



BFS high temperature calibration bath

- Temperature range 200°C to 1100°C
- Working volume diameter x depth 203 x 203mm

The BFS is designed for applications requiring a constant high temperature source for calibration. The BFS has a hinged lid and a cylindrical bath 218mm in diameter and 254mm deep. Substantial fire brick insulation is incorporated within the outer container and the lid.

Standard equipment includes a separate air supply control unit which incorporates two flowmeters for monitoring the air supply and a charge of fluidising medium (aluminium oxide) and air diffuser (zirconium oxide).

The inner container of the BFS is filled with two layers of fine granular particles. The lower layer (zirconium oxide) is denser than the upper layer (aluminium oxide) and does not fluidise but instead acts as a heat insulator. The inner container of the BFS is divided into inner and outer fluidised sections. Each area has a separate air supply which must be oil, water and dust free.

The air supply may be monitored on flowmeters in the air flow unit. Air supplies are adjustable to obtain uniform fluidisation in both sections of the bath. Heaters are mounted in firebrick insulation between the inner and outer container; heat is radiated inwards to the fluidised bath.

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An air extraction tube is located in a horizontal position in the side of the bath just below the hinge on the lid. When the lid is closed, dust created by the bath's operation can be withdrawn by connection to an extraction duct or fan. The dust can also be trapped in a small tank of water.



TC-5 Temperature controller

TC-5 Temperature Controller

The TC-5 supplied with the BFS uses a chromel/alumel thermocouple, supplied as standard, which mounts onto the back of the BFS and fits into the pocket of the inner container. The TC-5 is fitted to the air flow control unit. The TC-5 uses an Eurotherm controller for setting the temperature in the fluidised bath and will control and indicate the bath temperature.

Advance PID controller giving set and actual bath temperature read out. Control algorithm gives stable 'straight line' control with self and adaptive tuning.

Technical Information

	BFS/TC-5
Temperature range °C	200 to 1100
Temperature stability °C	
Short term	±0.5 to 3.5
Display resolution °C	1
Type of control	3 term (PID) digital set, digital readout
Sensor type	K Chromel/alumel thermocouple
Air pressure, kPa (psi)	47 (7)
Maximum flow, litres/minute	85
For immersed object	
Maximum load size	2.2 litres
Maximum surface area	10400mm ²
Weight of medium, kg	16 kg (aluminium oxide) 16.8kg (zirconium oxide)
Overall size L x W x H, mm	686 x 686 x 876 Airflow controller adds 305mm to width
Working volume	
Diameter x Depth, mm	203 x 203 Top lid has a central opening 82.5mm square

	TC-5
Overall size L x W x H, mm	430 x 305 x 140

Ordering Information

Model Number	Product Code	Voltage	Hz	Watts	Shipping weight, kg
BFS Bath	F955B	240	50/60	6000	386