

(Quantity: 01)

Specification of Equipment for Fluid Inclusion Studies

Feature	Description
Sample heating mechanism for above ambient	Conduction from electrical resistance heater in silver block from below and ~7 mm from sample, via sapphire window.
Sample heating mechanism for below ambient	Oppose N ₂ cooling with electrical heater as above.
Sample cooling mechanism for below ambient	Conduction, from annular circulation of pre-cooled N ₂ in metal ring below metal block, ~7 mm from sample, via sapphire window.
Temperature range	-180° C to +600° C
Temperature resolution	0.1° C (-180° C to + 200° C) 1° C (+200° C to + 600° C)
Temperature sensor and location	Platinum resistance thermometer embedded silver block ~3 mm from sample.
Temperature control	Fully automatic and Programmable temperature set point stable to better than 0.5 °C
Heating cooling rates	27 linear heating cooling rates (0.1° - 0.9° C / min; 1° - 9° C/min; 10° - 90° C / min)
Fast cooling	0° C to - 160° C in 40 seconds (using pre-chilled gaseous N ₂)
Pre-set limits	Any value between - 180° C and + 600° C
Temperature 'HOLD' facility	Yes
Thermal stability	± 0.1° C (full range)
Thermal response	Fast
Thermal gradients	Low
Condensation at low temperature	No problem
East of operation	Rapid cycling between heating and cooling no adjustments
Max. sample size	20 mm diameter: 1.5 mm thickness
Viewing area	2.2 mm diameter (for version using X-Y micromanipulators)
Maximum Sample area visible	22 mm diameter
Time for heating to 250 °C	~10 min.
Time for heating to 450 °C	4 min.
600 °C	6 min.
Time to change sample at room temp.	<1 min.
Time to reach -50 °C	~1.5 min.
Time to reach -150 °C	~2.25 min. but can be achieved in seconds if pressurized LN ₂ is used.
Printer unit	Yes
Recorded output	Yes
Calibration unit	Checks internal response of sensor and allows user to obtain true calibration temperatures

Feature	Description
Optical requirements	Most makes; minimum stage to lens clearance > 25 mm
(i) Microscope	
(ii) Object	Long working distance > 6 mm; no correction
(iii) Substage illumination	Long working distance condenser lens essential; must be capable of focusing ≥ 15 mm above level of microscope stage
(iv) Protection for Objectives	None
Consumable	Liquid N ₂ ; Oxygen-free N ₂ gas
Accessories	All essential accessories
manuals	Installation, Operational and maintenance manual are required
Make	Linkam or equivalent
Warranty	One year
Training	Two weeks
Spares	Along with fast consuming spares deemed necessary by supplier.