



CRIMP TESTER – VIBROTEX 400



The Vibrotex 400 was developed during this process as the reliable tool for this kind of crimp testing. More than two decades of experience matched with excellence in mechanics and latest processor technology resulted in this outstanding instrument which fulfills all desires in respect to flexible test procedures, easy and ergonomic handling and significant results.

Vibrotex 400 allows quick and easy determination of crimp properties like crimp removal or contraction and crimp recovery as well as crimp stability. Results are represented graphically as well as in terms of figures on the connected PC. Vibrotex 400 has been developed specifically for crimp testing, hence features a unique clamping and force measuring system assuring highest reliability of the results.

Scope

Determination of physical crimp properties of single staple fibers (crimp removal/contraction crimp recovery, crimp stability, etc.). Additionally, modulus numbers are given from which the shape of the crimp is estimated.

Method

The fiber is loaded into the instrument's electromagnetic clamps at a minimum pretension ($1 - 2 \text{ mg / dtex}$) by using paper weights. When starting a test the „tension vs. elongation“ curve is recorded while the crimp is carefully removed by extending the fiber up to a tension level which allows to extrapolate to the standard crimp removal tension of 1 cN / tex . This careful procedure ensures that crimp properties remain unaffected for the recovery measurement. Reaching this trip level the movement changes direction towards relaxation of the fiber – still the tension is recorded until reaching the initial tension level (pretension).

Technical specifications

- **Range of tension**
More than 1 cN/tex max. 20 cN, other ranges on request.
- **Gauge length**
10-33mm
- **Range of linear density**
0,1 to 99,99 dtex
- **Maximum extension**
40 mm (at 15 mm gauge length)
- **Calibration**
Through a built-in weight, which is actuated automatically
- **Resolution**
 - Tension: $\pm 0,001$ cN/tex
 - Length ± 5 μ m (microns)
- **Testing time**
Approx. 1 min/fiber
- **Testing speed**
0,1 - 50,0 mm/min
Separately adjustable for removal of crimp (2 stages) and recovery of crimp for optimal adaptation to different fiber properties and to reduce testing time.
- **Data output**
For on-line connection to IBM or compatible personal computer through a Lenzing interface. Crimp testing software is included
- **Power supply:**
110 to 240 V ~ 50/60 Hz 40 VA
- **Dimensions:**
 - Height: 550 mm
 - Width: 410 mm
 - Depth: 570 mm
- **Weight**
Approx. 31,5 kg