Precision Fluidised Sand Baths

With more than 50 years experience in the field of temperature control, Techne has established itself as a world leader in the design and manufacture of equipment used for both laboratory and on-site temperature calibration, providing the calibration engineer with a precise dynamic stable temperature source.

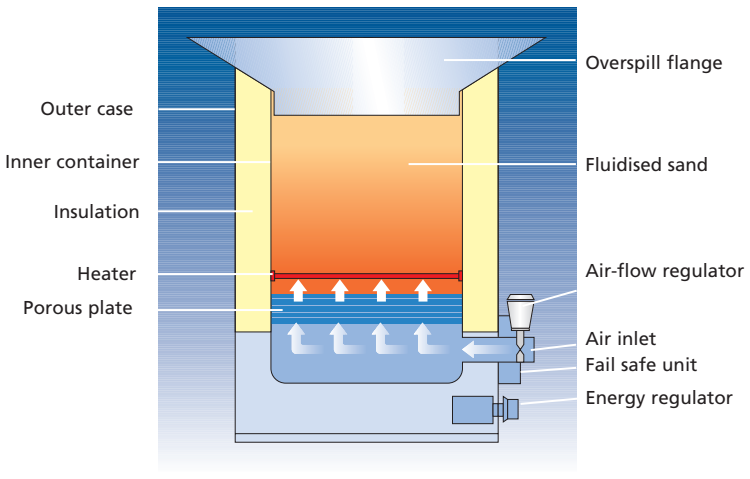
Pioneers in the development of fluidised bath technology, Techne now has a range of products capable of covering the temperature range –100°C to 1100°C.

The fluidised bath is a container filled with dry inert particles of aluminium oxide. When a gas flow is passed through the particles via a porous distribution plate, the particles are separated and suspended in the gas flow and take on the appearance of a boiling liquid.

Apart from circulating and flowing like a liquid, fluidised particles exhibit excellent heat transfer characteristics. When fluidised particles are heated, heat is distributed quickly and evenly throughout the bath and transferred rapidly to objects submerged in the bath. The bath temperature can be adjusted easily to the point at which you wish to calibrate or run a test.

Fluidised solids have no melting or boiling point. Therefore, solidification which takes place in cooling salt baths and fumes from hot oil baths are eliminated. Fluidised solids are dry and relatively inert, making the medium safe and clean compared to conventional liquid systems.

Techne fluidised baths for laboratory and instrument shop use provide rapid heat transfer and precise temperature control, enabling you to calibrate and maintain temperature sensitive instruments efficiently and safely.



The SBL range of Fluidised Baths have a working temperature span of 50°C to 600°C and offer a working environment that is dry, easily accessible and totally free from the dangers associated with high temperature oil or salt baths.

The units are designed to be bench standing and only require an electrical and air supply for operation. Air passes through the mass of the (AL2O3) particles via a porous plate in the base of the unit separating the individual particles and suspending them in free air, giving the properties of a liquid bath. Heaters are placed in the bath which allow temperatures of up to 600°C to be maintained. All the SBL range units have a stainless steel inner container insulated from the outer wall and a safety air pressure switch in the event of loss of air.

A range of accessories are available for use with the SBL baths, details of which can be found on pages 28 and 29. The baths are controllable to within ±1°C and are suitable as a general purpose high temperature environment ideally suited for comparison calibration, metal treatment, distillation and other high temperature work. All units are supplied with an initial charge of fluidising medium.

SBL-1

With a temperature range of up to 350°C this unit covers a wide range of uses. Simple to operate and maintenance free the SBL-1 Fluidised Bath when fitted with the optional TC-8D temperature control unit (see page 22) will maintain temperature to within ±1°C. The SBL-1 has a working volume of 228mm diameter and 120mm deep. The unit is fitted as standard with an energy regulator.

SBL Range Fluidised baths

SBL-2D

SBL-2

SBL-2
For temperatures up to 600°C the SBL-2 Fluidised Bath will maintain temperature to within ±1°C when used with the TC-8D. The working volume of the unit is 228mm diameter and 140mm deep. Three 1kW heaters give a heat up time from ambient to 600°C of approximately 100 minutes. All the SBL range of units have a pocket in the fluidised bath that will accept a 5mm diameter control thermocouple.

SBL-2D
This extra depth fluidised bath is based on the SBL-2 but with a working depth of 350mm. Four 1kW heaters give a heat up time from ambient to 600°C of approximately 100 minutes.

TC-8D
Designed to improve the temperature stability and temperature setting obtainable with the energy regulator supplied as standard with the SB series of fluidised baths.

The TC-8D is a self contained unit and is supplied complete with a chromel/alumel Type K thermocouple which fits into the sheath supplied with the SBL baths.

The unit has digital set point and readout of bath temperature on an LED display and incorporates PID control.

TECHNICAL DATA

	SBL-1	SBL-2	SBL-2D	TC-8D
Temperature range °C	50 to 350	50 to 600	50 to 600	0 to 800
Temperature stability °C, @ 50°C	±1	±1	±1	±0.3
Heat up time, minutes 20°C to maximum	60	105	105	-
Cooling time, minutes from maximum to 200°C	150	300	330	-
Air pressure, kPa (psi)	21(3)	21(3)	21(3)	
Air flow, maximum litres/minute	57	57	57	-
Weight of medium, kg Supplied with unit	13	16	32	-
Overall size, mm Diameter (excluding tap)	315	385	385	Width 165
Height	470	470	695	Depth 240 Height 140
Working volume, mm Diameter	228	228	228	
Depth	120	140	350	

Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.

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