



Case
Study

Jewelry
Production:
Rings

W2P

Jewelry Production: Rings

Application: Jewelry Production

Investment casting is the most common way to fabricate jewelry. The castable 3D printed part is being covered by a plaster mold and afterwards metal is poured into the mold. Thus, the 3D printed part vanishes and the metal forms the desired piece of jewelry.

Requirements

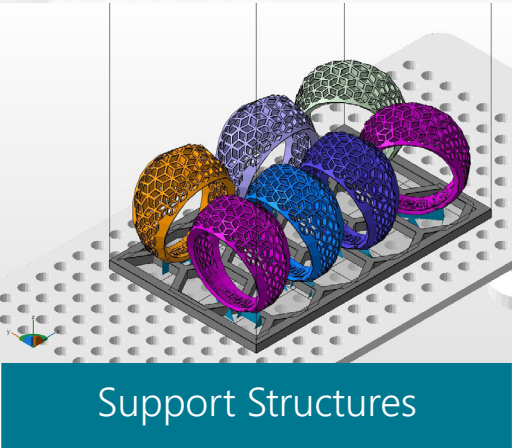
Material: residual-free combustion
Production Methos: very high precision, good surface quality

Recommended Material

SolFlex Cast Wax / SolFlex Cast Max Wax

Digital Workflow

Preparation: Prior to the printing process, the rings have to be prepared for printing. A 3D printing software helps to place the model on the building platform. Also, support structures have to be added.



Printing Process: In the next step, the prepared files are being processed by the printer. In this specific case the rings were 3D printed under the following conditions:

3D printer:	SolFlex 150
Layer thickness:	50 µm
Printing time:	51 min.
Resin:	SolFlex Cast Wax
Number of printed objects:	7
Resin use:	4.9 g
Total resin use (incl. support structures):	7.5 g
Total resin costs:	€ 1.73

Depending on the size of the 3D printer's building platform, a different number of rings can be 3D printed.

Number of rings that fit on the building platform:

SolFlex 650:	42
SolFlex 363:	26
SolFlex 350:	21
SolFlex 170:	14
SolFlex 150:	7

Post-Processing: The 3D printed rings are post-cured in a UV light box, cleaned and the support structures have to be removed. After the post-processing, the investment casting process starts.

