Anton Paar

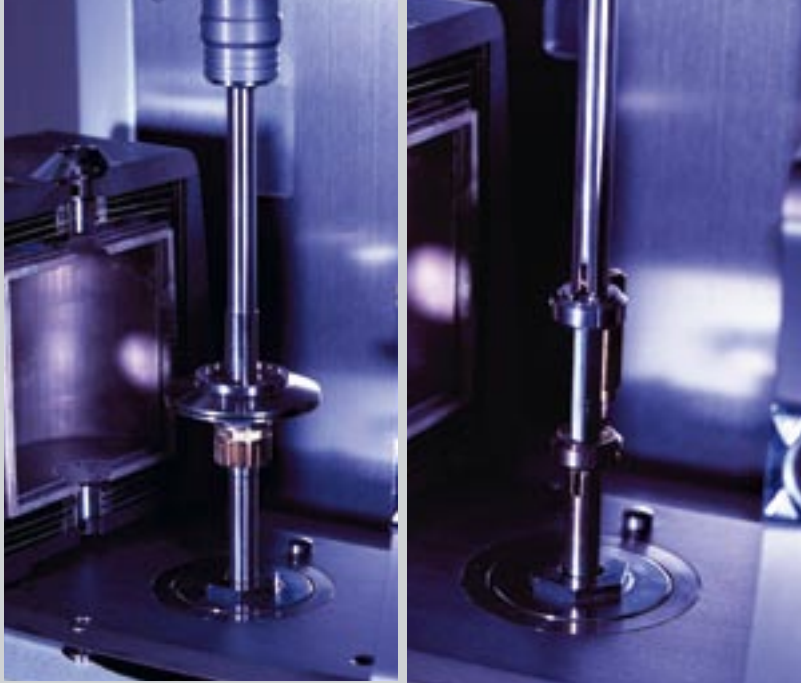
::: Intelligence in Rheometry

Precision Thermo Chamber

The Precision Thermo Chamber CTD 600 is probably the most advanced rheometer accessory available anywhere. Its wide temperature range of -150 °C to +600 °C and extremely uniform temperature distribution make the CTD 600 the perfect tool for demanding measuring tasks.

The Precision Thermo Chamber CTD 600 is suited for the measurements of liquids, melts and soild materials. It takes the temperature control of rheometers to a previously unattained level of reliability, accuracy and ease-of-use. During development the greatest care has been taken to guarantee an exact and reliable control of the sample temperature and a homogeneous temperature throughout the sample.

The symmetrically built oven combines electrical heating and convection of air or an inert gas. This principle guarantees optimum temperature control and minimum temperature gradient in the sample over the whole temperature range of -150 °C to +600 °C for every geometry. With its innovative design and comprehensive range of accessories the CTD 600 is a must for the serious rheologist.



Features

- The temperature range of the CTD 600 goes from ambient from +600 °C without the low temperature option; with the liquid nitrogen cooling system this range is extended to -150 °C up to +600 °C.
- A comprehensive range of measuring geometries is available such as plate-plate and cone-plate systems, disposable systems, solid torsion bar fixture (for DMTA measurments), and film and fiber fixtures.
- The measuring geometries can be exchanged quickly and easily. The oven can be fully opened which gives easy access to the sample area.
- The temperature sensor is located directly under the sample (for plate-plate and cone-plate systems) or next to the sample (for the solid torsion bar fixture and the fiber and film accessory).
- The temperature gradient vertically and horizontally is extremely low over the whole temperature range and for all measuring geometries. The sample is always placed in the centre of the oven.
- Temperature control is reliable and exact; great care has been taken to minimize temperature overshoot and avoid accidental degradation of the sample.
- A calibrated temperature sensor is available which allows easy and automatic temperature calibration from the software. Calibration results are stored automatically.
- The nitrogen flow from the evaporator unit is adjusted depending on the required measurement temperature to minimize the consumption of liquid nitrogen.
- The reading on the temperature sensor always represents the sample temperature, even during fast temperature ramps

Accessories

- Parallel-plate systems up to ø 50 mm
- Cone-plate systems up to ø 50 mm
- Disposable measuring systems
- Solid torsion bar fixture up to 50 x 10 x 4 mm (DMTA)
- Film and fiber fixture
- Evaporator unit for liquid nitrogen cooling
- Dewar
- Accessories for measurements under UV light

Technical specifications

Temperature range	ambient to +600 °C (standard option), -150 °C to +600 °C (low temperature option with liquid nitrogen cooling)
Heating rate	max. 20 K/min
Cooling rate (liquid nitrogen)	max. 15 K/min
Air/inert gas consumption (convection heating)	20 l/min
Air consumption (shaft cooling)	20 l/min
Liquid nitrogen consumption	3 - 6 l/h

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