Installation, Operation and Maintenance Instructions
Controller Manual
R38 Controller
Contents
This manual is for guidance on the use of the Carbolite Gero product specified on the front cover. This manual should be read thoroughly before unpacking and using the furnace or oven. The model details and serial number are shown on the back of this manual. Use the product for the purpose for which it is intended.

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1.0 R38 Controller

1.1 PID control

This controller uses PID (Proportional Integral Derivative) temperature control. This type of control uses a complex mathematical control system to adjust the heating power and achieve the desired temperature.

1.2 Operating Cycle

This product is fitted with an instrument switch which cuts off power to the control circuit.

Connect the product to the electrical supply.

The product has fan-assisted circulation which operates when the instrument switch is switched on.

Operate the instrument switch to activate the temperature controller.

Adjust the temperature controller - see below.

To turn the product off, set the instrument switch to its off position. The controller display will go blank. If the product is to be left unattended, isolate it from the electrical supply.

1.3 Controller Operation

When switched on, the controller lights up, goes through a short test routine and then displays the measured temperature and starts to control. The output light OUT1 indicates when heating is occurring.

To alter the setpoint, press the down arrow key once, “SPI” flashes. Then use the up and down arrow keys to adjust the setpoint. Press the P key to accept.

1.4 Calibration

If the process requires an accurate temperature display it is possible to calibrate the controller by entering a single temperature offset value as follows:

Please contact Carbolite Gero Service for detailed instructions on entering an offset in the R38 Controller.
1.5 Over-Temperature Control (if fitted)

The over-temperature controller should typically be set at 15 ºC above the main controller. If an over-temperature condition occurs, check the main controller is functioning correctly.

An over-temperature condition cuts off power to the heating elements. A light in the over-temperature controller flashes. To reset this, refer to the over-temperature control section of this manual.

1.6 Temperature Controller Replacement

1.7 Temperature Controller Replacement

Before handling the controller: wear an anti-static wrist strap or otherwise avoid any possibility of damage to the unit by static electricity. Refer to the detailed instructions supplied with the replacement controller.

Disconnect the product from the electrical supply and remove the cover (see section 1.0).

Make a note of all the wiring connections before disconnecting the wires. Loosen the screw that holds the controller body clamp in place. Use a flat screwdriver or similar object to ease apart the two plastic lugs on the side of the clamp and pull the instrument forward out of the front control panel.

Reconnect the wires according to the notes made – or see section 1.0 for wiring details.

Note: If the product features an R38 over-temperature controller, then this should be replaced using the same method described.
Notes

Service Record

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The products covered in this manual are only a small part of the wide range of ovens, chamber furnaces and tube furnaces manufactured by Carbolite Gero for laboratory and industrial use. For further details of our standard or custom built products please contact us at the address below, or ask your nearest stockist.

For preventive maintenance, repair and calibration of all furnace and oven products, please contact:

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