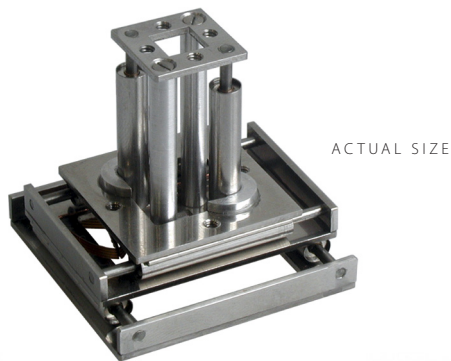


LT3310 Substage

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

The LT3310 is primarily used in SEM/FIB to enhance the accuracy and functionality of the standard microscope stage. Its smooth motion and rotational axis make it ideal for cell counting. In addition, the LT3310 is designed for nanomanipulation applications where weight and space are highly restricted and for high-precision work in extreme environments.



APPLICATIONS

Substage for SEM & FIB

Cell counting

Particle counting

CUSTOMIZATION

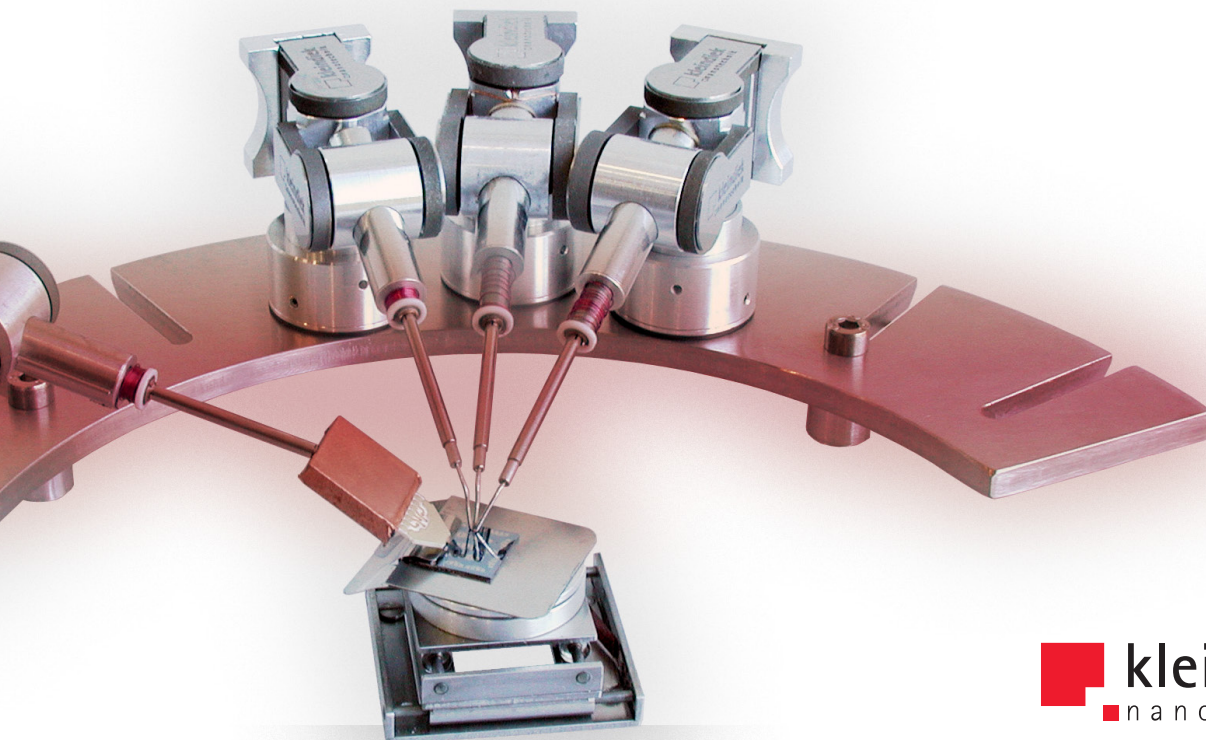
Two or three linear axes

Rotational axis

Ultra high vacuum compatible

Low temperature compatible

Non-magnetic material



LT3310 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 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 resolution ($< 0.5 \text{ nm}$)
- Coarse and fine displacement in one drive
- High operating velocity (up to 1 mm/sec)
- Low drift (1 nm/min)
- Smooth motion

Technical specifications

- Length 33 mm
- Width 33 mm
- Height XY 11.6 mm
Height XYZ $30 \text{ mm} + 7 \text{ mm travel}$
Height XYR 16.6 mm
- Weight XY 22 g
Weight XYZ 34 g
Weight XYR 27 g
- Travel XY 10 mm
Travel Z 7 mm
Travel R $360^\circ \text{ unlimited}$
- Speed up to 1 mm/s
- Resolution XYZ $< 0.5 \text{ nm}$
Resolution R 10^{-7} rad
- Load 50 g
- Lift 25 g
- Maximum sample size $25 \text{ mm} \times 25 \text{ mm}$
- Temperature range 273 K to 353 K
UHV version 273 K to 393 K
- Lowest pressure 10^{-7} mbar
UHV version $2 \times 10^{-10} \text{ mbar}$
- Substage mounting $4 \times 2 \text{ mm holes}$
- Sample mounting $4 \times \text{M2 holes}$
- Material Stainless steel

X, Y = HORIZONTAL
Z = VERTICAL
R = HORIZ. ROTATION

Contact us at
info@kleindiek.com
 or find your local agent at
www.kleindiek.com

LT6620 Substage

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

The LT6620 is primarily used in SEM/FIB to enhance the accuracy and functionality of the standard microscope stage. It is designed for large-range high-precision applications in extreme environments.

It is not fitted with positional encoders and is thus the economical alternative to the LT6820 substage for applications where repeatability or automation is not required.

APPLICATIONS

Substage for SEM & FIB

Cell counting

Particle counting

CUSTOMIZATION

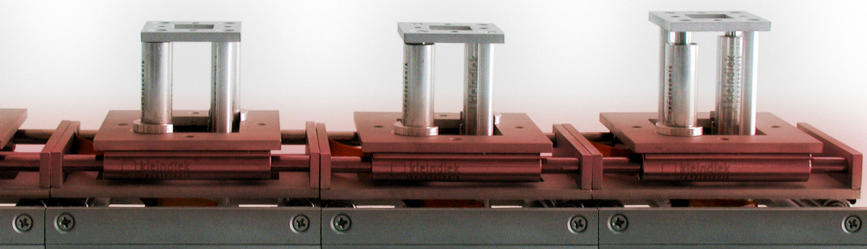
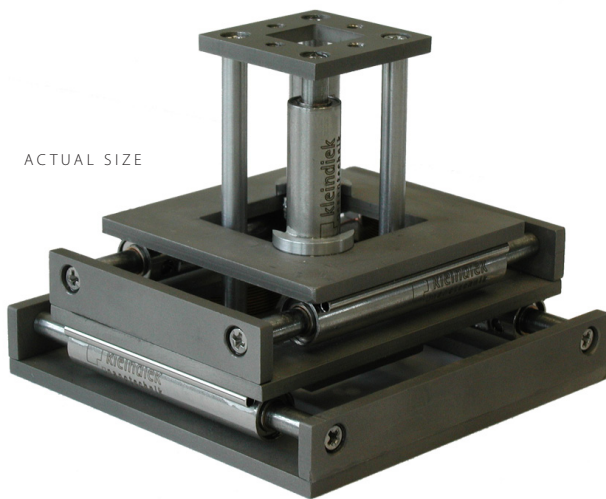
Two or three linear axes

Ultra high vacuum compatible

Low temperature compatible

Non-magnetic material

ACTUAL SIZE



LT6620 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 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 resolution ($< 0.5 \text{ nm}$)
- 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 66 mm
- Width 66 mm
- Height XY 26 mm
Height XYZ $50 \text{ mm} + 15 \text{ mm travel}$
- Weight XY 200 g
Weight XYZ 270 g
- Travel XY 20 mm
Travel Z 15 mm
- Speed up to 2 mm/s
- Resolution $< 0.5 \text{ nm}$
- Angular deviation (unidirectional) $< 10 \text{ } \mu\text{rad}$
- Load 500 g
- Lift 200 g
- Temperature range 273 K to 353 K
UHV version 273 K to 393 K
- Lowest pressure 10^{-7} mbar
UHV version $2 \times 10^{-10} \text{ mbar}$
- Substage mounting $4 \times 3.2 \text{ mm holes}$
- Sample mounting $4 \times \text{M3 holes}$
- Material Stainless steel

X,Y = HORIZONTAL
Z = VERTICAL

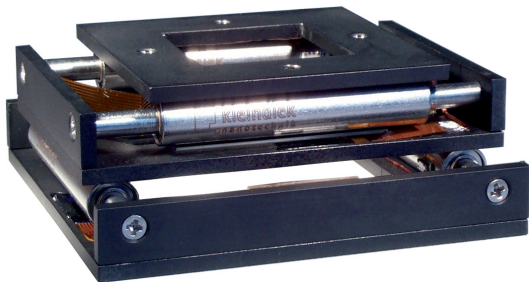
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LT6820 Substage

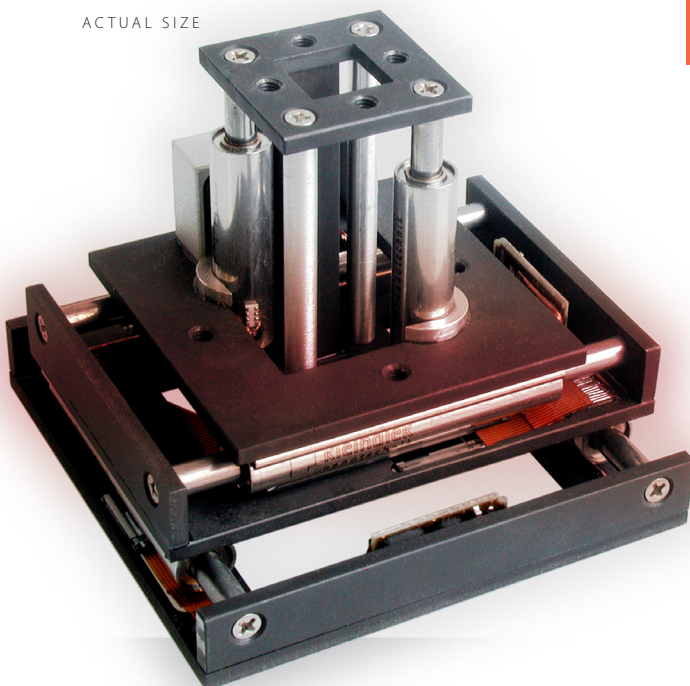
Our range of stages are suited for orthogonal positioning solutions in atmosphere, SEM/FIB, UHV and at low temperatures.

The LT6820 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 designed specifically for lithography, cell counting and failure analysis applications and is fitted with positional encoders allowing 100 nm repeatability on the X and Y axes.



ACTUAL SIZE



APPLICATIONS

Substage for SEM & FIB

Cell counting

eBeam lithography

Tensile measurement

Particle counting

Metrology

Forensic analysis

CUSTOMIZATION

Two or three linear axes

Positional encoder on Z axis

Ultra high vacuum compatible

Non-magnetic material

LT6820 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 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 resolution ($< 0.5 \text{ nm}$)
- 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 68 mm
- Width 68 mm
- Height XY 26 mm
Height XYZ $50 \text{ mm} + 15 \text{ mm travel}$
- Weight XY 200 g
Weight XYZ 270 g
- Travel XY 20 mm
Travel Z 15 mm
- Speed up to 2 mm/s
- Resolution $< 0.5 \text{ nm}$
- Encoder repeatability 100 nm^*
- Angular deviation (undirectional) $< 10 \mu\text{rad}$
- Load 500 g
- Lift 200 g
- Temperature range 273 K to 353 K
UHV version 273 K to 393 K
- Lowest pressure 10^{-7} mbar
UHV version $2 \times 10^{-10} \text{ mbar}$
- Substage mounting $4 \times 3.2 \text{ mm holes}$
- Sample mounting $4 \times \text{M3 holes}$
- Material Stainless steel

* Repeatability depends on the working distance from the encoder due to the angular deviation of the substage

X, Y = HORIZONTAL
Z = VERTICAL

Contact us at
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LT12830 Substage

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

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

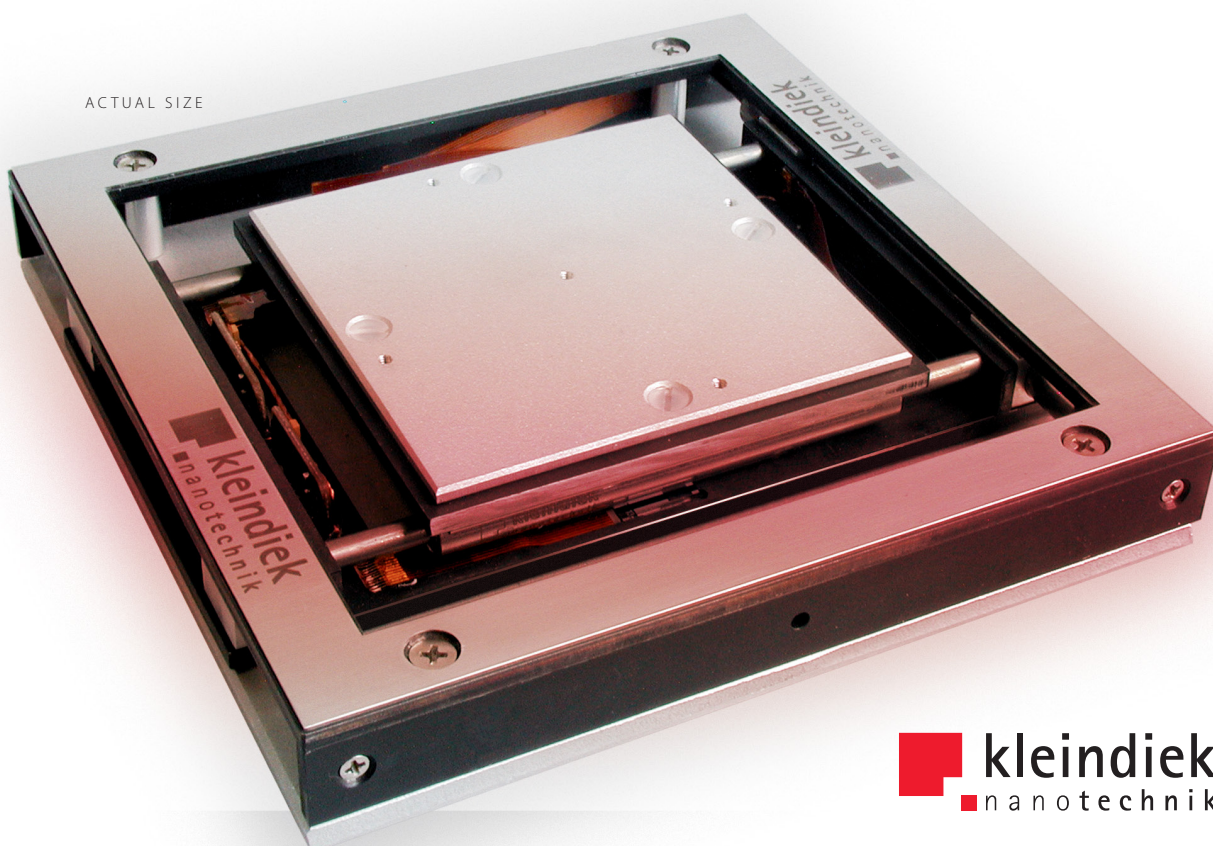
Tensile measurement

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 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 resolution ($< 0.5 \text{ nm}$)
- 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 16 mm
- Weight 520 g
- Travel XY 28.5 mm
- Speed up to 2 mm/s
- Resolution $< 0.5 \text{ nm}$
- Repeatability 50 nm
- Angular deviation $< 1 \mu\text{rad}$
- Load 500 g
- Temperature range 273 K to 353 K
UHV version 273 K to 393 K
- Lowest pressure 10^{-7} mbar
UHV version $2 \times 10^{-10} \text{ mbar}$
- Substage mounting $4 \times 3.2 \text{ mm}$ holes
- Sample mounting Clip or $2 \times \text{M3}$ holes
- Material Stainless steel

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