Cooling Systems

The LNP95 - Unrivalled high speed controlled linear cooling with ultra efficient use of Liquid Nitrogen

Features and Benefits

The LNP95 cooling system designed by Linkam is a totally unique patented design. The precise control of liquid nitrogen flow enables specific stages to be controlled at linear cooling rates as fast as 100C/min or as slow as 0.01C/min.

The ultra efficient use of liquid nitrogen ensures that a day of cooling experiments can be achieved using just a 2L dewar.

The LNP95 has two proprietary pumps inside that are automatically controlled by the T95 controller. A cooling system consists of the control unit housing the pumps and a 2 Litre dewar.

The novel use of the warmed recycled dry nitrogen gas is used to purge the sample chamber and clear the upper lid window surface of condensation. All tubes also remain perfectly flexible so that in polarized light applications the microscope table can still be rotated.

Note: Each dewar siphon is specifically calibrated for the particular stage it is to be used with.

LNP95 with 2L Dewar connected to THMS600 stage

Options

Longer siphons and vacuum tubes are available for systems such as spectrometers with enclosures around the optics, though this will compromise the speed and efficiency of cooling.

We can also supply vacuum flange fittings for vacuum sealed enclosures such as those used in x-ray photometers.

A 25L dewar with extra long siphon can be supplied for ultra long cooling experiments.

If speeds faster than 100C/min are required, we can supply a copper coil heat exchanger. The coil is then immersed in liquid nitrogen and N2 or Argon gas can be flowed through it and into the stage. A valve box controls the flow of the gas so that cooling rates can be varied approximately up to 700C/min.

Contact Linkam for further info.

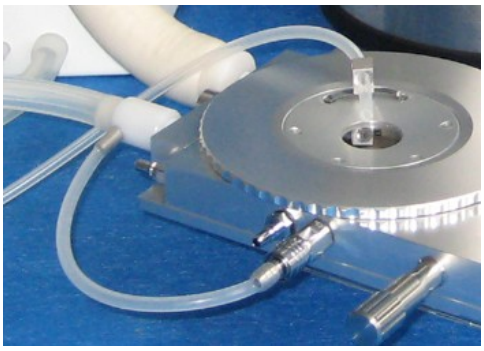
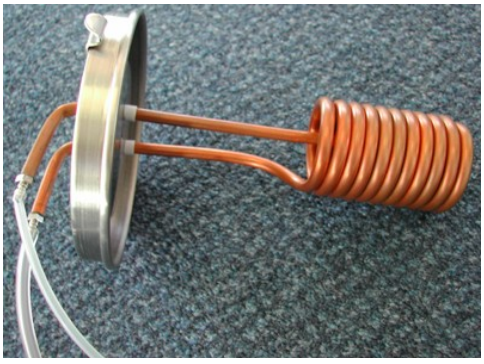


Image shows the chamber purging tube and window tube. Recycled nitrogen gas is used to remove condensation during cooling experiments



Copper heat exchanger built into dewar lid for ultra fast cooling rates up to 700C/min