

Accessories

X17 Thin Film Grips

The innovative design of Wallace's Thin Film Grips prevent slippage or breakage of thin samples when tested for tensile strength. The X17 grips are suitable for compliant elastomeric material, paper, fabric and threads less than 0.2mm in thickness.

The measurement of tensile properties, especially ultimate Tensile Strength and Elongation at Break, is one of the most widely used physical tests on rubber and elastomeric materials, being used for quality control testing to International Standards. Other tests requiring extension of test pieces include Tear Resistance, Creep, Stress Relaxation and Tensile Set, Fatigue and Crack Growth Resistance under cyclic deformation, and adhesion strength of rubber laminates.

Difficulties are commonly encountered when testing samples cut from thin sheets, films and finished products made of latex rubber and other highly extensible materials. Products made by dipping N R latex can extend up to ten times their original length, and are often coated with a lubricant. Tests may be invalidated by slippage or breakage at the grips.

Features

- Eliminates slippage and breakage at the grip
- Reduces number of invalid tests
- Easily fits into conventional grips
- Self aligning
- Quick & easy loading



Principle of Operation

A combination of clamping and capstan effects prevents both slip and tearing, whilst still conforming to the requirements of standard test methods.

Until now the most common type of grips used were pneumatic and simple wrap-around utilising the capstan effect. Pneumatic grips using parallel or shaped faces can be made to grip satisfactorily but due to the large local pressure set up, especially with very thin samples, failure at the grips is very common. Wrap-around grips do not usually suffer from this defect but due to the difficulty of obtaining sufficient surface contact slippage occurs.

The X17 overcomes these problems by achieving 360° wrap-around which, due to the exponential relationship of the capstan effect, squares the effective gripping friction.

The grips are closed and opened by simple thumb and forefinger actions and are provided with a tab end which can be secured in conventional grips simply and quickly without modification.

Specifications

Thin Film Grips—X17	
Part Number	WAX17
Dimensions (mm)	75 (h) x 40 (w) x 27 (d)
Weight	200g each
Maximum Width of Sample	25mm
Maximum Thickness of Sample	0.2mm
Operating Temperature	10 to 40°C; Altitude 2000m maximum
Humidity Range	10 to 80% RH non-condensing

