NEODYMIUM MAGNET

A neodymium magnet (Also known as NdFeB, NIB or Neo magnet), the most widely used type of rare-earth magnet, is a permanent magnet made from an alloy of neodymium, iron and boron to form the Nd2Fe14B tetragonal crystalline structure. Developed in 1982 by General Motors and Sumitomo Special Metals, neodymium magnets are the strongest type of permanent magnet commercially available. They have replaced other types of magnet in the many applications in modern products that require strong permanent magnets, such as motors in cordless tools, hard disk drives and magnetic fasteners**.**

Neodymium Magnet Safety

The neodymium magnets we sell are extremely strong, and must be handled with care to avoid personal injury and damage to the magnets. Fingers and other body parts can get severely pinched between two attracting magnets. Neodymium magnets are brittle, and can peel, crack or shatter if allowed to slam together. Eye protection should be worn when handling these magnets, because shattering magnets can launch pieces at great speeds.

The strong magnetic fields of neodymium magnets can also damage magnetic media such as floppy disks, credit cards, magnetic I.D. cards, cassette tapes, video tapes or other such devices. They can also damage televisions, VCRs, computer monitors and other CRT displays. Never place neodymium magnets near electronic appliances.

Children should not be allowed to handle neodymium magnets as they can be dangerous. Small magnets pose a choking hazard and should never be swallowed or inserted into any part of the body.

Never allow neodymium magnets near a person with a pacemaker or similar medical aid. The strong magnetic fields of the magnet can affect the operation of such devices.

Neodymium magnets are brittle and prone to chipping and cracking. They do not take kindly to machining.

Neodymium magnets will lose their magnetic properties if heated above 175°F (80°C).

Neodymium magnets should never be burned, as burning them will create toxic fumes.

Like any tool or toy, neodymium magnets can be fun and useful, but must always be treated with care.

Grades of Neodymium Magnet

N35, N38, N42, N52...what does it all mean? Neodymium magnets are all graded by the material they are made of. As a very general rule, the higher the grade (the number following the 'N'), the stronger the magnet. The highest grade of neodymium magnet currently available is N52. Any letter following the grade refers to the temperature rating of the magnet. If there are no letters following the grade, then the magnet is standard temperature neodymium.

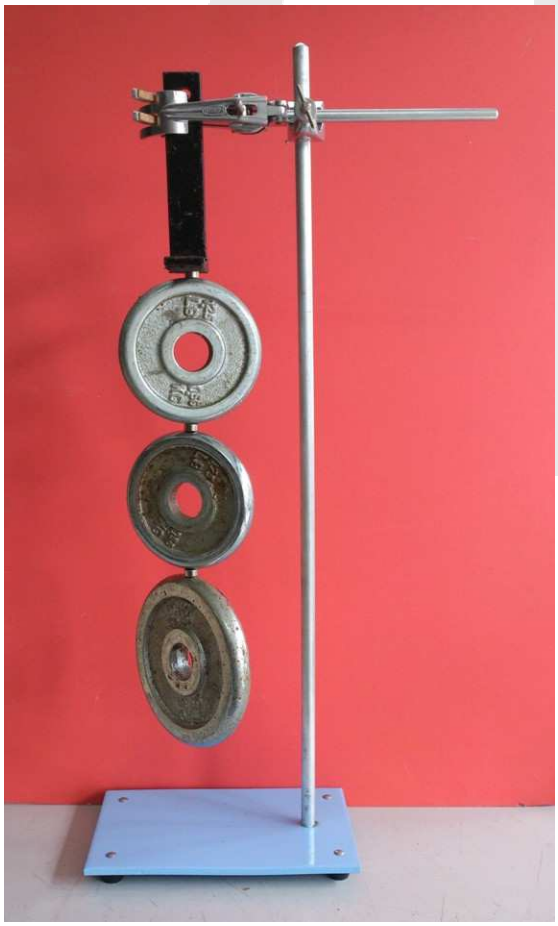
Experiment 1

Neodymium Magnet Size (Dia. x H) = **10 mm x 5 mm**

Neodymium Magnet Grade = N42

Quantity Magnet Use = 3 unit

Total Load = 0.56 kg + 0.56 kg + 1.1 kg = 2.2 kg



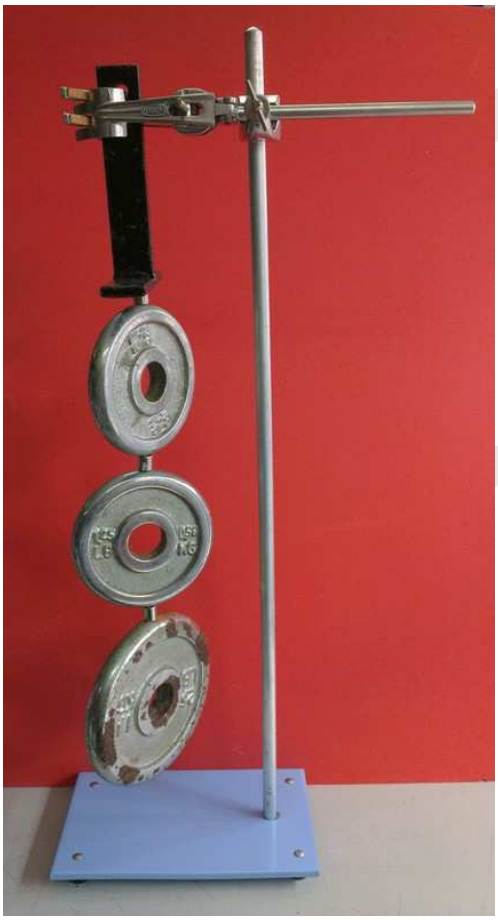
Experiment 2

Neodymium Magnet Size (Dia. x H) = 10 mm x 10 mm

Neodymium Magnet Grade = N52

Quantity Magnet Use = 3 unit

Total Load = 0.56 kg + 0.56 kg + 1.1 kg = 2.2 kg



Experiment 3

Neodymium Magnet Size (W x L x H) = 10 mm x 50 mm x 2.5 mm

Neodymium Magnet Grade = N42

Quantity Magnet Use = 3 unit

Total Load = 1.1 kg + 0.4 kg + 0.56 kg = 2.06 kg