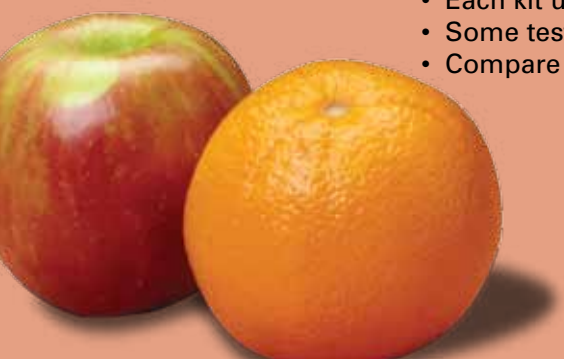
TEST METHODS DIFFER, OUTCOMES DON'T…

ERIEZ® XTREME® RARE EARTH MAGNETS ARE THE STRONGEST

Different Pull Test "pieces" yield different results. Using the same measurement pieces across tests will ensure accurate, comparable results.

- Pull Tests measure the Holding Force of permanent magnets
- Most manufacturers offer their own Pull Test Kits
- Each kit uses different test pieces to measure pull strength
- Some test pieces are affected by the magnet's magnetic field
- Compare test results ONLY when using the same test piece



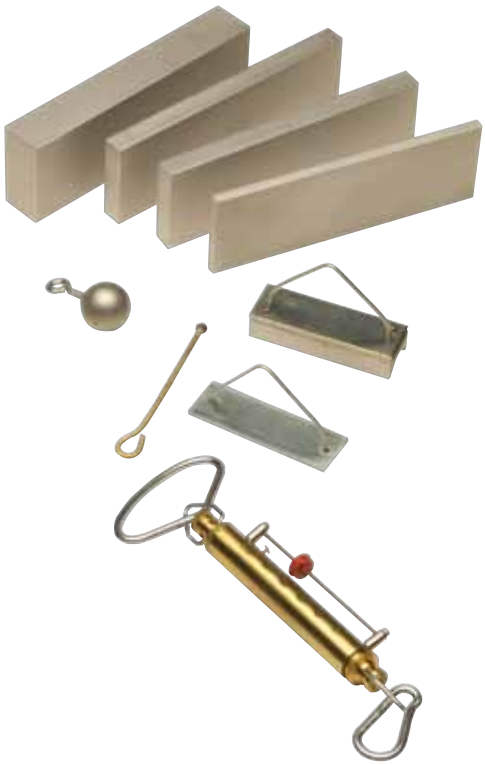
ERIEZ®

MAGNETIC PULL TEST COMPARISO

Pull Testing Permanent Magnets

Most equipment manufacturers offer similar tools to measure the Pull Strength of a magnet. Testing the strength of permanent magnets in the field is an excellent quality control practice as they may degrade over time in certain environments. Performing simple "Pull Tests" on magnetic plates, grates, traps and tubes ensures you're capturing and removing unwanted ferrous material from your process.

These tests are also used to compare the wide range of industrial magnets available on the market. The strength of a permanent magnet is dependent on multiple factors including the magnet material (ceramic or rare earth), circuit design (how the material is used and positioned) and its assembly.



Results Vary by Test Piece

Accurately evaluating the strength of a magnet assembly requires a Pull Test Kit. Tests are relatively quick and easy to perform. Generally, Pull Test Kits contain a scale and a series of mild steel test spheres, blocks and aluminum spacers. The "test pieces" (spheres and blocks) differ by manufacturer and will yield very different results when using the same scale. Because measurement pieces vary, it is VITAL that all comparative tests be performed using the SAME Pull Test piece.

The diagrams below show how the test results of a 1/4-inch, mild steel sphere will differ by test pieces. In figure A, the 1/4-inch test sphere is suspended by a 3-inch rod of non-magnetic 316L stainless steel material. By contrast, figure B uses a similar 1/4-inch sphere attached to a magnetic stainless steel ring and a magnetic scale hook. Since the ring and hook are "magnetic" and positioned within the tube's magnetic field, it requires greater pull force than the lone single sphere suspended from the scale. (See diagram to the right)

Using Different Test Pieces..
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Test Piece "A"*

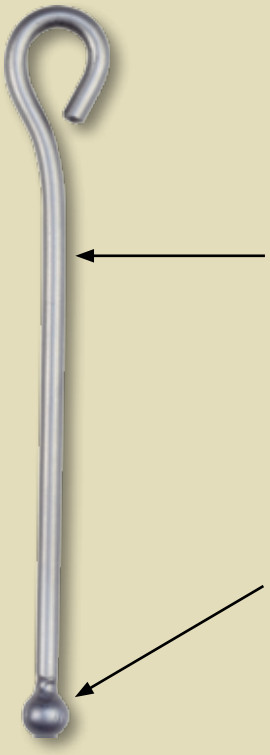
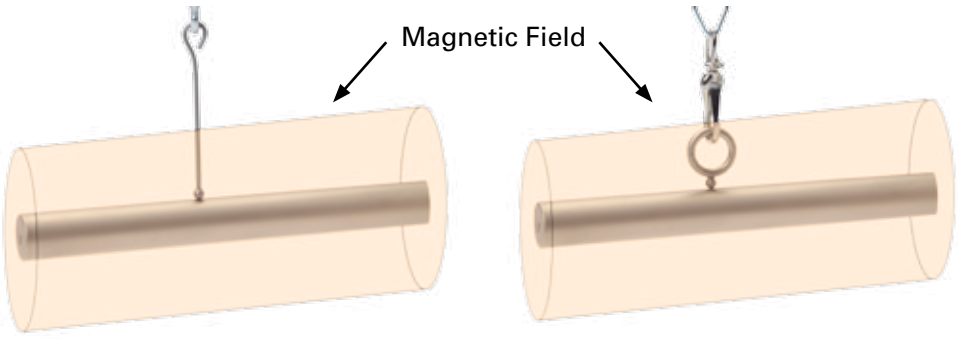


Figure A

* Eriez Test Piece

ON

Test Pieces Affected by Magnetic Field



Test Piece "A"

Test Piece "B"

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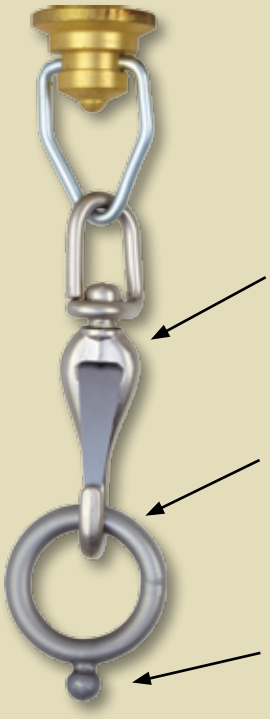
nparing apples to oranges

Test Piece "B"



Magnetic Scale Hook Attachment

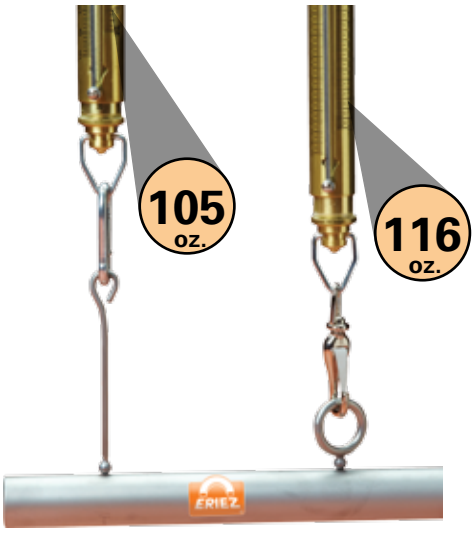
Magnetic Stainless Steel Ring

1/4" Diameter Mild Steel Test Sphere

Figure B

Apples to Oranges

Different test pieces, same magnet



Results vary by up to 12%

Oranges to Oranges

Same test pieces, different magnets

Eriez magnets are the strongest!

PENN STATE REPORT

Eriez' Magnets offer Superior Strength

In head-to-head comparisons, Eriez' Xtreme® Rare Earth magnetic separators consistently score higher than other magnetic assemblies. For complete results, download "Performance Testing of Rare Earth Magnetic Tube Circuits" at Eriez.com.

"Performing Testing of Rare Earth Magnetic Tube Circuits"

Download @ Eriez.com

Note: Some safety warning labels or guarding may have been removed before photographing this equipment.

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