



# SI-H Horizontal Tissue Bath

*Research system for higher throughput of complex pharmacological/physiological assays*



The new SI-H Horizontal Tissue/Organ Bath system (**SI-HTB**) combines the ease of use and productivity of a traditional vertical organ bath with the more advantageous features of single tissue physiology platforms.

- Two channel system for increased productivity, easily expanded to add channels
- Fully independent heating and fluid control for each channel
- Low profile/small footprint
- Variable volume, chemically inert teflon bath with shape configurations from variable to fixed 1.5mL–10mL
- Modular, space-saving, blade-style electronics (Control up to 4 channels with the electronics in one chassis)
- Large variety of force transducers covering mN–N forces, all with lifetime warranty
- Can be combined with automated fluid control systems
- Add a linear motor and controller (**SI-MOT**) to perform mechanical, electrophysiological and optical techniques, including isometric (standard), isotonic, eccentric and auxotonic
- Add a photometer for Calcium, NOx, ROS

- Add an electrometer like the WPI **Duo773** or **Electro705**
- Add a multi-purpose **Biofluorimeter** for tissue fluorescence (calcium, NO)

## Multiple Bath Options

The **SI-HTB** system breaks through the (large) volume limitations of the traditional organ bath, allowing volumes as low as 1.5mL in an inert, teflon-based bath.

The bath design allows multiple shape options for thick, long, flat and thin tissue. When pharmaceuticals are available in precious, small amounts, you will appreciate this standard feature. A wide range of transducers and tissue mounting supports complement this freedom of tissue shape, volume and size.

## Low Profile

The low profile and small footprint of the bath system, combined with the modular, space-saving, chassis-mounted design of the electronics, reduces the bench space requirement up to 4-fold when compared with standard 4-channel organ baths.

## Versatile System

The **SI-HTB** combines advanced physiological techniques with the throughput needed in pharmacological assays in one flexible platform. Upgrades to four or more channels are easy and economical.

The motor option (**SI-MOT**) turns your system into a tissue work-out station with isotonic, auxotonic and eccentric force measurement capabilities. Nearly all established myo-mechanical tests from stretch-release to work-loops and muscle fatigue are now possible in a single organ bath system. Some of these procedures require a length change solution (software/hardware) like WPI's **MDAC** package.



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*Basic research system for mechanical measurements of intact muscles*

## Fluorescence Measurement

The solid horizontal tissue bath design is ideal for combination with electrophysiology on the same platform. Intracellular measurements can share the stable solid base of the bath system.

WPI's new fiber-optic based, multi-channel Biofluorometer allows for tissue fluorescence measurements (calcium, NO, ROS) on the **SI-HTB** platform.

*Now, you can design a system to meet your needs and budget. And, it is fully upgradeable in the future.*

## Options

- WPI's 16-bit, high speed, Labview-based Muscle Data Acquisition system **SI-MDAC**
- WPI's 16-bit, high speed, data acquisition with industrial (CFR21 compliant) Notocord Data recording and analysis software

*The electronics for the 2-channel horizontal tissue bath are modular units mounted into a single chassis.*

## Configurations

### Standard 2-Channel System:

- (1) 2-Channel **SI-HTB** platform for isometric force
- (2) **SI-KGX** Force Transducers
- (2) **SI-BAM21LCB** Optical Force Transducer Amplifiers
- (1) **SI-TCM2B** 2-Channel Temperature Controller
- (1) Signal Conditioning Amplifier System Chassis

### 4-Channel System:

- (2) 2-Channel **SI-HTB** platform for isometric force
- (4) **SI-KGX** Force Transducers
- (4) **SI-BAM21LCB** Optical Force Transducer Amplifiers
- (2) **SI-TCM2B** 2-Channel Temperature Controller
- (1) Signal Conditioning Amplifier System Chassis

### 2-Channel Motorized System:

- (1) 2-Channel **SI-HTB** platform for isometric force
- (2) **SI-KGX** Force Transducers
- (2) **SI-BAM21LCB** Optical Force Transducer Amplifiers
- (1) **SI-TCM2B** 2-Channel Temperature Controller
- (2) **SI-MOTTEST** Linear motor (**SI-MOT**) with controllers (**SI-MOTDB**)
- (1) Signal Conditioning Amplifier System Chassis
- (1) **MDAC** Data Acquisition software



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