# SmarAct Inc.

SmarAct develops high-performance solutions for handling and positioning in the micro- and nanometer range. The broad product portfolio - from single positioners to complex parallel kinematics, miniaturized robots and easy-to-use control systems - is completed by sophisticated measuring equipment based on powerful laser interferometers.

# LINEAR AND ROTATIONAL POSITIONERS FOR UHV, HV AND CRYOGENIC ENVIRONMENTS

Stick-slip piezo actuators with low-heat profiles and ultra-high vacuum compatibility which allow sample manipulation down to the mK regime. The stages are based on SmarAct's piezo drive technology which is optimized for cryogenic temperatures. In addition, they can be used at temperatures of up to 330 K and are bakeable at high temperatures of up to  $+ 150 \, ^{\circ}\text{C}$ .

## **SMARPODs**

Parallel-kinematic systems for manipulating objects in all six degrees of freedom. The hexapod-like SMARPOD is considerably more compact than common serial kinematics. It has many advantages such as higher rigidity, low moving mass hence improved dynamical response and a user-definable virtual pivot point. Due to the modular design of the SMARPOD, its size and strength can be adapted to changing requirements, reaching from a few centimeters to almost a meter of travel with nanometer resolution.

#### **SMARPROBE**

Electrical probing system utilizing the SmarAct high precision drives on a probing area of  $25\times25$  mm. SMARPROBE offers fast closed-loop positioning of probe tips to points-of-interest with as little electron beam exposure as possible. It can be upgraded with active temperature control enabling low thermal drift of the probes, safe-approach movements and vibration free scanranges of up to  $10\mu m$ . An optional current amplifier enables SMARPROBE to perform Electron Beam Absorbed Current (EBAC) tests. The system is fully configurable with up to 8 probe towers and can be controlled by joystick and "Point & Click" using the SmarAct software.

SmarAct – for high precision matters: We serve high accuracy positioning and metrology applications in research and industry within such fields as optics, life sciences, microassembly, semiconductors and microscopy. Maintaining the complete production in house allows a high level of customization so that we can always provide you the optimal individual or OEM solution.



### How to find us

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