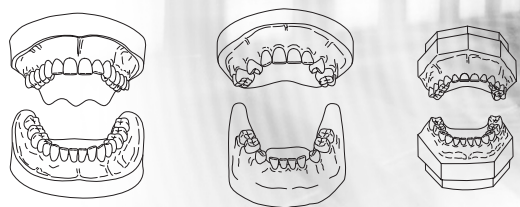


Operating instructions Study and Tooth Models.



Always on the safe side.



KaVo. Dental Excellence.

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Study and Tooth Models.

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Study and Tooth Models.

A 1 User information

A 1.1 Meaning of the pictograms

 Situations where failure to follow the instructions may lead to danger, damage to material or operating faults.

 Important information for operator and engineer.

 Automatic mode
Automatic sequence

 Close, screw in, fasten, etc.

 Open, release, loosen

+ more, higher

- less, lower

 Continuous operation

 Time, time sequence

 Disconnect mains plug

A 1.2 Important information

 The instructions for use should be read by the user before starting up the unit for the first time, in order to avoid incorrect operation and other damage. If other language versions are required, please request these from your responsible KaVo agent. Duplication and distribution of the instructions for use (IU) require KaVo's prior consent.

All technical data, information and properties of the product described in the IU correspond to the state on going to press.

Modifications and improvements to the product as a result of new technical developments are possible.

This does not imply any right to upgrade of existing units.

KaVo assumes no responsibility for damage arising through:

- external influences (poor quality of the media or inadequate installation)
- use of incorrect information
- improper use
- improperly performed repairs.

Repair and maintenance work - apart from the activities described in these instructions for use - may be performed only by qualified technical personnel.

In the event of modifications by third parties, the approvals become null and void. KaVo recommends using only original spare parts for operation and for repair.

A 1.3 Safety measures

Safe operation and protection of the product can only be achieved by use in accordance with regulations, the Instructions for Use, and the approved accessories. Additionally the following should be observed:

Safety at Work Regulations
Prevention of Accident Regulations

In accordance with these requirements, it is the duty of the user:



- to use only flawless materials
- to observe the correct applications
- to protect the patient, and others, from exposure to injury
- to avoid contamination by the product

A 1.4 Uses and Applications

The Study and Tooth Models allow the student of dental medicine to practise all necessary treatment techniques, prior to treating a live patient for the first time.

KaVo tooth models are based on impressions taken from an actual patient, with all pertinent anatomical details. When mounted in the KaVo Jaw Simulator, the functional relationship between tooth structure, morphology and the movements of the temporomandibular joint can be meaningfully taught. The complete range of full and partial-dentition models; special models for paedodontics, oral surgery and periodontics; together with epoxy models and silicone moulds, covers practically all areas in the education of dental students and technicians.

The modular construction of the models enables the individual components to be exchanged. Due to the identical, compatible construction, the differing models can be combined in the jaw simulator to simulate a variety of situations.

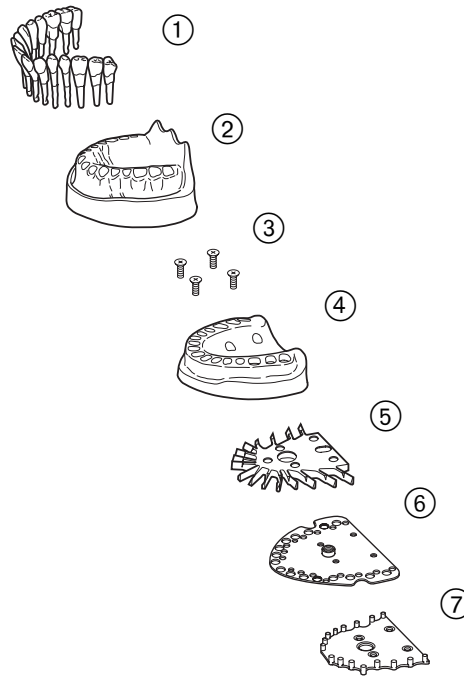
KaVo tooth models are also ideally suitable for demonstration and explanatory purposes to patients, thanks to the life-like reproduction of human oral conditions.

Study and Tooth Models.

A 2 Full and partial-dentition Study Models

A 2.1 Components of the latch-type tooth models

- ① Teeth with cut-out notch
- ② Gingiva, various designs
- ③ screws
- ④ Model base, types:
0.623.1492 for upper model full dentition; and partial dentition : TZ 14, TZ 12, TZ 10, TZ 9
0.623.1502 for upper model partial dentition TZ 5 and TZ 4.
0.623.1392 for lower model full dentition; and partial dentition : TZ 14, TZ 13, TZ 10, TZ 8.
0.623.1402 for lower model partial dentition TZ 7 and TZ 2.
- ⑤ Retention Mechanism
- ⑥ Metal Plate for location of teeth, and securing the model
- ⑦ Locking Comb to lock the retention mechanism



A 2.2 Tooth replacement

Due to the unique design of the retention mechanism ⑤ all simulated teeth ① are held securely in the model base, but with the help of extraction forceps ⑧ can be easily removed.

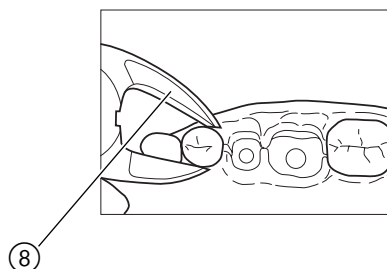
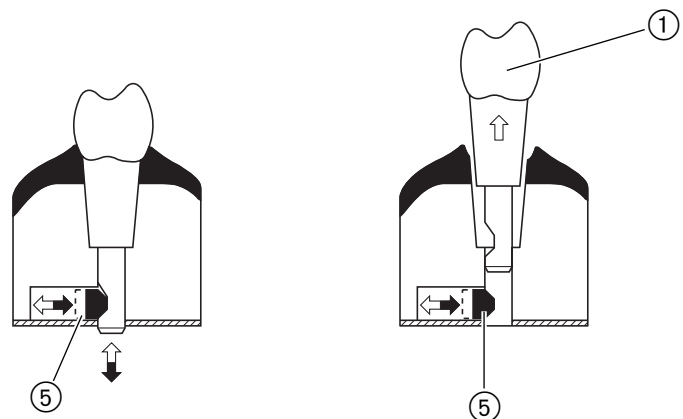
For examination purposes, or other situations where a quick tooth replacement is not desired, the teeth can be locked in place by using the locking comb ⑦. Removal of the locking comb is only possible by using a tool (small screwdriver, or something similar).

i When inserting a tooth, observe the correct orientation of the notch – press the tooth down until it latches into place in the cavity.

! When removing a tooth, pull in a straight direction – do not twist (danger of breaking!)

Insert the replacement tooth as described above. (Take particular care not to break anteriors)

Due to the necessary hardness of simulated teeth, the retention mechanism becomes gradually worn. This means that after replacing teeth several hundred times, the holding power of the mechanism is reduced, and should then be replaced.



Study and Tooth Models.

A 3 Surgery Models

i Root teeth and gingiva are glued in place!

Replacement of teeth and gingivae – see A 7,
Applications of the Repair Kit – see A 3.1.

KaVo Surgery Models make possible a
variety of exercises, e.g.

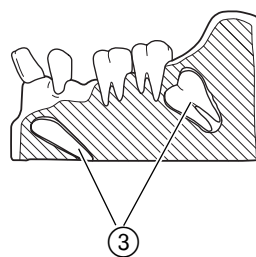
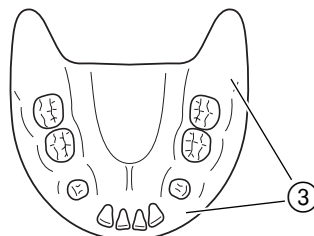
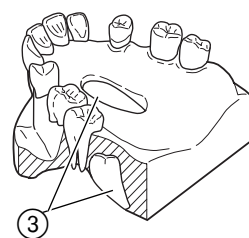
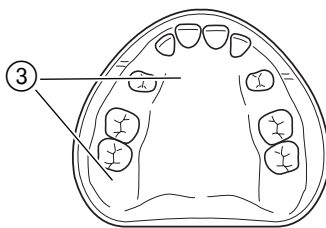
Osteotomy ③

Root amputation (hemisection)

Root resection, Single implants

The realistic simulation of bone structure
with compacta and spongiosa, together with
the incorporated nasal and sinus cavities,
offer ideal conditions for the insertion of
implants and true-to-life preparation exer-
cises in the bone.

The soft gingival tissue is ideally suitable
for incision and suturing exercises.



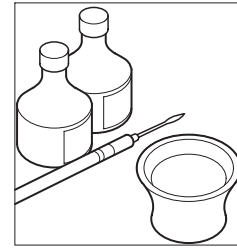
Study and Tooth Models.

A 3.1 Repair Kit for Surgery Models

For replacing the teeth and bone material damaged after surgical removal of unerupted teeth.

The repair kit Mat. No. 1.000.1024 consists of:

Moulding Resin component A
Moulding Resin component B
Mixing bowl



Completely remove the gingiva, or fold it back appropriately (see A 7 - Replacement of adhered teeth and gingivae)

Prepare the cavity created by the removal of the unerupted tooth, so that a replacement can be inserted.

Isolate the replacement teeth with a thin coating of wax and insert into the cavity. If necessary, secure with a small drop of wax.

Close the cavity with small layers of wax, leaving an opening at the highest point.

Mix the two resin components in the silicone bowl, in a proportion by weight of 80 parts A to 100 parts B.

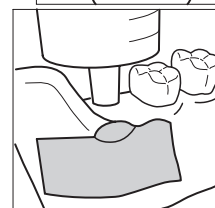
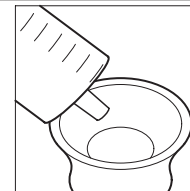
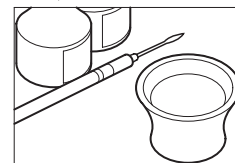
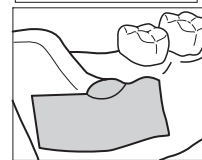
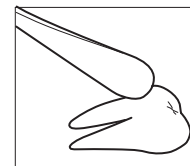
Draw the mixed resin into a syringe

i (working time of the material approx 25 – 30 minutes)

Fill the cavity with the resin, if necessary using a cannula (0,9 mm)

Allow to harden (approx 12 – 16 hours)

Remove the wax, and smooth off the surface.
Glue the (new) gingiva into place
(Adhesive Mat. No. 0.359.2021)



Study and Tooth Models.

A 4 Periodontal Models

i Root teeth are glued in place!

A 4.1 Model Set A1: Early adult periodontitis

① Upper PA A1, Mat. No. 0.623.1811

② Lower PA A1, Mat. No. 0.623.1821

This model demonstrates the condition of early adult periodontitis with localised recessions. The gingival margin, therefore, generally follows the cementoenamel line - or lies apically thereto.

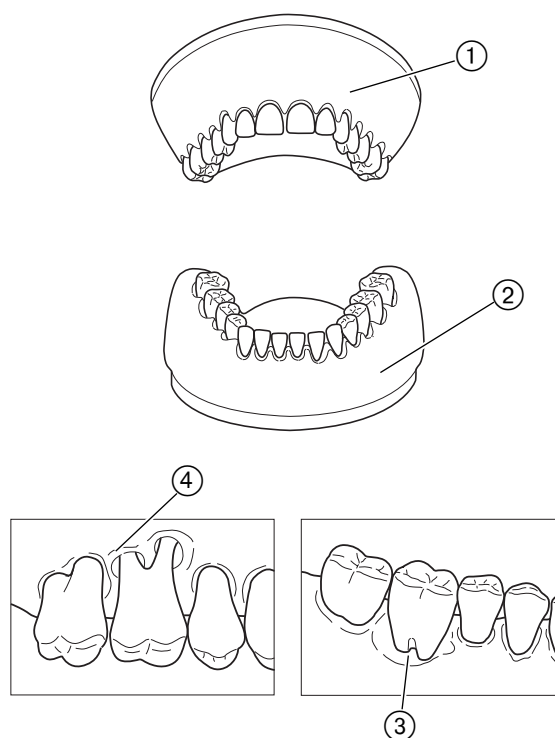
Recessions are noticeably evident on the buccal side in the upper front, as well as on the buccal aspect of all mandibular teeth.

Generally, the probing-depth of the pockets ranges from 2 – 4 mm. However, localised periodontal disease with intraosseous components can also be diagnosed. Advanced lesions are to be found particularly in the upper molars, and in the left lower region. Tooth 46 demonstrates a noticeable open furcation Class II on the buccal side ③.

A further Class II furcation of more than 3 mm is also to be found buccally on tooth 16 ④. The remaining molars 17, 14, 24, 26, 36 and 37 show evidence of early periodontal furcation conditions.

A distinct attachment loss is visible at teeth 41 and 42.

The treatment of this situation calls for systematic root-planing of all the affected areas. Surgical procedures should probably be considered for the upper right molar region, and eventually for tooth 46. In addition, a complex therapy of mucosal flaps, root amputation and bone replacement is indicated for tooth 16.



Study and Tooth Models.

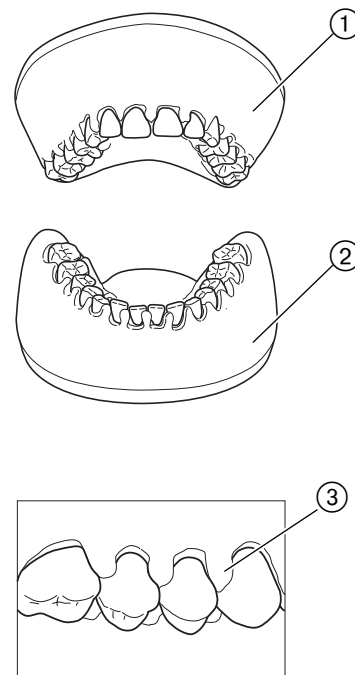
A 4.2 Model Set A2: Early adult periodontitis with pseudo-pockets

- ① Upper PA A2, Order No. 0.623.1831
- ② Lower PA A2, Order No. 0.623.1841

This model demonstrates the condition of adult periodontitis with multiple hyperplasia. The gingival margin lies therefore generally coronal from the cementoenamel line. Only on the buccal side of upper molars 17 and 16 is a slight recession to be seen. The hyperplasia is, above all, noticeably evident in the interdental spaces ③.

Due to the hyperplasia, various pseudo-pockets are recognisable, which combined with loss of attachment gives the impression of an advanced stage of periodontal disease. The probing-depth of the pockets ranges from 4 - 7 mm. Localised periodontal damage with intraosseous components can be diagnosed, with pocket-depths of up to 12 mm – tooth 16. As the clinical condition only partially demonstrates pseudo-pockets, the attachment loss is no greater than by Model Set A1.

The therapy for this situation demands systematic root-planing of the whole dentition, together with improved oral hygiene by the patient. These thorough hygienic measures will lead to a significant shrinkage of the soft tissue, so that through the healing process some of the pockets will be noticeably reduced. Following this initial treatment, it must be assumed that some remaining pockets will be of such a size that surgery will be necessary – at tooth 16 a complexity of measures including flaps, root amputation and hard-tissue replacement, etc. is indicated.



Study and Tooth Models.

A 4.3 Model Set B1: Advanced adult periodontitis

- ① Upper PA B1, Order No. 0.623.1851
- ② Lower PA B2, Order No. 0.623.1861

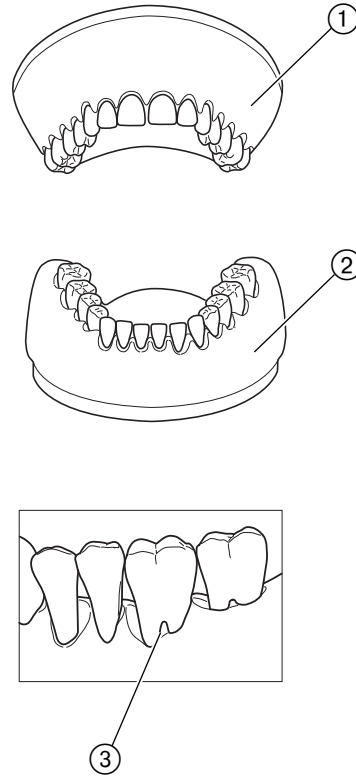
This model demonstrates an advanced stage of periodontal disease, which in some areas could be described as Rapidly Progressing Periodontitis – RPP. The gingival margin generally follows the cemento-enamel line, but in some positions curves apically from the line – teeth 17, 16, 26 and 46. This indicates that a generalised recession of 1 – 2 mm. is present in the whole dentition.

The extent of the advanced attachment loss is discernible predominantly by the highly increased probing depth, which can be diagnosed generally to a depth of 5 – 8 mm. Teeth 17, 16, 26, 34, 47 indeed show values up to 11 mm. Additionally, localised attachment loss on intraosseous pockets can be seen on teeth 14, 21, 26, 34, 42, 26 and 47.

The bifurcation of tooth 14 can be probed on the palatal side, mesially and distally, to a depth of more than 3 mm, and thus can be described as “open through and through” – Class III.

A similar condition can be found at tooth 46, which demonstrates both buccally and lingually, a horizontal furcation depth of more than 3 mm. The remaining furcations of teeth 17, 16, 36 and 47 show on all sides the onset of the disease, with horizontal depth of less than 3 mm ③.

The therapy for this case requires a careful evaluation of the prognosis for all teeth, whereby tooth 14 should be considered as “untreatable“, and extracted. As the situation relates to an extensive, advanced stage of periodontitis with various intraosseous angulated defects, a systematic hygiene treatment plan for the whole dentition is urgently indicated. Following this it is most likely that various surgical measures will be unavoidable. For the mild furcation conditions the therapy usually shows good results. However, the condition of tooth 46 demands more intricate measures – hemisection, etc.



Study and Tooth Models.

A 4.4 Model Set B2: Advanced adult periodontitis with multiple recessions

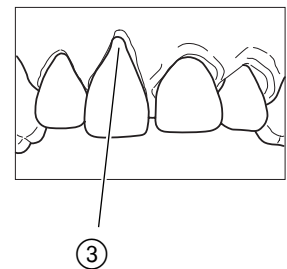
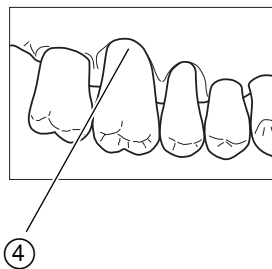
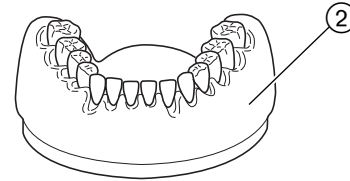
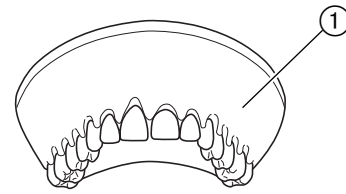
① Upper PA, Order No. 0.623.1871

② Lower PA, Order No. 0.623.1881

This model demonstrates an advanced stage of periodontitis, some areas rapidly progressive – RPP. The clinical condition shows generalised recessions, so that the gingival margin lies apically to the cemento-enamel line. Cleft-like recessions ③ are also visible, particularly to the right of the upper and lower dentition.

Although an advanced attachment loss in the whole dentition is to be diagnosed, the probing-depth is slightly less than in Model B1. The model demonstrates also localised intraosseous angulated defects, with some very deep pockets up to 12 mm. The periodontal disease is far advanced, especially in the molar regions ④. The bifurcation of tooth 46 can be probed both buccally and lingually more than 3 mm. and must, therefore, be classified “open through and through”, Class III. All remaining furcations of the upper and lower molars can be probed to a depth of less than 3 mm. Depending on the extent and location, these should be classified as “not fully open” – Class I or II.

The therapy for this case is identical to that of Model B1. At first, the operator must establish a clear picture of the prognosis for the, to some extent, severely damaged multi-root teeth. A systematic depuration of the whole dentition is vital. Although these measures will result in shrinkage of the soft tissue, the extent of the lesions in this advanced condition is such that the intraosseous angulated defects, and the affected furcations will most probably require a variety of surgical procedures. The treatment of the Class III furcations at tooth 46 is complicated – hemisection, etc., and the conditions to be found at molar 26 could also lead to some complex treatment measures.



Study and Tooth Models.

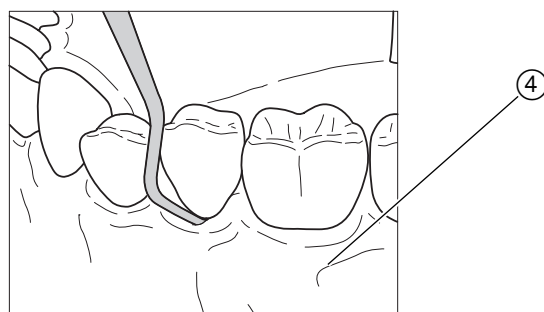
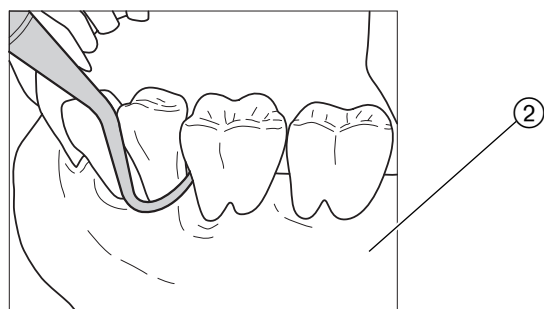
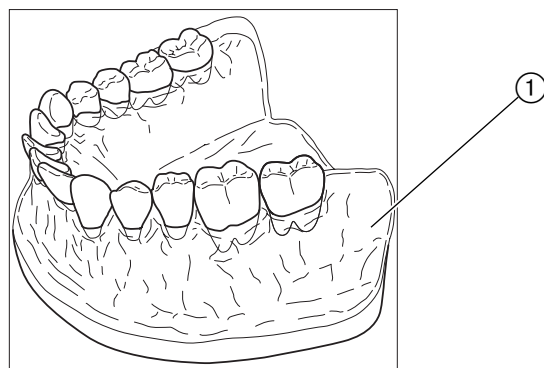
A 4.5 Transparent Gingivae

Transparent gingivae ① are also available for all periodontal models. This enables a systematic increase in the grade of difficulty for the exercises.

Exercise 1 – working on the model without gingiva ②.

Exercise 2 – with transparent gingiva ③.

Exercise 3 – working realistically with flesh-coloured gingiva ④.

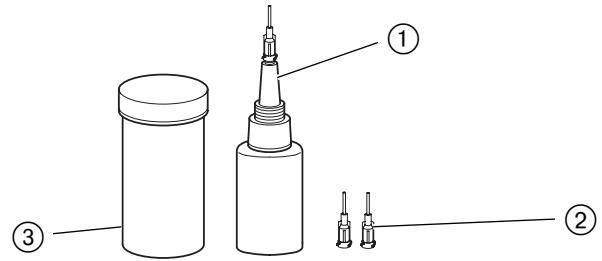


Study and Tooth Models.

A 4.6 Application of artificial calculus

The Kit consists of:

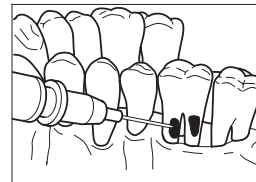
- ① Super-glue
- ② Needle Applicator
- ③ Powder



Remove gingiva from the model.

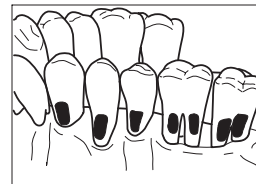


Apply a thin coat of the glue to the required area, using a cannula (0.9 mm) or the supplied needle applicator ②

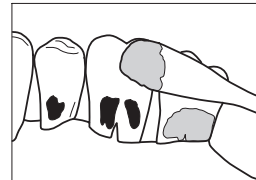


 *for safety reasons, take the usual precautions when applying super-glue!*

The glue can be applied on up to 5 teeth at the same time.



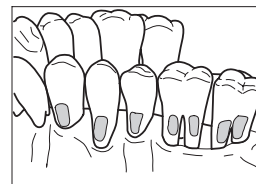
Apply a light dusting of the powder. Any surplus can be re-used.



Allow the glue to dry (a few minutes).

Carefully remove surplus powder using a compressed-air nozzle.

After 2 – 3 hours hardening time, the models are ready for use.



Study and Tooth Models.

A 5 Edentulous Models for full dentures and implantology

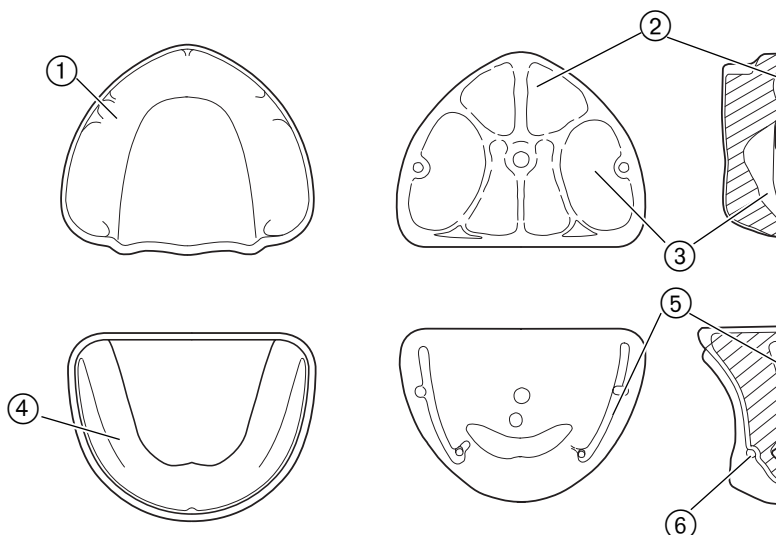
i *Gingiva is glued in place (to exchange gingiva – see A 7.2)*
When using impression materials, observe notes under A 12.

- ① Upper UBW
- ② Lower UBW

i *Suitable for full dentures as well as implantology*

These models provide a simulation of the nasal cavities (Cavum nasi) ② and the sinuses (Sinus maxillaris) ③ in the upper jaw ① – together with the nerve canals (Canalis mandibulae) ⑤ and the nerve egress (Foramen mentale) ⑥ in the lower jaw ④.

In conjunction with a realistic simulation of the bone structure, ideal working conditions for Implantology are thereby provided.



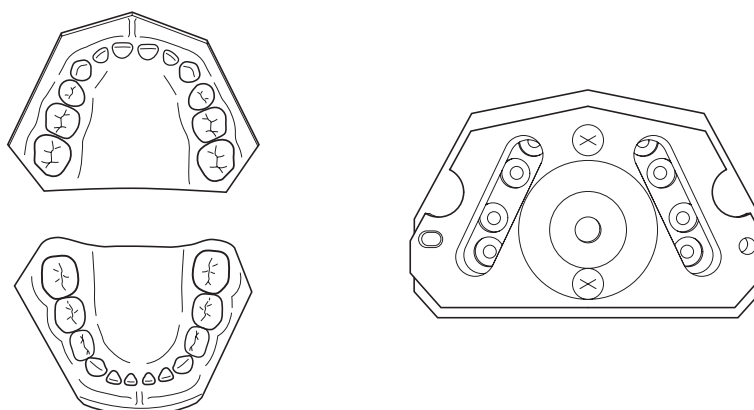
A 6 Paedodontal Models

Reproduction of a natural mixed dentition (20 milk teeth and 4 molars)

All 24 teeth can be replaced.

They can be removed by pressing with a supplied metal pin through a hole in the underside of the model.

The soft gingival tissue is permanently bonded to the model base, and cannot be replaced.



Study and Tooth Models.

A 7 Replacement of adhered KaVo root teeth and gingivae

A 7.1 Tooth replacement

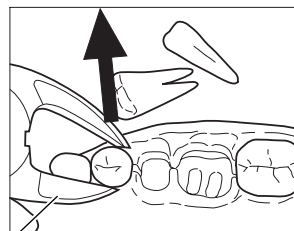
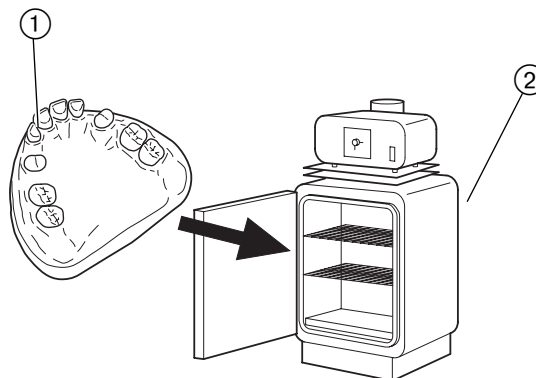
- Place the model ① in an oven ② pre-heated to approx 100°C (max 110°) and leave for about 5 to 10 minutes.
Or
- Place the model in boiling water for approx 3 – 4 minutes.
Or
- Use a microwave oven set at a maximum of 210 watts, leaving the model in for not more than 90 seconds. (**NB. the gingiva must first be removed**)

⚠ *Ensure that temperatures do not exceed 110°C, and that models are warmed for no longer than a few minutes. When using the microwave method, operating above the stated values can lead to the model being destroyed.*

The teeth can now be removed by careful use of extraction forceps ③.

⚠ *Do not twist the teeth when removing – this can break the roots.*

i *After cooling down, the adhesive returns to its original holding-power of the remaining teeth, even after several cycles.*



Study and Tooth Models.

A 7.2 Replacement of gingivae

Periodontal Models

As the gingiva is merely laid over the bony sub-structure, it can be lifted up by folding back at the interdental spaces. For better holding, at some spaces the gingiva is not separated. At these areas, carefully pull the gingiva through the interdental spaces. After positioning the new gingiva, locate the soft tissue between the spaces by means of an appropriate instrument.

Surgery and Implant Models

After heating (as described in section A 7.1) the gingiva ① can be peeled away from the model base ② with relatively light force.

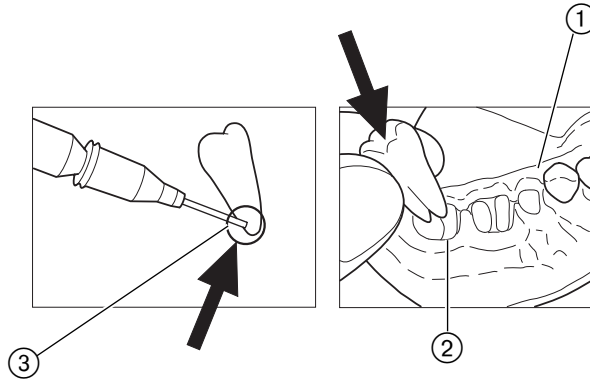
Any remaining adhesive is then removed from the model base and tooth sockets.

Apply a small drop of adhesive to the root tips ③ and insert the replacement tooth into the socket, using light pressure.

Coat the model base in the required area, sparingly using the adhesive (Mat. No. 0.359.2021) Then press the gingiva firmly into position.

The adhesive will set within a few seconds or minutes, depending on the room humidity.

i When working with super-glue, the manufacturers safety instructions must be strictly observed.



Study and Tooth Models.

A 8 Mounting models in the KaVo Jaw Simulator

A 8.1 Adjustment of models in Jaw Simulator 0.622.0521/ 0.622.1421

i See also *Operating Instructions Jaw Simulator* – Mat. No. 0.488.5877

Screw the upper model ③ into place, using the knurled screw ①.

! Take care when mounting periodontal, surgery and edentulous models, which are provided with plastic threads. Carefully turn fixing screws ① and ⑥ only enough to hold the model firmly. Overtightening the screws will damage the threads.

i When the upper model is mounted so that the incisal edge lies 2 mm beyond the Marking ②, then this corresponds to the Bonwill Triangle.

Press the two holding clips ⑧ to close the lower jaw.

Screw the lower model loosely into place, using the screw ⑥.

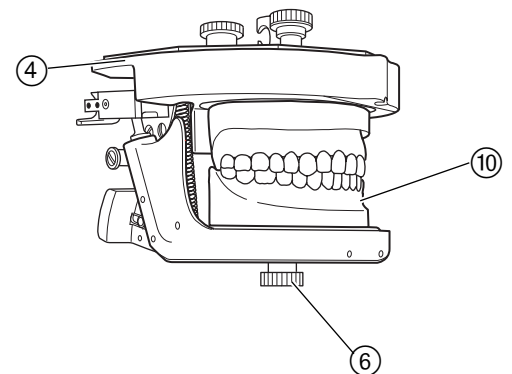
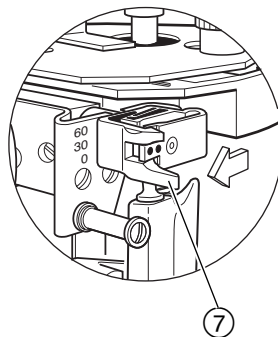
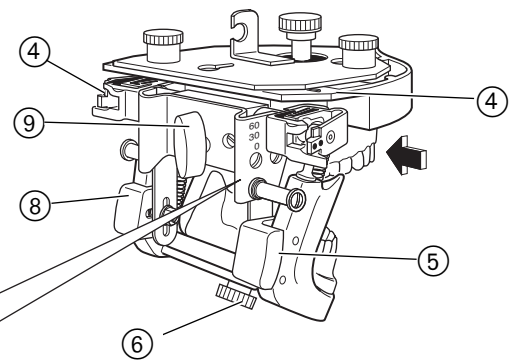
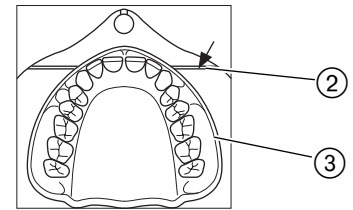
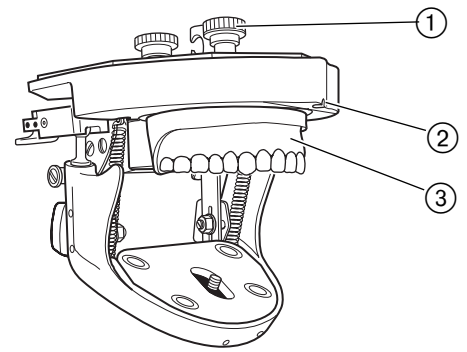
When both models are in occlusion, then adjust the jaw-height using screw ⑨.

i The occlusion can best be judged from the rear perspective.

To lock the condyles in the centric position, press on both condylar boxes ④ in the direction of the arrow until they latch into place.

Orientate the lower model ⑩ with the upper model ③, then tighten screw ⑥.

Pressing peg ⑦ in the direction of the arrow releases the centric lock.



Study and Tooth Models.

A 8.2 Adjustment of models in Jaw Simulator Mat. No. 0.622.0581 / 0.622.0591

⚠ Take care when mounting periodontal, surgery and edentulous models, which are provided with plastic threads. Carefully turn fixing screws ① and ⑥ only enough to hold the model firmly. Overtightening the screws will damage the threads

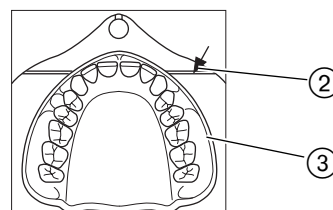
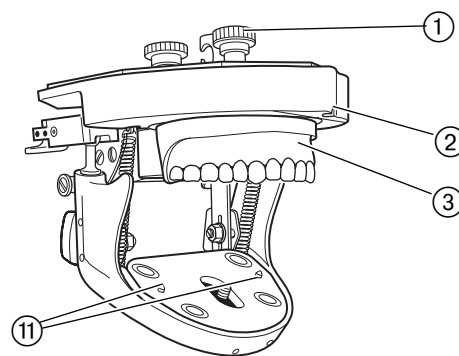
Locate the upper and lower models on the orientation pins ⑪ and tighten screws ① ⑥.

The models sit automatically in the correct position.

Should the height-relationship need adjusting:

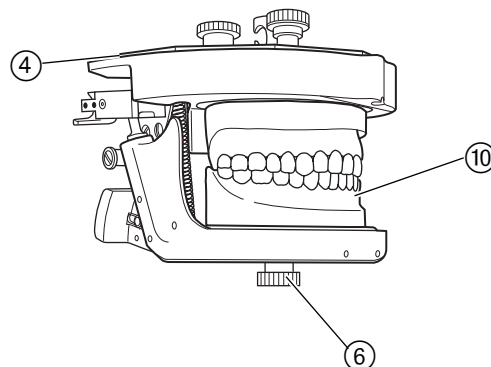
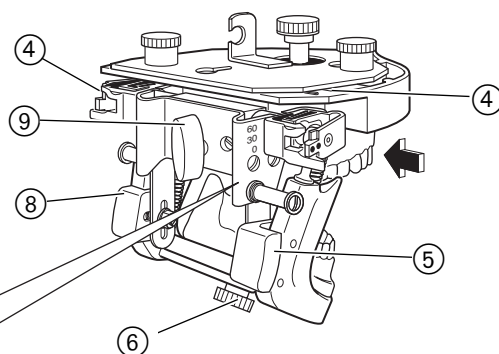
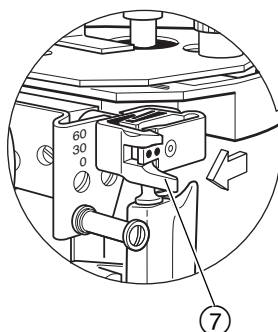
Locate and fix the models as described. Press both holding clips ⑧ to close the lower jaw.

Use screw ⑨ to adjust the required height.



A 8.3 Adjustment of models in Jaw Simulator Mat. No. 0.622.1631 / 0.622.1731

In this simulator the models are held in place magnetically. To achieve this, a collar screw 0.623.2402 must be screwed into the model baseplate. Adjustment of the simulator is as described under A 8.2.



Study and Tooth Models.

A 9 Mounting models in the KaVo Articulator

By using “Split-plates“, KaVo study models can be easily transferred from the patient simulator into the correct position in PRO-TAR Articulators.

To make the split-plates, the following procedure is recommended

1. Record the upper model data ② by use of the ARCUS Facebow ①.
2. Mount the facebow (1) in the PROTAR articulator ④.

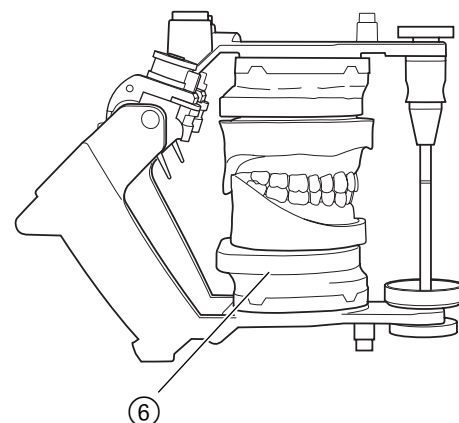
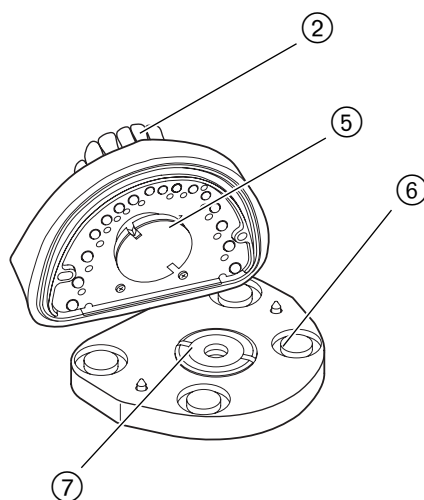
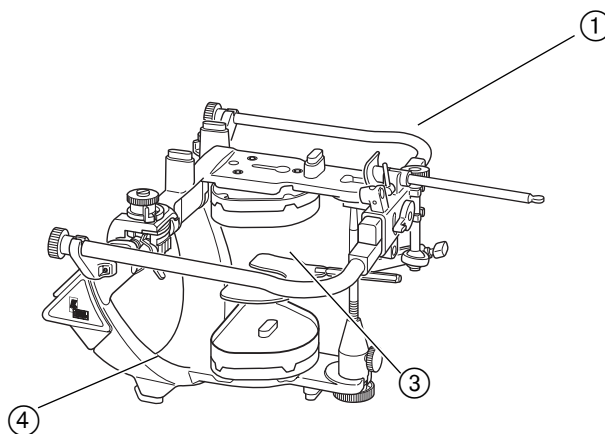
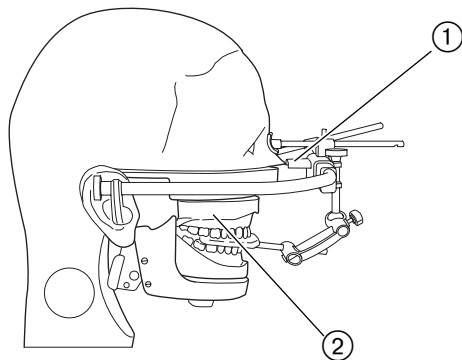
Screw collar screw 0.623.2402 ⑤ into the model ②.

Screw magnet 0.622.2682 ⑦ into holding plate 0.622.1301 ⑥.

Set model on the holding plate ⑥, position this on bitefork ③, and plaster in the articulator.

Then remove the facebow and turn the articulator.

Bring the lower model (with collar screw, holding plate and magnet) into occlusion, and plaster in the articulator.



Study and Tooth Models.

A 10 Tooth Charts

A 10.1 Permanent dentition

Classification of tooth numbers in other conventional systems

	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	Zsigmondy
Maxilla	8+	7+	6+	5+	4+	3+	2+	1+	+1	+2	+3	+4	+5	+6	+7	+8	Haderup
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	American
	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	International
	R															L	
	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	International
Mandible	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	American
	8-	7-	6-	5-	4-	3-	2-	1-	-1	-2	-3	-4	-5	-6	-7	-8	Haderup
	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	Zsigmondy

Study and Tooth Models.

A 10.2 Deciduous dentition

Classification of tooth numbers in other conventional systems

Maxilla																
			V	IV	III	II	I	I	II	III	IV	V				Zsigmondy
			05+	04+	03+	02+	01+	+01	+02	+03	+04	+05				Haderup
			A	B	C	D	E	F	G	H	I	J				American
			55	54	53	52	51	61	62	63	64	65				International
Mandible			R									L				
			85	84	83	82	81	71	72	73	74	75				International
			T	S	R	Q	P	O	N	M	L	K				American
			05-	04-	03-	02-	01-	-01	-02	-03	-04	-05				Haderup
			V	IV	III	II	I	I	II	III	IV	V				Zsigmondy

Study and Tooth Models.

A 11 Silicone Mould

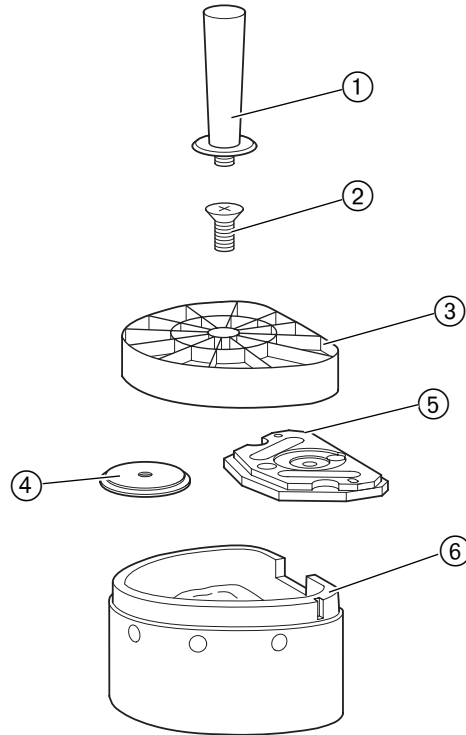
A 11.1 Production of individual plaster models

Components and accessories of the mould
 Upper Mat. No. 0.623.0551
 Lower Mat. No. 0.623.0561

- ① Model Remover 0.623.1191
- ② Holding Screw 0.251.4460
- ③ Casting Plate 0.623.1192
- ④ Threaded Insert 0.622.0781 or
- ⑤ Mounting Adapter 1.000.4886

Mounting adapter with plaster retentions, thread for fixing of models or for collar screw, receptacles for pin-system in KaVo jaw simulators.

- ⑥ Silicone Mould



Apply Separating Agent (KaVo 0.622.4442) to the flat underside of the casting plate ③.

Place mounting adapter ⑤ or threaded insert ④ on the casting plate ③ (observe correct assembly – side with plaster retentions facing the plate) Then tighten holding screw ②.

Position required teeth in the silicone mould ⑥ (extracted teeth, KaVo root, or latch-type)

Pour stone-plaster into the mould ⑥, up to the lower rim of the cut-out ⑦.

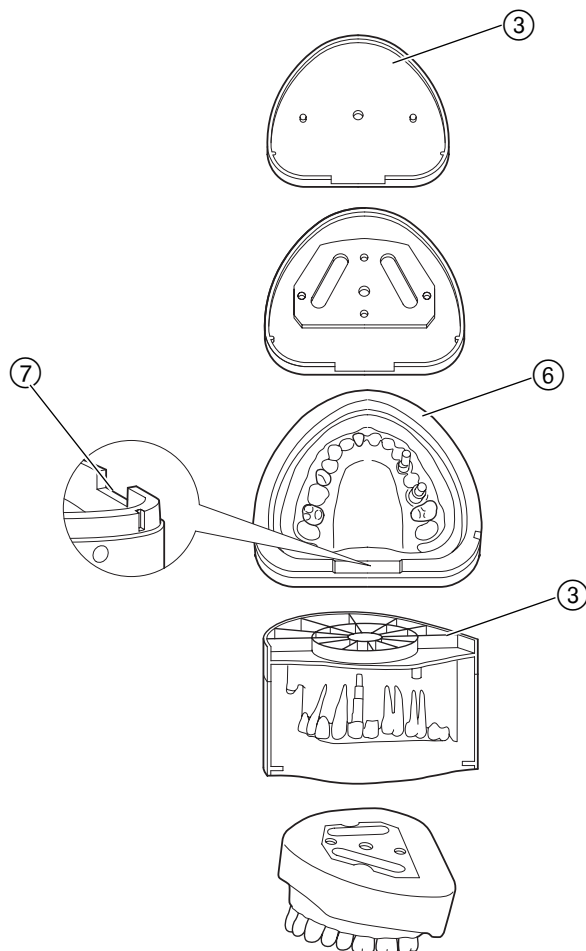
Put on the casting plate ③, then fill the mould with remaining stone through the opening.

Allow the stone to harden completely.

Remove the holding screw ② and casting plate ③. Screw the model remover ① into the exposed adapter or insert, and carefully pull out the formed model.

Models can be affixed to the KaVo jaw simulator by means of the knurled screw and orientation pins (see A 8).

i When using jaw simulators with magnetic attachment, an additional collar screw (0.623.2402) is also required.



Study and Tooth Models.

A 12 Casting Set

Casting Set (0.623.0571) – Components and accessories

① Sleeve	0.623.2192
② Mould Chamber	0.623.2202
④ Casting Plate	0.623.1192
⑤ Holding Screw	0.251.4460

The casting set enables the production of individual silicone moulds from KaVo study models, both full and partial dentition. The following procedure is recommended:

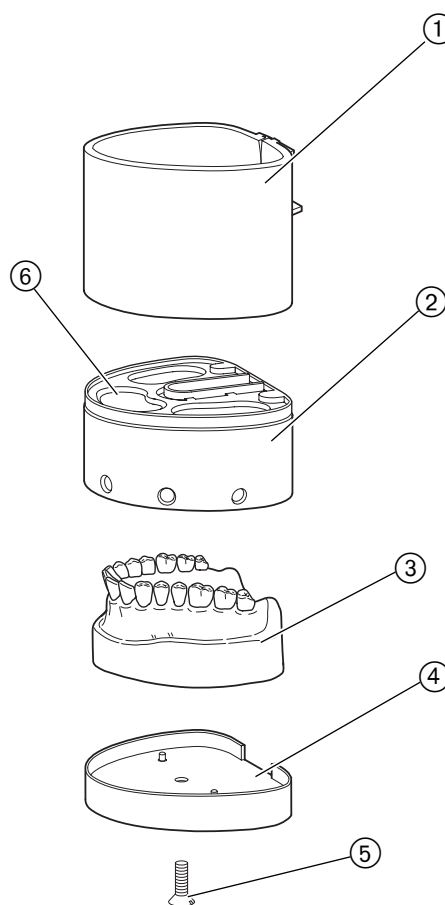
KaVo epoxy models (upper 0.623.0591) (lower 0.623.0581) are the principal constituents.

Depending on requirements, these can be used in their original form for full-dentition moulds, or modified by grinding for partial-dentition moulds, as required.

Place epoxy model ③ on the casting plate ④, using the orientation pins for exact location, and fix with the holding screw ⑤. Cover with the mould chamber ② and secure the sleeve ① around the chamber and plate.

Pour silicone through the mould chamber opening ⑥.

The resulting mould of silicone can now be used to produce individual plaster models for mounting in KaVo jaw simulators, as described in A 11.



Study and Tooth Models.

A 13 Working with dental materials on the study models

A 13.1 Impression materials

i *There are no known problems when working with impression materials on KaVo teeth. However, interactions between impression material and the gingiva can occur.*

Condensation-curing silicone impression materials:

There are no known interactions with the gingiva when working with this material.

Addition-curing silicone impression materials:

When using a-silicones on study models, an extended setting time must be reckoned with (up to double the time), as the times provided in the usage instructions are based on the moisture and temperature conditions in the human oral cavity. Impurities and remains of auxiliary agents on the gingiva can disturb the hardening of a-silicone, for example:

Slight remains from condensation-curing silicone; retraction solvents; wax and wax glazer; materials containing sulphur; poly-sulphides; amine; urethane; and heavy-metal compositions.

Alginates:

There are no known problems by using alginates.

Polyether-rubber impression materials

If this material remains for a long period of time on the gingiva, as suggested in the usage instructions, then the polyether-rubber bonds with the simulated gingival material. Even with a short length of time, slight adhesions cannot be ruled out. Therefore, it is recommended to use a separating agent (KaVo or silicone separating sprays).

Polysulphides:

There are no known interactions with the gingiva when using this material.



Study and Tooth Models.

A 13.2 Material for crown and bridge temporaries

There are no known problems when working with this material on KaVo teeth. Contact of this material with the gingiva, however, can lead to interactions.

Acrylic polymers

As these materials stick strongly to simulated gingival tissue, and sometimes bond together, it is recommended to use a separating agent (KaVo or silicone separating sprays).

A 13.3 Duplicating materials

i *There are no known problems when working with these materials on KaVo teeth. However, interactions between duplicating materials and the gingiva can occur.*

Industrial silicone, suitable for duplicating:

Generally, industrial silicones have a significantly longer hardening time than dental silicones, and must be partly processed under vacuum. Moulds made from industrial silicone, however, can be used much more often (high tensile strength, and greater resistance to further ripping)

i *It is recommended to try them first.*

Dental duplicating silicone:

A-silicones from some manufacturers harden only on freshly-cleaned simulated gingivae.

(See **A 14.2** - Cleaning the gingivae)

Study and Tooth Models.

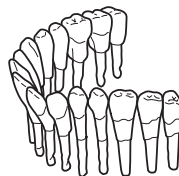
A 14 Cleaning and care of study models

A 14.1 Cleaning the teeth

Stains from occlusion paper are best removed with orange solvent.

Remains of orange solvent must be wiped off or removed with water, otherwise they can lead to hardening problems with a-silicones.

Cleaning materials containing alcohol are also suitable.

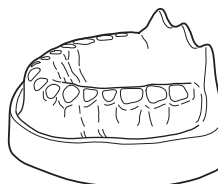


 *Teeth must first be removed from the model before cleaning with alcohol, otherwise they may stick to the model base.*

A 14.2 Cleaning the gingiva

For cleaning the gingiva, alcohol or cleaning materials containing alcohol are best suited.

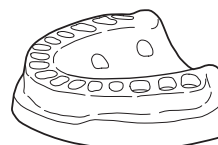
 *The model base must not come in contact with alcohol.*



A 14.3 Cleaning the model base

 *Remove all teeth and the gingiva before cleaning the model base.*

Use warm, soapy water to clean the model base.



Guarantee Information

Within the framework of applicable KaVo delivery and payment conditions, KaVo guarantees proper function, freedom from flaws in material and manufacturing for a period of 12 months from the date of purchase demonstrated by the purchaser.

In case of justified complaints, KaVo will honor its warranty with a free replacement or repair.

The warranty does not cover defects and their consequences that arose or may have arisen due to natural wear, improper handling, cleaning or maintenance, noncompliance with operating, maintenance or connection instructions, corrosion, contaminated media supply or chemical or electrical influences deemed abnormal or impermissible in accordance with factory specifications.

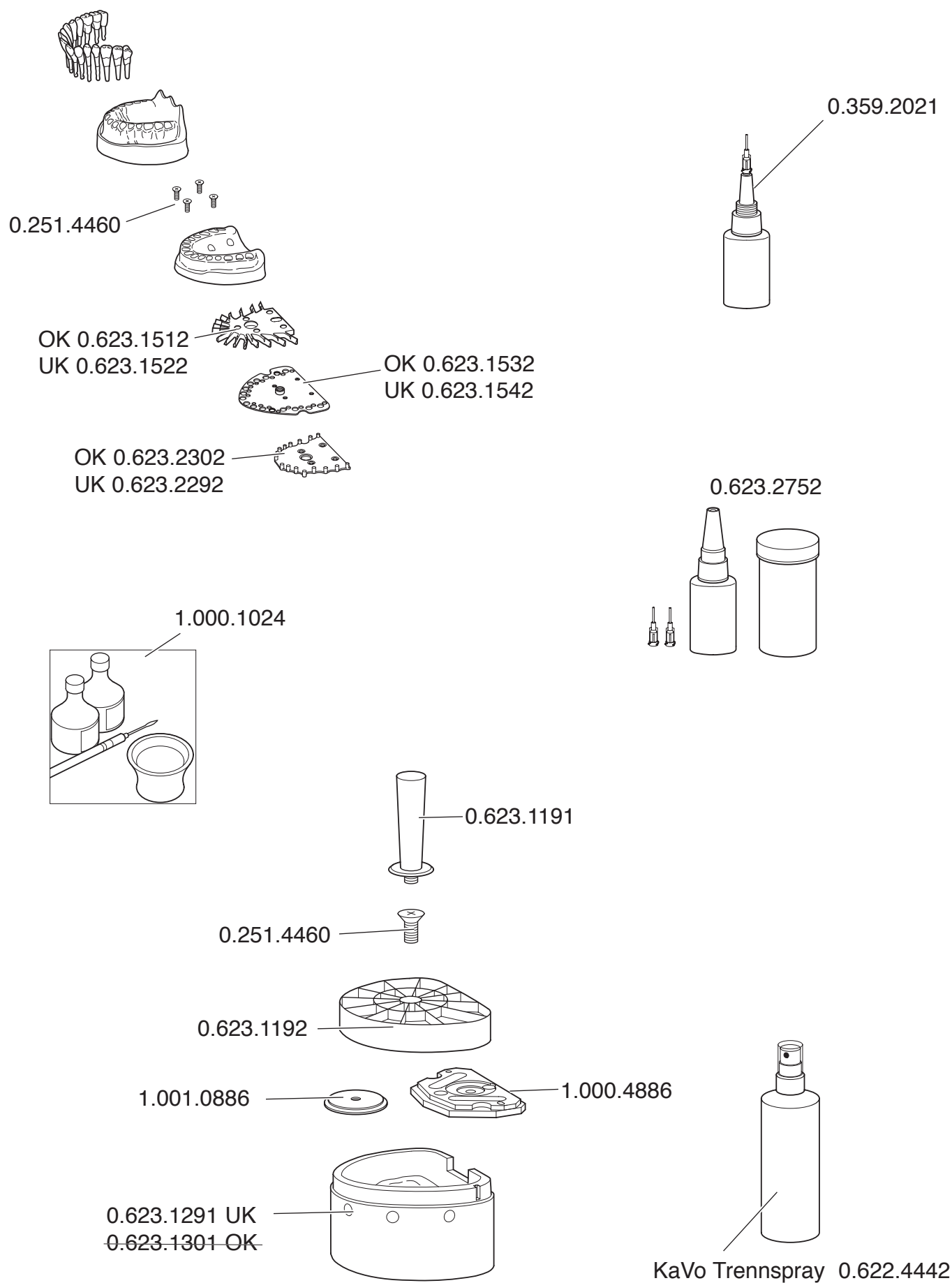
The warranty does not usually cover lamps, light conductors made of glass and glass fibers, glassware, rubber parts and the colourfastness of plastic parts.

The warranty expires when defects or their consequences can arise from manipulations or changes to the product. Warranty claims can only be asserted when they are immediately reported to KaVo in writing.

This notification must be accompanied by a copy of the invoice or delivery note on which the manufacturing number is clearly visible. In addition to the guaranty, the statutory warranty claims of the purchaser also apply with a warranty period of 12 months.

Study and Tooth Models.

Spare parts



Study and Tooth Models.

A 15 Spare parts sheets for user

A 15.1 Teeth

Tooth	No.	Latch-teeth 10-Pack	Latch-teeth 100-Pack	Exam. teeth 10-Pack	Root teeth 10-Pack	Root teeth 100-Pack
Incisor	11	0.623.1114	0.623.1115	0.623.1116	0.623.4114	0.623.4115
Incisor	12	0.623.1124	0.623.1125	0.623.1126	0.623.4124	0.623.4125
Canine	13	0.623.1134	0.623.1135	0.623.1136	0.623.4134	0.623.4135
Premolar	14	0.623.1144	0.623.1145	0.623.1146	0.623.4144	0.623.4145
Premolar	15	0.623.1154	0.623.1155	0.623.1156	0.623.4154	0.623.4155
Molar	16	0.623.1164	0.623.1165	0.623.1166	0.623.4164	0.623.4165
Molar	17	0.623.1174	0.623.1175	0.623.1176	0.623.4174	0.623.4175
Molar	18	0.623.1184	0.623.1185	0.623.1186	0.623.4184	0.623.4185
Incisor	21	0.623.1214	0.623.1215	0.623.1216	0.623.4214	0.623.4215
Incisor	22	0.623.1224	0.623.1225	0.623.1226	0.623.4224	0.623.4225
Canine	23	0.623.1234	0.623.1235	0.623.1236	0.623.4234	0.623.4235
Premolar	24	0.623.1244	0.623.1245	0.623.1246	0.623.4244	0.623.4245
Premolar	25	0.623.1254	0.623.1255	0.623.1256	0.623.4254	0.623.4255
Molar	26	0.623.1264	0.623.1265	0.623.1266	0.623.4264	0.623.4265
Molar	27	0.623.1274	0.623.1275	0.623.1276	0.623.4274	0.623.4275
Molar	28	0.623.1284	0.623.1285	0.623.1286	0.623.4284	0.623.4285
Incisor	31	0.623.1314	0.623.1315	0.623.1316	0.623.4314	0.623.4315
Incisor	32	0.623.1324	0.623.1325	0.623.1326	0.623.4324	0.623.4325
Canine	33	0.623.1334	0.623.1335	0.623.1336	0.623.4334	0.623.4335
Premolar	34	0.623.1344	0.623.1345	0.623.1346	0.623.4344	0.623.4345
Premolar	35	0.623.1354	0.623.1355	0.623.1356	0.623.4354	0.623.4355
Molar	36	0.623.1364	0.623.1365	0.623.1366	0.623.4364	0.623.4365
Molar	37	0.623.1374	0.623.1375	0.623.1376	0.623.4374	0.623.4375
Molar	38	0.623.1384	0.623.1385	0.623.1386	0.623.4384	0.623.4385
Incisor	41	0.623.1414	0.623.1415	0.623.1416	0.623.4414	0.623.4415
Incisor	42	0.623.1424	0.623.1425	0.623.1426	0.623.4424	0.623.4425
Canine	43	0.623.1434	0.623.1435	0.623.1436	0.623.4434	0.623.4435
Premolar	44	0.623.1444	0.623.1445	0.623.1446	0.623.4444	0.623.4445
Premolar	45	0.623.1454	0.623.1455	0.623.1456	0.623.4454	0.623.4455
Molar	46	0.623.1464	0.623.1465	0.623.1466	0.623.4464	0.623.4465
Molar	47	0.623.1474	0.623.1475	0.623.1476	0.623.4474	0.623.4475
Molar	48	0.623.1484	0.623.1485	0.623.1486	0.623.4484	0.623.4485
0.623.0281	Full dentition, set of 32					

Study and Tooth Models.

A 15.2 Latch-teeth models: (teeth – see A.15.1)

Gingivae:		Maxillary model		Mandibular model
0.623.1552	OK V16 Full-dentition gingiva	0.623.1702	UK V16 Full-dentition gingiva	
0.623.1612	OK T14 (Full, without the 8's)	0.623.1762	UK T14 (Full, without the 8's)	
0.623.1652	OK T12	0.623.1812	UK T13	
0.623.1662	OK T10	0.623.1822	UK T10	
0.623.1672	OK T 9	0.623.1832	UK T 8	
0.623.1682	OK T 5	0.623.1842	UK T 7	
0.623.1692	OK T 4	0.623.1852	UK T 2	
0.623.0321	Upper model base (with retention mechanism, plate and screws) for gingivae V16 / T12 /10/9/14	0.623.0331	Lower model base (with retention mechanism, plate and screws) for gingivae V16 / T13/10/8/14	
0.623.0341	Upper model base, flat (with retention mechanism, plate and screws) for gingivae T 4/5	0.623.0351	Lower model base, flat (with retention mechanism, plate and screws) for gingivae T 7/2	
0.623.0161	Retention mechanism, upper (pack of 10)	0.623.0171	Retention mechanism, lower(pack of 10)	
0.623.0181	Metal plate, upper (pack of 10)	0.623.0191	Metal plate, lower (pack of 10)	
0.623.2302	Locking comb, upper	0.623.2292	Locking comb, lower	

A 15.3 Surgery models: (root teeth – see A 15.1)

0.623.2762	Gingiva, upper	0.623.2772	Gingiva, lower
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A 15.4 Periodontal models: (root teeth – see A 15.1)

0.623.2752	Molar 16 PA (Tooth 16 for model OK PA A1 and OK PA A2)		
0.623.2672	Gingiva OK PA A1 for base OK A	0.623.2682	Gingiva UK PA A1 for base UK A
0.623.2692	Gingiva OK PA A2 for base OK A	0.623.2702	Gingiva UK PA A2 for base UK A
0.623.2712	Gingiva OK PA B1 for base OK B	0.623.2722	Gingiva UK PA B1 for base UK B
0.623.2732	Gingiva OK PA B2 for base OK B	0.623.2742	Gingiva UK PA B2 for base UK B
0.623.3872	Gingiva OK PA A1, transparent for base OK A	0.623.3882	Gingiva UK PA A1, transparent for base UK A
0.623.3892	Gingiva OK PA A2, transparent for base OK A	0.623.3902	Gingiva UK PA A2, transparent für for base UK A
0.623.3912	Gingiva OK PA B1, transparent for base OK B	0.623.3922	Gingiva UK PA B1, transparent for base UK B
0.623.3932	Gingiva OK PA B2, transparent for base OK B	0.623.3942	Gingiva UK PA B2, transparent for base UK B

Study and Tooth Models.

A 15.5 Edentulous models:

Gingiva

0.623.2782 OK UB

0.623.2792 UK UB

A 15.6 Paedodontal Models

Mat. No.	Modelltooth	Mat. No.	Modelltooth
0.623.4514	tooth 51, pack of 10	0.623.4614	tooth 61, pack of 10
0.623.4524	tooth 52, pack of 10	0.623.4624	tooth 62, pack of 10
0.623.4534	tooth 53, pack of 10	0.623.4634	tooth 63, pack of 10
0.623.4544	tooth 54, pack of 10	0.623.4644	tooth 64, pack of 10
0.623.4554	tooth 55, pack of 10	0.623.4654	tooth 65, pack of 10
0.623.4564	tooth 16, pack of 10	0.623.4664	tooth 26, pack of 10
0.623.4714	tooth 71, pack of 10	0.623.4814	tooth 81, pack of 10
0.623.4724	tooth 72, pack of 10	0.623.4824	tooth 82, pack of 10
0.623.4734	tooth 73, pack of 10	0.623.4834	tooth 83, pack of 10
0.623.4744	tooth 74, pack of 10	0.623.4844	tooth 84, pack of 10
0.623.4754	tooth 75, pack of 10	0.623.4854	tooth 85, pack of 10
0.623.4764	tooth 36, pack of 10	0.623.4864	tooth 46, pack of 10
1.000.0515	tooth 53 with pulp, pack of 10	1.000.0518	tooth 63 with pulp, pack of 10
1.000.0516	tooth 54 with pulp, pack of 10	1.000.0519	tooth 64 with pulp, pack of 10
1.000.0517	tooth 55 with pulp, pack of 10	1.000.0520	tooth 65 with pulp, pack of 10
1.000.0531	tooth 73 with pulp, pack of 10	1.000.0534	tooth 83 with pulp, pack of 10
1.000.0532	tooth 74 with pulp, pack of 10	1.000.0535	tooth 84 with pulp, pack of 10
1.000.0533	tooth 75 with pulp, pack of 10	1.000.0536	tooth 85 with pulp, pack of 10



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