LEGOR®
Extraordinary matter

Legor 3D Metal Hub

WE PRINT YOUR IDEAS

legor.com

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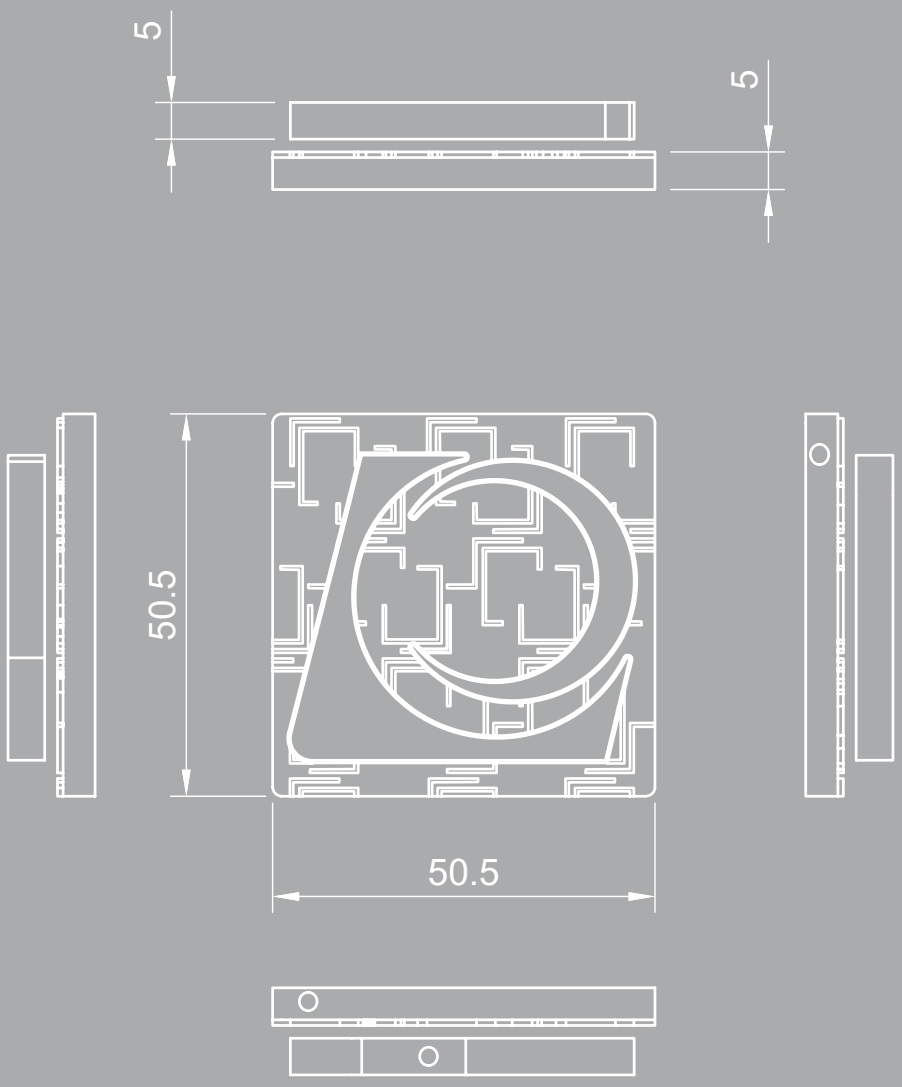
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WHO WE ARE

For over 45 years, Legor has been transforming metals into innovative **alloys, powders, and galvanic solutions** for fine jewelry, fashion accessories, and industrial applications. Today, Legor is a **Benefit Company** driven by strong ethical values and a deep commitment to sustainable innovation.

Our **metallurgical expertise** is combined with a constant pursuit of **innovation** in the **3D Metal Hub** – our center of excellence specializing in Binder Jetting (BJ) additive manufacturing. This center of excellence specializes in **Binder Jetting (BJ) additive manufacturing** and was created with the mission to offer a **sustainable and flexible production process**, capable of shaping components in **Steel, Silver, Bronze, Titanium**, and **Platinum**, while overcoming the limitations of traditional manufacturing.

TECHNOLOGY: BINDER JETTING

Binder Jetting is a **powder-bed 3D printing** technology offering unprecedented design freedom. This innovative process revolutionizes traditional manufacturing by shortening the supply chain and reducing development time. By eliminating the need for molds and tooling, it allows for greater production agility and a more sustainable approach.

KEY BENEFITS FOR BINDER JETTING

Design freedom

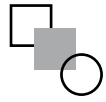
Create complex geometries, interlocking internal channels, hollow structures, or lattice designs – all without welding.

No supports required

Unlike other technologies, the powder bed itself acts as a support, eliminating the need for additional structures and simplifying post-processing.

High productivity, optimized costs

Binder Jetting allows medium-to-large production volumes at competitive costs, optimizing production time.



Wide material compatibility

The process is compatible with a broad range of powders, including precious metals and complex alloys.

Powder reusability

Unbound powder is fully reusable, minimizing waste.

Fast prototyping

Quick turnaround for sampling and prototypes.

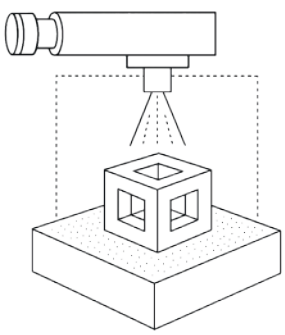
TECHNOLOGY PARTNERSHIP WITH HP

Thanks to our collaboration with **HP**, a global leader in industrial printing solutions, our 3D Metal Hub is equipped with **HP Metal Jet S100** printers – among the most advanced systems worldwide for metal additive manufacturing.
The HP Metal Jet platform ensures **outstanding quality**, scalable production capacity, and the ability to produce **complex geometries** with a **sustainable footprint**, thanks to high powder reuse.
This partnership is more than a technological supply – it's a **true innovation accelerator**. It allows us to work side-by-side with one of the global leaders in additive manufacturing, sharing know-how, anticipating trends, and co-developing tailor-made solutions for the **fashion, luxury, and industrial sectors**.

With HP, Legor is redefining 3D printing: **faster, more advanced, more sustainable.**

PRINTING PROCESS

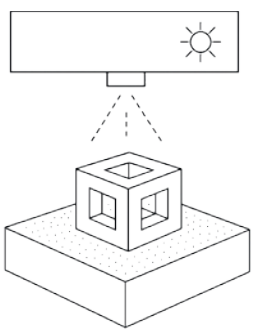
PRINTING



An inkjet printhead selectively deposits a liquid binder, layer bylayer, onto a metal powder bed, creating the so-called “green part”.

CURING

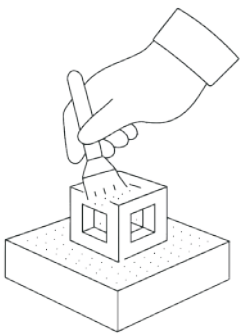
hardening



The green part is stabilized at low temperature to make it robust enough for subsequent steps.

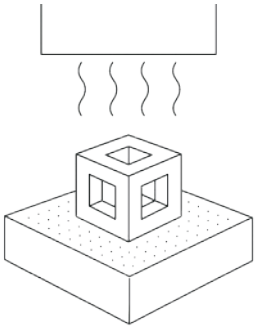
DEPOWDERING

cleaning



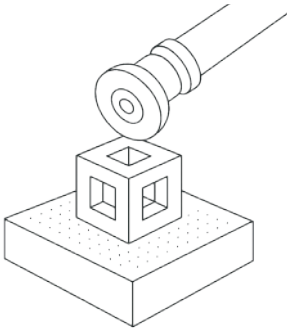
Unbound powder is removed and can be completely recycled, minimizing waste

SINTERING



The part is heated to a temperature below the metal's melting point. The binder burns out, particles bond, and the piece densifies with up to 20% shrinkage.
Final density can reach 99.8%.

FINISHING



Parts can be polished, coated with galvanic or PVD treatments, or CNC machined to achieve the desired surface finish.

DESIGN GUIDELINES

- **Aspect Ratio**
  Max 10:1, ideal ≤ 5:1

- **Max part dimensions**
  50mm (L) x 80mm (W) x 40mm (H)

- **Min wall thickness**
  1–1.5mm

- **Min hole diameter**
  >1.5mm for effective depowdering

To achieve optimal results, we recommend following these basic design rules.

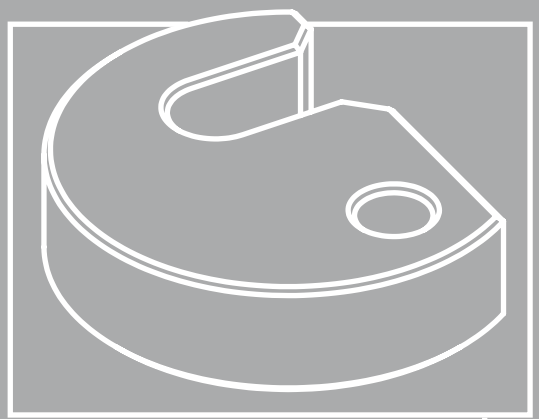
For more complex geometries, our technical team offers a **co-design service** to optimize your CAD file.

- **Undercuts**
  from 3mm

- **Min edge radius**
  0.5mm to improve finish and strength

- **Hollow parts**
  at least two holes required for depowdering

- **Lattice/interlinked parts**
  min wall and gap of 1.5 mm



OUR WORKFLOW

1.

CAD file submission

We accept STEP, STL, 3MF files.

2.

Analysis & Co-design

Technical assessment and, if needed, support in design adaptation.

3.

Production

We manage the full process from 3D printing to sintering.

4.

Post-processing

A wide range of finishing options available through our partner network.

5.

Delivery

From single prototypes to medium and large production batches.

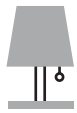
APPLICATIONS, MATERIALS & SERVICES

APPLICATION FIELDS

Luxury & Fashion
Jewelry, accessories, eyewear

Automotive & Industrial
Functional and technical components

Medical & Biomedical
Surgical tools

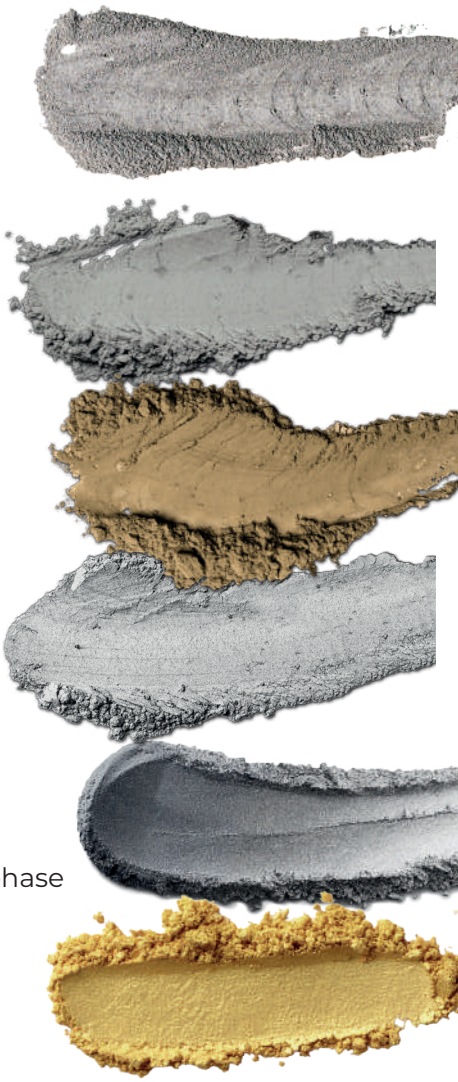


Design & Consumer Goods
Furniture and lifestyle items

Sports & Leisure
High-performance components

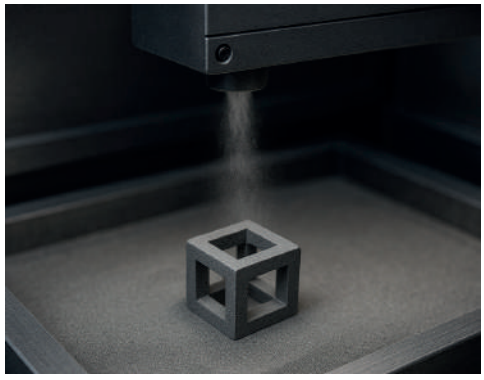
AVAILABLE MATERIALS

- 316L STAINLESS STEEL
- 17-4PH STAINLESS STEEL
- NICKEL-FREE STAINLESS STEEL
- SILVER 925
- BRONZE (on request)
- TITANIUM
- materials on request/projects in R&D phase
  PLATINUM 950
  GOLD



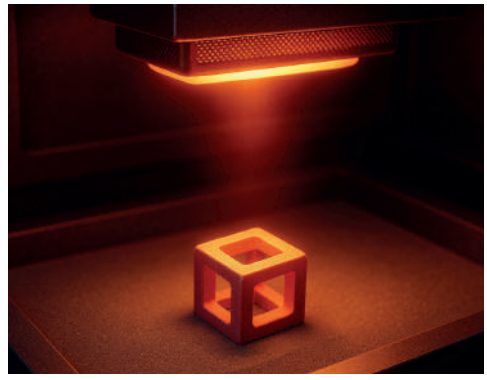
OUR SERVICES

PRINTING SERVICE



From design to final part – prototypes and production.

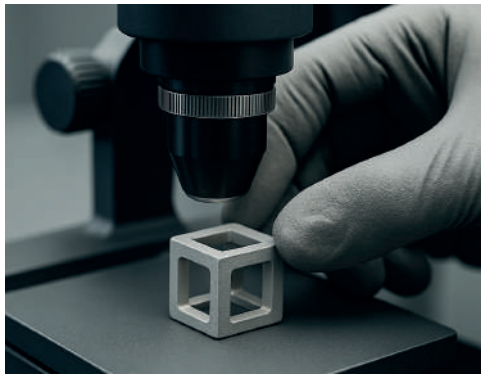
SINTERING SERVICE



Thermal treatment of green parts from external sources.

Immagini a scopo illustrativo.

R&D AND CONSULTING



New material development (e.g., gold, titanium), validation, and testing.

METAL POWDER SALES

Supply of premium powders for additive manufacturing.

WHY CHOOSE THE 3D METAL HUB?

EXPERIENCE

Over 45 years of metallurgical expertise

FLEXIBILITY

On-demand production, from single pieces to mid/large batches

SUSTAINABILITY

Waste reduction and full powder reusability

INNOVATION

Ongoing research in materials and processes

TECHNICAL SUPPORT

Personalized consulting at every stage of your project

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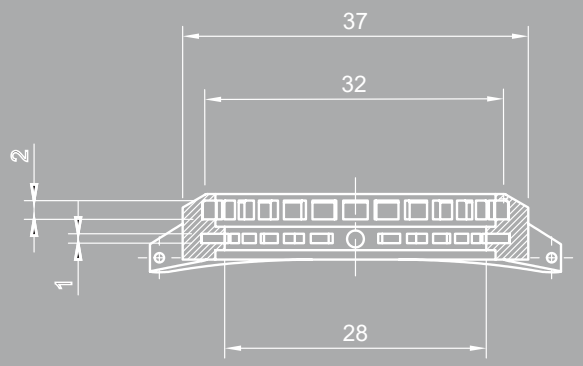
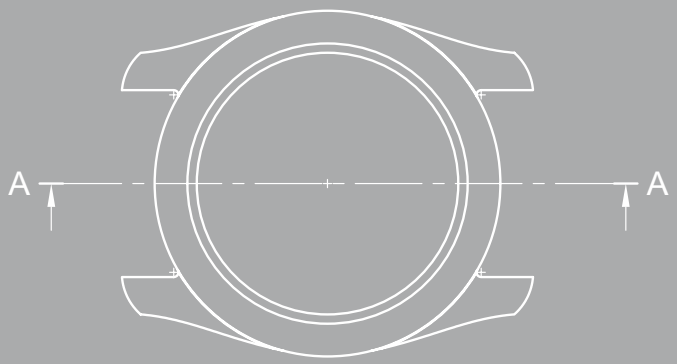
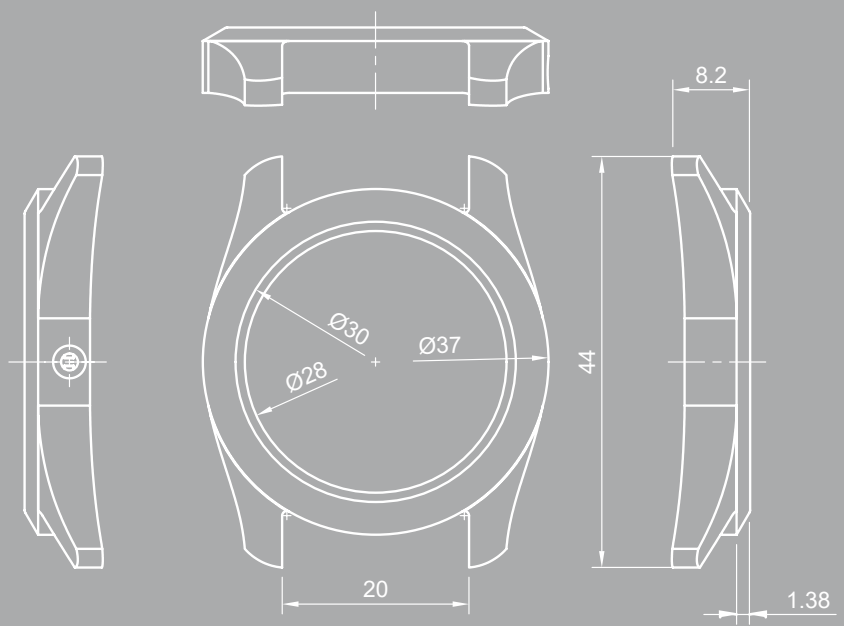






COLLABORATIONS

Amano+

Highly customizable watch by Thomas Lehman (AnalogLab), printed in stainless steel 316L.

IED

Collection designed by two IED Torino students – winners of the Jewellery Design project – printed in stainless steel 316L.

Puntozero

Watch case with lattice structure, developed from a design optimized for additive manufacturing.

XYZ, LEM, Puntozero

Keyring printed in 316L steel and bronze, born from a cross-disciplinary systemic project.

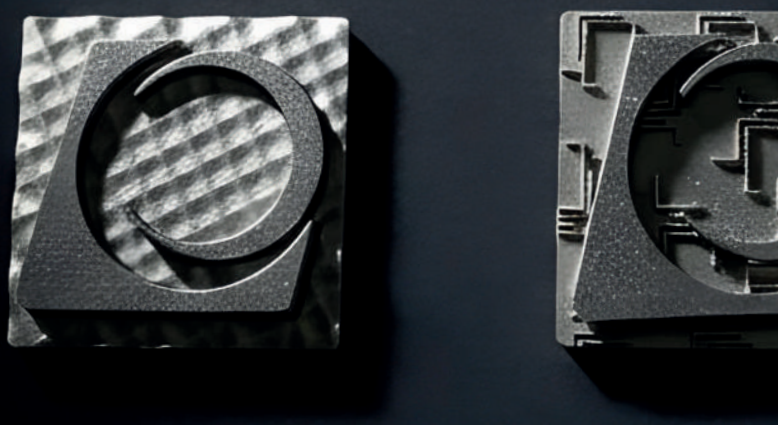
Indigo Runes

A unique collection of gaming dice printed in stainless steel 316L.

Legor: your innovation partner

Legor 3D Metal Hub is your strategic partner for transforming ideas into metal parts, accelerating production and delivering exceptional quality.

Shape your ideas in metal.



Do you have a project in mind?

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