

MAGNETICS

Magnets are the unsung heroes of our time! Not as awesome as atomic energy or flashy as electricity. We just think about sticking them on our refrigerators but magnets are much more! Given a chance magnets can be quite unforgettable.

You use magnets everyday--they are throughout our home, car, and offices. Magnets are everywhere. They drive our world. We rely on magnets, electro magnets, and magnetized material. Magnets are in home entertainment equipment, computers, credit cards, and are a key feature in airport security detection. Magnets help travel, communication, and are in the cutting edge of medicine.

People have always been fascinated with magnets. As children we played with toys that had magnets that would repel or attract. At Magic Mountain, CA, magnets are used on the roller coaster to hold the cars on the track and propels the cars over 100 mph. Magnets are perpetual and don't have to be recharged or need batteries. Magnetism is fascinating because of the mystery--you don't see the pushing or pulling.

There are permanent magnets that once magnetized hold onto their magnetism forever. There are temporary magnets, such as a bar magnet on a CD which is degaussed when paid for so as not to set off the alarm at the door. Also an electro magnet requires electricity to operate. A junk yard magnet picks up large amounts of metal and it can be switched on and off.

Magnetism is the force without touch. It has been a source of intrigue to humans for thousands of years. In ancient years Plato was the first to describe the properties of magnets. The Greeks encountered magnets in an area called Magnesia from which our word magnet was derived. Magnetic Loadstone was found throughout this area and is our only natural occurring magnet. Scientists refer to this as Magnetite. How it was magnetized is still a mystery. It is believed it was caused by lightning strikes on the rocks. The first practical use of a magnet was a compass. The scientific age of magnetism began in the 1600s when it was first determined the earth was a giant magnet. This is why the compass needle points north.

In the 20th century consumers started to buy appliances and other items that use magnets. The telegraph was able to send messages by using magnets. This concept would be used in thousands of applications--doorbells, telephones, speakers--but its greatest application was being able to make things spin, like electric motors. Wherever there is a cake mixer, shaver, washing machine, or an assembly line, there are permanent magnets.

Magnets play a critical role in the generators that provide the world with electricity. We also have magnets that are smaller and stronger and are resistant to demagnetization. Industry and technology have worked hand in hand to lead the country to a more prosperous future through magnets.

TV became a reality by using magnets. Medical science, while working with the use of magnets to discover a method to scan the human body, discovered MRI testing. Some applications need strong miniature magnets such as hearing aids, cell phones, and lap top computers. Also, some luxury feature car options--remote control mirrors, power seats and windows, retractable antennas and sun roofs. Magnets help run the tiny motors with these options. But it is the scientists and think tanks that drive the creations of the uses for magnets. Ultimately it is the consumer that demands smaller, more convenient products that are more efficient and that are the driving force behind the numbers of magnets in use today.

While magnets have been utilized by man for some 2000 years, magnets will help us create our future in a number of exciting ways. Magnets are continually being tried and tested to help us make our lives easier through the application of convenience.

When someone says they don't know about using EM® products, just remind them of all the uses of magnets they are already successfully using.

What sets the **EM Controller** different from the magnetic units out there is our patented design to control the flux field. Where other systems have the flux field going vertical, the EM® patented process is 8 to 10 times more effective by directing the flex field to go horizontal with the flow of the water for better, longer and stronger treatment, delivering optimum desired results. In addition to calcium control, the EM® is the only system independently tested that when used in combination with a water softener, reduces salt usage by up to 70 %. Third party test results starting with 19 grains hard water and installing EM® before a water softener:

30% salt reduction = 0 grains hardness

50% salt reduction = 2 grains hard

70% salt reduction = 4 grains hard

No other calcium control system can match the performance of the EM Controller®.