

## LT12830 Substage

Our range of stages are suited for orthogonal positioning solutions in atmosphere, SEM/FIB, UHV and at low temperatures.

The LT12830 is primarily used in SEM/FIB to enhance the accuracy and functionality of the standard microscope stage. It is an economical and technically superior alternative to laser interferometer stages.

It is built specifically for lithography, cell counting and failure analysis applications and contains two positional encoders per axis for automatic yaw error compensation.

Optional software for three-point alignment is available.

### APPLICATIONS

Substage for SEM & FIB

Cell counting

eBeam lithography

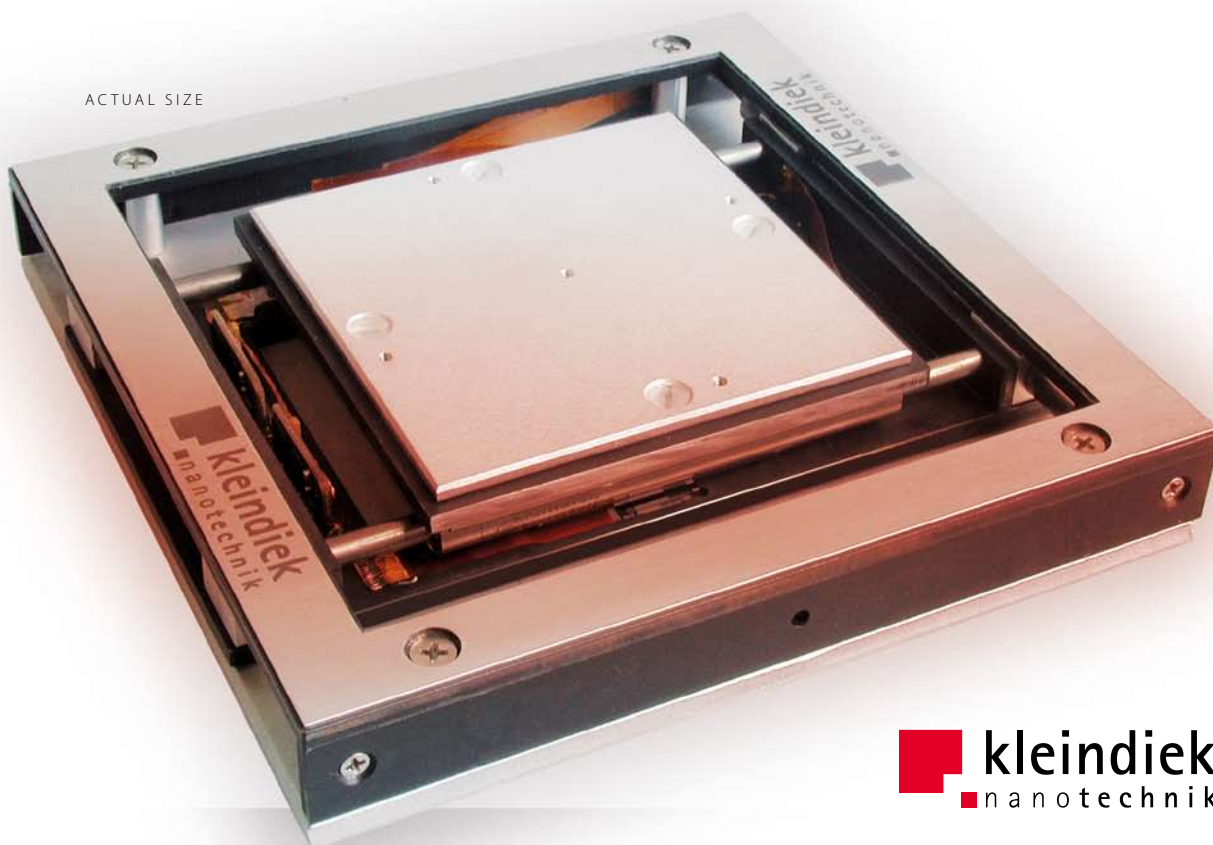
Tensile measurement

Particle counting

Metrology

Forensic analysis

ACTUAL SIZE



# LT12830 Substage

## More compact and more flexible

- Small and practical
- Plug-and-play system with modular design
- Interfacing solutions for most SEM/FIB instruments (including load lock)
- Fast setup and removal

## Clearer and simpler

- Result-oriented operation which leads to increased throughput
- Intuitive control interfaces, user-friendly software and API support
- User-friendly and easy to learn
- Compact, stand-alone electronics
- Pioneering cabling technology with compact vacuum feedthrough

## More robust and more stable

- Compact construction delivers higher resonance frequencies
- Excellent stability
- Virtually unsusceptible to vibrations
- Reliable operation (one year endurance test)
- Fast pre-positioning by hand
- Functions in extreme working environments

## Faster and more precise

- No backlash or reversal play
- Sub-nanometer resolution (< 0.5 nm)
- Coarse and fine displacement in one drive
- High operating velocity (up to 2 mm/sec)
- Low drift (1 nm/min)
- Smooth motion

## Technical specifications

- Length 128 mm
- Width 128 mm
- Height 15 mm
- Weight 490 g
- Travel XY 30 mm
- Speed up to 2 mm/s
- Resolution < 0.5 nm
- Repeatability 50 nm
- Angular deviation < 1  $\mu$ rad
- Load 500 g
- Temperature range 273 K to 353 K  
UHV version 273 K to 393 K
- Lowest pressure  $10^{-7}$  mbar  
UHV version  $2 \times 10^{-10}$  mbar
- Substage mounting 4  $\times$  3.2 mm holes
- Sample mounting 4  $\times$  M3 holes
- Material Stainless steel

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[www.nanotechnik.com](http://www.nanotechnik.com)