



Topcat Metrology Ltd



“Looking behind the measurement”

www.topcatmetrology.com

Wireless Mechanical Threshold Testing System

Topcat's wireless mechanical threshold testing system, WMT1, consists of a control unit containing an infra-red receiver, power supplies and controller to drive a limb mounted rolling diaphragm pneumatic actuator of our own design. It has duplicate displays and status lights on both sides, enabling readings to be taken easily without disturbing the subject. It can also be used as a bench-mounted system, with a pressure line to connect to the actuator. WMT1 has been validated on horses, cows and dogs and is also generally suitable for sheep, goats, and camels.

Note: We expect to validate WMT1 for camels in 2013.



The mechanical actuator has a rolling diaphragm to ensure low friction and a “donut” O ring connection to the pressure line. This is designed to pull away without damage to the system if the subject becomes excitable. The standard pin diameter for large animals is 1mm. Other sizes, and a three pin configuration are also available on request. The actuator is supplied with mounting straps and boots and a dummy set for the contra-lateral limb.



The system is operated from a two channel handset; one channel applies the stimulus and the other resets the system for the next test. Threshold force is recorded automatically on the digital display and is retained until the "status" button on the handset is pressed. The system is failsafe: the stimulus is removed if the infra-red signal is lost, and the maximum force achievable is limited by the air pressure in the pre-charge cylinder.

Technical specification

Rate of force rise: 0.4N/sec, 0.8N/sec and 1.2N/sec

Maximum force achievable: 30N

Actuator sizes supported: Topcat Large Animal & Topcat Small Animal

Power: 2 off PP3 re-chargeable (4 off supplied, together with charger)

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