

Vantage^{NX} Tensile Tester

Universal Testing System

The **Vantage^{NX}** is a universal testing system designed to provide a powerful, efficient and customizable platform to meet both routine and diverse testing needs for a wide range of materials and applications. Available in both single and dual column configurations, the **Vantage^{NX}** can be built to meet your exact testing needs offering crosshead travel distances up to 1,220 mm (48 inches) and force capacities up to 5 kN (1,125 lbf). Coupled with MAP4 Software, an extensive offering of test grips and fixtures and specialized accessories, the Vantage can be tailored to meet industry test methods developed by **ASTM, ISO, TAPPI, DIN, NWSP and others**.

For unique testing applications, customized solutions can be developed to meet your specific testing needs.

The **Vantage^{NX}** is a proven, accurate and flexible system to measure tensile, elongation, compression, flexural strength, coefficient of friction, adhesion, peel, puncture, burst, stress/relaxation. Custom built to meet a broad range of industry applications including adhesives, biomaterials, composites, corrugated, foil, nonwovens, packaging materials, paper, paperboard, plastic, plastic films, rubber, tissue paper and textiles.



Vantage^{NX}



FEATURES

- Small footprint with a space-saving design
- Frame Capacities: 1 kN, 2 kN, 5 kN
- Single Column Frame - **Vantage^{NX}**
Dual Column Frame - **Vantage^{NX} Duo**
- 24-48" Travel Distances
- Interchangeable load cells from 5 N to 5 kN
- Automatic electronic force calibration
- Fully enclosed electronics
- Multi-function hand controller
- PC Controlled by MAP4 Software
- Single USB Connectivity or Bluetooth
- **Full Line of Grips and Fixtures Available:**
Pneumatic, Vise, Wedge, Compression, Peel, COF, Burst, Puncture, Bending, Environmental Chambers, Extensometers, and more.
- **Common Industry Applications:**
Adhesives, Biomaterials, Corrugated, Foil, Nonwovens, Packaging Materials, Paper, Paperboard, Plastic Films, Rubber, Tissue, Textiles, and more.
- Tensile, Peel, Compression, COF, Cycling, Tear, Burst, ZDT, Flex/Bend, Stress Relaxation, Thickness, Insertion/Extraction, and more.



Thwing-Albert
Instrument Company

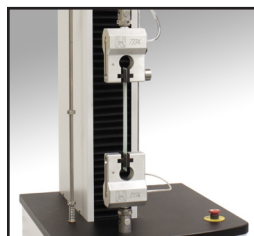


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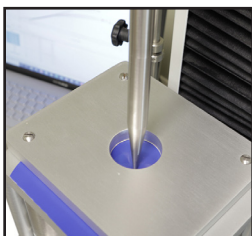
thwingalbert.com

Grips & Fixtures

The grips and fixtures used to secure the test specimen are an integral part of a test system. The use of inadequate fixtures will result in erroneous data and can compromise operator safety. We offer a wide range of grips and fixtures to meet the demands of continuous testing and ensure accurate and repeatable data.



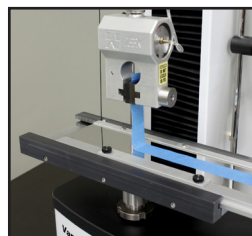
Tensile



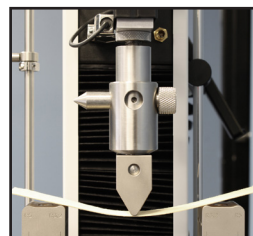
Puncture



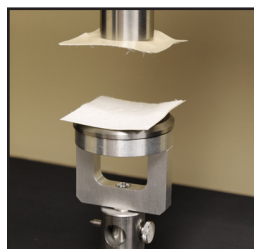
Compression



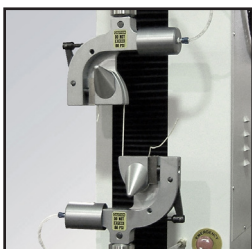
Peel



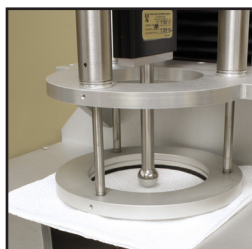
3 Point Bend



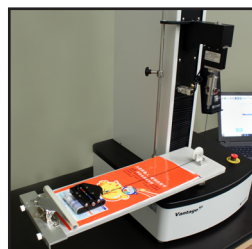
Z-Directional Force



Yarn/Cord Strength



Tissue Burst



COF



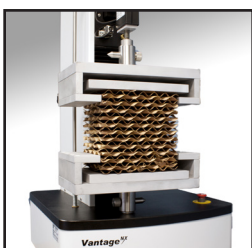
Rope

Specialty Fixtures

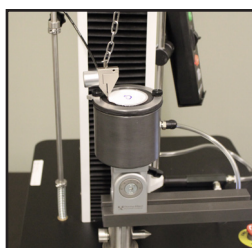
Along with a standard offering of test grips and fixtures, we offer customized solutions to accommodate specialized test applications.



Bag Handle Strength



Corrugated ZDT



Induction Seal Test



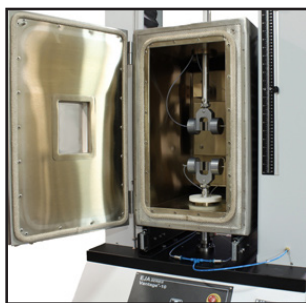
Opening Force



Blister Pack Seal

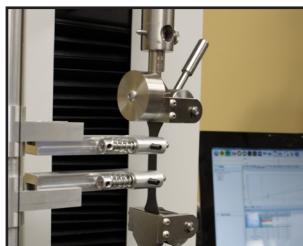
Environmental Chambers

We offer environmental chambers for use on both the single and dual column frames that provide provisions for testing at both elevated and sub-ambient temperatures. Chambers are provided with sliding brackets that allow the chamber to be positioned outside of the testing area when not in use.

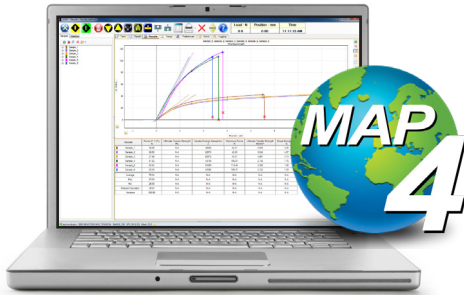


Extensometers & Deflectometers

A range of contacting extensometers are available for both high and low elongation materials. The extensometer provides a means to accurately measure the strain of a material independent of the crosshead movement of the materials tester.



MAP4 Materials Testing Software



MAP4 Software powers the **Vantage^{MX}** and provides unparalleled testing capabilities by providing the user with complete control of instrument. The software is provided with a comprehensive library of test methods developed in accordance with popular standards from ASTM, ISO, TAPPI, DIN and other international standard organizations.

For more advanced or custom applications, MAP4 provides the user with all the necessary tools to develop their own test methods to include complex motion control, algorithm creation and data presentation.

- Intuitive and customizable user interface
- Comprehensive library of test methods
- User Customizable test methods
- SQLite database capabilities to manage test data
- Automatic export to test results and data arrays
- Audit tracking database
- Simplified unit selection
- Customizable data display
- Multiple graphs
- Multi-lingual database
- Automatic saving of each test performed to maintain data integrity



System Requirements

- ✓ Windows® Operating System
- ✓ Microsoft .NET Framework 4.5
- ✓ Processor: 4 GHz or faster processor
- ✓ RAM: 8 GB
- ✓ Hard Disk Size: 500GB
- ✓ 2 USB Ports
- ✓ Video: 1920 x 1080 minimum

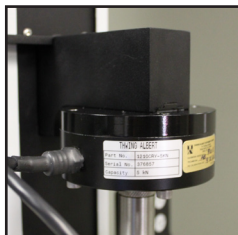
FEATURES

Load Cells

A variety of high precision load cells are available for compression and tensile testing needs. Available load cells range from 5 N (1.1 lbf) to 5 kN (1125 lbf).



▲ 50 N Load Cell Shown



▲ 5kN Load Cell Shown



Quick Control

Full-featured hand controller that provides the following functions:

- Crosshead positioning with variable speed control
- Upper and lower pneumatic grip control
- Initiating a test
- Stopping a Test
- Zeroing the load cell
- Zeroing the position
- Setting the Home Position

Performance & Specifications

MODEL >	1900-2000	1900-2001	1900-2002	1902-2000	1902-2001	1902-2002	1905-2000	1905-2001	1905-2002	1910-2000	1910-2001	1910-2002
Frame Style	Single Column			Single Column			Single Column			Dual Column		
Force Capacity ¹	1 kN (225 lbf)			2 kN (450 lbf)			5 kN (1125 lbf)			5 kN (1125 lbf)		
Crosshead Travel	610 mm (24 in)	915 mm (36 in)	1219 mm (48 in)	610 mm (24 in)	915 mm (36 in)	1219 mm (48 in)	508 mm (20 in)	813 mm (32 in)	1092 mm (43 in)	660 mm (26 in)	927 mm (36.75 in)	1181 mm (46.5 in)
Work Space Depth	89 mm (3.5 in)			89 mm (3.5 in)			89 mm (3.5 in)			Unlimited		
Work Space Width	Unlimited			Unlimited			Unlimited			343 mm (13.5 in)		
Height ²	1143 mm (45 in)	1448 mm (57 in)	1752 mm (69 in)	1143 mm (45 in)	1448 mm (57 in)	1752 mm (69 in)	1143 mm (45 in)	1448 mm (57 in)	1752 mm (69 in)	1156 mm (45.5 in)	1461 mm (57.5 in)	1765 mm (69.5 in)
Width ²	410 mm (16 in)			410 mm (16 in)			410 mm (16 in)			584 mm (23 in)		
Depth ²	432 mm (17 in)			432 mm (17 in)			432 mm (17 in)			482 mm (19 in)		
Weight ²	51 kg (112 lbs)	59 kg (130 lbs)	68 kg (150 lbs)	56 kg (124 lbs)	65 kg (143 lbs)	75 kg (165 lbs)	58 kg (128 lbs)	67 kg (148 lbs)	77 kg (170 lbs)	68 kg (150 lbs)	74 kg (164 lbs)	82 kg (181 lbs)

¹ Supported to full travel speed. ² Does not include grips, fixtures or PC

Force Accuracy

10% to 100% Load Cell Capacity:
± 0.25% of measured value

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

Force Resolution

15 bit ADC (0.003% of 1.15 x Load Cell Capacity)

Position Accuracy

±6.4 micron/25 mm (± 0.00025/1.0 inch)
or 0.025% of Distance

Position Resolution

1kN Frames: 0.17 µm (6.7 µin)
2kN Frames: 0.05 µm (2.1 µin)
5kN Frames: 0.11 µm (4.2 µin)

Sample Frequency

Selectable: 50, 60, or 250 samples/second

Crosshead Guidance

Precision Ball Screw

Crosshead Speed

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

Crosshead Speed Accuracy

0.1 to 30 in/min: 1% of Set Speed
<0.1 in/min: 2% of Set Speed
>30 in/min: 2% of Set Speed

Acceleration

0.127 to 127 mm/sec² (0.005 to 5 in/sec²)

Maximum Power Consumption

1kN & 2kN Frames: 72 VA
5kN Single Column Frames: 180 VA
5kN Dual Column Frames: 216 VA

Power Requirements

120-230 VAC ±10%, 50/60 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)

Safety Features

- Emergency Stop Button
- Upper and Lower Limit Switches with over-travel protection
- Electronic Grip Collision Detection
- Electronic Load Cell Overload Protection
- Mechanical Load Cell Overload Protection
 - 50-250 N: 10 x Load Cell Capacity
 - 500-2000 N: 5 x Load Cell Capacity
 - 5-10 kN: 1.5 x Load Cell Capacity

Specifications subject to change without notice.