Surgical Manual

Preoperative preparation

Before the surgical treatment of the patients, it is necessary to conduct general and local preoperative preparation. The aims of the preoperative preparation are the maximal reduction of the inflammatory phenomena in the periodontal tissues, soft and hard tissues oral cavity, for the prophylactics of complications and creating optimal conditions for the reconstruction of the damaged periodontal tissues during and after surgical procedure.

Conditionally the preoperative preparation before the surgical interference can be divided on the:

- Local treatment:

1. Sanitation of the mouth cavity (the treatment of the complicated and non-complicated caries of the teeth, the removal of the teeth, anti-inflammatory therapy of the periodontal tissues)
2. Hygiene of the mouth cavity (Removal of unwanted dental plaque and calculus, good teeth polishing). Instruct the patient on the rational hygiene of the mouth cavity.
2. Immobilization of the mobile teeth, removal of the traumatic occlusion.
3. Selective grinding of the teeth and leveling of the occlusive surface.
4. Making of the temporary prosthesis under numerous removal of the teeth.
5. When inflammation of the soft tissues, the use of antibiotic therapy.
6. In case of fungal infection of the oral mucosa, the appointment of anti-fungal therapy.
7. In bruxism, complex treatment with the making a hard night mouth guard on the upper jaw to lift the bite.

General preoperative treatment depends on the patient's chronic disease, the patient's general condition and the type of anesthesia being planned.

In chronic diseases, the patient must take the full necessary treatment prescribed by his general physician. An exception is drugs against blood clotting. It is necessary to stop taking drugs against blood clotting 5-7 days before the surgical procedure or replace it with other drugs.
In case of fear and anxiety of the patient before the surgical procedure, soothing drugs are prescribed for 2-3 days and an additional sleeping pill is prescribed in the night before the procedure.
With an increased gag reflex, antiemetic drugs are prescribed for 2-3 days.
When planning for general anesthesia or deep sedation, all appointments in the preoperative period are prescribed by the anesthesiologist with mandatory consultation with the dentist.

The goal of antibiotic prophylaxis in surgery is to prevent the development of superficial and deep wounded infections. In many randomized clinical studies it has been shown that prophylactic antibiotics can significantly reduce the development of postoperative wounded infections. The time and dose of antibiotics before the surgical procedure depends on the general condition of the patient. For patients with common chronic diseases, with any transplants in any organs and artificial heart valves, etc. antibiotic prophylaxis should be started 2 days before the procedure. On the day of the procedure, a single therapeutic dose of the antibiotic should be administered once intravenously or orally just before the incision of the mucous membrane and simultaneously with the start of induction anesthesia, that is, before bacterial contamination of the tissues, to create an effective concentration of the drug in the tissues throughout the operation. Antibiotics are most effective when they are injected prior to contamination of the tissue with bacterial wounds.
- In most “clean” or “conditionally clean” operations, including operations involving the implantation of prostheses and osteotropic materials, the choice of antibiotic is cefazolin or augmentin in combination with a drug with anti-

anaerobic dependence, which should be administered immediately. before the incision and the start of anesthesia.

- The choice of the optimal antibiotic for prophylaxis should be based on the knowledge of the most probable infectious agents in each specific situation. If possible, use one antimicrobial.

- It is prohibited to use antibiotic for prophylactic purposes within 12-24 hours from the start of the operation. A single administration of the antibiotic gives the same efficacy as the administration of several doses, if adequate concentrations of the serous preparation are maintained throughout the operation.

The conducting of the preoperative antibiotic prophylactics is allowed in the surgical interferences connected with the implantation and if the patient has the factors of risk of the development of the infections requiring the prophylactic prescription of the antimicrobial preparations.

The preparation of the patient before the operation of the dental implantation includes general regulations in surgical interferences.

The patient should rinse the mouth with the solution of chlorhexidine during one minute before the implantation for creating of the relative aseptic in the oral cavity.

If there are teeth subject to removal, on the place of which later it would be necessary to locate implants, two opportunities can be used: to remove the tooth and immediately conduct the implantation or to remove the tooth, wait for no less than 6-14 weeks and only then to conduct the implantation. In the second case, it is recommended for the time of recovering of the hole to fixate the temporary prosthesis with the artificial tooth going inside the hole and it is necessary to free the marginal papilla from the pressure of the artificial tooth.

Advantages of immediate implantation:

- the patient will not need to undergo another surgical procedure;

- most often there is no loss of height and width of the bone tissue after tooth extraction;
- you can get a good aesthetics of the gingival margin;
- the correct position of the installed implant for obtaining aesthetic restoration;

the ability to install the implant of maximum diameter and length.

Disadvantages of immediate implantation:

- The presence of a hole makes it difficult to install the implant at the right angle;
- Insufficient amount of soft tissue to close the implant;
- increased responsibility for the operation due to the frequent need for augmentation around the implant using bone membrane, bone and gum graft (see section "Direct implantation").

There are different opinions, which method is more preferable. When choosing, the individual conditions of the patient's oral cavity, the wishes of the patient, the possibilities of the clinic, the experience of the doctor, and much more, are crucial.

OPERATION OF THE INTRAOSSEOUS IMPLANTATION

methods of the dental implantation

The operation of the implantation can be divided on the few consecutive stages:

- the check of the order of the necessary instruments and equipment;
- the sterilization of the necessary instruments, equipment and the room and the preparation of the patient to the implantation;
- the conducting of the anesthesia;
- the rising of the mucosa over bony rag and denudation of the important anatomic areas, such as, for example, Mental Foramen;

- marking on the osseous with the help of direct or round surgical drill of the desired place for the implantation;
- the primary preparation of the osseous to the depth less than planned;
- introduction of the length meter and making of the control detailed radiogram;
- the continuation of the preparing with the first drill up to the desired length after the control radiogram;
- the continuation of forming of the osseous lodge of the implant with the next drills in accordance with selected kind of the implant;
- the installation of the length meter in the osseous lodge of the implant and making of the control radiogram;
- the installation of the implant;
- the closing of the implant by the cover screw by techniques two stage or closing by the gingival format or by the techniques one stage;
- stitching of the mucosa;
- radiogram after the implantation (panoramic or dental);
- observation after the operation of the implantation;
- the disclosure of the implant under two staged methods of the implantation.

The methods of the dental implantation:

1) Two-staged implantation;
2) One-staged implantation- open flap (With cut and outlaying of the mucosa);
3) One-staged implantation- non flap (Without cut - perforation of the mucosa);
4) Delayed implantation;
5) Immediate implantation two-staged;
6) Immediate implantation one-staged;
7) Immediate loading implantation;

8) Immediate implantation with immediate loading.

The check of the instruments and the equipment

Before the implantation, it is necessary to be convinced that all the instruments necessary for the implantation is available. The choice of instruments depends on the treatment plan, the implantation zone, the size of the intervention, the size of the implant, the type of bone and much more.

The list of instruments required for implantation:

A specialized set of surgical instruments for the preparation of the implant bone bed and implant installation is available in several configurations, for a different volume of intervention:

420040, MBSS, Mini Beginner Surgical Set- has the necessary tools for the surgical implantation stage (round bur, 4 cylindrical drills, 2 keys for implants, a key for screws and ratchet). Designed to prepare the implant bone bed and install of implants with internal connection (lengths from 6 to 18 mm and

diameters from 3.0 to 4.2 mm).

Mini Beginners Surgical Set

420040 Code: MBSS Mini Beginners Surgical Set		
1	420039	Kit Box for Mini Beginner Surgical Set
2	401720	Surgical Drill 2.0 mmd
3	401728	Surgical Drill 2.8 mmd
4	401732	Surgical Drill 3.2 mmd
5	401737	Surgical Drill 3.7 mmd
6	431825	Hex Driver Key for contra Angular 2.5mmd
7	431821	Hex Driver Key for contra Angular 2.1mmd
8	431412	Hex Tool Key Long 1.25 mmd
9	403419	Marketing Surgical Drill 1.9 mmd
10	446300	Ratchet Wrench Short

420044, MSS, Mini Surgical Set- has the necessary tools for the surgical implantation stage (round bur, 6 cylindrical drills, 2 keys for implants, 1 key for screws, drill extension, 2 measuring pins, adapter for one piece implant and ratchet). Designed to prepare the implant bone bed and install all types of

implants (lengths from 6 to 18 mm and diameters from 3.0 to 6.0 mm).

Mini Surgical Set

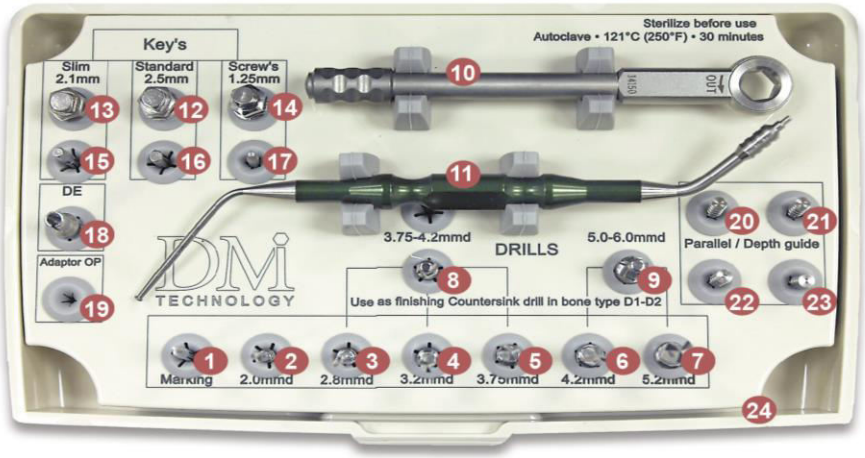
420044 Cade: MSS
Mini Surgical Set

1. Motor Hex Driver Key for contra Angular 2.5 mmd (430025)
2. Motor Hex Driver Key for contra Angular 2.1 mmd (430121)
3. Insertion Tool Key Long 2.5 mmd (431825)
4. Insertion Tool Key Long 2.1 mmd (431821)
5. Hex Tool Key Long 1.25 mmd (431412)
6. Drill Extension (401701)
7. Parallel/Depth Guide (451630)
8. Parallel/Depth Guide (451630)
9. Free for special instruments
10. Adaptor for Vector Implants Long (432121)
11. Marking Surgical Drill 1.9 mmd (403419)
12. Surgical Drill 2.0 mmd (401720)
13. Surgical Drill 2.8 mmd (401728)
14. Surgical Drill 3.2 mmd (401732)
15. Surgical Drill 3.65 mmd (401737)
16. Surgical Drill 4.2 mmd (401742)
17. Surgical Drill 5.2 mmd (401752)
18. Ratchet Wrench (446301)

420034, BSS, Basic Surgical Set- has the necessary tools for the surgical implantation stage (round bur, 6 cylindrical drills, 2 countersink Drill, 4 keys for implants, 2 key for screws, drill extension, 4 measuring pins, adapter for one-piece implant and ratchet). Designed to prepare the implant bone bed and install all types of implants (lengths from 6 to 18 mm and diameters from 3.0

to 6.0 mm).

Basic Surgical Set Plus

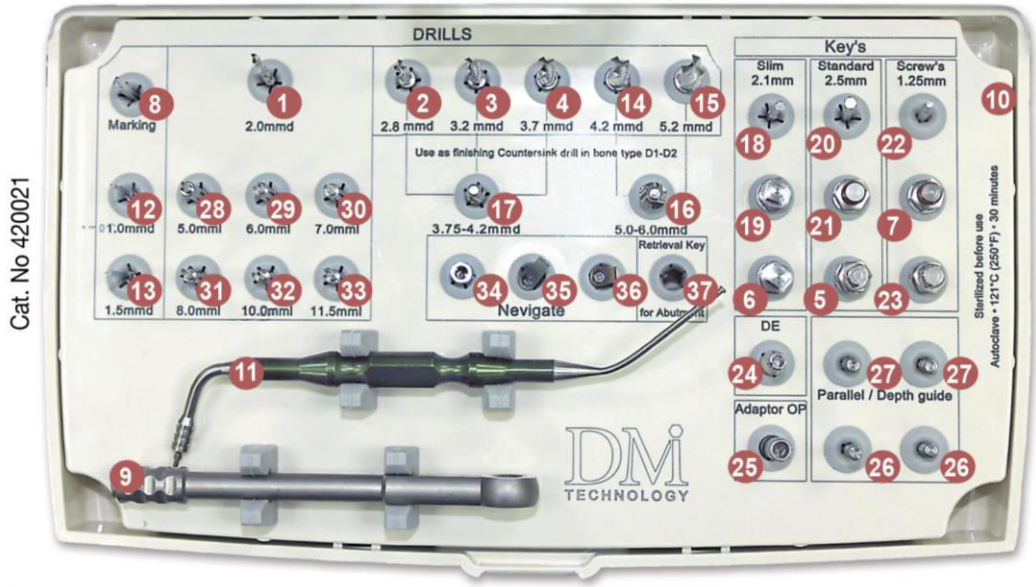


420034 Code: BSSP
Basic Surgical Set Plus

1.	403419	Marketing Surgical Drill 1.9 mmd
2.	401720	Surgical Drill 2.0 mmd
3.	401728	Surgical Drill 2.8 mmd
4.	401732	Surgical Drill 3.2 mmd
5.	401737	Surgical Drill 3.65 mmd
6.	401742	Surgical Drill 4.2 mmd
7.	401752	Surgical Drill 5.2 mmd
8.	400742	Countersink Surgical Drill Slim 3.75-4.2
9.	400759	Countersink Surgical Drill 5.0-6.0
10.	446301	Ratchet Wrench
11.	450001	Implant Depth Probe
12.	431825	Hex Driver Key for contra Angular 2.5mmd
13.	431821	Hex Driver Key for contra Angular 2.1mmd
14.	432312	Universal Hex Driver Short 1.25 mmd
15.	430121	Motor Hex Driver Key for contra Angular 2.1 mmd
16.	430025	Motor Hex Driver Key for contra Angular 2.5 mmd
17.	430012	Motor Hex Driver Key for contra Angular 1.25 mmd
18.	401701	Drill Extension
19.	432121	Adaptor for Vector Implants Long
20.	451030	Parallel/Depth Guide Short
21.	451630	Parallel/Depth Guide
22.	451030	Parallel/Depth Guide Short
23	451630	Parallel/Depth Guide
24	410033	Basic Kit Box

420021, MSS, Masters Surgical Set- has the necessary tools for the surgical implantation stage (round bur, 6 cylindrical drills, 6 cylindrical drills with stopper, 2 narrow drills, 2 countersink Drill, 6 keys for implants, 3 key for screws, 1 Retrieval Key, drill extension, 4 measuring pins, adapter for one-piece implant, "Navigate" Set, Implant Depth Probe and ratchet). Designed to prepare the implant bone bed and install all types of implants (lengths from 5 to 18 mm and diameters from 2.4 to 6.0 mm).

Masters Surgical Set



420021 Code: MSS Masters Surgical Set		
1.	401728	Surgical Drill 2.8 mmd
2.	401720	Surgical Drill 2.0 mmd
3.	401732	Surgical Drill 3.2 mmd
4.	401737	Surgical Drill 3.65 mmd
5.	431825	Hex Driver Key for contra Angular 2.5mmd
6.	431821	Hex Driver Key for contra Angular 2.1mmd
7.	431412	Hex Tool Key Long 1.25 mmd
8.	403419	Marketing Surgical Drill 1.9 mmd
9.	446301	Ratchet Wrench
10.	420020	Kit Box for Master Surgical Set
11.	450001	Implant Depth Probe
12.	401709	Surgical Drill 0.9 mmd
13.	401715	Surgical Drill 1.5 mmd
14.	401742	Surgical Drill 4.2 mmd
15.	401752	Surgical Drill 5.2 mmd
16.	400759	Countersink Surgical Drill 5.0-6.0
17.	400742	Countersink Surgical Drill Slim 3.75-4.2
18.	430121	Motor Hex Driver Key for contra Angular 2.1 mmd
19.	430521	Short Hex Driver Key for contra Angular 2.1mmd
20.	430025	Motor Hex Driver Key for contra Angular 2.5 mmd
21.	430525	Insertion Tool Key Short 2.5 mmd
22.	430012	Motor Hex Driver Key for contra Angular 1.25 mmd
23.	432312	Universal Hex Driver Short 1.25 mmd
24.	401701	Drill Extension
25.	432121	Adaptor for Vector Implants Long
26.	451030	Parallel/Depth Guide Short
27.	451630	Parallel/Depth Guide
28.	402105	Surgical Drill with stopper 5.0 mml/2.0 mmd
29.	402106	Surgical Drill with stopper 6.0 mml/2.0 mmd
30.	402107	Surgical Drill with stopper 7.0 mml/2.0 mmd
31.	402108	Surgical Drill with stopper 8.0 mml/2.0 mmd
32.	402110	Surgical Drill with stopper 10.0 mml/2.0 mmd
33.	402111	Surgical Drill with stopper 11.5 mml/2.0 mmd
34.	460002	Surgical Straight Abutment "Navigate"
35.	460003	Surgical Angular 15° Abutment "Navigate"
36.	460004	Surgical Angular 25° Abutment "Navigate"
37.	431912	Retrieval Tool Key For Locked Abutment

Surgical sets with instruments are sterilized by the steam method. The sterilizing agent is water saturated steam under an excess pressure of 0.05 MPa (0.5 kgf / cm2) - 0.21 MPa (2.1 kgf / cm2) (1.1-2.0 bar) with a

temperature of 110-134 ° C. The sterilization process takes place in sterilizers (autoclaves). Full cycle is from 15 to 180 minutes.
Before sterilization, you should check that all drills are sharp! On average, one drill is recommended to perform from 50 to 80 drilling of the bone for implants. The use of blunt drills leads to an increase in drilling time, overheating of the bone, the appearance of a large number of dead bone cells, large postoperative edema, severe pain and rejection of the implant.

-**Surgical drills** are made of the stainless steel alloy with the special through hole over the length of the whole drill, which is meant for the internal cooling of the drill. While preparing of the osseous tissue the internal cavity of the drill should be cleaned in advance with the special needles all over the length, then clean in the ultrasound apparatus and then sterilize. There are also drills without a through hole and cooling the drill only outside.
Corresponding to the diameter of the drill there is a colored marking, for example, the white color – the diameter of the drill 2,0 mmd (401720), red color – the diameter of the drill 2,8 mmd (401728), blue color – the diameter of the drill 3,2 mmd (401732), green color – the diameter of the drill 3,65 mmd (401737), black color – the diameter of the drill 4,2 mmd (401742), brown color – the diameter of the drill 5,2 mmd (401752). Besides the colored marking there are incisions on the thickening part of the drill: they indicate the diameter of the drill (for example, one incision – 2,0 mm, four incisions-3,65 mm,) and on the thin or working part of the drill they indicate the depth of the drilling (for example, in the drills in diameter from 2,0mmd to 3,65 mmd the first incision is on the depth 6 mml, then 8 mml, then 10 mml, then 11,5 mml, then 13 mml, then 16 mml. The available sharp tooth in the form of sharpened triangle on the end of the working part of the drill which consists approximately 0,9 mm is taken into account on the incisions defining the depth of the drilling.

There are also shortened drills for the screwed implants. These drills are identical to the above described drills, the difference is that they have shortened working part of the drill and can make drilling up to the depth 11,5 mml. Corresponding to the diameter of the short drill there is a colored marking, for example, the white color – the diameter of the drill 2,0 mmd (401220), red color – the diameter of the drill 2,8 mmd (401228), blue color – the diameter of the drill 3,2 mmd (401232), green color – the diameter of the drill 3,65 mmd (401237), black color – the diameter of the drill 4,2 mmd (401242),brown color – the diameter of the drill 5,2 mmd (401252) These drills are comfortable for work in the side sections of the maxilla and mandible and also in those areas of the jaws, where there is no need to make the depth of the drilling more than 11,5 mml.

- **The conical drills** for the dental implants almost identical to the drills for the screwed implants, the difference are that at the end of the working part of the conical shape. For the screwed conical implants. Corresponding to the diameter of the drill there is a coloreds marking, for example, the white and yellow color – the diameter of the drill 1,8/2,4 mmd (401424), blue /yellow color – the diameter of the drill 2,0/3,2 mmd (401432), the diameter of the drill 2,2/3,7 mmd (401437), green/red color, green/yellow color – diameter of the drill 2,7/4,0 mmd (401440), black/red color – the diameter of the drill 2,8/4,5 mmd (401445), brown/blue color – the diameter of the drill 3,1/5,5mmd (401455).

	Diameter	Code	Color	Cat. №
 Surgical Drills External Irrigation	Ø 1.2	SD 0.9	Yellow	401709
	Ø 1.5	SD 1.5	Black	401715
	Ø 2	SD 2.0	White	401720
	Ø 2.8	SD 2.8	Red	401728
	Ø 3.2	SD 3.2	Blue	401732
	Ø 3.65	SD 3.65	Green	401737
	Ø 4.2	SD 4.2	Black	401742
	Ø 5.2	SD 5.2	Brown	401752
 Surgical Short Drills External Irrigation	Ø 2	SSD 2.0	White	401120
	Ø 2.8	SSD 2.8	Red	401128
	Ø 3.2	SSD 3.2	Blue	401132
	Ø 3.65	SSD 3.65	Green	401137
	Ø 4.2	SSD 4.2	Black	401142
	Ø 5.2	SSD 5.2	Brown	401152
 Surgical Drills Internal Irrigation	Ø 2	IISD 2.0	White	401820
	Ø 2.8	IISD 2.8	Red	401828
	Ø 3.2	IISD 3.2	Blue	401832
	Ø 3.65	IISD 3.65	Green	401837
	Ø 4.2	IISD 4.2	Black	401842
	Ø 5.2	IISD 5.2	Brown	401852
 Surgical Short Drills Internal Irrigation	Ø 2	SIISD 2.0	White	401220
	Ø 2.8	SIISD 2.8	Red	401228
	Ø 3.2	SIISD 3.2	Blue	401232
	Ø 3.65	SIISD 3.65	Green	401237
	Ø 4.2	SIISD 4.2	Black	401242
	Ø 5.2	SIISD 5.2	Brown	401252
 Conical Internal Irrigation Surgical Drill	Ø 1.8/2.4	CIISD 1.8/2.4	White/Yellow	401424
	Ø 2.0/3.2	CIISD 2.0/3.2	Blue/Yellow	401432
	Ø 2.5/3.7	CIISD 2.5/3.7	Green/Yellow	401437
	Ø 2.7/4.0	CIISD 2.7/4.0	Black/Yellow	401440
	Ø 2.8/4.5	CIISD 2.8/4.5	Black/Yellow	401445
	Ø 3.1/5.5	CIISD 3.1/5.5	Brown/Yellow	401455
 Conical External Irrigation Surgical Drill	Ø 1.5/2.0	CEISD 1.5/2.0	White/Yellow	401520
	Ø 1.8/2.4	CEISD 1.8/2.4	White/Yellow	401524
	Ø 2.0/3.2	CEISD 2.0/3.2	Blue/Yellow	401532
	Ø 2.5/3.7	CEISD 2.5/3.7	Green/Yellow	401537
	Ø 2.7/4.0	CEISD 2.7/4.0	Black/Yellow	401540
	Ø 2.8/4.5	CEISD 2.8/4.5	White/Yellow	401545
	Ø 3.1/5.5	CEISD 3.1/5.5	Brown/Yellow	401555

- **Conical drills set with a stopper (490001)** for dental implants. Conical drills with stoppers are almost identical in shape and size to conical drills. In accordance with the drill diameter there is a color marking, for example, white and yellow - drill diameter 1.8 / 2.4 mmd, blue / yellow - drill diameter 2, 0 / 3.2 mmd, green / yellow color - drill diameter 2.2 / 3.7 mmd, black / red color - drill diameter 2.8 / 4, 5 mmd, brown / blue color - drill diameter 3.1 / 5.5 mmd. The difference is that the working part of the drill corresponds to the length of the implants. For each diameter of the drill, there are six lengths: the length of the working part is 6 mm, 8mm, 10mm, 11.5mm, 13mm, and 16mm. In total in a set 30 verified.

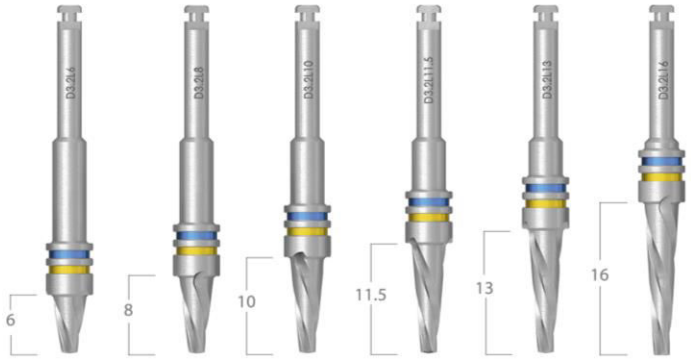
For all conical drills, it is recommended for bone preparation on the upper jaw in bone D3-D4. The drilling technique depends on the type of bone:

- In case of bone type D1, it is impossible to use conical drills;
- In case of bone type D2 according to the standard method (900-1200 rpm with obligatory cooling of the drill and bone);
- In case of bone type D3-D4: the first drill (white and yellow - drill diameter 1.8 / 2.4 mmd), with a rotational speed of 1200 rpm with water-cooling. Further drilling with drills of larger diameter, it reverses rotation at a speed of 1200 rpm with water-cooling. You can also enter the bone using drills, compact the bone and perform augmentation, it reverses rotation at a speed of 100-150

rpm without water-cooling.

CONICAL SURGICAL DRILL WITH STOPPER

490001 Code: SSCD
Set Surgical Conical Drills



Length / Diameter	6 mml	8 mml	10 mml	11.5 mml	13 mml	16 mml
	Cat. No					
Ø 1.5/2.5 mmd	490625	490835	491025	491125	491325	491625
Ø 1.5/3.2 mmd	490632	490832	491032	491132	491332	491632
Ø 1.7/3.7 mmd	490637	490837	491037	491137	491337	491637
Ø 2.1/4.2 mmd	490642	490842	491042	491142	491342	491642
Ø 3.0/5.3 mmd	490653	490853	491053	491153	491353	491653

Recommended to use in upper jaw, bone type D3-D4

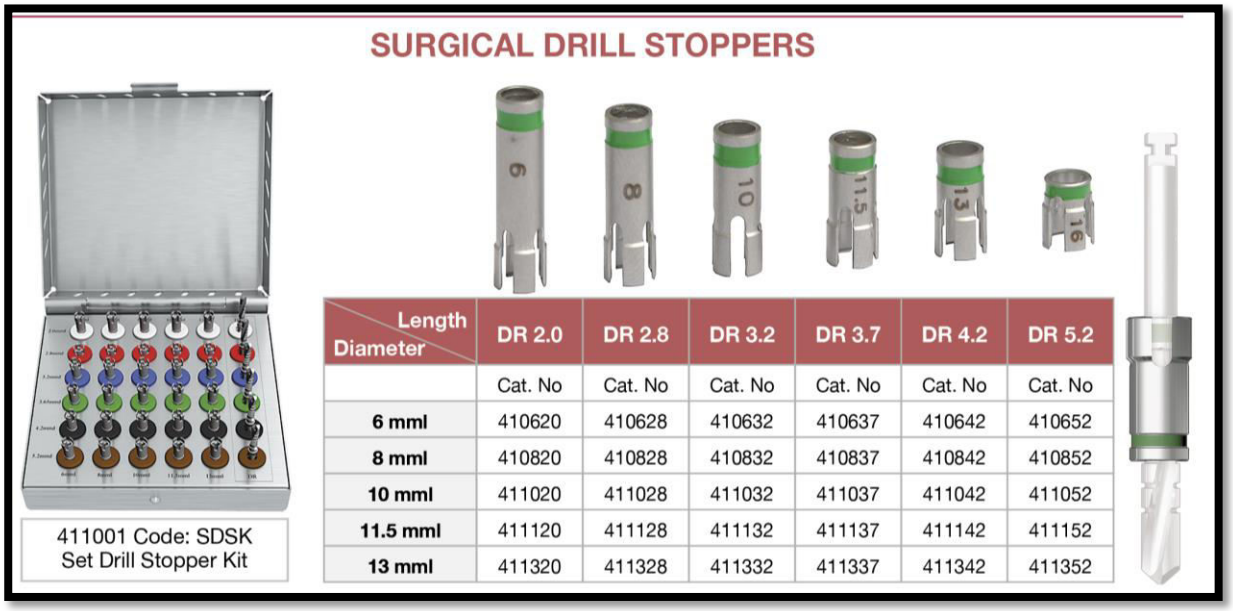
-**stoppers** for the drills are made from the stainless steel alloy in the form of hollow cylinder. The stopper is put on and fixed with the help of the clips on the working part of the drill. Stoppers different in length and diameter. The stoppers are corresponding to the diameters of the drills.

There are 5 length sizes of the stoppers: for the drill in the diameter 2,0 mmd - 6mml (410620), 8mml (410820), 10mml (411020), 11,5mml (411120), 13mml (411320). For the drill in diameter 2,8 mmd -6mml (410628), 8mml (410928) ,10mml (411028),11,5mml (411128),13mml (411328). For the drill in diameter 3,2 mmd -6mml (410632), 8mml (410932) ,10mml (411032), 11,5mml (411132), 13mml (411332). For the drill 3,65 mmd -6mml (410637), 8mml (410937) ,10mml (411037), 11,5mml (411137), 13mml (411337). For the drill in diameter 4,2 mmd -6mml (410642), 8mml (410942) ,10mml (411042), 11,5mml (411142), 13mml (411342) For the drill 5,2 mmd -6mml

(410652), 8mml (410952) ,10mml (411052), 11,5mml (411152), 13mml (411352).

The stopper prevents from the deeper than assigned depth penetration of the drill. While drilling in the area of the bottom of the maxillary cavity (soft sinus lifting) the stopper prevents the deeper penetration of the drill and, thus, reserves the integrity of the mucosa of the maxillary sinus).

- The lengthener of the drills (401701) is made of stainless steel with the special through hole over the whole length. From one side it is fixed to the angle end, from the other side it is hollow, and the drill is being inserted into it. It is meant for the lengthening of the non-working, upper part of the drill. The lengthening is necessary when the closely standing teeth with the defect of the dental row don't give the opportunity of preparation of the osseous lodge of the implant.

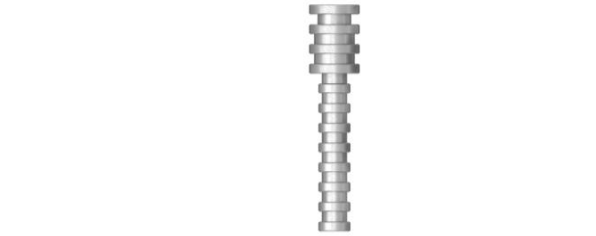


Length / Diameter	DR 2.0	DR 2.8	DR 3.2	DR 3.7	DR 4.2	DR 5.2
	Cat. No	Cat. No	Cat. No	Cat. No	Cat. No	Cat. No
6 mml	410620	410628	410632	410637	410642	410652
8 mml	410820	410828	410832	410837	410842	410852
10 mml	411020	411028	411032	411037	411042	411052
11.5 mml	411120	411128	411132	411137	411142	411152
13 mml	411320	411328	411332	411337	411342	411352

The subsidiary surgical devices

- The titanium meter (451630) and the shortened titanium meter (451030) for the definition of the depth and parallel of the preparation of the osseous lodge of the implant during the operation. After the preparation with the

first pilot drill (401820) on the depth 8 mm it is necessary to install the titanium meter of the depth and parallel into the prepared hole and to make X-ray investigation – Pere apical (aiming) or panoramic radiogram. Taking into account that on the meter there is a step of the thread 1 mm, it is possible with high exactness define in what distance we are from the nervous stem, tooth etc., also we can define how parallel the drilling is done in comparison with the teeth, implants and so on. And only after this the further preparation of the osseous lodge of the implant is conducted.

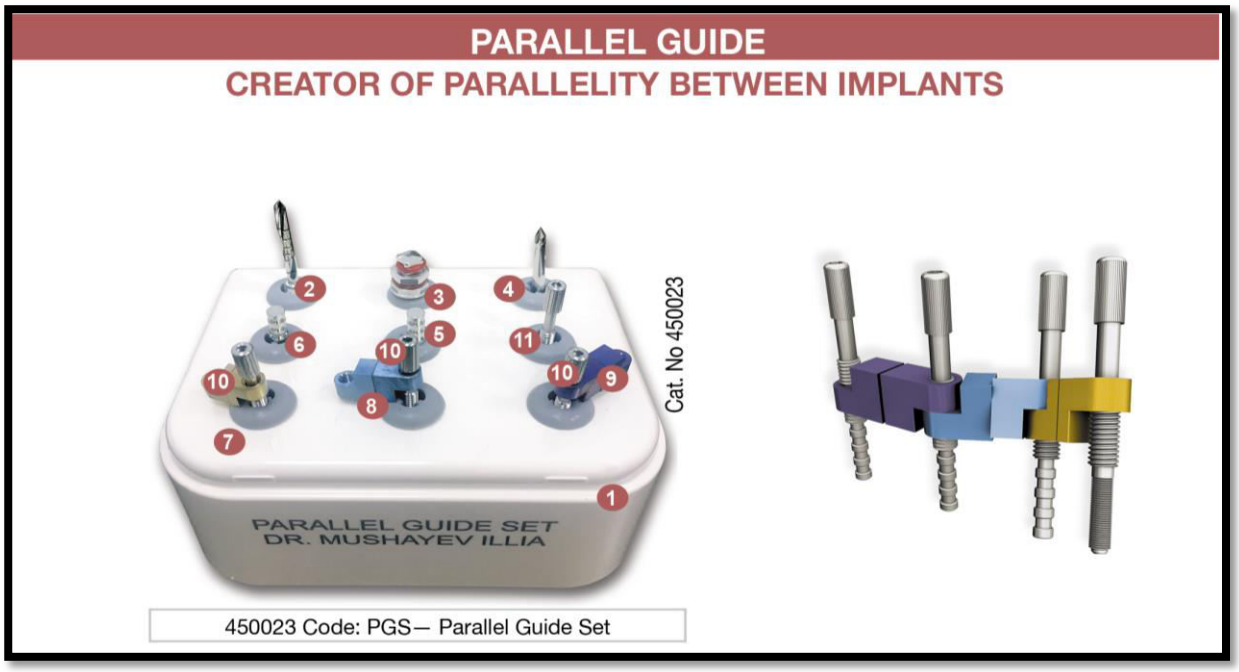


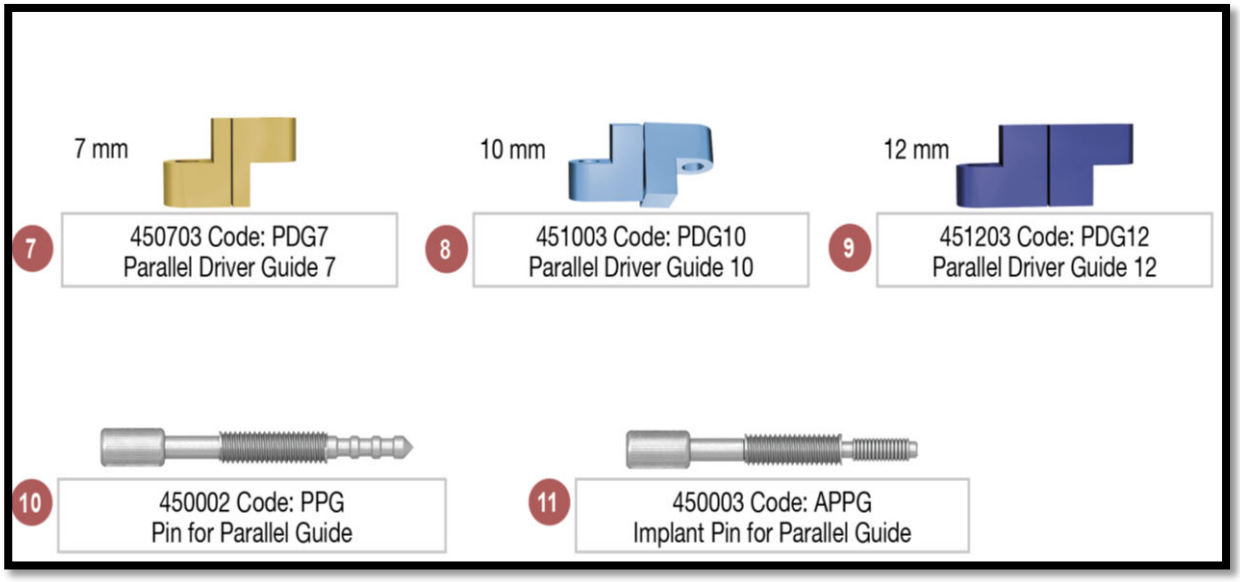
5 451630 Code: PDG
Parallel/Depth Guide

6 451030 Code: PDGS
Parallel/Depth Guide Short

- **Parallel guide set 420723 -** The director of the parallel (450700) is used for the reliable parallel preparation between the pair of the osseous lodges of the implants. After the preparation of the first lodge of the implant with the first pilot drill in the received hole getting out in the form of the pin director of the parallel is being inserted, and on the other part of this device there is a hole which is installed on the alveolar crest, and through this hole the preparation of the next osseous lodge of the implant is conducted. This gives an opportunity to get parallel between the pair of holes and further between the pair of standing closely implants. Besides, this device gives the opportunity to exactly calculate the distance between closely standing implants, because the distance between the outstanding pin and the hole in the device composes 7 mm. So, while installing of two closely standing implants in diameter 4,2 mm with the usage in the preparation of the osseous lodges of the implant of this device we'll get the distance 3 mm

between the implants, which will give the opportunity to race vie the sufficient volume of the osseous tissue between the implants for good osteointegration and good esthetic effect in the stage of prosthetics. Distance between the holes may be 10 mm (451000) and 12 mm (451200).



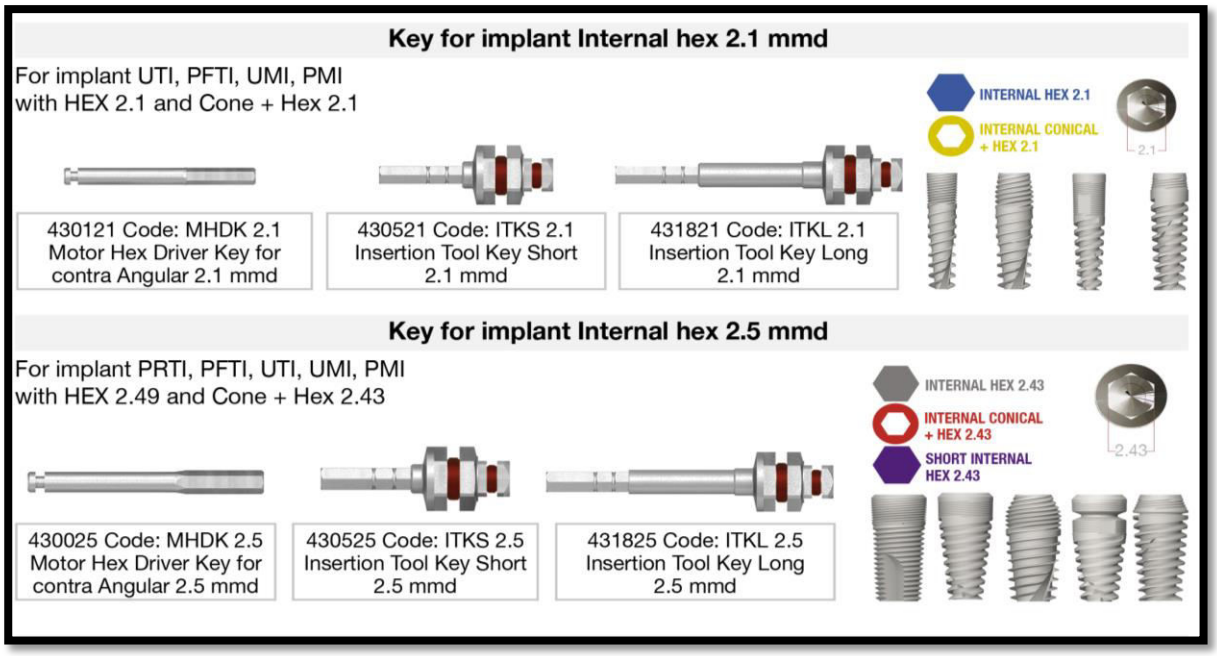


- - Hexahedron motor key 2.43 mmd for contra angled (430025) and 2,1mmd (430121) for twisting of the implants with internal hex and internal

cone + hex. This key is used together with physiodispencer and is joined to the angle reduction end. Used for the faster twisting of the implant into the prepared osseous lodge of the implant with obligatory cooling, and also when closely standing teeth don't give opportunity to twist the implant together with the bearer of the implant, then the bearer of the implant is being withdrawn from the implant and in the hexahedron of the implant the hexahedral key 2.43(2.1) is inserted and the implant is being twisted into the prepared osseous lodge. The hexahedral key can also be used as the lengthener of the implant's bearer. In this case, the hexahedral key is being inserted in the head of the implant's bearer, in which there is an internal hexahedron.

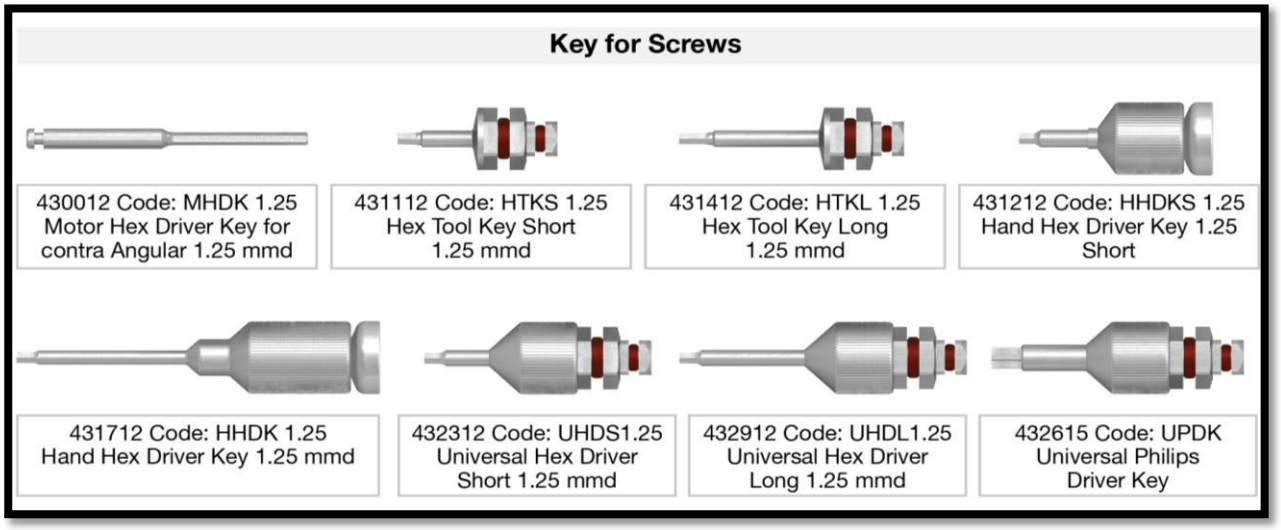
- Insertion tool key long (working part has the length 18,5 mm) 2,5 mmd (431825) and 2,1mmd (431821) and Insertion tool key short (working part has the length 9,5 mm) 2,5 mmd (430525) and 2,1mmd (430521) for rotating of the implants with internal hex and internal cone + hex. The upper part, the head is general in the form of the square of 4 mm and of the hexahedron 6.35 mm, which gives the opportunity to use this key for different world systems. It is used for torsion of the implant, when the closely standing teeth don't give the opportunity to twist the implant together with the bearer of the implant, then the bearer of the implant is withdrawn from the implant and in the hexahedron of the implant the hexahedral key 2.43 mmd (2.1 mmd) is being inserted and the implant is twisted in the prepared osseous lodge. The hexahedral key can also be used as the lengthener of the bearer of the implant. In this case the hexahedral key is being inserted in the head of the implant's bearer, in which there is internal hexahedron;
- Insertion tool key long 2,5 mmd (431825) and 2,1mmd (431821) and Insertion tool key short 2,5 mmd (430525) and 2,1mmd (430521) is used together with the key "Ratchet" (446301 & 446302) or the surgical key

(446303 & 440006).



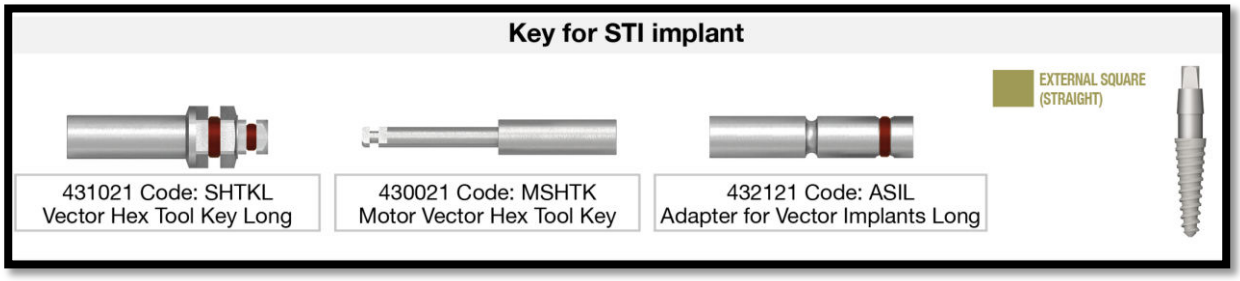
-The **hexahedron tool key 1,25 mmd long (431412) and short (431112)** for twisting of all the screws used in the surgical as well as in the prosthetic stages of the implantation. This key is used together with the key "Ratchet" (446301) or with the surgical key (446303), and also with the key for dozing by the definite force of twisting of the screws universal ratchet tongue control (446301). The upper part, the head is universal in the form of the square under 4 mmd and the hexahedron 6,35 mmd, which gives the opportunity to use this key for different world systems. The working part is 14,5 mm, also there is a key with the shortened working part 11,5 mm. The **hexahedron motor key 1,25 mmd for the contra angled (430012)** for twisting of all the screws, used in the surgical and also in the prosthetic stages of the implantation. This key is used together with the physiodispencer and is joined to the angle reduction end. Used for faster twisting of the screws and for twisting in the side parts of the jaws, where the access to the implant is uncomfortable and limited. **Hand hexahedron driver key 1.25 mmd long (431712) and short (431212)** for twisting of all the screws used in the

surgical as well as in the prosthetic stages of the implantation. The working part is 15.5 mm, also there is a key with the shortened working part 10.5 mm. Used for manual threading screws. **Universal hexahedron driver key 1.25 mmd long (432912) and short (432312)** for twisting of all the screws used in the surgical as well as in the prosthetic stages of the implantation. This key is used together with the key "Ratchet" (446301) or with the surgical key (446303), and with the key for dozing by the definite force of twisting of the screws universal ratchet tongue control (446301)_and at the same time used for manual threading screws. The upper part, the head is cylinder and universal in the form of the square under 4 mmd and the hexahedron 6.35 mmd, which gives the opportunity to use this key for different world systems. The working part is 15,5 mm, also there is a key with the shortened working part 10,5 mm;



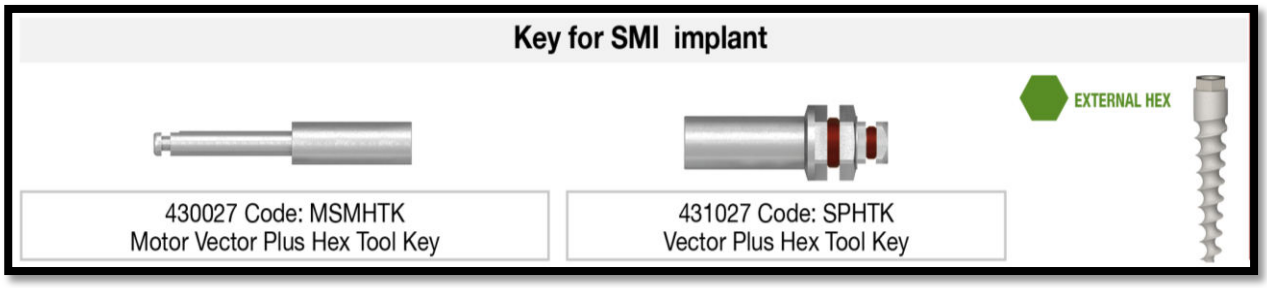
- **Hollow key for external square 2.1 mmd (431021)** use twisting of the one piece implants Solo. This key is used together with the key "Ratchet" (446301) or with the surgical key (446303). The upper part of the head is universal like the square 4 mm and hexahedron 6.35 mm, which gives the opportunity to use this key for different world systems. The working part 10 mml in length. Used for twisting of the Solo implants into

the prepared osseous lodge of the implant. After the removal of the plastic bearer of the vector implant the hollow part of the key is put on the upper part (head) of the Solo implant and the twisting of the implant into the prepared osseous lodge of the implant is conducted with obligatory cooling is conducted. And **motor hollow key for external square 2.1 mmd (431021)** use twisting of the one piece implants Solo. This key is used together with the physiodispencer and is joined to the angle reduction end. The working part 12 mml in length. Used for twisting of the Solo implants into the prepared osseous lodge of the implant. After the removal of the plastic bearer of the Solo implant the hollow part of the key is put on the upper part (head) of the Solo implant and the twisting of the implant into the prepared osseous lodge of the implant is conducted with obligatory cooling is conducted.



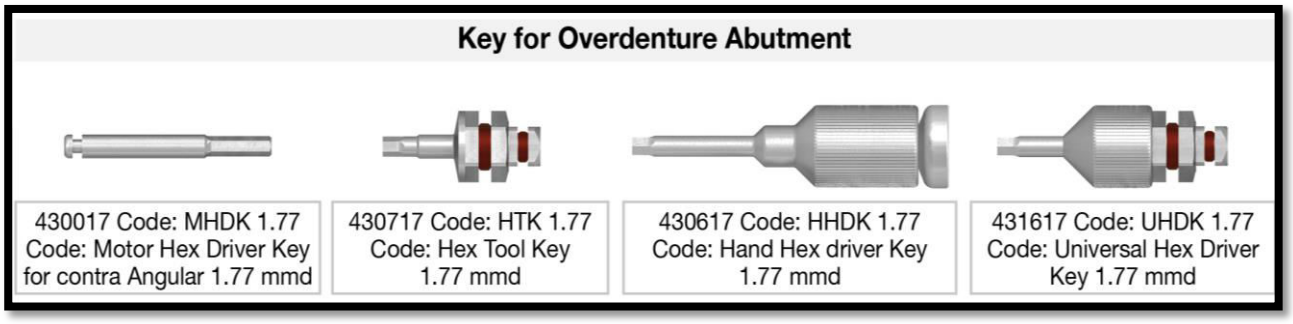
- **Hollow key for external hex 2.7 mmd (431027)** for twisting of the Solo modular implants by the lock fixations. This key is used together with the key "Ratchet" (446301 or surgical key (446303). The upper part, the head is universal like the square 4 mm and hexahedron 6.35 mm, which gives the opportunity to use this key for different world systems. The working part 10 mm in length is used for twisting of the implants. After the removal of the driver mount of the implant the hollow part of the key is put on the upper part (head) of the implant and the twisting of the implant in the prepared osseous lodge of the implant with the obligatory cooling is conducted and **Motor Hollow key for external hex 2.7 mmd** (430027) for twisting of the Solo modular implants by the lock fixations. This key is

used together with the physiodispencer and is joined to the angle reduction end. The working part 12 mm in length is used for twisting of the arrow like implants with the lock ball fixation. After the removal of the driver mount of the implant the hollow part of the key is put on the upper part (head) of the implant and the twisting of the implant in the prepared osseous lodge of the implant with the oblige story cooling is conducted.



-Hexahedron tool key 1.77 mmd (430717) for the twisting of the connector-abutments to the implants used on the prosthetic stage of the implantation. This key is used together with the key "Ratchet" (446301) or surgical key (446303) and together with the key for dozed by the definite force twisting of the screws (446302)). The upper part, the head is universal like the square 4 mm and the hexahedron 6.35 mm, which gives the opportunity to use this key for different world systems. The working part in 7 mm in length. **Hexahedron motor key 1.77 mmd for the contra angled (430017**) for twisting of the connector-abutments to the implant used on the prosthetic stage of the implantation. This key is used together with physiodispencer and is joined to the angle reductive end. Used for quicker twisting of the screws and for twisting in the side areas of the jaws, where the access to the implant is uncomfortable and limited. **Hand hexahedron tool key 1.77 mmd (430617)** for the twisting of the connector-abutments to the implants used on the prosthetic stage of the implantation. Used for manual threading screws. The working part in 7 mm in length. **Universal hexahedron tool key 1.77 mmd (431617)** for the twisting of the connector-abutments to the implants used on the prosthetic stage of the implantation. This key is used together with

the key "Ratchet" (446301) or surgical key (446303) and also together with the key for dozed by the definite force twisting of the screws (446302)) and at the same time used for manual threading screws. The upper part, the head is cylinder and universal like the square 4 mm and the hexahedron 6,35 mm which gives the opportunity to use this key for different world systems. The working part in 7 mm in length.

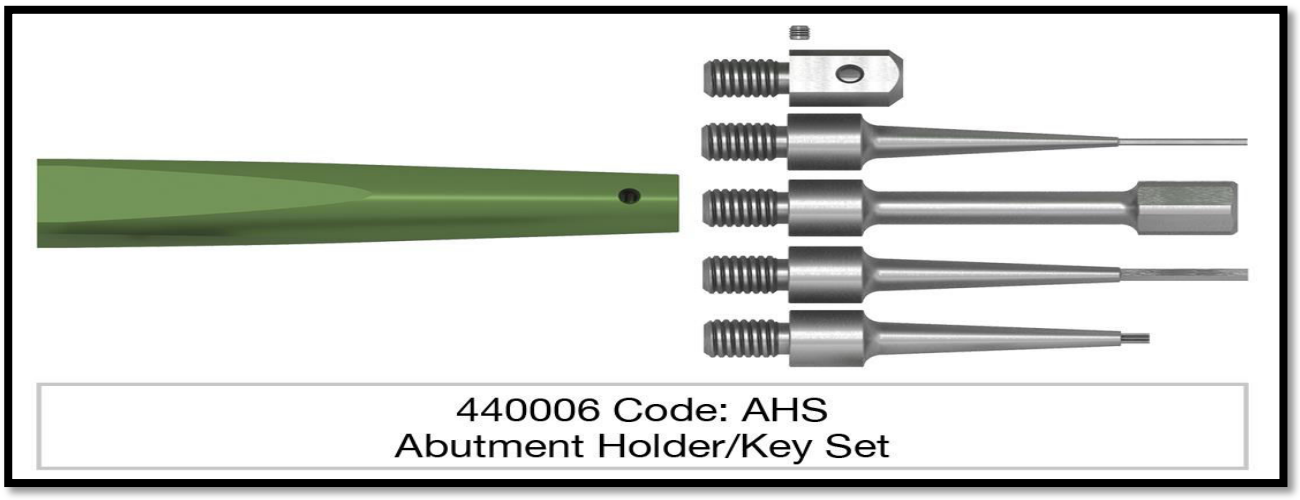


- **-One-way key "Ratchet"** (446301) with the universal hexahedron head 6,35 mmd. Has the reverse free move, contrary to the direction of twisting. Made of the stainless steel. Meant for the twisting of the implants (together with the hexahedral key 2.43 mmd (431825 etc.) to the implant during the surgical stage. The key is universal, used in all sections of the maxilla and mandible
- **-One-way key universal ratchet tongue control** for dozed by the definite force twisting of the screws (446302) with the hexahedron head 6.35 mmd. Made of stainless steel. The dozed force of twisting composes form 0 to 45 NC that is regulated by the doctor. Upon reaching of this force, the handle of this key seems to be broken towards the head of this key. Then there is no need to conduct twisting. It is proved, that while twisting of the screws with this force there is no displacement in the osseous lodge of already osteointegrate implant and the untwisting of the crew is fixing the prosthesis constructions to the implants and abutments. While twisting of the handle up to the end the handle of this key seems not to be broken towards the head of this key, and the key works as one-sided key "Ratchet". Used together with

the hexahedral key 2.43 mmd (431825 etc.) on the surgical stage of the implantation for defining of the stabilization of the implant in the jaw osseous and together with the hexahedral key 1,25 mmd (431412 etc.) on the orthopedic stage of the implantation for the reliable and passive twisting of all screws and abutments.

- The surgical key (436303) or the direct screwdriver with the box, with the universal hexahedron head 6,35 mm and the long thickened handle. Made of the stainless steel. Meant for the twisting of the implants (together with the hexahedral key 2,5mmd 431825 etc.) into the prepared osseous lodge and all screws, abutments, formers of the gingival edge (together with the hexahedral key 1,25mmd 431412 etc.) to the implant during the surgical stage of the implantation. Used mainly on the maxilla and in some cases in the front section of the mandible.

- **The surgical key set /abutment holder (440006)** or the direct screwdriver with the box, with the universal hexahedron head 6,35 mm and hex 2.5 &1.25mm. Made of the stainless steel. Meant for the twisting of the implants (together with the hexahedral key 2,5mmd 431825 etc.) into the prepared osseous lodge and all screws, abutments, formers of the gingival edge (together with the hexahedral key 1,25mmd 431412 etc.) to the implant during the surgical stage of the implantation. Used mainly on the maxilla and in some cases in the front section of the mandible. Also an additional device for holding the abutment during its processing outside the mouth.



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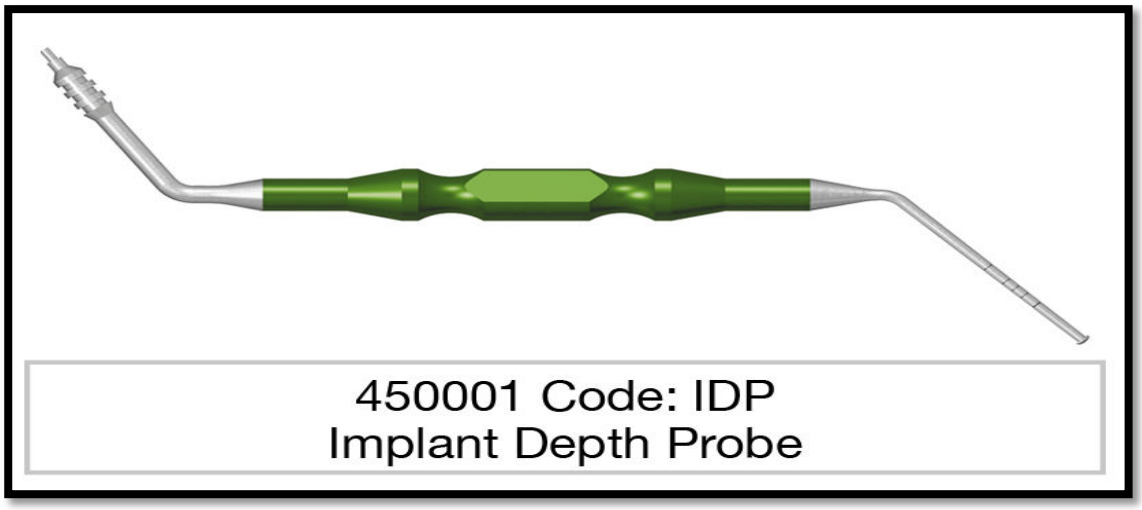
The measurer of the depth of the osseous lodge of the implant (450001) is the handle with the two sided working part. Made of stainless steel. On the working part there are incisions which show the depth of the drilling of the osseous lodge of the implant. The first incision is 8 mm, then 10 mm, then 11, 5 mm, then 13 mm, then 16 mm. At the end of the working part there is a semi-ball. On one side its diameter is 1,9 mm, on the other – 2,7 mm. The usage of this measurer gives the opportunity to simplify the investigation of the walls and the bottom of the prepared osseous lodge of the implant, to define the presence of the perforation of the walls and the bottom of the osseous lodge, define the integrity of the mucosa of the maxillary sinus, measure the height of the alveolar crest up to the bottom of the maxillary and nasal sinuses on the maxilla and mental hole on the mandible, conduct the necessary measurements during the operation and choose the tactics of the

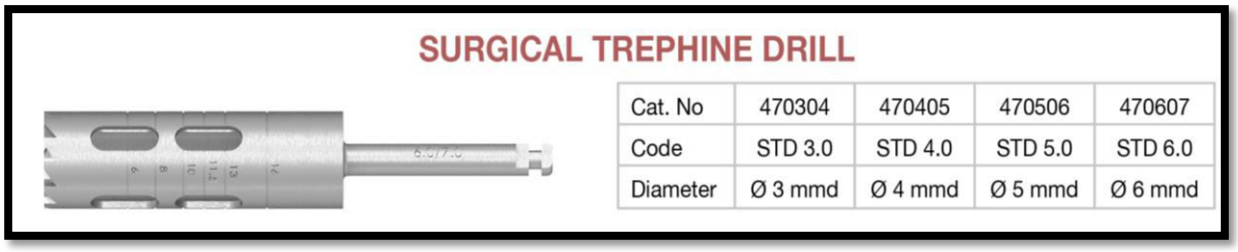
further actions.



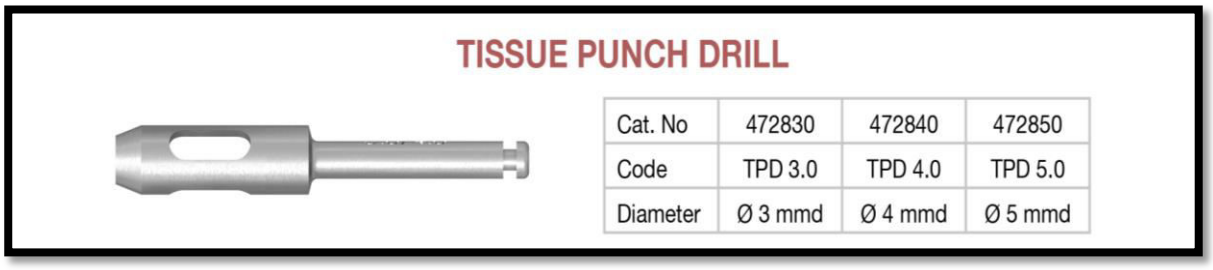
- **The laboratory hexahedral key 1, 25 mmd** (430007) for twisting of all screws used on the orthopedic stage of the implantation. It is used in the clinic by the dentist but mainly used in the tooth technical laboratory. This key is used for the manual twisting and also together with the key "Ratchet" (446301) or the surgical key (446303). The upper part, the head is universal like hexahedron 6, 35 mm, which gives the opportunity to use this key for different world systems.**The laboratory hexahedral key 1,25 mmd** long (430008) for twisting of all screws used on the orthopedic stage of the implantation. Used in the dental technical laboratory;

- **The drill "Trephine**") is a special hollow drill for preparing and assembling of the osseous tissue and also for the removing of the implant together with the osseous tissue. Made of stainless steel. The drills with special through holes along the length of the whole drill for the internal cooling while preparing of the osseous tissue, differ in diameter-3mmd (470304), 4mmd

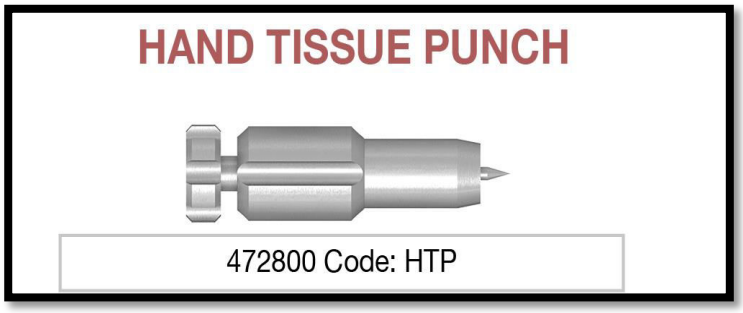
(470405), 5mmd (470506), 6mmd (470607).



- **The drill "Tissue Punch"** is a special hollow drill for_perforation of the mucous gingival. Made of stainless steel. The drills with special through holes along the length of the whole drill for the internal cooling while preparing of the perforation of the mucous gingival,_differ in diameter- 2mmd (472020), 3mmd (472830), 4mmd (472840), 5mmd (472850).



- **The "Hand Tissue Punch"** (472800) is a special hollow instrument for perforation of the mucous gingival. Made of stainless steel.



- **The set of the direct osteotomy** (421000) for the forming of the osseous lodge of the implant (without the drill). Made of stainless steel. The osteotomies set consists of straight osteotomies (5 five straight osteotomies) and angular osteotomies (5 five angular osteotomies). The osteotomy consists of handle, stopper and the working part. The handle and stopper in all five

osteotomies is the same. The difference is only in the working part. **Straight osteotomies set (421006)**- The first osteotomy (421001) with one round incision on the handle is the end of the working part in diameter 2,0 mmd, which increases up to 2,65 mmd in the distance 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is in the form of cone.

The second osteotomy (421002) with two round incisions on the handle is the end of the working part in diameter 2,55 mmd, which increases up to 3,2 mmd in the distance of 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is in the form of cone.

The third osteotomy (421003) with three round incisions on the handle is the end of the working part in diameter 3,1 mmd, which increase up to 3,65 mmd in the distance of 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is in the form of cone.

The fourth osteotomy (421004) with four round incisions on the handle is the end of the working part in diameter 3,55 mmd, which increases up to 4,8 mmd in the distance of 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is in the form of cone.

The fifth osteotomy (421005) with five round incisions is the end of the working part in diameter 4,2 mmd which increases up to 4,8 mmd in the distance of 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is in the form of the cone.

Used for the formatting of the osseous lodge of the implant under the type of the osseous 3 and 4 with domination of the spongy substance in the osseous tissue. The osteotomy doesn’t removes the osseous tissue as the drill doing it and as if reserving and condensing the spongy osseous tissue heightens the density of the osseous and by this increases the stabilization (the primary fixation) of the implant. The osteotomy are also being used for the forming of the osseous lodge of the implant after splitting of the narrow alveolar crest and

the operation "soft sinus lifting", for lifting of the mucosa maxillary sinus (after forming of the osseous lodge of the implants by the special drills for the soft sinus-lifting the osteotropic substances are being inserted in the osseous lodge and then start lifting by the osteotomy the osteotropic substances together with the mucosa of the maxillary sinus, then the implant is installed). **Angles osteotomy set (421016)** for the forming of the osseous lodge of the implant (without the drill). Made of stainless steel. The set of the osteotomy consists of five angle osteotomy. The osteotomy consists of the handle, stopper and the working part. The handle and stopper in all five osteotomies is the same. The difference between the direct and angle osteotomy is only in the working part of the osteotomy. The working part in the angle osteotomy is under the angle. There are no other differences. The angle osteotomy is generally used in the side sections of the maxilla.

The first angles osteotomy(421011) with one round incision on the handle is the end of the working part in diameter 2,0 mmd, which increases up to 2,65 mmd in the distance 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is in the form of cone.

The second angles osteotomy(421012) with two round incisions on the handle is the end of the working part in diameter 2,55 mmd, which increases up to 3,2 mmd in the distance of 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is conical.

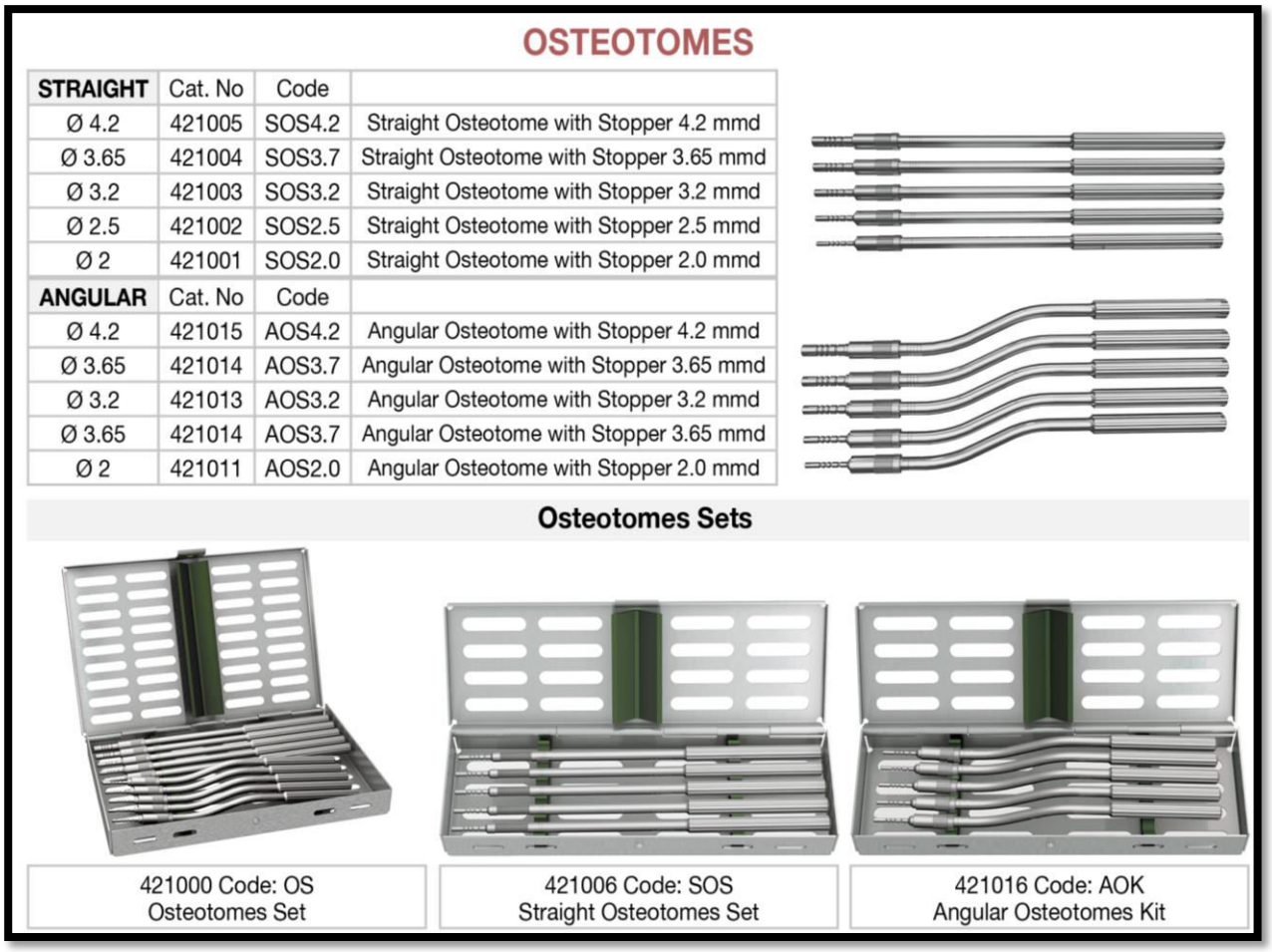
The third angles osteotomy(421013) with three round incisions on the handle is the end of the working part in diameter 3,1 mmd, which increase up to 3,65 mmd in the distance of 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is conical.

The fourth angles osteotomy (421014) with four round incisions on the handle is the end of the working part in diameter 3,55 mmd, which increases up to 4,8 mmd in the distance of 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is conical.

The fifth angles osteotomy 421015) with five round incisions is the end of the working part in diameter 4,2 mmd which increases up to 4,8 mmd in the distance of 16 mm from the end of the working part of the osteotomy. The working part of the osteotomy is in the form of the cone.

Used for the formatting of the osseous lodge of the implant under the type of the osseous 3 and 4 with domination of the spongy substance in the osseous tissue. The osteotomy doesn't remove the osseous tissue as the drill doing it and as if reserving and condensing the spongy osseous tissue heightens the density of the osseous and by this increases the stabilization (the primary fixation) of the implant. The osteotomy are also being used for the forming of the osseous lodge of the implant after splitting of the narrow alveolar crest and the operation "soft sinus lifting", for lifting of the mucosa maxillary sinus (after forming of the osseous lodge of the implants by the special drills for the soft sinus-lifting the osteotropic substances are being inserted in the osseous lodge and then start lifting by the osteotomy the osteotropic substances together with the mucosa of the maxillary sinus, then the implant is installed);**Kit box for the osteotomy** (421010) is a special kit-box where the set of the osteotomy is put. In this kit-box the osteotomy are being sterilized and then are given to the operational table. **Kit box for straight osteotomy** (421009) is a special kit-box where the set of the Straight osteotomy is put. In this kit-box the osteotomy are being sterilized and then are given to the operational table. **Kit box for angular osteotomy** (421017) is a special kit-box where the set of the angular osteotomy is put. In this kit-box the osteotomy are

being sterilized and then are given to the operational table.

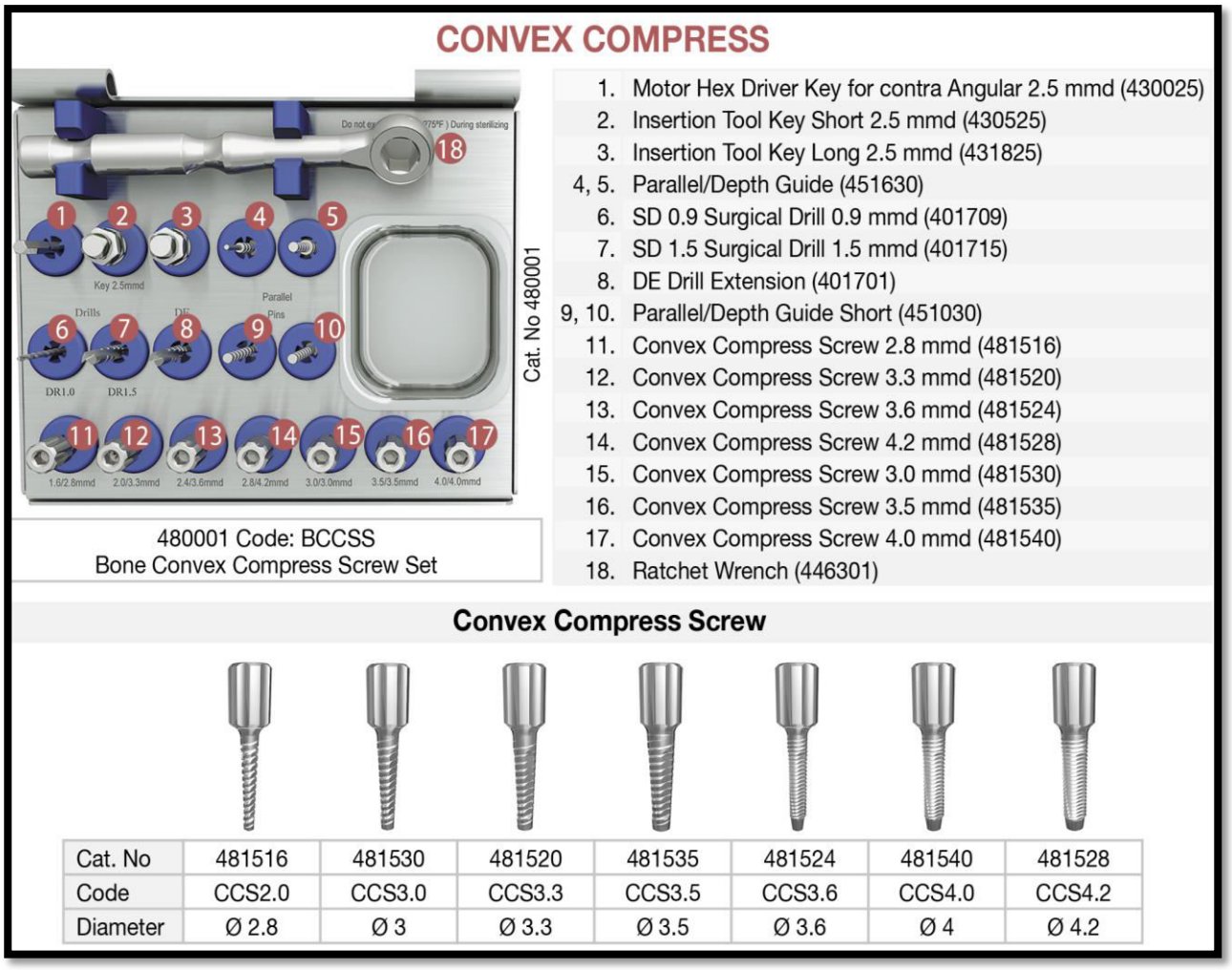


OSTEOTOMES

STRAIGHT	Cat. No	Code	
Ø 4.2	421005	SOS4.2	Straight Osteotome with Stopper 4.2 mmd
Ø 3.65	421004	SOS3.7	Straight Osteotome with Stopper 3.65 mmd
Ø 3.2	421003	SOS3.2	Straight Osteotome with Stopper 3.2 mmd
Ø 2.5	421002	SOS2.5	Straight Osteotome with Stopper 2.5 mmd
Ø 2	421001	SOS2.0	Straight Osteotome with Stopper 2.0 mmd
ANGULAR	Cat. No	Code	
Ø 4.2	421015	AOS4.2	Angular Osteotome with Stopper 4.2 mmd
Ø 3.65	421014	AOS3.7	Angular Osteotome with Stopper 3.65 mmd
Ø 3.2	421013	AOS3.2	Angular Osteotome with Stopper 3.2 mmd
Ø 3.65	421014	AOS3.7	Angular Osteotome with Stopper 3.65 mmd
Ø 2	421011	AOS2.0	Angular Osteotome with Stopper 2.0 mmd

The bone convex compress screw set (480001)_consists of seven is a special compress screw for manipulation of the bone. Made of stainless steel. Used together with an Allen key 2.5 mmd (431805). Conical in shape, 16mml length, has a different diameter -1,6/2,8mmd (481516), 2,0/3,3mmd (482033), 2,4/3,6mmd (481524) ,3,0mmd (481530), 3,5mmd (481535), 4,0mmd (481540). **Kit box for convex compress screw set** (420048) is a special kit-box where the set of the convex compress screw is put. In this kit-box, the osteotomy convex compress screw ms are being sterilized and then

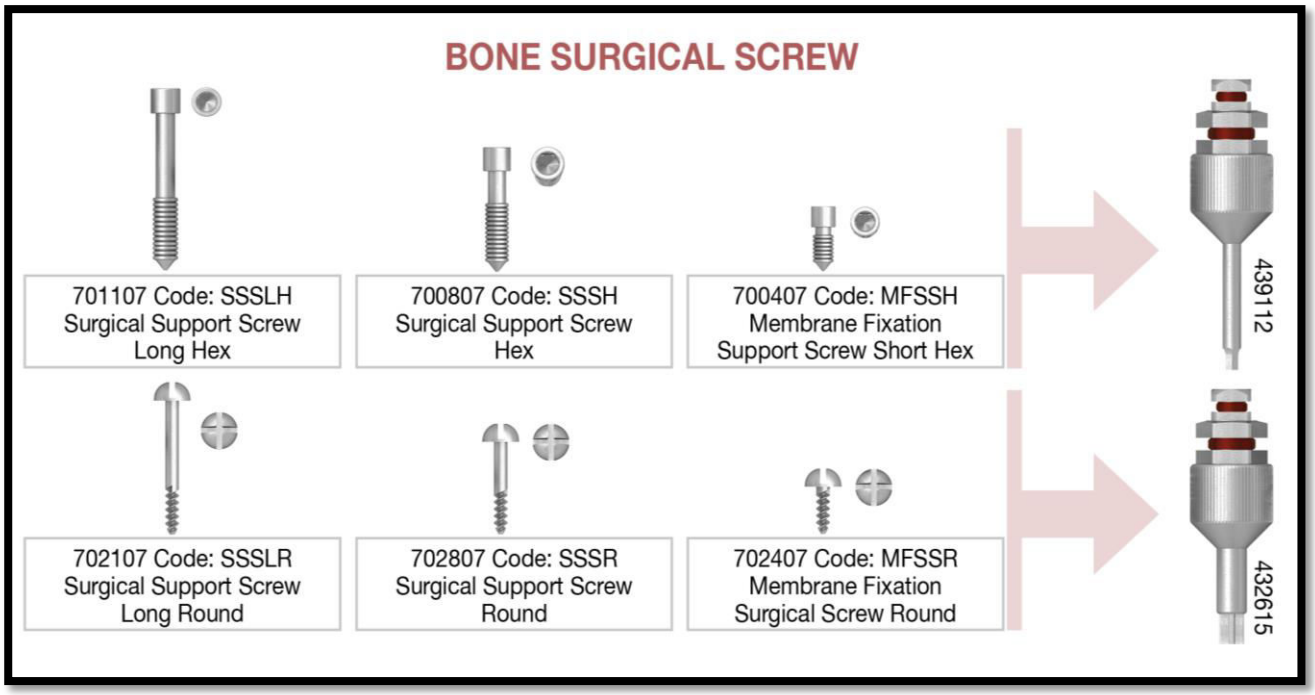
are given to the operational table.



Cat. No	481516	481530	481520	481535	481524	481540	481528
Code	CCS2.0	CCS3.0	CCS3.3	CCS3.5	CCS3.6	CCS4.0	CCS4.2
Diameter	Ø 2.8	Ø 3	Ø 3.3	Ø 3.5	Ø 3.6	Ø 4	Ø 4.2

- **Membrane fixation surgical screw 0,7 mmd** (700407)is twisted with the help of the key 1,25 mm (431412 etc.) and (700427) is twisted with the help of the fillips key (432615 etc.) for the fixation of the membrane to the osseous tissue is short with the working part 4,1 mml. **Fixation surgical screw 0,7 mmd** (700807) is twisted with the help of the key 1,25 mm (431412 etc.) and (700827)) is twisted with the help of the fillips key (432615 etc.) for the fixation of the membrane to the osseous tissue is medium with the working part 8,0 mm. **Fixation surgical screw long 0,7mmd** (701107) is twisted with the help of the key 1,25 mm (431412 etc.) and (701127) is twisted with the help of the fillips key (432615 etc.) for the fixation of the membrane to the

osseous tissue is the super long with the working part 11,6 mml.



- **Surgical «navigaide» set (460001**) consists of the three elements, which are the analogues of the standard titanium abutments:

1- Surgical staring «navigaide» abutment (460002) of the dark blue color direct (angle 0°) which is the analogue of the standard direct lock abutment (500945 etc.),

2- Surgical angled 15 «navigaide» abutment (460003) of the yellow color angle (angle 15°), which is the analogue of the standard angle lock abutment on 15 degrees (520845 etc.),

3- Surgical angled 25 «navigaide» abutment (460004) of the light blue color angle (angle 25°), which is the analogue of the standard angle lock abutment on 25 degrees (520847 etc.).

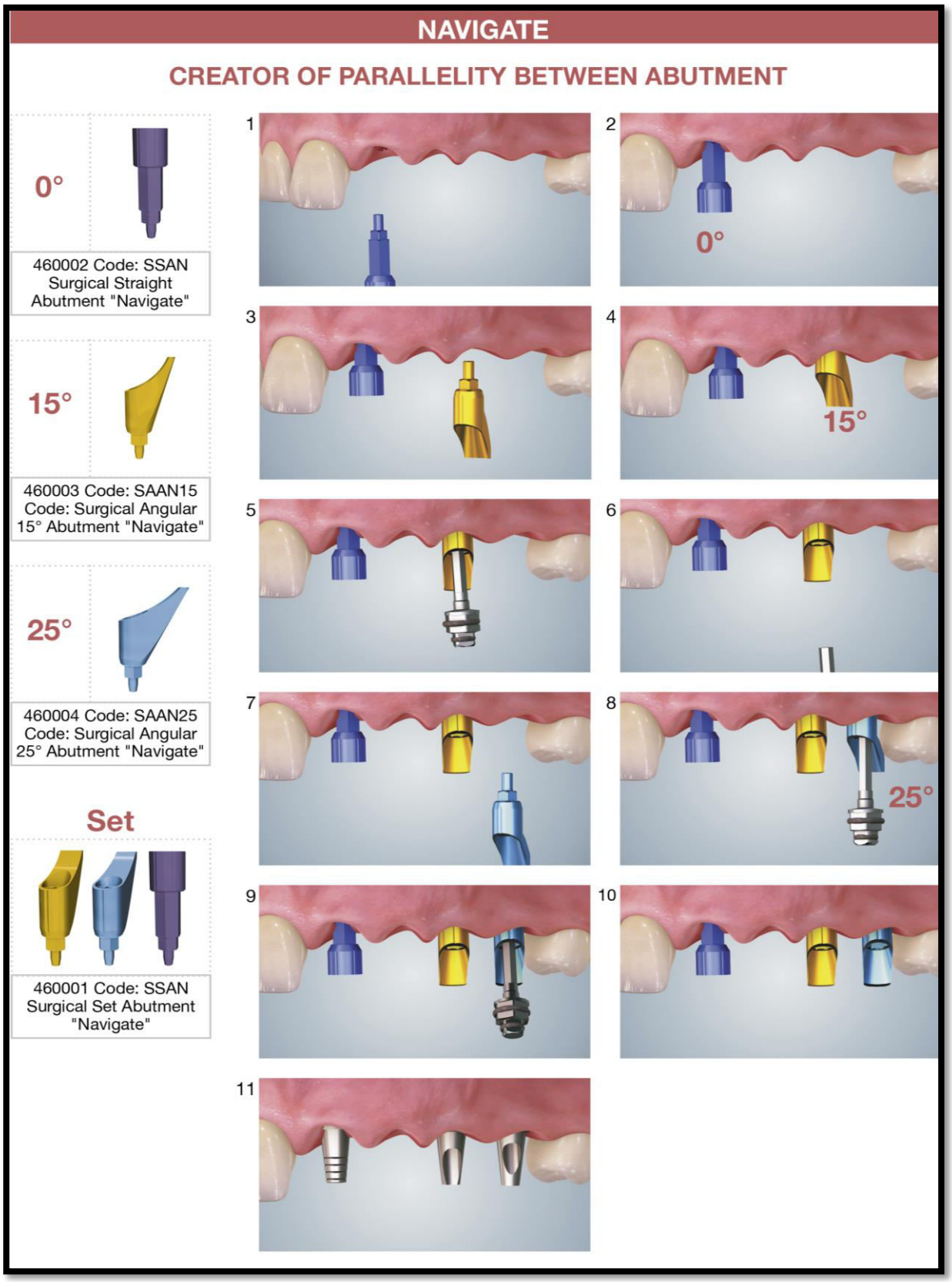
Used for the creating of the parallel between the pair of abutments of the closely inserted implants. On the surgical stage of the implantation after the insertion of the implants the analogue of the abutment is being installed so as the hexahedron of the analogue of the abutment densely entered in the hexahedron of the implant. At first the dark blue analogue is being installed

and check its parallel, either with closely standing tooth or, in case of toothless jaw, with the antagonists of the contrary jaw. If there is no necessary parallel or correlation in the bite, then we take the following angle analogue of the light blue or yellow color, install it on the implant and check the parallel towards the closely standing tooth. Then, in order to achieve parallel, it is necessary with insertion tool key 2,5mmd (431825 etc.), to turn the analogue of the abutment along its axis and get parallel between the closely standing tooth and the analogue of the abutment of the implant. After the parallel between the tooth and the closely standing abutment of the implant is reached the parallel between the pair of the analogues of the abutments of the implants (closely standing implants) should be reached .The analogue of the abutment, which we inserted the first, remains on the implant or we can substitute it by the direct standard abutment but then according to it we'll create the parallel between the pair of the implants. We also install the dark blue analogue and check its parallel with the abutment of the implant or with the analogue of the abutment of the implant. If there is no necessary parallel or correlation in the bite, we take the next angle analogue of the blue implant or with the analogue of the abutment of the implant. Then, in order to achieve parallel, which is inserted in the through hole of the analogue of the implant, to turn the analogue of the abutment along its axis and achieve parallel between the row of the analogues of the abutment of the implant or the abutment of the implant itself. Thus, creating the parallel between the pair of the analogues of the abutments of the implants, it is possible to create parallel between all standard abutments on the whole jaw. It is possible to achieve the parallel between the standard abutments of the implants on the surgical stage, even if the implants are installed non parallel with the incline up to 50 degrees. Then there are two possible actions:

1- to install the standard abutments on the installed implants either immediately, or with the 7 days' delay to make functional load on the implants

installing on them the temporary removable or non-removable prosthesis construction;

2- to install on the installed implants the covering screw and stitch the wound (two phased method) or install the former of the gingival edge and stitch the wound (one phased method), but in this case it should be written down for the doctor who will make the prosthetics that the methods of creating of parallel between the standard abutments of the implants are being conducted and on what implant the necessary standard abutment should be installed. This approach will significantly ease the work of the dentist and will decrease the quantity of the patient's visits for receiving of the prosthetic construction on the implant, it will also cheapen the work, because there is no necessity in using of the transfers and the analogues of the implants (no need to make the impression of the implants). The dentist installs the standard abutment on the implant and makes the impression from the abutment by usual way and then the temporary or final prosthetics is made on the implants.


NAVIGATE
CREATOR OF PARALLELITY BETWEEN ABUTMENT
0°
460002 Code: SSAN Surgical Straight Abutment "Navigate"
15°
460003 Code: SAAN15 Code: Surgical Angular 15° Abutment "Navigate"
25°
460004 Code: SAAN25 Code: Surgical Angular 25° Abutment "Navigate"
Set
460001 Code: SSAN Surgical Set Abutment "Navigate"
1
2
0°
3
4
15°
5
6
7
8
25°
9
10
11

- **Titanium Open Cover Screw**. It has the same function as a standard Cover Screw - closes the internal connection of the implant. Open Cover Screw consists of a pin with a diameter of 1.25mm in height from 2 mm to 6 mm, which is located on the cap in the center and a screw for screwing into the implant. Open Cover Screw screwed to fix the implant with a hollow key (431238). The choice of Open Cover Screw depends on the thickness and height of the gums in the area of implantation. After the wound is sutured, the protruding pin should be located in the thickness of the gum. If the pin protrudes from the gum, it should be changed to Open Cover Screw with a lower protruding pin or cut. The speaker pin gives the doctor, at the stage of disclosure of the implant; it is easy to find the location of the implant, to make disclosure of the implant using a hollow key (431238) and a punch gum (471230). Advantage of Open Cover Screw:

  -no need to make a cut;

  - there is no need to exfoliate the gums;

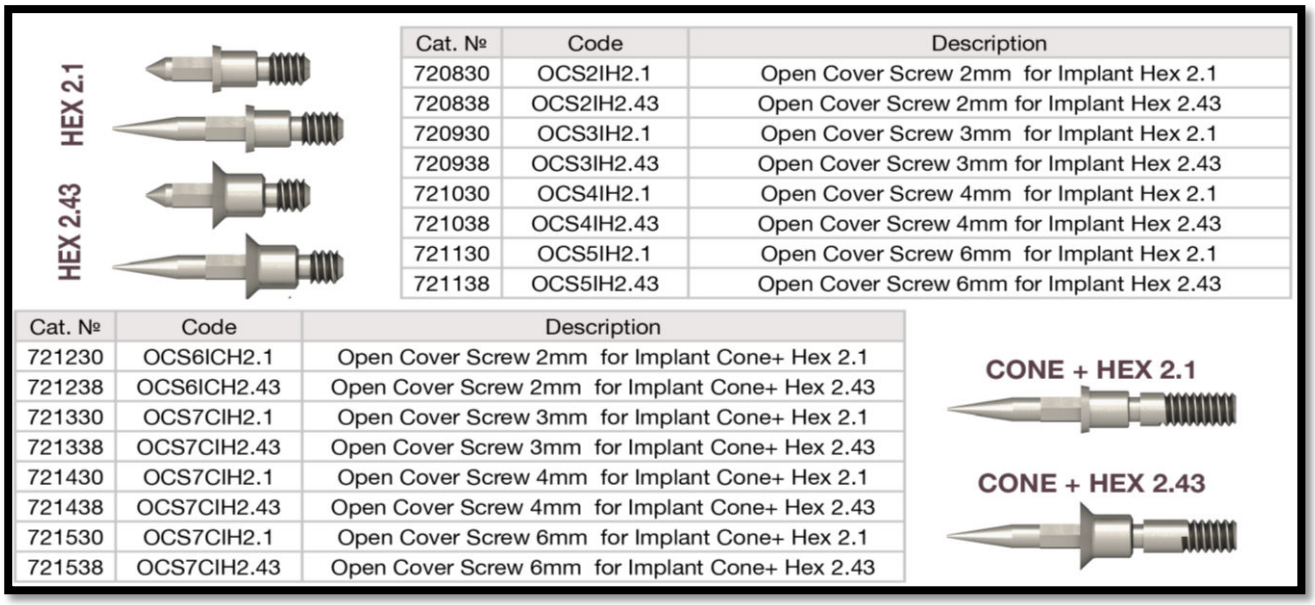
  - no need to stitch;

  -minimal loss of the gum with a diameter of 3.5mm above the implant;

  - perforation of the gums in the center of the implant. (As a protruding pin, is the guide for the punch);

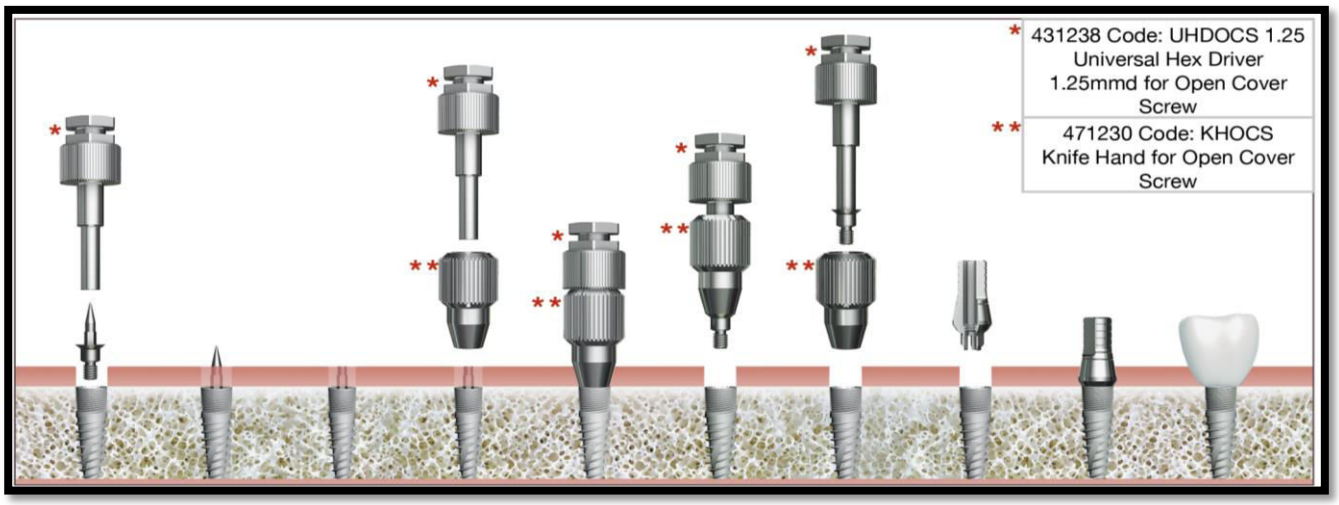
  - there is no loss of height of the gingival margin;

- prosthetics can be started on the day of disclosure.



Cat. №	Code	Description
720830	OCS2IH2.1	Open Cover Screw 2mm for Implant Hex 2.1
720838	OCS2IH2.43	Open Cover Screw 2mm for Implant Hex 2.43
720930	OCS3IH2.1	Open Cover Screw 3mm for Implant Hex 2.1
720938	OCS3IH2.43	Open Cover Screw 3mm for Implant Hex 2.43
721030	OCS4IH2.1	Open Cover Screw 4mm for Implant Hex 2.1
721038	OCS4IH2.43	Open Cover Screw 4mm for Implant Hex 2.43
721130	OCS5IH2.1	Open Cover Screw 6mm for Implant Hex 2.1
721138	OCS5IH2.43	Open Cover Screw 6mm for Implant Hex 2.43

Cat. №	Code	Description
721230	OCS6ICH2.1	Open Cover Screw 2mm for Implant Cone+ Hex 2.1
721238	OCS6ICH2.43	Open Cover Screw 2mm for Implant Cone+ Hex 2.43
721330	OCS7CIH2.1	Open Cover Screw 3mm for Implant Cone+ Hex 2.1
721338	OCS7CIH2.43	Open Cover Screw 3mm for Implant Cone+ Hex 2.43
721430	OCS7CIH2.1	Open Cover Screw 4mm for Implant Cone+ Hex 2.1
721438	OCS7CIH2.43	Open Cover Screw 4mm for Implant Cone+ Hex 2.43
721530	OCS7CIH2.1	Open Cover Screw 6mm for Implant Cone+ Hex 2.1
721538	OCS7CIH2.43	Open Cover Screw 6mm for Implant Cone+ Hex 2.43



- Titanium cover screws are packaged with the new implant, but sometimes they fall or are lost(in case the implant screw fell or went into the saliva ejector**)** and therefore before the operation it is necessary to have additional screws available, which must be sterile**. Titanium screw cover 720638** for closing the implant with an internal hex 2.43mm; **- titanium screw cover 720630** for closing the implant with an internal hex 2.1mm**; - titanium screw cover 720639** for closing the implant with an internal

cone + hex 2.43mm**;- titanium screw cover 720631** for closing the implant with an internal cone + hex 2.1mm**;- titanium screw cover for Prefix + Implant Slim Platform 720632** for closing the implant with an internal hex 2.1mm**;- titanium screw cover for Prefix + Implant 720637** for closing the implant with an internal hex 2.43mm**;- titanium screw cover for Short Systems 720633** for closing the implant with an internal hex 2.43mm .

- The healing titanium abutment is installed on the implant in case of conducting of the implantation in one stage or on the stage of the disclosure if the implants. There are different in diameter and length for different types of implants.

For an implant with an internal hexagon 2.1mm and 2.43mm:

A) diameter 4.5 mm - is the length - 2 mml (210245), 3mml (210345), 4mml (210445), 5mml (210545), 6mml (210645), 7 mml (210745);

B) Diameter 3.8 mm - is the length - 3mml (220338), 4mml (220438), 5mml (220538), 6mml (220638), 7 mml (220738);

C) Diameter 6.0 mm - is the length - 2 mml (230260), 3mml (230360), 4mml (230460), 5mml (230560), 6mml (230660), 7 mml (230760);

D) Diameter 3.0 mm - is the length - 2 mml (270230), 3mml (270330), 4mml (230430), 5mml (270530), 6mml (270630), 7 mml (270730);

SCREW HEALING ABUTMENTS FOR IMPLANT STANDARD & SLIM PLATFORM

We offer 4 different diameters of healing abutments: standard, slim, super slim, wide. That can be used with implants, that have standard platform and slim platform.


Titanium Healing Screw Abutment Super Slim


Titanium Healing Screw Abutment Slim


Titanium Healing Screw Abutment


Titanium Healing Screw Abutment Wide

		Diameter			
		Ø 3.0 mmd	Ø 3.8 mmd	Ø 4.5 mmd	Ø 6.0 mmd
Length	2 mml			210245	230260
	3 mml	270330	220338	210345	230360
	4 mml	270430	220438	210445	230460
	5 mml	270530	220538	210545	230560
	6 mml	270630	220638	210645	230660
	7 mml	270730	220738	210745	

For implant short systems with an internal hexagon 2.43mm:

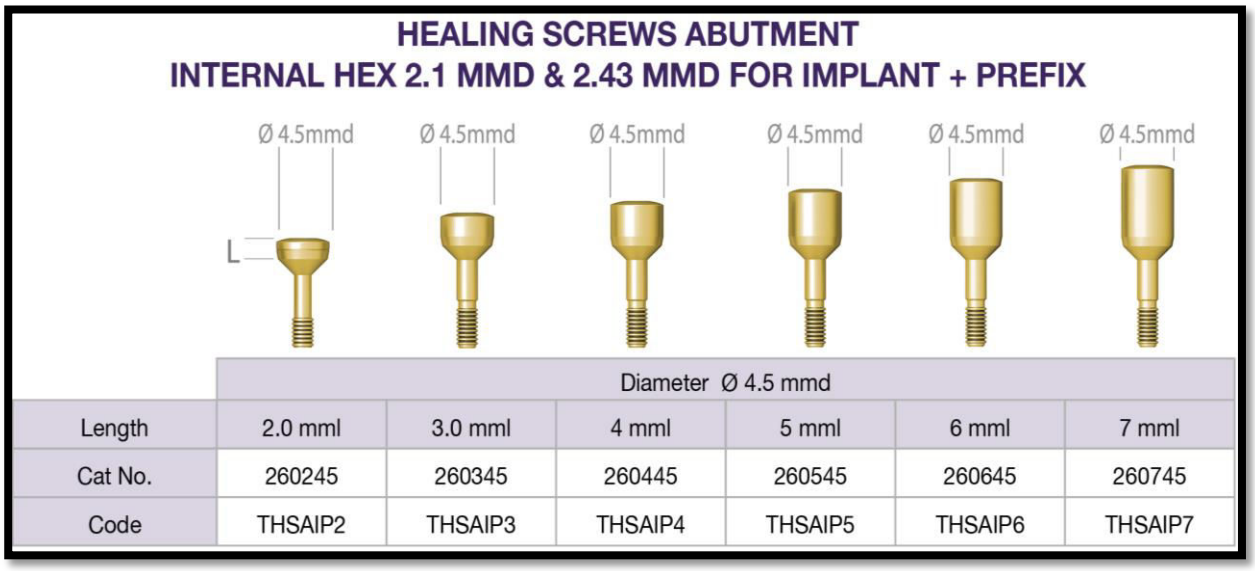
Diameter 4.5 mm - is the length - 3mml (209345), 4mml (209445), 5mml (209545), 6mml (209645), 7 mml (209745);

HEALING SCREWS ABUTMENT INTERNAL HEX 2.43 MMD FOR SHORT SYSTEM

	Diameter Ø 4.5 mmd				
Length	3.0 mml	4 mml	5 mml	6 mml	7 mml
Cat No.	209345	209445	209545	209645	209745
Code:	THSAS3	THSAS4	THSAS5	THSAS6	THSAS7

For an implant + prefix with an internal hexagon 2.1mm and 2.43mm:

Diameter 4.5 mm - is the length 2 mml (260245), 3mml (260345), 4mml (260445), 5mml (260545), 6mml (260645), 7 mml (260745);



	Diameter Ø 4.5 mmd					
Length	2.0 mml	3.0 mml	4 mml	5 mml	6 mml	7 mml
Cat No.	260245	260345	260445	260545	260645	260745
Code	THSAIP2	THSAIP3	THSAIP4	THSAIP5	THSAIP6	THSAIP7

For an implant with an internal cone + hexagon 2.1mm:

A) Diameter 3.8 mm - is the length - 3mml (250338), 4mml (250438), 5mml (250538), 6mml (250638), 7 mml (250738);

B) Diameter 6.0 mm - is the length - 2 mml (280260), 3mml (280360), 4mml (280460), 5mml (280560), 6mml (280660), 7 mml (280760);

For an implant with an internal cone + hexagon 2.43mm:

A) diameter 4.5 mm - is the length - 2 mml (290245), 3mml (290345), 4mml (290445), 5mml (290545), 6mml (290645), 7 mml (290745);

B) Diameter 3.0 mm - is the length - 2 mml (290230), 3mml (290330), 4mml (290430), 5mml (290530), 6mml (290630), 7 mml (290730);

C) Diameter 6.0 mm - is the length - 2 mml (290260), 3mml (290360), 4mml (290460), 5mml (290560), 6mml (290660), 7 mml (290760);

SCREW HEALING ABUTMENTS FOR IMPLANT INTERNAL CONNECTION CONE + HEX

Titanium Healing Screw Abutment Conical Slim

Titanium Healing Screw Abutment Conical

CONE + HEX 2.1		Diameter	
		Ø 3.8 mmd	Ø 6.0 mmd
Length	2 mml		280260
	3 mml	250338	280360
	4 mml	250438	280460
	5 mml	250538	280560
	6 mml	250638	280660
	7 mml	250738	280760

Titanium Healing Screw Abutment Conical Slim

Titanium Healing Screw Abutment Conical

Titanium Healing Screw Abutment Conical

CONE + HEX 2.43		Diameter		
		Ø 3.0 mmd	Ø 4.5 mmd	Ø 6.0 mmd
Length	2 mml	290230	290245	290260
	3 mml	290330	290345	290360
	4 mml	290430	290445	290460
	5 mml	290530	290545	290560
	6 mml	290630	290645	290660
	7 mml	290730	290745	

The height and width of the healing abutment is selected depending on: - the type and diameter of the implant to be installed; - the condition and amount of the edge of the gums around the implant; -distance between the established implants (minimum distance between the healing abutment 2-3 mm for the correct formation of the gingival papilla); -distance with the adjacent teeth (between the healing abutment and the tooth - at least 2-3 mm distance for the correct formation of the gingival papilla); Stage of implantation (with a single-stage implantation, a healing abutment of a narrow 3.0mm or 3.8mm in diameter is installed, to maximize the volume of soft tissue above the implant and prevent bone resorption around the implant.

With a two-stage, at the implant opening stage, the maximum diameter of the healing abutment - for the formation of a convenient approach to the internal connection of the implant during prosthetics). A prerequisite is that the healing abutment must be 1-3 mm higher than the edge of the gum (soft tissue) and must not be exposed to antagonists.

- **Physio-dispenser** should be tuned on 600-800 revolutions per minute and adapt it to the angle end with the redactor which reduces the speed in 16 or 20 times;

Non-specialized (general) surgical supplies:

- For anesthesia: a syringe, a few needles and a few anesthetic capsules;
- Surgical vacuum cleaner, suction for sucking blood and spitting;
- Blade handle and blade set (scalpel);
- Periosteal disintegrators and elevators for soft tissues;
- Needle holder;
- Surgical scissors;
- Round drill and bur;
- Carbide surgical bur for the turbine;
- Piezo-surgical ultrasound apparatus, which is used for the non-traumatic removal of teeth, manipulation on the osseous tissues and the mucosa of the mouth cavity and also the mucosa of the maxillary and nasal cavity;
- The package with the cold and sterile physiological solution or distilled water joined with the physio-dispenser;
- The stitch material and sutures for surgery;
- Mirror, probe, tweezers;

The list represented above is minimal. For increasing of the possibilities and comfort in work or in case of damage or falling of the instruments, it is recommended to have reserve instruments.

- **Dental implants** - it is advisable to have several implants of different lengths and diameters, because sometimes during the operation it is found that the pre-prepared implant does not meet the parameters. The DMI system has a large selection of intraosseous titanium implants. The choice of an implant depends on many factors that are determined by a specialist dentist depending on each specific case (see the choice of a dental implant in the section). Types of intraosseous titanium implants DMI:

PRIMA TITANIUM IMPLANT (PRTI)

PRTI- screw self-tapping titanium dental implant, conical shape, with varying thread, with an internal connection hex. Implants are made of medical titanium alloy Ti6Al4V ASTM 136. The outer surface of the implant has a double treatment (sand blasting and acid treatment). The texture of the outer surface of the implant has micro pores of 1-4 microns in size and macro pores of 30-40 microns in size. The outer thread of the spiral-shaped implant. The shape and size of the thread divides the implant into 2 functional parts: the first two spiral threads of 2 x 0.6 mm and the second four spiral threads of 4-x 0.4-mm. Implant internal connection - hexagon 2.43mm and thread 1-72 for all diameters of implants. A special internal "MULTI-LOCK "system provides additional fixation between the abutment and the implant. Implant length: 5; 6; 7; 8; 10; 11.5; 13; 16mml. Diameter: 3.3; 3.75; 4.2; 5.0; 6.0mmd. Used in all types of jawbones. Recommended for bones of type D2, D3. Implant areas - all parts of the upper and lower jaw. Indications - two and one stage implantation.

UNIQUE TITANIUM IMPLANT (UTI)

UTI- self-tapping titanium dental implant, pronounced conical shape, with variable thread, with internal hex. Implants are made of medical titanium alloy Ti6Al4V ASTM-136. The outer surface of the implant undergoes double treatment (sand blasting and acid treatment). The texture of the outer surface of the implant has micro pores of 1-4 microns in size and macro pores of 30-40 microns in size.

The outer thread of the spiral implant. The shape and size of the thread divides the implant into 2 functional parts: the first two helical threads with a size of 2 x 1.1 mm and the second four helical threads with a size of 4 x 0.4 mm. Internal implant connection - 2.1 mmd hexagon for implants with a diameter of 3.0; 3.3 mmd and hexagon 2.43 mm for implants with a diameter of 3.75; 4.2; 5.0; 6.0 ppm and thread 1-72 for all diameters of implants. The special internal "MULTI-LOCK"

system provides additional fixation between the abutment and the implant. Implant length: 5; 6; 7; 8; 10; 11.5; 13; 16; 18mml.Diameter: 3.0; 3.3; 3.75; 4.2; 5.0; 6.0mmd. Used in all types of jawbones. Recommended for bones of type D1, D2, D3, D4. Implant areas - all parts of the upper and lower jaw. Indications - two and one stage implantation, immediate implantation, immediate load on the implant.

NOVA TITANIUM IMPLANT KIT PACKAGE(NTI)

NTI- self-tapping titanium dental implant, pronounced conical shape, with variable thread, with internal hex. Implants are made of medical titanium alloy Ti6Al4V ASTM-136. The outer surface of the implant undergoes double treatment (sand blasting and acid treatment). The texture of the outer surface of the implant has micro pores of 1-4 microns in size and macro pores of 30-40 microns in size.

The outer thread of the spiral implant. The shape and size of the thread divides the implant into 2 functional parts: the first two helical threads with a size of 2 x 1.1 mm and the second four helical threads with a size of 4 x 0.4 mm. Internal implant connection - 2.1 mmd hexagon for implants with a diameter of 3.0; 3.3 mmd and hexagon 2.43 mm for implants with a diameter of 3.75; 4.2; 5.0; 6.0 ppm and thread 1-72 for all diameters of implants. The special internal "MULTI-LOCK" system provides additional fixation between the abutment and the implant. Implant complete with straight titanium abutment. Implant length: 5; 6; 7; 8; 10; 11.5; 13; 16; 18mml.Diameter: 3.0; 3.3; 3.75; 4.2; 5.0; 6.0mmd. Used in all types of jawbones. Recommended for bones of type D1, D2, D3, D4. Implant areas - all parts of the upper and lower jaw. Indications - two and one stage implantation, immediate implantation, immediate load on the implant.

PERFECT TITANIUM IMPLANT (PFTI)

PTI is a self-tapping titanium dental implant, double pronounced conical shape, with variable thread, with internal hex. Implants are made of medical titanium alloy Ti6Al4V ASTM-136. The outer surface of the implant undergoes double treatment (sand blasting and acid treatment). The texture of the outer surface of the implant has micro pores of 1-4 microns in size and macro pores of 30-40 microns in size.

The outer thread of the spiral implant. The shape and size of the thread divides the implant into 2 functional parts: the first two helical threads with a size of 2 x 1.1 mm and the second four helical threads with a size of 4 x 0.4 mm. Internal implant connection - 2.1 mmd hexagon for implants with a diameter of 3.75 mmd and a hexagon 2.43 mm for implants with a diameter of 4.2; 5.0; 6.0 mmd and thread 1-72 for all diameters of implants. The special internal "MULTI-LOCK" system provides additional fixation between the abutment and the implant.
Implant length: 10; 11.5; 13; 16mml. Diameter: 3.75; 4.2; 5.0; 6.0mmd.
Used in all types of jawbones. Recommended for bones of type D2, D3, D4. Implant areas - all parts of the upper and lower jaw. Indications - two and one stage implantation, immediate implantation, immediate load on the implant.

IDEAL TITANIUM IMPLANT KIT PACKAGE(ITI)

ITI is a self-tapping titanium dental implant, double pronounced conical shape, with variable thread, with internal hex. Implants are made of medical titanium alloy Ti6Al4V ASTM-136. The outer surface of the implant undergoes double treatment (sand blasting and acid treatment). The texture of the outer surface of the implant has micro pores of 1-4 microns in size and macro pores of 30-40 microns in size.

The outer thread of the spiral implant. The shape and size of the thread divides the implant into 2 functional parts: the first two helical threads with a size of 2 x 1.1 mm and the second four helical threads with a size of 4 x 0.4 mm. Internal implant connection - 2.1 mmd hexagon for implants with a diameter of 3.75 mmd and a hexagon 2.43 mm for implants with a diameter of 4.2; 5.0; 6.0 mmd and thread 1-72 for all diameters of implants. The special internal "MULTI-LOCK" system provides additional fixation between the abutment and the implant. Implant complete with straight titanium abutment.
Implant length: 10; 11.5; 13; 16mml. Diameter: 3.75; 4.2; 5.0; 6.0mmd.
Used in all types of jawbones. Recommended for bones of type D2, D3, D4. Implant areas - all parts of the upper and lower jaw. Indications - two and one stage implantation, immediate implantation, immediate load on the implant.

UNIQUE MODULAR TITANIUM IMPLANT(IMI)

UMI - is a self-tapping titanium dental implant, pronounced conical shape, with variable thread, with internal conical connection.
Implants are made of medical titanium alloy Ti6Al4V ASTM-136.
The outer surface of the implant undergoes double treatment (sand blasting and acid treatment).
The texture of the outer surface of the implant has micro pores of 1-4 microns in size and macro pores of 30-40 microns in size.
The external thread of the implant has a spiral shape.
The shape and size of the thread separates the implant into 2 functional parts: the first two spiral threads of 2 x 1.1 mm and the second four spiral threads of 4 x 0.4 mm.
The internal connection of the implant - a cone with a hexagon of 2.1 mrd for implants of diameter 3.3; 3.75 ppm and a cone with a hexagon 2.43 ppm for implants with a diameter of 4.2; 5.0; 6.0 ppm and thread 1-72 for all diameters of implants. Implant length: 8; ten; 11.5; 13; 16 mm. Diameter: 3.3; 3.75; 4.2; 5.0; 6.0mmd. Implant complete with straight titanium abutment. Used in all types of jaws. Recommended for bones of type D1, D2, D3, D4. Implant areas - all parts of the upper and lower jaw. Indications - two-stage implantation, immediate implantation, immediate load on the implant.

PERFECT MODULAR TITANIUM IMPLANT(PMI)

PMI - is a self-tapping dental implant titanium, pronounced double conical shape, with variable thread, with internal conical connection.
Implants are made of medical titanium alloy Ti6Al4V ASTM-136.
The outer surface of the implant undergoes double treatment (sand blasting and acid treatment). The texture of the outer surface of the implant has micro pores of 1-4 microns

in size and macro pores of 30-40 microns in size. The external thread of the implant has a spiral shape.
The shape and size of the thread separates the implant into 2 functional parts: the first two spiral threads of 2 x 1.1 mm and the second four spiral threads of 4 x 0.4 mm. The internal connection of the implant - a cone with a hexagon of 2.1 mmd for implants of diameter 3.3; 3.75 mmd and a cone with a hexagon 2.43 mmd for implants with a diameter of 4.2; 5.0; 6.0 mmd and thread 1-72 for all diameters of implants.
Implant length: 8; 10; 11.5; 13; 16 mm. Diameter: 3.75; 4.2; 5.0; 6.0mmd. Implant complete with straight titanium abutment. Used in all types of jaws. Recommended for bones of type D2, D3, and D4. Implant areas - all parts of the upper and lower jaw. Indications - two and one stage implantation, immediate implantation, immediate load on the implant.

SOLO TITANIUM IMPLANT(STI)

STI - Monoblock with a built-in abutment, self-cutting titanium dental implant, conical shape, with variable thread.
Implants are made of medical titanium alloy Ti6Al4V ASTM-136.
The outer part of the intraosseous implant has a double treatment (sandblasting and acid treatment). The texture of the surface of the implant has micro pores with a size of 1-4 microns and macro pores with a size of 30-40 microns.
The outer part of the abutment, after machining, has a polished surface.
The external thread of the implant has a spiral shape.
Implant length: 10; 11.5; 13; 16 mm. Diameter: 2.4; 3.0; 3.3; 3.75; 4.2; 5.0 mmd. Used in all types of jaws. Recommended for bones of type D1, D2. Implant areas - all parts of the upper and lower jaw. Indications - one-stage implantation, immediate implantation, immediate load on the implant.

SOLO MODULAR TITANIUM IMPLANT(SMTI)

SMI - self-tapping titanium micro dental implant, conical shape, with variable thread, with an external hex.

Implants are made of medical titanium alloy Ti6Al4V ASTM-136.
The outer part of the intraosseous implant has a double treatment (sandblasting and acid treatment). The texture of the surface of the implant has

micro pores with a size of 1-4 microns and macro pores with a size of 30-40 microns. The outer hex, after machining, has a polished surface. The external thread of the implant has a spiral shape. Internal thread of the implant 1-72. Implant length: 10; 11.5; 13 mm. Diameter: 3.0; 3.3mmd. Recommended for bones of type D1, D2 and for narrow alveolar crest. The implant zones are the anterior sections of the upper and lower jaw. Indications - single-stage implantation, immediate implantation, immediate load on the implant.

Anesthesia:

The surgical implantation procedure is performed under general or local anesthesia. The standard procedure for implantation in the oral cavity (gum incision, bone preparation, implant placement, bone augmentation, soft tissue repair, etc.) is most often performed under local anesthesia and does not differ from anesthesia in the treatment of other oral problems. General anesthesia has its own indications (phobia, complex somatic general condition, complex clinical cases, the patient's wishes, etc.) and is carried out together with a specialist anesthetist. Anesthesia is preferably performed with anesthetics with vasoconstrictors, to create good hemostasis, reduce bleeding and reduce the toxic effects of the anesthetic.

The exfoliation of the mucous-periosteal flap:

With the exfoliation of the mucous-periosteal flap the cut should be made in the attached gingival, i.e. in the fixed and not in mobile mucosa of the alveolar crest. It is possible to make the cut middle crest - along the top of the alveolar crest or slightly vestibular or lingual. It is recommended to make the cut lingual or palate; by this while, putting of the stitches the implant will be fully covered by the mucosa, and the stitch will not be located over it. Thus, the danger of the implant's denudation and infection is being reduced. It is necessary to supply the good blood provision of the exfoliated area of the mucosa.

There are few approaches and recommendations on the exfoliation of the mucous-periosteal rag:

- The cut along the alveolar crest with the additional vertical releasing cut, which gives the opportunity to lift the wider area of the mucosa and watch the direction of the osseous, its size, defects. With this decrease the possibility of

the perforation of the vestibular or lingual cortical lamina, and, if the perforation occurred, then it is possible to conduct the directed regeneration of the osseous tissue and close (by orthotropic substances and membrane) the denuded part of the implant. However, with the lifting of the larger area of the mucosa the postoperative period is flowing with the sharply expressed collateral edema near the operative soft tissues, with the appearance of hematomas on the face skin and the mucosa of the oral cavity, sometimes the edema is keeping more than 2 weeks, the divergence of the stitches can occur, and the height of the alveolar crest is most frequently diminishing on 1-2 mm

- The minimal cut or perforations (non-flap), which allows conducting the exfoliation of the mucous-periosteal rag minimally, denude only the upper part of the alveolar crest. In this case, the blood bearing vessels of the periosteal, of the mucosa and tissue are being reserved. With perforations for measuring the height of gingival mucosa using gingival depth probe (450011). The good blood provision of the implanted area of the osseous tissue is being supplied, the height of the alveolar crest is not being diminished, the postoperative period flows with slight collateral edema of the near operative soft tissues, the hematomas are absent, the edema is being reserved for no more than a week and in some cases the postoperative period flows without edema, the healing of the operative field takes place without special complications. However, with the minimal exfoliation of the mucous-periosteal rag the perforation of the vestibular or lingual cortical lamina of the alveolar crest and further denudation of the implant, the entry into the osseous lodge of the implant of the soft tissues (periosteal, mucosa) are possible, which will cause the rejection of the implant.

- Without incision, perforation of the mucous membrane of the alveolar process, without detachment of the mucous-periosteal rag. For this technique, it is always necessary to perform a CT X-ray before and after implantation and to manufacture 3D surgical guides for bone preparation. At the same time, the

blood vessels of the periosteal, mucous and bone tissues are reserved, a good blood supply to the implantable bone tissue is provided, the height of the alveolar crest is not reduced, and the postoperative periods without collateral defects. Edema of the adjacent soft tissues, hematomas are absent, healing of the surgical field occurs without any special complications. However, in this case, perforation of the vestibular or lingual cortical plate and further denudation of the implant is possible, a very high risk of penetration of the soft tissue (periosteal, mucous membrane) into the bone bed of the implant, which will lead to failure of the implant. It is not always possible to get a good gingival cuff over the implant for making aesthetic prosthetics.

-In the Mental Foramen area, it is necessary to denude the hole in the osseous and measure the distance between it and the alveolar crest. In the Mental Foramen area, the vertical releasing cut is not made. If the Mental Foramen is on the top of the alveolar crest, which is frequently met with the sharp atrophy of the alveolar crest of the mandible, the cut of the mucosa in the Mental Foramen area is made lingual in order to prevent the cut of the mental nerve.

- On the palate area a care should be taken not to damage the Crater Palatine Artery, and in the area of its location, the cuts are not conducted.

-With the operation on the frontal area of the maxilla in order not to damage the incisor's nerve the cut is conducted at first in the side areas along the alveolar crest and in the frontal area the cut goes around the place of the exit of the incisor's nerve.

- In case of the presence of the intact teeth the releasing cut I approximately repeating the outline of the gingival edge. The cu should not injure the marginal periodontal and the gingival papilla.

Implantation protocol:

Before bone preparation for implant placement, it is first necessary to determine which implantation method will be performed, what

type and size of the implant will be installed depending on the implantation method and the state of hard and soft tissues in the implantation zone. It is necessary to obtain the initial fixation of the implant depending on the treatment method and at the same time maintain the reparative properties of the bone around the implant and not violate the integrity of the internal connection of the implant and the implant itself. Implantation protocols for all types and sizes of DMI implants are shown in the tables below:

1.1. Implantation protocol: drilling procedure (with cylindrical drills) for various diameters of Prima PRTI implants and with a complete indication of bone preparation parameters for various types of bone and implantation methods. Minimum and maximum strength when screwing implants for different implant diameters with different types of bone and implantation methods. Indicator choosing the type of abutment for different implant diameters.

Surgical Cylindrical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd ● № 403419	Surgical Drill 2 mmd ○ № 401720	Surgical Drill 2.8 mmd ● № 401728	Surgical Drill 3.2 mmd ● № 401732	Surgical Drill 3.65 mmd ● № 401737	Surgical Drill 4.2 mmd ● № 401742	Surgical Drill 5.2 mmd ● № 401752	Countersink Surgical Drill Slim (3.75-4.2) № 400742	Countersink Surgical Drill (5.0-6.0) № 400759	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
PRTI standard connection Hex 2.43 mm	The narrow diameter – 3.3 mmd	D3-D4	Two-stage	YES	YES	YES					YES NO		15	30	
			One stage	YES	YES	YES					YES NO		20	30	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES					YES		15	30	
			One stage	YES	YES	YES					YES		20	30	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D1	Two-stage	YES	YES	YES	YES				YES		15	30	
			One stage	YES	YES	YES	YES				YES		20	30	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 3.75 mmd	D3-D4	Two-stage	YES	YES	YES	YES				YES NO		15	35	
			One stage	YES	YES	YES	YES				YES NO		20	35	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES				YES		15	35	
			One stage	YES	YES	YES	YES				YES		20	45	
			Immediately load	YES	YES	YES	YES				YES NO		45	70	
		D1	Two-stage	YES	YES	YES	YES	YES			YES		15	35	
			One stage	YES	YES	YES	YES	YES			YES		20	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 4.2 mmd	D3-D4	Two-stage	YES	YES	YES	YES	YES NO			YES NO		15	35	
			One stage	YES	YES	YES	YES	YES NO			YES NO		20	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES			YES		15	45	
			One stage	YES	YES	YES	YES	YES			YES		20	45	
			Immediately load	YES	YES	YES	YES	YES			YES NO		45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES		YES		15	45	
			One stage	YES	YES	YES	YES	YES	YES		YES		20	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide in diameter – 5.0 mmd	D3-D4	Two-stage	YES	YES	YES	YES	YES	YES NO			YES NO	15	45	
			One stage	YES	YES	YES	YES	YES	YES NO			YES NO	20	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES				YES	15	45	
			One stage	YES	YES	YES	YES	YES				YES	20	45	
			Immediately load	YES	YES	YES	YES	YES				YES NO	45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES	YES		YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES		YES	20	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide in diameter – 6.0 mmd	D3-D4	Two-stage	YES	YES	YES	YES	YES	YES NO	YES NO		YES NO	15	45	
			One stage	YES	YES	YES	YES	YES	YES NO	YES NO		YES NO	20	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES	YES	YES		YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES		YES	20	45	
			Immediately load	YES	YES	YES	YES	YES	YES	YES		YES NO	45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES	YES		YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES		YES	20	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

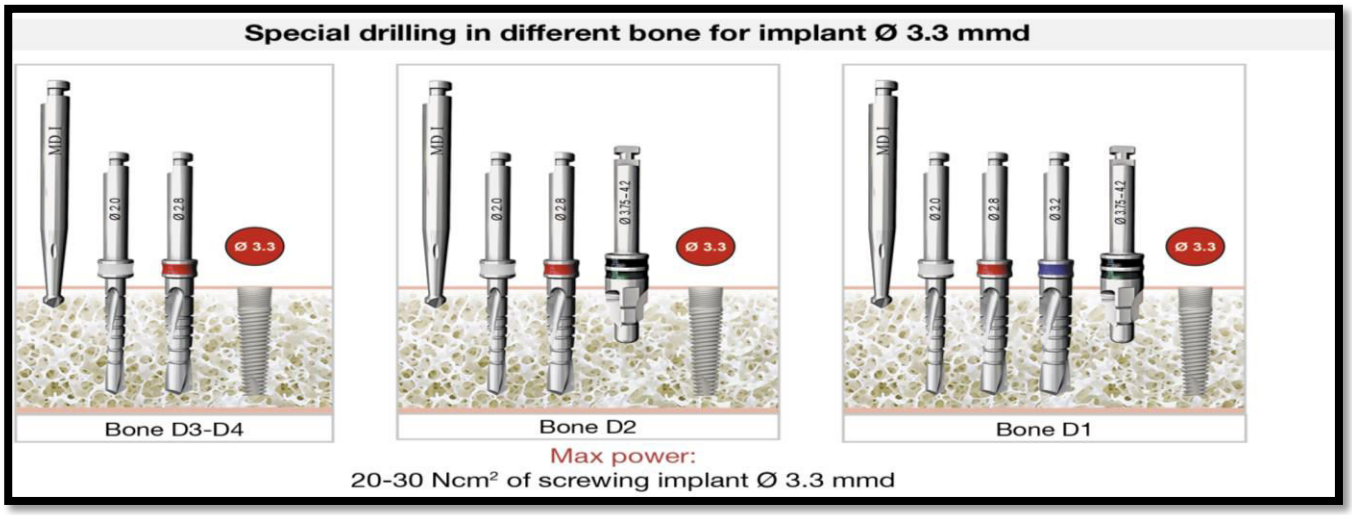
PRTI

INTERNAL HEX 2.43

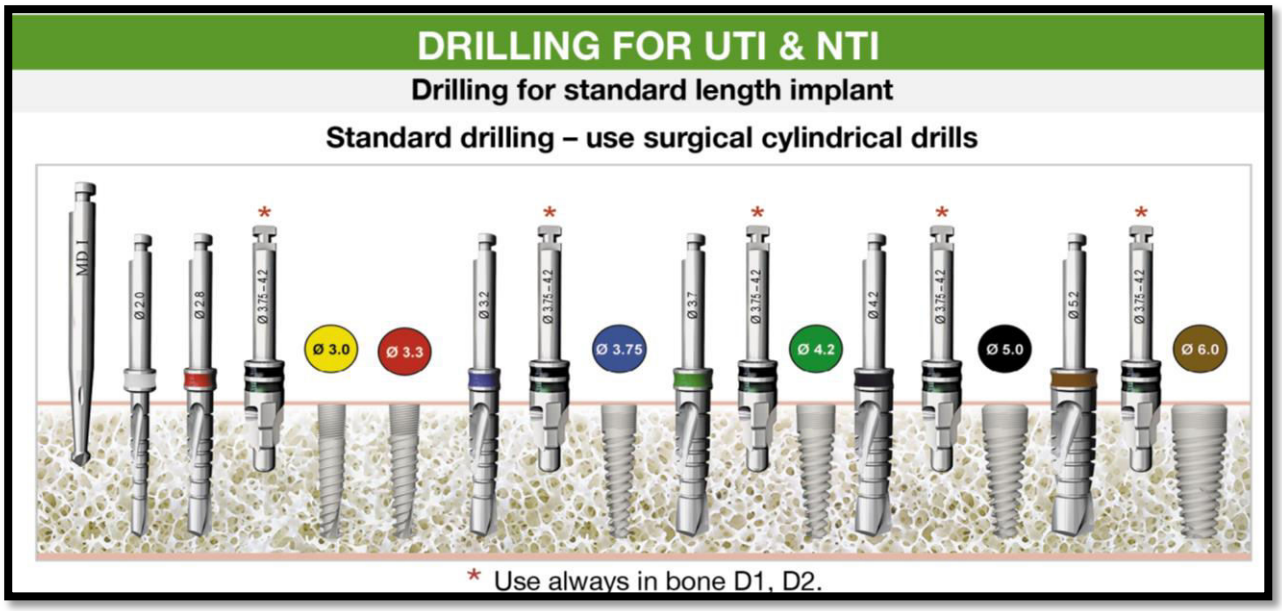
INTERNAL WITHOUT HEX 2.1 & 2.43

1.2. Implantation protocol for bone drilling (with cylindrical drills) for different diameters of PRIMA short implants (Critical sizes).

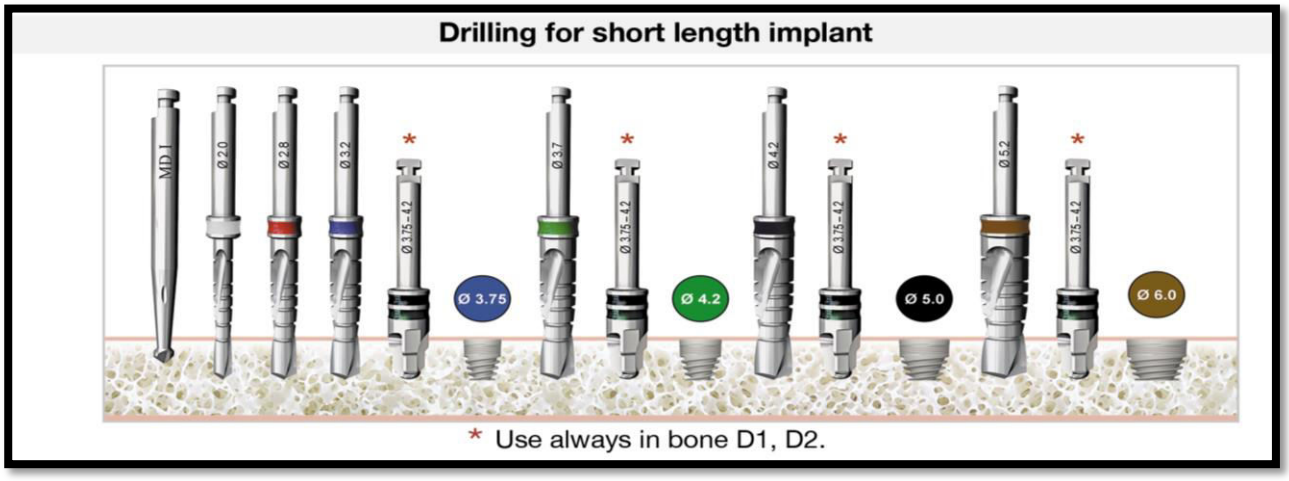
1.3. Implantation protocol for bone drilling (with cylindrical drills) for different diameters of PRIMA narrow implants (Critical sizes).



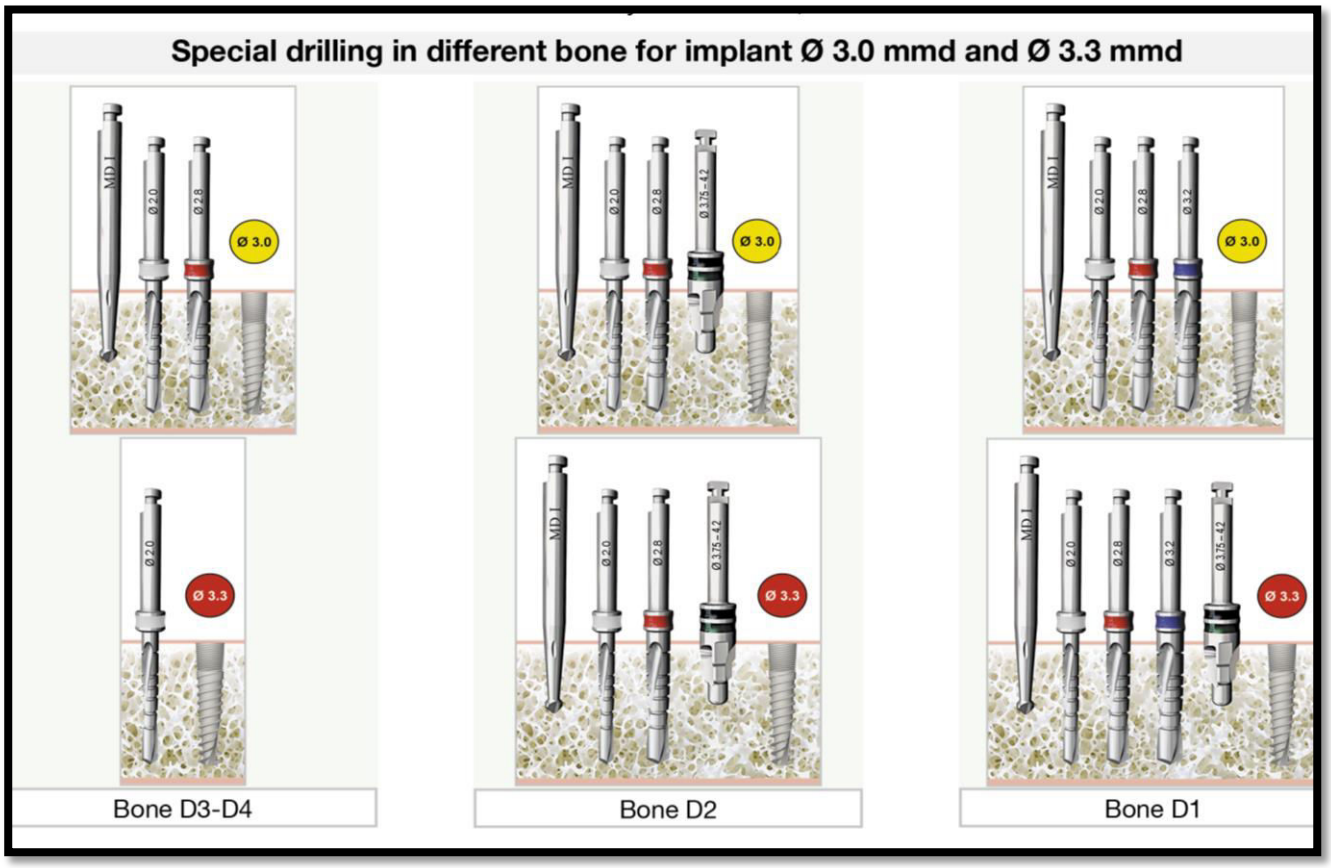
2.1. Implantation protocol for drilling (with cylindrical drills) and with placement of implants in the bone for different diameters of Unique-UTI, Nova-NTI implants.



2.2. Implantation protocol for bone drilling (with cylindrical drills) for different diameters of Unique-UTI, Nova-NTI short implants (Critical sizes).



2.3. Implantation protocol for bone drilling (with cylindrical drills) for different diameters of Unique-UTI, Nova-NTI narrow implants (Critical sizes).



2.4. Implantation protocol: drilling procedure (with cylindrical drills) for various diameters of Unique-UTI, Nova-NTI implants and with a complete indication of bone preparation parameters for various types of bone and implantation methods. Minimum and maximum strength when screwing implants for different implant diameters with different types of bone and implantation methods. Indicator choosing the type of abutment for different implant diameters.

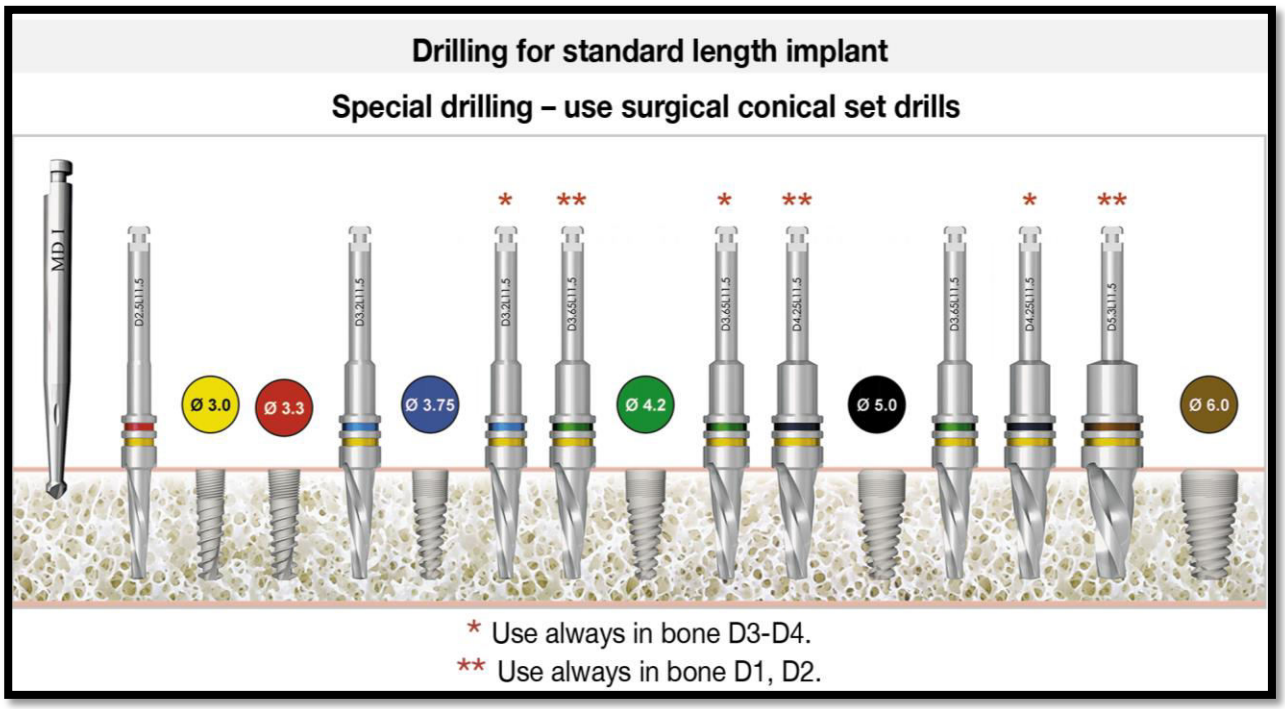
Surgical Cylindrical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd № 403419	Surgical Drill 2 mmd № 401720	Surgical Drill 2.8 mmd № 401728	Surgical Drill 3.2 mmd № 401732	Surgical Drill 3.65 mmd № 401737	Surgical Drill 4.2 mmd № 401742	Surgical Drill 5.2 mmd № 401752	Countersink Surgical Drill Slim (3.75-4.2) № 400742	Countersink Surgical Drill (5.0-6.0) № 400759	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
UTI	The narrow diameter – 3.0 mmd (connection Internal Hex 2.1 mm)	D3-D4	Two-stage	YES	YES	YES							15	25	
			One stage	YES	YES	YES / NO							20	25	
			Immediately implantation	YES	YES	YES / NO							15	25	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES					YES / NO		15	25	
			One stage	YES	YES	YES					YES / NO		20	25	
			Immediately implantation	YES	YES	YES					YES / NO		15	25	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D1	Two-stage	YES	YES	YES	YES				YES		15	25	
			One stage	YES	YES	YES	YES				YES		20	25	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The narrow diameter – 3.3 mmd (connection Internal Hex 2.1 mm)	D3-D4	Two-stage	YES	YES	YES							15	25	
			One stage	YES	YES	YES / NO							20	30	
			Immediately implantation	YES	YES	YES / NO							15	30	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES					YES / NO		15	30	
			One stage	YES	YES	YES					YES / NO		20	35	
			Immediately implantation	YES	YES	YES					YES / NO		15	35	
			Immediately load	YES	YES	YES	YES				YES / NO		40	50	
		D1	Two-stage	YES	YES	YES	YES				YES		15	30	
			One stage	YES	YES	YES	YES				YES		20	30	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 3.75 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES / NO				YES / NO		15	35	
			One stage	YES	YES	YES	YES / NO				YES / NO		20	35	
			Immediately implantation	YES	YES	YES	YES / NO						15	35	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES				YES		15	45	
			One stage	YES	YES	YES	YES				YES		20	45	
			Immediately implantation	YES	YES	YES	YES						15	45	
			Immediately load	YES	YES	YES	YES				YES / NO		45	70	
		D1	Two-stage	YES	YES	YES	YES	YES			YES		15	45	
			One stage	YES	YES	YES	YES	YES			YES		25	45	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

INTERNAL HEX 2.1 INTERNAL HEX 2.43 INTERNAL WITHOUT HEX 2.1 & 2.43

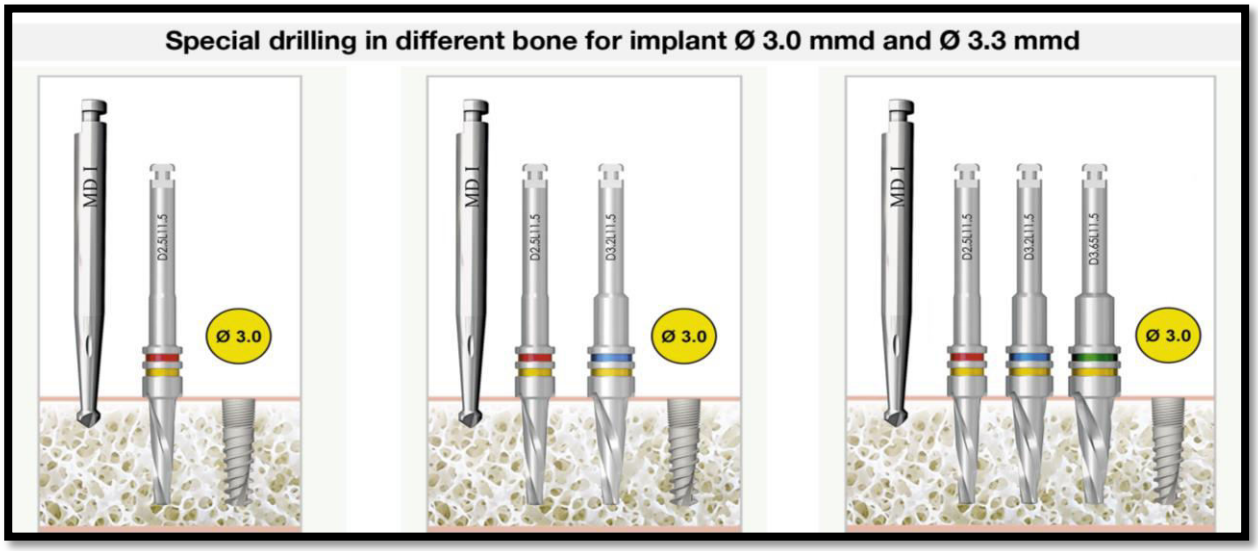
Surgical Cylindrical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd № 403419	Surgical Drill 2 mmd № 401720	Surgical Drill 2.8 mmd № 401728	Surgical Drill 3.2 mmd № 401732	Surgical Drill 3.65 mmd № 401737	Surgical Drill 4.2 mmd № 401742	Surgical Drill 5.2 mmd № 401752	Countersink Surgical Drill Slim (3.75-4.2) № 400742	Countersink Surgical Drill (5.0-6.0) № 400759	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
UTI	The standard diameter – 4.2 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES	YES NO			YES NO		15	35	
			One stage	YES	YES	YES	YES	YES NO			YES NO		20	35	
			Immediately implantation	YES	YES	YES	YES NO	YES NO					15	35	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES			YES		15	45	
			One stage	YES	YES	YES	YES	YES			YES		20	45	
			Immediately implantation	YES	YES	YES	YES	YES NO					15	45	
			Immediately load	YES	YES	YES	YES	YES NO			YES NO		45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES		YES		15	45	
			One stage	YES	YES	YES	YES	YES	YES		YES		20	45	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 5.0 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES	YES	YES NO			YES NO	15	45	
			One stage	YES	YES	YES	YES	YES	YES NO			YES NO	20	45	
			Immediately implantation	YES	YES	YES	YES	YES NO	YES NO				15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES	YES			YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES			YES NO	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES NO				15	45	
			Immediately load	YES	YES	YES	YES	YES	YES NO			YES NO	45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES	YES		YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES		YES	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES	YES NO			15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 6.0 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES	YES	YES NO	YES NO		YES NO	15	45	
			One stage	YES	YES	YES	YES	YES	YES NO	YES NO		YES NO	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES NO	YES NO			15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES	YES	YES		YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES		YES	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES NO	YES NO			15	45	
			Immediately load	YES	YES	YES	YES	YES	YES	YES		YES NO	45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES	YES		YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES		YES	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES	YES			15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

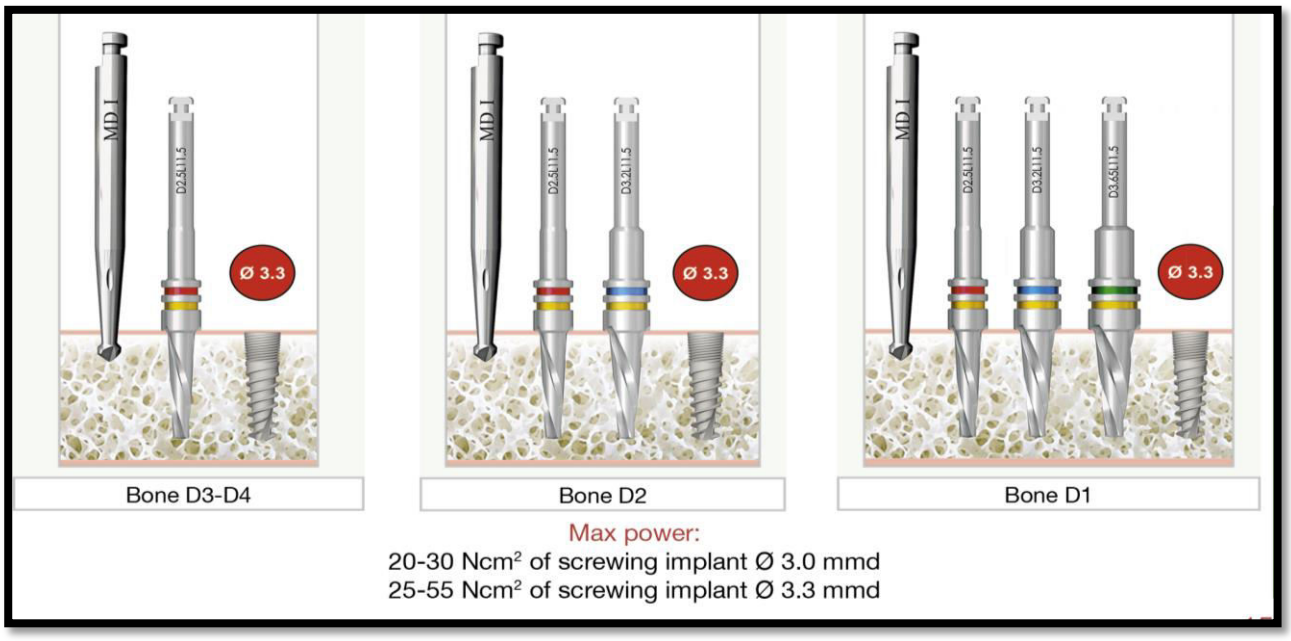
INTERNAL HEX 2.1 INTERNAL HEX 2.43 INTERNAL WITHOUT HEX 2.1 & 2.43

2.5. Implantation protocol for drilling (with conical drills) and with placement of implants in the bone for different diameters of Unique-UTI, Nova-NTI implants.



2.6. Implantation protocol for bone drilling (with conical drills) for different diameters of Unique-UTI, Nova-NTI narrow implants (Critical sizes).





2.7. Implantation protocol: drilling procedure (with conical drills) for various diameters of Unique-UTI, Nova-NTI implants and with a complete indication of bone preparation parameters for various types of bone and implantation methods. Minimum and maximum strength when screwing implants for different implant diameters with different types of bone and implantation methods. Indicator choosing the type of abutment for different implant diameters.

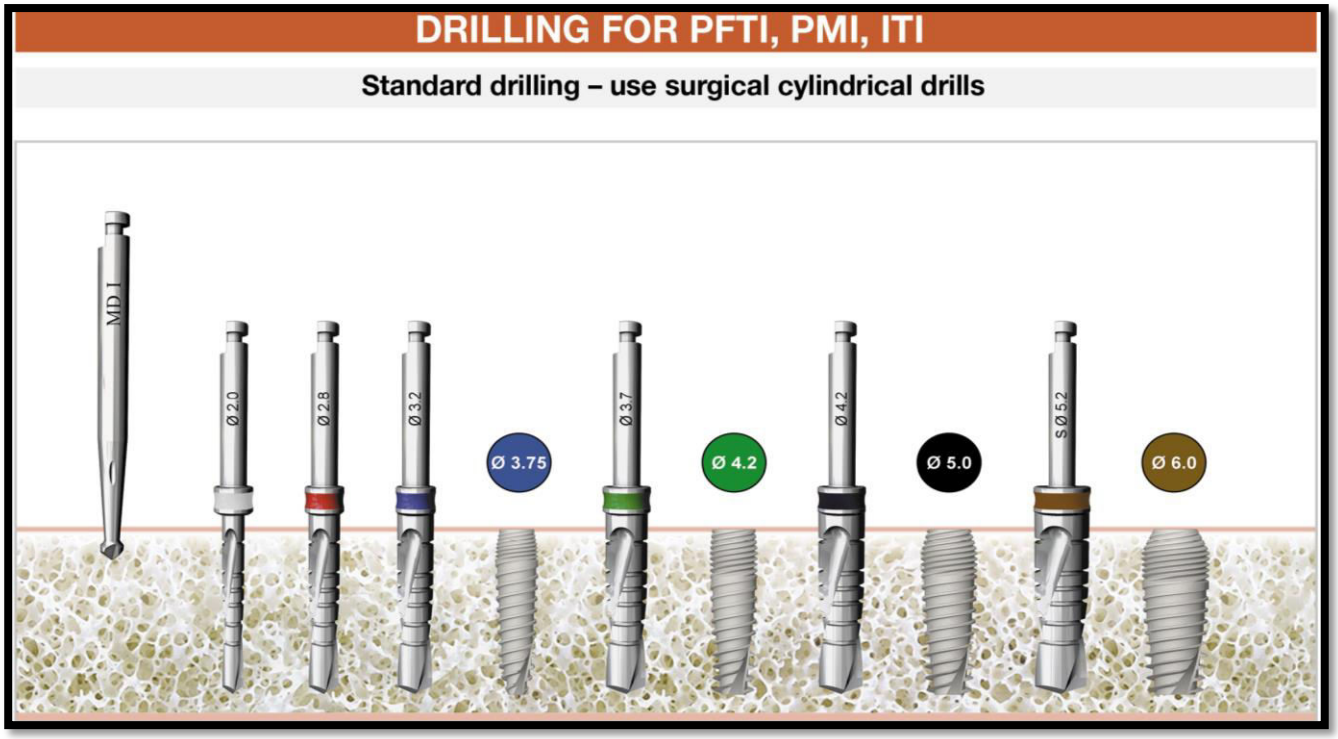
Special instructions:

1. **R -** Reverse rotation of the drill counter-clockwise. Drill reverse rotation speed for bone preparation from 1000 to 1200 rpm, with obligatory water-cooling. Drill Reverse rotation Speed for bone compaction from 100 to 150 rpm, without water-cooling.
2. Conical drill with stopper **-** corresponds to the length of the implant.

Conical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd № 403419	Surgical Drill 1.5/2.5 mmd	Surgical Drill 1.5/3.2 mmd	Surgical Drill 1.7/3.7 mmd	Surgical Drill 2.1/4.2 mmd	Surgical Drill 3.0/5.3 mmd	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
Conical Drills – UTI	The narrow diameter – 3.0 mmd (connection Internal Hex 2.1 mm)	D3-D4	Two-stage	YES		YES R				15	25	
			One stage	YES		YES R				20	25	
			Immediately implantation	YES		YES R				15	25	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES		YES				15	25	
			One stage	YES		YES				20	25	
			Immediately implantation	YES	YES	YES				15	25	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
	The narrow diameter – 3.3 mmd (connection Internal Hex 2.1 mm)	D3-D4	Two-stage	YES		YES R				15	25	
			One stage	YES		YES R				20	30	
			Immediately implantation	YES		YES R				15	30	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES				15	30	
			One stage	YES	YES	YES				20	35	
			Immediately implantation	YES	YES	YES				20	35	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 3.75 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	NO / YES R			15	45	
			One stage	YES	YES R	YES R				25	45	
			Immediately implantation	YES	YES R	YES R				20	45	
			Immediately load	YES	YES R	YES R				45	70	
		D2	Two-stage	YES	YES	YES	YES			15	45	
			One stage	YES	YES	YES	YES			20	45	
			Immediately implantation	YES	YES	YES	YES			20	45	
			Immediately load	YES	YES	YES	YES			45	70	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	

Conical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd № 403419	Surgical Drill 1.5/2.5 mmd	Surgical Drill 1.5/3.2 mmd	Surgical Drill 1.7/3.7 mmd	Surgical Drill 2.1/4.2 mmd	Surgical Drill 3.0/5.3 mmd	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
Conical Drills – UTI	The standard diameter – 4.2 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	NO YES R			15	45	
			One stage	YES	YES R	YES R	NO YES R			20	45	
			Immediately implantation	YES	YES R	YES R	NO YES R			25	45	
			Immediately load	YES	YES R	YES R	NO YES R			45	70	
		D2	Two-stage	YES	YES	YES	YES	NO YES		20	45	
			One stage	YES	YES	YES	YES	NO YES		30	45	
			Immediately implantation	YES	YES	YES	YES			20	45	
			Immediately load	YES	YES	YES	YES			45	70	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 5.0 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	YES R	YES R		15	45	
			One stage	YES	YES R	YES R	YES R	YES R		20	45	
			Immediately implantation	YES	YES R	YES R	YES R	NO YES		20	45	
			Immediately load	YES	YES R	YES R	YES R	NO YES		45	70	
		D2	Two-stage	YES	YES	YES	YES	YES		20	45	
			One stage	YES	YES	YES	YES	YES		30	45	
			Immediately implantation	YES	YES	YES	YES	YES		30	45	
			Immediately load	YES	YES	YES	YES	YES		45	70	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 6.0 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	YES R	YES R	YES R	15	45	
			One stage	YES	YES R	YES R	YES R	YES R	YES R	20	45	
			Immediately implantation	YES	YES R	YES R	YES R	YES R	YES R	20	45	
			Immediately load	YES	YES R	YES R	YES R	YES R	YES R	45	70	
		D2	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	

3.1. Implantation protocol for drilling (with cylindrical drills) and with placement of implants in the bone for different diameters of Perfect-PFTI, Perfect Modular-PMI, Ideal - ITI implants.

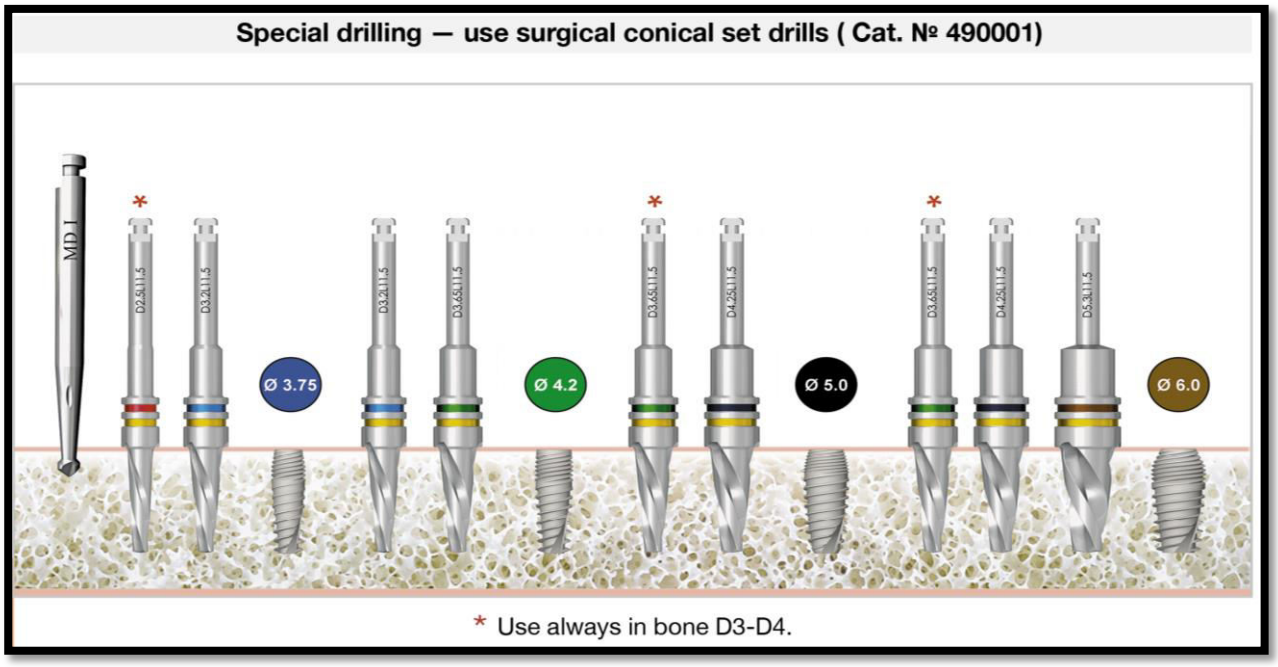


3.2. Implantation protocol: drilling procedure (with cylindrical drills) for various diameters of Perfect-PFTI, Perfect Modular-PMI, Ideal - ITI implants and with a complete indication of bone preparation parameters for various types of bone and implantation methods. Minimum and maximum strength when screwing implants for different implant diameters with different types of bone and implantation methods. Indicator choosing the type of abutment for different implant diameters

Surgical Cylindrical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd № 403419	Surgical Drill 2 mmd № 401720	Surgical Drill 2.8 mmd № 401728	Surgical Drill 3.2 mmd № 401732	Surgical Drill 3.65 mmd № 401737	Surgical Drill 4.2 mmd № 401742	Surgical Drill 5.2 mmd № 401752	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
PFTI	The standard diameter – 3.75 mmd (connection Internal Hex 2.1 mm)	D3-D4	Two-stage	YES	YES	YES	YES / NO				15	35	
			One stage	YES	YES	YES	YES / NO				20	35	
			Immediately implantation	YES	YES	YES	YES / NO				15	35	
			Immediately load	YES	YES	YES	YES / NO				45	55	
		D2	Two-stage	YES	YES	YES	YES				15	35	
			One stage	YES	YES	YES	YES				20	35	
			Immediately implantation	YES	YES	YES	YES				15	35	
			Immediately load	YES	YES	YES	YES				45	55	
		D1	Two-stage	YES	YES	YES	YES	YES			15	35	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	YES	YES	YES	YES	YES			15	35	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 4.2 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES	YES / NO			15	35	
			One stage	YES	YES	YES	YES	YES / NO			20	35	
			Immediately implantation	YES	YES	YES	YES / NO	YES / NO			15	35	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES			15	45	
			One stage	YES	YES	YES	YES	YES			20	45	
			Immediately implantation	YES	YES	YES	YES	YES / NO			15	45	
			Immediately load	YES	YES	YES	YES	YES / NO			45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES		15	45	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	YES	YES	YES	YES	YES	YES		15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 5.0 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES	YES	YES / NO		15	45	
			One stage	YES	YES	YES	YES	YES	YES / NO		20	45	
			Immediately implantation	YES	YES	YES	YES	YES / NO	YES / NO		15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES	YES		15	45	
			One stage	YES	YES	YES	YES	YES	YES		20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES / NO		15	45	
			Immediately load	YES	YES	YES	YES	YES	YES / NO		45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES	YES	15	45	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	YES	YES	YES	YES	YES	YES	YES	15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 6.0 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES	YES	YES / NO	YES / NO	15	45	
			One stage	YES	YES	YES	YES	YES	YES / NO	YES / NO	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES / NO	YES / NO	15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES	YES	YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES	YES / NO	15	45	
			Immediately load	YES	YES	YES	YES	YES	YES	YES	45	70	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	

INTERNAL HEX 2.1 INTERNAL HEX 2.43 INTERNAL WITHOUT HEX 2.1 & 2.43

3.3. Implantation protocol for drilling (with conical drills) and with placement of implants in the bone for different diameters of Perfect-PFTI, Perfect Modular-PMI, Ideal - ITI implants.



3.4. Implantation protocol: drilling procedure (with conical drills) for various diameters of Perfect-PFTI, Perfect Modular-PMI, Ideal - ITI implants and with a complete indication of bone preparation parameters for various types of bone and implantation methods. Minimum and maximum strength when screwing implants for different implant diameters with different types of bone and implantation methods. Indicator choosing the type of abutment for different implant diameters.

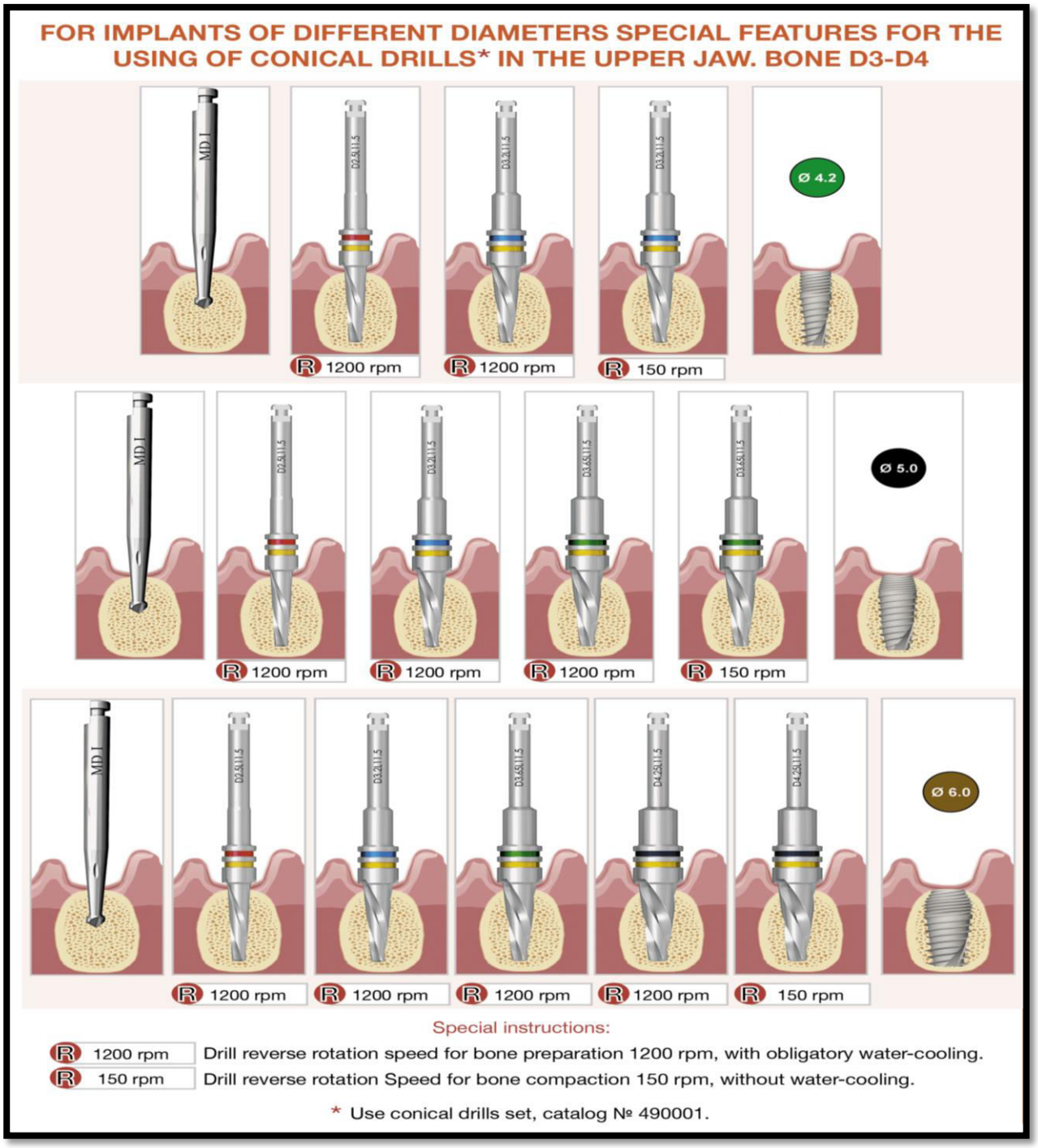
Special instructions:

1. **R –** Reverse rotation of the drill counter-clockwise. Drill reverse rotation speed for bone preparation from 1000 to 1200 rpm, with obligatory water-cooling. Drill Reverse rotation Speed for bone compaction from 100 to 150 rpm, without water-cooling.
2. Conical drill with stopper **–** corresponds to the length of the implant.

Conical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd ● № 403419	Surgical Drill 1.5/2.5 mmd	Surgical Drill 1.5/3.2 mmd	Surgical Drill 1.7/3.7 mmd	Surgical Drill 2.1/4.2 mmd	Surgical Drill 3.0/5.3 mmd	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
Conical Drills – PFTI	The standard diameter – 3.75 mmd (connection Internal Hex 2.1 mm)	D3-D4	Two-stage	YES	YES R	YES NO R				15	35	
			One stage	YES	YES R	YES NO R				20	35	
			Immediately implantation	YES	YES R	YES NO R				15	35	
			Immediately load	YES	YES R	YES NO R				45	55	
		D2	Two-stage	YES	YES	YES				15	35	
			One stage	YES	YES	YES				20	35	
			Immediately implantation	YES	YES	YES				15	35	
			Immediately load	YES	YES	YES				45	55	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 4.2 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	YES NO R			15	35	
			One stage	YES	YES R	YES R	YES NO R			20	35	
			Immediately implantation	YES	YES R	YES R	YES NO R			15	35	
			Immediately load		YES R	YES R	YES NO R			45	55	
		D2	Two-stage	YES	YES	YES	YES			15	35	
			One stage	YES	YES	YES	YES			20	35	
			Immediately implantation	YES	YES	YES	YES NO			15	35	
			Immediately load	YES	YES	YES	YES NO			45	55	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 5.0 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	YES R	YES R		15	35	
			One stage	YES	YES R	YES R	YES R	YES R		20	35	
			Immediately implantation	YES	YES R	YES R	YES R	YES NO R		15	35	
			Immediately load	YES	YES R	YES R	YES R	YES NO R		45	55	
		D2	Two-stage	YES	YES	YES	YES	YES		15	35	
			One stage	YES	YES	YES	YES	YES		20	35	
			Immediately implantation	YES	YES	YES	YES	YES NO		15	35	
			Immediately load	YES	YES	YES	YES	YES NO		45	55	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 6.0 mmd (connection Internal Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	YES R	YES R	YES NO R	15	35	
			One stage	YES	YES R	YES R	YES R	YES R	YES NO R	20	35	
			Immediately implantation	YES	YES R	YES R	YES R	YES R	YES NO R	15	35	
			Immediately load	YES	YES R	YES R	YES R	YES R	YES NO R	45	55	
		D2	Two-stage	YES	YES	YES	YES	YES	YES	15	35	
			One stage	YES	YES	YES	YES	YES	YES	20	35	
			Immediately implantation	YES	YES	YES	YES	YES	YES NO	15	35	
			Immediately load	YES	YES	YES	YES	YES	YES NO	45	55	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	

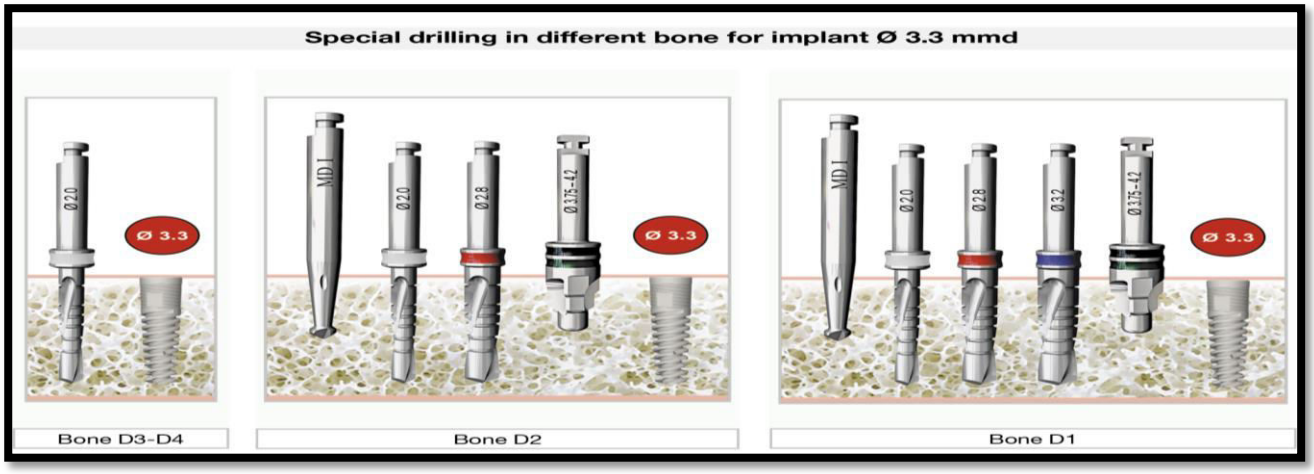
INTERNAL HEX 2.1 INTERNAL HEX 2.43 INTERNAL WITHOUT HEX 2.1 & 2.43

3.5. Special implantation protocol: reverse drilling procedure (with conical drills) for various implant diameters Perfect-PFTI, Perfect Modular-PMI, Ideal - ITI for implantation in bone D3-D4.



4.1. Implantation protocol for drilling (with conical drills) and with placement of implants in the bone for different diameters of Unique Modular-UMI implants.

4.2. Implantation protocol for bone drilling (with conical drills) for different diameters of Unique Modular-UMI implants (Critical sizes).



4.3. Implantation protocol: drilling procedure (with cylindrical drills) for various diameters of Unique Modular-UMI implants and with a complete indication of bone preparation parameters for various types of bone and implantation methods. Minimum and maximum strength when screwing implants for different implant diameters with different types of bone and implantation methods. Indicator choosing the type of abutment for different implant diameters:

Surgical Cylindrical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd № 403419	Surgical Drill 2 mmd № 401720	Surgical Drill 2.8 mmd № 401728	Surgical Drill 3.2 mmd № 401732	Surgical Drill 3.65 mmd № 401737	Surgical Drill 4.2 mmd № 401742	Surgical Drill 5.2 mmd № 401752	Countersink Surgical Drill Slim (3.75-4.2) № 400742	Countersink Surgical Drill (5.0-6.0) № 400759	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
UMI	The narrow diameter – 3.3 mmd (connection Internal Conical + Hex 2.1 mm)	D3-D4	Two-stage	YES	YES	YES							15	25	
			One stage	YES	YES	YES / NO							20	30	
			Immediately implantation	YES	YES	YES / NO							15	30	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES					YES / NO		15	30	
			One stage	YES	YES	YES					YES / NO		20	35	
			Immediately implantation	YES	YES	YES					YES / NO		15	35	
			Immediately load	YES	YES	YES	YES				YES / NO		40	50	
		D1	Two-stage	YES	YES	YES	YES				YES		15	30	
			One stage	YES	YES	YES	YES				YES		20	30	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 3.75 mmd (connection Internal Conical + Hex 2.1 mm)	D3-D4	Two-stage	YES	YES	YES	YES / NO				YES / NO		15	35	
			One stage	YES	YES	YES	YES / NO				YES / NO		20	35	
			Immediately implantation	YES	YES	YES	YES / NO						15	35	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES				YES		15	45	
			One stage	YES	YES	YES	YES				YES		20	45	
			Immediately implantation	YES	YES	YES	YES						15	45	
			Immediately load	YES	YES	YES	YES				YES / NO		45	70	
		D1	Two-stage	YES	YES	YES	YES	YES			YES		15	35	
			One stage	YES	YES	YES	YES	YES			YES		25	45	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 4.2 mmd (connection Internal Conical + Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES	YES / NO			YES / NO		15	35	
			One stage	YES	YES	YES	YES	YES / NO			YES / NO		20	45	
			Immediately implantation	YES	YES	YES	YES / NO	YES / NO					15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES			YES		15	45	
			One stage	YES	YES	YES	YES	YES			YES		20	45	
			Immediately implantation	YES	YES	YES	YES	YES / NO					15	45	
			Immediately load	YES	YES	YES	YES	YES / NO			YES / NO		45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES		YES		15	45	
			One stage	YES	YES	YES	YES	YES	YES		YES		20	45	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

INTERNAL CONICAL + HEX 2.43

INTERNAL CONICAL WITHOUT HEX 2.43

INTERNAL CONICAL + HEX 2.1

INTERNAL CONICAL WITHOUT HEX 2.1

Surgical Cylindrical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd № 403419	Surgical Drill 2 mmd № 401720	Surgical Drill 2.8 mmd № 401728	Surgical Drill 3.2 mmd № 401732	Surgical Drill 3.65 mmd № 401737	Surgical Drill 4.2 mmd № 401742	Surgical Drill 5.2 mmd № 401752	Countersink Surgical Drill Slim (3.75-4.2) № 400742	Countersink Surgical Drill (5.0-6.0) № 400759	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
UMI	The wide diameter – 5.0 mmd (connection Internal Conical + Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES	YES	NO / YES			NO / YES	15	45	
			One stage	YES	YES	YES	YES	YES	NO / YES			NO / YES	20	45	
			Immediately implantation	YES	YES	YES	YES	NO / YES	NO / YES				15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES	YES			YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES			NO / YES	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	NO / YES				15	45	
			Immediately load	YES	YES	YES	YES	YES	NO / YES			NO / YES	45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES	YES		YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES		YES	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES	NO / YES			15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 6.0 mmd (connection Internal Conical + Hex 2.43 mm)	D3-D4	Two-stage	YES	YES	YES	YES	YES	NO / YES	NO / YES		NO / YES	15	45	
			One stage	YES	YES	YES	YES	YES	NO / YES	NO / YES		NO / YES	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	NO / YES	NO / YES			15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
		D2	Two-stage	YES	YES	YES	YES	YES	YES	YES		YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES		YES	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	NO / YES	NO / YES			15	45	
			Immediately load	YES	YES	YES	YES	YES	YES	YES		NO / YES	45	70	
		D1	Two-stage	YES	YES	YES	YES	YES	YES	YES		YES	15	45	
			One stage	YES	YES	YES	YES	YES	YES	YES		YES	20	45	
			Immediately implantation	YES	YES	YES	YES	YES	YES	YES			15	45	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

INTERNAL CONICAL + HEX 2.43

INTERNAL CONICAL WITHOUT HEX 2.43

INTERNAL CONICAL + HEX 2.1

INTERNAL CONICAL WITHOUT HEX 2.1

3.2. Implantation protocol: drilling procedure (with conical drills) for various diameters of Unique Modular-UMI implants and with a complete indication of bone preparation parameters for various types of bone and implantation methods. Minimum and maximum strength when screwing implants for different implant diameters with different types of bone and implantation

methods. Indicator choosing the type of abutment for different implant diameters:

Conical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd № 403419	Surgical Drill 1.5/2.5 mmd	Surgical Drill 1.5/3.2 mmd	Surgical Drill 1.7/3.7 mmd	Surgical Drill 2.1/4.2 mmd	Surgical Drill 3.0/5.3 mmd	Countersink Surgical Drill Slim (3.75-4.2) № 400742	Countersink Surgical Drill (5.0-6.0) № 400759	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
Conical Drills – UMI	The narrow diameter – 3.3 mmd (connection Internal Conical + Hex 2.1 mm)	D3-D4	Two-stage	YES		YES R						15	25	
			One stage	YES		YES R						20	35	
			Immediately implantation	YES		YES R						15	35	
			Immediately load	YES	YES R	NO YES R						40	55	
		D2	Two-stage	YES	YES	YES						15	35	
			One stage	YES	YES	YES						20	45	
			Immediately implantation	YES	YES	YES						20	45	
			Immediately load	YES	YES R	NO YES R						40	55	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 3.75 mmd (connection Internal Conical + Hex 2.1 mm)	D3-D4	Two-stage	YES	YES R	NO YES R				NO YES		15	35	
			One stage	YES	YES R	NO YES R				NO YES		25	45	
			Immediately implantation	YES	YES R	NO YES R						20	45	
			Immediately load	YES	YES R	NO YES R						45	70	
		D2	Two-stage	YES	YES R	YES R				YES		15	45	
			One stage	YES	YES R	YES R				YES		25	45	
			Immediately implantation	YES	YES R	YES R						20	45	
			Immediately load	YES	YES R	YES R				NO YES		45	70	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The standard diameter – 4.2 mmd (connection Internal Conical + Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	NO YES R			NO YES		15	45	
			One stage	YES	YES R	YES R	NO YES R			NO YES		20	45	
			Immediately implantation	YES	YES R	YES R	NO YES R					25	45	
			Immediately load		YES R	YES R	NO YES R					45	70	
		D2	Two-stage	YES	YES R	YES R	YES R			YES		20	45	
			One stage	YES	YES R	YES R	YES R			YES		30	45	
			Immediately implantation	YES	YES R	YES R	NO YES R					20	45	
			Immediately load	YES	YES R	YES R	NO YES R			NO YES		45	70	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

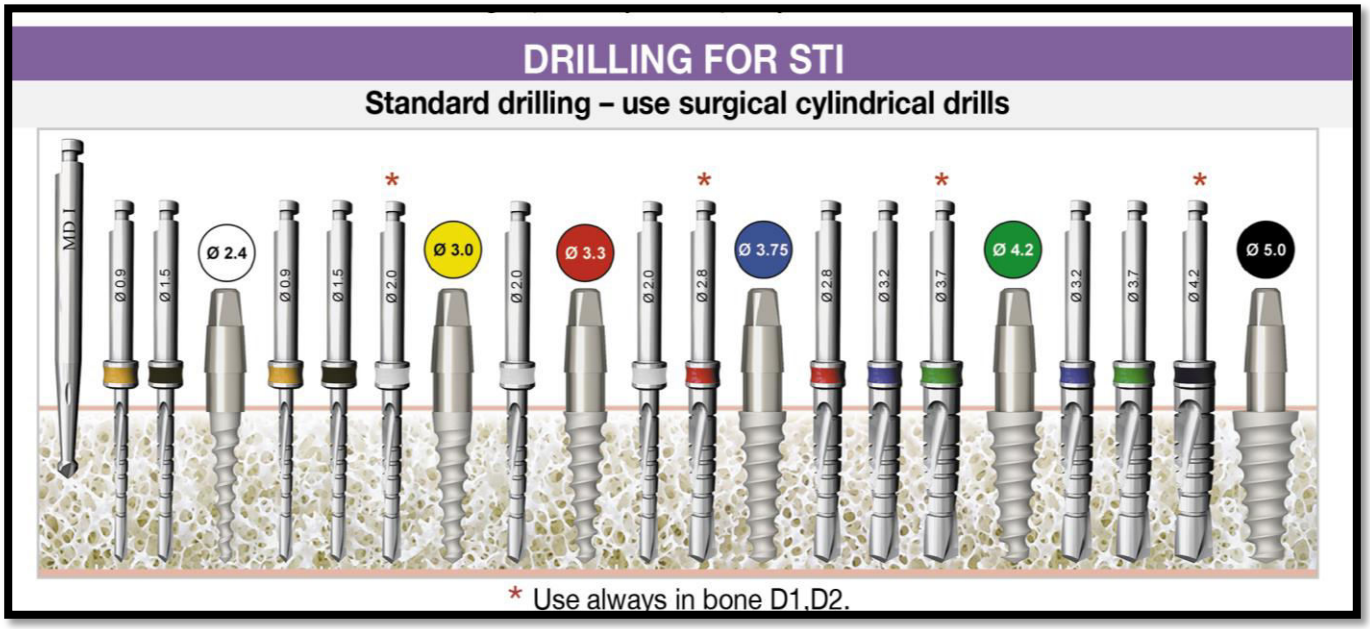
INTERNAL CONICAL + HEX 2.43 | INTERNAL CONICAL WITHOUT HEX 2.43 | INTERNAL CONICAL + HEX 2.1 | INTERNAL CONICAL WITHOUT HEX 2.1

Conical Drills		Bone type	Treatment method	Marking Surgical Drill 1.9 mmd № 403419	Surgical Drill 1.5/2.5 mmd	Surgical Drill 1.5/3.2 mmd	Surgical Drill 1.7/3.7 mmd	Surgical Drill 2.1/4.2 mmd	Surgical Drill 3.0/5.3 mmd	Countersink Surgical Drill Slim (3.75-4.2) № 400742	Countersink Surgical Drill (5.0-6.0) № 400759	MIN power (Ncm²) of screwing the implant	MAX power (Ncm²) of screwing the implant	Prosthetic Part
Conical Drills – UMI	The wide diameter – 5.0 mmd (connection Internal Conical + Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	YES R	YES R			NO YES	15	45	
			One stage	YES	YES R	YES R	YES R	YES R			NO YES	20	45	
			Immediately implantation	YES	YES R	YES R	YES R	NO YES R				20	45	
			Immediately load	YES	YES R	YES R	YES R	NO YES R				45	55	
		D2	Two-stage	YES	YES R	YES R	YES R	YES R			YES	20	45	
			One stage	YES	YES R	YES R	YES R	YES R			YES	30	45	
			Immediately implantation	YES	YES R	YES R	YES R	NO YES R				30	45	
			Immediately load	YES	YES R	YES R	YES R	NO YES R			NO YES	45	45	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	The wide diameter – 6.0 mmd (connection Internal Conical + Hex 2.43 mm)	D3-D4	Two-stage	YES	YES R	YES R	YES R	YES R	NO YES R		NO YES	15	45	
			One stage	YES	YES R	YES R	YES R	YES R	NO YES R		NO YES	20	45	
			Immediately implantation	YES	YES R	YES R	YES R	YES R	NO YES R			20	45	
			Immediately load	YES	YES R	YES R	YES R	YES R	NO YES R			45	70	
		D2	Two-stage	YES	YES R	YES R	YES R	YES R	YES R		YES	20	45	
			One stage	YES	YES R	YES R	YES R	YES R	YES R		YES	30	45	
			Immediately implantation	YES	YES R	YES R	YES R	YES R	NO YES R			30	45	
			Immediately load	YES	YES R	YES R	YES R	YES R	NO YES R		NO YES	45	70	
		D1	Two-stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			One stage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately implantation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			Immediately load	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

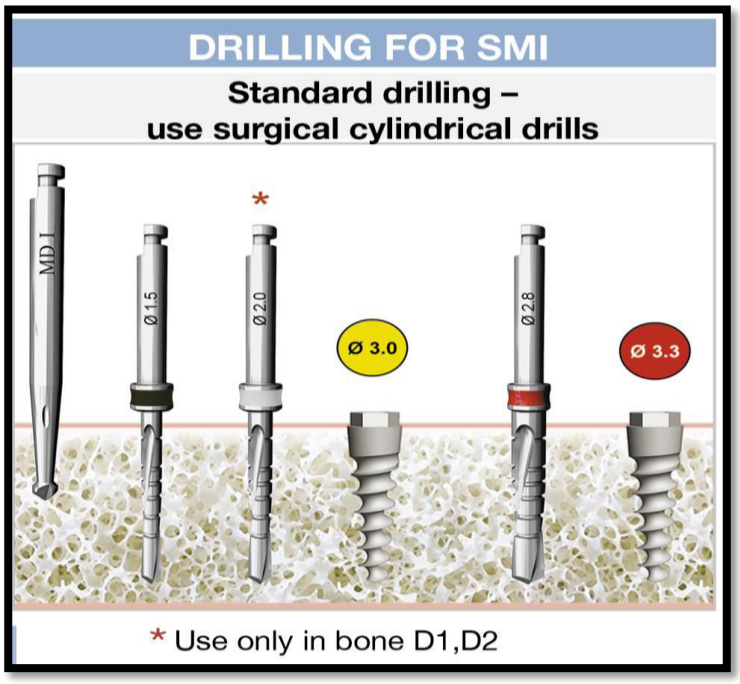
Special instructions:

1. **R –** Reverse rotation of the drill counter-clockwise. Drill reverse rotation speed for bone preparation from 1000 to 1200 rpm, with obligatory water-cooling. Drill Reverse rotation Speed for bone compaction from 100 to 150 rpm, without water-cooling.
2. Conical drill with stopper **–** corresponds to the length of the implant.

5. Implantation protocol for drilling (with conical drills) and with placement of implants in the bone for different diameters of Solo - STI implants.



6. Implantation protocol for drilling (with conical drills) and with placement of implants in the bone for different diameters of Solo Modular - SMI implants.



Forming of the osseous lodge of the implant:

The principle of preparation for the installation of the implant is similar to the principle of preparation for the installation in the roots of the natural teeth anchor pins (dentatus).

The reservation of the maximal volume of the osseous tissue in which the implant will be installed (around the implant from all the sides should be no less than 2-1,5 mm of the osseous tissue) is one of the main requirements in the preparation of the osseous lodge. And if the conditions don't allow to achieve the desired effect, it is necessary to apply additional methods, such as the directed regeneration of the osseous tissue, the splitting of the osseous tissue, retraction etc. The principle of the preparation of the osseous lodge of the implant depends on two main factors:

1- Type and kind of the implant;

2- Type of the osseous tissue.

- If these are cylindrical implants, then we finish the drilling with the drill of the same diameter as the implant being installed.
- If it is a screw implant, then we finish drilling depending on the bone density: for bone D1, the diameter of the last drill corresponds to the diameter of the implant. For bone D2, the diameter of the last drill is 0.5 mm smaller than the diameter of the implant to be installed. In the case when the bone density is low, in accordance with the type of D3-D4, we finish drilling with a drill of a cylindrical shape 1–3 mm smaller than the diameter of the implant to be installed. But it is best to use conical drills in the D3-D4 bone and the preparation should be performed at with a reverse speed of 1200 rpm with bone cooling (in some cases it is recommended that the bone be sealed with a reverse speed of 150 rpm without bone cooling with using bone materials). With this technique, the diameter of the last cone drill is 0.5 mm smaller than the diameter of the implant to be installed. When bone D3-D4 is recommended to install self-tapping implants expressed conical shape.

Before starting the preparation of the bone tissue, the first hole is made using a round bur (403419) with a diameter of 1.9 mm at the top of the alveolar process at a depth of 2-3 mm, which then will be an exact mark of the installation site of the intended implant. Drilling speed 1000-1200 rpm with water-cooling. The created hole prevents the drill from slipping. You can also make a note with a narrow surgical drill (401709, 401715) or carbide surgical boron. The choice of boron or drill depends on the experience of the doctor.

For beginners, it is recommended to mark the location of the intended implant with a round bur (403419Then the first cylindrical drill with a diameter of 2 mm with internal cooling (401820) or with external cooling (401720) is connected to an angle reductive tip (1:16, 1:20) connected to a physical dispenser. A cold solution should flow from the infusion

hole of the drill. The drill is cooled in this way, and overheating of the bone tissue is prevented.

The depth of the formed hole can be determined:

- using a drill: there are circular marks on it at levels 6, 8, 10, 11.5, 13, 16 mm;

- can be fixed with the help of a stopper for cylindrical drills (Set of stoppers 410001). Stoppers correspond to the diameter of the drill and differ in length. To obtain a drilling depth of 6 mm, the stopper (410620) is put on the drill bit (401700) and for other drills. There are stoppers to get lengths of 6mm, 8mm, 10mm, 11.5mm, and 13mm for all diameters of drills;

- you can use special cylindrical drills with stoppers (with a fixed working part of the drill): the length of the working part is 5 mm (402105); 6mm (402106); 7mm (402107); 8mm (402108); 10mm (402110); 11.5mm (402111); 5mm (402105); 13mm (402113); 16mm (402116);

- you can use a special set (490001) of conical drills with stoppers (with a fixed working part of the drill): the length of the working part is 6 mm; ; 8mm; 10mm; 11.5mm; 13mm; 16mm.

The forming of the lodge is made by the movement up down. With this movement of the drill from the lodge the splinters of the osseous exit and the overheating is prevented. The heating may cause a large harm to the osseous and lead to the non-effective implantation. If the drill became stuck in the osseous, it can be released by changing of the direction of the rotation to the contrary by pushing of the reverse button (Rev) of the physio-dispenser.

The attention should be paid to the character of the hemorrhage from the place of preparation. If it is absent, it means that the osseous is sclerotic and has weak ability to the osseointegration due to the absence of blood or blood cluster of the main component of the future osseointegration. In this case, it is expedient to stop the implantation, to stitch the mucosa and repeat the operation in six weeks, i.e. in the period of the forming of the young osseous

tissue. For the implants unique, perfect there is no necessity to wait for six weeks, as due to its unique expressed conical form , which forms big biological space between the implant and the osseous tissue after the installation of the implant into the prepared with the classical methods osseous lodge of the implant, and this biological space is filled up with the blood in 12 hours (with the preparation of the osseous lodge of the implant "the trauma" of the osseous tissue is made, which leads to the flowing of blood in this area and the distance between the implant and the osseous tissue is filled up naturally).

If the error was made in the definition of the angle of inclination of the implant, it is possible to form the lodge anew under the correct angle. It is possible to correct the direction by few methods which depend on what implant you are using: -for the screwed implants of the cylindrical and conical form, for which the cutting of the move of the thread by the special osseous drill is necessary (non-self-cutting implants), it is possible to change the angle of the inclination not in all the cases but only in the osseous with the type A2, i.e. well expressed jaw bone, which is, unfortunately, can be met very rarely. In this case we conduct the additional drilling under the new angle, introduce osteotropic substances in the new osseous lodge of the implant and introduce the implant. The primary fixation is very low and very frequently the rejection of the implant can be observed;

- for the screwed self-cutting implants of the slightly expressed conical form (Prima-PRTI) it is possible to change the angle of the inclination. It is necessary to conduct the drilling under the new angle, if necessary to introduce osteotropic substances in the osseous lodge of the implant and to introduce the implant under the new angle. In this case we achieve the good primary fixation of the implant;
- for the screwed self-cutting implants of the expressed conical form (unique-UTI, perfect-PRTI) it is possible to change the angle of the inclination. In many cases there is no necessity to use the additional drilling, as these implants are

very aggressive, cut the new move of the thread themselves, and in the common cases it is necessary to conduct the drilling under the new angle only with the first osseous drill in diameter 2 mm, or with the second drill in diameter 2,8 mm, if it is necessary to introduce the osteotropic substances in the osseous lodge of the implant and to introduce the implant under the new angle. In this case we achieve the good primary fixation of the implant.

In case of the firm osseous it is recommended to use a new or good sharpened drill in order to make easier the process of drilling and prevent the heating of the osseous.

If the crest of the alveolar branch is very narrow, it is possible to try to introduce the implant lingual or palate, but not cut the top of the alveolar crest. Otherwise, the notable resorption of the tissue will occur, which will worsen the aesthetic results of the prosthetics.

The removal of the osseous in the area inter teeth gingival papilla should be avoided, as the osseous base is vitally necessary for the existence of the inter teeth gingival papilla, which in its turn is the important component in the aesthetic plan in the further prosthetics. Sometimes it is possible to slightly remove the osseous of the alveolar crest in the area of the implants being installed, leaving between the implants osseous-mucosa tops for the imitation of the gingival papilla.

After the first preparation using a drill with a diameter of 2 mm (401720), we insert a depth gauge (451630) into the hole for the bone with the end of a smaller diameter up to the stop and conduct X-ray monitoring.

In accordance with the result of the radiogram the final length of the implant is defined with the help of the divisions on the meter, which step of which is 1 mm. The preparation with the first drill is being continued up to the required length. If the neighbor teeth prevent the preparation it is possible to connect the drill to the drill lengthener (401701). In the maxilla in the area of the maxillary sinus and the frontal hole it is desirable to deepen till the resistance

of the cortical osseous lamina is felt, which gives the opportunity of fixing of the implant between the two cortical osseous layers.

With the perforation the walls of the intra maxillary sinus or the basis of the nose the exact depth should be measured with the help of the implant depth probe (450001). The lodge meter has the protrusion on the end, which is fixed on the bottom of the osseous wall of the maxillary sinus or the cavity of the nose, which gives the opportunity to define the depth of the hole exactly.

Then the drill is being changed for the second, with larger diameter and the preparation is being renewed to the same depth.

The choice of the next drill depends on the kind of the implant required for installation.

The screwed implants

If the is very narrow, the two-staged unique implants(UTI) in diameter 3,0mm or 3.3, unique modular implants(UMI) in diameter 3,0mm, Prima implants(PRTI) in diameter 3,3 mmd; or one-staged Solo (STI) implants in diameter 2,4 mm, 3,0 mm, 3,3 mm are being installed.

The most spread implant is the implant in diameter 3,75mmd and for its implantation the final widening with the drill in diameter 3,2 mmd with the three lines in the foundation along the whole depth of the hole should be conducted.

In case the osseous is soft and the good primary fixation wasn't achieved successfully, it is necessary to remove the implant 3,75 mm and replace it without additional forming of the lodge by the implant in diameter 4,2 mm, which will provide the necessary primary fixation.

If the alveolar branch is wide and it is possible to install the implant in diameter 4,2 mm, the final widening of the hole is being conducted by the drill

in diameter 3,65 mm. If the alveolar branch is wide, it is possible to install the implant with the internal hexahedron 5 mm in diameter and form the lodge by the drill 4,3 mm in diameter after the preliminary widening by the drill in the diameter approximately 3,65 mm.

The last the drill in diameter 0,5 mm less than the diameter of the screwed implant is being used.

The mentioned method of work and the implant system has some advantages in comparison with the other systems:

-the implant is self-screwing; there is no necessity to use the drill of the thread cutter for its final screwing.

- the surface and cut in the area of the apex of the implant in the process of its installation are filled up with the particles of the osseous and the blood – the quicker absorption and good osseointegration of the implant by the osseous in the apical part as well as in the side surfaces of the implant are being achieved;

-the installation of the implant is easier and painless, as at the end to the implant there is original self-cutter, and the implant at the final stage of the implantation is being screwed with the screwdriver set on the carrier of the implant.

- the primary fixation, very important for the successful implantation, is being achieved easily;

- each PRTI, UTI, PTI, SMI implant complete with its disposable carrier that holds the implant in a sterile package and also serves as a hex key to insert the implant into the prepared bone bed. And also in sterile packaging there is a cover screw of the internal implant connection; - each NTI, INI, UMI, PMI implant has a straight titanium abutment in the kit, which holds the implant in a sterile package and also serves as a hex key for inserting the implant into the prepared bone bed and can be used as a healing abutment for one-stage implantation or as an abutment for immediate load. In addition, in sterile

packaging, there is a cover screw of the internal implant connection; -each STI implant is complete with its disposable carrier that holds the implant in a sterile package.

Installation of the implant

The implants come in the double packing in order to reserve sterility.

The outer packaging is made from recycled materials, which are all data about the implant, expiry date, place of manufacture and the like. Packaging colored soy ink, to reduce the contamination of the wound surface with toxic dyes. Within the outer packaging, there is an implant in a double sterile package, 2 labels, instructions for use. The assistant opens the external packing and puts out from it the internal. From the internal packing the carrier of the implant connected with the implant is going out.

The doctor should extract the implant by the carrier not touching the walls of the inner test tube and transfer it to the formed hole in the osseous.

While installing of the screwed implants it is possible to screw the implant manually or with the help of the physio dispenser, which can be tuned on the definite speed. **The manual screwing:**

-1 Manual for implants PRTI, UTI, PTI, SMI: hold the fingers on the disposable implant carrier (), remove from the sterile packaging, and insert (screw) the implant, with the disposable holder, into the prepared bone bed of the implant until there is strong resistance, and then with the help of vertically directed force we pull out the disposable carrier from the implant. A hex key (431825 or 431821, etc.) is inserted into the internal connection of the implant and we screw the implant to the level of the bone of the alveolar ridge using the ratchet surgical key;

- 2 Manual for implants NTI, INI, UMI, PMI: the Allen key (430525 or 431825) is inserted into the implant carrier — titanium abutment, removed from the sterile packaging, and inserted (screwed) the implant with the holder (titanium abutment) into the prepared bone bed of the implant until there is strong

resistance, and then using an Allen key (431412, etc.), unscrew and remove the screw (701203) connecting the implant to the abutment, and then use the key or screw to remove the abutments from the implants (431912 or 701912) and remove the abutment. And then a hex key (431825 or 431821, etc.) is inserted into the internal connection of the implant and we screw the implant to the level of the bone of the alveolar ridge using a surgical ratchet key;

-Machine screwing:

-1 Manual to implants PRTI, UTI, PTI, SMI: insert the Allen key (430025) onto the contra-angle of the physio Spenser. Next, the Allen key (430025) is placed on the disposable implant carrier and remove the implant from the sterile packaging and then insert (screw) the implant into the prepared the bone bed implant to strong resistance, and then using a vertically directed force, we remove the disposable holder from the implant. Next, a hex key (430025 or 430121) is inserted into the internal connection of the implant, and we screw the implant to the bone level of the alveolar bone. If there is no way to completely screw the implant into the machine, then we switch to the manual method and use the surgical key with a ratchet mechanism (431825 or 431821, etc.) we screw the implant into the bone bed;

-2 Manual to implants NTI, INI, UMI, PMI: install the Allen key (430025) on the corner tip of the physio Spenser. Next, the Allen key (430025) is installed in the implant holder - titanium abutment, and remove the implant from the sterile packaging and insert (screw) the implant into the prepared bone bed the implant is up to strong resistance. If there is no way to completely screw the implant into the prepared bone bed of the implant by the machine, then we switch to the manual method. Next, use the Allen key (431412, etc. .), unscrew and remove the screw (701203) connecting the implant to the abutment, and then use a wrench or screw to remove the abutments from the implants (431912 or 701912) and remove the abutment. Allen key (431825 or 431821, etc.)

It is inserted into the internal connection of the implant and with the help of a surgical key ratchet, we screw the implant into the bone bed.

In this case it is obligatory to take into account the moment of the introduction of the implant in the prepared osseous lodge and the initial direction of the implant's introduction. While being inserted in the osseous lodge the implant may "jump out of the thread" and break the integrity of the osseous and the alveolar crest, especially it may be observed with the conical implants or in case of the wrong angle of the introduction of the implant, the implant may stand under the wrong angle and injure the nearby standing teeth. To prevent these complications, it is necessary:

- first, to correctly form the upper part of the osseous lodge of the implant, i.e., depending on the clinical case, the density of the osseous tissue, the form and size of the alveolar crest and what implant you are going to install and also by what methods the implantation will be conducted. If with the dense cortical osseous of the alveolar crest, then the upper part of the osseous lodge of the implant on the level 2-3 mm is being formed in the accordance with the diameter of the implant being installed. And vice versa, when you install the conical implant and want it as "osteotomy" to widen the alveolar crest, form the upper part of the osseous of the implant on the level 2-4 mm, less than the diameter of the implant on 1-1,5 mm, but in the mesiodistal direction increase it up to the diameter of the implant, i.e. get the oval entrance hole.
- second, for the correct introduction of the implant (if you have self-cutting implant and you correctly and parallel formed the osseous lodge of the implant, then during the introduction you can introduce the implant under the another angle) different methods are being used:
- the use of the surgical stand;
- the use of the nearby standing teeth as an orientation.
- the use of the depth guide and parallel (451630) for the screwed implants, and for the vector implants introduction of the implants, i.e. with the forming

of the few osseous lodges of the implants the meter is being introduce in one of them and it serves as an orientation for the introduction of the implant in the nearby standing osseous lodge etc.

- the use of the «navigaide» system as an orientation for the parallel introduction of the implant, i.e. if the additional implant is being installed and you want to install the implant nearby, then on the already installed implant the detail of the «navigaide» system is being installed – the analogue of the future standard abutment under the needed angle abutment and it serves as an orientation for the correct introduction of the next implant.

- the use of the abutments of the nearby standing implants as the orientation for the installation of the implant, i.e. if the implant has already been installed, on the already installed implant the standard abutment is being installed under the needed angle, and it serves as an orientation for the installation of the new implant.

For proceeding with the screwing the screwdriver with the bush (446303) can be used. This screwdriver is comfortable for the work on the maxilla. Always on the mandible and often on the maxilla the one-sided screwdriver Ratchet (446301) is being used. The handle of the Ratchet is being joined to the carrier so as to the doctor's side the marking word IN or an arrow was directed. The implant is being screwed up to the final depth of the formed hole since the resistance is felt. The implant may also be screwed with the help of the angle end with the redactor 1/280. The connector is necessary for it and a key for the screwing of the implants with the help of the contra angled (430025 etc.). While screwing of the self-cutting implants the strong resistance appears, and in order to screw the implant the sufficiently large force of the screwing should be applied. In this case he following complications can occur:

- the overheating of the implant and the surrounding osseous, which may result in the rejection of the implant;

the jamming of the external hexahedron of the implant's carrier with the internal hexahedron of the implant.

-the break of the screw connecting the carrier of the implant with the implant, and the part of the broken screw remains in the implant;

-the break of the head of the one-sided key "Ratchet" due to the continuation of the screwing of the implant, though it can't be screwed further due.

-the jamming of the key (431825 etc.) for the screwing of the implant.

-the jamming of the implant itself in the prepared osseous lodge of the implant;

-the increase of the static tension on the intraosseous surface of the implant, which can lead to the rejection of the implant.

In order to prevent these complications it is necessary to observe all the classical requirements of the operation of the implantation, also to complete the manipulations depending on the clinical case:

- to prevent the overheating of the osseous and of the implant, it is necessary to constantly irrigate the implant with cold physiological solution during the process of its introduction into the osseous;
- if the implant is being screwed with difficulty (large resistance), it is necessary to constantly make 2-4 turns in the reverse direction, as if twist out the implant from the osseous lodge and then make 4-6 screwing movements. And do this several times till the implant fully absorbs in the osseous lodge. This manipulation prevents the damage of the one-sided key "Ratchet", the jamming of the carrier and of the key of the implant and gives the opportunity to introduce the implant into any dense osseous (where the density of the osseous is low, with dominating of the spongy substance, this manipulation should be conducted carefully as the primary fixation of the implant may not be achieved);
- in case of the jamming of the carrier it is necessary to make the movement to the reverse side on 30 degrees and make the horizontal movement of the

carrier and after it release the screw, connecting the carrier with the implant. For preventing of the jamming o the carrier of the implant in modern implantology systems the new connection between the implant and the carrier like a clip is being used, which prevents the jamming of the carrier and with the enlarging of the force gets rid of the implant;

- in case of the jamming of the key of the implant the movement in the reverse direction on 30 degrees should be done and the horizontal movements should be conducted;
- for the removal of the static tension from the implant the movement in the reverse direction up to 90 degrees should be done.

Then through the carrier the internal screw, connecting the carrier with the implant, is being screwed out and the screw and the carrier are being removed or the carrier of the implant is being removed, if the carrier is connected with the implant like a clip by means of the vertically directed force as if drawing it out of the implant, which is connected with the implant like a clip.

It is necessary that the absorbed implant was on the level or 0,5 mm lower than the surface of the osseous, as in it in the coming months after the operation will take place the process of remodeling and the height of the alveolar crest can diminish on the average on 0,5-1,0 mm due to the exfoliation of the mucosa, trauma and preparation of the osseous tissue. It is desirable that the implant was located lower than the anatomic neck of the neighbor teeth on 2 mm. However, for the wide teeth, such as central upper incisors it is necessary to install the implant still lower in order to supply conditions for the installation of the wide abutment and creating of the natural clinical neck of the artificial crown.

If the implant didn't enter in the lodge up to the end, as the nearby standing teeth prevent the carrier of the implant, the hexahedral key for the screwing of the screwed implants 2,5 mmd & 2,1mmd (431825 etc.) are being used. After removing the implant holder (the one-time used implant holder for implants -

prima, unique, perfect or titanium abutment, implant holder, for implants - nova, ideal, UMI, PMI), a 2.5 mm and 2 Allen key is inserted into the internal hexagon of the implant, 1 mm, and then screw the implant to the end in the prepared bone bed using a ratchet screwdriver key or a key from the sleeve. The consequence of the introduction off the one-staged titanium implants of the type SOLO is slightly different from the two-staged. In the implant SOLO the intraosseous part and the abutment are joined together and they are one monolith. The forming of the osseous lodge of the implant is being started with the preparation of the osseous tissue with the help of the cylindrical or round hard-alloyed drills, then the hole is made along the top of the alveolar crest on the depth 2-3 mm, which further will be the exact note of the place of the introduction of the supposed implant. The created hole prevents the slide of the drill. Then the drilling by the pilot drill is being continued, and then it is possible to screw the implant observing all the requirements of the introduction of the implant into the osseous lodge. The SOLO implant has plastic carrier and after opening of the sterile packing the SOLO implant is being taken by the plastic carrier and screwed manually into the prepared osseous lodge of the implant till it can be screwed by hand. Then for the screwing of the SOLO implant the special keys (431021 etc.). The screwdriver with bush or the screwdriver "Ratchet" is being joined to these keys for the final introduction of the implant in the osseous lodge.

Inside the implant there is a hole with cut thread, which is aimed for the joining of the abutment. In order to prevent the growth of the osseous or another tissue inside the hole for the prophylactics of the pollution of the implants in case of two-staged implantation, it is necessary to close it by the screw-cap. The screw is in the internal packing of the screwed implant; it is joined with the plastic lamina. The screw is being joined to the hexahedral key 1,25mmd and screwed inside the implant. It is desired to have additional screws available in case of loss. While screwing it is necessary to be convinced

that the screw is screwed up to the end and that between it and the implant there is no gingiva. It is necessary to be convinced again that the implant is well fixed and doesn't rotate.

If one-phased implantation is being conducted the curable titanium healing abutment with the height from 1 to 7 mm is being screwed with the help of the hexahedral key 1,25. With the one-phased technique the covering of the implant with the mucosa is not made, it should densely be attached to the former of the gingiva. Due to this it is necessary to make the primary cut of the mucosa in the region of the future implant and put the stitches around the former of the gingiva.

After the implantation it is necessary to make dental radiogram I in order to see the final position of the implant and compare this picture with the pictures made during the operation. When we are speaking about several implants it is possible to make a panoramic radiogram, which will give the full view of the position of the implants in the jaw and their parallel to each other.

After the closing of the implant the mucosa is being stitched. The putting of the stitches should be thorough; it is necessary to provide the full closing of the implant. It is not recommended that the stitch was located directly over the implant (it is worth thinking about during making of the cut with the exfoliating of the mucous-periosteal flap).

observation after the implantation

It is not obligatory to prescribe to the patient the course of the antibiotics after the implantation. Many doctors usually prescribe this course lasting few days as a measure of carefulness. It is possible to start the course of taking of the antibiotics 1-2 hours prior to the start of the implantation. If we speak about the outlaying of the large area of the mucosa for a long time and about the introduction of large quantity of the implants, then it is expedient to prescribe the course of the antibiotics.

If the patient has the overdenture, it is recommended not to use it for three weeks. In any case it is necessary to release the place over the implants from the basis of the prosthesis, in order to avoid excessive pressure. It is possible to use the soft padding of the basis over the place of the implantation.

For a week after the implantation it is recommended to rinse the mouth with the solution of the chlorohexidine or another antiseptic mean.

After the implantation the patient should be observed and asked to apply immediately in case he feels changes or pain in the area of the implantation. The patient receives in the clinic a special instruction with the necessary recommendations.

With the small interferences most frequently in a week after the implantation the patient is being invited for removing of the stitches. In case of wide interferences in the oral cavity the most frequently the large quantity of the implants with the directed regeneration of the osseous tissue are being installed, and the stitches are being removed not earlier than in 10-15 days. After the

removal of the stitches the patient is being invited in a week for an examination and this is during the whole period till the disclosure of the mucosa and joining of the former of the gingiva.

With the examination it is necessary to be convinced that the tissues are healthy, not inflamed, there is no pains, exudation and the denudation of the implant. With the appearance of the inflammation symptoms the treatment as in the case of periodontitis is conducted, i.e. the course of the antibiotics, the removal of the granulation tissue, if available, in case of necessity the disclosure of the abscess. It is also possible to conduct the operation of the apexotomia type, if there is inflammation around the apical part of the implant. In case of the spontaneous divergence of the mucosa over the implant the former of the gingival should be joined. With the similar denudation of the implant the inflammation in the gingiva around the implant may appear. This

process in most cases is painless and can lead to the quick resorption of the osseous in the near neck area of the implant and to the loss of the implant in the whole. That's why the dental radiogram should be done once in a few weeks In order to see if there is an area of resorption around the implant. If there is a wide area of the resorption and the mobility of the implant it is better to remove the implant not waiting for the termination of the process of treatment.

If this implant will be left, the resorption of the osseous will go on and it will be damaged. After six weeks it is possible to try again to conduct replantation in this place.

disclosure of the implant

If the implanting was made in two stages the disclosure of the implant should be made after the definite break. The break on the average lasts from 1,5 to 3 months with the operation on the mandible and from 3 to 5 months – on the maxilla. The disclosure can be done by two methods:

- not large cut of the mucosa along the alveolar crest over the implant;
- perforation of the mucosa over the implant;

Prior to the disclosure of the implant it is necessary to make a radiogram for definition of the quality and quantity of the osseous around the implant. The panoramic radiogram is not informative enough for this purpose; with its aid it is better to define only the place of the location of the implants and their correlation with each other.

The place of location of the implant in relation to the alveolar crest is defined by several methods:

- with the aid of the template Stent being used during the implantation;
- visually – sometimes there is an area on the gingiva with more pale, pale-grey or dark mucosa, through which the implant is shined;
- with the aid of palpation and sounding;
- With the aid of the panoramic and dental radiogram.

Then the tissue over the implant is being anesthetized, the cut over the implant in the attached gingiva (along the fixed mucosa) is being made. The small area of the mucosa is being disclosed only for denudation of the implant and close lying area.

In order to get convinced in the valuable osseointegration it is necessary to knock on the implant – the metallic sound testifies the fixation of the implant.

With the aid of the hexahedral key 1,25mmd the cap (screw) is being removed. The internal thread of the implant is being washed. It is possible to wash the implant with the aid of the syringe with the solution of the hydrogen peroxide or physiological solution. The former of the gingiva is joined with the aid of the hexahedral key 1,25mmd. The height and width of the healing abutment is being chosen in accordance with the thickness of the gingiva over the implant and peculiarities of the further prosthetics. It is necessary that the healing head went out over the gingiva no less than on 1-2 mm, but didn't touch the antagonists, the closely standing teeth or other healing heads. The stitches are being imposed around the implant.

It is possible to disclose the implant without lifting of the mucosa of the gingiva, with the aid of perforation of the tissue over the implant. It is made only in case if there is enough immobile tissue around the implant.

The place of the implant's location is defined by the same way as it was indicated above. If it is impossible to define exactly the place of the location of the implant, its denudation shouldn't be done with the aid of perforation. The area of the tissue over the implant is being anesthetized. The holes in the gingiva are made with the aid of the gingival puncher (472800 etc.) or hard-alloyed turbine drill, and the gingiva over the implant is being removed. Further everything is made by the same way, as described above; but there is no need to impose the stitches.

advantage of the perforation in comparison with the small cut of the mucosa of the gingiva:

-no necessity to disclose the mucosa;

- the healing process is going faster;

- less of the pain feelings and the postoperative edema is also less;

- the procedure takes less time;

- no necessity to impose and remove the stitches.

The disadvantages of the perforation in comparison with the small cut of the mucosa:

- its realization is possible only when the place of the implant's location is exactly known;
- the thick tissue of the gingiva, very important in the aesthetic plan, is being lost;
- there is a danger not to notice and not to remove the inflated tissue, if it is available.

After the disclosure of the implant the break for 3 weeks is usually done for healing of the mucosa, and then the prosthetics is being conducted. The patient should carefully and thoroughly clean his teeth around the former of the gingiva after the disclosure as well as in case of the one-staged implantation. It is recommended to prescribe to the patient the rinses by the weak solution of chlorhexidine during a week. With the preparing of the temporary prosthesis it is necessary to isolate the area with the gingival former from the pressure of the prosthesis.