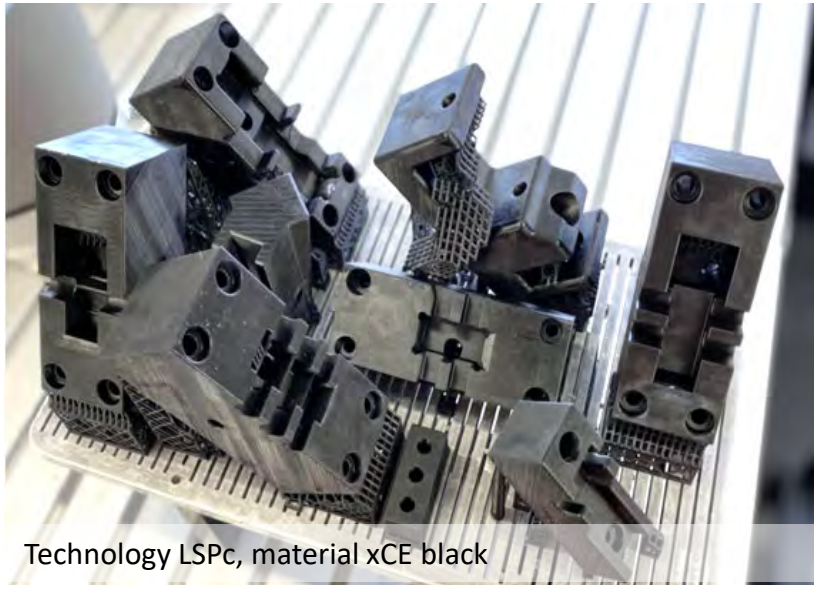
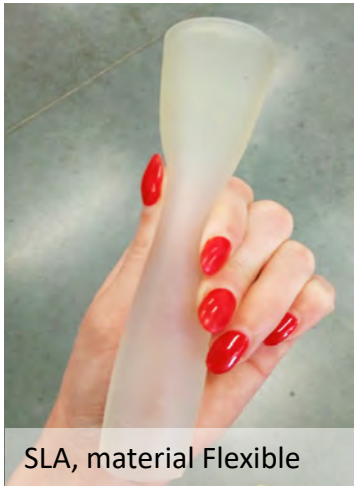
3D PRINTING AT VÚTS

We offer custom 3D printing using various technologies. We have a wide range of 3D printing materials in our portfolio. 3D printing is suitable for fast production preparation, especially for piece and small batch production.

Technology HP MJF, material PA12



Technology LSPc, material xCE black



SLA, material Flexible

SLA, material Rigid 4k

OUR TECHNOLOGIES

3ntr

Markforged

formlabs

FFF - Fused Filament Fabrication **FFF+CFF** - Continuous Fiber Fabrication **SLA** - Stereolithography

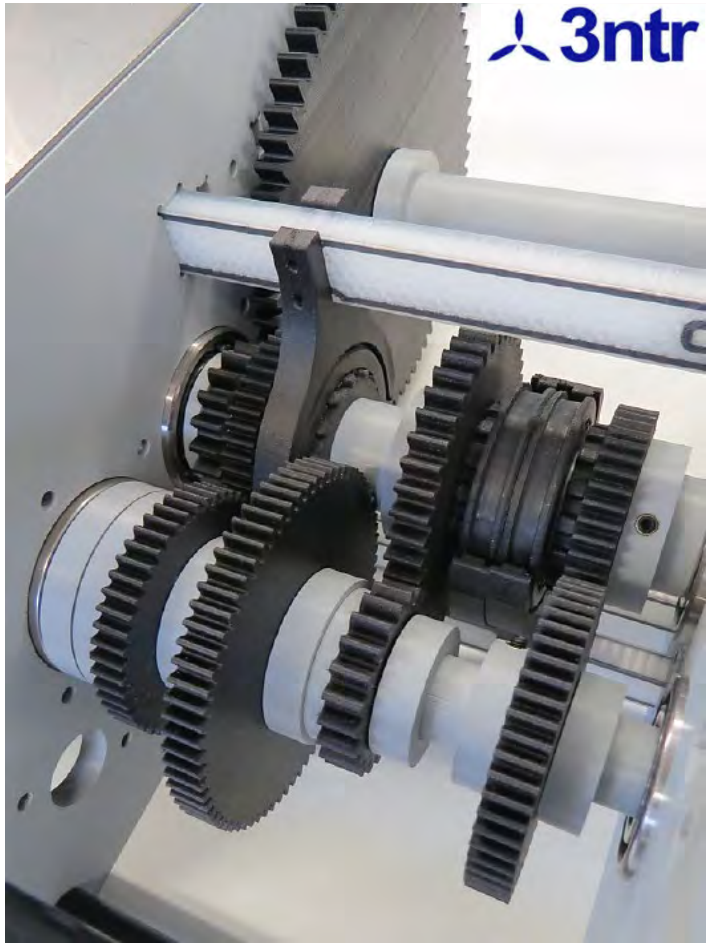
nexa3D

LSPc - Lubricant Sublayer Photo-curing **MJF** - Multi Jet Fusion

VÚTS LIBEREC

3ntr A2

Technology FFF



Construction Materials:
ABS, ABS ESD, PCABS, ASA, Igus I180-PF, FLA, PETG, PACF, PAGF, Carbon+, Elasto 85, Elasto 95, zWax, nPower, nPeek, and more

Support materials: SSU00, SSU01, SSU02, SSU03, SSU04, SSU05

String diameter: 2.85 mm

Layer height: from 0.05 mm

Device for precise printing of large and complex models made of industrial thermoplastics and composites. Use for additive manufacturing of **large parts**.

Use for single-purpose machine covers, templates for hand-founding, prototyping and verification of design function. For complex geometries of prints, it uses both a breakout support system and **flushable supports** in aqueous solution or 20% NaOH solution.

VÚTS LIBEREC

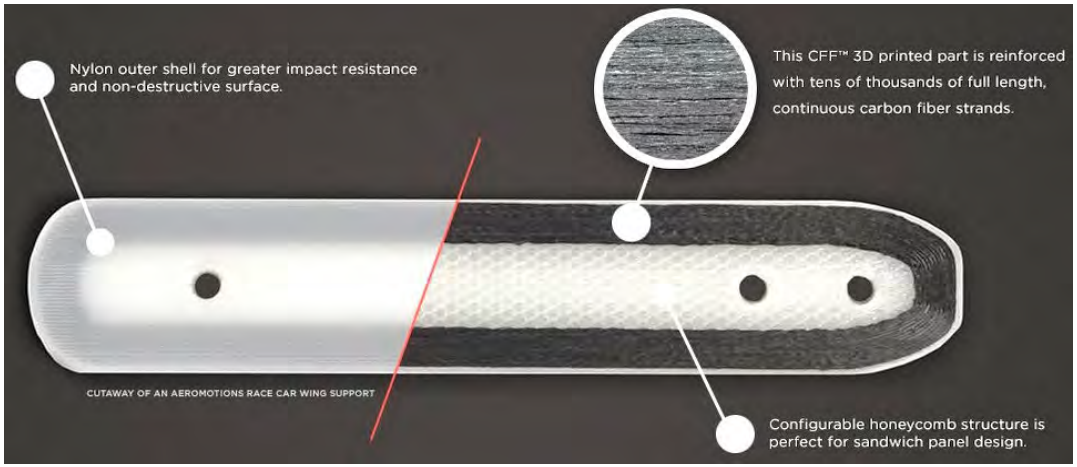
Markforged MARK 2

Technology FFF + CFF

3D Printer for the production of durable, high-strength **Nylon** and **Onyx** parts **reinforced** with continuous **carbon** fiber, **Kevlar, fiberglass** or **HSHT fiberglass**. Printing accuracy according to material and part dimensions approx. **IT14** standard ISO 286.

Markforged

Construction Materials:
Nylon, Onyx
Reinforcement:
carbon, Kevlar, glass fiber or high-strength, high-temperature GF
String diameter: 1.75 mm
Layer height: 0.1 mm



Applications range from assembly and clamping fixtures through the jaws of robotic production lines to fully functional parts proven by heavy-duty operation.

The technology enables the printing of very tough, fully functional parts **comparable to the strength of aluminum**, yet significantly lighter. The prints are characterized by good temperature and chemical resistance.

VÚTS LIBEREC

145 mm × 175 mm × 145 mm

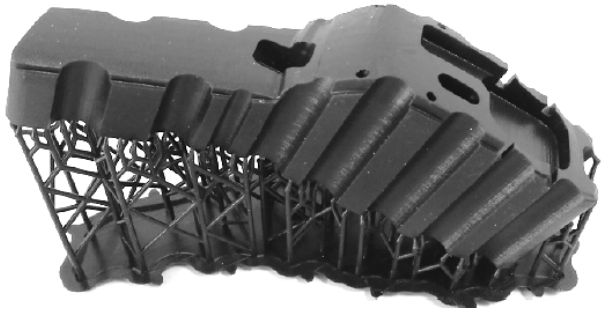
Formlabs FORM 2

Technology SLA

Device for reliable and accurate stereolithographic 3D printing from laser cured resins. The technology is used primarily for **precision parts** with perfect rendering of **small details**.

Layer heights as low as **25 µm** contribute to **high surface quality**. Use for additive manufacturing of small parts with properties depending on the resin used.

Use for grippers for small objects of pneumatic and electric jaws, setting beds with complex geometry, defining beds.



formlabs

Material of construction and supports: structural resin

Construction resins:

resin high temperature, resin tough, resin grey pro, resin durable, resin flexibile, resin rigid

Basic resins:

resin white, resin black, resin grey, resin clear

Layer height: 0.025 to 0.1 mm

NEXA3D NXE400

Technology LSPc

High-speed 3D printer for printing **parts of any geometry**, which thanks to the unrivalled 16L volume of the print chamber also allows the printing of **larger parts**.

The build material is UV-cured photopolymers, offering a wide choice of resins depending on the mechanical properties or temperature resistance of the part.

Construction and support materials:
xABS Black, xCE Black, xCE White,
xGPP Translucent, xGPP Gray
Layer height: 100 µm

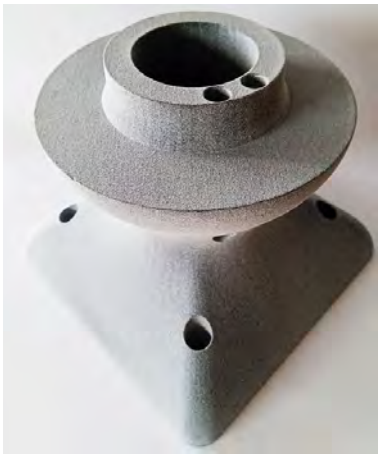
The high **pixel resolution of 75 µm** ensures that details or surface textures are faithfully captured.

HP Multi Jet Fusion 4200

Technology MJF

HP Multi Jet Fusion is a 3D printing technology that uses a **powder material** that is cured by infrared light after the binder is applied.

The superior size of the print chamber offers the possibility to **print bulky complex parts** as well as a **series of small components**.



Construction and support material: PA12

Layer height: 0.08 mm

HP Jet Fusion technology is fast and the parts are printed at **very high resolution** and **high-accuracies**. Printing accuracy according to part dimensions is approx. **IT13** standard ISO 286.

It is not only used for functional prototypes, but also for short-run manufacturing of fully functional parts.

MJF 3D Printing

HP Multi Jet Fusion 4200

Technology MJF

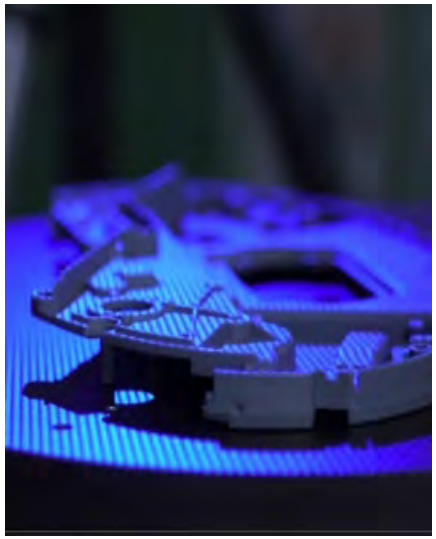
The size of the HP MJF 4200 print chamber offers the possibility to print bulky complex parts up to a dimensions **380 x 284 x 380 mm**, as well as a series of small components.

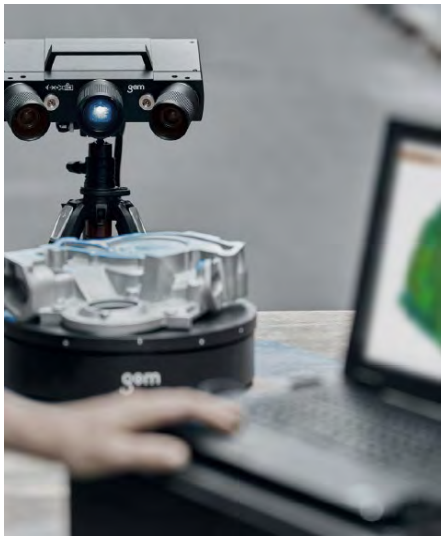
MJF technology enables printing **parts of any geometry.** The parts are printed **without supports**, which enables to produce parts with **complicated and detailed designs of shape or surface texture**.

3D SCANNING

GOM ATOS Q

- High precision and high resolution
- Vertical and horizontal projection of light strips
- Universal use in a variety of applications
- Compact and portable device
- Triple Scan and Blue Light technology
- Scanning area: 100 x 70 to 500 x 370 mm
- **Accessories**: Tripod and rotary scanning table





HandySCAN 3D BLACK

- High data acquisition speed
- Accuracy: 0.035mm
- Measurement resolution: 0.025 mm
- Light source: 7 blue laser crosses
- Scanning range: 310 x 350 mm
- **Accessories**: Possibility of use with ROMER ABSOTUTE ARM

REVERSE ENGINEERING & RAPID PROTOTYPING

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