NucleOSS™

# T1

## MONOBLOK DENTAL IMPLANT SYSTEM

# SURGICAL MANUEL

This guide contains the recommended operating instructions for surgical applications of the NucleOSS Dental Implant System. Treatment and surgical planning should be based on clinical data and the physician's case-related assessments.

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# Pre-Operation Procedures

## Pre-Operation Examination

General evaluation of the patient should be done by clinical and oral radiographic tests, mucosa membrane, jaw morphology, dental history, prosthetic history and oral dysfunctional symptoms should be carefully examined prior to the operation. Radiographic analysis should be used for the examination of bone topography.

Pre-radiographic assessments are an infrastructure for determining whether the patient is fit for implant treatment in addition to clinical examination.

If the patient is found to be eligible for treatment, a more detailed clinical examination should be performed for the treatment area and the receiving area. Any pathological condition detected in the jaw should be treated prior to implant operation.

## Pre-Operation Planning

During planning prior to the operation, the intended final prosthetic treatment should be observed and appropriate planning should be done. First of all, the intended final prosthetic treatment should be planned, and accordingly, the type and number of implants should be decided. The choice of the prosthetic material to be used must be made according to the region where the implant will be placed.

When planning treatment, all stages from the healing process to the final restoration should be evaluated with regard to the intended final treatment.

Articulator-mounted models provide information about the connection between the tooth and the jaw. Candle modeling from toothless region makes an important contribution in making the correct planning.

The most appropriate treatment planning can be done by examining the occlusal table, load distribution and evaluating factors such as the preferred nest for implants.

The transparent Radiogra k K Implant Guide, which shows the sizes of the implants enlarged at different rates, will contribute to the optimal selection of the place, direction and length of the implant to be placed.

During the surgical procedure, factors such as primary stability of the implant, single-stage or two-stage surgery, implant placement immediately after shooting, and expected recovery time before installation should be taken into account as well as the intended treatment approach.

Unless there is a different medical decision taken by the physician, the recommended recovery time before installation is 12 weeks.

In each case, bone quality, quantity, density, primary stability, restoration shape and loading conditions should be carefully examined and the loading time for each implant should be determined by the clinician.

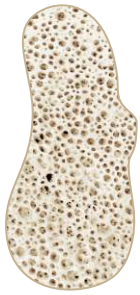
Before starting treatment, the patient should be told clearly about the results of the examination performed before the operation, the method of treatment required, the expected outcome after the treatment, the type of care required and the whole process by specifying the possible risks.

## Bone classification:

Since the thickness and density of the bones vary from patient to patient, implant placement and surgery vary from case to case. According to the case data from the examination results, the appropriate path for installation and implant surgery should be followed. Therefore, NucleOSS surgical set and protocol have been prepared with these functional needs in mind.

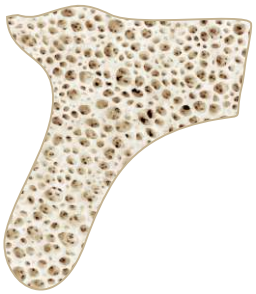
**D1**

Dense cortical
Anterior Mandibula



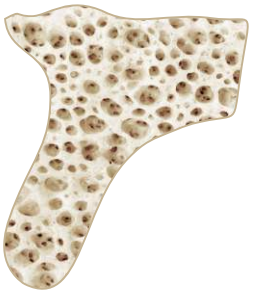
**D2**

Porous cortical and
thick trabecular
Anterior Mandibula
Posterior Mandibula
Anterior Maxilla



**D3**

Porous cortical and (thin)
tight trabecular
Anterior Maxilla
Posterior Mandibula
Posterior Maxilla



**D4**

Tight trabecular
Posterior Maxilla

## Clinical Practice Recommendations

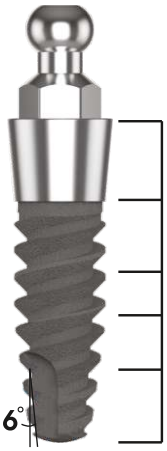
The nucleus Dental Implant System has been developed with natural oral Anatomy and the intended final prosthetic restoration in mind. The positions of the implants have been recommended according to the fit of the crown - implant. However, when deciding the placement of the implant, the size and shape of the implant, soft tissue healing, the support needed for the intended final restoration, bone volume and side-tooth connection status should be taken into consideration.

Depending on mechanical considerations, it is always advisable to use the largest possible diameter implant. This recommendation should be considered especially for rear areas where loading forces are higher. In all cases, when planning implant surgery and determining the number of implants, the installation conditions and the intended final prosthetic restoration should be considered.

# Characteristics of T1 implant and removal from tube

Ø 3.0

L: 8 T1 3008
L: 10 T1 3010
L: 12 T1 3012
L: 14 T1 3014




**2.7mm**
**Shiny Surface**

**Double Helix**
**1.8mm Screw Pitch**

3.0mm

**NucleOSS T1 monobloc implant is used to treat total toothless patients with movable dentures. Made of Ti Gr4 material. The body is 3mm in diameter and narrows towards the apex region. It has a double helix, revers-buttres tooth structure. The canal has been opened in order to enable cutting and bone collection in the Apex region. The surface NucleOSS is of" MAXICELL " construction. At the top of the implant is a gum region with a shiny surface that expands conically by 2.7 mm high. At the top is the bun part which provides the connection with the prosthesis.**
**It is available in four different sizes: 8mm/10mm/12mm/14mm.**

## Opening the tube cover

The tube cover is turned counterclockwise to open.
There is a safety ring attached to the covers by thin nails, when the cover is turned, the nails break off and the safety ring leaves the cover and stays on the tube.
If this ring is separated from the lid on first use it indicates that the tube was opened earlier.

**The T1 one-piece Implant is placed in a plastic carrier, in a sealed tube with the Transport part. It is presented in the same package as the Metal ring and silicone ring.**

**The process of carrying the implant from the sterile tube to the surgical site is shown on the side:**

**The surgical set includes a tightening piece for T1.**

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# Preparation of T1 Implant Socket

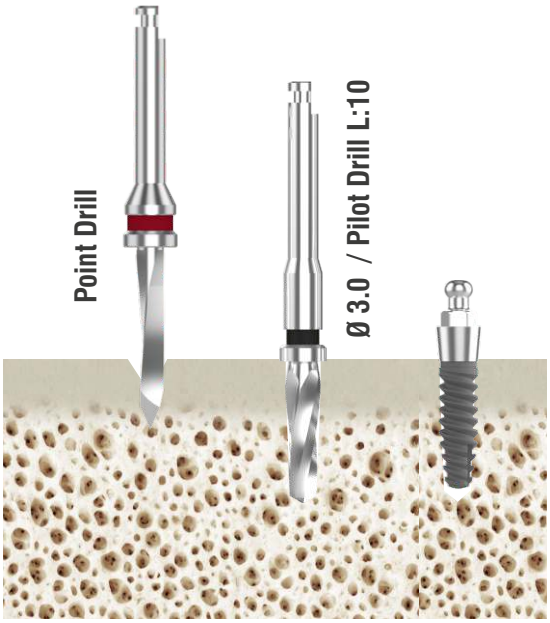
The bone-opening protocol for NucleOSS T1 implants is shown below.

1. Step: After planning T1 implants or implants, point drill is done to determine the marking and drill slot axis.

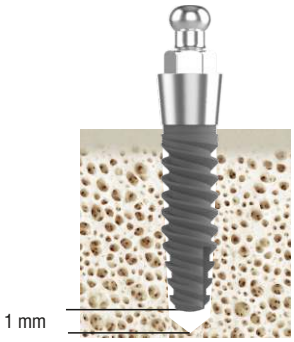
**Caution:** The point frez is 8mm tall and opens a Ø1.8 diameter slot.

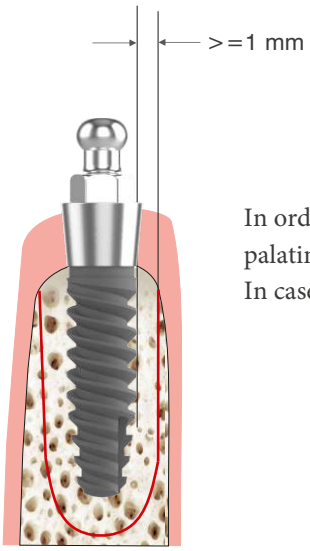
2. Step: Final drill for T1 implants is the standard pilot drill found in surgical sets. The drills are stopper and there are separate cutters available for each implant size.

The nest preparation is completed by entering the slot opened with the point drill with the selected drill according to the implant length.
The drills should be operated with coolant at a maximum speed of 800 rpm.




**T1 L: 10 mm implant Drill protocol**



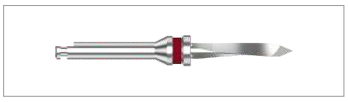




In order for the implant to provide the fastest and safest primary stability within the bone, the palatinal and vestibule surfaces must have a minimum bone thickness of 1mm.
In cases where the bone thickness is below 1mm, the agumentation method can be applied.

# Starting Drills

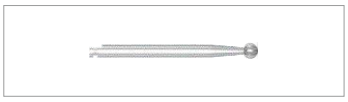
Starting drills are used to open the nest during Osteotomy.

Point Drill - T0 25024



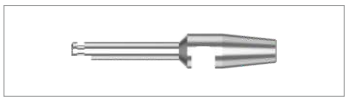
Point Drill: Used to determine where the implant will be placed.

Round Drill - T0 0103



Round Drill: Used to mark the location of the slot to be opened when starting Osteotomy.

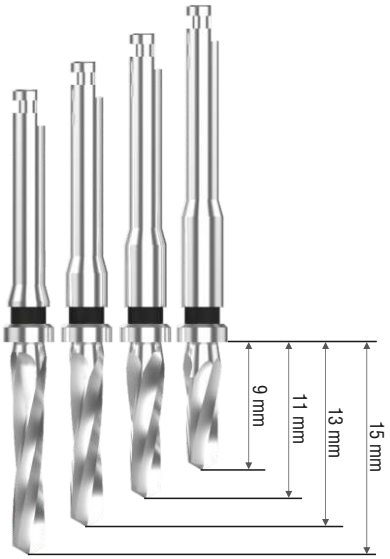
Drill Extender - T0 2012-1



Drill Extender: used to extend the length of the drill.

## Pilot Drills

| | | |
|---|---|---|
| T0 25043 |  | L : 8 |
| T0 25044 |  | L : 10 |
| T0 25045 |  | L : 12 |
| T0 25046 |  | L : 14 |




Caution: nucleoss standard pilot drills are used in the drill protocol of T1 implants. NucleOSS pilot drills were made 0.7 mm long from the implant neck to embed the T6 standard and T6 TORQ implants below 0.7 mm bone level. Therefore, if the stopper contacts the bone, the drill implant socket will open 1mm deeper than the implant neck. This distance should be taken into consideration when planning T1 implants drill.

# Maintenance and Cleaning of Surgical Hand Tools

Careful use of all tools is extremely important.

Even the slightest damage to the ends of the drill adversely affects cutting performance and therefore the clinical outcome.

Even if it is used correctly and clean, it should be taken into account that the cutting performance of the drill is reduced after a certain number of uses. (Maximum milling for NucleOSS drills is 15 times)

Avoid contact with the ends of the drills on a hard surface other than the bone.

Each surgical set piece should be used according to its purpose and method of use. Other uses may damage the part.

Never allow surgical residues (blood, bone, etc.tissue residues) to dry on an tool, clean immediately after surgery.

Clean thoroughly with only soft brushes so as not to cause wear and scratches on the tools. If necessary, remove the removable parts of the tools and clean the gaps.

Never disinfect, clean (also ultrasound) or sterilize instruments made of different materials together.

Use only cleaning agents and disinfectants for the material and follow the manufacturer's instructions for use.

Rinse disinfectants and cleaning agents thoroughly with water.

Never leave or store tools moist or wet.

For more detailed information, please refer to the Maintenance and Cleaning Prospectus for NucleOSS Surgical Hand Tools.

## Sterilization

The recommended sterilization condition is as follows:

| | |
|---|---|
| Method | Steam heat sterilization according to ISO 17665 |
| Cycle | Pre-Vacuum |
| Temperature | 132°C / 270°F |
| Exposure Time | 4 Minutes |
| Pre-Vacuum | 3 times < 60 mbar |
| Minimum Drying Time | 20 minutes indoors |

## Storage

After sterilization, put the devices in a dry and dark place, such as a closed cabinet or drawer.

## Sign Information

| | |
|---|---|
| REF | Product Catalog Number |
| LOT | Product Lot Number |
|  | Not used for the 2nd time |
| STERILE R | Sterilization with gamma radiation |
|  | Do not use if the packaging is damaged |
|  | Read the user manual |
|  | Expiration date |
|  | Producer |
| Rx only | Prescription use only |
|  | MRI Security Information |
|  | Warnings |

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