

Max Force

One method of determining magnet strength is through pull strength, or a pull test. Pull strength is a reliable method of measuring the maximum strength, or holding power, that a magnet has before it is separated from ferrous material. It is measured in pounds or kilograms. Magnetic assemblies are measured by the pounds of pull in a vertical test. Obviously, the higher the pull strength, the greater the magnet strength. The Max Force rating is the amount of force, measured in pounds before the magnet breaks away from the metal surface.

We rate our magnetic assemblies by pounds of pull in a vertical test. Each magnet's entire magnetic surface is tested against a .5 inch thick, ground steel plate. Beginning with a clean magnetic surface and a clean steel surface, the magnetic assembly to be tested is attached to the steel plate. A hook with the measuring device is attached to the magnet and it slowly pulls the magnet upward until enough force to break the magnet away from the plate has been created. The measuring device records the pounds pull. By repeating this test multiple times, we can establish an accurate reading and pounds pull rating for the magnetic assembly.

Pull tests are widely used across the industry and it's common for magnetic assemblies to have a rating of pounds pull in order to provide users with accurate insight of the product's capability.

However, it is important to note that pull strength will vary with:

- Differing thicknesses of steel (particularly less than .5 inch)
- Types of steel composition
- Coatings on the steel, including paint or grease
- Uneven surface area, such as rust

Application Considerations

Choosing a magnetic assembly might be as straightforward as selecting the right pounds pull for your application. Considering things like how many poles are needed; if there will be air gaps at any point on contact; how hot or wet the environment is; and the storage area can all affect the type of magnet best suited to a project.

We always recommend consulting with our magnetic solution specialists to help select the correct magnet for the application.



Look for
Max Force
on our
packaging!

