

Ideas for dental technology:

EQUIPMENT

INSTRUMENTS

MATERIALS



CATALOGUE 2011/2012



Ideas for dental technology

All-inclusive



3
YEARS GUARANTEE

Dependability **3-year guarantee on equipment**

You enjoy the certainty that your laboratory equipment will function reliably, and save you trouble, time and money.



Confidence in your investment **10-year spare parts service**

Our products are designed with longevity in mind. To this end, Renfert will stock a **complete assortment** of spare parts for ten years after the last unit has been sold.



Fit for service **Loaner service**

To keep down-times to a minimum, Renfert customers are entitled to a loan unit from their dealer **even after the guarantee period has elapsed.**



Operational reliability **48-hour repair service**

Within just 48-hours, Renfert's in-house service department will refurbish any equipment.



Information around the clock **24-hour, detailed information:**

www.renfert.com



Top-class support **Competent dealers and technicians**

All our dealers receive constant training and are kept up-to-date via regular information bulletins – this means top-class support for you.

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Ultimately precise

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1 SYMPRO, the clever idea for dental clinic, laboratory and patient!

Denture cleaning at the touch of a button

SYMPRO will remove difficult deposits such as plaque and tartar, and stains such as coffee, tea and red wine in approx. 15 mins. In future, let SYMPRO carry out the professional

cleaning of removable dental restorations and orthodontic appliances. This fully automatic and highly efficient cleaning process doesn't take up any of your valuable resources for this

unprofitable and unpleasant task.

Conventional cleaning methods are time consuming and costly. These and other disadvan-

tages were taken aboard by our development department and eliminated with this innovative system.



Before cleaning



After cleaning with SYMPRO

Plaque AND tartar are removed in only approx. 15 mins!



The SYMPRO takes on the important task of denture cleaning at your service and subsequently contributes to the value of your practice and laboratory.

Use in only three steps:



1) Filling-up
Add needles, SYMPROfluid Universal cleaning liquid and object, e.g. one patient's upper and lower dentures.

3) Remove
Rinse the object thoroughly with water before bringing it into contact with the patient and disinfect as prescribed by the hygiene regulations.



2) Start
Set the desired cleaning time and start the unit.

Optional
SYMPROfluid Nicoclean is used wherever post-treatment is necessary to remove stubborn nicotine stains. Simply lie the denture with Nicoclean in the separately supplied bath to soak for a few minutes.



Advantages for the patient

- Improved oral hygiene and well-being (Prophylaxis for denture wearers)
- The patient feels attended and regularly cared for
- Better quality of life without fear of bad breath



Advantages for the clinic

- Invoiceable service and a service which can be offered whilst the patient is present
- Low capacity commitment
- High hygiene standards
- Re-call possibility and long-term customer loyalty

Read here what your colleagues say about the **SYMPRO**:
www.renfert.com/en/sympro



Advantages for the laboratory

- Time saved on a value generating task (whilst SYMPRO itself generates value)
- Customer loyalty for the dentist due to service and support
- An integral contribution to a value adding process
- Health and safety in the laboratory: No risk of contamination for the staff or the instruments



Supporting media for the patient

Together with the SYMPRO, you will receive the patient's information brochure »Well-being through Oral Hygiene«, as well as a waiting room poster, for ongoing success with your new SYMPRO-system.



Denture cleaning at the press of a button

SYMPRO

Compact, high-performance cleaning device for prosthetic dentures and orthodontic appliances. The system comprises the device, pins and liquids.

- This additional service is a further value generating component which in turn increases the profit.
- Very fast cleaning times shorten the treatment times and optimise the clinic and laboratory working times.
- This fully automatic process does not require valuable personnel capacities.
- Implementation in operation procedures for repairs, extensions and relines
- Maximum oral hygiene increases the patient's feeling of wellbeing and encourages customer loyalty.
- Prophylactic cleaning at regular intervals helps in recognising possible damage early.



The clever System

SYMPRO is a well thought out system made from specifically coordinated material components, construction features and a special processing technique. Top cleaning results are only possible with this blend of components.

- fully automatic
- quiet
- highly effective
- economical

Technical details

Power supply	100-240 V, 50/60 Hz
Power consumption	90 VA
Dimensions (w x h x d)	230 x 140 x 300 mm (9.06 x 5.51 x 11.81 inch)
Weight without beaker	ca. 3 kg
Noise level	<70 dB
Rotational speed 1/min	1.200, 1.600, 2.000

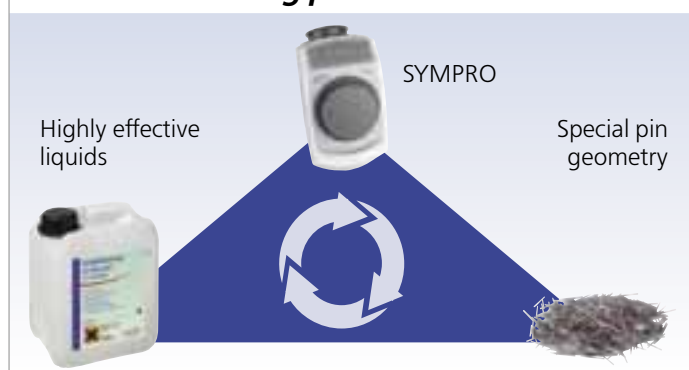
Description

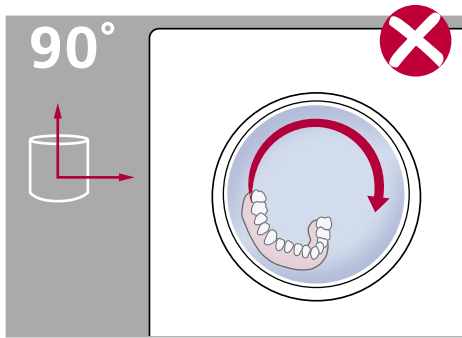
Description	Art. No.
SYMPRO	6500-00x0
Presentation: 1 cleaning device 1 tweezers, 1 cleaning vessel with cover for use in cleaning device, 1 cleaning vessel with cover (white) for post-treatment, retaining magnet, cleaning needles, waiting room poster set	

Accessories

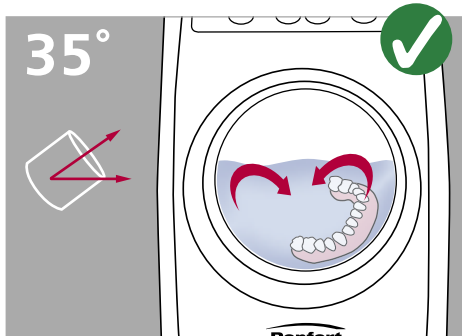
Accessories	Art. No.
Cleaning pins (75 g)	6500-0550
SYMPROfluid Universal, 2 x 2l	6500-0600
SYMPROfluid Nicoclean, 2 x 2l	6500-0610
SYMPROfluid Universal 2 x 2l, incl. 50 patient brochures, english	6500-1602
Set of 50 patient brochures, english	21-1092

SYMPRO-cleaning procedure





With conventional 90° solutions, the object is situated almost unrestricted in the liquid flow, the cleaning results are therefore far less successful.



In the SYMPRO, the object is situated against the liquid flow and is therefore rinsed and cleaned optimally (maximum pin impact energy).

35°, the optimal angle

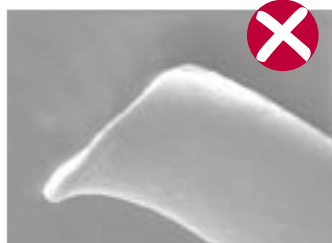
Our detailed examinations have shown that optimal cleaning results are achieved at an angle of 35° to the base. At this angle the pins are at their most efficient in the fluid dynamic.

In the SYMPRO, the object is situated against the liquid flow and is therefore rinsed and cleaned optimally (maximum pin impact energy).

Sequential reverse rotation in intervals of 30 sec. moves the dentures into different positions thus increasing the cleaning efficiency. 3 rotation speeds guarantee a material compatible, efficient and gentle cleaning procedure for all types of objects.



Renfert pins are cut exactly at a right angle. This makes them highly efficient, and at the same time gentle to the object's surface.



Pins which are cut bevelled and unevenly achieve less impact energy and the cleaning effect is less efficient. The sharp edges can damage the surface.

Perfect pin geometry

A rotating magnetic field oscillates the pins which subsequently enables them to gently remove the superficial deposits mechanically. The rotating pins warm the cleaning bath up to approx. 45°C / 113°F, which subsequently intensifies the effect of the chemical reaction. The pins are made from an acid resistant alloy, and their shape, which is not possible to see

with the naked eye, is designed for highest possible effectiveness and durability. Renfert pins are cut exactly at a right angle. This makes them highly efficient, and at the same time gentle to the object's surface.



High performance cleaning liquids

With two different, specially developed liquids, even difficult to remove stains are in for a fight. Both liquids are ready for use.

SYMPROfluid Universal is for use together with the device for removing „classic“ deposits such as plaque, tartar, stains and denture adhesive.

SYMPROfluid Nicoclean frees dentures even from difficult nicotine stains. This liquid is used wherever post-treatment is necessary without the use of the device.

1

The automatic recyclable blaster



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- 50% saving in abrasive agent + 50% saving in time
- rapid amortisation with only 3 - 4 CrCo frameworks per day

Vario jet

The Vario jet is the ideal recyclable sandblaster for cost-effective sandblasting. It can be used in automatic or manual mode.

Automatic blasting

The technical construction of the Vario jet has optimised the exact synchronisation of blasting parameters (pressure, time and grain size). Nozzle distance and angle are also harmonised to the direction of the basket rotation so that a 100% hit rate is achieved in the shortest time possible.

Manual blasting

With one easy hand motion the basket can be removed from its holder. This allows great freedom of movement within the large and well-lit chamber. Impulses are sent to the unit via the 360°, allround operation foot switch.

Technical details

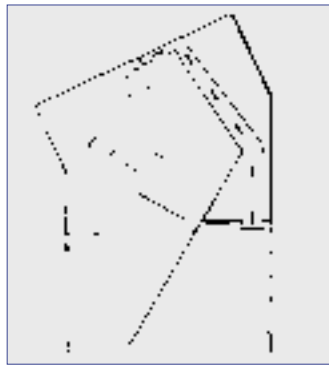
- programme selection via touch-control pad.
- blasting pressure adjustable from 1 to 6 bar (14.5 – 87 psi).
- pressure information via manometer.
- highly resistant, coated glass screen.
- additional protective grate to prevent premature glass wear due to erosion.
- cotton wool lined protective gloves.
- easy-to-open coarse separator.
- inlet opening and connection for a compressed air driven unit (fine sandblasting unit, deflasking chisel, air blast nozzle) (refer also to page 11).
- bright, flicker-free lighting with over 2000 LUX.
- automatic control of an external extraction unit with controlled run-on time between 5 and 30 sec.

We recommend: Cobra aluminium oxide, 90–125 µm or 250 µm (see page 148).

Description	Art. No.
Vario jet, 230 V	2961-0000
Vario jet, 120 V	2961-1000

Technical Details	
Working pressure	1-6 bar (14.5-87 psi)
Connecting pressure, external	max. 10 bar (145 psi)
Air consumption at 6 bar (87 psi)	200 l/min
Voltage	230 V / 120 V, 50/60 Hz
Lamp power	11 W
Max. power consumption of dust extractor	1200 W
Cable length	2 m (78.74 inch)
Ø hose connection interior	4 mm (0.16 inch)
Ø hose connection exterior	6 mm (0.24 inch)
Ø size of pipe union for external extraction unit, interior	35 mm (1.38 inch)
Ø size of pipe union for external extraction unit exterior	40 mm (1.58 inch)
Dimensions (W x H x D)	405 x 650 x 460 mm (15.96 x 25.61 x 18.12 inch)
Blasting chamber volume	25 l
Weight	≈ 26 kg
Noise level according to DIN 45635-01-KL3	< 72 dB(A)

Details



The dust extraction system

The suction channel technology is a particular advantage. They are constructed so that only the unusable fine dust particles are being extracted. This saves up to **50% of the blasting material**.



The blasting nozzle

The distance between the blasting nozzle and the basket can be adjusted to one of three positions. The nozzle is made from boron carbide and is extremely resistant. The nozzle can be exchanged easily without any special tools.

The blasting basket

Save valuable time. The large blasting basket allows up to 7 framework castings to be blasted simultaneously. Normally full automatic sandblasting of a casting requires only 10 minutes. A rubber sleeve prevents clasps getting caught during rotation. For more space during manual function the basket can be easily removed.



The control functions

The control elements are easy to view and easy to clean. The touchcontrol pad is hermetically sealed. In the automatic mode, the blasting time can be adjusted between 1 and 60 min. The current time setting is shown on an LED display. The Start, Hold, and Stop functions can be used to control the *Vario jet* in the automatic mode.

We recommend:
High-performance compressed air filter

- less downtime
- increased service life
- reduced servicing and maintenance costs due to clean compressed air free of oil and water.

Page 23



The connections

All connections are located on the rear of the unit.

1. the *Vario jet* is fitted for connection to a central or external dust extraction unit. An external extraction unit is connected to the rotation blaster via the power supply. This enables control of the extraction unit via the *Vario jet*.

2. additional units such as a fine sandblasting unit (e.g. *Basic mobil* no. 2914), deflasking chisel (e.g. *Power pillo* no. 5022-5000) or air blast nozzle (e.g. Art. No. 1371-0000) can be attached directly onto the integrated compressed air connection.
3. the air filter and water separator ensure ideal blasting conditions.
4. easily accessible power fuse.

Suitable extractor units are given on page 26.

Multifunctional and compact design



Vario basic

This allround blasting unit is a combined recyclable blaster and fine sandblasting unit. Its compact construction and multipurpose function is ideal for medium-sized and small labs. This economical unit can carry out all the usual blasting tasks required within dental technology.

Technical Details

- micro sandblasting tanks are not part of the standard equipment provided with the *Vario basic*. The unit can, however, be fitted with up to 4 micro sandblasting tanks.
- pressure indicated via manometer.
- individually adjustable recyclable blasting nozzle (highly

- resistant boron carbide nozzle also available as replacement).
- highly resistant, coated glass screen.
- replaceable and washable hand port cuffs.
- powder coated metal casing.
- an opening on the underside of the *Vario basic* allows the unit to be easily emptied.

- inlet opening and connection for an additional, compressed air driven unit (fine sandblasting unit, deflasking chisel, air blast nozzle).
- control elements located in the interior.

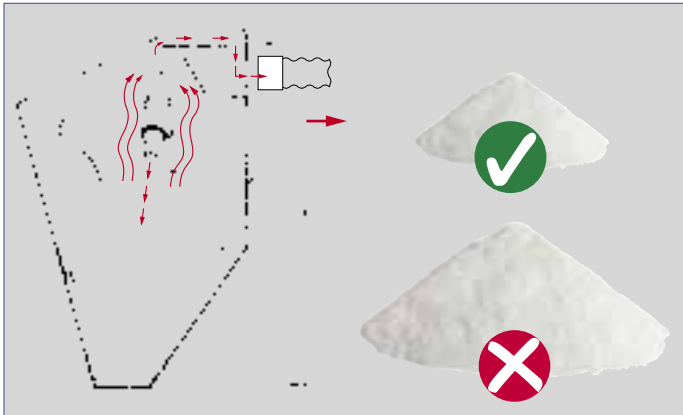
Description	Art. No.
<i>Vario basic</i> base unit without blasting tanks, 230 V	2960-0005
<i>Vario basic</i> base unit without blasting tanks, 120 V	2960-1005
Additional tank, right, 25–70 µm	2954-0050
Additional tank, left, 25–70 µm	2954-0051
Additional tank, right, 70–250 µm	2954-0250
Additional tank, left, 70–250 µm	2954-0251

Accessories	Art. No.
Wall bracket incl. 90° angled connector	2960-0001
90° angled connector	2960-0002
Protective grate for viewing screen	2960-0003
Boron carbide nozzle	90003-5520

Technical Details

Working pressure	1-6 bar (14.5-87 psi)
Connecting pressure, external	6-8 bar (87-116 psi)
Air consumption at 6 bar (87 psi)	200 l/min
Voltage	230 V / 100 V, 50/60 Hz
Lamp power	16 W (230 V, 100 V)
Cable length	2 m (78.74 inch)
Ø hose connection interior	4 mm (0.16 inch)
Ø hose connection exterior	6 mm (0.24 inch)
Ø size of pipe union for external extraction unit, interior	35 mm (1.38 inch)
Ø size of pipe union for external extraction unit exterior	40 mm (1.58 inch)
Dimensions (W x H x D)	380 x 540 x 450 mm (14.92 x 21.28 x 17.73 inch)
Blasting chamber volume	23 l
Capacity of 1 tank	1000 ml
Weight	≈ 14 kg
Noise level according to DIN 45635-01-KL3	< 70 dB(A)

Details



The extraction technique

- 50% less blasting material is used due to the clever extraction system.
- a separator removes only the unusable fine dust.

50% less consumption of blasting material

Suitable extractor units are given on page 26.



The fine sandblasting tanks (optional)

- four microblaster tanks for the required grit size can be easily added to the basic model without the use of tools.
- monitoring the tank fill level is possible at all times due to the transparent tank.
- the large tanks have a capacity for approx. 1000 ml blasting material.



The sand silo

- a removable large particle separator prevents the blasting material from becoming impure.
- the large funnel-shaped silo ensures permanent sand flow.
- the *Vario basic* can be emptied via an opening in the base of the silo.
- the suction point is fixed in the centre of the sand silo.



For use as a wall unit or table unit

- according to choice the *Vario basic* (two tank version) can be easily mounted on the wall via a wall bracket.
- for optimum connection to an extraction unit in cramped conditions we offer a 90° angled connector (available separately or with the wall bracket).

We recommend:
High-performance compressed air filter

- less downtime
- increased service life
- reduced servicing and maintenance costs due to clean compressed air free of oil and water.

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1 Fine sandblasting technology – State of the Art

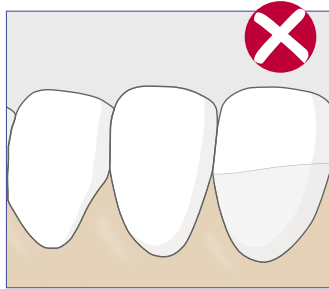
Precise Technology

1+1=3

The patented mixing chamber (venturi principle) and the special IT nozzles provide the following advantages:

1) Perfectly even: sandblasting flow, sandblasting pressure and blasting effect

Reproducible results and reliable and even surface conditioning for perfect bonding characteristics without stress or cracks in porcelain.



2) Efficient sandblasting

The sandblasting flow consists of an optimal air-sand mixture, regardless of the tank fill level, with minimal to no pre or post flow. This offers an unbeatably low sandblasting material consumption which reduces the sandblasting material costs by up to 80% (proven through independent studies by the University of Osnabrück in 2007).*



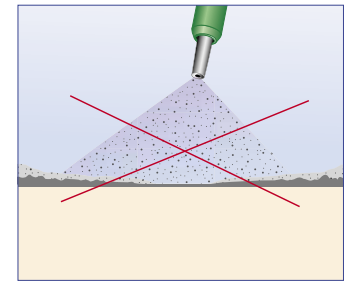
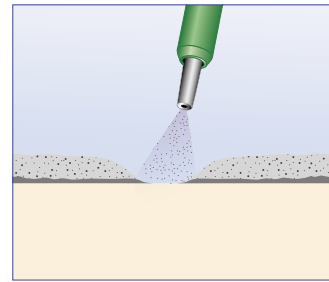
* More: www.renfert.com/en/analysis



3) Focussed, effective and safe sandblasting

Reproducibly reliable and focussed blasting strength for

efficient sandblasting without scattering loss of abrasive. The best protection for delicate objects.



...precise application...

PerfectView Concept

Many different ideas and techniques have been integrated to provide the Basic unit operator the best possible view of the piece of work. These include:

Innovative LED Technology

– the perfect balance between diffuse and direct light.

The layout of the new LED lights and the way that their light is distributed from various different diffusers simultaneously produces two contrasting advantages: the best contour and detail recognition on the object and at the same time a homogenously illuminated sandblasting chamber (4.800 Lux).

Too little shadow

PerfectView

Too many shadows

Daylight LEDs – the more spectrum there is means the more there is to see

Daylight offers stronger contrasts and clear shade recognition on the illuminated object. Moreover, the human eye is familiar with daylight which makes working with the Basic units even more precise, more natural and therefore more comfortable.

Ventilation Technology – Clear view

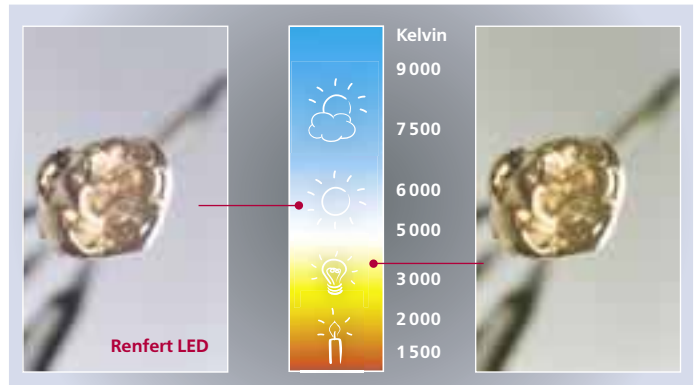
Within the Basic unit working chambers (from the „master“ up) there is no unnecessary air/sand turbulence between object and viewing window thanks to the optimally positioned ventilation slits. The operator therefore has a clear view.

Silicone coated screen – Clear views, above average service life

A completely transparent but elastic silicone coating from which the sand grains simply bounce off and cause less damage. The Basic glass windows (optional in the „classic“ version) remain clear for a considerably longer period of time.

The maximum view possible – Large glass flap and no restrictions

The maximum possible opening and a perfect view into every corner of the blasting chamber is supported by the intelligently placed tube position.



...in all areas.

That's why Renfert sandblasting units are also suitable for further applications such as:

- efficient and at the same time delicate deflasking of pressed ceramics.
- Rocatec™ surface conditioning (from 3M ESPE exclusively approved for Renfert sandblasting units) due to the fact that Renfert units operate more sparingly and have the necessary impact energy.
- extremely fine fissure blasting for quick anatomical design of occlusal surfaces.



	Basic classic 1-Tank / 2-Tank	Basic master 2-Tank	Basic quattro 2-Tank	Basic quattro IS 2-Tank
Art. no. 230 V version 120 V version	2947 1xxx* / 2947 2xxx* 2947 3xxx* / 2947 4xxx*	2948 2xxx* 2948 4xxx*	2958 0000 2958 1000	2959 0000 2959 1000
Number of blasting tanks	1-2	2	2-4	2-4
Sandblasting chamber volume	14 l	20 l	20 l	20 l
Air blast nozzle	-	-	yes	yes
Immediate Stop function	-	-	-	yes
Individual pressure adjustment for each tank	-	-	-	yes

*depending on configuration

1

The efficient professional: provides precision & processing safety for every procedure

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Basic quattro IS

Fine sandblasting unit with 2 - 4 blasting tanks. Professional and comfortable top-class sandblasting unit - for all indications - (with up to 4 tanks).

- **integrated quick stop technology 'IS'** (Immediate Stop) enables:
 - Start/Stop within seconds of the sandblasting process.
 - controlled and exact sandblasting of finely detailed objects.
- exact pressure adjustment and control of actual pressure for every tank, therefore providing safe operation.
- easy tank upgrade, tool-free due to the quick connection and colour coded system.
- precise and reliable processing at best possible cost effectiveness with the patented mixing chamber.
- **innovative PerfectView Concept:**
 - unique LED technology: optimal contrast of all objects

- and brightly illuminated blasting chamber.
- daylight with 4,800 LUX for fatigue free and comfortable working.
- maximum range of vision for maximum control.
- silicone coated screen with 10 times higher service life for clear visibility.

- large sandblasting chamber allows maximum freedom of movement.
- integrated air blast nozzle for cleaning the objects and hands.
- special IT carbide sandblasting nozzles with 4x higher service life.

See page 148 for the full range of **Renfert blasting material**.

Sandblasting nozzles and additional accessories page 22.

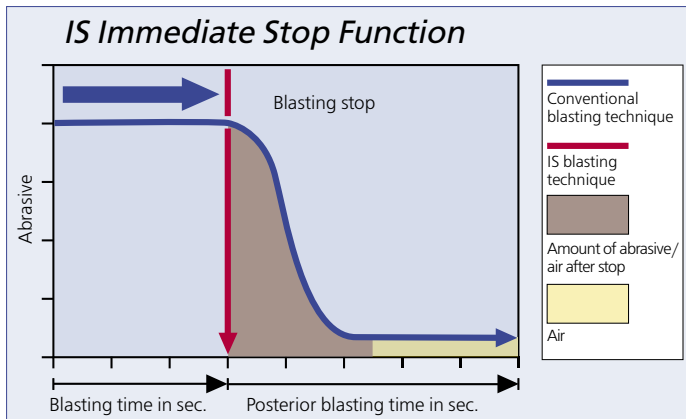
Technical Details

Working pressure	1-6 bar (14.5-87 psi)
Connecting pressure, external	5-8 bar (72-116 psi)
Air consumption at 6 bar (87 psi)	98 l/min
Voltage	230 V / 100-120 V, 50/60 Hz
Lamp power	16 W
Cable length	2 m (78.74 inch)
Ø hose connection interior	4 mm (0.16 inch)
Ø hose connection exterior	6 mm (0.24 inch)
Ø size of pipe union for external extraction unit, interior	35 mm (1.38 inch)
Ø size of pipe union for external extraction unit exterior	40 mm (1.58 inch)
Dimensions 2-tank version (W x H x D)	395 x 320 x 510 mm (15.55 x 12.6 x 20.08 inch)
Blasting chamber volume	20 l
Capacity of 1 tank	1000 ml
Weight (empty) 2-tank version	11,5 kg
Noise level according to DIN 45635-01-KL3	< 72 dB(A)

Description	Type	Art. No.
Basic quattro IS basic unit with 2 blasting tanks, 230/240 V ^{1, 2}	1 x 25–70 µm, 1 x 70–250 µm	2959-0000
Basic quattro IS basic unit with 2 blasting tanks, 100-120 V ^{1, 2}	1 x 25–70 µm, 1 x 70–250 µm	2959-1000
Additional tank ¹	25–70 µm	2959-0050
Additional tank ²	70–250 µm	2959-0250

¹incl. sandblasting nozzle 0.8 mm green IT ²incl. sandblasting nozzle 1.2 mm red IT

Details



The immediate stop (IS)

The foot switch controls the pneumatic valve. This allows the blasting process to begin or end instantly. The control system allows a very precise dosage of blasting material. There is no flow of material once blasting has stopped (savings on blasting material!). The flow of blasting material is consistent from the beginning, as the blasting pressure does not have to constantly be regained.

The IS function enables focused, precise sandblasting for e.g.:

- sandblasting fissures.
- devesting delicate restorations (all porcelain/ pressable ceramics, inlays, telescope units, thin crown margins etc.).
- precision attachments.



The exact control over pressure

After switching on the unit the blasting tanks are permanently under pressure. On switching off the unit the tanks remain under pressure for several hours so the pressure does not need to be continuously regained. This means the programmed pressure for each tank is ready for use immediately on starting the blasting process and also after short interruptions.

Unique: The pressure gauge in the tank lid gives accurate information on the actual pressure in the blasting nozzle and not on the static pressure in the tank.

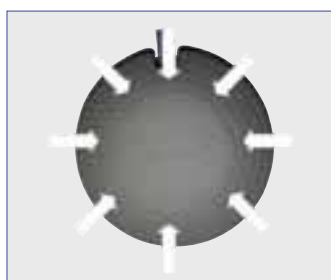


The colour coding system for the tank lids, tanks, tank selector switch, and blasting handles simplifies selection of the correct combination.

For clean compressed air we recommend: **High-performance compressed air filter** page 23.



Individual tanks can be comfortably selected from within the blasting chamber.



Foot switch can be activated from any position (360°).

Info

Cold silicatisation in the sandblasting unit

The *Basic* series of Renfert sandblasting units is exclusively recommended by 3M ESPE for use with ROCATEC™. This bonding system is ideal if an adhesive bond is required between a composite and a dental material (metal, acrylic, porcelain, zirconia porcelain). Advantage: The surface film is applied cold, preventing thermal loading of metal frameworks and consequently the risk of distortion.

All units in the *Basic* series can be used for ROCATEC™ due to their regular, homogeneous jet flow. As 3 abrasive agents are used in ROCATEC™ (Pre, Plus, Soft), 3M ESPE and Renfert recommend the *Basic quattro*, which can be expanded to 4 tanks. Further information at: www.renfert.com.

1 The perfect all-rounder



Basic quattro

Comfortable, flexible, top-class fine sandblasting unit (with 2 to 4 tanks).

- precise working procedures and great cost efficiency with the patented Renfert mixing chamber.
- easy tank upgrade, tool-free due to the quick connection and colour coded system.
- innovative PerfectView Concept:
 - unique LED technology: Optimal contrast of all objects and brightly illuminated blasting chamber.
 - daylight with 4,800 LUX for fatigue free and comfortable working.
 - maximum range of vision for maximum control.
 - silicone coated screen with 10 times higher service life for clear visibility.
 - ventilation slots for optimal ventilation and effective extraction within the sandblasting chamber.
 - ergonomically situated tubes for optimal visibility.
- large blasting chamber allows maximum freedom of movement.
- operating elements on the inside reduces the working steps!
- integrated air blast nozzle for cleaning the objects and hands.
- special IT carbide sandblasting nozzles with 4x higher service life.
- tank selector switch and pressure regulator: Individual tanks can be comfortably selected from within the blasting chamber. The respective blasting pressure can be set by the pressure regulator situated directly above the switch. A colour coding system eases orientation.

Info

Can be used with the ROCATEC™ bonding system from 3M ESPE (see page 17).

Technical Details

Working pressure	1-8 bar (14.5-116 psi)
Connecting pressure, external	5-8 bar (72-116 psi)
Air consumption at 6 bar (87 psi)	98 l/min
Voltage	230 V / 100-120 V, 50/60 Hz
Lamp power	16 W
Cable length	2 m (78.74 inch)
Ø hose connection interior	4 mm (0.16 inch)
Ø hose connection exterior	6 mm (0.24 inch)
Ø size of pipe union for external extraction unit, interior	35 mm (1.38 inch)
Ø size of pipe union for external extraction unit exterior	40 mm (1.58 inch)
Dimensions 2-tank version (W x H x D)	395 x 285 x 465 mm (15.55 x 11.22 x 18.31 inch)
Blasting chamber volume	20 l
Capacity of 1 tank	1000 ml
Weight (empty) 2-tank version	8,9 kg
Noise level according to DIN 45635-01-KL3	< 72 dB(A)

Description	Type	Art. No.
Basic quattro basic unit with 2 blasting tanks, 230/240 V ^{1,2}	1 x 25–70 µm, 1 x 70–250 µm	2958-0000
Basic quattro basic unit with 2 blasting tanks, 100-120 V ^{1,2}	1 x 25–70 µm, 1 x 70–250 µm	2958-1000
Additional tank ¹	25–70 µm	2958-0050
Additional tank ²	70–250 µm	2958-0250

¹incl. sandblasting nozzle 0.8 mm green IT ²incl. sandblasting nozzle 1.2 mm red IT

The space miracle which provides a high degree of comfort



Basic master

Fine sandblasting unit with 2 tanks.

- precise working procedures and great cost efficiency with the patented Renfert mixing chamber.
- large sandblasting chamber (20l) chamber allows freedom of movement.
- innovative PerfectView Concept:
 - unique LED technology: Optimal contrast of all objects and brightly illuminated blasting chamber.
 - daylight with 4,800 LUX for fatigue free and comfortable working.
 - maximum range of vision for maximum control.
 - silicone coated screen with 10 times higher service life for clear visibility.
 - ventilation slots for optimal ventilation and effective extraction within the sandblasting chamber.
 - ergonomically situated tubes for optimal visibility.
- operating elements on the inside reduces the working steps.
- special IT carbide sandblasting nozzles with 4x higher service life.
- the colour coding system for the tank lids, tanks, tank selector switch, and blasting handles simplifies selection of the correct combination.
- foot switch can be activated from any position (360°).

See page 148 for the full range of **Renfert** blasting materials.

Sandblasting nozzles and additional accessories page 22.

Technical Details

Working pressure	1-8 bar (14.5-116 psi)
Connecting pressure, external	5-8 bar (72-116 psi)
Air consumption at 6 bar (87 psi)	98 l/min
Voltage	230 V / 100-120 V, 50/60 Hz
Lamp power	16 W
Cable length	2 m (78.74 inch)
Ø hose connection interior	4 mm (0.16 inch)
Ø hose connection exterior	6 mm (0.24 inch)
Ø size of pipe union for external extraction unit, interior	35 mm (1.38 inch)
Ø size of pipe union for external extraction unit exterior	40 mm (1.58 inch)
Dimensions (W x H x D)	395 x 285 x 460 mm (15.55 x 11.22 x 18.11 inch)
Blasting chamber volume	20 l
Capacity of 1 tank	1000 ml
Weight (empty)	8,1 kg
Noise level according to DIN 45635-01-KL3	< 72 dB(A)

Type	Art. No. 230 V	Art. No. 100-120 V
2 x 25-70 µm ¹	2948-2000	2948-4000
1 x 25-70 µm ¹ , 1 x 70-250 µm ²	2948-2025	2948-4025
2 x 70-250 µm ²	2948-2250	2948-4250

¹incl. sandblasting nozzle 0.8 mm green IT ²incl. sandblasting nozzle 1.2 mm red IT

1 The smallest with the biggest technology



Basic classic

Fine sandblasting unit with up to 2 tanks.

- attractive introduction to the Renfert Sandblasting Technology.
- precise working procedures and great cost efficiency with the patented Renfert mixing chamber.
- innovative PerfectView Concept:
 - unique LED technology: Optimal contrast of all objects and brightly illuminated blasting chamber.
 - daylight with 4,800 LUX for fatigue free and comfortable working.
 - maximum range of vision for maximum control.
 - ergonomically situated tubes for optimal visibility.
- can be upgraded to 2 tanks without the use of tools.
- slim design: Finds a place even in tight spaces.
- tank selection switch inside the sandblasting chamber for efficient working.
- special IT carbide sandblasting nozzles with 4x higher service life.
- the colour coding system for the tank lids, tanks, tank selector switch, and blasting handles simplifies selection of the correct combination.
- foot switch can be activated from any position (360°).

Sandblasting nozzles and additional accessories page 22.

Technical Details	
Working pressure	1-8 bar (14.5-116 psi)
Connecting pressure, external	5-8 bar (72-116 psi)
Air consumption at 6 bar (87 psi)	98 l/min
Voltage	230 V / 100-120 V, 50/60 Hz
Lamp power	16 W
Cable length	2 m (78.74 inch)
Ø hose connection interior	4 mm (0.16 inch)
Ø hose connection exterior	6 mm (0.24 inch)
Ø size of pipe union for external extraction unit, interior	35 mm (1.38 inch)
Ø size of pipe union for external extraction unit exterior	40 mm (1.58 inch)
Dimensions (W x H x D)	350 x 270 x 470 mm (13.78 x 10.63 x 18.5 inch)
Blasting chamber volume	14 l
Capacity of 1 tank	1000 ml
Weight (empty)	6,5 kg
Noise level according to DIN 45635-01-KL3	< 72 dB(A)

Description / Type	Art. No. 230 V	Art. No. 100-120 V
1 x 25-70 µm ¹	2947-1050	2947-3050
1 x 70-250 µm ²	2947-1250	2947-3250
2 x 25-70 µm ¹	2947-2000	2947-4000
1 x 25-70 µm ¹ , 1 x 70-250 µm ²	2947-2025	2947-4025
2 x 70-250 µm ²	2947-2250	2947-4750
1 upgrade tank 25-70 µm ¹	2947-0050	2947-0050
1 upgrade tank 70-250 µm ²	2947-0250	2947-0250

¹incl. sandblasting nozzle 0.8 mm green IT ²incl. sandblasting nozzle 1.2 mm red IT

The compact sandblasting unit



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CE

Basic mobil

Ideal for use where blasting chambers already exist. The Basic mobil sandblasting unit provides the absolute basic requirements for blasting technology. Its mobility is only dependant on connection to compressed air. No power supply is required. The various versions of blasting modules allow you to use from 25 to 250 µm abrasives.

The compact basic technology is taken from the tried and tested Renfert sandblasting units.

Technical details

- Patented mixing chambers for an even flow of blasting material from 1 to 6 bar (14.5 – 87 psi).
- pressure information via manometer.
- integrated water separator.
- control via pneumatic foot switch.
- wear and tear resistant, long-lasting IT blasting hoses and nozzles.
- can be connected to *Vario jet*.



Info

Can be used with the ROCATEC™ bonding system from 3M ESPE (see page 17)

See page 148 for the full range of Renfert blasting materials.

Technical Details

Working pressure	1-6 bar (14.5-87 psi)
Connecting pressure, external	6-10 bar (87-145 psi)
Air consumption at 6 bar (87 psi)	120 l/min
Ø hose connection interior	4 mm (0.16 inch)
Ø hose connection exterior	6 mm (0.24 inch)
Dimensions (W x H x D)	220 x 260 x 130 mm (8.67 x 10.24 x 5.12 inch)
Weight	≈ 2,5 kg
Noise level according to DIN 45635-01-KL3	< 70 dB(A)

Type	Art. No. 25–70 µm ¹	Art. No. 70–250 µm ²
Basic mobil with foot switch	2914-3050	2914-3250

¹incl. sandblasting nozzle 0.8 mm green IT ²incl. sandblasting nozzle 1.2 mm red IT

Sandblasting nozzles and additional tanks









IT sandblasting nozzles

The quality and speed for sandblasting castings depend on the combination of abrasive agent and sandblasting nozzle as well as on use of the optimum sandblasting technique.

Special features of Renfert sandblasting units:

- service life of nozzles four times longer than that of standard nozzles, as they are made of a highly resistant high-tech material.

- excellent control and focusing of the abrasive agent due to the extended shape of the nozzle.
- optimum sandblasting nozzles for all applications.

Recommended sandblasting nozzles	Cobra						Rolloblast		ROCATEC™ 3M ESPE	
	25 µm	50 µm	90 µm	110 µm	125 µm	250 µm	50 µm	100 µm	Pre&Plus	Soft
 silver (Ø 0,40 mm) / art. no. 90002-1203	●									
 gold (Ø 0,65 mm) / art. no. 90003-3213		●					●			●
 green (Ø 0,80 mm) / art. no. 90002-1204		○	●	○			○	○		○
 blue (Ø 1,00 mm) / art. no. 90003-3211			○	●	○			●	○	
 red (Ø 1,20 mm) / art. no. 90003-3214		○	○	○	●	○		○	●	
 brown (Ø 1,40 mm) / art. no. 90002-1205				○	●	○			○	
 bronze (Ø 2,00 mm) / art. no. 90002-1206						●				
 bright red (Ø 1,5 x 3,5 mm) / art. no. 90003-1739				●	●	●		●		

○ = recommended

● = highly recommended

Additional blasting tanks for Basic units

Tank installation in just a few steps

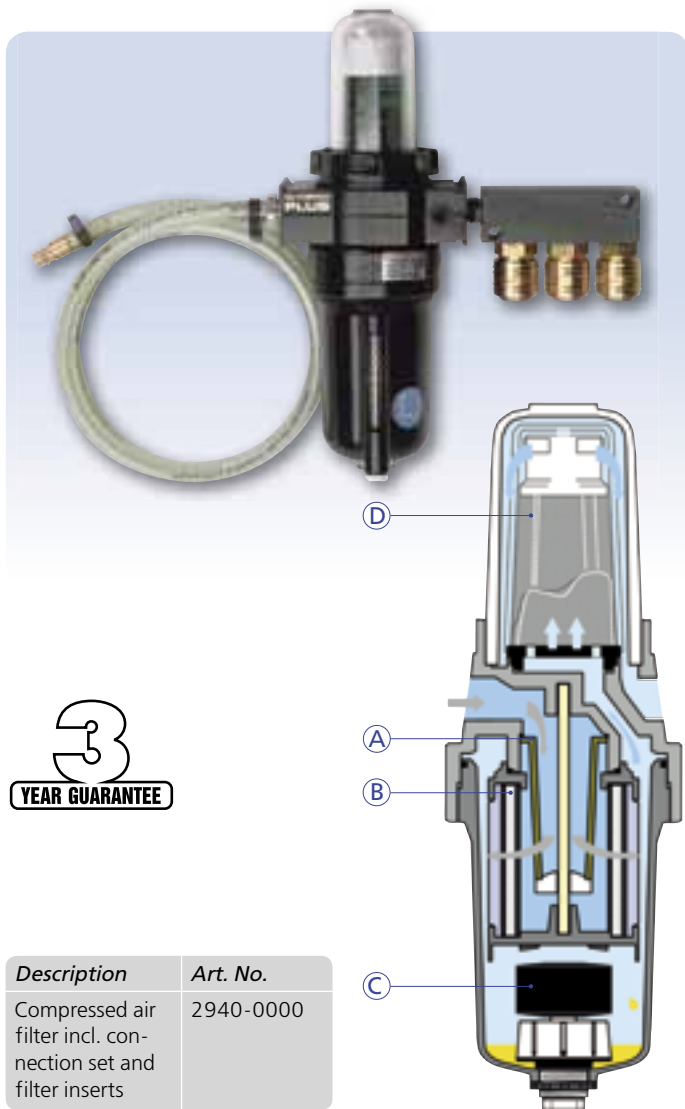
- easy tank upgrade, tool-free due to the quick connection and colour coded system.
- individual matching of tanks to blasting material of 25–70 µm and 70–250 µm.
- control of fill level via transparent tanks.

Grain size	Vario basic	Basic quattro IS	Basic quattro	Basic classic
25–70 µm	Additional tank, right ¹ 2954-0050	2959-0050	2958-0050	2947-0050
	Additional tank, lefts ¹ 2954-0051			
70–250 µm	Additional tank, right ² 2954-0250	2959-0250	2958-0250	2947-0250
	Additional tank, lefts ² 2954-0251			

¹incl. sandblasting nozzle 0.8 mm green IT ²incl. sandblasting nozzle 1.2 mm red IT

For clean compressed air free of oil and water

1



High-performance compressed air filter

Supplies of compressed air contain condensed water, oil, colour residues and rust particles from compressors. These impurities cause the abrasive material to get lumpy, clog the fine tubes of compressed air units and, when blasted out, contaminate the surface of the workpieces.

- Three-step filter system:
 - A) prefilter: grit particles up to 40 µm.
 - B) fine filter: ultra-fine particles and water droplets up to 0.01 µm.
 - C) fine filter with viewing glass and integrated fully automatic outlet at max. filling level.
 - D) active carbon filter: oil up to a residual content of 0.003 ppm (mg/m³).

- filters water, oil and dirt particles with absolute reliability.
- all filters can be exchanged easily without disassembling the entire unit.
- active carbon filter change indicated by discoloration under the transparent cover.
- up to three sandblasters can be connected to one filter.
- assembly close to the power consumers.

Advantages:

- less downtime with compressed air units.
- increased service life.
- reduced servicing and maintenance costs.

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Description	Art. No.
Compressed air filter incl. connection set and filter inserts	2940-0000

Technical Details

Connecting pressure max.	10 bar (145 psi)
Air quality	ISO 8573-1, Class 1.7.1
Flow rate / minute	420 l (6.3 bar)
Dimensions	210 x 280 mm (8.27 x 11.02 inch)



Filter pressure regulator

To be used in conjunction with above in order to reduce compressor pressure and filter the compressed air.

Technical Details:

- reduction of compressor pressure to 1-6 bar (14.5-87 psi).
- compressed air filtering.
- integrated water separator.
- use in conjunction with (Power)Pillo for fine-tuning of performance.

Description	Art. No.
Filter pressure regulator	2929-0000

1 Old-fashioned work method



A gap in quality chain

- ✓ *Cast precise models*
- ✓ *Make a tension-free wax-up*
- ✓ *Sprue-up correctly*
- ✓ *Invest bubble-free*
- ✓ *Inclusion-free casting*
- ✗ *Deflask it with a hammer*

Deflasking with a hammer and tongs destroys every valuable piece of work. If the damage is not visible at the first glance, if you can start again from the beginning or even if you are lucky enough

to have avoided any damage: Your precise preparation is ALWAYS at risk of damage!



The hammer
Bent clasps, cracked acrylics, broken-off acrylic dentures, warped bridges, and much more – all these damages result from using of a hammer. The uncontrolled percussive waves destroy the homogeneous structure.

Even more dangerous is hitting the metal object on the sprue former, thus damaging the object intentionally. Compared with the effort put into preparation before, this is crude treatment indeed.



The tongs
The tongs enforce a pincer-effect on the investment or plaster. This cleaves the material apart and transfers the force to the cast object, thus causing tension and warpage. An acrylic denture, for example, can easily break under such pressure. There is

permanent danger of teeth breaking off.

Conclusion:
Both methods effect not only the investment but, in the same way, the cast object. Hard-to-reach areas are left out completely. A pneumatic

chisel is much more favourable as it in fact only effects the investment material.



State-of-the-art deflasking

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CE

Pillo



Power pillo

- ① More running smoothness
- ② Less vibration
- ③ More power

Power pillo / Pillo

Pneumatic deflasking chisels

- Gentle deflasking
- Saves time and money
- Effortless operation

Safe for the restoration

Plaster and investment are chiselled in a controlled way and set under vibration so the structure almost breaks apart of its own accord. There is no uncontrolled and dangerous percussion or tension applied to the cast object. The material falls from the object easily and quickly.



Safe for the joints

Thanks to the best possible relationship between mass and impulse strength, the (*Power*) *Pillo* compensates vibration so the hand is not affected. The hand transmitted vibration values are very low, which should meet any government recommendations. Work safer for longer.

Technical Details	<i>Pillo</i> / <i>Power pillo</i>
Air consumption l/min	9 / 10
Noise level LpAep (work environment emission value) as per DIN EN ISO 11202	79,3 db(A) / 81,5 db(A)
Dimensions (ØxLength)	29 x 157 mm / 29 x 168 mm (1.14x6.18 inch / 1.14x6.61 inch)
Weight	300 g / 398 g ①
Hand/arm acceleration as per EN ISO 5349-1	Ahv: 7,33 m/s ² / 5,2 m/s ² ②
Piston frequency	110 Hz / 130 Hz ③
Nominal working pressure	5 bar (72 psi)
Working pressure	4-6 bar (58-87 psi)



5022-0300

5022-0400

5022-0200

5022-0100

Description	Art. No.
<i>Power pillo</i>	5022-5000
<i>Pillo</i>	5022-4000

Unit contains:

Deflasking chisel, chisel insert No. 5022-0200, connecting hose (2 m/78.7 inch), set of connection filters

1

Combined workbench and equipment extraction system



Silent TS

This extractor unit combines power, flexibility and profitability in a single device. Thanks to its enormous and adjustable suction performance it is possible to connect it to two working places or units at the same time.

Advantages at a glance:

- New motor technology achieves up to 3 times longer service life in comparison to conventional collector motors; for noticeable lower working costs.*
- Modular construction for tool-free motor change in 2 min. means: no down-time.
- Easy, exact calibration makes the extraction unit system-independent, since it is individually adjustable to every consumer and also suitable for use with critical micro-motors.
- Multifunctional: thanks to its higher volume flow it is possible to connect two units/working places for effective dust protection (clean working environment).

- Comfortable operation of all functions such as fine adjustment of automatic switch-on and filter-change-recognition adjustment, and individual adjustment of suction performance in a matter of seconds.
- Optimal adaptation to every laboratory and practice situation thanks to compact, slim design.
- Optional external air-outlet featuring directed flow of air for better air quality and less heat and noise development at the working place.

*Please note: Renfert concedes a guarantee on the Silent TS motor for 800 working hours (Motor running time).

Technical Details

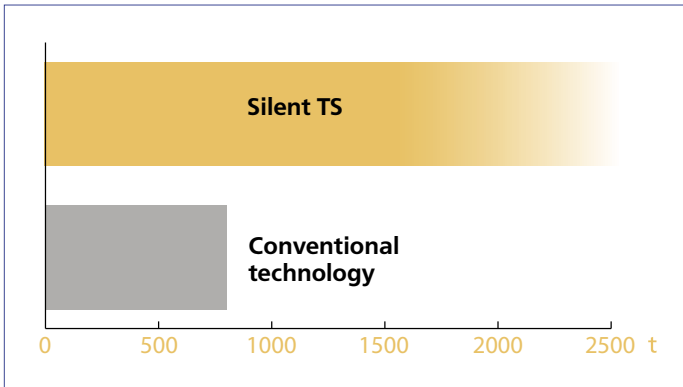
Voltage	230 V, 50/60 Hz 100-120 V, 50/60 Hz
Power consumption	1.400 W (230 V), 1.400 W (120 V), 1.000 W (100 V)
Cable length	2 m (78.74 inch)
Ø suction fittings internal	32,5 mm (1.28 inch)
Ø suction fittings: external	40,0 mm (1.57 inch)
Dimensions (WxHxD)	225 x 595 x 565 mm (8.8 x 23.4 x 22.2 inch)
Noise level complying with DIN 45635-01-KL3	63 dB (A)
Unit power outlet maximum connecting value:	2.000 W (230 V), 360 W (120 V), 500 W (100 V)
Total connected power:	3.400 W (230 V), 1.800 W (120 V), 1.500 W (100 V)
Airflow, max:	3.300 l/min (120/230 V), 2.900 l/min (100 V)
Fill volume, dust bag:	7,5 l
Weight (empty)	26,0 kg

Description	Art. No.
Silent TS, 230 V	2921-0050
Silent TS, 120 V / 100 V	2921-1050/ -2050

Presentation:

Extraction unit, 3 m of suction hose, special dust bag, fine-filter, universal hose connection adapter, Y-adapter

Powerful, flexible and compact



In a simulated laboratory environment and using different extraction cycles.

Even better value due to the higher than average service-life

Due to new motoring technology and additional control, it has been possible to increase the standard service-life of collector motors considerably. In a simulated laboratory environment and using different extraction cycles, a life expectancy increase of up to 200–300 % higher than the previous model was observed!

In one extreme case, the tests even showed an operating life of up to 2,400 working hours.



One extractor for several appliances or uses at the same time.

- The included Y-junction allows to connect two appliances from the start.
- Included universal adapter for connector fits to most hose sizes.
- Two-stage filter system with 99,9% extraction efficiency (dust bag: class M (DIN EN 60335-2-69) / fine filter: dust class C (BIA-ZH 1/487)).

- Specialised dust bag with particularly large intake capacity (synthetic material) at a low price.
- Motor change in only 2 minutes with no need of tools / convenient replacement engine.



The easy and comfortable operation makes this unit an uncomplicated partner.

No down-times

Even the finest of motors end their service life at sometime. Then it basically means: The unit must be either sent in for maintenance or the service technician will come to you. In both cases there are down-times to endure and often high costs involved.



Set of castors (optional) for a versatile, quick and easy positioning.

Not the case with the *Silent TS*. As with the previous model, it is possible for the operator to change the motor personally. And that, in only 2 minutes and completely without tools.

Find this as video stream at: www.renfert.com/en/silent_ts



External airflow extraction
With immediate effect the *Silent TS* will be available with optional external airflow extraction. An attractive side effect: the entire airflow is transmitted outside, including the warm air, leaving the laboratory environment cooler.

Accessories	Art. No.
Special dust-bag, synthetic, 5 pieces	2921-0002
Set of castors, 4 pieces	2921-0001
Universal hose connection adapter	90003-4305
Adapter for external exhaust air duct	2921-0004

1

The New Generation in Efficient Extraction Technology



Vortex compact 3L

Wet and dry extraction specially for devices

- High performance, high speed suction turbine with 3600 Watt and 3700 l/min
- The 2 step filter system class M also protects against hazardous fine dust (fine dust precipitation efficiency of 99%)
- The Free-Filter-System increases the filter capacity by more than 25% at the touch of a button
- The wet suction function means it is particularly suited for water cooled trimming procedures.
- Extremely strong, large filter bag (15l) made from Nano-Fibre-Fleece with integrated fastening system for dust reduced disposal
- Long service life for the washable fine filter made from PET fleece
- The reliable automatic activator switch increases the working safety and comfort

Free-Filter-System – Filter cleaning at the touch of a button

Filters that are blocked with fine dust particles result in a reduction in suction power even though the dust bag is not completely full.

The *Vortex compact 3L* eliminates this problem at the touch of a button with its clever filter cleaning system. This clever technology uses the air to tap the inner walls of the fine filter and of the dust bag. The technician no longer needs to open the extraction unit and this prevents him from being exposed to and possibly inhaling the fine dust particles.

*Please note: The *Vortex compact 3L* collector motor is excluded from the guarantee due to system related reasons. The motor is subject to wear, depending upon frequency of use and selected extraction level / power. The service life varies greatly according to demand. The average life span is approx. 800 hrs.

Accessories, please refer to page 30.

Technical Details

Voltage	230 V, 120 V, 50/60 Hz
Power consumption	1.200 W (230 V), 840 W (120 V)
Power consumption	16 A (230 V), 12 A (120 V)
Cable length	7,5 m (295.28 inch)
Dimensions (WxHxD)	385 x 600 x 480 mm (15.16 x 23.62 x 18.9 inch)
Capacity of dust retainer	30 l
Noise level complying with DIN 45635-01-KL3	< 62 dB (A)
Weight (empty)	≈ 10 kg
Ø suction pipe interior/exterior	36 mm (1.42 inch)/46 mm (1.81 inch)
Ø suction fittings internal/exter.	37 mm (1.46 inch)/45 mm (1.77 inch)

Description

Description	Art. No.
<i>Vortex compact 3L</i> , 230 V/120V incl. 1 filter bag and 3 m of tubing	2924-5000/2924-6000

Accessories

Accessories	Art. No.
Dust bag, 5 pieces	2924-5003
Waste bag, 5 pieces	2924-5002
Cloth filter, 1 piece	2924-5005
Fine filter, 1 piece	2924-5004

Dustex master plus – The Practical Dust Extractor Box



Dustex master plus

Dust and vapours are extracted directly where they originate: at the restoration. The tilt and slip resistant Dustex master plus protects the technician from splinters, dust and vapours. The sophisticated, ergonomic design and the armrests provide a comfortable working posture for fatigue-free work.

Compact and yet spacious

The large arm inlets, the spacious inner volume and the easy-to-open glass pane all contribute to providing extensive freedom of movement for efficient work. Time consuming clean-up of the workbench is eliminated. The compact dimensions and low weight allow the inexpensive dust box to be flexibly employed.

Technical Details:

- Built-in, bright illumination: 2400 lux (compared with standard office lighting at approx. 500 lux).
- Laminated glass protective pane with silicone coating (replaceable).

- Large inner volume (17 l) and roomy arm inlets for extensive freedom of movement.
- Compact and stable, low-weight powder-coated housing.
- Ergonomic, height-adjustable armrests made of plexiglas for fatigue-free, concentrated work.
- extraction-port kit:
 - provides an even clearer view; air is extracted directly ahead of the restoration.
 - the practical wooden support, made of hard beech wood, does not heat up and makes an ideal platform for your objects.
 - the special stand provides a safe and simple place to store your handpiece.

We recommend:
Gold filter (page 31).

Technical Details

Voltage	230 V, 50 Hz / 120 V, 60 Hz
Dimensions (WxHxD)	380 x 285 x 400 mm (14.97 x 11.23 x 15.76 inch)
Power consumption, illumination	17,3 W (230 V) / 9,5 W (120 V)
Working chamber (volume)	17 l
Weight	5 kg
Ø size of pipe union for external extraction unit, exterior	40 mm (1.58 inch)
Ø size of pipe union for external extraction unit, interior	35 mm (1.38 inch)

Description	Art. No.
Dustex master plus, 230 V / 120 V	2626-0105 / 2626-1105

Presentation:

Dust box, fluorescent light with lamp cover, extraction port kit, armrests

Accessories	Art. No.
High quality magnifier with flexible swan-neck	2626-0300
Gold filter	2626-0600

Recommended work-place extraction unit:
Silent TS, page 26–27.

1 Dust extractor accessories



Extractor clamp

With this practical accessory your dental lab work station can be subsequently fitted with an extractor unit.

- robust clamp made of beech wood.
- secure fixture to work tables of 20-40 mm (0.79-1.58 inch) thickness.
- variable connection (right or left) for extractor hose (connection diameter 40 mm / 1.58 inch).

- removable sieve to prevent accidental sucking up of workpieces.
- removable suction piece.
- protective glass available as accessory.



Description	Art. No.
Extractor clamp (without glass shield)	2925-0000
Glass shield with holder	2925-1000



Extractor Switch

For the operation of 2 blasting units.

- extractor tube 15-0823 is used for attachment to Renfert units.
- adjustable setting via the selector switch for either two or one each extraction sources.
- set of mufflers for a fast and easy connection of the extractor switch to the units with no need of tools.

Universal hose connection adapter, refer to page 27.

Description	Art. No.
Extractor switch incl. 4 mufflers (without hose)	2926-0000
End bushings set, 2 pieces	2921-0003
Suction hose, super-elastic PVC flex (by the metre)	15-0823

Technical Details	
Ø suction fittings internal/external	35 mm (1.38 inch)/44 mm (1.73 inch)
Ø muffler interior/exterior	38 mm (1.5 inch)/44 mm (1.77 inch)
Ø suction pipe interior/exterior	38 mm (1.5 inch)/44 mm (1.73 inch)



Cloth Filter

Long-term filter for use with the Vortex compact 3L dust extractors when connected to dry trimmers.

- alternative to a paper filter
- fully functional even when extracting slightly moist plaster remains.
- noticeably longer life.
- after emptying shake or wash out.

- unrestricted reuse.

Description	Art. No.
Cloth filter, 1 piece	2924-5005

Every gramm counts



Gold filter

This new accessory for the Dustex master plus stops even a single gram of gold being wasted during trimming. Gold dust is collected reliably by the large suction funnel and deep collecting tunnel.

- Convenient handling. Fast replacement - no tools needed
- Positioned far forward in the suction duct to prevent unnecessary additional contamination of the framework being trimmed
- Can be emptied without wastage
- A large suction duct and deep collecting funnel collect the gold reliably
- The light grey colour of the sieve is an optimum contrast colour against all gold alloys



Description	Art. No.
Gold filter	2626-0600
extraction port kit	2626-0500

For a clean lab and dental practice



Grinding box

Acrylic grinding box with built-in magnifying glass prevents the spread of grinding dust.

- resistant, light box for flexible use within the lab.
- optimum control via a 2 x magnification magnifying glass.
- large volume and wide hand inserts.
- protective glasses and mouth masks are no longer required.

- ideal for working on small work pieces as nothing can fall to the ground or be sucked up by the extractor unit.
- can be used for collecting gold dust.



Technical Details	
Dimensions (WxHxD)	250 x 150 x 150 mm (9.84 x 5.9 x 5.9 inch)
Weight	400 g

Renfert Dust Extractor Box see page 29.

Description	Art. No.
Grinding box	2625-0000

1

The times are changing – demands in quality are increasing

Old quality standards are outdated today

The demands on

- reliability
- comfort
- safety

are constantly changing. Technical improvements, competition and standards are driving these developments forward; this is especially noticeable in the dental trade. In order to survive, laboratories have to constantly check their working processes and if necessary adjust them accordingly.

The optimisation of laboratory processes requires the consistent qualification of employees and in particular a well functioning quality management based upon well engineered technologies and devices. Vacuum mixing devices play a leading role in the classical working processes in a laboratory. It is easy to overlook these “workhorses” and take for granted that they are actually an important link in the whole quality chain.

Process chains

As a whole, the mixing device is used frequently throughout the working process. Errors at this stage are passed on and lead to repetitive and therefore expensive correction procedures. A far more tender point is the effect of such errors in connection with the laser scanner in CAD/CAM technology, with its unforgiving precision

Classical process chain (example: cast metal denture)

- Production of the plaster model
- Duplicating the plaster model
- Production of an investment material model
- Fabricating the framework
- Investing the framework
- Melting & casting
- Devesting & finishing

Digital laboratory (example: crown & bridgework)

- Production of the plaster model
- Scanning the plaster model
- Construction with the mouse
- Transferring the data
- Milling



Choose between four different versions of Twister units. You decide which type suits you the best.

	Manual	Programmable
Membrane pump		
Venturi		

The Twister Family

The basis of modern quality



Optimised vacuum mixing technology based upon modern materials and techniques. German development know-how and a perfected quality management system make the Twister family internationally unbeatable value for money.

- The high speed mixing motor mixes large amounts of material reliably and reproducibly.
- The adjustable vacuum prevents bubbles from forming on certain plasters and duplicating silicones.
- Comfortable, single handed operation is possible thanks to the automatic bowl connection through vacuum.
- The large, well illuminated and simple display provides a high degree of user comfort.
- Assured longevity of all vacuum components thanks to the triple filter protection system.
- The ingenious mixing paddle geometry ensures optimum mixing. Because the mixing paddle is as close as possible to the bowl, it takes up as

much material as possible. The design of the mixing paddle ensures that the material is pushed to the bottom against the centrifugal force. The material is mixed most thoroughly at the bottom.

- Large range of bowls available for plaster, investment material, silicones and alginates.
- Usable as a wall and bench unit.

Programming and type of vacuum build-up

Programmability

All *Twister* devices are characterised by their reliably reproducible results, in particular the „evolution“: There are over 100 programmes available where individual, optimal mixing parameter can be saved for various different users and for different materials, which can each be called at the touch of a button (see also the following page).

The vacuum is built-up via the membrane pump or compressed air.

Both options achieve the required amount of vacuum at a rapid speed. The unit with high performance membrane pump is especially easy to install in the laboratory by simply connecting to a power supply. The „venturi“ series do not require a motorpump, but do require an extra compressed air connection.



1 Reproducibility at the touch of a button



Twister evolution

The unit without compromise

- Intuitive operation
- Reproducibility at the touch of a button
- High degree of flexibility

Membrane pump

The unit has a powerful vacuum pump.

Advantage:

Only a power supply is required.

Programming

The units with the byname "evolution" have over 100 individually programmable mixing programmes and are distinguished by their intuitive operation.

Advantages:

- high reproducibility
- rapid procedures
- standardized production processes
- consistent top quality
- user-friendly operation
- universal applicability
- successful and efficient results



Twister evolution venturi

Impressively economical high-end unit

- Intuitive operation
- Reproducibility at the touch of a button









Venturi Principle

Units with the description "venturi" function without the use of a motor pump. They need an additional compressed airconnection.



▶ Accessories are included on page 38.

Details

- Pre-mixing investment 
- Pre-mixing plaster 
- Pre-vacuum 
- Motor speed 
- Mixing time 
- Post-vacuum 
- Reverse rotation 
- Vacuum level 

Pre-mixing

The two pre-mixing functions take care of both materials (plaster and investment material) individually, and prevent the powder from being forced out of the mixing area from the start. The mixing ratio, which is particularly important for the expansion behaviour, is therefore consistently maintained.

Pre-vacuum

The chemical reaction of the investment constituents causes gas to build-up in the material during pre-mixing. This unwanted gas is extracted by the prevacuum function before the main mixing stage.

Motor speed

Motor speed of 150 – 450 rpm for all routine work. The new high performance Twister motors effortlessly maintain the programmed mixing speed for every material, every quantity and every beaker size.

Mixing time

Mixing accurate to the second.

Post-vacuum

Some investment materials and plasters are prone to producing gases at a later stage, even after the main mixing sequence. The Twister's post-vacuum helps to reduce these bubbles, which accumulate afterwards on the surface of the mixed material.

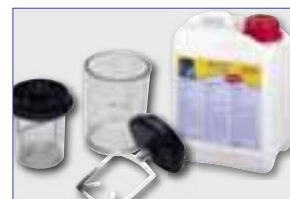
Reverse rotation

A change in mixing direction allows the powder to absorb the liquid more thoroughly and possible dry agglomerates (lumps of powder) are broken up.

Vacuum level

Restricting the vacuum performance to approx. 80% often reduces the amount of bubbles in difficult plasters and silicones.

Info



Tip: Easy removal of plaster

Mixing bowls with stubborn plaster residue or blocked trimmer discs can now be easily cleaned. Simply pour *GO-2011* (see page 150) into the mixing bowl and allow it to react according to the amount of plaster residue. The small bubbles that immediately appear indicate the start of the cleaning process.

After cleaning the bowl with *GO-2011*, rinse it briefly under running water. Finished!



Description	Art. No.
<i>Twister evolution</i> , 100–240 V incl. 500 ml bowl and mixing paddle	1828-0000
<i>Twister evolution venturi</i> , 100–240 V incl. 500 ml bowl and mixing paddle	1829-0000



Technical Details	<i>Twister evolution</i>	<i>Twister evolution venturi</i>
Voltage	100–240 V / 50/60 Hz	100–240 V / 50/60 Hz
Protection class in accord. w. IEC 536	1	1
Power consumption	180 VA	180 VA
Vacuum pump capacity / min.	16 l	24 l
rpm / min	100–450	100–450
Max. vacuum / Bowl pressure abs.	≈ -890 mbar / ≈ 80 mbar	≈ -880 mbar / ≈ 90 mbar
Unit fuse	5 x 20 / T4A (2 x)	5 x 20 / T4A (2 x)
Cable length	2 m (78.74 inch)	2 m (78.74 inch)
Dimensions (W x H x D)	105 x 285 x 235 mm (4.13 x 11.22 x 9.25 inch)	105 x 285 x 235 mm (4.13 x 11.22 x 9.25 inch)
Weight	≈ 5,2 kg	≈ 4 kg
Vacuum reduction	70–100%	80% / 100%
Working pressure	-	5–6 bar

1 The Classic



- Easy operation
- Offers all standard functions
- Highest flexibility

Twister

Twister with direct manual control

The compact Twister vacuum mixer can be employed for all conventional casting and modelling materials used in dental technology. All mixing parameters are quickly and easily input. The high performance motor and high quality vacuum pump guarantee homogenous and bubble-free mixing results for dental plasters, investments, and silicones.

Adjustable vacuum level

The vacuum which can be adjusted from 70 to 100% prevents bubbles from forming on certain plasters and duplicating silicones.

Flexible choice of location

The compact dimensions of the Twister allow a flexible choice of location, whether it is used as a wall-mounted or bench unit.

Twister accessories are included on page 38.



Technical Details

Voltage	100–240 V / 50/60 Hz
Protection class in accord. w. IEC 536	1
Power consumption	180 VA
Vacuum pump capacity / min.	16 l
rpm / min	100–450
Max. vacuum / Bowl pressure abs.	≈ -890 mbar / ≈ 80 mbar
Unit fuse	5 x 20 / T4A (2 x)
Cable length	2 m (78.74 inch)
Dimensions (W x H x D)	105 x 285 x 235 mm (4.13 x 11.22 x 9.25 inch)
Weight	≈ 5,2 kg
Vacuum reduction	70–100%

Description

Twister, 100–240 V,
incl. 500 ml bowl and mixing paddle

Art. No.

1826-0000

The economical quality supplier



- Easy operation
- Offers all standard functions
- Vacuum without the use of a mechanical pump



Twister venturi

Twister with direct manual control

In general, this unit possesses the same functions as the *Twister*. The difference lies in the vacuum activation technology. The *Twister* operates with a motor pump, whereas the vacuum is activated in the *Twister venturi* with the aid of compressed air

Advantage

The *Twister venturi* uses the existing compressed air supply in the laboratory so that a vacuum pump is not required. The unit is virtually maintenance free and more economical.

Optional vacuum level of 80 or 100%

The choice of vacuum performance of 80 to 100% prevents bubbles from forming on certain plasters and duplicating silicones.

Control air pressure easily and filter the air with the filter pressure gauge, page 23.



Technical Details

Voltage	100–240 V / 50/60 Hz
Protection class in accord. w. IEC 536	1
Power consumption	180 VA
Vacuum pump capacity / min.	24 l
rpm / min	100–450
Max. vacuum / Bowl pressure abs.	≈ -880 mbar / ≈ 90 mbar
Unit fuse	5 x 20 / T4A (2 x)
Cable length	2 m (78.74 inch)
Dimensions (W x H x D)	105 x 285 x 235 mm (4.13 x 11.22 x 9.25 inch)
Weight	≈ 4 kg
Vacuum reduction	80% / 100%
Working pressure	5–6 bar

Description

Twister venturi, 100–240 V, incl. 500 ml bowl and mixing paddle

Art. No.

1827-0000

1 Accessories

Mixing bowls – 5 different sizes

Ingenious mixing paddle geometry

The ingenious mixing paddle geometry ensures optimum mixing. Because the mixing paddle is as close as possible to the bowl, it takes up as much material as possible (A). The design of the mixing paddle ensures that the material is pushed to the bottom against the centrifugal force (B). The material is mixed most thoroughly at the bottom (C). This also creates pressure that along with the vacuum removes any air bubbles from the material.

Integrated overflow guard

All bowls have marks to indicate the maximum filling capacity so that incorrect

use is virtually eliminated. The bowls also have a collection area above the mixing paddle so that inadvertently overflowing them does not cause a problem. A dual valve prevents penetration of dust or mixing material into the vacuum pump. This valve is easily changed and cleaned in an ultrasonic cleaner and this is the only maintenance required.



Description accessories	Art. No. 65 ml	Art. No. 200 ml	Art. No. 500 ml	Art. No. 700 ml	Art. No. 1000 ml
Mixing bowl incl. mixing paddle	1820-6500	1820-0200	1820-0500	1820-0700	1820-1001
Mixing paddle	1820-6510	1820-0210	1820-0510	1820-0710	1820-1010
Mixing bowl	1820-6520	1820-0220	1820-0520	1820-0720	1820-1020

Twister alginate mixing bowl

Accurate impressions = quality results

Fabrication of a restoration begins with the impression. The quality of the impression is the basis for subsequent working stages by the dental technician and dentist. The impression is far too important to leave its ac-

curacy to chance. Alginate is still often mixed manually so that mixing results are not always consistent. The material must be homogeneous and bubble free or subsequent working stages

will be based on inaccurate information.



Description	Art. No.
Alginate mixing bowl, incl. mixing paddle, 500 ml	1823-0500
Alginate mixing paddle, 500 ml	1823-0510

Twister mixing spatula

The new mixing spatula for all Twister mixing bowls is the optimum tool for premixing and removing the mixed material completely from the bowl. The geometrical contour of the spatula has been exactly tailored to the side of the Twister bowl. The edges are rounded

to avoid damaging the bowl. The handle has an ergonomic contour that fits the shape of the hand perfectly. The length and stability of the spatula also make it easy to mix large quantities in the deep 1000 ml mixing bowl.

Description	Art. No.
Mixing spatula	1821-0200



Stand

- Converts the Twister to a bench unit
- Easy, reliable assembly
- Flexible and ergonomic
- Fits all Twister models

Description	Art. No.
Stand	1821-0102



Always the correct oscillation

Vibrax

Vibrax processes thin fluids as well as viscous materials optimally. This vibrator has a completely new conceptual design and has not only a high standard of vibration, but is also very easy to use.

Constantly adapting vibration performance

- Two-wave unit: fine vibrations with full-wave, stronger vibration with half-wave, the correct power for every viscosity.
- Four intensity levels for fine adjustment: sufficient bandwidth for all materials which need pouring. Easily adjusted, always reproducible.

Quiet and stable

- Controlled working as it stands firmly and only transfers minimal vibrations to the bench top. Will not tip even under high pressure at edge.

Ergonomical

- The large, easily operated lever switches are easily operated from the front of the device and fast detection of modified settings. The operator can concentrate fully on the impression or its casting ring, the device is operated intuitively.
- The *Vibrax* is very easy to clean, both the rubber mat and the switch can be quickly removed and replaced for cleaning. Round, smooth surfaces leave no space for dirty corners and edges.
- The rubber mat with two different degrees of hardness

offers high power on the mat and prevents the tray from jumping from the softer rubber edge.

- Swivelling vibrating ball (optional) for precise positioning of impression trays and casting rings, for all situations where special care is required.

Durable and maintenance-free

- The use of electromagnets gives the device a very high service life with maintenance-free use and constant vibration.



Technical Details

Voltage	230 V, 50 Hz / 120V, 50/60Hz
Frequency at 230V	100 Hz
Power consumption	150 VA (230V)/170 VA (120V)
Unit fuse	2 x 1,6 A (T)
Dimensions (WxHxD)	275 x 138 x 205 mm (10.83 x 5.43 x 8.07 inch)
Weight	6,5 kg
Cable length	2 m (78.74 inch)

Description	Art. No.
Vibrax, 230 V / 120 V	1830-0000 / 1830-1000

Accessories	Art. No.
Vibrating ball	1830-0001

1

The appropriate trimmer for any requirement

Renfert quality at all levels

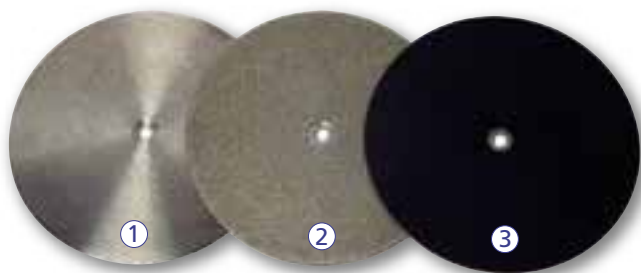
All Renfert trimmers offer following advantages:

- High performance motors with up to 1.650 W
- Easy, fast cleaning due to the tool free removable front door
- Robust and durable housing

Pure Power:

All Renfert trimmers have above average strong motors:

- MT3 1,300 W (230 V), 1,325 W (120 V)
- MT plus 1,300 W (230 V), 1,500 W (120 V)
- MT2 1,630 W (230 V)
- MT3 pro 1,650 W (230 V), 1,500 W (120 V)



Can operate with any trimmer disc

Renfert trimmers can optionally be equipped with:

- 1.) a partially diamond-coated disc = Marathon,
- 2.) a fully diamond-coated disc = Infinity, or
- 3.) a silicon carbide disc = Klettfix

*In each class,
best price-ratio
performance*




The most comfortable and quick cleaning:

The robust front can be completely removed without the use of tools, in just a few steps due to quick-release fasteners. Even the spray tube and the trimmer table can also be easily removed and then simply placed into plaster solvent e.g. *GO-2011*, and cleaned. Maintaining these units is child's play and means long-lasting value preservation.

	<i>MT3</i>	<i>MT3 pro</i>	<i>MT plus</i>	<i>MT2</i>
Ar. No. 230 V Version 120 V Version	1808-0xxx 1808-1xxx	1809-0xxx 1809-1xxx	1803-0xxx 1803-4xxx	1801-0000 -
Performance 230 V Version 120 V Version	1.300 W 1.325 W	1.650 W 1.500 W	1.300 W 1.500 W	1.630 W -
Wet	•	•	•	•
Dry option			•	
Housing material	Glass-fiber reinforced plastic	Glass-fiber reinforced plastic	Polyurethane	Metal
Trimmer table angle changeover	90°/98°	fully adjustable	fully adjustable	fully adjustable
Motor stop		•		•
Soft touch		•		
Weight (without disc)	13,2 kg	14,5 kg	12,7 kg	26,5 kg

1 The cost effective miracle



MT3

Wet trimmer

Technical details

- Above average strong motor with 1,300 W for max. material removal without pressure
- Easy, fast cleaning due to the tool free removable front door (quick-release fasteners)
- 100% corrosion free, robust and durable housing
- Compact shape allows easy integration into every working environment
- Quick trimmer table angle changeover due to the practical tilting mechanism (90° / 98°)
- Large grinding surface and ergonomic construction design guarantee a high degree of working comfort and a clear view
- Cut angle lines: easy plaster model guidance without adherence
- Safety: motor and water stop due to safety switch when opening and closing the front door



Adjustable trimmer table:

The MT3 trimmer table can be easily and efficiently tilted between two angles: 90° and 98°.

Technical Details

Voltage	230 V, 50 Hz / 120 V, 60 Hz
Power input	1.300 W (230 V), 1.325 W (120 V)
Motor performance P1	1.300 W (230 V), 1.325 W (120 V)
Motor performance P2	900 W (230 V), 1.000 W (120 V)
Speed 1/min	2.900 1/min (50 Hz) 3.400 1/min (60 Hz)
Water consumption	7 l/min
Required water pressure at 6 l/min.	min. 1 bar – max. 5 bar
Ø Water drain hose	35 mm
Length Water drain hose	1,5 m
Dimensions (W x H x D)	305 x 330 x 410 mm 12.01 x 12.99 x 16.14 inch
Weight	13,2 kg
Noise level according to DIN 45635-01-KL3	74 dB(A)
Cable length	2 m

Description	Art. No. 230 V	Art. No. 90-120 V
MT3 incl. trimmer disc Klettfix incl.	1808-0000	1808-1000
MT3 incl. Marathon trimmer disc	1808-0500	1808-1500

The new benchmark in wet trimmers



MT3 pro

High performance wet trimmer

- Maximum motor performance with 1,650 W at 230 V (resp. 1,500 W at 120 V) trimming, also under the most difficult conditions
- Easy, fast cleaning due to the tool free removable front door (quick-release fasteners)
- High safety due to the electronic quick stop system and durable due to the overheating display via LED
- 100% corrosion free, robust and durable housing.
- Fully adjustable trimmer table with angle lines (adjustable for every model situation).
- Individually adjustable water inlet and automatic water stop function (magnet valve)

Enhanced safety

As soon as the *MT3 pro* is switched off, the trimmer disc is actively slowed down. This unit therefore provides a greater degree of working safety. Moreover, the overheating display not only gives the unit a longer service life but also a higher degree of safety during work.

Touch keys

The *MT3 pro* can be easily and safely switched on by pressing the hermetically sealed touch keys on the top of the housing.



Technical Details

Voltage	230 V, 50 Hz, 120 V, 60 Hz
Power input	1.650 W (230 V), 1.500 W (120 V)
Motor performance P1	1.650 W (230 V), 1.500 W (120 V)
Motor performance P2	1.200 W (230 V), 1.100 (120 V)
Speed 1/min	2.900 1/min (50 Hz), 3.400 1/min (60 Hz)
Water consumption	7 l/min
Required water pressure at 6 l/min	min. 1 bar – max. 5 bar
Ø Water drain hose	35 mm
Length Water drain hose	1,5m
Dimensions (W x H x D)	305 x 330 x 410 mm 12.01 x 12.99 x 16.14 inch
Weight	14,5 kg
Noise level according to DIN 45635-01-KL3	74 dB(A)
Cable length	2 m

Description	Art. No. 230 V	Art. No. 90–120 V
<i>MT3 pro</i> incl. trimmer disc <i>Klettfix</i> incl.	1809-0000	1809-1000
<i>MT3 pro</i> incl. <i>Marathon</i> trimmer disc	1809-0500	1809-1500

1

The multi-talented unit for wet or dry trimming



3
YEAR GUARANTEE

CE

MT plus

The MT plus is a compact yet very high performing model trimmer that can be employed for either wet or dry trimming. The motor is capable of outputting 1.300 W (at 230 V) or 2.0 hp (at 120 V). This power means even the hardest plaster is removed with ease.

Technical details

- The housing is made of a new, special material (PU = polyurethane) which is both sound dampening and resistant.
- Trimmer table: can be removed without tools; with

precision adjustment and precision angle lines.

- Water adjustment: Water volume can be individually regulated for optimum cleaning.
- Safety: Motor and water flow are stopped by an interlock switch when the front door is opened.
- Motor power: 1,300 W (at 230 V) or 2.0 hp (at 120 V) guarantees maximum torque.
- Ergonomics: Ergonomic work position due to the angled position of the *MT plus*.

Wet or dry trimmer

Only a few adjustments convert the trimmer from wet to dry operation. The interior is designed to provide optimum flow currents in both the wet and dry operating modes.



Description	Art. No.
<i>MT plus</i> (trimmer disc <i>Klettfix</i> incl.), 230 V	1803-0000
<i>MT plus</i> (trimmer disc <i>Klettfix</i> incl.), 120 V	1803-4000
<i>MT plus</i> (trimmer disc <i>Klettfix</i> incl.), 100 V	1803-5000
<i>MT plus</i> (incl. <i>Marathon</i> trimmer disc), 230 V	1803-0500
<i>MT plus</i> (incl. <i>Marathon</i> trimmer disc), 120 V	1803-4500
<i>MT plus</i> (incl. <i>Marathon</i> trimmer disc), 100 V	1803-5500
<i>Marathon</i> trimmer disc for <i>MT plus</i> (partially diamond-coated)	1803-2000
<i>Infinity</i> trimmer disc for <i>MT plus</i> (fully diamond-coated)	1803-3000

Technical details

Voltage	230 V, 50 Hz / 120 V, 60 Hz
Power consumption	6,5 A (230 V), 13 A (120 V)
Motor performance P1	1.300 W (1.74 hp), 230 V 1.500 W (2.01 hp), 120 V
Motor performance P2	900 W (1.21 hp), 230 V 1.080 W (1.45 hp), 120 V
Speed	2.820 1/min (230 V) 3.400 1/min (120 V)
Water consumption	9 l
Required water pressure at 6 l/min.	1 bar (14.5 psi)
Ø Water drain hose	Ø 35 mm (1.38 inch)
Dimensions (W x H x D)	298 x 318 x 412 mm (11.74 x 12.53 x 16.23 inch)
Weight	12,7 kg
Noise level according to DIN 5635-01-KL3	74 dB (A)
Cable length	2 m (78.74 inch)

The high level wet trimmer for precision models

MT2

The power packed MT2 is a plaster trimmer of the highest class. The optimum and top quality combination of performance, technology and ergonomics sets standards for wet trimmers.

Technical details

- quiet-running, powerful electric motor.
- safety switch interrupts power and water supply on opening the casing door.
- **unique:** electronic instant stop for trimmer disc via **Disc Stop System (DSS)**.
- very large working surface and wide grinding trimming area.
- laser engraved angle lines on the 90° table for making precise models.
- precise 90° setting via individual precision adjustment.
- adjustable water flow up to 9 l/min.
- two trimmer tables with 90° and 98° inclination included. Table change without need for tools.
- tool-free quick release lock on removable casing door.
- corrosion-free steel casing with cast aluminium. Interior and exterior surfaces are very smooth and with a protective coating.
- spray tube easily removable for effective cleaning. Totally waterproof due to specially sealed profile.

Additionally deliverable are partially diamond-coated *Marathon* disc, fully diamond-coated *Infinity* disc or silicon carbide disc *Klettfix*.

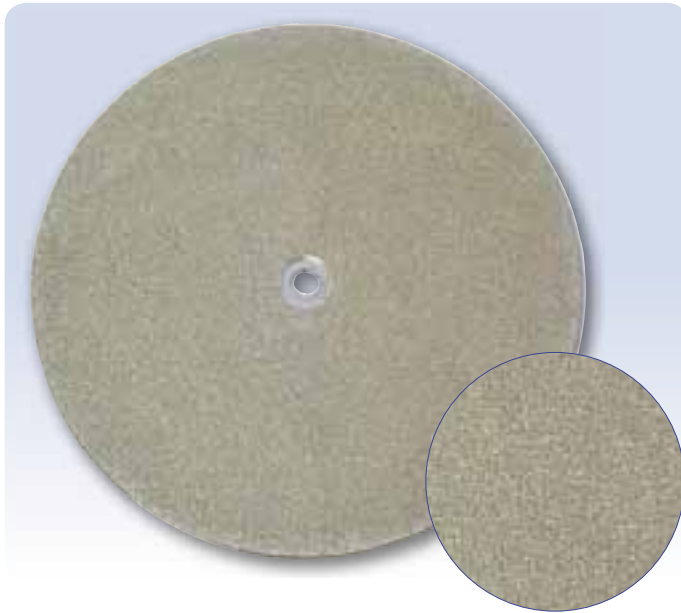


You can find more information on Renfert's range of trimmer discs on pages 46–47.

Description	Art. No.
MT2 (without trimmer disc) 230 V	1801-0000
Klettfix trimmer disc for MT2, 5 pcs. (3 x K80, 2 x K120)	1801-1000
Marathon trimmer disc for MT2 (partially diamond coated)	1801-2000
Infinity trimmer disc for MT2 (full diamond-coating)	1801-3000

Technical Details	
Voltage	230 V, 50 Hz
Power consumption	7,2 A
Motor performance P1	1.630 W (2.186 hp)
Motor performance P2	1.200 W (1.609 hp)
Speed	2.868 1/min.
Water consumption	max. 9 l/min.
Required water pressure at 6 l/min.	1 bar (14.5 psi)
Ø Water drain hose	35 mm (1.38 inch)
Length Water drain hose	1,5 m (59.06 inch)
Dimensions (W x H x D)	334 x 320 x 456 mm (13.16 x 12.61 x 17.97 inch)
Weight	26,5 kg
Noise level according to DIN 45635-01-KL3	74 dB (A)
Ø Hose connecting piece internal	29 mm (1.14 inch)
Ø Hose connecting piece external	35-40 mm (1.38-1.58 inch)
Cable length	2 m (78.74 inch)

1 Diamond-coated trimmer discs



Infinity

The fully diamond-coated disc for MT1, MT2, MT plus, MT3 and MT3 pro fulfils the highest demands for trimming plaster models.

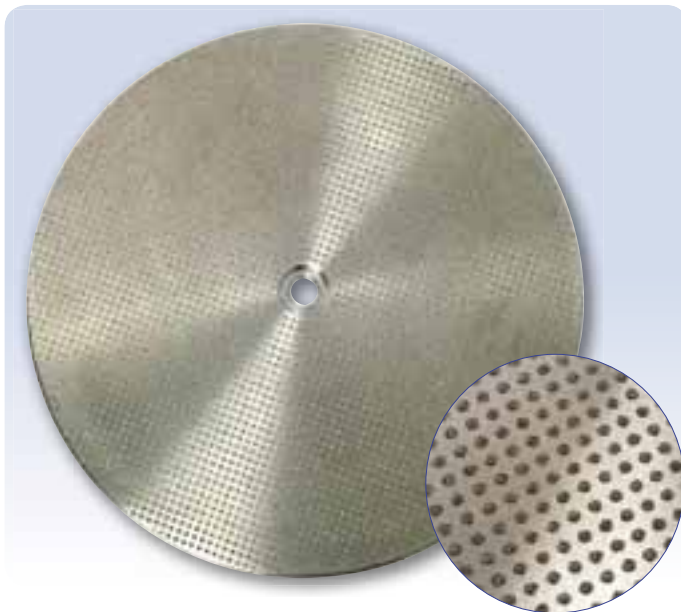
- closed diamond surface.
- extremely resistant.
- easily cuts through super-hard plaster.
- low wear-and tear rate ensures lifespan of years.
- stainless steel carrier disc.

Technical details

max. revolutions 3.400 1/min

Check unit and dimensions on table below

For grinding performance and service life, refer to page 47.



Marathon

The partially diamond-coated trimmer disc for MT1, MT2, TT2, MT plus, MT3 and MT3 pro with aggressive grinding properties.

- galvanically coated „diamond islands“.
- effective trimming of all plaster classes.
- optimum use for dry trimmers.
- requires little pressure.
- long lifespan.
- steel carrier disc.

Technical details

max. revolutions 3.400 1/min

Check units and dimensions in table below

Info

- Diamond discs are heat sensitive:
- never grind investment material!
 - never grind metal!

The *Marathon* is available with the relative modification set to take different makes of trimmer discs.

Which disc for which type of trimmer?	Ø Trimmer disc diameter (cm/inch)	Klettfix (silicon carbide)		Marathon (partially diamond-coated)	Infinity (fully diamond coated)
		Basic version comprising: 5 x Klettfix (3 x corn 80, 2 x corn 120) + support disc	Refill kit comprising: 5 x Klettfix (corn 80 or corn 120)	Refill kit comprising: 1 x Marathon	Refill kit comprising: 1 x Infinity
MT3 (pro)	23,4/9,22	1803-1001	1803-1100 (K80) 1803-1200 (K120)	1803-2001	1803-3001
MT plus	23,4/9,22	1803-1000	1803-1100 (K80) 1803-1200 (K120)	1803-2000	1803-3000
MT2	25,4/10,0	1801-1000	1801-1100 (K80) 1801-1200 (K120)	1801-2000 (also TT2)	1801-3000
MT1	21,0/8,27	1800-1000	1800-1100 (K80) 1800-1200 (K120)	1800-2000	1800-3000

Trimmer disc with quick-change function

Klettfix

The quick-change silicon carbide disc with micro hooks. A cost-efficient alternative for use with the MT1, MT2, MT plus, MT3 and MT3 pro (when used as a wet trimmer).

Changing discs takes a matter of seconds

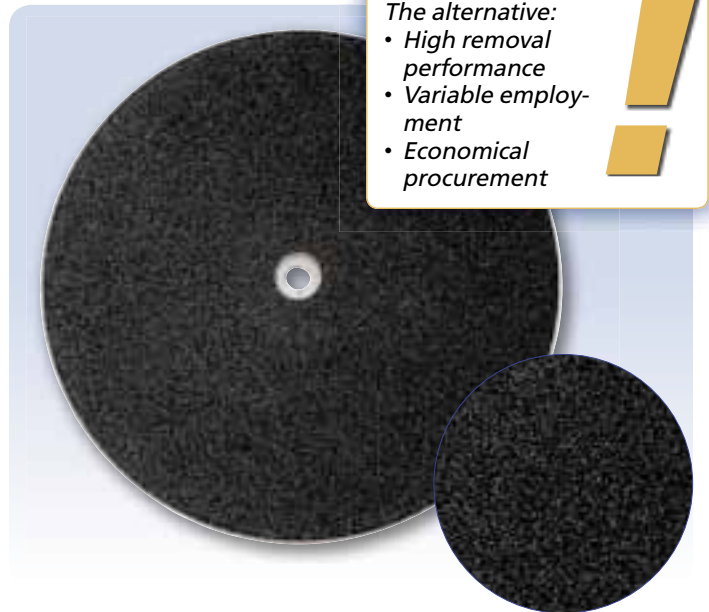
It is often the case that one trimmer is required to trim plaster models of various plaster qualities. The demands for a smooth surface also vary. The *Klettfix* disc takes this all in its stride. It can be easily and quickly mounted (or taken off) on the carrier disc with micro hooks.

The advantages are obvious:

- excellent grinding pattern: variable use of coarse (corn 80) and fine (corn 120) trimmer discs.
- high removal performance (9,5 g of super-hard plaster/ sec.).
- tool-free change within seconds.
- individual fit to trimmer.
- low acquisition costs -> low capital commitment.
- damage through improper use causes only minimal loss.

The disc surface consists of a resistant silicone-carbide layer for use with all classes of plaster models and even allows investment compounds to be ground.

Changing a *Klettfix* disc can be carried out just as quickly as a tool change on your handpiece. The disc is then completely secure and immovable and exhibits true concentricity.



Technical details

max. revolutions 3.400 1/min

Check units and dimensions in table on page 46.



Attention: *Klettfix* discs may only be employed for wet trimming!

Trimmer discs: grinding performance, service life	Art. No	Application	Type of material	Grinding performance per second with uniform pressure	Plaster quantity (super-hard plaster)	Cost allocation per model based on trimmer disc price:*
<i>Klettfix 80</i> <i>Klettfix 120</i>	1803-1100 1803-1200	Wet	Plaster and investment	9,5 g	18 kg	≈ 0,0348 USD 0,029 EUR
<i>Marathon</i>	1803-2000	Wet and dry	Plaster	8,5 g – 10,5 g	1.000 kg	≈ 0,0336 USD 0,028 EUR
<i>Infinity</i>	1803-3000	Wet	Plaster	7,8 g – 9,9 g	1.700 kg	≈ 0,0312 USD 0,026 EUR

* Sample calculation

1 Cumbersome use of the handpiece

Trimming dental arches

A few disadvantages of this operating method

In many laboratories the dental arch is prepared by firstly grinding the vestibular surface of the model with a trimmer and then grinding the lingual and or palatal area using a handpiece and coarse plaster bur. This leads to the following disadvantages:



High dust exposure

Not only does this cloud of dust make working procedures more difficult, but the laboratory also becomes unnecessarily dirty.



Time consuming

This process is long and slow due to the fact that the handpiece is only able to remove a relatively low amount of plaster and then the results are not of a high quality.



Inaccuracies

The main advantage, flexibility, is in this situation a disadvantage. Results cannot be identically reproduced and the intended conical shape of the dies (more favourable to lift) is seldom achieved to a standard which would otherwise be possible. The surface structure is uneven.



Risk of breakage

The low performance means the technician is required to use greater pressure, it is therefore not possible to maintain an even plaster thickness throughout the dental arch. In addition to this the dental arch must be held tightly in the hand throughout the procedure, this tension is dangerous for the object.



High maintenance expenses for the handpiece

Handpieces are generally used for a great number of applications, their wear and tear however is a great disadvantage when it comes to maintenance fees. Trimming a dental arch is an unsuitable procedure and high maintenance for a handpiece.

The elegant solution:

The dental arch trimmer Millo pro not only avoids such disadvantages, but it in fact offers a number of advantages.



Top models made efficiently



3
YEAR GUARANTEE

CE

Millo pro / Millo

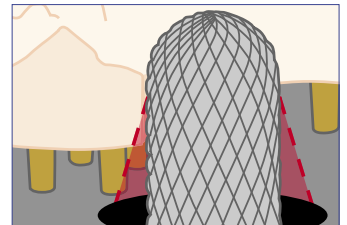
This dental-arch trimmer optimizes the model-making process improving quality and reliability during the fabrication of sectioned models. Saving more than 60% in time when trimming a dental arch Millo (pro) is profitable even for a small turnover of models a day.

Unhindered lifting of the dies
The tapered arch makes lifting from the base child's play. Undercuts and rough surfaces from handpiece cutters and

sandpaper cylinders are now a thing of the past. Smooth surfaces additionally aid easy lifting. The risk of breakage is reduced to almost zero.

Clean and safe work

- Work space and laboratory remain permanently clean during preparation of dental arches, thanks to connection points for external extractor.
- The model is guided with both hands, bringing greater safety to the process.



Ideal in each situation

- Adjustable cutter height (Millo pro) for easy trimming of arches with difficult tooth position. 17,5 mm possible height adjustment, therefore

it can be used with all popular model systems.

- Fine and coarse cutters available for reducing the material as required.

Technical details

Weight	5,7 kg
Dimensions (W x H x D)	252 x 214 x 207 mm (9.92 x 8.43 x 8.15 inch)
Voltage	230V (50Hz) / 120V (60Hz)
rpm	2770 (50 Hz), 3350 (60 Hz)

Description	Art. No.
Millo pro, 230 V / 120 V	1805-0000 / -1000
Millo, 230 V / 120 V	1804-0000 / -1000

Accessories	
Cutter (cross-cut)	1806-0001
Cutter, tapered, cross-cut (included in delivery)	1806-0002
Cross-cut, cylindrical bur	1806-0003



1

Precisely measured and parallel drilled pinholes

- Fast drill
- Precise holes
- Optimal retention

3
YEAR GUARANTEE

CE



Top spin

The automatic laser pinhole drilling unit guarantees the highest drilling precision and enables a relaxed working position either sitting or standing.

Easy, resistance-free drilling with the extremely powerful motor at **16.000 rpm** is guaranteed with even super-hard plasters. The result: The diameter is smaller, offers a more precise fit and is significantly straighter.

The casing

- powder-coated cast aluminium casing.
- compact, highly stable version.

Two working positions via swivel foot on base:

- parallel to the table,
- tilted 16° forwards.

Ergonomics supports precision work

The technician can comfortably hold the model in the desired position and drill without wavering, especially as the drilling itself is not strenuous. With the aid of the precision laser guidance point, the technician can also determine the best position for the basal drillhole.



Attention:
Top spin may only be operated with original Renfert pin drill bits (refer to page 113)!

For information on Renfert's range of pins see pages 105–112.

Technical details

Voltage	230 V, 50 Hz / 115 V, 60 Hz
Power consumption	150 W
rpm	16.000
Cable length	230 V: 2 m (78.74 inch) 115 V: 2,5 m (98.43 inch)
Dimensions (W x H x D)	166 x 322 x 149 mm (6.54 x 12.69 x 5.87 inch)
Weight	≈ 5,1 kg
TC-drill with shaft	Ø 3 mm (0.12 inch)
Table hub infinitely variable	0-12 mm (0-0.47 inch)
Laser class	2

Description

Description	Art. No.
Top spin, pinhole drilling unit, 230 V, incl. 1 stepped drill bit 2.0/3.0 mm (0.08/0.12 inch)	1835-0000
Top spin, pinhole drilling unit, 115 V incl. 1 stepped drill bit 2.0/3.0 mm (0.08/0.12 inch)	1835-4000

Details



The model table

- easy to move model table.
- dual guide for highest precision.
- perforations for removal of drilling dust.
- easy to remove collection dish for plaster dust underneath the table.
- individual, infinitely variable drill depth setting from 0-12 mm (0-0.47 inch) via knurled screw.
- non-slip, even surface.



The laser beam

- strong light, fine laser point.
- easily recognised on all plaster colours and surfaces.
- precise match to pinhole drill.

Info

For additional, useful tips regarding pinhole drilling, refer to the Renfert manual, „The Master Model“ at www.renfert.com.



The pinhole drill

- optimum access via lifting and fixture of model table.
- tool-free drill bit replacement via quick clamping device.
- 3 mm drill jig, easy replaced.
- protection from plaster dust due to efficient seal.
- engine stop function when changing drill bit.

For information on Renfert's pin drills see page 113.



Function

- on activating the main switch the unit is in stand-by mode.
- on depressing the table the drill spindle is activated.
- both counter-balances on the casing ensure easy and relaxed drilling.
- designed for both standing and seated (16° angle) working positions.
- clear view of model.

1

Mobile stereomicroscopy for filigree work

Mobiloskop S

The stereo microscope with swivel arm is an indispensable aid for precision work and optimum detail control. It is flexible and swivels and can therefore be shared by several workstations. The magnification permits the highest demands to be achieved for fittings, seals and preparation borders in dental technology.

Technical Details

- can be moved in all direction (360°). Suitable for more than one work place.
- infinitely variable setting for working position via the flexible angled arm.
- pupil distance can be individually set from 40–72 mm (1.58–2.84 inch).
- dioptre equaliser on both sides, three-dimensional view. 5x or 10x magnification possible.



- good lighting from both sides onto field of vision either via two swivel lamps or two glass fibre light conductors (refer to page 53).
- approx. 15 cm (5.91 inch) working distance for comfortable working position and optimum action radius.
- large field of vision with high depth and edge definition.

Technical details

Light beam (angled)	45°
Field of vision diameter	5x: 44 mm (1.73 inch) 10x: 22 mm (0.87 inch)
Focussing depth	5x: 22 mm (0.87 inch) 10x: 10 mm (0.39 inch)
Working distance	150 mm (5.91 inch)
Weight	≈ 3 kg

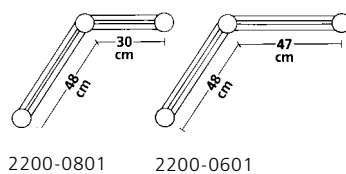
Description

Description	Art. No.
Mobiloskop S with swivel arm, standard	2200-0802
Mobiloskop S with swivel arm, long	2200-0602

Unit contains: a complete swivel arm and Mobiloskop head (without lighting).

Swivel arm

The large action radius of the swivel arm allows the Mobiloskop S to be used by more than one technician. There are three joints allowing it to be set to suit individual working positions.



Description	Art. No.
Swivel arm, standard (for up to 4 work places)	2200-0801
Swivel arm, long (for up to 6 work places)	2200-0601

Accessories



Info

Lighting

A microscope should always be equipped with a supplementary light source. The detail revealed when observing the object is determined

by the brightness and focus of the light. The light source should provide illumination from two sides to avoid shadows.

Lighting unit

For simple assembly onto the *Mobiloskop S*. The lamps can be swivelled and switched on independently of each other. Illuminating the object from

both sides avoids shadows and reflections on the surface.

Technical details

Voltage	230 V, 50 Hz / 110 V, 60 Hz / 240 V, 50 Hz
Working voltage	12 V AC
Power consumption	0,8 A
Dimensions (W x H x D)	185 x 80 x 60 mm (7.29 x 3.15 x 2.36 inch)
Weight	≈ 880 g

Description

Description	Art. No.
Lighting unit incl. transformer, 230 V	2200-0501
Lighting unit incl. transformer, 110 V	2200-1501
Lighting unit incl. transformer, 240 V	2200-2501



Mobiloskop lighting

This cold light source support three-dimensional vision under the microscope.

Two glass fibre light conductors transport the brightness, which can be adjusted on three levels, to the field of vision. Illumination from both sides ensures the working area is rich in contrast without annoying shadows. Both light conductors are equipped with focussing optics. It can be fitted to all Renfert microscopes in a few easy steps. Various fitting components are including in the set.



Cold light Mobiloskop lighting

Voltage	Art. Nr.
230 V	2200-3000
120 V	2200-4000

Technical details

Voltage	230 V, 50 Hz / 120 V, 60 Hz
Voltage	8 V
Power consumption	24 VA
Lamp rated output	20 W
Dimensions (W x H x D)	130 x 125 x 200 mm (5.12 x 4.93 x 7.88 inch)
Weight	≈ 1,6 kg



Remberti

1.5 x magnification magnifying glasses with fold-back magnifying lenses.

• also suitable for wearers of glasses (without attachment to your glasses).

- weigh only 38 g for trouble-free working.
- anti-glare optics via compensating natural glass.
- potential working distances of between 12 and 35 cm.
- fold-back magnifying lenses for more flexible use.

Description	Art. No.
Remberti silver	1262-0001
Replacement lens, left, 1 piece	1262-0100
Replacement lens, right, 1 piece	1262-0200

1 Efficient waxing-up...

Crown and bridge technique

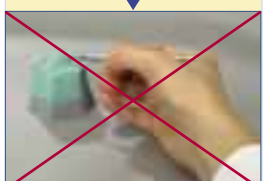
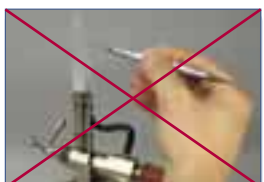
This is an ideal system for intricate, simultaneous waxing-up of different waxes: all waxes are heated individually, the appropriate instrument tip is quickly attached and the optimal temperature of the tips ensures ergonomic waxing-up. The result is superior quality.

Totally eliminate distortion of the wax
The wax is not subjected to temperature fluctuations, so there is no contraction.

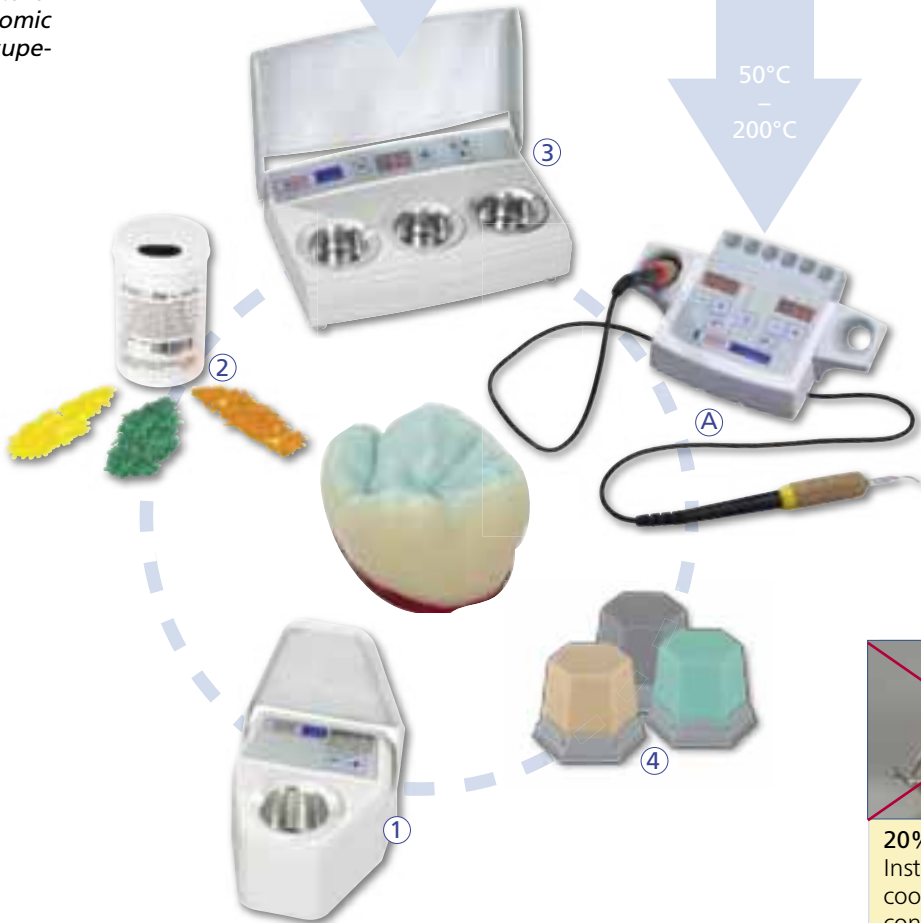
45°C
-
110°C

50°C
-
200°C

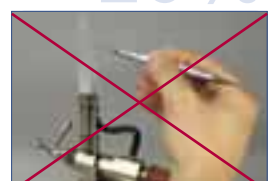
30%



30% saving in time
The continually repeated steps of Bunsen-wax-model are reduced to the quicker sequence of the Vario E -model.



20%



20% saving in time
Instruments always cool and have to be constantly reheated. The Waxlectric completely eliminates this sequence!

Wax up twice as quickly!

① **Hotty LED**
Dipping produces a wax coping with an optimal thickness in only 10 seconds.

② **GEO Dip**
Maximises the advantages of dipping a coping.

③ **Vario E**
Huge saving in time (repeatedly holding the instrument over the Bunsen burner is no longer necessary) and greatly improved quality due to minimum contraction.

④ **GEO Avantgarde modelling waxes**
The ideal contouring properties of these waxes have been precisely tailored to this technology, which preserves the original characteristics of the wax.

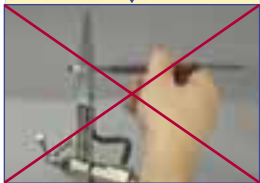
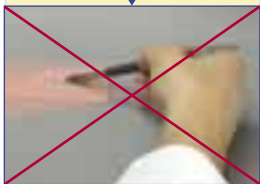
... improves quality, ergonomics and efficiency

Prosthetics

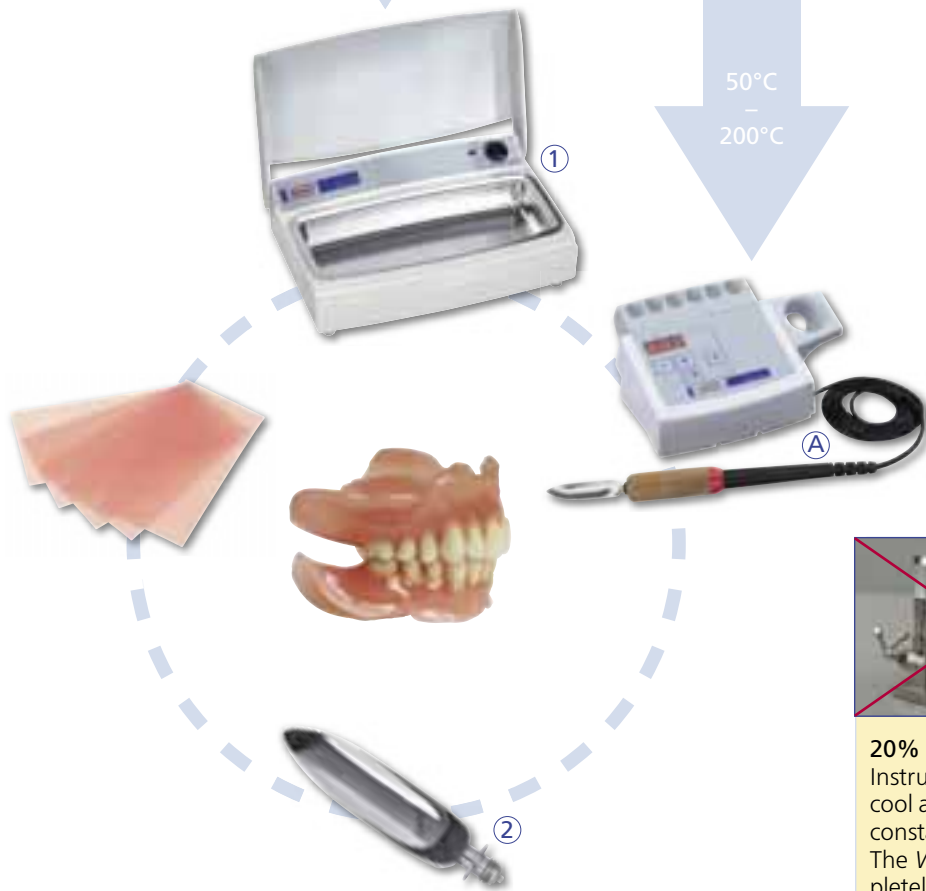
First large amounts of wax are applied to the model and then finely contoured. This system provides the technician with a perfectly coordinated instrument that ensures maximum efficiency for both stages.

Totally eliminate distortion of the wax
The wax is not subjected to temperature fluctuations, so there is no contraction.

30%



30% saving in time
The four continuously repeated steps, Bunsen-wax-Bunsen-model, are completely eliminated. Large amounts of wax are removed from the *Waxprofi* and applied directly to the model.



20%



20% saving in time
Instrument always cool and have to be constantly reheated. The *Waxlectric* completely eliminates this sequence!

Wax up twice as quickly!

A Waxlectric
Electric contouring and waxing-up
The instrument tip is maintained at a constant temperature electronically. Heat is distributed uniformly over the tip.

1 Waxprofi
Electronically regulated heating pot ensures the base wax is kept at an optimum waxing-up temperature and consistency (flowable to spreadable).

2 Large wax knife
Specially developed for prosthetics. Removes large amounts of wax from the *Waxprofi* and is an optimally designed instrument for fine contouring.

1

Professional waxing-up for crown and bridge and prosthetic work



Waxlectric I + II

Waxing-up is simple, precise and stress-free due to the accurately set, constant and evenly distributed temperature of the instrument tip. Huge saving in time because separate heating of the instrument and material is no longer required.

Quality, speed and simplicity:

- 20% saving in waxing-up time, as separate heating of the instrument is no longer required.
- 50% saving in waxing-up time (wax-up twice as fast) when used with the *Waxprofi* in prosthetics or the *Vario E* in crown and bridge work, as separate heating of the waxes is also no longer required.
- no contraction of the pattern, as the wax is not overheated or burned.
- the technician is able to concentrate on the pattern rather than on the materials and instruments.
- easier waxing-up on the model, as the wax knife is constantly at the optimum working temperature.

Temperature setting

- comfortable and intuitive operation.
- exact temperature setting (Celsius or Fahrenheit)
- 3 temperatures can be set and permanently assigned to each channel and are immediately available at the press of a button.
- 3-segment LED display visible in daylight.
- programmable initial temperature of 50°C–200°C (122°F–392°F).
- direct setting of the maximum or minimum temperature.
- both channels can be set separately with the *Waxlectric II* (colour-coded).

Handpiece

- heat-insulated + heating element not integrated in the handle.
- natural cork instrument handle, gentle to the skin.
- ergonomic design for comfortable, fatigue-free waxing-up.
- heat-resistant, anti-twist cable.
- colour coding facilitates temperature setting.

Housing

- compact, ergonomic model in a new design
- angled at 20° for an improved view and easier operation
- holders for 6 waxing-up tips and the handpiece directly on the housing

- both holders can be easily detached for cleaning (e.g. with a steam cleaner)
- hermetically sealed touchpad is easy to clean

Waxing-up tips

- choice of 12 different waxing-up tips made from a special alloy
- screw connection makes tips easier and quicker to change without using an instrument
- heating element is integrated in the tip, ensuring very short reaction times with virtually no temperature fluctuations and no heating of the handle

Optimum results with *GEO Avantgarde* modelling waxes, page 129.

Details



Simple, accurate temperature setting

The exact temperature setting is quickly and easily entered in Celsius or Fahrenheit. A 3-segment LED display ensures the temperature is easy to read even in brightly lit surroundings. The temperature setting also remains stored after the unit is switched off so that the technician can continue waxing up later at the correct temperature. The

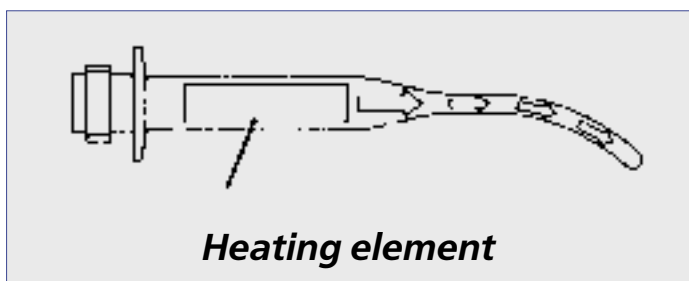
accuracy of the temperature allows optimum coordination of individual components of the system for efficient waxing-up with the aid of the melting range tables on page 127.



Ergonomic features

The holders supplied for the handpiece and tips are attached directly to the housing. This is consistent with the ergonomics and compact design of the unit. All components are designed strictly according to ergonomic principles. The unit is very easy to clean because of the hermetically sealed touchpad and detachable holders. The handpiece and cable have been thoroughly

tried and tested and have some outstanding features, such as excellent heat insulation, heat resistance, anti-knotting and anti-kink cable, easy handling and colour coding for indicating the relevant temperature.



Waxing-up tips

Construction
The integrated heating element of the waxing-up tip transfers the heat directly to the wax. There are only slight fluctuations in temperature. The difference in temperature between the heating element and waxing-up tip is absolutely minimal.

Our comprehensive range of waxing-up tips is included on page 59.



Systematic, efficient waxing-up of the highest quality

The *Waxlectric* provides considerable advantages, even when it is used as a separate unit. Used in conjunction with other units

and with the specially developed waxes (refer to page 126), the *Waxlectric* becomes part of a perfectly integrated system.

Technical details	
Voltage	100-240 V AC, 50/60 Hz
Supply voltage	12 V DC
Power consumption	5 W (Waxlectric I) 10 W (Waxlectric II)
Max./min. working temperature	200°C / 50°C
Max./min. working temperature	392°F / 122°F
Handpiece cable length	85 cm (33,46 inch)
Weight (with / without mains unit)	≈ 445 g / 235 g (Waxlectric I) ≈ 475 g / 265 g (Waxlectric II)
Dimensions Waxlectric I (WxHxT)	120 x 60 x 98 mm (4.72 x 2.36 x 3.86 inch)
Dimensions Waxlectric II (WxHxT)	150 x 60 x 98 mm (5.91 x 2.36 x 3.86 inch)

Description	Art. No. 230 V/240 V	Art. No. 120 V
<i>Waxlectric I</i> (1 channel) incl. waxing-up tip 2155-0102	2156-0000	2156-1000
<i>Waxlectric II</i> (2 channel) incl. waxing-up tips 2155-0101 + 2155-0103	2157-0000	2157-1000
Pack contents: 1 Control unit Integrated holders for the <i>Waxlectric</i> handpiece and 6 tips 1 Handpiece (or 2 handpieces with the <i>Waxlectric II</i>) 1 Waxing-up tip (or 2 waxing-up tips with the <i>Waxlectric II</i>) 1 Mains unit 1 Instructions for use with a list of replacement parts		

1 Waxlectric light

An introduction to efficient waxing-up

Waxlectric light I + II

Separate heating of the instrument and material is also no longer required with these units, resulting in greatly improved quality and speed. The wax does not contain any stresses and the technician can fully concentrate on waxing up.

Like the Waxlectric, the advantages of these units are quality, speed and simplicity:

- 20% saving in waxing-up time, as separate heating of the instrument is no longer required.
- 50% saving in waxing up time (wax up twice as fast) when used with the *Wax-profi* (refer to page 62) in prosthetics or the *Vario E* (refer to page 60) in crown and bridge work, as separate heating of the waxes is also no longer required.
- no contraction of the pattern, as the wax is not overheated or burned.
- the technician is able to concentrate on the pattern rather than on the materials and instruments.
- easier waxing up on the model, as the wax knife is constantly at the optimum working temperature.

Temperature setting

- a potentiometer ensures easy temperature control.
- both channels can be set separately with the *Waxlectric light II*.

Handpiece

- heat-insulated + heating element not integrated in the handle.
- natural cork instrument handle, gentle to the skin.
- ergonomic design for comfortable, fatigue-free waxing-up.
- heat-resistant, anti-twist cable.
- cable connection and guidance ensure optimum contact and protection of the sockets.



Cost-effective introduction to electric waxing-up

Housing

- compact, ergonomic design.
- hermetically sealed touchpad is easy to clean.
- increased safety when waxing up due to the low voltage technology, mains unit is outside the working area.

Waxing-up tips

- choice of 12 different waxing-up tips.
- screw connection makes tips easier and quicker to change without using an instrument.
- heating element is integrated in the tip, ensuring shortest reaction times, therefore virtually no temperature fluctuations and no heating of the handle.
- stable, can be bent or shaped to suit individual requirements.

Technical details

Voltage	100-240 V AC, 50/60 Hz
Supply voltage	12 V DC
Power consumption	5 W (Waxlectric light I) 10 W (Waxlectric light II)
Max./min. working temperature	200°C / 50°C
Max./min. working temperature	392°F / 122°F
Handpiece cable length	85 cm (33.46 inch)
Dimensions (W x H x D)	91 x 53 x 80 mm (3.58 x 2.09 x 3.15 inch)
Weight (with / without mains unit)	≈ 425 g / 215 g (Waxlectric light I) ≈ 445 g / 235 g (Waxlectric light II)

Description

	Art. No. 230 V/240 V	Art. No. 120 V
<i>Waxlectric light I</i> (1-channel) incl. waxing-up tip 2155-0102	2150-0000	2150-1000
<i>Waxlectric light II</i> (2-channel) incl. waxing-up tips 2155-0101 + 2155-0103	2151-0000	2151-1000

Pack contents:

- 1 Control unit
- 1 Handpiece (or 2 handpieces with the *Waxlectric light II*)
- 1 Waxing-up tip (or 2 waxing-up tips with the *Waxlectric light II*)
- 1 Mains unit, 1 Instructions for use with replacement parts list

Optimum results with *GEO Avantgarde* modelling waxes, page 129.

Accessories



Optional: Holders for handpiece and tips

These accessories integrate optimally into the ergonomic and compact design of the Waxlectric units. The detachable holders are heat-resistant and very easily cleaned, e.g. with a steam cleaner. The holder for the 6 waxing-up tips

is ergonomically positioned and well organised. Waxlectric holders are suitably positioned for left-handed operators.

Accessory	Art. No.
Set of Waxlectric holders	2151-1500



Tips easily changed

The Waxlectric handles and tips are designed so that they can be changed quickly: the tips are changed by means of a simple, hand-tight screw connection.

Options

There is a choice of 12 different waxing-up tips for the most common applications. Each tip can be customised to suit individual requirements.

Info

The new modelling tips (2155-xxxx) are not compatible with the tips of the previous Waxlectric-models (2139-xxxx / 2140-xxxx). Please use the item number 2141-xxxx (the last 4 numbers are always the same ones) for ordering tips for the previous Waxlectricmodels. More informations at www.renfert.com or call your dental dealer.



Nr. 2155-0101 -0102 -0103 -0104 -0105 -0106 -0107 -0108 -0109 -0110 -0111

Description	Art. No.
1 Tip, small	2155-0101
1 Tip, medium	2155-0102
1 Tip, large	2155-0103
1 Knife, narrow	2155-0104
1 Knife, wide	2155-0105
1 Knife, chamfered	2155-0106
1 Hollenback, horizontal	2155-0107
1 Hollenback, vertical	2155-0108
1 Tip, mini, angled	2155-0109
1 Lancet blade	2155-0110
1 Beavertail blade	2155-0111

Large wax knife

This knife is an innovation in prosthetics. It transfers a large amount of wax to the model and subsequently contours the wax very delicately. All prosthetic requirements are fully met with one single instrument.



Description	Art. No.
1 Large wax knife	2155-0112

Ideal for use with the Waxprofi, see page 62.

1 Wax heater for modelling waxes

Vario E

The *Vario E* heats modelling waxes to their ideal processing temperature.

The *Vario E* saves time melting hardened wax. The selectively preheated waxes enable the flow of the wax to be precisely regulated. There are less stresses on the wax objects, which are more homogenous and much easier to carve.

Technical Details

- SET or ACTUAL temperature shown on LED display in °C or °F.
- The three pots can be controlled separately. Each of the pots can be switched on or off separately.
- Expanded temperature interval from 45°C (113°F) to 110°C (230°F). Processing light waxes with low melting points is now also possible.
- New pot design provides optimum flow of excess wax back into the pot from the rim. The deep pots are also suitable for dipping copings.
- Waxes are protected by lids during work breaks. The lid can be locked in place at a 120°-angle to save space in the work area.
- Glare-free view on the angled display. Control elements protected by a plastic cover for easy cleaning.
- Renfert recommends the special *GEO Avantgarde* modelling waxes (refer to page 129).
- Small, compact construction. Ideal working height for relaxed modelling. Modern design in bright colours.



Save up to 50% time!
The Renfert wax system:
Waxlectric + Vario E + GEO
Avantgarde modelling
waxes see page 54.



Vario E also for dipping copings

- deeper wax wells are suitable for dipping copings.
- no need to purchase a separate wax dipping unit.
- when not being used for dipping, the well in question can be switched off independently.



Info

Vario E + Waxlectric for professional and relaxed modelling

- a savings of 50% in modelling time in combination with Waxlectric (refer to page 54). The risk of overheating the wax is eliminated, avoiding any contraction.
- short distances between the Vario E and the working model.
- the technician can concentrate on his or her work without being distracted by a Bunsen burner or during the wax melting phase.

Description	Art. No.
Vario E, 230 V	1452-0000
Vario E, 120 V	1452-1000

Technical details

Voltage	230 V / 120 V, 50/60 Hz
Power consumption	85 W
Max./min. working temperature	110 °C / 45°C
Max./min. working temperature	230°F / 113°F
Dimensions (W x H x D)	178 x 54 x 120 mm (7.01 x 2.13 x 4.73 inch)
Cable length	2 m (78.74 inch)
Weight	660 g

Dipping technique for perfect wax copings

hotty LED / hotty

Wax dipping pots with a controllable working temperature for gently heating dipping waxes. High-grade wax components are heated without impairing the quality.

Wax Pot

- the sloping edge of the pot permits wax to drip back into the well.
- unit remains cleaner.
- even temperature throughout the pot.
- excellent heat storage.

Housing

- low height.
- stable stand position.
- the dipping pot is sealed with a lid during breaks.
- even in closed position use and control is possible.

Heating Process

- continuous and quick heating up phase.
- no overstepping the programmed temperature.
- small temperature fluctuations are permanently balanced.

hotty LED

LED Display

- display shows the set or actual temperature in °C or °F (can be set to either).
- large luminous display.
- can be set by individual degrees.
- displays actual value.

Touch Control Panel

- protects the control elements from dirt.
- easy to clean.
- adjustable temperature setting from 60° to 110°C (140 – 230°F).



hotty

Temperature Control

- the temperature can be infinitely varied from 60–110°C (140–230°F).
- light diode display gives current function situation and indicates the warm-up phase.



Info

The dipping technique is the quickest and most precise way to create a coping. The proper preparation of the wax allows stable wax copings with a uniform layer

thickness to be produced in a few seconds. The positive characteristics of the dipping waxes are maintained.

Our range of dipping waxes is included on page 132.

Description	Art. No.
hotty LED, 230 V/120 V	1461-0000/1461-1000
hotty, 230 V/120 V	1460-0000/1460-1000

Technical details	
Voltage	230 V / 120 V, 50/60 Hz
Power consumption	25 W
Max./min. working temperature	110°C / 60°C
Max./min. working temperature	230°F / 140°F
Dimensions (W x H x D)	90 x 65 x 98 mm (3.55 x 2.56 x 3.86 inch)
Cable length	2 m (78.74 inch)
Weight	360 g

1

Efficient and reproducible technique for prosthetic work



3
YEAR GUARANTEE

CE

Waxprofi

The Waxprofi produces improved prosthetic results more efficiently. Instruments and wax are no longer heated separately, resulting in distortion-free wax denture bases and a huge saving in time.

Quality, speed and simplicity:

- high precision of the wax denture base due to extremely low contraction.
- approx. 30% saving in time when waxing up, as separate heating of the wax is no longer required.
- approx. 50% saving in time (twice the speed) when used with the *Waxlectric* and large wax knife, as separate and repeated heating of the instrument is no longer required.
- amortisation of the Waxprofi after only a very short time.
- the technician can concentrate more on setting up the teeth.
- large, even deeper pot for keeping the wax at a flowable to spreadable consistency (see melting range table page 127).

- wax portions very easily removed, particularly with the large wax knife on the *Waxlectric*.
- also suitable for use with light-curing waxes.

Technical Details

- LED display to indicate the temperature or heating status.
- infinitely adjustable temperature from 40°C (104°F) to 110°C (230°F).
- continuous SET/ACTUAL value adjustment by the automatic controller.
- large wax pot (120 ml) to allow approx. four base wax sheets to be melted. Scraping edge on the inner pot rim.
- the housing lid can be locked in place at a 120°-angle to save space in the work area.
- resistant plastic sheet to protect the control elements.
- low height offers ideal prerequisites for ergonomic work.

Waxprofi + Bunsen Burner

- approx. 30% saving in time, as waxes no longer have to be repeatedly melted.
- the wax knife need only be briefly heated.
- high precision during modelling and tooth set-up.



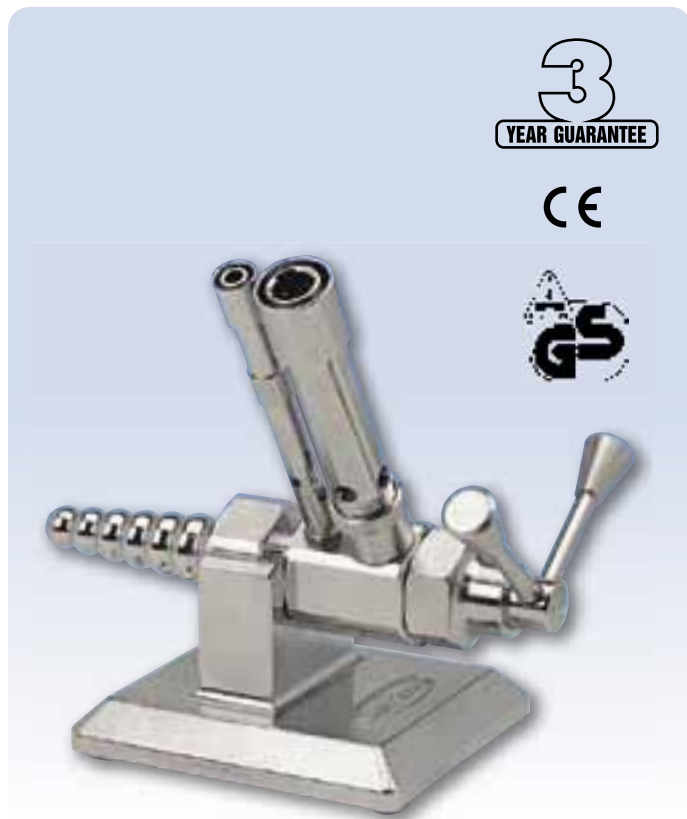
Large wax knife see page 59.

Description	Art. No.
Waxprofi, 230 V	1440-0000
Waxprofi, 120 V	1440-1000

Technical details

Voltage	230 V / 120 V, 50/60 Hz
Power consumption	120 W
Max./min. working temperature	110°C / 40°C
Max./min. working temperature	230°F / 104°F
Dimensions (W x H x D)	178 x 54 x 120 mm (7.01 x 2.13 x 4.73 inch)
Cable length	2 m (78.74 inch)
Weight	≈ 608 g

Tested safety and no need for maintenance



Safety burner and Bijou 90

Safety Burner
 The use of propane or natural gas in the lab always represents a safety hazard. If the burner flames goes accidentally out, the safety burner interrupts immediately the gas supply.

Bijou 90
 The Bijou 90 is a universally employable, economical lab burner for propane and natural gas.

- locking device in base permits 30° angle to either side
- ensures relaxed grip for both right and left-handed users.
- low burner height of 13 cm (Safety Burner) and 11 cm (Bijou 90).

Technical Details Ascending Pipes

- flame intensity is controlled via two ascending pipes.
- small pipe: pilot flame.
- large pipe: main flame.



Flame Control

- gas supply setting via rocking lever.
- individual control of oxygen supply via setting wheel.

Stand Positions

- sturdy base for secure stand.
- easy to remove burner from base.

Bijou 90:

Description	Art. No.
Propane gas (F)	960-0000
Natural gas E	961-0000

Safety burner:

Description	Art. No.
Propane gas (F)	933-0100
Natural gas E	932-0100
Flexible tubing for burners	931-0000



Safety Burner Caution:
 Propane gas Bunsen burners should only be used in conjunction with a pressure reducer set to 50 mbar!

Technical Details	933-0100	932-0100	960-0000	961-0000
Connecting pressure	50 mbar	20 mbar	50 mbar	20 mbar
Consumption	48 g/h	63 l/h	48 g/h	63 l/h
Power	660 W			
Connecting hose	meets DIN 30664			
Dimensions (W x H x D)	160 x 130 x 60 mm (3,94 x 5,12 x 2,36 inch)		100 x 110 x 60 mm (3,94 x 4,33 x 2,36 inch)	
Weight	≈ 640 g (incl. burner base)		≈ 520 g (incl. burner base)	

1 The versatile oven for reliable results



Magma

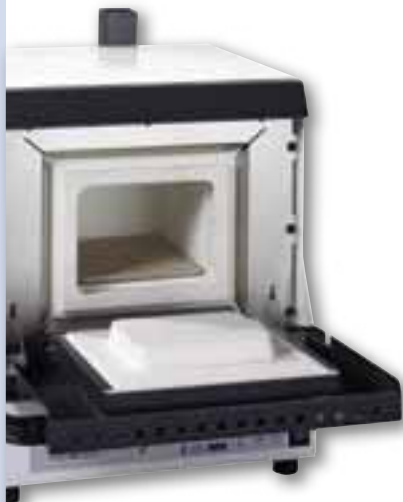
This furnace unifies all the main elements necessary for pre-heating, all in one machine. Apart from the top technology such as the Pt-RhPt temperature sensor, the four sided heating chamber and the hidden heating elements etc., the main emphasis was placed upon the ergonomics, so that operation, programming and ventilation is the best possible.

Secure investment

- this furnace is covered by a 3 year guarantee (except for the thermal sensor, a consumable part). The guarantee even covers the heating elements (to maximum 6000 operating hours).
- every single furnace is "burnt in" before leaving the factory, which means that it is 100% tested and can be placed in operation immediately.
- full benefit of the Renfert guarantee service: 3 year guarantee, 10-year spare parts supply and much more.

- ✓ **Spacious:**
Space for 4× size 6 plus 3× size 3 casting rings
- ✓ **Quick:**
Max. heat-up rate 900°C (1652°F) in 60 min.
- ✓ **Precise:**
Type S: PtRh-Pt temperature sensor

- ✓ **Even heat distribution:**
Four-sided heating
- ✓ **Reliable:**
Displayed temperature shows temperature in casting ring height
- ✓ **Clean:**
Renfert catalyst converter for Magma



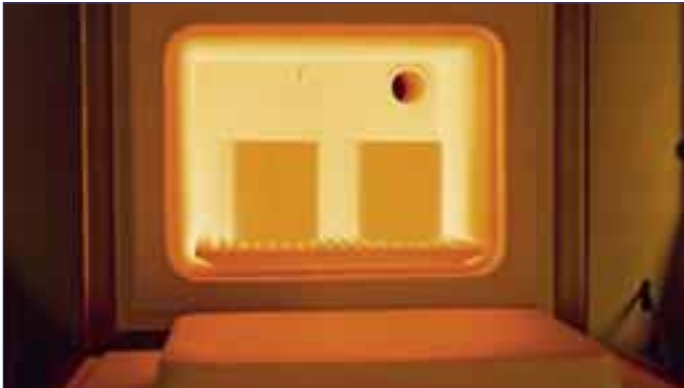
* Exception: thermal sensor. Heating elements to max. 6000 operating hours.

Description	Art. No.
Magma for use with catalyst converter, 230 V	2300-0500
Magma, 230 V	2300-0000

Technical Details

Voltage	230 V, 50 Hz
Heating power	1.900 W
Max. temperature	1.100°C
Muffle dimensions	160 x 180 x 120 mm (6.30 x 7.09 x 4.72 inch)
Max. heat-up rate in min.	900°C
Type S temperature sensor	PtRhPt
Size	430 x 500 x 450 mm (16.93 x 19.69 x 17.72 inch)
Free programmable stages	99
Additional speed programme	1
Firing chamber volume	3.45 l
Weight Magma	33.5 kg
Weight catalyst converter	6.7 kg

Details



Heats to 900°C in 60 minutes with evenly distributed temperature

- Heating from **four sides** means fast, even heating and quick compensation for temperature differences.
- The **one-piece** firing chamber prevents heat loss at points where it would otherwise occur because of joints.
- The distribution of the heating coils is more dense in thermally difficult areas to guarantee even temperature distribution (comparable to an air circulation oven).



Accurate and reliable

- The **PtRh-Pt temperature sensor** offers maximum accuracy and service life.
- The displayed temperature is the actual temperature at the height of the casting rings.
- Heating coils integrated into the walls of the firing chamber are protected from aggressive gases and mechanical damage. Result: long life.



Spacious, ergonomical and clean

- The oven has space for 9 × size 3, 4 × size 6 or 3 × size 9 casting rings.
- Casting rings can be placed on the special ceramic fibre oven door when removing them.
- Various functions guarantee that the wax will flow to the rear where it is burnt off – optionally by the high-performance catalytic converter – and removed through the exhaust and not through the door: no unpleasant odours, a clean oven, clean air with the inward tilted ceramic plate and the adjustable angle of inclination.



Simple, convenient and flexible operation

- It can be operated immediately without learning time with the intuitive icon-controlled programming
- Direct input of desired casting time (date and time) eliminates the need for calculation
- 99 program memory places + 1 program for speed investment compounds
- Controlled heating rate of 0–9°C/min. (0 = max.)
- Extra speed program

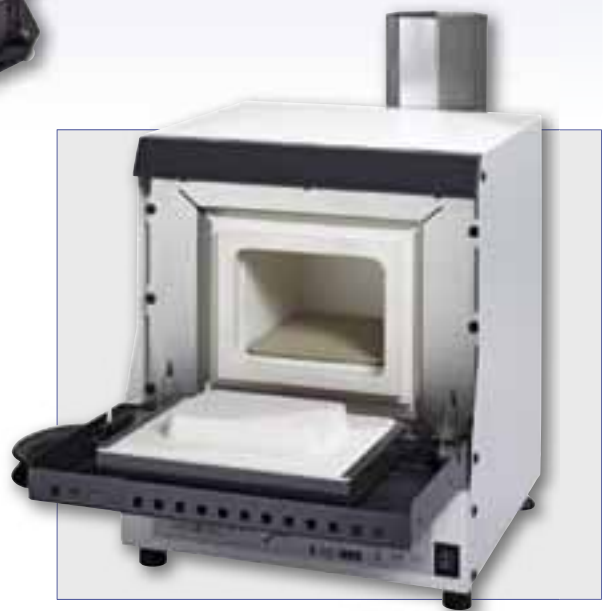
1 Intelligent catalytic converter control



Catalytic converter for Magma

The optional catalytic converter is centrally controlled from the oven and is intelligently integrated into the programs. In the standard program the catalytic converter is automatically shut off when it reaches 650°C (1202°F), which extends its life. It can be manually switched on again until the program stops.

If the program has finished and the technician does not switch off the *Magma* after the acoustic signal, the controller expects the insertion of speed investment compound and restarts the catalytic converter. Because the new casting rings are not at the same temperature as the interior of the oven, the gases given off by the wax would not



be completely burnt off and would contaminate the room atmosphere and also settle on the honeycomb structure of the catalytic converter. Therefore the catalytic converter oper-

ates continuously in the speed program. This interconnection increases the service life of the catalytic converter and improves the quality of the air in your laboratory.

* Components subject to natural wear (e.g., Catalyser cartridges) are excluded from this warranty.

Accessory	Art. No.
Catalyst converter	2300-0001

High-speed grinder for safe separating and trimming



Demco High-speed grinder

The robust unit for separating casting sprues and trimming cast objects.

Technical Details

- powerful, wear-free motor operates at 24.000 rpm and durable mechanics.
- fast action brake for safe tool change when motor is running.
- adjustable spindle height.
- extractor functioning can be carried out directly from Demco.
- separate light switch.

- collet chuck takes 2.35 mm shanks.
- spacious, well-lit working area.
- permits connection to extractor unit.
- protection via large, flip-down safety glass screen.



Description	Art. No.
Demco with accessoires	1204-0000

Technical Details

Voltage	220/230 V, 50/60 Hz
Power consumption	180 W
Speed / min.	24.000
Cable length	1 m (39.37 inch)
Ø size of pipe union for external extraction unit, interior	58 mm (2.3 inch)
Ø size of pipe union for external extraction unit exterior	68 mm (2.7 inch)
Dimensions (WxHxD)	275 x 280 x 310 mm (10.8 x 11.0 x 12.2 inch)
Weight	≈ 14,3 kg

The simplest method for perfect cleaning

Easyclean

Ultrasonic cleaner for time-saving and effective cleaning. Ultrasonics is the most up-to-date and effective process available for fine cleaning. The Easyclean provides state-of-the-art ultrasonic cleaning technology for all types of ultrasonic cleaning.

Advantages:

- varied range of applications.
- cleans items thoroughly and gently, even highly intricate or delicate items.
- saves time by eliminating manual cleaning.
- extremely easy to operate.

Technical Details

- ultrasonic operating frequency (37 kHz) = efficient operation and excellent cleaning results.
- electronic dial, LED set power and actual power bar displays (temperature / cleaning period) = user-friendly and clearly designed control panel.
- continuous operation or timer operation settings from 1–30 min.
- temperature regulated ultrasonic function (30–80°C / 86–176°F) and automatic cleaning start at the preselected temperature (settings in 5° graduations) = labour-saving with enhanced cleaning quality.
- automatic circulation during heating ensures optimum, thorough mixing of the cleaning fluid = improved cleaning results.
- sweep function (optimised ultrasonic field distribution) = optimum cleaning, particularly of large items.
- degas function (+ auto degas) ensures efficient degassing of the cleaning fluid = superior cleaning results.
- dry-run protection as the unit switches off automatically.
- ultrasonic tank made of stainless steel, highly resistant to cavitation = greater durability.
- stylish stainless steel housing = hygienic and easy to clean.

- plastic handles = safe transport even when the housing is hot.

Caution:

Never place items to be cleaned directly on the floor of the ultrasonic tank, as this could cause damage. Use the basket or a similar aid (see Accessories page 69).



Info

Ultrasonic cleaning applications:

- removal of plaque and accretion on dentures
- removal of polishing pastes (CrCo, dentures, composite facings etc.)
- removal of cements and plaster from impression trays
- removal of occlusion spray and varnish from crowns
- cleaning instruments and small mixing bowls
- plus many other applications

Technical Details

Tank, max. volume / operating volume	≈ 2,75 l / 1,90 l
Tank, inner dimensions WxDxH	≈ 240 x 137 x 100 mm
Size	≈ 300 x 179 x 214 mm
Mains voltage	100 - 120 / 220 - 240
Ultrasonic frequency	37 kHz
Total power	280 W
Ultrasonic effective power	80 W
Ultrasonic peak power	320 W
Heating power	200 W
Weight	≈ 3,3 kg

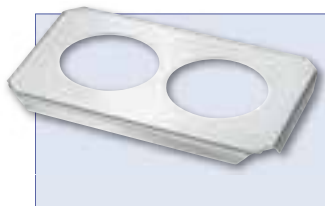
Description	Art. No.
Easyclean, 230 V/120 V	1850-0000/1850-1000
Supplied as: 1 Easyclean ultrasonic cleaner, 1 mains cable	

Accessories / Cleaning agents



Plastic lid

- quicker heating.
- protects against evaporation and dust infiltration.



Stainless steel cover

- cover for use with the cleaning jar (Art. no. 1850-0006) or the plastic container with lid (Art. no. 1850-0007).



Stainless steel basket

- items to be cleaned should never be placed on the floor of the tank to avoid scratching the items or the floor of the tank.



Stainless steel immersion basket

- for cleaning small and very delicate items. For use with the stainless steel cover, Art. no. 1850-0002 or with the cleaning jar, Art. No. 1850-0006.



Acid bath insert

- for acids and fluids not suitable for use in the stainless steel tank.



Cleaning jar

- ideal when the cleaning fluid has to be changed frequently and it would be impractical to fill the stainless steel tank.



Plastic container

- ideal for cleaning smaller items and working with acids due to its easy handling (used in conjunction with the stainless steel cover, Art. no. 1850-0002).

Accessories	Art. No.
Plastic lid, grey, piece	1850-0001
Stainless steel cover, piece	1850-0002
Stainless steel basket, piece	1850-0003
Stainless steel immersion basket 59 mm, piece	1850-0004
Plastic acid bath insert	1850-0005
Cleaning jar 600 ml with lid and rubber band, piece	1850-0006
Plastic container with lid, piece	1850-0007

Ultrasonic cleaning agent – the perfect partner for optimum cleaning

Renfert supplies various products specially developed for standard ultrasonic cleaning

procedures in dental technology. In combination with the ultrasonic cleaning process these products provide the perfect chemical additive to ensure optimum cleaning.



Product description/Art. No.	Suitable for	Removal of	pH
GO-2011 2011-0000, 2 l	Dentures, mixing bowls, instruments, castings, Impression tray	Alginate, Plasters, plaster-bonded, investments	8
Ceramex 2187-10000, 1 l	Porcelain veneers, allporcelain inlays and crowns, metal-ceramic alloys	Porcelain, investment materials, metallic oxides	1



Instruments

Mixing trays.....	page 72
Brushes	page 76
Hand instruments	page 84
Polishers	page 91
Separating discs	page 97

2

Mixing palette with water-retention function



Save time and money, improve quality !

**Tropical
Tropicolino
Tropicana
Tropicantina**

A homogenous palette material capable of diffusion provides the porcelain with a continuous supply of the correct amount of fluid.

The system

- the porcelain palette rests in an acrylic tray of water.
- permanent diffusion of the distilled water takes place through the palette surface.
- the porcelain's optimum moist consistency is maintained.

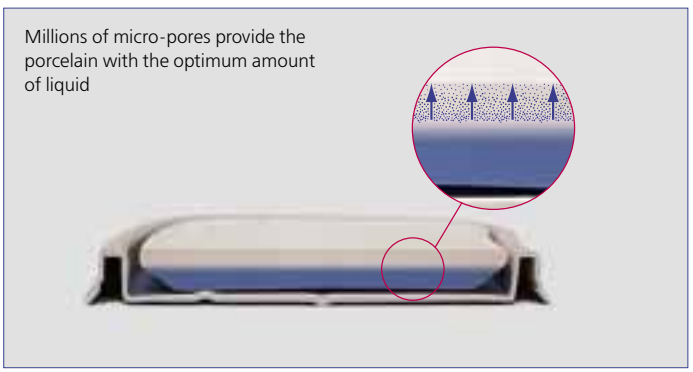
Advantages

- no purchase of wear- and tear parts (e.g., membranes or filters).
- save money, every gram of porcelain is used.
- save time, no continual remoistening of the porcelain powder.
- porcelain remains consistently moist for days and weeks.
- minimal evaporation during work breaks due to air-tight lid.

- technician can concentrate on modelling.
- choice of four mixing palettes for individual use.

Note:
The use of an agate spatula instead of metal instruments prevents scraping the palette when mixing (see page 85).

Improved sculptability and stability of your porcelain with Proform-12 (see page 124).



Lack of moisture retention results in porcelain being wasted and thus in a loss of money!

Mixed porcelain compound that has dried out cannot be used again if it is re-mixed. When the compound dries out the water between the porcelain particles is replaced

with air. If the compound is re-mixed this will lead to micro-bubbles. The porcelain becomes „milky“ and should not be re-used.



Details



Tropical

Large porcelain mixing palette with moisture-retention function.

- three glazed wells for mixing liquid or stains.

Technical Details

Dimensions (WxH)	≈ 235 x 170 mm
------------------	----------------

Description

Description	Art. No.
Tropical incl. lid and acrylic tray	1066-0000



Tropicolino

Porcelain mixing palette with moisture-retention function, approx. 30% smaller than the Tropical.

- as per Tropical.

Technical Details

Dimensions (WxH)	≈ 160 x 116 mm
------------------	----------------

Description

Description	Art. No.
Tropicolino incl. lid and acrylic tray	1068-0000



Tropicana

Porcelain mixing tray with moisture-retention function and wells.

- 12 large wells for separate storage of porcelain.
- 7 smaller wells for small mixing amounts.
- 4 glazed wells (without moisture) for mixing liquid or stains.

Technical Details

Dimensions (WxH)	≈ 235 x 170 mm
------------------	----------------

Description

Description	Art. No.
Tropicana incl. lid and acrylic tray	1067-0000



Tropicantina

Place-saving porcelain mixing palette, 30% smaller than the Tropicana with wells and moisture-retention function.

- 4 large wells.
- 8 small wells (2 of them are round).
- 3 glazed wells (round, for mixing liquid or stains).

Technical Details

Dimensions (WxH)	≈ 160 x 116 mm
------------------	----------------

Description

Description	Art. No.
Tropicantina incl. lid and acrylic tray	1069-0000

Info

Cleaning the mixing palettes:

Tropical
Tropicolino
Tropicana
Tropicarina



Manually:

- Under running water.
- With a jet steam spray.
- With sandpaper (400 grain).

Baking the mixing tray in the pre-heating furnace:

- Remove all porcelain residues.
- Allow the porcelain palette to dry for 3-4 hours.
- Place palette on a large tray with a soft firing tray

(e.g., Renfert *Fibertray*) then place in the cold pre-heating oven.

- Bake at a max. heating rate of 7–9°C/min until 120°C (248°F) and hold at this temp. for 60 min.
- Then increase the heat at a rate of max. 6–8°C/min to 800°C (1,472°F).
- Switch the oven off when it reaches 800°C (1,472°F).

- Leave the oven closed and allow it to cool off until the palette is warm to the touch.
- Do not use metal forceps or pliers to remove the porcelain palette, only remove the palette by hand.
- Once it has completely cooled, rinse the porcelain palette under running water.

- While the palette is still wet, rub it down with 600-grain wet sandpaper, then again rinse it under running water.

Attention

Do not place any strain on the ceramic mixing tray and only bake one tray at a time! Never place the tray into the furnace at an angle (risk of breakage due to expansion)!

Individual porcelain mixing palettes



Rainbow

Moisturises porcelain compound via perforations in wells.

The system

- the porcelain palette rests in an acrylic tray of water.
- capillary effect to the wells (2 holes each) moistens the porcelain.
- permanent optimum porcelain consistency.

Advantages

- continuous balancing out of evaporation.
- porcelain remains ready to use over weeks.

- no gram of porcelain is wasted.
- transparent lid gives air-tight seal during work breaks.

Technical Details

Dimensions (WxH)	≈ 183 x 105 mm
------------------	----------------

Description	Art. No.
Rainbow incl. lid and acrylic tray	1058-0000

Porcelain Mixing Palette

Porcelain mixing palette for porcelain compound and stains.

- wells are shaped for optimum take-up of porcelain compound.
- larger and smaller wells for apportioning porcelain.
- permits mixing of two shades with dentine, enamel and cervical powders.
- round, flat wells for 6 different stains.
- transparent lid gives airtight seal during work breaks.

Technical Details

Dimensions (WxH)	≈ 155 x 95 mm
------------------	---------------

Description	Art. No.
Porcelain mixing tray incl. lid	1051-0000

Indispensable assistant



Metrical scoops

Stainless steel metrical scoops for precisely apportioning porcelain mass.

- slim shape for easy access to small bottles of porcelain.
- for reproducible, individual porcelain mixtures.
- 4 different scoop sizes.
- Size 1 = -0.02 g
- Size 2 = -0.05 g
- Size 3 = -0.10 g
- Size 4 = -0.40 g

Description	Art. No.
2 metrical scoops with 4 different scoop sizes	1053-0000

Mixing palettes for stains



Stain-Mix

Porcelain mixing palette for stains with transparent or black lid.

- 30 small wells for stains.
- 1 large well for glaze.
- available with a black lid for light-curing stains.

Technical Details	
Dimensions (WxH)	≈ 155 x 95 mm
Description	Art. No.
Stain-Mix black lid	1065-0100
Stain-Mix incl. transparent lid	1065-0000



Melody

Porcelain palette with individual wells for mixing porcelain stains.

- 16 sloped wells for stains.
- 4 flat wells for individual mixing of stains.
- separate well for mixing fluid.
- All porcelain compounds and colours are clearly laid out.
- transparent lid with air-tight seal.

Technical Details	
Dimensions (WxH)	≈ 143 x 85 mm
Description	Art. No.
Melody incl. lid and acrylic tray	1058-0100



Please find tips on brush care at:
www.renfert.com/en/brush/care



Brush	Art. No.	Natural bristles	Synthetic hairs	Page
<i>Ceramicus</i>	1716-0xxx 1703-0000		•	77
<i>Takanishi</i>	1714-0xxx 1701-0000		•	78
<i>Genius</i>	1715-000x	•		79
<i>Profi</i>	1711-0xxx	•		80
<i>Kolinsky</i>	1713-1xxx	•		81
<i>Basic line</i>	1717-00xx	•		82
<i>Squirrel hair brush</i>	1712-0000	•		83
<i>Combi wax brush</i>	1705-0000	•	•	83

The surprising improvement for use with porcelain

2



Ceramicus

Ends the discussion about natural bristles or synthetic hairs.

New-type brush bristles – exclusively from Renfert – with properties superior to both types of brush known so far. This special material and the manufacturing process to create the CERAMICUS finally provide ...

... what specialists in porcelain aesthetics really need:

- A brush tip which remains perfectly formed
- Sufficient tension force for picking up larger amounts of porcelain
- Moistening the porcelain powder optimally
- Build up interdental regions without the use of a metal instrument
- Direct working procedures; no need to rinse continually, saves time and allows concentrated working
- The custom grain of the wooden handle makes every CERAMICUS unique.

Advantages due to the new-type tension force:

Tip

The brush tip is immediately reshaped and cleaned – a quick flick or tap on the edge of the bench is sufficient. No more need to continually rinse the brush tip to shape it. And it no longer has to be dipped into the water beaker to moisten the porcelain as often as this new-type bristle supplies the porcelain with moisture for an especially long period and even continues doing so after being tapped. The CERAMICUS allows the user to work directly and in a concentrated manner.

Picking up porcelain

Due to the high tension force, the brush tip can easily pick up larger amounts of porcelain. The tip of this brush demonstrates its qualities best just as the porcelain has thickened on the mixing tray.

Optimum water reservoir brings advantages:

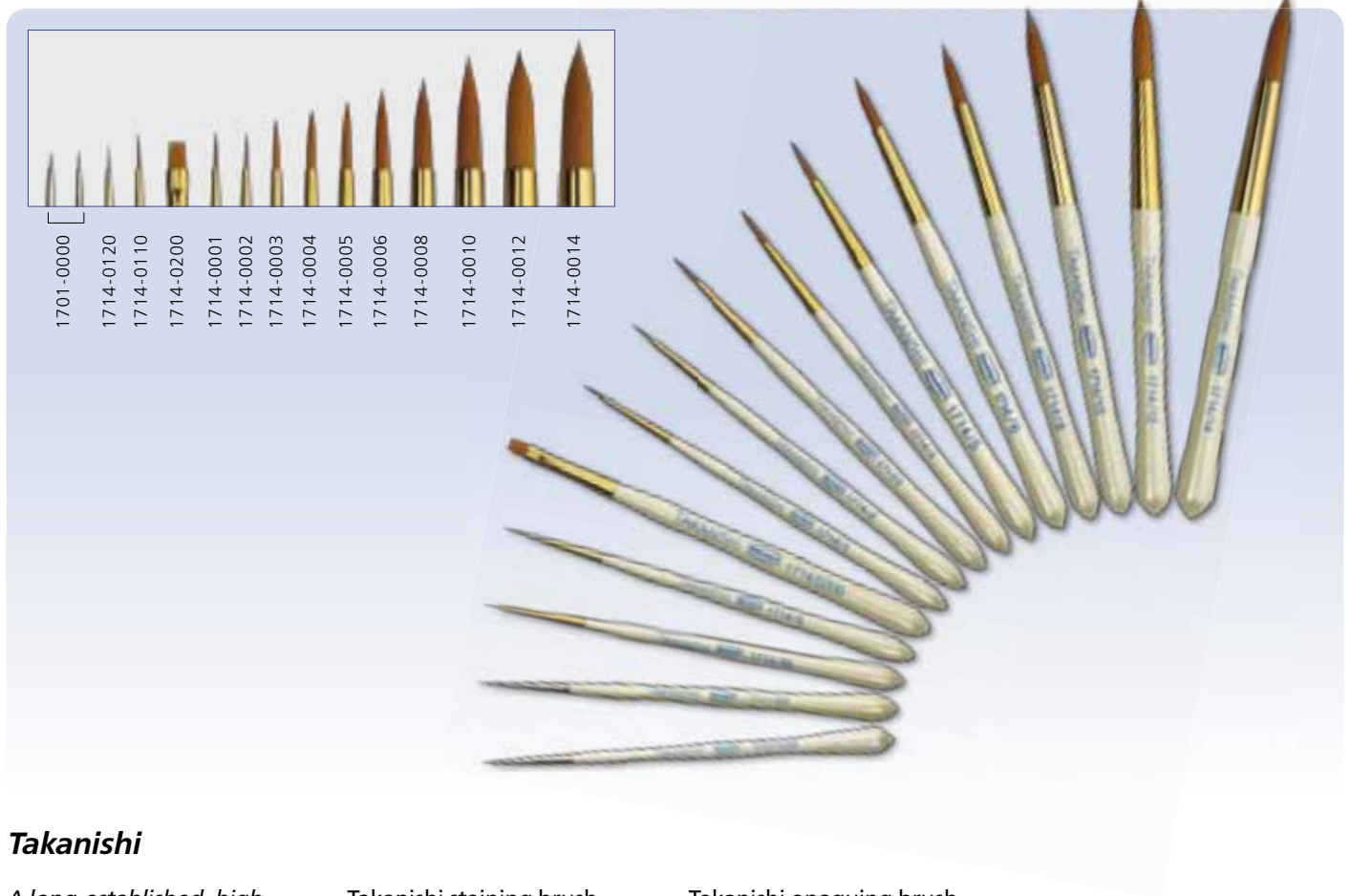
Very few diversions via the water beaker.

The brush tip is easily formed and cleaned as previously described. No more need to wet it in a beaker before smoothing and drying it.



Description	Art. No.
Ceramicus Set with 6 brush sizes (1/0, 01, 02, 04, 06, 08)	1716-0000
Ceramicus Staining brush set with 2 each brush (00, 000)	1703-0000
Size 01, 2 pieces	1716-0001
Size 02, 2 pieces	1716-0002
Size 04, 2 pieces	1716-0004
Size 06, piece	1716-0006
Size 08, piece	1716-0008
Big Brush, piece	1716-0088
Size 1/0, 2 pieces	1716-0110
Size 2/0, 2 pieces	1716-0120
Opaqing brush, 2 pieces	1716-0200

2 The classic acrylic bristle brush



Takanishi

A long-established, high quality acrylic bristle brush for optimum porcelain modelling.

- tapered bristles always ensure brush remains pointed.
- each bristle is identical in its smoothness.
- densely packed bristles.
- no splitting or splaying of bristles.
- portions of porcelain lie nicely on the bristles.
- permanent, even flexibility and elasticity.
- 12 different brush sizes cover the whole range of requirements for porcelain modelling.
- ergonomically shaped, light brush handle.

Takanishi staining brush

- bristles only half as long as usual staining brushes.
- precise take-up and application of the stains.
- the short bristles are extremely stable.
- lasts much longer than natural bristle staining brush.



Takanishi opaquing brush

- Short, strong tip for optimal application of the compounds.
- Also ideal for rubbing the opaquing agent into the facing surface.



Description	Art. No.
Takanishi Set with 12 brush sizes (without staining and opaquing brush)	1714-0000
Size 1, 2 pieces	1714-0001
Size 2, 2 pieces	1714-0002
Size 3, 2 pieces	1714-0003
Size 4, 2 pieces	1714-0004
Size 5, 2 pieces	1714-0005
Size 6, 2 pieces	1714-0006
Size 8, 2 pieces	1714-0008
Size 10, piece	1714-0010
Size 12, piece	1714-0012
Size 14, piece	1714-0014
Size 1/0, 2 pc.	1714-0110
Size 2/0, 2 pc.	1714-0120
Opaquing brush, 2 pieces	1714-0200
Staining brush set with 2 each brush size 00 and 000	1701-0000

Porcelain brush with unique grip concept

Awarded the Design Prize:



Genius

High quality porcelain brushes with multi-functional handle. Setting new standards in utility, function and design.

The multi-functional handle

- protects the brush tip.
- optimum storage position.
- non-slip texture
- comfortable handling.

The protection mechanism

1. hood for the brush tip during work breaks.
Protective sleeve in the handle is slipped easily over the tip.
2. ideal storage position - standing on its tip. This prevents porcelain deposits and splaying of tip bristles.

Hair quality

- natural A1 Kolinsky quality bristles.
- closely packed bristles to form a fine point.
- ideal mixture of stability and elasticity for processing porcelain.
- Genius No. 8 special for „Big-Brush“ technique.

Description	Art. No.
Genius Set with 4 brush sizes (see ill.)	1715-0000
Size 2, piece	1715-0002
Size 4, piece	1715-0004
Size 6, piece	1715-0006
Size 8, piece	1715-0008



The dripping moisture moves the porcelain particles towards the tip which then flow away. So the tip maintains its shape.

Note: Do not store the brushes in water!



High-end natural bristle brushes



Profi

High quality porcelain brush made from A1 quality Kolinsky natural bristles.

- finest bristle point for take-up of the smallest porcelain portions.
- weight incorporated in shaft gives optimum balance.
- comfortable to hold due to ergonomic handle.

Staining brush

- finest bristle tip for take-up of the smallest amount of stain.

Glazing brush

- wider brush tip.
- ideal for „rubbing in“ glaze.

Cleaning brush

- for condensing the model.
- removal of surplus porcelain particles.



Description	Art. No.
Profi Set with 6 brush sizes (without opaquing brush)	1711-0100
Staining brush Size 2/0, 2 pieces	1711-0120
Glazing brush, 2 pieces	1711-0106
Cleaning brush, 2 pieces	1711-0105
Opaquing brush, 2 pieces	1711-0200
Size 4, 2 pieces	1711-0004
Size 6, piece	1711-0006
Size 8, piece	1711-0008

Natural bristle brush for porcelain

Red sable Kolinsky brush

Natural bristle brush made from Kolinsky red sable bristles – quality and aesthetics combined.

Special features

- fine, flexible brush tip.
- optimum liquid reservoir.
- 6 different sizes for individual uses.

Brush forms

Size 1 and 0/1 – stain brushes

- long, fine bristle tips for deeper spots in occlusal or interdental areas.
- enables precise application of even the smallest stains portions.

Size 2 – correction brush

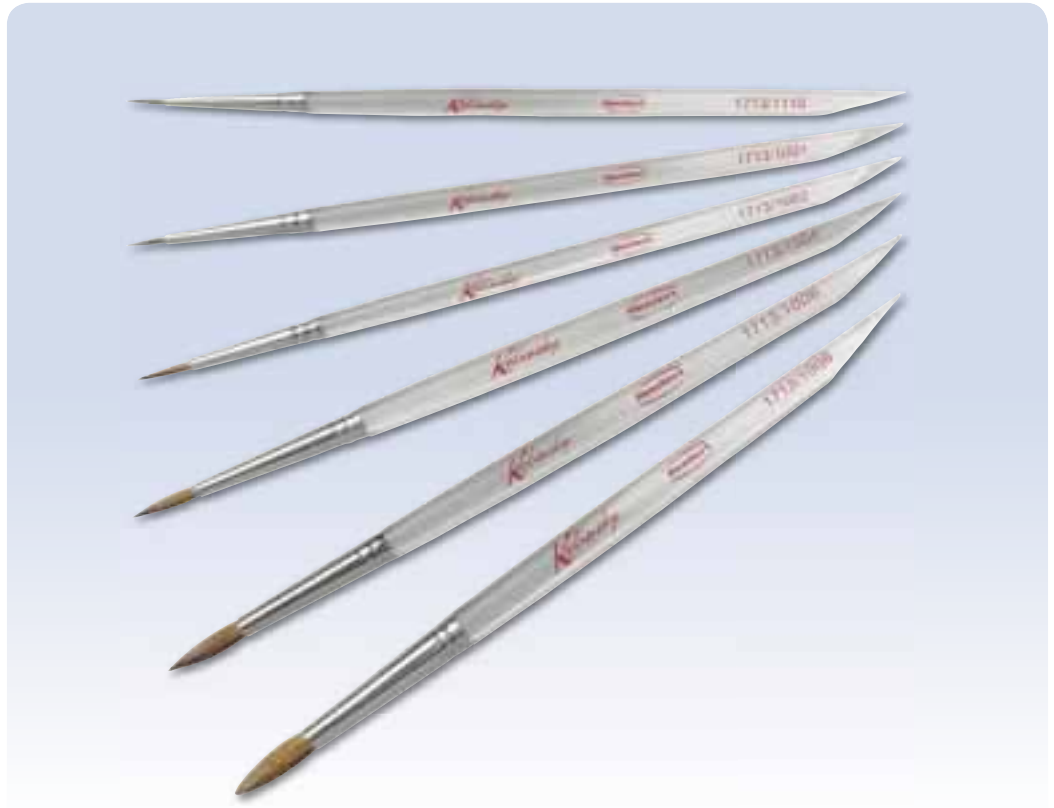
- ideal for applying small amounts of porcelain portions after corrective firing.
- for detailed formation of occlusal surfaces.
- for adding occlusal or approximal contact points.

Sizes 4 and 6

- for porcelain modelling of large surfaces.
- good take-up and apportioning of porcelain due to fine tip.

Size 8

- large liquid reservoir.
- can be used for the most detailed modelling to large surface application.



Description	Art. No.
Red Sable Kolinsky Brush Set with 6 brushes	1713-1000
Size 0/1, 2 pieces	1713-1110
Size 1, 2 pieces	1713-1001
Size 2, 2 pieces	1713-1002
Size 4, 2 pieces	1713-1004
Size 6, 2 pieces	1713-1006
Size 8, 2 pieces	1713-1008



Info

Natural hair

Kolinsky brushes (as well as *Genius* and *Profi*) are made from the tail hairs of the Siberian sable. It lives in the coldest regions of Siberia and consequently has a very strong, thick pelt. The quality of the hairs cannot

be compared to that of any other animal. It is extremely resistant, very fine, and highly elastic. One gram is more expensive than gold, with longer hairs having a significantly higher price.

Basic line – Top of the class!

Basic line

The main difference between Basic line and other low cost dental brushes is the choice of material and manufacturing method.

The differences at a glance:

Basic line

Bristle quality

- Premium red sabler

Manufacturing process

- Optimal length of bristles
- Sorting of unsuitable bristles
- Manual, careful depilation
- Special adhesive technique
- High-quality ferrule

Conventional, low cost brushes

Bristle quality

- Standard Red Sable
- Up to approx. 80% of low cost bristles used, which are usually meant for the cosmetic or painting market.

Manufacturing process

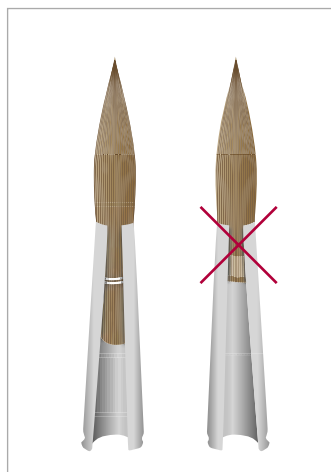
- Bristles too short
- No sorting out
- Chemical acidification
- Poor quality retention of bristles which are often too short
- Collar with sharp edges

The top bristle quality and the complex manufacturing process provide the Basic line brush with all the essential requirements for working with porcelain. The Basic line offers very high quality at a fair and attractive price.

Description	Art. No.
Set with 6 brush sizes	1717-0000
Size 1/0, 2 pieces	1717-0010
Size 02, 2 pieces	1717-0002
Size 04, 2 pieces	1717-0004
Size 06, 2 pieces	1717-0006
Size 07, 2 pieces	1717-0007
Size 08, 2 pieces	1717-0008



Low-priced natural bristle brush



The longer the bristle, the stronger the brush tip

Info

Tips on brush care

After every application the brush hair should be cleaned by rinsing thoroughly in a glass of clean water. Fine porcelain particles, which so often become deposited between the fine hairs, can cause the hairs to spread apart and must therefore be removed.

One particular type of after care we would like to recommend is the regular use of curd soap. This soap has lipid replenishing qualities which help keep natural hair, bristles

and synthetic fibres elastic and smooth. Carefully wash the brush head in warm water until the soap begins to bubble slightly, then shape the hairs back into their original form. A little droplet of Proform 12 will additionally enhance the brush hair.

Warning: Never use a de-greasing soap – natural hairs in particular tend to break if their natural protective lipid layer is removed.

Special brush for all porcelain work

Squirrel hair brush according to Stefan Borenstein

Fine, wide surface brush for smoothing and cleaning the porcelain model.

- very wide brush bristles.
- large surface brush.
- access to interdental spaces using narrow edge.



Description	Art. No.
Squirrel hair brush, 1 piece	1712-0000

Practical all purpose instruments

Combi wax brush

The twin purpose brush for the most common uses within crown and bridge and partial denture technique.

- large brush: for smoothing and cleaning wax models
- small brush: for isolating dies or plaster models.



Description	Art. No.
1 wax brush	1705-0000



Hand instruments	Art. No.	Porcelain	Wax	Acrylics	Page
<i>ERGO Ceramic</i>	1161-1xxx	•			85
<i>Agate spatula</i>	1157-0000	•			85
<i>ERGO Acryl</i>	1052-1xxx			•	86
<i>ERGO Wax</i>	1034-200x		•		87
<i>Keramogrip</i>	1109-0xxx	•			88
<i>Jacketgrip</i>	1105-0300 1109-0100	•			88
<i>Universal instrument</i>	1030-1000	•	•	•	89
<i>Instrument set Deluxe</i>	1154-0000	•	•	•	90
<i>Instrument set Standard</i>	1151-0000		•		90

Calipers	Art. No.	Page
<i>Calipretto S</i>	1122-100x	89
<i>Caliper</i>	1119-0000	89

Precision instruments for porcelain

ERGO Ceramic

Double-sided special instruments for modelling porcelain.

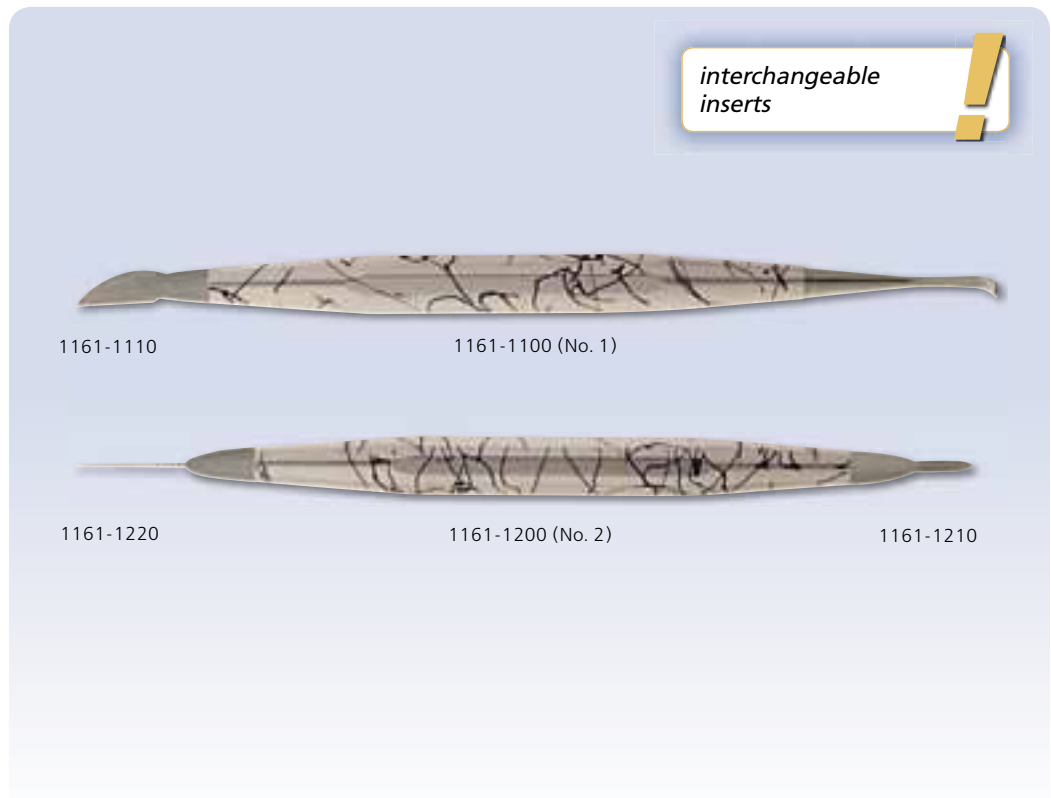
Instrument No. 1:

- **large blade** - replaceable.
- for separating interdental spaces.
- for reducing dentine layers.
- **large claw scraper** with sharp blade.
- precise resection when modelling outer edges.
- for hollowing the lingual parts of incisors.

Instrument No. 2:

- **fine nerve needle** - replaceable.
- for working on fissures in occlusal areas.
- for preparing inlays for enamel fissures.
- for resecting built-up dentine shape.
- for building up shape in enamel and transparent masses.
- **small blade** - replaceable.
- fine modelling in hard-to-reach places.
- for opening interdental spaces.

interchangeable inserts



Description	Art. No.
ERGO Ceramic Set with 2 instruments (see ill.)	1161-1000
ERGO Ceramic instrument, No. 1, 1 piece	1161-1100
ERGO Ceramic instrument, No. 2, 1 piece	1161-1200
Spring tip „large blade“, 2 pieces	1161-1110
Spring tip „small blade“, 2 pieces	1161-1210
Spring tip „fine nerve needle“, 2 pieces	1161-1220

Agate spatula

Agate instrument for mixing porcelain masses.

- the porcelain cannot be contaminated by metal flaking off instruments.
- both ends can be used.
- ideal if used in combination with the *Tropical/Tropicana* series (see page 72).

Description	Art. No.
1 agate spatula	1157-0000



2

Special instruments for acrylic facings

interchangeable inserts



ERGO Acryl Greenstein instruments

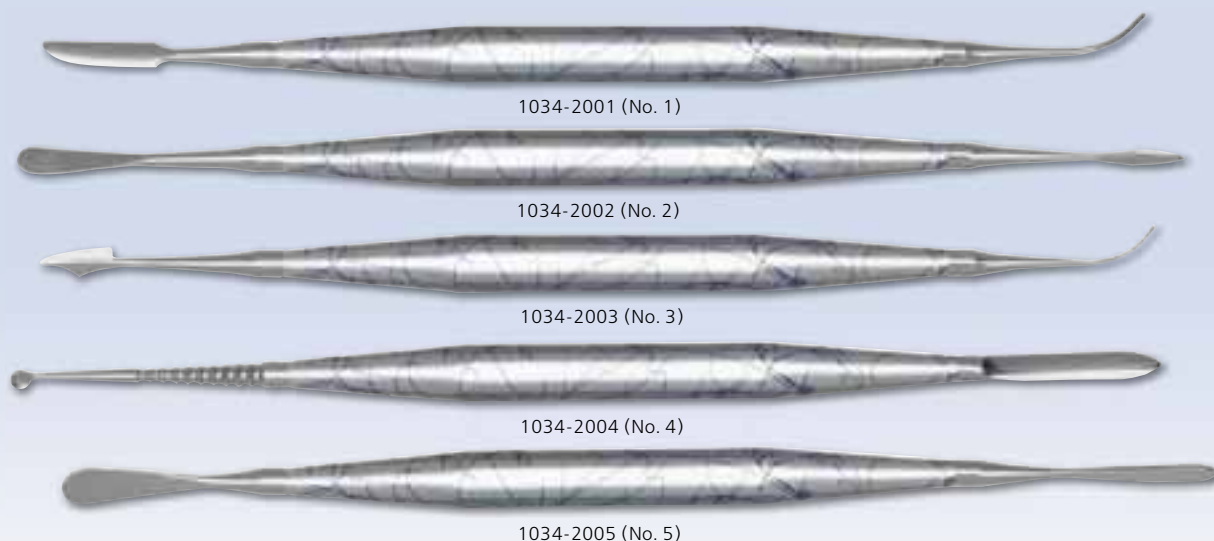
Double-sided modelling instruments ideal for acrylic facings.

- three individual flexible blades, 0.2 mm thick.
- flexible blades are secured to the instrument handle by a threaded connection and can be easily exchanged, as required.
- ideal for applying and modelling modern facing acrylics.
- also suitable for processing porcelain compounds.
- for effective modelling of natural-looking, anatomic tooth forms.
- light, anodised instrument handles.
- instrument tips are made of stainless steel and can also be individually adapted.



Description	Art. No.
ERGO Acryl Set of 3 instruments (as illustrated)	1052-1000
ERGO Acryl instrument, No. 1, 1 piece	1052-1100
ERGO Acryl instrument, No. 2, 1 piece	1052-1200
ERGO Acryl instrument, No. 3, 1 piece	1052-1300
Flexible blade tip, No. 1, 2 pieces	1052-1110
Flexible blade tip, No. 2, 2 pieces	1052-1210
Flexible blade tip, No. 3, 2 pieces	1052-1310

The all-purpose instrument for modern waxing-up technique



ERGO Wax

ERGO wax instruments are characterised by the wide variety of applications for which they can be employed and by their individual adaptability. The modern handle design is different for each set, thus making them unique.

- instruments can be ground according to individual needs.
- probes, blades and scrapers made from handground stainless steel.
- fine, anodised handles, comfortable to hold, heat-resistant and insulated.
- exceptionally hard and scratch-resistant anodised layer on the handles featuring a modern design pattern.
- tips and handles are firmly attached together.
- light weight useful for prolonged use.

Use

No. 1+3:

- waxing up and modelling occlusal surfaces

No. 4:

- processing larger quantities of wax.
- modelling full dentures.

No. 2 + 5:

- specifically for modelling crown edges and bridge elements.
- general smoothing of large wax surfaces.

ERGO Wax instruments are also suitable for model cast and full dentures, as well as for acrylic processing.



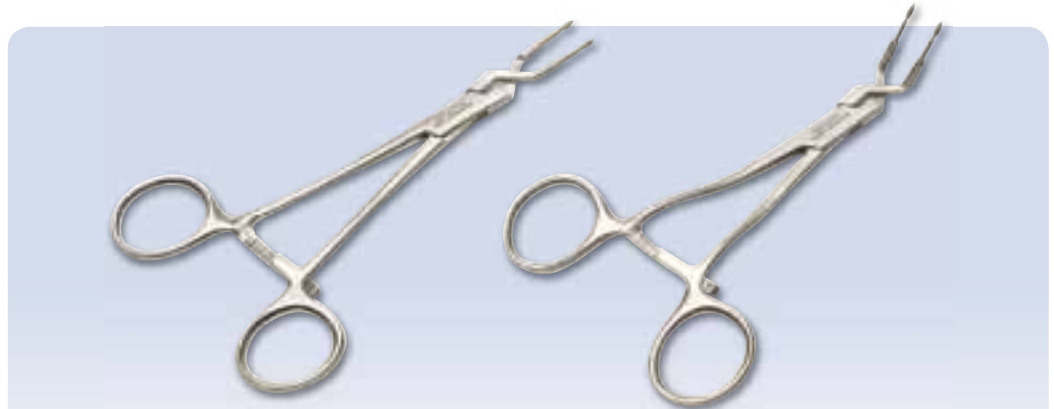
Description	Art. No.
ERGO Wax set with 5 instruments (see picture)	1034-2000
ERGO Wax instrument No. 1, 1 piece	1034-2001
ERGO Wax instrument No. 2, 1 piece	1034-2002
ERGO Wax instrument No. 3, 1 piece	1034-2003
ERGO Wax instrument No. 4, 1 piece	1034-2004
ERGO Wax instrument No. 5, 1 piece	1034-2005

2 High quality holders

Keramogrip

Holders for crowns and bridges during porcelain or acrylic work.

- replaceable, fine diamond tips.
- minimal damage to crown edge due to elliptical shape.
- finely graduated gripping ratchet.
- two versions: straight or curved.
- areas of use: building-up, condensing, staining or marking approximal contact points.
- ideal for full porcelain reconstructions.



interchangeable tips !



Description	Art. No.
Keramogrip straight	1109-0000
Keramogrip curved	1109-0300
Replacement tips, 2 pieces	1109-0100

Jacketgrip

Tweezers for a secure hold on crowns and bridges.

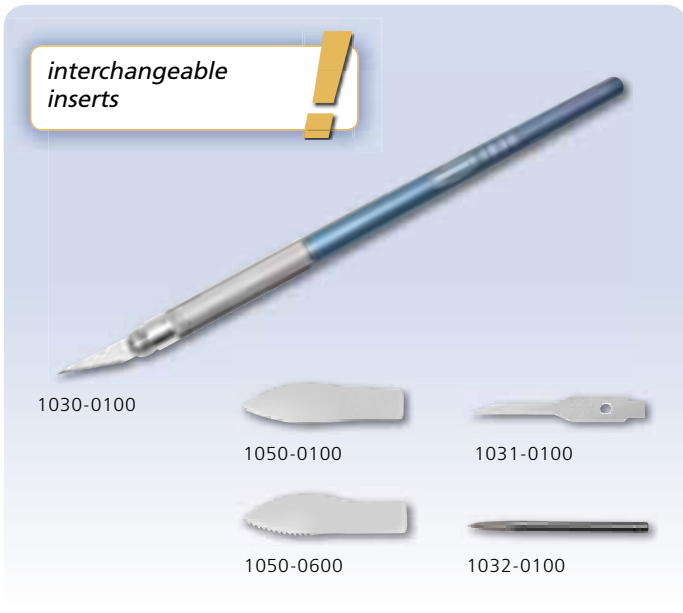
- replaceable, fine diamond tips.
- elliptical shapes ensures secure hold and no damage to edges even in narrow crowns.
- thumb-screw allows individual, infinitely variable setting on crown diameter.
- overload (cracks, splits) is avoided by reduced spring tension.



interchangeable tips !



Description	Art. No.
Jacketgrip curved	1105-0300
Replacement tips, 2 pieces	1109-0100



Multi-purpose instrument

High quality instrument with tension adjustor and 5 different inserts for use within various dental technology applications.

- blade change within seconds.
- super-thin blades for separating porcelain.
- light instrument with non-slip grip.

Description	Art. No.
Multipurpose instrument with 1 handle and each 1 blade no. 1030-0100, 1050-0100 and 1050-0600	1030-1000
Blades broad, 10 pieces	1030-0100
Blades narrow, 10 pieces	1031-0100
Chisel, 6 pieces	1032-0100
Blades smooth, 8 pieces	1050-0100
Blades serrated, 8 pieces	1050-0600

Precision measuring instruments



Calipretto S

Measuring system for precise wall thickness indication on dental technological objects.

- interchangeable special tips.
- standard tips: all-purpose use within normal space conditions.
- modified tips: specifically for use in slender anterior crowns.
- tips for wax: specifically for use with wax models; large surface disc tips prevent perforation of the model.
- tips can only be changed in pairs.
- subsequent adjustment is possible.
- adjustment aid for standard tips is included in the set.

Description	Art. No.
Calipretto S incl. 3 pairs of tips, adjusting sleeve and Allen key	1122-1000
Measuring tips, standard, 1 pair	1122-1001
Measuring tips, modified, 1 pair	1122-1002
Measuring discs for casting wax, 1 pair	1122-1003



Calliper

Precision instrument, dials readable from either side.

- rust-proof special steel.
- slender callipers.
- reading accuracy of up to 0.1 mm.
- measuring range of 0 to 10 mm.



Description	Art. No.
Calliper, 1 piece	1119-0000

The set to encompass all dental technology tasks

Instrument set Deluxe

High quality basic set for every dental technician including instruments, brushes and pliers for all areas of use within dental technology.

- Tweezers, rust-proof, 15.5 cm (No. 3233-0000)
- Sakura marking pen
- Combi wax brush (No. 1705-0000)
- Wax knife, small (No. 1130-0000)
- ERGO Wax instrument No. 1 (No. 1034-2001)
- ERGO Wax instrument No. 3 (No. 1034-2003)
- ERGO Wax instrument No. 4 (No. 1034-2004)
- Multipurpose instrument with blades (No. 1030-1000)
- ERGO Acryl instrument kit, 3 pieces, (No. 1052-1000)
- *Takanishi* brush, size 4 (No. 1714-0004)

- *Takanishi* brush, size 6 (No. 1714-0006)
- Wax knife, large (No. 1132-0000)
- Soldering tweezers, 16 cm (No. 2823-0000)
- *Aderer* clasp bending pliers, slender (No. 1026-0100)

- Curved haemostats (No. 1117-0000)
- Plaster knife, 13 cm (No. 1145-0070)
- Standard callipers (No. 1119-0000)
- Pointed pliers, grooved (No. 1221-0200)

- Foil scissors (No. 2291-0000)



Description	Art. No.
Instrument set Deluxe with contents as indicated	1154-0000

The universal beginner's set

Instrument set Standard

The standard set contains everything necessary for the novice dental technician.

- ERGO Wax instrument No. 1 (No. 1034-2001)
- ERGO Wax instrument No. 3 (No. 1034-2003)
- ERGO Wax instrument No. 4 (No. 1034-2004)
- Tweezers, rust-proof, 15.5 cm (No. 3233-0000)
- Combi wax brush (No. 1705-0000)
- Multi-purpose instrument with blades (No. 1030-1000)
- Plaster knife, 13 cm (No. 1145-0070)
- Wax knife, large (No. 1132-0000)
- Wax knife, small (No. 1130-0000)
- *Aderer* clasp bending pliers, slender (No. 1026-0100)

- Pointed pliers, grooved (No. 1221-0200)
- Foil scissors (No. 2291-0000)
- Soldering tweezers, 16 cm (No. 2823-0000)

- Standard callipers (No. 1119-0000)



Description	Art. No.
Instrument set Standard with contents as indicated	1151-0000



Polisher	Art. No.	Precious metals		Model casting/ non precious alloys		Veneering acrylic		Denture resin		Porcelain		Page
		Prep.	HL	Prep.	HL	Prep.	HL	Prep.	HL	Prep.	HL	
Bison brushes	763-/ 766-xxxx		•		•		•				•	92
Cotton buff, mounted	205-1000		•		•		•					92
Dia-Finish L	40-xxxx						•				•	92
Pleated buff nettle-cloth	210-0002		•		•+					•+		93
Linen buff, silicone coated	209-0000		•		•			•				93
Goat hair brush	204-0000	•	•				•					93
Narrow brush for CoCr	787-1000	•			•							93
Polisoft A	90-0000	+	+									94
Polisoft cylinders	93-x000	+	+									94
Polisoft	91-0000	•			•							94
Silver wire brush	166-0000	•										94
Silicon polishers	86-0000	•								•		95
Grinding wheel for CoCr-framework	612-/615-x		+									95
Chungking brushes	767-2000		+									95
Silver wire brushes	196-0000		+									96
Slim brush	788-x000								•			96
Special brushes for chrome cobalt	199-x000		+									96

Prep. = Prepolishing HL = High lustre polishing + = Smooth • = Polishing

2

The ideal polisher for each material and each request



Bison

Mounted high-lustre brushes available in two diameters for perfect polish using a hand-piece.

This unique mixture of bristles ensures a powerful and quick high-lustre polish on alloys, porcelain and acrylic facings.

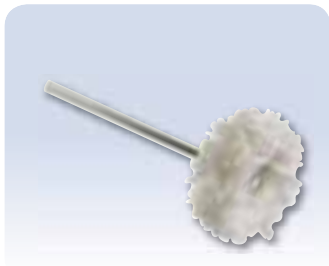
- dense and firm bristle arrangements for long service life.

- particularly suitable for polishing occlusal surfaces and interdental spaces.
- excellent take-up of polishing pastes.
- ideal polishing results with *Opal* polishing paste.

Technical Details

Diameter	14 mm / 18 mm
Ø shaft	2,35 mm
max. rpm 1/min.	20.000 / 5.000

Description	Art. No. / 25 pcs.	Art. No. / 100 pcs.
Bison mounted, Ø 14 mm	763-1000	763-1100
Bison mounted, Ø 18 mm	766-1000	766-1100



Cotton buff mounted

For high-lustre polish on acrylic teeth and facings using the handpiece.

- optimum take-up of polishing paste, no sticking.
- suitable for prolonged use.

Technical Details

Diameter	22 mm
max. rpm 1/min.	15.000

Description	Art. No.
Cotton buff, mounted, 12 pieces	205-1000



Dia-Finish L

Two in one: polishing instrument + polishing paste. High-quality felt discs impregnated with fine diamond particles for polishing porcelain and facing acrylics.

- optimum combination of polishing felt and diamond paste.
- quick and comfortable polishing.
- long-lasting and ready to use.
- polish without firing after occlusal grinding (**TIME-*SAVING!***).
- one mandrel contained in every pack.

Wheel shape:

- for polishing large areas.

Knife-edge shape:

- for occlusal and interdental polishing.
- harder version to maintain the knife-edge shape.

Technical Details

Diameter	12 mm / 12 mm, 15 mm
max. rpm 1/min.	15.000

Description	Art. No.
Dia-Finish L wheel, medium-hard, Ø 12 mm, 12 pieces	40-0001
Dia-Finish L wheel, hard, Ø 12 mm, 12 pieces	40-0101
Dia-Finish L knife-edge, hard, Ø 12 mm, 12 pieces	40-0201

Polishers for professionals



Pleated buff nettle cloth

For large surface high-lustre polish on acrylic dentures.

- will not fray due to diagonal cut of material.
- material folds cause cooling effect leading to speedier shine.

Do not use in wet areas in conjunction with pumice powder!

Technical Details	
Diameter	100 mm
max. rpm 1/min.	4.000
Thickness	14 mm

Description	Art. No.
Pleated buff, nettle-cloth, 4 pieces	210-0002

Recommended polishing agent:
Resilit (page 152)



Linen buff siliconised

For pre-polishing acrylic dentures with damp pumice.

- produces a silky matt surface.
- no fraying due to rubber coating.
- optimum polishing even in deep gum areas.

Technical Details	
Diameter	80 mm
max. rpm 1/min.	4.000
Thickness	10 mm

Description	Art. No.
Linen buff, siliconised, 4 pieces	209-0000



Goat hair brushes

For polishing precious metal and acrylic surfaces.

- good take-up of polishing paste for pre- and high-lustre polishing.

Recommended polishing agents:
Opal L (page 153)

Technical Details	
Diameter	19 mm
max. rpm 1/min.	15.000

Description	Art. No.
Goat hair brush, mounted, 12 pieces	204-0000



Slender brushes

The classic brush for polishing chrome cobalt or hard precious metals using a polishing unit.

- precise polishing via pointed brushes.
- ideal for narrow places on frames.
- highly resistant bristles under heavy duty use.
- very good take up by the spindle due to acrylic hub and metal centre.

Technical Details	
Diameter	≈ 36 mm
max. rpm 1/min.	4.000

Description	Art. No.
Slender brushes, 12 pieces	787-1000

Smoothing and polishing of metal alloys



Polisoft A

For gentle polishing and powerful smoothing of hard alloys.

- extremely effective optimum alternative to rubber and silicone polishers.
- grinding ridges are smoothed away before the final surface treatment.
- great durability.
- results in a matt shine and sealed surface.

Technical Details

Diameter	22 mm
max. rpm 1/min.	15.000
Thickness	3 mm

Description

Description	Art. No.
Polisoft A, 50 pieces	90-0000



Polisoft Cylinder

Smooths and polishes hard alloy surfaces.

- extremely suitable for smoothing LJ bars and rounding off sharp edges.
- cylinder shape enables unique range of use.

Technical Details

max. rpm 1/min.	15.000
-----------------	--------

Description

Description	Art. No.
Polisoft cylinders, small, Ø 7 x 24 mm, 12 pcs	93-1000
Polisoft cylinders, large, Ø 10 x 28 mm, 12 pcs	93-2000



Polisoft

Effective polishing of precious and non-precious metal alloys.

- optimum pre-polish alternative to rubber or silicone polishers.
- quickly smooths all metal surfaces.
- virtually no dust or odour produced.
- surface is cooled due to porous nature.
- achieves a silky matt shine.
- long life-span.

Technical Details

Diameter	22 mm
max. rpm 1/min.	15.000
Thickness	3 mm

Description

Description	Art. No.
Polisoft, 50 pieces	91-0000

Recommended polishing paste: *Saphir* (see page 153).



Silver wire brushes

Abrasion-free pre-polishing of metal occlusal surfaces.

- ideal for maintaining the occlusal or approximal stops.
- silky matt shine after polishing.
- preparation for high-lustre polish.

Technical Details

Diameter	19 mm
Ø shaft	2,35 mm
max. rpm 1/min.	5.000

Description

Description	Art. No.
Silver wire brushes, mounted, 12 pieces	166-0000

Polishing



Silicone polishers

Abrasive silicone polisher for pre-polishing porcelain and metal.

- fine ground surface.
- heavy abrasion.
- no smear build-up on porcelain.
- ideal for the transition between metal and porcelain.

Technical Details

Diameter	22 mm
max. rpm 1/min.	15.000
Thickness	3,2 mm

Description

Description	Art. No.
Silicone polishing wheels, 100 pieces	86-0000

Trimming



Grinding discs

Optimum processing of chrome cobalt frames via very aggressive grinding properties. The discs can be very effective when used in combination with a speed grinder (e.g. Demco page 67).

Technical Details

max. rpm 1/min.	25.000
-----------------	--------

Description

Description	Art. No.
Grinding discs Ø 25 x 3 mm, 100 pieces	612-2000
Grinding discs Ø 35 x 3 mm, 100 pieces	615-2000

Condensing



Chungking brushes

Polishing buffs made from a combination of linen inserts and Chungking bristles for pre-polishing.

- saves time due to duplicated polishing effect.
- Chungking brushes for pre-polishing and speedy condensing.
- linen insert for high-lustre polish.

Technical Details

Diameter	≈ 80 mm
max. rpm 1/min.	4.000

Description

Description	Art. No.
Chungking brushes, 12 pieces	767-2000

▶ Ideal when used with our *Saphir* polishing paste (see page 153).

2 The polishing specialists



Silver wire brushes

Stainless steel wire, ideal for pre-polishing chrome cobalt frames and palatal surfaces.

- optimum handling due to 51 mm diameter.
- does not remove surface – stippled effect remains intact.
- silky matt shine of frames.

Technical Details	
Diameter	≈ 51 mm
max. rpm	1/3.000

Description	Art. No.
Silver wire brushes, 2 pieces	196-0000

Preliminary denture resins polishing



Slim

The Slim polishing brush is particularly suitable for polishing interdental spaces on acrylic dentures.

- slender brushes for working on the polisher.
- the spaces between bristles produce a cooling effect.
- soft bristles prevent abrasion.

Technical Details	
Diameter	44 mm
max. rpm	1/4.000

Description	Art. No.
Slim polishing, brushes, 12 pieces	788-1000
Slim polishing, brushes, 100 pieces	788-2000



Special brushes for chrome cobalt

Particularly good for polishing chrome cobalt frames using polishing paste.

- powerful, short brushes (10 mm), extremely durable.
- narrow brushes (12 mm), access all places.
- 2 rows of grade 1 Chungking bristles.
- acrylic hub with wooden centre.

Technical Details	
Diameter	≈ 65 mm
max. rpm	1/6.000

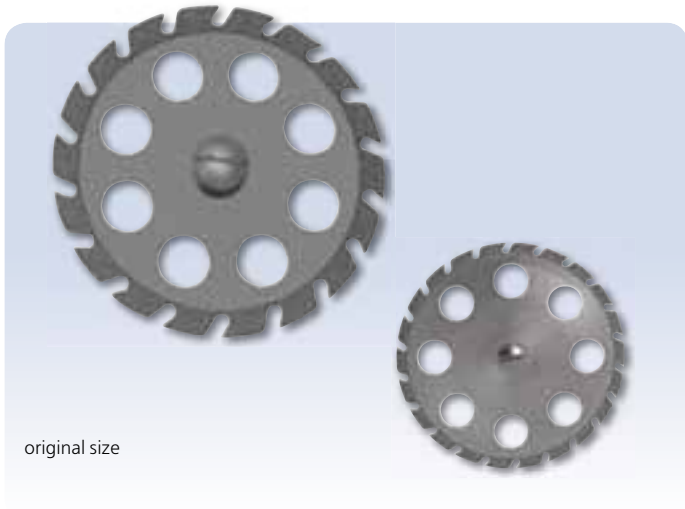
Description	Art. No.
Special brushes for chrome cobalt, 12 pieces	199-1000
Special brushes for chrome cobalt, 100 pieces	199-2000



Separating discs	Art. No.	Field of utilisation				Page			
		Glass-fibre reinforced	diamond-coated	recommended speed	Precious metals		Model casting/npm	Porcelain	Plaster
<i>Plastercut</i> diamond-coated	33-xxxx		•	10000				•	98
Glass-fibre reinforced	58-10xx	•		25000		•			98
Glass-fibre reinforced	59-10xx	•		25000		•			98
Standard 38 mm	65-2000			25000		•			99
Standard 37 mm	66-2000			25000		•			99
Standard 32 mm	68-2000			25000		•			99
Standard 24 mm	67-2000			25000	•	•	•		99
Thin, flexible	72-0000			24000	•				99
<i>Ultra-Fine</i> , extra-thin	71-0000			20000	•				99
Universal	74-0000			20000	•		•		99
<i>Bi Flex</i> diamond-coated	27-1000		•	15000			•		100
Thin	69-2000			20000			•		100
Extra-thin	70-2000			20000			•		100
<i>Turbo Flex S</i> diamond-coated	29-0100		•	15000			•		100
<i>Ultracut</i> sintered diamonds	73-0000			15000			•		101
<i>Dynex</i>	57-xx40	•		38000		•			101
<i>Dynex</i>	57-0322	•		50000	•	•			101

2

A complete assortment of model separating discs



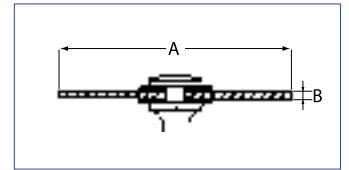
original size



Plastercut

Diamond coated separating disc for cutting out dies from the plaster arch.

- quick and precise cut without destroying the edges.
- stable carrier material ensures reduced noise level.
- two different diameters and cut widths.
- perforations within the disc ensure transparency whilst cutting.
- long lasting galvanised diamond coating.

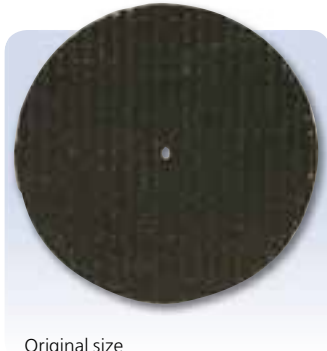


Technical Details	
Diameter	30 mm (1,18 inch)
Thickness	0,3 mm (0,01 inch)
Shaft diameter	2,35 mm (0,09 inch)
max. rpm 1/min.	10.000

Description	Art. No.
Plastercut, mounted, 1 piece	33-1300

Technical Details	
Diameter	45 mm (1.77 inch)
Thickness	0,35 mm (0.01 inch)
Shaft diameter	2,35 mm (0.09 inch)
max. rpm 1/min.	10.000

Description	Art. No.
Plastercut, mounted, 1 piece	33-1450



Original size



Glass-fibre reinforced separating discs

High quality and robust. Particularly strong cutting performance yet extremely shatter-resistant.

Technical Details	
Diameter	40 mm (1,57 inch)
Thickness	1,0 mm (0,04 inch)
max. rpm 1/min.	25.000

Description	Art. No.
Separating disc 40 mm, 25 pieces	58-1040
Separating disc 22 mm, 25 pieces	58-1022



Original size




Glass-fibre reinforced separating discs

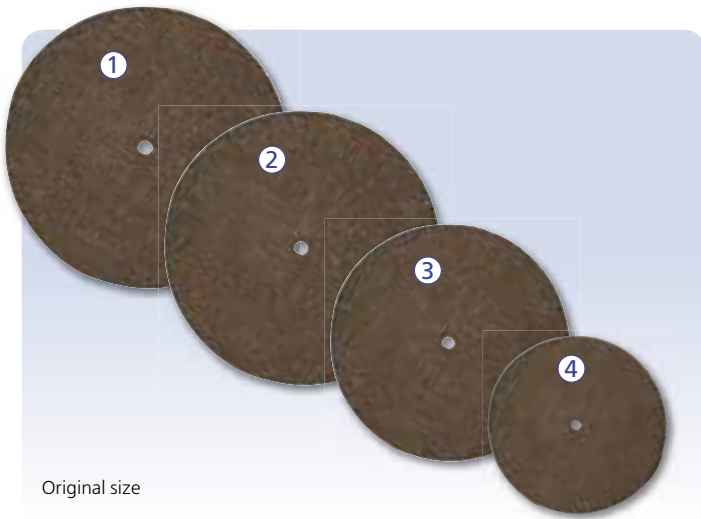
Robust, value-for-money standard version. For separating sprues and processing chrome cobalt frames.

Technical Details	
Diameter	40 mm (1,57 inch)
Thickness	1,0 mm (0,04 inch)
max. rpm 1/min.	25.000

Description	Art. No.
Separating disc 40 mm, 25 pieces	59-1040
Separating disc 22 mm, 25 pieces	59-1022

low-priced version 

Separating discs for non-precious alloys, precious alloys and porcelain



Original size

Standard separating discs

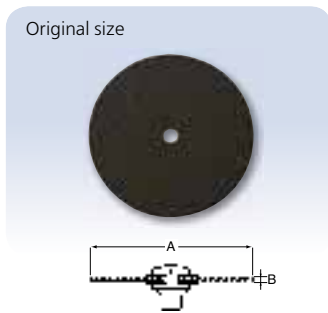
High durability for heavy use. For separating sprues from chrome cobalt alloys.

Stable. Especially suitable for processing chrome cobalt frames.

Very powerful. For grinding sprues and finishing chrome cobalt alloys.

Technical Details	
max. rpm 1/min.	25.000

Description	Art. No.
① Separating disc 38 mm, 100 pcs.	65-2000
② Separating disc 37 mm, 100 pcs.	66-2000
③ Separating disc 32 mm, 100 pcs.	68-2000
④ Separating disc 24 mm, 100 pcs.	67-2000



Original size

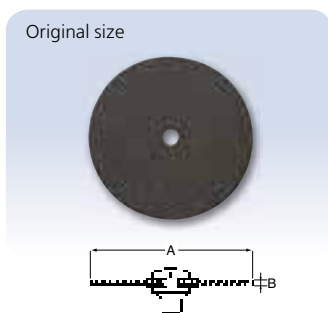


Separating disc for precious metals

Thin, flexible, low abrasion disc for precious metal.

Technical Details	
Diameter	22 mm (0,87 inch)
Thickness	0,3 mm (0,01 inch)
max. rpm 1/min.	24.000

Description	Art. No.
Separating disc EM, 100 pieces	72-0000



Original size

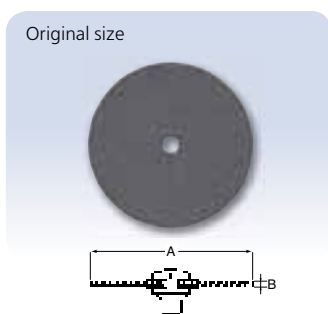


Separating discs Ultra-Fine

Extremely thin, non-flexible separating discs for precious metals. Suitable for the finest separating work.

Technical Details	
Diameter	22 mm (0,87 inch)
Thickness	0,17 mm (0.01 inch)
max. rpm 1/min.	20.000

Description	Art. No.
Ultra Fine, 50 pcs.	71-0000



Original size



Separating discs for precious metals and porcelain

Multi-purpose disc for separating and grinding both precious metals and porcelain.

- particularly suitable for evening out the transitions from metal to porcelain.
- leaves no dark grinding traces on porcelain.

Technical Details	
Diameter	22 mm (0,87 inch)
Thickness	0,3 mm (0,01 inch)
max. rpm 1/min.	20.000

Description	Art. No.
Separating discs precious metal/porcelain, 100 pcs.	74-0000

Separating discs for porcelain

Original size



Bi-Flex

Highly flexible separating disc for porcelain with coating on both sides.

- fine diamond coating for fine separation and contouring.

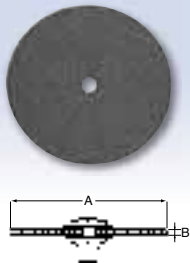
Technical Details

Diameter	22 mm (0,87 inch)
Thickness	0,15 mm (0,01 inch)
Shaft diameter	2,35 mm (0,09 inch)
max. rpm 1/min.	15.000

Description

<i>Bi-Flex</i> mounted, piece	27-1000
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Original size



Separating discs for porcelain

Separating discs for separating and preparing porcelain bridges.

- extremely durable with minimal heat production.

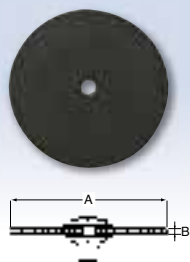
Technical Details

Diameter	22 mm (0,87 inch)
Thickness	0,38 mm (0,01 inch)
max. rpm 1/min.	20.000

Description

Separating discs for porcelain, 50 pieces	69-2000
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Original size



Separating discs for porcelain

Extra-thin, special separating discs for very fine separating work on porcelain dentures.

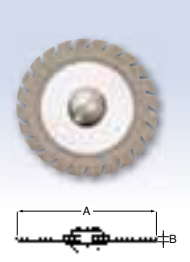
Technical Details

Diameter	22 mm (0,87 inch)
Thickness	0,2 mm (0,01 inch)
max. rpm 1/min.	20.000

Description

Separating discs for porcelain, 50 pieces	70-2000
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Original size



Turbo-Flex S with angled serrations

A serrated, double-sided separating disc for separating porcelain.

- notches ensure cooling effect and dissipation of grinding dust.
- high flexibility ideal for creating interdental spaces.

Technical Details

Diameter	19 mm (0,75 inch)
Thickness	0,15 mm (0,01 inch)
Shaft diameter	2,35 mm (0,09 inch)
max. rpm 1/min.	15.000

Description

<i>Turbo-Flex S</i> mounted, piece	29-0100
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Powerful separating discs



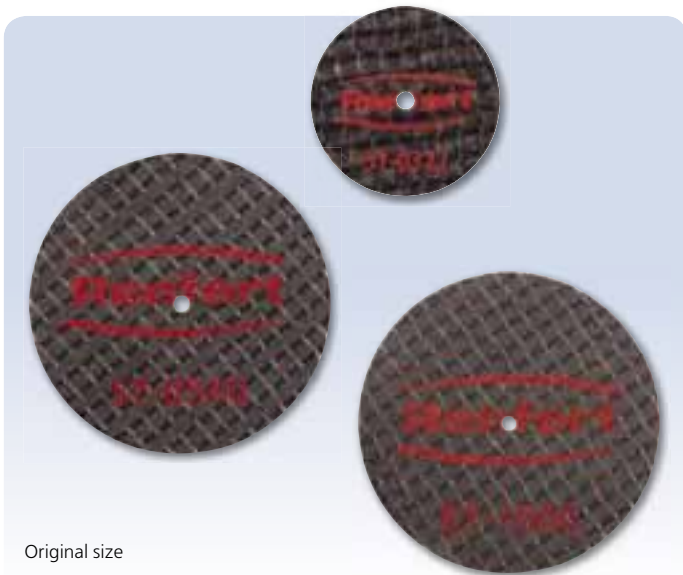
Ultracut sintered diamond separating disc

Diamond disc sintered on both sides for separating porcelain.

- long-lasting sintered diamond layer.
- fine ground surface.
- highly flexible.

Technical Details	
Diameter	20 mm (0,79 inch)
Thickness	0,15 mm (0,01 inch)
Shaft diameter	2,35 mm (0,09 inch)
max. rpm 1/min.	15.000

Description	Art. No.
Ultracut mounted, piece	73-0000



Dynex

Extremely robust separating discs with double, cross linked, high-tec fibreglass reinforcement. Suitable for cutting and grinding all conventional alloys. These separating discs provide maximum cutting performance and minimum wear.

A new manufacturing process together with a special binding material, guarantee great strength and low heat generation even at extremely high rotational speeds.

0,3 x 22 mm – The highly flexible one

- For all precious and NP alloys in C+B technique.
- Very flexible and highly efficient even with rotational speeds up to 50.000 rpm.
- Gentle to materials thanks to minimal heat generation.
- Almost indestructible, even under extreme pressure (e.q. when jammed).

0,5 x 40 mm – The fast one

- Superfast cutting of non precious or chrome cobalt alloys.
- Highest cutting power with minimum wear.
- Need only little pressure
- Low heat generation.

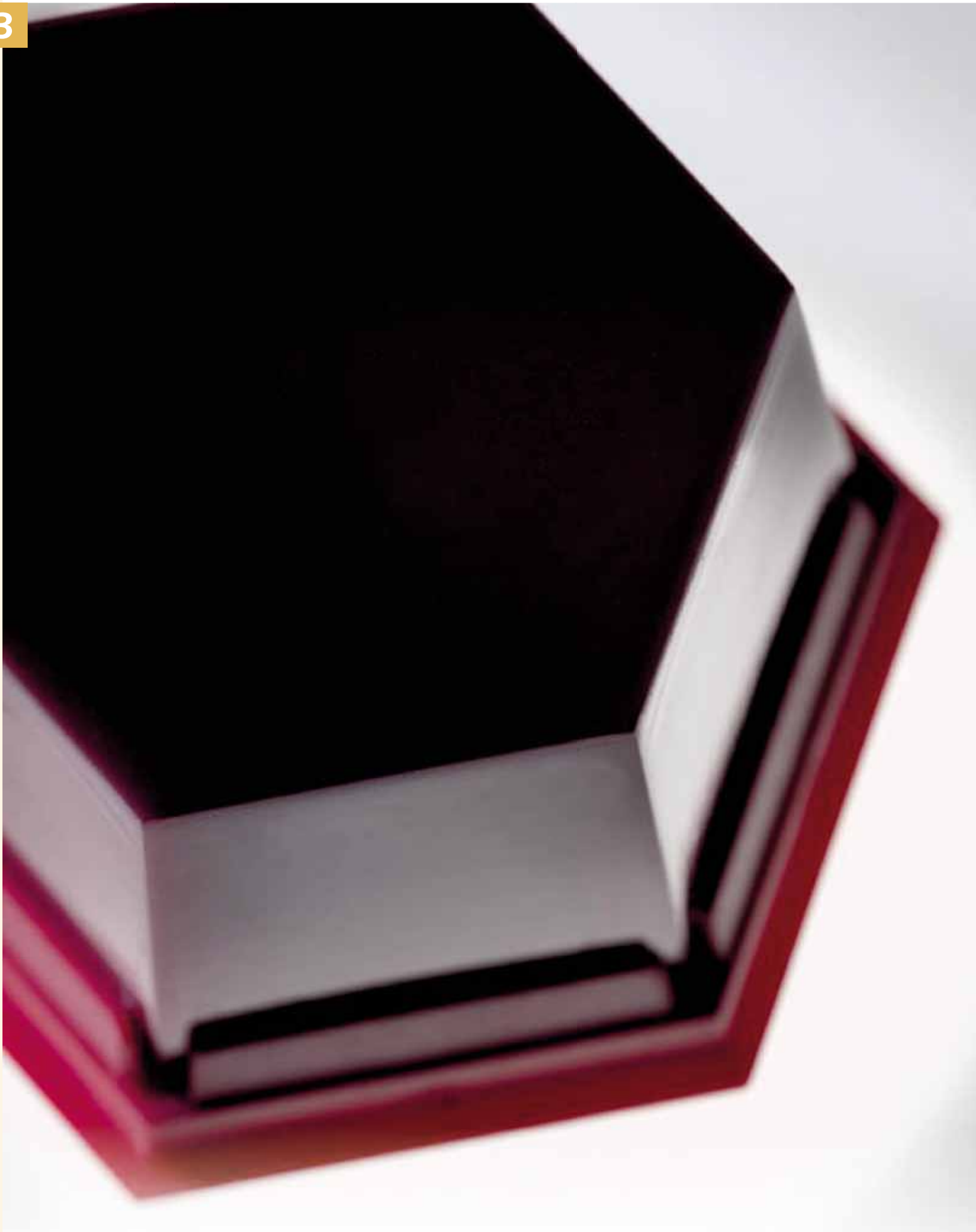
1,0 x 40mm – The strong one

- For all chrome cobalt and non precious alloys.
- Cutting and grinding sprues in one step.
- Extremely low wear with maximum cutting power.
- For use in handpieces and in high-speed grinders (e.q. Demco).



Description	Art. No.
Dynex 0,3 mm, 20 pieces	57-0322
Dynex 0,5 mm, 20 pieces	57-0540
Dynex 1 mm, 20 pieces	57-1040

Technical Details	
Diameter	57-0322: 22 mm (0.87 inch) 57-xx40: 40 mm (1.57 inch)
Thickness	57-0322: 0,3 mm (0.01 inch) 57-0540: 0,5 mm (0.02 inch) 57-1040: 1,0 mm (0.04 inch)
max. rpm 1/min.	57-0322: 50.000 57-xx40: 38.000



Materials

Pin-Cast, model base former	page 104
Pins	page 105
Adhesion, Sealing, Lacquering, Separating	page 114
Waxes	page 126
Laboratory equipment / devices:	page 145

Systematic model base production

Pin-Cast model base former set

Model base production kit for effective formation of model bases for plaster arches.

Two-stage model base production

1. Primary base:

- a base is made for the isolated plaster arch complete with pins.
- base former available in three different heights suitable for almost all the most popular pins.
- exact positioning of metallic retention discs.

2. Secondary base:

- the base plate of the base is removed.
- the plaster base is isolated.
- the magnet is positioned along with the magnet holder.
- the secondary base is filled with plaster.

Before separating both bases they should be trimmed to the required size.

Advantages

- simple system for base formation with mainly reusable parts.
- less plaster is needed.
- precision fit of primary and secondary base with Split-Cast system.



- after positioning in the articulator the model can be easily removed and precisely repositioned.
- base heights suitable for all Renfert *Bi-Pins*, the *Smart-Pin* and the most modern pin systems with guide length of 12.5 mm, 13.5 mm and 17.5 mm.
- two sizes available – for small and large jaws.
- retentive discs and magnet holders.



1 Form the base around the model arch with pins



2 Remove the base plate



3 Isolate plaster against plaster



4 After positioning the magnet holder and magnet pour the secondary base.



5 Remove the rubber ring once the plaster has hardened.



6 Position the base-lined plaster arch in the articulator with the secondary base.

Description of Set	Base height	Art. No.
Set for <i>Bi-Pin</i> short with sleeve (No. 326)	13,5 mm	410-0326
Set for <i>Bi-Pin</i> long with sleeve (No. 346)	17,5 mm	410-0346
Set for <i>Smart-Pin</i> (No. 366), <i>Bi-V-Pin</i> (No. 328) with sleeve and <i>Pro-Fix</i> (No. 367)	12,5 mm	410-0366

Contents each: 2 model base former set large, 1 model base former set small, 2 rubber rings large, 1 rubber ring small, 10 magnets, 10 magnet holders, 40 retention discs

Description	Art. No. large	Art. No. small
Magnets and magnet holders, 30 pieces each	413-0000	
Retention discs, 120 pieces	414-0000	
Rubber rings (23.5 mm) for <i>Bi-Pin</i> short (base height 13.5 mm), 5 pieces	412-0326	412-1326
Rubber rings (27 mm) for <i>Bi-Pin</i> long (base height 17.5 mm), 5 pieces	412-0346	412-1346
Rubber rings (21.7 mm) for <i>Smart-Pin</i> and <i>Bi-V-Pin</i> (base height 12.5 mm), 5 pieces	412-0366	412-1366
Base former, 3 pieces	411-0000	411-1000



Pins	Art. No.	Sleeve	Shaft length	Head length	Base height Pin-Cast	Page
<i>Bi-V-Pin</i>	329-x000	Plastic	12,5 mm	5,5 mm	12,5 mm	106
<i>Bi-V-Pin</i>	328-x000	Metal	12,5 mm	5,5 mm	12,5 mm	107
<i>Bi-Pin long</i>	346-x000	Metal	17,5 mm	5,5 mm	17,5 mm	108
<i>Bi-Pin short</i>	326-x000	Metal	13,5 mm	5,5 mm	13,5 mm	108
<i>Bi-Pin long with spike</i>	343-x000	Metal	17,5 mm	4,0 mm	17,5 mm	109
<i>Bi-Pin short with spike</i>	323-x000	Metal	13,5 mm	4,0 mm	13,5 mm	109
<i>Bi-Pin long</i>	353-3000	No sleeve	17,5 mm	5,5 mm	17,5 mm	110
<i>Bi-Pin short</i>	336-2000	No sleeve	13,5 mm	5,5 mm	13,5 mm	110
<i>Bi-Pin with spike</i>	352-x000	No sleeve	17,5 mm	4,0 mm	17,5 mm	110
<i>Pro-Fix</i>	367-x000	Plastic	11,6 mm	5,5 mm	12,5 mm	111
<i>Bi-Fix-Pin</i>	345-x000	No sleeve	17,5 mm	5,5 mm	17,5 mm	112
<i>Brass arched pins</i>	355-x001	No sleeve	17,0 mm	5,0 mm	17,5 mm	112
<i>Brass arched pins</i>	355-x002	No sleeve	17,0 mm	5,0 mm	17,5 mm	112
<i>Smart-Pin</i>	366-2x00	Metal	12,5 mm	5,5 mm	12,5 mm	112

Pins Accessories	Art. No.	Ø	Page
<i>Retention rings</i>	393-0000	-	113
<i>Rubber caps</i>	322-0000	-	113
<i>Stepped pin drill bit</i>	5010-0003	2,0 mm	113
<i>Smart-Pin drill bit</i>	367-0000	1,6 mm	113
<i>Bi-Pin drill bit</i>	347-0000	2,0 mm	113

3 V-Profile sleeved dowel pins



Bi-V-Pin with plastic sleeve

Narrow model pin with two dowel pins, ideal for positioning in limited space.

- v-shaped profile suitable for use with close standing dies such as lower anteriors.
- only one drilling needed for each die.
- tapered shape glides easily into final position.
- open-ended sleeve prevents clogging and simplifies cleaning.
- reproducible positioning without vertical adjustment of bite.
- small base thanks to reduced pin length (12.5 mm).

Plastic sleeve

No more deformation of your intricate bridge copings through sudden, erratic loosening of pins thanks to Easy Glide function.

- remove without tension with a smooth, even gliding friction that runs along a special guide bar (see graphic).
- short friction distance of 1 mm (end position) allows the safe and simple removal of even the most complex bridge framework such as with diverging dies.
- a strain relief gap compensates any possible pin tolerance and provides a smooth and uniform friction with all pins.

- precision of fit and secure retention even after repeated insertion and retraction because the guide bar yields to the metal pin, thus there is no abrasion.
- retention marks in the plastic sleeve's outer surface secure them firmly in the model base.
- a membrane in the sleeve's lower exit area stops plaster from entering during base forming.
- custom plastic sleeves are dimensionally stable against moisture and heat (steam-cleaning).



Technical Details

Shaft length	12,5 mm
Head length	5,5 mm
Ø head	2,0 mm
Sleeve width max.	3,8 mm

Description

Bi-V-Pin with plastic sleeve

Art. No.

100 pieces

Art. No.

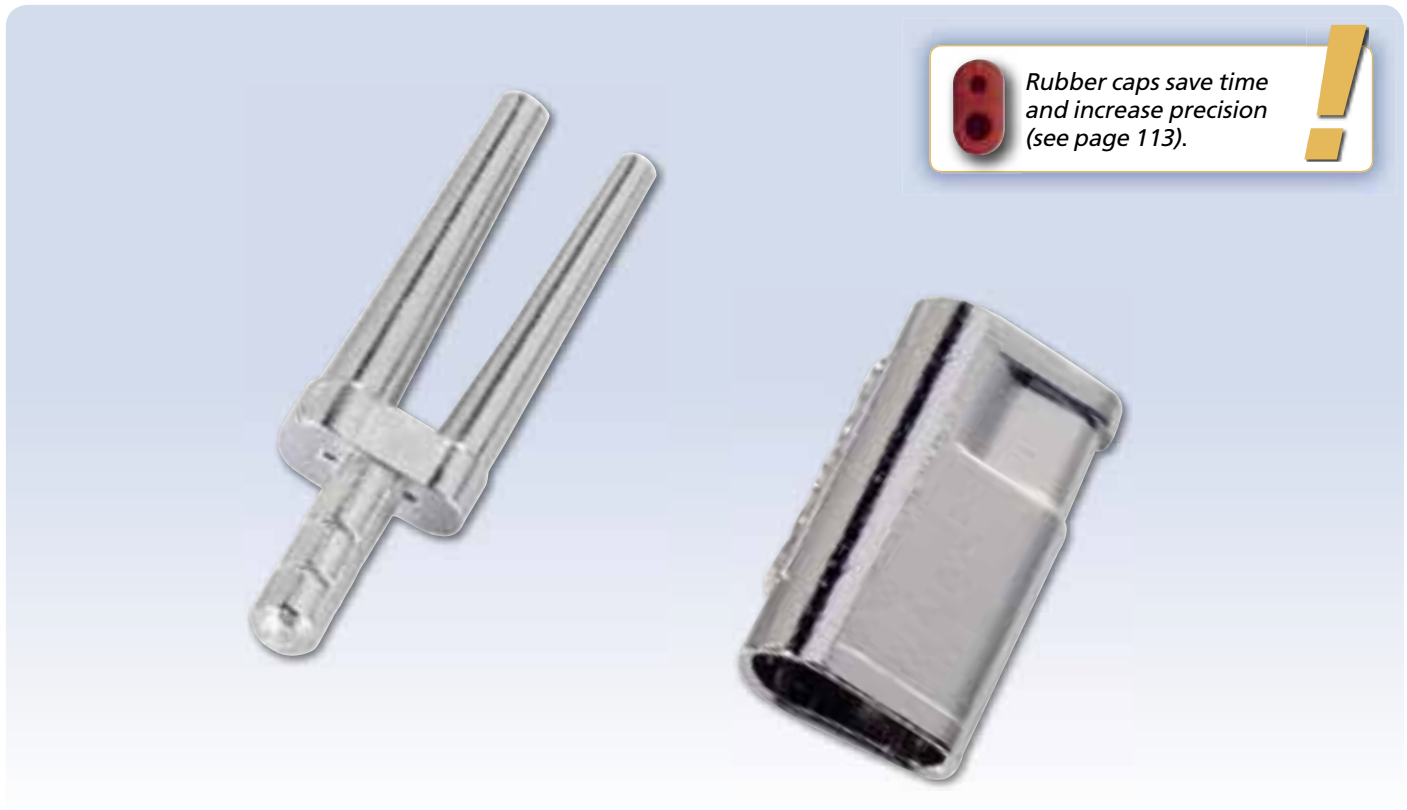
1.000 pieces

329-1000

329-2000

Compatible with Pin-Cast model tray system (see page 104).

V-Profile sleeved dowel pins



Bi-V-Pin with metal sleeve

Narrow model pin with two dowel pins, ideal for positioning in limited space.

- v-shaped profile suitable for use with close standing dies such as lower anteriors.
- only one drilling needed for each die.
- tapered shape glides easily into final position.
- open-ended sleeve prevents clogging and simplifies cleaning.
- reproducible positioning without vertical adjustment of bite.
- small base thanks to reduced pin length (12.5 mm).

Metal sleeve

- nickel-plated pin and sleeve - no oxidation.
- precision fit with slight friction between pin and sleeve.

Precision guidance

A high-tech production technique makes the pin's guidance so precise, the metal pin and sleeve both originate from the same lot. Continual precision adjustment of the production machine means these parts are never mixed. The precise matching of both components is noticeable in the technician's accurate results.

Die handling

The pin improves die handling considerably. The technician uses the pin to hold the die, which also prevents damage. Further advantages: Dipping your wax copings is made easier and more ergonomic with the extended grip and thus leads to better results.



Technical Details

Shaft length	12,5 mm
Head length	5,5 mm
Ø head	2,0 mm
Sleeve width max.	3,6 mm

Description

Bi-V-Pin with metal sleeve

Art. Nr.

100 pieces

328-1000

Art. Nr.

1.000 pieces

328-2000

Compatible with *Pin-Cast* model tray system (see page 104).

Special pins with sleeves for precision modelling



Bi-Pin long / short with sleeve

Model pin with dual guidance for precise, rotation-free positioning of the die.

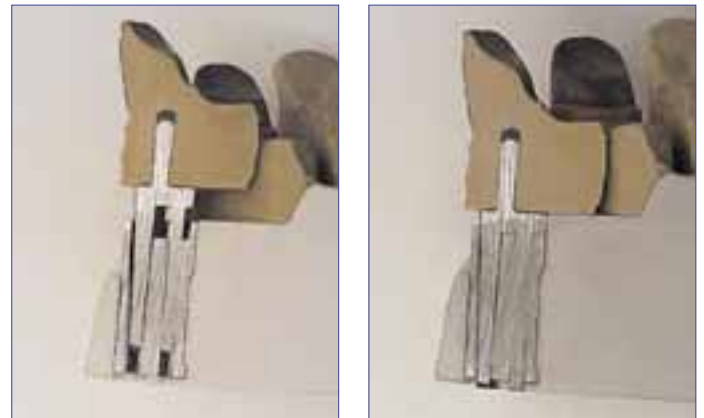
- pin and sleeve are high-lustre nickel plated - no oxidisation.
- only one drill-hole per die necessary.
- precision fit with gentle friction between pin and sleeve.
- easy to slide into end position via the conical pin shape.
- open sleeve base prevents blocking and allows gentle cleaning.
- pin can be repositioned exactly so as not to raise the bite.

Technical Details

Shaft length	17,5 mm / 13,5 mm
Head length	5,5 mm
Ø head	2,0 mm
Sleeve width max.	3,6 mm



Description

Description	Art. No. 100 pieces	Art. No. 1.000 pieces
Bi-Pin long with sleeve	346-1000	346-2000
Bi-Pin short with sleeve	326-1000	326-2000



Sleeved pins with spike



 **Rubber caps save time and increase precision (see page 113).** 

Bi-Pin long / short with sleeve and spike

High-lustre nickel plated model pin with dual guidance. A special spike for fixation in the impression shortens the production time of the model.

- long spike ensures secure hold in the impression.
- plaster arch and model base can be made one after the other in the impression.
- dual purpose model:
 1. as a saw cut die.
 2. as an anatomical model.
- pin and sleeve are highlustre nickel plated – no oxidisation

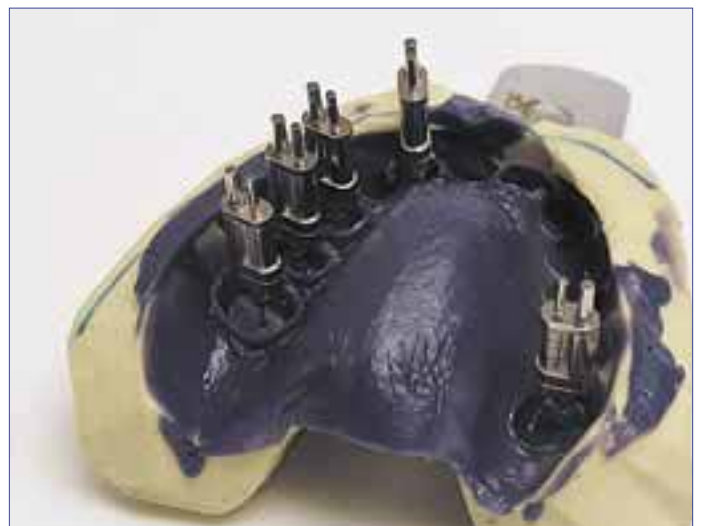
- precision fit with gentle friction between pin and sleeve.
- easy to slide into end position via the conical pin shape.
- open sleeve base prevents blocking and allows gentle cleaning.
- pin can be repositioned exactly so as not to raise the bite.

Technical Details

Shaft length	17,5 mm / 13,5 mm
Head length	4,0 mm
Ø head	1,9 mm
Sleeve width max.	3,6 mm
Spike length	8,0 mm

Description

Description	Art. No. 100 pieces	Art. No. 1.000 pieces
Bi-Pin long with sleeve and spike	343-1000	343-2000
Bi-Pin short with sleeve and spike	323-1000	323-2000



3 Bi-Pins without sleeve



Bi-Pin long / short

High-lustre nickel plated model pin with dual guidance.

- only one drill-hole per die necessary.
- dual guidance prevents rotation.
- precision fit with gentle friction between pin and sleeve.
- no oxidisation of pins even with time
- narrow pin shape is suitable for cramped die situations.



Technical Details

Shaft length	17,5 mm / 13,5 mm
Head length	5,5 mm
Ø head	2,0 mm
Max pin width	2,9 mm

Description

Description	Art. No.	1.000 pieces
Bi-Pin long	353-3000	
Bi-Pin short	336-2000	



Bi-Pin with spike

High-lustre nickel plated model pin with dual guidance and a special spike for positioning in the impression.

- long spike ensures secure hold in the impression.
- plaster arch and model base can be made one after the other in the impression.
- dual purpose model:
 1. as a saw cut die.
 2. as an anatomical model.
- pin is high-lustre nickel plated no oxidisation.
- easy to slide into end position via the conical pin shape.
- easy to remove the spike without damaging the die.



Rubber caps save time and increase precision (see page 113).



Technical Details

Shaft length	17,5 mm
Head length	4,0 mm
Ø head	1,9 mm
Spike length	8,0 mm
Max pin width	2,9 mm

Description

Description	Art. No.	Art. No.
Bi-Pin with spike	352-1000	352-3000

Ultimately accurate...



Pro-Fix Precision pin with plastic sleeve

Model pin with Easy-Glide-Function and a guidance pin.

A very short friction path of only 1 mm and parallel guide bars in the sleeve enable:

- jolt-free and controlled removal.
- the special geometry of the plastic sleeve provides a strong hold of the pins and at the same the least amount of intrinsic mobility as possible.
- even friction of the dies enables smooth loosening of all dies.

This innovative specialty is exclusive to Pro-Fix:

The cap is integrated in the sleeve thus saving time, maintaining precision and giving your models a professional appearance.

Protection:

- pins and/or sleeves are not damaged by the bur during exposure.
- the plaster cannot penetrate into the sleeve when the base is formed.
- the pins are not held in plaster, therefore no negative friction interference.

Easy handling:

- sleeve is easily attached also in complicated situations.
- convenient removal of caps using supplied metal point.

Properties of the sleeve's material:

- the special developed plastic material is resistant to moisture, heat and abrasion. This maintain long-lasting precision and prevents a loss of friction.



For suitable pin drill
Art.No. 367-0000,
Ø 1,6 mm, see page 113.

Technical Details

Shaft length	11,6 mm
Shaft length + sleeve	12,0 mm
Head length	5,5 mm
Ø head	1,6 mm
Ø sleeve	3,0 mm
Ø pin max.	2,5 mm

Description

Pro-Fix Precision pin with plastic sleeve

Art. No.
100 pieces

367-1000

Art. No.
1.000 pieces

367-2000

Compatible with Pin-Cast model tray system (see page 104). We recommend base height 12,5 mm.

3 Special pins



Technical Details

Shaft length	17,5 mm
Head length	5,5 mm
Ø head	2,0 mm
Max pin width	2,9 mm
Needle length	43,0 mm

Bi-Fix-Pin

Dual guidance model pin with fixing wire for exact positioning in the impression.

- ideal for effective production of a saw cut model without using a pin drilling unit.
- for anatomical models with removable dies.

- particularly suited for cramped teeth conditions and complicated impressions.
- no damage to the impression during preparation.
- dual guidance prevents rotation of the pin.

Description	Art. No. 100 pieces	Art. No. 1.000 pieces
Bi-Fix-Pin	345-1000	345-3000



Technical Details

Shaft length	17,0 mm
Head length	5,0 mm
Ø head	2,0 mm
Needle length	43,0 mm
Ø pin max.	3,2 mm

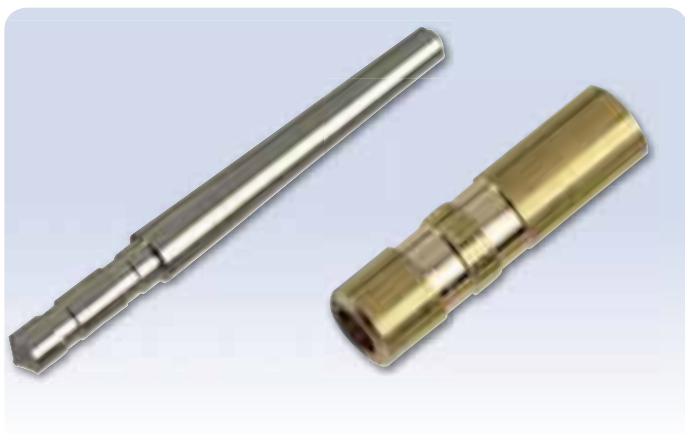
Brass arched pins

Model pin for fixation in complicated impressions.

- two different fixation possibilities:
 1. pointed fixation wire: for optimum fixation this should be stuck deeper into the impression.

2. flat fixation wire: pin rotation is prevented via the flattened tip of the wire.
- narrow shape is ideal for fragile dies.
 - protection from rotation due to flatted shape of pins.

Description	Art. No. 100 pieces	Art. No. 1.000 pieces
Arched pin pointed	355-1001	355-3001
Arched pin flat/pointed	355-1002	355-3002



Smart-Pin with sleeve

Narrow, short model pin with optimum insertion into metal sleeve.

- precise, conical fit of the pins into the sleeve.
- produces flat bases.
- reduced plaster processing ensures reduced expansion within the model.
- ideal for crowded spaces e.g. anterior area.
- particularly narrow retention head (1.6 mm) for delicate dies.

Technical Details

Shaft length	12,5 mm
Head length	5,5 mm
Ø head	1,6 mm
Ø pin max.	2,0 mm
Ø sleeve	2,5 mm

Description	Art. No.
Smart-Pin 1.000 pieces	366-2000
Sleeves for Smart-Pins, 1.000 pieces	366-2100

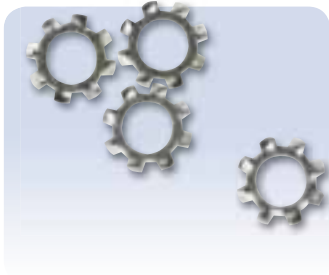
Compatible with Pin-Cast model tray system (see page 104).

Info

Handling tip:

Slip the sleeves on to the pins before applying the isolating agent. This prevents pin and sleeve sticking to each other.

Retention of plaster arch sections



Retention rings, zinc plated

Retention rings for secure fixation of non-removable sections of the plaster arch.

- individual use for fixing various sizes of model areas.
- simple placement at commencement of the plaster arch binding phase.

Description	Art. No.
Retention rings, 1.000 pieces	393-0000

Pin accessories



Rubber caps

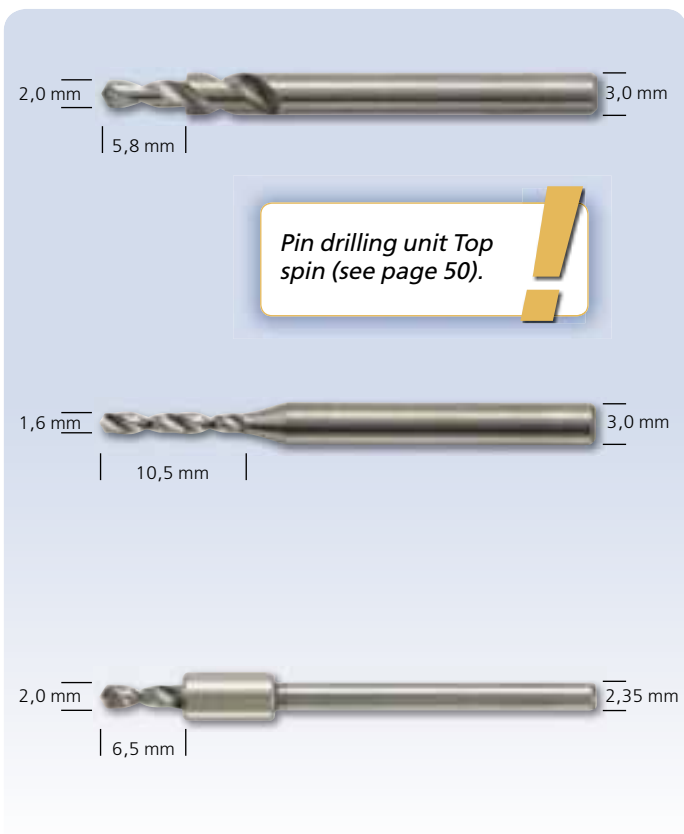
Prevent pins and sleeves from being damaged during basal model trimming.

- for use with all Renfert Bi-Pins.
- also used for orientation when determining the pin position.
- only remove after positioning in the articulation. The

pin guidance legs are then basally exposed. **No rework required!**

- can be reused several times.

Description	Art. No.
Rubber caps for Bi-Pins, 500 pieces	322-0000



Stepped pin drill bit

For use in drilling stepped pin holes using pin drill unit.

- ideal for Bi-Pins and Pindex pins.
- cut step provides a reservoir for the glue during pin fixation.

Description	Art. No.
Stepped pin drill bit, 3 pieces	5010-0003

Smart-Pin drill bit

For use with a pin drill unit for drilling pin holes.

- specifically for Smart-Pin.
- predetermined optimum drill depth via drill head.

Description	Art. No.
Smart-Pin drill bit, 3 pieces	367-0000

Bi-Pin drill bit

For use with a handpiece for drilling pin holes.

- for Bi-Pin and Bi-V-Pin.
- optimum drill depth on impact.

Description	Art. No.
Bi-Pin drill bit, 3 pieces	347-0000



Adhesion

Description	Art. Nr.	Viscosity in mPa.s	Area of application
Sekundenkleber "Universal"	1733-0100 1733-0050	≈ 14	Specially for bonding " recently set " stone (approx. 5–6 hrs after pouring the impression). Ideal for sealing. Bonds stone, resin, metal and porcelain.
Sekundenkleber "Strong"	1733-2000 1733-2050	≈ 18	Specially for bonding " dry " stone (more than 1–2 days old). For rapid bonding of stone, resin, metal and porcelain.
1733 G "Odourless"	1733-2500	≈ 11	Odourless special glue for bonding " recently set " stone (approx. 5–6 hrs after pouring the impression) as well as resin, metal and porcelain. Ideal for sealing. No irritation of the respiratory tract.
Concret "High viscosity"	1722-0020	≈ 100	High viscosity special glue for closing glued joints with stone, metal, resin and porcelain.
Liquicol "Low viscosity"	1732-0020	≈ 1,3	Very low viscosity special glue for sealing dies and stone models. Hardens the surfaces of dies, alveolar ridges and opposing dentitions.

Sealing

Sealing	Art. No.	Contents (ml)	Area of application
Surface hardener	1719-2000	125	ideal also for sealing the complete model or wide surfaces
Surface hardener thinner	1719-2100	125	for individual control over viscosity
Model spray	1736-0000	300	surface sealing of investment models

Lacquering

Die spacer	Art. No.	Color	Contents (ml)	Layer thickness (µm)	Properties
<i>Pico-Fit</i>	1954-0500	gold	15	14–20	
	1954-0600	silver	15	14–20	
	1954-0200	red	15	12–15	
	1954-0300	blue	15	12–15	
<i>Aqua-Fit</i>	1966-0000	tooth-colour	15	15	water soluble
Thinner					
<i>Pico-Fit</i>	1954-0700		30		
<i>Aqua-Fit</i>	1966-0100		15		

Separating

Isolate / Separating agents	Art. No.	Contents (ml)	Area of application	Properties	Others
<i>Picosep</i>	1552-0030	30	Wax / Plaster Porcelain / Plaster	No layer build-up	Also available as Iso-Stift
<i>Iso-Stift</i>	1709-3000	4,5	Wax / Plaster Porcelain / Plaster	No layer build-up very sparingly application	Separating agent = <i>Picosep</i>
<i>Isofix 2000</i>	1720-0000	1000	Plaster / Plaster	No layer build-up	Refill (2 l) available

3 A super glue suitable for most applications



1733-0100/-0050 - The multi-purpose one

All-round glue for use with plaster, metal, acrylics and porcelain.

Specially for bonding "recently set" stone (approx. 5-6 hrs after pouring the impression). Ideal for sealing. Bonds most types of materials used in the dental laboratory (stone, resin, metal, porcelain)

Viscosity approx. 14



Description	Art. No.
Sekundenkleber, 6 x 10 g	1733-0100
Sekundenkleber, 6 x 5 g	1733-0050

Info

When storing in a cool place (refrigerator) before the first use the unopened glue is processible until maximum date of expiry (batch number) printed on the bottle.

Tip: before using the glue for the first time remove it from the refrigerator 15-20 minutes before use to allow it to come to room temperature. This will prevent condensation of water.

For exceptional demands



1733-2000/-2050 - The powerful one

All-round glue with quick bonding time, for use with plaster, metal, acrylic and porcelain.

Specially for bonding „dry“ stone (more than 1-2 days old). For universal use when rapid bonding is required (stone, resin, metal, porcelain etc.).

Viscosity approx. 18



Info

New sealing system. Problems with the previous seal: Dental technicians all know the typical problems when cutting open the dispensing

tip - regardless of the method used, a few drops of superglue would always squirt inadvertently from the tip.

A unique solution from Renfert (see Info Page 117-118).

Description	Art. No.
Sekundenkleber, 6 x 10 g	1733-2000
Sekundenkleber, 6 x 5 g	1733-2050

For pleasant handling



1733 G - The odourless one

Odourless special glue for gluing and sealing plaster, metal, acrylic and porcelain.

Odourless special glue for bonding „recently set“ stone (approx. 5-6 hrs after pouring the impression) as well as resin, metal and porcelain. Ideal for sealing. No irritation of the air passages by pungent fumes or odours.

Viscosity approx. 11



Attention:

Having opened the glue for the first time it should not be placed back into the refrigerator as every opening attracts humidity because of the cold bottles; this affects the glue in the long term. In case the glue is closed and stored at room temperature this problem is reduced to a minimum.

Description	Art. No.
Sekundenkleber, odourless, 6 x 10 g	1733-2500

Info

Bottle is always hermetically sealed by a pin

- Viscosity is maintained even after a long time in storage
- No more tips blocked with glue

With anti-drip device and practical thread design

- No more screw caps blocked with glue
- Even if this happens, the cap is still easily removed

New, non-stick material

- Neither the cap nor the pin becomes stuck
- The bottle is always ready to use

A service kit in each pack

- Sealing and application pin facilitate use
- Application tip ensures increased precision
- Replacement cap extends usability

Soft plastic bottle

- Precise, easy dispensing

Speciality: Large spanned applications



Concret - The viscous one

Viscous special glue for closing up large glue wells in plaster, metal, acrylic and porcelain.

Concret is ideal for filling gaps left by missing chips. Delayed bonding time enables a comfortable period for arranging the pieces to be glued. Strong adhesive power for vibration- and impact-free glue connections. High tensile strength.

Viscosity approx. 100



Description	Art. No.
Concret, 2 x 10 g	1722-0020

3

Liquid resin, an adhesive and more...



burns without residue

Attention:
Never apply *Stabiloplast* with a metal instrument!
Always store the resin and accelerator separately!



Stabiloplast

The general purpose resin for fixing, stabilising, binding, blocking out.

- may be applied straight from the bottle.
- has excellent adhesive properties to wax, metals, resins and plaster.
- dimensionally stable.
- sets within a short time of spraying with the new accelerator (depending on layer thickness).
- does not become warm on setting.
- is temperature resistant and can be trimmed.

Info

Wax inlays can be removed from the die without distortion if the wax base is stabilised with a thin layer of *Stabiloplast*. The occlusal surface can then be waxed upon this layer. Tension-free bridge joints can be achieved by adhering crowns and pontics with *Stabiloplast* rather than joining with wax.

Description	Art. No.
Set with 2 x 10 g Stabiloplast resin, 30 ml accelerator and 1 acrylic spatula	448-0004
<i>Stabiloplast</i> resin, 2 x 10 g	448-0003
<i>Stabiloplast</i> accelerator, 30 ml	448-0002

A perfect sealant



Liqicol - The thin liquid one

Extreme low viscosity special glue for sealing plaster models.

- Minimal layer build-up.
- For strengthening the surfaces of dies, alveolar ridges or opposing dentition.
- For smoothing rough areas of models.
- Protects plaster model from water absorption.
- Ideal for model preparation with *Picosep* (see page 122) before porcelain processing.



Info

A unique solution from Renfert:
The dispensing tip is supplied ready to use!
• No need to cut open the tip

- No contamination
- No glue on cutting instruments
- No increase in the size of the opening due to repeated cutting

- Consistent dispensing guaranteed

- Glues plaster, metal, acrylic and porcelain with the minimum gap for glue.

Viscosity approx. 1,3

Description	Art. No.
<i>Liqicol</i> , 2 x 20 g	1732-0020

Hardening and sealing plaster surfaces



Surface hardener

Self-hardening acrylic solution for hardening and sealing plaster models.

- requires only one application or dip.
- seals surface without layer build-up.
- surface becomes very hard and water-resistant.
- individual consistency controlled using thinner.

- for use with:
 - protection of preparation borders (crowns, inlays).
 - preparation of layers for porcelain shoulders.
 - smoothing rough plaster models for all prosthetic work.



Description	Art. No.
Surface hardener, 125 ml	1719-2000
Surface hardener thinner, 125 ml	1719-2100

Important aids for model casting



Model spray

Smooths and hardens the surface of investment models of chrome cobalt frames.

- fine spray onto cold investment material.
- seals the surface of investment material.
- optimum base for secure modelling and adaptation of wax profiles.
- free from FCs.

Description	Art. No.
Model spray, 300 ml	1736-0000



Water-washable die varnish in tooth colour



Aqua-Fit

Renfert is consolidating its position in the area of die varnishes and is adding a washable die varnish to the range of products. It can be rinsed off under running water.

This is particularly important for inlays and onlays and also for partial crowns. Washable die varnish is primarily used in fabrication of pressable ceramic work. With a special thinner for setting the preferred consistency and the tested (and recommended) separating agent *Picosep* (silicone-based), *Aqua-Fit* is an outstanding preparation trio:

- wash the varnish off the die to compensate for the expansion of the ceramic

- die varnish in tooth colour (dentine shade) – no colour clashes, natural translucence
- very easily washed off – no damage to the plaster die
- thinner to customise the layer thickness
- optimum compatibility with the silicone-based isolating agent *Picosep*
- 15 µm layer thickness / smooth surface

Info

Application

1. Prepare the die as usual, then seal it (e.g., with *Liquicol*, art. no. 1732-0020).
2. After drying, apply a uniform coat of *Aqua-Fit* with the special brush. The coating thickness is approx. 15µm. A second coating may be applied, if required.
3. Allow *Aqua-Fit* to dry for approx. 10 min. then apply a thin isolating film of *Picosep*, art. no. 1552-0030. Note: *Aqua-Fit* has been specially tested for compatibility with *Picosep* and we therefore recommend this combination. Reactions cannot be ruled
4. Model/dip the crown/coping in the usual manner.
5. Before fitting the finished restoration, wash *Aqua-Fit* off under running water (using a soft brush, if required).
6. Renfert recommends *Pico-Mark* marking spacer, art. no. 1934-0xxx, for fitting the full-porcelain restoration.



Description	Art. No.
<i>Aqua-Fit</i> die spacer, 15 ml	1966-0000
<i>Aqua-Fit</i> Special thinner, 15 ml	1966-0100

Die spacer varnish



Pico-Fit

High quality die spacer varnish with good contrast on the most popular plasters.

- short drying period.
- flow property individually controlled using the thinner.
- builds an even layer thickness and a smooth surface.
- good resistance on plaster models.
- available in 4 colours.

Pico-Fit, gold / silver

- colours should be used in combination with each other.
- first apply the silver varnish and allow to dry.
- then cover this with a gold layer.
- total layer thickness of undiluted varnish approx. 14–20 µm.
- purpose: trouble spots will be visible by the wear-off of the gold layer without damaging the model.

Pico-Fit, red

- good contrast against all popular plaster colours.
- layer thickness of undiluted varnish approx. 12–15 µm.

Pico-Fit, blue

- strong contrast against most model plasters.
- layer thickness of undiluted varnish approx. 12–15 µm.



Info

Before applying the varnish the preparation border can be hardened using *Liquicol* glue (see page 118). This will make the surface resistant against mechanical and thermal loads. Even delicate dies can be maintained.

Description	Art. No.
Pico-Fit set with 15 ml each of gold and silver varnish plus 30 ml thinner	1954-0400
Pico-Fit silver varnish, 15 ml	1954-0600
Pico-Fit gold varnish, 15 ml	1954-0500
Pico-Fit red varnish, 15 ml	1954-0200
Pico-Fit blue varnish, 15 ml	1954-0300
Pico-Fit thinner, 30 ml	1954-0700

3

Plaster/wax and plaster/porcelain isolation



Picosep

Thin, silicone based isolating agent – specially developed for wax-dipping techniques.

- microfilm isolates plaster from wax or porcelain.
- a thin layer is effective for days; no reapplication required.
- isolates the plaster, acrylic and metal surfaces to permit wax application.

- contains no solvents: will not attack die varnishes or waxes and will not evaporate.
- layer thickness in the 100th millimetre range prevents surface falsification.
- ensures precise fit of wax copings.

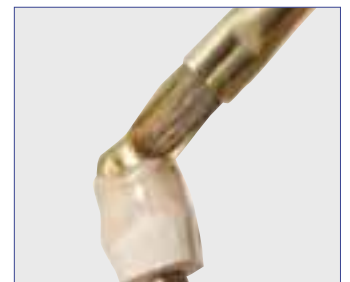
Info

The consistency of *Picosep* allows an extremely thin layer to be applied. The optimum isolating effect is achieved if the brush is wiped on a towel prior to application. This prevents the applied or dipped wax from floating, thus avoiding streaking or edges on the crowns.



Also available as a practical, two-ended isolating stick.

Also optimally suited for isolating plaster against porcelain in conjunction with Renfert *Liquicol* glue (see page 118).



Description	Art. No.
Picosep, 30 ml	1552-0030

Iso-Stift for porcelain and wax



Iso-Stift

A practical, double-sided isolating stick for isolating plaster against porcelain and wax.

- Soft and hard tip for individual applications.
- Economical and precise application of isolating material.
- Comfortable and easy handling.
- The flexible tip in particular provides excellent isolation in difficult-to-reach areas.
- Isolation = *Picosep*



Description	Art. No.
1 Iso-Stift	1709-3000

Isolation and sealing of plaster models

Isofix 2000

Film-free isolation of plaster against plaster from a practical spray bottle. Ideal for producing saw cut models.

- soaks into the plaster surface
- seals the open pores of the plaster model.
- no layer build-up.
- surface is hardened, smoothed and water-resistant.



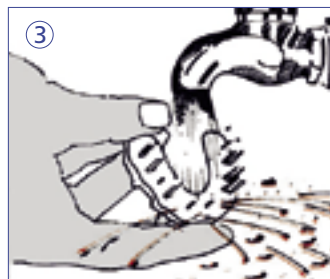
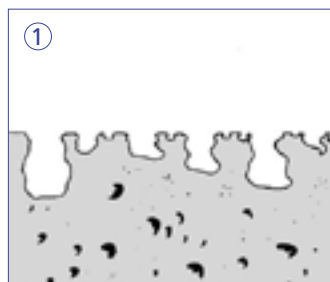
Easy to use:

1. micro-pores in the plaster surface.
2. spray on *Isofix 2000* and leave for approx. 10 seconds.
3. rinse off excess liquid under flowing water.
4. sealed, isolated surface.

Info

Should the plaster model require a particularly smooth, shiny and dirt-resistant surface (e.g. for course work) spray on a generous amount of *Isofix 2000*. In this case the applied coating should be left to act for approx. 10 minutes.

Wash off the excess and allow the model to dry. The plaster model can then be buffed up with a soft brush or cloth in order to bring about a shine.



Description	Art. No.
1 l <i>Isofix 2000</i> plus 500 ml spray bottle	1720-0000
2 x 1 l <i>Isofix 2000</i> refill packs	1720-2000

Porcelain additive for minimal evaporation



Proform-12

Proform-12 is a porcelain additive which lends plasticity to the porcelain mass.

- the porcelain takes on a wax-like consistency.
- improves stability of porcelain when modelling.
- considerably less evaporation just by adding a few drops (= remains moist over a longer period).
- does not affect the firing process.
- neutral colour.
- enables aesthetic occlusal surfaces to be modelled using the tiniest porcelain portions.
- optimum bond between applied layers.
- can be used with all porcelain powders from reputable manufacturers.
- excellent for use with both natural and acrylic bristle brushes.



Description	Art. No.
Proform-12, 60 ml	1462-0000

Recognition of premature contact and trouble spots



Pico-Mark

Washable articulating liquid for identification of trouble spots in crowns and secondary parts as well as systematic occlusion grinding.

- easily applied via brush inset in bottle.
- can be thinned as required.
- average layer thickness of 5 µm.
- colour application marks several times.
- areas of use: e.g., trouble spots in crowns, secondary

places, approximal contact, basal contact of bridge parts, occlusion contact.

- environmentally friendly, sparing use.
- available in red and white depending on areas of use.

Description	Art. No.
Pico-Mark set with 1 each x red and white varnish plus 30 ml thinner	1934-0000
Pico-Mark varnish red, 12 ml	1934-0100
Pico-Mark varnish white, 12 ml	1934-0200
Pico-Mark thinner, 30 ml	1934-0300



3 Modelling waxes

Description	Art. No.	Crown & Bridge	Wax-up	Model casting	Dipping waxes	Page
<i>GEO Classic</i>	497-xx00	•				128
<i>GEO Avantgarde</i>	492-0x00 495-0x00	•				129
<i>Crowax</i> <i>Crowax DUR</i>	474-0x00 674-0x00	•				130
<i>GEO Natural</i>	499-0300		•			131
<i>GEO Snow-white</i>	499-0x01		•			131
<i>GEO Model casting-modelling wax</i>	649-x000			•		133
<i>GEO Dip</i>	482-3x00				•	132
<i>rewax</i>	651-0000				•	132

Special waxes and sheet waxes

Description	Art. No.	Page
<i>GEO Cervical wax</i>	486-1000	133
<i>GEO Block-out wax</i>	650-0000	133
<i>GEO Milling wax</i>	485-1000	134
<i>GEO Sticking wax</i>	488-1000	134
<i>GEO Undercut wax</i>	489-1000	134
<i>GEO Casting wax</i>	445-300x	134
<i>GEO Set-up wax</i>	654-3000	142
<i>GEO Casting wax</i>	64x-30xx	138

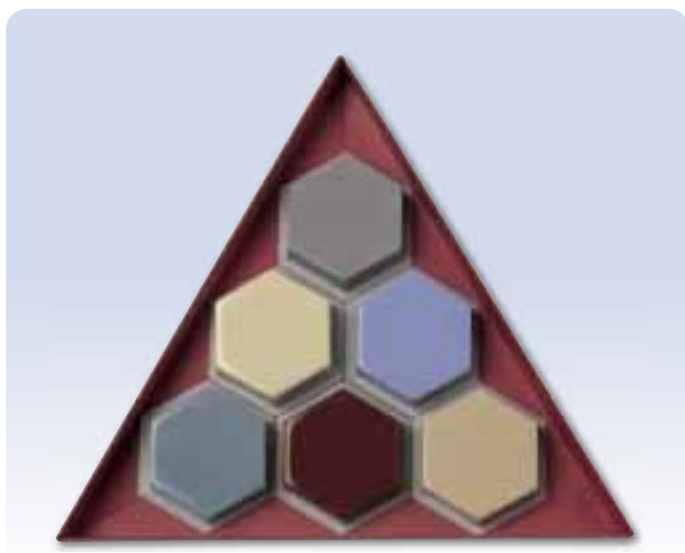
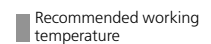
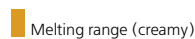
Preformed waxes

Description	Art. No.	Crown & Bridge	Model casting	Sprueing	Page
<i>GEO Clasps</i>	688-30xx 638-30xx		•		136
<i>GEO Retention meshes</i>	688-30xx 638-30xx		•		137
<i>GEO Perforated wax retainers</i>	664-3000 662-3000		•		137
<i>GEO L-jaw bar</i>	667-3042		•		142
<i>GEO Pontics</i>	500-0x00	•			139
<i>GEO Pear-shaped wax</i>	501-1100			•	140
<i>GEO Casting sprues, triangle</i>	680-3000			•	140
<i>GEO Wax wire</i>	676-20xx 678-30xx 675-10xx			•	141

Waxes: Overview of melting ranges

Description Art. No.	transp./ opaque	Colours	Suitable for ACS*	°C											Page			
				60 °F 140	65 149	70 158	75 167	80 176	85 185	90 194	95 203							
Modelling waxes	<i>GEO Avantgarde occlusal</i> 492-0x00	opaque	beige, grey, mint														129	
	<i>GEO Avantgarde universal</i> 495-0x00	opaque	beige, grey, mint														129	
	<i>GEO Classic</i> 497-xx00	transp. + opaque	beige, blue, mint, tooth colour	• (transparent)														128
	<i>Crowax</i> 474-0x00	transp. + opaque	green, blue, red, beige, grey	• (transparent)														130
	<i>Crowax DUR</i> 492-0x00	transpa- rent	green, blue, red,	•														130
	<i>GEO Snow white L</i> 499-0x01	transp. + opaque	white	•														131
	<i>GEO Natural</i> 499-0x00	transp. + opaque	beige	•														131
Special waxes	<i>GEO Cervical wax</i> 486-1000	transpa- rent	red	•													133	
	<i>GEO Undercut wax</i> 489-1000	transpa- rent	red	•													134	
	<i>GEO Milling wax</i> 485-1000	opaque	blue														134	
	<i>GEO Sticking wax</i> 488-1000	transpa- rent	fuchsia														134	
	<i>GEO Block-out wax</i> 650-0000	opaque	pink														133	
Dipping waxes	<i>GEO Dip</i> 482-3x00	opaque	yellow, orange, green														132	
	<i>rewax</i> 651-0000	opaque	yellow														132	

* All ceramic systems



GEO

Basis-Set

Combination of selected *GEO, Classic and Avantgarde special waxes.*

- 6 wax blocks of 20 g each.
- covers wide range of uses.
- ideal introduction to the Renfert range of waxes.

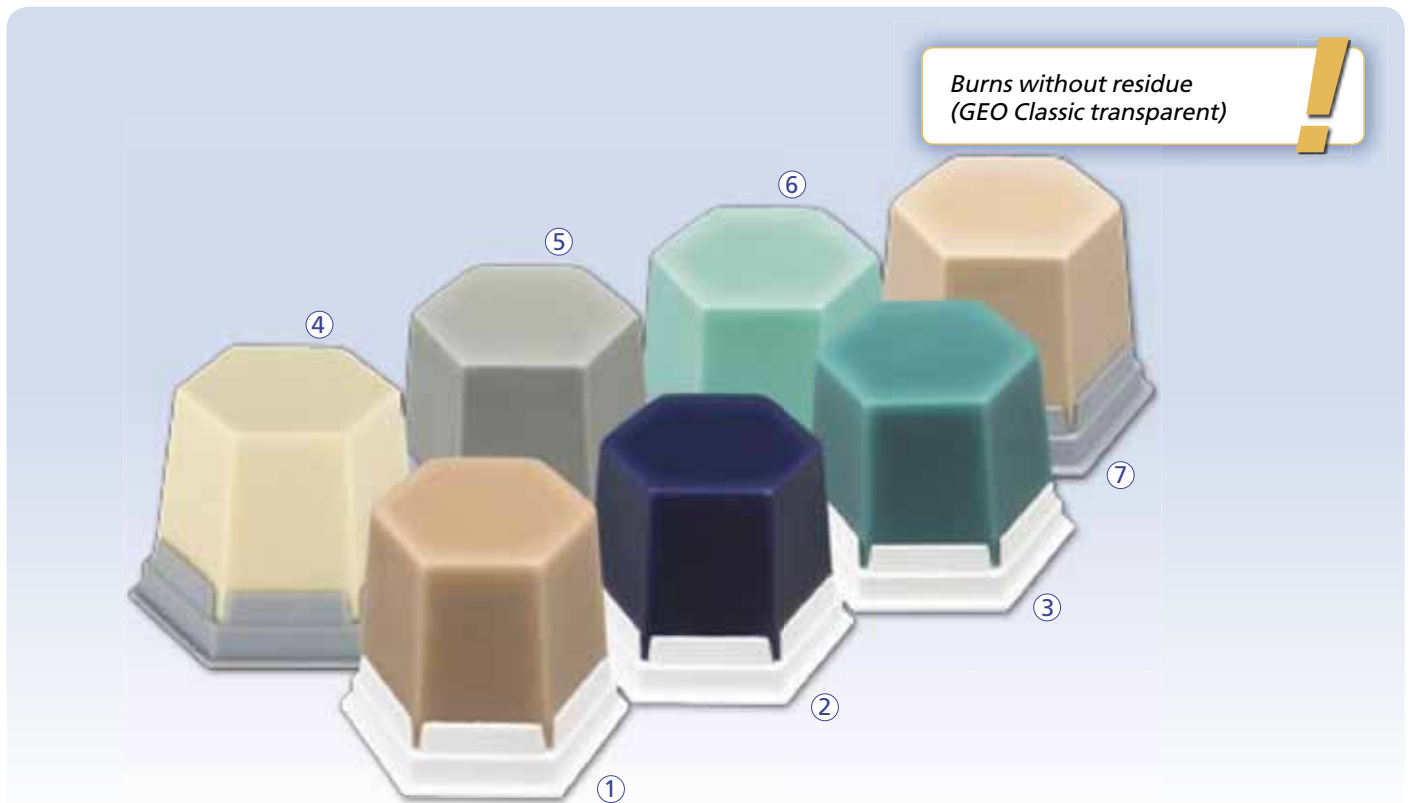
Contents:

- *GEO Avantgarde universal* grey-opaque, 20 g
- *GEO Classic* tooth colour-opaque, 20 g
- *GEO milling wax* blue-opaque, 20 g

- *GEO Classic* mint-transparent, 20 g
- *GEO undercut wax* red-transparent, 20 g
- *GEO Avantgarde occlusal* beige-opaque, 20 g

Description	Art. No.
<i>GEO Basis-Set</i> contents as per description on this page	493-0004

Special waxes for Bunsen burners



Ⓐ GEO

Classic modelling waxes

GEO Classic modelling waxes are ideally suited to additive waxing-up techniques. Their excellence lies in the optimum properties of raw material used.

- low shrinkage due to micro-crystalline structure.
- quick to apply and quick to cool with its optimum melting interval.
- high surface tension.
- excellent carving properties due to its non-elastic and hard quality.
- wide assortment of colours.

Both lines, *Classic opaque* and *Classic transparent* are designed with specific techniques in mind.

GEO Classic opaque

- offers sharp contour details even in a liquid state due to opacity.
- behaves in a plastic manner to accentuate the relief.
- ideal for forming occlusal surfaces.

GEO Classic transparent
Special wax for full porcelain work

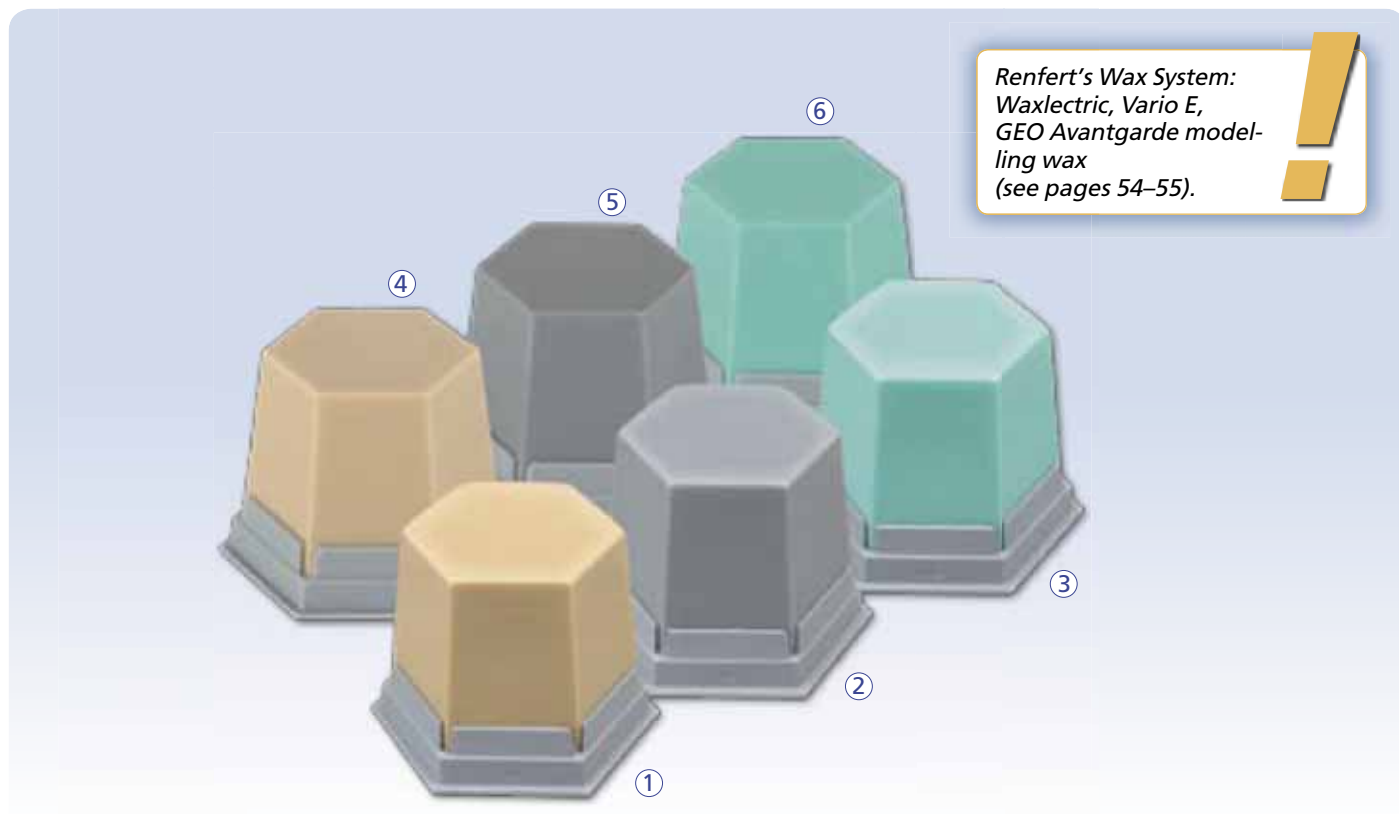
- especially for pressed porcelain.
- filtered many times, contains no opaque components.
- burns without residue.
- no impurities caused by metal oxides.



Melting ranges of the waxes (Page 127).

Description	Colour	Art. No.
① <i>GEO Classic</i> , 75 g	beige-transparent	497-1100
② <i>GEO Classic</i> , 75 g	blue-transparent	497-1200
③ <i>GEO Classic</i> , 75 g	mint-transparent	497-1300
④ <i>GEO Classic</i> , 75 g	beige-opaque	497-0100
⑤ <i>GEO Classic</i> , 75 g	grey-opaque	497-0200
⑥ <i>GEO Classic</i> , 75 g	mint-opaque	497-0300
⑦ <i>GEO Classic</i> , 75 g	tooth colour-opaque	497-0400

Special waxes for electronic waxing-up



Renfert's Wax System:
 Waxlectric, Vario E,
 GEO Avantgarde model-
 ling wax
 (see pages 54–55).

GEO

Avantgarde model- ling waxes

When working with an elec-
tronic waxing-up unit special
demands are made on the
wax used. GEO Avantgarde
modelling waxes are precisely
developed for this technol-
ogy which seeks to preserve
the raw materials. The ideal
modelling properties are
maintained thus leading to
precise results.

- excellent flow properties and low contraction for modelling the exterior tooth shape (*GEO Avantgarde universal*).
- excellent rigidity and strength for forming occlusal surfaces (*GEO Avantgarde occlusal*).
- owing to their different qualities *GEO Avantgarde* model-
ling waxes cover both sets of requirements.

GEO Avantgarde universal
 Ideally suited for quick cover-
age of large areas with wax.
 Ideal for modelling bridge
 elements.

- low surface tension.
- low melting point.
- small contraction on hardening.
- excellent flow properties.

GEO Avantgarde occlusal

Fulfils all requirements for
modelling occlusal surfaces.

- high strength - no abrading of contact points.
- behaves in a plastic manner to accentuate the relief.
- high rigidity.
- can be easily drawn due to its high surface tension.
- ideal for filigree occlusal modelling.
- opaque appearance for de-
fined contours and perma-
nent control during modelling.

**Melting ranges of the
waxes (Page 127).**



- Occlusal wax for the occlusal surface
- Universal wax for the crown and bridge body
- Cervical wax for the tooth cervix (refer to page 133)



Description	Colour	Art. No.
① <i>GEO Avantgarde occlusal</i> , 75 g	beige-opaque	492-0100
② <i>GEO Avantgarde occlusal</i> , 75 g	grey-opaque	492-0200
③ <i>GEO Avantgarde occlusal</i> , 75 g	mint-opaque	492-0300
④ <i>GEO Avantgarde universal</i> , 75 g	beige-opaque	495-0100
⑤ <i>GEO Avantgarde universal</i> , 75 g	grey-opaque	495-0200
⑥ <i>GEO Avantgarde universal</i> , 75 g	mint-opaque	495-0300

3 Universal wax

Burns without residue
(Crowax transparent)



Crowax / Crowax Dur

The properties of Crowax and Crowax Dur make these waxes suitable for a wide range of uses.

Universal waxes for

- C&B techniques
 - Individual crowns
 - Inlays
 - Bridges
 - Porcelain pressing
 - Wax-ups
- Model casting techniques

Crowax

- suitable for flame technique as well as electronic waxing-up.
- available in green, blue, red, beige and grey.
- Crowax beige is also suitable for wax-ups.

Crowax Dur

- harder version with a higher melting and drip point.
- ideal for use in summer/higher temperature surroundings.
- ideally suited for modelling occlusal surfaces.
- optimum carving properties.

- transparent wax for full porcelain work.

Highest precision with lowest shrinkage values!

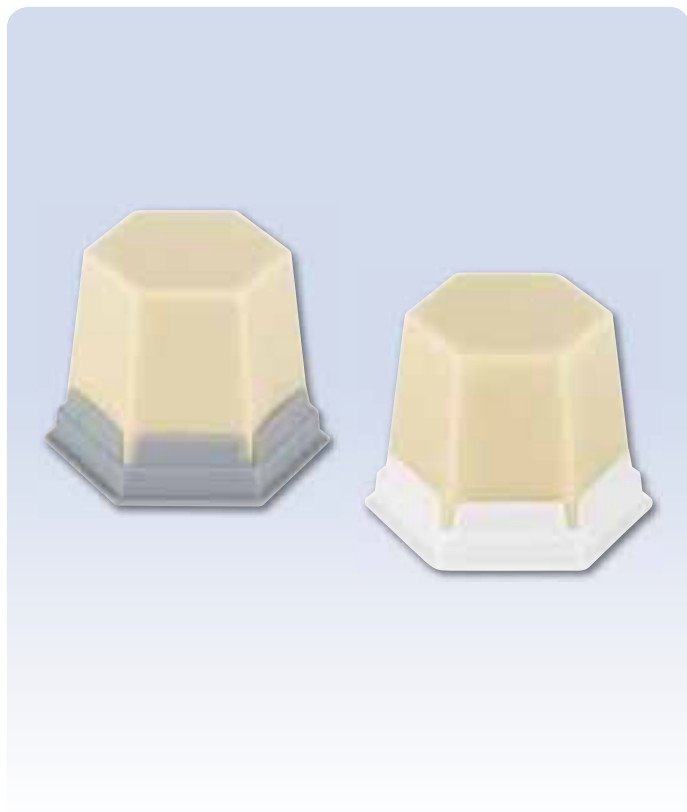
In comparison to other waxes the shrinkage values of Crowax and Crowax Dur are considerably lower. This makes the wax particularly suitable for precision work in partial crown, onlay and inlay techniques. Owing to its low contraction Crowax has been valued for many years for long-span bridge work.



Melting ranges of the waxes (Page 127).

Description	Colour	Art. No.
① Crowax, 100 g	green-transparent	474-0100
② Crowax, 100 g	blue-transparent	474-0200
③ Crowax, 100 g	red-transparent	474-0300
④ Crowax, 100 g	beige-opaque	474-0400
⑤ Crowax, 100 g	grey-opaque	474-0500
Crowax Dur, 100 g	green-transparent	674-0100
Crowax Dur, 100 g	blue-transparent	674-0200

Exact therapeutic planning



Ⓐ GEO

Natural

Renfert has a new addition to the successful GEO Snow-white L range of waxes with a naturally tooth-coloured wax-up wax (tooth shade: Dentin A2).

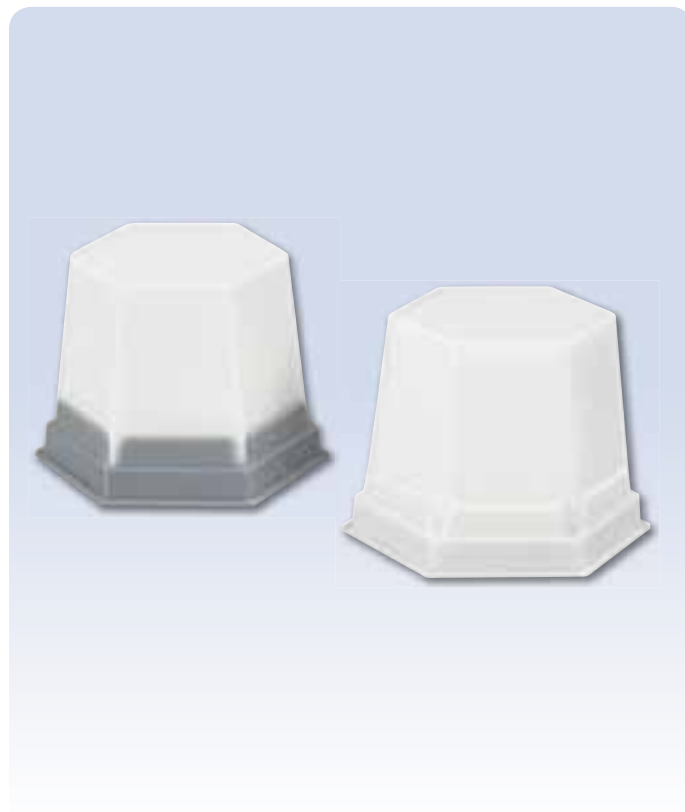
Wax-ups are fabricated on situation models or master models in the articulator on various framework types (metal, ceramic etc.), but they can also be modeled directly on plaster just as easily. The teeth are modelled in their final size and shape using wax-up modelling wax (tooth-shade or white).

The fabrication of a wax-up is also used to demonstrate the subsequent dental work for the patient.

- better wax-ups than with conventional modelling waxes (tooth shade: Dentin A2)
- very good carving properties and modelling characteristics
- high strength, high surface tension and low shrinkage



- opaqued: covers plaster and metal framework.



Ⓐ GEO

Snow-white L

The wax-up waxes (GEO Snow-white L opaque and GEO Snow-white L transparent) provide assistance in both functional and aesthetic planning for dental restorations. They are employed on diagnostic models or on master models in the articulator on a variety of framework types (metal, all-porcelain, etc.). Either white or tooth-coloured modelling wax is employed for these applications.

White wax-ups are particularly well suited for **demonstrating the final dental work to the patient**. The wax colour is significantly closer to that of the final facing than is the case with conventional modelling



waxes. This offers the patient a very concrete idea of the appearance of the final restoration.

Even in very thin layers, the opaque wax provides **excellent masking power** - something which is vital on a metal frame. Aside from the traditional production of wax-ups, the primary application area for the wax is wax-veneers of secondary telescopes.

Description	Colour	Art. No.
GEO Snow-white L, 75 g	opaque	499-0101
GEO Snow-white L, 75 g	transparent	499-0201
GEO Natural, 75 g	opaque	499-0300
GEO Natural, 75 g	transparent	499-0400

3

Precise wax copings via dipping wax technique



GEO

Dip

Special waxes for processing within an electronic wax die pot.

Precise preparation, maintains the excellent raw material properties of this high quality wax. The result: precise copings with extremely low shrinkage.

- high precision via low shrinkage.
- optimum viscosity at 89–91°C (192–196°F).
- reproducible, precisefitting copings with an even layer thickness.
- high stability and elasticity.
- contains no acrylic additives.
- easy to cut off the preparation border.
- exact dosage via the *GEO Dip* container.
- stable and reversible moulded copings.

Colours to match your technique

The light colours of yellow and orange are ideally suited to controlling coping thickness. No optical influence when using modelling wax. The dark green colour allows the thickness of the model to be continuously monitored and controlled when using light coloured waxes.

Wax dipping pots, see page 61.

Description	Art. No.
<i>GEO Dip</i> yellow, approx. 200 g	482-3000
<i>GEO Dip</i> orange, approx. 200 g	482-3200
<i>GEO Dip</i> green, approx. 200 g	482-3300



rewax Dipping wax

Hard not elastic dipping wax with excellent shaping properties in a ready to use pot.

- high processing temperature of 90-92°C (194-198°F).
- precise moulding of dies with minimal contraction.
- excellent scraping and cutting properties.
- guaranteed optimum precision fit and surface smoothness of the cast crown.

Info

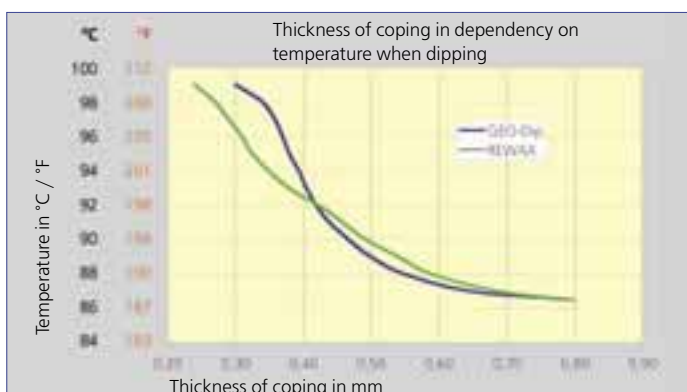
The precise temperature setting on the wax die pot (see diagram) guarantees an even, reproducible coping thickness.

Preparation:

- place a thin isolating layer on the die surface using *Picosep* (see page 122).
- build-up of bubbles and streaks are thus prevented.

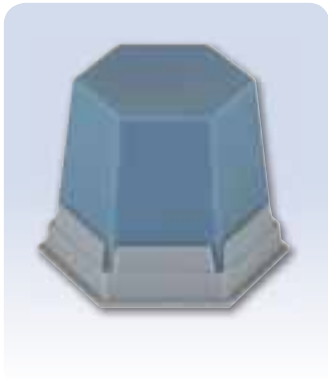
Dipping:

- support your hand comfortably.
- do a **quick dip** to just beyond the preparation border.
- **slowly and evenly** remove the die from the wax.
- just before the tip comes out hold it steady in the pot for a short time so that any excess wax can drip down.



Description	Art. No.
rewax yellow, approx. 210 g	651-0000

Model casting and special waxes

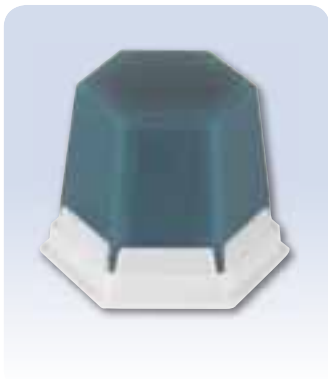


GEO **Cast Model Modelling wax hard/opaque**

For modelling cast model sections on the investment model.

- wax composition is precisely matched to preformed wax clasps.
- optimum modelling of occlusal surfaces or sharp seals.

Description	Art. No.
GEO cast model modelling wax, hard, turquoise opaque, 75 g	649-1000



GEO **Cast Model Modelling wax standard/transparent**

For modelling cast model sections on the investment model.

- wax precisely matched to preformed wax clasps.
- for bonding clasps, wax patterns or retainers.
- slightly transparent to recognize markings.

Description	Art. No.
GEO cast model modelling wax, standard, turquoise transparent, 75 g	649-0000

Burns without residue



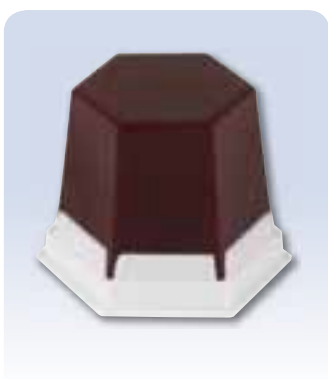
GEO **Undercut wax**

This wax is suitable for blocking undercuts, cavities or errors on plaster models for both model casting and crown and bridge techniques.

- excellent adhesion to plaster model.
- soft flow in the smallest areas.
- excellent carving properties.

- high melting point of 86°C (186°F) prevents change in dimensions during heat load (e.g. when duplicating).
- even thin layers can be easily recognised due to high opacity.

Description	Art. No.
GEO undercut wax, pink, opaque, 75 g	650-0000



GEO **Cervical wax**

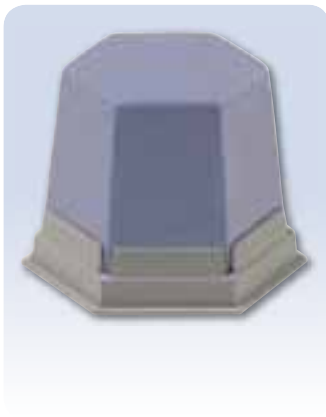
Non-rebounding wax for forming crown margin.

- low shrinkage.
- particularly stable.
- precise and very thin application at the preparation border.

- excellent carving properties.
- burns without residue.

Description	Colour	Art. No.
GEO Cervical wax, 75 g	red-transparent	486-1000

3 Special waxes



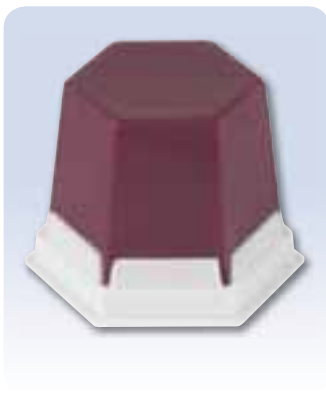
GEO Milling wax

Developed precisely to meet the mechanical working processes when using milling and carving instruments.

- small wax-copings.
- no smearing or sticking when working between 2,500 and 5,000 rpm.

- specifically designed to cope with hard metal burs (spiral burs) or wax burs / scrapers.
- flat, defined contour surface.
- ideally suited for occlusal surface modelling.

Description	Colour	Art. No.
GEO milling wax, 75 g	blue-opaque	485-1000



GEO Sticking wax

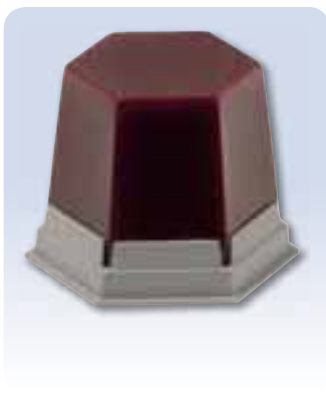
Special wax for fixing denture parts.

- for preparing repair or welding work.
- low shrinkage.
- high strength and brittleness – wax breaks immediately

- if the position of the fixed pieces is changed.
- ideal sticking properties for all dental materials.
- ideal for aligning and fixing casting sprues and preformed wax components.

Melting ranges of the waxes (page 127).

Description	Colour	Art. No.
GEO sticking wax, 75 g	pink-transparent	488-1000



GEO Undercut wax

Inert wax for small undercuts and cavity coverage before inlay modelling. Excellent for flooding when forming secondary parts made of wax.

- significantly softer than cervical wax.

- gentle elasticity.
- good adaptation and carving properties.
- very low shrinkage.
- burns without residue.

Description	Colour	Art. No.
GEO undercut wax, 75 g	red-transparent	489-1000



GEO Casting wax

Self-adhesive preparation wax for hollowing acrylic saddles.

- simple to cut pieces and remove them from the adhesive foil.
- excellent fit on model surfaces.
- optimum adhesion even on damp models.
- sheet size 10 x 10 cm.

Description	Art. No.
0.3 mm, 32 sheets	445-3003
0.4 mm, 32 sheets	445-3004
0.5 mm, 32 sheets	445-3005
0.6 mm, 32 sheets	445-3006

Efficient wax technique



All Renfert's model casting waxes burn without residue

⊗ GEO

Model casting system

The most important pre-fabricated wax parts for efficient working are included in the clearly designed assortment.

The one-colour-concept

All wax parts of the *GEO* model casting waxes are coloured in turquoise. This has the advantage, that the wax model corresponds to the appearances of the casted partial. The light turquoise of the *GEO* model casting sheets has a high translucency, which allows optimal showing through of the marked lines.

- high stability on pressure.
- smooth surface thanks to a high content of micro waxes.
- optimal smoothness when adapting.
- all waxes burn out without residues.

The assortment

- prefabricated parts, modeling wax, undercut wax and casting wax are always complete and clearly assorted.
- all single items, as well as the adhesive version, can be ordered separately (see pages 136-137).
- can be stacked and fit into the current drawers (e.g. KaVo).

Contents:

- 4 sheets of casting wax smooth, 0.3mm
- 4 sheets of casting wax, fine stippled, 0.35 mm
- 4 sheets of casting wax, fine stippled, 0.5 mm
- 4 sheets of casting wax, coarse stippled, 0.5 mm
- 5 sheets of casting-wax, 0.6 mm


- 3 sheets of Bonyhard clasps
- 3 sheets of molar clasps
- 3 sheets of premolar clasps
- 3 sheets of ring clasps
- 3 sheets of grid meshes
- 10 pcs. of lingual bars
- 10 pcs. of perforated retainers
- 10 pcs. of wax rods, 0.8 mm
- 30 g of sculpturing wax for model casting
- 30 g of undercut wax

See page 133-142 for all components of the Model Casting Assortment as well as for other parts of the *GEO* model casting waxes.



Description	Art. No.
GEO model casting assortment with contents as mentioned	633-0000

3 Preformed clasps

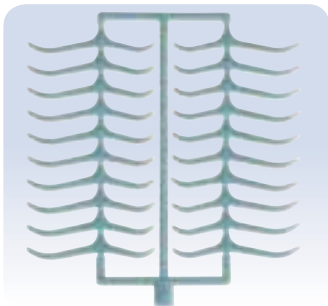
Burns without residue 



GEO **Premolar clasps**

Anatomically shaped clasp profiles made of easily adaptable wax. High stability to pressure. Suitable for premolars. Also available with self-adhesive coating. 10 sheets.

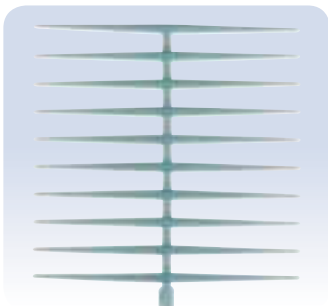
Description	Art. No. normal	Art. No. self-adhesive
Premolar clasps, 200 pcs	688-3002	638-3002



GEO **Molar clasps**

Anatomically shaped clasp profiles made of easily adaptable wax. High stability to pressure. Suitable for molars. Also available with self-adhesive coating. 10 sheets.

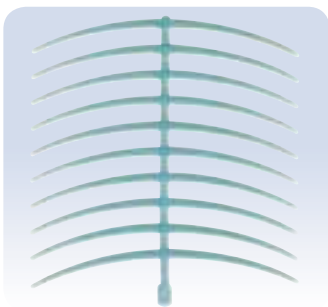
Description	Art. No. normal	Art. No. self-adhesive
Molar clasps, 200 pcs	688-3003	638-3003



GEO **Ring clasps straight**

Clasp profiles that runs conically to produce ring clasps. High stability to pressure. Maintains the adapted shape. Also available with self-adhesive coating. 10 sheets.

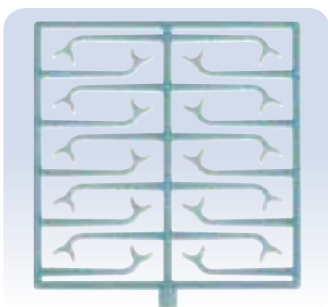
Description	Art. No. normal	Art. No. self-adhesive
Ring clasps straight, 200 pcs	688-3004	638-3004



GEO **Ring clasps**

Clasp profiles in bended shape that runs conically to produce ring clasps. High stability to pressure. Maintains the adapted shape. Also available with self-adhesive coating. 10 sheets.

Description	Art. No. normal	Art. No. self-adhesive
Ring clasps, 200 pcs	688-3005	638-3005



GEO **Bonyhard clasps**

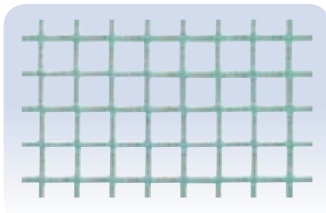
Filigree Bonyhard clasps with short clasp arms. High stability to pressure. Maintains the adapted shape. Also available with self-adhesive coating. 10 sheets.

Description	Art. No. normal	Art. No. self-adhesive
Bonyhard clasps, 200 pcs	688-3010	638-3010

Wax retainers

Burns without residue

3

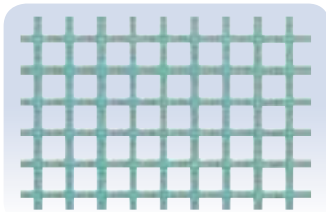


ⓐ GEO Retention grids, large

Large grid structure of 2.2 x 2.2 mm.
High stability to pressure, easily adaptable.
Sheet size 70 x 70 mm,
Sheet thickness 0.75 mm.

Also available with self-adhesive coating.

Description	Art. No.
Retention grid, large, 20 sheets	688-3007
Retention grid, large, self-adhesive, 20 sheets	638-3007

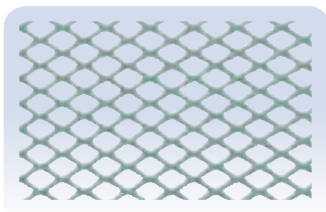


ⓐ GEO Retention grids, fine

Fine grid structure of 1.8 x 1.8 mm.
High stability to pressure, easily adaptable.
Sheet size 70 x 70 mm,
Sheet thickness 0.7 mm.

Also available with self-adhesive coating.

Description	Art. No.
Retention grid, fine, 20 sheets	688-3008
Retention grid, fine, self-adhesive, 20 sheets	638-3008

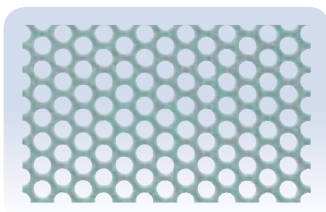


ⓐ GEO Retention grids, diagonal

Excellent retention effect due to special structure.
High stability to pressure, easily adaptable.
Sheet size 70 x 70 mm,
Sheet thickness 0.95 mm.

Also available with self-adhesive coating.

Description	Art. No.
Retention grid, diagonal, 20 sheets	688-3011
Retention grids, diagonal, self-adhesive, 20 sheets	638-3011

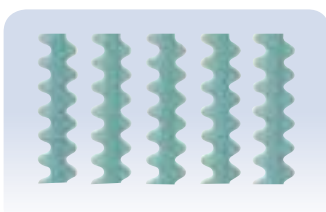


ⓐ GEO Circular retainer

Circle diameter 2.0 mm.
High stability to pressure, easily adaptable.
Sheet size 70 x 70 mm,
Sheet thickness 0.8 mm.

Also available with self-adhesive coating.

Description	Art. No.
Circular retainer, 20 sheets	688-3009
Circular retainer, self-adhesive, 20 sheets	638-3009

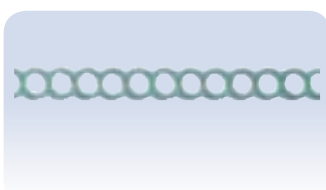


ⓐ GEO Bar retainer

Ideal for narrow lower jaw ridges.
High stability to pressure, easily adaptable.
Sheet size 70 x 70 mm,
Sheet thickness 1.3 mm.

Also available with self-adhesive coating.

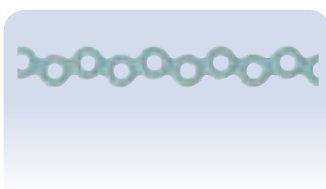
Description	Art. No.
Bar retainer, 10 sheets	688-3006
Bar retainer, self-adhesive, 10 sheets	638-3006



ⓐ GEO Perforated retainers, straight

High stability to pressure, easily adaptable. Ideal for lingual retention, even where space is limited.

Description	Art. No.
Perforated retainers, straight, 40 strips	664-3000



ⓐ GEO Perforated retainers, staggered

Compact retention. The staggered arrangement provides optimum space for tooth arrangement.

Description	Art. No.
Perforated retainers, staggered, 40 strips	662-3000

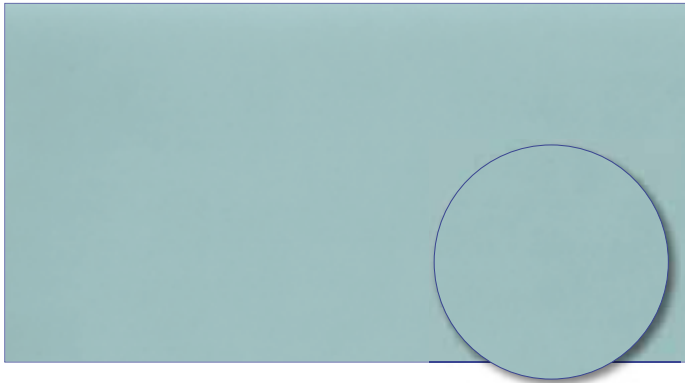
Sheet wax for model casting

Renfert's wax sheets for model casting consist of natural wax raw materials that burn without residue. They are pressure-proof and can be adapted onto

the model without creating tension. Tear-resistant. For precise, error-free results. The high translucency of the turquoise-transparent wax sheets permits an ideal identification

of all marked lines on the model.

All Renfert's casting waxes burn without residue



 GEO

casting wax smooth

Turquoise, transparent sheet wax with smooth surface. Sheet size 75 x 150 mm, Sheet thickness 0.3 – 0.6 mm. 15 sheets.

Description	Art. No.
0.30 mm	640-3030
0.35 mm	640-3035
0.40 mm	640-3040
0.50 mm	640-3050
0.60 mm	640-3060

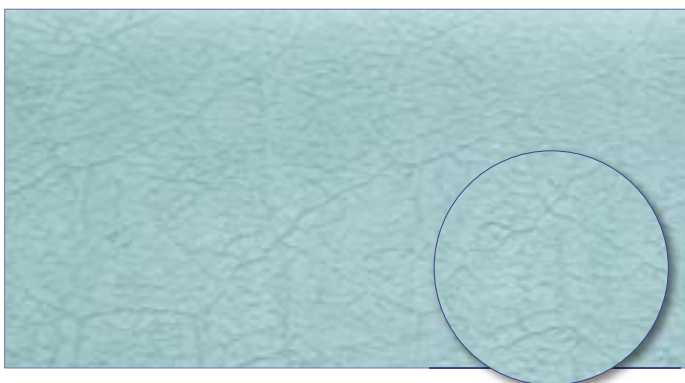


 GEO

casting wax fine stippled

Turquoise, transparent sheet wax with fine surface pattern. Sheet size 75 x 150 mm, Sheet thickness 0.3 – 0.6 mm. 15 sheets.

Description	Art. No.
0.30 mm	641-3030
0.35 mm	641-3035
0.40 mm	641-3040
0.50 mm	641-3050
0.60 mm	641-3060

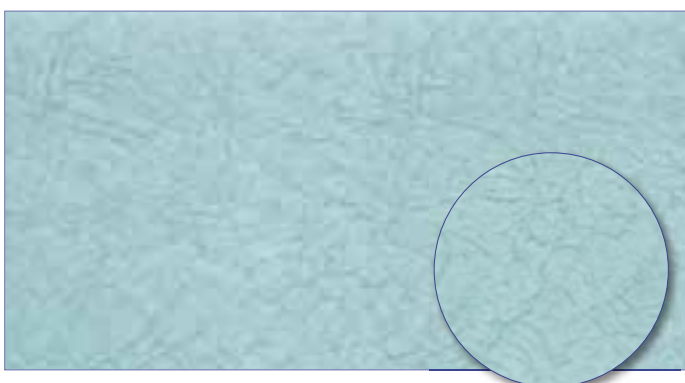


 GEO

casting wax coarse stippled

Turquoise, transparent sheet wax with prominent surface pattern. Sheet size 75 x 150 mm, Sheet thickness 0.3 – 0.6 mm. 15 sheets.

Description	Art. No.
0.30 mm	643-3030
0.35 mm	643-3035
0.40 mm	643-3040
0.50 mm	643-3050
0.60 mm	643-3060



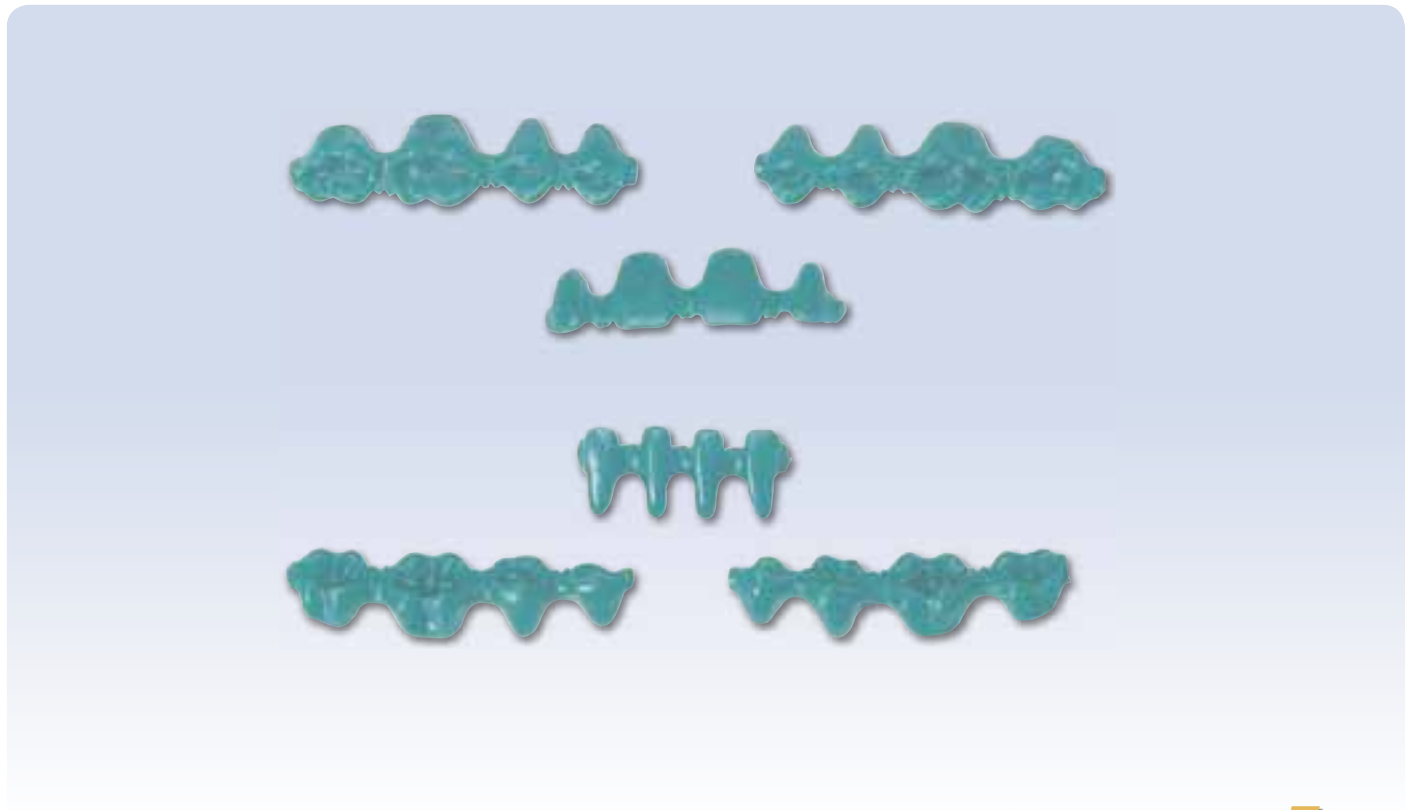
 GEO

casting wax veined

Turquoise, transparent sheet wax with distinct surface pattern. Sheet size 75 x 150 mm, Sheet thickness 0.3 – 0.6 mm. 15 sheets.

Description	Art. No.
0.30 mm	644-3030
0.35 mm	644-3035
0.40 mm	644-3040
0.50 mm	644-3050
0.60 mm	644-3060

Preformed pontics



Ⓜ GEO

Pontics wax pontics

A set of pontics for modeling anterior and posterior bridges for veneer technique with acrylic or porcelain.

- tooth shapes are proportionally reduced.
- standard sizes are compatible for the majority of applications – **saving in time!**
- *GEO Pontics* can also be individually reduced or waxed-up.
- 6 standard wax blocks for bridge construction in each quadrant.
- anatomical shaping of tooth nucleus.
- reduced occlusal contacts for more aesthetics.
- the lingual positioning of the anchor points allows vestibular separation.
- optimum depth of occlusal surfaces allowing anatomical modelling.
- no distortion during lifting due to high stability.

Burns without residue !



Description	Art. No.
GEO Pontics Set with 10 pieces each of 6 sizes	500-0000
GEO Pontics UJ right, posterior teeth 14-17, 20 pieces	500-0100
GEO Pontics UJ anterior, 12-22, 20 pieces	500-0200
GEO Pontics UJ left, posterior teeth 24-27, 20 pieces	500-0300
GEO Pontics LJ left, posterior teeth 34-37, 20 pieces	500-0400
GEO Pontics LJ anterior teeth, 32-42, 20 pieces	500-0500
GEO Pontics LJ right, posterior teeth 44-47, 20 pieces	500-0600

3 Attaching sprues systematically



 GEO

Pear-shaped wax casting sprues

Casting sprues with a special pear-shaped melting reservoir for avoiding shrink-holes in precious metal casting.

For individual use in casting technique for veneer crowns, cast crowns, veneer bridge shapes.

- pear shape guarantees the optimum flow for the molten alloy.
- shrinkholes form in the pear shape not in the casting object.
- optimum match of solidification point in head and neck area of the sprue.
- melting reservoir for casting object due to delayed solidification in the casting pear.

Info

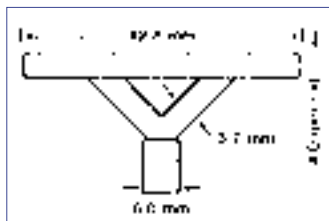
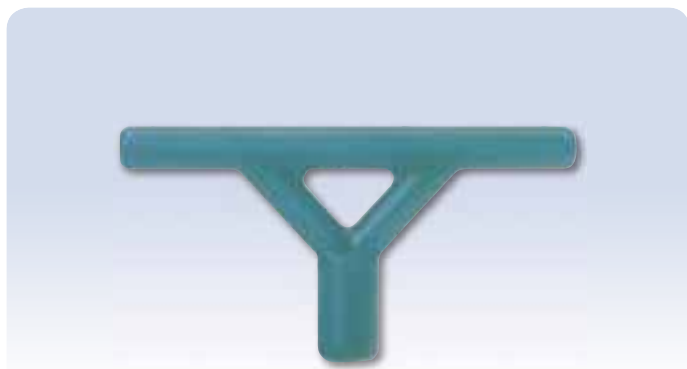
The pear shape of the casting sprue is ideal as a melting reservoir. The large surface area of the attachment allows controlled cooling. The molten liquid in the casting object solidifies first, contracting and drawing the still molten metal out of the pear. This prevents bottlenecks from forming and blocking the flow. Shrinkholes and imprecise fits are thus prevented (Burns without residue).

Technische Daten

Length	35 mm
Ø pear head	6,6 mm

Description

Description	Art. No.
GEO wax casting pears, turquoise, approx. 200 pcs.	501-1100



 GEO

Triangular casting sprues

Set of casting sprues for effective attachment of the wax model.

- stable, extra-hard casting system.
- defined reduction of the sprue diameter.
- sufficiently large reservoir.
- burns without residue.
- handling advantage:
 - no distortion of the bridge when sprueing.
 - time saving.
 - optimum metal flow.

Description

Description	Art. No.
GEO Triangular casting sprues, approx. 100 pcs.	680-3000

Wire on rolls



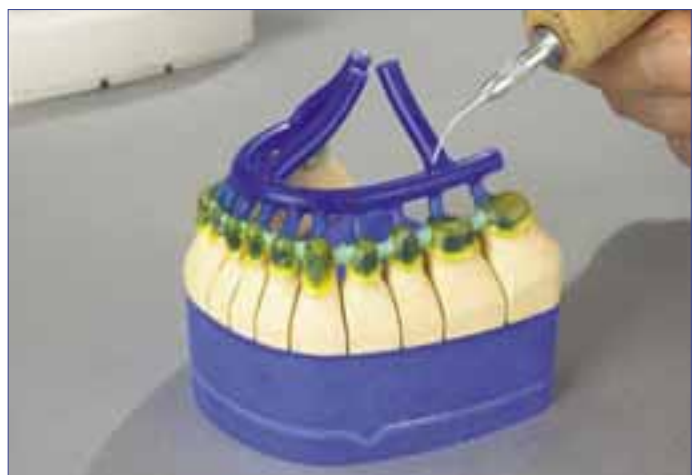
⊗ GEO

Wax wire

An optimal wax mixture makes the GEO wax wire tension-free, thus limiting elastic recovery.

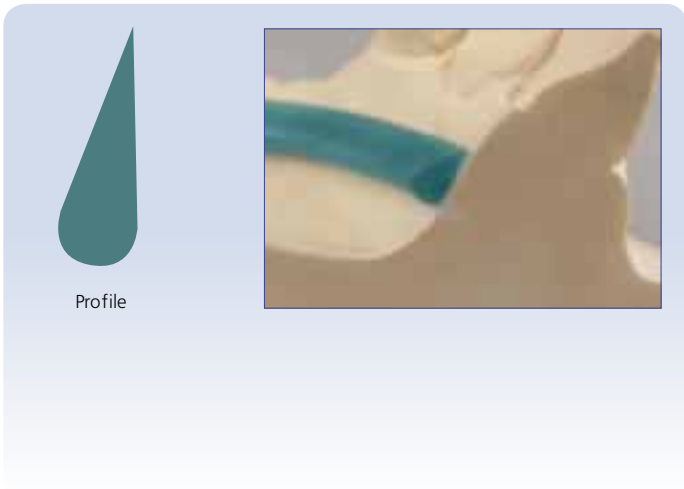
- suitable for various fittings due to the different diameters and wax strengths.
- easily shaped but dimensionally stable.
- no tangling or fissure buildup when shaping individually.

burns without residue



Description	Art. No. turquoise/hard	Art. No. blue/medium-hard	Art. No. light-blue/extra-hard
2.0 mm / approx. 250 g	676-2020	678-3020	675-1020
2.5 mm / approx. 250 g	676-2025	678-3025	675-1025
3.0 mm / approx. 250 g	676-2030	678-3030	675-1030
3.5 mm / approx. 250 g	676-2035	678-3035	675-1035
4.0 mm / approx. 250 g	676-2040	678-3040	675-1040
5.0 mm / approx. 250 g	676-2050	678-3050	675-1050

3 Wax LJ bars and rods



GEO

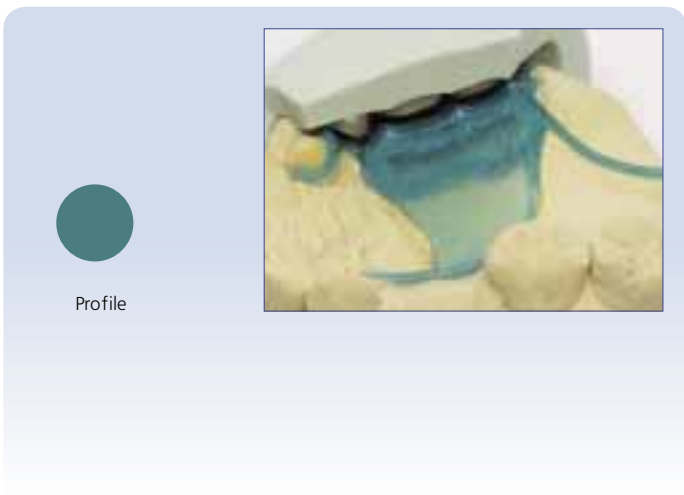
Lingual bars

Profile sections for forming lower jaw bars.

- standard size, „drop“ shape.
- optimum shaping and adaptability.
- medium-hard quality.
- will not return to its original shape, outstanding pressure stability.

Burns without residue

Description	Art. No.
4 x 2 mm, approx. 65 g	667-3042



GEO

Wax wire in bars

Wax profiles for forming edges or individual retainers.

- medium-hard, easily shaped wax wire.
- available in four different diameters.
- will not return to its original shape, outstanding pressure stability.

Burns without residue

Description	Art. No.
0.6 mm, approx. 12 g	668-3006
0.8 mm, approx. 25 g	668-3008
1.0 mm, approx. 37 g	668-3010
1.2 mm, approx. 50 g	668-3012

For prosthetic professionals



GEO **Set-up wax**

Shape stable wax for fixing prosthetic teeth during set up.

- can be easily adapted to alveolar ridge.
- no melting required; soft wax for easy tooth positioning.
- time saving and easier to use.

Description	Art. No.
GEO set-up wax, narrow, approx. 220 g (3.4 x 2.5 mm)	653-3000
GEO set-up wax, wide, approx. 220 g (5.5 x 4.5 mm)	654-3000

More stability with mesh reinforcement



CE



Mesh inserts

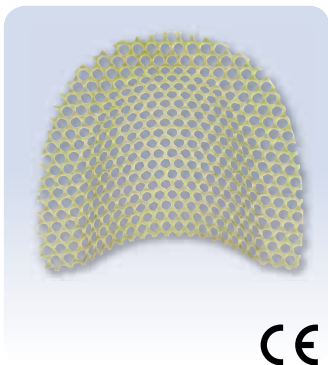
Fine mesh reinforcement net with bound periphery for complete upper dentures.

- stable, gold-plated mesh.
- simple, individual adaptability.
- guaranteed high stability of acrylic denture.

Technical Details

Thickness	0,35 mm
Dimensions (WxLxH)	68 x 40 x 12,5 mm (2,68 x 1,58 x 0,49 inch)

Description	Art. No.
Mesh inserts, gold-plated, 5 pieces	232-1100



CE



Strengthening grid

Insertion grid with increased stability for complete or partial upper dentures.

- in gold-plated or plain versions.
- even if breaks or splits occur in the acrylic the denture stays in position.
- improves considerably strength of acrylic denture.

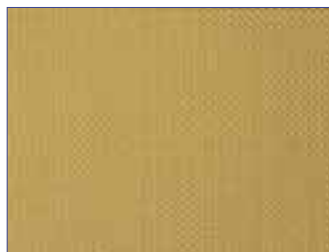
Technical Details

Thickness	0,4 mm
Dimensions (WxLxH)	59 x 54 x 14 mm (2,32 x 2,13 x 0,55 inch)

Description	Art. No.
Strengthening grid, gold-plated, 5 pcs.	235-0104
Strengthening grid, plain, 5 pcs.	235-0004



CE



fine, gold-plated



medium, gold-plated

Sizes as illustrated

Mesh strengtheners

Fine mesh for individual reinforcement of acrylic dentures.

- gold-plated (also available on roll).
- simple to match by cutting individual shapes.
- easily adaptable.

Technical Details

Thickness	0,4 mm
-----------	--------

Description	Art. No. fine	Art. No. medium
Mesh strengthener, gold-plated 10 x 10 cm, 3 sheets	222-1100	223-1100
Mesh strengthener, gold-plated 50 x 10 cm, 1 roll	222-2100	223-2100

3 Surface conditioning for perfect casts



GEO Waxfinish

By using GEO Waxfinish an even, smooth wax surface is achievable which later eases the finishing and polishing process.

- smooth surfaces reduce the finishing time by up to 50 %.
- 5 to 10 µm layer thickness.
- occlusal and approximal contact points are exactly the same after polishing as they are in the original wax model.
- can be thinned according to requirements.
- GEO Waxfinish floods any fissure depths inaccessible to the fissure drill.



since even the smallest gaps are sealed.

Not to be used in conjunction with Picosilk or other wetting agents!

Model casting:
Quickly and easily smooth transition areas with GEO Waxfinish. This will reduce working time by around 10 %. The flow of investment material between the model and the investment model is avoided



Description	Art. No.
GEO Waxfinish Set with 15 ml varnish and 30 ml thinner	1553-0000
GEO Waxfinish varnish, 15 ml	1553-0100
GEO Waxfinish thinner, 30 ml	1553-0200



Picosilk

Picosilk is a wetting agent for wax models within crown, bridge and model casting technique.

- spray on finely using the atomiser before investing.
- wax does not take on water-repellent characteristics after use.
- improves the flow of investment material.
- allows reproduction of the finest models.
- prevents microbubbles.
- speedy evaporation of excess liquid without becoming too cold.

Description	Art. No.
Picosilk, 75 ml spray bottle	1550-0000
Picosilk 500 ml refill bottle	1550-0100

Laboratory equipment / devices

Active carbon..... page 146

Mesh firing tray page 146

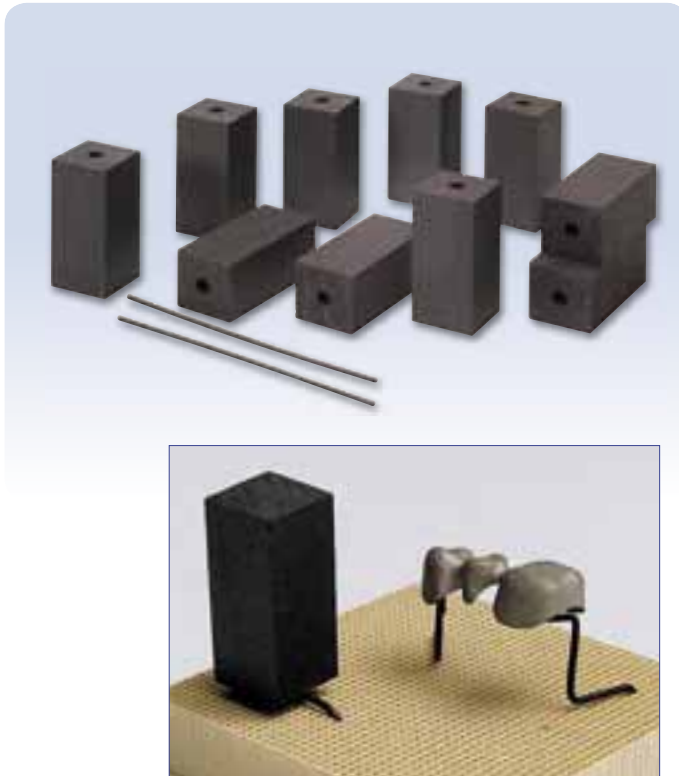
Sandblasting material... page 148

Cleaning material..... page 150

Polishing pastes page 152



Accessories for porcelain work



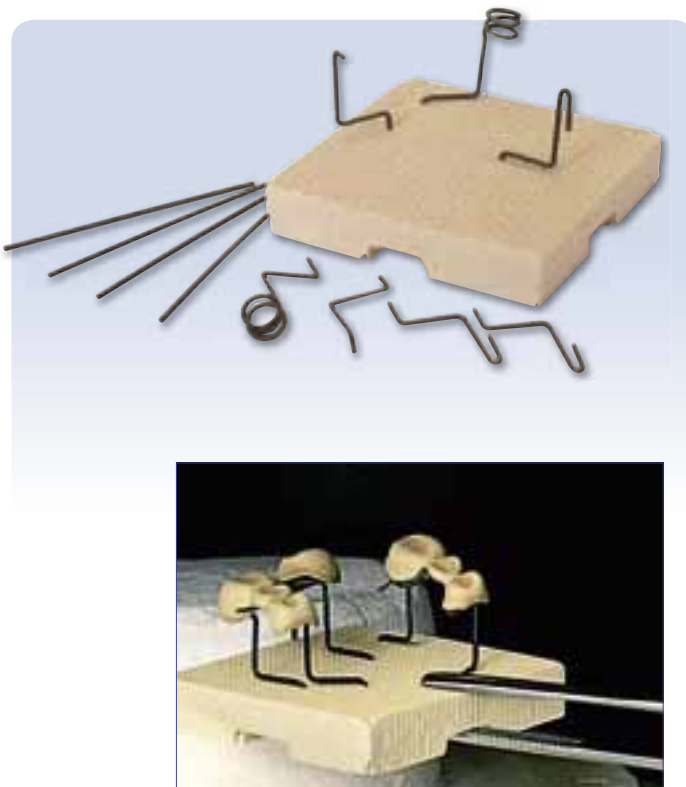
Aktiv-Karbon

For regularly cleaning the porcelain furnace by absorbing the oxide deposits during the firing process.

- ideal for firing non-precious metals, low gold content and bonding alloys as well as oven solderers.
- prevents contaminated deposits.
- does not affect the porcelain quality.

Description	Art. No.
Aktiv-Karbon, 10 pieces, incl. 2 supports	2065-0000

Firing trays



Mesh-Tray

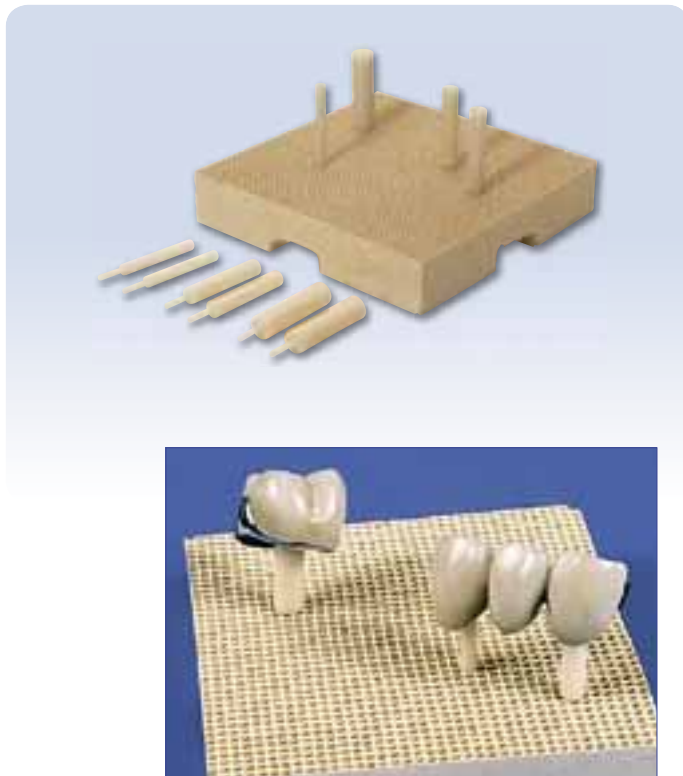
Honeycomb shaped, light-weight firing tray for individual positioning of crowns and bridges in the porcelain oven.

- firing tray absorbs minimal heat.
- no transfer of tension onto model.
- supports made from a high temperature-resistant special alloy – can be individually shaped.
- exact positioning of the supports is possible due to the honeycomb shape of the base plate.

Technical Details	
Ø supports	1 mm
Dimensions of base plate	≈ 55 x 53 mm

Description	Art. No.
Mesh-Tray incl. 2 base plates, 6 shaped and 4 straight supports	1922-0000
6 shaped and 4 straight supports	91922-0001
20 straight supports	91922-0003

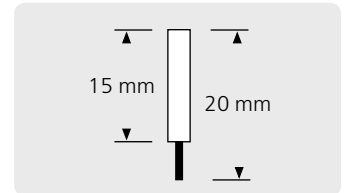
Firing trays



Mesh-Tray K

Firing tray with porcelain supports for individual positioning of crowns and bridges in the porcelain oven.

- construction ensures a similar expansion / contraction to the object.
- no transfer of tension to the model.
- porcelain supports.
- varying support dimensions for anterior, pre-molar and molar crowns.
- exact positioning of the supports due to the honeycomb shape of the base plate.



Technical Details

Ø supports	1 mm
Dimensions of base plate	≈ 55 x 53 mm

Description	Art. No.
Mesh-Tray K, incl. 2 base plates and 10 porcelain supports	1922-0100
10 porcelain supports (3 x Ø 2 mm, 4 x Ø 3 mm, 3 x Ø 4 mm)	91922-0002



Fibertray

Textile firing tray for stable positioning of porcelain models during firing in the oven.

- remove minimal heat from object to be fired.
- ideal for full porcelain restorations or large span bridge constructions.
- more stable than wool firing pads.
- can be built up into many positions
- top layer can be peeled off when worn.
- contact has no effect on porcelain.
- additional stability can be given by inserting Mesh-Tray or Mesh-Tray K supports.

Technical Details

Ø Fibertray	50 mm
-------------	-------

Description	Art. No.
Fibertray, 10 pcs.	1919-0000

Abrasives from the experts in blasting techniques

The Renfert line of abrasives covers every abrasive type and grain size required in dental technology. The high quality meets all the DIN requirements; the high purity prevents premature failure of the blasting units.

The following abrasive are available for a variety of uses:

- Cobra
- Rolloblast

Renfert blasting units on pages 10–21.

Cobra

This abrasive contains one of the hardest materials: aluminium oxide (Al₂O₃).

- extremely sharp-edged.
- low to very high abrasive effect dependant on size.
- extremely pure – approx.

- 99.7% Al₂O₃.
- less than 0.06% SiO₂ impurity – according to DIN 8201 there is no danger of silicosis.
- low dispersion of grain sizes.

Rolloblast

Non-abrasive glass beads for smoothing and condensing of surfaces.

- guarantees silky matt surface with no light reflection.
- for the finest surface treatment of precious and non-

- precious metal alloys.
- does not cause silicosis.

Cobra 25 µm (450 mesh)	Sandblasting fissures; devesting pressable ceramics/inlays
Cobra 50 µm (270 mesh)	Fine abrasive; gentle oxide removal/devesting; framework preparation (PM); surface conditioning (porcelain, composite); removing cement (PM, NPM); removing the reaction film/ conditioning before etching in the pressable ceramics technique
Cobra 90–125 µm (200–115 mesh)	Medium abrasive; oxide removal/devesting; framework preparation (PM/ NPM); surface conditioning (porcelain/ composite); preparing for soldering; surface conditioning with denture acrylics
Cobra 250 µm (60 mesh)	Highly abrasive; heavy oxide removal/devesting (NPM)
Rolloblast 50 µm (400–200 mesh)	Surface condensing and satin-smooth high lustre on occlusal surfaces, in secondary units or inner surfaces of crowns; cleaning dentures (plaster/calculus); devesting (pressable ceramics/inlays)
Rolloblast 100 µm (170–100 mesh)	Surface condensing, smoothing and polishing NPM; removing debris from dentures (plaster/calculus/ etc.)
ROCA TEC™ - 3M ESPE	Cold silicatisation in the sandblasting unit (see page 17)

Info

Renfert abrasives are supplied in acrylic canisters or buckets to preserve their high quality. The hermetic seals on these containers prevent any humidity entering.

The 5 kg canisters are easy to handle. The abrasive can be comfortably poured into the module.



Abrasive use: Cheap can often prove expensive

Insufficient attention to quality when purchasing or employing abrasives engenders a variety of risks.

Hardly recognisable to the naked eye:

- lack of purity (contamination).
- risk of clumping.
- unsuitable grain shape and grain size distribution.



- risk of silicosis from abrasives containing fine, crystalline quartz.
- incorrect application.

Why are purity and correct storage so important? Contaminated or damp abrasive as well as inadequate grain shape and grain size distribution lead to:

- altered, undesirable results (precise adjustment to the alloy or the desired surface structure is not possible).
- the risk of metalliferous inclusions in treated surfaces.
- nozzle blockage.

The consequences: decline in work quality, longer working times and increasing costs. These are the points to observe when buying and using sandblasting agents:

- purity of the agent (classification of the grain shape and grain size distribution in accordance with FEPA, ISO, ANSI or JIS standards).
- absolutely dry storage by way of appropriate packaging.
- assurance that the abrasive contains no free, crystalline quartz (e.g., through DIN 8201/6 certification), otherwise there is a risk of silicosis!
- correct use (pressure, angle, nozzle, material).

Grain sizes

Blasting nozzle application overview (page 22).



Cobra 25 µm (450 mesh)

- fissure blasting.
- devesting pressed porcelain/inlays.

Description	Art. No.
25 µm, white, 5 kg canister	1594-1105



Cobra 50 µm (270 mesh)

- gently abrasive.
- gentle oxide removal / deflasking.
- frame preparation (precious metals).
- surface conditioning (porcelain / acrylic).
- cement removal (precious and non-precious metals).
- removing the reaction layer / conditioning prior to etching pressed porcelain.

Description	Art. No.
50 µm, white 5 kg canister	1594-1205
50 µm, white 20 kg bucket	1594-2220



Cobra 90 – 125 µm (200 – 115 mesh)

- mildly abrasive.
- oxide removal/deflasking.
- frame preparation (precious/non-precious metals).
- surface conditioning (porcelain/acrylic).
- preparation for soldering.
- surface conditioning of denture acrylics.
- highly effective in the Vario jet recyclable blasting unit.

Description	Art. No.
90 µm, white 5 kg canister	1584-1005
110 µm, white 5 kg canister	1583-1005
110 µm, white 20 kg bucket	1583-1020
125 µm, pink 5 kg canister	1587-1005
125 µm, pink 20 kg bucket	1587-1020



Cobra 250 µm (60 mesh)

- highly abrasive.
- removal of heavy oxide layers/deflasking (non-precious metals).

Description	Art. No.
250 µm, white 5 kg canister	1585-1005
250 µm, white 20 kg bucket	1585-1020



Rolloblast 50 µm (400 – 200 mesh)

- surface condensing and silky matte high-lustre finish on occlusal surfaces, in secondary components or crown interiors.
- denture cleaning (plaster / tooth tartar).
- devesting (pressed porcelain/inlays).

Description	Art. No.
50 µm 5 kg canister	1594-1305
50 µm 12,5 kg canister	1594-2312



Rolloblast 100 µm (170 – 100 mesh)

- surface condensing, matting and lustre polish of non-precious metals.
- removal of residue from dentures (plaster/tooth tartar/etc.).

Description	Art. No.
100 µm 5 kg canister	1589-1005

3 Cleaning agents

Cleaning agents	Art.-No.	Suitable for	Removal of	Page
<i>SYMPROfluid Universal</i>	6500-0600	Dentures, orthodontic appliances and splints	Plaque, tartar and adhesive creme	9
<i>SYMPROfluid Nicoclean</i>	6500-0610	Dentures and splints.	Nicotine stains	9
<i>GO-2011</i>	2011-0000	Mixing bowls, acrylic dentures, impressions trays, castings, instruments, utilities	Dental stones, gypsum-bonded investment material and alginates	150
<i>Ceramex</i>	2187-1000	Etching of porcelain, metal-ceramic alloys	Porcelain, investment material and metal oxides	151
<i>Electrolyte</i>	1524-x000	Electrolytic polishing of chrome cobalt frames		151

One for all



GO-2011 – Combined, ready-to-use alginate and gypsum solvent

The most effective all-in-one cleaner for alginate and gypsum contamination. Only one solvent for both applications.

- Easily cleans
- Mixing Bowls
 - Acrylic dentures
 - Impression trays
 - Castings
 - Instruments
 - Utilities
- of dental stones, gypsum-bonded investment material and alginates – even in hard-to-reach areas.
- Ready to use: Simple and fast
 - Quick reacting (bubble forming).
 - Does not etch acrylics, metals, or glass.

- Best effect when used in ultrasonic cleaners at 40–50°C (104–122°F).

- Best cleaning times, only:
- 5–15 minutes in an ultrasonic cleaner.
 - 15–90 minutes without ultrasonic cleaner.

Description	Art. No.
GO-2011, 2 l	2011-0000



Accessories for porcelain work



Ceramex

Caustic agent for removing porcelain, investment material and metal oxides.

Areas of Application

- removal of porcelain facings.
- etching full porcelain inlays and crowns before cementing (cover polished areas with wax).
- removal of oxides from all bonding alloys - **not titanium!**
- loosening of investment material without blasting.

Advantages

- particularly effective in an ultrasound bath at 40–45°C resp. 104–113°F (acrylic vessel) (see pages 68–69).
- no damage to framework.
- does not attack metal.



Porcelain facing before treatment with Ceramex



Porcelain facing after treatment with Ceramex



Attention: Ceramex may only be poured into suitable plastic containers, never into glass containers.

Description	Art. No.
Ceramex, 1 l	2187-1000



Elektrolyt

For electrolytic high-lustre polishing of chrome cobalt frames in special units.

- special additives ensure time-saving and high efficiency during electrolytic polishing.
- for all units with copper, precious metal or titanium electrodes.

Description	Art. No.
Elektrolyt, 2 l	1524-1000
Elektrolyt, 10 l	1524-2000



Polishing paste	Art. No.	Field of utilisation										Page
		Precious metals		Model casting/ npm		Ceramics		Acrylics for veneer		Denture resin		
		Prepol.	HL	Prepol.	HL	Prepol.	HL	Prepol.	HL	Prepol.	HL	
<i>Kohinoor L</i>	516-0001						•					152
<i>Resilit</i>	518-2000								•		•	152
<i>Brinell L</i>	519-000x		•		•		•					153
<i>Saphir</i>	515-0000	•	•	•	•							153
Universal polishing paste beige	513-1000										•	153
<i>Opal L</i>	520-0000							•	•		•	153

Prepol. = Prepolishing HL = High-lustre

Polishing agent for brilliant high-lustre



Kohinoor L

Fine, adhesive diamond polishing paste for highlustre polish on porcelain

- optimum uptake with rotating polishing brush.
- very economical in its use.
- ideal for „hand polishing“ porcelain work.
- good bond between paste and object due to „adhesive effect“ (= high efficacy).

Description	Art. No.
<i>Kohinoor L, 5 g</i>	516-0001



Resilit

Liquid high-lustre polishing medium for acrylic and metal.

- all-purpose use, immediate high-lustre.
- does not smear or become trapped in grinding striations.
- cools the surface.
- optimum prevention against deposits on materials.
- highly efficient.
- practical dosing bottle.

Description	Art. No.
<i>Resilit, 500 g</i>	518-2000



Brinell L

Brinell L is a high-lustre polishing paste impregnated with diamond powder for precious metal bonding alloys and porcelain.

- the finest diamond particles achieve the optimum high-lustre shine.
- sparing application via the measuring syringe.

- efficient take-up using felt wheels.
- excellent high-lustre using cotton buffs.

Description	Art. No.
Brinell L, 5 ml with 1 cotton buff (No. 205-1000), 1 felt wheel and 1 mandrel	519-0001



Saphir

High-lustre polishing paste for precious metal and chrome-cobalt alloy crowns and bridges.

- special formula of high quality raw materials.
- for general use on all alloys.
- optimum polishing effect with Polisoft pre-polishers and Bison brushes (see pages 94, 92).

- good adhesion to polishing brushes due to its creamy consistency.
- use sparingly.

Description	Art. No.
Saphir, approx. 250 g	515-0000



Universal polishing paste beige

Paste for high-lustre polish on all prosthetic acrylics.

- hard polishing paste for mirror-like surface.
- long-lasting.
- fine grained consistency.
- optimum paste application for brushes or buffs.

Description	Art. No.
Universal polishing paste, beige, 6 x approx. 200 g	513-1000



Opal L

White high-lustre polishing paste for all facing acrylics using a handpiece.

- particularly suitable for light-curing acrylics.
- quick polishing effect.
- quickly smoothes the surface without altering the structure.
- best used in conjunction with Bison (page 92) and goat hair brushes (page 93).

Description	Art. No.
Opal L, 35 g	520-0001

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Some end of range items are not represented in this catalogue. In any case, contact us for detailed information. All our products are subject to a continuous development procedure with the possibility of modifications in technology and colour. **Date 05/2011**

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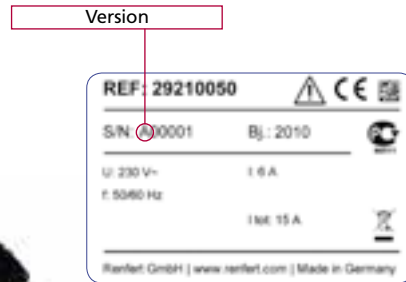
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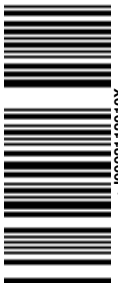
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