SGS Dental
Swiss Implant System

US EDITION

INSTRUCTIONS FOR USE

Removable Abutments

Document	Version	Date of issue
IFU-BAL-2003	**1.0**	**08/13/2025**

About this edition. This US edition adds this cover page for customers in the United States. The 6 pages that follow are the manufacturer's Instructions for Use, reproduced unchanged. Follow them for all clinical steps, torque values, cleaning and sterilization. Dates inside the manufacturer's pages are written year.month.day (for example, 2025.08.13 is 08/13/2025).

US CONTACT

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REPORTING A PROBLEM

In the United States, report any serious incident, adverse event or device problem to SGS Dental East Coast at 212-754-6555 or Support@sgseast.com. You can also report it to the FDA through MedWatch at www.fda.gov/medwatch or 1-800-FDA-1088.

MANUFACTURER

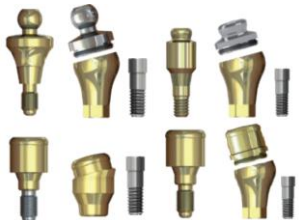
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USING THIS DOCUMENT

Read the full Instructions for Use before use. Keep this document for reference. For the latest version, contact SGS Dental East Coast.

Rx only. U.S. federal law restricts this device to sale by or on the order of a dental professional.

Removable Abutments



Important – Disclaimer of Liability

This product is part of an overall concept and may only be used in conjunction with the associated original products according to the instructions and recommendation of S.G.S. International Kft. Non-recommended use of products made by third parties in conjunction with S.G.S. International products will void any warranty or other obligation, express or implied, of S.G.S. International. The user of S.G.S. International products has the duty to determine whether or not any product is suitable for the particular patient and circumstances. S.G.S. international disclaims any liability, express or implied, and shall have no responsibility for any direct, indirect, punitive or other damages, arising out of or in connection with any errors in professional judgment or practice in the use of S.G.S. International products. The user is also obliged to study the latest developments in regard to this S.G.S. International product and its applications regularly. In cases of doubt, the user has to contact S.G.S. International. Since the utilization of this product is under the control of the user, they are his/her responsibility. S.G.S. International does not assume any liability whatsoever for damage arising thereof.

Product Description

Removable Abutments are dental implant abutments which can be directly connected to an endosseous dental implant to support the placement of a dental prothesis. These abutments can be used for full-arch restorations.

The Removable Abutment system includes a range of straight and angulated abutments designed for use with overdentures in edentulous patients. Available in hexagonal, conical, and narrow platform connections, the abutments come in various heights (1–6 mm) to accommodate soft tissue thickness and prosthetic requirements. Angulated variants (15°, 17°, and 30°) allow for correction of implant divergence, enabling prosthetic alignment and insertion path optimization. The system incorporates modular attachment components (S3-S7, S35-S7, S5-S7, S35a) that serve as the prosthetic interface, ensuring secure retention and compensating for misangulation.

For a complete overview of products and the included screws please refer to the table below.

Table 1. Product range

Connection	Product code	Heights	Screws
Hexagonal	S3-3.75	1mm, 2mm, 3mm, 4mm, 5mm, 6mm	-
	S3-S7-3.75-17°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S3-S7-3.75-30°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S35-3.75	1mm, 2mm, 3mm, 4mm, 5mm, 6mm	-
	S35-S7-3.75-17°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S35-S7-3.75-30°	1mm, 2mm, 3mm	S1a for S6/S7

Table 1. Product range

Connection	Product code	Heights	Screws
Hexagonal	S5-3.75	1mm, 2mm, 3mm, 4mm, 5mm, 6mm	-
	S5-S7-3.75-17°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S5-S7-3.75-30°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S8-3.75	1mm, 2mm, 3mm, 4mm, 5mm, 6mm	-
	S8-3.75-15°	1.5mm, 3mm	S1a/S1aa for S6/S7
Conical	S3D	1mm, 2mm, 3mm, 4mm, 5mm, 6mm	-
	S3-S7D-17°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S3-S7D-30°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S35D	1mm, 2mm, 3mm, 4mm, 5mm, 6mm	-
	S35-S7D-17°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S35-S7D-30°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S5D	1mm, 2mm, 3mm, 4mm, 5mm, 6mm	-
	S5-S7D-17°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S5-S7D-30°	1mm, 2mm, 3mm	S1a/S1aa for S6/S7
	S8D	1mm, 2mm, 3mm, 4mm, 5mm, 6mm	-
	S8D-15°	1.5mm, 3mm	S1a/S1aa for S6/S7
Narrow	S3N-2.1	1mm, 2mm, 3mm, 4mm	-
	S3NN-2.1	2mm, 3mm, 4mm	-
	S35N-2.1	1mm, 2mm, 3mm	-
	S5N-2.1	1mm, 2mm, 3mm, 4mm	-
	S5-S7N-17°	1.5mm	S1a/S1aa for S6/S7
	S5-S7N-30°	1.5mm, 2.5mm	S1a/S1aa for S6/S7
Attachments	S3-S7	0.5mm,1mm,2mm	-
	S35-S7	4mm	-
	S35a	2mm	-
	S5-S7	1mm, 2mm	-

Materials:

Removable Abutments: Titanium alloy Ti-6Al-4V (90% titanium, 6% aluminum, 4% vanadium).

Attachments: Titanium alloy Ti-6Al-4V (90% titanium, 6% aluminum, 4% vanadium).

Screws: Titanium alloy Ti-6Al-4V (90% titanium, 6% aluminum, 4% vanadium).

Intended Purpose / Intended Use

Dental Implant Abutments and Attachments are inteded to be used in the upper or lower jaw and used for supporting tooth replacements to restore chewing funciton.

Indications

Removable Abutments are indicated for edentulous jaws retaining a tissue-supported overdenture.

Indicated for patients with extensive bone or soft tissue loss, with compromised or manual dexterity or phonetic concerns. Also to be used when implants are placed too posterior to allow retention by means of a bar. Allows for misangulation up to 30° between implants.

The Attachments are indicated for use as the prosthetic interface of the removable abutment system, providing a retention

mechanism for overdentures and compensating for implant angulation when used in combination with the angulation-correcting base.

Contraindications

It is contraindicated to use Removable Abutments in:

- Patients who are medically unfit for an oral surgical procedure.
- Patients in whom adequate sizes, numbers or desirable positions of implants are not reachable to achieve safe support of functional or eventually parafunctional loads.
- Patients who are allergic or hypersensitive to Titanium alloy Ti-6Al-4V.

Intended Users and Patient Groups

Removable Abutments are to be used by dental health care professionals.

Removable Abutments are to be used in patients subject to dental implant treatment.

Clinical benefits

Removable Abutments are a component of treatment with a dental implant system and/or dental crowns and bridges. As a clinical benefit of treatment, patients can expect to have their missing teeth replaced and/or crowns restored.

Residual risks and Undesirable side-effects

Residual risk: The evidence of safety of dental implants and its accessories and their contribution to the well-being of the patient - functionally, aesthetically and psychologically - is clear. The predictability of success is evidently high, and the set goals can be achieved in over 95% of cases. Risks are extremely low; no severe systematic problems are at risk and the majority of severe localized problems are transitory. The summary of benefits compared to the risk indicates a very high ratio of predictable success and patient satisfaction compared to the possible risks. Nevertheless, good professional education and patient selection is indispensable for maintaining low risk, and patient cooperation is also essential for good long term-prognosis of treatment.

The placement of these devices is part of an invasive treatment which may be associated with typical side effects such as inflammation, infection, bleeding, hematoma, pain, and swelling. During the placement or removal the pharyngeal reflex (gag reflex) may be triggered in patients with a sensitive gag reflex.

Implant abutments are part of a multi-component system that replaces teeth and as a result, the implant recipient may experience side effects similar to those associated with teeth, such as retained cement, calculus, mucositis, ulcera, soft tissue hyperplasia, soft and/or hard tissue recessions. Some patients may experience discoloration in the mucosal area such as graying.

Where required per the European Medical Device Regulation (MDR; EU 2017/745) a Summary of Safety and Clinical Performance document (SSCP) is available for the Healing caps. The SSCP can be obtained at the following website:

https://ec.europa.eu/tools/eudamed 1

Notice regarding serious incidents: For a patient / user / third party in the European Union and in countries with an identical regulatory regime (Regulation 2017/745/EU on Medical Devices); if, during the use of this device or as a result of its use, a serious incident has occurred, please report it to the manufacturer and to your national authority. The contact information for the manufacturer of this device to report a serious incident is as follows:

https://sgs-dental.com/contact-us/

Performance Requirements and Limitations

To achieve the desired performance, Removable Abutments must only be used with the products described in this Instructions for Use and/or in the Instructions for Use for other compatible S.G.S. International products, and in accordance with the Intended Use for each product. To confirm the compatibility of products, check the color coding, dimensions, lengths and connection type. For further information regarding compatibility please refer to Annex I of this Instructions for Use.

Performance characteristics of the device

Removable Abutments are designed to ensure accurate fit and mechanical stability under intraoral conditions. The recommended maximum tightening torque for the abutment screw is 25 Ncm for the Overdenture S-lock Abutments, Smart-lock Abutments and Easy-fix Abutments, and 20 Ncm for the Ball Attachment Abutments.

Recommended use

Use procedure for Multi-unit abutments:

1.Select the appropriate abutment

2.Place the abutment, using the appropriate driver

3. Remove the driver

4.Tighten the screw

5.Verify the final abutment selection and seating using radiographic imaging.

Warning: Do not exceed the recommended insertion torques. Products must be secured against aspiration when handled intraorally. Aspiration of products may lead to infection or unplanned physical injury. Besides the mandatory precautions for any surgery such as asepsis, during drilling in the jaw bone, one must avoid damage to nerves and vessels by referring to anatomical knowledge and preoperative radiographs.

Caution: One hundred percent implant success cannot be guaranteed. Failure to observe the indicated limitations of use and working steps may result in failure. Treatment by means of implants may lead to loss of bone, biologic or mechanical failures including fatigue fracture of implants. Close cooperation between surgeon, restorative dentist and dental laboratory technician is essential for a successful implant treatment. It is strongly recommended that S.G.S. implants are used only with dedicated S.G.S. surgical instruments and prosthetic components, as combining components that are not dimensioned for correct mating can lead to mechanical instrumental failure, damage to tissue or unsatisfactory esthetic results. It is strongly recommend that clinicians, new as well as experienced implant users, always go through special training before undertaking a new treatment method. S.G.S. International offers a wide range of courses for various levels of knowledge and experience. For more information please visit https://sgs-dental.com/

Before Surgery: Careful clinical and radiological examination of the patient has to be performed prior to surgery to determine the

psychological and physical status of the patient. Special attention has to be given to patients who have local or systemic factors that could interfere with the healing process of either bone or soft tissue or the osseointegration process (e.g., cigarette smoking, poor oral hygiene, uncontrolled diabetes, oro-facial radiotherapy, steroid therapy, infections in the neighboring bone). Special caution is advised in patients who receive bisphosphonate therapy. In general, implant placement and prosthetic design must accommodate individual patient conditions. In case of bruxism or unfavorable jaw relationships reappraisal of the treatment option may be considered. With respect to pediatric patients, routine treatment is not recommended until the end of the jaw bone growth phase has been properly documented.

At surgery: All instruments and tooling used during procedure must be maintained in good condition and care must be taken that instrumentation does not damage implants or other components. Because of the small sizes of the devices, care must be taken that they are not swallowed or aspirated by the patient. S.G.S. implants may be tilted up to 45° relative to the occlusal plane. When used with angulations between 30° and 45°, the following applies: The tilted implant must be splinted; a minimum of 4 implants must be used when supporting a fixed prosthesis in a fully edentulous arch. After the implant installation, the surgeon's evaluation of bone quality and primary stability will determine when implants may be loaded. Lack of adequate quantity and/or quality of remaining bone, infection and generalized diseases may be potential causes for failure of osseointegration both immediately after surgery, or after osseointegration is initially achieved.

Surgical procedure: The company will only take responsibility for the product if the surgeon follows the drilling protocol (See. DR-1101-1) provided and implantation protocol (IMP-1101-1) by the company.

After surgery: To secure the long term treatment outcome it is advised to provide comprehensive regular patient follow up after implant treatment and to inform about appropriate oral hygiene.

Facilities and training

It is strongly recommended that both professionals experienced in the application of S.G.S. International products and those who are not familiar with them undergo specialized training before using any new product. S.G.S. International offers a variety of courses tailored to professionals with different levels of knowledge and expertise. Furthermore, all users must possess the necessary basic medical/professional qualifications. It is always the responsibility of the user to ensure that the procedure is carried out in a licensed facility that complies with the regulations in force in the respective country.

Sterility and Reusability Information

Caution: S.G.S. Prosthetic devices are delivered non-sterile and are intended for single use only. Prior to use clean and sterilize the products following the applicable procedure in this Instructions for Use.

Warning: Use of non-sterile device may lead to infection of tissues or infection diseases.

Caution: Removable abutments are single use products and must not be reprocessed. Reprocessing could cause loss of machanical, chemical and / or biological characteristics. Reuse could cause local or systemic infection.

Warning: Do not use device if the packaging has been damaged or previously opened as the device's integrity may be compromised.

Sterilisation

Each device must be individually sealed in a sterilization pouch and sterilized.

Note: The devices have been validated to withstand these cleaning and sterilization procedures.

1. Reassemble any multi-piece devices (where applicable) and seal each device in a suitable sterilization pouch.
2. Label the sterilization pouch with the information necessary to identify the device (e.g. the product name with article number and lot/batch number (if applicable)).
3. Sufficient protection of the instruments as well as of the sterilization packaging to mechanical damage.
4. Sterilize the device using the following recommended parameters (Table 2).

Table 1 Recommended parameters for sterilisation

Temperature	121 °C
Duration	20 minutes
Number of Cycles	3

Note: Autoclave/sterilizer design and performance can affect the efficacy of the sterilization process. Healthcare facilities should therefore validate the processes that they use, employing the actual equipment and operators that routinely process the devices. All autoclaves/sterilizers should comply with the requirements of, and be validated, maintained and checked in accordance to EN 13060, EN 285, EN ISO 17665-1, and/or AAMI ST79, or to the applicable national standard. The autoclave/sterilizer manufacturer's instructions for use must be strictly followed.

Caution: After sterilization, place the labeled and sealed sterilization pouch in a dry and dark place.

Compatibility

Each S.G.S. International dental system has corresponding connection types, parts, and instruments. For proper use of the corresponding parts and instruments, please refer to the Compatibility Table in Annex I of this Instruction for Use.

Magnetic Resonance (MR) Safety Information:

If there is no MR Safety symbol on the product label, the device has not been evaluated for safety and compatibility in the MR environment and has not been tested for heating or migration in the MR.

Selection of the appropriate device

The selection of the appropriate size/type is always the responsibility of the attending physician after they have performed or received the preliminary condition assessment data.

Disposal:

Safely discard potentially contaminated or no longer usable medical devices as healthcare (clinical) waste in accordance with local healthcare guidelines, country and government legislation or policy.

Separation, re-cycling or disposal of packaging material shall follow local country and government legislation on packaging and packaging waste, where applicable.

Storage, Handling and Transportation:

The device must be stored and transported in dry conditions in the original packaging at room temperature and not exposed to direct sunlight. Incorrect storage and transportation may influence device characteristics leading to failure. Recommended storage/transportation conditions 0-50ºC/32-122ºF. Federal law restricts this device to sale by or on the order of a dentist or other licensed healthcare practitioner.

Information to be provided to the patient:

Information on contraindications, warnings, precautions, side effects and complications with S.G.S. devices should be provided to the patient.

Manufacturer

S.G.S. International Kft.
Budapest, Károlyi István u. 1-3, 1047

LOT	Batch code
MD	Medical device
	Manufacturer
UDI	Unique Device Identifier
	Do not re-use
	Do not resterilize
	Caution
	Date of manufacture
#	Model number
℞ Only	U.S. federal law restricts this device to sale by or on the order of a dental professional.
	Do not use if package is damaged and consult instructions for use
	Keep dry
	Keep away from sunlight
	Temperature limit
CE 1011	CE Marking (Class IIb)

Symbols Glossary

Annex I Compatibility Table for S.G.S. International Removable Abutments

Table 3. Overdenture-Ball Attachments

Connection type	Abutments	Implants
Hexagonal	S3-3.75 S3-S7-3.75-17° S3-S7-3.75-30°	P1 P7
Conical	S3D S3-S7D-17° S3-S7D-30°	P1D P7D P5D P5G
Narrow	S3N-2.1 S3NN-2.1	P7N

Table 4. Overdenture S-Lock Abutments

Connection type	Abutments	Implants
Hexagonal	S35-3.75 S35-S7-3.75-17° S35-S7-3.75-30°	P1 P7
Conical	S35D S35-S7D-17° S35-S7D-30°	P1D P7D P5D P5G
Narrow	S35N-2.1	P7N

Table 5: Overdenture Smart-Lock Abutments

Connection type	Abutments	Implants
Hexagonal	S8-3.75 S8-3.75-15°	P1 P7
Conical	S8D S8D-15°	P1D P7D P5D P5G

Table 6: Overdenture Easy-fix Abutments

Connection type	Abutments	Implants
Hexagonal	S5-3.75 S5-S7-3.75-17° S5-S7-3.75-30°	P1 P7
Conical	S5D S5-S7D-17° S5-S7D-30°	P1D P7D P5D P5G
Narrow	S5N-2.1 S5-S7N-17° S5-S7N-30°	P7N