



Case
Study

Crowns & Bridges

W2P

Crowns & Bridges

Application: Prosthetic Restoration

Crowns and bridges are used for prosthetic reconstruction purposes in order to replace damaged or missing teeth. In the investment casting process, castable 3D printed crowns and bridges are burnt out and metal alloys are used to serve as a full cast crowns and bridges that consist of metal alloys are made from.

Requirements

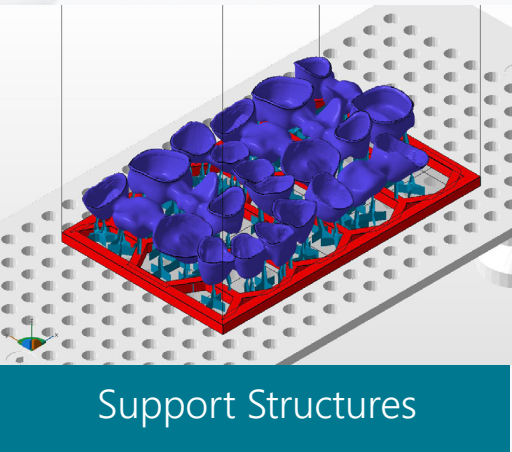
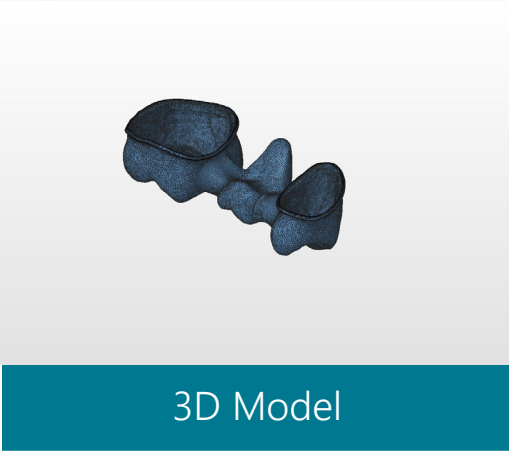
Material: residual-free combustion
Production Method: very high precision, exact fit

Recommended Material

SolFlex Cast Wax

Digital Workflow

Preparation: Prior to the printing process, the crowns and bridges 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 castable crowns and bridges were 3D printed under the following conditions:

3D printer:	SolFlex 150 PLUS
Layer thickness:	50 µm
Printing time:	31 min.
Resin:	SolFlex Cast Wax
Number of printed objects:	8
Resin use:	4 g
Total resin use (incl. support structures):	7 g
Total resin costs:	€ 1.61

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

Number of crowns and bridges that fit on the building platform:

SolFlex 650:	48
SolFlex 363:	30
SolFlex 350:	24
SolFlex 170:	16
SolFlex 150:	8

Post-Processing: The 3D printed crowns and bridges 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.

