National Academy of Sciences of Ukraine
DONETSK PHYSICS&TECHNOLOGY INSTITUTE
named after A. Galkin

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CRYOSTAT FOR RESEARCH OF PHOTORECEIVERS

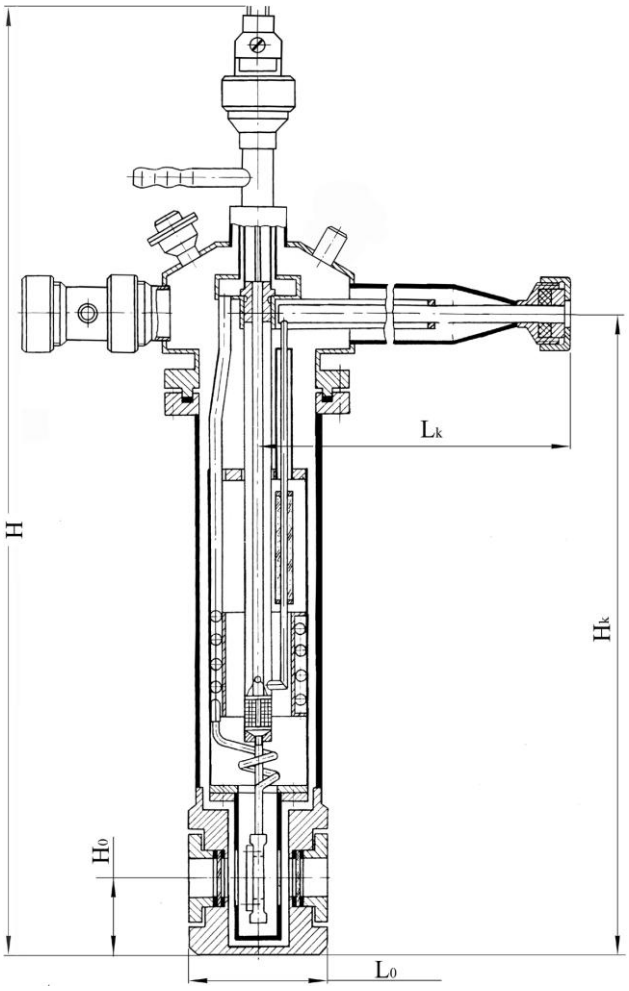
CRYOSTAT «CT- PR»

Small cryostat CT– PR is intended for research of characteristics of photosensitive materials, photoreceivers and emitters in the range of temperatures of 3-3OOK or 80-300K in the visible and infra-red region of radiation spectrum.

With built-in heat exchanger located in vacuum. Thermostating of standard is produced by blowing out of holder heat exchanger by coolant of required temperature from heat exchanger of the temperature control system with a built-in heater. Coolant \ helium, nitrogen \ is fed to system of temperature control by a flowing siphon by a vacuum pump or blowing out due to the surplus pressure created in the transport Dewar vessel.

The holder of photoreceiver is equipped by the contact arrangements and electric lead providing possibility of measuring characteristics under operating conditions.

The scheme of cryostat structure is shown in the figure.



The change of standard is produced by dismantling of cryostat. For the change of standard lower parts of casing and screen are taken off.

Performance specification

Temperature control range, K	
- using liquid helium at consumption 1 l/h	**3 – 300**
- using liquid nitrogen at consumption 1 l/h	**65 – 300**
Investigated sample dimensions, mm	
- diameter	**25 – 50**
Overall dimensions in optical axis zone, mm:	
- maximum dimension along optical axis, L_0	**75 -110**
- height of optical axis.	
H_0	**60**
- L_k	**350**
- H_k	**350**
- H	**600**

Merits

- **High reliability of results of sample transmission coefficient measurements.**
- **High vacuum and no-sediments on sample surface during the experiment onditioned by application of the built in cryopump.**
- **Extended spectral range of investigation because of existing of exchanging windows.**
- **Efficiency in experiment preparation and realization.**

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