

Mayflower Tissue Bath System



73-2155 Mayflower Tissue Bath Configured as a flow-through system



- Horizontal tissue bath for isometric contraction measurements using a F10 or F30 force transducer
- Two versions are available:
 - Flow-through superfusion system
 - Incubation system
- Possibility of electrical stimulation
- Exchangeable holders depending on tissue used (for vascular or tracheal rings, for strips)

The Mayflower tissue bath is a horizontal tissue chamber with an integral contraction force measurement. It is completely open at the top and has a small bath volume of 3 - 5 ml. The compact and modular construction provides ideal conditions for investigations on small muscle preparations (urethra, papillary muscle, cavernous body), vascular rings, or tracheal rings.

Basic Equipment:

- Acrylate support with a movable mounting platform for preload adjustment through a micrometer screw. This platform receive the tissue chamber and acts as holder for the force transducer. The acrylate support also includes a glass heat exchanger for the pre-heating of the perfusate solution.
- The tissue chamber differentiates the two versions.

Flow Through System (73-2155)

The tissue chamber is carved out of an acrylate block and placed on the support stand. This chamber includes the tissue holder, the connections for electrical stimulation electrodes, a frit for aeration and a draw-off tube with height adjustment to set the bath volume. As it is not jacketed, continuous flow through the chamber is required.

Incubation System (73-3600)

The tissue chamber is jacketed. The bottom of the chamber is made of a teflon coated stainless steel plate to optimize the temperature stability of the solution. A additional small stainless steel heat exchanger is also built in to avoid temperature fluctuation.

The incubation chamber can also be used as a flow-through superfusion chamber. The superfusion chamber cannot be used for incubation.

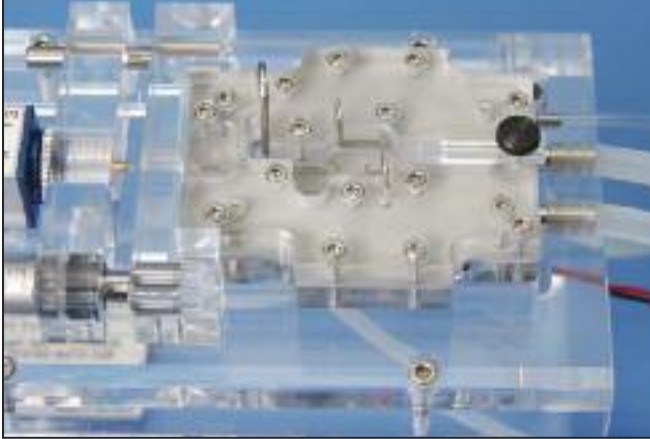
Additional Equipment:

- A multi-channel roller pump for the perfusate circuit
- A thermocirculator for keeping the perfusate solution at constant temperature

The modular concept of this apparatus offers a wide range of different arrangements to meet individual requirements regarding bath geometry, tissue holders and stimulation electrodes. The horizontal arrangement of the tissue and the open top provide ideal conditions during preparation and experiment.

The various parts of the apparatus are made mainly from Plexiglas or stainless steel and are therefore inert and corrosion-resistant. The solution flows in from a roller pump and passes through a heat exchanger, the outflow is under suction through a suction tube with height adjustment by the same pump. A frit for aeration is located in the tissue chamber. Two connection sockets for the stimulation electrodes are located on either side of the tissue chamber.

73-3600 MAYFLOWER "Fully Thermostated Bath Top" Incubation System



MAYFLOWER Chamber with direct Stimulation Electrode



MAYFLOWER Chamber with Field Electrodes

Electrical Stimulation Electrodes

The stimulation electrodes can be of different types:

- Coaxial electrode for contact stimulation (stainless steel).
If point stimulation is required, a Miniature Coaxial Stimulation Electrode is installed using our Mini Ball Joint Positioning System. The electrode can therefore precisely and easily be placed.
- Two plate electrodes for field stimulation (platinum or AgAgCl)
- Flexible platinum wires for direct contact with the tissue

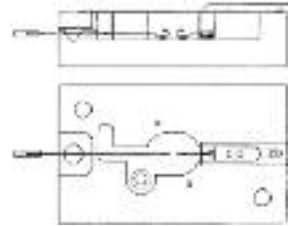
Tissue Holders

Three different tissue holders are available. Tissue holders can be exchanged. The holders consist of two parts, a fixed part positioning the tissue inside the bath and the part transmitting the contractile force to the transducer.

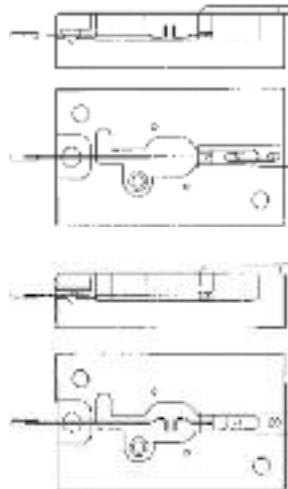
Order # Product

73-2155	Small Volume Horizontal Tissue Bath, System MAYFLOWER
73-3600	Small Volume Horizontal Tissue Bath, System MAYFLOWER "Fully Thermostated Bath Top"

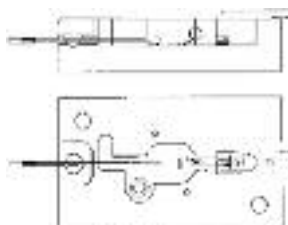
IMPORTANT NOTE: Mayflower Tissue Bath is especially designed for HSE-HA F30 or F10 Force Transducers and it is not possible to modify Transducer Holder to suit other transducer models.



A standard tissue holder is used for small muscle preparations. The tissue is attached to both hooks by threads.



Special holder for vascular or tracheal rings. The rings are slid over the holder jaws.



Special holder for small muscle preparation. The tissue is clamped on the right-hand side by a spring clip against the bottom of the chamber and attached to the transducer hook using a thread. A tool for lifting the clamping system is supplied.

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