Die Casting's Answer to Plastic MAGNESIUM

Today's world places high value on products that are portable, small, lightweight, sleek, and cutting edge. This rapid evolution of technology poses a unique challenge for engineers to stay a step ahead of the competition while also meeting the demands of their consumer base regarding features that are most important.

Magnesium vs. Plastic

Plastics technology has seen some improvement, but magnesium has gained popularity due to its unique properties that are inherently superior to plastic –greater tensile strength, rigidity, impact resistance, thin wall capabilities, EMI protection, and ability to withstand higher temperature applications. For a company that values quality and superior product performance, magnesium is increasingly becoming the standard at which the bar has been set.

Magnesium vs. Other Common Metals

Magnesium, in comparison to steel, is a more cost-efficient, lightweight solution. Less energy is used to melt and die cast magnesium, giving the ability to save on operational costs in the long run. Having about the same material cost as aluminum, magnesium becomes an alternative option for applications that require material properties that magnesium can provide. Vehicles, airplanes, medical equipment, sophisticated electronics, power tools, and rugged outdoor items – these are just a few of the items amongst many industries that have hopped onto the magnesium "bandwagon", and have reaped the benefits.

CWM in the 1950's

Early on, we listened. We brainstormed. We saw the vision. Once the realization of magnesium's many benefits set in, we expanded our staff and invested in equipment to integrate magnesium into our die casting workflow. We rearranged our facility to dedicate shop floor "real estate" to magnesium. We shifted our sales and marketing focus to incorporate the use of magnesium. We moved with the market because our team saw an opportunity for our corporate partners to have the option of improving their product in ways which were previously deemed impossible. While the benefits of investing in magnesium shows our technological advancement and status as a leader in the die casting industry, it is more important that it serves as a beneficial solution to you, our partners in success.

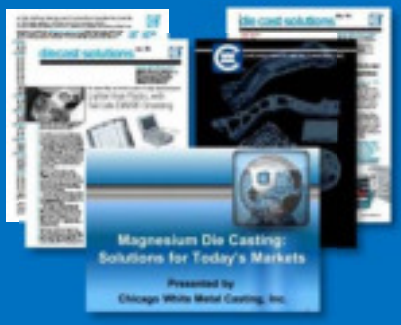
Our corporate mission is to "create success by enriching the

lives of others," and that is our ultimate goal. What will make your company more successful? What solutions can we provide to improve your product, your image, your quality, and your sales? How can Chicago White Metal be your partner in success?

Read more about Magnesium Die Casting:
www.cwmdiecast.com/alloys/magnesium-die-casting.html

Die Casting Design Center

Browse through our "Magnesium" section for more white papers, webinars, case studies, guides, and many other resources!



www.cwmdiecast.com/design-center.html

MAGNESIUM

CWM Case Studies

At CWM, we manufacture hundreds of thousands of magnesium parts across various industries, accounting for almost half of our overall sales each year.

Case Study #1: VARIOUS MOTOR COMPONENTS

Our first case study includes 6 different die cast components that go into a portable O^2 concentrator unit. CWM met the challenge of the medical industry's strict standards, as well as the need for light weight portability, tight tolerances, and cost-effective, high volume production processes that our customer required.

Case Study #2: HANDLE

This handle is used in a high-end safety box cutter. It was a conversion from a multi-part plastic assembly into a single magnesium part with a significant increase in strength and no increase in weight. The previously assembled "tab" was incorporated directly into the magnesium casting design, saving cost. As a result, our partner in this project enjoyed the accolades of winning the NADCA Die Casting Design Award for the Magnesium in 2017.

Case Study #3: REAR DRIVER & BACKPLATE

A supplier of high-end products for dental offices partnered with us to incorporate their first-ever magnesium parts into the design of a high-end LED dental light. The light weight of the arm and back plate castings as well as the ability to add a highly cosmetic finish made this part a success, also winning a NADCA award.