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LIVI-8

The solution for the inspection of micro O-rings up to OD 8 mm

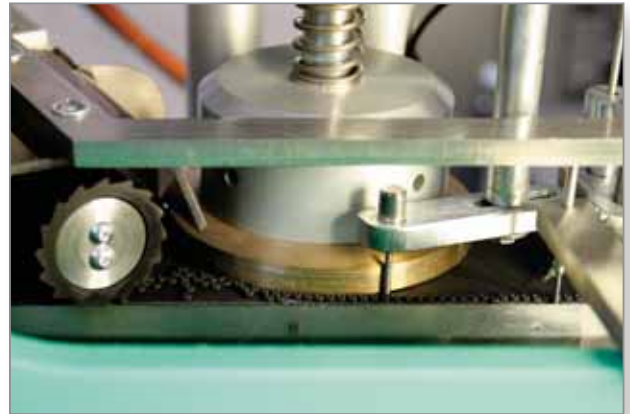
The inspection of very small rubber parts requires specialized equipment that is fine tuned for the critical dimensions when it comes to handling and inspection sensors. With the **LIVI-8**, NELA offers a fully automatic inspection system that is designed for O-rings with an outer diameter ranging from 3 mm to 8 mm. Sensor units that have been specially adapted for this application guarantee a 100% inspection of the parts which, together with its high throughput, make the **LIVI-8** one of the most efficient inspection systems available today.

Your benefits:

- Fully automatic inspection of O-rings with critical dimensions and high throughput of up to 22.000 parts per hour
- Process and production safety through a 100% non-destructive inspection and multiple sorting options
- Statistic process control in real time enables you to detect problems in your production process at an early stage
- All quality-relevant data can be extracted from the NELA system at any time
- Optional geometry control and height monitoring



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System specification

Application and throughput	
Material	All elastomeric materials
Color	All colors
Part type	O-Rings and other radial symmetric parts
Part size	OD 3 - 8 mm; CS / height up to 2 mm
Minimum defect size	≥ 50 µm
Repeatability geometry inspection	20 µm
Throughput / Durchsatz	Up to 6 parts per second
TOP/INside Sensor - surface upper side / bottom side / inner side	
Sensor type	Sensor array with 4 cameras
Illumination (LED)	Standard: white; optional other colors, depending on the application
OUTside Sensor - surface outer side	
Sensor type	Sensor array with 6 cameras
Illumination (LED)	white, red (back light)
DIMension Sensor - dimension control	
Objective lens	Telecentric lens
Illumination (LED)	Telecentric illumination; optional area illumination red or white
HEIGHTcontrol - height check	
Objective lens	Matrix camera
Illumination (LED)	Area illumination - red or white
Hardware and Software	
Controller	Master controller with ITX boards for each sensor unit
HMI	15" LCD monitor with keyboard and track ball
Software	Visioncheck control and image data processing software
System specifications	
Footprint (without feeder)	approx. 2400 x 1200 x 1950 mm
Power supply	3/N/PE 400V/50Hz (others optional)
Compressed air supply	6 - 10 bar
Additional equipment options	
Filter fan unit	To ensure clean conditions inside the machine
De-ionizer	Reduces static force on the parts
Bowl feeder & bunker	Vertical feeder with motorized adjustment; add. external high-volume bunker optional
Automated packaging options	Interface for automated packaging system (blister, boxes, bags) available

Part sizes:

- O-rings with an outer diameter ranging from 3,0 mm to 8,0 mm

Defect detection:

- Pores
- Holes
- Nicks
- Material contamination
- Surface defects
- Flow marks

Geometry (optional):

- Dimension
- Height monitoring

Speed:

- Up to 22.000 parts per hour



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 today 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 future, worldwide.



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