

FSB-200 Series

Precision Fluidized Sand Baths



Safe and clean alternative to conventional liquid systems and salt baths

The Cole-Parmer FSB-200-P precision fluidized sand bath has exceptional temperature stability and uniformity making it the ideal choice for critical temperature calibration and heat treatment processes. Our fluidized sand baths have become the markets preferred choice for carrying our shape setting (heat treatment processing) of stents from nitinol wire in a safe, precisely controlled and uniform manner. Platinum/tungsten products are also processed successfully.

With lower running costs, they are a safer alternative to salt baths providing much better results than with conventional ovens. These units offer fast temperature immersions as the fluidized alumina behaves like a liquid.

These units are suitable for many other applications including thermal testing of sensitive components such as semiconductor devices, wire product testing, delicate transducers, and they may also be used as a constant temperature environment for chemical reactions. When used with the optional probe holder accessory for comparison calibrations of temperature sensors, the stability and uniformity are better than 0.010 °C in dead bed mode.

The dust suppression system accessory enables the FSB-200-P and FSB-200-P-AC user to bolt on a probe holder and chimney assembly thus sealing the FSB-200-P and FSB-200-P-AC making it suitable for use in a calibration lab where airborne dust must be avoided.

FEATURES

- Create, open and save programs with up to 20 set points
- Specify either °C or °F plus ramp rates and hold times
- Log data from the instrument while connected to the computer and export the data to an excel spreadsheet
- Open, save, view, and print logged data
- Run a program in real-time mode
- Specify the logging interval from every 5 seconds to 60 seconds
- Program daily start and stop time to automatically turn unit off and on for weekly schedules
- 3 year warranty

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*Enquiries from Germany and France are now handled in our St Neots office by native speaking experts.



Precision fluidized sand bath FSB-200-P



Precision fluidized sand bath FSB-200-P-AC

FSB-200 Series Precision Fluidized Sand Baths

The user is then able to insert temperature probes for calibration purposes, while all aluminum oxide is fully contained within the bath. This accessory also allows silent running of the FSB-200-P and FSB-200-P-AC. The integrated chimney contains a filter in the upper section and a small exhaust pipe right at the top to prevent pressure build-up. The dust suppression system with chimney, item number 12184-96, is the best solution for calibrating probes in a fluidized bath within a calibration laboratory.

For replacement alumina (fine, white aluminum oxide) see FSB-200-P and FSB-200-P-AC accessories to replace sand lost through normal operation and removal of items from the bath. Accept no other substitute as performance and functionality cannot be guaranteed with third party suppliers.

The Cole-Parmer FSB-200-P precision fluidized bath has exceptional temperature stability and uniformity as well as automatic airflow control and RS-232 communications. Our most popular fluidized bath is used to carry out shape setting (heat treatment processing) of stents from nitinol wire in a safe, precisely controlled and uniform manner.

This model is specifically designed to allow the operating temperature of the fluidized bath to be adjusted from a remote source while the bath is unsupervised. An automatic fluidizing air control system is fitted which adjusts the air flow rate accordingly to suit the set temperature of the bath.

Where an ultra stable temperature condition is required, a dead bed state can be programmed into the control system. During this condition, the air and electrical supply to the fluidized bed are switched off. For a period of up to six minutes, the fluidized bed becomes an isothermal mass without heat input and very low heat loss. Under these conditions the stability at the center of the aluminum oxide is ± 0.01 °C over the range of the unit.

When used with the optional probe holder accessory for comparison calibrations of temperature sensors, the stability and uniformity are better than 0.010 °C in dead bed mode.

Specifications

Specifications	FSB-200-P	FSB-200-P-AC
Temperature Range	50 °C to 700 °C	50 °C to 700 °C
Short Term Temperature Stability at 50 °C	±0.2 °C	±0.2 °C
Short Term Temperature Stability at 600 °C	±0.3 °C	±0.3 °C
Long Term Temperature Stability at 50 °C	±0.5 °C	±0.5 °C
Long Term Temperature Stability at 600 °C	±0.5 °C	±0.5 °C
Display Resolution	°C	°C
Type of Controller	3 Term PID	3 Term PID
Sensor Type	Type K Thermocouple	Type K Thermocouple
Heat Up Time 20 °C to 700 °C	105 minutes	105 minutes
Cool Down Time 700 °C to 200 °C	165 minutes	165 minutes
Air Pressure kPa (psi)	420 (60)	420 (60)
Maximum Flow	127 L/min.	127 L/min.
Nominal Heater Power at 240 VAC	3000 watts	3000 watts
Weight of Medium	16	16
Working Volume (Diameter x Depth)	16.5 x 38.5 cm	16.5 x 38.5 cm
Overall Size (W x L x H)	51.5 x 77.0 x 60.0 cm (20 x 23 x 30 in.)	51.5 x 77.0 x 60.0 cm (20 x 23 x 30 in.)
Net Weight	76 kg	84 kg
Warranty	3 years	3 years

Ordering Information

Description	Series Number	Model Number	Legacy SKU	Item Number
Precision fluidized sand bath, 230 VAC, 50/60 Hz, excludes alumina, 25 kg	FSB-200	FSB-200-P-AC	F949D	12184-03
Precision fluidized sand bath with auto air circulation, 230 VAC, 50/60 Hz, excludes alumina, 25 kg	FSB-200	FSB-200-P	F949J	12184-94

Accessories

Description	Series Number	Model Number	Legacy SKU	Item Number
Dust suppression system with chimney	FSB-200	—	FFB08DS1	12184-96
White aluminum oxide, 25 kg	FSB-200	—	WHITE/ALO	01184-73