

# BENNEWART FLEX TESTER

Bennewart flex testing is intended to determine the resistance of a component of material to cut growth during repeated flexing. It can also be used to assess the effect of surface patterns on crack initiation and growth. This test is especially applicable to the outsoles of footwear, but may also be used with certain other flexible components.

The **Unilab Bennewart Flex Tester** consists of a drive unit comprising of an electric motor with pulleys and belts system to give the desired speed to an eccentric and link mechanism to give an oscillating movement to one of the two grips holding the two ends of test specimens, the other grip being fixed.



The oscillating grip has gun metal bushes, which slides on two hardened and ground bearing steel rods to give it a long working life. Each grip consists of swivable bases pivoted on ball bearings so that the two ends of the test specimens are free to align themselves with the natural contour of the specimen during flexing.

The axis about which the grip bases oscillate lies in the plane of their specimen holding face. A six digit pre-set electronic digital counter counts the numbers of test cycles and also stops the motor after pre-set numbers of test cycles.

The apparatus is finished in shore blue matalic painting and bright chrome / zinc plating to give it a corrosion resistant finish.

A cutting die for preparation of test specimen from sheet and slitting punch with jig for making initial crack are available as optional accessories.

## TECHNICAL DATA

Number of test specimens tested : 2 for full sole, 6 for cut test specimens

Angle of flexing : 90°

Diameter of bending mandrel : 30 mm

Frequency of operation : 125 to 150 cycles/minute

Motor : ½ HP single-phase 230 volts AC

Counter : Six digit pre-set type digital type with memory backup

## RELATED STANDARDS

**DIN 53543 - 1979** : Testing of Semi Rigid Polyurethane (PUR) Integral Cellular Materials - Materials for Soles and Parts of Shoes

**SATRA - PM 161** : Bennewart Flex Test Resistance to Cut Growth on Flexing

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