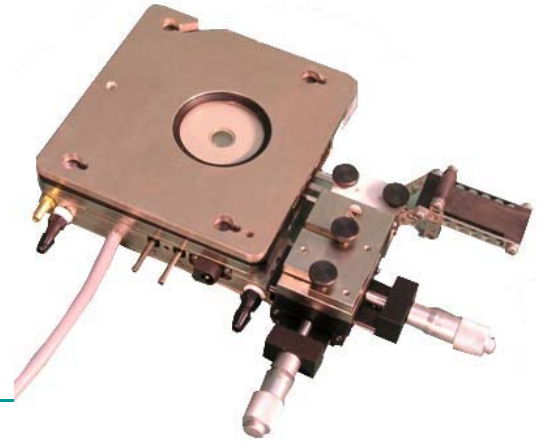


CLM77K Microscope Hot & Cold Stage



Instec's CLM77K is a fully customized stage designed for use on any upright light microscope for correlative cryo-light and cryo-electron microscopy (CLEM). Equipped with a specially designed grid holder, one can image up to six 3 mm EM grids via brightfield and fluorescence light microscopy for determination of regions and/or cellular events of interest for later observation in the electron microscope. The grid holder is designed to keep the grids vitreous-well below the amorphous ice phase transition temperature during loading and transfer of grids into the grid holder and then into the CLM77K stage. To eliminate frost build up on samples, the chamber is gas purged and the grid holder has an integrated slide cover that is closed during transfer from liquid nitrogen into the CLM77K chamber.



Features

- Programmable Precision Temperature Control from -190 °C to 200 °C
- Swing Cover for Easy Sample Access
- Specially Designed Cryo Grid Sample Holder, Capable of Holding Up to Six Grids
- Grid Holder Remains Chilled During Transfers
- Integrated Slide Cover on Grid Holder to Eliminate Moisture Condensation on Samples
- 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
- Gas Purge Sample Chamber
- Easy Side Sample Loading with Standard Microscope Slides
- Vertical and Horizontal Mounting
- Integrated Precision X-Y Micropositioner for Sample Positioning
- Optional Microscope Rotational Stage Mounting Accessories



Technical Specifications

Temperature Range	-190 °C to 200 °C Optional higher temperature limit available The LN2-SYS liquid nitrogen cooling system is included with the CLM77K
Temperature Resolution	0.01 °C with mK1000
Temperature Stability	±0.01 °C at 100 °C with mK1000
Minimum Heating and Cooling Rate	±0.1 °C per hour
Maximum Heating Rate	+100 °C per minute at 100 °C
Maximum Cooling Rate	-50 °C per minute at 100 °C (when using LN2-P4)
Temperature Control Method	Switching PID
Temperature Control Sensor	100 Ω Platinum RTD
Minimum Objective Working Distance	9.2 mm
Minimum Condenser Working Distance	14.4 mm
Sample Area	38 mm x 50 mm
Grid Holder	Holds six 3 mm diameter sample grids
Sample Viewing Aperture	2, 5, 8, or 10 mm for transmitted light
X-Y Micropositioner	10 μm resolution

Ordering Information

Part Number	Description
CLM77K-mK1000	CLM77K, hot and cold stage with mK1000, 115V/230V, software included
CLM77Ki-mK1000	CLM77Ki, hot and cold stage for inverted microscope with mK1000, 115V/230V, software included
Accessories	Description
mK1000 Options	Please refer to the mK1000 Temperature Controller section for mK1000 controller options (e.g. IEEE-mK1000: IEEE 488 communication port)
MTR-SYS	Adaptor ring for microscope mounting. Contact Instec for microscope specific ring availability

Physical Dimensions & Cross Section View

