

Special Applications XRDTHERMO Stage

Equipment used with X-ray diffractometers (XRD)

- Wide temperature range regulation
- Precise and stable temperature control
- In-situ testing function
- Good radiation transmittance



One Platform Many Possibilities

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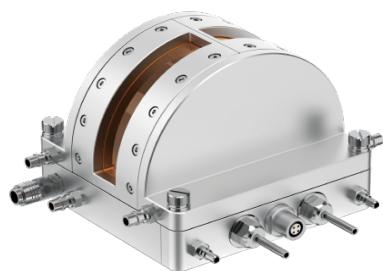
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VLS-190-600



VLS-190-400V

Overview

Introduction to XRDThermo Stage :

This device adopts advanced temperature control technology, supporting precise temperature control from low to high temperatures, and featuring excellent temperature stability and uniformity. Its modular design allows it to be easily adapted to various XRD systems, supports atmosphere control and vacuum environments, and meets different research needs. The XRDThermo Stage is equipped with a highly transparent window, ensuring high X-ray transmittance and the quality of diffraction signals. At the same time, it adopts a stable sample stage structure to ensure positional accuracy during the testing process. Combined with professional control software, it can realize the automatic operation of temperature programs and synchronous data recording, and is widely used in phase transition research, thermal expansion coefficient measurement, and temperature-dependent structural analysis in fields such as metals, ceramics, thin films, polymers, and battery materials.

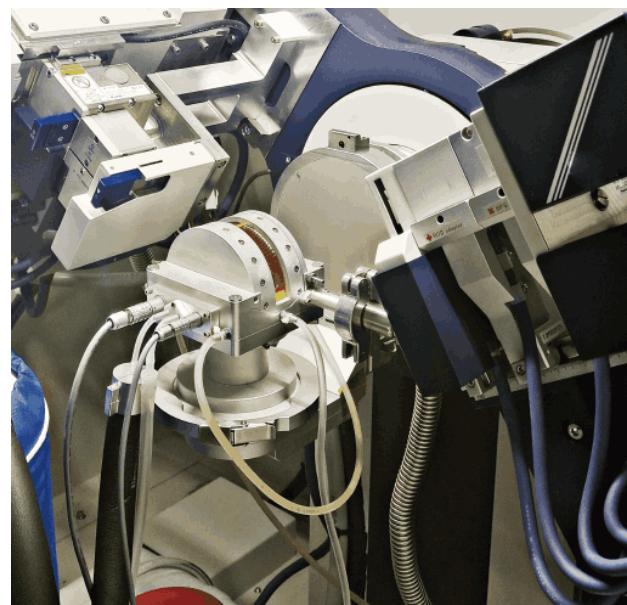
Specifications

Same parameters

Parameter	Description
Cooling and heating method	Liquid nitrogen refrigeration, resistance heating
Temperature range	-130 ~600
Temperature stability	±0.1
Temperature control rate	Maximum heating rate: 100 /min, maximum cooling rate: 40 /min
Window material	JGS2 quartz glass (transmission band range 220nm~2500nm), can be manually disassembled and replaced
Chamber	Atmosphere

Application

- Phase Transition Study:**
 Real-time observation of crystal structure changes, melting, and solidification.
- Thermal Expansion & Lattice Parameters:**
 Measurement of thermal expansion coefficient and lattice deformation.
- Crystallization Kinetics:**
 Reaction rate study with rapid heating/cooling (up to 100°C/min).
- High-Temperature Stability:**
 Material durability and reaction testing under extreme heat (up to 1500°C).



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