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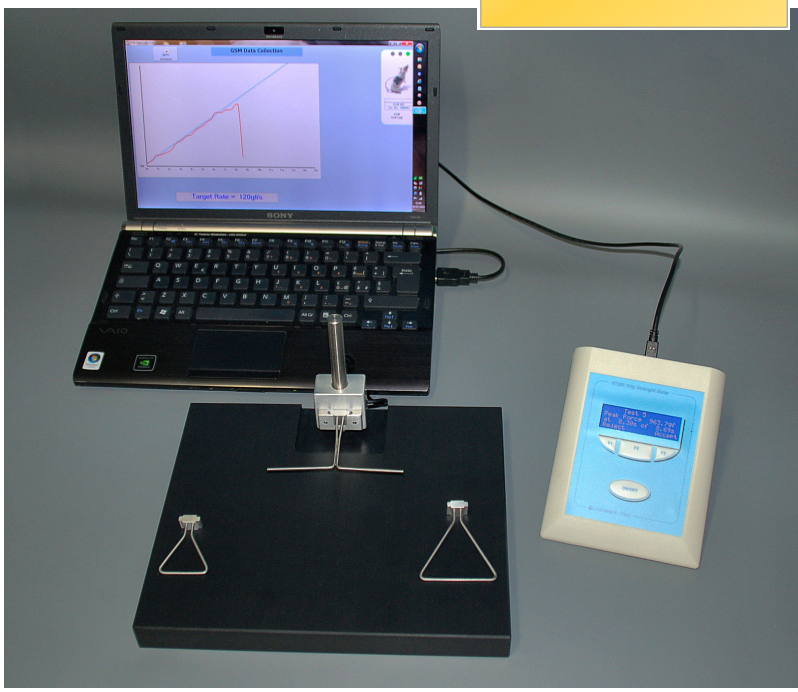
NOW full optional:
including software,
3 grasping tools and
2 grasping grids

Grip Strength Meter

Cat. No. 47200



General

The Ugo Basile Grip Strength Meter automatically measures grip-strength (*i.e.* peak force and time resistance) of forelimb or hindlimb (via the optional grid) in rats and mice.

The Grip Strength test is a perfect complement to the gold standard Ugo Basile Rota-Rod device for motor coordination and motor function experiments. The effects of drugs, toxins, muscle relaxants, disease, ageing or neural damage on muscle strength may be assessed.

The animal is placed over a base plate, in front of a grasping tool (either T-shaped, trapeze-shaped or grid), whose height is adjustable.

The bar is fitted to a force sensor connected to the control unit, which can be used as a stand-alone or connected to a PC via the USB port, for monitoring and data recording, via the **NEW** software provided as standard

High Consistency with force-rate monitoring tool

for Rats

for Mice

Features and Benefits

- Software included - **NEW 2014 Release**
- Grasping tools and grasping-grids included for rats and mice
- No calibration needed
- Force-rate monitoring (via software or LCD display)
- Grasping bar / grasping trapeze positioned at adjustable height
- Maximum applicable force 1500g; resolution 0.1g

Ugo Basile: more than 10,000 citations

Rationale of the Grip Strength test

When pulled by the tail, the animal grasps at the bar. Rodents instinctively grab anything they can, to try to stop this involuntary backward movement, until the pulling force overcomes their grip strength. After the animal loses its grip on the grasping bar, the peak amplifier **automatically stores the peak pull-force achieved by the limbs** and shows it on the display.

The instrument basically consists of a base plate of black sand-blasted Perspex, complete with a force transducer and a grasping device (bar, trapeze or the optional grid), which can be positioned at an adjustable height.

The force transducer has a maximum applicable force of 1500g, with a resolution 0.1g.

The transducer incorporates a proprietary memory chip to store all calibration parameters, so that no further calibration is required for normal use; moreover, the controller will prompt to auto-zeroing routine at every measurement to automatically adjust any offset.

Data Monitoring and Storage

The device comes standard with both a control unit with internal memory and the **new DCA software** for signal monitoring, data transfer and analysis.

Once saved, data can be browsed on the control unit and/or trasferred to a PC in proprietary, Excel (.xls) or text (.txt) format, to be managed by most statistical analysis packages available on the market.

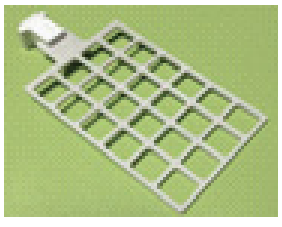
Ease of use

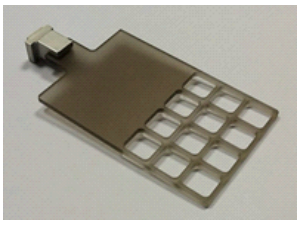
The GSM device has been designed to make sensitivity experiments easy and consistent, thanks to its:

- Effective **peak detector**, for a reliable and automated detection of the animal response
- **Ratemeter** and **Slope** features, ensuring the desired force is applied at a consistent rate
- NEW **Software,** acting as a quality control tool, by showing the applied pulling force (red line), the desired target force rate (blue line), and the peak detection in real time.

The experimenter can consistently apply the force (i.er. pull the animal) at the desired rate, by simply making sure that the red trace lays on the blue line, see figure 1

Grasping-Grids





Grasping-grids are also included, for integrated measurement of the four limbs (left) or hindlimbs (right).

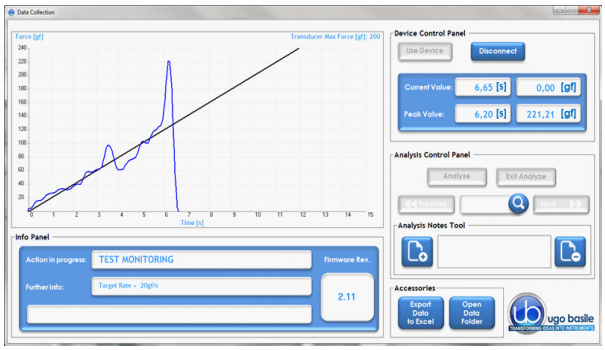


Figure 1: Screenshot of the GSM software *showing the force trace (in red) and the desired target force rate (in blue) - slope function*

Ordering Information

47200	**Grip-Strength Meter,** new model forrats & mice, complete with following standard accessories
47200-001	Control Unit, with Power Supply
47200-002	Force Sensor
47200-004	Baseplate and upright
38500-011	DCA Software (on USB Key)
M-LM 589	T-shaped Grip-Bar
M-LM 590	Grip-Trapeze for Rat
M-LM 588	Grip-Trapeze for Mouse
47200-325	Mouse Grasping Grid
47200-326	Mouse Grasping Grid ("blind" top)
38500-303	Pedal Switch
52010-325	USB Cable

All components lodged in a dedicated plastic case

Physical

Weight	4.8kg
Shipping weight	6.5Kg
Packing	46x38x27cm

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