

# Module Adhesion, Embossed Character & Peel Tester

## Perform Four Tests with One Test Stand

BQ Technologies' motorized test stand with integrated digital force gauge allows for flexible, highly reliable testing and robust data capture strict testing standards.

PEEL TESTING

**75%**

*faster with  
automated  
graphing  
and reports*

## Automate Every Test. Trust Every Result.

Included with the BQ Peel Tester, the software automates calculations, data analysis, graphing, and reporting to turn force measurements into clear results.



**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 these tests.

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

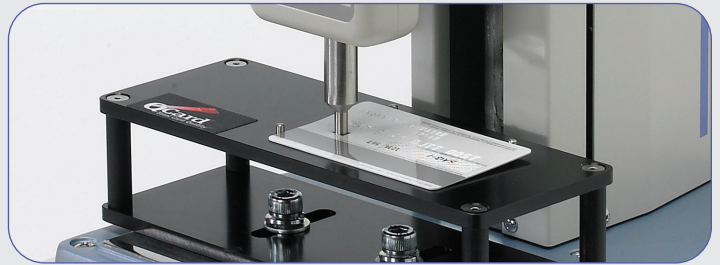
# Module Adhesion Testing

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)**

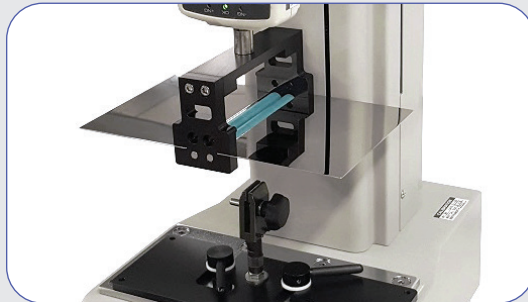
- Mastercard CQM

# 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

## BQ Technologies Motorized Test Stand

BQ Technologies' 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 BQ Technologies' 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 min 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: 115/230VAC



# Digital Force Gauge Features

## 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:  $\pm 0.2\%$  F.S.,  $\pm 1$  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

BQ Technologies' 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.

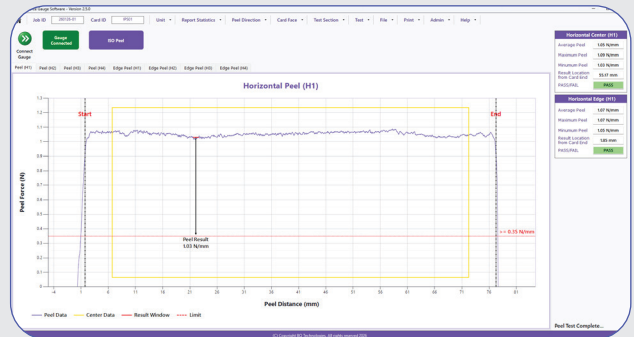
Further analysis can be done on the entire range or by selecting part of the graph to detect the first peak or generate statistics within that time interval. Compare and align multiple graphs. Save graphs or export data to CSV format.

## Software Features at a Glance

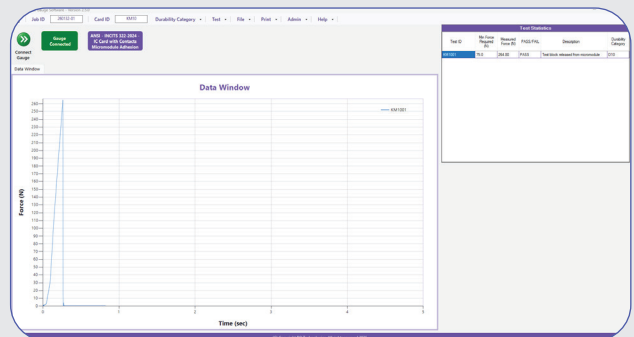
- Data Transfer Rate: 2,000 data/sec
- Maximum Data Points: 7.2 million
- Program Gauge Functions
- Graph Overlay Function
- Trigger Function
- Point Marking
- Border Line Function
- Graph Editing
- Graph Navigation
- Statistics Output
- Comment Function
- Note Function
- Print

## Software Platform Requirements

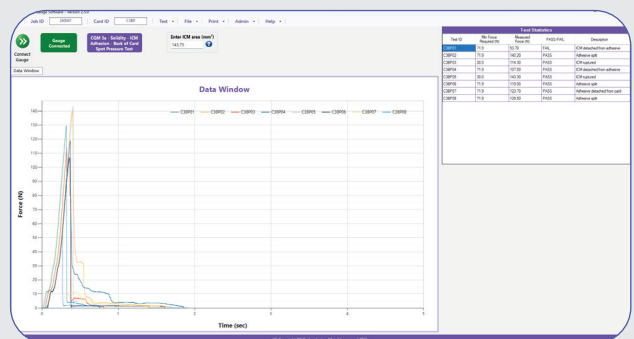
- OS: Windows XP / Vista / 7 / 8
- NOTE: Windows 10 currently not supported
- CPU: Pentium 4 (1GHz or higher) or later
- RAM: 2GB or greater
- Hard Disk: 10GB minimum (dependent on test variables and duration)
- Display Resolution: 1024 x 768 or greater
- Port: USB 1.1 / 2.0 (Not compatible with USB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



Sample Peel Test Graph

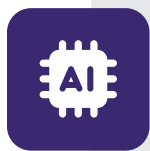


Sample Module Adhesion Graph



Sample Backside Spot Pressure Graph

## Features That Move The Work Forward



### Automate The Workflow

- Calculations and data analysis
- Graphing and quick statistics
- PDF and Word test reports
- JSON and XLSX raw-data export



### Guide The Operator

- User-friendly, cost-effective interface
- Clear graphs with values and labels
- Interactive toolbar and easy navigation
- Step-by-step manual and in-process prompts



### Support Key Tests

- ISO Peel Testing
- CQM Peel Testing
- Module Adhesion Testing
- Standalone Force Gauge testing



### Improve The Outcome

- Accelerate peel and other test workflows
- Reduce manual error and uncertainty
- Improve accuracy and repeatability
- Customize report data items

## Ordering Details

### Equipment

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

### Accessories

| Part #     | Description                                                |
|------------|------------------------------------------------------------|
| 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 (110VAC)                 |
| 906844-220 | Router Tool for Back of Card Spot (220VAC)                 |

# Additional Accessories



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



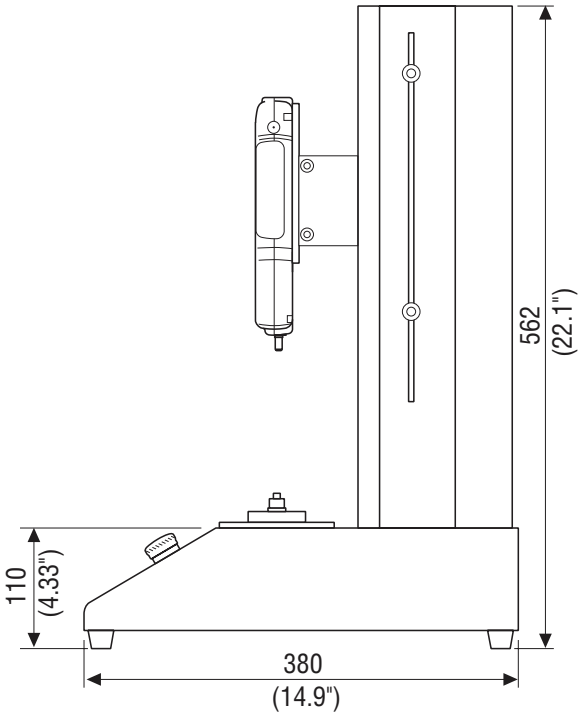
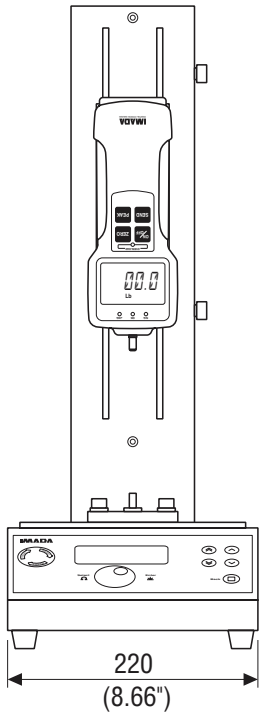
Gluing Fixture to prepare cards for module  
adhesion test (note: one fixture is included with  
module adhesion tester)



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



# Dimensions



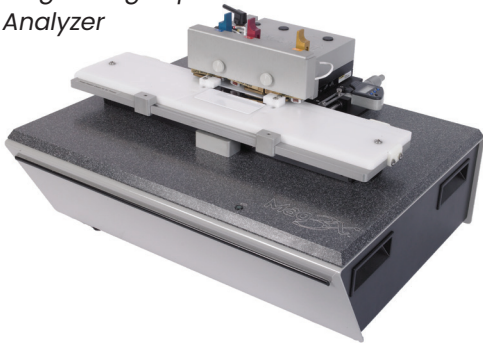
# The Equipment The Experts Use

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

Use the equipment the experts use. BQ Technologies 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. BQ Technologies 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



**BQ** TECHNOLOGIES

301 Reagan Street  
Sunbury, PA 17801 USA

570-286-5611  
BQTech.us

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