STOE

SINCE 1887

SINGLE CRYSTAL DIFFRACTOMETRY

ACCESSORIES

YOUR PARTNER IN X-RAY DIFFRACTION

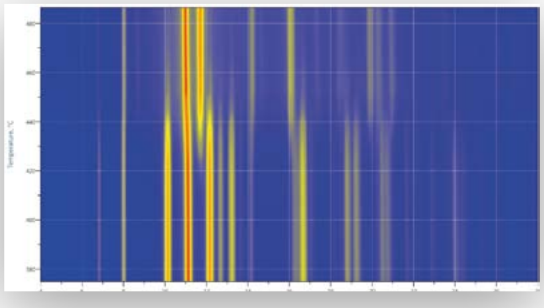
STOE & Cie GmbH | WWW.STOE.COM

HEATSTREAM

As non-ambient methods are becoming inceasingly popular, STOE provides a powerful high temperature attachment: the **HEATSTREAM**.

The crystal, mounted on the goniometer, is positioned in a precisely tempered N_2-flow ($\Delta T < 2\,K$) coming from below with the thermocouple placed as close as possible to the sample, on the ceramic nozzle. An exhaustor with a fan is positioned directly above the crystal and removes the hot gas from the diffractometer's interior.

Once the **HEATSTREAM**'s base is mounted to the instrument, the hot gas nozzle can be mounted and removed in a plug and play fashion. This configuration enables the screening of phase transitions, facilitates the study of high-temperature structures in both single crystals and powders, and can even be utilized for heat treatment and long-term annealing of samples.



PHASE TRANSITION TEMPERATURE
Gunier plots of Ag_2SO_4 around its phase transition temperature at 430°C

CHARACTERISTICS

- Temperature range from RT to 1000 K
- Temperature accuracy within ± 1°
- Heating medium N_2 (open flow)
- Constant thermal conditions for the sample at any diffractometer position
- Easy alignment and sample mounting

AVAILABLE FOR
> STOE STADIVARI

LOW TEMPERATURE

For cooling applications we commonly implement the Cryostream or Cobra for liquid nitrogen temperatures and for even lower temperatures we work with the N-Helix cooler by Oxford Cryosystems.

If you require any other type of sample environment, we are happy to discuss the available options. Please do not hesitate to contact us.

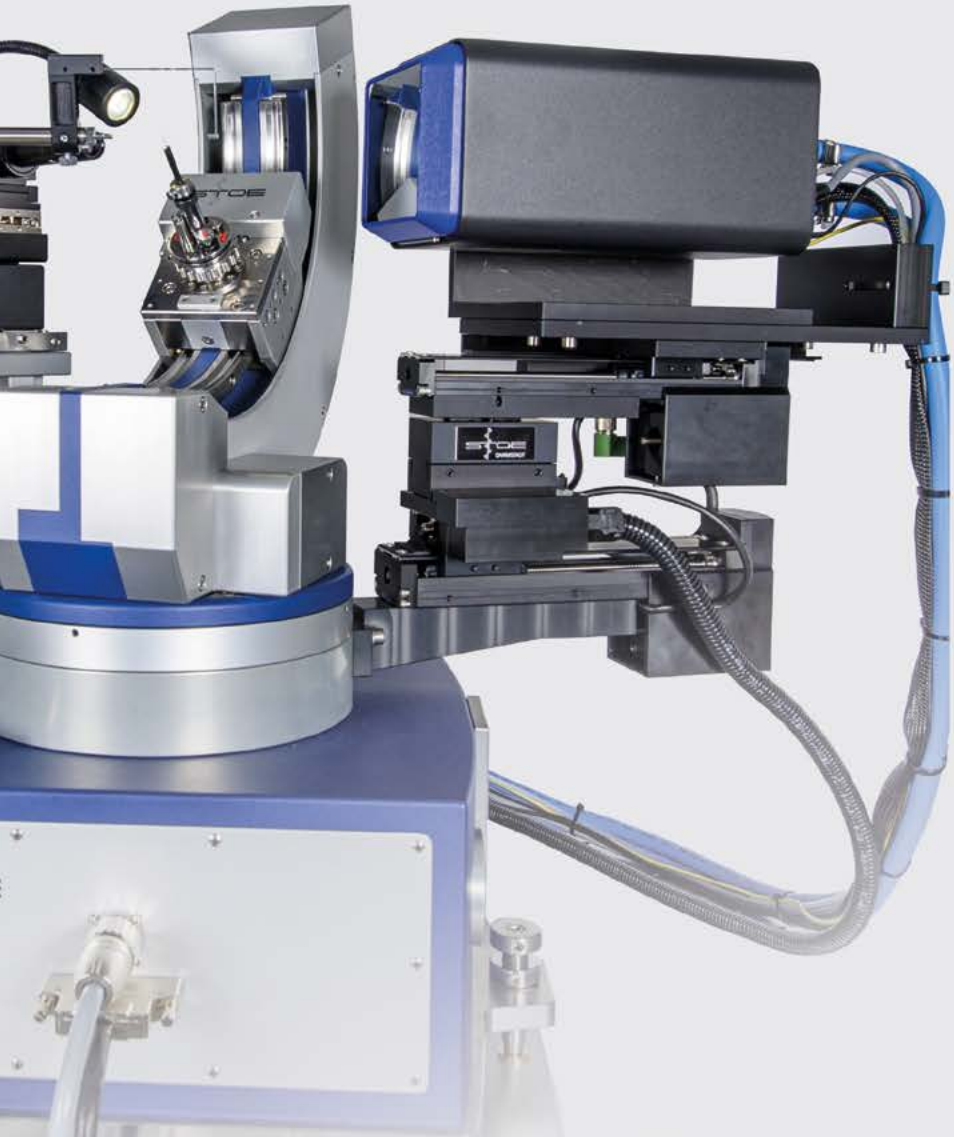
AVAILABLE FOR
> STOE IPDS II & 2T / STADIVARI

XYZ SAMPLE STAGES

STOE provides two variants of motorized xyz stages designed for the **STADIVARI** diffractometer.

The light load stage is compatible with standard micromounts and is capable of moving 10 mm x 10 mm x 10 mm in the xyz direction. This stage is particularly suitable for tasks such as centering samples at extremely low temperatures. On the other hand, the heavy load stage is specifically produced for diamond anvil cells. It comes equipped with a sample holder ring of 55 mm diameter and has the capacity to move 9 mm x 9 mm x 5 mm in the xyz direction.

Both stages incorporate a standard IUCr mount and are designed to ensure that cables are of minimal amount and are routed safely away from the goniometer center.



LIGHT-LOAD AUTOMATED SAMPLE STAGE

- Movement range 10 mm x 10 mm x 10 mm
- Resolution <1.5 µm
- Movable cable guide, guided below the detector
- Max. load up to 10 g
- Protective cover against low temperatures

AVAILABLE FOR
> STOE STADIVARI

HIGH-LOAD AUTOMATED SAMPLE STAGE

- Movement range 9 mm x 9 mm x 5 mm
- Resolution <1.5 µm
- Designed for DACs (55 mm diameter)

AVAILABLE FOR
> STOE STADIVARI

GONIOMETER HEADS

MAGNETIC GONIOMETER HEAD

- Magnetic crystal support
- Tool free centering of crystal
- Height between 67 mm and 110 mm
- Height adjustment without re-alignment of the crystal

FULLY LOCKABLE XYZ HEAD

- Common center of changeable height between 59 mm and 72 mm, or with short crystalmount 49 mm – 62 mm above standard base
- Translational movement: ± 1.7 mm
- All movements within a cylinder of 28 mm Ø

FULLY LOCKABLE X-RAY GONIOMETER HEAD WITH HEIGHT ADJUSTMENT

- Common center of changeable height between 55 mm and 65 mm above standard base
- Translational movement ± 4 mm
- Adjustment of arcs: ± 20°
- Reading accuracy: 0.1°
- All movements can be locked and are within a cylinder of 44 mm Ø

STANDARD GONIOMETER HEAD

- Common center 63.96 mm above standard base
- Translational movement: ± 4 mm
- Adjustment of arcs ± 20°
- Reading accuracy 0.1°
- All movements within a cylinder of 46 mm Ø

SMALL GONIOMETER HEAD

- Common center 33 mm above standard base or with a distance piece common center of changeable height between 52 mm and 70 mm above standard base
- Translational movements: ± 1.5 mm
- Adjustment of arcs ± 25°
- Reading accuracy 0.1°
- All movements within a cylinder of 26 mm Ø

LARGE GONIOMETER HEAD

- Common center 70 mm above standard base
- Translational movement ± 27°
- Reading accuracy: 0.1°
- All movements within a cylinder of 75 mm Ø

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