

Grant

General information

Safety

All Grant laboratory equipment meets the requirements of International Standard **IEC1010-1, Safety requirements for electrical equipment for measurement, control, and laboratory use** and **IEC1010-2-010, Particular requirements for laboratory equipment for the heating of materials**. *

* IEC 1010-1 : 1990 plus Amendment 1 : 1992 and Amendment 2 : 1995, and IEC 1010-2-010 : 1992 plus Amendment 1 : 1996.

The above international standards are also published as European (EN 61010), British (BS EN 61010), US (UL 31010), Canadian (C22.2. No. 1010) and many other national standards.

All plastics used in Grant laboratory equipment are resistant to acids and to common laboratory solvents, and meet classification FV0 or FV1 of IEC 707 (equivalent to V-0 or V-1 of UL94). This is more stringent than required by IEC1010 (which also allows classification FV2).

Electrical supplies

All equipment in this catalogue is available for voltages within the range 220-240V, 50 or 60 Hz, apart from RC recirculating chillers which may only be used on 50 Hz supplies. Most equipment is available for voltages within the range 110-120V, 50 or 60 Hz. See specification tables for details.

Environmental conditions

Grant laboratory equipment is designed for indoor use in laboratory conditions, with room temperature between 5°C and 40°C, and 80% relative humidity up to 31°C (IEC1010) unless stated otherwise.

CE mark

All Grant laboratory equipment bears a CE mark to indicate that it meets the requirements of the Low Voltage and EMC Directives.

Compliance with the **Low Voltage Directive** is based on meeting the requirements of EN 61010 (see paragraph above on safety). Compliance with the **EMC Directive** is based on meeting the requirements of EN 50081-1: Generic Emission Standard and EN 50082-1 Generic Immunity Standard.

After sales service

In the United Kingdom, repairs are normally carried out within two working days of arrival at our factory, or receipt of authorisation to repair. Refrigeration systems may take a few days longer, as they require more prolonged testing after repair. Alternatively, spare parts and service manuals can normally be despatched within two working days.

Most distributors of Grant equipment outside the UK hold stocks of spare parts, have their own service engineers and operate a similarly prompt repair service.

3 year guarantee

Grant equipment is robust and reliable, designed and built to provide years of trouble-free service.

All standard laboratory equipment is guaranteed for three years against faulty materials and workmanship. If repairs are carried out under guarantee, no charge is made for labour or materials, and within the United Kingdom we make no charge for carriage.

Performance figures

Performance figures quoted in the catalogue apply to equipment used in ambient temperature between 10°C and 35°C.

Stability of baths is measured according to performance standard DIN 58966. Tests are made at 70°C, using water, unless stated otherwise. The measurement is made in the centre of the bath. Stability of block heaters is measured in the centre of a block.

Uniformity is measured at 37°C, using water in a bath, unless stated otherwise. Uniformity is defined as half the maximum temperature difference between any two points in the working space of a bath, or between any two tubes in a block heater.

Liquids

We recommend the following liquids for use in Grant baths:

- 30 to 30°C: 50% water 50% antifreeze (inhibited ethylene glycol)
- 0 to 30°C: 80% water 20% antifreeze (inhibited ethylene glycol)
- 5 to 99.9°C: water
- 50 to 150°C: Dow Corning silicone fluid DC200/20
- 150 to 260°C: Dow Corning silicone fluid DC210H/100

As Grant Instruments is committed to a continuous programme of improvement, specifications may be changed without notice.