

MANUFACTURE OF PERMANENT MAGNETIC EQUIPMENTS



MAGNETIC PLATE



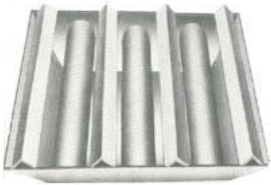
FERRITE MAGNET



RARE EARTH MAGNET



LIFTING MAGET



HOPPER MAGNET



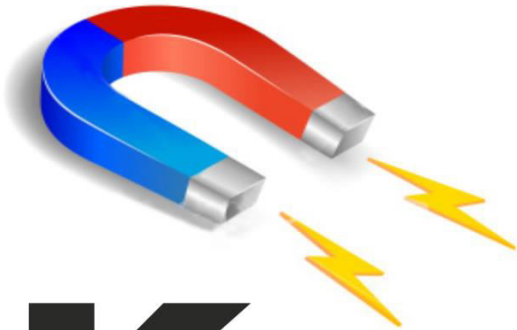
SUSPENSION MAGNET



**SINGLE DRUM TYPE
MAGNETIC SEPERATOR**



**OVERBAND MAGNETIC
SEPERATOR**



Kumar Industries



DRAWER MAGNET



MAGNETIC ROD



PERMANET MAGNETIC PULLEY



COOLANT SEPARATOR



**INLINE MAGNETIC
SEPARATOR**



HUMP MAGNETIC SEPARATOR



**HIGH INTENSITY ROLLER TYPE MAGNETIC
SEPARATOR**



KUMAR INDUSTRIES, a pioneer company in the field of High Power Permanent Magnetic Equipments since 1986 is based at Ahmedabad (Gujarat), India.

We are a leading supplier in the Magnetic Equipment field. With the vast knowledge and experience in the field, we supply the best Magnetic Equipments to suite the need of our customers.

The qualities of our products are highly acclaimed in the market by our customers. We have a large base of satisfied customers. We are constantly endeavored to incorporate the most modern technology in our products to the entire satisfaction of our customers.

PRODUCTS:-

- **High Intensity Rare Earth Magnetic Equipment**
- **High Intensity Roller Type Magnetic Separator**
- **Over Band Magnetic Separator**
- **Ferrite (Ceramic) Magnets**
- **Lifting Magnets With Cover**
- **Magnetic Plate**
- **Hopper Magnets**
- **Power Magnets**
- **Permanent Magnetic Drum**
- **Funnel Magnets**
- **Magnetic Floor Sweeper**
- **Permanent Magnets Drum Separator**
- **Double-Deck Vibrating Screening Machine**
- **Double & Triple Drum Type Permanent Magnetic Separators**
- **Magnetic Coolant Separator**
- **Drawer Magnets**
- **Grill Magnets**
- **Hump Magnetic Separators**
- **Inline Drum Type Magnetic Separators**
- **Liquid Trap Magnets**
- **Permanent Magnetic Pulley**
- **Pot Magnet**
- **Rare Earth Magnets**
- **Suspension Magnet**
- **Wet Magnetic Separators**

High Intensity Rare Earth Magnetic Equipments

Kumar - High Intensity Rare Earth Magnetic Equipments are manufactured using Rare Earth NdFeb Magnets having 4-5 times more strength compared to Ceramic/Alnico Magnetic or fine contamination from dry or liquid products. These equipments are most suitable for Food Chemicals, Minerals and Refractories etc.



RARE EARTH TUBE MAGNETS:

Rare Earth Tube Magnets are used to eliminate Iron contamination from Liquids or dry bulk materials for quality Control Check. Magnetic Tubes are available in standard length i. e. 150mm to 400mm with solid, Threaded or with studded ends, as per specific requirements of the clients.

RARE EARTH GRIDS:

Rare Earth Magnetic Grids are developed for installation in Hoppers, Feed Holes and Duct etc. The Grids Comprise of Rare Earth Tubes assemblies in single, Double or Multiple bank as required by the clients and can be supplied in square circular or any other size to suit the requirement of the customers.



RARE EARTH MAGNETIC DRUMS :

Rare Earth Magnetic Separators can be used in processing industry for removal of weak magnetic or fine iron impurities from Minerals, Refractories, Food Products, Glass, Slag, Ores etc.

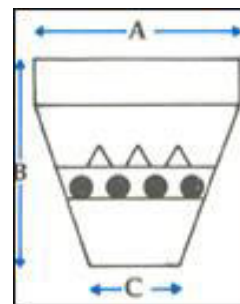


RARE EARTH MAGNETIC PLATE:

Rare Earth Magnetic Plates are developed for installation in feed Chutes or for suspension over the flow of material for eradication of weak magnetic and or fine iron impurities. They are widely used by food, Chemicals, Minerals or Ceramic Slips and glazes etc.

Rare earth Chutes (Channel Type Magnet) are also suitable for custom Built requirements.

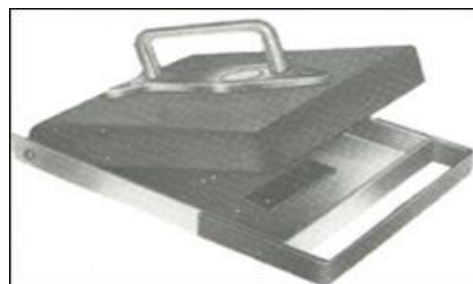
Hopper Magnets



Kumar Hopper Magnets provide an efficient magnetic filtering to any hopper-fed injection moulding, blow molding, extruders, cattle feed plants, flour mills rice mills etc. Made up of high corecivity, permanent magnets sealed in non magnetic tubes they provide better magnetic filtering due to their high magnetic flux density. They are designed to fit in any size of hopper. No need to make any cumbersome attachment or alteration to fix it in your hopper. Easy to clean and no maintenance, cost Makes it really a very convenient and reliable filter, providing constant magnetic protection at a low cost to your equipment and preventing expensive shut downs and delays.

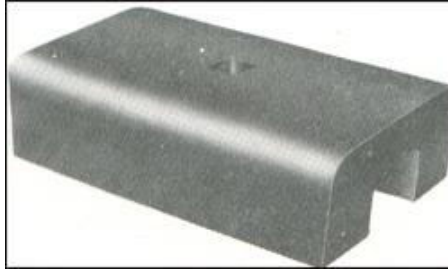
Catalogue No.	Shape	Size in M. M.	Diameter No. of Magnetic Rods
KI 741	Square	150x150	2x38 m.m.
KI 742	Square	200x200	2x38 m.m.
KI 743	Square	250x250	3x38 m.m.
KI 744	Square	300x300	4x38 m.m.
KI 745	Round	Dia 150	2x38 m.m.
KI 746	Round	Dia 200	2x38 m.m.
KI 747	Round	Dia 250	3x38 m.m.
KI 748	Round	Dia 300	4x38 m.m.

Lifting Magnets With Cover



Type KI-706 LM / WC is the most handy , efficient and economical device to separate iron contamination from Foundry scrap, sand & plastic granuls. Made from High coercivity permanent magnets most useful for foundry Plastic Industries & Scrap dealers Size of the magnetic plate is 135 mm (w) x 170 mm (L) x 27 mm height.

POWER MAGNET



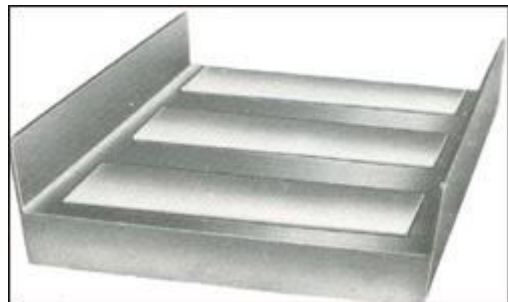
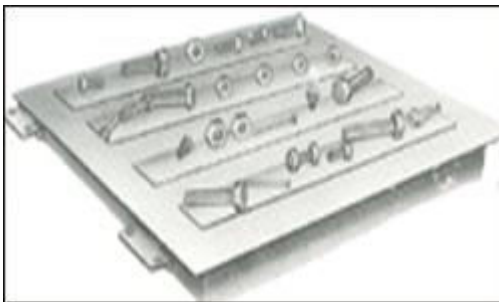
These are available in various size and capacity and is the most handy device for separating Iron from nonferrous scrap, plastic or any other material. Following size are available.

MAGNETIC FLOOR SWEEPER



This ideally used to collect the iron scrape from the workshop floor. Magnetic Plate with cover, wheels and Handle in three different sizes are available.

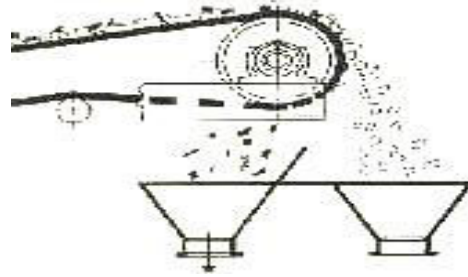
MAGNETIC PLATE



Permanent Magnetic Plates are used for separation of tramp iron found in Tea, Tabacco, Coffee, Cocoa, Milk Powder, Chemicals etc.

They are available in both flat and curved shapes and could be installed either above or along the passage of materials flow. They are provided with Clamps and could be located on the conveyor of carrying such materials ideally; they are located 30 mm above the layer of material flow. These plates are constructed with high energy permanent magnets plated in a magnetic circuit. They are extensively used in CTS Tea machinery and in Biscuit stacking machines. They are available in various sizes as per the requirement.

PERMANENT MAGNETIC PULLEY



“KUMAR” manufacture a wide range of Rare Earth and Ferrite Magnetic Pulleys. These Pulleys are widely used to remove tramp iron mixed with the material moving on a conveyor belt.

The permanent magnetic pulley is dual-purpose equipment used for protection of crusher Jaws or other machinery and also for purification and concentration of magnetic material from the mines. It has the widest application in food, chemical, ceramic, paper, coal handling, foundry operation and mining industry.

The magnetism in a Permanent Magnetic Pulley is generated by internal assembly of magnets enclosed in non magnetic Stainless Steel shell. The steel shaft is extended on both sides. One side is provided with Key-way. The Pulleys have a face width of 50 mm to 100 mm more than the belt width. The magnetic strength of the pulley depends on the diameter and also quality of magnets used. Pulleys with Rare Earth Magnets can handle depths up to 300 mm.

Pulley width is determined by width of conveyor belt to be used. Diameter depends on depth of material and speed of the conveyor. It can be designed to suit customer's specific application.

The magnetic Drum pulley replaces the drive pulley at the end of conveyor belts. In view of the wide variety of conveyor belt types, the drum pulleys are supplied made to measure and ready for installation. As the figure clearly show, the magnetic head roller extracts the iron particles from the material flow and carries them to the underside of the belt where they are removed and collected. Head roller magnets for conveyor belt are supplied in permanent magnets.

Features:

- (1) 304 stainless steel faces. (2) Removable mild steel shaft. (3) Four hub styles.
- (4) Flat face. (5) Keyway and set screws.

Options:

- (1) Taper locks (2) Crowned face (3) Fixed shaft
- (4) Lagging (5) Stainless steel shaft

Permanent Magnets Drum Separator



Permanent Drum Type Magnetic Drum Separator:

KI Permanent Drum Type Magnetic Separator is most useful non electric separator for separating tramp iron from non magnetic material processed in bulk quantity for the purity of end products recovery of metals having commercial value end protection of processing plant and machinery. These are widely used in all the processing Industry for separation of iron contamination from minerals, chemicals food, flour, plastics, grains sand, cement fertilizers, abrasives, glass slag, ores rock and many other products.

Working Principle & Magnetic System :

The Permanent Magnetic Drums consists of a stationary Permanent magnetic assembly having uniform and everlasting Magnetic field across the entire width of the drum, which is effective over approximately half the drum circumference as shown in Fig-1

Drum shell made of non Magnetic stainless steel revolves around the magnetic field. As the material fed evenly from the chute falls over drum, powerful magnetic field attracts and holds ferrous particles to the revolving shell.

As the revolving shell carries the Iron particles through the stationery magnetic field the non-magnetic material falls freely from the shell while ferrous particles are firmly held until carried beyond divider and out of magnetic field.

The strength of the Permanent Magnetic Drum is guaranteed to be greater than corresponding electromagnetic drum. The Permanent magnets used are everlasting magnets and its strength does not diminish during normal use and can be used through

Type KI	Size of the Drum		Over all Diamension of Separator Machine			Capacity Ton/hour
	Dia mm	Length mm	Width mm	Height mm	Depth mm	
761	300	500	720	1150	750	1
762	400	500	770	1250	825	1.5
763	400	600	820	1250	825	2
764	300	400	630	1000	1000	1
765	400	450	680	1000	1100	1.5
766	450	500	730	1100	1200	2

Double & Triple Drum Type Permanent Magnetic Separator



Double Drum Type Permanent Magnetic Separator :

Specification : With reduction gear, 1 HP 3 Phase Electric Motor to drive the drum at a speed of 15 RPM, Vibrating Tray fixed in between Hopper and Drum extra high power permanent magnetic plate at bottom side & Machine complete with close body.

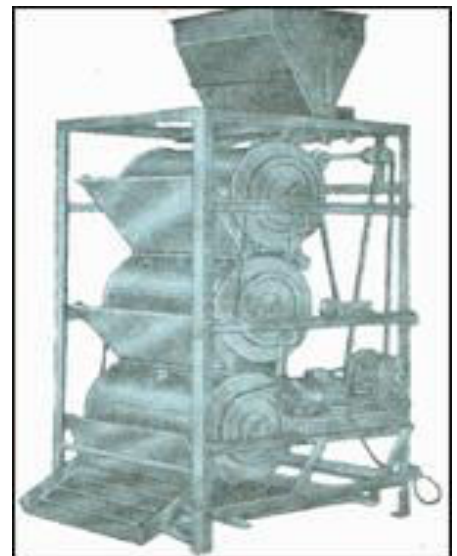
Special modifications can be made as per requirement of the customer.

Type	Size Of The Drum		Capacity Ton /hour
	Dia mm	Length mm	
KI - 767	300	500	1 Ton
KI - 768	400	550	1.5 Ton
KI - 769	400	600	2 Ton

Triple Drum Type Permanent Magnetic Separator :

Specification : With reduction gear, 1 HP 3 Phase Electric Motor to drive the drum at a speed of 15 RPM, Vibrating Tray fixed in between Hooper and Drum,extrahigh power permanent magnetic plate at bottom side & Machine complete with close body.

Type	Size Of The Drum		Capacity Ton /hour
	Dia mm	Length mm	
KI - 770	300	500	1 Ton
KI - 771	400	550	1.5 Ton
KI - 772	400	600	2 Ton



Salient Features: -

- Drum consists of high coercively modern anisotropic Permanent Magnets.
- Strong & rugged construction.
- Automatic separation of iron impurities.
- Completely closed design to avoid dusting and air pollution.

Kumar Made Double & Triple Drum Type Permanent Magnetic Separator Manufactured By Well Known Parameters in the Magnetic Field.

A Unique Device Made From Strong Anisotropic Magnets For Permanent Separating Iron Contents From Powders, Minerals, Chemicals, Food, Flour Plastics, Grains, Sand Cement, Fertilizers, Abrasive, Glass Stag, Ores Rock And Many Other Products.

Salient Features:

Manufactured from extra energetic high retentivity anisotropic permanent which does not need any electric force.

Automatic Separation of iron particles in any rang & mesh.

Build up with strong frame to withstand rough handling.

It operates on 1 HP Electric Motor.

Permanent Magnetic Drum :

Drum manufactured from strong covercivity , strong ceramic magnets.

Its radial magnetic design eliminates dead sports and no maintenance is required.

Motor :

A 3 Phase or signal phase motor to run the drum.

Vibrating Inlet With Extra Magnetic Plate :

To Vibrate the component and fiow them to a uniform basis.

Outlet:

Fixed with extra magnetic plate to pure the separated material.

Iron collecting Tray:

For collecting separated iron from the components.

Hopper:

Specially manufactured to flow the material on the drum fitted with continous control on the flow.

Pulleys:

Can simply reduce the speed and easily to maintain.

High Intensity Roller Type Magnetic Separator



KUMAR have Developed High Intensity, High Gradient, Permanent Magnetic Roller Separators with the indigenous Technology. This technology can be successfully used in Industrial Minerals applications. The Technology involves high energy Rare Earth Neodym Permanent Magnetic Roll Assembly, Which is developed and assembled under strict quality control and specification to generate unsurpassed Magnetic Field Gradients. Under this high Intensity Magnetic Field, weekly Magnetic Contamination can be easily removed effectively.

Operating Method :

A Short conveyor belt envelopes the Magnetic Roll and tensioning the Ideal Roll. An efficient Feeder discharges material on the Belt. The Ferro Magnetic and Para-magnetic particles adhere to the Belt while the non-magnetic particles flow freely off the end of the Conveyor.

Features :

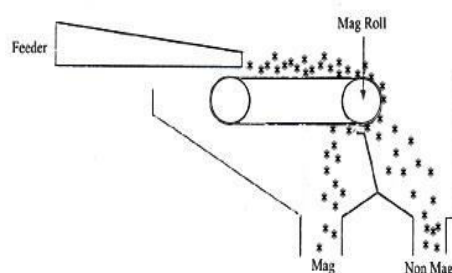
Magnetic Rolls are available in 65, 75 & 100 mm dia and widths upto 1200mm . There are three different Magnetic Strengths i. e. 8000 Gauss, 20,000 Gauss and 22,000 Gauss. The Roll is driven by a 0.5 HP, variable speed DC/AC geared Motor drive adjustable from 0 to 100 RPM. For the purpose of Feeding, Vibratory Feeder with Control is provided. The Machine is provided with Abrasion resistant endless conveyor Belts of 0.8mm thickness.

Applications :

Kumar Machines are most suitable for various types of Industrial Minerals applications i. e. Abrasive, Refractory and Ceramic Raw Material beneficiation, Alumina, Silica, Carbide, Magnestic, Quartzite, etc. Glass Raw Materials, Clean Silica Sand, quartz, Feldspar, Dolomite etc., Ultra High Purity Quartz Cleaning, Graphite Upgrading, Manganese Orebenification, Bauxite Upgrading, Diamond ore benification, Selective Separation of Garnet / Ilmenite/Rutile, Zircon, Benification of Iron ore, Recovery of Metals from Slag, Removal of Ferro Silicatge from Limestone, Megnesite etc.

Testing Facilities :

Please feel free to ask for Free Demonstration by testing 5/10 Kgs of any material, at our Works.



DRAWER MAGNET



Drawer magnets consists of a row, or most commonly, rows of round magnetic tubes that are assembled into drawers. Drawer Magnets are recommended for fine cohesive materials such as magnesium oxide, zircon powder, fly ash, aluminum, gypsum, lime, powdered sugar, cornstarch, flour & pulverized minerals and ceramics. This type of ferrous metal removal unit can be fitted simply in existing pipe line or outlet of various equipments like pulverizes blenders, & classifier or any other outlet location. In standard type each unit comprises to permanent magnetic grids mounted one above the other. System with multiple grids is available for special application. The grids are easily removable for cleaning. The drawer is fitted with flanges at outlet. As standard the magnetic rods consisting hard ferrite ceramic magnets or high intensity rare earth magnet is fitted in a sturdy steel housing. Model with stainless steel grids and housing can be supplied if required. The drawer magnets are available with either Ferrite Magnets or with High Intensity Rare Earth NdFeB Magnets.

Types: Based on the sizes, configurations and the working capacities, drawer magnetic separators are classified as:

Heavy Duty: Heavy duty drawer are useful for optimum magnetic separation in tough processing conditions like ambient temperature and humidity, bridging, abrasion, corrosion or galling. There are special coating on the drawer's tubes that prevents sticking problems associated with certain products and processing conditions. Due to this the cleaning operations becomes even easier. The cleaning can be accomplished both manually and automatically.

Large Tube:- In larger drawer magnets Rare Earth Magnetic tubes are incorporated for optimum ferrous metal separation on difficult flowing products such as flour, powdered sugar and other products with a tendency to bridge. The placement of larger tubes below steep angled diverters that prevent product from bridging or building up on the tubes. Since the spacing between the tubes are larger it allows the product to flow freely through the housing.

Manual Clean:- For low levels of tramp metal contamination, manual clean drawer magnets are ideal. The Magnetic tubes are located on the alternating centers of the tubes. The trapped materials can be removed with the help of shop rag or gloved hand.

Self-Cleaning:- In difficult locations Self-cleaning Magnetic Drawer is considered as suitable. Through the toggle switch the operator can easily clean the assembly from a remote location.

Features

Following are the features of the drawer magnets:

- (1) The drawer magnets can be fitted simply in existing pipe line or outlet of various equipments like pulverizers, blenders etc.
- (2) Generally each unit comprises of permanent magnetic grids mounted one above the other.
- (3) For special applications there are systems with multiple grids.
- (4) The grids are easily removable for cleaning.
- (5) Normally the ferrite or rare earth and NdFeB magnets are used in the drawer magnets.
- (6) Certain types of drawer magnets handle a wide range of separation tasks in gravity conveying systems

Applications

The drawer magnets can be applied in following areas:

- (1) Mining industries
- (2) Pharmaceuticals industries
- (3) Food processing industries
- (4) Industries dealing with powdery substance
- (5) Cement, gypsum and other types of small scale industries.

TRAP MAGNET



Liquid Trap Magnets are those engineering device that removes ferrous tramp from liquid processing and conveying lines. Liquid magnetic traps separators provide magnetic protection for liquid lines and processing equipments. They preserve product purity by removing small contaminants.

They protect against tramp iron and other ferrous fine contaminations. It consists of powerful magnets to capture finest possible contaminants. Magnetic configuration ensures maximum exposure of contamination to the high intensity tubes without any obstruction to liquid flow.

Types:

Based on the configuration and the types of contaminants they capture, the liquid tramps are of following types:

Cartridge-Style Liquid Traps:

For non fibrous fluids cartridge-style liquid traps are ideal. These types of separators are utilized where the size of the contaminants is few diameters and pose no risk of clogging. When the liquid is forced towards the tightly spaced grid, the contaminants come in the effect of magnetic field, which is extracted from the liquid flow by powerful Rare Earth Magnets. The contaminants are held on the cartridge surfaces, which is later removed.

Magnetic Liquid Traps- Single Plate:

Single plate magnet style liquid traps are effective and efficient in removing ferrous particles from viscous and fibrous liquids and liquids containing large suspended solids. The contaminants are thrust to the magnetic plates where they are held. The magnetic field is strong enough to trap and protect the tramp materials from the wiping action of the liquid flow. The cleaning is done by removing the plate magnets from the housing and wiping the ferrous tramp to the edge of the plate, where it can easily be brushed away.

Magnetic Liquid Traps- Dual Plate:

Dual plate magnet has diverter that creates a smooth flow pattern that protects fragile products from damage. The diverter also divides the product flow over two plate magnets. Thus even the flow rate is higher the dual plate traps can effectively handle it easily. The flow rate can be slowed thereby giving more magnetic protection. Also more contaminants are exposed to the magnetic field in the dual plate magnetic liquid traps.

Specifications:

- (1) The liquid trap magnets are equipped with powerful Rare Earth Magnets of high-intensity there by capturing even the minutest ferrous fines.
- (2) The trap magnets come in different forms like single plate, dual plate cartridge's type etc.
- (3) They are easy to mount and operate.
- (3) The liquid trap magnets are housed in stainless steel structure.
- (4) The entire flow of the liquid is covered by the cartridge in cartridge liquid magnets which creates strong magnetic force and captures the tramp iron and ferrous particles.

Applications:

- (1) Food industries
- (2) Pharmaceutical
- (3) Chemical product flows
- (4) Rubber industries
- (5) Plastic industries

Ferrite (Ceramic) Magnets

KUMAR FERRITE MAGNETS are very hard, but more brittle and more prone to cracks and chipping on the edges and corners. They are characterised a very high normal and intensive coercive force, but rather a low residual induction and are virtually free from self-demagnetisation. They possess a very high electrical resistivity which makes them ideally suited for high frequency applications.



The following shapes of ferrite magnets are available:- Rings, Rectangular, Square, Segments, Discs, Cylindrical, Pasto-ferrite / Rubber Sheet / Strips, etc.

Any other shapes and sizes, not available in the country at present, could be supplied in accordance with the client's requirement.

Our factory is well equipped with latest sophisticated machinery catering to the need for -

- (1) Magnetic Chuck, Separators, Grills, Holding Systems, etc.
- (2) Magnetos, DC Motors, Stepper Motors, Generators, etc.
- (3) Moving coil Instruments, Magnetic Door Catches, Magneto Therapy.
- (4) Loud Speakers, Horns Public Address System etc.
- (5) Fabricators, Automobiles, Auto Switches, Coupling Oil Filters etc.
- (6) Magnetic / Stickers/Boards, Laboratories & Schools
- (7) Conveyors, Trolleys, Gifts & Novelty Items, Televisions
- (8) Computers, Refrigerators & Relays.

Our Products were launched in the market only 4 year back and have earned a high reputation in terms of quality and timely supply.

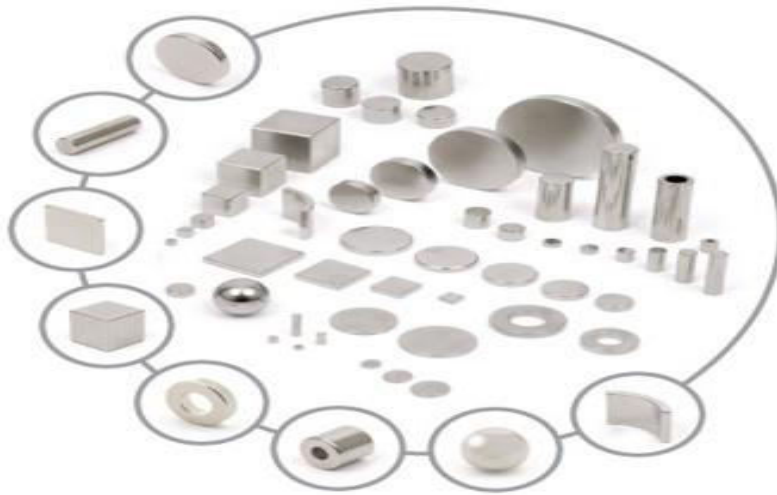
Our magnets are fully guaranteed for its best performance. However, minor defects like hair line cracks, chipped edge or corner which are unavoidable due to nature of material. These defects are acceptable only, if they do not change the magnetic performance of the piece.

Kumar magnets has carved out a unique place for itself at the forefront of magnet technology - with a reputation for the highest quality standards reliability and dependability of timely supplies-and the creditability that goes with it. The confidence that has been generated, thus, will be our springboard into the future - into more challenging vistas calling for the highest technical ingenuity and the most prudent resource management. Partners in each other's growth through a commonality of interests.

DISC MAGNETS are also available in isotropic materials which do not have any specific directions; they can be magnetized by any one of the 3 axes. Isotropic Disc Magnets are available from 4.00 mm to 50.00 mm diameter and their varying heights.

Rare Earth Magnets

Kumar Industries, a supplier of “KUMAR” Rare Earth neodymium magnets for education, industry and engineering. We specialize in providing strong high-quality neodymium-iron-boron (NdFeB) magnets at low prices. Our neodymium magnets are made with the most advanced magnetic materials.



New Resellers :

We are contemplating actively recruiting new resellers for our “KUMAR” Rare Earth Magnets. If you have a retail store or an online presence with complementary products, we encourage you to contact. Small accounts are welcome.

Extensive Selection Magnets:

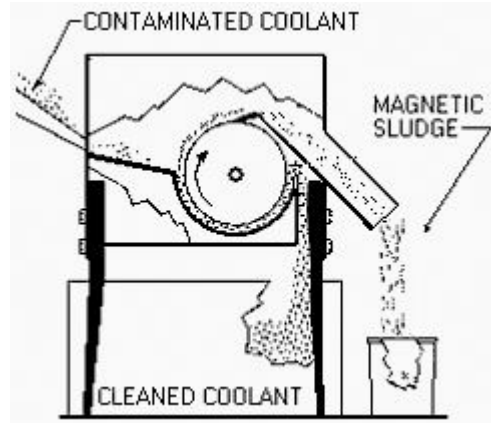
We carry a wide range of shapes and sizes of neodymium magnets. All our stock of magnets is of Grade N40 sintered neodymium-iron-boron plated in nickel.

Rare Earth Magnets can be customized according to your request. Any shape or size can be ordered. If you have any questions, please, do not hesitate to ask us. We will design a magnet that will be exactly as per your requirement.

NdFeB Magnet:

Neodymium Iron Boron (NdFeB) magnets, a sort of Rare Earth magnet, has the high remanence, high coercive force, Maximum energy and is easily formed into various sizes, shapes. So they have been widely used in commercially available fields. Manufactured by sintering, compression bonding, injection molding, and extrusion. The sintered form holds the highest energy product of up to 48MGOe, while the bonded form holds a lower energy product of up to 10MGOe. Furthermore the majority of NdFeB magnets is anisotropic and can only be magnetized in the orientation direction.

MAGNETIC COOLANT SEPARATOR



The Coolant fluid with iron dust particles falling by gravity to the inlet of the separator from the precision machine tools such as Grinders, Milling Machines, Automats etc. The coolant with iron impurities come into contact with Magnetic Drum and extract all iron particles.

The Magnetic drum is kept clean at all times by a spring steel blade scrapping along the circumference. A Rubber roller squeezes the sludge's gathered to ensure that no coolant is wasted.

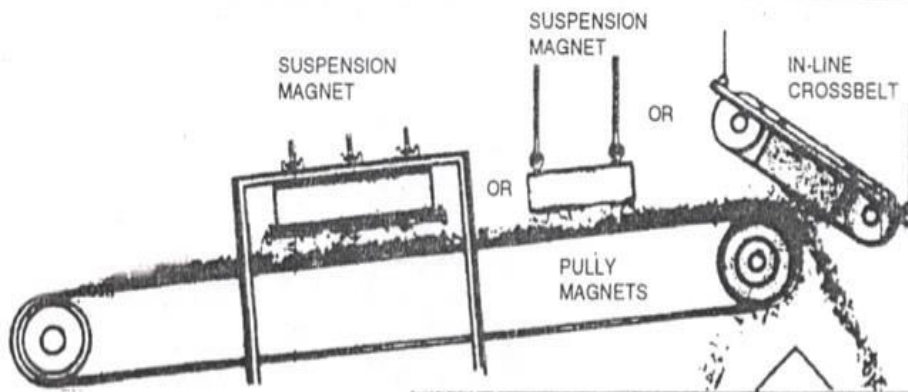
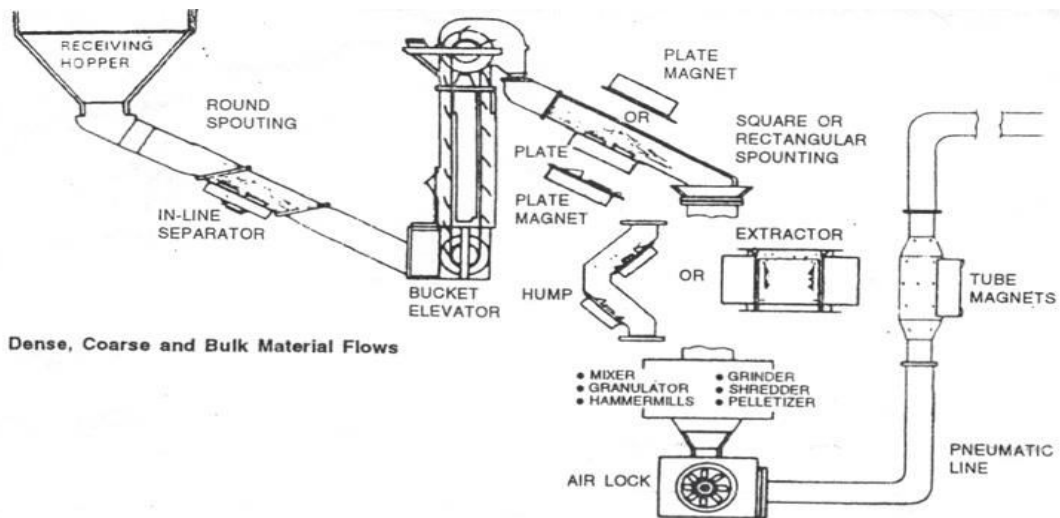
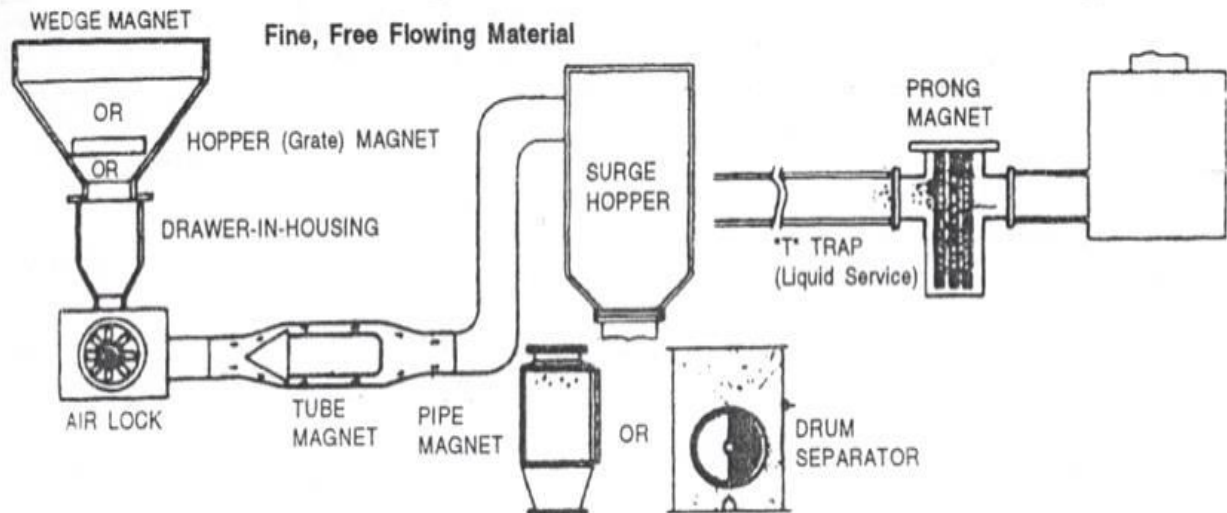
SPECIFICATIONS:-

- A sturdy welded Stainless Steel/M.s Frame.
- A Magnetic drum enclosed in stainless steel Drum having extra powerful Magnets with uniform Magnetic field all along the circumference.
- A neoprene rubber roller with covered bearings.
- A spring steel blade with adjustments for efficient scrapping of the sludge.
- An electric motor working 440 Volts with a reduction gear revolving the drum at about 10 RPM.

We give below the standard models manufactured by us. However, custom made coolant separators can also be manufactured as per specific req.

Model No.	Size Of Permanent Dia	Magnetic Drum Length	Capacity Per Min.
KI CM 701	125mm	190mm	50 Litres
KI CM 702	125mm	300mm	100 Litres
KI CM 703	150mm	400mm	150 Litres
KI CM 704	200mm	450mm	200 Litres

MAGNET LOCATION AND SELECTION GUIDE



Plant & Office:-

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Ahmedabad – 382 415 Gujarat, (India)**

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