

LT14030 Substage

Our range of stages are suited for orthogonal positioning solutions in atmosphere and with SEM/FIB tools.

The LT14030 is primarily used in SEM/FIB to enhance the accuracy and functionality of the standard microscope stage. It is an economical 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.

APPLICATIONS

High precision stage for SEM & FIB

eBeam lithography

CAD navigation

Memory cell counting

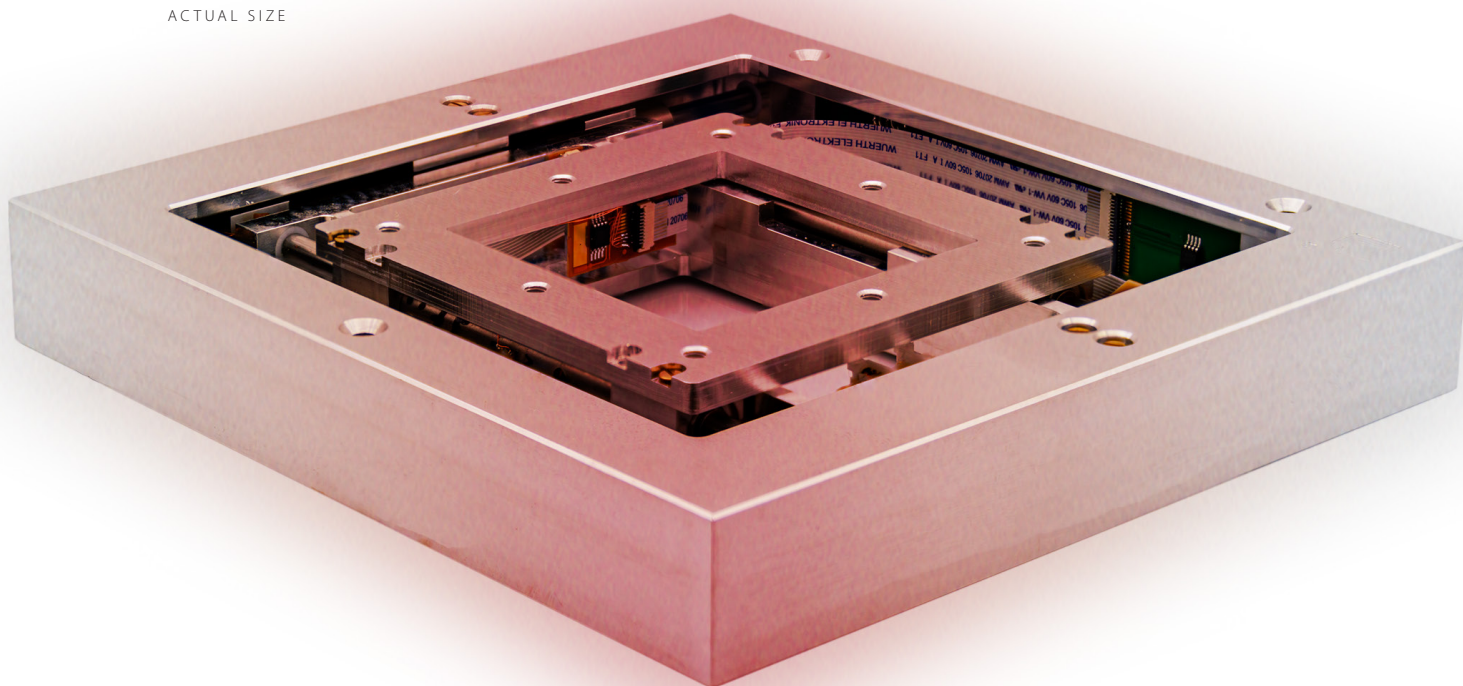
Tensile measurement

Particle counting

Metrology

Forensic analysis (e.g. GSR)

ACTUAL SIZE



LT14030 Substage

More compact and more flexible

- Small and practical
- Plug-and-play system with modular design
- Interfacing solutions for most SEM/FIB instruments
- 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 insusceptible 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 step size (< 0.02 nm)
- Coarse and fine displacement in one drive
- High operating velocity (up to 1 mm/sec)
- Low drift (1 nm/min)

Technical specifications

- Length 141 mm
- Width 133 mm
- Height 21 mm
- Weight 420 g
- Travel XY 30 mm
- Speed up to 1 mm/s
- Smallest step size < 0.02 nm
- Reproducibility 100 nm
- Measurement resolution 50 nm
- Angular deviation < 10 μ rad
- Load 500 g
- Temperature range 273 K to 353 K
- Lowest pressure 10^{-7} mbar
- Substage mounting 3×3.2 mm holes
- During operation, the stage will heat up to approx. 55°C

Optional Features

- Z drive with 5 mm travel, 0.02 nm step size
- Laser interferometric measurement system for X and Y
- Laser interferometric measurement system avoids stage heat up during operation
- Basic version w/o encoders also available

Contact us at

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or find your local agent at

www.kleindiek.com