



METAL ADDITIVE MANUFACTURING SOLUTIONS FOR HEALTHCARE

CMF IMPLANTS

BUILD DATA

SLM@125
Ti6Al4V Gd. 23 (ASTM F136)
Ti Gd. II (ASTM F67)
30 µm layer thickness

BENEFITS

- Efficient production of implants designed for fit and function
- Complex geometries produced more efficiently and economically
- Functional integration of lattice structures where needed
- Enabling mass customization

These maxillofacial implants are designed and produced specific to the patient’s anatomy, on the basis of the patient’s CT-scan images. They enable a more efficient surgical procedure, achieving functional and cosmetic restoration. The production of patient-matched and



custom CMF implants by Selective Laser Melting is more efficient and more economical compared to traditional CNC-milling techniques.

DENTAL PROSTHETIC COMPONENTS

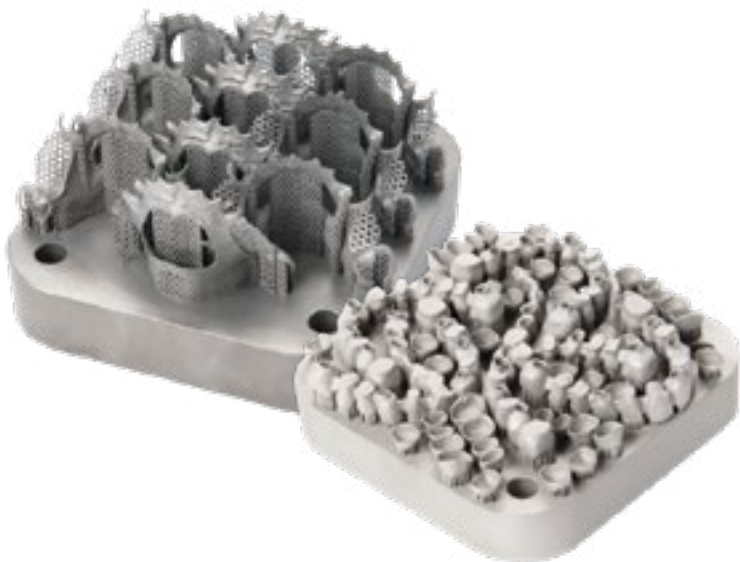
BUILD DATA

SLM@125
CoCr SLM® MediDent (ISO 22674)
20 µm / 30 µm layer thickness

BENEFITS

- Precision manufacturing with minimal material waste
- Productivity and cost advantages compared to casting and milling
- RPD frames for upper and lower jaw with high precision,
- High fatigue resistance and integrated malleability

printing the required design directly, production creates much less material waste and is more economical compared to traditional casting and milling techniques. Implant abutments, implant bars and frameworks are also produced with a hybrid production technique, i.e. Selective Laser Melting followed by CNC-milling. The hybrid production technique is more economical compared to traditional milling, and also enables the integration of lattice structures for improved prosthesis retention where needed.



Dental crowns and bridges for PFM prostheses, as well as removable partial denture frameworks for acrylic prostheses are common dental applications of selective laser melting. These dental prostheses are printed to patient-specific designs, however multiple patients’ customized geometries can be printed simultaneously during one SLM® build. By