

- Shear stress, luminal pressure, mechanical stretch and tension in longitudinal direction.... all in one system
- Ergonomic design to facilitate easy and quick mounting of arteries
- Low volume of chamber fluid to minimize amount of reagents
- Pulsatile flow studies with pulse rates between 50 and 600 per minute.



The Pressure or Perfusion Myograph System – 112PP is a system used to study the structure and function of isolated sections of small vessels (diameter $>40\ \mu\text{m}$) under near physiological conditions.

Vessel diameters can be measured in response to pharmacological and physiological stimuli.

In addition the system allow simulation of pulsations between 50 and 600 BPM with a pressure difference up to 60 mmHg.

A built-in heating system maintains the chamber temperature, eliminating the need for continuous and often costly superfusion. The chamber cover includes ports for superfusion, for rapid draining and filling, for cumulative addition of drugs and for oxygenation. To facilitate cleaning, the chamber is made of acid resistant stainless steel.

Measurements are continuously recorded by a computer with dimension analysis software - MyoVIEW. As an option, the FlowMeter - 162FM can be added to the system to measure flows between 15 - 4000 $\mu\text{l}/\text{min}$.

Because of the nature of the technique, physiological responses such as the myogenic response and flow-mediated dilation can be examined.

The state of the art Pressure Myograph software MyoVIEW will collect data such as vessel wall thickness, changes in vessel and lumen diameter, intra vascular pressure, and a host of other calculated parameters, such as shear stress and vascular resistance, can be collected, setting pressure or perfusion myography apart from standard organ bath techniques.

The Acquisition & Analysis Package

The DMT Inverted Microscope, inverted Zeiss, Nikon or similar microscopes (contact DMT for further specifications) with USB camera, computer and data acquisition software MyoVIEW.



PRESSURE MYOGRAPH SYSTEM - 112PP

CHAMBER:

Chamber volume (min)	3.1 ml
Chamber(s)	1
Chamber material	Acid resistant stainless steel
Vessel size	>40 μ m
Vessel alignment	X, Y, Z
Micrometer resolution	0.01 mm
Mounting type	Cannulas
Pulse rate	50 - 600 BPM

TEMPERATURE:

Range	15.0 to 50.0 $^{\circ}$ C
Resolution	0.1 $^{\circ}$ C
Stability	\pm 0.2 $^{\circ}$ C
Heating	Yes

TRANSDUCER FORCE:

Output reading	mN
Range	\pm 200 mN
Resolution	0.01 mN
Force calibration	Yes

TRANSDUCER PRESSURE:

Output reading	mmHg
Range	0 - 250 mmHg
Pressure stability	\pm 0.5 mmHg
Resolution	0.1 mmHg
Force calibration	Yes

RESERVOIR:

Heated	Yes
Capacity	250 ml
Pressure circuit	Closed
Air inlet	1 bar (max)

OUTPUT:

Data communication	USB 2.0
Analogue output channels	4
Analogue output range	\pm 2.5 V

