# **Preparatory work**



# Perfection from the very beginning!



The manufacturing process for dental technical treatment in the laboratory starts with preparatory work. Therefore, high-quality, matched products must be used as early as this stage for a high level of precision, to achieve the correct foundation for further processing.

bredent develops, produces and sells innovative model system components and devices to efficiently support dental technical laboratories as well as low-expansion plasters coordinated with the impression materials for best fit. Additional products for time-saving preparatory work, such as die varnishes and light-curing materials, facilitate daily work and reduce possible sources of error during the process.



### Impressions

High-precision silicone-based impression materials enable an exact reproduction to be created with a high level of design accuracy for the perfect base - a working model made from plaster or resin. Various flow properties for the corresponding requirements provide the ideal pre-requisite for correct impression taking of the situation in the mouth. The pre-fabricated individual single-use impression tray offers the highest level of precision for an impression that is stressfree for the patient thanks to its special shape.





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### Model manufacture

Raw materials of superior quality for high-quality models are the pre-requisite for the development and production of model materials such as plasters and resins. The coordinated expansion of the plasters to the impression materials enables an exact reproduction of the situation in the mouth to be created and therefore offers the correct base for further processing. The Exakto-Form model resin, with a high degree of edge stability, particularly with thinwalled inlays, provides a cost-saving method with a high safety factor.







## Model systems

The high-quality and accurate Master-Split model system with various model formers and the reusable Split-Cast insert enables high profitability for the laboratory. The corresponding and innovative Master-Pin, with a space-saving sleeve, offers perfect slippage whilst simultaneously holding the die securely.





### Die varnishes

The display of colours of various die varnishes offers the correct base for every situation. The visual layer thickness checks enable precise application, in the desired layer thickness. The choice of curing – air-drying or light-curing – allows various levels of hardness to be achieved and thus, appropriate protection of the die to be maintained.





### Accessories

Useful accessories support accuracy of fit from the very beginning and therefore make the daily work in the laboratory easier. Everything is on offer, from low-expansion brush resin for resin dies in various colours to a real blend of plasters and their devices and materials optimised for surface processing.







### breciform D impression tray

#### The foundation for success

The choice of impression tray is pivotal for the quality of the impression. This was proven in practice by a scientific investigation at the University of Basel. The breciform D impression tray significantly outperformed the metal trays and individual trays.



Especially in implantology, the requirements for precision of the impression are particularly high, as the results of inadequate impressions can massively increase the amount of work for prosthetic restorations, whether separating the finished works or time-consuming grinding.

#### Scientifically-proven precision

A study at the University of Basel arrived at the following conclusion: "Differences between the tray types both in the measurement section range as well as in the die diameter could be determined. The metal tray provided the least accurate results. The plastic tray from bredent frequently achieved the best result; the individual tray came in second place, due to the constancy of the values achieved." \*

\*Dissertation from the University Dental Clinics at the University of Basel "Individual tray versus conventional tray - Effects on the dimensional stability of models" by Gabrielle Widmer.

#### **High efficiency:**

Costly and time-intensive cleaning of the tray is avoided by using a single-use tray. Storage is made easier, as there is no lengthy tracking of the tray, whether this is by you, your partner or the dental technical laboratory. There is no lengthy and expensive manufacturing of an individual tray.

#### **Optimal hygiene:**

The optimum result in terms of hygiene is ensured by the use of a single-use item. Offer your patients this service.



#### Rapid open impression taking

The position of the implants can be identified easily and the tray is therefore simple, quick and safe to customise.

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## breciform D impression tray

#### Simple, quick and precise in application









#### Perfect ergonomy

Work during impression taking is facilitated and precision improved thanks to the wide handle plates, enabling the base to be positioned for successful prosthetic restoration.

#### **Comfortable for patients**

Thanks to optimal tongue support and rounded edges, stress for the patient is avoided as much as possible.





#### breciform adhesive

breciform adhesive ensures optimal adaptation of the impression materials, which results in maximum precision.



#### With stops for dentulous jaws

Triangular and bar-shaped sterilisable stops enable dentulous jaws to be modelled safely and precisely. They enable individual edge designing with putty soft kneading silicone, so that pressing through the impression is safely prevented.





## Impressions

### breciform D impression tray



#### **Material properties**

High mechanical rigidity and strength

Dimensionally and pressure stable



Single-use breciform D impression tray Starter set 10 trays each for the maxilla/mandible Sizes S, M, L and XL 10 breciform D triangular stops 10 breciform D bar-shaped stops

**REF 580UOTSS** 

#### Single-use breciform D impression tray 50 pieces of each . Maxilla size S **REF 5800K00S** Maxilla size M REF 580OK00M Maxilla size L

REF 580OK00L Maxilla size XL REF 580OK00XL

#### Single-use breciform D impression tray 50 pieces of each Mandible size S **REF 580UK00S** Mandible size M REF 580UK00M Mandible size L REF 580UK00L Mandible size XL **REF 580UK0XL**



#### breciform D triangular stop (sterilisable) 50 pieces

REF 58000036

breciform D bar-shaped stop (sterilisable) REF 58000037 50 pieces

breciform adhesive for A silicone 10 ml REF 58000040



## brecision implant impression materials



#### brecision implant heavy

The new brecision implant heavy is specially designed for the requirements of implantology. When taking an impression using the open method, it fixes the implant impression posts reliably and in the case of closed impression taking, it enables secure repositioning of the impression posts.



#### brecision implant light

For taking impressions in aesthetically demanding areas, brecision implant light creates a realistic reproduction with a high level of image precision thanks to its thixotropy. It is therefore the ideal corrective material for taking double-mix impressions and corrective impressions.

Can be used flexibly:





#### Single-phase impression taking

Single-phase impression taking for work without a high aesthetic requirement, e.g. edentulous jaws, free-end situations, opposing bite, etc., is carried out freely and easily with brecision implant heavy.





#### **Double-mix impression taking**

In the case of work with a high aesthetic requirement and in which the soft tissue situation must be modelled very precisely, double-mix impression taking using brecision implant heavy and brecision implant light is recommended.

#### **Corrective impression taking**

If corrective impression taking is desired, the initial impression is taken using putty soft, which combines very well with the corrective material brecision implant light for taking the second impression.





### brecision implant impression materials



![](_page_7_Picture_3.jpeg)

#### brecision implant light

Impression material, orange 2 x 50 ml 10 mixing cannulas, yellow 10 intra-oral tips **REF 580BL050** 

### Accessories

![](_page_7_Picture_7.jpeg)

Mixing cannulas, pink 40 pieces REF 58000022

![](_page_7_Picture_9.jpeg)

Mixing cannulas, yellow 40 pieces REF 58000032

12 pieces REF 32000451

![](_page_7_Picture_12.jpeg)

Intra-oral tips, yellow 40 pieces REF 58000033

![](_page_7_Picture_14.jpeg)

Dynamic mixer, yellow for 5:1 system 40 pieces REF 58000112

![](_page_7_Picture_16.jpeg)

Intra-oral tips, white 40 pieces REF 58000034

![](_page_7_Picture_18.jpeg)

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Contouring tip wide 40 pieces REF 58000023

![](_page_8_Figure_1.jpeg)

### security-bite blue bite registration

![](_page_8_Picture_3.jpeg)

The thixotropic property of the security-bite blue bite registration material, based on A-silicone, can be adapted to the row of teeth without dripping and therefore in a targeted manner. The high Shore A hardness of 90 enables dimensionally stable bite registration and therefore ensures a reproduction that is true to the original, without bending.

![](_page_8_Figure_5.jpeg)

security-bite blue 2 x 50 ml cartridges 12 mixing cannulas, pink 12 contouring tips - wide REF 58000020

### Impression cutter

Undercuts or drainage channels can be easily and specifically removed using the scalpel-sharp loop blade.

![](_page_8_Picture_9.jpeg)

The scalpel-sharp loop blade allows cutting even in areas difficult to access.

![](_page_8_Figure_11.jpeg)

![](_page_8_Picture_12.jpeg)

![](_page_9_Picture_0.jpeg)

Impressions

### Dentaclean impression and prosthesis disinfection

Disinfection with Dentaclean impression and prosthesis disinfection prevents the transmission of viruses, bacteria and fungi from patients to the laboratory, and therefore increases your protection against infection.

![](_page_9_Picture_4.jpeg)

Disease pathogens can be transmitted to the laboratory by impressions.

Tested and approved by the Institute for Hospital Hygiene and Infection Control [Institut für Krankenhaushygiene und Infektionskontrolle], Gießen,

Dentaclean impression and prosthesis disinfection is listed by the DGHM (German Society for Hygiene and Microbiology) [Deutsche Gesellschaft für Hygiene und Mikrobiologie].

![](_page_9_Picture_8.jpeg)

After using Dentaclean impression and prosthesis disinfection, active viruses, bacteria and fungi can no longer be detected.

![](_page_9_Picture_10.jpeg)

Impression and prosthesis disinfection 1000 ml concentrate yields 10 litres of ready-to-use solution incl. 25 shipping bags REF 52001006

## Shipping bags

The shipping bags have already been labelled with the word "disinfected".

![](_page_9_Picture_14.jpeg)

A separate bag for order notes is also supplied so they do not become damp.

The shipping bags can be pre-printed with your company logo on request.

![](_page_9_Picture_17.jpeg)

Shipping bags, neutral 200 pieces REF 52001002

Shipping bags with your company logo on request from 1,000 pieces

![](_page_10_Picture_1.jpeg)

## Protective wax for functional margins

#### For the manufacture of perfect functional margins.

![](_page_10_Picture_4.jpeg)

The ready-to-use, prepared functional tray provides the safe pre-requisite for precise models with a functional margin. The slightly sticky, flexible protective wax for functional margins enables simple and safe positioning onto each impression material. Final fixation is carried out by waxing up. Accordingly, uniform design of functional margins is possible.

![](_page_10_Picture_7.jpeg)

Uniform and ideal functional margins in the model guarantee perfect positioning of the prosthesis.

![](_page_10_Picture_9.jpeg)

Protective wax for functional margins red, 175 g REF 43001500

### Silicone and wax surface tension reducing agent

Enhances the flow properties of plaster for silicone impressions.

![](_page_10_Picture_13.jpeg)

The spray head of the spray bottle facilitates even surface wetting with silicone and wax surface tension reducing agent.

![](_page_10_Picture_15.jpeg)

Silicone and wax surface tension reducing agent 750 ml REF 54000705

![](_page_10_Picture_17.jpeg)

The reduced-tension silicone surface (left) visibly improves the flow properties of the plaster.

![](_page_10_Picture_19.jpeg)

The silicone and wax surface tension reducing agent creates a homogeneous plaster surface. This ensures precise dental technical work.

![](_page_10_Picture_21.jpeg)

Spraying on the silicone and wax surface tension reducing agent improves the flow properties of plaster for silicone impressions. The impression must be dry before casting the arch.

![](_page_10_Figure_23.jpeg)

![](_page_11_Picture_0.jpeg)

### ecovac vacuum mixing system

#### Precision-fit restorations obtained through optimal use of material properties.

![](_page_11_Picture_4.jpeg)

The user-friendly and compact design simplifies work and reduces sources of errors. A powerful and maintenance-free vacuum pump, adjustable in two different levels (15 mbars, 200 mbars), ensures bubble-free mixing of materials and results in a perfect casting surface.

Stirring time and speed can be adjusted continuously to allow correct processing of different materials.

ecovac (230V) REF 14000930

(wall mounting, without cup and stand) 1 x mains cable 1 x replacement filter

1 x drilling template for wall mounting 4 x screws and wall plugs for wall mounting

ecovac base 1 piece REF 21000450

![](_page_11_Picture_11.jpeg)

#### ecovac mixing spiral

The mixing spiral takes up the components to be mixed from all areas of the mixing cup and stirs them horizontally and vertically. No unmixed materials remain on the bottom of the mixing cup, which may cause different expansion of the material later on.

All features and components listed provide increased reliability, lead to improved fit when preparing dental restorations and prevent time-consuming reworking.

#### **Mixing spiral**

50 ccm	REF 1400R945
250 ccm	REF 1400R940
750 ccm	REF 1400R942
1000 ccm	REF 1400R943

![](_page_11_Picture_17.jpeg)

#### ecovac mixing cups

The smooth inner surface of the stainless steel mixing cup prevents any material or liquid residues from adhering to or depositing in scratches or undercuts. Allocation of mixing cups to different materials is therefore not required. The conical shape ensures that material which has been taken up will flow back to the centre of the mixing cup. Accordingly, the mixing ratio is retained exactly and better results can be achieved with minimal effort.

#### Mixing cups

1

50 ccm	REF 1400B945
250 ccm	REF 1400B940
750 ccm	REF 1400B942
000 ccm	REF 1400B943

![](_page_11_Picture_22.jpeg)

Mixing cup D (for use with the Degussa mixing unit) 425 ml REF 1400B944

12

![](_page_12_Picture_1.jpeg)

### KoEx measuring device

Expansion stop helps ensure an accurate fit.

Just two hours after mixing it is possible to carry out further work as a result of the expansion stop of the plasters. This increases the accuracy of fit of the dental prosthesis.

It is not possible to think of a digital future without plasters, if only because of the high level of attention to detail and the further processing steps compared to digitally produced resin models. The expansion time and the start of modelling play a significant role in the accuracy of fit of the dental prosthesis. This is why bredent plasters are set with an **expansion stop after two hours at a maximum of 0.08%** (Exakto-Rock S and Thixo-Rock). The dental technology work is generally started after this period of time. Any further expansion would make the accuracy of fit of the dental prosthesis produced significantly worse, increasing the monitoring and fitting time at the practice.

![](_page_12_Figure_6.jpeg)

![](_page_12_Picture_7.jpeg)

Measurements are carried out with the precise KoEx measuring device, featuring a digital dial gauge, to carry out a simple check on the plaster's expansion. For the first time ever, an expansion measuring device can also be used to measure the contraction of impression materials to determine the link between the two materials.

The accuracy of fit of the dental prosthesis is significantly affected by the expansion of the model material. If a plaster expands from 0.08% to 0.12% as a result of a subsequent expansion, this equates to a further expansion of 50%. In large-span bridge constructions, this can lead to inaccuracies which are extremely noticeable in the fixed implants.

![](_page_12_Picture_10.jpeg)

![](_page_12_Figure_11.jpeg)

![](_page_13_Picture_0.jpeg)

## Model manufacture

### **Giflex-TR**

#### Perforated design for controlled sawcuts.

![](_page_13_Picture_4.jpeg)

![](_page_13_Picture_5.jpeg)

Giflex-TR is a disc that features diamond-coating on both sides and is particularly suitable for cutting plaster and resin dies. Calculated chip spaces in the area of the diamond coating ensure quick removal of the grinding dust and increase the cutting performance of the disc. Giflex-TR allows quick, smooth and reliable cutting of even the hardest plaster and model resin. Troublesome chattering and jamming of the disc is avoided.

Larger holes in the diamond-free section also reduce the friction heat. The disc will not overheat even if deep cuts are carried out. The punched holes also provide a clear view of the saw cut. Better visibility when cutting plaster with Giflex-TR.

![](_page_13_Picture_8.jpeg)

Giflex-TR Ø 25 mm REF 34000025

![](_page_13_Picture_10.jpeg)

**Giflex-TR** Ø 45 mm **REF 34000110** 

Additional diamond discs for plaster processing in the special "Diamond tools" brochure **REF 000531GB**.

### **Protective chamber**

The protective chamber prevents grinding dust being inhaled, protects your eyes and therefore protects your health.

![](_page_13_Picture_15.jpeg)

Either with or without extraction connection. The extraction connection can be connected directly to the extraction device, thereby reducing the creation of dust and simultaneously providing a better view.

Protective chamber with extraction connection Dimensions: approx. W 410 x D 350 x H 260 mm, Ø 35 mm REF 22000100

Protective chamber without extraction connection Dimensions: approx. W 410 x D 350 x H 260 mm REF 22000110

### Accessories

Safety glass pane 1 piece REF 99300012

### Tungsten carbide tools for plaster processing

#### Quick shaping and smooth surfaces for all types of plaster.

![](_page_14_Picture_3.jpeg)

The super-coarse cross-cutting edge allows removal of large quantities of any type of plaster.

![](_page_14_Picture_5.jpeg)

The coarse cutting edge allows finer cuts and avoids splintering of the plaster.

![](_page_14_Picture_7.jpeg)

The cross-cutting edge produces smooth and precise grooves.

![](_page_14_Picture_9.jpeg)

The cylindrical shape enables a horizontal groove to be created, which improves the visibility of the preparation margin.

The relief protects the sharp blade against breakage of the edges. This way the service life of the relief tools is three times longer than that of comparable burs. The processed surface is also smoother and a lustre is applied.

![](_page_14_Picture_12.jpeg)

Tungsten carbide bur 1 piece **REF H263SH60** 

![](_page_14_Picture_14.jpeg)

Tungsten carbide bur 1 piece REF H263GH60

![](_page_14_Picture_16.jpeg)

**Rapidy microbur** 1 piece REF H001NH31

![](_page_14_Picture_18.jpeg)

**Preparation bur** 1 piece REF H263GH30

Additional tungsten carbide tools for plaster processing can be found in the special "Tungsten carbide tools" brochure REF 000753GB.

![](_page_14_Picture_21.jpeg)

![](_page_15_Picture_0.jpeg)

### Exakto-Rock S

#### Exakto-Rock S – formaldehyde-free, class IV super-hard plaster

The raw materials for Exacto-Rock S are synthetic. This means that a consistently high quality of end product is achieved, which in turn guarantees a reproducible model manufacture in the laboratory.

- Extremely low expansion values of just 0.08% with an expansion stop after two hours for a dental prosthesis with an accurate fit
- High compression strength offers the highest level of edge stability
- Smooth surface ensures significant attention to detail
- Excellent surface recognition in all scanners offers the optimum working basis
- An optimum light reflection provides exact readability and simplifies the work process

![](_page_15_Picture_10.jpeg)

![](_page_15_Picture_11.jpeg)

![](_page_15_Picture_12.jpeg)

#### Formaldehyde-free

The formaldehyde-free formula of the plaster offers processing which is healthy for the dental technician and enables holistic dental prostheses free from harmful substances to be manufactured.

#### Can be scanned

The best possible light reflection of all components enables perfect readability in all scanners. This reduces the digital reworking and prevents inaccuracies in the digital manufacture of dental prostheses.

#### Precise

The distinctive precision of the class IV super hard plaster for the toughest requirements offers everything you need for success. The material properties are tailored to dental technology needs.

![](_page_16_Picture_1.jpeg)

### Exakto-Rock S

#### Exakto-Rock S for the digital world

High-quality work requires a first-class basis

![](_page_16_Picture_5.jpeg)

The super-hard scannable class IV plaster offers exact readability for all components in all scanners due to the optimum light reflection. This reduces the digital reworking and prevents inaccuracies in the digital manufacture of dental prostheses.

![](_page_16_Picture_7.jpeg)

The perfect reproduction of the surface in the scanner simplifies construction and forms the basis for a high-quality dental prosthesis with an accurate fit. Final expansion is achieved after 2 hours – this guarantees rapid further work at the planning stage.

#### Exakto-Rock S for high-precision models

The minimal expansion permits the manufacture of exact arch models or master models

![](_page_16_Picture_11.jpeg)

An excellent processing time of six minutes enables stress-free casting, even of several impressions at the same time.

![](_page_16_Picture_13.jpeg)

The high level of thixotropy makes building up the plaster easy and therefore enables the manufacture of workable models. The accuracy of the plaster and the smooth surface it creates results in precise work.

#### Technical data for Exakto-Rock S

Colour	brow
Mixing ratio:	100 g
	distill
Soaking time	20 se
Mixing time by hand	20 se
Mixing time under vacuum	40-60
Processing time	5-6 m
Setting time (Vicat time)	appro
Demoulding after	40 mi
Compression strength after 1 hour	over 6
Compression strength after	85 MF
24 hours	
Hardness after 1 hour (Brinell)	200 N
Hardness after 24 hours (Brinell)	280 N
Linear expansion after 2 hours	< 0.08
	(no fi

rown, ivory 00 g / 20 ml istilled water 0 sec. 0 sec. 0-60 sec. -6 min. oprox. 10 min. 0 min. ver 60 MPa 5 MPa

200 MPa 280 MPa < 0.08% (no further expansion)

![](_page_16_Picture_19.jpeg)

 Ivory colour:

 1 x 2 kg
 REF 5700SE52

 5 x 2 kg
 REF 5700SE51

 10 x 2 kg
 REF 5700SE50

![](_page_16_Picture_21.jpeg)

 Brown colour:

 1 x 2 kg
 REF 5700SB52

 5 x 2 kg
 REF 5700SB51

 10 x 2 kg
 REF 5700SB50

![](_page_17_Picture_0.jpeg)

## Model manufacture

### Thixo-Rock

#### Class IV super-hard plaster with excellent thixotropy and optimal flow characteristics

![](_page_17_Picture_4.jpeg)

Thixo-Rock provides a very high level of stability on the spatula and an easy-flowing consistency on the vibrating machine. Processing is easy and clean.

![](_page_17_Picture_6.jpeg)

The outstanding processing width favours bubble-free casting of a higher than average number of impressions with only one mix.

- very good stability enables a simple construction
- exact exposure of the preparation margins is offered by the high edge stability, which enables sawing with no risk of splitting
- sufficient processing width for stress-free casting of several impressions

![](_page_17_Picture_11.jpeg)

Sawing and grinding of the arches is carried out with no splitting.

![](_page_17_Picture_13.jpeg)

The preparation margins of the dies are not damaged during processing. No breakage of the edges when demoulding. This leads to accurately fitting results.

lechnical data for Thixo-Rock	
Colour	brown,
	ivory, grey
Mixing ratio:	100 g / 20 ml distilled water
Soaking time	20-30 sec.
Mixing time under vacuum	60 sec.
Processing time at 23°C	5-6 min.
Setting time (Vicat time)	approx. 10 min.
Demoulding after	45 min.
Compression strength after	over 60 MPa
1 hour	
Compression strength after 24 hours	85 MPa
Hardness after 1 hour (Brinell)	200 MPa
Hardness after 24 hours (Brinell)	280 MPa
Linear expansion after 2 hours	< 0.08%
	(no further
	expansion)

![](_page_17_Picture_16.jpeg)

 Brown colour:

 1 x 2 kg
 REF 57000052

 5 x 2 kg
 REF 57000051

 10 x 2 kg
 REF 57000050

![](_page_17_Picture_18.jpeg)

 Ivory colour:

 1 x 2 kg
 REF 57000E52

 5 x 2 kg
 REF 57000E51

 10 x 2 kg
 REF 57000E50

![](_page_17_Picture_20.jpeg)

 Grey columna

 1 x 2 kg
 REF 57000G52

 5 x 2 kg
 REF 57000G51

 10 x 2 kg
 REF 57000G50

![](_page_18_Picture_1.jpeg)

### Fluid-Rock

![](_page_18_Picture_3.jpeg)

Mix Fluid-Rock base plaster in a mixing ratio of 100 g powder to 25 ml distilled water for a low-viscosity consistency.

The thin-consistency class IV base plaster Fluid-Rock enables bubble-free casting of the base shape. This enables the production of saw-cut models with an accurate fit. The light blue colour can be easily combined with all arch plasters.

![](_page_18_Picture_6.jpeg)

Fluid-Rock base plaster is cast directly into the model former without using a vibrating machine. Ideal flow characteristics enable bubble-free results.

#### Technical data for Fluid-Rock

Colour Mixing ratio: Processing time Setting time (Vicat time) Compression strength after 1 hour Compression strength after 24 hours Setting expansion

#### blue

100 g / 25 ml dist. water approx. 6 min. at 18 to 20°C approx. 11 min. at 18 to 20°C 48 N/mm<sup>2</sup> 55 N/mm<sup>2</sup> < 0.06% (no further expansion after 2 hours)

![](_page_18_Picture_12.jpeg)

Cleaner models facilitate the modelling process and do not distract from more important issues.

![](_page_18_Picture_14.jpeg)

Low-designed expansion ensures consistent quality when manufacturing the model.

Perfectly matched with Exakto-Rock S super-hard plaster.

Colour blue: 1 x 2 kg REF 5700FB52 5 x 2 kg REF 5700FB51 10 x 2 kg REF 5700FB50

![](_page_18_Picture_18.jpeg)

![](_page_19_Picture_0.jpeg)

## Model manufacture

### Arti-Rock

The snow white articulation plaster with very low expansion enables precise articulation of the models.

This avoids an unwanted increase in the bite, significantly reducing the grinding times. The short setting time enables an ideal fixation of the models and rapid further work.

![](_page_19_Picture_5.jpeg)

A precise impression can be manufactured for matrices thanks to the flexible processing of the plaster. The final hardness of Arti-Rock enables excellent processing.

![](_page_19_Picture_7.jpeg)

The rapid setting time and the low level of expansion are the perfect pre-requisites for accurate relining.

#### Technical data for Arti-Rock

Colour Mixing ratio:

Processing time Setting time (Vicat time) Compression strength according to DIN Expansion white 100 g / 40 ml dist. water approx. 3 min. 5 min.

7.2 MPa 0.01% after 20 min. 0.02% after 48 hours

The low level of expansion, at only 0.02%, guarantees an accurate model position when aligning according to the anatomic situation. This results in precise work and short grinding times.

Perfect stability and special adhesive capacity simplify mounting in the articulator and ensure safe retention of the models.

![](_page_19_Picture_16.jpeg)

![](_page_19_Picture_17.jpeg)

Colour white 1 x 4 kg REF 5700AR04 1 x 18 kg REF 5700AR18

### Accessories

![](_page_19_Picture_20.jpeg)

Master x-tray magnets 25 pieces REF 36001272

![](_page_20_Picture_1.jpeg)

### Thermo-syringe

# Fixing and bonding that can be dissolved quickly without any residues for any type of model situation.

![](_page_20_Picture_4.jpeg)

After heating, the adhesive resin wax is applied directly to the adhesion site using the thermo-sy-ringe. This ensures firm bonding.

![](_page_20_Picture_6.jpeg)

The adhesive resin wax can be applied to any material, it can be removed afterwards from the objects with no residue.

The adhesive resin wax can be moulded by heating and easily placed on the models.

![](_page_20_Picture_9.jpeg)

### Accessories

![](_page_20_Picture_11.jpeg)

Adhesive resin wax 250 g pack REF 51000701

1000 g tub REF 51000700

#### Thermo-syringe 1 piece REF 11001211

### Adhesive wax

Selected components guarantee stable adhesion of all materials.

![](_page_20_Picture_17.jpeg)

The high degree of stability after cooling enables the manufacture of models without any additional reinforcement.

![](_page_20_Picture_19.jpeg)

![](_page_20_Picture_20.jpeg)

The excellent flow properties ensure the hold of models prior to casting in plaster thanks to a secure bond.

Adhesive wax dark red 25 g REF 51000400

![](_page_20_Picture_23.jpeg)

The balanced composition enables the adhesive wax to be steamed off or boiled off with no residue.

![](_page_20_Figure_25.jpeg)

![](_page_21_Picture_0.jpeg)

## Plaster insulating liquid

#### For reliable separation of plaster against plaster.

![](_page_21_Picture_3.jpeg)

The insulating liquid soaks into the plaster and seals the surface without layering. The brush pen enables quick application.

![](_page_21_Picture_5.jpeg)

The plaster insulating liquid ensures damage-free separation of both halves of the flasks.

An alginate-based plaster insulating liquid that guarantees gap-free fitting. For the highest level of precision and damage-free separation for saw-cut models and articulation.

![](_page_21_Picture_8.jpeg)

### Accessories

![](_page_21_Picture_10.jpeg)

![](_page_22_Figure_1.jpeg)

## Multisil-mask soft

#### Accurate reconstruction of the gingival sections.

![](_page_22_Picture_4.jpeg)

![](_page_22_Picture_5.jpeg)

Rational

![](_page_22_Picture_8.jpeg)

Quick and economical processing with the cartridge system and the especially adjusted silicone allow trouble-free direct application into the impression or the matrix. The natural colour of the gingival mask supports perfect shade determination of the veneer. Overdimensioning of edge design is detected immediately.

Aesthetic

Informative

![](_page_22_Picture_12.jpeg)

![](_page_22_Picture_13.jpeg)

The gingival situation...

![](_page_22_Picture_15.jpeg)

Inlet and outlet openings are drilled into the matrix using the matrix drill and Multi-Sep is applied.

![](_page_22_Picture_17.jpeg)

... is modelled on the unsawn saw model using haptosil D kneading silicone and the arch is then sawn.

![](_page_22_Picture_19.jpeg)

The dispensing device with cartridge and cannula is held at the opening. Whilst applying the material from the dispensing device, the matrix is fixed on the model...

![](_page_22_Picture_21.jpeg)

The sawcuts are coated with wax.

![](_page_22_Picture_23.jpeg)

...to obtain a correctly-positioned gingival mask.

![](_page_22_Picture_25.jpeg)

Multisil-mask soft 50 ml cartridges REF 54001047

![](_page_22_Figure_27.jpeg)

**Mixing cannulas** Size 1 / blue REF 32000450

![](_page_22_Picture_29.jpeg)

**Multisil-Sep** 10 ml bottle REF 52001003

#### Assortment

2 x 50 ml Multisil-Mask soft 24 mixing cannulas 10 ml Multisil-Sep REF 54001041

### **Accessories**

![](_page_22_Picture_34.jpeg)

Multisil dispensing device 1 piece REF 32000440

![](_page_22_Picture_36.jpeg)

![](_page_23_Picture_0.jpeg)

## Model manufacture

### Multisil-mask hard

#### Special resin for hard gingival masks with stable consistency and ideal processing properties.

![](_page_23_Picture_4.jpeg)

The hardness enables torsion-free and accurate placement on the model. The Vario-Stud-Snap vks-oc system is used for fixation. Divergent implants are aligned using the implant compensating cones developed by bredent.

![](_page_23_Picture_6.jpeg)

The margin fit of the individual abutment to the implant can be checked at all times.

![](_page_23_Picture_8.jpeg)

Multisil-Mask hard permits reliable adapting of individual attachments and framework designs.

![](_page_23_Picture_10.jpeg)

Accurate placement of pontics can be easily achieved with Multisil-Mask hard.

#### Processing

![](_page_23_Picture_13.jpeg)

Initial situation of the implant restoration with laboratory abutments.

![](_page_23_Picture_15.jpeg)

Place the implant offset cones on the laboratory analogues so that the wide side is in the angled area.

![](_page_23_Picture_17.jpeg)

Fill Multisil-Mask hard around the laboratory abutments at the level of the compensating cones.

![](_page_23_Picture_19.jpeg)

Use tweezers to insert the matrices vks-oc into the soft resin immediately after injecting the resin.

![](_page_23_Picture_21.jpeg)

Trim the gingival mask from the basal side to obtain a straight margin.

![](_page_23_Picture_23.jpeg)

Apply Vaseline to insulate the gingival mask against the plaster.

![](_page_24_Picture_1.jpeg)

### Multisil-mask hard

![](_page_24_Picture_3.jpeg)

"Snap" the metal transfer patrices into the matrices

![](_page_24_Picture_5.jpeg)

Cast the impression using Exakto-Rock S and then...

![](_page_24_Picture_7.jpeg)

...box the impression with the Master-Split model system.

![](_page_24_Picture_9.jpeg)

Use an instrument to lift the gingival mask carefully off after boiling out the compensating cones.

![](_page_24_Picture_11.jpeg)

The gingival mask is safely retained by the vks-oc matrices and can always be repositioned in an accurate manner.

![](_page_24_Picture_13.jpeg)

The finished gingival mask. Apply transparent die varnish to protect the gingival mask against scratches and to improve the aesthetic appearance.

![](_page_24_Picture_15.jpeg)

Multisil-mask hard 50 ml cartridge 1 piece REF 54001133

Mixing cannulas, blue 12 pieces REF 32000450

#### Assortment

Multisil-mask hard 2 x 50 ml Multisil-Mask hard in cartridges 24 pieces mixing cannulas 1 set of implant compensating cones 8 metal transfer patrices, vks-oc 1.7 mm 8 matrices, vks-oc 1.7 mm REF 54001134

#### Implant compensating cones

20 pieces, 4 pieces of each 3.5; 4.0; 4.5; 5.0; 5.5 REF 43007392

### Accessories

![](_page_24_Picture_23.jpeg)

Matrices vks-oc 1.7 mm 8 pieces REF 43006590

![](_page_24_Picture_25.jpeg)

Metal transfer patrices 1.7 mm 8 pieces REF 43006620

![](_page_24_Picture_27.jpeg)

Multisil dispensing device 1 piece REF 32000440

![](_page_24_Picture_29.jpeg)

Light-curing die varnish transparent 20 ml REF 54001006

#### Implant compensating cones

![](_page_24_Picture_32.jpeg)

Ø 4.0 mm, 12 pieces REF 43007040

Ø 5.5 mm, 12 pieces REF 43007055

Ø 4.5 mm, 12 pieces REF 43007045

![](_page_24_Picture_37.jpeg)

![](_page_25_Picture_0.jpeg)

### Exakto-Form

#### Model resin for accurate reproduction and maximum edge stability in five different colours.

![](_page_25_Picture_4.jpeg)

In the case of impression materials based on polyurethane, to avoid a chemical bond, the impression must be sprayed in advance using the Exakto-Form insulating liquid.

![](_page_25_Picture_6.jpeg)

Prior to mixing, each component must be stirred so that a homogeneous mixture is obtained. Mix the sediment completely.

![](_page_25_Picture_8.jpeg)

Pour component B into component A and empty the tin completely. Mix Exakto-Form for approx. 30 seconds, until a uniform colour is achieved.

![](_page_25_Picture_10.jpeg)

Two tins of Exakto-Form (100 g) are sufficient to produce approx. 2-3 complete arches.

![](_page_25_Picture_12.jpeg)

The material can be removed after just 30 minutes. Final hardness is achieved after 90 minutes and the material can then be ground.

![](_page_25_Picture_14.jpeg)

If a base for the model is to be produced with Exakto-Form, the model must be insulated in advance with Exakto-Form insulating liquid.

![](_page_25_Picture_16.jpeg)

Due to its high edge stability Exakto-Form is perfectly suitable for precision-fit crown and bridgework.

![](_page_25_Picture_18.jpeg)

Any technique can be used for sawing Exakto-Form models. Familiar working processes do not need to be changed.

![](_page_25_Picture_20.jpeg)

If smaller quantities are used, fill component A and B into a separate syringe.

![](_page_25_Picture_22.jpeg)

Fill equal portions of Exakto-Form into a silicone cup (approx. 2 ml each for one die) and mix to obtain a homogeneous consistency. Please note: material in the syringes must be processed within 5 days.

![](_page_25_Picture_24.jpeg)

Pour Exakto-Form into the impression. The excellent flow properties prevent the formation of bubbles even in impressions with thin edges.

![](_page_25_Picture_26.jpeg)

The hardened resin can be drilled and ground. The stability prevents changes to the dimensions and guarantees precise models.

![](_page_26_Picture_1.jpeg)

### Exakto-Form

![](_page_26_Picture_3.jpeg)

**Component A** yellow 1 x 50 g **REF 52000178** 

![](_page_26_Picture_5.jpeg)

**Component A** grey 1 x 50 g **REF 52000175** 

![](_page_26_Picture_7.jpeg)

**Component A light ivory** 1 x 50 g **REF 52000176** 

![](_page_26_Picture_9.jpeg)

**Component A signal blue** 1 x 50 g **REF 52000177** 

![](_page_26_Picture_11.jpeg)

Component A olive green 1 x 50 g REF 52000174

![](_page_26_Picture_13.jpeg)

**Component B** 1 x 50 g **REF 52000173** 

### Assort-

ments 6x 20g A 6x 20g B

yellow REF 52020284

light ivory REF 52020282

olive green

6x 50g A 6x 50g B

yellow REF 52000284

light ivory REF 52000282

olive green REF 52000280

REF 52020280 grey

grey REF 52000283

signal blue REF 52000281

## Accessories

![](_page_26_Picture_25.jpeg)

Stirring sticks 250 mm long 100 pieces REF 39000310

Mixing cups 120 ml 100 pieces REF 39000300

![](_page_26_Picture_28.jpeg)

Measuring syringes 20 ml, 50 pieces REF 39000360

![](_page_26_Picture_30.jpeg)

Exakto-Form Insulating Liquid 125 ml REF 52000210

![](_page_26_Figure_32.jpeg)

![](_page_27_Picture_0.jpeg)

### Undercut wax

#### Precise blocking out of all cavities on the die.

![](_page_27_Picture_3.jpeg)

The high adhesive capacity of the undercut wax provides reliable hold in the cavity.

![](_page_27_Picture_5.jpeg)

Low shrinkage and optimum scraping capacity simplify blocking out.

![](_page_27_Picture_7.jpeg)

The high melting temperature also allows the use of the wax below immersion wax copings.

![](_page_27_Picture_9.jpeg)

The undercut wax has a high melting point and is therefore perfectly suited for blocking out cavities. No bond with the dipping wax is formed.

## Litebloc UV

Light-curing resin for blocking out cavities and building up dies.

![](_page_27_Picture_13.jpeg)

The screwable tube allows application of the desired amount.

![](_page_27_Picture_15.jpeg)

The high level of stability enables the cavities to be filled in a targeted manner.

![](_page_27_Picture_17.jpeg)

After hardening in the light curing device, Litebloc UV can be coated with any type of die varnish.

![](_page_28_Figure_1.jpeg)

## Transblock

#### The transparent block-out material for fast and systematic working.

The stability of Transblock results in uniform layer thicknesses when adapting and can be adapted individually using a scraper where needed.

![](_page_28_Picture_5.jpeg)

Any desired size or shape of Transblock can be produced with the help of an instrument or scissors

![](_page_28_Picture_7.jpeg)

The high degree of flexibility and low resilience facilitate positioning on the model.

![](_page_28_Picture_9.jpeg)

Due to its stability, a uniform thickness is retained during the adaptation. If required, the thickness can be adjusted individually using a scraper.

![](_page_28_Picture_11.jpeg)

The transparency of Transblock allows to check the thickness of the area that has been blocked out. This way precisely prepared models for individual trays are obtained.

![](_page_28_Picture_13.jpeg)

REF 54001149

## Dentaclean Plaster Removing Agent / Plaster Removing Agent Speed

Ready-to-use solution to remove plaster residues from all surfaces.

Dentaclean Plaster Removing Agent is available in two types: Normal and Speed. The ready-to-use

solution removes plaster residues from all surfaces. If the work needs to be carried out quickly, Denta-

![](_page_28_Picture_17.jpeg)

Hard plaster particles are gently removed from the mixing cup quickly and without damage.

clean Plaster Removing Agent Speed is available.

![](_page_28_Picture_19.jpeg)

Gentle and fast plaster removal protects the resin surface and the colour.

![](_page_28_Picture_21.jpeg)

Dentaclean **Plaster Removing** Agent

1000 ml REF 52000119

Agent Speed

1000 ml

2500 ml REF 52000993

REF 52001010

2500 ml REF 52000994

Dentaclean

**Plaster Removing** 

![](_page_28_Picture_30.jpeg)

![](_page_29_Picture_0.jpeg)

### **Retention pins**

#### The retention pins already have grooves to guarantee a secure hold when manufacturing resin dies.

![](_page_29_Picture_4.jpeg)

Paint the crowns with a thin coat of Vaseline.

![](_page_29_Picture_6.jpeg)

The excellent modelling properties enable targeted filling of the crowns in a very short amount of time.

![](_page_29_Picture_8.jpeg)

Pi-Ku-Plast HP 36 has a short setting time. The retention pins can therefore be pushed directly into the resin.

![](_page_29_Picture_10.jpeg)

Pi-Ku-Plast HP 36 creates accurate and particularly stable resin dies in a very short amount of time.

![](_page_29_Picture_12.jpeg)

**Retention pins** 100 pieces **REF 36000001** 500 pieces **REF 36000002** 

### Accessories

![](_page_29_Picture_15.jpeg)

Resin dies are the perfect basis for a precision-fit dental restoration.

![](_page_29_Picture_17.jpeg)

The high strength of Pi-Ku-Plast HP 36 creates a stable base for all milling work.

30

![](_page_29_Picture_19.jpeg)

![](_page_29_Picture_20.jpeg)

100 ml

REF 54000213 Monomer yellow

**REF 54000210 Cleaner** 100 ml

REF 54000224

REF 54000215

Polymer

85 g

100 ml

Monomer orange 100 ml REF 54000212

REF 54000211

**Monomer red** 100 ml **REF 54000214** 

#### Assortment

85 g Polymer 100 ml Monomer 100 ml Cleaner 1 x brush holder 2 x brushes 3 x vessels blue REF 54000219

yellow REF 54000217

orange REF 54000218 red REF 54000220

transparent REF 54000210

![](_page_30_Picture_1.jpeg)

## Master-Pin drill unit

#### The powerful, high quality and maintenance-free motor features high true running accuracy.

![](_page_30_Figure_4.jpeg)

### Accessories

![](_page_30_Picture_6.jpeg)

![](_page_30_Picture_7.jpeg)

![](_page_30_Picture_8.jpeg)

1 piece

REF 21000440

![](_page_30_Picture_9.jpeg)

![](_page_30_Picture_10.jpeg)

Tungsten carbide drill Special drill for Master-Pin Radix-K, Ø 2.0 mm

1 piece REF 36001233

![](_page_30_Picture_13.jpeg)

#### Master-Pin Diatit tungsten carbide step drill Special / yellow

If bonding of the Master-Pin is too difficult, the Master-Pin Diatit tungsten carbide step drill special/yellow can be used to drill a larger hole. This drill is 0.01 mm larger in diameter than the Master-Pin Diatit tungsten carbide step drill standard/green.

1 piece REF 36001193

#### Master-Pin Diatit tungsten carbide step drill Special / red

If the drilled hole is too large for insertion of the Master-Pin, the Master-Pin Diatit tungsten carbide step drill special/red can be used to drill a smaller hole. This drill is 0.01 mm smaller in diameter than the Master-Pin Diatit tungsten carbide step drill standard/green.

1 piece REF 36001194

![](_page_30_Picture_20.jpeg)

![](_page_31_Picture_0.jpeg)

### Master-Pin drill unit

![](_page_31_Picture_2.jpeg)

The diameter of the light point can be set individually; therefore anti-glare, precise focussing is possible.

![](_page_31_Picture_4.jpeg)

Firmly mounted model table can be adjusted to the width and shape of an arch.

![](_page_31_Picture_6.jpeg)

Guide lines on the model table enable targeted positioning of the model for precise planning of the pin holes.

![](_page_31_Picture_8.jpeg)

Integrated dust grooves trap the plaster particles and create the pre-requisite for an arch lying parallel.

![](_page_31_Picture_10.jpeg)

A precise model table, mounted at a 90° angle to the drill, ensures subsequent simple removal of the arch from the model base.

![](_page_31_Picture_12.jpeg)

The firm hold of the arch allows precise drilling of pin holes. The drill travels to the arch without any vibration.

![](_page_31_Picture_14.jpeg)

Simple screw mechanism for rapid and precise adjustment of the drill depth.

![](_page_31_Picture_16.jpeg)

Drills are exchanged externally without the need to open the unit.

![](_page_31_Picture_18.jpeg)

![](_page_31_Picture_19.jpeg)

Any resulting plaster particles are automatically collected by the projecting collecting tray.

![](_page_31_Picture_21.jpeg)

The unit, motor and collet remain clean and the collecting tray can be removed.

![](_page_32_Picture_1.jpeg)

#### The pin system for the manufacture of the perfect sawcut models.

The low drill depth into the arch of only 4.5 mm prevents unwanted perforation of the arch. Flattening of the soft plastic sleeves is the solution for pins that are close together. The choice of plastic for the sleeves and the internal design offer smooth and controlled removal of the dies. Ideal for modelling bridges.

#### Your benefits at a glance

![](_page_32_Picture_6.jpeg)

The lowest drill depth of all pins at only 4.5 mm. Benefit: no perforation of the arch when drilling; therefore increased stability.

![](_page_32_Picture_8.jpeg)

The Master-Pin Diatit tungsten carbide step drill is adjusted so that the boundary line for drilling of the pin is on exactly the same level as the base of the arch.

The tapering and rounding of

the end of the pin enables the

Master-Pin to be joined to the

Master-Pin sleeve easily.

![](_page_32_Picture_10.jpeg)

The optimised adhesive tip: the adhesive distributes itself more evenly in the drill hole and on the adhesive shaft. Benefit: secure hold of the Master-Pin in the die.

At only 11.7 mm in

saw models.

length, the Master-Pin

sleeves enable low-rise

![](_page_32_Picture_12.jpeg)

![](_page_32_Picture_13.jpeg)

The sleeve stands proud of the Master-Pin. All Master-Pins are clearly visible on the underside of the model.

![](_page_32_Picture_15.jpeg)

![](_page_32_Picture_16.jpeg)

![](_page_32_Picture_17.jpeg)

The funnel-shaped design of the Master-Pin sleeve makes joining of the die segments and the model base easy.

![](_page_32_Picture_19.jpeg)

![](_page_32_Picture_20.jpeg)

Unilateral flattening of the Master-Pin sleeve serves to protect against twisting and...

![](_page_32_Picture_22.jpeg)

...it is the perfect space-saving solution in the case of drill holes that are close together.

![](_page_32_Picture_24.jpeg)

![](_page_32_Picture_25.jpeg)

![](_page_32_Picture_26.jpeg)

![](_page_32_Picture_27.jpeg)

The retention bead guarantees a perfect connection to the base plaster.

![](_page_32_Picture_29.jpeg)

![](_page_32_Picture_30.jpeg)

![](_page_33_Picture_0.jpeg)

![](_page_33_Picture_2.jpeg)

Weigh or measure plaster and water to ensure uniform results.

![](_page_33_Picture_4.jpeg)

A thermoforming foil is placed on the cast impression. A uniform arch thickness is achieved.

![](_page_33_Picture_6.jpeg)

The arch is evenly trimmed to achieve an extremely low uniform height.

![](_page_33_Figure_8.jpeg)

The correct height of the trimmed arch is essential.

![](_page_33_Picture_10.jpeg)

The trimmed surface can be optimised using wet abrasive paper.

![](_page_33_Picture_12.jpeg)

The inner surface of the dry arch is ground slightly conically (6°) in relation to the base using an H263 SH 60 plaster bur.

![](_page_33_Picture_14.jpeg)

The drill holes are positioned using the Master-Pin Diatit tungsten carbide drill.

![](_page_33_Picture_16.jpeg)

Positioning of the drill holes, 2 per die, is carried out beginning from a buccal direction: 1st drill hole = centre of fissure; 2nd drill hole = approx. 3 mm away in a palatinal or lingual direction

![](_page_33_Picture_18.jpeg)

Correct alignment of the drill holes in the arch.

![](_page_33_Picture_20.jpeg)

The upper course of the palatinal or lingual ground 6° edge is marked with a red pen.

![](_page_33_Picture_22.jpeg)

Bond the Master-Pins into the drill holes with precision using second adhesive.

![](_page_33_Picture_24.jpeg)

Arch with bonded Master-Pins.

![](_page_34_Figure_1.jpeg)

![](_page_34_Picture_3.jpeg)

The base of the arch as well as the Master-Pins are

separated using Master-Sep.

![](_page_34_Picture_4.jpeg)

The thicker end of the Master-Pin sleeves is first placed onto the Master-Pins.

![](_page_34_Picture_6.jpeg)

The Master-Pin sleeve can also be used easily for Master-Pins that are positioned very close together due to the lateral flattening.

![](_page_34_Picture_8.jpeg)

The Master-Pin sleeves stand proud of the Master-Pins by approx. 0.5 mm, so that a uniform, constant height of the arch is always ensured.

![](_page_34_Picture_10.jpeg)

The Master-Split System is used to create a base for the arch.

![](_page_34_Picture_12.jpeg)

Place the prepared arch into the Master-Split model former and align.

![](_page_34_Picture_14.jpeg)

The base plaster is filled up to 1 mm below the deepest point on the red marking (fig. 10).

![](_page_34_Picture_16.jpeg)

After the base plaster has hardened, remove the model by pressing it out of the Master-Split model former.

![](_page_34_Picture_18.jpeg)

The removed saw model is subject to Split-Cast separation: Master-Split, when creating a base, with no additional work.

![](_page_34_Picture_20.jpeg)

The Master-Split base former is removed prior to trimming of the model.

![](_page_34_Picture_22.jpeg)

The saw model is trimmed to the smallest size possible on the trimmer.

![](_page_34_Picture_24.jpeg)

The trimmed and dried working model.

![](_page_34_Picture_26.jpeg)

![](_page_35_Picture_0.jpeg)

![](_page_35_Picture_2.jpeg)

Remove the arch from the model base towards the The thorough cleaning of the base of the arch pins - in parallel and without tilting.

![](_page_35_Picture_4.jpeg)

and the model base after trimming is crucial for a high level of precision and perfect aesthetics.

![](_page_35_Picture_6.jpeg)

The green Master-Pin sleeves are all the same height and can be clearly seen on the underside of the model.

![](_page_35_Picture_8.jpeg)

The die segments are separated using the Giflex-TR diamond disc.

![](_page_35_Picture_10.jpeg)

Ideal position and perfect fit of the working dies on the model base.

![](_page_35_Picture_12.jpeg)

The insertion of interdental, non-bonded Master-Pins is also possible.

![](_page_35_Picture_14.jpeg)

Aesthetically appealing and functional models simplify daily work.

![](_page_35_Picture_16.jpeg)

A beautiful and precise dental technical restoration is created on a beautiful model.

![](_page_36_Figure_1.jpeg)

The Master-Pin system simplifies daily manufacture of models as the system components have been matched with each other.

![](_page_36_Picture_4.jpeg)

Processing is simple and no adaptation is required. The advantages of the Master-Pin system are the shallow drilling depth and the small diameter of the drill hole. The Master-Pin sleeve slides in and out smoothly due to the internal surface design of the Master-Pin. This is a particular advantage for bridge restorations. Easy assembling is possible thanks to the tapering design at the end of the Master-Pin.

![](_page_36_Picture_6.jpeg)

Master-Pin sleeves 1000 pieces REF 360H1225

#### Assortment

![](_page_36_Picture_9.jpeg)

402pieces 200 Master-Pins 200 Master-Pin sleeves 1 Master-Pin Diatit tungsten carbide step drill Standard / green 1 working box REF 36001226

![](_page_36_Picture_11.jpeg)

2000pieces 1000 Master-Pins 1000 Master-Pin sleeves REF 36001225

### Accessories

![](_page_36_Picture_14.jpeg)

#### Master-Pin Diatit tungsten carbide step drill

Master-Pin Diatit tungsten carbide step drill

Special / yellow If bonding of the Master-Pin is too difficult, the Master-Pin Diatit tungsten carbide step drill special/yellow can be used to drill a larger hole. This drill is 0.01 mm larger in diameter than the Master-Pin Diatit tungsten carbide step drill standard/green.

1 piece REF 36001193

Standard / green 1 piece **REF 36001192** 

![](_page_36_Picture_18.jpeg)

#### Master-Pin Diatit tungsten carbide step drill

Special / red If the drilled hole is too large for insertion of the Master-Pin, the Master-Pin Diatit tungsten carbide step drill special/red can be used to drill a smaller hole. This drill is 0.01 mm smaller in diameter than the Master-Pin Diatit tungsten carbide step drill standard/green. 1 piece

REF 36001194

![](_page_36_Picture_22.jpeg)

Master-Sep Special separating liquid for sawcut models 200 ml REF 52000290

![](_page_36_Figure_24.jpeg)

![](_page_37_Picture_0.jpeg)

#### The universal model system for economical model fabrication for all dental-technical indications.

Matched with the Master-Pin System. Simple and precise manufacturing of the base with integrated Split-Cast, which requires little space due to its shape. Three different model formers for crown and bridgework, combination prostheses, implant prostheses, model casting technique, full prostheses and repairs.

#### Your benefits at a glance

<ul> <li>significant time saving</li> </ul>	Model manufacturing using the control base (secondary base) in a single working step.
• significant saving of plaster	The respective impression size determines which of the three Master-Split model former sizes is used. The consumption of plaster is reduced to the absolute minimum required.
high degree of precision	As the model is manufactured directly on the secondary base (Master-Split base former), a perfectly smooth, precisely fitting model underside is achieved.
<ul> <li>long period of reusability</li> </ul>	All individual components of the Master-Split model system are reusable and durable.
excellent cost-benefit ratio	Thanks to the savings in plaster and time, the economical Master-Split model system pays for itself even after only a few applications.
• optimised handling	Each model will automatically obtain a Split-Cast separation. Due to the model-articulator separation, working is performed on a small, easy-to-use and functional model.
low construction height	Even in cases of limited space (facial arch model assembly, etc.), the low construction height of the Master-Split base former means that the Master-Split model system can be used.
<ul> <li>increased security</li> </ul>	The model holds firmly and precisely on the Master-Split base former, even in the event of lateral movements in the articulator, due to the additional octagonal fixation.
perfect aesthetics	Models produced with the Master-Split model system excel thanks to their aesthetic appearance.

#### Underside

![](_page_37_Picture_7.jpeg)

vanced mounting

#### Upper side

![](_page_37_Figure_10.jpeg)

#### **Examples of application**

![](_page_37_Picture_12.jpeg)

Crown and bridgework

![](_page_37_Picture_14.jpeg)

Implants and combination prostheses

![](_page_37_Picture_16.jpeg)

Full prostheses and model casting technique

![](_page_37_Picture_18.jpeg)

Situation models, repairs

![](_page_38_Figure_1.jpeg)

![](_page_38_Picture_3.jpeg)

Regardless of which arch or impression size is used,...

![](_page_38_Picture_5.jpeg)

...the Master-Split model formers fit in every case.

![](_page_38_Picture_7.jpeg)

The green Master-Split base former - the matching counterpart to the underside of the model.

![](_page_38_Picture_9.jpeg)

The Master-Pin sleeves stand proud of the Master-Pins by approx. 0.5 mm, so that a uniform, constant height of the arch is always ensured.

![](_page_38_Picture_11.jpeg)

The Master-Split base former is first inserted at the rear edge.

![](_page_38_Picture_13.jpeg)

After fitting, the plate is positioned and pressed in by hand.

![](_page_38_Picture_15.jpeg)

Only then is the plate pressed in again on the table.

![](_page_38_Picture_17.jpeg)

The plate is then inserted correctly when there is a 0.1 mm high step at the edge.

![](_page_38_Picture_19.jpeg)

The metal magnetic plate is centred on the Master-Split base former.

![](_page_38_Picture_21.jpeg)

The arch is aligned according to the markings of the Master-Split model former.

![](_page_38_Picture_23.jpeg)

In the case of sawcut models, the model base is ideally prepared with a liquid base plaster, for example Fluid-Rock.

![](_page_38_Picture_25.jpeg)

After the base plaster has hardened, the model is pressed out.

![](_page_38_Picture_27.jpeg)

![](_page_39_Picture_0.jpeg)

![](_page_39_Picture_2.jpeg)

The removed die model is subject to Split-Cast separation: Master-Split, when creating a base, with no additional work.

![](_page_39_Picture_4.jpeg)

Trim the model with the plaster trimmer to obtain the perfect size.

![](_page_39_Picture_6.jpeg)

Due to the special shape of the sleeve, an indentation is obtained in the model base, which simplifies the removal of the plate.

![](_page_39_Picture_8.jpeg)

The finished trimmed and dry working model.

![](_page_39_Picture_10.jpeg)

The Master-Split base former is removed before the model is trimmed.

![](_page_39_Picture_12.jpeg)

If the arch is adequately prepared, trimming is no longer required after preparing the base.

![](_page_39_Picture_14.jpeg)

![](_page_39_Picture_15.jpeg)

To ensure exact contact of the model on the Master-Split base former,...

**Care and cleaning** 

![](_page_39_Picture_17.jpeg)

...the finished model is cleaned two to three times using abrasive paper.

![](_page_39_Picture_19.jpeg)

Wax or dirt that may deposit on the four model skids later on will not affect precision.

![](_page_39_Picture_21.jpeg)

Plaster and wax residues can be easily recognised on the signal-green plate so that precise working is simplified.

![](_page_39_Picture_23.jpeg)

The Master-Split base formers and the Master-Split model formers only need to be cleaned under running water as their surfaces are extremely smooth and self-separating.

![](_page_39_Picture_25.jpeg)

They are intended to be used for plaster and matched with this material. Additional separating is not required.

![](_page_40_Figure_1.jpeg)

#### Split-Cast check

![](_page_40_Picture_4.jpeg)

The assembly of the model can be checked very easily and is clearly visible...

![](_page_40_Picture_6.jpeg)

![](_page_40_Picture_7.jpeg)

...despite the fixed magnet.

![](_page_40_Picture_9.jpeg)

The plaster Split-Cast must be trimmed to be integrated into the articulator.

![](_page_40_Picture_11.jpeg)

An individual plaster control base is much thicker than...

![](_page_40_Picture_13.jpeg)

Plaster control bases often cause problems when they are integrated into articulators.

![](_page_40_Picture_15.jpeg)

The Master-Split base former is the better choice.

![](_page_40_Picture_17.jpeg)

...the specially shaped Master-Split base former.

![](_page_40_Picture_19.jpeg)

The Master-Split base former always provides sufficient space.

#### Assortments

small 1 model former, green 3 base formers 3 metal magnetic plates REF 3600124K

![](_page_40_Picture_23.jpeg)

Master-Split Model former, small 2 pieces REF 3600118K

medium 1 model former, yellow 3 base formers 3 metal magnetic plates REF 3600124M

![](_page_40_Picture_26.jpeg)

Master-Split Model former, medium 2 pieces REF 3600118M

large 1 model former, red 3 base formers 3 metal magnetic plates REF 3600124G

![](_page_40_Picture_29.jpeg)

Master-Split Model former, large 2 pieces REF 3600118G

Master-Split **Base former** 10 pieces REF 36001180

![](_page_40_Picture_32.jpeg)

Metal magnetic plates 50 pieces REF 36001181

![](_page_40_Picture_34.jpeg)

Each size of the Master-Split model system consists of two elements. Thanks to the three different Master-Split model formers, the correct size is always available for any size of arches or impressions. A reduction in the plaster used is possible thanks to the range of different sizes. When mounting in the articulator, sufficient space is always ensured due to the low height of the Split-Cast. The smooth surface of the material always ensures easy and rapid cleaning.

![](_page_40_Picture_36.jpeg)

![](_page_41_Picture_0.jpeg)

### Master-Pin Radix-K

#### The favourably-priced dowel pin solution for the production of models.

Due to the special root shape, only one pin can be used per die. In addition to the retention element, additional bonding surfaces are integrated to ensure secure hold in the die. The smooth surface of the high-tech plastic allows easy integration and removal of the die.

![](_page_41_Picture_4.jpeg)

Perfect bonding is ensured when a small amount of adhesive is also applied to the area of the support.

![](_page_41_Picture_6.jpeg)

The root shape that is obtained in the model base ensures exact guidance and positioning. The dies are perfectly protected against tilting and twisting.

![](_page_41_Picture_8.jpeg)

It is also possible to insert interdental Master-Pins Radix-K that are not bonded in.

![](_page_41_Picture_10.jpeg)

REF 52000290

![](_page_42_Figure_1.jpeg)

## Master-Pin Radix-S

#### Master-Pin Radix-S can be aligned and fixed into the impression easily and securely.

The sturdy, high-tech plastic provides the required stability and the root shape offers protection against twisting.

![](_page_42_Picture_5.jpeg)

![](_page_42_Picture_6.jpeg)

Master-Pin Radix-S can be aligned and fixed into the impression easily and securely.

![](_page_42_Picture_8.jpeg)

Casting and preparing the base of the impression are carried out in the usual way.

![](_page_42_Figure_10.jpeg)

![](_page_42_Figure_11.jpeg)

![](_page_43_Picture_0.jpeg)

## Light-curing die varnish

#### For smoothing and hardening the plaster surface.

Depending on the plaster and modelling wax, different colours are available. The desired layer thickness can be achieved by applying the varnish several times and can be controlled with the help of the colour intensity.

![](_page_43_Picture_4.jpeg)

The disposable brush allows precise application. The layer thickness can be varied by applying the material several times.

![](_page_43_Picture_6.jpeg)

The varnishes are translucent. If they are applied several times, the colour becomes more intense and as a result, the layer thickness can be controlled.

![](_page_43_Picture_8.jpeg)

The light-curing die varnishes produce a particularly hard surface which protects the die against damage when fitting the crowns.

![](_page_43_Picture_10.jpeg)

To produce a cement gap, the varnish must be cured with light immediately after applying. For hardening of preparation margins: Allow varnish to soak into the plaster, then polymerise. The varnish hardens the surface without layering.

![](_page_43_Picture_12.jpeg)

red 20 ml REF 54001003

![](_page_43_Picture_14.jpeg)

**yellow** 20 ml **REF 54001004** 

![](_page_43_Picture_16.jpeg)

Five different colours to ensure contrast to any type of modelling wax.

![](_page_43_Picture_18.jpeg)

**green** 20 ml **REF 54001005** 

![](_page_43_Picture_20.jpeg)

**blue** 20 ml **REF 54001000** 

![](_page_43_Picture_22.jpeg)

transparent 20 ml REF 54001006

## Accessories

![](_page_43_Picture_25.jpeg)

Brush holder, bent 12 pieces REF 33001141

![](_page_43_Picture_27.jpeg)

Brush holder, straight 12 pieces REF 33001149

![](_page_43_Picture_29.jpeg)

Disposable brush 100 pieces REF 33001142

![](_page_43_Picture_31.jpeg)

Mixing block 10 pieces REF 33001144

![](_page_44_Figure_1.jpeg)

## Light-curing opaque die varnish

#### Swift application thanks to good masking capacity.

The opaque die varnishes simplify uniform colouring of the varnish coat. The brush is already integrated into the lid. When steaming the die, the varnish coats remain intact.

![](_page_44_Picture_5.jpeg)

When steaming the die, the die varnish diffuses into the plaster surface. Depth polymerisation creates abrasion-resistant bonding to the die. Light-curing opaque die varnish resists high mechanical stress. Even steam-blasting devices cannot affect the strong bonding.

![](_page_44_Picture_7.jpeg)

![](_page_44_Picture_8.jpeg)

red 20 ml REF 54000104 Light-curing opaque die varnish is available in three different colours. The fine masking capacity allows a uniform colour of the varnish layer to be obtained.

![](_page_44_Picture_11.jpeg)

**blue** 20 ml **REF 54000101** 

### diephos dentine

#### Light-curing varnish for abrasion-resistant surface on dies.

The use of diephos dentine facilitates simple assessment of the aesthetic design and colour of all-ceramic restorations.

![](_page_44_Picture_16.jpeg)

Two coats of diephos dentine are applied. Each coat is applied thinly and polymerised in a light-curing device for 90 seconds.

![](_page_44_Picture_18.jpeg)

The modelling material will not cause discolouration of the tooth. An opaque-like effect is achieved on the subsurface.

![](_page_44_Picture_20.jpeg)

The thickness of the coat of a cement gap can be controlled by applying several layers. A single layer is approx. 12  $\mu$ m thick. Light-curing is required after the application of each layer.

- quick application
- abrasion-resistant surface as a result of light-curing
- assessment of aesthetic appearance on the working model
- resistant to steam

![](_page_44_Picture_26.jpeg)

Separating liquid can be easily applied and waxups can be prepared on diephos dentine.

![](_page_44_Picture_28.jpeg)

**Tooth-coloured** 10 ml **REF 54000100** 

![](_page_44_Picture_30.jpeg)

![](_page_45_Picture_0.jpeg)

## Spacer varnish, gold, silver, silver-blue micro

#### Air-drying varnishes with metal components for scratch-resistant surfaces.

![](_page_45_Picture_3.jpeg)

The gold and silver spacer varnishes produce a layer thickness of approx. 10 µm. The silver-blue micro spacer varnish produces a layer thickness of 5 µm.

![](_page_45_Picture_5.jpeg)

The spacer varnishes contain metal components. They produce a particularly abrasion-resistant surface which protects the die against damage.

silver blue 20 ml REF 55000006

Specific layer thicknesses of 5 µm or more can be achieved with these spacer varnishes. Each additional coat increases the layer thickness accordingly. The metal components of the gold, silver and silver-blue micro spacer varnishes produce highly abrasion-resistant surfaces and hence protect the die.

#### Accessories

![](_page_45_Picture_11.jpeg)

Thinner for gold and silver spacer varnish 20 ml REF 54000701

![](_page_45_Picture_13.jpeg)

Thinner for silver blue spacer varnish 20 ml REF 54000690

### Spacer varnish blue

gold

20 ml

REF 55000005

Air-drying varnish used to determine premature and undesired contacts.

REF 54000717

silver

20 ml

![](_page_45_Picture_17.jpeg)

As the blue spacer varnish is well suited to detect undesired contact points, it can also be used as an alternative to occlusion spray.

fitting a framework on the model.

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![](_page_45_Picture_19.jpeg)

The blue spacer varnish can be applied selectively to avoid overlaps which may result from non-uniform application of spray.

![](_page_45_Picture_21.jpeg)

silver blue 20 ml REF 55000006

![](_page_45_Picture_25.jpeg)

Accordingly, early contact points can be eliminated quickly and in a targeted manner.

### Accessories

![](_page_45_Picture_28.jpeg)

Thinner for blue spacer varnish 20 ml REF 54000690

The area of the cement gap of 8–10 µm in the inner side of the crown can be identified very quickly thanks to the clear contrast in colour to the plaster model.

The blue spacer varnish has two functions: it defines targeted application of a cement gap and can alternatively be used to

determine and eliminate premature and undesired contacts when

![](_page_46_Picture_1.jpeg)

## Gloss and hardening agent for plasters

#### Scratch-resistant surfaces for all plaster types without layering.

![](_page_46_Picture_4.jpeg)

Without the hardening agents for plasters, models can be damaged when the restoration is placed on the model.

![](_page_46_Picture_6.jpeg)

The specially adjusted consistency causes diffusion into the plaster surface. The high edge stability and scratch resistance avoid damage of any kind.

![](_page_46_Picture_9.jpeg)

![](_page_46_Picture_10.jpeg)

Gloss and hardening agent for plaster diffuses into the plaster so that it can also be used on the preparation margin.

![](_page_46_Picture_12.jpeg)

Gloss and hardening agent for plasters

20 ml **REF 55000001** 

100 ml REF 55000002

The gloss and hardening agent for plasters renders the model or die resistant to scratches and creates a surface shine with a layer thickness of only 2  $\mu$ m.

![](_page_46_Figure_17.jpeg)

# **Preparatory work**

# Perfection from the very beginning!

![](_page_47_Picture_2.jpeg)

## Other offers that may be of interest to you

![](_page_47_Picture_4.jpeg)

REF 000753GB

![](_page_47_Picture_6.jpeg)

REF 000531GB

![](_page_47_Picture_8.jpeg)

REF 000570GB

![](_page_47_Picture_11.jpeg)

DENTAL INNOVATIONS