



Your Partner for Magnetic Applications

About Magma

Magma has been manufacturing magnets since 1979.

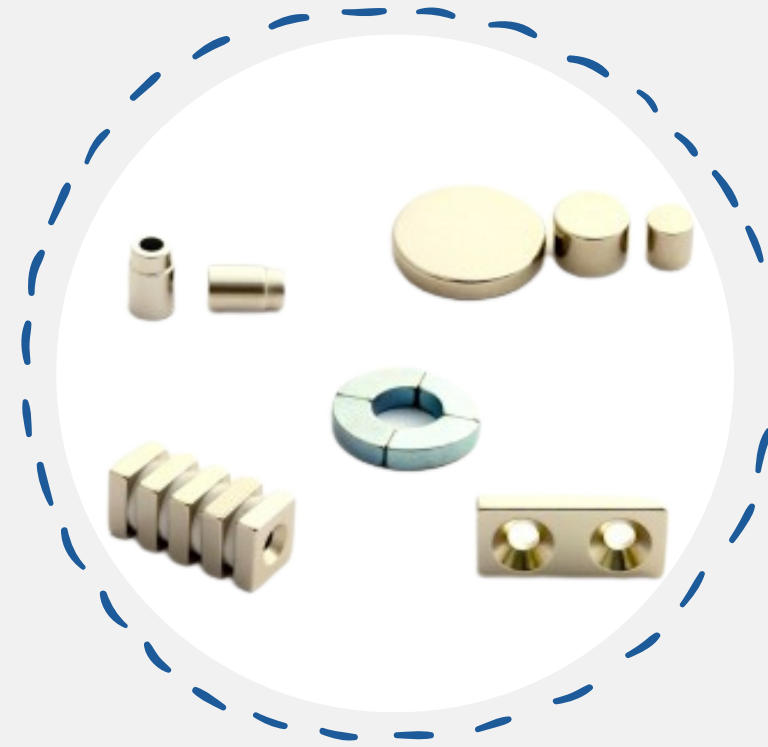
With over 40 years of experience and expertise – we offer the **most innovative magnetic solutions.**



Ceramic magnets



Neodymium magnets



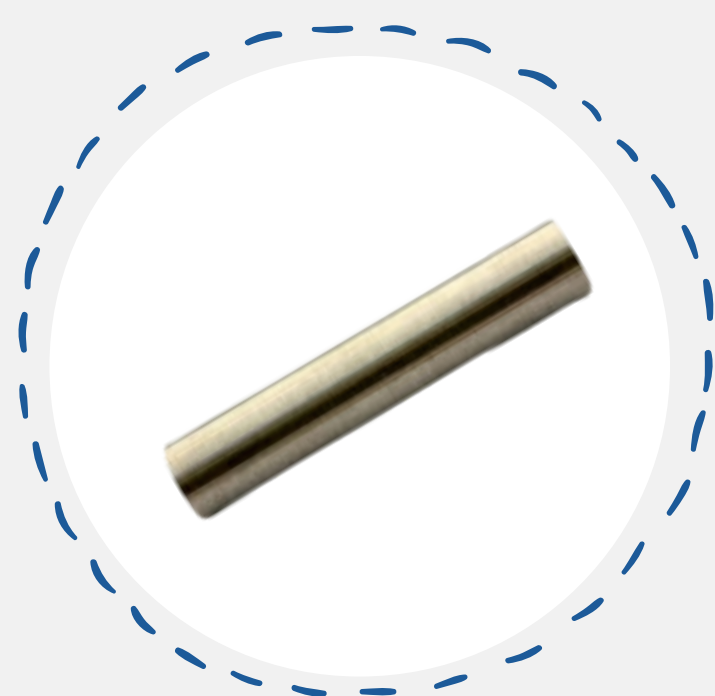
Samarium Cobalt



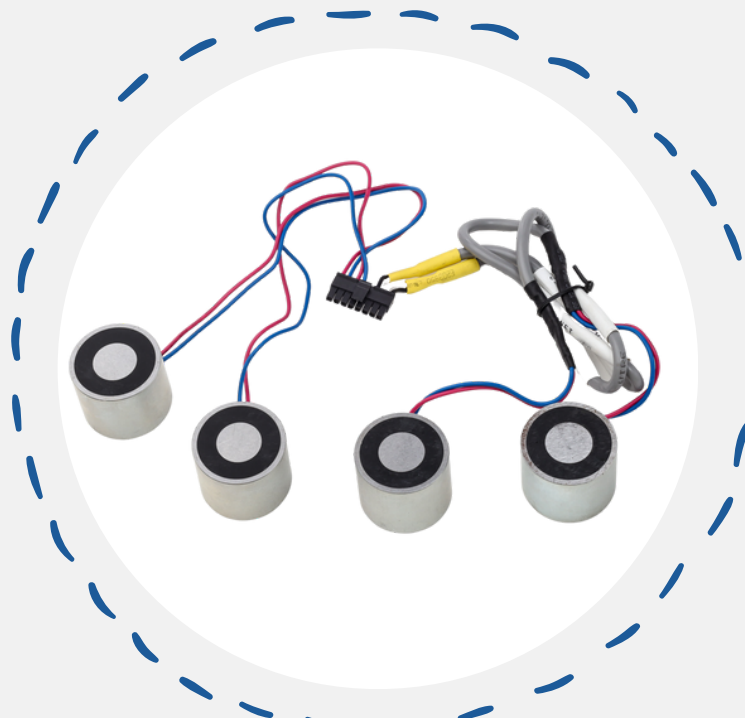
Magnetic



Products



AlNiCo magnets

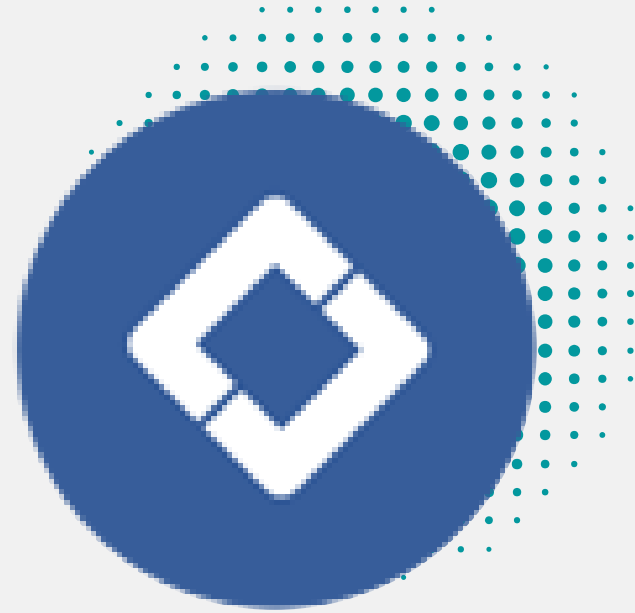


Electromagnets & Solenoids



Magnetic Assemblies

New Line of Products



C-CORES



E-CORES



TOROIDS



SPECIAL CORES

Magma has recently partnered with [Eilor Magnetic Cores](#), specializes in manufacturing [tape wound magnetic cores](#), providing production means for [highly efficient transformers and inductors](#), according to the customer's requirements.

Magnetic Services

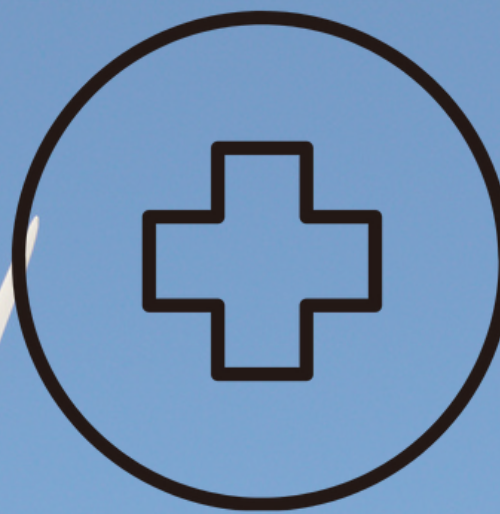
Magma proudly supports R&D and prototyping and offers Magnetic design, consulting & FEM analysis services.

We work with all industries and applications.





HOMELAND SECURITY



BIOMEDICAL

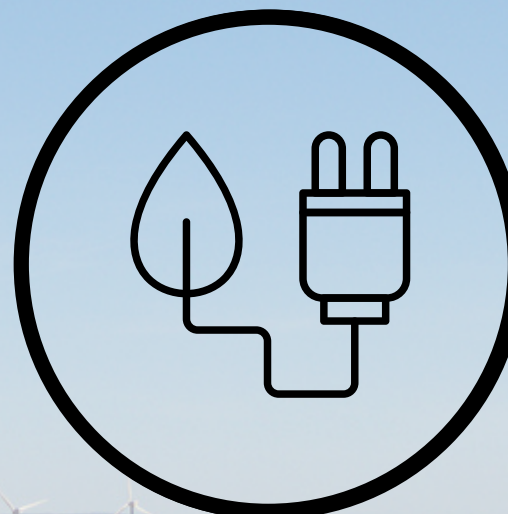


AUTOMOTIVE

MAGNETIC SERVICES



HOME APPLIANCE



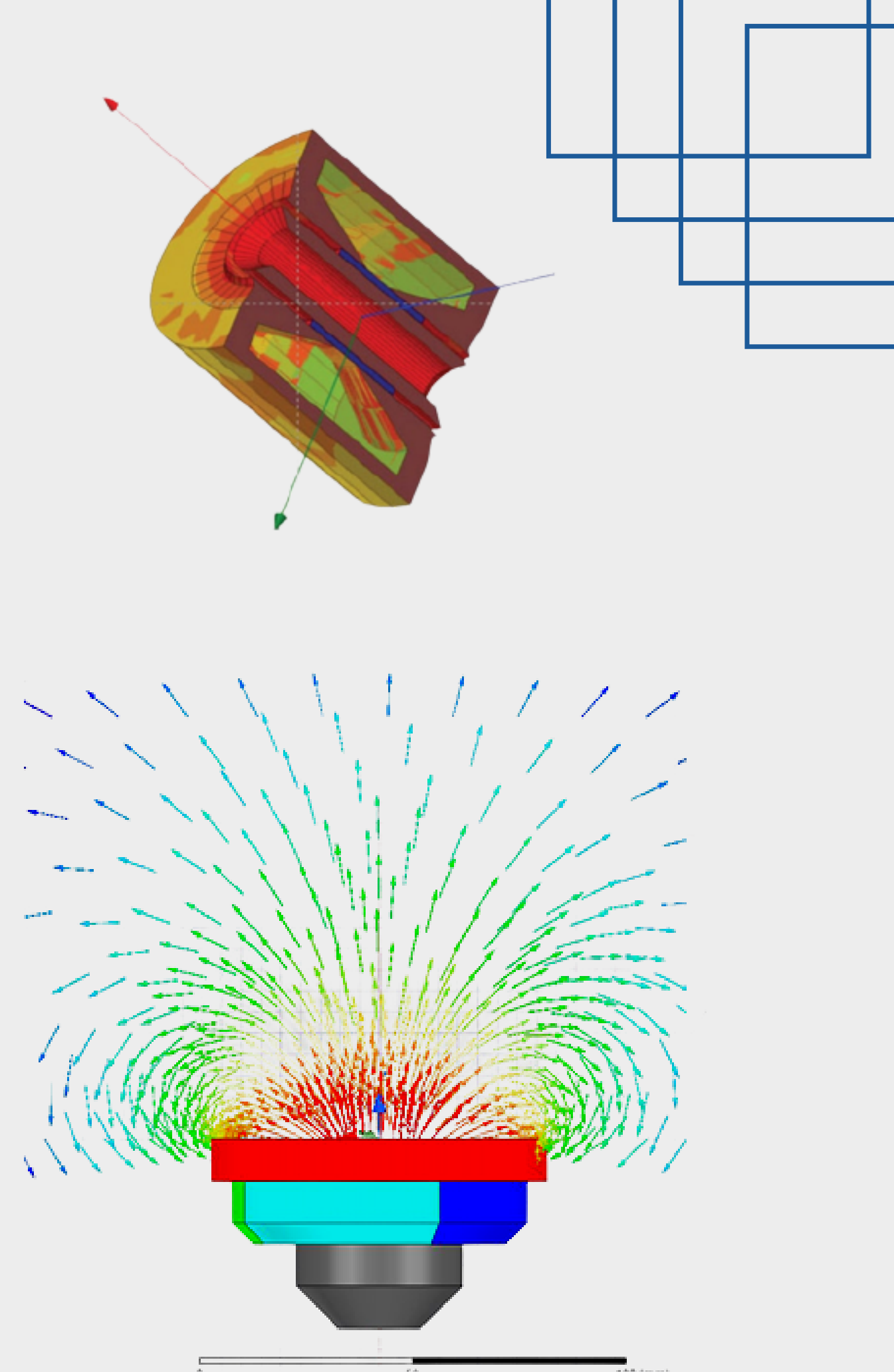
GREEN ENERGY



AVIATION

R&D Support

Using the sophisticated **ANSYS MAXWELL** software and our fully equipped magnetic laboratory, we support our customers from the initial phase of simulation to the mass production stage.

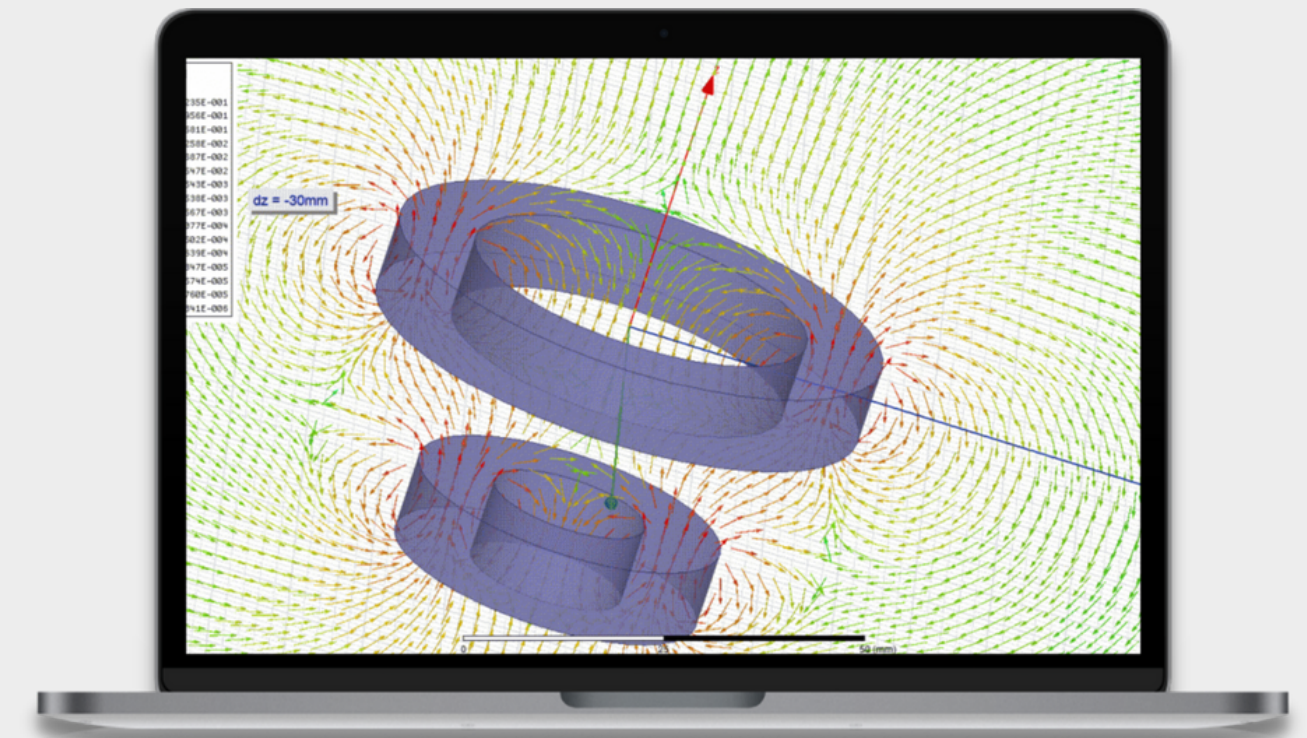


Magnetic Solutions

By performing accurate magnetic simulation, we are perfectly matching the right magnet to the product specifications.

- ➔ Providing the most accurate results
- ➔ Improving magnetic assemblies
- ➔ Lowering manufacturing costs

Magnetic design optimization is our expertise!



Fluent Supply

As serving worldwide companies, we hold a large inventory of magnets to ensure production continuity and provide magnets' fluent supply.





Challenges & Magnetic Solutions

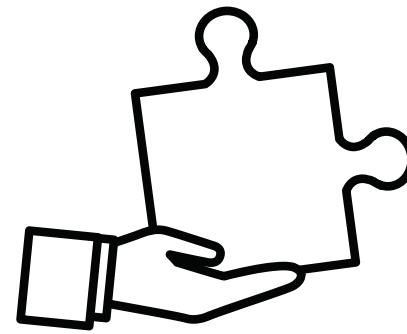
Case Study Examples:



Customer 1

Drug Dispenser Device

Challenge:



Set up an economical assembly process for vast quantities of units in which very tiny magnets are inserted into plastic parts.

Solution:

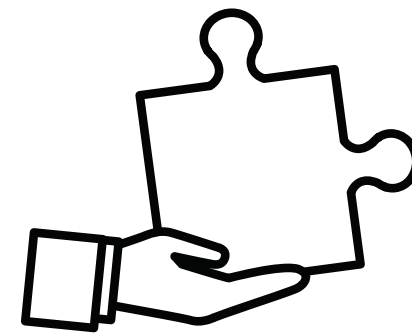


Magma developed an overmolding process, immediately followed by a magnetization process to the customer's satisfaction.

Customer 2

Drug Administration Device

Challenge:



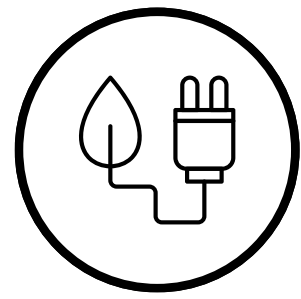
The customer was suffering from a high rejection rate of the final product.

Solution:



Magma ran a sophisticated magnetic simulation which led to a change in both the magnet specifications and the metal part, thus solving the failure the customer encountered.



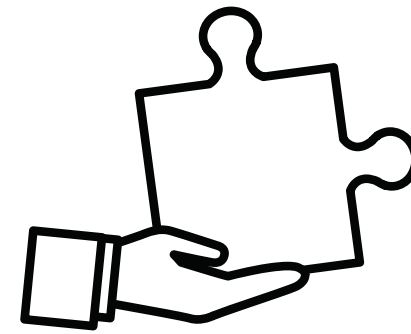


Green Energy

Customer 1

Wind, Wave, and Hydroelectric Energy

Challenge:

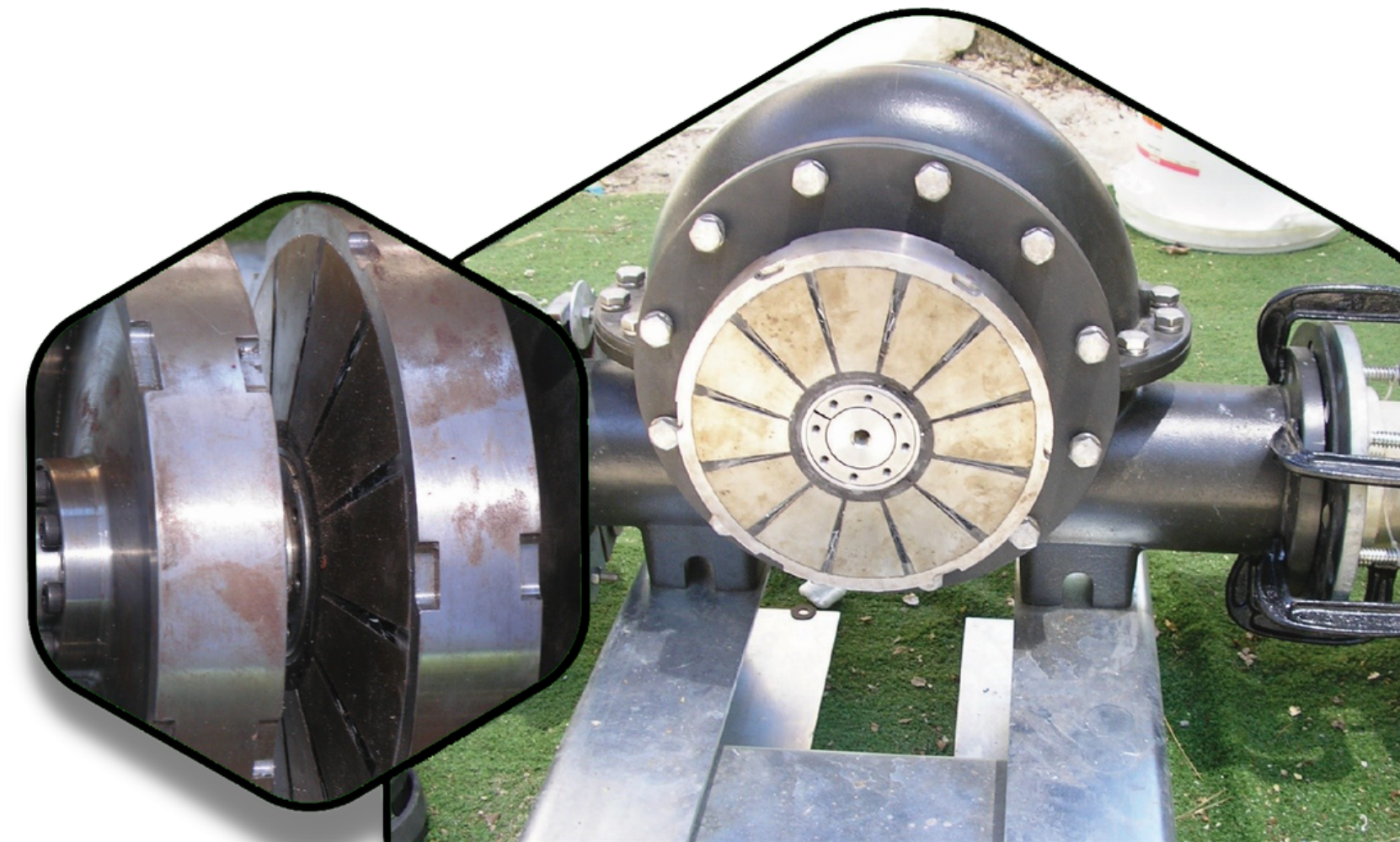


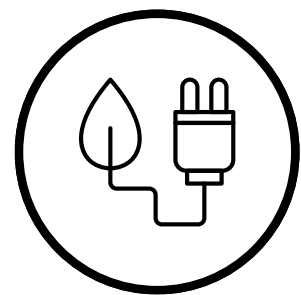
Electricity generation by low-pressure water flows in third world countries.

Solution:



Magma developed an efficient magnetic coupling that enabled the customer to complete his product development successfully.





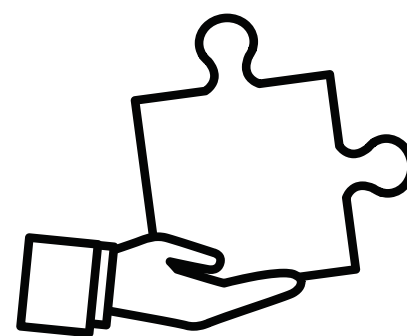
Green Energy



Customer 2

Water Treatment

Challenge:

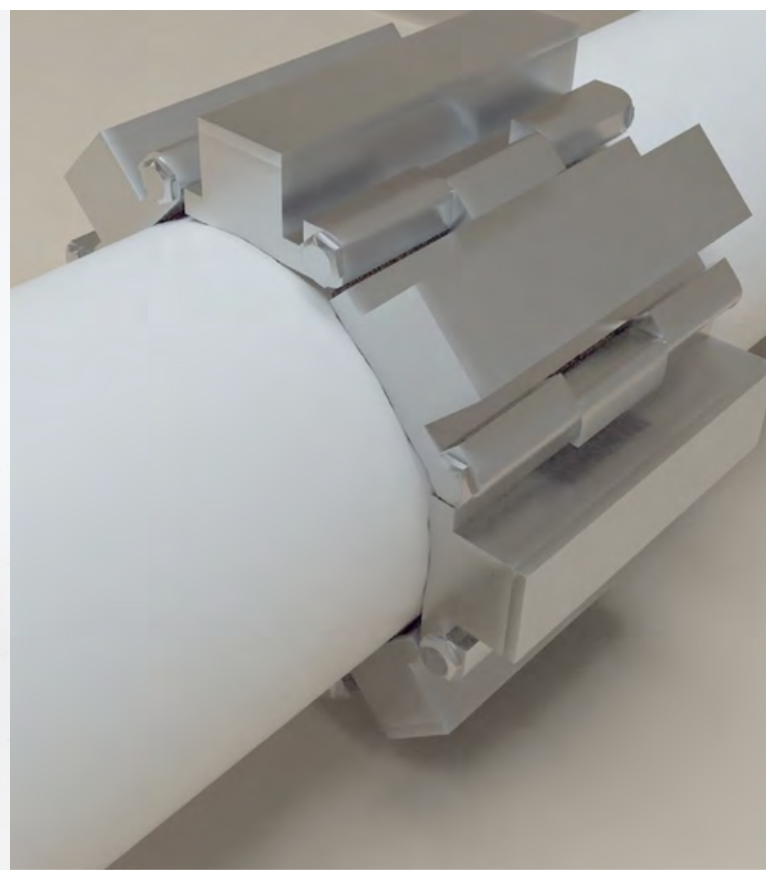


To avoid scale in large diameter cooling tower pipes.

Solution:

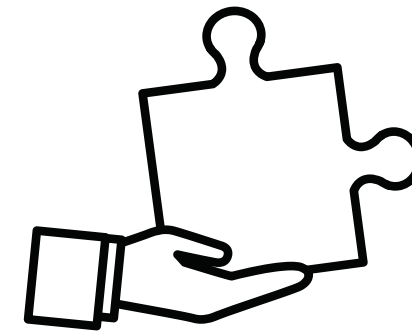


Special magnetic design based on the Halbach array, to obtain a maximal magnetic field in a large diameter (12") magnetic assembly, involving the use of laser welding.





Challenge:



Connecting a device under seawater in harsh and corrosive environmental conditions.

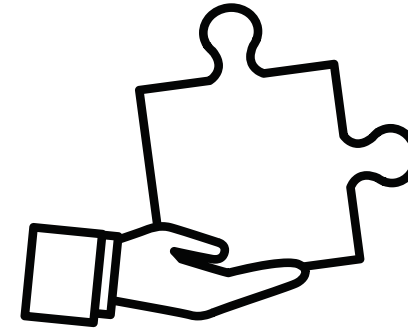
Solution:



Magma developed a uniquely designed electromagnet with a specific metallic structure and cables.

Customer 2

Challenge:



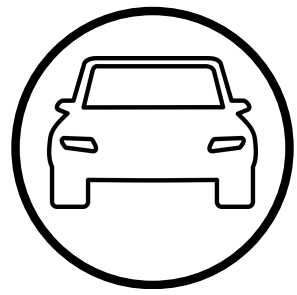
An existing magnetic structure with a high-precision magnetic field was just too heavy.

Solution:

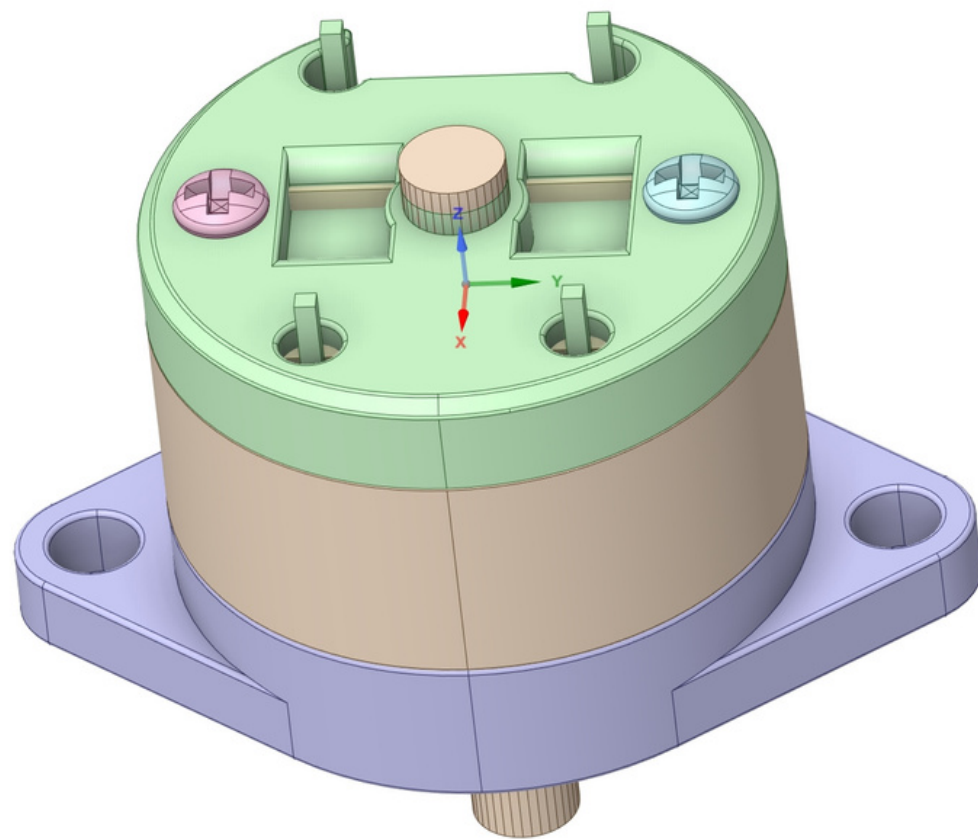


Magma performed a magnetic analysis of the existing magnetic structure. A newly designed magnetic structure offered a 40% reduction in weight while maintaining the same high-precision magnetic field and same magnetic performance.





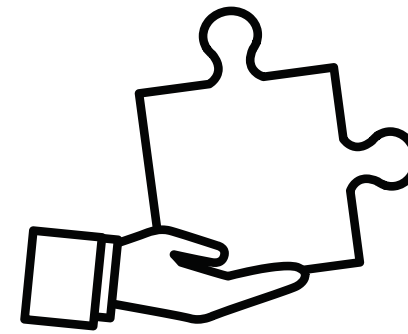
Automotive



Customer 1

Car Rotary Solenoid

Challenge:

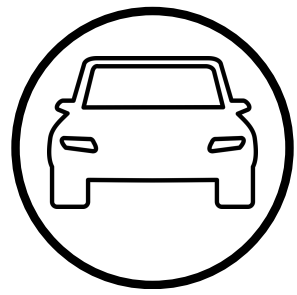


To improve the magnetic torque of an existing rotary solenoid under size limitations.

Solution:



Magma performed a magnetic simulation for the existing solenoid and recommended changes that would improve performance.



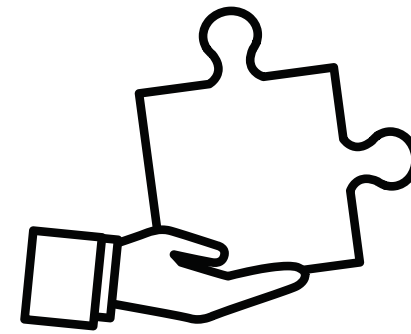
Automotive



Customer 2

Plastics Company

Challenge:



The customer encountered a problem in one of their van vehicles, in which the back door did not close hermetically.

Solution:



Magma designed a specially shaped magnet, inserted into a plastic structure.



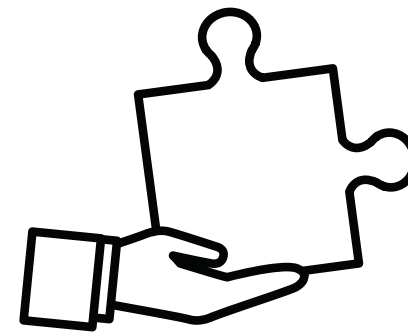
Home Appliance

Customer 1

Water dispenser



Challenge:



During the mass production phase, the customer experienced a failure due to deviations in both the plastic part and the magnetic design.

Solution:



Within two weeks, a solution was provided to keep the production line from halting; simultaneously, magnetic optimization was performed, resulting in a modified plastic part and redesigned magnet.



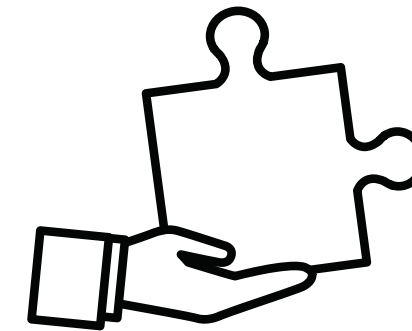
Home Appliance



Customer 2

Pool cleaning robot manufacturer

Challenge:



To create mechanical movement in a corrosive and harsh environment using a minimum energy.

Solution:



Specific design and manufacture of a magnetic coupling based on a full radial ring inserted in a plastic cup, providing complete protection against corrosion.



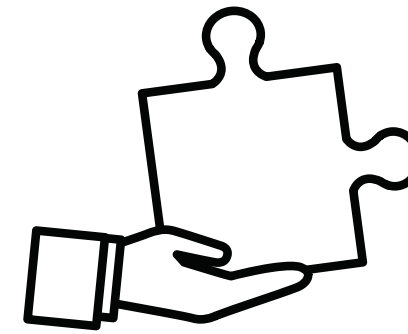
Consumer Goods

Customer 3

Hermetically Sealed Pouch



Challenge:

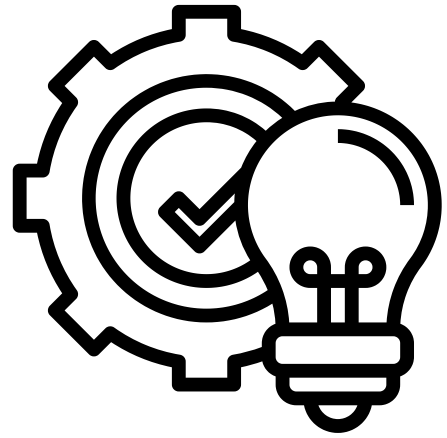


A customer entered into a conflict with his complete magnetic product manufacturer.

Solution:



In less than three months, an entire production line was set up for the product, with improvement and reduction in the cost of the magnetic components.

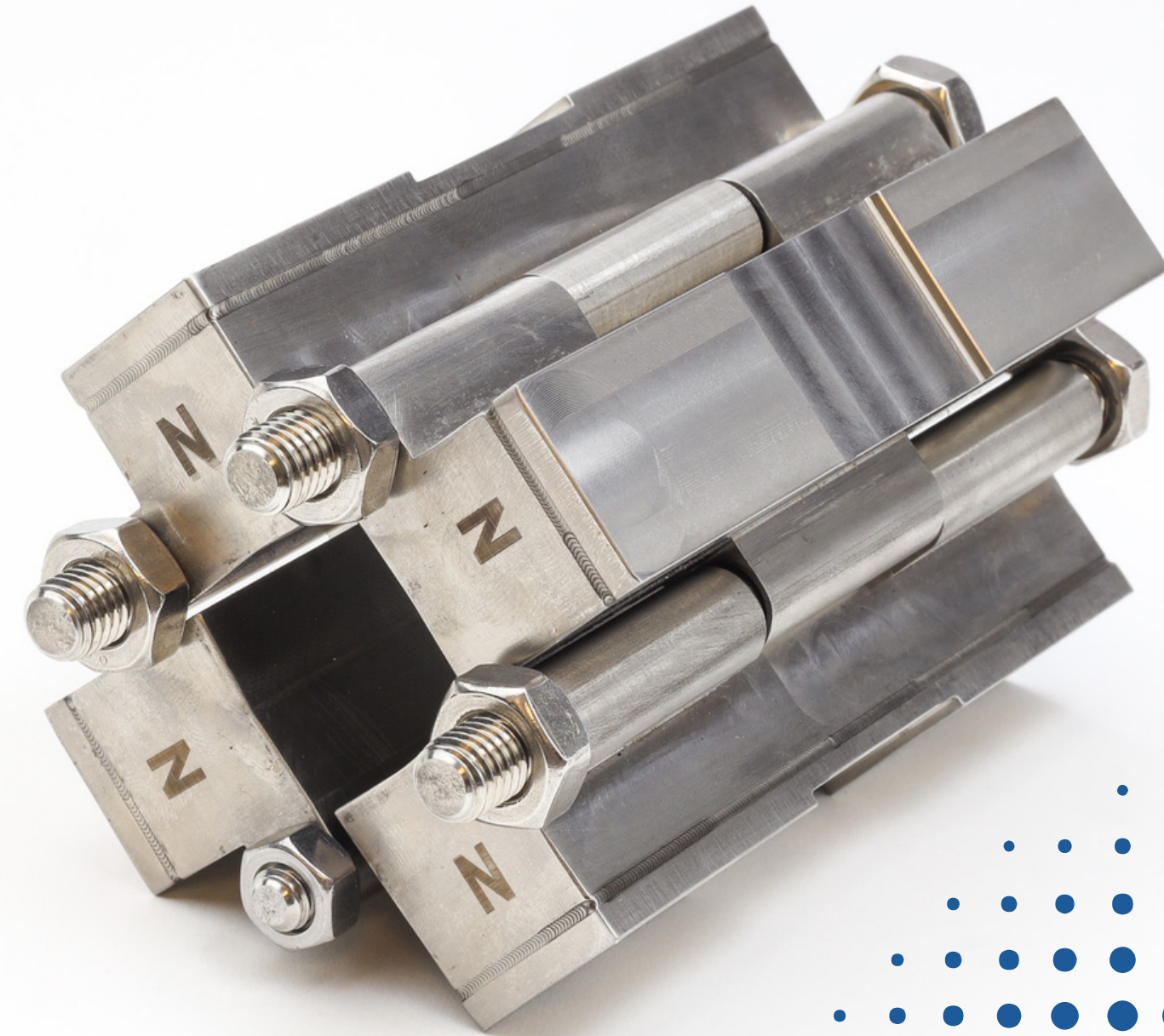


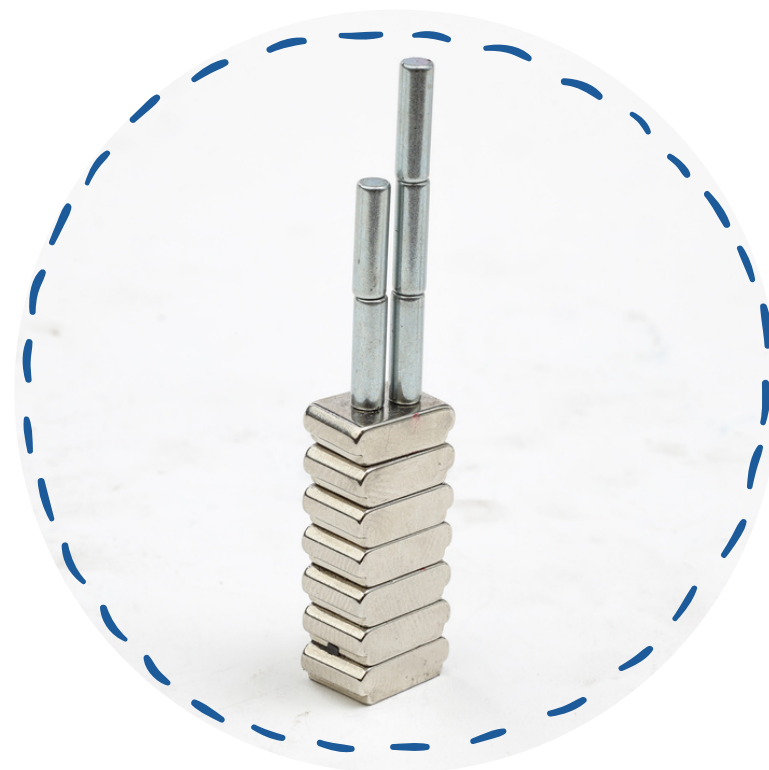
Looking for a strategic partner?

For example:

in this project, Magma became
a significant partner of Hydroflux:

www.hydroflux.com





**Looking forward to
being your partner!**



www.magmamagnets.com



+972-50-5513013 / +972-722150592



Gil@magmamagnets.com

Trade@magmamagnets.com



Electromagnet Online Shop:

www.magmamagnets.com/shop/





Thank You!

