

Maximum Convenience by Advanced Digital Technology

DAIHAN NEW Generation Digital Precise Shaking Water Bath

Sturdy! Noise-free! Innovative Upgrade **MaXturdy™** Shaking Water Bath



New Generation
Digital Precise Shaking Water Bath

The most important part of Shaking Water Bath is the **Shaking Mechanism**. Considering the actual applications by the customers that operate the unit continuously for long time, the shaking mechanism must be durable and low-noise while long-time operation. Most of other brands use very simple structured “**Rotate-Rectilinear Motion Converter**”, so called Cam or Crank, to achieve the Reciprocating Motion on Shaking Mechanism. And, most of failure or noise is caused on this structure due to imperfect design or mechanical worn. The Reciprocate Shaking Mechanism, which DAIHAN Scientific has applied to its best seller Shakers, is extremely durable, stable and already proven. We’ve renovated this to be **ideal Shaking Mechanism** for Shaking Water Bath. Noise and failure are removed, smooth shaking motion is achieved and solution overflow doesn't happen.

Added to the Unique User Convenient features of DAIHAN, the core performance of Shaking Mechanism is dramatically improved to be a new Design. Experiencing the **Max Convenience and Sturdiness, MaXturdy™** Shaking Water Bath, this is Must-Have item in your lab.

» Upgrade on Performance

- Advanced Shaking Mechanism: Minimized Vibration & Noise during shaking operation (Patent No.: 20-0460386)
- Optimized Engine Structure for Reciprocating Shaking Mechanism : Stable and Smooth Motion of the Rack.
- 0% Leakage Failure on Bath achieved by complete packing on shafts.
- Optimized Driving Shaft: achieved Stable Motion of Rack.
- The best Controller for Temperature & Speed Control : Digital Fuzzy Control for Temp. and Digital Feedback Control for Speed.

» Upgrade on Functionality / Convenience

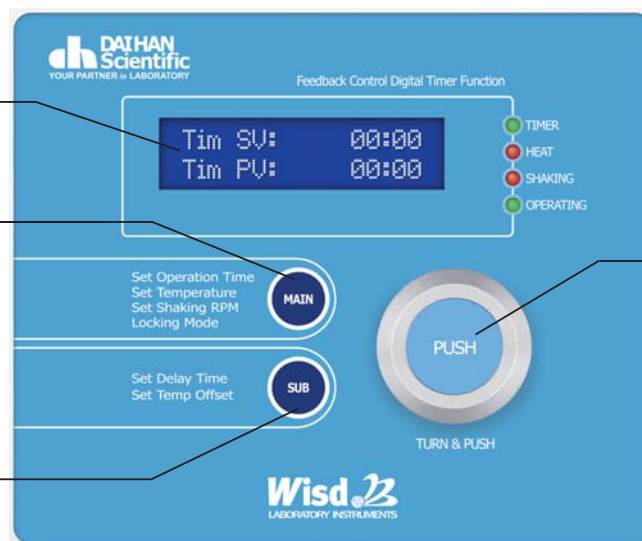
- Easy to remove/assemble the Shaking Rack (standard accessory)
- Drain Valve: Easy to release solution from the Bath.
- New Jog-Dial Controller: Maximized User Convenience (Patent: 10-0554098)
- Digital Timer: Delay-time and Operation time setting
- Polishing and Simple Ergonomic Design

» New Jog-Dial Controller

Digital LCD
with Back-light Function

Main Button

Sub Button



New Jog-Dial & Push Button

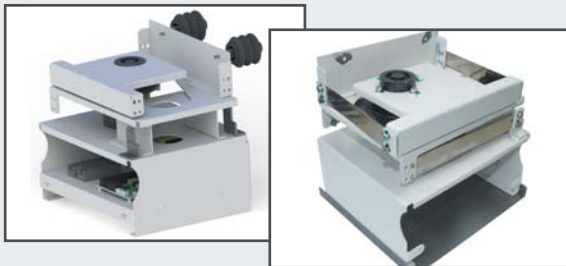
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»» Advanced Shaking Mechanism

Advanced Shaking Mechanism minimizes Vibration and Noise while shaking operation as well as prevent from Overflow of Solution. (Patent No.: 20-0460386)

No Stress!! at Vibration and Noise



»» High-performance Engine Structure

Optimized Engine Structure for Reciprocating Shaking Mechanism achieves Stable and Smooth Motion of the Rack.

Removal of Flick that is normally generated during Reciprocating Motion, ensures even Safety of Samples while Shaking.



»» Ensure Water Leak '0%'

The complete packing on shafts ensures 0% Leakage Failure on Engine Room, that is common failure of Shaking Water Bath by long-time use.



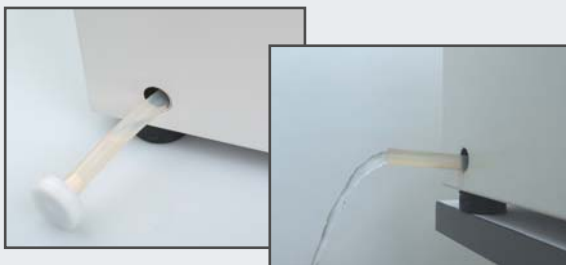
»» Stability Shaking Motion

Optimized Driving Shaft for Reciprocating Motion and the Rail (Roller Base) minimized Conflict on Shaking Rack achieve Smooth and Stable Shaking Motion.



»» Easy to Exchange Shaking Rack

Easy to remove/assemble the Shaking Rack provides easy clean and/or service.



»» Easy to Discharge Liquid in Bath

Easy to release solution from the Bath by equipped Drain Valve.

Cat. No	Description
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Articles

DAIHAN MaXturdy™ Digital Precise Shaking Water Bath, Reciprocating Motion, 18-/30-/45-Lit. **NEW**

with Universal Spring Rack, Digital Fuzzy Control, up to 2 Lit. Flask, 20 ~ 250 rpm, up to 100°C, ±0.1°C, with Certi. & Traceability

- DAIHAN-brand® New Generation Shaking Water Baths
- with Certificate & Traceability :
Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital Fuzzy Controller Provides Precise Temperature Control
- Digital Feedback Controller Provides Precise Speed Control
- Hi-Performance Shaking Engine ensures Best Smoothly Shaking Motion and Minimum Noise and Vibration
- Easy to Disassemble Spring Rack for Cleaning
- **Patented Shaking Mechanism** : Minimum Noise and Vibration
- **Patented Jog-Dial Control System** and Digital LCD with Back-Light
- CE Certified ■ **PL(Product Liability) Insurance**

- * Ideal for Direct Immersion of Samples or Shaking in the Field of Biotechnology and Laboratories.
- * Hybridization Applications, Cell Cultures, Cell Aeration, Increasing Solubility Rates, Molecular Biology Assays, Bacterial Cultures
- * Stainless steel Bath for Superior Durability & High Thermal Efficiency
- * Universal Stainless steel Spring Rack Included : for various kind of Flasks and Tubes (up to 2 l)
- * User's Self-Compensation Function to Control Difference between Real Temperature and Indicated Temperature (±10.0°C)
- * Over Temp., Over Current Protection and Sensor Error Detection
- * Digital Timer Function : 'Delay Time' and 'Operation Time' : Can be Controlled

Specification

Model	MaXturdy 18	MaXturdy 30	MaXturdy 45	
Capacity	18 Lit.	30 Lit.	45 Lit.	
Max.Q'ty of Erlenmeyer Flask	250 ml × 4 ea	250 ml × 8 ea	250 ml × 15 ea	
Temp. Range & Accuracy	Ambient +5°C to 100°C, ±0.1°C			
Temp. Resolution	0.1°C – Display, 0.1°C – Control			
Temp. Uniformity & Probe	±0.5°C, PT100			
Heating Power	1.4 kW	1.8 kW	2.4 kW	
Shaking Speed & Resolution	20 ~ 250 rpm, 1rpm – Display/1rpm – Control			
Shaking Stroke (mm)	15, 20, 30 Available (20 as factory Default)			
Timer & Alarm	99hr 59min (Delay & Continuous run), Error status & Timer-end			
Display	Digital LCD with Back-Light Function			
Controller	Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)			
Safety Circuit	Over-Temp./-Current protection, Sensor Error Detection			
Rack	Included Stainless steel Spring Rack : Universal-type			
Drain Valve	Mounted			
Material	Stainless steel (#304)-Internal, Powder Coated steel-External			
Dimension (w × d × h)	Internal (mm)	300 × 300 × h200	500 × 300 × h200	600 × 380 × h200
	External (mm)	563 × 353 × h340	763 × 353 × h340	863 × 433 × h340
Packing Size (mm) & Gross Weight (kg)	620 × 420 × h450, 24 kg	820 × 420 × h450, 26 kg	920 × 500 × h450, 32 kg	
Power Supply*	1 Phase, AC 120V, 60 Hz or 230V, 50 / 60Hz			

* Other Specifications are available upon Customer's Request.

Ordering Information

- DH.WSB03018 Shaking Water Bath, 230V, 18 Lit., "MaXturdy 18"
 DH.WSB03030 , 30 Lit., "MaXturdy 30"
 DH.WSB03045 , 45 Lit., "MaXturdy 45"
 DH.WSB03218 Shaking Water Bath, 120V, 18 Lit., "MaXturdy 18"
 DH.WSB03230 , 30 Lit., "MaXturdy 30"
 DH.WSB03245 , 45 Lit., "MaXturdy 45"

Spare Universal Spring Rack

- DH.WSB51018 (1) Spring Rack, for 18 Lit., 245 × 270 × h110mm, "SBR018"
 DH.WSB51030 , for 30 Lit., 445 × 270 × h110mm, "SBR030"
 DH.WSB51045 , for 45 Lit., 545 × 350 × h110mm, "SBR045"

Optional Dome Lid, Stainless steel

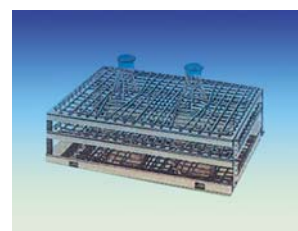
- DH.WSB02018 (2) Dome Lid, for 18 Lit., 363 × 353 × h69mm, "SBD018"
 DH.WSB02030 , for 30 Lit., 563 × 353 × h69mm, "SBD030"
 DH.WSB02045 , for 45 Lit., 663 × 433 × h69mm, "SBD045"

Validation (IQ, OQ) Service

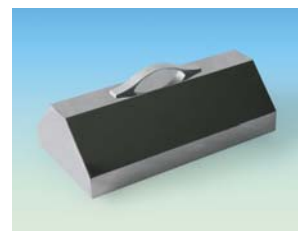
- DH.WSB31018 Validation Service(IQ, OQ), "SBV018", for 18Lit.
 DH.WSB31030 , "SBV030", for 30Lit.
 DH.WSB31045 , "SBV045", for 45Lit.



New Digital Precise Shaking Water Bath
"MaXturdy 30"



(1) Universal Spring Rack
(Included)



(2) Dome Lid, Stainless steel
(Optional)