

3D PRINTING



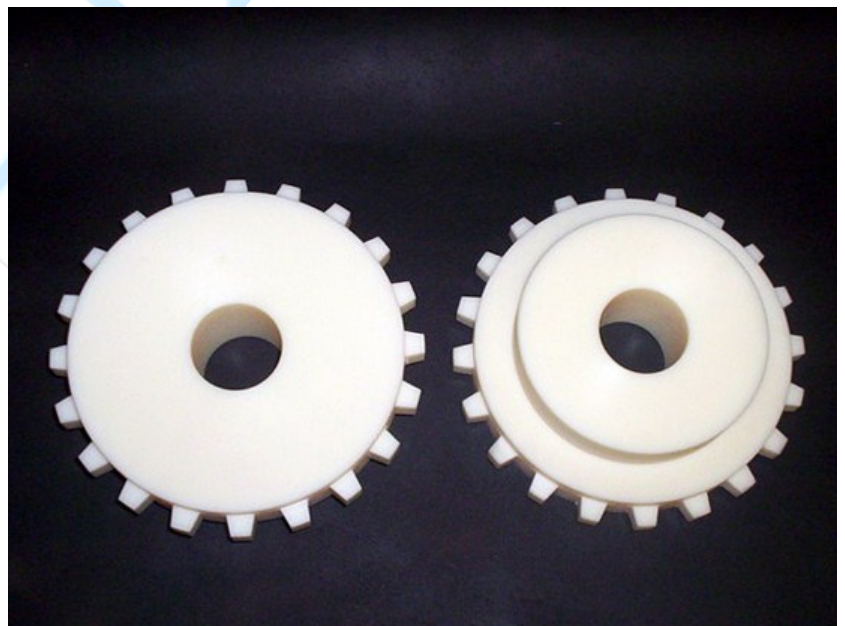
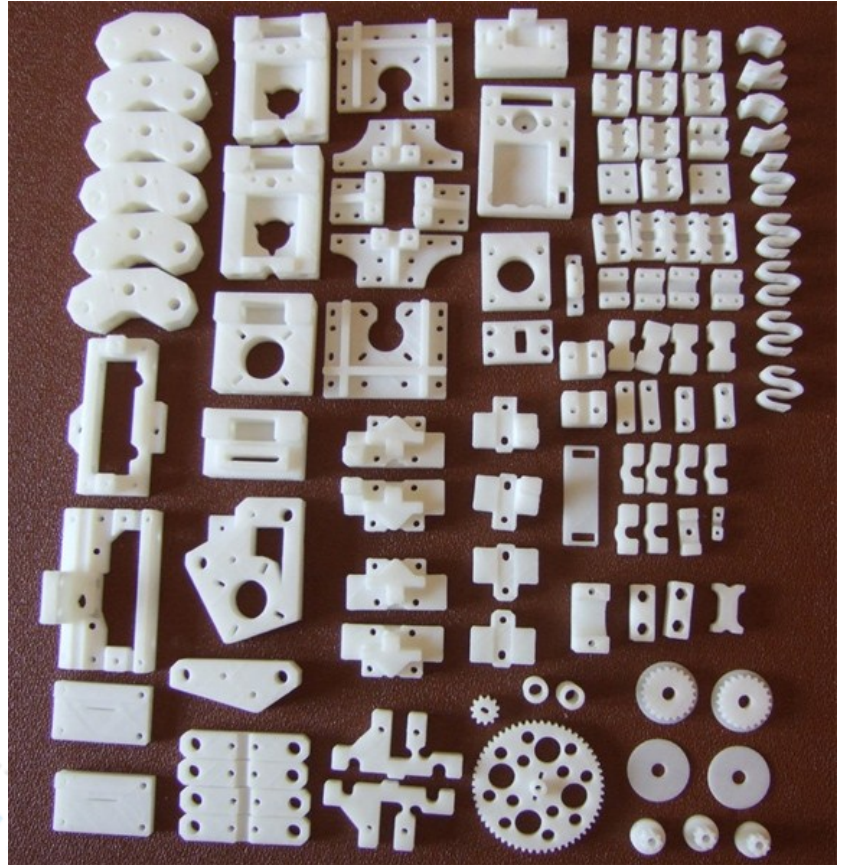
3D PRINTING

We offer 3d printing using reliable printers American company „3D Systems”.

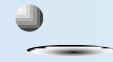
The printed models are compatible with the 3D design. We can print models with complex shapes and structures. They print with mapping the smallest


We offer models made with materials: epoxy resin or light-cured photopolymers. Printed models are monochrome but you can choose color of the material.

We offer very fast execution of orders. You can also order express print. Our services are characterized competitive price. We offer a free estimate based on STL files.



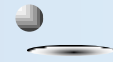
3D PRINTING



| PRINTER PERFORMANCE | |
|-----------------------------|--|
| Max Build Size (XYZ) | (171x228x203 mm) |
| Native Resolution (xy) | 1024x768 DPI |
| Vertical Build Speed | Standard Mode: 14 mm/hour High Speed Mode: 20 mm/hour |
| Print quality | HD or UHD |
| Layer Thickness | Standard Mode 102 μm (0,102 mm) High speed Mode 152 μm (0,152 mm) |
| Min Vertical Wall Thickness | 0,64 mm |
| Color model |  |
| File Types Supported | STL, CTL |

| Materials | ASTM | UNITS | IVORY | RED | GREY | BLUE | BLACK | ZOOM |
|-----------------------------|-------|-------------------|----------|---------|----------|----------|----------|----------|
| Density (liquid) | | g/cm ³ | 1,08 | 1,08 | 1,08 | 1,08 | 1,08 | 1,08 |
| Tensile Strength | D 638 | MPa | 12-22 | 8-18 | 8-18 | 10-24 | 13-25 | 15-29 |
| Tensile Modulus | D 638 | MPa | 800-1200 | 400-600 | 600-1000 | 600-1300 | 600-1000 | 800-1500 |
| Elongation at Break | D 638 | % | 2-3 | 2-4 | 2-3 | 2-3 | 2-4 | 2-3 |
| Flexural Strength | D 790 | MPa | 23-34 | 16-22 | 20-36 | 13-29 | 19-34 | 29-53 |
| Flexural Modulus | D 790 | MPa | 750-1100 | 500-700 | 700-1000 | 300-800 | 600-1000 | 900-1400 |
| Impact Strength | D 256 | MPa | 16 | 17 | 17 | 16 | 17 | 19 |
| Heat Deflection Temperature | D 648 | C° | 52 | 50 | 45 | 47 | 50 | 52 |
| Hardness, Shore D | | | 77-80 | 65-70 | 75-80 | 70-80 | 75-82 | 72-85 |

3D PRINTING

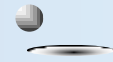


Application **3D PRINTING**:

- **Industry** - with 3D printing you can save time and money, because you can make original products in short time. This reduces design cycle and testing the final version.
- **Consumer products and electronics** - in the era of miniaturization, parts are becoming smaller and products are becoming more functional. Your design group can use 3D printing, in order to test the product already at idea.
- **Engineering design** - the important thing in design is the possibility of testing the product after its design. With 3D models can you physically check the concept, and get feedback from other employees. You can check the final result and evaluate the success of the investment at the design stage.
- **Architecture** - 3D models can you use to build architectural models. From that can you show customers how the project will look like even before the start construction.
- **Medicine and dentistry** - 3D models help in preoperative consultation. It has an important role in Stomatology, when with this technology can you print patient jaw.

AND MANY OTHER USES BY CUSTOMER'S IDEA AND VISION!!!

3D PRINTING



Preparation of valuation:

To prepare valuation the file for 3d printing, please you send the model in STL format with dimension of the object. The price of 3D model results from a combination working time printer and the volume of material used and possibly support material. Therefore, to determine the price, it is necessary to simulate in software the machine to an STL file. All valuation based on the drawings or photographs are flawed typically within the limits $-50 +300\%$.

How reduce cost of 3D printing?

3D printing is certainly cheaper, if we will use less material, and the printer will work shorter.

This can achieved in several ways:

- One possibility is to perform a model, that will have inside the small air bubbles (this is an option in our printer - do not make this change in the model on the computer). It can't see from the outside, but this way we can save up to 30% of the material.
- Another method is to build objects with the walls, (even thickness od 1 mm) instead of total solids. When we make from example a building model of prism-shaped will be cheaper if instead of the whole body, print it open from the bottom so that the walls and roof will be of a certain thickness.

We always suggest to our Clients the cheapest solution!!!