



CONTROLLED RATE FREEZERS

LD-LCRF-A10

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Controlled rate freezers LD-LCRF-A1 series units provide precise, user-friendly and repeatable freezing results that protect the sample from intracellular freezing. Touchscreen display allows for easy set-up, operation and review of a freezing run. Uses environmentally friendly insulating foam. These freezing systems delivers liquid nitrogen as a gas via metal hose connection, into the freezing chamber. Systems keeps careful monitoring on freezing rate helps to prevent rapid cellular dehydration and ice-crystal formation. Equipped with predetermined cooling programs. Data logging ensures monitoring of the entire process, including multiple temperature sensor set-points, actual values and the pressure supplied to liquid nitrogen.

Features

- Type 304 stainless steel with exterior powder-coat finish
- T thermocouples are used for real time monitoring of temperature
- 6 preset freezing programs, can store up to 120 user defined programs
- Record temperature curve of each cycle automatically
- Alarms for thermocouple failures, heater malfunction, high/low temperature limits, temperature tracking, power failure, and completion of run
- Dual solenoid valves design, one for working, the other for backup. When one valve fails, switch to the other valve through touch screen controller
- RS232 port and USB port to download running data
- Freezing racks and rack holders can be provided for sample handling

Applications

Used in cryopreservation of biological material in research and clinical applications, embryology research, cell lines, IVF application. To cryopreserve cellular viability of biological cells such as protist, mammalian, plant cells, hematopoietic stem cells.

Specifications

Model No.	LD-LCRF-A10
Capacity	18 L
Temperature Range	-180 °C to +50 °C
Heating Rate	0.1 to 12/min
Freezing Rate	0.1 to 60/min
Control Parameter	Sample Temperature or Chamber Temperature
Temperature Deviation	<2 °C

Net Weight	64 kg
Internal Dimensions (W x D x H)	180 x 305 x 330 mm
External Dimensions (W x D x H)	810 x 540 x 790 mm
Power Supply	100 to 240 V, 50 to 60 Hz