TORONTECH

DIGITAL WATER BATH

Digital Water Bath – ToronWB™ D

High-Precision Digital Water Bath for Demanding Laboratory Temperature Control

ToronWB™ D is a high-precision electric heating water bath instrument engineered for laboratory applications where tighter temperature control is required than standard water bath equipment can provide. With a temperature fluctuation of just ±0.2 °C across its full RT+5 °C to 100 °C working range, the ToronWB™ D delivers the stability and reproducibility demanded by sensitive analytical, biological, and pharmaceutical procedures.

Constructed with a powder-coated steel housing and a corrosion-resistant stainless steel inner chamber, this water bath instrument combines robust build quality with the precise temperature regulation needed for exacting scientific work. Available in two sizes — the ToronWB™ D 500 and ToronWB™ D 700 — both models offer an open-top rectangular bath configuration that accommodates a wide variety of laboratory vessels, making this water bath an exceptionally versatile piece of equipment for any general-purpose or specialized laboratory.

APPLICATIONS

Digital Water Bath – ToronWB™ D Applications

- Precision enzyme kinetics and biochemical reaction incubation requiring tight temperature control
- Microbiological culture and pathogen growth studies at specific set-point temperatures
- Pharmaceutical dissolution testing and stability studies requiring ±0.2 °C accuracy
- Molecular biology applications including hybridization, restriction digestion, and primer annealing
- Clinical laboratory serology and immunoassay plate incubation
- Chemical synthesis and reflux reactions requiring stable bath temperature
- Calibration support for thermometers and temperature-sensitive instruments

- Histology and cytology slide preparation and staining procedures

TORONTECH
ToronWB™ D - Digital Water Bath
Set Temp
°C
Actual Temp
°C
Heating
Set
Increase
Decrease
Power

FEATURES

Digital Water Bath – ToronWB™ D Key Features

- Powder-coated quality steel housing provides corrosion resistance and durability in wet laboratory environments; stainless steel inner chamber ensures chemical resistance and ease of decontamination
- High-precision temperature sensor and integrated circuit control system deliver ±0.2 °C temperature fluctuation — five times tighter than standard water bath equipment — for demanding analytical and biological applications
- Full operating range of RT+5 °C to 100 °C with 1 °C digital display resolution covers the complete spectrum of common laboratory heating requirements
- Open-top rectangular bath design accommodates a wide variety of laboratory vessels including test tubes, Erlenmeyer flasks, beakers, culture bottles, and multi-well plates
- Two model sizes (ToronWB™ D 500 and ToronWB™ D 700) provide flexibility to match bench space and sample throughput requirements
- Compact, easy-to-clean design with minimal internal cavities reduces contamination risk and simplifies routine maintenance

THEORY & METHOD

Theory and Method

ToronWB™ D uses indirect liquid-medium heating to deliver highly uniform, stable temperatures to submerged laboratory vessels. Distilled or deionized water fills the stainless steel inner chamber, which is heated by an immersion-type electric element. A high-precision RTD (Resistance Temperature Detector) or thermistor sensor monitors bath temperature continuously and relays real-time data to the integrated circuit control system.

Unlike standard water bath equipment with ±1 °C tolerance, the ToronWB™ D series employs an enhanced control algorithm that modulates heater output with greater sensitivity, achieving temperature fluctuation of ±0.2 °C — five times tighter than the base ToronWB™ EH series. This precision makes the ToronWB™ D water bath instrument the preferred choice for temperature-sensitive assays where small deviations can significantly affect experimental outcomes.

Temperature is set and displayed digitally with 1 °C resolution on the front-panel interface. The rectangular open-top bath design allows flexible positioning of tubes, flasks, beakers, and multi-well plates within the water bath, while the stainless steel chamber walls ensure even heat distribution throughout the bath volume. The quality steel housing with electrostatic powder-coat finish protects internal components from the humidity and chemical splashes inherent to typical water bath laboratory environments.

TECHNICAL SPECIFICATIONS

Digital Water Bath – ToronWB™ D Technical Specifications

Parameter	ToronWB™ D 500	ToronWB™ D 700
Temp. Range	RT+5 – 100 °C	
Temp. Resolution	1 °C	
Temp. Fluctuation	±0.2 °C	
Power	500 W	700 W
Voltage	220 V, 50 Hz (110V is also available)	
Internal Dimensions (W×D×H)	420×190×150 mm	600×300×180 mm
Housing Dimensions (W×D×H)	565×220×260 mm	745×340×295 mm
Net Weight	8 kg	15 kg

Parameter	ToronWB™ D 500	ToronWB™ D 700
Gross Weight	9 kg	16 kg
Package Size	670×330×340 mm	860×450×390 mm

TORONTECH.com

TORONTECH

Torontech Inc.
251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC
601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE
Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE

Phone: +971 488 19252
Email: me@torontech.com

USA | Canada | EU | UAE | GCC | KSA | India | Africa | Latin America | Asia