

# 3D PRINTING WITH PASSION

# SHAPING THE DIGITAL FUTURE

**Stefan Remplbauer** Managing Director

As a master dental technician with my own laboratory, I am constantly on the lookout for innovative techniques in the dental and medical fields. In 2012, I invested in 3D printing in order to produce dental models from resin materials and founded 3D medical print, which I am now completely dedicated to.

It is very important to me to advise our customers competently, to support them in their work and to find solutions for them: delivering reliable quality, growing with challenges and exploring new ways – that is what I look forward to doing every day.

At 3D medical print, today and in the future, design, construction and support services will be provided exclusively by experienced dental technicians, so that we can provide an answer to every technical question. So that we can surprise you with new solutions, again and again, we question established truths, think carefully, test patiently and work with great concentration.

If our customers appreciate this and stay faithful to us, year after year, this will show us that we have succeeded. I am looking forward to meeting many of our customers personally at the IDS and getting to know new ones. Other countries, cultures, customs and traditions have always fascinated me. This is why I am particularly thrilled that our customers and we ourselves are becoming more and more international.

To promote the application of 3D printing in dentistry and medicine and to shape the future – that is what I would like to do, together with you!



1997 Certified Dental Technician  
2003 Opening of the Zahntechnik Stefan laboratory  
2008 Conclusion of advanced technical studies, title of "Master Dental Technician"  
2012 Foundation of 3D medical print  
Representative for well-known enterprises in Austria and abroad

# MEDICAL TECHNOLOGY ON THE PULSE OF TIME

**3Dmedicalprint** is an international company specializing in 3D printing in the medical field and in rapid prototyping. It was founded in 2012 by master dental technician Stefan Remplbauer. In 2014, the company moved to Lenzing, a moderately sized community between Linz and Salzburg in northern Austria, in 2014.

**3Dmedicalprint** has been and continues to be the only manufacturer-independent 3D print service provider for medical technology in Austria. Thanks to its reliable technical partners and sizable capital investments, the company works with all additive manufacturing techniques: DLP, SLA and Polyjet. This has resulted in a wide range of 3D-printed products for the dental sector, a product portfolio that is constantly expanded and further improved.

Dental technicians, dentists and oral and maxillofacial surgeons can upload their data for online orders of medical and dental surgical models, surgical guides, and structures and models for surgical planning online at **3Dmedicalprint** ([www.3dmedicalprint.com](http://www.3dmedicalprint.com)).

**3Dmedicalprint's** products are characterized by high precision and a perfect fit as well as consistently high quality. The company sees itself as a problem solver and is constantly on the lookout for new and promising processes to supply its customers with improved and newly developed products and custom solutions.

In close cooperation with physicians, dentists and international researchers, new products have been devised that improve patient outcomes by enhancing healing processes or by being more comfortable for patients to wear. The Polyjet technology allows different materials to be processed in a single printing, providing accurate and extremely realistic surgical and training models. 3D medical print is already well positioned in this field with a number of products developed in-house and is poised to make further important strides in areas such as maxillofacial, cardiac and vascular surgery, as well as in orthopaedics.

3D printing has an enormous potential to become established as the leading manufacturing technology for a wealth of indications. Advancing this development and opening up new areas of application in medicine – that is **3Dmedicalprint's** mission.





# THE RIGHT STEP AT THE RIGHT MOMENT

## Interview with Stefan Remplbauer Managing Director, 3Dmedicalprint

### *How did you get interested in 3D technology?*

I am a master dental technician and I have my own laboratory – Zahntechnik Stefan. In 2008 we added a new product to our range and started to plan the correction of tooth malpositions using special software and exporting set-up models as STL files. The problem was that at that time there was hardly any way to create set-up models from those data. We then proceeded to having our first models milled by external service providers, but were dissatisfied with the results, especially in the interdental region.

### *So what was your solution?*

At the time, nobody had thought about using 3D printers in dental technology. Since I was dead set on finding a solution to our problem, I read trade journals and searched the Internet, where I was alerted to 3D printing technology. For testing purposes, I then ordered the first models directly from the manufacturers of 3D printers – and was positively surprised by the results.

### *When did you decide to invest in 3D printing?*

After the testing phase, it became clear to me that 3D technology could be used to produce complex designs with great precision in excellent quality. I quickly opted for Polyjet technology and above all for a large industrial machine, because even at the time I was thinking in terms of using this technology not just for my own laboratory, but also to make it available to other dental laboratories. This decision naturally led to the foundation of **3Dmedicalprint** in 2012. At that time, we were the first manufacturer-independent 3D printing service provider in Austria.

### *How did you acquire so many international customers?*

Since **3Dmedicalprint** was quickly successful with its products in the German-speaking area, it was obvious to expand and address a broader, more international audience. The International Dental Show (IDS) in Cologne offers the best setting for this, so in 2015 we presented our company and our products there for the first time.

Nobody had expected that we would be welcomed so openly by the international community and that our products would be so well received. Our success, especially in Northern Europe, has prompted us to return to the IDS each time it is held – which is every two years – to introduce our products to a broader professional public, to maintain existing contacts and to keep in touch with the latest developments in the industry and in the markets.



# TABLE OF CONTENTS

**From file to model** 10

**Services** 12

---

- Aligner planning
- Implant planning
- Bracket placement

**Model design** 17

**Products** 18

---

- Dental
- Orthodontic
- Surgical

**Useful products** 30

 **Presentation models** 33

 **Training models** 36

---

- Preparation and impression models
- Composite training models
- Aesthetics composite training model
- Implant training models

# FROM FILES TO MODELS

In order to create 3D models from your data, you must send them to us together with your requirements. It is true that the many data transfer options are at least as varied and confusing as the great number of data formats themselves. We therefore want to make the process as easy and secure as possible for you.

And this is how it works: You register in our online shop and can then securely transmit all data to us when ordering. It does not matter from which application or which device the data originates. In addition, we have set up the following data transfer options for you

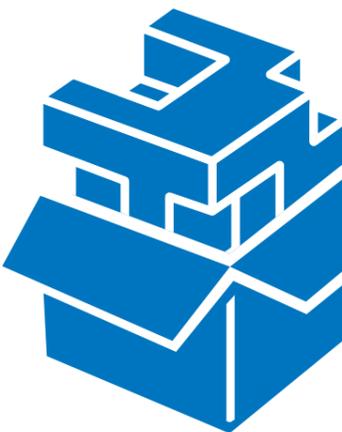
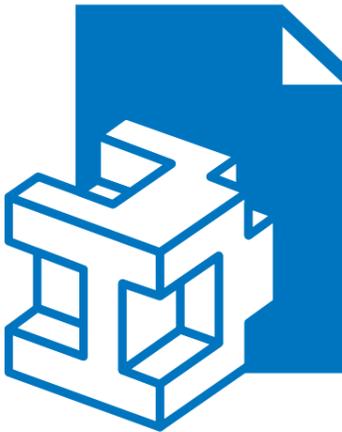
We are expanding our transfer options step by step. Please contact us if you have any questions or problems:  
**support@3dmedicalprint.com.**

All order information are assembled in our content management system. This allows us to keep track of all orders, track order processing and monitor our progress. You can check the processing status of your order at any time via our website.

We are constantly working on improving our logistics, ensuring that your orders arrive at the specified time and you are informed as quickly as possible in the event of delays.

**Register in our webshop** and transfer your data easy and safely during the ordering process. It does not matter which software or scanners you use.

Additionally we have alternative possibilities for data transfer (see right hand side)



## Dental orders



3shape Dental System – via FTP  
3shape Trios – directly from the scanner via Communicate



Sirona connect – directly from the scanner



iTero – directly from the scanner



DentalWings – available soon

## Orthodontic orders



3shape TRIOS – directly from the scanner  
3shape Ortho Analyzer – via Communicate



OnyxCeph – via FTP

## Implant-planning orders



DentalWings coDiagnostiX – as reference laboratory



3shape implant studio – available soon



# SERVICES

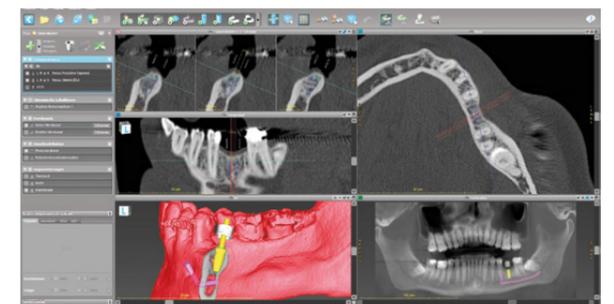
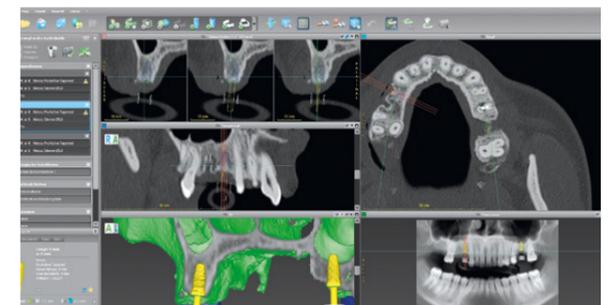
## Implant planning

Planning your implant procedure ahead of time and being sure that it will proceed just as planned is the best thing you can wish for as an implant dentist. To know that the screw access channel for the prosthetic restoration is located just where it is needed and that the direction, angle and depth of the access hole are correct. In principle, this is quite simple – with template-based implantology, using the principles of guided surgery.

We plan your implants for you and find the best possible position for the intended implant – from a surgical and a prosthetic point of view. We can draw on a library of more than 3,000 standard implants to find the ideal solution for your specific case.

After your approval, we produce the drilling template or stent and provide the appropriate drilling sleeves so that you can place your implants safely and with great precision. If you wish, we can create a model with a laboratory analogue based on the planning data or a screw-retained temporary resin crown on an antirotational adhesive base.

Our dental technicians will be happy to plan more complex cases for you, with virtual tooth extractions to provide immediate restorations, and produce bone reduction templates for osteoplasties. Of course, they will always consult with you, the attending surgeon.



**For computer-assisted 3D implant planning, we will need the following from you:**

- Scan of the current intraoral situation and a DICOM data set for partially edentulous jaws (at least 3 teeth).
- A duplicate of the old prosthesis with a reline impression for edentulous jaws in order to fabricate the CT template, and later the DICOM dataset obtained with the CT template inserted.



## Aligner planning

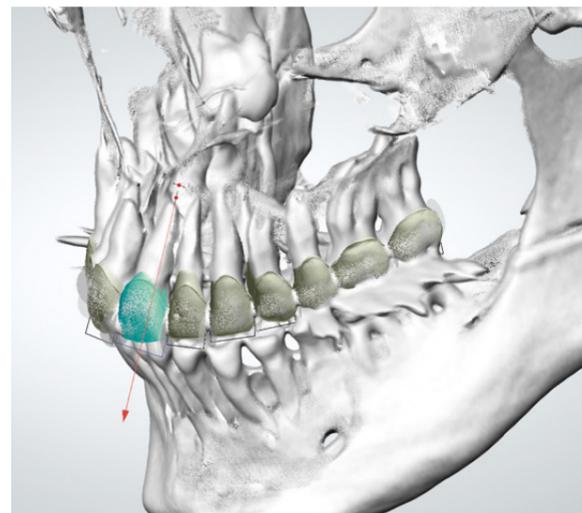
Since 2008 we have been working intensively with the Orthoanalyzer software from 3shape and offer courses for planning aligner therapy. We will be happy to plan patient cases, print setup models and manufacture dental splints for you. You can choose between the following variants:

### Aligner planning "light"

This variant includes the planning, the printing of the models will be charged extra. You can then manufacture the splints in-house.

### Aligner planning "comfort"

We plan the entire course of aligner therapy for you, print setup models and manufacture the splints for you.



**Each planning task includes detailed documentation (PDF) with all analyses as well as a data backup. Specifically, the documentation comprises:**

- Analysis of the baseline situation
- A Bolton analysis
- Screenshots of important information related to post-treatment function
- Before and after pictures
- Video of movements
- A Schwartz-Korkhaus analysis
- A tooth movement analysis
- A stripping protocol

**For aligner planning, we need the following information from you:**

- Scans of the maxilla and mandible in occlusion
- Optionally: DICOM dataset for exact determination of the rotation point
- Information about patient requests and expectations
- Your choice of specific planning variant

## Bracket placement

We take care of the precise positioning of the brackets and the design of the transfer splint for transferring and setting the brackets in their correct position. This will let you minimize errors compared to the direct technique, work more efficiently and offer shorter treatment times.

Our planning facilities covers all common bracket systems – just let us know which system you work with.

**For bracket placement planning, we need the following information from you:**

- Scans of the maxilla and mandible in occlusion
- Details of the bracket system
- Optionally: DICOM dataset for exact determination of the rotation point

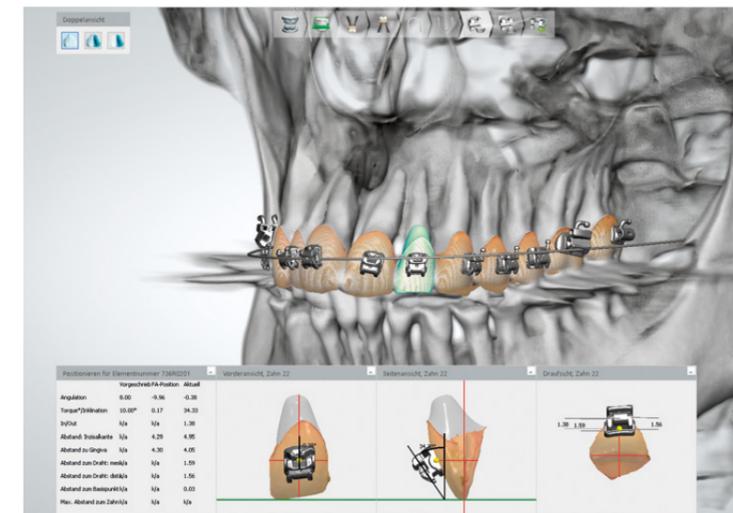
**We plan your brackets to exactly match the facial axis points (FA points) of the individual teeth. After each planning task you will receive detailed documentation (PDF) with our analyses:**

- Analysis of the baseline situation
- A Bolton analysis
- Screenshots of important information
- A tooth movement analysis
- Table with bracket values

Once you have approved the planning result, we will construct a three-part transfer splint (frontal, 2 x lateral) for each jaw to facilitate the insertion of the brackets and the removal of the splint.

Our transfer splint is printed from two different materials with different hardness: The bracket "housing" around the bracket is printed in 27 Shore. The occlusal surfaces and the area halfway up to the brackets are printed in a hard material. The more rigid material supports a more precise placement of the splint on the teeth. The softer part of the splint serves as a tear-off edge when removing the brackets after they have been placed.

Both materials are certified as class I medical devices.





# MODEL DESIGN

**We take your scan data and use them to construct precisely fitting models for downstream processing in your laboratory.**

You do not have to worry about which design software is the best, which settings you should use for a perfect fit of the dies or which implant library you need for which scanbody. We take all these decisions off your hands and offer you a wide selection of laboratory analogues for digital impressions. We also guarantee safe installation of the analogues so that the models are ready for immediate use.

A list of available analogues and implant systems can be found at [www.3dmedicalprint.com](http://www.3dmedicalprint.com). This list is constantly being expanded as we integrate innovative developments to provide you with the best possible service.

With implant models, we always construct a gingival mask from the raw data supplied by you. In any case, we create a screenshot during the scanbody matching process in order to be able to answer any questions that might come up about the height of the analogue or rotation errors and to clarify possible discrepancies with you.

If your scan data show gaps or if you send us an Atlantis CoreFile dataset, we will prepare your data with special software before designing the model. This enables us to guarantee smooth processes and improve precision – both during the CAD design phase and during the actual production of the model. We also offer this service for laboratories that want to design models themselves and manufacture them in-house.





# DENTAL PRODUCTS



## Crown and bridge models, saw-cut models

A model with removable dies. The gingival portions remain unchanged. The dies are segmented at or below the preparation margins and can be pushed out of the model base.

A special feature are the removable, high-resolution printed stumps. All our models can be ordered with different model base connectors for articulators.

By default, models will be equipped with a 3-pin connector, but they are also available with 3shape, iTero or our own 3DMP Splitcast connectors at no extra charge. This model is also available with a removable gingival mask on the prepared dies if requested.

The basic model is a full model with a wall thickness of 2 mm, filled with support material on the inside.

Included: Model of the opposing jaw with all prepared dies and a removable neighbouring tooth.

**Colour:** Model, beige; dies, ivory (standard) or grey and similar to Vita A3 (optional)

**Extras:** Removable soft gingival mask (surcharges apply), control model "small" printed in HQ, max. 6 units (surcharges apply)

**Print mode:** Model, HQ 0,016 mm (Polyjet); dies, 0,010 mm (SLA)

**Design parameters:** 3D medical print parameters

**Production time:** 1–3 working days



## Crown/bridge models, uncut

A model without removable dies. By default, models will be equipped with a 3-pin connector, but they are also available with 3shape, iTero or our own 3DMP Splitcast connectors at no extra charge.

This model is an economy variant without removable dies.

The basic model is a full model with a wall thickness of 2 mm, filled with support material on the inside.

Included: Model of the opposing jaw.

**Colour:** Beige

**Print mode:** 0,016 mm (Polyjet)

**Design parameters:** 3D medical print parameter

**Production time:** 1–3 working days



### Implant models

Implant models can also be designed with removable prepared dies. The soft gingival mask around the implant can be removed to better check the fit of the prosthetic construction.

The model is available with or without laboratory analogues.

To make the workflow as easy as possible for you, we stock an extensive inventory of laboratory analogues by the most popular implant manufacturers. These laboratory analogues will – if requested – be installed in the model in the correct position.

A regularly updated list can be found on our website under Products – Implant Model – Implant List. Or ask our technicians directly.

The basic model is a full model with a wall thickness of 2 mm, filled with support material on the inside.

Included: Model of the opposing jaw with all prepared dies and a removable neighbouring tooth (gingival mask available, surcharges apply).

**Colour:** Model, beige; dies, ivory (standard) or grey and similar to Vita A3; gingival mask, pink

**Extras:** Removable soft gingival mask (surcharges apply)

**Print mode:** Model, HQ 0,016 mm (Polyjet); dies, 0,010 mm (SLA); gingival mask, 0,030 mm (Polyjet)

**Design parameters:** 3D medical print parameter

**Production time:** 1–3 working days



### Elos accurate® models

This model is absolutely identical to our implant model. However, we can offer a special package price due to our close cooperation with Elos. This package price includes the model itself and the model of the opposing jaw, a removable neighbouring tooth, the gingival mask, and an Elos model analogue.

Additional analogues will be charged according to our current price list. This package offer assumes that the scanning was performed using an Elos scanbody and that we can install an original Elos analogue.

The basic model is a full model with a wall thickness of 2 mm, filled with support material on the inside.

Included: Model of the opposing jaw with all prepared dies and a removable neighbouring tooth as well as an Elos model analogue and one gingival mask per jaw.

**Colour:** Model, beige; dies, ivory (standard) or grey and similar to Vita A3; gingival mask, pink

**Print mode:** Model, HQ 0,016 mm (Polyjet); dies, 0,010 mm (SLA); gingival mask, 0,030 mm (Polyjet)

**Design parameters:** 3D medical print parameter

**Production time:** 1–3 working days



### Master models

The master model differs from the crown/bridge model in that the scanned palate area of the model is present; only margins frayed during scanning are cut away.

It is used for the fabrication of partial dentures, cast-metal framework, the analogue production of impression trays, and more.

The printed model is easy to insulate against methyl methacrylate with agar-agar.

With good insulation, the prosthesis base can be easily removed after the resin has cured. Do not use for hot polymers under pressure or at temperatures exceeding 60°C. By default, models will be equipped with a 3-pin connector, but they are also available with 3shape or iTero connectors at no extra charge.

The basic model is a full model with a wall thickness of 2 mm, filled with support material on the inside.

Included: Model of the opposing jaw.

**Colour:** Beige

**Print mode:** 0,016 mm (Polyjet)

**Design parameters:** 3D medical print parameter

**Production time:** 1–3 working days



### Custom impression trays

Digitally designed custom impression trays are used for analogue impression-taking for implant restorations or complete denture, among other uses.

The biocompatible material has been certified as a class IIa medical device and will be cleaned and post-cured to manufacturer requirements.

We will be happy to design your impression tray (surcharges apply).

**Cleaning:** The cleaning and post-curing of biocompatible materials is subject to stringent manufacturer requirements, which we comply with fully.

**Colour:** Blue

**Print mode:** 0,100 mm (DLP)

**Design parameters:** Minimum tray thickness, 2,5 mm; impression material gap, 1,5–3,0 mm

**Material:** The biocompatible material has been certified as a class I medical device. The product specification sheet is available for download on our website.

**Production time:** 1–3 working days



### Cast-metal frameworks

Printed components for cast-metal frameworks have been specially developed for intraoral scans, but also have their advantages in analogue impressions.

Blocking out, duplicating and creating a duplicate model are no longer necessary.

With this technique you can immediately start with the digital construction.

The design includes all digital wax profiles, which can be further reinforced. For intraoral impressions, the master model must also be ordered for completion.

You can order the model casting components from us either just printed or both printed and cast. We will be happy to also perform the design step (surcharges apply).

If you order cast components, we will supply you with the divested and sandblasted framework from which the sprues already have been removed. We do not offer a finishing service.

**Colour:** Printed, clear; cast, metallic  
**Print mode:** 0,030 mm (SLA)

**Material, printed:** Special fully calcinable resin material

**Material, cast:** Remanium GM 800+. The product specification sheet is available for download on our website.

**Production time:** Printed, 1–4 working days; cast, 2–5 working days



### Testing dummies for implant work

Save on the expensive fabrication charges for large constructions from materials such as titanium, CoCr or zirconia.

Order an inexpensive test dummy from us beforehand to check the impression.

Thanks to the biocompatible tooth-coloured material, you can simultaneously check the aesthetics of anatomical designs.

This has many advantages – above all, it may save you a lot of trouble and lengthy discussions about who is responsible for paying for a job that is not accepted. This product is printed from a biocompatible material certified as a class IIa medical device.

**Cleaning:** The cleaning and post-curing of biocompatible materials is subject to stringent manufacturer requirements, which we comply with fully.

**Colour:** Similar to Vita A3

**Print mode:** 0,050 mm (DLP)

**Design parameters:** Not specified

**Material:** The biocompatible material has been certified as a class IIa medical device. The product specification sheet is available for download on our website.

**Production time:** 1–3 working days



### Designs for pressing pressable ceramics

Do you design veneers, crowns, inlays or onlays in order to be able to press them in ceramics later?

We print these designs for you, with a pressing sprue with a length of 5–8 mm and a thickness of 3 mm already installed. The resin material is fully calcinable, so there will be no residual ash any of the lumens.

This allows homogeneous pressing without inclusions.

Take advantage of our service and have multiple parts printed by combining them into a coherent “tree” consisting of up to four parts. This immensely simplifies handling ahead of the investing step; for example, only one part needs to be waxed onto the pressing plunger.

In addition, this printed resin construction will be much more stable during investing and there will be no fractures breaks or distortions, by contrast with wax parts.

**Colour:** clear

**Extras:** Combination of four parts to one pressing “tree” (surcharges apply)

**Print mode:** 0,030 mm (SLA)

**Material:** Special fully calcinable resin material

**Production time:** 1–3 working days



### Provisional crowns, veneers, try-ins, mock-ups

Thanks to new materials we are now able to print provisional crowns, veneers, bridges and more. We will print your design from a biocompatible microfilled hybrid resin material that is certified as a class IIa medical device. Although this certification would allow permanent use in the mouth, there are no long-term clinical studies available yet for these materials.

We therefore recommend (as of March 2019) printing only bridges with a maximum of one pontic. For more extensive bridges, we cannot guarantee non-breakage. This material is easy to polish or can be finished with glaze.

**Cleaning:** The cleaning and post-curing of biocompatible materials is subject to stringent manufacturer requirements, which we comply with fully.

**Colour:** Similar to Vita A3

**Print mode:** 0,050 mm (DLP)

**Design parameters:** As with milled constructions; no milling radius correction is required

**Material:** The biocompatible material has been certified as a class IIa medical device. The product specification sheet is available for download on our website.

**Production time:** 1–3 working days

# PRODUCTS OF ORTHODONTICS





### Master models for orthodontics

The model is constructed with a so-called Hinz base.

All orthodontic work can be completed analogously on these models. Unlike plaster casts, these models are very resistant to mechanical stress. These models look very clean even after completion of the case; broken teeth or the like will be a thing of the past.

The printed model is easy to insulate against methyl methacrylate with agar-agar. With good insulation, the orthodontic device can be easily removed after the resin has cured. Do not use for hot polymers under pressure or at temperatures exceeding 60°C.

The basic model is a full model with a wall thickness of 2 mm, filled with support material on the inside.

Included: Model of the opposing jaw.

- Colour:** Beige
- Print mode:** 0,016 mm (Polyjet)
- Design parameters:** Not specified
- Production time:** 1–3 working days



### Aligner models, dental arch

These aligner models are full-arch models.

They can be used to make splints for aligner therapy with the help of thermoforming foils.

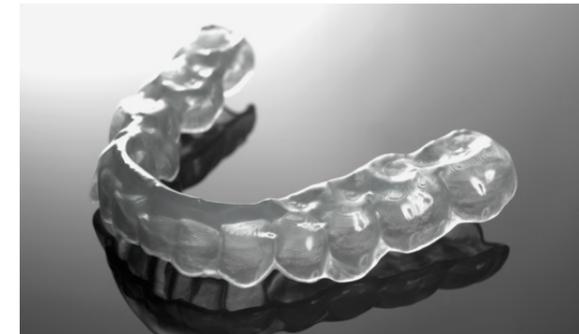
You do not need to insulate these models, although the use of an Isofolan film would be an advantage.

These models are manufactured at full pressure and are therefore protected against distortion by the pressure and the heat in the thermoforming unit.

In order to avoid confusion between multiple set-up models, we trim the models if necessary and label them with the file name at the base.

The basic model is a fully printed model.

- Colour:** Beige
- Print mode:** 0,016 mm (Polyjet)
- Design parameters:** Not specified
- Production time:** 1–3 working days



### Splinting therapy

We print Michigan splints, bleaching splints, bite guards (for splint therapy) and NTI splints from a biocompatible material.

This material is certified as a class IIa medical device and is therefore suitable for permanent use. The splints are very easy to grind and polish. The material is particularly fracture-resistant and sufficiently elastic.

In future we will be offering these splints in two different colours, one blue transparent (available immediately) and the other one clear (available soon). You can find out about availability on our website.

**Cleaning:** The cleaning and post-curing of biocompatible materials is subject to stringent manufacturer requirements, which we comply with fully.

- Colour:** Bluish transparent, clear transparent
- Print mode:** 0,050 mm (DLP)
- Design parameters:** Distance to teeth, 0,05 mm; retained undercuts, 0,07 mm
- Material:** The biocompatible material has been certified as a class IIa medical device. The product specification sheet is available for download on our website.



### Bracket transfer splints

The splints are supplied in three parts per jaw (frontal, 2 x lateral) to facilitate insertion of the brackets and removal of the transfer splint. On request, splints can also be designed and supplied in one part for each jaw.

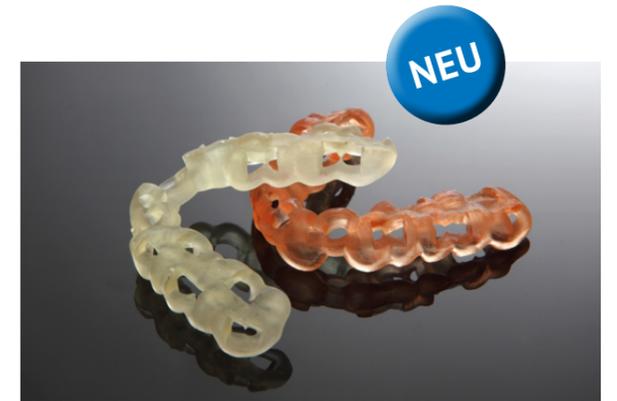
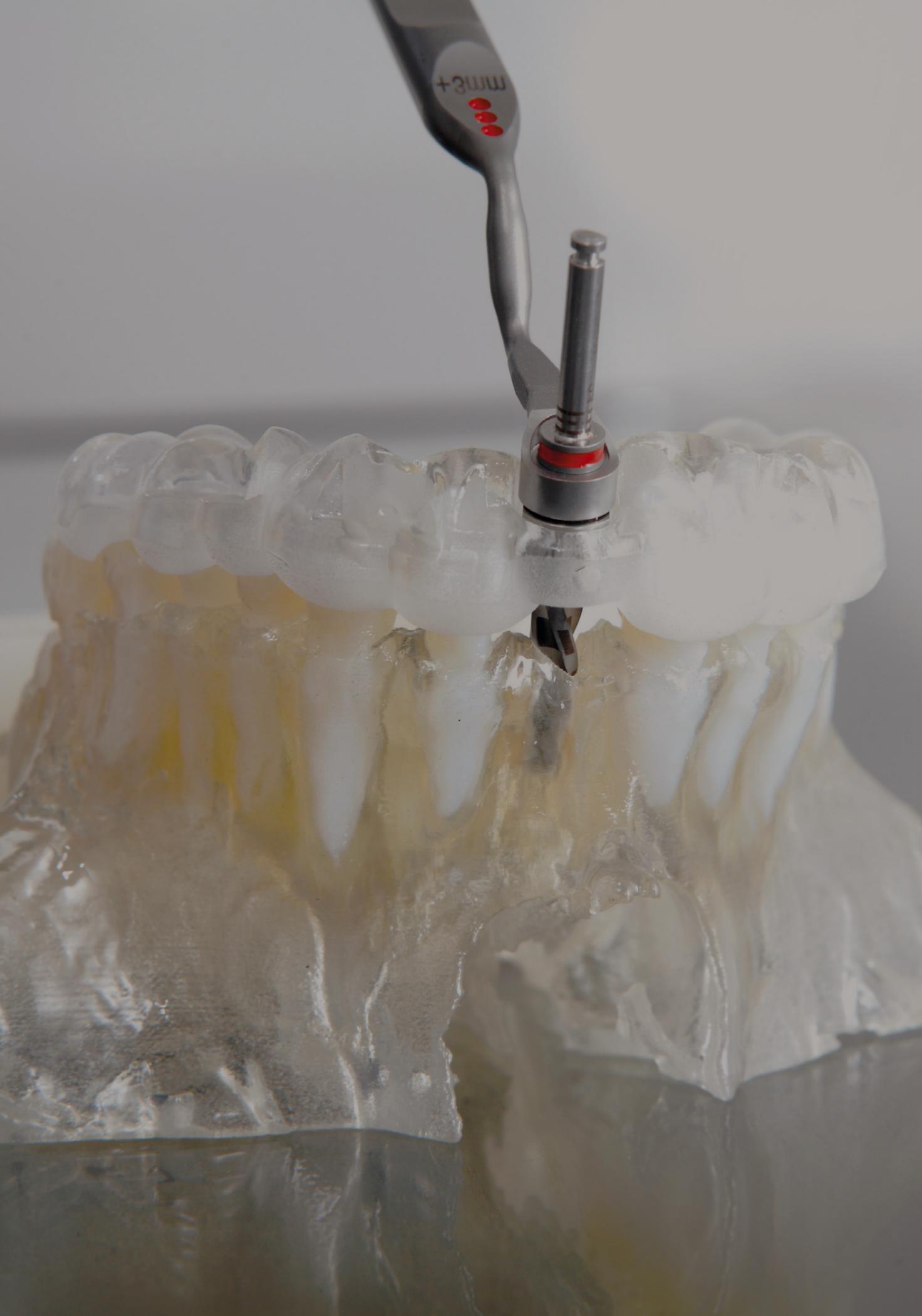
In addition, our transfer splints are printed from two different materials with different hardness: The bracket "housing" around the bracket is printed in 27 Shore. The occlusal surfaces and the area halfway up to the brackets are printed in a hard material.

The more rigid material supports a more precise placement of the splint on the teeth. The softer part of the splint serves as a tear-off edge when removing the brackets after they have been placed.

Both materials are certified as class I medical devices.

**Cleaning:** The cleaning and post-curing of biocompatible materials is subject to stringent manufacturer requirements, which we comply with fully.

- Colour:** Clear transparent
- Print mode:** 0,030 mm (Polyjet)
- Design parameters:** Distance to brackets, 0,01 mm; distance to teeth, 0,1 mm
- Material:** The biocompatible material has been certified as a class I medical device. The product specification sheet is available for download on our website.



### Digital drill templates (stents)

The best thing you can wish for as an implant dentist is to know in advance what will happen – and what won't.

To ensure the screw access channel is located where it makes prosthetic sense, we plan implants for you and create surgical (drill) templates. Of course we can also print your self-designed drill template from a biocompatible material, certified as a class I medical product.

We deliver the templates ready for use, with titanium sleeves already in place if the planned implants require this. All that is left for you to do is disinfecting the stent prior to implant placement.

**Cleaning:** The cleaning and post-curing of biocompatible materials is subject to stringent manufacturer requirements, which we comply with fully.

**Colour:** Clear-transparent

**Print mode:** 0,030 mm (Polyjet)

**Design parameters:** Distance to teeth, 0,15 mm; sleeve offset, 0,03 mm

**Material:** The biocompatible material has been certified as a class I medical device. The product specification sheet is available for download on our website.

### Digital drill templates, autoclavable

The best thing you can wish for as a surgeon is to know in advance what will happen – and what won't. To ensure that the screw access channel is located where it makes prosthetic sense, we plan implants for you and create surgical (drill) templates. Of course we can also print your self-designed drill template from a biocompatible material, certified as a class I medical product.

This material is approved for high-temperature sterilization. You can sterilize the template in any commercial or Statim autoclave.

**Cleaning:** The cleaning and post-curing of biocompatible materials is subject to stringent manufacturer requirements, which we comply with fully.

**Colour:** Clear-orange before sterilization, clear-yellow after sterilization

**Print mode:** 0,050 mm (DLP)

**Design parameters:** Distance to teeth, 0,10 mm; sleeve offset, 0,03 mm

**Material:** The biocompatible material has been certified as a class I medical device. The product specification sheet is available for download on our website.

**Sterilization:** 15 minutes at 121°C or 3 minutes at 138°C



# USEFUL PRODUCTS

## 3DMP-Splitcast

We tried to harness the benefits of the Splitcast system by carrying them over from analogue to digital technology. And we have indeed achieved this with our latest product, the 3DMP Splitcast. Thanks to the magnetic system, you can easily separate the model from the articulator. This is a great help when mounting models, because it is no longer necessary to pay attention to the removable dies; and when continuing to work on the model, it is no longer necessary to hold the entire plaster base.

The 3DMP Splitcast system is reusable. However, we advise caution when removing the plaster from the base (do not use a hammer but a plaster pliers).

- Colour:** Beige or magenta
- Print mode:** 0,016 mm (Polyjet)
- Presentation:** Pack of 12
- Magnet:** Neodymium 2.3 kg



## Magnetic screws

These screws are needed for the 3DMP Splitcast system.

Because these models are designed for multiple use, they are delivered without these screws. After receiving the model, simply screw the screws into the threaded holes provided. All you need is a hexagon screwdriver.

After completion of the prosthetic work, simply remove the screws from the model and reuse them the next time.

- Colour:** Metallic
- Presentation:** Pack of 20
- Material:** Stainless steel



## 3Shape articulators

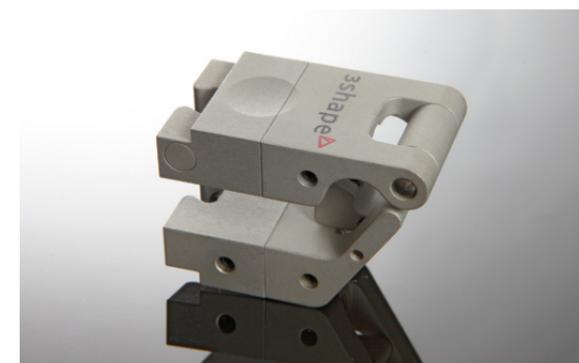
A very useful part of the digital workflow.

Models are easy to mount on this articulator without screws or plaster. The occlusion – and especially lateral movements – can be checked very easily.

The base can be designed for quadrant models but also for full-arch models.

Please use the 3DMP for 3shape interface in the Modelbuilder software; we have adjusted its fit to match our models precisely.

- Colour:** Metallic
- Manufacturer:** 3Shape



## iTero articulators

A very useful part of the digital workflow.

Models are easy to mount on this articulator without screws or plaster. The occlusion – and especially lateral movements – can be checked very easily.

The base can be designed for quadrant models but also for full-arch models.

Please use the 3DMP for iTero interface in the Modelbuilder software; we have adjusted its fit to match our models precisely.

- Colour:** Metallic
- Manufacturer:** Cadent iTero®





# PRESENTATION MODELS



These models are primarily display models.

These models, which are particularly suitable for patient information, illustrate all indications in crown and bridge prosthodontics. The specially designed mandible makes the difference between an implant restoration and a three-unit bridge very clear and obvious for any patient.

The difference between a cemented crown on an abutment and a screw-retained crown with a screw access channel can also be demonstrated on the mandibular model.

The models are printed with a layer thickness of 0,016 mm, the removable dies in 0,010 mm.

You can order the models as follows:

- With monolithic stained and glazed crowns, bonded to titanium bases in zirconia
- With printed and polished crowns, glued on titanium sleeves already glued in resin
- With no prosthetic devices

Delivered with laboratory analogues and a gingival mask at site 36. We can customize your models with your logo on request (surcharges apply)

We need your logo in .eps and .ai formats in order to display it three-dimensionally. This logo will be displayed on the bottom side of the models.



# TRAINING MODELS

Designed by 3Dmedicalprint

## Maxilla

**Site 16:** Removable die, prepared for MOD inlay

**Site 12:** Removable die, prepared for veneer

**Site 11:** Removable die, prepared for crown

**Sites 24, 26:** Removable dies, prepared for bridge

## Mandible

**Site 36:** Abutment on a Straumann WN Implant  
Abutment bonded on titanium base, with screw

**Site 36:** Cemented crown for abutment 36

**Site 32:** Screw-retained crown on a Dentsply Astra EV 3.0 implant  
Screw-retained crown, bonded to a titanium base, with screw

**Site 45:** Screw-retained crown on a Nobel CC RP implant  
Screw-retained crown, bonded to a titanium base, with screw

**Site 44, 46:** Removable dies Bridge 44, 45, pontic 46

Alternating dies, from anatomical shapes to prepared teeth 44, 46



### Preparation and impression models

This model shows a dentate maxilla with removable teeth 17 to 27. Teeth with a natural anatomy, printed in composite resin in a colour similar to Vita A3. This material can be easily milled with diamond cutters.

Also, the material can be easily scanned with any contemporary intraoral scanner. The basic model has a hard core and a soft pink gingival mask above it.

This allows students to displace the gingiva by inserting retraction cords after the preparation is complete.

The student can then use the intraoral scan to examine and evaluate the results of the preparation and the digital impression.

#### This model is particularly suitable for:

- Dental schools
- Training events by manufacturers of intraoral scanners
- Advance preparation classes by material manufacturers
- Master courses for preparation techniques (all-ceramics)

This model is reusable to a limited extent. Teeth 17 to 27 can be re-ordered separately as a set,

All models designed by 3D medical print



We can customize your models with your logo on request (surcharges apply) We need your logo in .eps and .ai formats in order to display it three-dimensionally. This logo will be displayed on the bottom side of the models.



### Composite-resin training models

The composite-resin training model presents a dentate maxilla with removable teeth 17 to 27.

Teeth with a natural anatomy, printed in composite resin in a colour similar to Vita A3.

The printed, pre-prepared teeth bond very well with all commercially available composite materials.

The basic model has a hard core and a soft pink gingival mask above it.

The creation of partial matrices and/or wedges can be practiced as well as the actual filling.

#### Prepared teeth

- Site 17: Occlusal restoration
- Site 16: Mesiopalatal/mesiobuccal cusp build-up
- Site 14: Distal contact point restoration
- Site 13: Edge build-up
- Site 21: Mesial edge build-up
- Site 24: MOD restoration
- Site 25: MOD restoration

#### This model is particularly suitable for:

- Dental schools
- Composite manufacturer (to demonstrate the use do the materials)
- Advanced composite restoration courses for dentists
- Manufacturers of wedge matrix systems

This model is reusable to a limited extent. Teeth 17 to 27 can be re-ordered separately as a set.





NEW

## Aesthetic composite training models

This model shows a dentate maxilla with removable teeth 17 to 27.

Teeth 13 to 23 are milled from a multi-layer composite. This means a natural layering of the cervical, dentin and incisal aspects, yielding a very natural model for aesthetic anterior fillings.

The basic model has a hard core and a soft pink gingival mask above it. This model differs from the standard composite training model in the natural appearance of its milled anterior teeth.

### Prepared teeth

- **Site 13:** Edge build-up
- **Sites 12 and 22:** Incisal lengthening
- **Site 21:** Mesial edge build-up
- **Site 23:** Edge build-up

The model is supplied with a back wall to help model the desired anatomical shape.

### This model is particularly suitable for:

- Dental schools
- Composite manufacturer  
(to demonstrate the use do the materials)
- Advanced composite restoration courses for dentists
- Presentations of highly aesthetic anterior fillings

This model is reusable to a limited extent. Teeth 17 to 27 can be re-ordered separately as a set.



NEW

## Implant training models

with optional drill template

This model lets you practice implant insertions and to train in training courses.

The model is designed so that an anterior implant can be placed at **site 11** and posterior implants at **sites 25, 26 and 27**.

The thickness of the bone in the posterior region is around 13 mm. The maxillary sinus has also been reconstructed and lined with a Schneiderian membrane of 0,35 mm thickness.

This artificial membrane is soft with a Shore hardness of 27.

The basic model has a hard core and a soft pink gingival mask above it. The average thickness of the gingival mask is 2,5 mm. This soft gingival mask can also be used to practice the incision and subsequent suturing of the soft tissue.

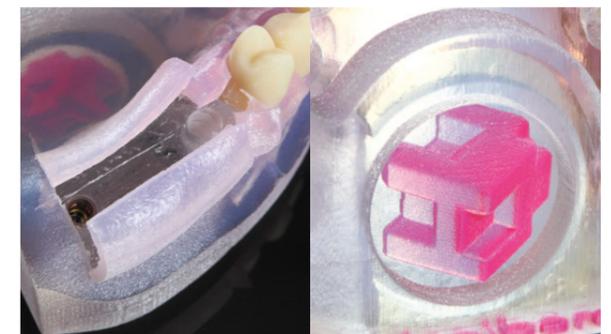
Our models are made to appear as natural as possible. Therefore, for example, this soft gingival portion can be separated from the "bone" with a raspator, just as in a clinical case.

### This model is particularly suitable for:

- Dental schools
- Implant manufacturers (demonstration of systems)
- Training for dental surgeons
- Training in sinus floor elevation

You can optionally the model with a drill template. By default, implants are pre-planned at **sites 11, 25 and 27**. However, you can select other implant sites for your drill template if you prefer (surcharges apply).

This model will be developed to allow sinus floor elevation simulations in the future.





Kraimsthalstr.1, A-4860 Lenzing, phone: +43 664 1314270, mail: [office@3dmedicalprint.com](mailto:office@3dmedicalprint.com), [www.3dmedicalprint.com](http://www.3dmedicalprint.com)