

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 being formed.

The WIRA Tuft 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 dial balance which is raised at a steady rate by a small electric motor. Tension on the tuft or loop is thus increased and a



'dead' pointer on the balance indicates the maximum force needed to withdraw it.

The standard instrument is supplied with a balance registering up to 5kg, but an alternative 10kg balance is available for testing carpets with a higher pile binding force.

**Conforms to:**  
**BS 5229:1975 (1996)**  
**ISO 4919:1978**

*Dimensions:*  
*Width: 430mm*  
*Depth: 300mm*  
*Height: 535mm*

*Power Consumption: 20W*