VIBROTEX 400

LENZING INSTRUMENTS

CRIMP TESTER

Crimp crucially influences the processing of staple fiber. But how can you test physical properties like crimp stability quickly in an objective way?

The answer to this question is given by Lenzing Instruments, the pioneers in crimp testing, with **VIBROTEX 400**. Already in the late 70‘ s; the Lenzing Research Centre started a special program in order to gain expert knowledge of physical crimp properties of staple fibers in production and further processing. **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.

FIBER TESTING

The Testing Company

VIBROTEX 400

CRIMP TESTER

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 with minimum pretension (1 - 2 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. After the trip level has been reached, the movement changes direction towards relaxation of the fiber - still the tension is recorded until reaching the initial tension level (pretension).

Results:
Knowing the different lengths in the initial, extended and recovered state allows enables a characterization of the crimp stability - conclusions can be drawn by comparison with previous tests and internal standards. Two modulus values, which describe the slope of the crimp curve, give feedback regarding shape and regularity of the crimp.

Tension range:
More than 1 cN/tex
max. 6 gram,
other ranges on request

Force range:
0 - 20 cN

Gauge length:
10 - 30 mm

Range of linear density:
0.1 - 60 dtex

Maximum extension:
35 mm at (20 mm initial length)

Calibration:
Through a built-in weight, which is actuated automatically

Resolution:
Tension: ± 0.001 cN/tex
Length: ± 5 µm

Testing time:
Approx. 1 min/fiber

Testing speed:
0.1 - 50 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:
Ethernet

Power supply:
230/115 VAC ± 10 %
50/60 Hz, 40 W

Dimensions:
Length: 550 mm
Width: 410 mm
Height: 570 mm
Weight: 31.5 kg

Included accessories:
1 set of paper weights, working pad and tweezers, puncher and hammer for self-made paper weights

Optionally available:
- Vibration isolation platform to prevent vibrations from being transmitted to the instrument
- OPC UA interface

Technical data and pictures are subject to change.

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