



Description

The Flex Durability Tester simulates stress, which flexible packaging materials (such as coated or vapor-coated paper, plastic films and laminated material) may be subject during the automated packaging process. The KFT-C covers the determination of the flex resistance of flexible barrier materials with a high repeatability.

The device uses a stationary and a movable mandrel of 90 mm diameter each.

Two different motion cycles are described in the ASTM F 392-93 standard: One motion cycle uses a twisting angle of 400° and a horizontal move of 80 mm simultaneously (short stroke). The other motion cycle uses a twisting angle of 440° and a horizontal move of 90 mm simultaneously, followed by a single horizontal movement of 65 mm without twisting (long stroke). The frequency for both motion cycles is at a rate of approximately 45 cpm.

Using the selector switch, the 5 different standard testing conditions can be set. Additionally the operator can choose any desired numbers of cycles for both different types of motion cycles. The actual testing condition is shown in a LCD-display on the logic module. During a running test the current number of cycles and remaining time is also indicated in the display.

Features

- **Specimen preparation according to international standards:** The KFT-C is in accordance to the ASTM F 392-93 standard.
- **High reproducibility:** Exactly the same stress simulations for all specimens, guarantees a high reproducibility for the following tests.
- **Easy handling:** One selector switch for all testing conditions in accordance to the ASTM F 392-93.
- **Test stops automatically:** The running preconditioning stops after the set numbers of cycles had been reached.
- **Enhanced testing conditions:** Using customized numbers of cycles – from 1 up to 999999 – the specimen's preparation can be adapted to the customer's special needs.
- **Long lifetime:** High-quality manufacturing guarantees an extended longevity.
- **Health and safety:** Interlock and safety cover reduce the risk of injury during the specimen preparation.
- **Future:** The device meets the increasing QC requirements of the packaging industry

Specifications

Testing Standard	Reproducible simulation of mechanical stress to determine the flex durability on films in accordance to the ASTM F392-74 standard
Specimen dimension	DIN A4 / 210 mm x 295 mm
Compressive strain (long stroke)	155 mm
Compressive strain (short stroke)	80 mm
Angle of twist (long stroke)	440° (the first 90mm during the compressive strain)
Angle of twist (short stroke)	400° (during the complete 80mm compressive strain)
Testing conditions according the ASTM F392-74 standard	Condition A: long stroke / 2700 Cycles Condition B: long stroke / 900 Cycles Condition C: long stroke / 270 Cycles Condition D: long stroke / 20 Cycles Condition E: short stroke / 20 Cycles
Additional testing conditions	long stroke / 1 up to 999999 Cycles short stroke / 1 up to 999999 Cycles
Stroke frequency	approximately 45 per minute
Dimensions	69 x 27 x 30 cm
Weight	27.5 kg
Storage temperature	10°C - 40°C
Operating temperature	15°C - 35°C
Relative humidity	80% maximum, not condensing
Electrical connection	100 - 240 V/50 - 60 Hz, Current maximum 1,5 A primary / 24 V DC, maximum 1,88 A secondary
Compressed air supply	5 up to 10 bar

*On request, the number of cycles of the ASTM standard, choosable by the selector switch can be programmed to another customer specific value.

After the test, any failure of the barrier can be determined by a gas permeability test, using our GDP-C or GTT. Physical holes through the material can be detected by the colored-turpentine-pinhole test.



Gas Transmission Tester GTT