

Multi Wire Myograph System - 620M

The 620M Multi myograph system is the successor to our very popular 610M myograph system. This 4-channel multi myograph system is a highly sophisticated yet robust research instrument. It is an easy-to-use system for in vitro studies of small and large blood vessels, trachea or gut mounted as larger ring preparations (up to 10 mm).

The actual myograph chamber has not been changed, but we have improved and re-designed the Myo-Interface:

- The heating has been made more accurate down to the individual bath level.
- The operation of the interface has been made even more intuitive and easy to handle. The front switches have been replaced by a graphical color touch-display.
- The menus are easier to navigate, read and similar of what you would see on a PC screen or Mobile phone.
- We have installed a powerful CPU and a large memory to make the 620M future upgradeable.



620M Multi Interface with touch screen display



Rat mesenteric artery mounted on the myograph jaws. Approx 200 µm

Each individual myograph unit, made of aluminum, has a centrally located round 8ml stainless steel chamber. The segment supports (jaws or pins) are then positioned in the chamber, where one side is attached to the force transducer and the other side is attached to a micrometer. Each unit has individually controlled gas inflow and suction. Heating and connections for vacuum and gassing are on the myograph interface permitting the preparations in all four chambers to be kept under physiological conditions, i.e. at 37 °C, and bubbled with a gas mixture of your choice. The interface also incorporates all electronics, a micro-processor for calibration, circuitry for analog outputs, and an USB port on the back.

Following mounting and equilibration, passive length-tension relationships for the vessels are determined using a normalization procedure. This ensures reproducibility among the segments and between experiments. During actual experiments, the circumference of the vessel is kept constant, i.e. the vessels are examined under isometric conditions. Compounds are added directly to the chamber and vessel tension is measured for contractile or relaxing effects of the tested compound.

This myograph is highly suited for pharmacological investigations on vessel reactivity. Multiple 620M units can be conveniently arranged side-by-side for larger testing capacity. Thus making it ideal for work requiring a higher throughput, such as drug screening, running concentration-response curves or in experiments where individual testing of vessels in separate baths is necessary.

Stainless steel jaws

The stainless steel jaws are the standard outfit of the myograph as they allow the mounting of small vessels. For work requiring electrical field stimulation the jaws are made in plastic and have an attached platinum electrode.



Mounting pins

A full set of parallel pins also comes as standard and can be used instead of the micro vessel jaws to allow the mounting of larger vessels or rings up to 10 mm.



Chamber cover

Cover with suction/ draining, refilling and oxygen supply



Technical specifications

Vessel size:	>60 µm / >450 µm up to 10 mm
Chamber:	Four individual chambers
Chamber material:	Acid-resistant stainless steel
Chamber volume:	Max. 8 ml
Chamber suction:	Manual or automatic, time controlled, user defined
Chamber cover:	Supplied with connections for gassing
Chamber gassing:	Individually controlled per chamber by needle valves
Force range:	User selectable at +/-200/400 /800/1600 mN
Force resolution:	0.01 mN
Micropositioners:	Manually operated precision micrometer
Weight calibration:	Semi Automatic
Heating:	Built into chamber, independent of superfusion
Temp. range:	Ambient temp. - 50 °C
Temp. resolution:	0.1 °C
Temp. probe:	External
Output reading:	Force (mN)
Analogue output:	Independent filtered 4 channel output at 1.0V full scale
Serial output:	USB 2.0
Voltage:	External power supply
Ambient temp.	15-30 °C

Set-up example

