Magnetic Materials

Catalog

www.china-magnetic.com | China Loong Magnetic Materials Co., Ltd.

About Us

It always follows the concept of “quality first” and emphasizes strict quality control throughout the production process. China Loong Magnetic Materials Co., Ltd. has obtained multiple system certifications, including IATF16949, ISO9001, and ISO14001, ensuring its strong quality management system.

Adhering to the principles of excellence, innovation, and reliability, China Loong Magnetic Materials Co., Ltd. is committed to providing environmentally friendly and high-quality NdFeB magnetic products. Through continuous improvement and customer-centric service, the company has earned recognition and trust from clients worldwide.

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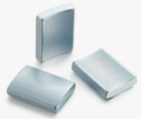


Cylinder Magnets

Ring Magnets

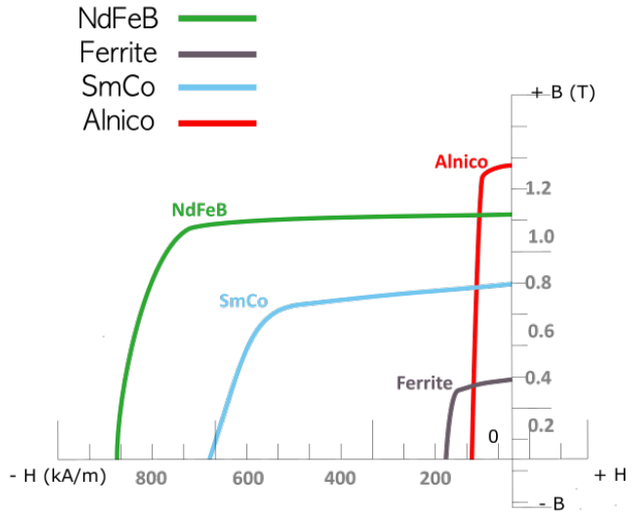
Block & Bar Magnets

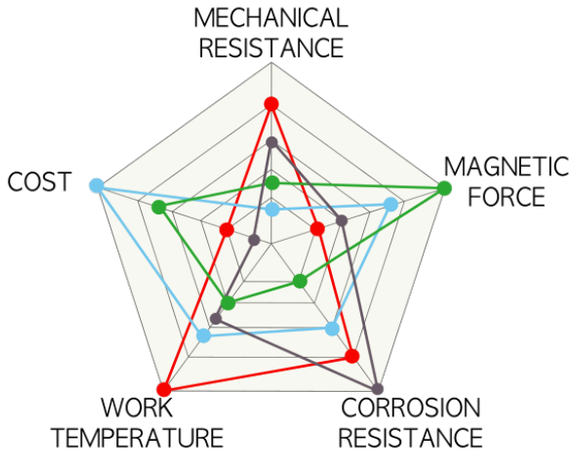
Disc Magnets

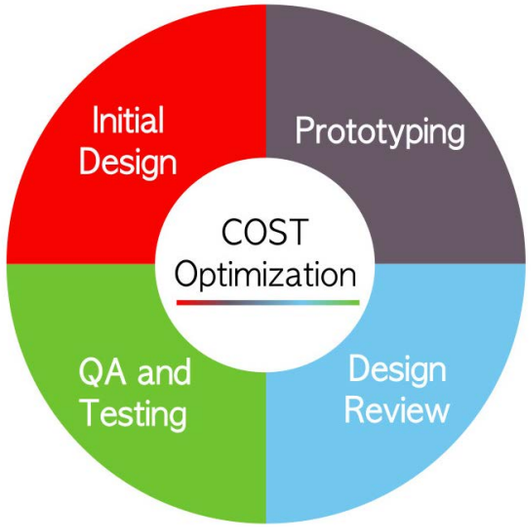
Technological Process :

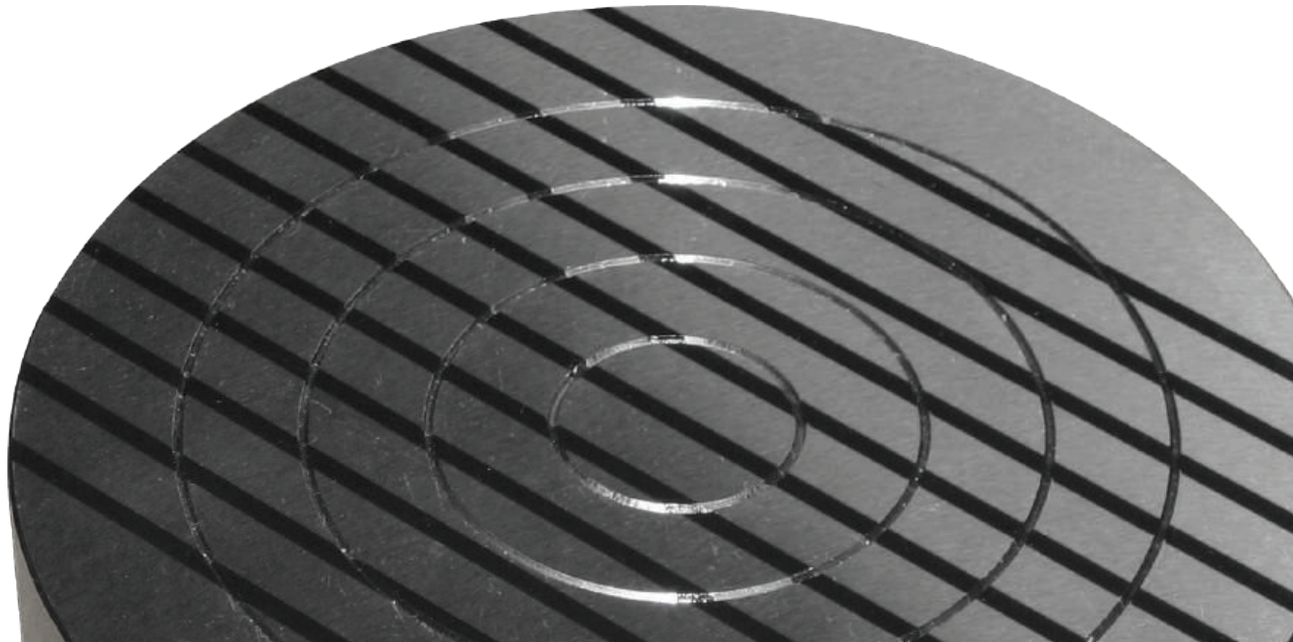
Customization Magnets

Our Custom Magnet service is designed to cater to diverse industrial, commercial, and personal projects. With a focus on precision, quality, and performance, we ensure that your Custom Magnets are manufactured to the highest standards. Our team works closely with you to understand your unique magnetic needs, offering guidance on the best material, shape, size, and coating to suit your application.









Radially Magnetized Magnets

Radially magnetized magnets refer to magnets whose magnetization direction follows the radius of the magnet, meaning the magnetic lines radiate from the center of the magnet outward. This magnetization method is typically used for ring magnets (such as neodymium ring magnets), where the magnetic field is distributed radially from the center to the outer edge of the magnet.

Features and Applications:

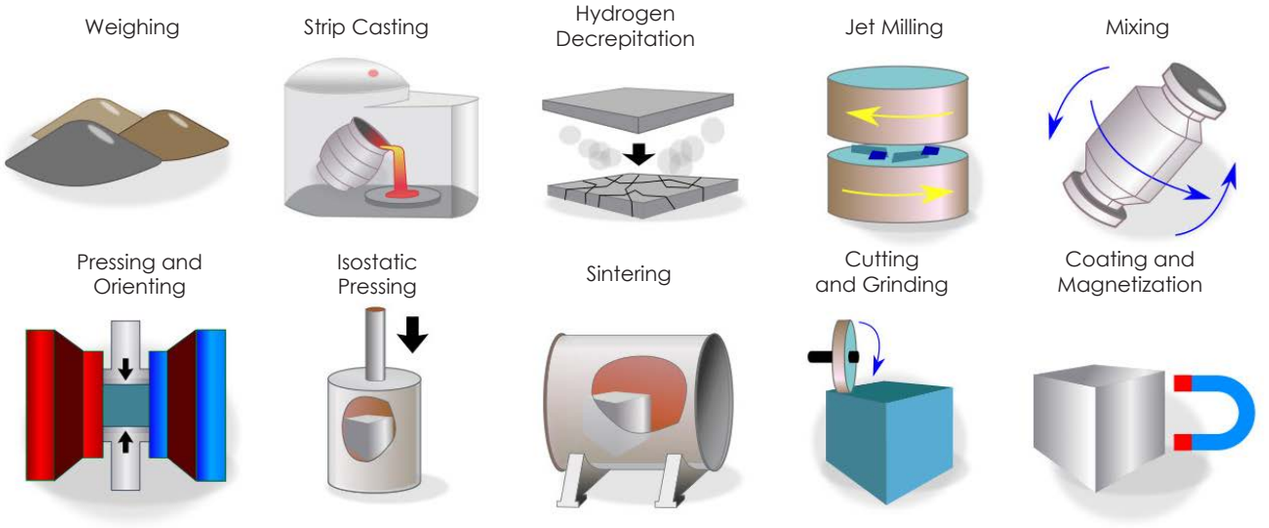
Magnetization Direction: The magnetization direction of the magnet is along the radius, from the center outward. For ring magnets, the magnetic field passes through the cross-section of the magnet and is distributed along the radius.

Applications: Radially magnetized magnets are commonly used in motors, generators, sensors, and some specialized devices, especially when a uniform or multipole magnetic field is required within and around the magnet.

Multipole Magnets: This magnetization method is often used in the design of multipole magnets, such as those used in MRI (Magnetic Resonance Imaging) equipment, or as key components in high-efficiency motors and generators.

Difference from Diametrically Magnetized Magnets:

Unlike diametrically magnetized magnets, which are magnetized along the diameter of the magnet, radially magnetized magnets have their magnetization along the radius.Radial magnetization is commonly used in applications where the magnet needs to be configured with multiple poles or to ensure a uniform magnetic field distribution.



Property	um	value
Density	kg/m^3	7.5×10^3
Bending Strength	kg/cm^2	2.95×10^3
Compressive Strength	kg/cm^2	9.6×10^3
Vickers Hardness (Hv)	Hv	560 - 600
Electrical Resistivity	Ωm	1.4×10^{-6}
Thermal Expansion Coefficient parallel to M	1/°C	7.9×10^{-6}
Thermal Expansion Coefficient perpendicular to M	1/°C	-1.7×10^{-6}
Curie Temperature	°C	345

Cube Magnets

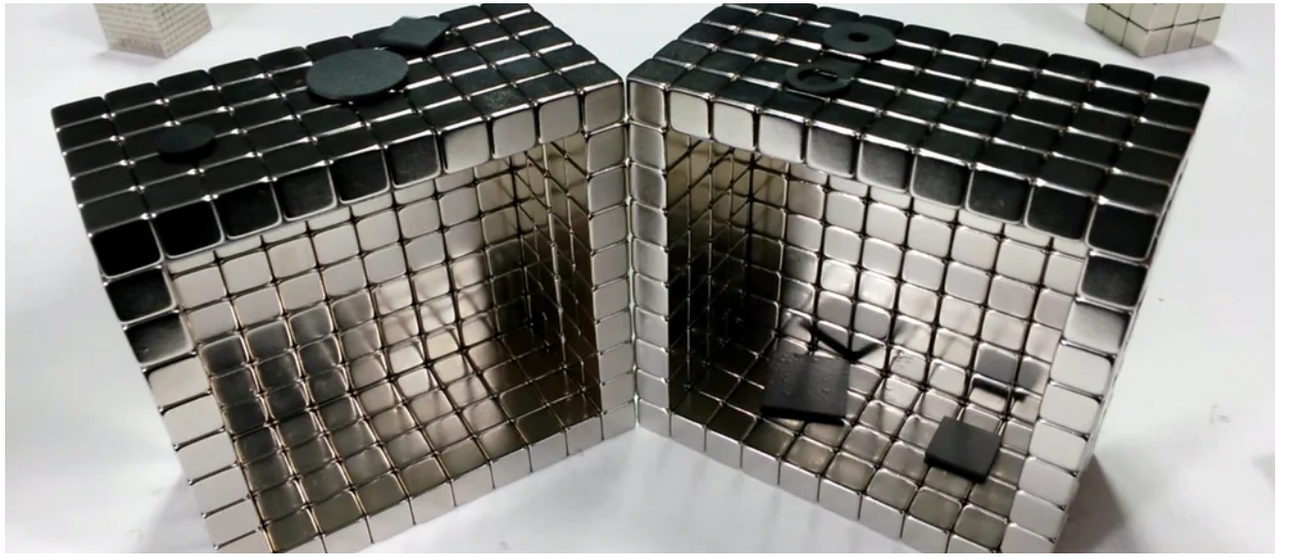
Cube magnets are bounded by six equal square faces, the angle between any two adjacent faces of the magnet is a right angle. They are commonly used in holding applications where they fit within a channel to increase their holding force.

What are the properties of the cube magnets ?

From a geometric point of view, the cube has the same length, width and height, with full magnetic force on each side. Its symmetrical design has a harmonious character, and its shape itself cleverly builds on past positive experiences. Depending on the application, different sizes and features are required. For our customers, we offer cube magnets with the following features:

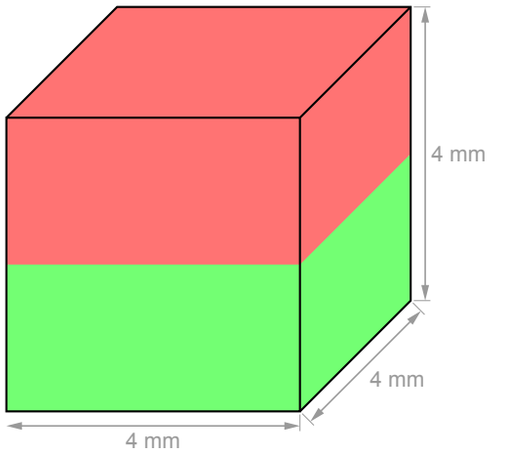
The super magnets are coated with nickel (Ni–Cu–Ni), and this coating gives the cubes a metallic sheen. Nickel is the best choice to protect neodymium from oxygen attack due to the good relationship between price and performance. If not treated, the rare earth metal will oxidize. The thin protective layer prevents this process from occurring, while not having any effect on the excellent bonding power of the corresponding magnet.

We offer neodymium magnets in different specifications: these cubes range in size from very small 3 x 3 x 3mm to 7 x 7 x 7mm, as well as products with dimensions of 12 x 12 x 12mm.

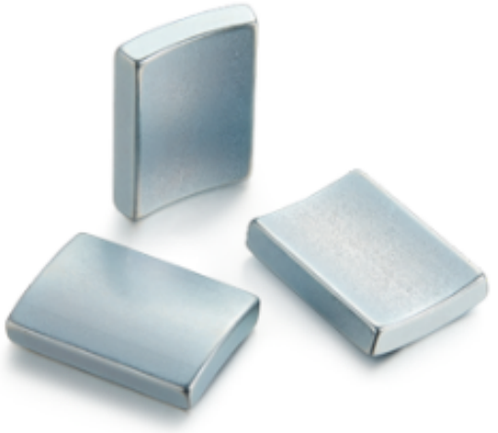


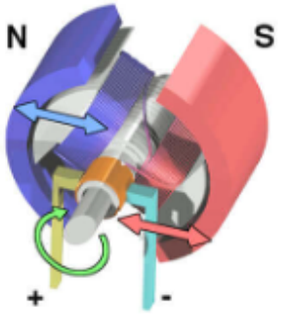
Neodymium supermagnet - Cube magnet 4 mm, holds approx. 500 g

Article ID	W-04-N
EAN	7640155438681
Material	NdFeB
Shape	Cube
Length	4 mm
Tolerance	+/- 0,1 mm
Coating	Nickel-plated (Ni-Cu-Ni)
Manufacturing method	sintered
Magnetisation	N42
Strength	approx. 500 g (approx. 4,9 N)
Displacement force	approx. 100 g (approx. 0,981 N)
Max. working temperature	80°C
Colour	Silver-coloured
Weight	0,4864 g
Curie temperature	310 °C
Residual magnetism Br	12900-13200 G, 1.29-1.32 T
Coercive field strength bHc	10.8-12.0 kOe, 860-955 kA/m
Coercive field strength iHc	≥12 kOe, ≥955 kA/m
Energy product (BxH)max	40-42 MGOe, 318-334 kJ/m³

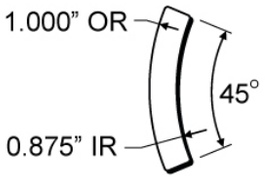


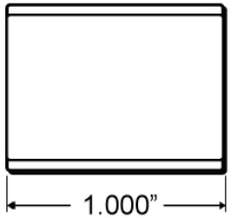
Arc Magnets

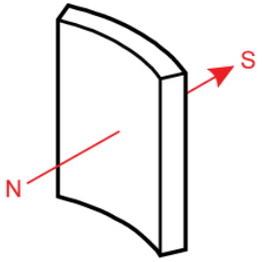


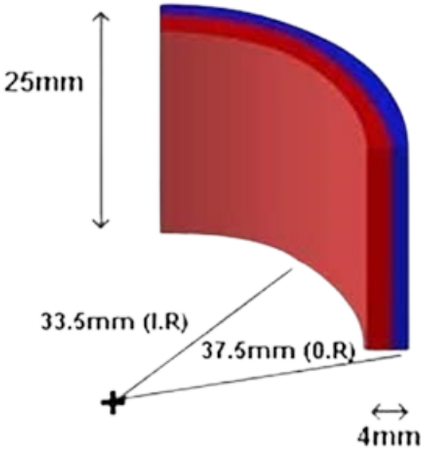


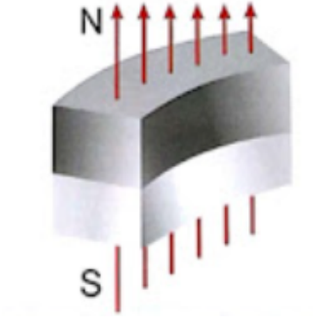
Arc segment or tile magnets are commonly used in electric motors and generators. They also have uses where a magnet needs to be formed around a cylinder.
Arc segment (Arc–Magnet OR*Ir*L)

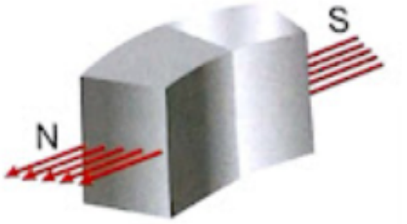












Cylinder Magnets

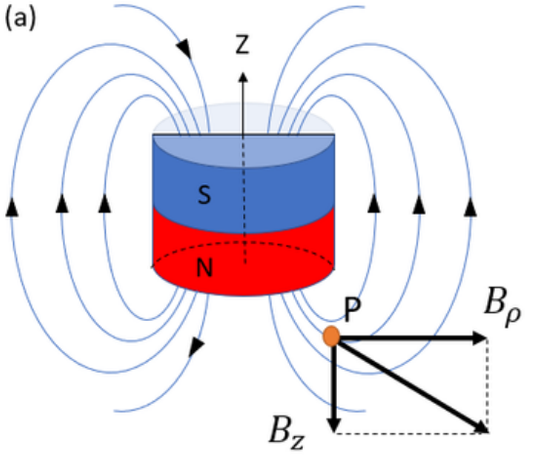
Cylinder magnets have straight parallel sides and a circular cross section and a hollow center section with straight parallel sides.
Cylinder magnets (Cylinder–Magnets D*H)

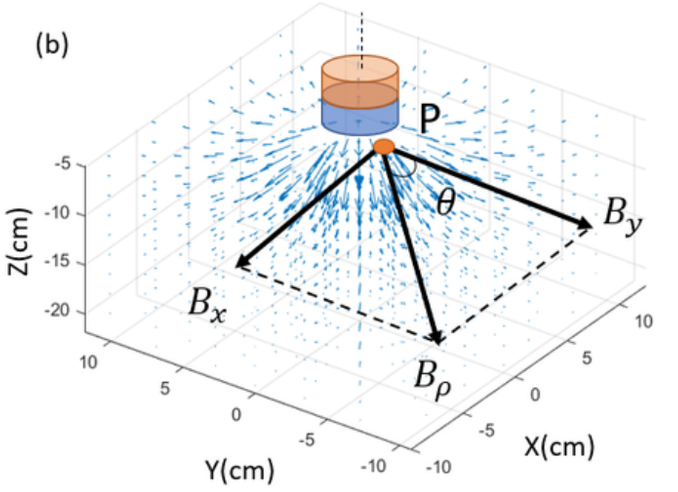
Quality NdFeB material, shiny and smooth surface, anti-rust and anti-corrosion, sturdy and durable.

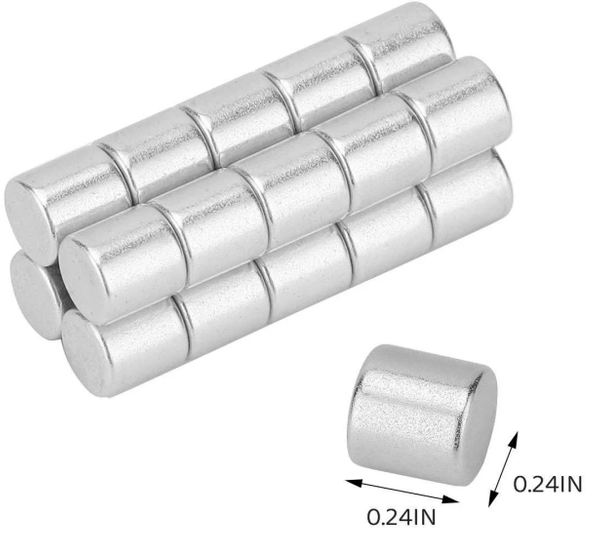
Strong Force

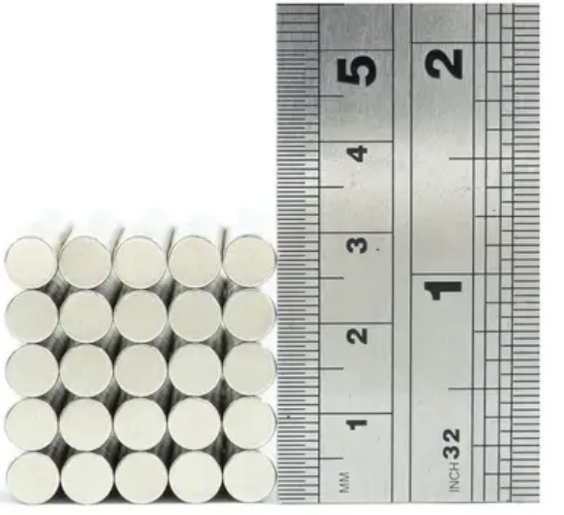
Long Term

Neodymium









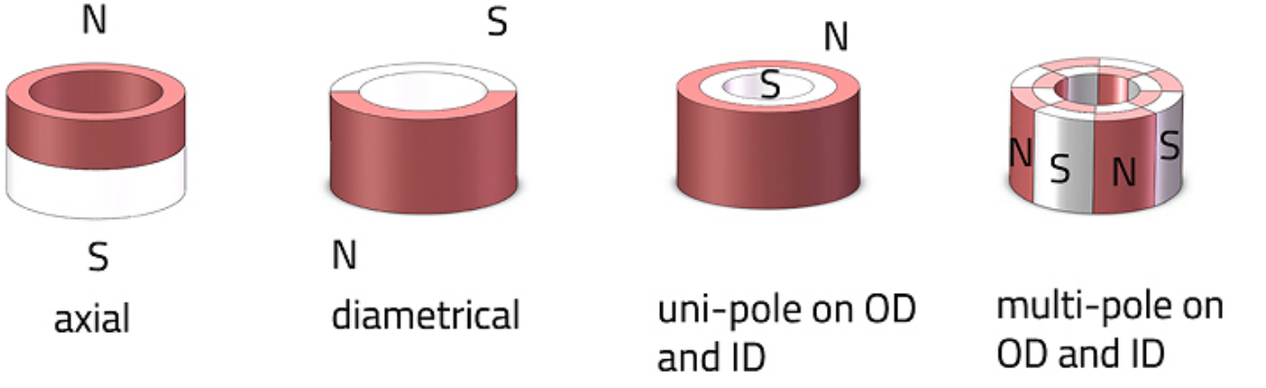
Ring Magnets

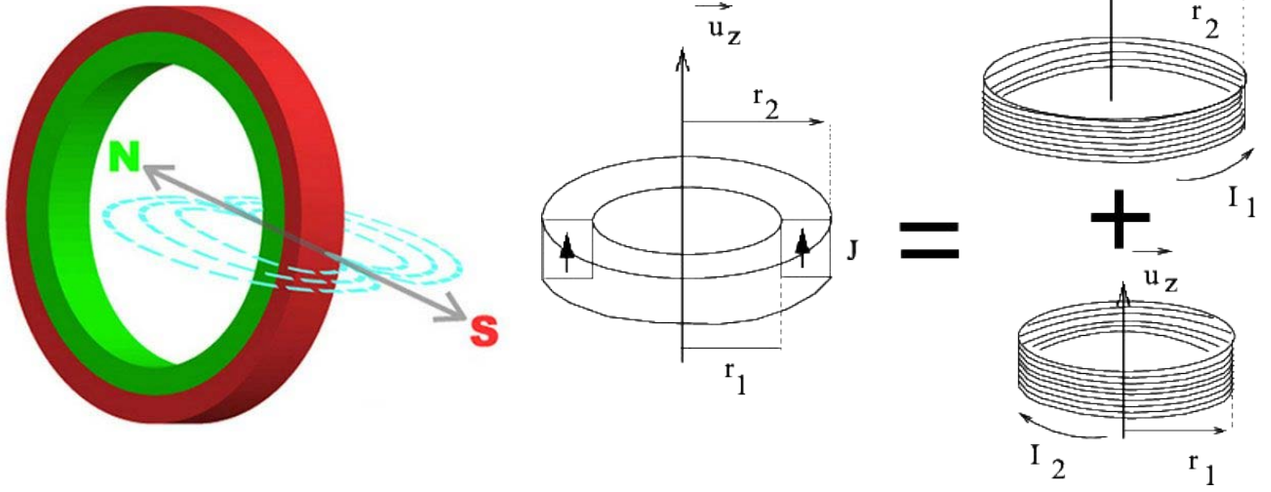
A thin flat circular magnet where the thickness does not exceed the diameter and there is a hole through the center. Ring magnets are commonly used when a mechanical attachment method is needed to secure the magnet.
Ring Magnets (Tube–Magnets OD*ID*H)

Where are ring magnets used ?

Due to their shape, ring magnets can be used for other purposes in a positive sense. Our flat versions are particularly helpful: With their very large inner diameter, they are ideal as date indicators for calendars. On a desk or hanging calendar, they show and accentuate the current day. Even from a greater distance you can see the calendar information very well. Due to its high degree of magnetization, the neodymium material guarantees a reliable and precisely fitting adhesive force for this application. Thus the ring always holds, the shifting succeeds likewise easily and briskly. The contemporary and harmonious appearance of magnetic desk calendars rounds off this useful function of the ring–shaped permanent magnets. We have offers with a height of 2 millimetres and a variable diameter for different calendar sizes.

Among the measurements of round super magnets, the values for outer diameter, inner diameter as well as the height are relevant for the right choice. The two numbers of the diameter (Ø) are separated by a forward slash in the product details. We make various fine gradations: These begin at a trim 6/2 millimetre diameter and end at the larger ring magnets with values of 30/25 millimetre. Thin ring magnets, which must be handled carefully due the risk of breakage thus associated with them, have a height of 2 millimetre. Stronger ranges exhibit values up to 5 millimetre height. The holding force covers the spectrum of 700 gram to a heavy 11 kilogram.





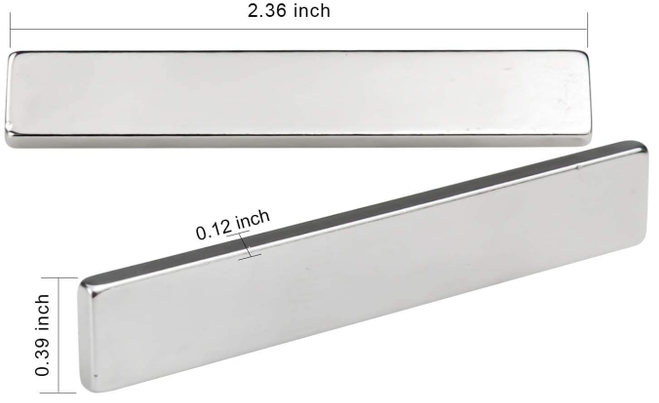
Block & Bar Magnets

Block magnets are six–sided magnet with straight sides where all angles are right angles (90°). Opposite sides of the magnet are parallel. They are commonly used in holding applications where they fit within a channel to increase their holding force.

(Block–Magnets L*W*T)

Neodymium Bar Magnets: Strength And Versatility For Every Application.

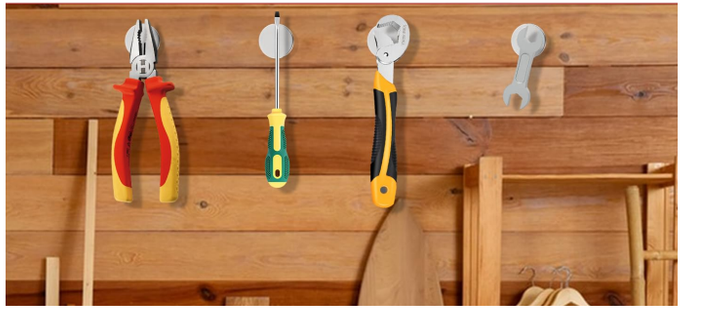
Neodymium Bar Magnets, also recognized as Neodymium Block Magnets or Rectangular Magnets, offer an unparalleled range of magnetic grades, from N35 to N52, catering to a wide spectrum of industrial, commercial, and personal applications.



- Custom decorated magnets for fridge or magnetic wall
- DIY magnetic spice rack for the fridge or metal surface
- DIY magnetic knife holder for the fridge or metal surface

Disc Magnets

Disc magnets are thin flat circular magnets where the thickness does not exceed the diameter. They are the most commonly used magnet shape and the most versatile. They are used in holding applications where a hole is drilled and the magnet is recessed into the hole. They are commonly used with cup assemblies to increase their holding strength.
Disc magnets (Disc–Magnets D*T)



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