Module Adhesion, Embossed Character & Peel Tester

Perform Four Tests with One Test Stand

Q-Card's motorized test stand with integrated digital force gauge allows for flexible, highly reliable testing and robust data capture for the following test standards listed below.

Peel Testing
- ISO/IEC 7810
- ISO/IEC 10373-1
- ANSI/INCITS 322
- Mastercard CQM

Micromodule Adhesion (pull test)
- ANSI/INCITS 322

Back of Card Spot Pressure (push test)
- Mastercard CQM

Embossed Character Retention - Pressure
- ISO/IEC 7810
- ISO/IEC 10373-1
- ANSI/INCITS 322
- Mastercard CQM

This test platform can be ordered in a variety of configurations.

Test package for performing all four tests includes a motorized test stand, digital force gauge, AC adapter/charger for 115VAC or 230VAC, data acquisition and exporting software, scoring fixture, glue fixture, ISO 9001 calibration, and the necessary attachments and cables to perform the above tests.

Configurations are also available for individual tests. See Ordering Details section of this document.

Module Adhesion Testing

Test package for module adhesion tester only includes a motorized test stand with integrated digital force gauge, AC adapter/charger for 115VAC or 230VAC, data acquisition and exporting software, ISO 9001 certification, module test fixture and necessary attachments and cables to perform the tests below.

Micromodule Adhesion (pull test)
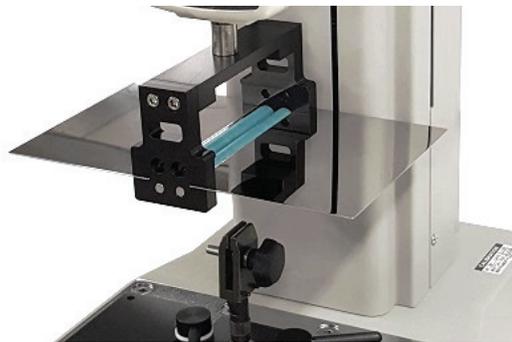- ANSI/INCITS 322

Back of Card Spot Pressure (push test)
- MasterCard CQM

Peel Testing

Test package for peel tester includes the motorized test stand with integrated digital force gauge, AC adapter/charger for 115VAC or 220VAC, data acquisition and exporting software, scoring fixture, ISO peel fixture, CQM angled fixture, stabilizing plates with rails, stabilizing plates for use with double-faced tape, base plate for thin film grip, ISO 9001 certification and the necessary cabling to perform the tests below.

Peel Strength
- ISO/IEC 7810
- ISO/IEC 10373-1
- ANSI/INCITS 322
- Mastercard CQM

Embossed Character Testing

Test package for embossed character tester only includes a motorized test stand with integrated digital force gauge, AC adapter/charger for 115VAC or 230VAC, data acquisition and exporting software, ISO 9001 calibration and the necessary attachments and cables to perform the tests below.

Embossed Character Retention
- ISO/IEC 7811
- ISO/IEC 10373-1
- ANSI/INCITS 322
- Mastercard CQM

Motorized Test Stand Features

Q-Card Motorized Test Stand

Q-Card's motorized test stand offers advanced force testing features such as digital speed control, timer control, and cycle counter. The stand incorporates an easy to read LCD screen onto the base. Users can control the intuitive program dial to set the mode, speed, test duration time, number of cycles and change other available test settings. With numerous customizable test settings, the test stand can be configured and used for a variety of tests.
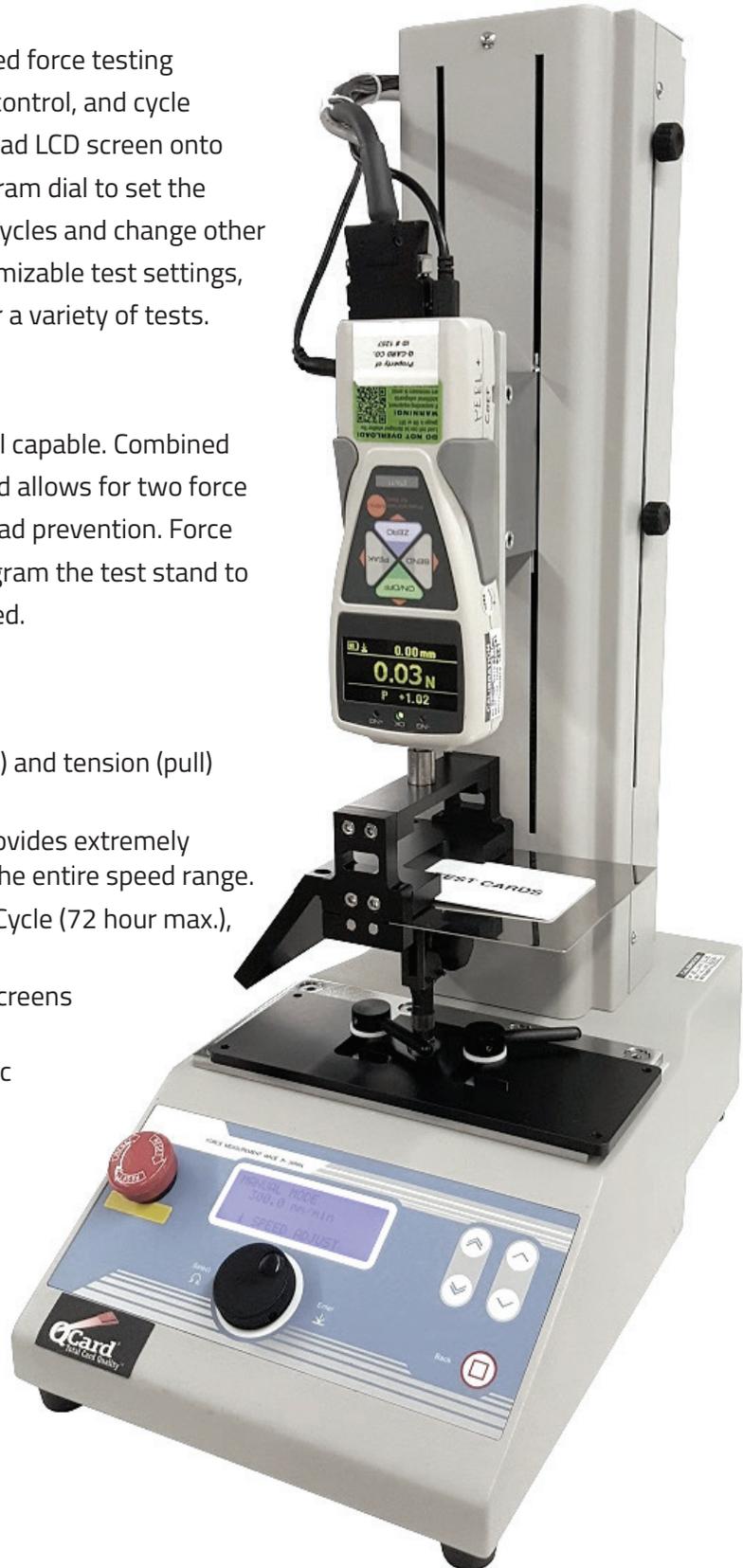
Force Control Capable

The motorized stand is also force control capable. Combined with Q-Card's force gauge, the test stand allows for two force controlled modes and conditional overload prevention. Force control of the stand allows users to program the test stand to move until a certain force value is reached.

Test Stand Features

- One stand for both compression (push) and tension (pull) tests
- High performance brushless motor provides extremely smooth and powerful operation over the entire speed range.
- Manual, Single Cycle, and Continuous Cycle (72 hour max.), Force Control modes
- Easy-to-use program dial and menu screens control mode, speed, timer and cycles
- Programmable timer up to 99 59.9 sec in 0.1 sec increments
- Conditional Overload Prevention with Force Control Cable
- Force Controlled Operation

Test Stand Specifications

- Capacity: 110 lbf
- Stroke: 9.4" (240mm)
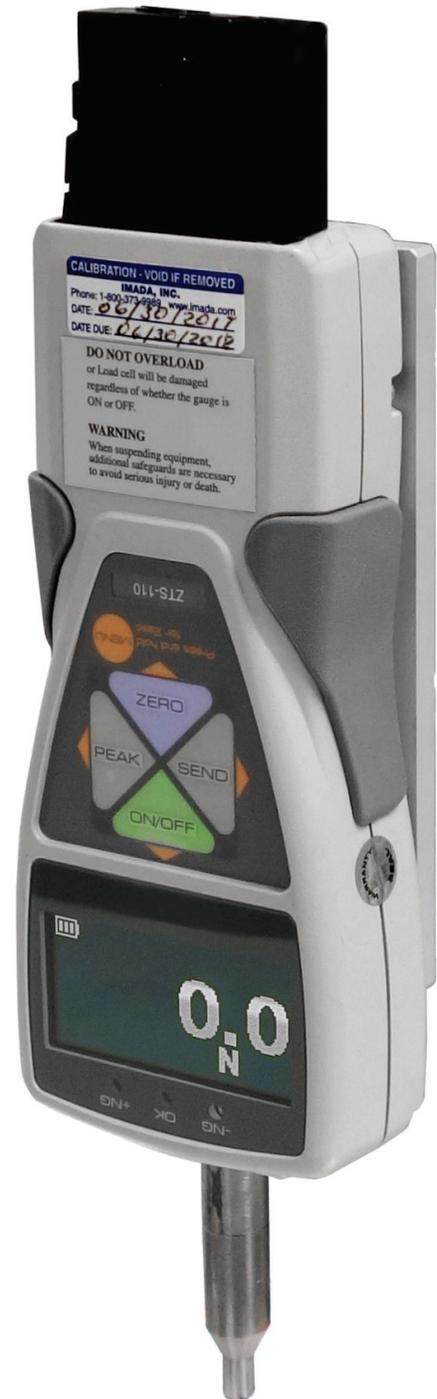- Power: 115/230 VAC

Digital Force Gauge

The digital force gauge features an intuitive user interface with easy-to-use menus. Users can select units, reverse the display, set high/low set points, and set all other functions using plain language menus. The vibrant luminescent display shows force value, unit, and peak, and can be configured with additional user selectable data including memory data, +NG count, high/low set points, first and second peaks, and more.

Color-coded LED indicators alert the user to go/no-go conditions. Orange lights for less than low set point, green lights between high and low, and red for over the high. Process and transmit 2,000 actual data per second, not just the peak from a high sampling rate.

The gauge, through its USB connection allows users to download data from the gauge memory or capture a continuous stream of data. Users can zero the gauge or capture data while at the computer. All gauge programming can be set and saved from the software. Data Acquisition Software is designed to capture up to 2,000 data per second. No competitors' gauges come close to this speed! See testing software section for complete details.

Force Gauge Standard Features

- Accuracy: ±0.2% F.S., ±1 LSD

- Selectable Units: lbf(ozf), kgf(gf) or Newtons

- Luminescent display is highly visible in dark locations

- Multi-language program menus: English, Spanish, French, Chinese, German, Italian, Korean, Japanese

- Processes and transmits 2,000 data/sec.

- Color-coded LED indicators and output signal for go/no-go testing

- Ergonomic design with non-slip grips, heavy duty metal construction

- Capacity up to 1,100 lbs (push/pull)

- Overload capacity 200% F.S.

- USB (virtual COM port), RS-232C, Digimatic and Analog outputs

- 1,000 data memory for recall or download

- External switch display hold and clear

- Internal Ni-MH batteries or AC adapter

- Real time and peak mode (selectable)

- Overload alarm and output signal

Testing Software Features

Testing Software Capabilities

Q-Card's Force Recorder data analysis software provides for a robust interface with the integrated force gauge. The software enables users to program, save or import saved gauge programming directly from the software.

The Force Recorder software captures and processes 2,000 data per second (not just the peak) and generates force versus time profile graphs with statistics. Users can zoom into any part of the graph to see individual data points at intervals of 0.5 mS. Software includes mouse over data points to display the force value.
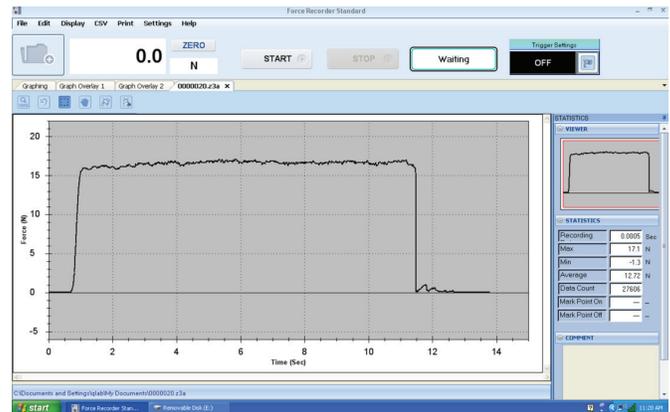
Further analysis can be done on the entire range or by selecting part of the graph to detect the first peak or generate statistics within that time interval. Compare and align multiple graphs. Save graphs or export data to CSV format.

Software Features at a Glance

- Data transfer rate: 2000 data/sec
- Maximum Data Points: 7.2 million
- Program Gauge Functions
- Graph Overlay Function
- Trigger Function
- Point Marking
- Border Line Function
- Graph Editing
- Graph Navigation
- Statistics Output
- Comment Function
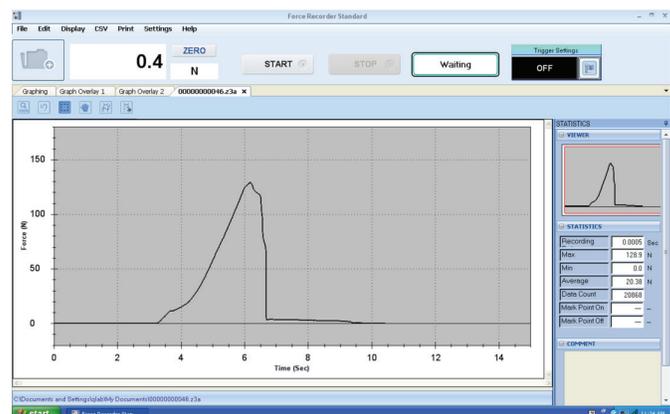- Note Function
- Print

Software Platform Requirements

- OS: Windows XP / Vista / 7 / 8
- NOTE: Windows 10 currently not supported
- CPU: Pentium 4 (1GHz or higher) or later
- RAM: 2GB or greater
- Hard Disk: 10GB minimum (dependent on test variables and duration)
- Display Resolution: 1024 x 768 or greater
- Port: USB 1.1 / 2.0 (Not compatible with USB 3.0)
- Cable: Standard USB A to Mini-B cable (comes with gauge)
- Windows 7 includes .NET Framework 4.0

Sample Peel Test Graph

Sample Module Adhesion Graph

Sample Backside Spot Pressure Graph

Additional Accessories

Router Tool for Back of Card Spot Pressure Testing (for embedded chip location)

Gluing Fixture to prepare cards for module adhesion test (note: one fixture is included with module adhesion tester)
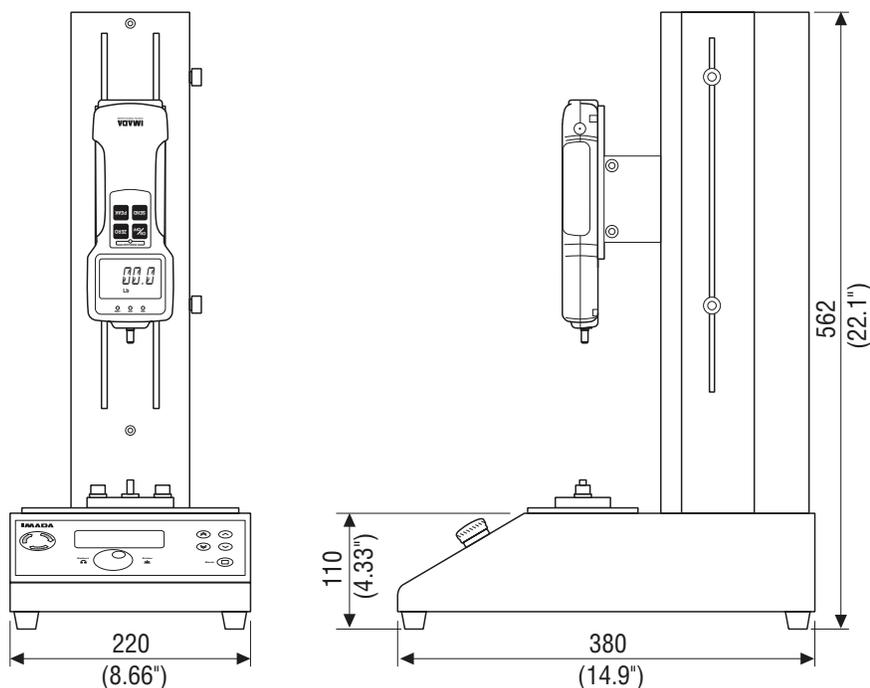

Standard Horizontal and Vertical scoring fixtures are available for peel strength test (note: standard horizontal fixture is included with peel tester)

Ordering Details

Part #	Description
907018-110	Peel Tester (110 VAC)
907018-220	Peel Tester (220 VAC)
907026-110	Peel/Module Adhesion/Back of Card Spot (110 VAC)
907026-220	Peel/Module Adhesion/Back of Card Spot (220 VAC)
907017-110	Peel/Module Adhesion/Embossed Character Retention (110 VAC)
907017-220	Peel/Module Adhesion/Embossed Character Retention (220 VAC)
906923-110	Module Adhesion/Back of Card Spot Pressure (110 VAC)
906923-220	Module Adhesion/Back of Card Spot Pressure (220 VAC)
906926-110	Embossed Character (110 VAC)
906926-220	Embossed Character (220 VAC)

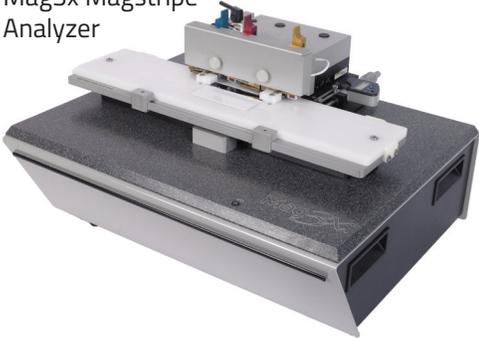| Accessories	
906987	ISO Edge Peel Test Fixture Upgrade with CQM Angled Bracket
906987-120	Double Sided Tape
906987-130	Filament Tape
906595	Card Scoring Fixture for Peel Strength Test
906820	Vertical Card Scoring Fixture for CQM Peel Strength Test
906680	Gluing Fixture and Pull Ends for Micromodule Adhesion Test
906844	Router Tool for Back of Card Spot (110 VAC)
906844-220	Router Tool for Back of Card Spot (220 VAC)

Dimensions

The Equipment The Experts Use

Test tools for quality labs, production and R&D.

Use the equipment the experts use. Q-Card has been designing, manufacturing and supporting highly accurate test equipment for laboratory, R&D and production environments since 1988. Our offering of test equipment and test fixtures are used in our own laboratory, so you can be confident that we've designed them for durability, reliability and accuracy.

Our complete line of test equipment includes peel testers, bend and torsion, magnetic stripe analyzers, three wheel testers and a variety of ISO, ANSI and Mastercard CQM test fixtures. Q-Card is also an authorized reseller for KEOLABS test tools for EMV and NFC, including contactless spy, PICC and PCD emulation, automation tools and an EMV approved contactless test bench.

Mag3x Magstripe Analyzer

Magstripe Verification Gauge

Dynamic Bend & Torsion Card Tester

Climatic Immunity Test Fixture

ProxiSPY Contactless Spy

Card Wrapping Fixture

Opacity Tester

QCard™
The Lab Authority™

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Q-Card is

ISO 9001 Compliant

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