

TS102W Wide Aperture Microscope Thermal Stage



Instec's TS102W is a Thermo Electric Cooler (Peltier) based thermal stage that can cool down to -30°C without using liquid nitrogen or a circulation chiller. Like the TS62, this is very convenient for performing long duration experiments at cold temperatures. It also simplifies the system set up and reduces operating costs. The TS102W features a large viewing aperture for transmitted light, and large incident angle for wide angle X-Ray and light scattering experiments.



Features

- Programmable Precision Temperature Control from -30°C to 90°C
- Peltier-Based Thermal Microscope Stage Accommodates Up To 38 mm x 50 mm Sample Size
- Wide Incident Angle up to 60°
- Controlled Fast Heating and Cooling Rate
- Extra Large Viewing Aperture
- Removable and Exchangeable Windows
- Dual Pane Windows for Better Thermal Isolation
- Integrated Aperture Window Defrost System
- Variable Sample Chamber Height
- Gas Purge Sample Chamber
- Inner Lid for Improved Sample Temperature Uniformity
- Easy Side Sample Loading with Standard Microscope Slides
- Vertical and Horizontal Mounting
- Optional Precision X-Y Micropositioner for Sample Positioning

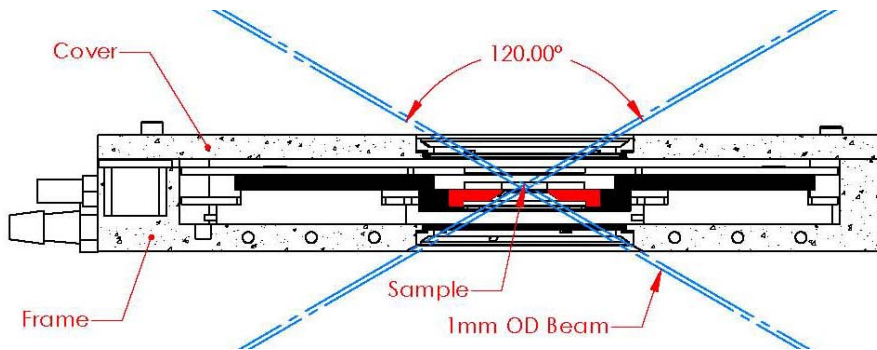
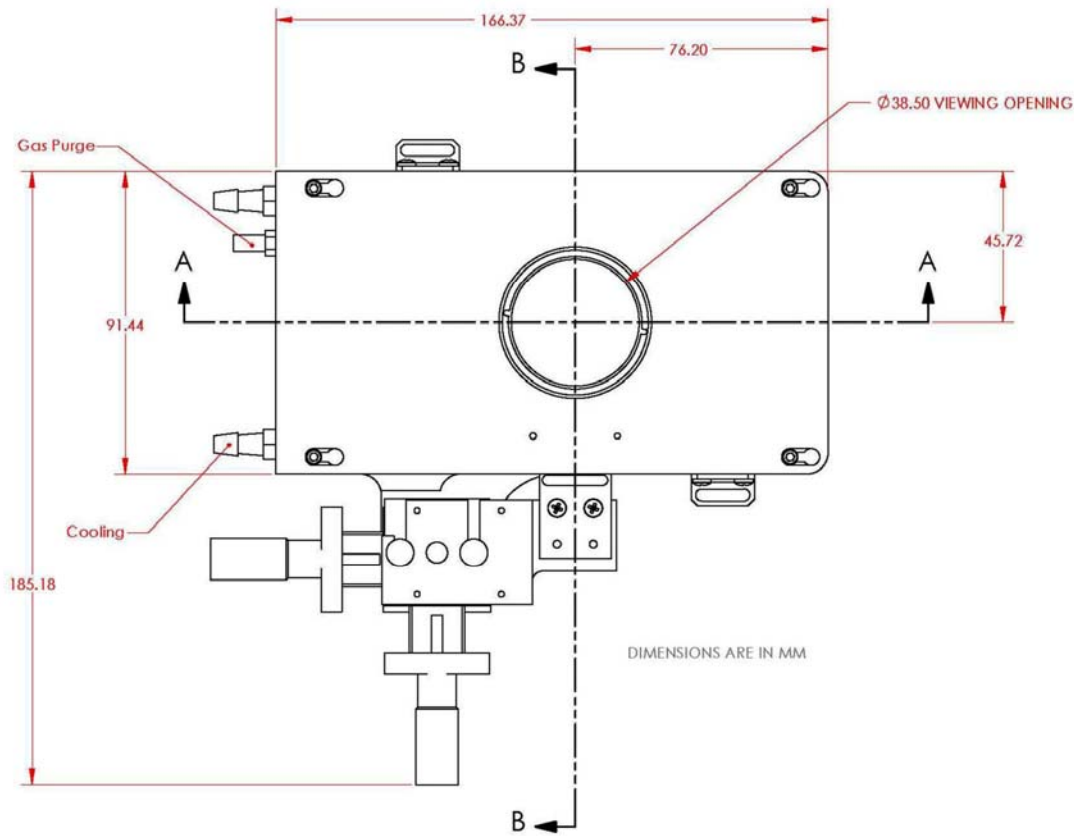
Technical Specifications

Temperature Range	-30°C to 90°C Optional higher temperature limit available
Temperature Resolution	0.1°C with STC200 0.01°C with mK1000
Temperature Stability	$\pm 0.1^{\circ}\text{C}$ at 37°C with STC200 $\pm 0.01^{\circ}\text{C}$ at 37°C with mK1000
Minimum Heating and Cooling Rate	$\pm 0.1^{\circ}\text{C}$ per hour
Maximum Heating Rate	$+50^{\circ}\text{C}$ per minute at 37°C
Maximum Cooling Rate	-50°C per minute at 37°C
Temperature Control Method	PID with Linear Variable DC
Temperature Control Sensor	100 Ω Platinum RTD
Minimum Objective Working Distance	7.8 mm (shorter working distance optional)
Minimum Condenser Working Distance	8.4 mm (shorter condenser distance optional)
Sample Area	38 mm x 50 mm
Chamber Height	3.1 mm
Sample Viewing Aperture	38 mm for reflected light 10 or 20 mm for transmitted light
X-Y Micropositioner (optional)	10 μm resolution

Ordering Information

Contact Instec for ordering information.

Physical Dimensions & Cross Section View



Hot & Cold Stages