

Innovative Technologies in Sensorics . Robotics . Automation

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TETRA Gesellschaft für Sensorik, Robotik und Automation mbH
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Presentation of TETRA

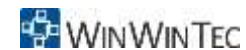


- Company founded 1991 in high-tech location Ilmenau
- Technology for Innovators
- 70 employees – a half engineers
- Competence center of mechatronics development
- Turn over 4 Mio.

Distribution network



- Sales area TETRA: Germany
- Distribution partners
 - Europe: Falex EU (Belgium)
 - USA: Falex, Compass Instruments
 - China: WinWinTec



Expertise in Mechatronics Development



Robotics

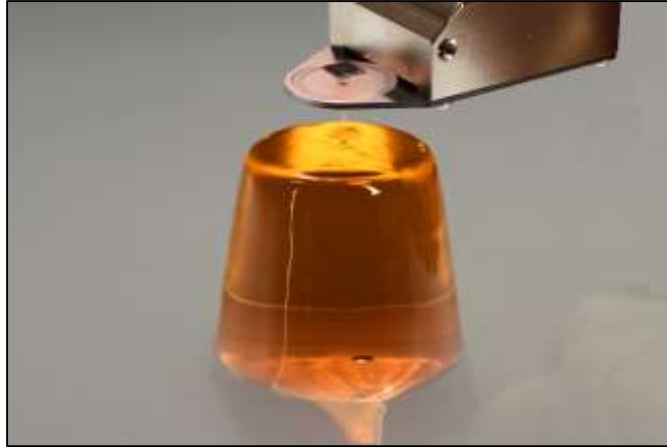
- Bionic inspired robots
- Research projects
- Climbing robot - RatNic



BioRob

- Robot arm for assistance tasks
- ultra-lightweight
- Front joints are moved by Bowden cables
- save human-robot cooperation without the need for extra safety

Expertise in Mechatronics Development



Sensorics

- High precision sensorics
- Special purpose machines
- High-end surface characterization
- Measurement of friction, wear, bending, hardness, coating thickness and others



Multi measurement platform

- Customized machine for characterization of material
- 3 drives
- Hall sensors, magnetic sensors, force sensors, ultrasonic

Expertise in Mechatronics Development

The EtherCAT logo, consisting of the word "EtherCAT" in a bold, black, sans-serif font, followed by a registered trademark symbol. To the right of the text is a stylized graphic element: a red arrow pointing right, positioned above a black arrow pointing left.

Automation

- Industrial machines
- Real-time bus system EtherCAT®
- Easy integration and link to other machines
- Master-Slave principle
- Smart factory

Products: Special Purpose Machines



Bubble-Blow-Maschine



Elipsometer for fuel quality



Tribometer for piston rings



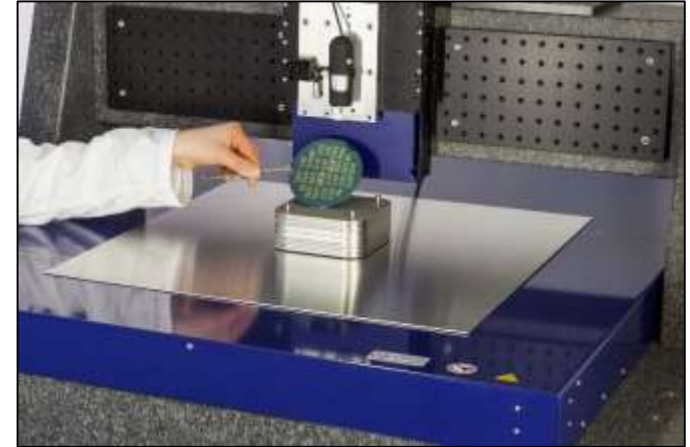
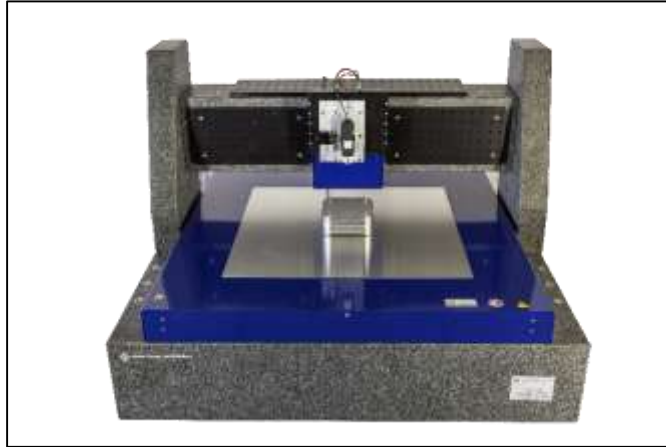
Inspection system für wafer

Products: Measurement System BASALT-N2



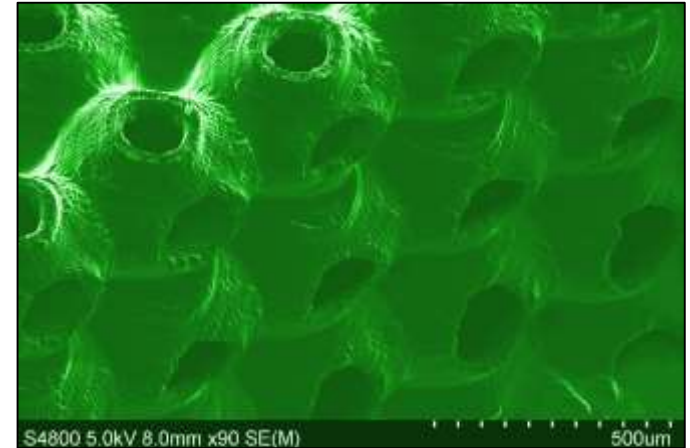
- innovative sensor and drive technologies
- Platform based Design
- configurable for customized demands
- Wear, friction, hardness, optical inspection
- Force range from 10 mN to 200 N

Products: Planar Positioning System PPS



- Planar positioning system for e.g. laser cutting or micro assembly
- High dynamic and excellent speed properties up to 500 mm/s
- Resolution 2.5 nm
- Repeatability 0.2 μm
- Path accuracy $\pm 1 \mu\text{m}$
- Easy integration via EtherCAT[®]

Products: Nano 3D printer MBZ-2PP



- Industrial 3D printer for micro- and nano-structures
- Applications: tissue engineering, photonics, MEMS
- Resolution 100 nm
- Smart factory: ethernet, integrated camera, control via Internet
- Multi sensors for better condition monitoring and control

Cooperation with Italy



- Clients for innovative TETRA products
- Clients with interesting and challenging projects in mechatronic development
- Qualified distribution partners for TETRA products
- Development partners

Dankeschön

