Contrast Media Warming Cabinets Manual

1. UNPACKING

Carefully remove all packaging materials from the unit, ensuring that any protective packing located between the shelves and the inner chamber walls is completely removed before operation.

2. ELECTRICAL SUPPLY

2.1 Mains Connection
The unit is designed for operation from a 240 V AC mains supply.
Each unit is supplied with a mains lead fitted with a correctly rated fuse. The fuse rating and electrical specifications are detailed on the rating plate located on the rear of the unit.
Important: If fuse replacement is required, only a fuse of the specified type and rating must be fitted.

3. OPERATION

3.1 Shelf Installation
Position the shelves as required within the chamber before use.
3.2 Powering the Unit
Switch the mains power ON. The touchscreen display will illuminate and the chamber will automatically regulate to the factory default temperature of 37°C.
3.3 Temperature Set Point
The default temperature set point is 37°C and is factory locked.
The set point may be adjusted between 35°C and 40°C if required.
To unlock the temperature set point:

1. Press the Configuration icon.
2. Enter the access code 0381 and press ENT.
3. Select the Temperature icon.
4. Navigate to Set Point Lock.
5. Change the setting from Y (Locked) to N (Unlocked).

3.4 Over-Temperature Safety Protection
The cabinet is fitted with an independent secondary temperature probe that provides over-temperature protection.
By default, the protection system is configured to activate if the chamber temperature exceeds the set point by 5°C. In this condition:

- An alarm will be activated.
- Power to the heating elements will be automatically removed.
- The alarm condition will be displayed on the touchscreen.

Once the chamber temperature has returned to a safe level, the alarm must be acknowledged via the alarm menu before normal operation can resume.
If the over-temperature alarm activates repeatedly, discontinue use and contact the manufacturer or authorised service provider.

4. CALIBRATION

The chamber incorporates two independent temperature probes:

- Control Probe – used by the controller to regulate chamber temperature.
- Overheat Probe – independently monitors chamber temperature and provides safety shutdown protection under fault conditions.

Both probes can be calibrated using an offset adjustment.

Calibration Procedure

1. Place a calibrated reference temperature sensor in the centre of the chamber.
2. Allow the chamber temperature to stabilise at 37°C.
3. Press the Configuration icon.
4. Enter access code 0381 and press ENT.
5. Select Calibration.
6. Select Control Probe with Offset calibration highlighted.
7. Adjust the offset value using the arrow keys until the displayed temperature matches the reference sensor.
8. Repeat the procedure for the Overheat Probe.

5. TEMPERATURE TRENDING

The controller provides temperature history and trend data.

To view chamber temperature history:

1. Press the Graph icon.

The display will show:

- Red trace: Temperature set point.
- Green trace: Actual chamber temperature.

Trend scaling is adjusted automatically according to the recorded temperature range.

History Duration

The displayed history period can be configured between 2 and 48 hours.

To adjust the history duration:

1. Enter Configuration Mode using access code 0381.
2. Select the History icon.
3. Choose the required time period.

6. PREVENTATIVE MAINTENANCE

The unit should be maintained in a clean, dry condition and stored in a warm, dry environment when not in use.

The following checks are recommended at intervals not exceeding six months:

6.1 Electrical Plug Inspection

Verify that all plug-top connections are secure and that the fitted fuse is of the correct rating.

6.2 Electrical Safety Testing

Carry out a Portable Appliance Test (PAT) using suitable test equipment operated by a competent person.

6.3 Temperature Verification

Confirm that the chamber temperature remains within the specified operating limits.

The manufacturer can provide maintenance and calibration services upon request.

7. SAFETY

7.1 General Safety

Where the unit is used for warming applications involving biological materials, appropriate risk assessments and laboratory safety procedures must be followed at all times.

Any applicable local regulations and institutional guidelines must be observed to protect personnel and prevent contamination.

7.2 Heating of Liquids

When heating liquids in partially sealed containers:

- Ensure the temperature setting does not allow excessive pressure to develop within the vessel.
- Never operate the unit at temperatures that may cause liquid boiling and pressure build-up.
- Containers requiring heating must not be completely sealed.

Failure to observe these precautions may result in vessel rupture or explosion.

7.3 Flammable Materials

This equipment is not suitable for use with flammable solvents or volatile substances where vapour concentrations may reach flammable or explosive levels.

7.4 Unauthorised Adjustment

Where temperature settings are protected by a lock function, the lock should remain enabled during operation.

A warning notice should be displayed where necessary to prevent unauthorised adjustment of temperature settings or interference with materials being warmed.

8. GENERAL OPERATING GUIDELINES

- Immediately clean any liquid spills from the chamber floor.
- Optional drip trays are available from the supplier where increased liquid evaporation is anticipated.
- Do not place samples directly on the chamber floor. Always use the lowest shelf.
- Prevent liquids from coming into contact with electrical components.
- External surfaces may be cleaned using a warm damp cloth and mild detergent or a suitable non-abrasive cleaner.
- The chamber interior may be cleaned using the same method.
- Do not use solvents, abrasive cleaners, or scouring materials.

WARNING

The following precautions must be observed:

- Do not place items containing excessive free water into the chamber. Drain glassware and containers before use.
- Do not position the cabinet directly against a wall. Adequate clearance must be maintained to allow free air circulation around the unit.
- This unit is NOT SUITABLE FOR USE WITH FLAMMABLE SOLVENTS.