

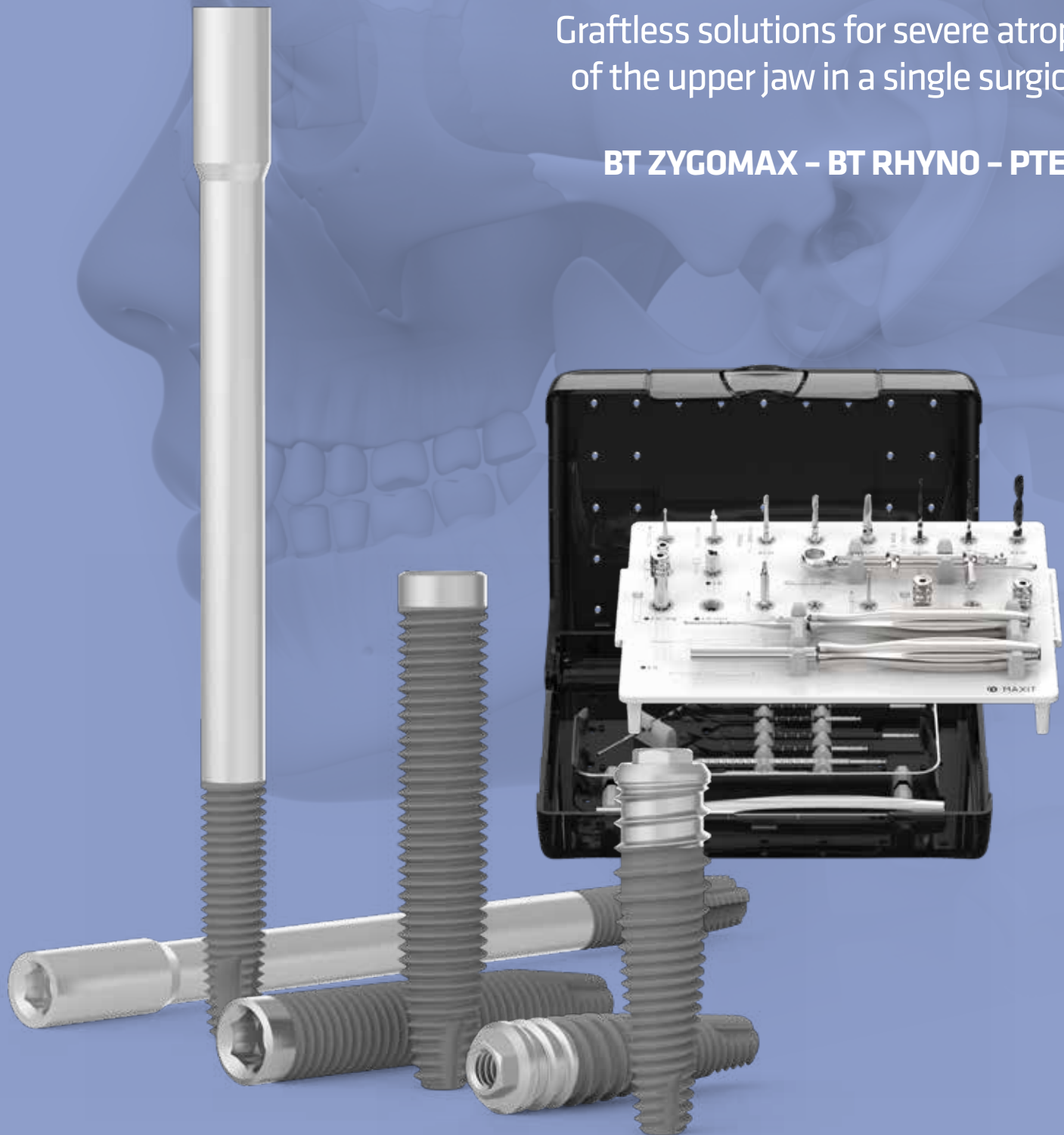
MAXIT  
MANUAL

**btk**  Implanting Trust,  
Smile Again!

# MAXIT LINE

Graftless solutions for severe atrophies  
of the upper jaw in a single surgical kit

**BT ZYGOMAX - BT RHYNO - PTERIGO**



visit [btk.dental](http://btk.dental)

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## **IMPORTANT NOTE**

For latest updates and information, visit **[www.btk.dental](http://www.btk.dental)**

This manual provides dental practitioners and related specialists with general information regarding the use of ISY+ dental implant system.

For detailed information on other specific implant lines and their restorative procedures, please refer to the corresponding manuals, specific literature or refer to the BTK website.

Consider to regularly visit practical courses for updates and professional exchange with dedicated colleagues in order to ensure your long-term success with implant-borne dental restorations.

© 2020 BTK - the smile system.

# MAXIT LINE

Graftless solutions for severe atrophies of the upper jaw  
in a single surgical kit

BT ZYGOMAX – BT RHYNO – PTERIGO

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## CORPORATE BACKGROUND

Privately held BTK BIOTEC was founded in 1998 in order to improve the quality of life of people with missing teeth.

BTK is a dedicated supporter of the genuine "100% Made in Italy" label, because with this it is guaranteed that BTK products are of unmatchable Italian craftsmanship and premium quality materials offering dedicated specialization and ample differentiation.



BTK Headquarters - NORTH ITALY

## Implanting Trust, Smile again!

By combining cutting-edge technologies and biology, BTK's mission is to offer affordable and personalized implant-borne solutions thereby sustainably improving the daily life of dental patients.

**Together with leading professionals, BTK strives to become a reference in replacing missing teeth with trusted implant solutions in order to improve oral health around the globe.**





## PREMIUM QUALITY MATERIALS

Grade 4 commercially pure titanium (ASTM F 67 / ISO 5832-2) is BTK's material of choice for dental implants. Grade 4 is slightly harder to work, but it provides the highest strength and durability characteristics among the commercially pure titanium grades, making it the natural choice for BTK dental implants.

Grade 5 titanium (ASTM F 136 / ISO 5832-3) is used for BTK's prosthetic components, as these are subject to certain levels of stress and in the MINI line implants. This high-strength version, also known as Ti-6Al-4V, is widely used in orthopedics and shows excellent long-term physical and mechanical properties.



## IMPLANT-ABUTMENT CONNECTION

The precision of the connection between implant and abutment creating a tight seal may be beneficial in preventing inflammatory bacteria propagating in the interface between different components.

Apart from that, extremely tight tolerances as applied by BTK help to avoid micromovements.

Providing precision in every part produced is one of our key contributions ensuring longterm restorative success.



## RESTORATIVE OPTIONS

The purpose of dental implant therapy, now widely used in dentistry, is to replace lost dental elements with biocompatible titanium implants, in order to obtain a new and correct occlusion, using prostheses on implants.

In order to achieve this goal, BTK offers a focused portfolio of restorative solutions backed-up by comprehensive clinical experience. BTK offers a variety of prostheses components to satisfy the clinical preferences and needs of the patients.



## MADE IN ITALY, USED GLOBALLY

We constantly ensure that the quality of our products and services meet the high expectations of our customers and their patients. Specialized professionals are taking care to offer comprehensive solutions in applied research, engineering, education and related activities.

Our brand is a solid promise of quality, we are certified UNI EN ISO 9001, UNI EN ISO 13485 and MDD 93/42/EEC Annex II and subsequent amendments and additions, and is therefore authorized to apply the CE Mark on its products.

# MAXIT

THE SURGICAL KIT FOR THE RESOLUTION  
OF BIG ATROPHIES



**The Surgical KIT MAXIT  
(Ref.651NA001)**

contains all the tools necessary  
for the application of the  
ZIGOMATIC, NASAL  
AND PTERIGOYD IMPLANTS.



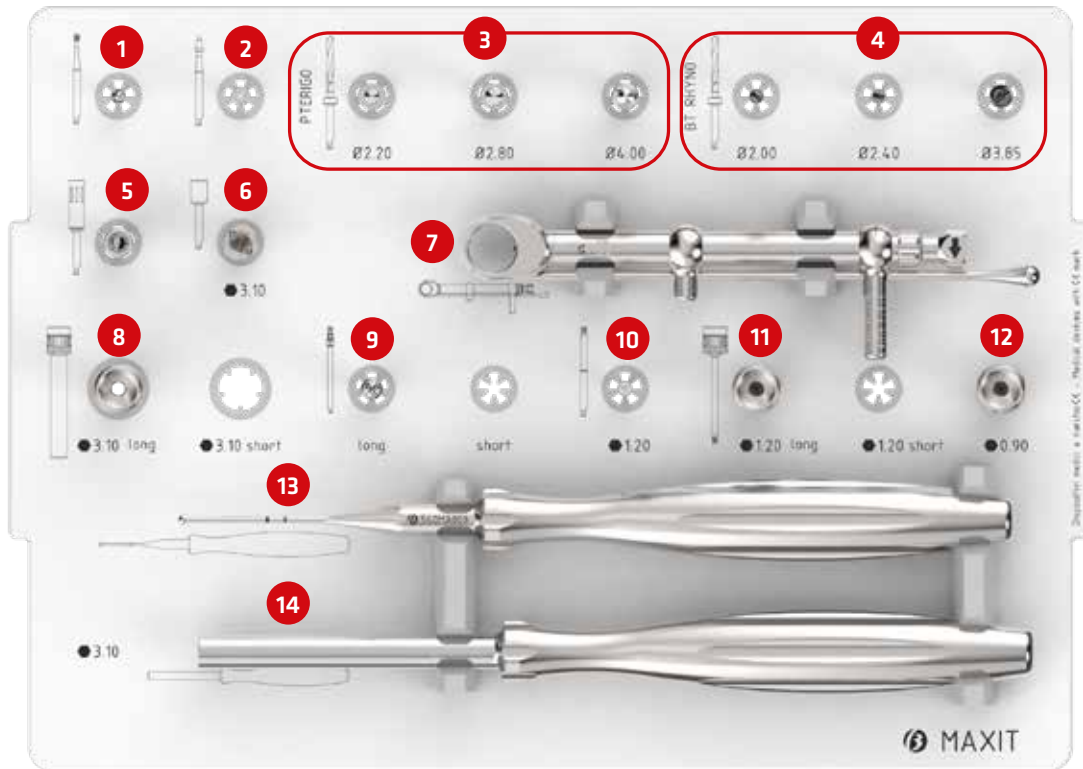


## SURGICAL KIT MAXIT

BTK has developed this surgical kit for the placement of three implant lines: BT ZYGOMAX, BT RHYNO AND PTERIGO.

The surgical tray is made of a highly shock-proof thermoplastic, which is well established in medical applications and the material is suitable for frequent sterilization in the autoclave.

General guidelines for the cleaning and sterilization are given in the corresponding SURGICAL MANUAL.



**1**  
**ROUND DRILL HS**  
401HS200 | Ø 2mm L30mm

**2**  
**LANCE DRILL HS**  
401HS201 | Ø 2mm L30mm

**3**  
**TWIST PRODRILL HR**  
412HR220 | Ø 2.2mm L37mm  
412HR280 | Ø 2.8mm L37mm  
412HR400 | Ø 4mm L37mm

**4**  
**TWIST DRILL HR**  
429HL200 | Ø2.0mm L44.8mm  
429HL240 | Ø2.4mm L44.8mm  
429HL385 | Ø3.85mm L44.8mm

**5**  
**DRILL EXTENSION HS**  
520HS003 | L28mm

**6**  
**RETENTIVE WRENCH**  
530HS017 | HEX 3.10

**7**  
**TORQUE WRENCH JD, REVERSIBLE**  
501JD003 | 90Ncm

**8**  
**ADAPTER CONNECTION**  
530JD031 | ISO/HEX3.10 JD-L35mm

**9**  
**IMPLANT DRIVER HANDPIECE IR-IW**  
530HL005 | L35mm

**10**  
**HANDPIECE DRIVER**  
530HS005 | HEX 1.20 L30mm

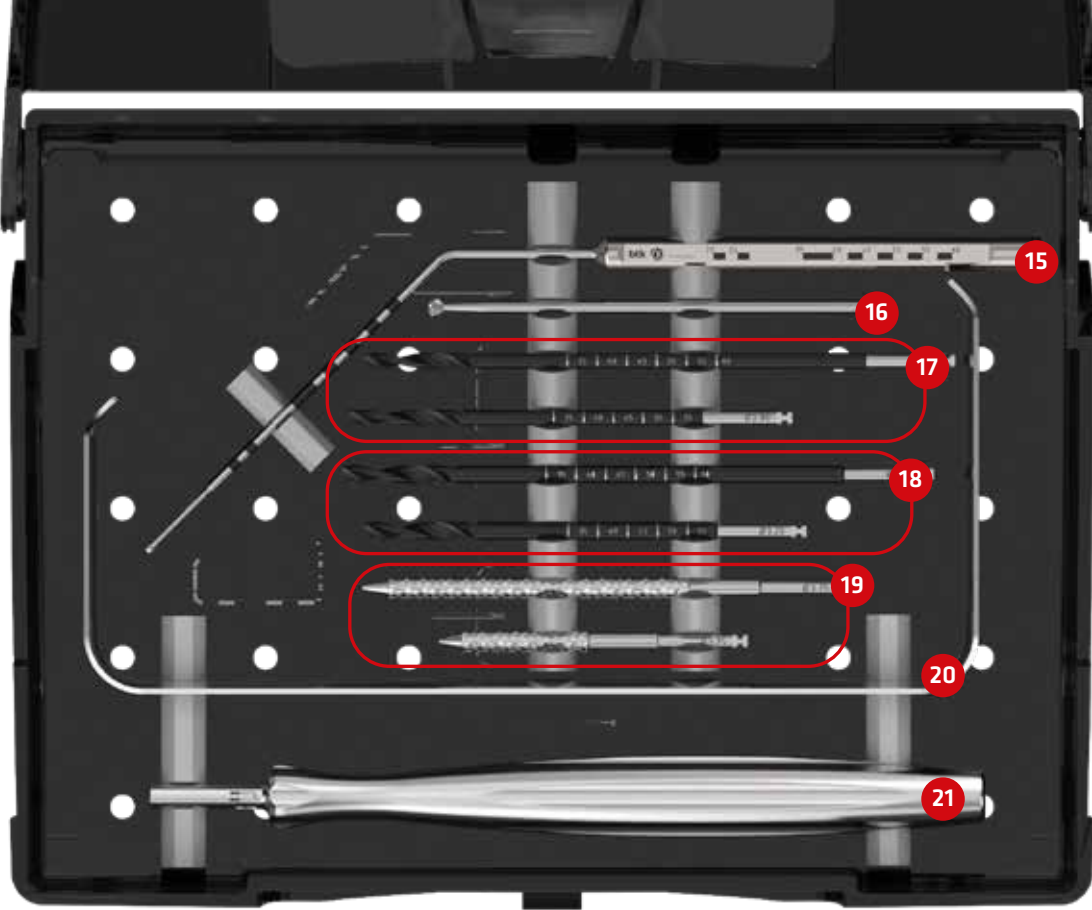
**11**  
**SCREWDRIVER JD**  
530JD007 | HEX1.20 L30mm

**12**  
**SCREWDRIVER JD**  
530JD012 | HEX0.90 L15mm

**13**  
**DEPTH GAUGE**  
540MA009 | Ø 1.8mm L140mm

**14**  
**MANUAL WRENCH**  
502MA020 | HEX 3.10 L140mm





15

**DEPTH GAUGE**



540MA021 | Ø1.8mm L175mm 45°

16

**ROUND DRILL HL**



401HL300 | Ø3mm L75mm

17

**HELICAL DRILL HL DLC Ø2.8**



428HL280 | Ø2.8mm L99.8mm



428HL281 | Ø2.8mm L74.8mm SHORT

18

**HELICAL DRILL HL DLC Ø3.2**



428HL320 | Ø3.2mm L99.8mm



428HL321 | Ø3.2mm L74.8mm SHORT

19

**ABRASIVE DRILL HL**



441HL370 | Ø3.75mm L82mm



441HL371 | Ø3.75mm L52mm SHORT

20

**SURGICAL RETRACTOR**



**SURGICAL RETRACTOR**

Notched to have greater grip on the mucosa

502MA008 | 70x16mm / 50x12mm

21

**MANUAL WRENCH**



520MA002 | L140mm

## PRE-OPERATIONAL PLANNING AND CONTRAINDICATIONS

There are many factors that must be taken into consideration in the therapeutic planning phase. These should be based on a thorough evaluation of the patient's clinical and radiological examination results.

The following problems must be taken into consideration in the clinical examination:

- Lack of teeth, bone, gum.
- Type of bone defects.
- Smile line and its impact on reconstruction.
- Interdental relations.
- Para functional habits.

In order for the doctor to exclude any pathology and plan the number and positions of the implants, the radiological examination must be performed on radiographs and CT scans that include all the relevant information.

### CONTRAINDICATIONS

- Acute infections of the maxillary sinus.
- Disorders of the jaw or zygomatic bone.
- Disorders that represent contraindications for the insertion of the dental implant.

### RELATIVE CONTRAINDICATIONS

- Chronic infections of the maxillary sinus.
- Bisphosphonate therapies.
- Smoking.

## POST OPERATIVE INSTRUCTIONS

- Diet based on soft foods and medical support therapy.  
The post-operative indications are similar to those of the maxillary sinus lift operation.
- Periodical oral hygiene and check-ups.
- After six months from the surgery, it is possible to do the final restoration.

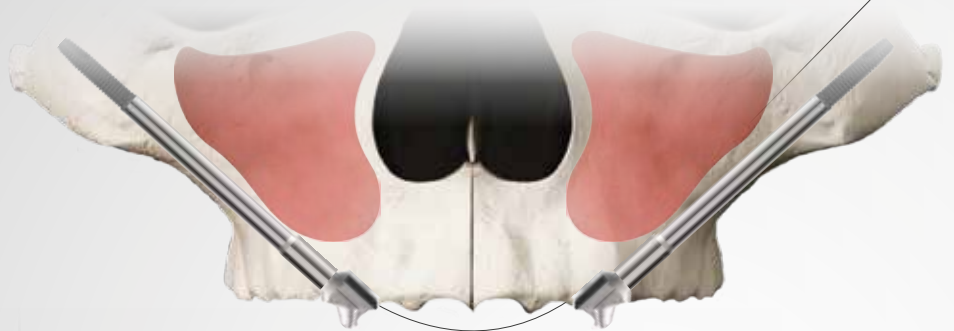
## POSSIBLE COMPLICATIONS

- Sinusitis.
- Oro-antral fistulas.
- Loss of osseointegration of the implant.



# BT ZYGOMAX

The implant for severe resorption in maxillary bone



CYLINDRICAL NECK  
H 10 mm - Ø 4.5 mm

CP TITANIUM  
GRADE 4

CYLINDRICAL BODY  
Ø 3.75 mm

SL  
SURFACE

ROUGH SURFACE  
H 15 mm

SINGLE LEAD THREAD  
0,6 mm

CONICAL SECTION H 4 mm  
APEX Ø 3.3 mm

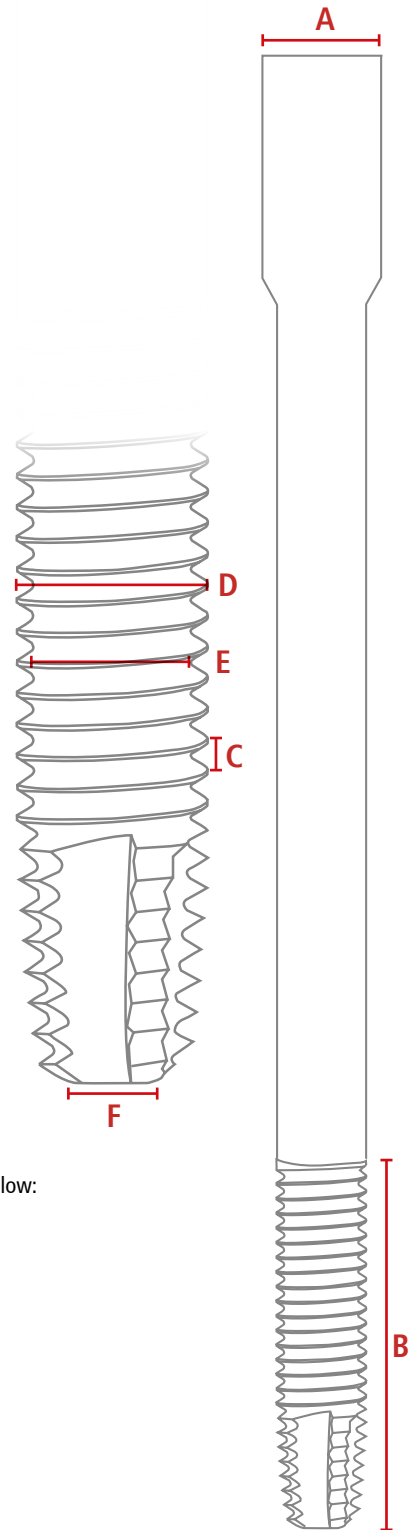
The **BT ZYGOMAX** implant is used in cases of partial or total maxillary edentulism and therefore placed in a multi-implant system (for example all-on-4) in which the loads are distributed.

The **BT ZYGOMAX** implant is extrasinusal and does not require perforation of the sinus membrane. In the extrasinusal approach, the implant is positioned on the external side of the maxilla, trying not to tear the sinus membrane itself.

Before the surgery, it is suggested to do a pre-operative study with radiographic images, CT images and any stereolithographic model of the maxilla.

# IMPLANT PORTFOLIO BT ZYGOMAX

INTERNAL HEXAGON CONNECTION IR					
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-right: 10px;">3,75</div> <div> <p><b>IR (INTERNAL REGULAR)</b> M1.8 Occlusal thread Ø 4.50 mm Prosthetic platform Etched part height 15.1 mm</p> </div> </div>					
<b>A PLATFORM Ø</b>					
Ø 4.50 mm					
<b>B ETCHED PART HEIGHT</b>					
15.1 mm					
<b>C THREAD PITCH</b>					
0.60 mm					
<b>D DIAMETER Ø</b>					
Ø 3,75 mm					
<b>E CORE DIAMETER</b>					
Ø 3.10 mm					
<b>F APEX TIP</b>					
Ø 2.0 mm					
<b>TOTAL LENGTH</b>					
35 mm	37.50 mm	40 mm	42.50 mm	45 mm	47.50 mm
133IR37A	133IR37B	133IR37C	133IR37D	133IR37F	133IR37G
50 mm	52.50 mm	55 mm			
133IR37H	133IR37I	133IR37K			



The color codes applied for different implant diameters and prosthetic platforms are indicated below:

	WHITE
IMPLANT DIAMETER Ø	<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">3,75</div>
PROSTHETIC PLATFORM INT	<div style="background-color: #003366; color: white; padding: 5px; display: inline-block;">IR</div>

# HANDLING OF STERILE IMPLANT PACKAGING

## CAUTION

The sealed package of the medical device (MD) must be opened in a surgically suitable environment.

The removal of the implant must be carried out using sterilized instruments, avoiding any contact with non-sterile surfaces.

The sterility of the medical device is only guaranteed if the following conditions are met:

the expiry date stated on the packaging is still valid; there is a red dot on the sterile vial that signals the successful operation of gamma ray sterilization; the sealed package has not been opened and does not show damage or perforations. If only one of the aforementioned conditions is not respected, the device must not be used.

The device is disposable; the reuse can compromise the safety features of the device making it inappropriate for its intended use.

BIOTEC explicitly declares that the MD is for single use and assumes no responsibility for any re-use by users.

## BT ZYGOMAX



1

BT Zygomax dental implants are supplied sterile. The external packaging is made up of a cardboard box. The implant is inserted into the vial placed inside a sealed blister. The diameter, length and production lot of the implant are shown on the device identification label.



2

Open the cardboard box and remove the blister containing the vial with the implant. To facilitate compliance with the traceability requirement of the medical device, there are two detachable patient-labels in the vial. One must be stuck onto the patient's medical record and one onto the patient's implant passport. Inside the box there are also dedicated instructions for use, which must be consulted before using the device.



3

Open the blister and remove the vial.



4

Open the vial containing the implant in a surgically suitable environment. The internal vial must be handled with sterile gloves.



5

Keep the vial in vertical position to prevent the device from leaking out.



6

The BT Zygomax system is supplied without the mounting device. Use the IR-IW implant driver (530HL005) and possibly extended with the drill extension (520HS003 torque wrench) for the removal of the implant from the vial and for its insertion into the previously prepared implant site. BTK dental implants can be positioned manually with the reversible dynamometric ratchet or can be inserted using the micromotor. Insert the implant into the bone at the required depth by screwing it with appropriate instruments (max speed 15-25 rpm), not exceeding the torque values indicated below in order not to damage the implant connection and the instruments:

- Implants > Ø 3.7 mm  
Max insertion torque 45-65 Ncm

Upon completion of the insertion, the doctor will have to evaluate the quality of the bone and the initial stability, which are decisive elements to load the prosthesis.

## SURGICAL PROCEDURE

### FLAP OPENING AND SITE PREPARATION:



- 1**  
Proceed with an incision on the crest of the edentulous maxilla with a distal vertical incision of release.

Proceed with the lifting of a full thickness mucoperiosteal flap, exposing the lateral side of the maxilla.

The alveolar ridge is exposed, including the palatal side, so dissect up to the level of the infraorbital foramen to facilitate anatomical orientation.

- 2**  
Identification of the alveolar support point and where possible try to safeguard the bone structure of the alveolar region for greater stability of the future implant.

- 3**  
It is possible to subsequently mill a space of about 10 mm x 5 mm on the lateral side of the maxilla until to clearly highlight and detach the sinus mucosa in the area in which the implants will be inserted.

- 4**  
The possible trajectory of the implant is identified by positioning the ball drill over the lateral wall of the jaw. The implant must rest on the lateral wall of the maxilla, from the alveolar region and inserting itself into the zygomatic bone until it reaches the external cortex.

### IMPLANT SITE CREATION:



- 1**  
Mark the entrance of the implant in the cheekbone region with the stainless steel ball bur (**401HL300 Round Drill**) and create an invitation to enter the posterior-upper side of the maxillary sinus to allow insertion of the abrasive drill. **Maximum recommended speed: 800 RPM**



- 2**  
Use the abrasive drill (**441HL370**) to prepare the intermediate passage between the alveolar position and the zygomatic region (preparation of the lateral bone wall of the maxillary sinus). **Maximum recommended speed: 500 RPM**



- 3**  
Use the depth gauge (**540MA021**) to determine the ideal implant length.



- 4**  
Proceed to enlarge the bone passage with the helical drill with DLC coating (**428HL280** o **428HL320**). **Maximum recommended speed: 600 RPM.**

Once the osteotomy is completed, we recommend irrigating the sinus with pre-cooled physiological solution before inserting the implant.

# INSERTION OF THE IMPLANT

1

Open the package and insert the implant with the implant driver for handpiece IR-IW (530HL005) and possibly extended with the drill extension (520HS003) and insert the implant in the bone site, prepared with a **setting of 65 Ncm maximum and a maximum speed of 25 RPM.**

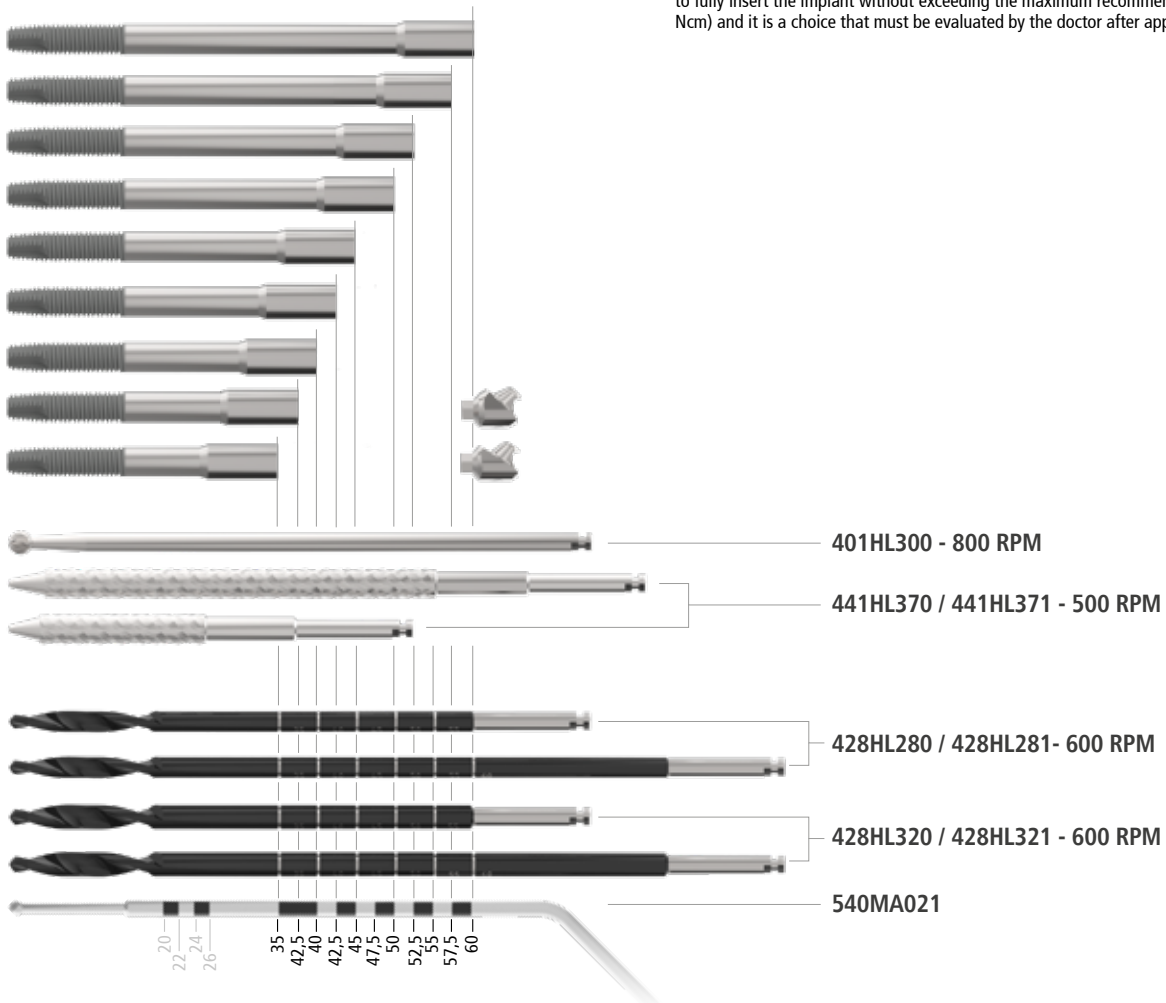
2

To complete the insertion of the implant, it is also possible to insert it with the connection adapter (530JD031) and reversible dynamometric ratchet JD (501JD003 torque wrench) to check the final insertion torque of the implant.

3

Proceed with the immediate loading technique by inserting the **angled BT4 IR abutment (45 ° 266IR3J0 and 55 ° 266IR3M0)** in combination with the **BT4 prosthetic cylinder (267NA0A0)** and the respective screws, then creating the dedicated prosthetic.

The final tightening of the retention screw of the angled abutment with the implant must be **maximum 30Ncm**; while the tightening of the connection screw of the BT4 prosthetic cylinder must be a **maximum of 15Ncm.**



BT ZYGOMAX IMPLANT	Round Drill HL 401HL300	Abrasive Drill HL Ø 3.75 441HL370	Helical Drill HL DLC Ø2.8 428HL280	Helical Drill HL DLC Ø3.2 428HL320
Ø 3,75 X 35	●	○	●	○
Ø 3,75 X 37,5	●	○	●	○
Ø 3,75 X 40	●	○	●	○
Ø 3,75 X 42,5	●	○	●	○
Ø 3,75 X 45	●	○	●	○
Ø 3,75 X 47,5	●	○	●	○
Ø 3,75 X 50	●	○	●	○
Ø 3,75 X 52,5	●	○	●	○
Ø 3,75 X 60	●	○	●	○

● Always

○ It depends on the appearance of the maxillary sinus and the direction of the implant in situ, so it is a choice that must be evaluated by the doctor after the appropriate analyzes.

○ Helical drill HL Ø 3.20 = Should be used if the helical drill HL Ø 2.80 is not sufficient to fully insert the implant without exceeding the maximum recommended torque (max 30 Ncm) and it is a choice that must be evaluated by the doctor after appropriate analysis.



# PROSTHETIC OPTIONS

## INTERNAL HEXAGON PROSTHETICS IR

PICTURE	REF	PRODUCT NAME	SPECIFICATION
<b>HEALING &amp; SOFT TISSUE CONDITIONING</b>			
	201IR2A0	Healing Abutment IR	H2mm Ø4.5mm
	201IR3A0	Healing Abutment IR	H3mm Ø4.5mm
	201IR4A0	Healing Abutment IR	H4mm Ø4.5mm
	201IR4A1	Healing Abutment IR	H4mm Ø5.5mm
	201IR5A0	Healing Abutment IR	H5mm Ø4.5mm
	201IR5A1	Healing Abutment IR	H5mm Ø1.8mm
	201IR7A0	Healing Abutment IR	H7mm Ø1.8mm
	200IROA0	Cover Screw IR	HEX1.20
<b>SCREW-RETAINED PROSTHESIS</b>			
	266IR3M0	Abutment IR	45° H3.5 SV5.7
	266IR3J0	Abutment IR	55° H3.5 SV6.2
	690NA066	Retentive Screw BT4	M1.8 Angled abutment IR-EN
	330NA0A0.04	Covering Caps BT4	H5 Kit 4pcs
	690NA024	Retentive Screw	M1.4 HEX1.20 10N
	267NA0A0	BT4 Titanium Abutment	
	207NA0A0	Castable Plastic Abutment BT4	
	207NA0A1	Castable Plastic Abutment BT4	No Screw
	311NA0A0	Impression Post Pick-up BT4	with long Screw
	690NA031	Impression Post Pick-Up Screw	M1.4 HEX1.20 H17mm
	303NA0A0	Abutment Replica BT4	
	351BT1A1	Scan Abutment Extra-oral BT	Rotating
	352BT1A1	Scan Abutment Intra-oral BT	Rotating
	246BT1A1	BT Link BT	H1mm Ø4.8mm Rotating
	247BT1A1	Base BT Link BT	H1mm Ø4.8mm no Cap. Rot
	205NA003.05	Castable Plastic Abut. BT Link	H1mm Ø5.4mm Kit 5pcs
	240BT1R0	CoCr Abutment BT	H1.5mm Rotating

# BT RHYNO

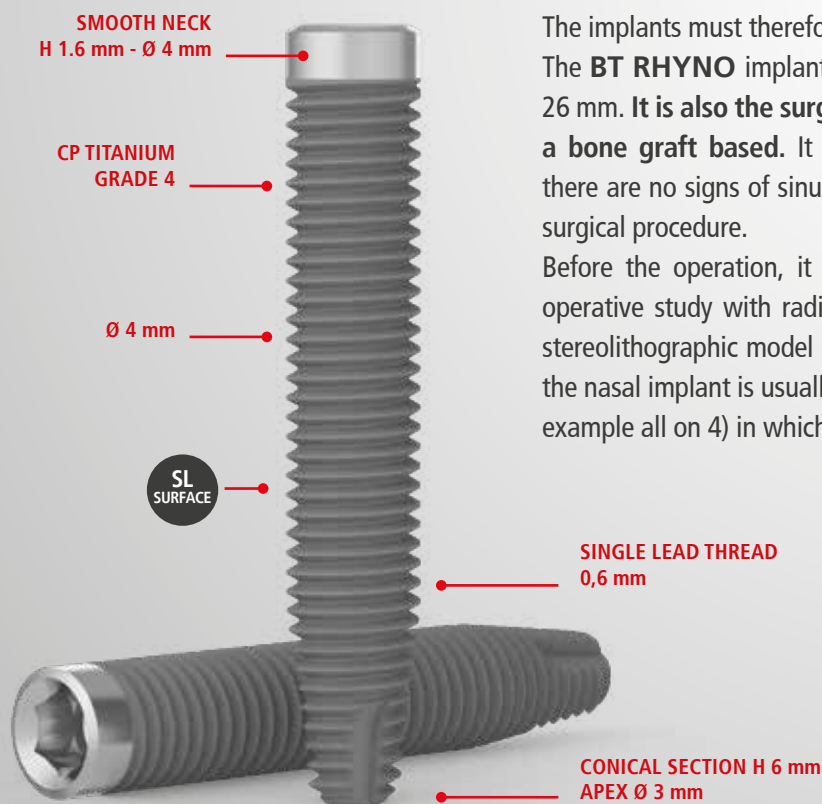
## GRAFTLESS SOLUTIONS FOR SEVERE ATROPHIES WITH NASAL ANCHORAGE



In the case of partial or total maxillary edentulism, **BT RHYNO** implants can be used to exploit the maxillary bone surrounding the nose. The relative implant site begins in the alveolar bone (which must be at least 3mm) in the premolar area and ends in the bone between the maxillary sinus and the nasal cavity.

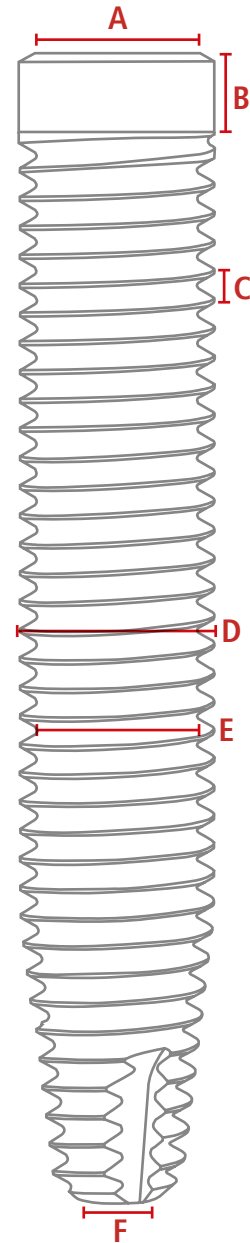
The implants must therefore be long enough to cross the sinus. The **BT RHYNO** implant is available in lengths 20, 22, 24 and 26 mm. **It is also the surgeon's choice whether or not to add a bone graft based.** It is always mandatory to monitor that there are no signs of sinus infection before proceeding with the surgical procedure.

Before the operation, it is recommended to carry out a pre-operative study with radiographic images, CT images and any stereolithographic model of the maxilla. It should be noted that the nasal implant is usually placed in a multi-implant system (for example all on 4) in which the loads are distributed.



# IMPLANT PORTFOLIO BT RHYNO

INTERNAL HEXAGON CONNECTION IR			
<b>4.0</b>	<b>IR (INTERNAL REGULAR)</b> M1.8 Occlusal thread Ø 4.0 mm Prosthetic platform 1.6 mm Smooth neck portion		
<b>A PLATFORM Ø</b>			
Ø 3.50 mm			
<b>B SMOOTH NECK HEIGHT</b>			
1.6 mm			
<b>C THREAD PITCH</b>			
0.60 mm			
<b>D DIAMETER Ø</b>			
Ø 4 mm			
<b>E CORE DIAMETER</b>			
Ø 3.25 mm			
<b>F APEX TIP</b>			
Ø 2.0 mm			
<b>TOTAL LENGTH</b>			
20 mm	22 mm	24 mm	26 mm
134IR41U	134IR41V	134IR41W	134IR41X



The color codes applied for different implant diameters and prosthetic platforms are indicated below:

IMPLANT DIAMETER Ø 4.0

PROSTHETIC PLATFORM INT IR

# HANDLING OF STERILE IMPLANT PACKAGING

## CAUTION

The sealed package of the medical device (MD) must be opened in a surgically suitable environment. The removal of the implant must be carried out using sterilized instruments, avoiding any contact with non-sterile surfaces. The sterility of the medical device is only guaranteed if the following conditions are met: the expiry date stated on the packaging is still valid; there is a red dot on the sterile vial that signals the successful operation of gamma ray sterilization; the sealed package has not been opened and does not show damage or perforations. If only one of the aforementioned conditions is not respected, the device must not be used. The device is disposable; the reuse can compromise the safety features of the device making it inappropriate for its intended use. BIOTEC explicitly declares that the MD is for single use and assumes no responsibility for any re-use by users.

## BT RHYNO



1

BT Rhyno dental implants are supplied sterile. The external packaging is made up of a cardboard box. The implant is inserted into the vial placed inside a sealed ampoule. The diameter, length and production lot of the implant are shown on the device identification label.



2

Open the cardboard box and remove the ampoule containing the vial with the implant. To facilitate compliance with the traceability requirement of the medical device, there are two detachable patient-labels in the vial. One must be stuck onto the patient's medical record and one onto the patient's implant passport. Inside the box there are also dedicated instructions for use, which must be consulted before using the device.



3

Open the ampoule and remove the vial.



4

Open the vial containing the implant in a surgically suitable environment. The internal vial must be handled with sterile gloves.



5

Keep the vial in vertical position to prevent the device from leaking out.



6

The BT Rhyno system is supplied without the mounting device. Use the IR-IW implant driver (530HL005) and possibly extended with the drill extension (520HS003) for the removal of the implant from the vial and for its insertion into the previously prepared implant site. BTK dental implants can be positioned manually with the reversible dynamometric ratchet or can be inserted using the micromotor. Insert the implant into the bone at the required depth by screwing it with appropriate instruments (max speed 15-25 rpm), not exceeding the torques indicated below in order not to damage the implant connection and the instruments:

- Implants > Ø 3.7 mm  
Max insertion torque 45-65 Ncm

Upon completion of the insertion, the doctor will have to evaluate the quality of the bone and the initial stability, which are decisive elements to load the prosthesis.

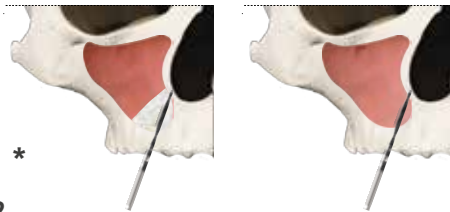
# SURGICAL PROCEDURE



1

It is advised to open a window in the lateral sinus wall, gently reflecting the Schneiderian membrane without perforating it.

The site preparation begins with the identification of the access in the alveolar bone.



2

If the alveolar has more than 3mm of good bone, use the twist drill **DLC 429HL200 Ø2 mm** to cross through the sinus, engaging the lateral nasal wall.

**Max. Speed: 600 RPM**

It is optional the reflect of the Schneiderian membrane of the sinus, but it is advisable.

It is a surgeon's choice how to proceed.

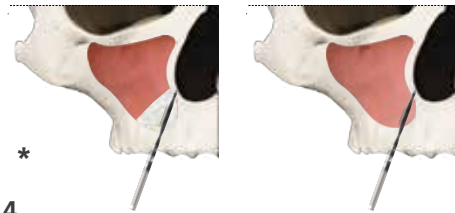


3

The depth probe **540MA021** can be used to verify the depth of the osteotomy and for the implant selection.

\*

**NB: The surgeon can choose to open a window in the lateral sinus wall, gently reflecting the Schneiderian membrane, then insert the bone graft.**



4

Use the twist drill **429HL240 Ø2.4 mm** to enlarge the implant site.

**Max. Speed: 600 RPM**



5

If is necessary to enlarge the hole to obtain optimal torques (maximum 45 Ncm) use the drill **429HL385**.

**Maximum recommended speed: 500 RPM.**

It is always a clinician's choice.






6

Place the implant, with the IR implant driver **530HL005** or with the extension drill **520HS003**, until reaching the final position with setting **45-65 Ncm maximum** and a **maximum speed of 15-25 RPM.**

## INSERTION OF THE IMPLANT

It is possible to proceed with the immediate loading technique by inserting the angled BT4 IR abutment (**45 ° 266IR3J0 and 55 ° 266IR3M0**) in combination with the BT4 prosthetic cylinder (**267NA0A0**) and the respective screws, then creating the dedicated prosthetic.

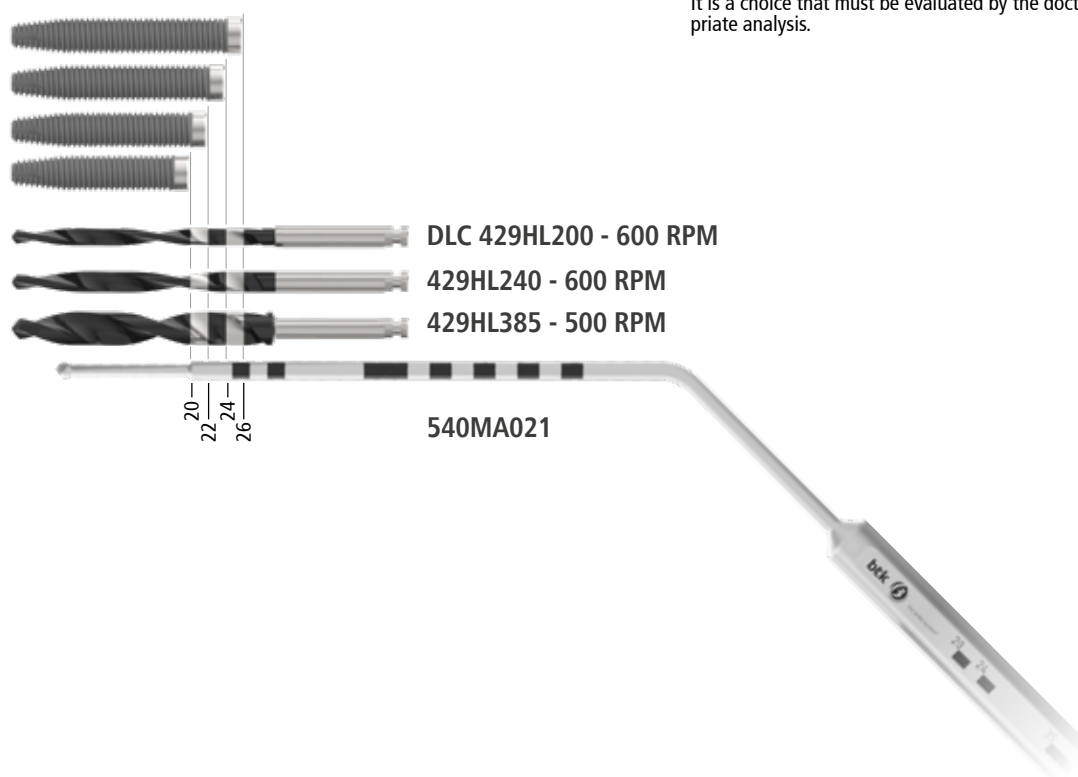
The final tightening of the retention screw of the angled abutment with the implant must be **maximum 30Ncm**; while the tightening of the connection screw of the BT4 prosthetic cylinder must be a **maximum of 15Ncm**.

BT RHYNO IMPLANT	Twist Drill HL DLC 429HL200	Twist Drill HL DLC 429HL240	Twist Drill HL DLC 429HL385
			
Ø 4 X 20	●	●	○
Ø 4 X 22	●	●	○
Ø 4 X 24	●	●	○
Ø 4 X 26	●	●	○

● Always


























○ It is recommended to place BT Rhyno implant if there are at least 3mm of residual bone crest.

Sometimes it may be necessary to use the twist drill 429HL385 to drill more the alveolar bone and get the right torque. It is a choice that must be evaluated by the doctor after the appropriate analysis.



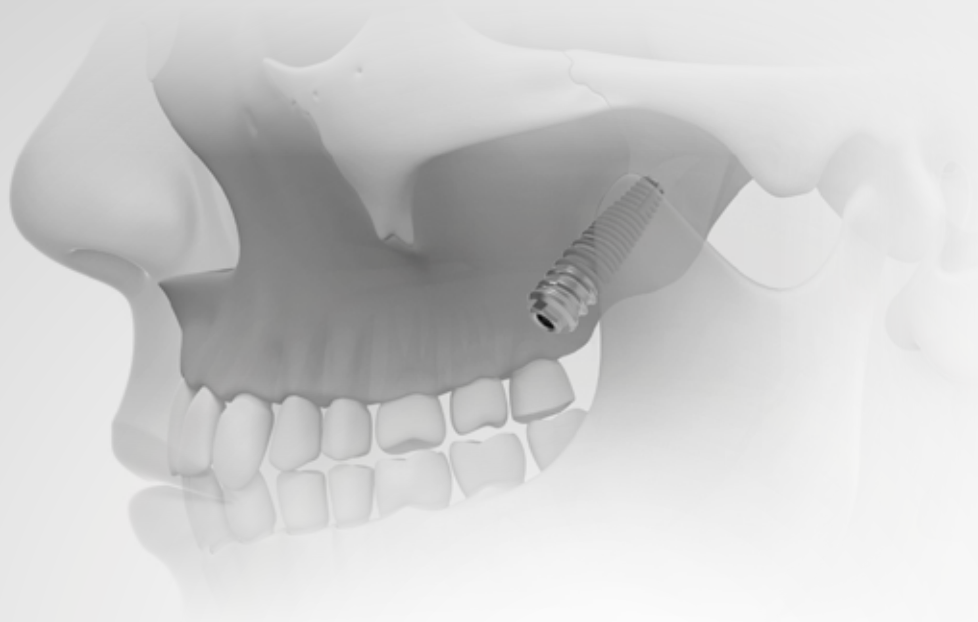
# PROSTHETIC OPTIONS

## INTERNAL HEXAGON PROSTHETICS IR

PICTURE	REF	PRODUCT NAME	SPECIFICATION
<b>HEALING &amp; SOFT TISSUE CONDITIONING</b>			
	201IR2A0	Healing Abutment IR	H2mm Ø4.5mm
	201IR3A0	Healing Abutment IR	H3mm Ø4.5mm
	201IR4A0	Healing Abutment IR	H4mm Ø4.5mm
	201IR4A1	Healing Abutment IR	H4mm Ø5.5mm
	201IR5A0	Healing Abutment IR	H5mm Ø4.5mm
	201IR5A1	Healing Abutment IR	H5mm Ø1.8mm
	201IR7A0	Healing Abutment IR	H7mm Ø1.8mm
	200IROA0	Cover Screw IR	HEX1.20
<b>SCREW-RETAINED PROSTHESIS</b>			
	266IR3M0	Abutment IR	45° H3.5 SV5.7
	266IR3J0	Abutment IR	55° H3.5 SV6.2
	266IR2L0	Angled Abutment BT4 IR	17° H2mm Ø4.8mm
	266IR3L0	Angled Abutment BT4 IR	17° H3mm Ø4.8mm
	266IR3G0	Angled Abutment BT4 IR	30° H3mm Ø4.8mm
	690NA066	Retentive Screw BT4	M1.8 Angled abutment IR-EN
	330NA0A0.04	Covering Caps BT4	H5 Kit 4pcs
	690NA024	Retentive Screw	M1.4 HEX1.20 10N
	267NA0A0	BT4 Titanium Abutment	
	207NA0A0	Castable Plastic Abutment BT4	
	207NA0A1	Castable Plastic Abutment BT4	No Screw
	311NA0A0	Impression Post Pick-up BT4	with long Screw
	690NA031	Impression Post Pick-Up Screw	M1.4 HEX1.20 H17mm
	303NA0A0	Abutment Replica BT4	
	351BT1A1	Scan Abutment Extra-oral BT	Rotating
	352BT1A1	Scan Abutment Intra-oral BT	Rotating
	246BT1A1	BT Link BT	H1mm Ø4.8mm Rotating
	247BT1A1	Base BT Link BT	H1mm Ø4.8mm no Cap. Rot
	205NA003.05	Castable Plastic Abut. BT Link	H1mm Ø5.4mm Kit 5pcs
	240BT1R0	CoCr Abutment BT	H1.5mm Rotating

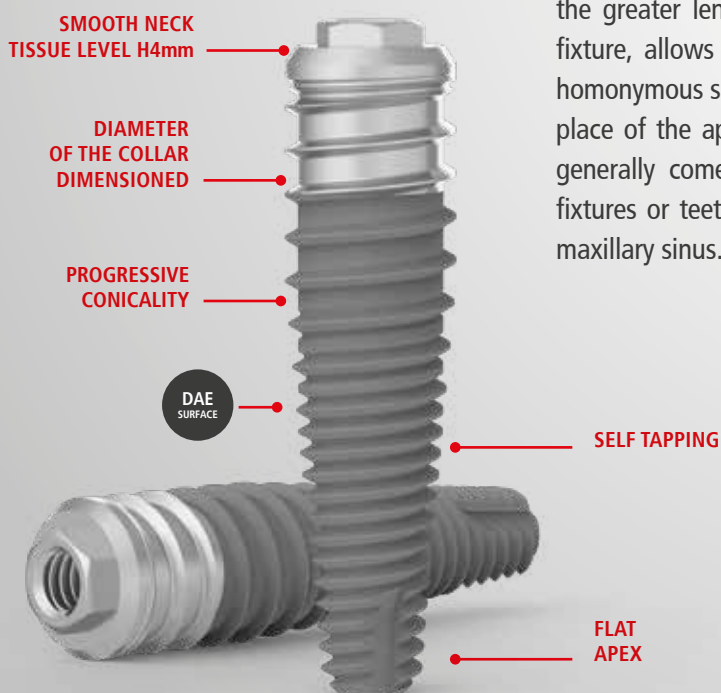
# PTERIGO

## THE PTERIGOID SOLUTION



The posterior area of the maxillary tuberosity is closely connected at the bone level with the pterygoid process of the sphenoid and with the wall of pyramidal process of the palatine, thus representing an appropriate anatomical structure, characterized by dense bone, suitable to support dental implants.

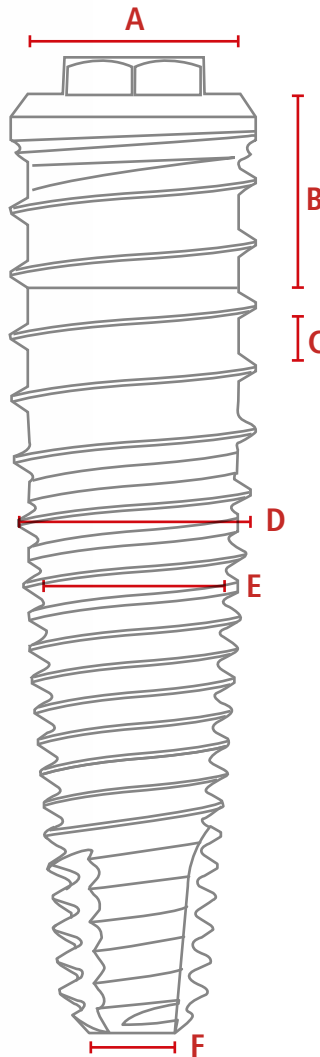
The pterygoid implant is an endosseous fixture, of 15-18 mm in length, positioned in the region of the superior maxillary tuber; the greater length of the implant, if compared to a standard fixture, allows to reach the pterygoid fossa and therefore the homonymous sphenoid abutment on which the anchoring takes place of the apical part of the implant. The pterygoid implant generally comes used together with the placement of other fixtures or teeth placed in the mesial area with respect to the maxillary sinus.





# IMPLANT PORTFOLIO PTERIGO

CONNECTION EXTERNAL HEXAGON ER	
<b>4,7</b>	<b>ER (EXTERNAL REGULAR)</b> Occlusal thread M2.0 Prosthetic Platform Ø 4.1 mm Smooth Neck Portion 4.0 mm
<b>A PLATFORM Ø</b>	
Ø 4.1 mm	
<b>B SMOOTH NECK HEIGHT</b>	
4 mm	
<b>C THREAD PITCH</b>	
1.2 mm	
<b>D DIAMETER Ø</b>	
Ø 4.7 mm	
<b>E CORE DIAMETER</b>	
Ø 4.0 mm	
<b>F APEX DIAMETER</b>	
Ø 2.0 mm	
<b>TOTAL LENGTH</b>	
<b>15 mm</b>	<b>18 mm</b>
150ER47R	150ER47T



The color codes applied for different implant diameters and prosthetic platforms are indicated below:

	GREY
IMPLANT DIAMETER Ø	<b>4,7</b>
PROSTHETIC PLATFORM EXT	<b>ER</b>

# HANDLING OF STERILE IMPLANT PACKAGING

## CAUTION

The sealed package of the medical device (MD) must be opened in a surgically suitable environment.

The removal of the implant and of the cover screw, if provided, must be carried out using sterilized instruments, avoiding any contact with non-sterile surfaces.

The sterility of the medical device is only guaranteed if the following conditions are met:

the expiry date stated on the packaging is still valid; there is a red dot on the sterile vial that signals the successful operation of gamma ray sterilization; the sealed package has not been opened and does not show damage or perforations. If only one of the aforementioned conditions is not respected, the device must not be used.

The device is disposable; the reuse can compromise the safety features of the device making it inappropriate for its intended use.

BIOTEC explicitly declares that the MD is for single use and assumes no responsibility for any re-use by users.

## PTERIGO



1

BTK dental implants are supplied sterile in a double-vial package. The implant diameter, length and lot are shown on the label located in the vial containing the implant and in the outer label on the back of the packaging.



2

Open the blister from the back by breaking the outer label, and take out the vial.



3

The top lid of the vial is protected by the seal label. The color of the seal label identifies the diameter of the implant. To facilitate compliance with the traceability requirement of the medical device, there are two detachable patient-labels in the vial. One must be stuck onto the patient's medical record and one onto the patient's implant passport.



4

Open the external vial and withdraw the internal vial containing the implant in a surgically suitable environment. The internal vial must be handled with sterile gloves.



5

Remove the safety cap of the sterile inner vial, which always includes the sterile closure screw. Warning The internal vial consists of 3 parts. The cover screw (locking screw), if provided, is placed in the vial cap. Hold the vial upright to prevent the devices from leaking out. Unscrew the central part of the vial, to access the implant.



6

Some implant lines are supplied with mounting device connected to the implant, other lines are supplied without. Depending on the different configuration, use the appropriate instrument for the implant withdrawal from the vial and for the insertion of the same in the previously prepared implant site. For further details, please refer to the documentation of the relative implant lines. The BTK dental implants can be positioned manually with the Reversible Torque Wrench or they can be inserted using the contra-angle handpiece. A range of 15 - 25 rpm is recommended for implant insertion and not to exceed the maximum torque indicated by BTK.

## SURGICAL AND PROSTHETIC GUIDELINES



### OPENING OF THE FLAP AND SITE PREPARATION

Make an incision of the maxilla tuber in the ridge at all thickness and subsequently vestibular release incisions and palatal. Proceed with the skeletonization of the maxilla

superior posterity and the identification of anatomical landmarks clinical and radiological.



### CREATING THE IMPLANT SITE

Use the **lance drill (401HS201) or ball drill (401HS200)** to create an invitation on the cortical bone useful for the placement of the depth drill.

- Recommended maximum speed: **700 RPM**.



Use the **Ø 2.20mm depth drill (412HR220)** to create the depth pilot hole, up to the pterygoid fossa.

- Recommended maximum speed: **300 RPM**.



Use the **depth gauge (540MA009)** to verify the clinical length of the pterygoid implant. Proceed to enlarge the hole with the **twist drill Ø 2.80mm (412HR280)** and subsequently with the **twist drill Ø 4mm (412HR400)**.

- Recommended maximum speed: **150 RPM**.



We recommend connecting all rotating instruments to the drill extension for easier access to the surgical area.

Abundant irrigation by means of physiological pre-cooled solution is recommended.



### INSERTION OF THE IMPLANT

Insert the implant with the **retentive wrench and the drill extension tool (530HS017 + 520HS003)**. Apply a maximum torque of 50 Ncm with a maximum speed of 25 RPM.



To complete the insertion it is possible to place the implant also with the manual moulder and the **reversible torque wrench (501JD003)**, in order to evaluate the final torque of insertion for the implant.

Insert the cap screw and tighten using the **HEX 0.90 mm screwdriver (530JD012)**.



In the case of immediate loading, once taken the impression, insert the healing screw.

### Close the surgical area by suture.

In the case of insertion of a deferred load implant, it is necessary a surgical re-entry, to remove the cap screw and place the healing screw, finally proceed again with the suture.



### INSTRUMENTS

The **drill extension (520HS003)** must be used for extend rotary tools, such as the **HEX 1.20 mm handpiece driver**.

The **HEX 1.20 mm handpiece driver (530HS005)**, must be used to INSERT AND REMOVE the healing screw.

The **HEX 0.90 mm (manual) screwdriver JD (530JD012)**, must be used to REMOVE THE SCREW CAP.

The **HEX 3.10 L140 mm manual wrench (502MA020)** must be used for manual insertion of the implant.

The **HEX 1.20 L30 mm (manual) screwdriver (530JD007)**, must be used connected to the **90Ncm reversible torque wrench**, included in the kit, for the final tightening of the abutment screws.

- We recommend using a torque of 30-35Ncm.

### IMPRESSION TAKING

#### 25° angled transfer with cap.

This transfer allows to correct the disparallelism of the implant compared to other implants or natural elements.

The transfer is equipped with hexagonal base and guarantees to transfer the position of the hexagon in relation to the implant such as the three-dimensional position of the implant itself in comparison to the maxillary bone.

The plastic cap is a single-use device and is supplied NOT-STERILE. It is not auto-clavable. It must be disinfected before use with a common disinfectants for plastic products.

The impression process use a closed tray and the repositioning of the system transfer + analogous with the cap, which remains in the impression, is done manually. The master model thus obtained, allows the design of both the temporary prosthesis and the definitive one done in collaboration with the dental laboratory technician.

#### Temporary prosthesis:

We recommend the execution of a temporary resin prosthesis, CEMENTED to the pterygoid implant by means of the temporary titanium abutments, or a SCREWED prosthesis to not-rotating peek abutment.



















#### Definitive prosthesis:

In collaboration with the dental laboratory it is performed the design of the final restoration, choosing between a screwed or cemented approach; the final restoration can be realized also by means of CAD-CAM technology.





Anyway, the choice is subjective and it can condition the clinical case in question. The final tightening of the abutment screw must take place at 30-35 Ncm using the torque wrench.

# PROSTHETIC OPTIONS



## EXTERNAL HEXAGON PROSTHETICS ER

PICTURE	REF	PRODUCT NAME	SPECIFICATION
<b>HEALING &amp; SOFT TISSUE CONDITIONING</b>			
	201ER6A3	Healing Abutment ER	H6mm Ø7mm
<b>IMPRESSION TAKING</b>			
	325ER0F0	Transfer Cappetta PRO ER	25° Cappetta Plastica
	301ER0A1	Implant Replica	—
<b>TEMPORARY ABUTMENTS</b>			
	210ER2A0	Temporary Abutment ER	
	210ER2A1	Temporary Abutment ER	Rotating
	215ER2A0	Temporary Abutment ER	Peek
<b>CEMENT-RETAINED PROSTHESIS</b>			
	220ER2A1	Straight Abutment ER	H2mm Ø5mm
	220ER2A3	Straight Abutment ER	H2mm Ø6mm
	220ER2A2	Straight Abutment ER	H2mm Ø7.5mm
	220ER4A0	Straight Abutment ER	H4mm Ø5mm
	220ER4A1	Straight Abutment ER	H4mm Ø6mm
	220ER4A2	Straight Abutment ER	H4mm Ø7.5mm
	220ER2D0	Angled Abutment ER	15° H2mm
	220ER4D0	Angled Abutment ER	15° H4mm
	220ER2F0	Angled Abutment ER	25° H2mm
	220ER4F0	Angled Abutment ER	25° H4mm
<b>SCREW-RETAINED / CEMENT-RETAINED PROSTHESIS</b>			
	246ER1A0	BT Link ER	H1mm Ø4.6mm
	247ER1A0	Base BT Link ER	H1mm Ø4.6mm no Cap.
	248ER1A0	Base BT Link ER	H1mm Ø4.6mm Multi Length
	205NA002.05	Castable Plastic Abutment ER	H1mm Ø5.2mm Kit 5pcs
	240ER1A0	CoCr Abutment ER	H1.5mm
	245ER1A0	Gold Abutment ER	H1mm
	205ER2A0	Castable Plastic Abutment ER	—
	205ER2A0.10		Kit 10pcs
	246ER1A1	BT Link ER	H1mm Ø4.6mm Rotating
	247ER1A1	Base BT Link ER	H1mm Ø4.6mm no Cap. Rot.
	240ER1R0	CoCr Abutment ER	H1.5mm Rotating
	245ER1R0	Gold Abutment ER	H1mm Rotating
	205ER2A1	Castable Plastic Abutment ER	Rotating
	205ER2A1.10		Rotating Kit 10pcs

## ACCESSORIES

PICTURE	REF	PRODUCT NAME	SPECIFICATION
	690NA013	Retentive Screw	M2.0 HEX1.20
	690NA019	Retentive Screw Gold	M2.0 HEX1.20
	690NA067	Impression Post Screw	M2.0 HEX1.20 H8.1mm
	690NA091.10	Caps Kit Pro	Ø5.1mm Kit 10pcs

## CAD-CAM

PICTURE	PRODUCT	SPECIFICATION
	351ER1A0	Scan Abutment Extra-oral ER
	Prosthesis Options (Titanium)	<ul style="list-style-type: none"> <li>• Customized abutments</li> <li>• Screw-retained single crowns</li> </ul>
	Prosthesis Options (Cobalt Chrome)	<ul style="list-style-type: none"> <li>• Bridges on implants</li> </ul>
	Prosthesis Options (Zirconia)	<ul style="list-style-type: none"> <li>• Anatomically reduced Toronto bridges</li> <li>• Toronto bridges for commercial teeth</li> </ul>

## DELIVERY TERMS & CONDITIONS

### RESPONSABILITY

The use of BTK medical devices is reserved exclusively for personnel with the necessary qualifications for the exercise. An improper or incorrect use of the devices can cause the failure or worse, injury to the patient or the user. BTK implant systems should only be used with original BTK components and instruments and in accordance with the specific BTK instructions. Combining with different devices may cause a failure. Biotec must not and can not control the procedures for using the product for implant-prosthetic treatment. Therefore, Biotec assumes no responsibility for the application of the device and its processing nor for any incongruous use of the device under the surgical or prosthetic profile, nor in any case for failure, adverse reactions or damage to the patient or dentist as a result of application of the product.

### STERILITY OF WARRANTY AND DISPOSABLE

Dental implants are supplied STERILE (gamma ray sterilization). The sterility of the medical implant is guaranteed only according to the following conditions: the expiry date stated on the packaging is still valid; there is a red dot on the sterile vial which demonstrates that it has undergone gamma ray irradiation; the sealed package has not been opened and does not show any signs of damage. Compliance with all these conditions must be ensured; alternatively do not use the device.

Surgical components, laboratory accessories and instruments are not supplied in sterile packs, therefore before use they must be properly CLEANED and STERILIZED, as shown in the instructions for use. Biotec dental implants, prosthetics and laboratory accessories are designed for SINGLE USE. In fact, reuse is a potential risk and could damage the construction of the device, making it inappropriate for its intended use. Biotec explicitly declares the single-use of MD and assumes no responsibility for any re-use by users.

### STORAGE

Biotec products must be stored at room temperature and protected from direct heat or sunlight and dust.

### INSTRUCTIONS FOR USE

The information in this manual is not intended to be exhaustive for BTK implant systems. It is recommended that new customers follow the training courses that Biotec makes available with trained personnel and clinicians who are experts in implantology and in the use of BTK devices. The complete and updated user manuals, which allow the correct use of the product, are available online ([www.btk.dental](http://www.btk.dental)) or at BTK and / or the local distributor.

### AVAILABILITY

Not all products described here are available in ExtraEU countries. For more information, please contact BTK and / or your local distributor.

### RETURNS

Biotec does not accept returned goods if the packaging seals are broken or not conforming to the sale specifications of the company.

### GUARANTEE

We constantly guarantee that the quality of our products and services meets the high expectations of our customers and their patients. Specialized professionals are committed to offering complete solutions in applied research, engineering, training and related activities. Biotec is available to customers in the event that a defect in the product or its use is found.

### VALIDITY

The contents are updated at the date of publication. This manual replaces all previous editions.

### CASE DOCUMENTATION AND TRACEABILITY

BTK absolutely recommends documenting implant cases comprehensively at the clinical, radiographic, photographic and statistical levels. The clinician must guarantee the traceability of the devices used. It is advisable to use the adhesive labels included in the packaging of the BTK devices, which show the code and lot of the device used, for the purpose of documentation on the medical records and on the relative implant passport of the patient.

### TRAINING

Comprehensive and regular training ensures long-term implant success.

Be advised that we strongly recommend regular education events in order to update your know-how and clinical expertise.

### DELIVERY TERMS

BTK delivery terms are 1 working day for order received before 12.00 p.m. of the previous day in Italy; except for islands where delivery is evaluated to be 2 working days. For export deliveries contact Biotec offices.

### QUALITY STANDARD

Owing to extensive research, development and to a strict quality standard, we guarantee premium quality materials and products. Our products meet the requirements of directive 93/42 /EEC and subsequent amendments and additions, and therefore have the CE mark, in accordance with the corresponding law. BTK has a quality system certified UNI EN ISO 9001 and UNI EN ISO 13485.

### CAUTION

In addition to the instructions for use, warnings and risks reported both in this document and in the instructions for use, it must always be ensured that the devices used in the oral cavity are not aspirated or swallowed by the patient.

### COPYRIGHT AND TRADEMARKS

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### BTK PERSONAL TUTOR

A program for individual case planning and execution supported by experienced professionals in order to leverage know-how and maximize clinical experience with the aim to achieve sustainable high patient satisfaction rates.

**BTK is always at your disposal for any request for further follow-up or information, promoting periodic and ad-hoc training course..**

### CERTIFIED QUALITY SYSTEM

BIOTEC is certified UNI EN ISO 9001  
and UNI EN ISO 13485.



CE marked product, in accordance with Directive 93/42/EEC and subsequent modifications and additions.

### MADE IN ITALY USED GLOBALLY



We constantly ensure that the quality of our products and services meet the high expectations of our customers and their patients.

Specialized professionals are taking care to offer comprehensive solutions in applied research, engineering, education and related activities.

