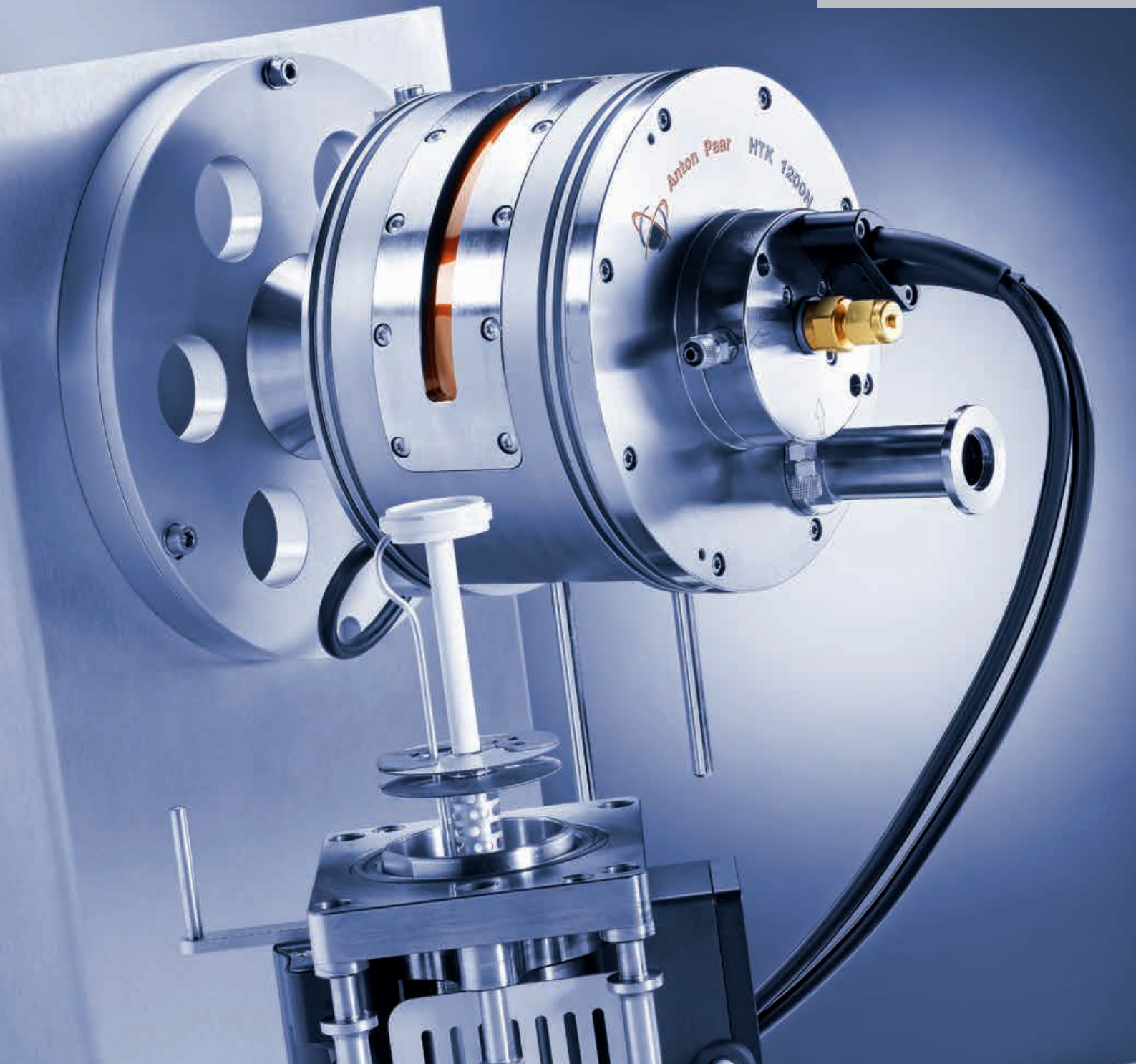




Anton Paar

::: Innovation in Materials Science



HTK 1200N High-Temperature Oven Chamber

The HTK 1200N High-Temperature Oven Chamber is a versatile and robust sample stage for in-situ X-ray studies in different atmospheres up to 1200 °C. It guarantees excellent temperature uniformity in the sample as well as accurate temperature measurement and control.

A reliable instrument in any respect - day in, day out!

Perfection is our goal

The HTK 1200N High-Temperature Oven Chamber is the sample heating stage of choice for many in-situ high-temperature XRD studies up to 1200 °C. The furnace type heater, the sample spinner, the possibility to use capillaries and the quality of its materials make HTK 1200N one of the most versatile sample stages on the market. High performance combined with unmatched ease of use minimize the effort of carrying out in-situ XRD investigations.

Temperature measurement at the right spot

The temperature sensor in HTK 1200N is located right underneath the sample in a protective ceramic sample holder. This setup provides for a highly repeatable and reliable temperature measurement and stable temperature control compared to other arrangements with free-standing temperature sensors.

The well-proven design of the environmental heater guarantees that there are virtually no temperature gradients in the sample, offering high flexibility regarding sample thickness.

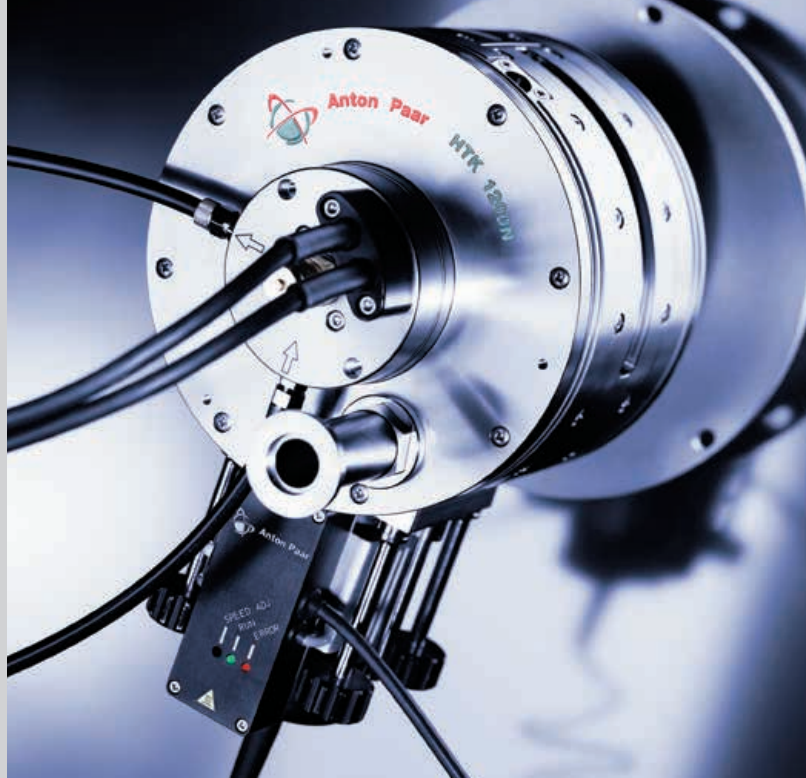
Sample spinning is crucial

The sample spinning option provides highly random grain orientation, which is necessary for good diffraction data quality and subsequent profile fitting routines. The sample carriers are easily exchanged and can accommodate various sample forms like powders, flat solids or pellets. The standard sample carriers made of chemically inert alumina minimize the risk of reactions with the sample.

A capillary spinner for measuring X-ray-transparent or air-sensitive samples is optionally available.

Features and benefits

- ▶ Excellent sample temperature uniformity due to environmental heating
- ▶ Reliable measurement and control of the sample temperature
- ▶ Sample spinning for optimal data quality
- ▶ Capillary spinner add-on for transmission XRD
- ▶ Easy exchange of samples
- ▶ Chemically inert sample carriers
- ▶ Easy installation in most standard powder diffractometers
- ▶ Robustness and long durability



Applications

- ▶ Study temperature-induced crystal phase transformations and chemical reactions
- ▶ Monitor crystallite growth during annealing and sintering
- ▶ Investigate calcination processes
- ▶ Measure lattice parameters and coefficients of thermal lattice expansion
- ▶ Study structure changes in porous crystals during gas absorption and release

Technical Specifications

Operating temperature	25 °C to 1200 °C
Pressure range	10 ⁻⁴ mbar to 1 bar rel.
Gases	Air, O ₂ , N ₂ , He, other non-hazardous non-corrosive gases
Scan range	0 °2θ to 164 °2θ
Sample carriers	Corundum, Ø 16 mm
Sample stage diameter	150 mm

Your distributor: