

# Industrial-grade 3D Printing Services

High-quality service from printing to post-processing

3D  
FORM  
TECH

## 3D Formtech – your partner for high-quality 3D printing

At 3D Formtech, we serve manufacturing companies in Finland and internationally. We are the largest industrial 3D printing company in Finland in terms of turnover, and our factory in Jyväskylä supplies a significant proportion of the industrial 3D printed parts needed in Finland.

We use plastics and metals that can withstand even the most demanding applications. We also use flame retardant, ESD-proof and titanium materials.

We are a full-service industrial 3D printing specialist and a strategic partner that can help you through the entire process, from planning of manufacturing to post-processing.

**Contact our experts for more information! Our contact details are on the last page.**



# OUR SERVICES:

## 3D Printing of Plastic Parts

### Materials

- ✓ Biocompatible and food grade PA2200 (PA12)
- ✓ Glass-fiber reinforced polyamide PA3200GF (PA12)
- ✓ Flexible thermoelastic TPU material
- ✓ Fire retardant PA2241FR (JAR 25)
- ✓ Fire retardant PA2210FR (UL94 V-0)
- ✓ Electrostatic discharge material PA11 ESD

### Post-processing

- ✓ Chemical Polishing
- ✓ Coating
- ✓ Dyeing
- ✓ Painting
- ✓ UV Printing
- ✓ Inserts

## 3D Printing of Metal Parts

### Materials

- ✓ Aluminium AlSi10Mg
- ✓ MaragingSteel MS1
- ✓ StainlessSteel 316L
- ✓ Titanium TiCP Grade 2
- ✓ Titanium Ti64 Grade 5

### Post-processing

- ✓ Heat Treatment
- ✓ Machining
- ✓ Polishing

## Additional Services

- ✓ Measurement and Reporting
- ✓ 3D Scanning in Measurement Reporting and Model Making
- ✓ Configurations



# 3D PRINTING OF PLASTIC PARTS

3D printing is a cost-effective way to produce plastic parts on an industrial level. It offers almost limitless geometric possibilities and is suitable for both **serial production** and as a method of manufacturing **end use parts**.

We use **SLS technology** for plastic 3D printing. We have **Finland's largest plastic SLS printer** with a volume of 700 x 380 x 580 mm.

All our plastic materials are certified, high quality, and highly durable. The materials used are:

- ✓ **Biocompatible and food grade PA2200 (PA12)**
- ✓ **Glass-fiber reinforced polyamide PA3200GF (PA12)**
- ✓ **Flexible thermoelastic TPU material**
- ✓ **Fire retardant PA2241FR (JAR 25)**
- ✓ **Fire retardant PA2210FR (UL94 V-0)**
- ✓ **Electrostatic discharge material PA11 ESD**

Check out our tips for [designing plastic parts](#) and take advantage of our expertise early in the process – we'll help you find the best and most cost-effective solutions to meet your goals.

[» Read more about 3D printing of plastics](#)



# 3D PRINTING OF METAL PARTS

Industrial-grade 3D printing is an excellent manufacturing method for challenging metal parts – including those that are difficult, impossible or expensive to produce using traditional methods. Metal 3D printed parts are fully finished end use parts that are highly durable and ready for use.

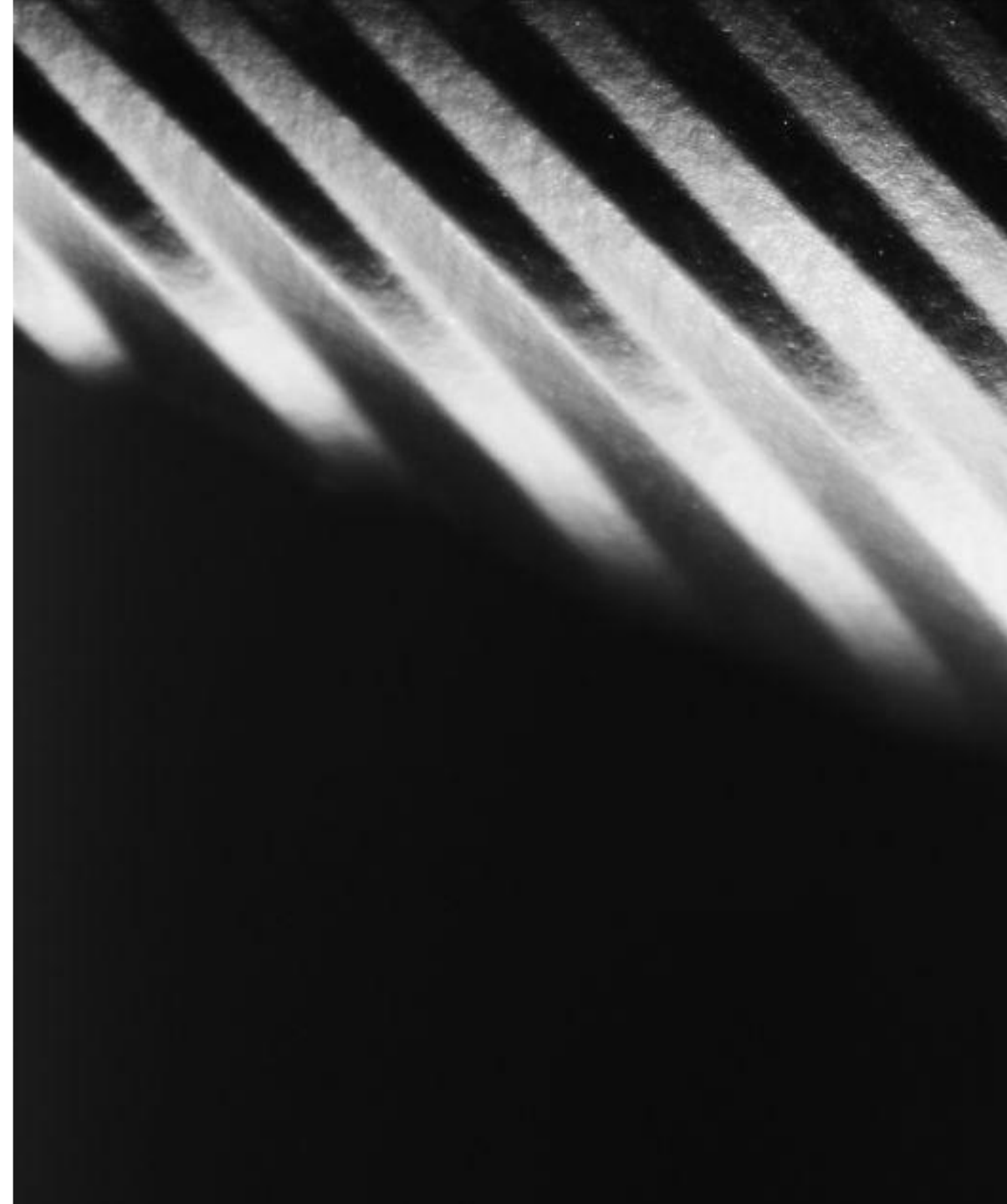
Metal 3D printing is done using **LPBF technology**, where metal powder is melted layer by layer with a laser. The parts printed using LPBF technique have a very dense and durable structure. The chamber size of our metal printers is 250 x 250 x 290 mm.

The metal materials we use are certified and have properties suitable for demanding applications:

- ✓ **Aluminium AlSi10Mg**
- ✓ **MaragingSteel MS1**
- ✓ **StainlessSteel 316L**
- ✓ **Titanium TiCP Grade 2**
- ✓ **Titanium Ti64 Grade 5.**

Take a look at our tips for [designing metal parts](#) and benefit from our expertise! For example, we can help you choose the best material and advise you on what to look for in a cost-effective design.

[» Read more about metal 3D printing](#)



# POST-PROCESSING OF 3D PRINTS

The post-processing of all manufactured parts includes the following steps:

- ✓ powder cleaning
- ✓ removal of support materials from metal parts
- ✓ surface finishing with shot blasting
- ✓ appropriate stress relief annealing for metal parts.

In addition, the post-processing services described on the following pages are available as additional services.



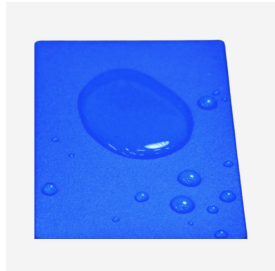


# POST-PROCESSING OF PLASTIC PARTS



## Chemical Polishing

Treatment that improves the appearance and cleanability of parts by eliminating porous structures from the surface of the part.



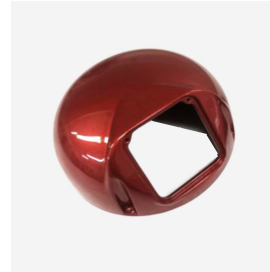
## Coating

The one-component micro-coating makes the piece water and oil repellent. The 2-component coating also protects against fading caused by UV radiation.



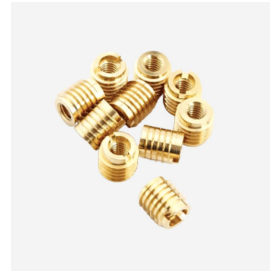
## Dyeing

Parts can be dyed with manual or automatic process. Manual process is suitable for small batches and prototypes. Automatic dye process provides the best repeatability for serial and end products with accurate RAL color.



## Painting

With our professional painting partners, we can paint the 3D prints according to precise RAL color codes and with desired gloss levels.



## Inserts

When there is a need for more precise and mechanically robust threads, metal threads can be added to the parts.

[» Read more](#)



## UV Printing

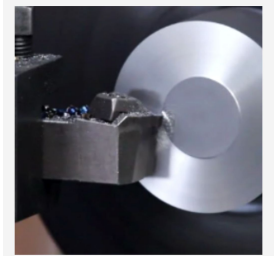
UV printing is a cost effective way to add text and symbols to the surface of printed pieces.

# POST-PROCESSING OF METAL PARTS



## Heat Treatment

In addition to stress relief annealing, various heat treatments, such as ageing treatment can be offered to the parts.



## Machining

We machine printed metal parts to customer specification with options including milling, turning, drilling and tapping.



## Polishing

The external surfaces of parts can be mechanically polished to achieve the desired surface finish.



[» Read more about post-processing](#)



# ADDITIONAL 3D PRINTING SERVICES

## Measurement and reporting

We provide measurement reporting on parts manufactured for the customer according to the contract. The reporting can be based on samples taken from the series, or we can report on the manufacturing steps or batches of material pieces were made from. We can also provide material certificates.

## 3D scanning and measurement reporting

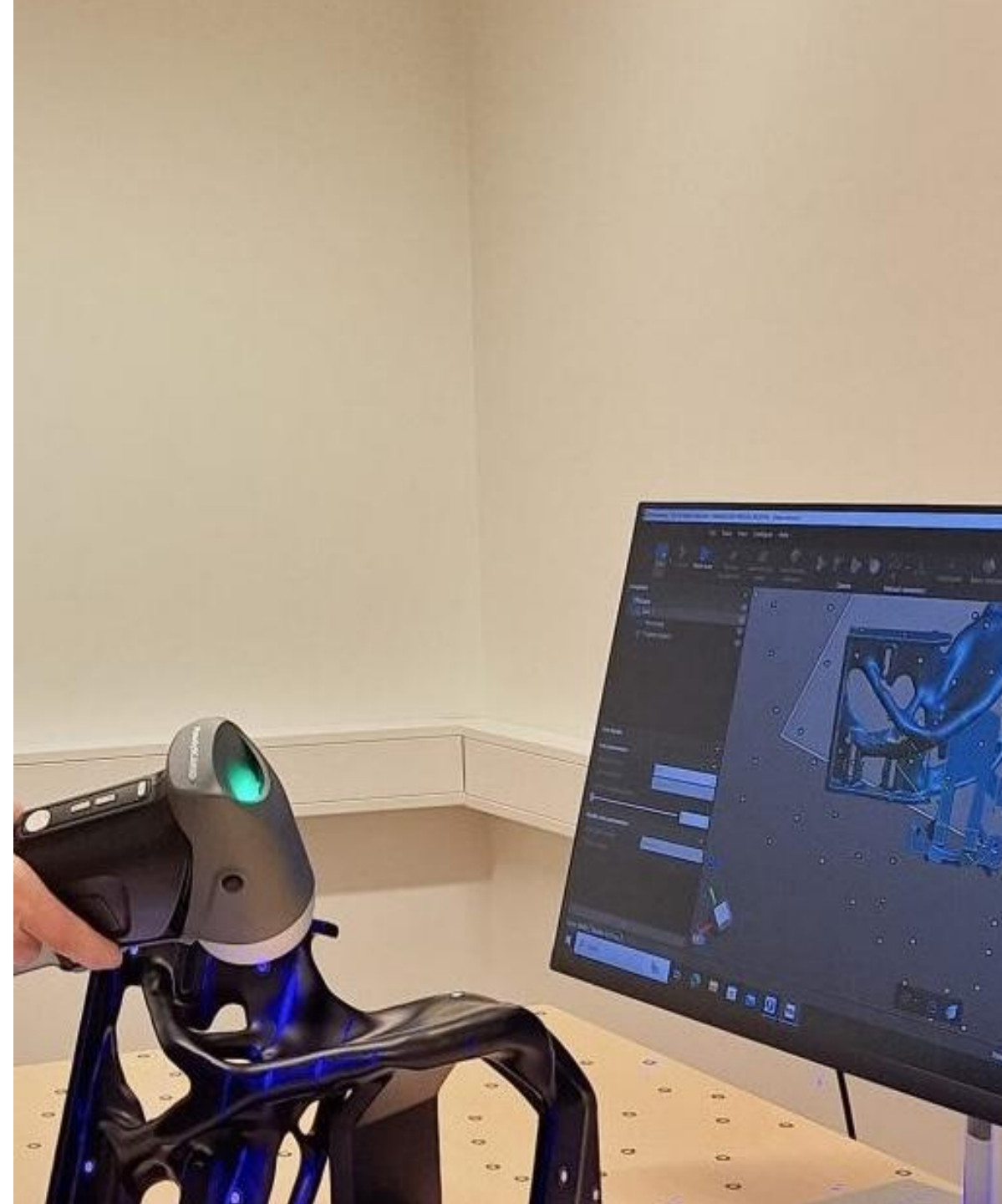
3D scanning measurement provides accurate dimensional images of even the most challenging geometries to verify the true dimensional accuracy of parts.

## 3D scanning and model making

3D scanning can be used to model a physical object to produce a print file.

## Configurations

We carry out simple assembly work on printed parts on a contract basis.





## **TAKE THESE INTO ACCOUNT WHEN DESIGNING AND ORDERING 3D PRINTS**

Design is in many ways a critical stage in the success of 3D printing, and you can benefit from our expertise. For example, we can help you choose materials and implementation methods, optimise manufacturing efficiency and achieve maximum benefits.

[» Read more about design considerations](#)

### **Is your part ready to print?**

For printing, we need a **3D model** and **production photos**. You can attach these files to your quotation request.

[» Request a quote](#)



At 3D Formtech, we help our customers realise the full potential of 3D printing. We look at familiar things from a new perspective, dare to challenge the way things are done and do things in a new, more efficient way.

### **3+1 reasons why our customers choose us:**

- ✓ **We have the necessary certifications**, which are often critical for our customers and their own customers.
- ✓ **Our processes are reliable.** That's why many of our customers find that working with us reduces their risks. For example, a large number of machines means the ability to produce large quantities of products.
- ✓ **Our prints are of the highest quality** and are also suitable for end products. The quality of the finish is excellent and a wide range of finishes are available as options.
- ✚ **We can do all this as a one stop service.** This also reduces the need for logistics and scheduling risks.





**CREATING THE NEW NORMAL IN  
THE MANUFACTURING INDUSTRY.**

**Because our job is not to meet your expectations, but to exceed them.**

We help growth-oriented manufacturing companies to manufacture better end products, innovate unprecedented solutions and build more successful and responsible businesses through industrial-grade 3D printing.

**10 000**  
PRINTS PER WEEK

**2014**  
ESTABLISHED

**100 %**  
SATISFACTION  
GUARANTEE

**Want to learn more about what industrial 3D printing in plastic and metal could do for your business? Contact us or [book a free chat here](#) and we'll tell you!**



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