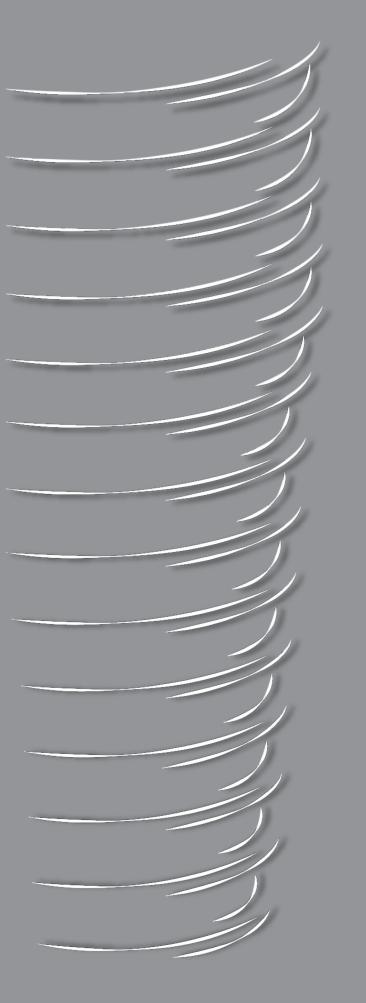


BA DENTAL, founded in 2010, offers high-quality dental products and services in a clean and safe production environment. In 2020, the company began implant production under the OPUSVI Implant brand. All products are manufactured by a team of experienced members in the dental implant industry, based on scientific evidence and proven concepts, ensuring reliability and high quality. Our goal is to meet the satisfaction of both dentists and patients with a better implant system, based on long-term research and development experience in the field of dental implantology.





# Introduction

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# **RESEARCH AND DEVELOPMENT**

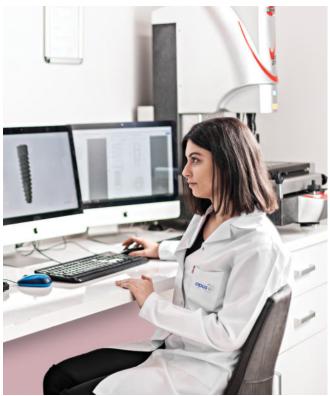
Since our establishment, OPUSVI's research teams have been in close collaboration with leading clinics, research institutes, and universities, accumulating scientific data that provide approval for our products, which meet exceptional quality standards. Studies are being conducted on material surfaces, and technical analyses are being carried out for new products. Through applied research, testing, and analysis, we aim to introduce new systems and products to the industry.

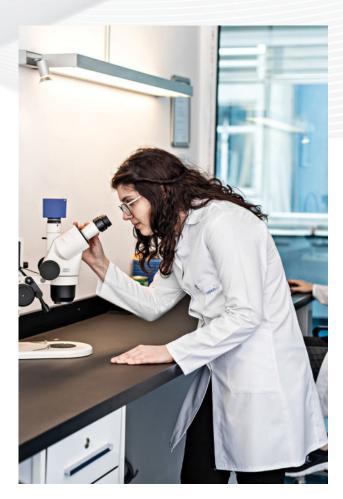
# PRODUCTION

Engineers, mechanical and technical experts become an integral part of the manufacturing process. All innovations introduced during the production stages and the features of the finished products are the result of consistent and in-depth studies, as well as significant investments.

# **QUALITY CONTROL**

The high quality of OPUSVI products is the result of sophisticated manufacturing techniques and precise quality control in compliance with regulations. The products are inspected by different quality control authorities using measurement devices with the highest precision, capable of detecting up to one-tenth of a millimeter (1/10,000) and high-precision transition







**CLEAN ROOM** 

A clean room is a controlled working environment established for production and research purposes, where the air is purified of dust and other particles as much as possible, with controlled temperature and humidity. After the surface treatment, the implants are brought to this unit for packaging. Our products are packaged in three stages to ensure maximum sterilization.



# SURFACE CLEANING

The products leaving the production are cleaned in a controlled manner using our planned washing and drying program in the device. The highest success rate is achieved as a result of the cleaning process.





# **MEASUREMENT**

The internal measurement of the implant is performed using a measurement device. Touch-trigger probes are used to support the measurement of sample characteristics that cannot be inspected visually alone. This capability in the device ensures extremely high precision measurements.

Surface roughness is measured using the RA measurement device. Surface roughness is a precise quality criterion that indicates the quality of a product and affects the joining surface of two parts. Surface roughness must always be well-designed on both macro and micro levels to ensure compatibility with the biomechanical properties of the jaw.

The RA surface roughness value is the absolute arithmetic average of the profile fluctuations that occur upwards from the center of the material. The RA values we obtain for the implant are between 2.5-3  $\mu$ m.



# **IMPLANTOLOGY**

Implantology has become a natural part of dental treatment. On one hand, extensive research and development, and on the other hand, the comprehensive expertise of dentists and dental technicians, have made implants a routine procedure for their benefits today. The foundation of the OPUSVI implant system is built on this solid structure. Through comprehensive communication with specialists from clinics and dental offices, it has combined proven concepts with innovative solutions, taking future demands into account.

Dental implants placed in the jawbone function as tooth roots. They provide better chewing and speaking functions compared to bridges and traditional dentures because they carry features that most resemble natural teeth. They offer a more natural and aesthetic appearance. When combined with correct and sufficient knowledge, experience, and equipment, successful results can be achieved. Dental implants can be used for many years as long as the necessary care is provided. The patient's current bone condition and systemic diseases are very important for implants. With the latest technology, most patients are made suitable for implant treatment. The OPUSVI Implant System contains minimum components with maximum flexibility. It can be used for all indications and positions in the mouth. Your trust in us is based on scientific evidence. Therefore, since our establishment, OPUSVI's research teams have been in close collaboration with leading clinics, research institutes, and universities, accumulating scientific data that ensures the validity of our products, which meet extraordinary quality standards.

Tooth loss is a very common issue; therefore, the use of dental implants has become a widespread practice. Research on dental implant designs, materials, and techniques has increased in recent years, and although it is expected to expand in the future, there is still much work to be done on better biomaterial usage, implant design, surface modification, and the functionalization of surfaces.

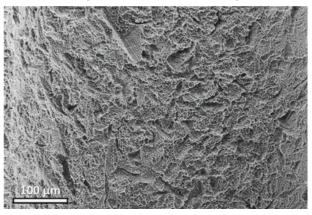
The diameter values range from 3.4 to 4.8, and the length values are available in 8, 10, 12, and 14 mm, offering high-quality implant systems. All of our implants are produced from titanium alloy Ti-Grade4 raw material and are manufactured in compliance with ISO5832-2 standards. Titanium has the ability to fully integrate with bone. When combined with the advantages of strength and durability, this property makes titanium an ideal material for implants. Thanks to the flawless internal structure of the OPUSVI IMPLANT System, a perfect abutment-implant connection is achieved, and no micro-gaps are formed. It ensures the long-term durability of the implant, preventing issues such as screw breakage or loosening.

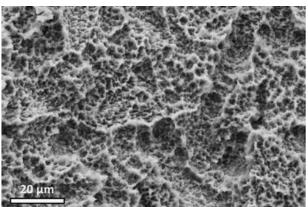
**IMPLANT SURFACE** The osseointegration rate and quality of dental implants are related to their surface roughness and composition. Today, titanium

and titanium alloys are considered the best materials for providing bone connection. To further enhance the biological acceptability of titanium implants, various surface treatments are applied to the implants. The main purpose of these surface treatments is to adapt the surface topography and surface energy. This way, wettability, cell proliferation, cell growth, and bone apposition increase, thus accelerating the osseointegration process.

The osseointegration process occurs in two stages. In the first stage, the implant material placed directly contacts the bone. During this period, there is no bonding structure between the bone and the organic structure. In this initial stage, which lasts until the formation of the biological structure, due to the absence of bonding structures, there is more mechanical interaction between the implant and its surrounding area. In the second stage of the osseointegration process, observed in studies, the titanium implant in contact with the bone is covered by soft fibrous tissue. The capsule structure surrounding the dental implantmust be formed with the correct thickness and structure in order to withstand the loads applied to the implant and ensure it is fixed to the bone appropriately. These two processes are crucial for preventing implant failure and ensuring the long-term performance of the implant. The SLA surface treatment is particularly effective in promoting osseointegration.

The surface preparation process for osseointegration typically lasts between 6 to 8 weeks, and the SLA (Sandblasted, Large Grit, Acid-Etched) surface method is used. SLA is not a surface coating. It involves a sandblasting process applied to roughen the surface.





# Implant SLA surface SEM image.

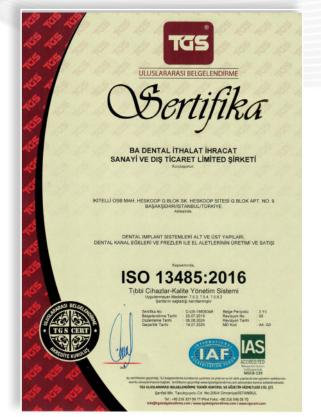
The implant screw and all surfaces are uniformly sandblasted. After the sandblasting process, an acid etching group is applied at high temperatures. As a result, fine-sized 2-2.5 micrometer micro-pores are observed on the implant surface. This unique macro/micro topography reduces the possibility of bacterial colonization while providing an ideal structure for cell attachment. SLA implant surfaces are moderately rough. The roughness degree is consistent across the entire implant surface. The SLA system is the surface treatment system that provides the highest success rate in healing.

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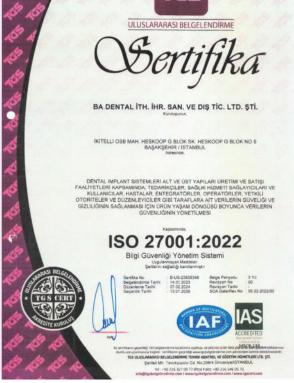




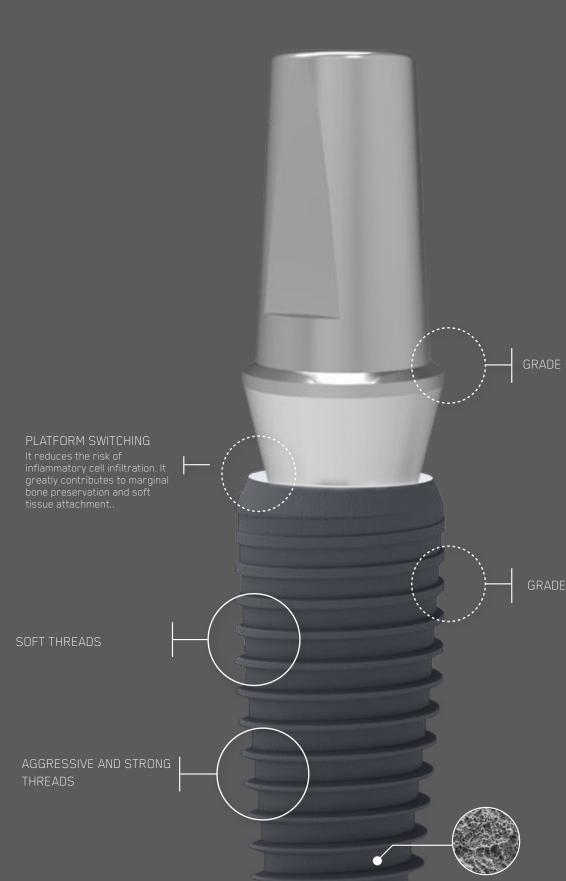




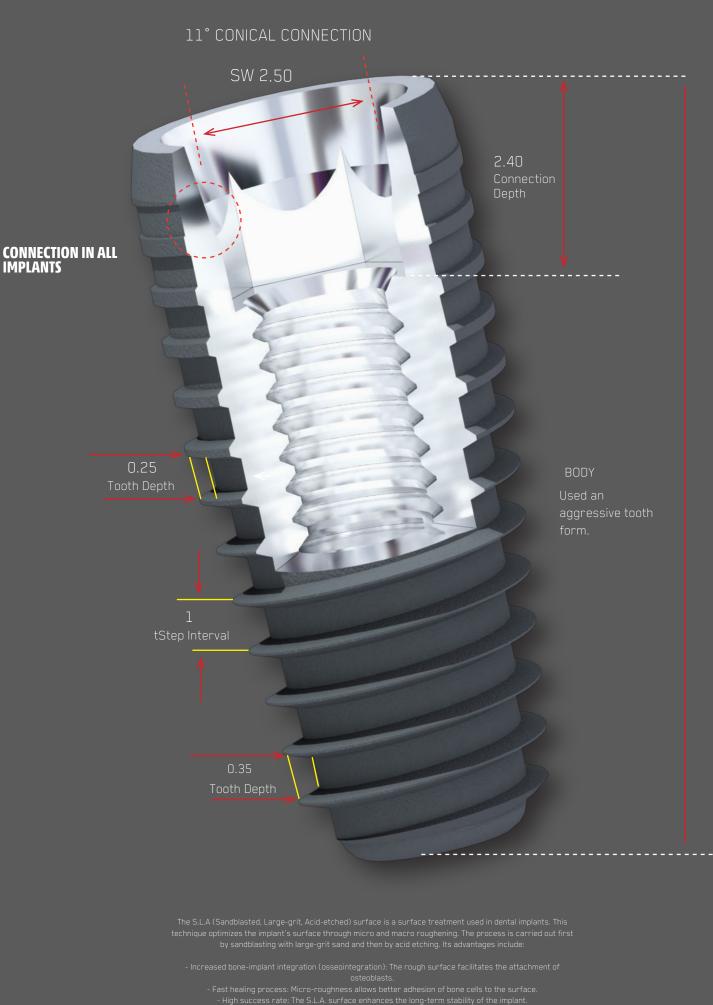








S.L.A. SURFACE TREATMENT The most researched and proven surface technology.



Э.Л	D (Ø)	н	REF NO.
	3.5	8	140/1415
	3.5	10	140/1419
	3.5	12	140/1423
	3.5	14	140/1427

<u> </u>	D (Ø)	н	REF NO.
Ø4.I	4.0	6	140/1431
	4.0	8	140/1435
	4.0	10	140/1439
	4.0	12	140/1443
	4.0	14	140/1447



Ø4.5	D (Ø)	н	REF NO.
04	4.5	6	140/1451
	4.5	8	140/1455
	4.5	10	140/1459
	4.5	12	140/1463
	4.5	14	140/1467

(Ø)	н	REF NO.
.0	6	140/1471
.0	8	140/1475
.0	10	140/1479
.0	12	140/1483
.0	14	140/1487

1.20 Machine Hex Driver

Н

180/0098 180/0097

30.50

24.16

	D (Ø)	Н	REF NO.
Ø5.0	5.0	6	140/1471
	5.0	8	140/1475
	5.0	10	140/1479
	5.0	12	140/1483
	5.0	14	140/1487

Cover Screw

Н

170/0084

ø3.2

REF No.

5.32



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7	19

180/0096 1	.80/0094
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- opusimplant.com



Temporary Implant: Micro-mini dental implants are used until the permanent implant heals and the permanent teeth are placed. This way, the patient never remains without teeth and feels socially comfortable.



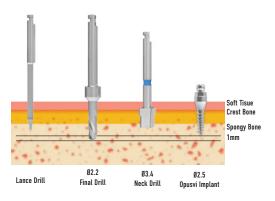


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BAR KEY

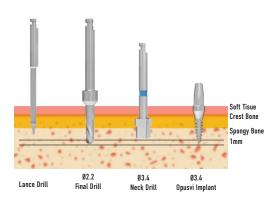
BAR KEY	
Ref No. 220/096	9

D(Ø)	Н	REF NO.
2.5	8	140/1591
2.5	10	140/1592
2.5	12	140/1593



It is recommended that the implant be placed 1 mm below the bone level when sent with the implant ey.

D (Ø)	Н	REF NO.
2.5	8	140/1597
2.5	10	140/1598
2.5	12	140/1599



It is recommended that the implant be placed 1 mm below the bone level when inserted using the implant key.





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SMART SET



BASIC SET

A surgical set is a collection of medical instruments brought together for use during surgery, designed to meet the needs of a specific surgical procedure. It is typically prepared under sterile conditions and contains various instruments specific to different types of surgeries. These sets are tailored to ensure the proper performance and safety during the operation, offering the required tools for precise and effective procedures.r.



# **OPEN SPOON**

The process of using the Measurement Post involves replicating the position of the dental implant in the mouth, creating an

exact copy of the patient  ${\bf s}$  dental implant  ${\bf s}$  shape,  ${\bf s}{\bf i}~{\bf e},$  and position.

It provides a special screw design and allows for manual use.

It is used by placing a 1.25mm ey on the transfer screw and tightening the transfer screw.

The narrow design allows access in limited spaces between ad acent teeth.

The open spoon measurement post provides more precise measurements.



DEFINITION	н	REF NO.
Open Spoon Measurement Post Long	19.45	150/0010
Long Screw	30.30	150/0011



DEFINITION	н	REF NO.
Open Spoon Measurement PostShort	14.00	150/0008
Short Screw	26.23	150/0009

# **CLOSE SPOON**

The use of the impression post involves replicating the position of the dental implant in the mouth, creating an exact copy of the patient s dental implant s shape, si e, and position. It provides a special screw design and manual usage.

The transfer screw is used by placing a 1.25mm ey on top of the transfer screw to tighten it. The narrow design allows for impressions in restricted spaces between ad acent teeth.

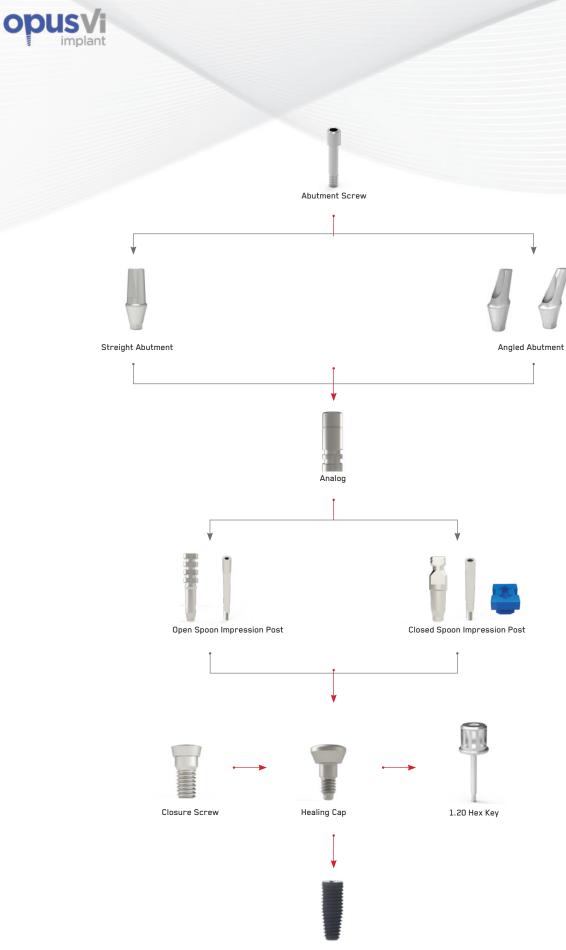


DEFINITION	Н	REF NO.
Closed Spoon Impression Post Short	14.45	150/0013
Closed Spoon Impression Post Screw	30.30	150/0014



DEFINITION	н	REF NO.
Closed Spoon Impression Post Plastic	19.45	150/0036





#### Dental Implant Systems

#### HEX

Plastic Abutment: It can be used for custom casting prosthetic restorations in single or multiple implants.



#### NON-HEX: CYLINDRICAL

**STRUCTURE:** Plastic Abutment: It can be used for custom casting prosthetic restorations in single or multiple implants.



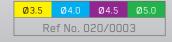
## HEX

Bridge Plastic: Can be used for custom casting prosthetic restorations in single or multiple implants.



#### NON-HEX: CYLINDRICAL STRUCTURE

Bridge Plastic: Can be used for custom casting prosthetic restorations in single or multiple implants.



#### **TEMPORARY PLASTIC ABUTMENT**

In the first stage of surgery, it can be placed to shape the gum without compromising osseointegration. PEE is a biocompatible plastic that is nearly as durable as titanium, but with a smoother surface. It provides a highly aesthetic temporary restoration that can be easily polished and shaped, ensuring long-lasting results.



#### PLASTIC (CR-V) ABUTMENT

It consists of two parts. The upper part is made of pom plastic, and the lower connection section is made of Cr-V.

Ø3.5	Ø4.0	Ø4.5	Ø5.0	
R	ef No. l	50/003	37	



In the implant system, the soft tissue profile obtained with different healing abutments and transferred to the model with a transfer piece that has the same exit profile as the healing abutment is preserved by being restored with abutment options that are in perfect harmony with this profile. This ensures long-term soft tissue health. The final lin in the sequence of complementary components is the abutments used for the permanent restoration.

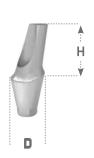
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Ø4.!	4.5	7	1	010/1010
	4.5	7	2	010/1012
	4.5	7	3	010/1014
	4.5	7	5	010/1018



Recommended Torque Value: Max. 30 Ncm.

Angled abutments are used when dental implants are not placed parallel to ad acent teeth or implants. The clinician may use angled abutments to achieve appropriate restorative contours. During implant surgery, particularly due to regional bone variations in the upper aw, implants placed at incompatible angles with each other may require the use of angled abutments.

ц.				
Ø4.5	4.5	7	1	040/1010
	4.5	7	2	040/1012
	4.5	7	3	040/1014
	4.5	7	5	040/1018



Recommended Torque Value: Max. 30 Ncm.

20/21

These abutments are provided to resolve orientation and parallelism issues that may occur during restoration. The selection of the abutment si e depends on the vertical distance between the fixture base and the opposing teeth, the existing circular depth, and the aesthetic requirements of the restored area.

ц.				
04	4.5	7	1	050/1010
	4.5	7	2	050/1012
	4.5	7	3	050/1014
	4.5	7	5	050/1018

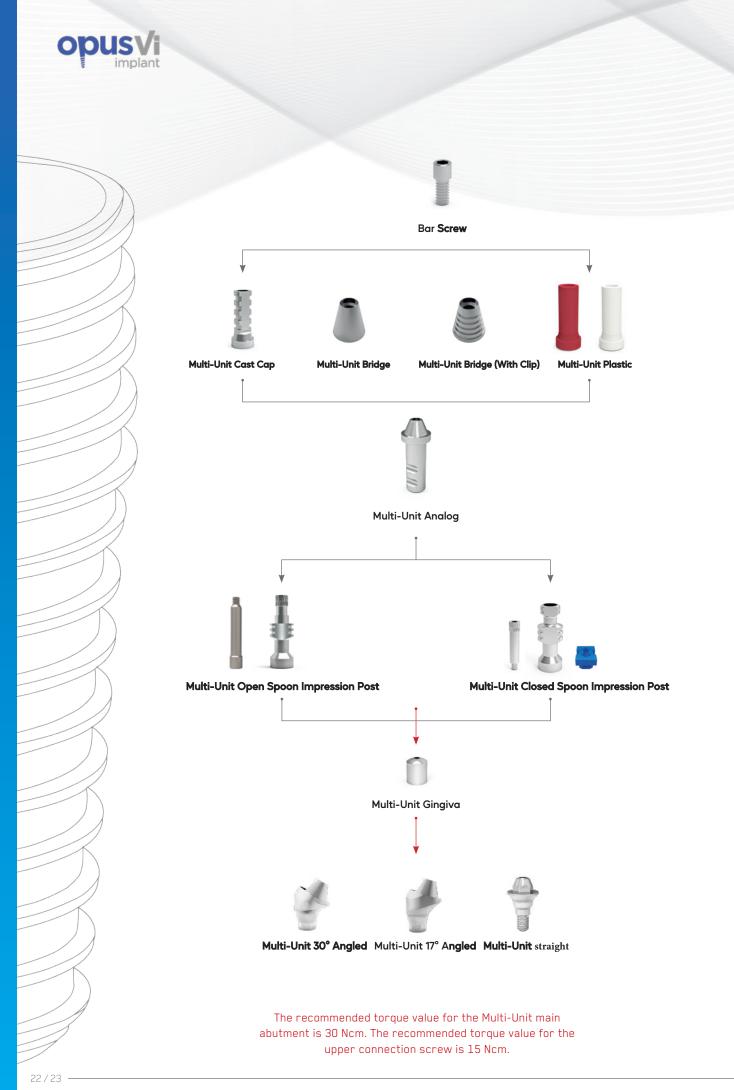
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Recommended Torque Value: Max. 30 Ncm.

Healing caps are designed to assist in the faster healing of the soft tissue surrounding the implant area. The healing caps, designed according to diameter and height, can be selected based on the needs and requirements of a specific clinical case, while preserving the emergence profile and final abutment needed for this process.

<u>د.</u>			
Ø4.	4.5	1	160/1993
	4.5	2	160/1995
	4.5	3	160/1997
	4.5	4	160/1999
	4.5	5	160/2001
	4.5	6	160/2003
	4.5	7	160/2005





Premil abutments are "patient-specific" abutments that are fully produced according to the size of the patient's teeth. The abutments are specially designed and manufactured for the patient using CAD / CAM technology, taking into account the angle of the implant applied to the patient, the shape and structure of the tooth, and the relationship with the surrounding tissues.

# PREMILL ABUTMENT

Ref No. 400/0086



Ti-Base is a product used for the digital recording of an implant's position and for providing restorations to implants.

TI-BASE ABUTMENT GH 1.5: Ref No. 350/0310 GH 3: Ref No. 350/0312

It is designed to be used as dental implant replicas placed on a 3D printed or milled model to replicate the position, orientation, and restorative platform of the implant placed in the mouth.

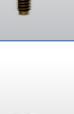
#### DIM ANALOG - DIGITAL ANALOG Ref No. 150/0026

It represents the position and orientation of the relevant dental implant or analog in CAD/CAM scanning procedures.

SCAN-BODY DIGITAL SCANNING HEAD Ref No. 150/0034

Multi-Unit Scanning.

MULTI-UNIT SCAN BODY Ref No. 150/0034













Ball-attachment abutments are small titanium anchors that are permanently positioned in dental implants. The abutments are used with a metal body and silicone caps. Silicone caps are available in various retention degrees. Ball-attachment abutments provide strong retention by helping stabili e excessive retention.

GH	REF NO.
1	100/0202
2	100/0204
3	100/0206
4	100/0208
5	100/0210

Recommended Torque Value: Max. 30 Ncm

BAR KEY	
Ref No. 220/0969	

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	STANDARD

STANDARD BALL-TYPE SPHERICAL ATTACHMENT	
Ref No. 150/0028	

METAL CAP

Ref No. 150/0027

STANDARD BALL-TYPE SPHERICAL ATTACHMENT	
Ref No. 150/0029	

MULTI-UNIT ANALOG STANDARD BALL-TYPE SPHERICAL Ref No. 150/0030

LOCATOR

Locator, overdenture-implant connection system, is designed for use with full or partial dentures supported by endosseous implants in the mandible or maxilla.



GH	REF NO.
1	230/0223
2	230/0225
3	230/0227
5	230/0229
7	230/0231

#### Recommended Torque Value: Max. 30 Ncm



LOCATOR KEY	
<b>LONG</b> - Ref No. 230/0427	
<b>SHORT</b> - Ref No. 230/0429	



PLASTIC
Ref No. 230/0013

#### ΤΙΤΑΝΙΌΜ Ref No. 230/0015



It is carefully designed to rehabilitate both edentulous and partially edentulous arches, especially when using the clinically and scientifically proven Multi-Unit treatment concept



GH	REF NO.
1	220/0540
3	220/0542
5	220/0544

Recommended Torque Value: Max. 30 Ncm / Bar screw: 15 Ncm



Recommended Torque Value: Max. 15 Ncm

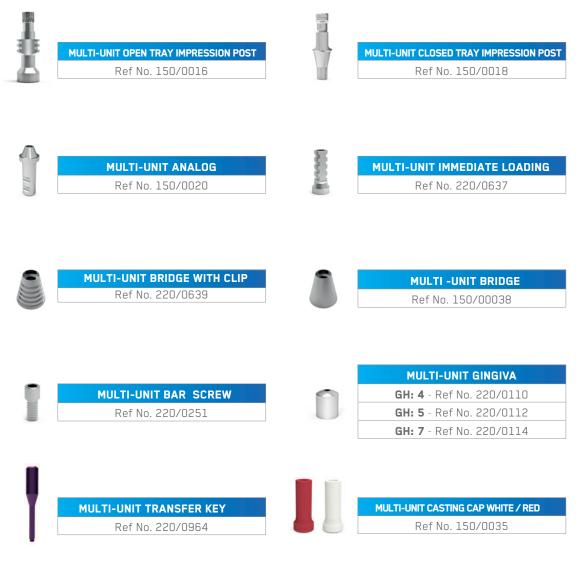
MULTI-UNIT ANGLED 17°

It was carefully designed to rehabilitate both edentulous and partially edentulous arches using the clinically and scientifically proven Multi-Unit treatment concept.



011	
GH	REF NO.
1	200/0111
3	200/0113
5	200/0115

Recommended Torque Value: Max. 30 Ncm / Bar screw: 15 Ncm



Recommended Torque Value: Max. 15 Ncm

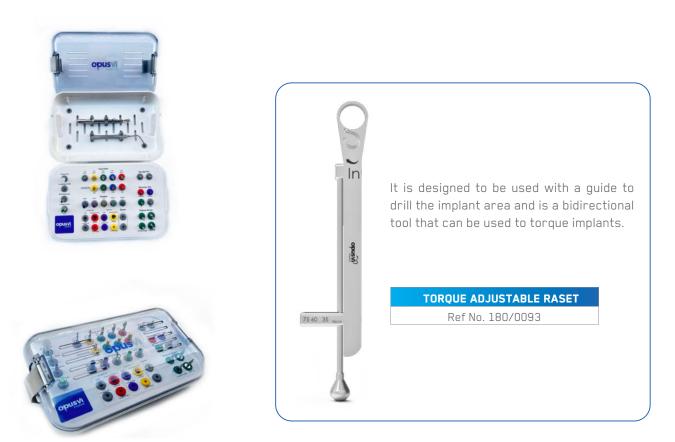


It is carefully designed to rehabilitate both edentulous and partially edentulous arches while using the clinically and scientifically proven Multi-Unit treatment concept.



## Dental Implant Systems

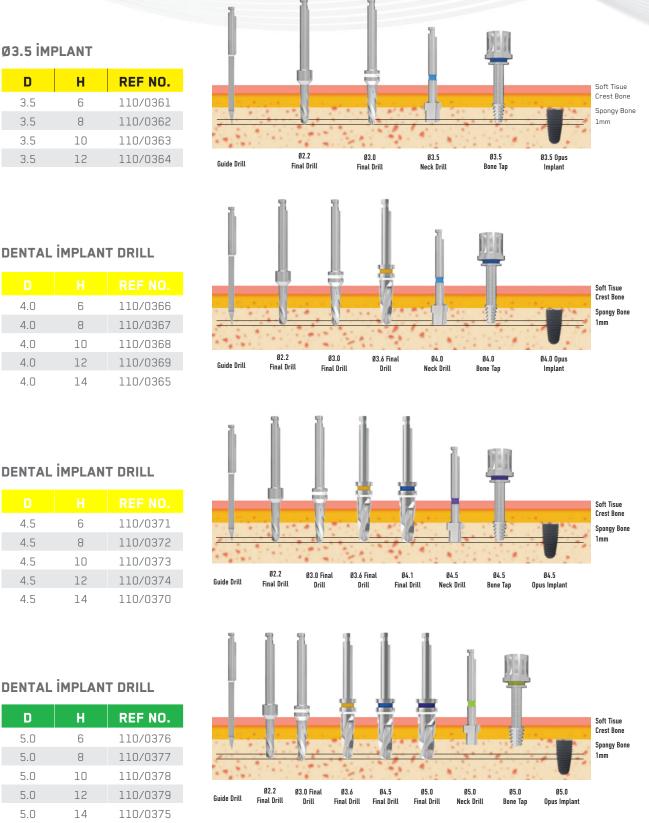




opusimplant.com



It allows dental surgeons to ad ust bone level implants to 3.4, 3.8, 4.2, and 4.8 implant diameters in as few steps as possible. This means that practitioners can benefit from maximum comfort. The it maximi es drilling power with a unique drill design that s ips the intermediate drilling step, resulting in a smooth but fast drilling process that maximi es bone contact with the implant. The excellent drilling power of the it simultaneously minimi es heat buildup, maintaining a low drill temperature. The shape of the conical drill ensures that it also functions as a pilot drill, preventing splashing during the drilling process



It is recommended that the implant be placed 1 mm below the bone level when sent with the implant key. In very hard and cortical bones, a thread-cutting drill should be used. In D4 bones, it is recommended to finish with the previous drill.

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