Patient-specific implants

Viscero- and neurocranium

Hard tissue and soft tissue models

Practice and planning purposes

Implanting the Future

Who we are

3di GmbH from Jena, Germany

3di GmbH is a German company from Jena, successfully established in the medical device/technology industry since the year 2000. Specialised in the manufacture of **patient-specific implants**, we supply patients from more than 10 countries with the life-saving help they require.

To achieve **optimal defect coverage of any complexity**, digital and physical 3D models can be consulted for visualization purposes. More than two decades of expertise from cooperations with neuro-, plastic- and oral and maxillofacial surgery departments allows us to offer **solutions of highest quality** and carefully adapted care to the requirements of your patients.

Experienced specialists in research and development, engineering design, manufacture and marketing and sales are the bedrock on which the swift provision of perfectly adapted implants is founded. We are a **strong team**, characterised by reliability, professionalism, close cooperation and short reaction times.

We focus on customer satisfaction and thus offer comprehensive solutions – not just products – and we accompany you holistically from planning to surgery.

Let us convince you with products of highest quality and flexible, individual service!

What we do

Patient-specific implants

We specialise in the manufacture of patient-specific implants for the viscero- and neurocranium regions. They find utilisation after traumas, tumor operations, functional-aesthetic corrections and general creation of surgical accesses.

3di mastered a manufacturing process that allows rapid supply of precisely fitting patient-specific implants especially in emergency situations, while taking into account individualised surgical-technical aspects.

Almost any bone structure of the human skull can be reproduced with manufacturing accuracies of < 0.5 mm.

- individual fixation options possible, e. g. anchorage of the temporalis muscle
- compatible with all common plates and screw systems
- standard perforation for dural tenting sutures
- communicated information and requirements for the soft tissue situation can be taken into account
- material-independent implant price

We are certified according to EN ISO 13485:2016 + AC:2016 in the fields of development, production and sale of hard tissue implants.
Our patient specific implants meet the requirements of MDR 2017/745.

What we do

Our strengths

reliability and compliance to delivery dates from order to delivery

expertise for the realisation of **highly complex cases** – e. g. resection & implantation as **one-stage surgery + custom-fit resection template**

personal availability and flexibility for individualized service

highest accuracy in planning and production by our **experienced design engineers**

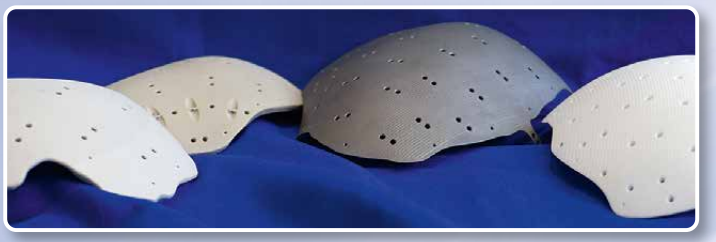
swift realisation and **short delivery times**

flexibility and individuality for the implementation of patient-specific implant solutions

More insights?
Image film 3di

What we work with

Our materials



PEEK (polyether ether ketone)

» linear, aromatic polymer structure
» semi-crystalline material
» non-resorbable high-performance thermoplastic for the long-term implantation
» intraoperative machinability
» excellent postoperative diagnostics, radiolucent (no artifacts when using MRI/CT/X-ray)
» resterilisation possible

BIOVERIT®II

» glass ceramics of the SiO_2-Al_2O_3-MgO-Na_2O-K_2O-F-system
» extensive experience as implant material; established for decades
» white, odourless, solid, non-outgassing material
» dimensionally stable, corrosion resistant and bioinert
» intraoperative machinability
» very good postoperative diagnostics (no artifacts when using MRI/CT)
» resterilisation possible

Titanium

» use of metal alloy Ti-6Al-4V (pure titanium tends to abrasion)
» non-resorbable, highly stable metal
» passivates automatically on the surface by forming a dense oxide layer
» allows the design of very thin implants
» extensive experience as implant material
» material stability hardly allows intraoperative customisation
» resterilisation possible

What else we offer

Hard tissue & soft tissue models

Our **hard tissue models** are used for surgery planning and – when required – as part of the agreement with the physician; for training and education as well as for research and development.

» acrylate model
» cranial model
» postcranial model
» training model for neuronavigation
» petrous bone models
» paranasal sinus model
» osteotomy model

Our **soft tissue models** are used for surgery preparation, training of complex surgeries and reconstructions, suturing techniques as well as for training and education – also perfectly applicable for various courses.

In cooperation with the 3di GmbH and the ENT university clinics in Jena and Ulm, various training models were developed for the visceral cranium and other cranial areas.

» skin flap model
» rhinoplasty model
» lip model
» auricle model cavum/antihelix
» patient-specific planning model

video: medical practice models

How do we work

Procedure of cooperation

Case announcement

» phone | » e-mail
» please enclose the completed request form

1

CT data transfer

» secured digital upload
» data carrier via postage

2

Data check

» 3di feedback, if data quality is suitable for processing

3

Design proposal and offer

» for the joint agreement
» signed and returned to 3di

4

Manufacture of the patient-specific implant

» with resection template and/or ready-to-use DICOM data on request

5

Delivery of the finished implant

» includes all neccessary documents

How to get in touch

Contact and information

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3diGmbH

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