



**Thwing-Albert  
Instrument Company**

**More Than a Century of Testing Solutions**

**IDM<sup>®</sup>**  
instruments

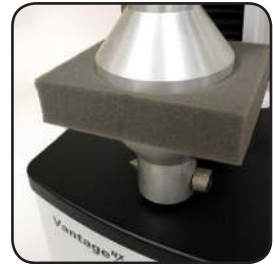
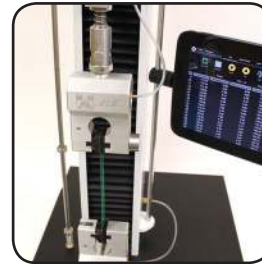
# Vantage<sup>NX</sup>

The **Vantage<sup>NX</sup>** is a revamped design for the EJA Vantage Family of universal testing machines. The sleek style will keep your lab looking sharp and allow for dynamic testing to meet most industry standards. Efficient placement of internal electronics improves ergonomics while maintaining a small footprint.

Thwing-Albert offers a wide range of grips, fixtures and accessories to outfit your universal materials tensile tester. These options enable the **Vantage<sup>NX</sup>** to meet many industry standards including ASTM, TAPPI, ISO, DIN and others.

## Features

- Ergonomic Frame
- Small Footprint 16" x 17"
- 1 kN & 2 kN Capacities
- 24-48" Travel
- Automatic Electronic Calibration
- One-Touch Auto Zero
- Electronic Air Switches
- Serial Load Cell Interface
- Powered by Your Choice:  
MAP-4 Windows Based Software with Adjustable Keypad  
(or) Touch Screen Tablet for Simplified Test Control
- Full Line of Grips and Fixtures Available:  
Pneumatic, Vise, Wedge, Compression, Peel, COF,  
Burst, Puncture, Bending, Extensometers, and more.
- Common Industry Applications:  
Adhesives, Biomaterials, Corrugated, Foil, Nonwovens,  
Packaging Materials, Paper, Paperboard, Plastic Films,  
Rubber, Tissue, Textiles
- Tensile, Peel, Compression, COF, Cycling,  
Tear, Burst, ZDT, Flex/Bend, Stress Relaxation,  
Thickness, Insertion/Extraction, and more.

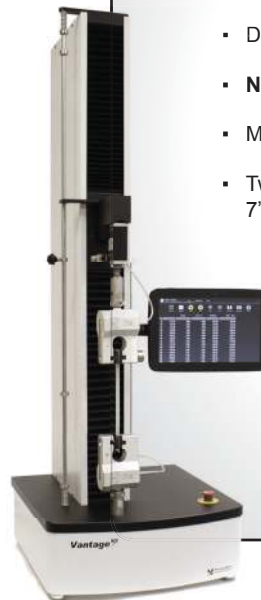


## Testing at Your Fingertips

Touch Screen Instrument Controller Option

You choose the option to control the **Vantage<sup>NX</sup>** using a touch screen tablet that is connected to a built-in Bluetooth system. Run basic test functions with the touch of your fingertips.

- Designed for **quick and easy testing**
- **NO PC needed** to run tests
- Minimal operator training required
- Two screen size options - you choose:  
7" or 10"
  - Ready to test:  
Tensile, Peel, Compression, COF
- Easily modify test parameters
- Automatic load cell recognition
- Bluetooth communication
- Network printer support



# G r i & P x t u r e s

A wide range of grips and fixtures enable the **Vantage<sup>NX</sup>** to be configured to most International Standards including ASTM, TAPPI, ISO & DIN. Manual & air-operated grips, compression plates, peel fixtures, coefficient of friction, burst, extensometer and puncture fixtures provide endless test possibilities.



**Pneumatic Grips** are ideal for testing sheet materials including films, tapes, paper, textiles, nonwovens and tissue. There are a wide range of capacities available. Pneumatic operation makes sample insertion faster and easier than manual grips and ensures a contact uniform pressure.

**Mechanical Vise Grips** are designed for low, medium and high capacity applications. The vise grips are ideal for general tensile strength testing of paper, plastics, foils, textiles and other sheet materials.



**Wedge Action Vise Grips** are ideal for tensile strength testing of rigid plastics and composites of flat or round samples. The jaw faces are spring loaded for effortless opening and closing of the grip.



**Drum/Rubber Grips** are uniquely designed to securely hold flat samples of rubber, plastics and general polymers.

**Yarn, Rope, Wire & Cord Grips** are specifically designed for testing thin, flexible materials.

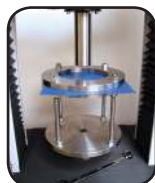
They ensure a secure hold to maximize test result accuracy and repeatability.



**Pincer Grips** are ideal for small forces, pull off tests, tear test of components, adhesive bonds, plastic weldings (paper, plastics, rubber) etc. Chain mounting available for flexible positioning.



Film Puncture  
ASTM D4833



Puncture  
ASTM D6241



Puncture  
ASTM D751



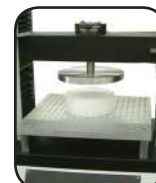
Tissue Burst  
TAPPI T570



Ball Burst  
ASTM D6797



Compression  
Platens



Foam  
Compression  
ASTM D3574



Film Blocking  
Fixture  
ASTM D3354



Coefficient of  
Friction



Finch Wet  
Strength Device



180° Peel



90° Peel



Loop Tack



3 Point Bend  
Fixture

Thwing-Albert has designed many fixtures for custom applications and we would be glad to create one for you. Our grips are ideal for the **Vantage<sup>NX</sup>** but **can be adapted to fit most universal materials testing machines.**

# MAP-4 Materials Testing Software



## Software Control.

The **Vantage<sup>MX</sup>** is controlled via a serial interface connection between the tester and any standard PC or laptop. A magnetic test control keypad also provides convenient access to basic test functions.

## MAP-4™ Software

This software equips the **Vantage<sup>MX</sup>** with Windows® 7 and 8 operating system compatibility. It incorporates powerful capabilities for defining complex motion control and enables unlimited test methods.

- View real-time graphical test results
- Multiple graphs
- Multiple database capabilities to organize results
- User customizable test methods
- Create custom presentation templates
- Share video and sound training
- Control your test result display
- Simplify analysis by tracking variables
- Group statistics for powerful analysis
- Easy unit conversion built-in
- Multi-lingual system capabilities
- **Includes a built-in** library of testing methods to comply with **ASTM, ISO, TAPPI, DIN** and other standards.
- **Simple customization** when your test parameters change, open existing methods, modify and save.
- **Advanced users** can have full control over the motion analysis and the presentation of data.



### System Requirements

- ✓ Operating System: Windows® XP, Vista, Windows 7 and Windows 8
- ✓ Processor: 2GHz or faster processor
- ✓ RAM: 4GB
- ✓ Hard Disk Size: 250GB
- ✓ 2 USB Ports
- ✓ Video: 1024 x 768 minimum



## 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 lbs) to 2 kN (450 lbs).

0 to 5 N (0.5 kg/1.1 lbs) Load Cell w/Certificate	[Part #771-6101]
0 to 10 N (1 kg/2.2 lbs) Load Cell w/Certificate	[Part #771-6102]
0 to 25 N (2.5 kg/5.6 lbs) Load Cell w/Certificate	[Part #771-6103]
0 to 50 N (5 kg/11 lbs) Load Cell w/Certificate	[Part # 771-6104]
0 to 100 N (10 kg/22 lbs) Load Cell w/Certificate	[Part # 771-6105]
0 to 250 N (25 kg/56 lbs) Load Cell w/Certificate	[Part # 771-6106]
0 to 500 N (50 kg/112 lbs) Load Cell w/Certificate	[Part # 771-6107]
0 to 1000 N (100 kg/225 lbs) Load Cell w/Certificate	[Part # 771-6108]
0 to 2000 N (200 kg/450 lbs) Load Cell w/Certificate	[Part # 771-6109]

## Physical Specifications

	<b>Vantage<sup>MX</sup>-1 (1900-2000)</b>	<b>Vantage<sup>MX</sup>-1 (1900-2001)</b>	<b>Vantage<sup>MX</sup>-1 (1900-2002)</b>	<b>Vantage<sup>MX</sup>-2 (1902-2000)</b>	<b>Vantage<sup>MX</sup>-2 (1902-2001)</b>	<b>Vantage<sup>MX</sup>-2 (1902-2002)</b>
<b>Width:</b>	410mm (16 in)	410mm (16 in)	410mm (16 in)	410mm (16 in)	410mm (16 in)	410mm (16 in)
<b>Depth:</b>	410mm (16 in)	410mm (16 in)	410mm (16 in)	410mm (16 in)	410mm (16 in)	410mm (16 in)
<b>Height:</b>	1143 mm (45 in)	1448 mm (57 in)	1752 mm (69 in)	1143 mm (45 in)	1448 mm (57 in)	1752 mm (69 in)
<b>Net Weight:</b>	51 kg (112 lbs)	59 kg (130 lbs)	68 kg (150 lbs)	51 kg (112 lbs)	59 kg (130 lbs)	68 kg (150 lbs)
<b>Crosshead Travel:</b>	610 mm (24 in)	915 mm (36 in)	1200 mm (48 in)	610 mm (24 in)	915 mm (36 in)	1200 mm (48 in)

\*Above dimensions do not include grips, fixtures & PC

## Performance Data

### Force Capacity

**Vantage<sup>MX</sup>-1** = 1 kN (225 lbs)

**Vantage<sup>MX</sup>-2** = 2 kN (450 lbs)

### Force Measurement

Interchangeable load cells available from  
5N (5.5 lbs) to 2kN (450 lbs)

### Force Accuracy

10% to 100% Load Capacity:  $\pm 0.25\%$  Measuring Value  
Less than 10% Load Capacity:  $\pm 0.025\%$  of Load Cell Capacity

### Force Resolution

16 Bit A/D to 0,001 N

### Position Resolution

0.6  $\mu\text{m}$  (0.00002 inch)

### Position Accuracy

$\pm 2.5 \mu\text{m}/25 \text{ mm}$  ( $\pm 0.0001 \text{ inch}/1.0 \text{ inch}$ )  
or 0.01% of Distance

### Crosshead Guidance

Precision Ball Screw

### Horizontal Clearance

Unlimited

### Depth Clearance

89 mm (3.5 in)

### PC-Based System Control with MAP-4 Software

USB interface

### Operating System

Windows<sup>®</sup> 98 / NT / 2000 / XP / Windows 7 / Windows 8

### Crosshead Speed

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



### 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.

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