



Thwing-Albert Instrument Company

More Than a Century of Testing Solutions

The **Vantage^{NX}** 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.

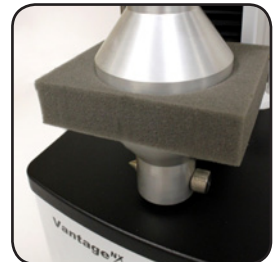
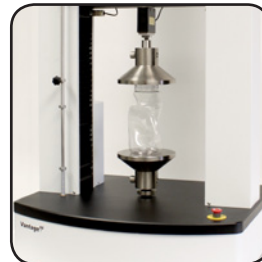
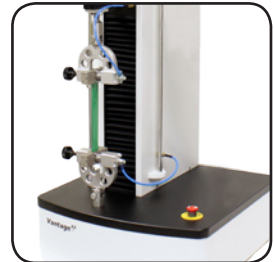
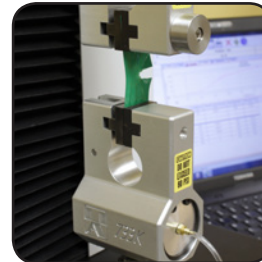
Thwing-Albert offers a wide range of grips, fixtures and accessories to outfit your universal materials tensile tester. These options enable the **Vantage^{NX}** to meet many industry standards including ASTM, TAPPI, ISO, DIN and others.

Features

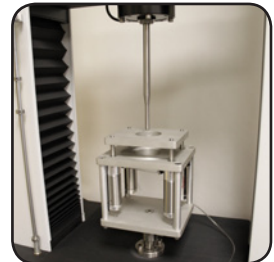
- Ergonomic Frame
- 1 kN, 2 kN, 5kN **Vantage^{NX}**
Small Footprint 16" x 17"
- 5kN **Vantage^{NX} Duo**
Dual Column 23" x 19" Footprint
- 24-48" Travel
- Automatic Electronic Calibration
- One-Touch Auto Zero
- Electronic Air Switches
- Serial Load Cell Interface
- Powered by Your Choice:
MAP4 Windows 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.



Vantage^{NX}



Universal Materials Testing Frame



A wide range of grips and fixtures enable the **Vantage^{NX}** 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.

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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.



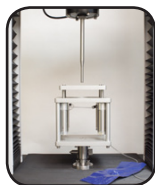
Drum/Rubber Grips are uniquely designed to securely hold flat samples of rubber, plastics and general polymers.

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

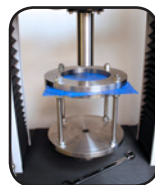
They ensure a secure hold to maximize test result accuracy and repeatability.



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



Lightweight
Grips



Tissue Burst
TAPPI T570



Ball Burst
ASTM D6797



Compression
Platens



Foam
Compression
ASTM D3574



Film Blocking
Fixture
ASTM D3354



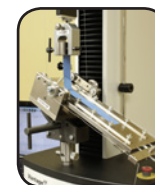
Coefficient of
Friction



Finch Wet
Strength Device



180° Peel



Variable Angle
Peel Fixture



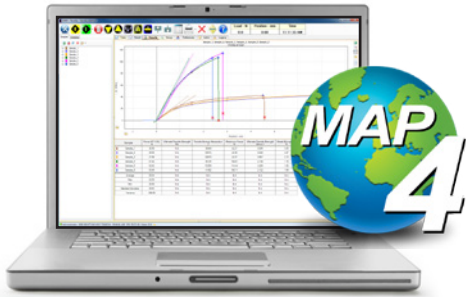
Z-Directional
Test



Vacuum
Opening Force

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^{NX}** but **can be adapted to fit most universal materials testing machines.**

MAP4 Materials Testing Software



Software Control.

The **Vantage^{MX}** 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.

MAP4™ Software

This software equips the **Vantage^{MX}** with Windows® 7, 8 and 10 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
- Audit tracking database
- User customizable test methods
- Create custom presentation templates
- 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® 7, 8, or 10
- ✓ Microsoft .NET Framework 4.5
- ✓ Processor: 2GHz or faster processor
- ✓ RAM: 4GB
- ✓ Hard Disk Size: 250GB
- ✓ 2 USB Ports
- ✓ Video: 1024 x 768 minimum



▲ 50 N Load Cell Shown



▲ 5kN Load Cell Shown

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).

0 to 5 N (0.5 kg/1.1 lbf) Load Cell w/Certificate	[Part #771-6101]
0 to 10 N (1 kg/2.2 lbf) Load Cell w/Certificate	[Part #771-6102]
0 to 25 N (2.5 kg/5.6 lbf) Load Cell w/Certificate	[Part #771-6103]
0 to 50 N (5 kg/11 lbf) Load Cell w/Certificate	[Part # 771-6104]
0 to 100 N (10 kg/22 lbf) Load Cell w/Certificate	[Part # 771-6105]
0 to 250 N (25 kg/56 lbf) Load Cell w/Certificate	[Part # 771-6106]
0 to 500 N (50 kg/112 lbf) Load Cell w/Certificate	[Part # 771-6107]
0 to 1000 N (100 kg/225 lbf) Load Cell w/Certificate	[Part # 771-6108]
0 to 2000 N (200 kg/450 lbf) Load Cell w/Certificate	[Part # 771-6109]
0 to 5000 N (500 kg/1125 lbf) Load Cell w/Certificate	[Part # 771-6114]

Physical Specifications

*Dimensions do not include grips, fixtures & PC

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

	Vantage^{MX}-5 (1905-2000)	Vantage^{MX}-5 (1905-2001)	Vantage^{MX}-5 (1905-2002)	Vantage^{MX} Duo (1910-2000)	Vantage^{MX} Duo (1910-2001)	Vantage^{MX} Duo (1910-2002)
Width:	410 mm (16 in)	410 mm (16 in)	410 mm (16 in)	584 mm (23 in)	584 mm (23 in)	584 mm (23 in)
Depth:	410 mm (16 in)	410 mm (16 in)	410 mm (16 in)	482 mm (19 in)	482 mm (19 in)	482 mm (19 in)
Height:	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)
Net Weight:	54 kg (120 lb)	61 kg (135 lb)	68 kg (150 lb)	68 kg (150 lb)	74 kg (164 lb)	82 kg (181 lb)
Crosshead Travel:	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)

Performance Data



Force Capacity

Vantage^{MX}-1 = 1 kN (225 lbf)
Vantage^{MX}-2 = 2 kN (450 lbf)
Vantage^{MX}-5 = 5 kN (1125 lbf)
Vantage^{MX} Duo = 5 kN (1125 lbf)

Force Measurement

Interchangeable load cells available from 5N (1.1 lbf) to 5kN (1125 lbf)

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 μm (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

Test Workspace

Single Column

Width: Unlimited
 Depth from Grip Adapter Center to Column: 89 mm (3.5 in)

Dual Column

Column Width: 343 mm (13.5 in)
 Width from Grip Adapter Center to Column: 171.5 mm (6.75 in)
 Depth: Unlimited

PC-Based System Control with MAP4 Software

USB interface

Operating System

Windows[®] 7 / Windows[®] 8 / Windows[®] 10

Computer Requires

Microsoft .NET Framework 4.5

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.

Thwing-Albert Instrument Company

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