

## SW23 Shaking Water Bath

for working temperatures from +20 °C to +99.9 °C

JULABO shaking water baths with seamless, splash-water protected keypad offer a high operating comfort. The bright MULTI-DISPLAY (LED) indicating up to 6 temperature values is visible from across the lab. Advanced MICROPROCESSOR technology with PID temperature control eliminates temperature overshoot and provides high temperature stability. The built-in timer simplifies time-dependent applications. The RS232 interface allows on-line communication with PC. Sensitive samples in the bath are well protected: As soon as the high and low temperature limits are reached an interval tone sounds. If the liquid in the bath reaches a minimum, a complete shut-down is effected and a permanent signal tone sounds. Instruments are conceived for unsupervised continuous operation. Bath tanks and all parts in contact with the bath liquid are made of high-grade stainless steel.



### Your advantages

- MICROPROCESSOR technology with PID temperature control
- Bright MULTI-DISPLAY (LED)
- Seamless, splash-proof keypad
- Splash-proof mains switch
- Electronic timer for setting the running time (0:01 to 9:59 h:min)
- On-line communication via built-in RS232 interface
- Early warning system with high and low temperature limits
- Drain screw for conveniently emptying the bath
- Dry-running protection / safety temperature fixed at 105 °C
- Wide range of accessories including lift-up Makrolon bath cover available
- EasyTemp control software is available free of charge
- Removable shaking carriage
- Shaking frequency adjustable from 20 to 200 rpm
- Shaking frequency indicated on MULTI-DISPLAY (LED)
- Shaking stroke 15 mm
- With integrated circulation pump

### Technical Data

Order No.	9550323
Model series	SW Series - shaking water baths
Category	Shaking Water Bath
Working temperature range (°C)	+20 ... +99.9
Temperature stability (°C)	±0.02
Setting / display resolution	0.1 °C
Temperature Display	LED
Heating capacity (kW)	1
Bath opening / bath depth (W x L / D inch)	19.7 x 11.8 / 7.1
Filling volume liters	8 ... 20
Digital interface	RS232 Optional: Profibus

Ambient temperature	5...40 °C
Dimensions W x L x H (inch)	27.6 x 13.8 x 10.2
Weight (LBS)	51
Classification according to DIN12876-1	Classification I (NFL)
Included with each unit	integrated circulating pump for best temperature stability and homogeneity
Bath cover	optional
Power requirement V / Hz / A	115/60/10
Shaking frequency rpm	20...200
Shaking stroke mm	15
Available voltage versions	230 V / 50-60 Hz 115 V / 60 Hz

## Characteristics

### Display



#### Easy to read

Large LED temperature display for actual value and setpoint (resolution 0.1 °C)



#### Several values at a glance

Large Multi-Display (LED), easy to read across the room, for actual value and up to 3 setpoints, warning functions, high temperature cut-off, selected pump stages (resolution 0.01/0.1 °C)

### Operation



#### Clearly structured

Comfortable, splash-proof keypad for setpoint adjustment, high/low temperatures, timer and shaking frequency (SW models)

### Temperature Control



#### Precise

PID Temperature control with set control parameters, temperature stability  $\pm 0.02 \dots \pm 0.2$  °C



#### High measuring accuracy

'Absolute Temperature C alibration' for manual compensation of a temperature difference, 1-point calibration

### Technical Features



#### Serial connection

RS232 interface for PC connection, e.g. for data communication and recording of measured values

### Warning & Safety Functions



#### Early warning system for high/low temperature limits

Maximum safety for applications, optical and audible alarm, convertible to automated cut-off function



#### Only for non-flammable bath fluids

Classification I (NFL) according to DIN 12876-1