BB Series Biomedical Bath

Overview

BB Series BioBath environmental systems are added to test machines to provide a controlled temperature (e.g. 37C) liquid bath environment for biological research and medical device testing. BB Systems can be configured for virtually any load frame, including single and dual column load frames. Test machine adapters enable the product to be used with existing test machines.

Systems are configured with:

- High load capacity tensile grips.
- Light tare weight tensile grips.
- Flexural Fixtures for three and four point bend tests.
- Compression Platens.
- Air operated grips
- Fatigue rated grips.
- Extensometry.

Acrylic Tank Sizes

Acrylic tanks are sized to application requirements. Users may access the sample from above the tank which features a split removable top, or via an optional front door. Large tanks make it easy to load test samples or to change out test fixtures. Some samples are long and require a tall tank if immersion is needed. The removable cover is split to match the centerline of the load axis, and provided to minimize evaporation and protect the media from contamination. The tanks are matched to the controller type. Circulating bath setups have dual ports located on back side and tank bottom.

Standard BB Series Tank Configurations

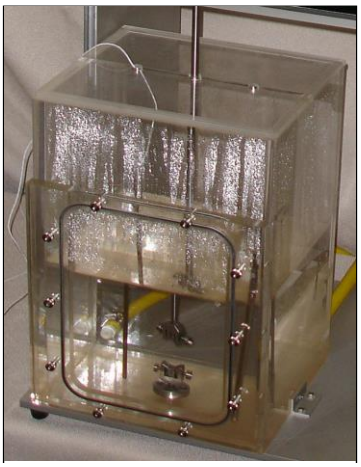
BB10 – 12”W x 10”D x 12”H with front

- Robust (0.5” walls) clear acrylic
- Removable split top cover with center hole
- Input/Output ports on back bottom
- Rated to 70 C

BB6 – 12”W x 10”D x 6”H (no door)

BB20-6-4 – 12”W x 10”D x 6”H (no door)

Vascular Fatigue Testing



Tall tank for long test samples such as tendons, biological samples and catheters

TestResources Inc – 701 Canterbury Road – Shakopee MN USA 55379
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www.testresources.com

Temperature Control

Systems include standalone digital temperature controller, heater, and a mobile RTD temperature sensor. The controller includes a thermal safety and options include an analog output for data acquisition and monitoring.

Circulation

Systems can be configured with an external circulation pump or a static non circulating mode. Some light force tests demand low wave action within the tank. If static non circulation is required, the temperature controller is configured with two RTDs and two heaters to ensure accurate temperature control in the tank. The standard BB system includes a pump with a needle valve for an adjustable flow rate to ~5 GPM. In that case, temperature control stability is maintained +/- 0.5ºF (0.2ºC).

Medical Device Fatigue Testing

Controller Packages

T200 Circulating Media Temperature Controller for Biobath
* Enclosure; pump, heater, and controller
* Flow rate: 5 GPM 7.2 psi max
* Heat rate: 20 min to 37ºC
* Temp control: +/- 0.5ºF (0.2ºC); depends on sensor location
* Power: 120 or 240VAC; 5 amps; 600 Watts
* Sheathed RTD sensor
* Self prime enables enclosure to be placed above bath
* Standalone temp controller
* Retransmitted analog output for data acquisition
* Set Point control with Auto-tuning PID
* Overtemperature limit switches
* Hoses (2) with manual valve

T201 Temperature Controller for Non-circulating (static) Biobath
* 120 Volt & 230 Volt Options available
* Two submersed 200W heaters with internal T/C and Teflon sheath - wired in parallel
* Two temperature controllers control bath fluid while preventing Teflon sheath from melting
* Teflon sheathed RTD sensor for location in bath
* 4" x 8" x 8" benchtop control box

AQH200 Affordable Submersible Heater for static baths
* Temp control stability ± 2.5ºF (1ºC)
* Manual Set point – basic on/off
* Accuracy depends on proximity to sample
* Power: 120V 200 Watts
* Requires submersion

T201 Static Temperature Controller

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Grips and Fixtures

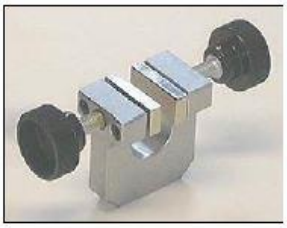
TestResources offers many different grips and fixtures composed of corrosive resistant materials, including stainless steel.
Common examples shown below.

G23SS056 Stainless Steel Platen
* 56 mm (2.2") diameter
* 5/8"F cup with 8 mm pin
* Concentric rings for sample centering

G42 Series Bend Fixtures
* Fixed span designs

G238X Universal 3 & 4 point fixtures

G140SS Stainless Steel Vise Grip
* Rated 200 N (50 lb)
* Tare weight 120 g with jaws
* For specimens to 8 mm thick
* Jaws 15 X 15 mm (0.6" X 0.6")
* 10-32 F (M5) thread



G227SS Stainless Steel Vise Grip
* Rated 440 N (100 lb)
* Tare weight 240 g with jaws
* For specimens to 6 mm thick
* Female 10-32 UNF (M5) thread
* Fatigue or static

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