

The LTC1 is a fully integrated, high quality refrigerated and heated circulator for general laboratory use. Whether you need to immerse a sample in a reservoir or pump fluid to an external instrument or process, the LTC1 provides the choice.

- ❑ 4 YEAR WARRANTY confirming Grant's reputation for producing reliable and rugged products
- ❑ Suitable for a wide range of applications with a range down to -20°C
- ❑ Supplied ready assembled with all necessary tubing, clips and tools
- ❑ Designed with the user in mind - including a built-in drain tap, a compact footprint and under temperature protection

Key features:

- Digital thermostat for precise temperature control
- Cooling/heating range -20 to 100°C
- Stability $\pm 0.1^{\circ}\text{C}$ across the range
- 5 litre reservoir volume
- External cooling: 17L/min max flow rate and typical cooling power of 220W at 5°C

Key benefits:

- Easy-to-use rotary dial provides access to the interactive interface for fast, accurate set-up
- Operating setpoint plus 3 adjustable preset temperatures for clear indication of the chosen temperature and easy setting of new temperatures
- Freezing prevention system: 5°C thermostat on/off switch stops freezing when operating with water
- Fluid selection safety feature - restricts temperature range according to the fluid used
- Audible and visual alarms - low fluid detection plus user determined high temperature alarm and cut-out
- Designed for quiet operation for minimal impact on your working environment
- Integrated timer function
- Robust construction, corrosion resistant materials, stainless steel tank - durable in demanding environments
- Powerful, efficient cooling and ozone-friendly refrigerant
- Convenient carrying handles front and rear for repositioning the unit
- User calibration facility



Removable grille - easy access to drain valve and condenser for routine maintenance

Typical external cooling applications:

The Grant LTC1 low temperature circulation system provides a source of external precision cooling for many sensitive analytical procedures including:

- Spectrophotometry
- Viscometry
- Refractometry
- Electrophoresis
- Reaction Cooling
- Biological Culture

LTC1 Specification

Temperature range	-20°C to 100°C		
Cooling power (@20°C ambient)			
	@20°C	W	250
	@5°C	W	220
	@0°C	W	140
	@-10°C	W	100
	@-20°C	W	35
Heater power	240V		1.40kW
Stability (DIN 58966)	water@ 10°C		±0.1°C
	50% water, 50% glycol @-10°C		±0.1°C
Uniformity (DIN 58966)	water@ 10°C		±0.1°C
	50% water, 50% glycol @-10°C		±0.1°C
Setting resolution			±0.1°C
Display			4 digit 13mm LED
Display resolution			0.1°C
Timer range			1 to 9999 mins
No. stored temperature values (presets)			4
Two point re-calibration			√
Safety	overtemperature		adjustable cut-out
	fluid level		float switch
Alarms, audible and visual			√
Electrical power (maximum)	220-240V (50Hz)		1.83kW
Reservoir opening			110 x 145mm
Liquid depth			80 -140mm
Airflow			front to back
Drain			√
Water freezing protection thermostat			√
Pump			√
Maximum pressure	water		310mbar
Maximum flow	water		17L/min
Pipe bore	outlet		11mm

Grant LTC1 low temperature refrigeration system

- meets the requirements of IEC61010 parts 1 and 2
- CE mark - meets the requirements of the Low Voltage and EMC Directives.

Grant Instruments (Cambridge) Ltd operates an approved Quality Management System which complies with the requirements of BS EN ISO 9001:2000 for the activities detailed in the scope of registration. Certificate No. FM 24301.

Repairs are normally carried out within three to five working days of arrival at our factory or receipt of authorisation to repair. Alternatively, spare parts and service manuals can be despatched within two working days. Most overseas distributors offer a rapid and effective after-sales service, with spare parts held in stock.

Grant LTC1 low temperature refrigeration systems are guaranteed for four years against faulty materials and workmanship. No charge is made for labour or materials for repairs carried out under guarantee.

We are committed to a continuous programme of improvement, and specifications may be changed without notice.