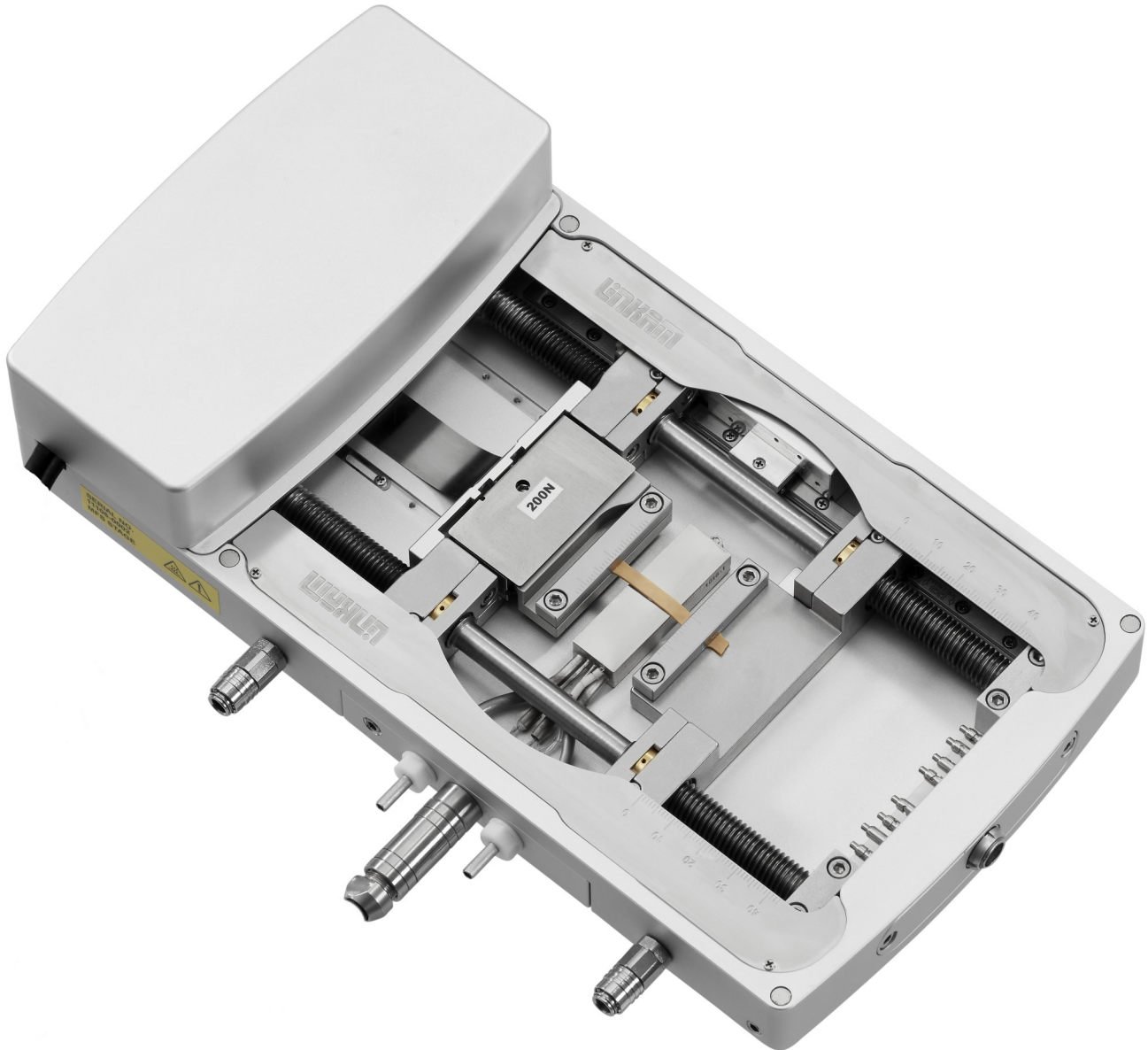


MFS

Modular Force Stage

NEW



Tensile & Compression

A wide range of grips to accommodate different samples

Wide Range of Tensile Force

Interchangeable options of 0N to 20N or 0N to 200N and more

Multiple Control Options

Full control of speed, distance and force applied as well as temperature

Introducing the MFS

Understanding the micro- and thermo- mechanical properties of materials is increasingly important. Existing materials are being deployed in new environments and exotic new materials are being developed to meet ever higher demands.

Advanced materials such as carbon fibre and graphene are becoming established materials for high-end applications such as bike frames, cars, surgical implants and aircraft wings. New materials are being developed to replace or support human body parts such as artificial hips and artificial corneas. It is vital that the physical properties of these materials are characterized and any failure modes well understood.

The MFS Modular Force Stage is designed to characterise the mechanical properties of your samples. The system is a new and improved version of the TST tensile stage with increased sensitivity and resolution. The modular design allows users to have an additional level of control over their experiments with the ability to change grips, heater types and force beams. It offers a flexible upgrade and customisation path. The additional options will accommodate a wide range of different samples and applications.

The stage can be used with reflected or transmitted illumination as well as other techniques such as X-ray, Raman and FTIR. Its sample chamber can be gas purged via the built in gas ports. Additional options for humidity control and electrical contact posts are also available.



Features

COMPRESSION & TENSILE FORCE

Test the compressive and tensile properties of your sample relative to temperature and capture high resolution images of the structural changes in situ.

WIDE RANGE OF CONTROL PARAMETERS

Speed of jaws, distance moved and the force applied can be varied relative to temperature.

INTERCHANGEABLE COMPONENTS

Grips, force beams, heaters and lids can be easily changed to accommodate a wide range of sample types. You can have an unheated ambient base or the temperature can be controlled from -196°C up to 600°C depending on heater attached.

ELECTRICAL CONNECTIONS

Optional electrical connections enable electrical measurement on the sample during tensile testing.

HUMIDITY

Add the RH95 humidity unit to your system to accurately control the relative humidity around your samples.

ENCODED DISTANCE MEASUREMENT

Built in high resolution encoder ensures precise measurement of changes in length.

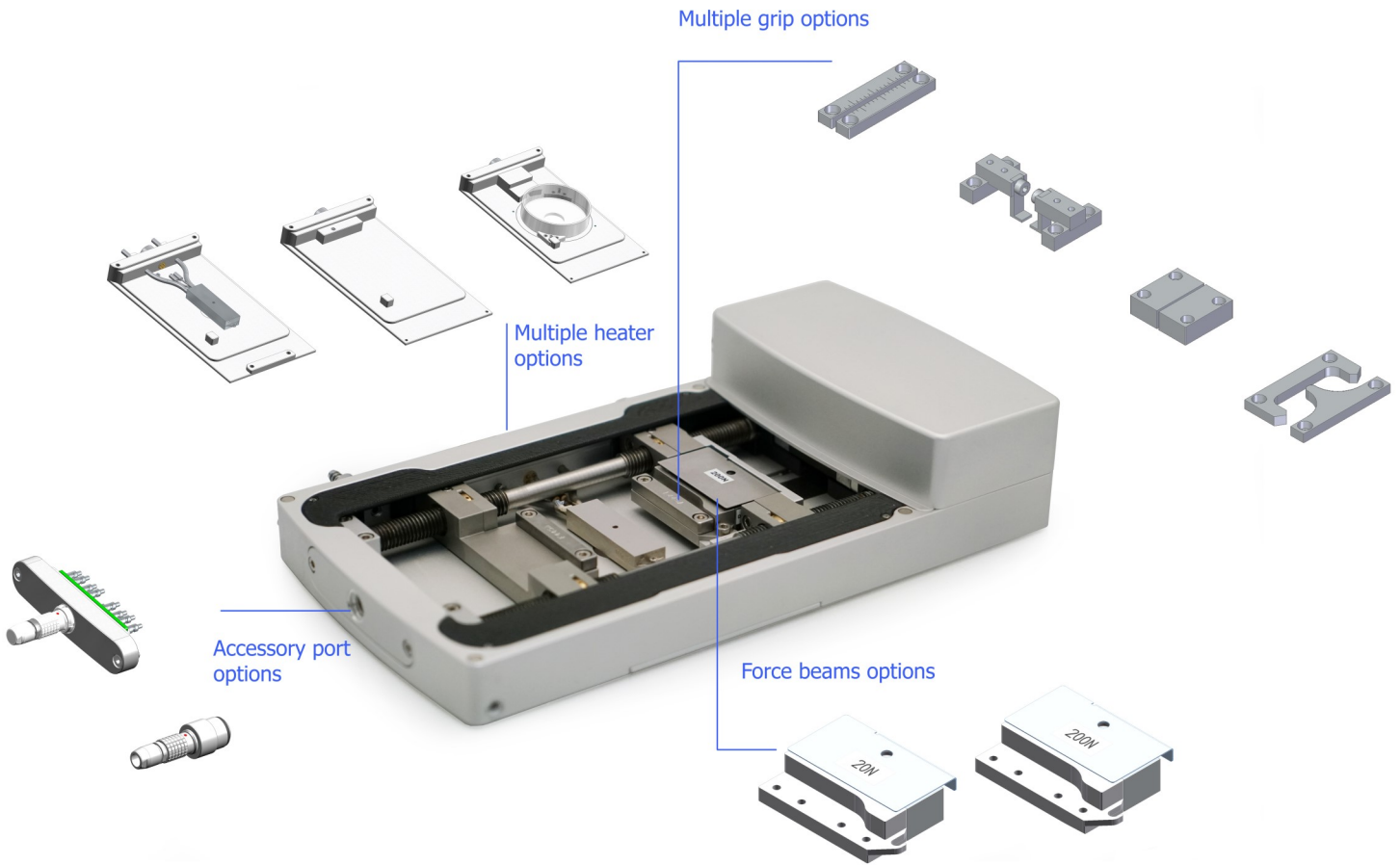
Quick Specification*

Distance Resolution	1 μm
Tensile Force Range	0N to 20N, 0N to 200N
Tensile Speed Range	0.1 to 5000 $\mu\text{m/s}$
Maximum Travel	85mm
Force Resolution	20N x 0.0001N 200N x 0.001N

*subject to change

The Modular Force Stage- A Modular System

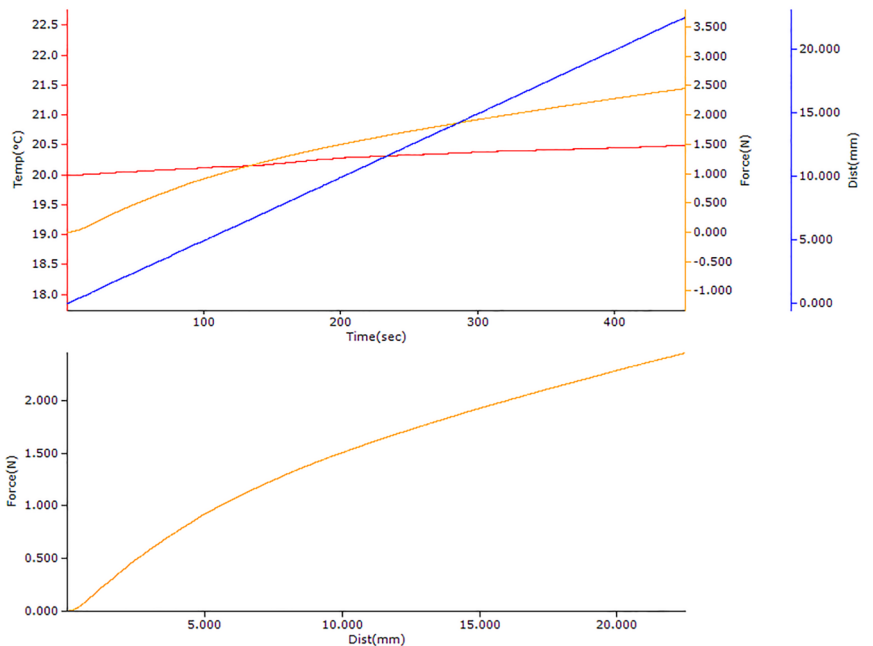
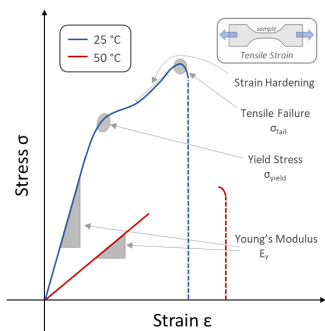
Design the system you need:



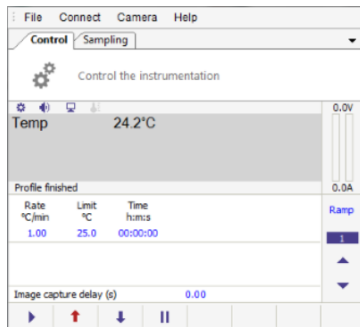
Graphical Data

Analyse the mechanical properties of your samples with LINK software. Combine it with the LINK imaging module for in situ visualisation of your samples throughout your experiment.

Real-time graphs are displayed as the experiment is run. You can visualise your data in both temperature-time and force-distance graphs and export it to excel for more detailed analysis



Discover More...



LINK Control Software

Take control of your experiment with the new LINK software. In addition to temperature, LINK can control or monitor many of the other stage parameters such as vacuum, humidity, tensile force and shear force (dependent of stage type and sensors). LINK can be programmed with up to 100 ramps and provides real time graphical feedback. LINK supports a number of modules to further enhance your system, including LINK Imaging Module for synchronised image capture, LINK Extended Measurements module for recording the measurement of key features in your images, LINK 21CFR11 Module for data regulatory compliance and LINK TASC providing image analysis based thermal analysis.



Humidity

The RH95 Relative Humidity Controller provides environmental sample control to Linkam's range of temperature stages. It provides precise control in a compact, self-contained package with no requirement for dry air supply. The RH% is accurately controlled between 10%-90% (temperature range ambient to 85°C).



Imaging Station

The Imaging Station provides a digital imaging platform compatible with all Linkam heating and cooling stages. It has been specially designed with a pivoted mechanism to allow greater access to your samples making it quick and easy to change samples. There are reflected and transmitted light options available as well as options for polarisation and phase contrast imaging. The Imaging Station is compatible with a range of long working distance objective lenses.

Contact Details

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We make scientific instruments that help characterise materials from polymers to biological tissue and metals to composites. Our instruments are used for research by the world's most advanced scientific organisations and companies. Each of our instruments are designed and manufactured in-house by our team of highly experienced electronics, software and mechanical design engineers. We design and develop solutions for sample characterisation by collaborating with the best scientists in the world. Will you be next?