

Product Information

Robotig Testing System 'roboTest L' (Linear) for Testing of Rubber O-Rings



Robotic testing system 'roboTest L' with testing machine 2.5 kN

Applications

The robotic testing system is used for the fully automatic performance of tensile tests on rubber rings (e.g. according to DIN 53504 with standard rings R1/R2, ISO 37 or ASTM D412).

System configuration

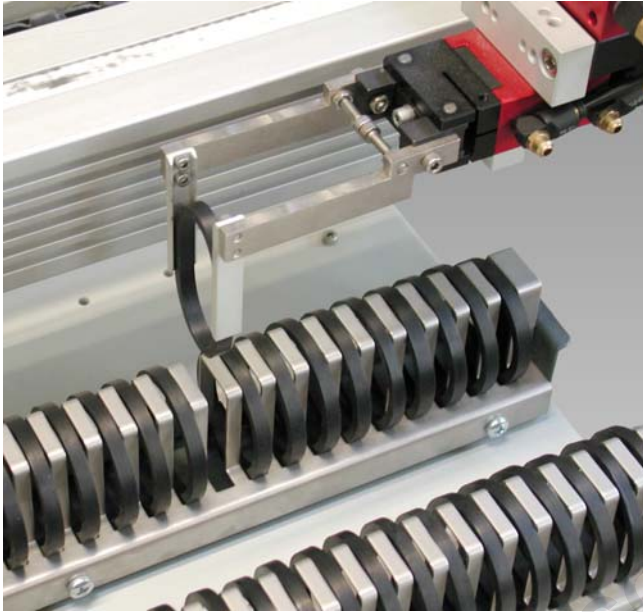
- Materials testing machine 2.5 kN up to 20 kN with roller grips according to DIN 53504 or ISO 37
- Removable specimen magazines for each 50 rings
- Robotic feeding system 'roboTest L' with pincer gripper
- Automatic thickness measuring unit for o-rings (measurement at one point)
- Industry Controller with test software *testXpert*[®] and automation software *autoEdition2*

Advantages of the Robotic Testing System 'roboTest L'

- A high reproducibility of the test results is obtained because operator influences are excluded (hand temperature, moist hands, eccentric or inclined insertion of specimens etc.).
- Qualified laboratory staff is relieved of routine jobs and is thus available for more complex activities.
- The machine can be used during idle times (break, night shift) and thus increases the rate of utilization and allows „quicker“ results.
- The modular system makes an economical adaptation to specific customer requirements possible.
- The system reduces the testing costs per specimen and usually pays off within one to two years.
- Manual tests are still possible by simply moving the robotic feeding system aside.
- The usage of state-of-the-art web-technologies ensures a constant process control and remote diagnostics of the robotic testing system. Results as well as status messages can be sent directly per email or SMS.
- The automatic data logging system ensures secure documentation and enables statistical long-term monitoring (Statistical Process Control).
- The components of the robotic testing system are not subject to wear; they are maintenance-free and designed for three-shift operation.

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Pincer gripper takes O-ring out of magazine

Technical Data

Mechanics

| | |
|------------------------|--|
| Mounting | coupled to the load frame |
| Dimensions (H x W x D) | 1200 ¹⁾ x 700 ²⁾ x 1500 ³⁾ mm |
| Weight | approx. 200 kg (without specimens, depends on the equipment) |

¹⁾ depends on the load frame

²⁾ without option "motorized magazine table"

³⁾ with linear axis

Connected values

| | |
|-------------------------|----------------|
| Electrical connection | 230/115 V |
| Output | approx. 200 VA |
| Mains frequency | 50/60 Hz |
| Compressed air | 6 bar |
| Required compressed air | 10 lpm |

Control

| | |
|-----------------------|--------------|
| Automation | autoEdition2 |
| Peripheral connection | RS 232 |

Specimens

| | |
|--------------------|---|
| • Specimen type | o-ring specimens |
| • Capacity | 50 (standard) 294 (with option moving table) |
| • Material | rubber |
| • Diameter (round) | 44.6 / 52.6 mm |
| • Thickness | 4 mm |

Options

| |
|--|
| • Motorized magazine table for 294 specimens |
| • Data exchange with superior processor systems (e.g. LIMS) via upload/download of ASCII-files or ODBC |
| • Optical status indicator by threefold „traffic light“ (running, refill specimens/finished, error) |

Test Sequence

- The user fills the removable specimen magazine at the specimen preparation or directly on the test system with O-rings. Then the magazine will be placed on the magazine table.
- After the startup of the system, feed and test of the specimens are carried out automatically. With the optional expansion „motoric moving table“ integrated, up to 7 specimen magazines (=294 specimens) are tested in succession.
- After testing of all magazined specimens the magazine can be refilled or changed by a prepared insert. A refilling of specimens in empty magazine places is possible at any time.
- By the individual loading of specimen into the magazines the order of testing can be controlled by the operator. Urgent specimens can be tested immediately by defining priorities.