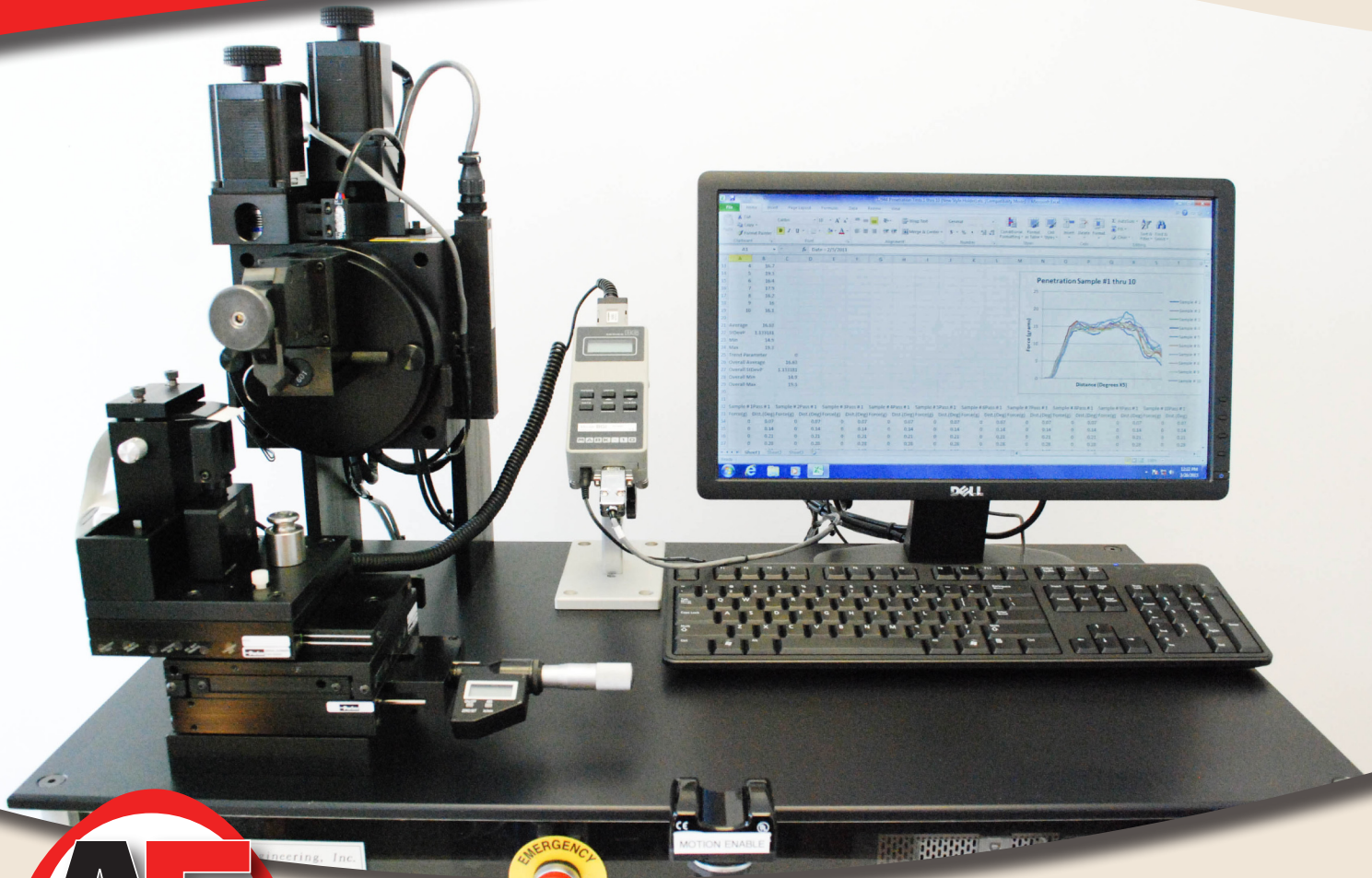


Experts in Medical Needle
Test Systems
Since 1982



**Acculine
ENGINEERING**

Quality • Reliability • Trust

ACCULINE ENGINEERING, INC.

Suture/Hypodermic/Cannula needle test systems for curved and straight needles



ASTM International Compliant
Test Methods



Model AE3-BM

Suture/Hypodermic/Cannula Needle Tester

The Model AE3-BM needle test system is a turn key machine with custom hardware and user-friendly software provided for testing sharpness and bend moment strength of both straight or curved suture/hypodermic/ cannula and other medical needles. With our supplied quick change tooling, the operator can change over from one type of test to another in just a few minutes.

When a sharpness (penetration) test is performed, the software calculates the force required to penetrate a membrane and writes that value into spreadsheet form. The raw values for the complete test are also stored in the spreadsheet for each successful and complete test. This gives the operator the ability to recreate a load vs. angle plot for any needle tested. The data that the software puts into the spreadsheet is then organized by needle and test numbers. When all of the test are complete for a given batch of needles, the software then automatically performs some statistical analysis on the tests and saves that information on the spreadsheet.

When a strength (bend moment) test is performed, the software calculates the slope of the load vs. the angle and uses this information to determine the yield point of the needle being tested. The software then calculates the yield load, yield moment, ultimate load, and the ultimate moment then writes these values into a spreadsheet.

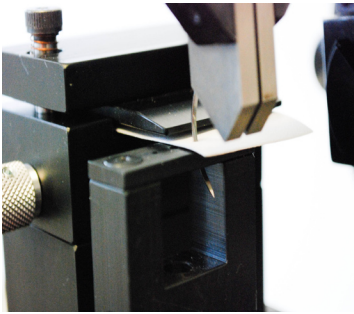
The Software

The Model AE3-BM has custom software that controls the motion of all powered vertical and rotary stages while also collecting data from the load cell during needle testing. The software is user friendly, with little training required to perform accurate, reliable, and repeatable tests.

The Software is designed to perform the following tests:

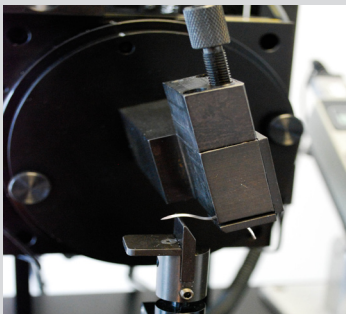
- Strength (bend moment)
- Sharpness (penetration)

The Testing Process



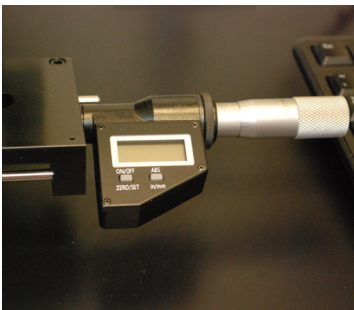
SHARPNESS TESTING (PENETRATION)

It is generally accepted that needle sharpness is a key feature of any well designed medical needle. Sharper needles provide patients with more comfortable injections, thereby providing both patient and clinician with a more satisfying experience.



STRENGTH TESTING (BEND MOMENT)

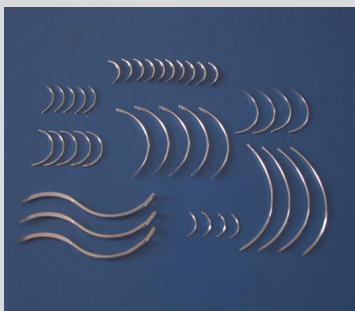
A good measure of needle strength is the force required to bend the needle around a consistent radius. With our Model AE-3BM, you are able to perform this testing accurately. The information is collected from the mounted load cell. The operator is then able to measure the bend moment via the digital micrometer and then enter the value into our pre-loaded proprietary software. All of this ensures accurate and consistent test results.



ACCURACY

The Model AE3-BM is designed for ease of use, maximum accuracy, and consistency. Precision needle alignment is critical in order to achieve accurate and repeatable results. The Model AE3-BM has many features that allow the operator to easily and precisely align the precision tooling and each needle to be tested.

Curved suture needles ranging in size from 3/8x9mm-60mm & 1/2x12mm-70mm



Cannula/Hypodermic needles ranging in size from 31g-14g



STRAIGHT & CURVED NEEDLE ACCURACY

No matter the type of needle, whether it be a straight hypodermic or a curved suture needle, Acculine Engineering's AE3-BM is capable of performing reliable and accurate tests to meet ASTM and ISO Standards. *Needles outside of the standard 41 needle size range can be accommodated with special tooling*

MODEL AE3 BM



ACCULINE ENGINEERING, INC. Has a long history of building both reliable and high quality medical needle test systems. Many industry leaders have come to know and rely upon Acculine Engineering's 25 plus years of experience in needle testing.

Since 1982, Acculine Engineering has assembled a staff of talented engineers and machinists who are committed to excellence and customer satisfaction every step of the way. Acculine Engineering gives every order undivided attention to ensure that every product performs to its design standard.

Just a few of the companies that have trusted and relied upon Acculine Engineering's machines and expertise:

B | BRAUN
SHARING EXPERTISE

ETHICON
a Johnson & Johnson company

tyco
Healthcare

Please contact us for more information and to receive a specialized quote for a specific model to meet your testing requirements.



International Standards Utilized



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