

Compression/Softness

Vantage^{NX} Tensile Tester

The Vantage^{NX} Compression/Softness Tester provides an objective measure of material softness. In order to do this MAP4 Software is used to evaluate a combination of factors including sample loft, thickness, compressibility and structural softness of sheet materials including paper, tissue, toweling, nonwovens and textiles.

Test Procedure

For the highest level of accuracy, the Vantage Compression/Softness Tester compresses test plates to a user-defined force value with no sample installed resulting in a curve that represents the deflection of the machine, load cell and fixture. This curve is subtracted from the test curves which removes all instrument deflection which could effect test results.

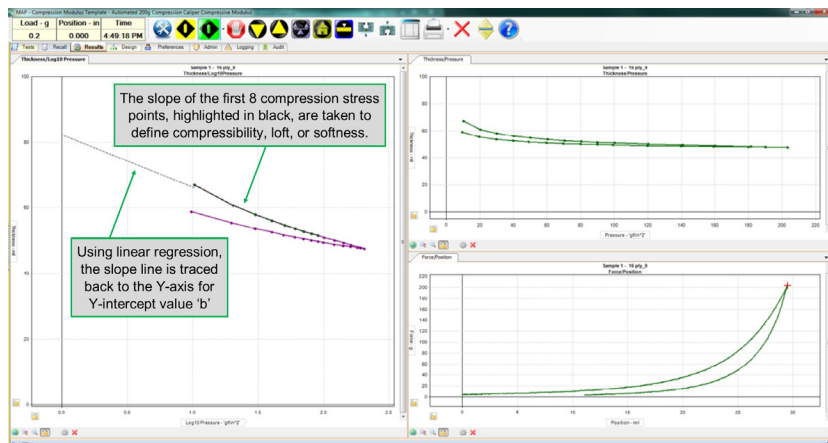
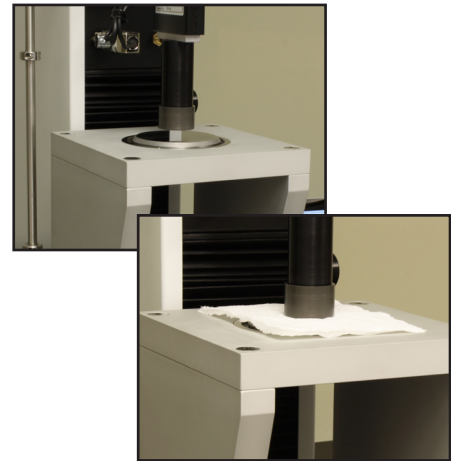
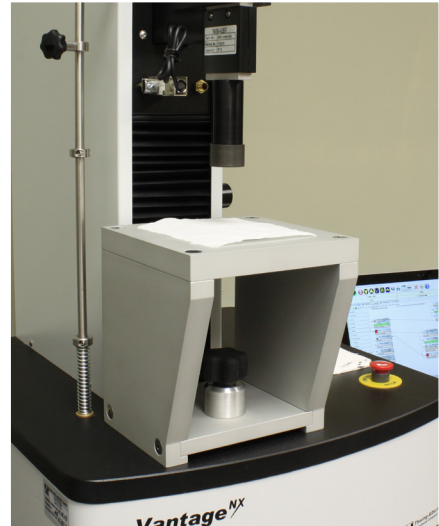
During a test, thickness values are captured until the maximum load is reached. Thickness values are captured in both the compression and recovery phase resulting in two unique curves. The distance between the two curves represents energy lost and is a function of several properties including loft, thickness, compression/recovery, and structural softness.

Machine Setup:

Load Cell: 50N Capacity shown

Pressure Foot: 1.0 IN² Standard (different sizes available)

Lower Anvil: Adjustable for parallelism requirements



FEATURES

- MAP4 Software
- Windows Compatible
- USB Interface to a PC
- Serial Load Cell Interface
- Movable Test Control Panel
- Push-button auto zero



PHYSICAL SPECIFICATIONS

Dimensions (W x D x H)

10 in x 16.5 in x 31.5 in
(254 mm x 419 mm x 800 mm)

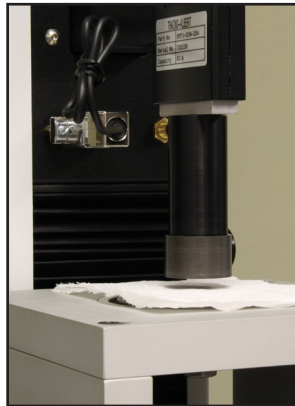
Weight

112 lb (51 kg)

Crosshead Travel

23 in (584 mm)

*Above Dimensions do not include PC



Compression Fixture with Pressure Foot & Anvil

Extremely robust, the adjustable anvil is mounted securely to the test frame. A pressure foot is also supplied which, in conjunction with a gage block, enables parallel adjustment of the anvil to 1 micron (0.00004inch / 0.001 mm).

PERFORMANCE DATA

Crosshead Guidance

Precision Ball Screw

Horizontal Clearance

Unlimited

Depth Clearance

89 mm (3.5 in)

Load Cells (N)

5, 10, 25, 50, 100, 250, 500 & 1000 N

Force Accuracy

10% to 100% Load Capacity:
±0.25% Measuring Value

Less than 10% Load Capacity:
±0.025% of Load Cell Capacity

Force Resolution

16 Bit A/D to 0.1 N

Position Resolution

0.6 µm (0.00002 inch)

System Control

PC-Based with USB interface

Operating System

Windows®

Crosshead Speed

1 to 1000 mm/min (0.05 to 40 in/min)

Speed Accuracy

±0.1%

Safety Features

Emergency stop button, upper & lower limit switches with over-travel protection and load cell overload protection

Power Requirements

110 VAC, 50/60 Hz
220/230 VAC, 50 Hz
240 VAC, 50 Hz

Operating/Storage Environment

Air Temperature

Operating: 10° to 50° C (50° to 122° F)
Storage: -25° to 70° C (-13° to 158° F)

Relative Humidity:

Operating: 10% to 85% (Non-Condensing)
Storage: 5% to 90% (Non-Condensing)

Specifications subject to change without notice.

