

**LINSEIS**

T H E R M A L   A N A L Y S I S

# DILATOMETRY

DIL L75 Quattro



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Since 1957 LINSEIS Corporation has been delivering outstanding service, know how and leading innovative products in the field of thermal analysis and thermo physical properties.

We are driven by innovation and customer satisfaction.

Customer satisfaction, innovation, flexibility and high quality are what LINSEIS represents. Thanks to these fundamentals our company enjoys an exceptional reputation among the leading scientific and industrial organizations. LINSEIS has been offering highly innovative benchmark products for many years.

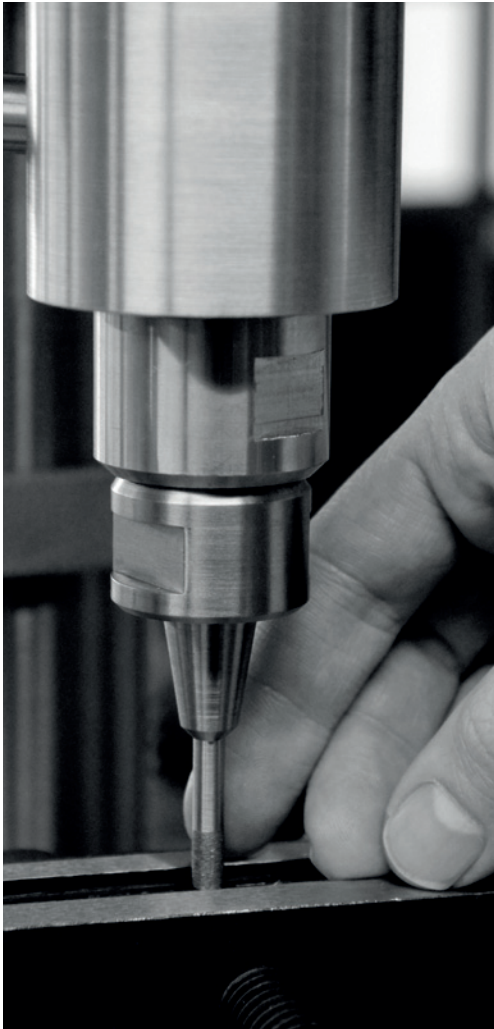
The LINSEIS business unit of thermal analysis is involved in the complete range of thermo analytical equipment for R&D as well as quality control. We support applications in sectors such as polymers, chemical industry, inorganic building materials and environmental analytics. In addition, thermo physical properties of solids, liquids and melts can be analyzed.

LINSEIS provides technological leadership. We develop and manufacture thermo analytic and thermo physical testing equipment to the highest standards and precision. Due to our innovative drive and precision, we are a leading manufacturer of thermal Analysis equipment.

The development of thermo analytical testing machines requires significant research and a high degree of precision. LINSEIS Corp. invests in this research to the benefit of our customers.

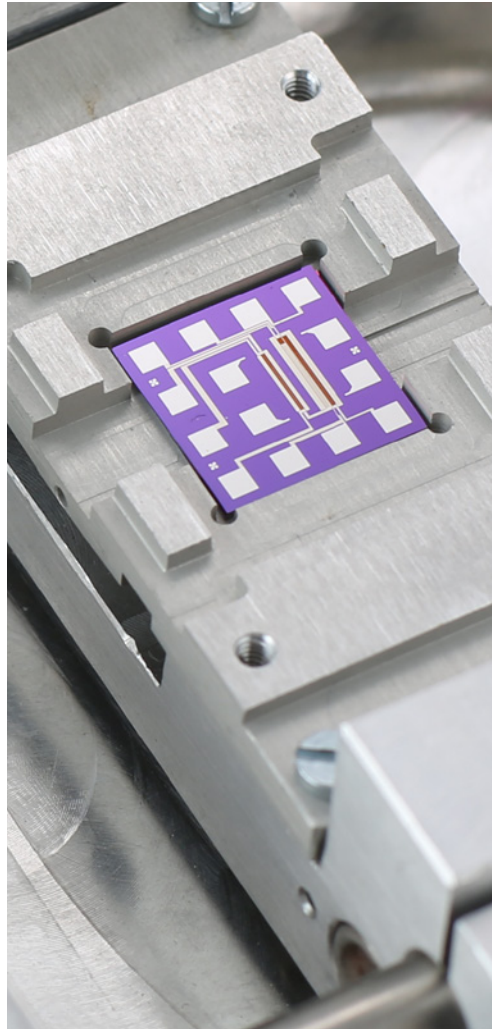


**Claus Linseis**  
Managing Director



## German engineering

The strive for the best due diligence and accountability is part of our DNA. Our history is affected by German engineering and strict quality control.

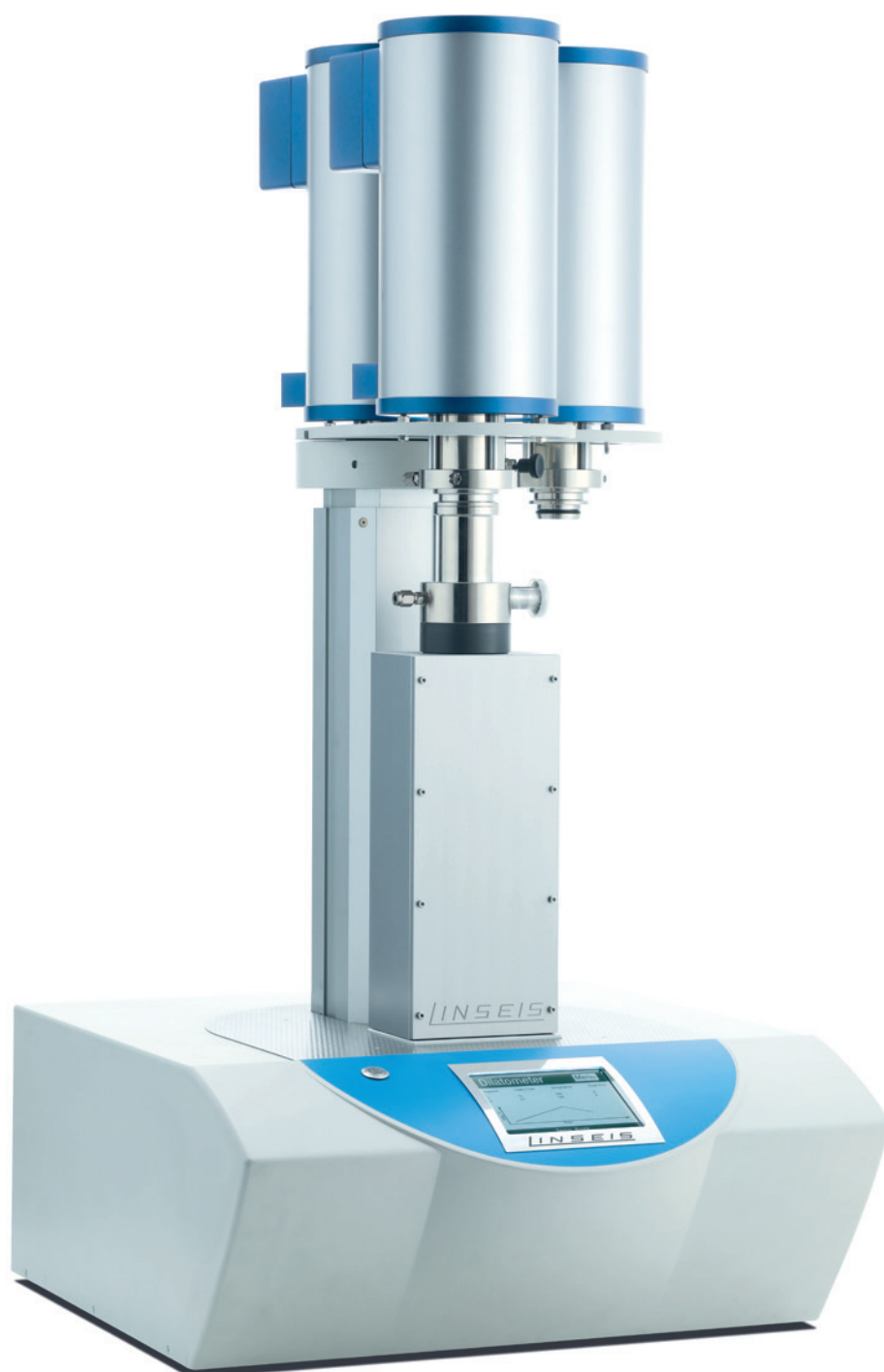


## Innovation

We want to deliver the latest and best technology for our customers. LINSEIS continues to innovate and enhance our existing thermal analyzers. Our goal is constantly develop new technologies to enable continued discovery in Science.

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# DIL L75 QUATTRO



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This dilatometer is a very unique instrument, which was developed for customers in the ceramics automotive industry.

These customers have to make a lot of quality control measurements in order to ensure ISO9000 standards. Especially companies manufacturing catalytic converter base ceramics for car exhaust systems are very interested.

The Quattro Dilatometer is built up with four separate dilatometer measuring sensors, which can measure simultaneously either four separate samples at one time, or three separate samples against a NIST reference.

That means, the productivity of the Quattro Dilatometer is three times as high, if compared to the normally used dual push rod dilatometers. With a dual push rod dilatometer only one sample can be measured against the standard at each time.

In order to further increase the productivity, this dilatometer is built with two separate furnaces. Whenever the first run of four samples is ready, a new, cool furnace is ready to immediately start the next run.

There is another feature included in this Quattro Dilatometer, which is called an automatic furnace lift mechanism. This feature automatically lifts the furnace at the end of each measurement without any operator interaction.

This way the measuring system is already cool when the operator comes to change the samples. This again increases the productivity of the system.

The 32 bit software further developed to be able to program the parameters for four samples on one screen. For each sample different sample length, file name, etc. can be stored, and are available for later evaluation.

The temperature programming is done through an expensive program part, for several stages, dwell times, heat up speeds etc. A software macro is supplied with automatic evaluation, to ensure that ready measuring data are available without time delay.

We are proud to say that as far as we know LINSEIS is the only supplier worldwide, that can offer this highly specialized dilatometer. This is another example of our powerful line of Thermal Analysis instruments.

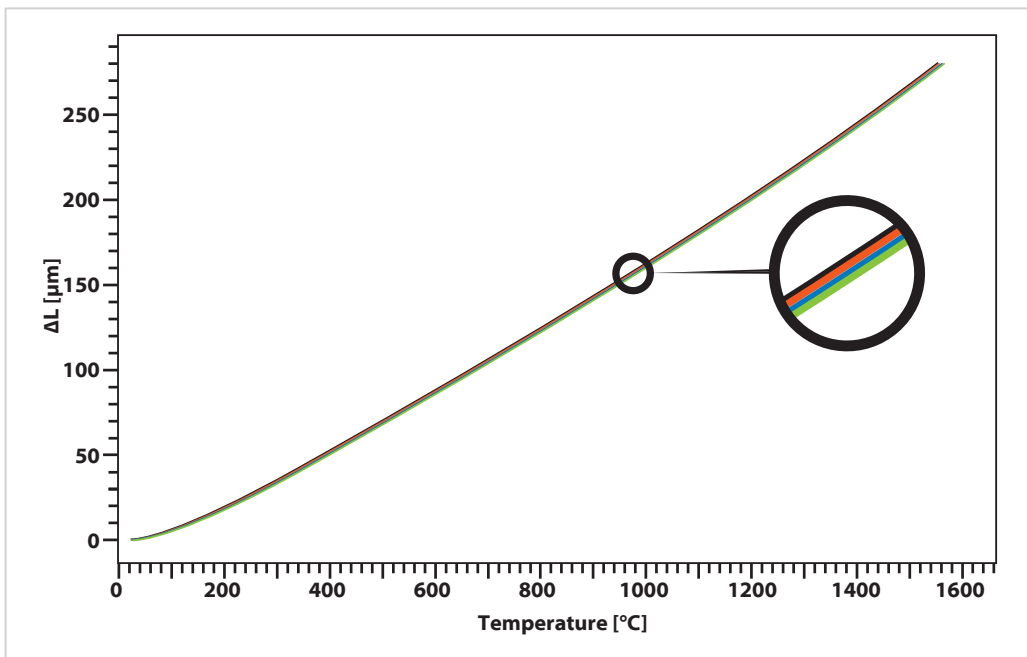
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# TECHNICAL SPECIFICATIONS

	DIL L75 Quattro
<b>Temperature range</b>	-180°C up to 500 / 700 / 1000°C RT up to 1000 / 1400 / 1600 / 1750 / 2000 / 2400 / 2800°C
<b>Number of samples</b>	4
<b>Heating/cooling rates</b>	0.01K/min up to 50K/min (dependent on furnace)
<b>Sample holders</b>	fused silica, Al <sub>2</sub> O <sub>3</sub> < 1750°C
<b>Sample length</b>	max. 50mm
<b>Sample diameter</b>	max. 7mm
<b>Measuring range</b>	500 / 5000µm
<b>Resolution</b>	1.25nm
<b>Atmospheres</b>	inert, oxidizing, red., vac., static/dynamic
<b>Electronics</b>	integrated
<b>Interface</b>	USB

# APPLICATIONS

## Standard Expansion Measurement



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07/17

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