



Product Sheet SC-XRD 45

KRYOFLEX II

Low Temperature Attachment

The KRYOFLEX II low temperature attachment permits crystallographic studies at controlled temperatures by enveloping a crystal sample in low temperature nitrogen gas. The low temperature attachment addresses the need to handle delicate samples, obtain more accurate structures from small molecules and protect biological macromolecules.

The KRYOFLEX II features highly stable temperature control with greatly reduced liquid nitrogen consumption and can run at low temperature uninterrupted for weeks because of the automatic refill of the local 60-liter Dewar. Ice formation is safely avoided at the sample by shielding the cold gas stream with dry air at ambient temperature.

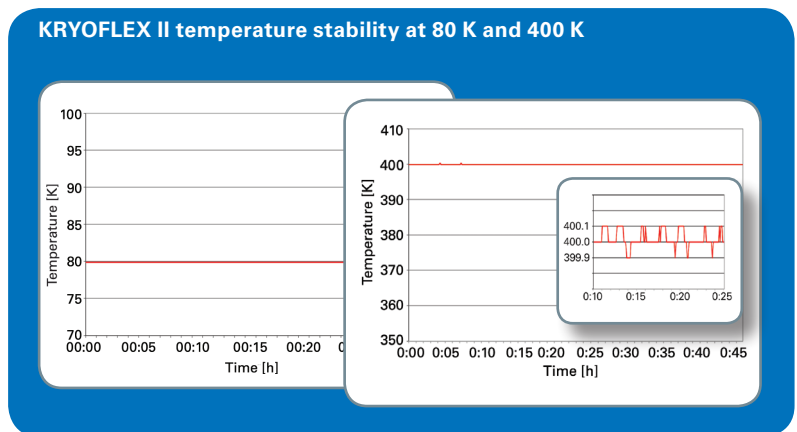
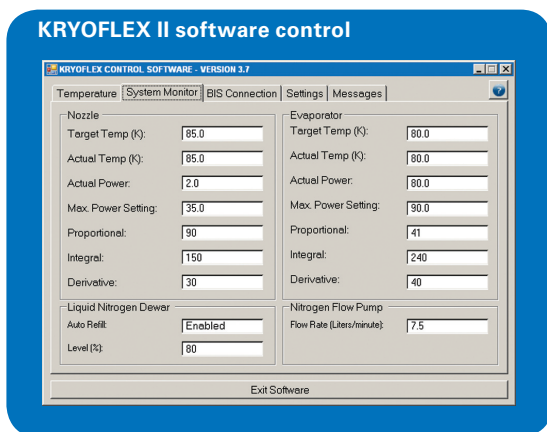
With its long 3000-mm flexible insulated stainless steel transfer line, the KRYOFLEX II can be mounted easily on a variety of instruments. It fits perfectly in the enclosures of sealed tube or rotating anode based systems as well as in synchrotron hutches.

The temperature can be set or changed easily via a graphical user interface (GUI). The GUI also provides extensive feedback on the status of the KRYOFLEX II.



Technical Specifications

KRYOFLEX II low temperature attachment	Liquid nitrogen consumption	< 0.6 liters/hour
	Mode of operation	Heat exchanger
	Temperature range	80 K - 400 K
	Temperature stability	± 0.1 K over the entire temperature range
	N ₂ gas flow rate	User-selected, electronically controlled gas flow rate of 5.0 or 7.5 liters/minute
	Transfer line	Flexible, insulated stainless steel
	Length of transfer line	3000 mm
	Liquid nitrogen storage	60 liter Dewar, lasts for more than four days without refill
	Automated liquid nitrogen refill	Included
	Safety checks (selection)	Nitrogen flow present Low nitrogen flow detection
	Power supply	230V/50Hz or 115V/60Hz
KRYOFLEX II mount	Features	<ul style="list-style-type: none"> • Stable, easy and accurate to align • Easy sample transfer since distance between the sample and the cold-stream nozzle can be adjusted via a lever • Mounts directly on Bruker goniometer or on goniometer table of third-party instruments
System control	Pneumatic unit	19" interface, mounts inside D8 cabinet, hosting: <ul style="list-style-type: none"> • Membrane pump for nitrogen control • Dryer cartridge for removing potential traces of water • Manual valve for dry-gas flow-rate adjustments, typically 3-5 liters/minute
	Temperature control unit	19" interface, mounts inside D8 cabinet, hosting: <ul style="list-style-type: none"> • Control electronics and safety
Control software	Graphical User Interface (GUI) for remote control	
Options	Air dryer	Dew point ≤ 225 K 10 liters/minute 2 bar minimum outlet pressure



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