TST350

Accurate Tensile Characterisation

Heating and Freezing
Wide temperature ranges from –196°C to 350°C

Wide Range of Tensile Force
Interchangeable options of either 0N to 20N or 0N to 200N available

Variety of Control Options
Full control of jaw speed, distance and force applied

Linkam Scientific Instruments

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Introducing the TST350

The TST350 is built with two precision ground stainless steel lead screws to maintain perfect uniform vertical and horizontal alignment. Sample jaws move in opposite directions to maintain sample position in the field of view. The TST350 can be used with reflected or transmitted illumination as well as other techniques such as X-ray.

Its temperature control and accuracy is second to none, ranging from -196°C to 350°C with 0.01°C control and up to 60°C/min rates, with virtually no temperature feedback to the measurement of force.

Its sample chamber is sealed and can be purged with various gases via the built in valves. For x-ray applications, there is a special vacuum version with feed through connectors for x-ray cabinets.

The system is provided with a T95 controller which is available with either LINK software or LinkPad touch screen controller. For below ambient temperatures, the LNP95 cooling pump is available.

Features

Tensile Force
Test the tensile properties of your sample relative to temperature and capture high resolution images of the structural changes

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

Low & High Temperatures
The temperature can be controlled from –196°C (with the addition of a LNP) up to 350°C, for a wide range of applications.

Quick Release Gas Ports
Simple and easy stage purging to allow atmospheric composition control.

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

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

Application Examples

Use the TST350 to investigate how the tensile properties of your sample change with temperature. Some key applications in the manufacturing and testing of everyday materials are:

Materials

Within the materials testing field, the TST350 is ideal for tensile applications including:

Fracture Testing | Adhesion analysis | Degradation

Food

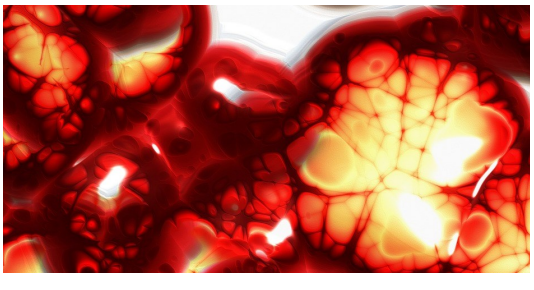
Many well known food and drink manufacturers and food scientists are using the TST350 in a variety of different applications:

Oral Processing | Thermal Analysis | Packaging

Biological

The TST350 is being used by many top universities to aid the pioneering research of biological material in a wide variety of applications:

Tissue stress | Growth manipulation | Cell stretching



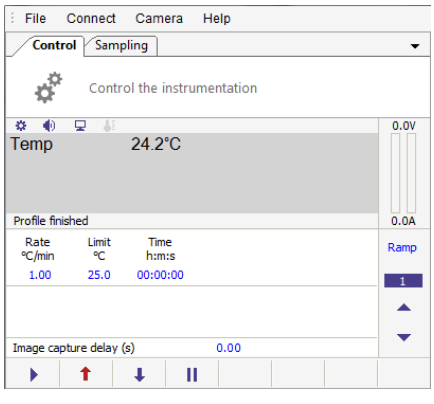
Technical Specification

Temperature Range	-196°C to 350°C (X-ray version –196°C to 250°C)
Heating Rates	0.01°C/min to 60°C/min
Tensile Force Range	0N to 20N or 0N to 200N
Maximum Sample Length	Up to 76mm
Objective Lens Working Distance	8mm
Compatibility	Reflected and transmitted light microscopes, Raman, Confocal & X-ray
Tensile Speed Range	1-1000µm/s
Force Resolution	0.001N (20N version) or 0.01N (200N version)

Discover More...

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).



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.

Imaging Station

The Imaging Station is compatible with all Linkam heating and cooling stages. It has been specially designed with a pivoted mechanism to allow greater access to your samples. There are reflected and transmitted light options available and it 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?

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