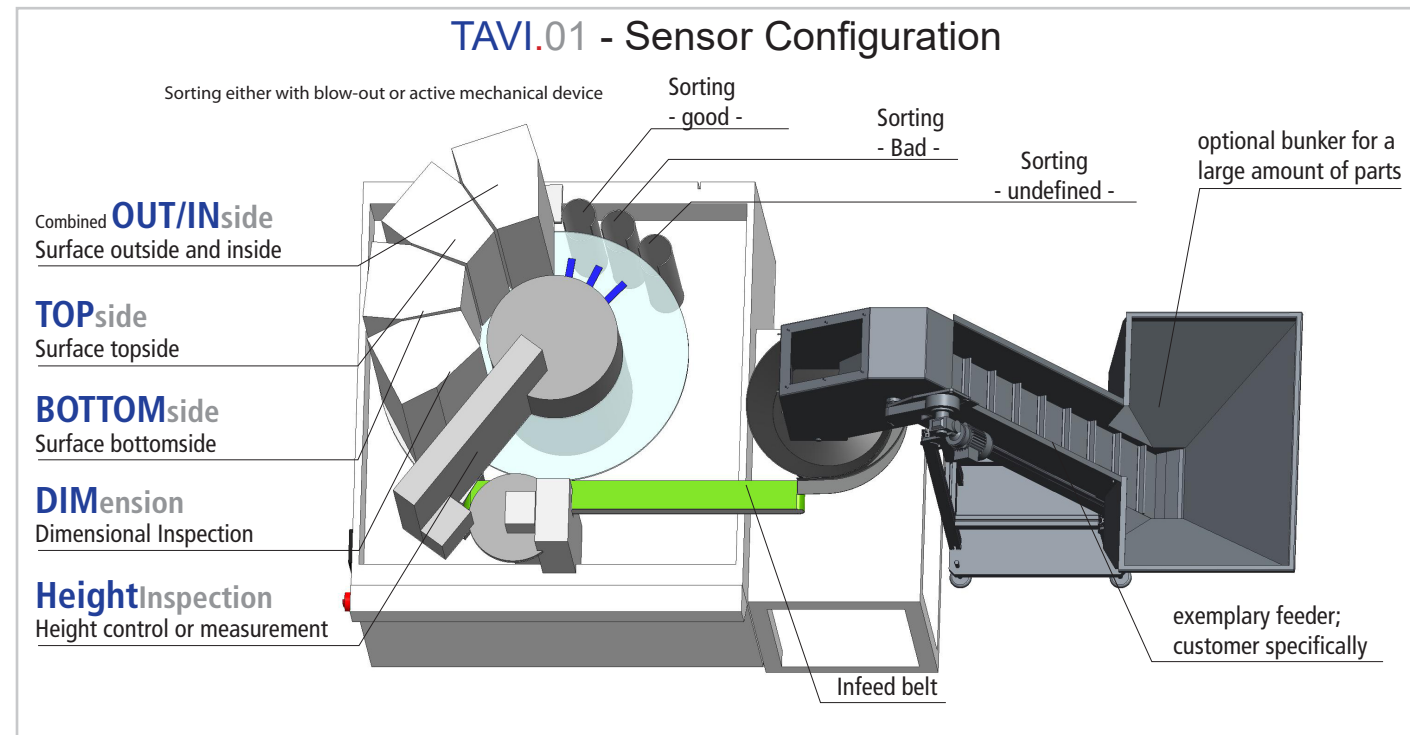
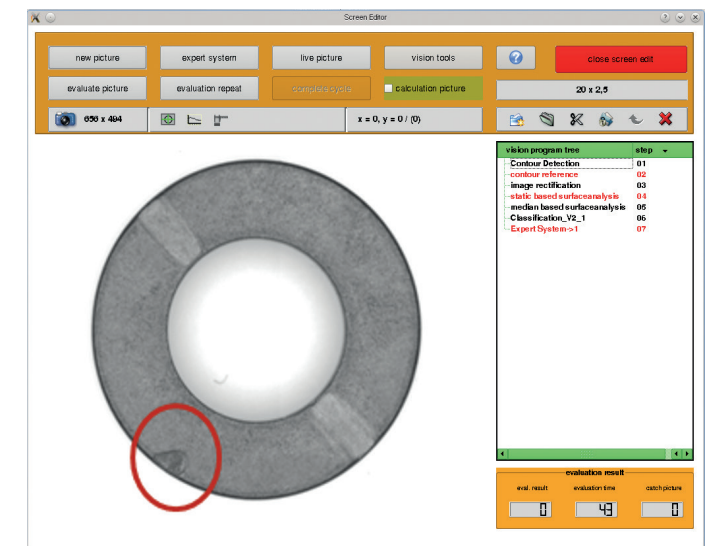


Inspection Speeds

High inspection-speed means high throughput and increased productivity. With a speed of up to 50,000 parts per hour, **TAVI.01** ensures that no time is wasted and gives you control over your production.

VISIONCHECK – With the user in mind

All of our Inspection Systems come with the advanced **VISIONCHECK** image processing and control software. As intuitive for the user as it is extensive for the engineer, it can be calibrated to detect a wide range of defects.



Sensor Specification

TAVI.01 can be equipped with a variety of different sensors, all with the accuracy of $\pm 1\mu\text{m}$:

- ◆ **DIM**ension uses transmitted light in combination with a telecentric lens to inspect the part dimensions
- ◆ **TOP**side defect detection on face sides and lateral surfaces
- ◆ **BOTTOM**side defect detection on face sides and lateral surfaces
- ◆ **IN/OUT**side multihead sensors for surface inspection
- ◆ **Height**inspection measures the exact height of the part with a telecentric lens
- ◆ **3D**concheck measures the contour of the part with 40,000 lasers-scans per second which in combination with a telecentric lens detects any contour deviations
- ◆ **HARD/SOFT** checks whether the part is hardened through eddy currents



see. control. automate.

TAVI.01 System Summary

The NELA TAVI.01 is an extremely flexible inspection system that can be used for versatile inspection tasks in many industries. Through individual sensor configuration it delivers a highly precise and comprehensive inspection of your parts, even for shapes and materials which would be difficult if not impossible to flip over.

TAVI.01 can detect several different defects such as pores, holes, breaches, impurities, corrosion, cracks, notches, burrs, chipping and scratches as well as geometrical irregularities. With an accuracy of $\pm 1\mu\text{m}$, about an eighth the width of a strand of spider web silk, it can detect even the smallest of defects. It's optimal for inspection of parts sizes of OD 1mm - 80mm.

The speed of 50,000 parts per hour ensures that quality inspection will never be a bottleneck in your production. After inspection the parts are sorted after your request, from just perfect or defect to different classifications such as A-Class, B-Class, C-Class etc.

Aside from the inspection system itself, we offer numerous options such as environment control air filtration, different feeder options, or instant remote service over NELAvpn+.

TAVI.01 is, like all our products, custom built to fit your exact needs. That way you have full control from start to finish. We pride ourselves in taking care of our customers and our support staff is just as helpful as our engineers are good at finding solutions. With NELA inspection systems, your quality control will be accurate, fast and reliable.

TAVI.01 at a glance

- Glass table inspection system
- Defect inspection of top, bottom, inside, outside, and geometry
- Throughput of up to 50,000 parts per hour
- Can inspect a part range of OD 1mm – OD 80mm
- Measurement accuracy of $\pm 1\mu\text{m}$
- Dimensions approx. 1400 x 1600 x 1950 mm
- Power supply 3/N/PE 400V/50 Hz
- Compressed air 6-10 bar



About NELA:

With 75 years of tradition in high-precision machine manufacturing, originally as a supplier for the Graphic Arts industry, the family-owned company, Brüder Neumeister GmbH located in Lahr / Black Forest, is also a leading system supplier for inspection equipment in the rubber, plastics, compound and sintered metal industry. With 200 employees, more than 5000 m² of production area, an own, independent development department for industrial image processing software, as well as a high degree of vertical integration in manufacturing, NELA makes sure that your inspection requirements will be fulfilled - today and in the future, worldwide.



www.nela-usa.com
e-mail: info@nela-usa.com

NELA USA
610 Whitetail Boulevard
River Falls, WI 54022
Phone: 715-425-1900
Fax: 715-425-1901

see. control. automate.

