

DIE CASTING SOLUTION



From your idea, to the finished component in Aluminum or Zamak





Our **expertise** combined with





the most advanced **technology**





People

The success of our company and the quality of the services provided to international customers have solid roots and are based on the great competence of all the people who work there. Over time, a close-knit and always available team has made it possible to achieve truly ambitious goals. At every level of responsibility and whatever the task performed, **FP Cupido**'s philosophy is to enhance cooperation and dialogue between resources for the optimization of work and the resolution of problems in increasingly rapid times.



Lorenza Cupido Owner | Purchasing and Personnel Manager

> **Pierluigi Cupido** Owner | Sales Manager





Emmanuelle Taverna Export sales assistant Marco Ascani Plant Manager Andrea Temperilli Technical Office Manager

The success of our company is based on the great competence of all the people who work there Mauro Barontini Quality and Environment Manager



Services

Analysis of the 3D project Design and construction of the mold Aluminum Die-casting Zamak Die-casting Cleaning and finishing of components Assembly and packaging

From project to finished component

Our expertise combined with the most advanced technology. An optimized process and phases that are always traceable. The complete service: from your idea, through the 3D project, to the finished and packaged zamak or aluminum component. Thanks to the experience acquired over the decades and the help of historic partners, **FP Cupido** is the ideal prime contractor for the customer who wishes to achieve their final goal in complete safety and tranquility. **FP Cupido**, with a staff of around **50 employees** and a surface area of **10,000 m**², is able to take care of all the production phases, from the design and construction of moulds, to aluminum and zamak die-casting, from polishing and cleaning of metals to finishing galvanic (galvanising, nickel plating, etc.) until final testing and shipping.





Analysis of the **3D project**

You provide us with the 3D model, we will take care of delivering the finished product to you. We receive your file, in the most common CAD formats, and we evaluate the technical feasibility and prototyping, if necessary, indicating any improvements and measures to be applied to the article in order to make it printable at the best cost and with the best manufacturing quality. It is in this phase that we define the production cycle and the idea of the mold takes shape.

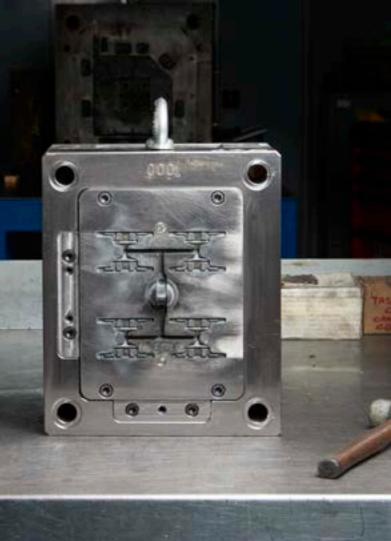
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Design and construction of the mold

With our experience we coordinate the design, casting and flow simulation and mold construction activities, making use of reliable and time-tested partners close to our factory. The mold is studied by identifying the most suitable solution for the shape, size and morphology of the article, defining the number of cavities, their position and that of the casting connections, the steel to be used, the necessary treatments, etc. Once the project has been defined, in a few weeks we are able to build the mold and produce the first sampling.



Aluminum Die-casting



Aluminum Die-Casting

To meet the needs of its customers, since 2018 the company has introduced aluminum die-casting, first with a new robotic production cell with a clamping force of 550 TON and later, in 2021, with an additional 650 TON production cell. The characteristics of aluminum associated with efficient systems permits the production of articles for many application sectors allowing the company to produce components that are used in the electronics, lighting, accessories for doors and windows and furnishing accessories, just to name a few.

The reasons for aluminum die casting

- · Ideal for the production of medium and large series
- · Good surface finish
- · Very high aesthetic qualities
- · Excellent mechanical characteristics
- · Excellent predisposition for any mechanical processing
- · Corrosion resistance
- · Optimal rigidity and strength/weight ratio
- · Complete recyclability
- · Low production/raw material costs

Main characteristics

One of the best technical characteristics of aluminum is undoubtedly its lightness. Just consider that for the same volume, aluminum weighs about 1/3 of copper and steel. In addition, the ductility and malleability make it an easily workable material and suitable for undergoing machining processes both at low and high temperatures.

Aesthetic quality

Recyclability is one of the main advantages of aluminum. Few materials in the world can be 100% recycled infinite times without losing the original qualities. They remain unchanged indefinitely, even as a result of numerous recycling phases even when from being primary aluminum the metal becomes "recycled aluminum" or "secondary aluminum".

Costs

The die-casting of aluminum, performed with the latest generation plants, allows to realize the production of small, medium and large quantities, allowing the correct amortization of the cost of the mold and its wear over time.







Zamak is is an alloy capable of guaranteeing very high-quality standards at low operating costs. Through the help of 4 die-casting machines of the latest generation 4.0, with tonnages from 50 to 135 TON, the company produces objects ranging from the sector of accessories for doors and windows to furniture, lighting and furnishing accessories. Particular attention is paid to the procurement of only first choice zamak ingots, which guarantee long-lasting results and reduced waste.

The reasons for zamak die casting

- · Very high cycle repeatability
- · Possibility of creating walls with reduced thickness (up to 1 mm)
- · Very high surface compactness
- · Excellent predisposition for any mechanical processing
- · Excellent affinity with any galvanic process
- · Very long equipment life
- · Low production costs

Main characteristics

Die-cast zamak articles offer greater resistance to impact and wear than articles produced with other alloys or plastics due to the fact that zamak has a hardness comparable to that of cast iron or brass. In addition, the corrosion resistance, already very good, can be further increased through galvanic processes, optimally supported by the alloy. The excellent predisposition to support mechanical processing, the possibility of achieving very reduced thicknesses (less than 1 mm), the centesimal respect of tolerances are other characteristics that make zamak the ideal alloy for the construction of very precise technical and aesthetic details, even if very complex, at very low costs.

Aesthetic quality

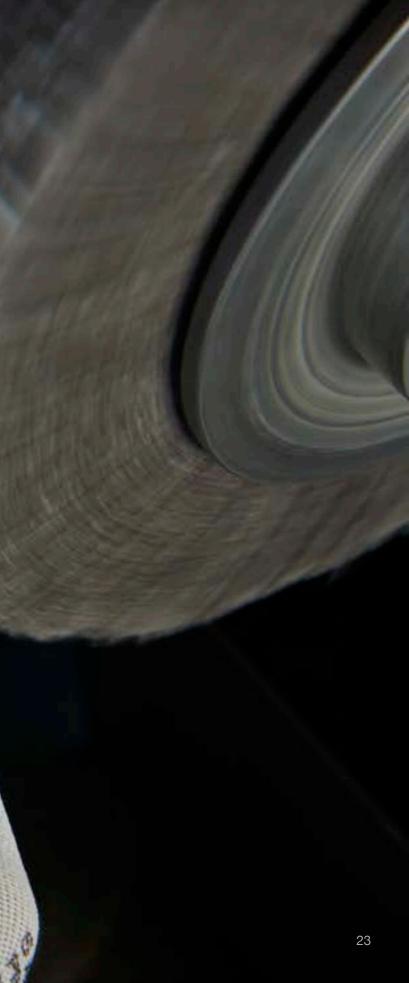
In addition to a much greater resistance than aluminum alloys, magnesium alloys and plastics, Zama alloy ensures the production of items that are not only functional, but also with a high aesthetic profile. Zama die castings are widely used in the construction, electronics, automotive, furniture sectors, as well as in various other areas. In short, using Zamak means making a choice in the name of efficiency and quality.

Production Costs

The die-casting of zamak allows to obtain, at low cost, articles and parts with very complex geometries and reduced thicknesses of absolutely constant quality, both for small and large productions. The cost of the mold also, in addition to having low costs, can be amortized over an almost infinite number of strokes, working the alloy at relatively low temperatures. Recyclable production waste, low energy consumption, contribute to making the process very economical and in perfect compliance with the latest environmental regulations.



Cleaning and finishing of **Components**





Assembly and packaging

An entire department dedicated to the assembly of your components, both with small systems on loan for use and built internally. Following your specifications, we pack the products with the necessary accessories so that the goods are bagged, boxed, labeled and ready for delivery to your departments or to your end customers. Each bag, each box and each carton are carefully checked and weighed with piece counting scales in order to avoid the lack of even the smallest washer.

Cleaning and finishing

Grinding and tumbling are among the founding activities of FP Cupido, decades of experience have allowed us to set up efficient departments with expert staff who are sensitive to every type of problem you need to face and resolve. In one department there are dozens of contact wheel taping machines, free belt taping machines, horizontal machines and brushing machines, in the other dozens of circular tumblers, corn sawdust dryers and air dryers, both with great attention to safety, cleanliness and 'environmental impact. Without forgetting the sandblasting and tumbling systems, which are also useful in numerous situations.



Certifications

in a demanding and dynamic global market.

FP Cupido is certified according to **UNI EN ISO 9001** and **UNI EN ISO 14001**. It was not the customers who made certification a necessary requirement, but the desire of the owners to guarantee high quality standards and services, introducing controls in the production phases and verification indices of the internal processes. Continuous improvement is the basis

of companies that, like **FP Cupido**, want to continue to be protagonists



Sustainability

Saving

Through the installation of ad hoc systems and software, we constantly and punctually monitor the energy consumption of our machinery. The constant renewal of the machine park, with new and more efficient machines, has allowed us to reduce consumption, thanks to lower demand and greater efficiency. The solar roofing of our buildings has been completely covered with photovoltaic panels, allowing us to provide, albeit in part, the internal electricity needs.

Recovery

Great attention to the recovery of die-casting waste materials, both in the reuse of sprues and vent bags, and in the disposal of waste entrusted to certified professionals. Nothing is neglected and left to chance, the competitiveness and quality of our products also pass through the attention to the maximum yield of raw materials and the reduction of their consumption. A logic that allows us to achieve efficiency and, above all, respect for the environment!









FP Cupido srl

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