

This catalogue contains our complete range of both bare and cased magnets:

Bare



Cased



Related Catalogues available.....just ask for your free copy:



Reed Switches



Proximity Switches



Economy Proximity Switches

All dimensions are nominal, in millimetres unless otherwise stated. If further information is required, individual datasheets are available on our websites, or on CD. As part of the groups policy of continued product improvement, specifications may change without notice. Our sales office will be pleased to help you with the latest information on our products.

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We also have a large network of worldwide agents. These can be seen on any of our websites, or on our company profile brochure.

Magnets



MATERIALS AVAILABLE:

ALNICO / ALCOMAX

A good general purpose material that can be machined or cast to the required shape prior to being magnetised. It has a maximum working temperature of 550°C and good corrosion resistance. Composed mainly of alloys of Aluminium, Nickel and Cobalt, Alnico / Alcomax magnets are manufactured by either sintering, or casting. Sintered magnets have slightly lower magnetic properties to cast magnets, but have better mechanical characteristics. Cast magnets allow for more complex shapes such as horseshoes, which are not possible with other magnetic materials. Alnico / Alcomax is very hard and brittle, meaning drilling by conventional methods is very difficult. Holes are generally cored during the manufacturing process, with magnets being cast close to the finished size, and then machined to the correct dimensions. Alnico / Alcomax magnets can be easily plated for cosmetic reasons if required.

FERRITE

Ferrite magnets are sintered permanent magnets composed of Barium or Strontium Ferrite. Aside from having good resistance to demagnetization they have the popular advantage of being low cost. Ferrite magnets are very hard, but also very brittle, and as such require specialized machining techniques. They are machined in an unmagnetized state. Anisotropic grades are oriented in the manufacturing direction, and must be magnetized in the direction of the orientation. Isotropic grades are not oriented and can be magnetized in any direction, however a certain degree of greater magnetization will be found in the pressing dimension, which is usually the shortest dimension. Ferrite is a cost effective material which has high resistance to demagnetisation. It has a maximum working temperature of 250°C and excellent corrosion resistance. Due to their very low cost, Ferrite magnets are used in a wide range of applications, from loudspeakers, and motors, to childrens toys, and are today the most commonly used permanent magnets, worldwide. Because of the sintering process, Ferrite magnets may have a thin layer of magnet powder on the surface, and hence for clean applications where contaminant could prove troublesome, some form of coating may be required.

NEODYMIUM IRON BORON (NdFeB)

An alloy of the Lanthanide group of elements, and also known as Rare Earth magnets, Neodymium Iron Boron (NdFeB) along with Samarium Cobalt (SmCo) are the most advanced permanent magnet materials available today. There are various grades available which satisfy a number of application requirements. NdFeB magnets are available in sintered or bonded forms. Sintered magnets offer the higher energy, however require some finishing techniques to keep to tight tolerances not required using bonded forms. NdFeB magnets are again, hard, yet brittle, and are all anisotropic, (except bonded NdFeB B10N material), and as such can only be magnetised in the orientation direction. B10N may be magnetized in any direction, and with multiple poles, although this requires special fixtures. Corrosion resistance of NdFeB magnets is low. Therefore all our standard Neodymium magnets are Bright Nickel plated which gives excellent resistance to harsh environments. Alternative Zinc and Tin platings are also available, as well as powder epoxy coatings in many colours, which further protect the magnet. All Rare Earth magnets have extremely strong magnetic fields and must be handled very carefully to avoid damage. They have a maximum working temperature of around 130°C.

BARE MAGNETS

Magnets can be supplied as a separate product or part of a proximity switch set consisting of switch and magnet.

CASED MAGNETS

Cased magnets can be supplied as a separate product, where you can select a magnet to suit your operation, or as part of a proximity switch set consisting of matching switch and magnet.

CUSTOM DESIGN

Looking for a magnet that is not shown overleaf? Do you need a different size? A different grade of material or coating? Contact our sales office. We can manufacture custom magnets to your own specifications in large or small volumes.

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