

**The versatility of the Strong SW line that you already know, with HAnano® surface and accelerated osseointegration. Nanosurface technology that greatly accelerates an osseointegration of quality.**



## PRODUCT DESCRIPTION

Strong SW Plus implants are produced in commercially pure Titanium (Grade 4). The macrogeometry of the implant is hybrid, with cervical micro threads and external hexagon (EH), internal hexagon (IH) and cone morse (CM) prosthetic coupling. The surface of the implant is porous obtained by acid- etched process plus an ultra-fine layer of hydroxyapatite. The cover implant is accessory.

### Implant

Diameters (mm)	Length (mm)
3.5, 3.8, 3.75, 4.5, 5.0	7, 8.5, 10, 11.5, 13, 15.

## INDICATIONS OF USE

S.I.N. implants are indicated for surgical procedures in maxillary or mandibular bones generating a support platform for the installation of prosthetic components that will receive an artificial teeth, restoring the patient's masticatory function. They can be used in conventional procedures (1 and 2 surgical stages) and immediate loading (activation in up to 48 hours) when there is acceptable primary stability (above 45 N.cm) and proper occlusal load. They can be used in single or multiple restorations.

## APPLICATIONS

Strong SW Plus implants are indicated for surgical installation in all bone densities, maxilla or mandible, as long as the maximum insertion torque (80 N.cm) is not surpassed. If the installation reaches a torque that exceeds the limit, it is recommended to use a specific

ground thread for each model before the installation is finished.

## EH, IH and CONE MORSE STRONG SW PLUS IMPLANT INSTALLATION

- Remove the blister from the outer cartridge.
- Keep the traceability labels that came with the product.
- In sterile surgical field and after breaking the sterile sealing of the blister, grasp the primary package (tube) with the non-dominant hand and open the lid.
- The implant will be exposed inside the tube to capture the wrench;
- For motor installation, use the contra-angle wrench.
- Grab the implant by holding the wrench still and rotating the internal support slightly, looking for the perfect fit between the connection and the implant. Press the wrench to the implant to get better fixation.
- Transport the implant to the bony site.
- In the surgical motor, use a maximum torque of 35 N.cm and rotation between 20-40 RPM.
- Preferably, complete the implant installation with the Surgical Torque Wrench or a ratchet wrench.
- The recommended maximum installation torque is 80 N.cm.
- The choice between installing the implant cap, healing or prosthetic component is at the professional's discretion.
- Select the intermediaries between the implant and the prosthesis, observing its indications and limitations, according to the applicable literature.

## EH, IH AND CONE MORSE STRONG SW PLUS IMPLANT INSTALLATION WITH STRONG SW GUIDED SURGICAL KIT

- Remove the blister from the outer cartridge.
- Keep the traceability labels that came with the product.
- In sterile surgical field and after breaking the sterile sealing of the blister, grasp the primary package (tube) with the non-dominant hand and open the lid.
- The implant will be exposed inside the tube to capture the wrench.
- For motor installation, use the key for counter angle according to the choice EH, IH or CONE MORSE implant system and observing the diameter of the chosen implant.
- Grab the implant by holding the wrench still and rotating the internal support slightly, looking for the perfect fit between the connection and the implant. Press the wrench to the implant to get better fixation.
- Fit one of the implant guides according to the selected implant diameter into the washer of the prototype surgical guide.
- Transport the implant to the already attached implant guide.
- In the surgical motor, use a maximum torque of 35 N.cm and rotation between 20-40 RPM.
- Preferably, complete the implant installation with the Surgical Torque Wrench or a ratchet adjusting key length (short or long) according to adjacent dental crown and available mouth opening. Remember that the connection of this key must be the same as the pre-used key for counter-angle.
- The recommended maximum installation torque is 80 N.cm.
- The choice between installing the implant cap, healing or prosthetic component is at the professional's discretion.
- Select the intermediaries between the Implant and the prosthesis, observing its indications and limitations, according to the applicable literature.
- The patient should be informed of all possible surgical complications, contraindications, warnings, precautions and adverse effects. All documentation should also be made available to the patient.
- The use of the product and surgical techniques are inherent to the professional's training. It can only be used and/or applied by dentists specializing in surgery/Implantology.

### ATTENTION

Strong SW Plus implants are intended for specialized procedures, which must be performed by qualified professionals in Implantology. The use of the product must be performed in a surgical environment and in proper conditions for the health and safety of the patient.

### PRECAUTIONS

Observe the conditions of intra-oral tissues, bone quality and bone quantity of the implant receptor site, through radiographic and/or tomographic exams. Failure to perform the pre-surgical assessment can lead to the impossibility of finding pre-existing diseases.

- Consider the general health conditions of the patient. The patient must undergo a thorough clinical and radiological analysis before the surgery to assess the physical and psychological conditions of the patient.
- Patients that present local or systemic factors that may interfere with the healing processes of bone or soft tissues or in the integration process should receive special care.
- Handle the material only in sterile field.
- All materials used in the procedure must be sterile.
- Sterilization is only ensured if the secondary packaging (blister) is not damaged. Do not use the product if the package is damaged. Only open the package at the time of surgery and use the product immediately. Implants not used after opening the carton should be discarded. Expired products should not be used.
- In rehabilitations of a surgical stage (immediate loading), the primary stability should reach at least 45N.cm.
- The maximum angulation allowed for S.I.N. is up to 30 degrees.
- A Insertion torque higher than the recommended maximum can damage the product, causing the loss of its primary function.
- Observe the conditions of use of surgical instruments. Drill and other instruments with low cutting power can generate heating during use, which hinders the osseointegration process. Replace instruments in case of damage, erasure of marks, impaired sharpening, deformation, and wear.

- The surgical motor used in the procedure should be adjusted according to the specification of the implant to be used (torque and RPM)
- Check your motor and angling conditions before surgery. If necessary, perform preventive/corrective maintenance with the manufacturer. Deregulated equipment may directly interfere with the product performance
- During the surgical and prosthetic procedure, only use components and instruments specified by S.I.N.; they have specific dimensions and tolerances for each implant system to ensure the product longevity. Other brand components or adapted to implant models may reduce the life time of the system and cause irreversible damage.
- The professional should ensure that the patient does not aspirate the product.
- The professional is responsible for using S.I.N. in accordance with the instructions for use, as well as determining if it suits the individual situation of each patient.
- The patient should be informed about all possible surgical complications, contraindications, warnings, precautions, and side effects. All documentation accompanying the product should also be made available to the customer.
- The form of use is inherent to the training of the professional who will use the material. It can only be used and/or applied by dentists specialized in surgery/implant dentistry.

## RECOMMENDATIONS

S.I.N. recommends prior planning of the installation surgery for Strong SW Plus implants. Inadequate planning and / or lack of occlusal adjustment may compromise the performance of the implant / prosthesis combination resulting in system failure, such as implant loss or fracture, loosening or fracture of the prosthetic screws. The S.I.N. does not recommend the installation of the implant in patients with inadequate oral hygiene, uncooperative and unmotivated patients, with drug or alcohol abuse, psychoses, chemical dependence, prolonged functional disorders that resist any drug treatment, xerostomia, low levels in the immune system, diseases that require the use of steroids regularly, endocrine disorders, drug allergy, diabetes mellitus, anticoagulation/ bleeding diathesis medications, bruxism, other parafunctional habits, tobacco abuse, installation in children, or pregnant or lactating women.

## CONTRAINDICATIONS

S.I.N. Does not recommend the installation of implants in patients with: acute inflammatory or infectious processes of living tissues, inadequate bone volume or quality, root remnants in the local, serious medical problems such as: disorders of bone metabolism, blood clotting disorders, poor healing capacity, incomplete maxillary growth, allergy or hypersensitivity to titanium, patients with a history of head and neck irradiation, bone condition anatomically unfavorable to implant stability, acute periodontitis, treatable pathological maxillary diseases and alterations of the oral mucosa.

## SIDE EFFECTS

Because it is a surgical procedure, the installation of implants can cause side effects such as irritation at the implantation site, mild bleeding, mild inflammation, localized pain, tenderness, edema and ecchymosis. In case of failure in planning or executing the surgical procedure, adverse effects such as chronic pain, paraesthesia, paralysis, infection, hemorrhage, oroantral oronasal fistula, affected adjacent teeth, bone necrosis, fractures of the implant or prosthesis, bone loss around the implant or loss of the implant (not osseointegration).

## WARNING

Implants should receive components with compatible geometry, or specific components for the switching platform technique and installation indication.

S.I.N. suggests an application table of implants and components according to the region to be applied, but it is up to the dentist, trained in the specialty, the choice and arbitration with regards the diameter and length of the implant installation in relation to the region and anatomy.

S.I.N. Implants are designed to withstand the maximum torque of 80N.cm. Torques above this value can cause irreversible damage, as well as surgical complications.

This product is for single use and cannot be reused nor reesterelized. The reuse or re sterilization of this product may cause loss of the implant (non Osseointegration), contagious infectious disease, deformation and wear of the product

The torque for fixation of the intermediates (cemented abutment, conical or mini-abutment on the implant) is 20 N.cm, for external hexagon cemented abutment use 32 N.cm. The torque for fixation of components above intermediates is 10 N.cm. Do not install the protective screw (implant cap) with ratchet wrench or torque wrench in order to not damage the implant; the tightening must be performed manually through digital wrench. During prosthesis maintenance, the recommended torque value for each component must be respected. Higher values can damage/fracture the implant, reducing its useful life.

## TRACEABILITY

All S.I.N. - Implant System products have sequential batches that allow traceability, which promotes greater safety for the professional qualified to the procedure. Through this batch number it is possible to know the entire history of the product from the manufacturing process until the moment of distribution. The implant card is sent in 3 ways, which one way belongs to the patient.

## STORAGE

The Strong SW Plus implant should be stored in a cool dry place at a maximum temperature of 35° C and protected from direct sunlight in their original unopened packaging and should not be damaged.

## DISPOSAL OF MATERIAL

The disposal of materials should comply with local hospital regulations and applicable local laws.

## TRANSPORTATION

Strong SW Plus implant must be transported adequately to avoid falling and stored under a maximum temperature of 35° C, protected from heat and moisture. Carriage must be carried out in its original packaging.

## HANDLING

S.I.N implants are sent to the professionals properly packaged, sealed and sterilized. Therefore, its packaging (blister) should be opened in a sterile surgical field, and the implant should be handled only with the specific instruments available in the Strong SW Surgical Kit and Strong SW Guided Surgery Kit.

## STERILE R COMMERCIAL PRESENTATION AND STERILIZATION

This product is supplied sterile and for single use (sterilization method: gamma radiation), individually packaged with triple protection: tertiary package (cardboard), blister package (pet film and surgical grade paper) and primary package (transparent pipe).

## COMPLEMENTARY INFORMATION

Magnetic Resonance Imaging (MRI): The safety and compatibility of S.I.N. dental implants with the MRI environment were not evaluated. The heating, displacement or distortion suffered by S.I.N. dental implants in the MRI environment were not tested. The safety of S.I.N. dental implants in the MRI environment is unknown. Performing an MRI on a patient with this device may harm the patient. Exclusive Product for Dental Use. Use. In case of an incident caused by the product, the professional must immediately inform the manufacturer.

## USE BY DATE

The information regarding the expiration date can be found on the labeling of the product. After installation on the patient, the product must be monitored by the professional.

**TABLE 1: INDICATION OF IMPLANT APPLICATION PER REGION**

ARCH	POSITION		TOOTH	EH			IH		CM	
				Diameter	Plataform	Component	Diameter	Component	Diameter	Component
UPPER	11	21	CENTRAL INCISOR	Ø3,75 / Ø4,5	Ø4,1 / Ø4,5	Ø3,6/Ø4,1	Ø3,8 / Ø4,5	Ø3,8 / Ø4,5	Ø3,8 / Ø4,5	Ø4,0
	12	22	LATERAL INCISOR	Ø3,5 / Ø3,75	Ø3,5 / Ø4,1	Ø4,1	Ø3,8	Ø3,8	Ø3,5	Ø3,3 / Ø3,5
	13	23	CANINE	Ø3,75 / Ø4,5	Ø4,1 / Ø4,5	Ø3,6/Ø4,1	Ø3,8 / Ø4,5	Ø3,8 / Ø4,5	Ø3,8 / Ø4,5	Ø4,0 / Ø4,5
	14	24	1 <sup>st</sup> PREMOLAR	Ø3,75	Ø4,1	Ø4,1	Ø3,8 / Ø4,5	Ø4,5	Ø3,8 / Ø4,5	Ø4,0 / Ø4,5
	15	25	2 <sup>nd</sup> PREMOLAR	Ø3,75	Ø4,1	Ø4,1	Ø3,8 / Ø4,5	Ø3,8 / Ø4,5	Ø3,8 / Ø4,5	Ø4,0 / Ø4,5
	16	26	1 <sup>st</sup> MOLAR	Ø5,0	Ø5,0	Ø5,0	Ø4,5 / Ø5,0	Ø3,8 / Ø4,5	Ø4,5 / Ø5,0	Ø4,5 / Ø5,0
	17	27	2 <sup>nd</sup> MOLAR	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0
	18	28	3 <sup>rd</sup> MOLAR	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0
LOWER	41	31	CENTRAL INCISOR	Ø3,5	Ø3,5	Ø3,6	Ø3,8	Ø3,8	Ø3,5	Ø3,3 / Ø3,5
	42	32	LATERAL INCISOR	Ø3,5	Ø3,5	Ø3,6	Ø3,8	Ø3,8	Ø3,5	Ø3,3 / Ø3,5
	43	33	CANINE	Ø3,75	Ø4,1	Ø3,6 / Ø4,1	Ø3,8 / Ø4,5	Ø3,8 / Ø4,5	Ø3,8 / Ø4,5	Ø4,0 / Ø4,5
	44	34	1 <sup>st</sup> PREMOLAR	Ø3,75	Ø4,1	Ø3,6 / Ø4,1	Ø3,8 / Ø4,5	Ø4,5 / Ø5,0	Ø3,8 / Ø4,5	Ø4,0 / Ø4,5
	45	35	2 <sup>nd</sup> PREMOLAR	Ø3,75	Ø4,1	Ø3,6/Ø4,1	Ø3,8 / Ø4,5	Ø4,5	Ø3,8 / Ø4,5	Ø4,0 / Ø4,5
	46	36	1 <sup>st</sup> MOLAR	Ø5,0	Ø5,0	Ø5,0	Ø4,5 / Ø5,0	Ø4,5 / Ø5,0	Ø4,5 / Ø5,0	Ø4,5 / Ø5,0
	47	37	2 <sup>nd</sup> MOLAR	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0
	48	38	3 <sup>rd</sup> MOLAR	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0	Ø5,0


**TABLE 2: SW PLUS IH, EH, CONE MORSE IMPLANT DRILLING SEQUENCE**

		1500RPM			800RPM					25RPM				
PLAT. (mm)	DIÂM. (mm)	FRLD 2020	FHD 2015	FRWD 35	FRWD 38	FCWD 41	FRWD 45	FRWD 50	CMRIW 35	CMRIW 37	CMRIW 38	CMRIW 45	CMRIW 50	
3,5 3,6	3,5	•	•	•					•					
3,8	3,8	•	•	•	•						•			
4,1	3,75	•	•	•	•	•				•				
4,5	4,5	•	•	•	•		•					•		
5	5	•	•	•	•		•	•					•	

• In type I and II bones it is necessary to use the male thread to guarantee the healing process














**TABLE 3: SW PLUS IH, EH, CONE MORSE IMPLANT DRILLING SEQUENCE WITH GUIDED SURGICAL KIT**



PLAT. (mm)	DIÂM. (mm)	20 RPM		400 RPM		1500 RPM	800 RPM				25 RPM				
		EM 35	EM 45	FPG 35	FPG 45	FHDG 20	FRWDG 35	FRWDG 38	FCWDG 41	FRWDG 45	CMRIWG 35	CMRIWG 35E	CMRIWG 37	CMRIWG 38	CMRIWG 45
3.5/3.6	3.5	•		•*		•	•					•	•**		
3.8	3.8		•		•*	•	•	•							•
4.1	3.75		•		•*	•	•	•	•					•	
4.5	4.5		•		•*	•	•	•		•					•

- The use of the tapping screw is optional on bone types I and II, because it is a compressive implant, however the maximum torque must always be respected.
- \* The use of the flat cutter is optional, this instrument is used for alveolar ridge planning, creating a stable face for drilling with the other cutters in the system.
- \*\* The use of the tapping screw will be only for narrow-ring surgical planning.

<b>STERILE</b> <b>R</b>	PRODUTO ESTERILIZADO POR RADIAÇÃO GAMA	PRODUCT STERILIZED THROUGH GAMMA RAYS	PRODUCTO ESTERILIZADO POR RADIACIÓN GAMA
	NÃO REUTILIZAR	DO NOT REUSE	NO LO REUTILICE
	CONSULTAR AS INSTRUÇÕES DE USO	CONSULT INSTRUCTIONS FOR USE	CONSULTE LAS INSTRUCCIONES DE USO
<b>CE</b>	MARCAÇÃO CE	CE MARK	MARCA CE
	MANTENHA SECO	KEEP DRY	MANTÉNGALO SECO
	MANTENHA AO ABRIGO DO SOL	KEEP AWAY FROM SUNLIGHT	MANTÉNGALO LEJOS DE LA LUZ SOLAR
	NÃO UTILIZAR SE A EMBALAGEM ESTIVER VIOLADA	DO NOT USE IF PACKAGE IS DAMAGED	NO LO UTILICE SI EL ENVOLTORIO ESTÁ DAÑADO
	NÃO REESTERILIZE	DO NOT RESTERILIZE	NO LO REESTERILIZAR
	ATENÇÃO	CAUTION	PRECAUCIÓN
<b>EC</b> <b>REP</b>	REPRESENTANTE AUTORIZADO NA COMUNIDADE EUROPEIA	AUTHORIZED REPRESENTATIVE IN THE EUROPEAN COMMUNITY	REPRESENTANTE AUTORIZADO EN LA COMUNIDAD EUROPEA
	LIMITE SUPERIOR DE TEMPERATURA	UPPER LIMIT OF TEMPERATURE	LÍMITE SUPERIOR DE TEMPERATURA
<b>Rx only</b>	ATENÇÃO: A LEI FEDERAL (EUA) LIMITA A VENDA DESTE DISPOSITIVO POR OU POR ORDEM DE UM PROFISSIONAL DE SAÚDE LICENCIADO.	CAUTION: FEDERAL LAW (USA) RESTRICTS THIS DEVICE TO SALE BY OR ON THE ORDER OF A LICENSED HEALTHCARE PRACTITIONER.	PRECAUCIÓN: LAS LEYES FEDERALES (USA) RESTRINGEN LA VENTA DE ESTE DISPOSITIVO POR O EN EL ORDEN DE UN PROFESIONAL DE LA SALUD LICENCIADO.
	FABRICANTE	MANUFACTURER	FABRICANTE
	DATA DE FABRICAÇÃO	DATE OF MANUFACTURE	FECHA DE FABRICACIÓN
	VALIDADE	USE-BY DATE	VALIDEZ
<b>REF</b>	CÓDIGO DE REFERÊNCIA	REFERENCE CODE	CÓDIGO DE REFERÊNCIA

**DEVELOPED AND MANUFACTURED BY:**  
 **S.I.N. Sistema de Implante Nacional S/A**  
 CNPJ [Corporate Taxpayer's Registry]: 04.298.106/0001-74  
 Rua Soldado Ocimar Guimarães da Silva, 2445 - Vila Rio  
 Branco CEP: 03348-060 - São Paulo - SP - Brazil

**EC** **REP**  
**OBELIS S.A.**  
 Bd. Général Wahis 53  
 1030 Brussels, Belgium



**RESPONSIBLE TECHNICIAN:**  
 Alessio Di Risio  
 CREA-SP (register): 5061207169

**PRODUCT:**  
 Strong SW Plus Implant Nano with Surface of SINactive

**ANVISA REGISTRATION** 80108910052

### SERVICE TO PROFESSIONALS

0800 770 8290 +55 (11) 2169-3000

[www.sinimplantsystem.com](http://www.sinimplantsystem.com)

email: [sin@sinimplante.com.br](mailto:sin@sinimplante.com.br)