

- **Manually operated micropositioner for accurate tension control**
- **Can be easily combined with microelectrodes for membrane potential measurements**
- **Easily integrated into an imaging system for simultaneous force measurements and vessel wall fluorescence**

The Single Wire Myograph System - 320A is ideal for studying a single vessel with a diameter of 30 μm - 3 mm. The vessel is mounted as a ring preparation by threading it over two parallel stainless steel wires and securing the wires to two supports or "jaws". One support is attached to a precision micrometer, allowing manual control of vessel circumference and stretch. The other support is attached to a force transducer for measurements of force/tension development.

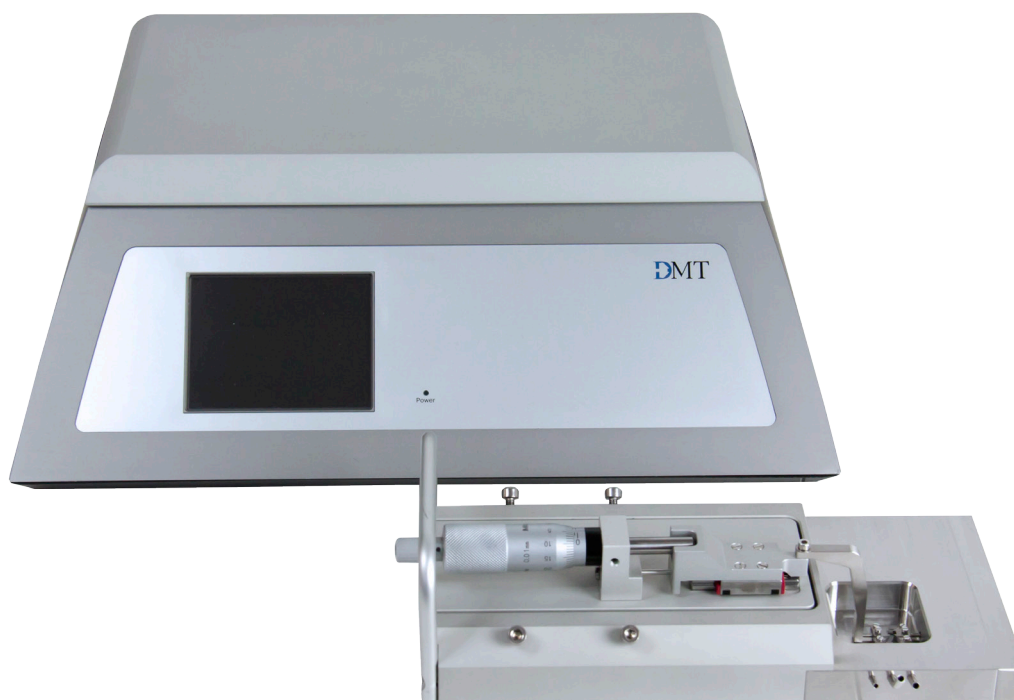
The preparation is mounted in a heated 10 ml acid-resistant, stainless steel chamber, which can be covered with a lid featuring ports for rapid suction/draining, refilling and bubbling of oxygen. The base of the chamber contains a window allowing morphological observation or fluorescence measurements on an inverted microscope.

Typically, the preparation is kept in the heated vessel chamber in a physiological salt solution at 37°C, bubbled with oxygen where the vessels remain viable for at least 12 hours.

Following mounting and equilibration, the passive length-tension relationship of the vessel is determined. During the actual experiment, the circumference of the vessel is kept constant. Compounds can be added directly to the chamber, and the vessel's contractility and reactivity are measured under isometric conditions.

As an option, an electronic valve can be added to the system for easy control and emptying of the chamber.

The Wire Interface with touch screen makes it easy to set up and use. Furthermore, the Wire Interface is compatible with the DMT Device Enabler allowing automatic recognition of supported devices by LabChart, use of multiple devices simultaneously, correct units and ranges in LabChart channels and simultaneous recording of data into LabChart alongside a PowerLab. The DMT Device Enabler allows the Wire Myograph System - 320A to stream data directly into LabChart without a PowerLab unit.



Features

Wire Interface

- Power supply

Single Wire Myograph - 320A

- Myograph connection cable with a temperature probe
- Stainless steel mounting jaws with supports
- Chamber cover

Accessories:

- 1 x calibration kit (including bridge, T-balance and 2 gram weight)
- 1 x funnel
- 1 x stainless steel wire 40 µm
- 3 x Allen keys
- 1 x high vacuum grease
- 1 x grease for protection of linear slides
- 5 x spare screws
- 1 x screwdriver
- 10 x spare cover glass OD 12.0 x 0.17 mm

Optional accessories

- Data Acquisition System - PowerLab
- Data Acquisition and Analysis Software - LabChart
- Stimulator
- pH meter
- Vacuum pump
- Electronic vacuum valve
- Waste bottle
- Gas supply manifold

Technical specifications

Wire Interface

Voltage:	External 100-240 VAC to 24 VDC adapter $\pm 10\%$
Current max.:	3.3 Amps at 24 VDC
Dimensions:	34 x 25 x 15 cm (LxWxH)
Net weight:	5 kg
Operating temp.:	15-40 °C
USB connector:	For download of firmware and connection to PC Software
4 Analog outputs:	BNC connector at the back, used to connect to external acquisition system
Analog output range:	± 2.5 V
Analog output impedance:	<200 Ohm
Force resolution:	On display 0.1 mN resolution on analog BNC connector is higher than 0.01 mN
One pH input:	Range pH 0-14
pH calibration:	Manual with guidance on display

Single Wire Myograph - 320A

Vessel size:	>30 µm
Vessel alignment:	Manually in the X, Y and Z plane
Micrometer positioner:	Manually operated
Mounting supports:	Jaws
Chamber:	Single bath/conical shape
Chamber size:	Standard max. 10 ml (5 ml typical)
Chamber cover:	With connections for suction and gassing
Chamber material:	Acid resistant stainless steel
Chamber temp. range:	From ambient temp. to +50 °C
Chamber heating:	Built-in, independent of superfusion
Chamber temp. resolution:	0.1 °C
Chamber temp. stability:	± 0.2 °C (when target temperature attained)
Temperature probe:	External PT1000
Force range:	± 200 mN
Force calibration:	Manual with guidance on display
Data on the transducer	
Max. range:	± 200 mN
Operating temperature:	15-50 °C
Frequency range:	0-20 Hz

Optional accessories

pH meter	
- range:	pH 0-14
- temp. correction:	0-50 °C
Electronic valve:	100-240 VAC (auto) 50/60 Hz via external power supply