

## IEC 60745-1 Hand-held Motor-Operated Electric Tools –“Safety –“ Flexing Test Apparatus

### Description

Cord guards shall have adequate mechanical strength and shall retain these properties throughout extended normal use.

Compliance is checked by the following test:

The part of the tool comprising the cable entry, fitted with the cord guard and the flexible cable or cord for which the tool is designed, is fixed in the oscillating member of an apparatus similar to that shown in Figure 9. The sample is so mounted that the axis of oscillation is tangential to the outer surface of the part in which the cord guard is secured, and, when the oscillating member is in the middle of its travel, the axis of the cable or cord where it leaves the cord guard is vertical.

A weight, having a mass equal to that of the tool, but not less than 2 kg or more than 6 kg, is attached to the cable or cord.

The oscillating member is moved backwards and forwards through an angle of 90° (45° on either side of the vertical), the number of flexings being 20 000 and the rate of flexing 60 per min. A flexing is one movement, either backwards or forwards. After 10 000 flexings, the sample is turned through 90° about the centre line of the cord guard.

After the test, the cord guard shall not have worked loose, and neither the cord guard nor the flexible cable or cord shall show any damage that could impair compliance with this standard, except that not more than 10 % of the number of strands of each conductor may have been broken.

Immediately after this test, the cord anchorage and the terminal screws are loosened, without removing the conductors of the flexible cable or cord. However, if the cord guard is clamped under the cord anchorage, the cord anchorage is not loosened.

The tool is then lifted by the cord guard, without jerks, over a distance of approximately 500 mm in approximately 1 s, and replaced on a support.

The operation is made 10 times.

During this test, the cord guard shall not slip out of its location.



### **Cord Flexing Tester According to IEC 60745-1**

- Weight 5kg (other weights on request)
- Digital display of number of flexing
- Digital set of number of flexings
- Automatic cut of cycle after finish
- Angle adjustment using mechanical switches
- Motorized operation
- Fixtures for fixing the product on the turning table
- Manual jog for setup of the sample

### **Category**

1. Equipment for Standards
2. Standards