Mini-SG® PLUS

Instructions for use

Slide attachments

Application, activation, deactivation, repairs and regular servicing of attachments should only be carried out by trained personnel using original instruments and components. Mechanically cleaning attachments with a toothbrush and toothpaste can cause premature wear and tear of the functional components.

With the publication of these instructions for use all previous Editions are no longer valid.

The manufacturer refuses any liability for damages due to Disregard of the instructions for use below.

Slide attachments: general guidelines

Traceability of lot numbers
If attachments are assembled from components with different lots numbers, all relevant lots numbers have to be recorded to ensure that they can be traced.

Tooth preparation for extracoronal attachments
No special requirements.

Tooth preparation for intracoronal attachments
In order to prevent overcontours on the artificial crown a box must be prepared in the abutment into which the female part of the slide attachment can be placed. For omega-shaped stabilizers a groove is sufficient, the position and axis of which must be matched to the position of the attachment. For good casting-on and diffusion the diameter of the groove and the box must be 0.6 mm larger than the female parts of the attachments involved. To obtain optimal casting-on results and sufficient stability of the connection, the wall thickness between abutment and female part must be at least 0.3 mm.

Size
If an attachment is available in different sizes, the largest possible one should be chosen.

Operator removable and screw-retained constructions
If no screw-retained attachments are used, the bridge may be fixed by a screw placed in the milled brace support. For screw-retentions on root canal post caps, see chapter «Anchors» in the Dental documentation of Cendres+Métaux.

Twin crowns
With two blocked crowns in succession in the posterior region of a quadrant an articulated construction of the free-end dentures with attachments is recommended.

Denture framework
For bilateral insertion and free-end dentures cast transversal connections such as plates in the upper, sublingual connectors in the lower jaw are used. It is important that these constructions are absolutely rigid (no springiness).

Transversal blocking
Rigid unilateral dentures must be blocked transversally.

Dismantling of attachments
Male and female parts of attachments must be seperated and, if made of several components, dismantled before thermal treatment (casting-on, soldering, hardening and ceramic firing).

Pickling
Pickled parts slide better, if they are placed in soap water (ultrasonic bath) after pickling.

Fit-in
After thermal treatment the parts may have a too strong friction and need to be re-adjusted. This is done by applying colloidal graphite to one of the degreased parts- here the male part- and drying with compressed air. The adjustment is done by repeated insertion and removal of the attachment parts. Then clean ultrasonically.

Thread
If desired, thread cutters and tap dies are available for specific attachments.

Working parts
Recommendation: Exchange working parts made of plastic (Galak) during the annual routine check-up.

Duplicating aids
These red parts are slightly overdimensioned compared to the original parts. The result is an optimal gap for the resin-bonding technique.
Please note: The duplicating aid must not be placed in the patient's mouth as a temporary replacement for the female part.

Disinfection
After any fabrication or modification, the prosthetic work, incl. female part component, must be cleaned and disinfected according to national guidelines. When selecting the disinfectant, it is essential to ensure that:
– it is suitable for cleaning and disinfection of dental prosthetic components.
– it is compatible with the materials of the products to be cleaned and disinfected.
– it has tested efficacy in disinfection.
All parts made of plastic must be disinfected with a high EPA-registered disinfectant prior to use.
Recommended: Cidex® OPA Solution. Strictly follow manufacturer's instructions.

Further information
On processing precious metal alloys, soldering and casting-on are included in the Dental documentation of Cendres+Métaux.

The products carry the CE Mark.
See packaging for details.

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Allergies
With patients having an existing allergy to one or several elements of the materials contained in any one attachment, this particular product must not be used. With patients suspected of having an allergy to one or several of these elements contained in any one attachment, this product can only be used after preliminary allergological testing and proof of a non-existing allergy.
Please contact your Cendres+Métaux sales representative for further information.

Auxiliary instruments may contain nickel.

The device has not been evaluated for safety and compatibility in the MR environment.
The device has not been tested for heating or migration in the MR environment.

Precautions
– The parts are delivered non-sterile. Proper preparation of the parts before use in patients is explained in the section «Disinfection».
– Ensure the attachment is cleaned regularly to avoid soft tissue inflammation.
– During intraoral use, all products should generally be secured against aspiration.
– No cutting work should be performed in the patient's mouth.

TV
Female part T = Titanium (grade 2)
Integration: Polymerization, resin-bonding
Male part V = Valor®
Fitting: cast-on or soldered, **cannot be laser-welded**

TK
Female part T = Titanium (grade 2)
Integration: Polymerization, resin-bonding
Male part K = Korak
Integration: Non-residual burnout plastic for the casting technique

Components for all types
Plastic insert G = Galak
Mouth-resistant plastic (POM)
Activating screw T = Titanium (grade 4)

T = Titanium
Ti > 98.9375 %

V = Valor®
Pt 89.0 %, Au 10.0 %, Ir 1.0 %
$T_S - T_L$ 1660–1710 °C
CET (25–500 °C) 10.1 $10^{-6} K^{-1}$
(25–600 °C) 10.3 $10^{-6} K^{-1}$

Indications
Dental and dental-gingival supported dentures:
– Interdental insertion dentures
– Rigid unilateral and bilateral free-end dentures
– Dentures with one interdental saddle and one free-end situation/ Insertion denture and free-end parts in combination

Contraindications
– Where patients have an existing allergy to one or more elements of the attachment materials.
– Unwillingness of the patient to correctly follow the aftercare/ recall instructions.
– Patients with bruxism or further uncontrolled para-functional habits.
– Unilateral dentures without transverse bracing

Equipment neccessary for correct processing
Parallelometer, auxiliary parts and instruments (see Dental documentation of Cendres+Métaux).

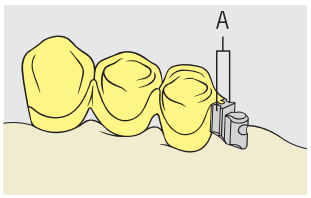

Fig. 1

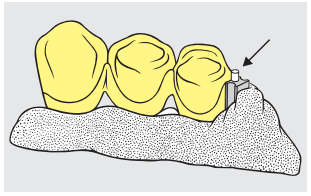
Fig. 2

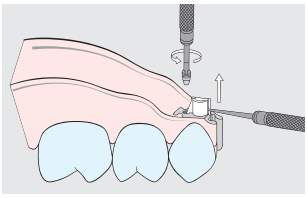
Fig. 4

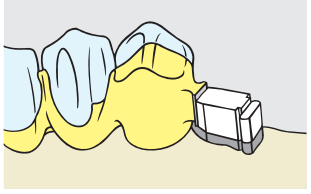
Fig. 3

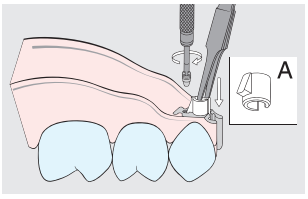

Fig. 5

Instructions for use

Milled brace support
Due to the construction of the Mini-SG® PLUS **no** milled brace support for the protection of the attachment is needed.

Integration of male part V / casting-on technique
Important: Only use precious metal alloys for casting-on!
Model the wax framework according to the usual techniques. With the special parallelometer insert (072627) or with the parallelometer insert (070567) position the degreased male part V (055517) in the for the patient ideal direction of insertion and fix it with wax.

Important!
The two guiding grooves A must be free of wax (Fig. 1).
Cast, then benchcool the casting cylinder to room temperature (selfhardening).

Integration of male part V / soldering technique
If the male part is to be soldered to the crown the soldering area must be parallel to the attachment. Insert the rod solder into the groove (Fig. 2). After soldering bechncool to room temperature (selfhardening).

Integration of male part K / casting technique
Model and position the male part K (055529) as described for the «casting-on technique». Invest and cast. The casting alloy must have a minimum 0.2 % proof stress of 500 N/mm^2. Do not sandblast the male part after devesting (risks changing its dimensions). Clean it in an ultrasonic cleaner or with a glass-fibre brush. Remove any casting defects (bubbles etc.) and polish the male part with a brush mounted in a handpiece. Check for correct functioning on the master model.

Integration of female part T
The female part T (055 807) of the Mini-SG® PLUS can simply be polymerized or using the duplicating and resin-bonding technique be directly bonded into the denture framework.

Duplicating and resin-bonding technique
Position the duplicating aid G (072649). Block out any undercuts or papilla gaps with wax (Fig. 3). Duplicate with a dimensionally stable duplicating compound (silicon or polyether type) make the duplicating model. Model the framework with a box for the female part. With constricted places model a metallic occlusal surface for additional protection. Cast and finsish as usual.

Resin-bonding technique
By resin-bonding on the model the desired precision and strength of a stable connection of female part and framework is obtained. Only use adhesives suited for resin-bonding of attachments and whose characteristics and reliablity is recognized. Follow the instructions of use of the manufacturer.

Finishing the denture
Before polymerisation or resin-bonding it is recommended to apply a little vaseline to the inside of the female part in order to prevent penetration of the resin. Place the female part in position and block out the undercuts and screw with wax. Process the resin work using standard dental laboratory methods.

Removing the friction insert
Unscrew activating screw T (055775) fully with the screwdriver (072653) and raise friction insert G (055774 or 055811) with the screwdriver (072653) (Fig. 4).

Inserting the friction insert
Use tweezers (070347) to grip the insert on one of its lamellae and press it carefully into the housing (Fig. 5). Ensure that the wider part of the wedge is positioned toward the occlusal aspect (Fig. 5/A).
Replace activating screw T.
Please note: The insert exerts counterpressure on the screw to prevent it loosening on its own.

Activation / deactivation
Wind in activating screw T clockwise with the screwdriver/activator (072653). Deactivation is achieved by unwinding the screw.
The desired friction can be adjusted progressively from 100–600 g with the orange insert (055774). To achieve increased friction of approx. 500–1000 g, use the violet insert (055811).
Please note: Should the range of friction of the two inserts be exceeded when activating the slide attachment, it will revert to the maximum adjustable friction after approximately 3–5 months.

Follow-up treatment
Inside the mouth, retainers for prosthetic work are more or less exposed to stresses in a constantly changing environment, and hence wear. Wear occurs everywhere in everyday situations and cannot be avoided, only reduced. The intensity of wear depends on the system as a whole. Our endeavour is to use materials that are optimally matched to one another, in order to reduce wear to an absolute minimum. The good fit of the denture on the mucosa has to be checked at least once a year and a lining may have to be provided in order to eliminate swinging movements (overloads), especially in the case of free-end prostheses. We recommend replacing the friction insert (wearing part) at the annual check-up as a precaution.

Patients can obtain information and recommendations about the use, removal and care of prostheses on the patient website at www.cmsa.ch/dental/infos.

Modifications / underlining
In case of a transformation or an underling of the denture use the system transfer jig (072616) for the reconstruction of the position of the male parts on the working model.

Additional information
The male part of this system is compatible with all female parts included in the Mini-SG® slide attachment system.

Care & cleaning
Ideally you should clean your teeth and your denture after every meal. Cleaning your denture also involves cleaning the connecting element. The gentlest method is to clean the connecting element under running water with a soft toothbrush. For the most thorough cleaning, the denture has to be placed in a small ultrasonic device with a suitable cleaning additive. High-precision attachments must never be cleaned with toothpaste because this can cause damage. You should also be wary of unsuitable cleaning solutions or tablets. These can also damage the high-quality connecting element or interfere with its functioning. The connecting elements fixed in your mouth, e.g. on remaining teeth or on implants, must be cleaned only by using water and a soft toothbrush as well as an interdental brush. Do not use toothpaste in order to avoid premature damage to the connecting element.
Ensure the attachment is cleaned regularly to avoid soft tissue inflammation.

Please contact your Cendres+Métaux agency for advice and additional information.

Disclaimer
Upon publication, these instructions for use supersede all previous editions.

The manufacturer is not liable for any damages due to the user disregarding the instructions for use below.

This attachment is part of a comprehensive conception and may only be used or be combined with the corresponding original components and instruments. If this is not the case, any responsibility by the manufacturer will be refused.

In case of complaints the lot number must always be specified.

Markings on the packaging / Symbols

	Manufacturer
	Catalogue number
	Batch code
	Quantity
	Consult instructions for use
Rx only	Caution: US Federal law restricts this device to sale by or on the order of a licensed (healthcare) practitioner.
	Cendres+Métaux products with the CE mark fulfill the requirements of the Medical Device Directive 93/42/EEC.
	Do not re-use
	Non-sterile
	Keep away from sunlight
	Caution, consult accompanying documents