Mini-SG® Latch

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With the publication of these instructions for use all previous Editions are no longer valid.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

The 3 most important points for using this product successfully:
- Fit the latch pin in the correct position.
- A bracing unit should only be fabricated if required for the specific case and to ensure that the latch functions for a long period (refer to the indications).
- Instruct the dentist and patient.

In general

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

Preparing the tooth for extracoronal attachments
No special procedures required.

Denture frameworks
As with bilateral interdental and free-end dentures, cast transpalatal plates are used as transverse connectors for uppers and sublingual bars etc. for lowers. It is important that these denture frameworks are absolutely rigid (and not springy!).

Dismantling the attachment
Before heating, (casting-on, soldering, tempering and firing ceramic) the male and female parts of attachments must be separated and multiple units dismantled completely.

Pickling
Pickled parts slide better if they are placed in soapy water (ultrasonic unit) after pickling.

Fitting together
After being heated, the attachment components have to be adjusted precisely with colloidal graphite.
The graphite must only be applied to one half of the attachment (in this case, the degreased male part) and dried with compressed air. The attachment components are adjusted by sliding them in and out several times. Clean with an ultrasonic cleaner.

Duplicating aid
As these «red» parts are slightly larger than the originals they create an optimum gap for duplicating and resin-bonding.
Please note: The duplicating aid must not be placed in the mouth to replace the female part temporarily.

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 and in the website www.cmsa.ch/dental.

Warnings
Allergies
This product must not be used for patients known to be allergic to one or several of the elements contained in the attachment materials. With patients suspected of being allergic to one or several of the elements contained in any one of the attachment materials, this product can only be used after preliminary allergological testing and proof that no allergy exists.
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.

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

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Mini-SG® Latch

TV
Female part T, complete **T = Titanium and Syntax**
Fitting: Polymerized or resin-bonded into the restoration
Male part **V = Valor®**
Fitting: Soldered or cast-on, cannot be laser-welded

Detachable parts

Housing	**T = Pure titanium**
Latch pin	**T = Pure titanium**
Latch spring	**S = Syntax**
Locking screw	**T = Pure titanium**

Indications
Dental and dental-gingival supported removable dentures:
– Implant-supported restorations
– Unilateral and bilateral free-end dentures
– Interdental insertion dentures
– Dentures combining interdental and free-end situations
– Restorations can be planned in advance

Restorations **excluding** custom bracing units:
– Unilateral, tooth supported insertion dentures
– Bilateral tooth supported insertion dentures
Restorations **including** custom bracing units:
– Unilateral free-end dentures (up to 2 denture teeth loaded)
– Bilateral free-end dentures
– Bilateral combined fixed/removable dentures (free-end and interdental saddles)

Please note: Depending on the case, a custom bracing unit may be dispensed with under the following conditions:
– Patient does not suffer from bruxism
– Six-monthly recall appointments guaranteed
– Saddle extended to the maximum degree
– Minimum leverage
– Minimally resilient restoration
– Maximum tooth support and minimum gingival support for the denture

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.
– All applications not specifically listed as being indications – taking the comments into account.

Equipment and parts required for correct processing
– Simple parallelometer
Processing aids, instruments (further details are included in the Dental documentation of Cendres+Métaux)
– Milling machine for milling the brace support

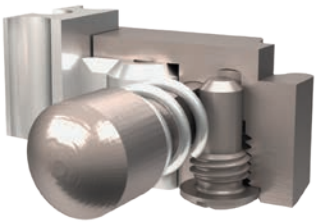
How the Mini-SG® Latch functions
The Mini-SG® latch employs a semi-automatic locking concept. The latch pin is pressed in fully and held in this position to release the latch for inserting and removing the denture from the mouth.

Milled brace support
Please refer to the lists of indications and contraindications.

T = Pure titanium (grade 4)
Ti > 98.9375 %

S = Syntax / TiA6 V4 ELI (grade 5)
Ti > 89.478 %, Al 6.0 %, V 4.0 %

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



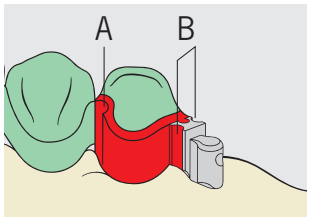


Fig. 1

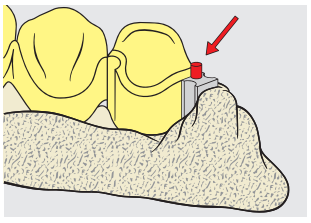


Fig. 2

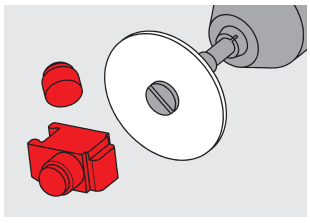


Fig. 3

Fitting male part V / Casting-on (recommended)
Please note: Only precious alloys can be cast-on!
Wax-up the framework using standard dental techniques. Degrease male V (055517) and use a special paralleling mandrel (072627) or paralleling mandrel (070567) to position and wax it into place along the correct direction of insertion. Wax-up the milled brace support with stabilizer (Fig. 1 / A).
Important: Keep wax out of the two guiding grooves in male part V (Fig. 1 / B). Cast and bench cool the casting to room temperature (optimum mechanical properties).

Soldering male part V into place
Align the male part as described for casting-on.
Please note: The soldering surface on the crown must be parallel to the direction of insertion of the slide attachment.
The groove in the back of the male part simplifies soldering. Insert the soldering rod into the groove (Fig. 2). After soldering, bench cool the restoration to room temperature (optimum mechanical properties).

Fitting female part T
Female part T of the Mini-SG® latch is available in two versions (left-hand latch: 055840, right-hand latch: 055841). Ideally, it is resin-bonded directly into the framework using the duplicating and resin-bonding techniques. It can also be polymerized into the denture directly.

Duplicating
Duplicating aid G (072652) can be used on either the right or left hand sides. For example, when fitting the latch in the lower right quadrant, the pin on the buccal side of the duplicating aid must be cut off with a separating disk (Fig. 3).
Place the modified duplicating aid on the male part and block out the undercuts and interpapillary spaces with wax (Fig. 4).
Duplicate with a dimensionally stable duplicating material (silicone or polyether) and cast a duplicate model. Wax-up the framework including the bracing unit and housing for resin-bonding the female part into place (Fig. 5).
Please note: Should only limited space be available, a metal occlusal surface can be waxed up above the slide attachment to provide additional protection. Invest, cast and finish using standard dental laboratory techniques.

Adhesive technique
Sandblast that area of the cobalt chrome framework to be resin-bonded with 250 μm Al_2O_3 and the distal retainer on the female part with 50 μm Al_2O_3.
Please note: The system transfer pin (072616) must be fitted to prevent the functional section of the female part becoming damaged. Thoroughly steam clean the areas to be resin-bonded and do not touch them again. Prior to resin-bonding the female part, apply a small amount of Vaseline inside it to prevent adhesive creeping in. Fit the female part and block out the undercuts with wax. Apply a thin coat of adhesive to both surfaces, ensuring that no bubbles are entrapped, and join them. For further details, refer to the adhesive manufacturer's instructions.

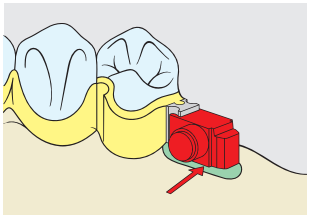


Fig. 4

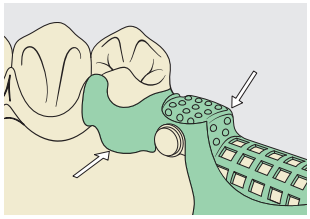


Fig. 5

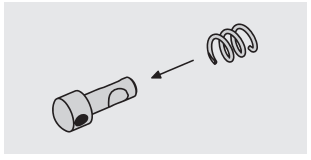


Fig. 6

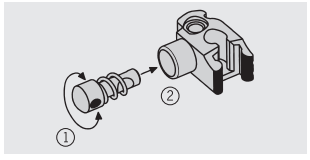


Fig. 7

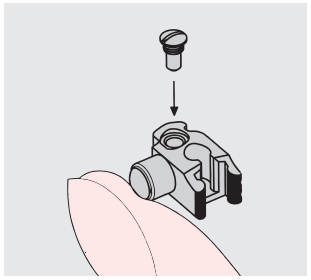


Fig. 8

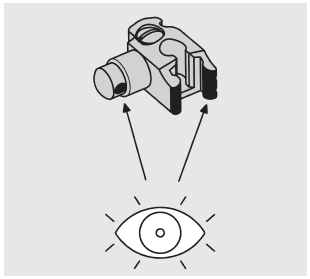


Fig. 9

Fitting female part T
Before polymerizing the female part into the denture, dismantle the latch pin (refer to «Dismantling the latch pin») and apply Vaseline inside the female to prevent acrylic creeping in. Fit the female part and press the packing pin (072655) into it fully. Block out the undercuts in the female part with wax and process the resin using standard dental laboratory techniques. After polymerizing the resin, use pliers to carefully withdraw the packing pin and reduce the resin to the level of the latch opening. The titanium latch opening must not be trimmed. Polish the resin, clean it, fit the latch pin (refer to «Fitting the latch pin») and check that the latch functions correctly on the working model.
Please note: It is virtually impossible for the locking screw T to unscrew inadvertently from the underside of the female. To protect it perfectly, wax out the screw slot and coat it with cold-curing resin.

Dismantling the latch pin
Use the screwdriver (072410) to unscrew locking screw T (055831) from the underside of the female part and remove it. Grasp latch pin T (055837) with the tweezers (070347) and remove it from the housing together with latch spring S (055832).

Important: Fitting latch pin T
Fig. 6: Press latch spring S onto the latch pin.
Fig. 7: (1) Align the marking on the latch pin head with the opening in the female part (secondary stabilization).
(2) Insert the latch pin into the housing.
Fig. 8: Press the latch pin in fully and wind locking screw T in with the screwdriver.
Fig. 9: Important: Before continuing, look again to see that the latch pin is aligned correctly (the marking on the latch pin head must point toward the opening in the female part).
Please note: If the latch pin is not inserted correctly, it cannot lock properly and the denture may be dislodged from the patient's mouth inadvertently.
Upon request a latch pin T extended by 3 mm, order No. 055872, is available. The pin can be shortened up to the marking.
Adjustments by grinding may only be made on the **dismantled** part.

Modifications / Relines
Should the denture require modifying or relining, place the system transfer pin (072616) on the working model to take the place of the male part.

Dentists please note
If an impression (e.g. Impregum) is to be taken over the restoration, the latch pin must be removed first.
The latch opening should be sealed with wax to prevent impression material creeping into it.

Dentists and patients please note
Dentists must warn patients of the risk of swallowing a unilateral restoration without transverse connector while placing or removing it.
To ensure that the latch functions properly, the latch pin must always remain pressed in to the stop while the restoration is being placed or removed.

Aftercare
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.

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