Bending Resistance/ Stiffness Tester

The Model 4171D/E Bending Resistance/Stiffness Tester, measures the force required to bend a wide variety of flat materials under controlled and repeatable conditions. This force may be equated to stiffness, resilience, flexibility or pliability, depending on the nature of the materials and purpose of the test.

The bending resistance/stiffness tester is designed to accommodate a diverse range of products allowing for up to fifteen possible sample sizes and an unlimited range of thicknesses up to 0.25 inches (6.35 mm). A complete set of accessory weights (5, 25, 50 and 200 grams) are included offering a great range of testing possibilities.

Incorporating digital technology, Model 4171D/E provides fast, accurate measurements. The point when the sample releases is automatically recorded by an optical encoder and displayed on a digital readout. Both the right and left direction is recorded and automatically computes and displays the average of left and right stiffness data.

Applications

Quality Control: Quality in many products depends on their degree of flexibility or stiffness. Packaging, playing cards, boxboard fabrics, containers and many plastic and metal parts are examples.

Medical Manufacturing: Adhesive bandages, laminated or coated materials can all be evaluated for material flexibility.

Chemical Treatments: Analyze the effect of treatments intended to stiffen or soften material including gums, lacquers, varnishes, latex, plastics and waterproofing compounds.

Textile Testing: Easily quantify the “handle” or “feel” of certain fabrics as well as test for the effect of laundering, filling, starching or coating. Minute weave difference as well as weights may also be evaluated.

Features:

- Push-button control converts scale readings automatically
- RS-232 computer output (Model 4171E)
- Model available for tubing and small dimension parts
- Industry Standards: TAPPI #T543 ASTM D-6125-97
**Physical Specifications**

**Dimensions:**
235 mm x 292.1 mm x 508 mm  
9.25 in W x 11.5” D x 20 H

**Sample Dimensions:**
Accommodates materials up to 2 in wide and 0.25 in thick

**Performance Data**

**Counter Weights:**
5, 25, 50 and 200 grams

**Test Speeds:**
Capacitor-type synchronous motor geared-down to 2 RPM

**Sample Arm Movement:**
75 degrees left or right of vertical

**Electrical Requirements:**
115 V @ 50 or 60 Hz (standard) Other electrical outputs are available

**Outputs:**
RS-232 serial port

**Result Reporting:**
Digital Encoder & Display

**Result Units:**
Gurley units, milligrams, grams centimeters and millinewton meters

*Specifications subject to change without notice.*