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Find the *Instec LN2-P* at our website: ***Click HERE***

LN2-SYS Liquid Nitrogen Cooling Systems

INSTEC® FOCUS ON EXCELLENCE

#LN2-40813

The LN2-SYS liquid nitrogen cooling system consists of a LN2-P, a liquid nitrogen pump, and a LN2-F, a thermal flask. The LN2-P utilizes an air pump to create suction. This draws liquid nitrogen from the LN2-F to the hot and cold stage, chuck, or plate to cool the sample. The LN2-P liquid nitrogen pump is PID controlled by the Instec STC200 controller. When the hot and cold stage, chuck, or plate's heating option is on, the pump is off; and when the pump (cooling option) is on, the heating option is off.

The pump speed is scaled from 1 to 1000, (e.g. power percentage from 0.1% to 100%), which is automatically calculated and controlled by the STC200 temperature controller.

Features

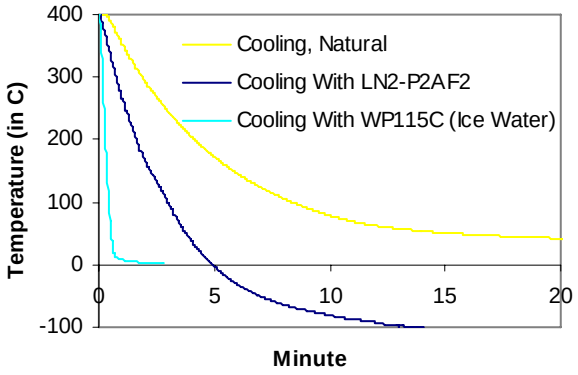
- System consists of a LN2-P (pump), and a LN2-F (thermal flask)
- Working without pressurizing flask
- Capable of cooling hot and cold stages, chucks, and plates down to –190°C
- PID controlled by STC200 temperature controller

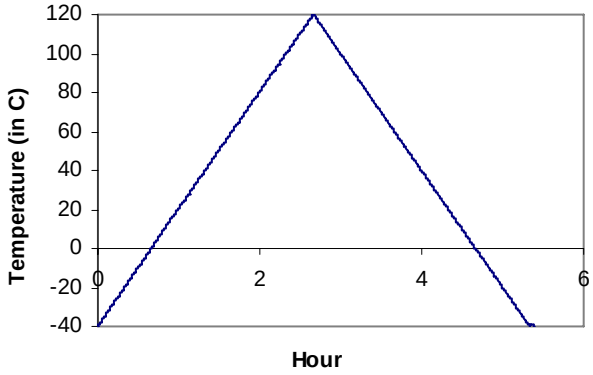


Technical Specifications

Automatic Operation	PID controlled by STC200 temperature controller (LN2-P plug to out2 of STC200 temperature controller)
LN2-P Dimension	6" x 10" x 13"
LN2-F Dimension	LN2-F2: 6" dia. 10" height LN2-F4: 7.5" dia. 14" height

The below data was taken using Instec HCS410-STC20A hot and cold stage system, LN2-P2AF2 liquid nitrogen cooling accessory, and WP115C circulation water pump.





The graphic at left shows the cooling curve of HCS410 stage by using different cooling methods. Water-cooling is faster than liquid nitrogen cooling due to large heat capacitance of water. Liquid nitrogen cooling can reach much lower temperatures than water-cooling. The graphic at right shows controlled heating and cooling: ramp up and down at 1°C/minute, using HCS410-STC20A and LN2-P2AF2 liquid nitrogen cooling accessory.

Ordering Information

Part Number	Description
LN2-P2AF2	Liquid nitrogen cooling accessory. Consists of a LN2-F2, 2 liter liquid nitrogen thermal flask, and a LN2-P2, 2-power liquid nitrogen pump. 115V input voltage.
LN2-P2UF2	Liquid nitrogen cooling accessory. Consists of a LN2-F2, 2 liter liquid nitrogen thermal flask, and a LN2-P2, 2-power liquid nitrogen pump. 230V input voltage.
LN2-P2AF4	Liquid nitrogen cooling accessory. Consists of a LN2-F4, 4.5 liter liquid nitrogen thermal flask, and a LN2-P2, 2-power liquid nitrogen pump. 115V input voltage.
LN2-P2UF4	Liquid nitrogen cooling accessory. Consists of a LN2-F4, 4.5 liter liquid nitrogen thermal flask, and a LN2-P2, 2-power liquid nitrogen pump. 230V input voltage.
LN2-P4AF4	Liquid nitrogen cooling accessory. Consists of a LN2-F4, 4.5 liter liquid nitrogen thermal flask, and a LN2-P4, 4-power liquid nitrogen pump. 115V input voltage.
LN2-P4UF4	Liquid nitrogen cooling accessory. Consists of a LN2-F4, 4.5 liter liquid nitrogen thermal flask, and a LN2-P4, 4-power liquid nitrogen pump. 230V input voltage.

Contact Instec today for further product information. Inquires for a hot and cold stage, a hot and cold chuck, a hot and cold plate, and/or the liquid crystal testing products customized to your special requirements are also welcome. Above information is subject to changes without notice.

www.instec.com e-mail: sales@instec.com tel: +1 303-444-4608 fax: +1 303-444-4607

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