

## Tuft Withdrawal Tensometer

### Model: C0051

The tuft retention property is one important factor in the useful life of a tufted or traditional carpet. Carpets which are badly constructed or poorly backed may lose complete tufts in some situations, for example on stairs. In loop pile carpets, a good bind is necessary to prevent long runner loops formed.

The IDMTuft Withdrawal Tensometer measures the force required to withdraw a single tuft or loop of pile from a carpet – that is, the binding force between carpet pile and backing. The instrument is normally used on small samples of carpet in the laboratory, but the balance may be detached and used in selected positions on large pieces or on carpets already laid.

### Test Method:

The carpet sample is held down by a steel plate, and a pair of surgical forceps is clamped to one end of the tuft to be tested, or a hook threaded through one loop. The forceps or hook are linked to a digital force gauge, which is raised at a steady rate by a small electronic motor. Tension on the tuft or loop is thus increased and the digital force gauge indicates the maximum force needed to withdraw it.

The standard instrument is supplied with a digital force gauge registering up to 10kg, for testing carpets pile binding force.

### Applications:

- Textile floor covering which has a tuft (cut) loop pile yarn structure
- Woven: individual loops
- Woven: individual cut tufts

### Features:

- Portable stand with force gauge able to measure force required to withdraw a single tuft
- Digital Force Gauge features:
  - 20 x 0.02 lb, 10 x 0.01 kgF, 100 x 0.1N, 220V
  - Peak memory for tensile loads
  - Accuracy:  $\pm 0.5\%$  of full scale  $\pm$  digit
  - Safe overload: 150% accuracy
  - Selectable units of measurement: kg, N, or lbs
  - Push-button calibration
  - IPM – Intelligent Power Management system
  - Battery or AC operation



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*a measurable difference...*



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### Standards:

- AS 2111.15
- ASTM D1335
- BS 5229:1975 (1996)
- ISO 4919:1978
- IWS 202

### Options:

- RS-232, Mitutoyo and analog outputs
- MESURgauge Software
- Serial cable, gauge to PC

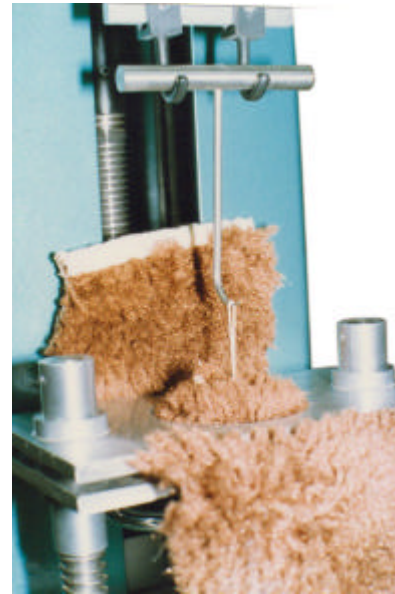
### Connections:

- **Electrical:** 220/240 VAC @ 50 HZ or  
110 VAC @ 60 HZ

*(please specify when ordering)*

### Dimensions:

- **H:** 535mm • **W:** 430mm • **D:** 300mm
- **Weight:** TBA



**Loop Withdrawal Fixture**

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