



SURGICAL MANUAL CONTENTS

THE IMPLANTS	4
Clinical indications for resorting to implantoprosthesis.....	4
Side and secondary effects.....	5
General indications.....	6
Method of use.....	7
Key to the implant codes.....	7
Implants morphology.....	8
Premium implants.....	8
Transgingival (TG) implants.....	9
ZirTi surface.....	10
Availability.....	11
Premium Straight, Premium SP, Premium TG: the range.....	12
Colours summary table.....	14
SURGICAL INSTRUMENTS	16
Surgical kits.....	16
Premium surgical kit.....	17
OneBox.....	20
General indications.....	24
Key to the codes: surgical instruments.....	24
Drills.....	25
Precision drill FS-230.....	26
Pilot drill FPT3-200-LXS.....	26
Pilot drill stops.....	27
Intermediate drills.....	27
Countersink drill FC-XS.....	28
Final cylindrical drills.....	28
Final cylindrical drill stops.....	29
Drills for distal sector.....	30
Osteotomes.....	31
Bone taps.....	32
Easy Insert drivers.....	34
Carriers and drivers for implant.....	35
Drivers.....	36
Mounter and mounter stop key.....	36
Screwsdrivers.....	37
Torque-control ratchet CRI5-KIT.....	39
Extensions and adapters.....	40
Depth gauge PROF3.....	41
X-Rays templates.....	41
Bone profilers.....	42
ø 2.50 mm cylindrical drill.....	42
Parallelism pin PP-2/28.....	43
Parallelism pins with depth lines.....	43
Cleaning, disinfection, sterilisation and storage of the kit and of the surgical instruments.....	44
Cleaning, sterilisation and storage of the torque-control ratchet CRI5-KIT.....	44
Preparation of the implant site.....	46
Surgical sequences.....	47

SURGICAL PROCEDURES	48
Surgical sequence for Premium implants with length 7.00 mm.....	48
Surgical sequence for Premium implants with length 8.50 mm.....	50
Surgical sequence for Premium implants with length 10.00 mm.....	52
Surgical sequence for Premium implants with length 11.50 mm.....	54
Surgical sequence for Premium implants with length 13.00 mm.....	56
Surgical sequence for Premium implants with length 15.00 mm.....	58
Surgical sequence for Premium implants with length 18.00 mm.....	60
SURGICAL INSTRUMENTS	62
Shorty Drilling kit.....	62
Instruments contained in the Shorty Drilling kit.....	66
SURGICAL PROCEDURES	68
Surgical sequence for Premium implants with length 6.00 mm (Shorty drills).....	68
Surgical sequence for Premium implants with length 7.00 mm (Shorty drills).....	70
Surgical sequence for Premium implants with length 8.50 mm (Shorty drills).....	72
Implant insertion.....	74
Standard procedure.....	75
Phase after inserting the implant.....	75
GENERAL	76
Intra-operative removal of the implants.....	76
Maintenance of the prosthesis.....	76
Responsibility for defective products and warranty terms.....	76
Disposal.....	76
Material composition.....	77
Identification of the manufacturer.....	77
Key to symbols used on the implant packs.....	78
Key to symbols used on the surgical instrument packs.....	78
Key to symbols used on the prosthesis packs.....	79

In implant-prosthetic rehabilitation with Premium implants, exclusively original prosthetic components by Sweden & Martina must be used. Use of non-original components limits the responsibility of Sweden & Martina S.p.A. and renders the product warranty void. Suitable surgical instruments must be used to insert the fixtures surgically. These instruments are sold individually or in kits. It is recommended to use original surgical accessories manufactured by Sweden & Martina. The Company declines all responsibility for use of any non-original instruments. Premium dental implants are implantable devices suitable for the rehabilitation of patients affected by total or partial edentulism. They are intended to be inserted surgically in the mandibular or maxillary bone. They can be inserted in different sites of the oral cavity with various techniques and then connected to the prosthesis at different times.

This manual contains the instructions for use of Premium dental implants and of the respective surgical instruments.

Clinical indications for resorting to implantoprosthesis

When assessing the patient, in addition to his/her eligibility as regards implant-prosthetic rehabilitation, it is usually necessary to consider the contraindications that apply to oral surgery procedures in general.

These include:

- clotting disorders, anticoagulant therapy;
- healing or bone regeneration disorders;
- decompensated diabetes mellitus;
- metabolic or systemic diseases that compromise tissue regeneration with a particular influence on healing and bone regeneration;
- alcohol abuse, smoking and use of drugs;
- immunosuppressive therapy, such as: chemotherapy and radiotherapy;
- infections and inflammations, such as periodontitis and gingivitis;
- poor oral hygiene;
- inadequate motivation;
- occlusion and/or articulation disorders as well as an inadequate interocclusal space;
- inadequate alveolar process.

It is contraindicated to fit implants and implant restorations in patients with poor general or oral health, those who are unable to monitor their general conditions properly or those who have had organ transplants. Psychologically unstable patients, alcohol or drug abusers, and poorly motivated or uncooperative patients should also be considered unsuitable for this kind of treatment. Patients with poor periodontal health should first be treated and allowed to recover. In the presence of a lack of bone substance or poor quality of the receiving bone, such as to compromise the stability of the implant, suitable guided tissue regeneration must be performed prior to implant treatment. Contraindications also include: bruxism, allergy to titanium (extremely rare), acute or chronic infectious diseases, sub-acute chronic maxillary osteitis, systemic diseases, endocrine disorders, diseases resulting in microvascular disorders, pregnancy, breastfeeding, previous exposure to radiation, haemophilia, neutropenia, steroid use, diabetes mellitus, kidney failure and fibrous dysplasia. The normal contraindications common to all oral surgery must also be observed. Surgery is not recommended for patients on anti-coagulant, anticonvulsant and immunosuppressant therapies, with active inflammatory-infective processes of the oral cavity, and patients with BUN and creatinine values outside the norm. Patients with cardiovascular disease, hypertension, thyroid or parathyroid diseases, malignant tumours found in the 5 years preceding the operation, or nodular swellings must also be rejected. Chemotherapies reduce or eliminate the ability of osseointegration, therefore patients undergoing these treatments must be carefully screened before being rehabilitated with oral implantoprosthesis. Numerous cases of bisphosphonate-associated periimplant osteonecrosis of the mandible have been reported in the literature. This problem particularly applies to patients treated intravenously. As a post-operative precaution, the patient must avoid any kind of strenuous physical activity.

Side and secondary effects

Situations that may occur after surgical procedures include temporary local swelling, oedema, haematoma, temporary sensitivity alterations, temporary masticatory limitations, post-surgical micro-haemorrhages in the following 12-24 hours. The patient may also experience pain, speech problems, gingivitis, loss of bone crest, permanent paresthesia, dysesthesia, local or systemic infections, exfoliation, hyperplasia, and oronasal and oroantral fistulas, perforation of the labial or lingual plate, perforation of the Schneider membrane, bone fractures, implant fractures, fractures of the over-structures, aesthetic problems, unnoticed perforation of the nasal sinus, nerve injuries, impairment of natural dentition.

The following pathophysiological problems can increase the risks: cardiovascular failure, coronary disease, arrhythmia, pulmonary or chronic respiratory disease, gastrointestinal disease, hepatitis, inflammatory bowel disease, chronic kidney failure and disorders of the urinary system, endocrine disorders, diabetes, thyroid diseases, hematologic disorders, anaemia, leukaemia, coagulation problems, osteoporosis or musculoskeletal arthritis, stroke, neurological disorders, mental retardation, paralysis.

Before proceeding, it is important to perform a careful pre-operative analysis of the patient's medical history to verify his or her suitability for the implant treatment. It is also recommended to collect and file all the clinical, radiological and radiographic records.

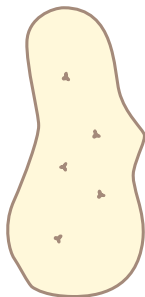
After making models of the two arches, the best position and orientation of the chosen implants will be evaluated based on the occlusal plane and on a correct distribution of the forces. In this phase, a surgical stent may be created to guide the specialist to correctly position the implants during the operation. Depending on the specific case, a decision will be made on whether to use a single or double phase surgical procedure, using titanium cylinders (code DIM) to make the radiological/surgical stent.



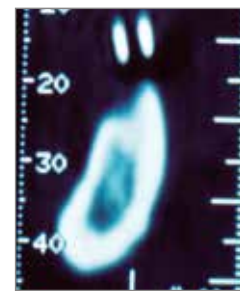
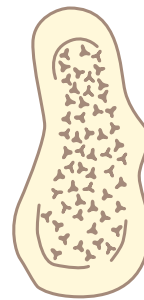
A radiological and surgical stent can be made by using the special cylinders in titanium (code DIM), which can be used to obtain an ideal positioning of the implants in terms of biomechanics and aesthetics.

In addition to an oral examination, both clinical and with x-rays, it is recommended to take a Completed Tomography (C.T.) scan of the interested area; once the x-rays and scans have been obtained, the specialist can identify the most suitable implant with the help of convenient transparent radiographic guides. The pre-operative study of the C.T. Dentscan allows identifying the type of bone present in the insertion point of the implant. The choice of the surgical procedure must take into consideration the type of bone present.

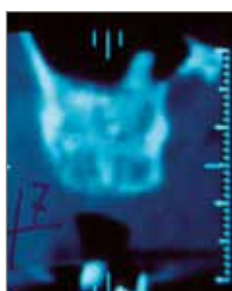
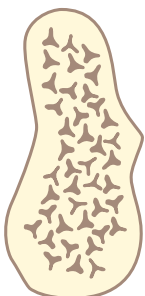
The bone is normally classified into 4 types according to the density. The classification (according to Karl Misch) is the following:



BONE D1: dense cortical bone



BONE D2: thick dense to porous cortical bone on crest and coarse trabecular bone within



BONE D3: thin porous cortical bone on crest and fine trabecular bone within



BONE D4: fine trabecular bone

General indications

Premium fixtures are long-term implantable medical devices. All the fixtures are sold in single-use sterile packs. The function of the fixtures is to replace missing dental roots. The fixtures have a connection in the crown part for receiving an implant post aimed at supporting a dental prosthesis.

In the implant-prosthetic rehabilitation with Premium implants, only original Sweden & Martina prosthetic components should be used.

The employment of non-original components limits Sweden & Martina responsibility and cancel the product warranty.

These implants have cylindrical shape with an external thread and have a hexagonal internal connection for connecting the prosthetic components. Premium implants can be inserted in both edentulous and post-extraction sites, either immediate (insertion of the implant at the same time as the removal of the tooth or root), or deferred (normally about 3/4 weeks between extraction and insertion of the implant fixture).

All the fixtures are sold with the respective closing cover screws (also called, surgical screws), preassembled on practical mounters which also act as transfer and post, secured to the connections with special screws. The surgical cover screws are also medical devices that can be implanted surgically. They are designed to remain in the oral cavity for more than 30 days. The surgical cover screws can also be sold individually, in sterile packs. Normally, dental implants, even though they can be implanted in all patients who have the suitable therapeutic indications, must only be used by professional dentists or surgeons with the necessary qualifications and training.



Method of use

The methods of use can be divided into two main surgical techniques:

- **Two stage:** the first stage is "submerged" i.e. where the implant is inserted under the mucosa, and the connection well is covered with a surgical cover screw (or closing screw), which is then sutured. Then, after 2 to 6 months, the mucosa is reopened and the prosthesis is inserted;
- **One stage:** insertion of the implant, closure of the connection with a transgingival healing screw, instead of a surgical cover screw. Alternatively, in the presence of suitable therapeutic indications, it can be loaded immediately with an appropriate temporary or permanent dental post, depending on the case.

Implants are inserted in the bone based on surgical protocols that must be considered according to the quantity and quality of the receiving bone, the implant or the kind of prosthesis, and the possible need for regenerative therapies. The "implantologist" or dental surgeon creates a site in the patient's bone (corresponding to the new tooth to be placed or replaced), by using a series of calibrated burs or suitable instruments such as bone expanders, bone compactors or similar instruments. The necessary conditions for the success of the implant are:

- the presence of a certain amount of bone;
- good periodontal (gingival) support;
- no bruxism (teeth grinding) or serious malocclusion;
- the presence of good occlusal balance (correct masticatory occlusal plane).

Premium implants have been tested in a wide range of clinical situations:

- standard operating procedures involving the double or single surgical phase;
- immediate and early loading;
- simultaneous use with regenerative therapies;
- post-extraction situations, even combined with immediate loading.

Generally, masticatory loading with a fixed prosthesis occurs at a second stage, after 2 to 3 months for the mandible and after 4 to 6 months for the upper jaw. In some cases, but not all, immediate loading of the implants is possible; to do this it requires good primary stability, with no mobility or movement limited to a few microns. The bone-implant interface must therefore be of the order of a few millimicrons, otherwise there is the risk of fibrous integration.

The clinical indication for choosing the Premium implant depends on the site in which the implant is to be inserted, on the anatomy of the receiving bone and on the technique chosen from among those mentioned above. The choice must be made exclusively by the doctor, who must have the suitable training and experience and must plan the prosthetic rehabilitations beforehand.

Key to the implant codes

The implant codes are so-called "mnemonic" codes, i.e. they allow easy identification of the piece. Below is a table showing how the mnemonic codes work using code A-ZT-425TG-115 as an example:

Type of implant A-	Surface ZT-	Diameter 425	Emergency TG-	Length 115
A: Premium Implant	ZT: ZirTi Surface	330: 3.30 mm 380: 3.80 mm 425: 4.25 mm 500: 5.00 mm	TG: Transgingival (Transmucosal)	060: 6.00 mm 070: 7.00 mm 085: 8.50 mm 100: 10.00 mm 115: 11.50 mm 130: 13.00 mm 150: 15.00 mm 180: 18.00 mm
			SP- SP: Switching Platform	

it's the size of the platform of the implant connection

if no specifications are available, it refers to a standard STRAIGHT connection

refers to the length of the implant

All measurements in the catalogues are given in mm, unless indicated otherwise.

Implants morphology

Premium implants

The different morphologies that characterize the entire family of Premium implants (Straight and SP) mean that the correct implant design can always be selected to suit the site in which they are to be fitted.

Ø 3.30

Implants with Ø 3.30 mm are available only with a cylindrical-shaped coronal emergence with a smooth collar 0.80 mm high. Only the thread of the implants with Ø 3.30 mm has a pitch of 0.60 mm and a triangular profile characterized by a 50° angle and a depth of 0.30 mm.



Straight

All Premium Straight implants with a cylindrical-shaped coronal emergence have a smooth collar 0.80 mm high. The standard thread of Premium implants has a pitch of 1.00 mm and a depth of 0.40 mm.



Switching Platform (SP)

The neck of Premium SP implants widens gradually in the coronal direction, then returns to the implant diameter at connection level. The maximum widening is 0.60 mm on the diameter.



Transgingival (TG) implants

The Premium TG implants are dental fixtures with a transmucous conformation that complete the program of submerged Premium implants already available, thus allowing to choose the most suitable fixture for any clinical situation. The implants of the Premium TG system have two connection platforms:

- the "M" (Medium) connection, which has a platform with external diameter 4.80 mm, common to both Premium TG implants with diameters of 3.30, 3.80 and 4.25 mm;
- the "W" (Wide) connection, which has an external diameter of 5.80 mm and is only present in implants with a diameter of 5.00 mm, in this case too both Premium TG.

Premium TG
The height of the transgingival part of Premium TG implants is 2.20 mm irrespective of the endosseous length of the implant.



A range of fixtures with reduced heights is also available in the program; they can be used, according to the most recent clinical protocols, in all cases where there is small vertical bone dimension. Shorty implants are available in height 7.00 and 8.50 mm.

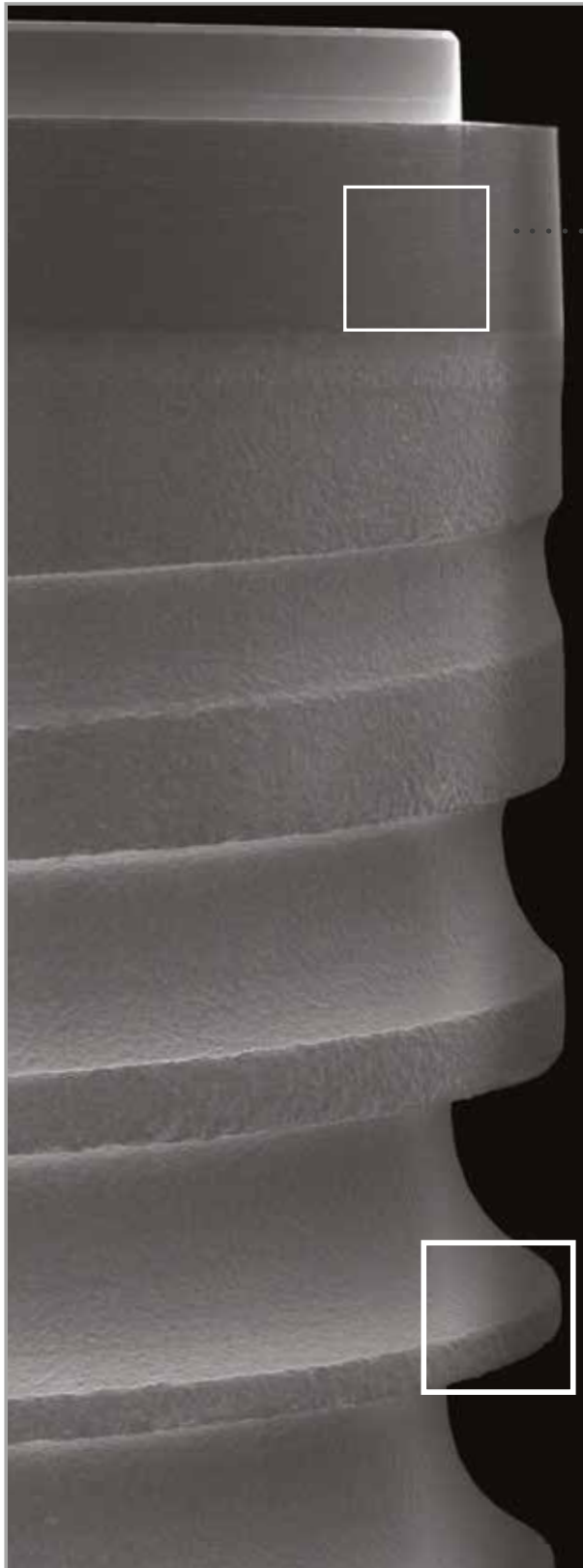


IMPORTANT WARNING

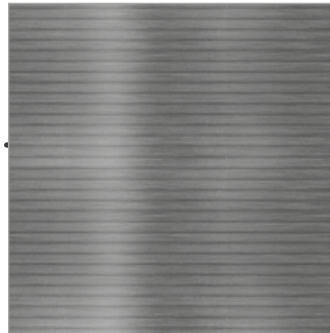
Never use these implants for rehabilitating single crowns, but only as support posts combined with longer fixtures for multiple rehabilitations. It is also recommended to always use, whenever possible, implants with the largest diameter possible depending on the thickness of the crest.

ZirTi Surface

All three versions of Premium implants Straight, SP, TG are available a machined neck and a body with ZirTi treatment.



Machined surface



The **machined collar** allows the control of the connection diameter and prevents the accumulation of plaque in the area where it joins the post.

ZirTi surface

(Zirconium Sand-Blasted Acid etched Titanium)

The implant body is treated with appropriate subtraction techniques that give the surface the characteristic ZirTi morphology.

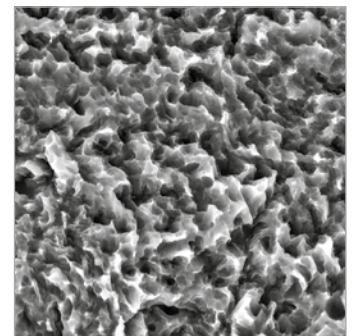
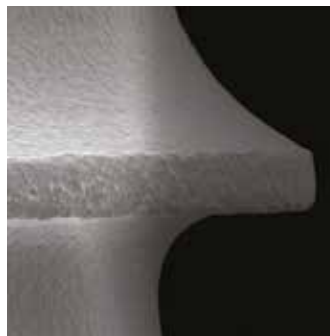


Image from the Sweden & Martina archives

Availability

PREMIUM



code

PREMIUM SP



code































PREMIUM TG














































code

diameter	length <i>L</i>	ZirTi surface	ZirTi surface	ZirTi surface
3.30	10.00	A-ZT-330-100	-	A-ZT-330TG-100
	11.50	A-ZT-330-115	-	A-ZT-330TG-115
	13.00	A-ZT-330-130	-	A-ZT-330TG-130
	15.00	A-ZT-330-150	-	A-ZT-330TG-150
3.80	6.00	-	-	A-ZT-380TG-060
	7.00	-	-	A-ZT-380TG-070
	8.50	A-ZT-380-085	A-ZT-380SP-085	A-ZT-380TG-085
	10.00	A-ZT-380-100	A-ZT-380SP-100	A-ZT-380TG-100
	11.50	A-ZT-380-115	A-ZT-380SP-115	A-ZT-380TG-115
	13.00	A-ZT-380-130	A-ZT-380SP-130	A-ZT-380TG-130
	15.00	A-ZT-380-150	A-ZT-380SP-150	A-ZT-380TG-150
	18.00	A-ZT-380-180	-	-
4.25	6.00	-	-	A-ZT-425TG-060
	7.00	A-ZT-425-070	A-ZT-425SP-070	A-ZT-425TG-070
	8.50	A-ZT-425-085	A-ZT-425SP-085	A-ZT-425TG-085
	10.00	A-ZT-425-100	A-ZT-425SP-100	A-ZT-425TG-100
	11.50	A-ZT-425-115	A-ZT-425SP-115	A-ZT-425TG-115
	13.00	A-ZT-425-130	A-ZT-425SP-130	A-ZT-425TG-130
	15.00	A-ZT-425-150	A-ZT-425SP-150	A-ZT-425TG-150
	18.00	A-ZT-425-180	-	-
5.00	6.00	-	-	A-ZT-500TG-060
	7.00	A-ZT-500-070	A-ZT-500SP-070	A-ZT-500TG-070
	8.50	A-ZT-500-085	A-ZT-500SP-085	A-ZT-500TG-085
	10.00	A-ZT-500-100	A-ZT-500SP-100	A-ZT-500TG-100
	11.50	A-ZT-500-115	A-ZT-500SP-115	A-ZT-500TG-115
	13.00	A-ZT-500-130	A-ZT-500SP-130	A-ZT-500TG-130
	15.00	A-ZT-500-150	A-ZT-500SP-150	A-ZT-500TG-150

THE IMPLANTS

mm length	Ø 3.30 mm			Ø 3.80 mm		
	Straight	SP	TG	Straight	SP	TG
6.00	-	-	-	-	-	 Ø 3.80 2.20 6.00 A-ZT-380TG-060
7.00	-	-	-	-	-	 Ø 3.80 2.20 7.00 A-ZT-380TG-070
8.50	-	-	-	 Ø 3.80 2.20 8.50 A-ZT-380-085	 Ø 3.80 2.20 8.50 A-ZT-380SP-085	 Ø 3.80 2.20 8.50 A-ZT-380TG-085
10.00	 Ø 3.30 2.20 10.00 A-ZT-330-100	-	 Ø 3.30 2.20 10.00 A-ZT-330TG-100	 Ø 3.80 2.20 10.00 A-ZT-380-100	 Ø 3.80 2.20 10.00 A-ZT-380SP-100	 Ø 3.80 2.20 10.00 A-ZT-380TG-100
11.50	 Ø 3.30 2.20 11.50 A-ZT-330-115	-	 Ø 3.30 2.20 11.50 A-ZT-330TG-115	 Ø 3.80 2.20 11.50 A-ZT-380-115	 Ø 3.80 2.20 11.50 A-ZT-380SP-115	 Ø 3.80 2.20 11.50 A-ZT-380TG-115
13.00	 Ø 3.30 2.20 13.00 A-ZT-330-130	-	 Ø 3.30 2.20 13.00 A-ZT-330TG-130	 Ø 3.80 2.20 13.00 A-ZT-380-130	 Ø 3.80 2.20 13.00 A-ZT-380SP-130	 Ø 3.80 2.20 13.00 A-ZT-380TG-130
15.00	 Ø 3.30 2.20 15.00 A-ZT-330-150	-	 Ø 3.30 2.20 15.00 A-ZT-330TG-150	 Ø 3.80 2.20 15.00 A-ZT-380-150	 Ø 3.80 2.20 15.00 A-ZT-380SP-150	 Ø 3.80 2.20 15.00 A-ZT-380TG-150
18.00	-	-	-	 Ø 3.80 2.20 18.00 A-ZT-380-180	-	-
Surgical cover screws	 A-VT-330	-	 A-TG-VT-M	 A-VT-380	-	 A-TG-VT-M

































- Ø 3.30 mm implants: The use of the Premium Ø 3.30 mm implants is only for replacing the central and lateral incisors and upper and lower canine teeth. They can also be used in the pre-molar and molar zone, but only to support the prosthetic structures which are also supported by implants with a bigger diameter. Each implant is sold with its own surgical cover screw. The surgical screws are also available on sale individually in a sterile pack and must be tightened to 10 Ncm.


















































Ø 4.25 mm			Ø 5.00 mm			mm length
Straight	SP	TG	Straight	SP	TG	
		 A-ZT-425TG-060			 A-ZT-500TG-060	6.00 ZirTi
 A-ZT-425-070	 A-ZT-425SP-070	 A-ZT-425TG-070	 A-ZT-500-070	 A-ZT-500SP-070	 A-ZT-500TG-070	7.00 ZirTi
 A-ZT-425-085	 A-ZT-425SP-085	 A-ZT-425TG-085	 A-ZT-500-085	 A-ZT-500SP-085	 A-ZT-500TG-085	8.50 ZirTi
 A-ZT-425-100	 A-ZT-425SP-100	 A-ZT-425TG-100	 A-ZT-500-100	 A-ZT-500SP-100	 A-ZT-500TG-100	10.00 ZirTi
 A-ZT-425-115	 A-ZT-425SP-115	 A-ZT-425TG-115	 A-ZT-500-115	 A-ZT-500SP-115	 A-ZT-500TG-115	11.50 ZirTi
 A-ZT-425-130	 A-ZT-425SP-130	 A-ZT-425TG-130	 A-ZT-500-130	 A-ZT-500SP-130	 A-ZT-500TG-130	13.00 ZirTi
 A-ZT-425-150	 A-ZT-425SP-150	 A-ZT-425TG-150	 A-ZT-500-150	 A-ZT-500SP-150	 A-ZT-500TG-150	15.00 ZirTi
 A-ZT-425-180						18.00 ZirTi
 A-VT-425	 A-TG-VT-M		 A-VT-500	 A-TG-VT-W		Surgical cover screws

Each implant is sold with its own surgical cover screw. The surgical screws are also available on sale individually in a sterile pack and must be tightened to 10 Ncm.

THE IMPLANTS

Colours summary table

implant morphology	Premium			
implant Ø	3.30 Straight	3.80 Straight	4.25 Straight	5.00 Straight
reference colour code on surgical tray				
colour code (on pack)				
<i>maximum emergence Ø</i> <i>connection</i> <i>platform Ø</i> <i>collar external Ø</i>				
main dimensions				
connection driver hexagon colour code				
Easy Insert				
	Hexagon: 2.30 mm	Hexagon: 2.30 mm	Hexagon: 2.50 mm	Hexagon: 2.50 mm
implant basket colour code				
standard final drill				
	Ø 2.80 mm	Ø 3.00 mm	Ø 3.40 mm	Ø 4.25 mm

Premium SP			Premium TG				implant morphology
3.80 SP	4.25 SP	5.00 SP	3.30 TG	3.80 TG	4.25 TG	5.00 TG	implant Ø
							reference colour code on surgical tray
							colour code (on pack)
<p>Ø 4.45 Ø 3.80 Ø 3.20</p> 	<p>Ø 4.85 Ø 4.25 Ø 3.60</p> 	<p>Ø 5.60 Ø 5.00 Ø 3.90</p> 	<p>Ø 4.80 Ø 3.30</p> 	<p>Ø 4.80 Ø 3.80</p> 	<p>Ø 4.80 Ø 4.25</p> 	<p>Ø 5.80 Ø 5.00</p> 	<p>maximum emergence Ø connection platform Ø collar external Ø</p> <p>main dimensions</p>
							connection driver hexagon colour code
							Easy Insert
Hexagon: 2.30 mm	Hexagon: 2.50 mm	Hexagon: 2.50 mm	Hexagon: 2.30 mm	Hexagon: 2.30 mm	Hexagon: 2.30 mm	Hexagon: 2.50 mm	
							implant basket colour code
							standard final drill
Ø 3.00 mm	Ø 3.40 mm	Ø 4.25 mm	Ø 2.80 mm	Ø 3.00 mm	Ø 3.40 mm	Ø 4.25 mm	

Surgical kits

PREMIUM SURGICAL KIT

In a single kit all the surgical instruments for the whole Premium range, in all versions (Straight, SP, TG).

A **single kit** complete with all the indispensable instruments to ensure the surgeon of the rapid availability of everything needed for the most varied surgical necessities. It also contains prosthetic drivers for the fixation screws of posts and abutments.

In **all kits** is also included a practical ratchet that acts as a dynamometric key for checking the closing torque of the prosthetic screws and as a surgical key during insertion of the implants. The ratchet has a very small, compact head and is also easy to use in distal sectors.



All **kits** are made of practical boxes in Radel with a surgical tray inside that is set-up to hold the instruments according to a guided procedure. The sequences of use of the instruments are indicated by coloured marks. The instrument codes are printed on the tray.

SHORTY DRILLING KIT



ONEBOX KIT

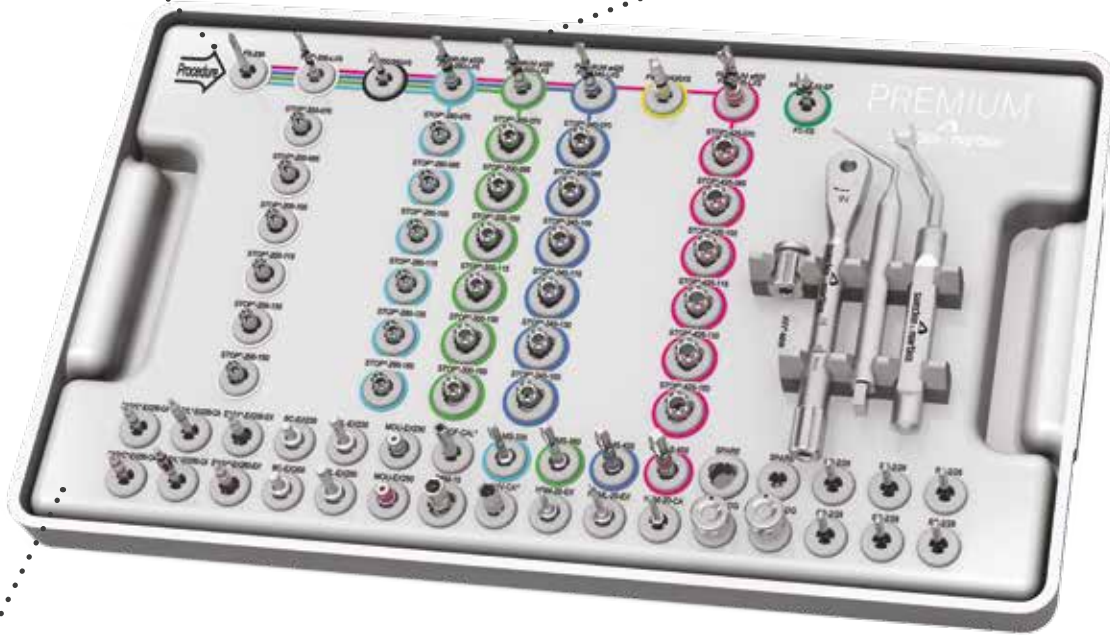


Premium surgical kit





The surgical kit for the Premium implant system have been designed for maximum simplicity and ergonomics.

The instrument codes are printed on the tray to allow the assistants to easily reposition them after cleansing and cleaning.

The standard surgical kit contains the stops for safely using the drills. These stops are extremely practical because they allow manually inserting and removing drills in tip → shank direction.



Premium surgical kit: contains all the surgical and prosthetic instruments needed for all the implants in the Premium family in all morphologies: Straight, Switching Platform and transgingival (TG).

code	description
	ZPREMIUM-INT Surgical kit complete with the instruments necessary for Premium implants Straight and SP
PRE-KIT-INT	Radel instrument tray for Premium implants Straight and SP
	GROMMET-3 Kit with 5 spare silicon supports for surgical trays, for drills or instruments with right angle shanks
	GROMMET-4 Kit with 5 spare silicon supports for surgical trays, for hand use instruments or hand knobs
	GROMMET-5 Kit with 5 spare silicon supports for surgical trays, for digital or manual handheld instruments

Premium kit

PILOT DRILL
FPT3-200-LXS

INTERMEDIATE DRILL
FG-200/280XS

FINAL CYLINDRICAL DRILLS
 ● FFT3-280-LXS
 ● FFT3-300-LXS
 ● FFT3-340-LXS
 ● FFT3-425-LXS

STOP FOR CYLINDRICAL DRILLS
 STOP3-280-070
 STOP3-280-085
 STOP3-280-100
 STOP3-280-115
 STOP3-280-130
 STOP3-280-150

PRECISION DRILL
FS-230

STOP FOR PILOT DRILL
 STOP3-200-070
 STOP3-200-085
 STOP3-200-100
 STOP3-200-115
 STOP3-200-130
 STOP3-200-150

EASY INSERT DRIVERS
 EASYS2-EX230-CA EASYL-EX230-CA EASY2-EX230-EX

EASY INSERT DRIVERS
 EASYS2-EX250-CA EASYL-EX250-CA EASY2-EX250-EX

DRIVER
 BC-EX230 BL-EX230 BC-EX250 BL-EX250

DRIVER
 BC-EX250 BL-EX250

MOUNTER
 MOU-EX230 MOU-EX250

ADAPTER AND EXTENSIONS
 PROF-CAL3 BPM-15 B-AVV-CA3

● STOP FOR CYLINDRICAL DRILLS

- STOP3-300-070
- STOP3-300-085
- STOP3-300-100
- STOP3-300-115
- STOP3-300-130
- STOP3-300-150



INTERMEDIATE DRILL
FG-330/425XS



● STOP FOR CYLINDRICAL DRILLS

- STOP3-340-070
- STOP3-340-085
- STOP3-340-100
- STOP3-340-115
- STOP3-340-130
- STOP3-340-150

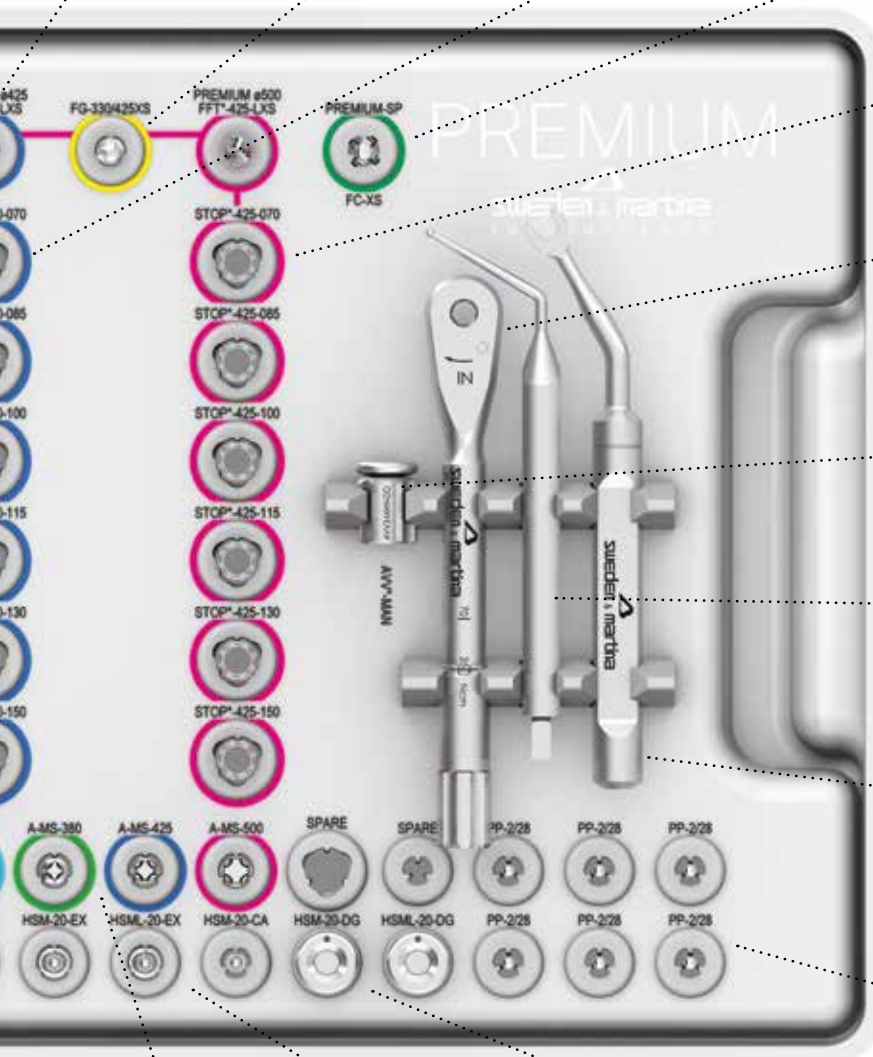


COUNTERSINK DRILL
FC-XS



● STOP FOR CYLINDRICAL DRILLS

- STOP3-425-070
- STOP3-425-085
- STOP3-425-100
- STOP3-425-115
- STOP3-425-130
- STOP3-425-150



TORQUE-CONTROL RATCHET
CRI5-KIT



ADAPTER
AVV3-MAN-DG



DEPTH METER
PROF3



MOUNTER STOP KEY
CM2



PARALLELISM PINS
PP-2/28



STANDARD BONE TAPS

- A-MS-330
- A-MS-380
- A-MS-410
- A-MS-500



DRIVERS FOR FIXATION SCREWS

- HSM-20-EX
- HSML-20-EX
- HSM-20-CA



HAND DRIVERS FOR FIXATION SCREWS

- HSM-20-DG
- HSML-20-DG

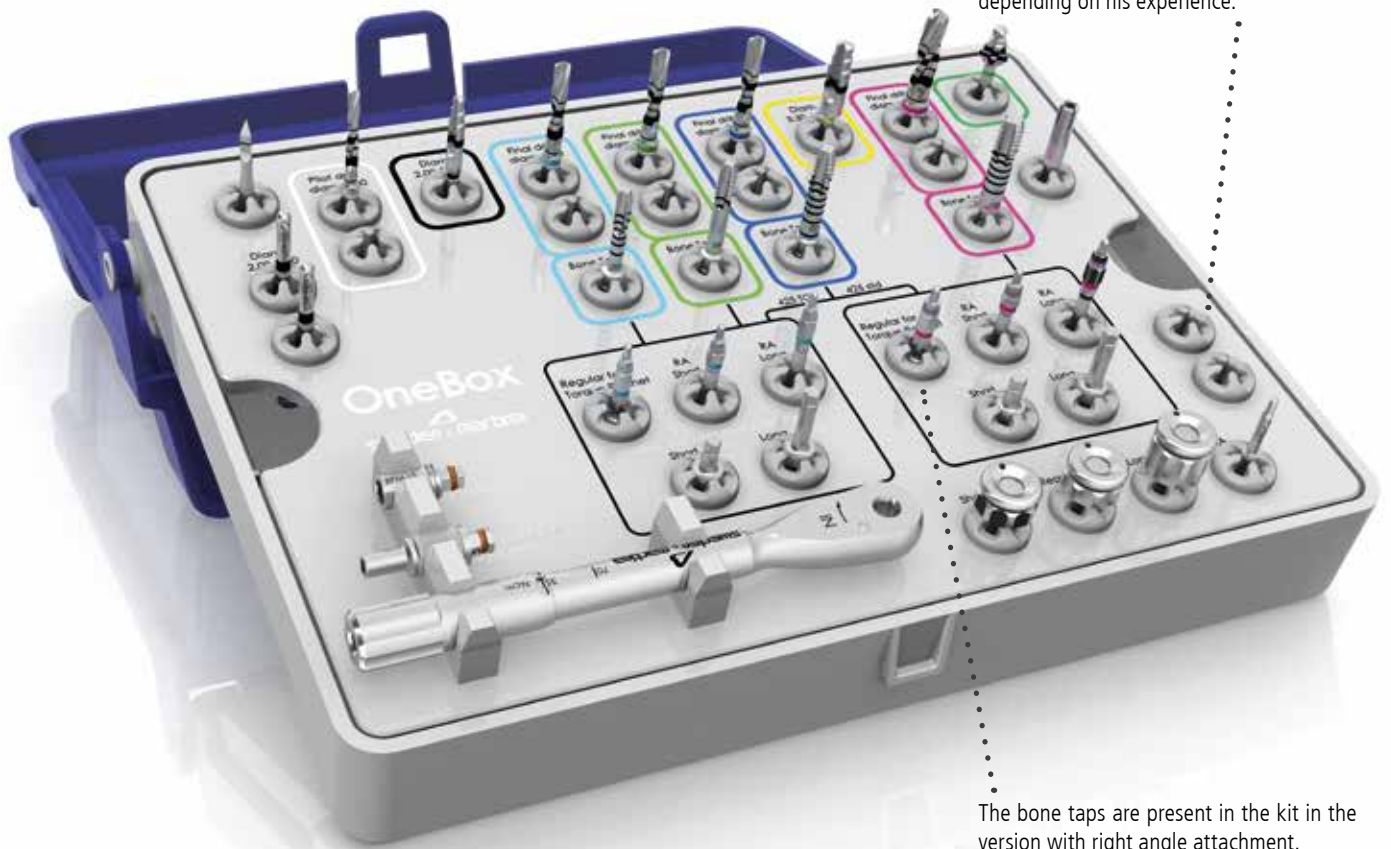


OneBox

It is a compact kit equipped essentially with all that is needed only for the surgical phase.

The OneBox is a compact kit that is easy to carry, containing the surgical instruments strictly necessary for inserting Premium implants in all the versions Straight, SP and TG. It contains drill stops or prosthetic drivers, but it contains all the drivers in the one-piece hand use version and the right angle version.

This kit contains space for an additional series of alternative drills, which the surgeon may wish to choose and use depending on his experience.



The bone taps are present in the kit in the version with right angle attachment.

code

description



ZAONEBOX-INT

OneBox surgical kit complete with the instruments for Premium implants Straight, SP and TG

AONEBOX-KIT-INT

OneBox Radel instrument tray for Premium instruments Straight, SP and TG



GROMMET-CA-1

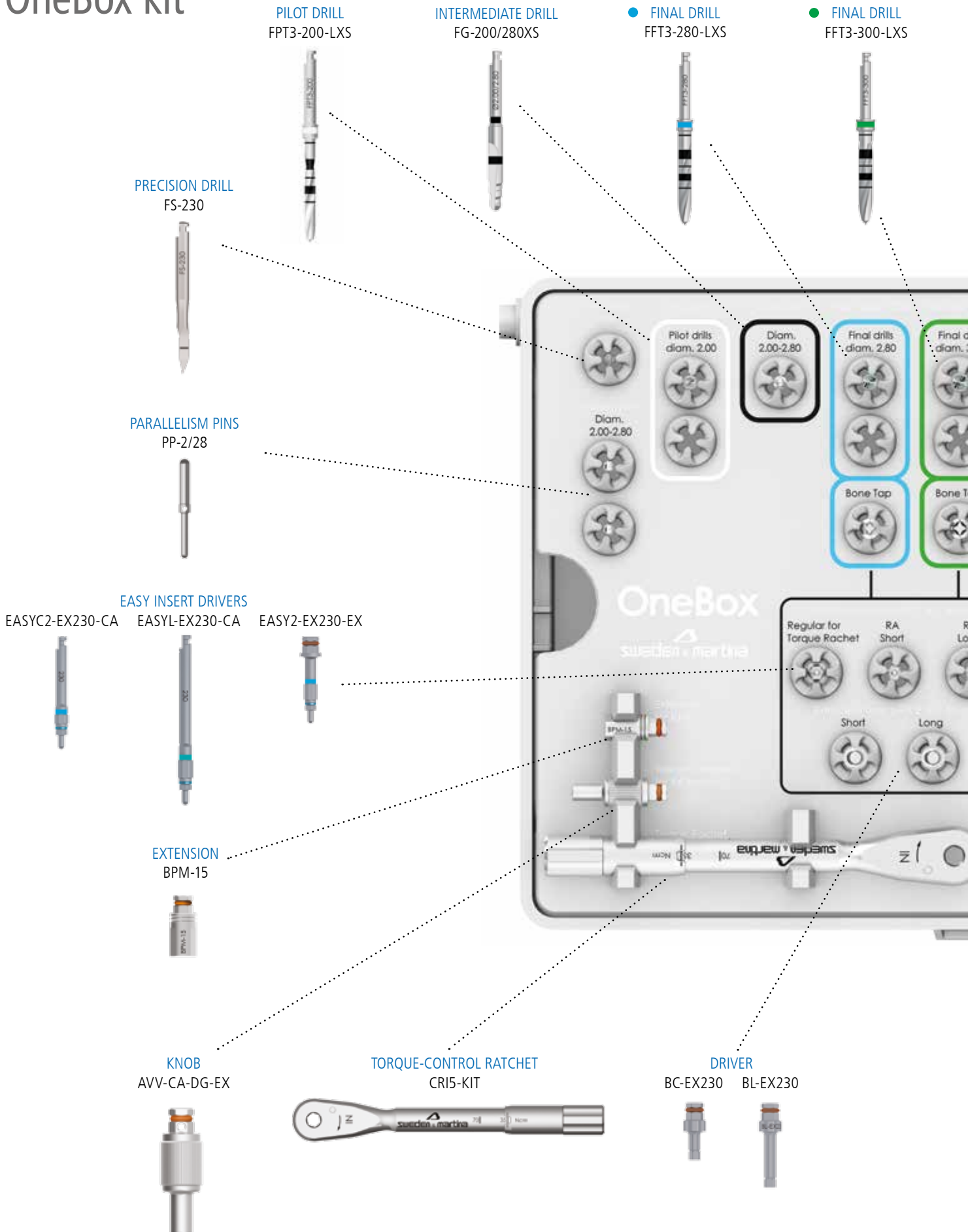
Kit with 5 spare silicon supports for surgical trays, for drills or instruments with right angle shanks



GROMMET-CA-2

Kit with 5 spare silicon supports for surgical trays, for instruments fitted with connection hexagon

OneBox kit



● FINAL DRILL
FFT3-340-LXS



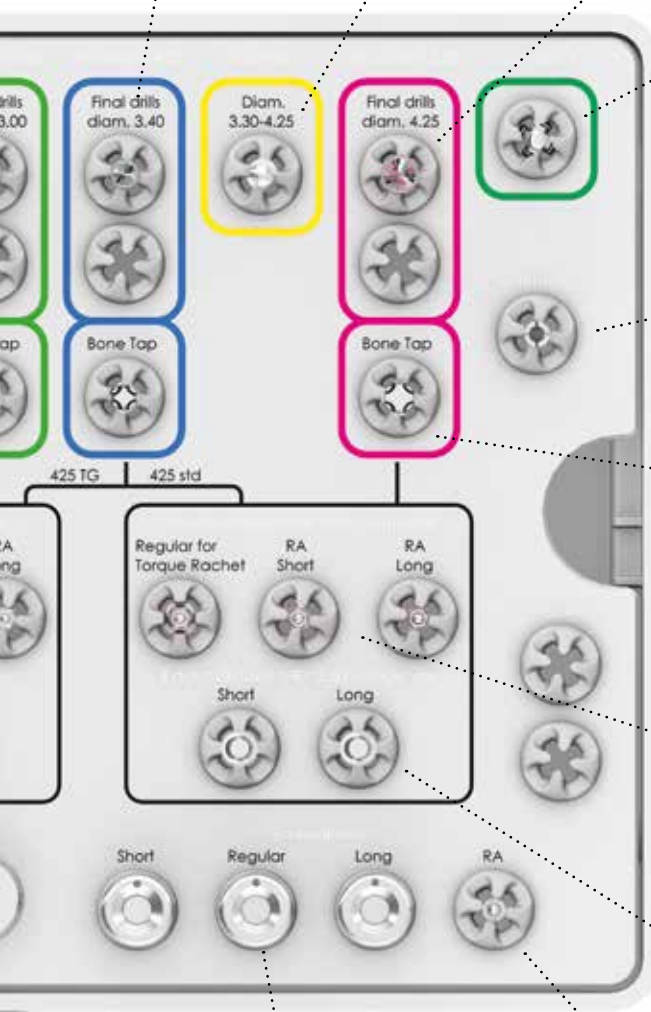
INTERMEDIATE DRILL
FG-330/425XS



● FINAL DRILL
FFT3-425-LXS



COUNTERSINK DRILL
FC-XS



EXTENSION
PROF-CAL3



BONE TAPS

- A-MS-330-CA
- A-MS-380-CA
- A-MS-410-CA
- A-MS-500-CA



DRIVER

EASYC2-EX250-CA

EASYL-EX250-CA

EASY2-EX250-EX



HAND DRIVERS FOR FIXATION SCREWS

HSMXS-20-DG

HSM-20-DG

HSML-20-DG



DRIVER FOR COVER SCREWS

HSM-20-CA



DRIVER

BC-EX250

BL-EX250



General indications

The surgical instruments designed for use with the implant systems manufactured by Sweden & Martina are reusable medical devices intended for temporary use in the oral cavity (no more than 60 minutes at a time).

The functions of the surgical instruments are to prepare sites for Sweden & Martina implants, to insert the implants in the sites, to tighten and unscrew all the fixation screws (cover screws, transgingival healing screws, screws for posts, abutments, prosthetic screws, transfer screws, etc.).

The surgical instruments manufactured by Sweden & Martina are designed for use with dental implants manufactured by Sweden & Martina. Use of surgical instruments for implant work other than those manufactured by Sweden & Martina limits the responsibility of Sweden & Martina and renders the product warranty void. Sweden & Martina declines all responsibility for use of any non-original instruments.

Sweden & Martina surgical instruments are sold in NON-STERILE packs. Before use, they must be cleaned and sterilised according to the instructions reported below. Failure to follow these warnings may potentially expose the patient to infection.

The materials used for manufacturing the surgical instruments manufactured by Sweden & Martina were selected based on the properties indicated for their intended use according to directive 93/42, implemented in Italy with Law 46/97, Annex I – Essential Requirements, point 7.1 and according the related standard.

Each packaging indicates the code, description of the contents and batch number. These same details, which are also indicated on the labels inside the packs, must always be provided by the practitioner in any relevant correspondence.

All the devices are identified by an instrument code, which is laser marked onto the body of each instrument. If there is not enough space to include the full code, the elements for unequivocally identifying the device (e.g. diameter or length) are provided.

When handling the devices, both during use and during cleaning and sterilisation, it is recommended to use surgical gloves for personal protection from bacterial contaminations. Failure to follow these instructions may cause cross-infection.

Key to the codes: surgical instruments

The instrument codes are so-called “mnemonic” codes, i.e. they allow easy identification of the piece. Below is a table showing how the mnemonic codes work using different types of instruments as an example.

Examples	Type of component and type of implant	Diameter	Length
As the instrument range is vast, here just a few examples for the main instrument families are provided	The letter “A” indicates the Premium system. The other letters indicate the product family	Usually, the diameter size of the implant the instrument is designed for	This size usually relates to the height of the component or other pertinent distinguishing measurements, otherwise it is a code that indicates whether or not a post is repositionable
A-ZT-380-115	A: Premium Implant	380: 3.80 mm	115: 11.50 mm
STOP-200-070	STOP: Stop for drill	280: prepare for implants of Ø 3.30 mm	070: 0.70 mm
A-MS-330-CA	A-MS: Bone tap for Premium Implant	330: 3.30 mm	-
PP-2/28	PP: Parallelism pin	2/28: from 2.00 mm to 2.80 mm	-

Drills

All Sweden & Martina drills are made of **steel** specifically for surgical use with **high resistance to corrosion and wear**. They are intended for mechanical use, i.e. they have a shank with a right angle attachment and must be used with a suitable micromotor. The extreme accuracy of design and production allows to use them **free from vibrations and oscillations**. However, incorrect insertion of the instruments in the handpiece will cause instrument vibration, eccentric rotation, early wear and shaft buckling. Suitable surgical micromotors only should be used. Micromotors should be checked regularly by their manufacturers, according to the indications given by the same, to prevent potential malfunctions (e.g. axle shifts for transmission shafts, worn or faulty forceps, etc.). Failure to follow the instructions provided may cause surgical complications and consequent damage to the patient's health.

It is recommended to use the rotation speeds indicated in the procedures from page 46 to prevent the development of bone necrosis. Lever movements increase the risk of instrument breakage and should therefore be avoided. Changes in speed should be avoided in general. Never apply pressure such as to force the instrument to stop rotating. This could lead to an excessive increase in heat in the tissues being drilled, with consequent bone necrosis, and damage both the instrument and the appliance (micromotor) used. This could also lead to breakage of the instrument. Using an intermittent approach prevents overheating and wear of the working part and an undesirable increase in the temperature in the tissues being cut. Suitable coolant should be used. Inadequate irrigation can lead to bone necrosis.

Drill wear depends to a large extent on the type and density of the drilled bone: harder bone leads to greater instrument wear. For greater safety and caution, given the device's capacity for resistance to wear, drills should not be used for more than 20 work cycles and should be replaced earlier if the instruments lose their cutting ability. These recommended 20 cycles should be considered a rough guide. Always check the instrument's residual cutting capacity after each procedure. Sweden & Martina decline responsibility for the use of blunt instruments. Never sharpen drills before use. Never use damaged, buckled or worn instruments.



Precision drill FS-230

The precision drill is made of surgical steel. It is used to cut the cortical bone, so it is very sharp and pointed. The design of the blades ensures efficient cutting with both the tip and the edge. It has a maximum diameter of 2.30 mm. The laser marking at 4.80 mm indicates the depth to which the drill should always be inserted to obtain a suitable guiding hole for the next drills.

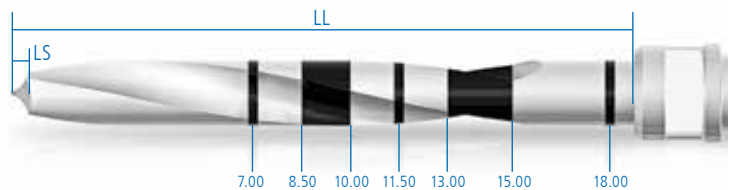


IMPORTANT WARNING

The precision drill comes with a protective silicone sheath to protect the instrument during transportation and it must be removed before first use. Since this drill is extremely sharp, special caution is required during handling.

Pilot drill FPT3-200-LXS

The pilot drill, cylindrical in shape with Ø 2.00, is used to prepare the hole for lodging the implant. The drill is easy to identify, thanks to the presence of a white ring and to the code laser-etched on the drill shank. It has laser-etched depth marks and a spiral shape with two cutting edges. It must be used with abundant external irrigation.



LL: Total length of the working part, including the tip.
LS: Length of the tip. This measurement must be calculated in addition to the length of the preparation hole.

IMPORTANT WARNING

The drills always make a hole that is longer than the implant to be inserted. The oversizing (LS) is equal to the height of the tip of the drill that is being used.

code	Ø	LS	LL
FPT3-200-LXS	2.00	0.58	19.30

Pilot drill stops

Stops are devices to be fitted in tip → shank direction on drills suited to receive them. They make it possible to restrict the working length of a drill to a pre-set height.



height	7.00 mm	8.50 mm	10.00 mm	11.50 mm	13.00 mm	15.00 mm
stop						
	STOP3-200-070	STOP3-200-085	STOP3-200-100	STOP3-200-115	STOP3-200-130	STOP3-200-150

Always check that the stop is inserted at the desired height. Incomplete insertion may reduce the preparation height. Any insertion difficulties can be resolved by loosening the stop tabs slightly, using forceps. It is also recommended to check the retention exerted by the stop, as if retention is too weak the instrument will fall off the drill during operation. In the event of reduced retention capacity, simply tighten the tabs by hand or using forceps.

Intermediate drills

Intermediate drills are drills with two cutting edges suitable for progressively widening the preparations in relation to the diameter of the drills to be used in succession. They have two small steps with an initial guide with a progressive diameter and final diameter, respectively equal to 2.00/2.80 and 3.30/4.25 mm. They have reference laser markings that range from a height of 8.50 to 10.00 mm. For shorter preparations, they must be used until the end stop (the guide is not a cutting edge).



code	description
 FG-200/280XS	Intermediate drill, for widening the hole to 2.00 mm, 2.40 mm and 2.80 mm
 FG-330/425XS	Intermediate drill, for widening the hole to 3.30 mm, 3.80 mm and 4.25 mm

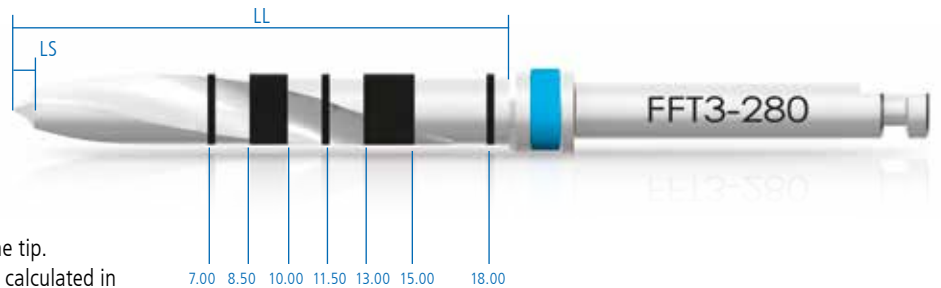
Countersink drill FC-XS

This drill is ideal for preparing the seat of the neck of SP implants. The drill has a non-cutting guide and a green ring. Two laser markings on the working part indicate the working depth.

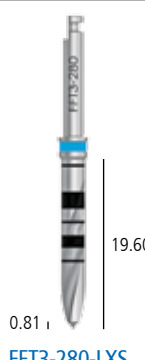
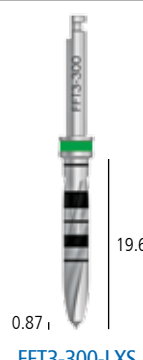
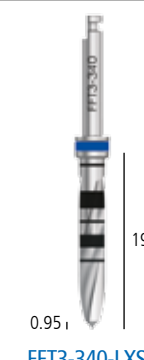



Final cylindrical drills

Made of steel with high resistance to corrosion and wear, Premium final drills present a number of cutting edges proportional to the hole diameter, so as to allow a continuous and homogeneous cutting movement and greater instrument stability during operation. All this enables high-precision implant preparations to be obtained, with consequent ease in inserting the implant. It is recommended to use these drills with the related depth stops, both included in the surgical kit.



























LL: Total length of the working part, including the tip.
LS: Length of the tip. This measurement must be calculated in addition to the length of the preparation hole.

implant diameter	Ø 3.30 mm	Ø 3.80 mm	Ø 4.25 mm	Ø 5.00 mm
drills	 0.81 19.60 FFT3-280-LXS	 0.87 19.60 FFT3-300-LXS	 0.95 19.70 FFT3-340-LXS	 1.23 20.00 FFT3-425-LXS

IMPORTANT WARNING

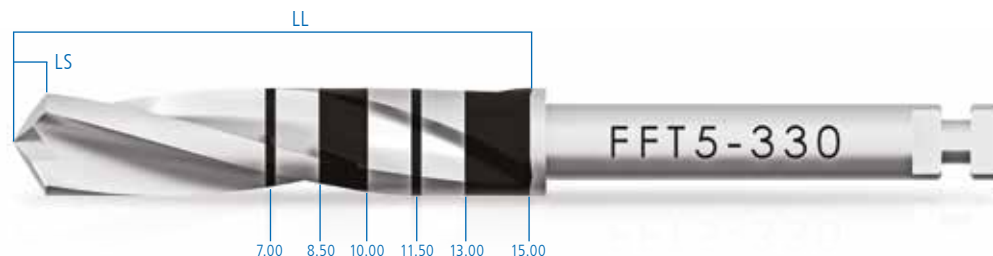
■ The drills always make a hole that is longer than the implant to be inserted. The oversizing (LS) is equal to the height of the tip of the drill that is being used.

Stops for cylindrical drills

implant diameter	Ø 3.30 mm	Ø 3.80 mm	Ø 4.25 mm	Ø 5.00 mm
				
	STOP3-280-070	STOP3-300-070	STOP3-340-070	STOP3-425-070
				
	STOP3-280-085	STOP3-300-085	STOP3-340-085	STOP3-425-085
stop				
	STOP3-280-100	STOP3-300-100	STOP3-340-100	STOP3-425-100
				
	STOP3-280-115	STOP3-300-115	STOP3-340-115	STOP3-425-115
				
	STOP3-280-130	STOP3-300-130	STOP3-340-130	STOP3-425-130
				
STOP3-280-150	STOP3-300-150	STOP3-340-150	STOP3-425-150	

Drills for distal sectors

As an option, shorter drills are available that are very practical in distal sectors with limited oral opening. They are also useful for preparations in extremely compact bone where, in the most coronal portion, you want to widen the preparation diameter by 0.10 mm with respect to the size of the standard drills to facilitate the insertion of the implants. On the other hand, in low-density bone they can be used to under-prepare the implant site so as to obtain optimum primary stability.



LL: Total length of the working part, including the tip.
LS: Length of the tip. This measurement must be calculated in addition to the length of the preparation hole.

Note: The drills always make a hole that is longer than the implant to be inserted. The oversizing (LS) is equal to the height of the tip of the drill that is being used. See the drawing above.

Ø 2.00 mm

Ø 2.80 mm

Ø 2.90 mm

Ø 3.00 mm

Ø 3.20 mm



FFT5-200-LXS
Cylindrical drill Ø 2.00 mm



FFT5-280-LXS
Cylindrical drill Ø 2.80 mm



FFT5-290-LXS
Cylindrical drill Ø 2.90 mm



FFT5-300-LXS
Cylindrical drill Ø 3.00 mm



FFT5-320-LXS
Cylindrical drill Ø 3.20 mm

Ø 3.30 mm

Ø 3.40 mm

Ø 3.60 mm

Ø 4.25 mm

Ø 4.45 mm



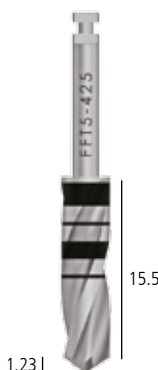
FFT5-330-LXS
Cylindrical drill Ø 3.30 mm



FFT5-340-LXS
Cylindrical drill Ø 3.40 mm



FFT5-360-LXS
Cylindrical drill Ø 3.60 mm



FFT5-425-LXS
Cylindrical drill Ø 4.25 mm



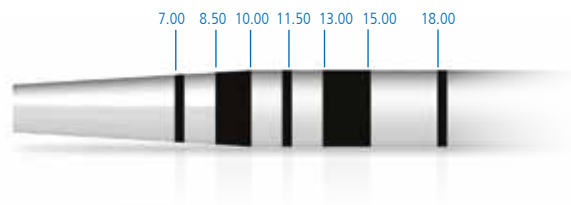
FFT5-445-LXS
Cylindrical drill Ø 4.45 mm

Osteotomes

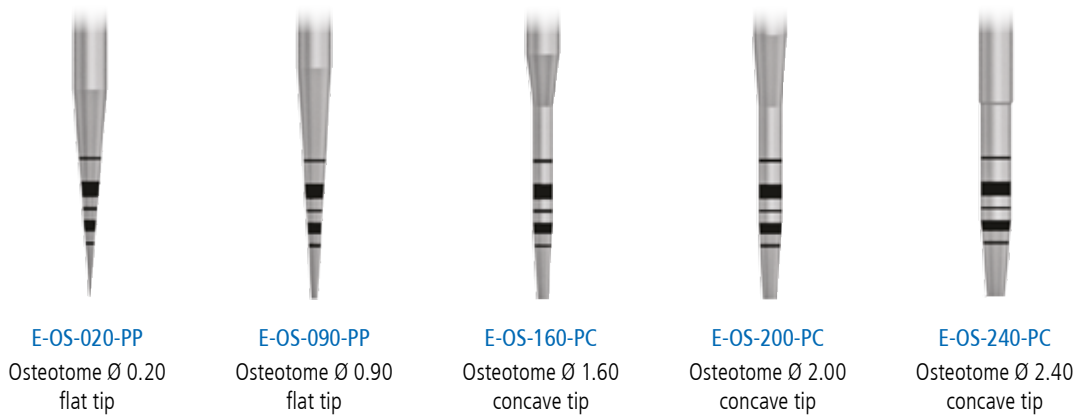
A complete set of osteotomes has been designed for the expansion of thin crests, for mini-crest lifts and for the compaction of poorly mineralised bone, to be used as an alternative to the final drills. The osteotomes are invasive surgical instruments, manual, intended for creating holes in bone, especially in the presence of poor quality bone, and for compacting by the progressive widening of the preparations, compressing the bone against the walls. They can have a flat or concave tip depending on whether they have to push the bone or cut it, and are tapered in relation to what shape is required for the site to receive implants in a pre-ordered shape. The sequence of use must be determined according to the degree of bone density and the preparation that is to be obtained.

Premium Straight, SP and TG osteotomes

Premium osteotomes have on their tips laser marks indicating the various implants heights, for a more practical use.



Premium osteotomes



Bone taps

Premium implants are self-tapping implants with excellent cutting and insertion capabilities. However the use of a bone tap is recommended in all cases where the type of bone (D1) requires it. On this point refer to the section on surgical procedures (see page 46). It is available a bone tap for every diameter.



implant diameter	Ø 3.30 mm	Ø 3.80 mm	Ø 4.25 mm	Ø 5.00 mm
standard bone taps with hexagonal attachments	 A-MS-330	 A-MS-380	 A-MS-425	 A-MS-500
right-angle bone taps	 A-MS-330-CA	 A-MS-380-CA	 A-MS-425-CA	 A-MS-500-CA
short bone taps*	 A-MSC-330	 A-MSC-380	 A-MSC-425	 A-MSC-500

* **Note:** short bone taps are not included in any surgical kit, they are available as options.

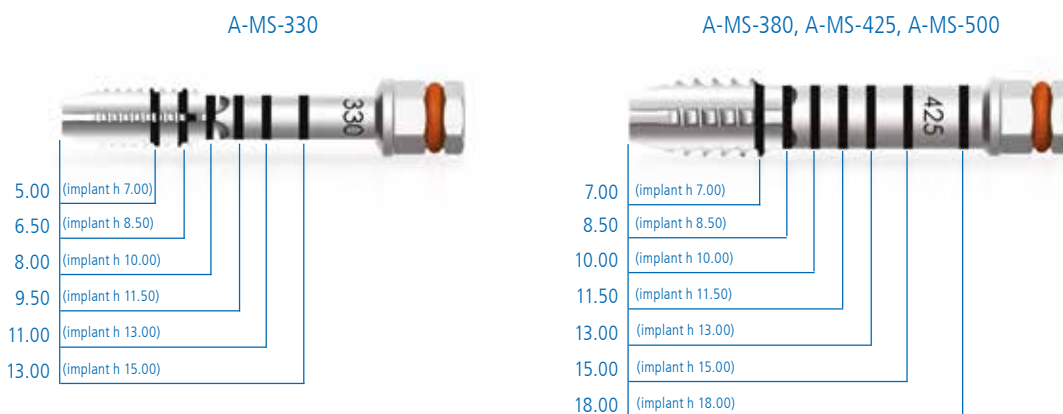
IMPORTANT WARNING

Premium bone taps of Ø 3.30 are inserted in bone for a depth calculated by deducting two millimetres from the length of the implant. For example, if a 10.00 mm implant must be inserted, the taper must be inserted for a depth of 8.00 mm. The calculations marked on the taps already include the deduction of 2.00 mm (see figure below); Premium bone taps of Ø 3.80, 4.25 and 5.00 mm are inserted in the bone for the entire length of the implant to be inserted. The markings reported on the tappers are consistent with the implant lengths.

SURGICAL INSTRUMENTS

The Premium bone taps should be used with some basic instructions:

- **Premium implants of Ø 3.30** are inserted in bone for a depth calculated by deducting two millimetres from the length of the implant. For example, if a 10.00 mm implant must be inserted, the tapper must be inserted for a depth of 8.00 mm. The calculations marked on the taps already include the deduction of 2.00 mm (see figure below);
- **Premium implants of Ø 3.80, 4.25 and 5.00 mm** are inserted in the bone for the entire length of the implant to be inserted. The markings reported on the tappers are consistent with the implant lengths.



Bone taps with a hexagonal connector are used manually with the hand knobs AVV3-MAN-DG or with the ratchet CRI5-KIT. If they are used with the torque-control ratchet, it is recommended to set the using torque at 40-50 Ncm and to increase this gradually up to the maximum value (without torque adjustment) only if strictly necessary. High torque values exert high compression on the bone, with risks of ischemia and reduced capacity of vascularization of the tissues. In cases where it is difficult to move forward with the instrument, to decrease compression it is always advisable to proceed with 2-3 turns in rotation and 1-2 turns in counter-rotation, continuously alternating forward movement and unscrewing. The bone taps are made of steel for surgical use. They have a hexagon that makes them compatible with the kit instruments. In the coupling hexagon there is an O-ring that guarantees the seal of the components. This O-ring must be checked periodically and replaced when worn or when no longer able to exert the correct friction.



A kit of 5 spare O-rings is available which can be ordered with code ORING180-088.

Easy Insert drivers

The implant does not require a moulder for inserting into the implant site because it is engaged directly inside the connection by practical Easy Insert drivers designed to guarantee a safe grip.

BONE LEVEL IMPLANTS



TG IMPLANTS



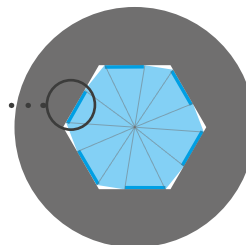
The **colour code** on the instrument shank and on the retaining metal O-rings facilitates the identification and choice of the item needed.

The Easy Insert drivers aid **visibility of the operating field**, do not occupy much space, and allow adjusting the connection hexagon properly because their hexagonal visual index is the same as a prosthetic index.

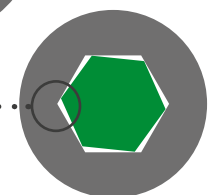
Engagement is extremely safe and reliable with the use of a special **titanium O-ring** that engages inside the connection.



The **design** of the drivers prevents deformations to the implant connection. The special design of the Easy Insert drivers (in green) enables to interact on a portion of the surface in the centre of the connection hexagon.









The image on the right shows how a traditional instrument (in green) edges inside the connection (in grey). This geometry inevitably determines the grip and deformation of the actual session.



When using the Easy Insert drivers with the dynamometric ratchet, as if using any other instrument of implant insertion with dynamometric key, it is recommended to be careful in maintaining the working axis as vertical as possible. Moreover, it is fundamental that the ratchet movement during the screwing phase is slow and uniform, avoiding sudden strokes. It is recommended to hold the ratchet in the nearest part to the connection and to maintain a constant and light pressure on it with a finger, in order to allow greater stability during the screwing.

SURGICAL INSTRUMENTS

Carriers and drivers for implants

code	description
 EASYC2-EX230-CA	Short driver with right angle shank, for Premium implants Ø 3.30 and Ø 3.80 mm
 EASYL2-EX230-CA	Long driver with right angle shank, for Premium implants Ø 3.30 and Ø 3.80 mm
 EASY2-EX230-EX	Driver with connector for torque-control ratchet, for Premium implants Ø 3.30 and Ø 3.80 mm
 EASYC2-EX250-CA	Short driver with right angle shank, for Premium implants Ø 4.25 and Ø 5.00 mm
 EASYL2-EX250-CA	Long driver with right angle shank, for Premium implants Ø 4.25 and Ø 5.00 mm
 EASY2-EX250-EX	Driver with connector for torque-control ratchet, for Premium implants Ø 4.25 and Ø 5.00 mm

Maintenance and care of the Easy Insert Drivers

The Easy Insert drivers are supplied with the special titanium O-rings already mounted. Since they are mechanical components, the retainer rings are subject to wear over time and can lose their elasticity and functionality. The O-rings cannot be replaced, but it is necessary to replace the instrument. The Easy Inserts were tested to be good for 40 uses. These limits can therefore change depending on the conditions of use. However, it is always a good idea to check its good functionality even during the cleaning and sterilisation operations. For this reason and to allow the doctor to familiarise himself with the Easy Inserts, the surgical kits contain a "test implant" that has not been treated and sterilised: it can be distinguished from the others as it is entirely anodised in blue.

IMPORTANT WARNING

It is recommended to use the Easy Inserts with a torque value included between 50 Ncm and 70 Ncm. According to mechanical tests, from 70 Ncm and 100 Ncm a light friction between the instrument and the implant connection may happen, but it is easily resolvable with a contra-rotation movement (40 Ncm) in order to remove the instrument from the connection. It is also recommended to finish the insertion phase using the dynamometric ratchet.

Drivers

These are surgical steel instruments, indicated for removing implants already in position. It is recommended to use long and short drivers EXCLUSIVELY for removing the implants, and not for screwing them in.

code	description
 BC-EX230	Short driver (hex 2.30)
 BL-EX230	Long driver (hex 2.30)
 BC-EX250	Short driver (hex 2.50)
 BL-EX250	Long driver (hex 2.50)

IMPORTANT WARNING

Since these drivers have a full hexagon, they may cause the deformation of the implant hexagon if used for screwing even from 40 Ncm, with the risk of influencing the whole subsequent phase of prosthetic rehabilitation. Moreover, also on account of the full hexagon, they get stuck much more easily in the implant hexagons, and often become very difficult to remove.

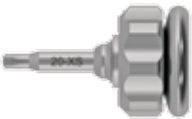


Mounter and mounter stop key

In the case of inserting Premium implants, optional mounters suitable for this procedure are available. It is also available a mounter stop key, useful for the screwing/unscrewing of the mounter itself.

code	description
 MOU-EX230	Mounter, for implants: - Ø 3.30 and Ø 3.80 mm Premium Straight and SP - Ø 3.30, Ø 3.80 and Ø 4.25 mm Premium TG
 MOU-EX250	Mounter, for implants: - Ø 4.25, 5.00 and Ø 6.00 mm Premium Straight and SP - Ø 5.00 mm Premium TG
 CM2	Mounter stop key

Screwdrivers

The surgical kit contains various drivers, useful for screwing and unscrewing mounter fixation screws, transgingival healing screws, screws for transfers, posts and abutments, and more generally all the screws in the Premium system. They are all made of steel for surgical use. The design of the tip of all the drivers is the same, so the screwdrivers are all interchangeable. They are distinguished one from the other by their total length and by the fact that they are one-piece digital drivers, that is they are all in one with the hand knob which allows them to be gripped, or provided with a hexagonal connector compatible with the ratchet. The one-piece drivers are available in the kits in 3 different heights, as follows:

code	description
 <p data-bbox="333 808 464 835">HSMXS-20-DG</p>	Screwdriver for surgical cover screw and fixation screws, digital, extra-short
 <p data-bbox="344 1003 453 1030">HSM-20-DG</p>	Screwdriver for surgical cover screw and fixation screws, digital, short
 <p data-bbox="339 1200 458 1227">HSML-20-DG</p>	Screwdriver for surgical cover screw and fixation screws, digital, long



**Optional instrument, non included in the surgical kit, included in the OneBox kit.*

IMPORTANT WARNING


- It is recommended to pass a thread through the hole on the top of the knob to prevent it falling.




The drivers with a hexagonal connector at the top are designed for use with the torque-control ratchet. The kit contains the long and short versions:

code	description
 HSM-20-EX	Screwdriver for fixation screws, with hexagonal connector for torque-control ratchet or hand knob, short
 HSML-20-EX	Screwdriver for fixation screws, with hexagonal connector for torque-control ratchet or hand knob, long

An optional extra-long version is also available, necessary when the length of the hole for the screw to pass inside the posts is greater than 13.50 mm:

code	description
 HSMXL-20-EX	Screwdriver for fixation screws, with hexagonal connector for torque-control ratchet or hand knob, extra long

The kit also contains a driver with right angle shank, very practical both in the surgical and prosthetic phase, if used with a micromotor with torque control:

code	description
 HSM-20-CA	Screwdriver for fixation screws, with right angle shank

All the ratchet drivers have a red polymer O-ring in the connecting hexagon that guarantees friction between the instruments and therefore a correct grip of the components.

This O-ring must be replaced when worn or when no longer able to friction properly.

A kit of 5 spare O-rings is available which can be ordered with code **ORING180-088**.



IMPORTANT WARNING

Excessive torques may strip the wells of the fixation screws and pare off the corners of the screwdrivers, causing even serious intraoperative or prosthetic complications. The recommended torques for the various components are summed up in the following table:

surgical cover screws, transgingival healing screws	8-10 Ncm
all prosthetic screws	20-25 Ncm
all prosthetic components screwed directly onto the implant	25-30 Ncm

IMPORTANT WARNING

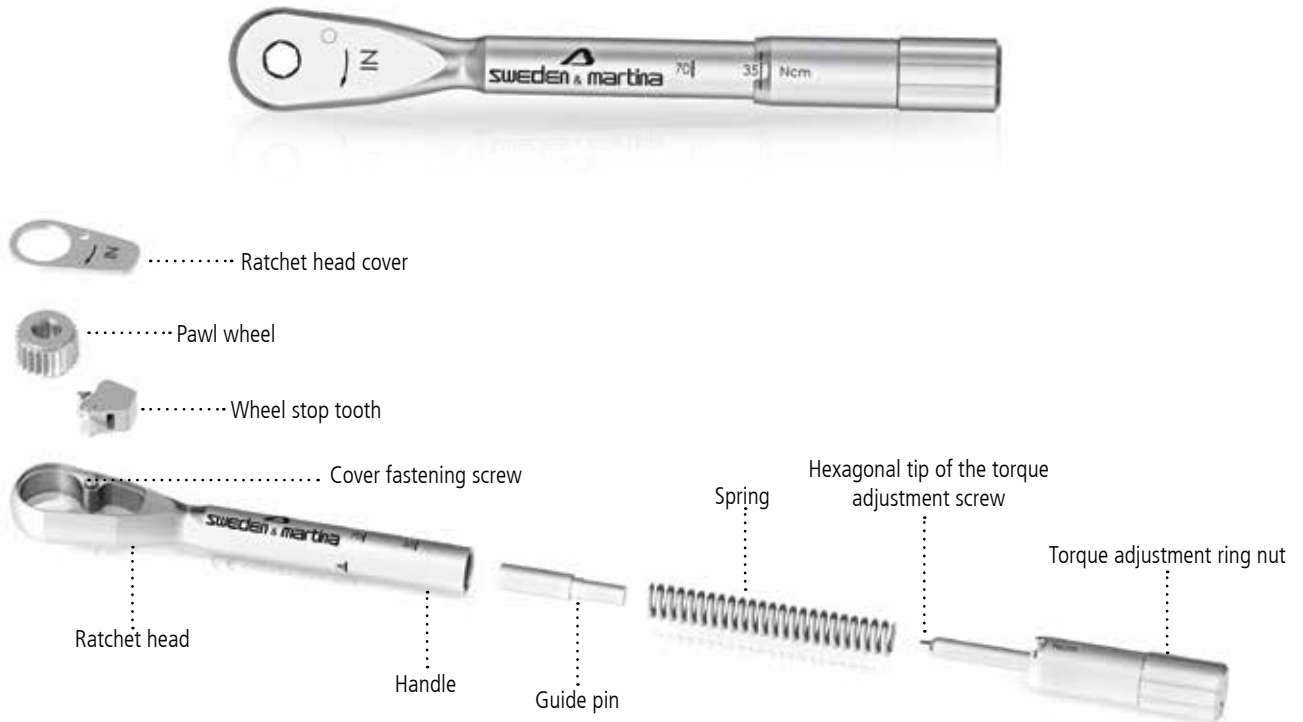
Lever movements should be avoided as they increase the risk of breakage. Before tightening, make sure the hex socket screw head on the driver tip is correctly inserted into the screws to be tightened. Incorrect insertion is likely to pare off the hexagonal connection of the screwdriver or the screw to be tightened. Drivers have a slightly conical profile, able to guarantee the hexagonal connection on the tip of the driver grips inside the hexagonal connection on the head of the screws, making it possible to carry the screw to the patient's mouth correctly, without dropping it.

Replace drivers regularly to reduce the risk of wear to the hex connection.

Torque-control ratchet CRI5-KIT

The surgical kit of the implant system contains a special ratchet, with its own adjustment key, for quickly screwing the torque adjustment ring nut. The ratchet may be used with torque adjustment from 10 to 70 Ncm or in a blocked position without torque control.

When using as a prosthetic ratchet for fastening the screws, refer to the torque values given in the table on the previous page. The torque-control ratchet CRI5-KIT is a multipurpose instrument that can be disassembled, and is sold unsterile.



Before each use, this instrument must be cleaned and sterilised according to the instructions on the following page. Adequate maintenance, performed following in detail all the step by step instructions for the disassembly and correct reassembly of the device during cleaning operations, is essential for the correct functioning of the device and for its durability. Personnel who use this tool must be suitably trained, and they must have read the instructions in this manual prior to handling the device.

After sterilisation, the ratchet is ready for use. A test to verify the correct assembly and functioning of the key is necessary before any surgical or prosthetic interventions. The torque is adjusted by aligning the marking of the desired torque in the circular opening of the handle. The "IN" arrow legible on the top of the head indicates the screwing position of the key. The "OUT" arrow legible on the top of the head indicates the loosening or unscrewing position. An unlimited torque position is obtained by positioning the torque adjustment device up to the line marked "R" on the handle of the ratchet body.

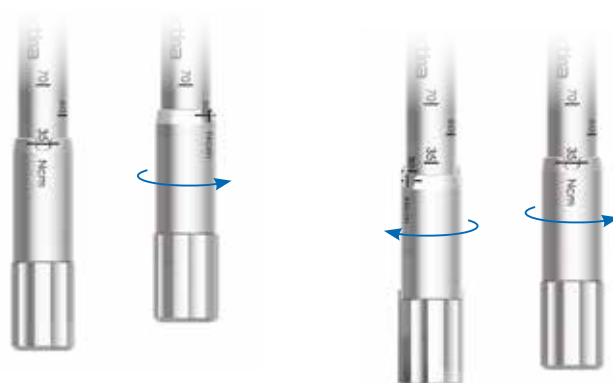


The ring nut may be screwed and unscrewed by hand, but to speed up these operations the kit also contains a driver that allows it to be turned quickly. Any deterioration of the screwing, insertion and torque mechanisms must be checked by personnel responsible for the use and maintenance of this dental instrument. The pieces of this mechanism are not interchangeable; one piece from one key cannot be replaced by a piece from another key as each ratchet is calibrated INDIVIDUALLY. If a piece is lost, please return the instrument to Sweden & Martina for repair. No components for assembling the ratchet can be sold individually. Failure to follow the instructions provided may cause problems of maintenance and stability of the prosthesis.



IMPORTANT WARNING






The torque is adjusted by screwing/unscrewing the ring nut located at the bottom of the instrument's handle. The torque must always be adjusted on the rise, starting screwing from a lower value until the desired torque is reached, or unscrewing the ring nut in a clockwise direction. To do this, if it is necessary to set a torque lower than the last one used, you must unscrew the ring nut by two turns below the value of the desired new torque, and work up to that value by rescrewing the ring nut in a clockwise direction.



For setting an increase torque value, just turn the ring nut in a clockwise direction.

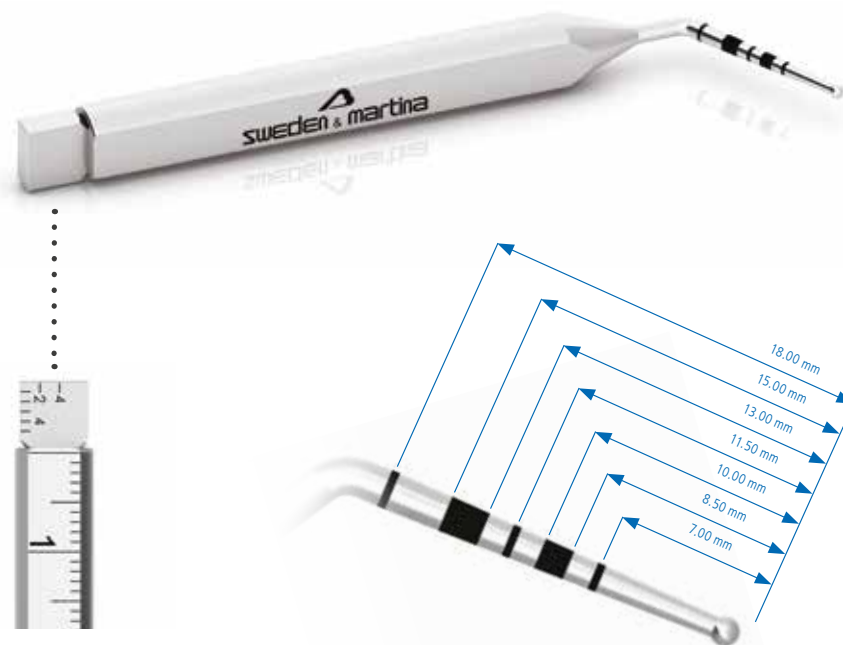
For decreasing the torque value, just turn the ring nut in an anticlockwise direction, until a value lower than the wanted one; then proceed with the screwing in a clockwise direction until the wanted torque value is reached.

Extensions and adapters

code	description
 BPM-15	Extension for bone taps, mounters, drivers and manual drivers, with hexagonal connector for torque-control ratched
 PROF-CAL3	Extension for surgical drills
 B-AVV-CA3	Mechanical adapter with right angle shank for instruments with hexagonal connector
 AVV3-MAN-DG	Hand knob for instruments with hexagonal connection for torque-control ratchet
 AVV-CA-DG-EX	Hand knob for hand use of drivers, bone taps and drivers with right angle shank and with hexagonal connection for torque-control ratchet

Depth gauge PROF3

The kit contains a practical instrument that allows to verify the depth of the holes and the distance between the implants.



X-Ray templates









The surgical kits also contain templates for the graphic representation of the implant measurements to allow choosing the most suitable implant diameters and lengths by means of X-Ray or tomographic methods. The templates are available in three versions: with real dimensions (code ends with 100), with dimensions increased by 20% (code ends with 120) and with dimensions increased by 30% (code ends with 130).

	code	description
	A-L100	X-ray template for Premium implants, real dimensions
	A-L120	X-ray template for Premium implants, dimensions increased by 20%
	A-L130	X-ray template for Premium implants, dimensions increased by 30%
	A-TG-L100	X-ray template for Premium TG implants, real dimensions
	A-TG-L120	X-ray template for Premium TG implants, dimensions increased by 20%
	A-TG-L130	X-ray template for Premium TG implants, dimensions increased by 30%

Bone profilers

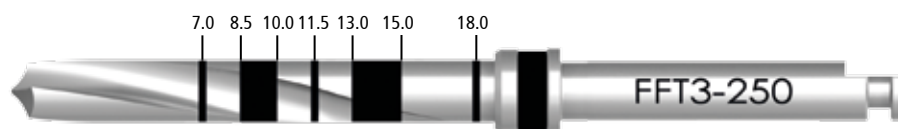
The bone profilers are very useful for levelling a very irregular bone crest at the coronal level, especially in the subsequent use of P.A.D. abutments.



implant diameter	Ø 3.30 mm	Ø 3.80 mm	Ø 4.25 mm	Ø 5.00 mm
Bone profiler with narrow flaring	 A-PAD-PS330-S	 A-PAD-PS380-S	 A-PAD-PS425-S	 A-PAD-PS500-S
Bone profiler with wide flaring	 A-PAD-PS330-L	 A-PAD-PS380-L	 A-PAD-PS425-L	 A-PAD-PS500-L

Ø 2.50 mm cylindrical drill

It is available a cylindrical drill with Ø 2.50 mm made of surgical steel. Depth stops for this drill are available to proceed with a safe preparation.



7.00 mm 8.50 mm 10.00 mm 11.50 mm 13.00 mm 15.00 mm



* The drill with Ø 2.50 mm and the related depth stops are not included in the surgical kit. The complete set of drill and depth stops are to be ordered with the code KIT-INTEGRA-F250. They are available also separately as a spare.

Parallelism pin PP-2/28

The surgical kit contains six pins that can be used to check the insertion axis of the implants and the parallelism between several fixtures. One side of the pin has a diameter of 2.00 mm and the other 2.80 mm, so that it can be used after drills with these same diameters have been passed.



code

description

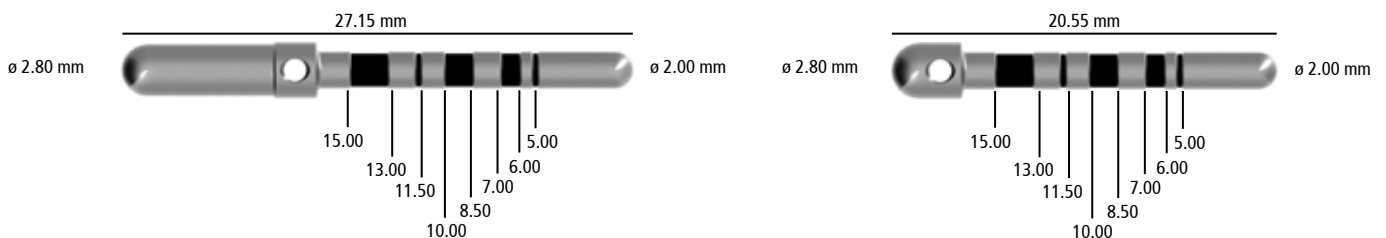


PP-2/28

Parallelism pin with one side \varnothing 2.00 and the other \varnothing 2.80 mm

Parallelism pins with depth lines

Parallelism pins with depth lines are available optionally, they allow the control of the preparation depth during the first surgical step, thanks to the presence of dedicated lines in the side with \varnothing 2.00 mm. As the lines have a reduced diameter in comparison with the pin body, it is possible to distinguish them also on the x-ray images. The other side of the instruments has a diameter of \varnothing 2.80 mm and presents a hole for safety thread. The small version of the pin has a shorter \varnothing 2.80 side.



code

description



PPTL-2-28

Parallelism pins with depth lines, large version, not included in the surgical kit



PPTS-2-28

Parallelism pins with depth lines, small version, not included in the surgical kit

IMPORTANT WARNING

It is recommended to pass a thread through the hole in the centre of the pin to prevent it falling.

Cleaning, disinfection, sterilisation and storage of the kit and of the surgical instruments and prosthetic components

Attention! All the surgical instruments for dental implants are sold NON-STERILE. Before use, they must be cleaned and sterilised according to the following procedure validated by Sweden & Martina. These processes must be performed before use and before each subsequent reuse. Repetition of the processes described in this paragraph has minimal effect on the wear of these devices. Instruments should always be checked before use to ensure they are in good working order. Any instruments showing signs of wear must be immediately replaced with new devices. It is particularly important to check that the drivers grip properly inside the engagement wells on the heads of the screws to be lifted and tightened with the same. Failure to follow these instructions may cause intraoperative complications.

a. Cleaning

Containers to be used for washing and transport: there are no special requirements.

In case of automatic cleaning, use an ultrasound bath with a suitable detergent solution (as DURR ID212, DC1 or equivalent). Follow the manufacturer's instructions concerning concentrations and washing times. Use demineralised water to prevent the formation of stains and marks. When draining, check the recesses of the devices, holes, etc. to make sure all residues have been completely removed. If necessary, repeat the cycle or clean manually. When cleaning manually: use a suitable detergent solution (as DURR ID212, DC1 or equivalent) and follow the manufacturer's user instructions. Brush the products with a soft-bristled brush under plenty of running water. Use the brush to apply the detergent to all surfaces. Rinse with distilled water for at least four minutes. Make sure plenty of running water passes through any holes.

Do not exceed 120°C when performing a drying cycle.

b. Steam sterilisation: in a vacuum autoclave, proceeding as follows:

- autoclave (Gravity-Displacement Cycles) at a temperature of 121°C with a minimum exposure of thirty (30) minutes and a drying of fifteen (15) minutes;
- autoclave (Dynamic-Air-Removal Cycles) at a temperature of 132°C -134°C with a minimum exposure of five (5) minutes and a drying of twenty (20) minutes.

c. Storage: after sterilisation, the product must remain in the sterilisation bags. The bags should only be opened immediately prior to reuse. In normal conditions, sterilisation bags maintain the sterility of the contents, unless the wrapping is damaged. Therefore, do not use components if the bags in which they were kept are damaged, and resterilise in new bags before using them again. The storage time of products sterilised inside the bags should not exceed that recommended by the manufacturer of the bags. The product must be stored in a cool dry place, away from sunlight, water and sources of heat.

Reference standards

The surgical components are designed and manufactured in accordance with the most recent directives and harmonised standards regarding the materials used, production processes, information supplied and packaging.

Disposal procedures

If used, dispose of the surgical accessories as biological waste, according to the local regulations.

Cleaning, sterilisation and storage of the torque-control ratchet CRI5-KIT

The processes described below must be performed before use and before each subsequent operation. Repetition of the processes described in this paragraph has minimal effect on the wear of the device. The failure to follow these instructions may cause cross infections. Containers to be used for washing and transport: there are no special requirements. As soon as possible after each use, the key must be placed in a container filled with a cleaning solution and covered with a cloth. This prevents the desiccation of the contaminating agents coming from the patient, and dissolves them, thus making cleaning easier and more effective. Completely disassemble the key as shown below:



Completely unscrew the torque adjustment screw and remove the spring inside the handle of the ratchet body. Do not separate the spring from the pin that acts as a stop.



Use the hexagon tip at the bottom of the torque adjustment screw to unscrew and completely remove the connecting screw of the cover from the side marked "OUT". Exert a light pressure in order to avoid damaging the hexagon tip.



After removing the cover, pull out the two components contained inside the ratchet head: the toothed pawl wheel and wheel stop tooth.

In case of manual cleaning, clean the outer and inner surfaces of the instrument mechanically under hot water with a soft bristled brush. Inject hot water using a needleless syringe to wash the hard-to-access holes of the head and the area around the pawl wheel and wheel stop. If necessary, proceed in the same way for the inside of the handle and of the torque adjustment device. Use a suitable neutral detergent and follow the manufacturer's user instructions. Use the brush to apply the detergent to all surfaces. Rinse with distilled water for at least four minutes. Make sure the running water passes abundantly through the passages. In case of automated ultrasound cleaning: use an ultrasound bath with a suitable detergent solution. Use neutral detergents only. Follow the manufacturer's instructions concerning concentrations and washing times. Use demineralised water to prevent the formation of stains and marks. During this cycle, avoid contact between the pieces because this causes the machined surfaces to deteriorate, and consequently, loss of precision of the torque measurement. When draining, check the recesses of the devices, holes, etc. to make sure all residues have been completely removed. If necessary, repeat the cycle or clean manually.

Observation: Blood residues or other deposits reduce the efficacy of the sterilisation process, which is why it is important to clean thoroughly. During cleaning, avoid sprays or jets of liquid and adopt adequate protections. Avoid contact between this instrument and other nickel-plated instruments.

The pieces must be reassembled prior to sterilisation. Dry the parts, lubricate the functional areas lightly and reassemble the key as shown in the figures below. Too much lubrication may cause the surfaces of the instrument to resurface during sterilisation. Use only a lubricant approved.



After lubricating the parts shown in the figure, insert the two elements of the ratchet head according to the following sequence: the toothed pawl wheel and then the wheel stop tooth.



Lubricate the contact areas between the tooth of the pawl wheel and the pin of the wheel stop tooth.



Once parts 2 and 3 have been lubricated and inserted in the head of the ratchet body, position the cover and turn the ratchet body from the "OUT" side. Tighten the screw with the hexagon tip of the torque adjustment screw.



Lubricate the spring inside the ratchet handle as shown in the figure. Assemble the torque adjustment screw, making sure the instrument functions properly. Manually activate the pawl wheel.

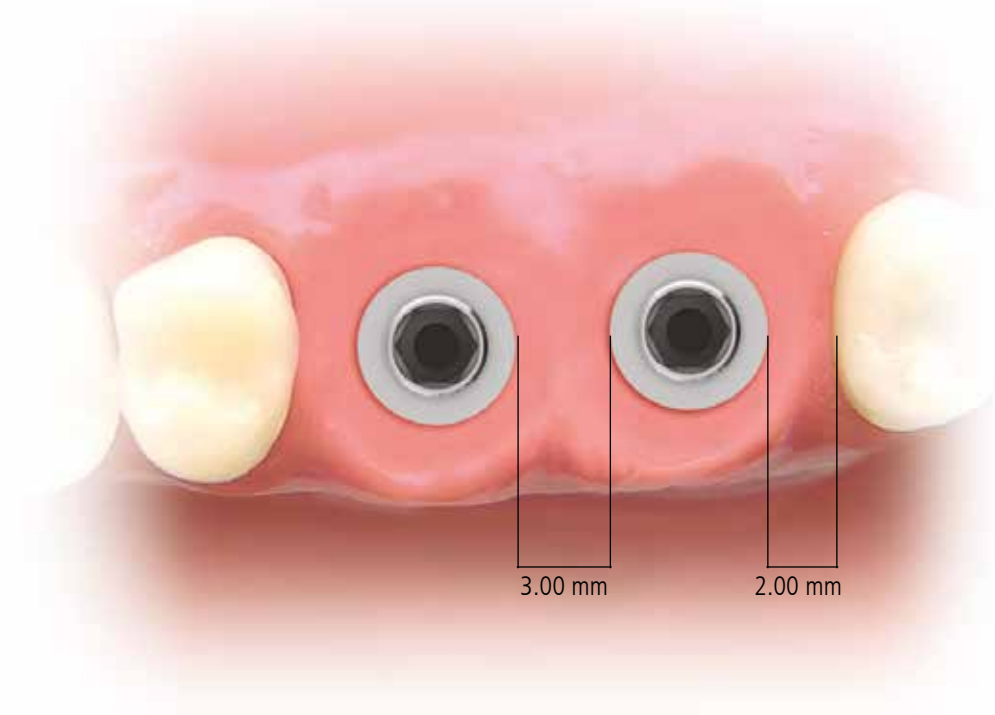
Sterilisation: in a vacuum autoclave, proceeding as follows:
Temperature = 121 – 124°C, with autoclave cycle of at least 30 minutes and drying cycle of 15 minutes.

This procedure is important in order to preserve the precision of the instrument within a tolerance of $\pm 3.5\text{Ncm}$. Operate the torque and insertion mechanism to check their proper functioning. Remove any traces of lubricant from the outer surface of the key. Place the device in suitable sterilisation bags. It is recommended to practise the disassembly and reassembly operations, following the instructions.

Preparation of the implant site

To obtain a three-dimensional view of the bone available, it is recommended to lift a mucoperiosteal flap.

As already mentioned previously, pre-operative clinical and radiographic exams play an important role in determining the position and direction according to which the implants will be positioned. In this stage, a surgical stent will be helpful, acting as a guide during the marking of the cortical bone with the precision drill and in the drilling phase with the 2.20 mm pilot drill. As a rule a distance of 3.00 mm should be maintained between the perimeter of the implants, and at least 2.00 mm between implants and adjacent natural teeth. The numerous experimental and clinical studies carried out indicate that it is opportune to position the implants more in a lingual or a palatal direction to obtain the best aesthetic results, because this position helps preserve the level of the hard and soft tissues at the crown of the implant. It is also essential to check that the thickness of the residual bone wall at buccal level is not less than 1.00 mm. If the thickness is smaller there is a high risk of bone reabsorption failure and exposure of the spires.



Surgical sequences

The following pages contain information on the drilling sequences for the adequate preparation of all implant types. These procedures come from clinical experience and recommendations taken from numerous studies and clinical protocols for implants of this type. However, it should be remembered that bone types with different densities require different surgical approaches, and the indications below cannot replace the necessary training and knowledge of the doctors, nor their personal experience, which can at times lead to different solutions and indications. The sequences that follow refer to specific bone types. In expansion techniques or in case of regenerative surgery, or when you want to increase the compaction in poor quality bone, the use of drills can be replaced with the relative osteotomes. Remember to always use drills with stops correctly inserted. Remember that the drills always prepare a hole that is longer than the implant. For the overpreparation dimensions, refer to page 26 for the cylindrical pilot drill, to page 28 for the final cylindrical drills. The preparations must be non-traumatic and as gradual as possible, and must be executed quickly and precisely. No overheating of the bone should be generated.

It should also be remembered to initially set the surgical micromotor with the correct torque, reduction and rotation values depending on the operation to be performed. In particular:

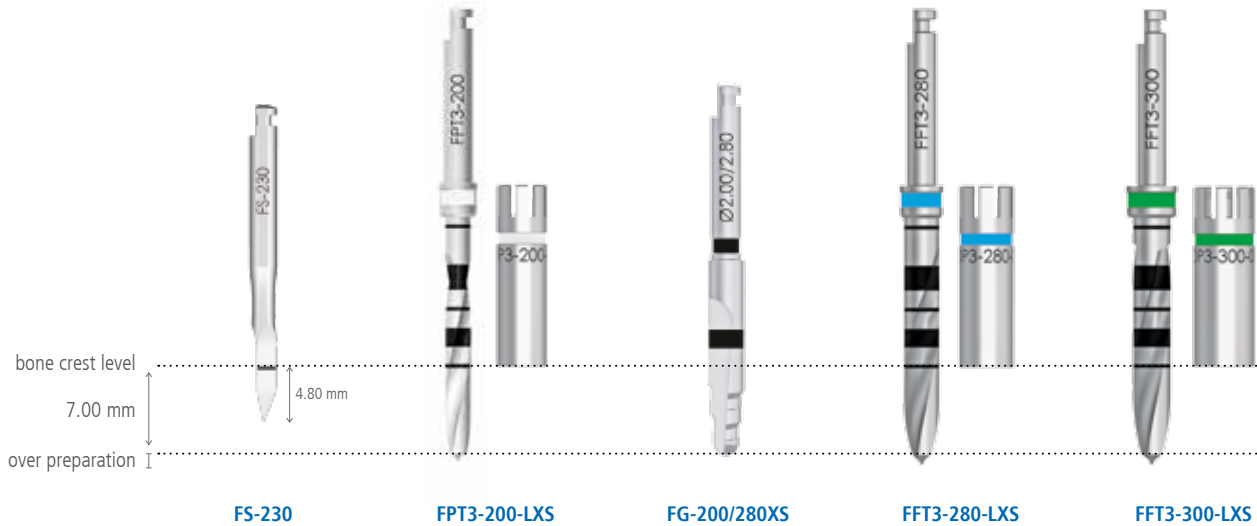
- the **drills** must be used at the speed indicated in each sequence, with the maximum torque and irrigated copiously with cold sterile physiological solution, better if cooled in a refrigerator, with intermittent movements;
- the **bone taps** must only be used when indicated in each procedure.

It should always be remembered that bone types with different densities require different surgical approaches, and the indications below cannot replace the necessary training and knowledge of the doctors, nor their personal experience, which can at times lead the operator to make further considerations. The sequences that follow refer to specific bone types. In expansion techniques or in case of regenerative surgery, or when you want to increase the compaction in poor quality bone, the use of drills can be replaced with the relative osteotomes.

SURGICAL PROCEDURES

Surgical sequence for Premium implants with length 7.00 mm

The use of the stop is at the dentist's discretion. However, its use is recommended, especially in cases of poor intra-operative visibility. Remember that the drills over-prepare the length to an extent indicated in the table on pages 26 (for the pilot drill) and 28 (for the final drills). The graphic sequence refers to Ø 5.00 mm implants.



		use up to: marking 7.00 mm	half of the third step		
Ø 3.80 mm	A-ZT-380TG-070				
	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
	BONE D3	900 rpm	900 rpm	900 rpm	900 rpm
	BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome
Ø 4.25 mm	A-ZT-425-070 A-ZT-425SP-070 A-ZT-425TG-070	marking 7.00 mm	half of the third step		
	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	900 rpm	900 rpm	900 rpm	900 rpm
	BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome
Ø 5.00 mm	A-ZT-500-070 A-ZT-500SP-070 A-ZT-500TG-070	marking 7.00 mm	half of the third step		
	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	1.100 rpm	900 rpm	900 rpm	900 rpm
	BONE D4	1.100 rpm	900 rpm	preparation with osteotome	preparation with osteotome

IMPORTANT WARNING

The intermediate drills in case of length 7.00 mm implants should be used until the middle of the 3rd step of the drills, in order to guarantee a suitable guiding hole for the 2.80 mm drill. It is recommended not to use the intermediate drills until the markings, since they are placed at 8.50 mm.

In case of surgeries in the distal sectors, or of scarce oral opening, drills with reduced length are available, which are to be used without stops. For further details, please see page 60.



FFT3-340-LXS

FG-330/425XS

FFT3-425-LXS

FC-XS

See table below

See table below

50 Ncm max

-	-	-	-	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm

ONLY SP
(beginning of the second notch)

50 Ncm max

50 Ncm max

900 rpm	-	-	1.100 rpm	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)
900 rpm	-	-	1.100 rpm	-	20 rpm
900 rpm	-	-	-	-	20 rpm
preparation with osteotome	-	-	-	-	20 rpm

ONLY SP
(end of the second notch)

50 Ncm max

50 Ncm max

1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	A-MS-500 (20 rpm)	EASYC2-EX250-CA (20 rpm)
1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	-	20 rpm
900 rpm	900 rpm	900 rpm	-	-	20 rpm
preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome	20 rpm

IMPORTANT WARNING

Implants with length 7.00 mm and 8.50 mm may be inserted with the drills in the surgical kit and the respective stops. However, if these implants are inserted at the limit of anatomical structures such as the maxillary sinus floor expansion or the mandibular nerve, it is preferable to prepare the site using the drills in the Shorty Drilling kit, which do not over-prepare the length.

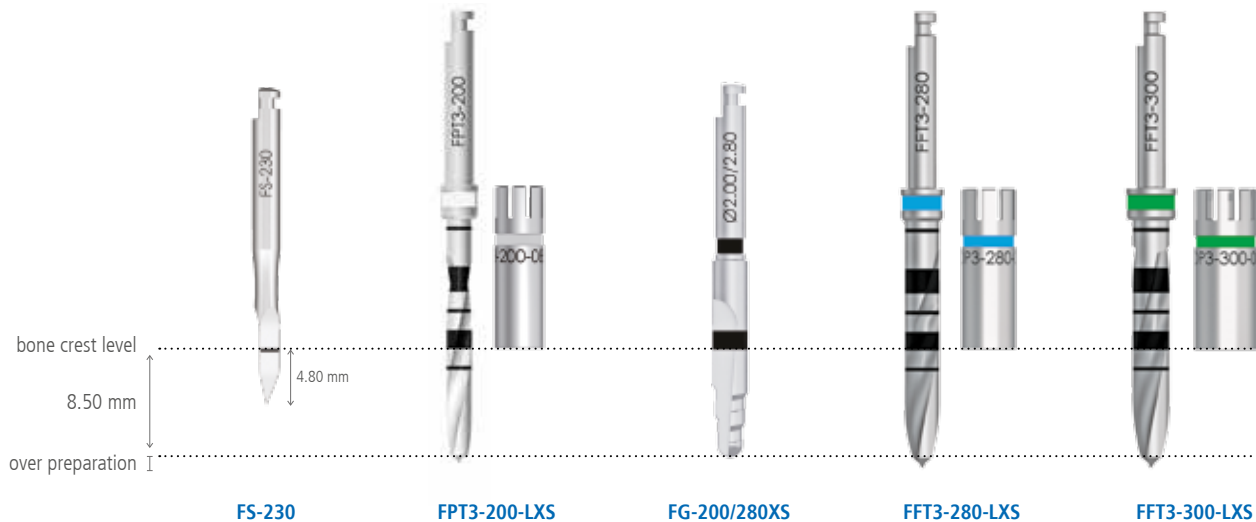
IMPORTANT WARNING

TG implants Ø 4.25 mm should be inserted with the Easy Insert with 2.30 mm hexagon, that is marked with blue color (cod. EASYC2- EX230-...).

SURGICAL PROCEDURES

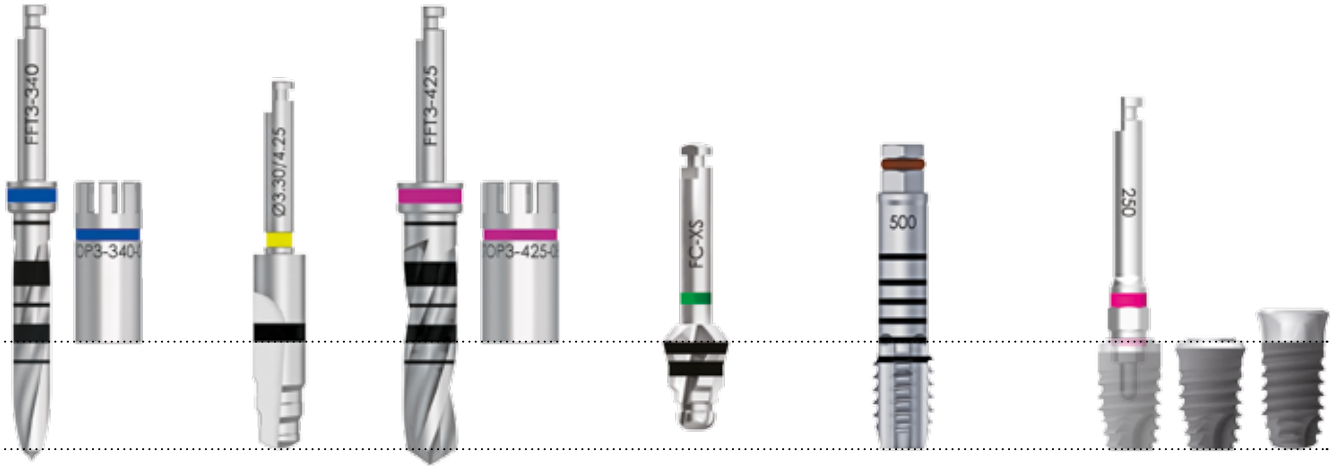
Surgical sequence for Premium implants with length 8.50 mm

The use of the stop is at the dentist's discretion. However, its use is recommended, especially in cases of poor intra-operative visibility. Remember that the drills over-prepare the length to an extent indicated in the table on pages 26 (for the pilot drill) and 28 (for the final drills). The graphic sequence refers to Ø 5.00 mm implants.



	FS-230	FPT3-200-LXS	FG-200/280XS	FFT3-280-LXS	FFT3-300-LXS
A-ZT-380-085 A-ZT-380SP-085 A-ZT-380TG-085		use up to: marking 8.50 mm	marking 8.50 mm		
Ø 3.80 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome
A-ZT-425-085 A-ZT-425SP-085 A-ZT-425TG-085		marking 8.50 mm	marking 8.50 mm		
Ø 4.25 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome
A-ZT-500-085 A-ZT-500SP-085 A-ZT-500TG-085		marking 8.50 mm	marking 8.50 mm		
Ø 5.00 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D3	1.100 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	1.100 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome

In case of surgeries in the distal sectors, or of scarce oral opening, drills with reduced length are available, which are to be used without stops. For further details, please see page 60.



FFT3-340-LXS

FG-330/425XS

FFT3-425-LXS

FC-XS

See table below

See table below

				ONLY SP (end of the first notch)	50 Ncm max	
-	-	-	1.100 rpm	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)	
-	-	-	1.100 rpm	-	20 rpm	
-	-	-	-	-	20 rpm	
-	-	-	-	-	20 rpm	
				ONLY SP (beginning of the second notch)	50 Ncm max	50 Ncm max
900 rpm	-	-	1.100 rpm	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)	
900 rpm	-	-	1.100 rpm	-	20 rpm	
900 rpm	-	-	-	-	20 rpm	
preparation with osteotome	-	-	-	-	20 rpm	
				ONLY SP (end of the second notch)	50 Ncm max	50 Ncm max
1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	A-MS-500 (20 rpm)	EASYC2-EX250-CA (20 rpm)	
1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	-	20 rpm	
900 rpm	900 rpm	900 rpm	-	-	20 rpm	
preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome	-	20 rpm	

IMPORTANT WARNING

Implants with length 7.00 mm and 8.50 mm may be inserted with the drills in the surgical kit and the respective stops. However, if these implants are inserted at the limit of anatomical structures such as the maxillary sinus floor expansion or the mandibular nerve, it is preferable to prepare the site using the drills in the Shorty Drilling kit, which do not over-prepare the length.

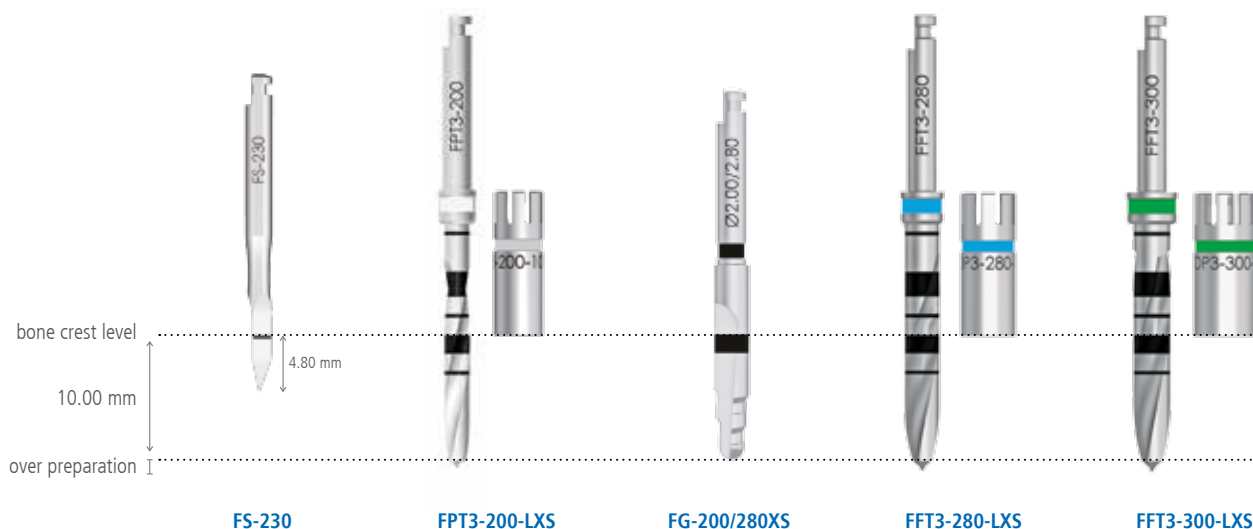
IMPORTANT WARNING

TG implants Ø 4.25 mm should be inserted with the Easy Insert with 2.30 mm hexagon, that is marked with blue color (cod. EASYC2- EX230-...).

SURGICAL PROCEDURES

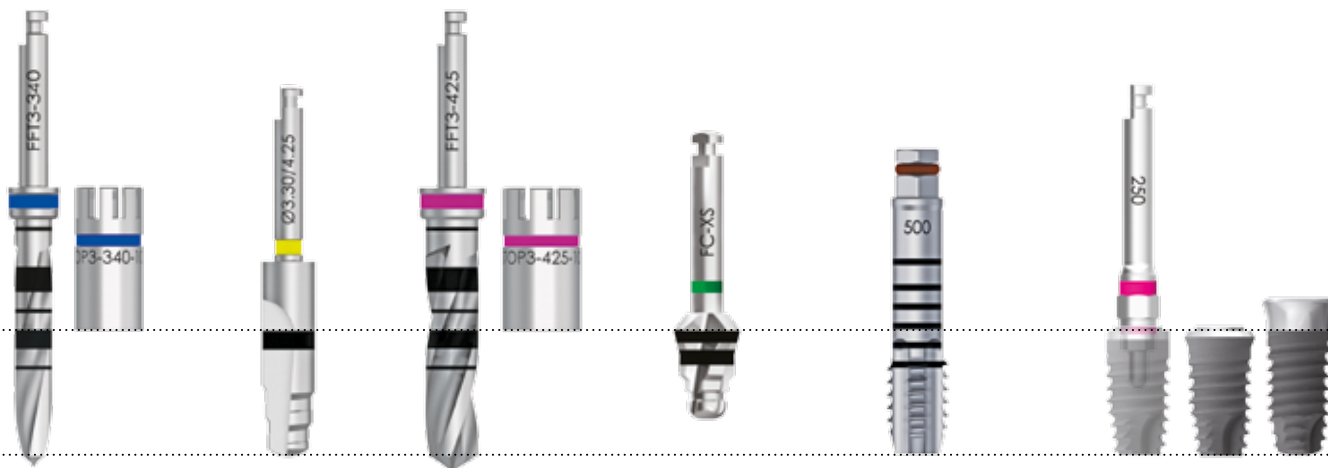
Surgical sequence for Premium implants with length 10.00 mm

The use of the stop is at the dentist's discretion. However, its use is recommended, especially in cases of poor intra-operative visibility. Remember that the drills over-prepare the length to an extent indicated in the table on pages 26 (for the pilot drill) and 28 (for the final drills). The graphic sequence refers to Ø 5.00 mm implants.



	A-ZT-330-100 A-ZT-330TG-100	use up to: marking 10.00 mm	use up to: marking 10.00 mm		
Ø 3.30 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
	BONE D3	900 rpm	900 rpm	900 rpm	900 rpm
	BONE D4	-	-	-	-
Ø 3.80 mm	A-ZT-380-100 A-ZT-380SP-100 A-ZT-380TG-100	marking 10.00 mm	marking 10.00 mm		
	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome
Ø 4.25 mm	A-ZT-425-100 A-ZT-425SP-100 A-ZT-425TG-100	marking 10.00 mm	marking 10.00 mm		
	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome
Ø 5.00 mm	A-ZT-500-100 A-ZT-500SP-100 A-ZT-500TG-100	marking 10.00 mm	marking 10.00 mm		
	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	1.100 rpm	900 rpm	900 rpm	900 rpm
BONE D4	1.100 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome

In case of surgeries in the distal sectors, or of scarce oral opening, drills with reduced length are available, which are to be used without stops. For further details, please see page 60.



FFT3-340-LXS

FG-330/425XS

FFT3-425-LXS

FC-XS

See table below

See table below

50 Ncm max

-	-	-	-	A-MS-330 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm
-	-	-	-	-	-

ONLY SP
(end of the first notch)

50 Ncm max

50 Ncm max

-	-	-	1.100 rpm	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	1.100 rpm	-	20 rpm
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm

ONLY SP
(beginning of the second notch)

50 Ncm max

50 Ncm max

900 rpm	-	-	1.100 rpm	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)
900 rpm	-	-	1.100 rpm	-	20 rpm
900 rpm	-	-	-	-	20 rpm
preparation with osteotome	-	-	-	-	20 rpm

ONLY SP
(end of the second notch)

50 Ncm max

50 Ncm max

1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	A-MS-500 (20 rpm)	EASYC2-EX250-CA (20 rpm)
1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	-	20 rpm
900 rpm	900 rpm	900 rpm	-	-	20 rpm
preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome	-	20 rpm

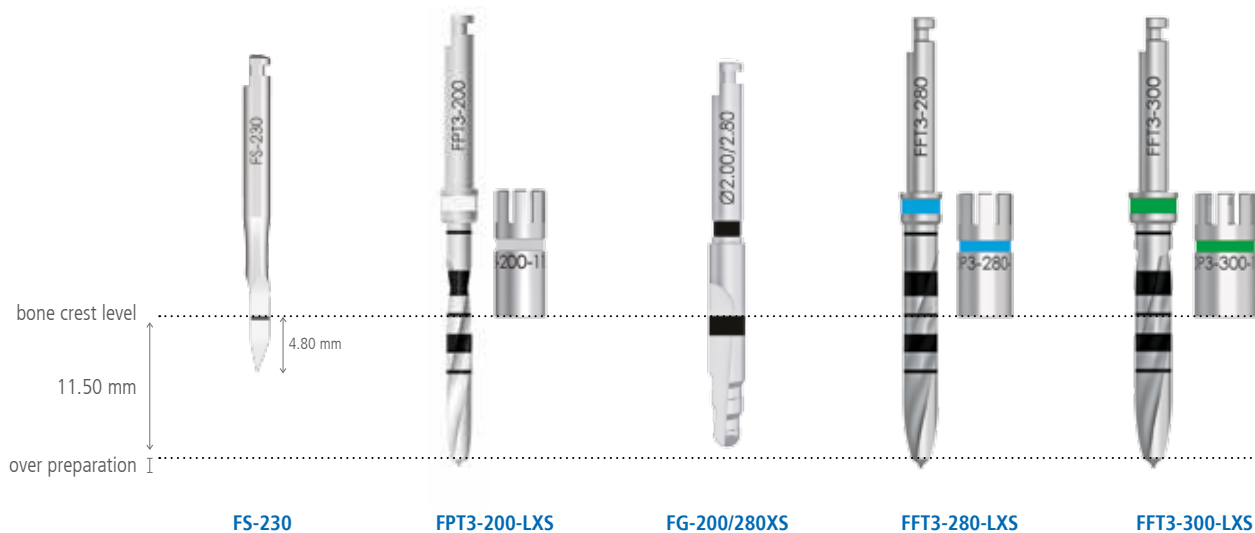
IMPORTANT WARNING

■ TG implants Ø 4.25 mm should be inserted with the Easy Insert with 2.30 mm hexagon, that is marked with blue color (cod. EASYC2- EX230-...).

SURGICAL PROCEDURES

Surgical sequence for Premium implants with length 11.50 mm

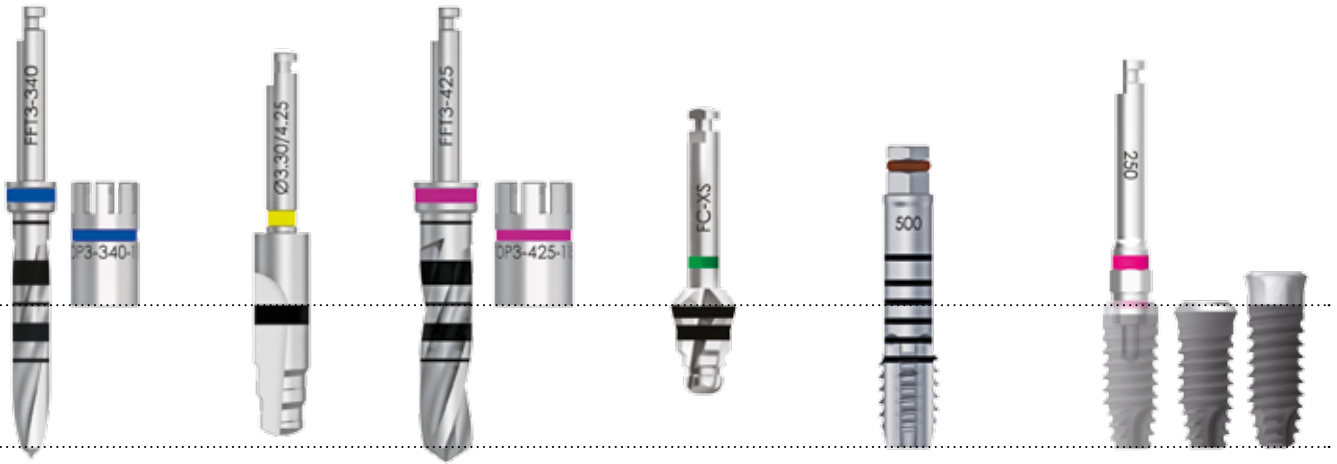
The use of the stop is at the dentist's discretion. However, its use is recommended, especially in cases of poor intra-operative visibility. Remember that the drills over-prepare the length to an extent indicated in the table on pages 26 (for the pilot drill) and 28 (for the final drills). The graphic sequence refers to Ø 5.00 mm implants.



	A-ZT-330-115 A-ZT-330TG-115		use up to: marking 11.50 mm	use up to: marking 10.00 mm		
Ø 3.30 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
	BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	-
	BONE D4	-	-	-	-	-
Ø 3.80 mm	A-ZT-380-115 A-ZT-380SP-115 A-ZT-380TG-115		marking 11.50 mm	marking 10.00 mm		
	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
	BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome
Ø 4.25 mm	A-ZT-425-115 A-ZT-425SP-115 A-ZT-425TG-115		marking 11.50 mm	marking 10.00 mm		
	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome
Ø 5.00 mm	A-ZT-500-115 A-ZT-500SP-115 A-ZT-500TG-115		marking 11.50 mm	marking 10.00 mm		
	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	1.100 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	1.100 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome

In case of surgeries in the distal sectors, or of scarce oral opening, drills with reduced length are available, which are to be used without stops. For further details, please see page 60.

*All the osteotomes are to be used until the mark related to the implant to be inserted.



FFT3-340-LXS

FG-330/425XS

FFT3-425-LXS

FC-XS

See table below

See table below

50 Ncm max

-	-	-	-	A-MS-330 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm
-	-	-	-	-	-

ONLY SP
(end of the first notch)

50 Ncm max

50 Ncm max

-	-	-	1.100 rpm	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	1.100 rpm	-	20 rpm
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm

ONLY SP
(beginning of the second notch)

50 Ncm max

50 Ncm max

900 rpm	-	-	1.100 rpm	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)
900 rpm	-	-	1.100 rpm	-	20 rpm
900 rpm	-	-	-	-	20 rpm
preparation with osteotome	-	-	-	-	20 rpm

ONLY SP
(end of the second notch)

50 Ncm max

50 Ncm max

1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	A-MS-500 (20 rpm)	EASYC2-EX250-CA (20 rpm)
1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	-	20 rpm
900 rpm	900 rpm	900 rpm	-	-	20 rpm
preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome	-	20 rpm

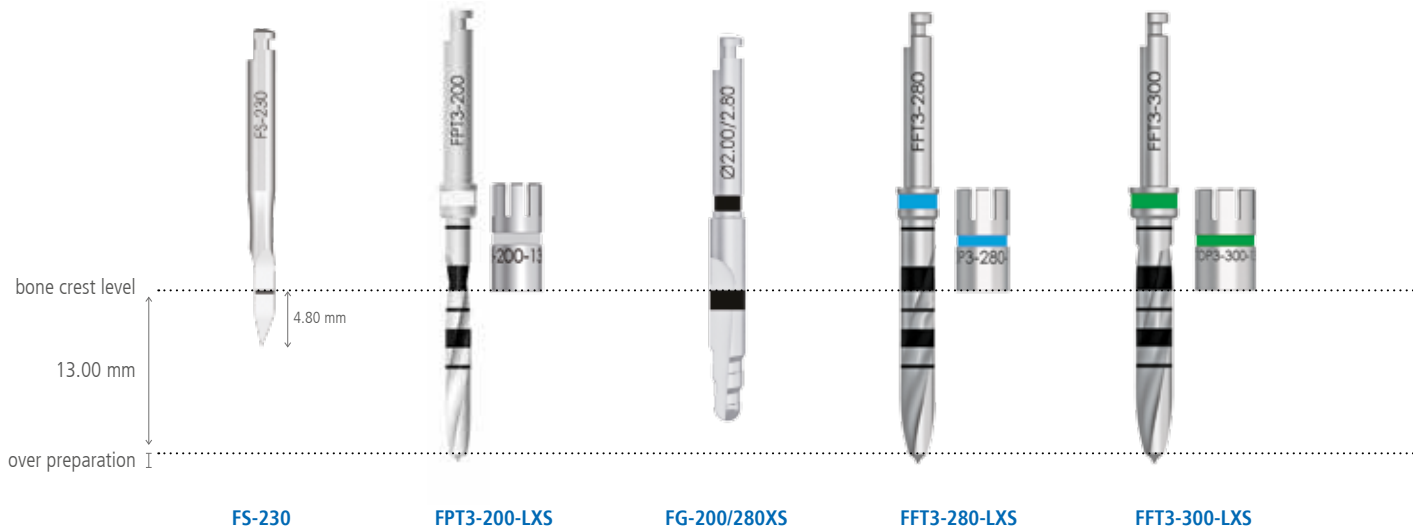
IMPORTANT WARNING

■ TG implants Ø 4.25 mm should be inserted with the Easy Insert with 2.30 mm hexagon, that is marked with blue color (cod. EASYC2- EX230-...).

SURGICAL PROCEDURES

Surgical sequence for Premium implants with length 13.00 mm

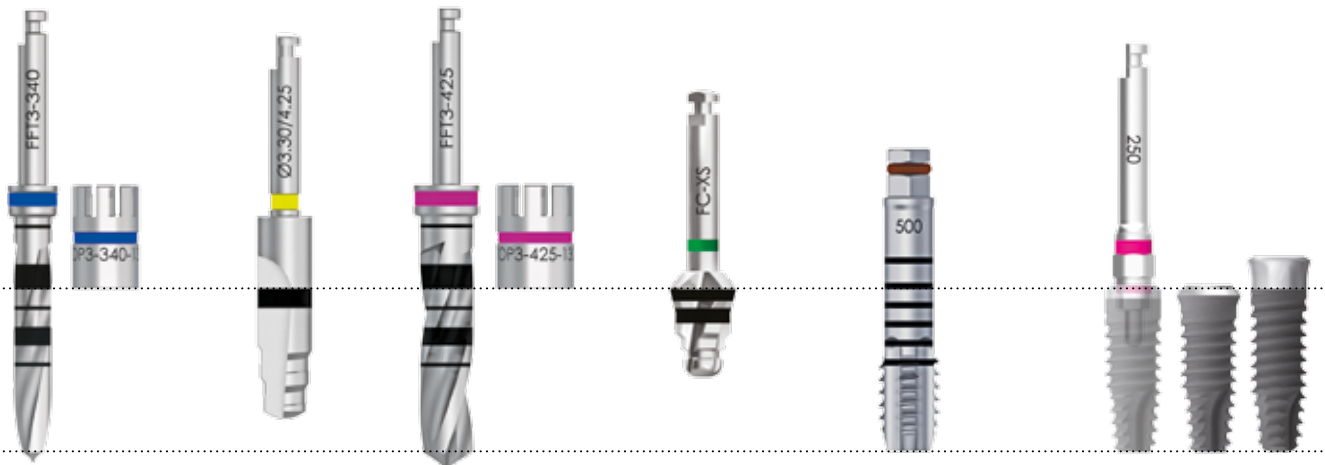
The use of the stop is at the dentist's discretion. However, its use is recommended, especially in cases of poor intra-operative visibility. Remember that the drills over-prepare the length to an extent indicated in the table on pages 26 (for the pilot drill) and 28 (for the final drills). The graphic sequence refers to Ø 5.00 mm implants.



	FS-230	FPT3-200-LXS	FG-200/280XS	FFT3-280-LXS	FFT3-300-LXS
A-ZT-330-130 A-ZT-330TG-130		use up to: marking 13.00 mm	use up to: marking 10.00 mm		
Ø 3.30 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	-
BONE D4	-	-	-	-	-
A-ZT-380-130 A-ZT-380SP-130 A-ZT-380TG-130		marking 13.00 mm	marking 10.00 mm		
Ø 3.80 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome
A-ZT-425-130 A-ZT-425SP-130 A-ZT-425TG-130		marking 13.00 mm	marking 10.00 mm		
Ø 4.25 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome
A-ZT-500-130 A-ZT-500SP-130 A-ZT-500TG-130		marking 13.00 mm	marking 10.00 mm		
Ø 5.00 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D3	1.100 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	1.100 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome

In case of surgeries in the distal sectors, or of scarce oral opening, drills with reduced length are available, which are to be used without stops. For further details, please see page 60.

*All the osteotomes are to be used until the mark related to the implant to be inserted.



FFT3-340-LXS

FG-330/425XS

FFT3-425-LXS

FC-XS

See table below

See table below

50 Ncm max

-	-	-	-	A-MS-330 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm
-	-	-	-	-	-

ONLY SP
(end of the first notch)

50 Ncm max

50 Ncm max

-	-	-	1.100 rpm	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	1.100 rpm	-	20 rpm
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm

ONLY SP
(beginning of the second notch)

50 Ncm max

50 Ncm max

900 rpm	-	-	1.100 rpm	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)
900 rpm	-	-	1.100 rpm	-	20 rpm
900 rpm	-	-	-	-	20 rpm
preparation with osteotome	-	-	-	-	20 rpm

ONLY SP
(end of the second notch)

50 Ncm max

50 Ncm max

1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	A-MS-500 (20 rpm)	EASYC2-EX250-CA (20 rpm)
1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	-	20 rpm
900 rpm	900 rpm	900 rpm	-	-	20 rpm
preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome	-	20 rpm

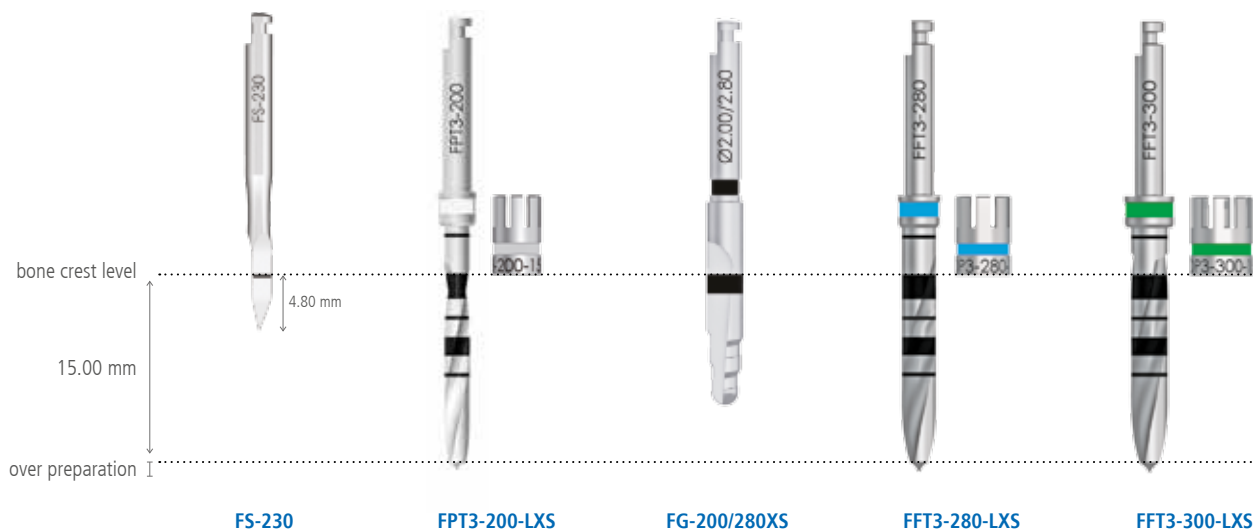
IMPORTANT WARNING

■ TG implants Ø 4.25 mm should be inserted with the Easy Insert with 2.30 mm hexagon, that is marked with blue color (cod. EASYC2- EX230-...).

SURGICAL PROCEDURES

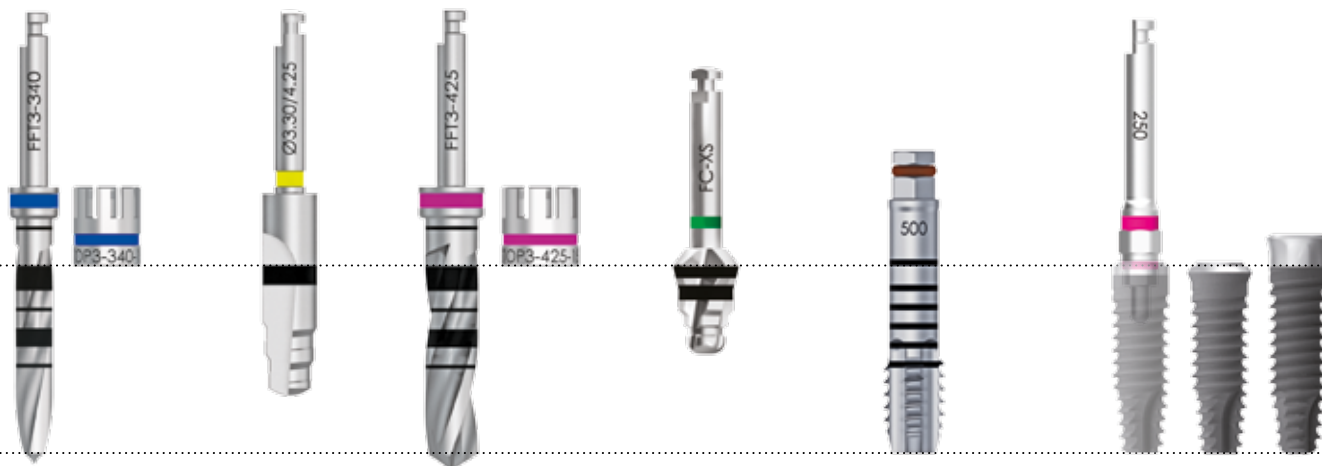
Surgical sequence for Premium implants with length 15.00 mm

The use of the stop is at the dentist's discretion. However, its use is recommended, especially in cases of poor intra-operative visibility. Remember that the drills over-prepare the length to an extent indicated in the table on pages 26 (for the pilot drill) and 28 (for the final drills). The graphic sequence refers to Ø 5.00 mm implants.



	FS-230	FPT3-200-LXS	FG-200/280XS	FFT3-280-LXS	FFT3-300-LXS
A-ZT-330-150 A-ZT-330TG-150		use up to: marking 15.00 mm	use up to: marking 10.00 mm		
Ø 3.30 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	-
BONE D4	-	-	-	-	-
A-ZT-380-150 A-ZT-380SP-150 A-ZT-380TG-150		marking 15.00 mm	marking 10.00 mm		
Ø 3.80 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm
BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome
A-ZT-425-150 A-ZT-425SP-150 A-ZT-425TG-150		marking 15.00 mm	marking 10.00 mm		
Ø 4.25 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D3	900 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	900 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome
A-ZT-500-150 A-ZT-500SP-150 A-ZT-500TG-150		marking 15.00 mm	marking 10.00 mm		
Ø 5.00 mm					
BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
BONE D3	1.100 rpm	900 rpm	900 rpm	900 rpm	900 rpm
BONE D4	1.100 rpm	900 rpm	preparation with osteotome	preparation with osteotome	preparation with osteotome

In case of surgeries in the distal sectors, or of scarce oral opening, drills with reduced length are available, which are to be used without stops. For further details, please see page 60.



FFT3-340-LXS

FG-330/425XS

FFT3-425-LXS

FC-XS

See table below

See table below

50 Ncm max

-	-	-	-	A-MS-330 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm
-	-	-	-	-	-

ONLY SP
(end of the first notch)

50 Ncm max

50 Ncm max

-	-	-	1.100 rpm	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	1.100 rpm	-	20 rpm
-	-	-	-	-	20 rpm
-	-	-	-	-	20 rpm

ONLY SP
(beginning of the second notch)

50 Ncm max

50 Ncm max

900 rpm	-	-	1.100 rpm	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)
900 rpm	-	-	1.100 rpm	-	20 rpm
900 rpm	-	-	-	-	20 rpm
preparation with osteotome	-	-	-	-	20 rpm

ONLY SP
(end of the second notch)

50 Ncm max

50 Ncm max

1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	A-MS-500 (20 rpm)	EASYC2-EX250-CA (20 rpm)
1.100 rpm	1.100 rpm	900 rpm	1.100 rpm	-	20 rpm
900 rpm	900 rpm	900 rpm	-	-	20 rpm
preparation with osteotome	preparation with osteotome	preparation with osteotome	preparation with osteotome	-	20 rpm

IMPORTANT WARNING

■ TG implants Ø 4.25 mm should be inserted with the Easy Insert with 2.30 mm hexagon, that is marked with blue color (cod. EASYC2- EX230-...).

SURGICAL PROCEDURES

Surgical sequence for Premium implants with length 18.00 mm

The use of the stop is at the dentist's discretion. However, its use is recommended, especially in cases of poor intra-operative visibility. Remember that the drills over-prepare the length to an extent indicated in the table on pages 26 (for the pilot drill) and 28 (for the final drills). The graphic sequence refers to Ø 4.25 mm implants.



FS-230

FPT3-200-LXS

FG-200/280XS

marking 18.00 mm

marking 10.00 mm

A-ZT-380-180

Ø 3.80 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	900 rpm	900 rpm	900 rpm
	BONE D4	900 rpm	900 rpm	preparation with osteotome

marking 18.00 mm

marking 10.00 mm

A-ZT-425-180

Ø 4.25 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	900 rpm	900 rpm	900 rpm
	BONE D4	900 rpm	900 rpm	preparation with osteotome

In case of surgeries in the distal sectors, or of scarce oral opening, drills with reduced length are available, which are to be used without stops. For further details, please see page 60.



FFT3-300-LXS



FFT3-340-LXS



See table below



See table below

50 Ncm max

900 rpm	-	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)
900 rpm	-	-	20 rpm
900 rpm	-	-	20 rpm
preparation with osteotome	-	-	20 rpm

50 Ncm max

50 Ncm max

1.100 rpm	900 rpm	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)
1.100 rpm	900 rpm	-	20 rpm
900 rpm	900 rpm	-	20 rpm
preparation with osteotome	preparation with osteotome	-	20 rpm

IMPORTANT WARNING



The use of stops in implants with length 18.00 mm is not contemplated, since the end of the working part of the cylindrical drills already corresponds to 18.00 mm. So in this case the use of the depth stop is not necessary.

Shorty Drilling kit

The Shorty drills allow dedicating the entire bone available to lodging the implant, without any over-preparation due to the tip morphology of the standard drills (for example, to insert a Premium implant of 7.00 mm using the Shorty drills, an actual hole of 7.00 mm will be made, and not 7.00 mm plus the portion of over-preparation). Moreover, the Shorty drills have the advantage, compared to traditional drills, of being shorter than the standard drills (24.85 mm instead of 35.00 mm).

This important feature makes it possible to use these instruments even in case of difficult to reach distal sectors or small oral openings.

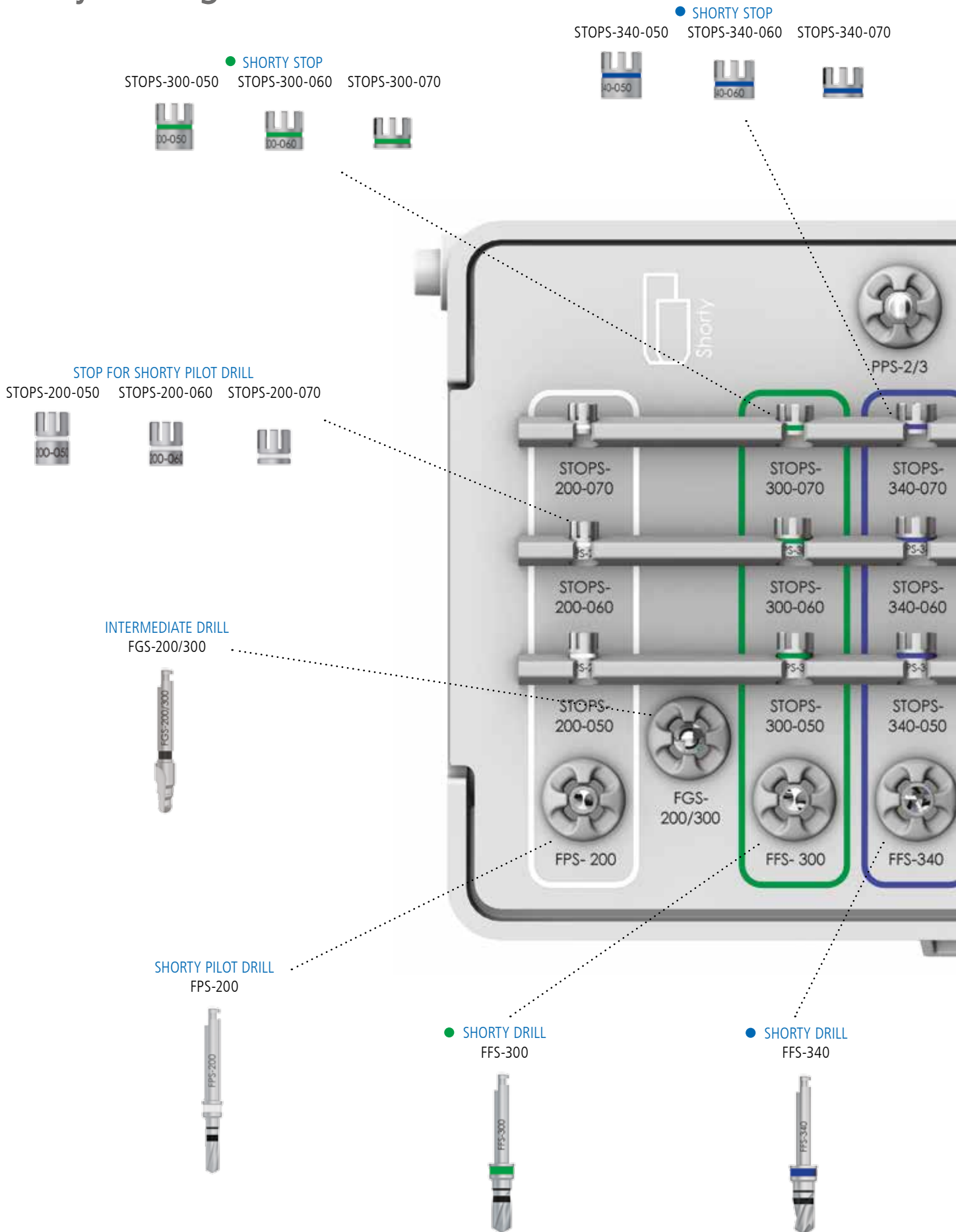


code	description
	<p>ZSHORTY-INT Surgical drilling kit complete with drills for Premium implants Straight, SP and TG</p>
SHORTY-KIT-INT	Radel drilling kit instrument case for Shorty drills
	<p>GROMMET-CA-1 Kit with 5 spare silicon supports for surgical trays, for drills or instruments with right angle shanks</p>

IMPORTANT WARNING

The Shorty Drilling kit is a kit of **only** drills, which also contains two parallelism pins. However, it is not a complete kit; to insert short implants the instruments in the standard surgical kit are required (ratchet, drivers, etc.).

Shorty Drilling kit



PARALLELISM PIN
PPS-2/3



● SHORTY STOP

STOPS-425-050 STOPS-425-060 STOPS-425-070



● SHORTY STOP

STOPS-540-050 STOPS-540-060 STOPS-540-070



INTERMEDIATE DRILL
FGS-425/540



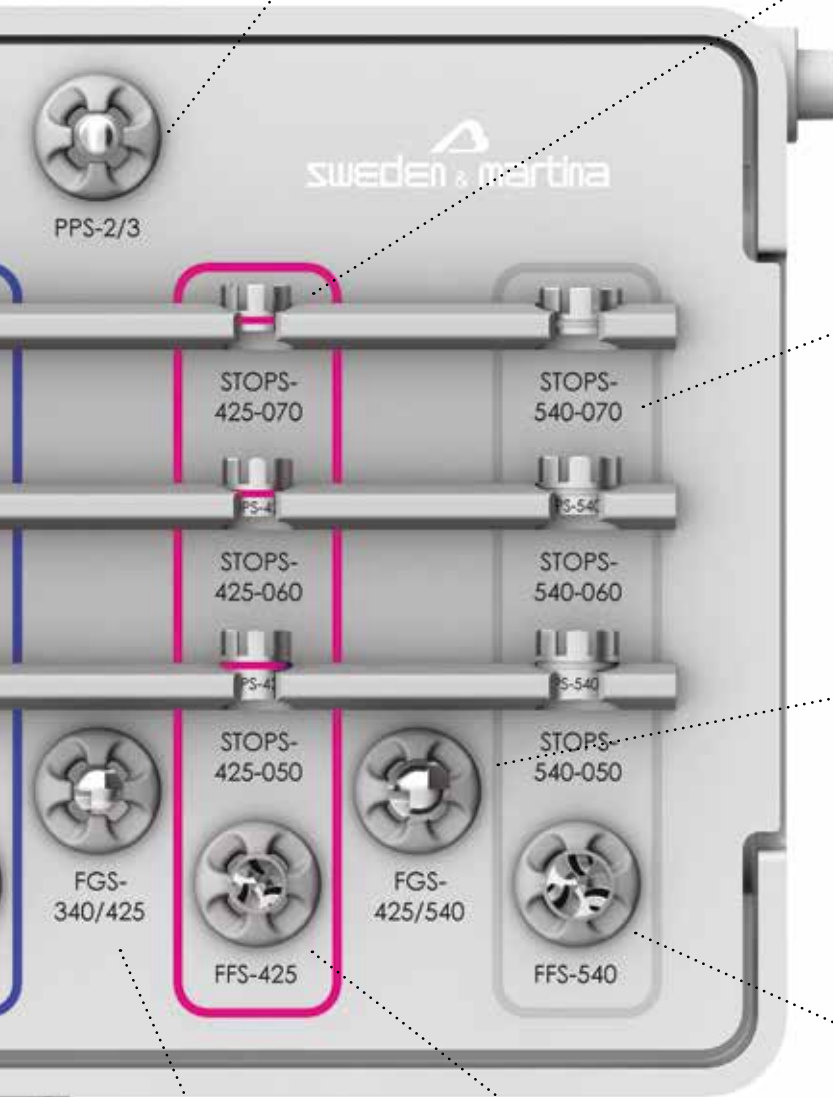
● SHORTY DRILL
FFS-540



● SHORTY DRILL
FFS-425



INTERMEDIATE DRILL
FGS-340/425



Instruments contained in the Shorty Drilling kit

Shorty pilot drill



FPS-200
Shorty pilot drill

Shorty pilot drill stops



STOPS-200-050
5.00 mm stop for Shorty pilot drill



STOPS-200-060
6.00 mm stop for Shorty pilot drill



STOPS-200-070
7.00 mm stop for Shorty pilot drill

code	description	diameter
 FGS-200/300	Short guide drill	2.00/2.50/3.00
 FGS-340/425	Short guide drill	3.40/3.80/4.25
 FGS-425/540*	Short guide drill	4.25/4.80/5.40
 PPS-2/3	Parallelism pin for short implants, with depth lines at 5.00, 6.00 and 7.00 mm	2.00/3.00

* Intermediate drill dedicated to other Sweden & Martina implant systems.

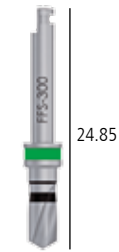
Ø 3.80 mm

Ø 4.25 mm

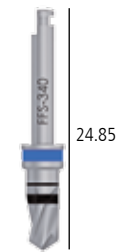
Ø 5.00 mm

Ø 6.00 mm

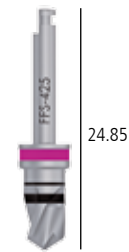
drills



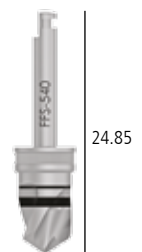
FFS-300



FFS-340



FFS-425



FFS-540*



STOPS-300-050



STOPS-340-050



STOPS-425-050



STOPS-540-050*

stop



STOPS-300-060



STOPS-340-060



STOPS-425-060



STOPS-540-060*



STOPS-300-070



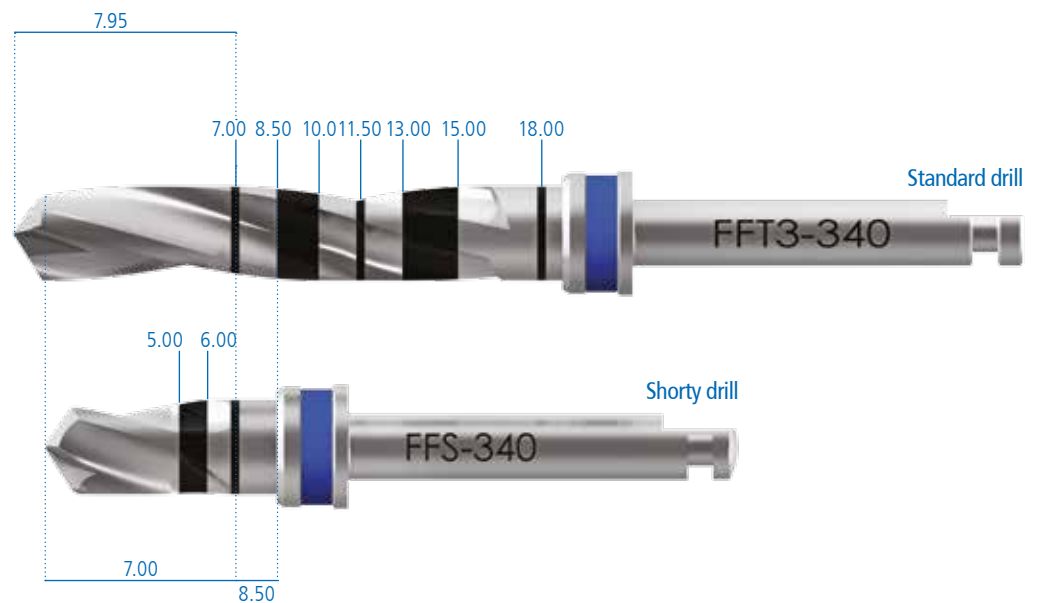
STOPS-340-070



STOPS-425-070



STOPS-540-070*



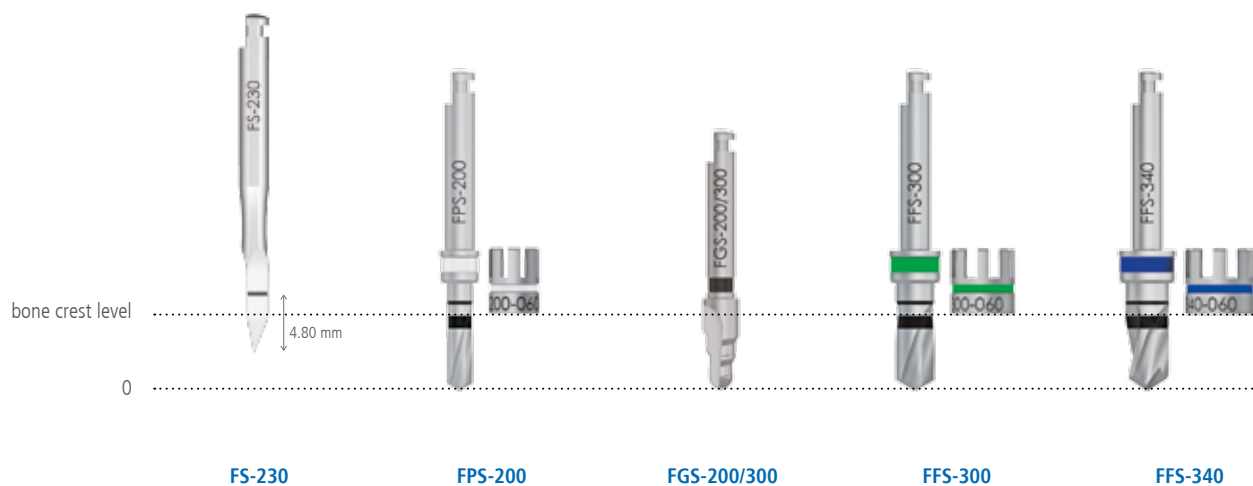
Please note: remember that the drills in the Shorty Drilling kit do not over-prepare the surgical site. The working lengths include the portion related to the conical tip of the drill.

* Drills dedicated to other Sweden & Martina implant systems.

SURGICAL PROCEDURES

Surgical sequence for Premium implants with length 6.00 mm (Shorty drills)

The use of the stop is at the dentist's discretion. However, its use is recommended, especially in cases of poor intra-operative visibility. The graphic sequence refers to Ø 5.00 mm implants.



A-ZT-380TG-060

Ø 3.80 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
	BONE D3	*	*	*	*	-
	BONE D4	*	*	*	*	-

A-ZT-425TG-060

Ø 4.25 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	-
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	-
	BONE D3	*	*	*	*	*
	BONE D4	*	*	*	*	*

A-ZT-500TG-060

Ø 5.00 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	*	*	*	*	*
	BONE D4	*	*	*	*	*

IMPORTANT WARNING

The precision drill is very cutting. For length 6.00 mm implants, it is recommended not to use this drill until the marking (placed at 4.80 mm), but to use it only for cutting the cortical.



FGS-340/425



FFS-425



See table below



See table below

		50 Ncm max	
-	-	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	20 rpm	20 rpm
-	-	*	*
-	-	*	*
		50 Ncm max	50 Ncm max
900 rpm	-	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)
900 rpm	-	20 rpm	20 rpm
*	-	*	*
*	-	*	*
		50 Ncm max	50 Ncm max
1.100 rpm	900 rpm	A-MS-500 (20 rpm)	EASYC2-EX250-CA (20 rpm)
1.100 rpm	900 rpm	20 rpm	20 rpm
*	*	*	*
*	*	*	*

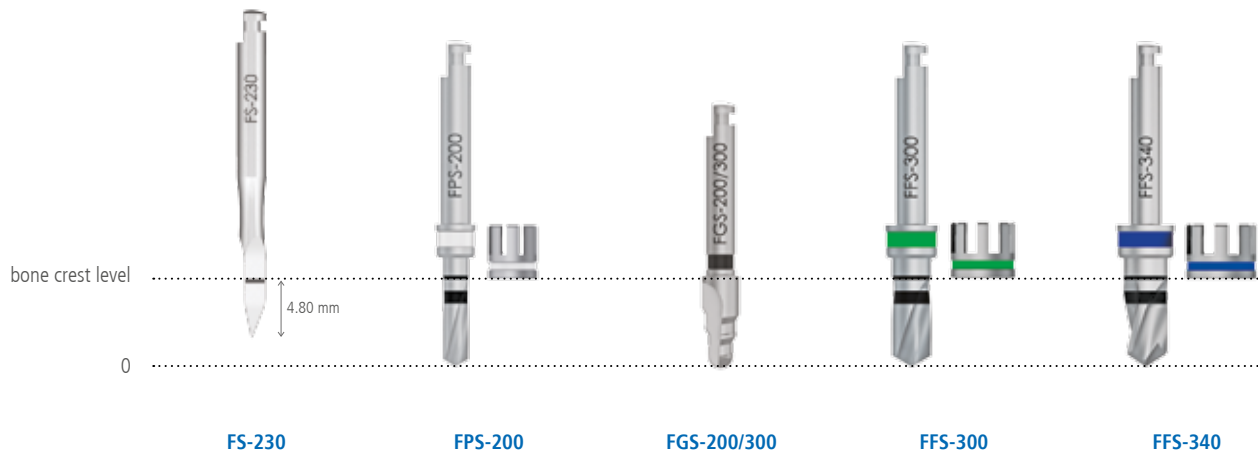
IMPORTANT WARNING

■ TG implants Ø 4.25 mm should be inserted with the Easy Insert with 2.30 mm hexagon, that is marked with blue color (cod. EASYC2- EX230-...).

SURGICAL PROCEDURES

Surgical sequence for Premium implants with length 7.00 mm (Shorty drills)

The use of the stop is at the dentist's discretion. However, its use is recommended, especially in cases of poor intra-operative visibility. The graphic sequence refers to Ø 5.00 mm implants.



A-ZT-380TG-070

Ø 3.80 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
	BONE D3	*	*	*	*	*
	BONE D4	*	*	*	*	*

A-ZT-425-070 A-ZT-425SP-070 A-ZT-425TG-070

Ø 4.25 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	-
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	-
	BONE D3	*	*	*	*	*
	BONE D4	*	*	*	*	*

A-ZT-500-070 A-ZT-500SP-070 A-ZT-500TG-070

Ø 5.00 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	*	*	*	*	*
	BONE D4	*	*	*	*	*



FGS-340/425

FFS-425

FC-XS

See table below

See table below

50 Ncm max

-	-	-	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	-	20 rpm	20 rpm
*	*	*	*	*
*	*	*	*	*

ONLY SP
(beginning of the second notch)

50 Ncm max

50 Ncm max

900 rpm	-	1.000 rpm	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)
900 rpm	-	1.000 rpm	20 rpm	20 rpm
*	*	*	*	*
*	*	*	*	*

ONLY SP
(end of the second notch)

50 Ncm max

50 Ncm max

1.100 rpm	900 rpm	1.000 rpm	A-MS-500 (20 rpm)	EASYC2-EX250-CA (20 rpm)
1.100 rpm	900 rpm	1.000 rpm	20 rpm	20 rpm
*	*	*	*	*
*	*	*	*	*

IMPORTANT WARNING

Implants with length 7.00 mm and 8.50 mm may be inserted with the drills in the surgical kit and the respective stops. However, if these implants are inserted at the limit of anatomical structures such as the maxillary sinus floor expansion or the mandibular nerve, it is preferable to prepare the site using the drills in the Shorty Drilling kit, which do not over-prepare the length.

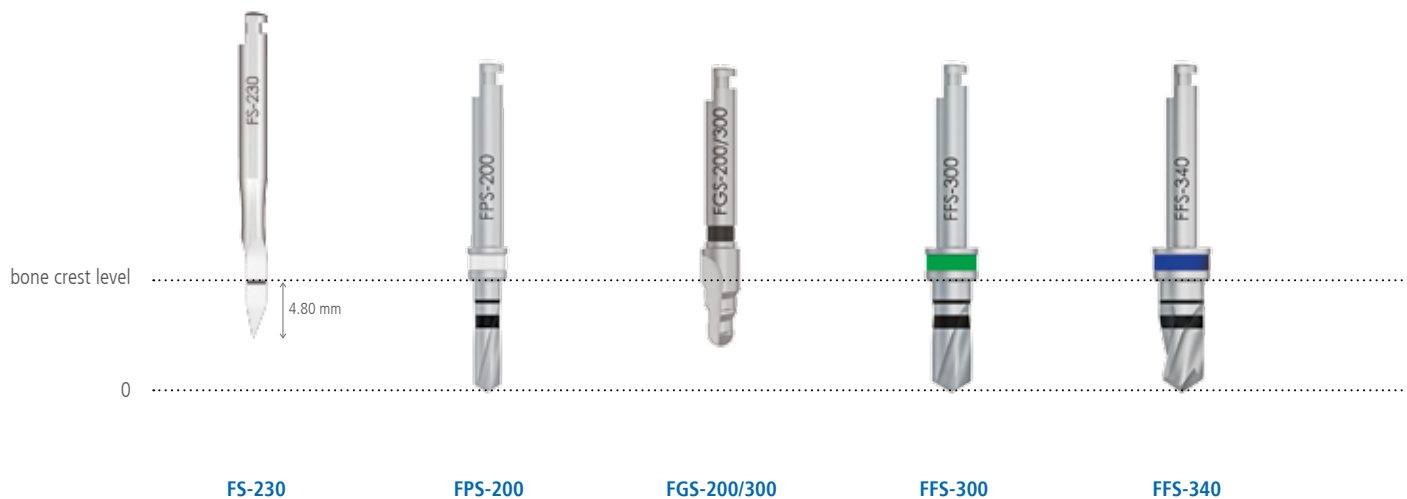
IMPORTANT WARNING

TG implants Ø 4.25 mm should be inserted with the Easy Insert with 2.30 mm hexagon, that is marked with blue color (cod. EASYC2- EX230-...).

SURGICAL PROCEDURES

Surgical sequence for Premium implants with length 8.50 mm (Shorty drills)

The use of stops in implants with length 8.50 mm is not contemplated, since 8.50 corresponds to the maximum working length of the drills. The graphic sequence refers to Ø 5.00 mm implants.



A-ZT-380-085
A-ZT-380SP-085
A-ZT-380TG-085

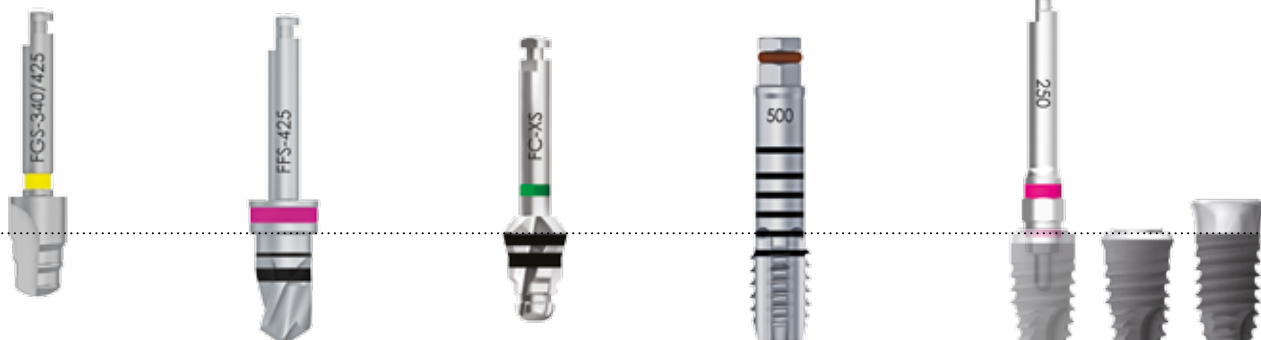
Ø 3.80 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	900 rpm	-
	BONE D3	*	*	*	*	*
	BONE D4	*	*	*	*	*

A-ZT-425-085
A-ZT-425SP-085
A-ZT-425TG-085

Ø 4.25 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	-
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	-
	BONE D3	*	*	*	*	*
	BONE D4	*	*	*	*	*

A-ZT-500-085
A-ZT-500SP-085
A-ZT-500TG-085

Ø 5.00 mm	BONE D1	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D2	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm	1.100 rpm
	BONE D3	*	*	*	*	*
	BONE D4	*	*	*	*	*



FGS-340/425

FFS-425

FC-XS

See table below

See table below

		ONLY SP (end of the first notch)	50 Ncm max	
-	-	1.000 rpm	A-MS-380 (20 rpm)	EASYC2-EX230-CA (20 rpm)
-	-	1.000 rpm	20 rpm	20 rpm
*	*	*	*	*
*	*	*	*	*
		ONLY SP (beginning of the second notch)	50 Ncm max	50 Ncm max
900 rpm	-	1.000 rpm	A-MS-425 (20 rpm)	EASYC2-EX250-CA (20 rpm)
900 rpm	-	1.000 rpm	20 rpm	20 rpm
*	*	*	*	*
*	*	*	*	*
		ONLY SP (end of the second notch)	50 Ncm max	50 Ncm max
1.100 rpm	900 rpm	1.000 rpm	A-MS-500 (20 rpm)	EASYC2-EX250-CA (20 rpm)
1.100 rpm	900 rpm	1.000 rpm	20 rpm	20 rpm
*	*	*	*	*
*	*	*	*	*

IMPORTANT WARNING

Implants with length 7.00 mm and 8.50 mm may be inserted with the drills in the surgical kit and the respective stops. However, if these implants are inserted at the limit of anatomical structures such as the maxillary sinus floor expansion or the mandibular nerve, it is preferable to prepare the site using the drills in the Shorty Drilling kit, which do not over-prepare the length.

IMPORTANT WARNING

TG implants Ø 4.25 mm should be inserted with the Easy Insert with 2.30 mm hexagon, that is marked with blue color (cod. EASYC2- EX230-...).

Implant insertion

Use the patient label found inside the pack for the patient's medical file and apply it on the Dental Card: this will make it easier to record the patient's treatment plan and will keep a trace of the batch used.

Then open the blister and place the vial contained in it on a sterile surface (i.e. on a disposable towel or sterile cloth) next to the operating field.

Immediately before inserting it into the oral cavity, remove the cap of the vial, making sure not to remove the transparent cap containing the surgical cover screw. The implant holding cylinder inside the vial and the surgical cover screw are coloured according to a colour code that allows the rapid identification of the implant diameter.



Standard procedure

When the vial is opened the mounter is presented ready to be engaged. The implant may be picked up using the driver Easy Insert and then screwed mechanically in place with the aid of a suitable surgical micromotor with torque control set at a screwing speed of 20 rpm and max torque 70 Ncm. At the moment this value is the maximum tested and that can be reached by the micromotors on the market. The right angle driver has been tested up to 70 Ncm and has not presented any deformations or failures. Micromotors with torque control must be set regularly with a suitable calibrated tool.



Phase after inserting the implant

HEALING TIME

It is essential to respect the healing times recommended in implant surgery and to check periodically the state of evolution of osseointegration, even with x-rays. The preliminary healing times at implant loading are influenced by numerous factors:

- the quality of the receiving bone;
- the length of the implant used;
- the number of implants to be splinted together;
- the positioning of the implants in a line or along an arch.

In cases where all or many of the so-called factors are positive, a premature or immediate loading can be assumed (see paragraph on METHOD OF USE on page 7).

SECOND SURGICAL PHASE

In the second surgical phase, therefore, the closing screws of the implants are exposed and any hard tissues in excess are removed, after which the implants are unscrewed. If the right angle driver is used, the surgical micromotor must be set with the following parameters: 20 rpm and torque 10 Ncm. Once the transgingival healing screws have been positioned, the margins of the flaps are secured, the soft tissue is adapted to the profile of the transgingival healing screw and sutured around it. It is recommended to secure the healing screws manually or at any rate with a torque no greater than 10 Ncm.

The soft tissues can be conditioned with an individualised temporary post instead of transgingival healing screws.

In case of deferred loading, if a submerged double-phase surgical technique is chosen, to minimise discomfort determined by the observance of the biological times for osseointegration, temporary mobile prostheses must be used carefully, unloading them amply. Implant protocols with two surgical phases require a healing period to pass for the biological processes that lead to osseointegration before the second surgical procedure can be performed to replace the surgical cover screws with the transgingival healing screws.

Intra-operative removal of the implants

Should it be necessary to remove a previously inserted implant, this can be done using a moulder or by directly grasping the octagonal working connection of the implant. Accurately clean any blood and residue produced during insertion from the well of the implant, take the driver BC-EX230 from the surgical kit, insert the hexagonal part of the driver inside the implant well making sure the instrument is in axis with the implant and that the internal connection is engaged completely and deeply; now block the ratchet head and connect it to the hexagonal part of the driver, making sure the laser-etched arrow on the ratchet head indicates the counter clockwise direction and prise it up while keeping the driver/ratchet assembly in axis with your index finger.

Maintenance of the prosthesis

Some implant restoration-related complications are reported in the literature. These complications may lead to a loss of osseointegration and implant failure. Correct maintenance by the patient, good home dental care and regular sessions with a professional hygienist increase the device's service life. Complications such as the pull-out of screws that fasten the restoration to the implants or bone reabsorption causing the loss of the mucosal resting surface in patients with removable restorations can be easily prevented with regular check-ups. If post or prosthetic fixation screws are needed, these operations must be performed by the practitioner using suitable devices with torque tightening control. The calibration of these devices should be checked regularly. In the event of complications of this kind, patients should contact their practitioner as soon as possible, so that the restoration can be repaired and functionality restored.

A delay in contacting the doctor may lead to the fracture of the fixation screw or of the prosthesis, in the first case, and to implant failure in the second case, which could impair the rehabilitative result. Practitioners must make this clear to their patients.

Complications can be of a biological nature (loss of integration) or mechanical nature (fracture of a component due to overloading). If there are no complications, duration depends on the devices and the whole restoration system depends on mechanical resistance in relation to the fatigue accumulated by the device.

Responsibility for defective products and warranty terms

Optimal patient care and attention to their needs are necessary conditions for the success of implantation procedures and, therefore, patients must be carefully selected and informed of the associated risks and obligations connected with the treatment and encouraged to cooperate with the odontologist in the interests of the success of the same treatment. The patient must, therefore, maintain good hygiene, which should be confirmed during check-up appointments, guaranteed and recorded and the practitioners instructions and orders shall be observed. The warranty only covers manufacturing defects as long as the faulty piece is identified by the article code and batch number and returned within the validity period of the warranty. The warranty terms are available on the website www.sweden-martina.com

Disposal

If removed from the oral cavity due to biological or mechanical failure, the implant fixtures must be disposed of as biological waste. The surgical instruments are made of small components, mostly metal. They may be disposed of as such. If dirty, they must be disposed of as biological waste. In general, the local regulations apply.

Material composition

The devices in this user manual are designed and manufactured in accordance with the most recent directives and harmonised standards regarding the materials used, production processes, sterilisation, information supplied and packaging.

Implants

The implants are made of Gr. 4 commercially pure titanium and conform to the harmonised standards. Although very rare, titanium allergy is possible. Patients should therefore always be asked whether they have allergies of this type. The characteristics of the Gr. 4 titanium used are listed below.

GR. 4 TITANIUM (cold worked ASTM F67-13, ISO 5832-2:2012)	Maximum allowed values (%)	Tolerance
Chemical composition:		
Nitrogen	0.05	+/- 0.02
Carbon	0.10	+/- 0.02
Hydrogen	0.015	+/- 0.002
Iron	0.25	+/- 0.10 (%<0.25) +/- 0.15 (%>0.25)
Oxygen	0.20	+/- 0.02 (%<0.20) +/- 0.03 (%>0.20)
Titanium	remainder	-

**This technical information complies with the express specifications of the regulations in force for the use of Gr. 4 titanium in implantology.*

Note: the use of bars obtained from cold processing, for the production of Sweden & Martina Spa implants, allows the exploitation of the mechanical characteristics of tensile strength and yield strength about 15% higher than those that can be obtained with a hot process (respectively 550 MPa and 483 MPa).

Surgical instruments

Depending on the type of component, the surgical instruments are made of:

- Gr. 5 titanium
- 1.4197 steel
- 1.4542 steel
- 1.4305 (AISI 630) steel
- 1.4112 steel

Remember to ask patients whether they are allergic to any of the raw materials.

Identification of the manufacturer













The manufacturer of Premium implants and of the respective surgical instruments is:

Sweden & Martina S.p.A.










Via Veneto 10
35020 Due Carrare (Pd) Italy
Tel. +39 049 9124300
Fax +39 049 9124290
www.sweden-martina.com

GENERAL











Key to symbols used on the implant packs:

symbol	description
	Caution! See instruction for use
	Batch number
	Code
	Manufacturer
	Consult instructions for use
	CE conformity mark for class IIa/IIb products
	American federal law restricts this device to sale by or by order of a professional practitioner
	Do not resterilize
	Single use product, do not reuse
	Do not use if packaging is damaged
	Sterile device, sterilisation by radiation.
	Expiry date

Key to symbols used on the surgical instrument packs:

symbol	description
	Caution! See instruction for use
	Batch number
	Code
	Manufacturer
	Consult instructions for use
	CE conformity mark for class IIa/IIb products
	CE conformity mark for class I products
	American federal law restricts this device to sale by or by order of a professional practitioner
	No sterile device

Key to symbols used on the prosthesis packs:

symbol	description
	Caution! See instruction for use
	Batch number
	Code
	Manufacturer
	Consult instructions for use
	CE conformity mark for class IIa/IIb products
	CE conformity mark for class I products
	American federal law restricts this device to sale by or by order of a professional practitioner
	Single use product, do not reuse
	No sterile device

THE LATEST REVISION DATE OF THIS MANUAL IS MARCH 2016



rev.03-16
v. 01



Sweden & Martina S.p.A.

Via Veneto, 10
35020 Due Carrare (PD), Italy
Tel. +39.049.9124300
Fax +39.049.9124290
info@sweden-martina.com
www.sweden-martina.com

Sweden & Martina Mediterranea S.L.

Sorolla Center, Oficina 801
Avda Cortes Valencianas 58, 8pl
46015-Valencia, Spain
Tel. +34.96.3525895
Tel. 900993963
info.es@sweden-martina.com

Sweden & Martina Ltd

Unit 45
Basepoint Business Centre
Metcalf Way, Crawley,
West Sussex, RH11 7XX, UK
Toll free 0800 1123575
info.uk@sweden-martina.com

Sweden & Martina Inc.

c/o DCI Management
301 Pleasant St.
Abbottstown, 17301 PA, US
Toll free 844-8MARTINA
844-862-7846
info.us@sweden-martina.com

The implants, standard prosthetic components and surgical instruments contained in this brochure are Medical devices and are manufactured by Sweden & Martina S.p.A. They conform to the ISO 9001 and ISO 13485 standards and are certified with the CE Mark (Class I) and CE 0476 mark (Class IIA and class IIB) in compliance with European Medical Device Directive No. 93/42 and European Directive No. 2007/47/CE. They are conform to the QSR 21 CFR part 820 and are approved by FDA.



We have met the good manufacturing standards (GMP) set forth by many countries worldwide, including the United States FDA.

The contents are updated at the time of publication. Check with the company for any subsequent updates.

All trademarks herein are the property of Sweden & Martina S.p.A. unless otherwise indicated.

This material is intended for laboratories and clinicians and is not intended for patient distribution.

This material is not to be redistributed, duplicated, or disclosed without the express written consent of Sweden & Martina S.p.A.

For additional product information, including indications, contraindications, warnings, precautions, and potential adverse effects, see Sweden & Martina S.p.A. website.