



MILLING CENTER



**B&B DENTAL**  
IMPLANT COMPANY





# Scan Center Service





## Milling center

The milling center uses cutting-edge mills to create reconstructions with CAD/CAM technology and can read files from any open scanner system.

Quality control by specialised dental technicians ensures the accuracy of prosthetic products; any special requirements identified when analysing the submitted files are addressed in a timely manner by the technical service personnel in collaboration with our laboratory staff.

## Scanning service

Those laboratories that do not have a scanner or modelling software can use our scanning service to easily enjoy the benefits of customised prostheses. Simply send the model and wax-up to our center; our specialised personnel will take care of the rest.



## Characteristics of models for the scanning service

Accurate, non-deformable models – ideally made from resin or extra-hard plaster – will provide the best results.

**Models for prostheses on natural teeth:** at the milling center, the digital models can be replicated using resin or wax and in any size, from single crowns to full arch. Submitted models must have removable abutments and be sliced; also, they must not be coated with die spacer and/or scanning spray. Antagonist models and any bite registrations should also be submitted whenever possible.

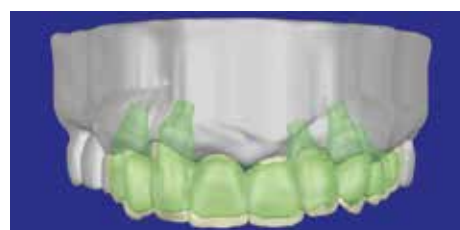
**Models for implant-supported restorations:** to guarantee the best possible fit between implants, models need to be developed with new components (transfers and analogues) and fabricated using removable artificial mucosa made from pink silicone or similar materials. Wax-ups of implant-supported restorations must be made from resin.

Models and any accessories should be packed with great care with secured packaging material to prevent damage during transport.



## Diagnostic wax-up and reduced wax-up

Diagnostic wax-ups can be reduced virtually. This way, the generated milled product takes into account the thicknesses necessary to mount caps or cemented bridges or the thickness of the ceramic layer for a screw-retained prosthesis.



## Cementable Ti-Link connectors

With Ti-Link connectors, prostheses can be created starting from an intraoral impression thanks to the benefits of cementation in order to **obtain a passive fit**. Retaining screws in titanium Gr 5 are included.

Ti-Link connectors come both in a version that can be relocated for single reconstructions as well as in a pivoting version for multiple reconstructions.

Ti-Link connectors are also supported by implant libraries included with many software products available on the international markets.

Ti-Link connectors allow for the creation of full crowns, abutments and multiple structures in different materials using a cementing technique. Files from any open CAD / CAM system are accepted without reducing the micrometric precision of matching platforms.

**The milled restoration is delivered separate from the Ti-Link connector;** the two parts can be bonded extra-orally using anaerobic cement. Final prosthetic reconstruction includes a small mating surface in titanium Gr 5 that provides an interface between the implant and the crown.



## Custom abutments and anatomical crowns on mua and flat connections

In cases of a Ti-Link with an angled hole for a particular aesthetic or anatomical requirement, please contact the company to verify its feasibility and receive a cost estimate.

### Inclined screw holes

Often the implants of screw-retained structures present an angle that places the screw hole into the vestibular position thereby causing aesthetic problems. The direction of holes can be corrected thanks to our scanning service, which operates both on digital models as well as on physical models; done in this manner, the screw hole is brought into an aesthetically more appropriate position. Special screws dedicated to angled screwing accompany the restoration.

**Important notice**

*The algorithms for hole design that ensure proper interactions between screwdriver and screw head are very accurate. This means that if a model is submitted with a wax-up already featuring angled holes, it will not be possible to reproduce the preparation precisely.*



# Materials

## The correct raw material for every case

We have several materials available to enable laboratories to choose **the most suitable solution for each clinical case**. For instance, we offer:

- Zirconia oxide
- Milled biomedical grade 5 titanium
- Milled ceramic-bonded biomedical cobalt-chromium
- PEEK
- PMMA multi-layer for temporary prostheses
- Prototyped resin for aesthetic wax-ups and models



## Characteristics of some commonly used materials:

**Biomedical titanium:** restorations are milled from Gr 5 titanium discs meeting ISO 5832-3 and ASTM F136-11 specifications. This titanium alloy contains aluminium and vanadium, ensures excellent mechanical strength over time, and is ideally suited for full-arch reconstruction.



**Chromium-cobalt:** the discs used for dental work are made from chromium-cobalt alloy and free from nickel, beryllium or gallium. Their main characteristics include high corrosion resistance and proven biocompatibility.



**Multilayer zirconium:** the new multi-layer technology simulates the natural colour transition of dentin and enamel thanks to 5 overlapped layers of zirconium oxide creating precisely tuned shades. The aesthetic outcome of the crowns is guaranteed by every single layer of the disc, creating a three-dimensional effect and a natural translucency.



**PEEK:** PEEK restorations are perfect for patients with particular allergy problems and suitable for bars and screw-retained reconstructions. As they are radiopaque, proper fit to implant platform can be verified for implant screw-retained restorations.



**PMMA for temporary prostheses:** the new multi-layer technology simulates the natural colour transition of dentin and enamel thanks to 5 overlapped layers of zirconium oxide creating precisely tuned shades. The aesthetic outcome of the temporary prosthesis is guaranteed by each individual layer of the disc, creating a three-dimensional effect and a natural translucency.





## STL file for milling

This means an STL model file ready for machine uploading and milling.

***The work will be completed in 5 working days***

## Model with Finished wax-up

Wax-up scan and precise replica in the desired materials. Please send the master model with resin wax-up. For machining on implants, please send the master model with resin wax-up, along with the gingiva model and analogues all in perfect condition.

***The work will be completed in 6 working days***

## Model without wax-up

Structure to be designed from scratch. Please send the articulated master model with the antagonist model and masks (recommended). For machining on implants, please send the master model in articulation with the gingiva model and analogues all in perfect condition and masks (recommended).

***The work will be completed in 7 working days***

## Model with anatomical wax-up to be reduced/ cutback

Aesthetic mock-up for dimension reduction. Please send the master model with anatomical diagnostic wax-up. For machining on implants, please send the master model in articulation with gingiva and analogues all in perfect condition together with the anatomical diagnostic wax-up.

***The work will be completed in 7 working days***

## STL file model

This means a file in STL format of the model that will be used to create the commissioned work.

***The work will be completed in 7 working days***

## Additional processing / machining

***For the attachments milled on a structure deriving from STL file please contact our offices for a quotation***

Delivery time may vary depending on the progress status of submitted file. In other words, if we receive the STL files of the dental work to be milled, processing time will be shorter; if we receive a physical (plaster) model, processing will take longer.

If a file (or package) is delivered by 12:00, the delivery day will be considered as a working day. Files delivered after that time are considered to have been delivered the next day.

PLEASE NOTE: in order for the milling center to produce the product in the correct material and with the desired methods, it is important to provide explicit indications during the order to limit any delays.

# Cementable customised abutments and anatomic crowns (Ti-Link)

The precision fit of a titanium-titanium interface between an implant and abutments and the aesthetic advantages offered by the latest prosthetic materials are combined into the customised abutments and single full crowns with cementable Ti-Link connectors.

An anaerobic cement is recommended for cementing the two parts after the ceramic coating has been oven cured.

Cementable Ti-Link connectors are available for all B&B Dental implant platforms.



# Bridges, Toronto bridges and Bars on cementable screw-retained implants (Ti-Link)

The cementable connector lends the structure an excellent passive fit, especially in the case of milled multi-unit structures.

The restoration comes with Gr 5 titanium connectors and retaining screws.

Please note: the connectors must be cemented to the bridge after the ceramic-coating process.



## Customised abutments and reduced one-piece anatomic crowns (pre-milled)

Abutments can be created for all platforms of B&B Dental implant. Abutments and full crowns are milled to fully reflect the emergence profile defined by file and wax-up modelling.



## Screw-retained one-piece bridges and Toronto bridges

Producing implant screw-retained bridges meets the requirements of a temporary prosthesis, with such materials as biomedical resin, as well as of a definitive prosthesis.

For mesostructures, threaded holes to accommodate connectors are available on request. Connectors are not supplied by B.&B. Dental. Please contact our offices to indicate the type of thread needed and to receive an estimate. It is the laboratory's responsibility to provide the correct details to produce the desired thread.

With the exception of zirconia structures, other structures are available with angled customised screw channel for an optimal aesthetic result.

Please contact the milling center to verify project feasibility.



## Bars on one-piece implants

The milling center can define screw positions for ball connectors, locators or other special connectors.

It is important to indicate the specifications of the attachment to be included in the project during the order phase so that the milling center can assess the dimensions of the bar.



## Crowns and bridges on natural teeth

The restorations prepared by the milling center ensure micrometric tolerances and very small thicknesses in the margin area. Small laboratory milling machines offer less precision and cannot provide the same advantages in terms of convenient procedures and aesthetics.

Zirconia products undergo a controlled sintering procedure that lasts over 15 hours to avoid any problems associated with surface porosity or distortion.



## Prototype service for restoration models

Available products includes models for implant-supported restorations, models for abutment restorations and models with removable abutments.

This type of process is capable of creating shapes that are not otherwise possible with conventional techniques.

**Work will be shipped out in 5 working days**



## Analogue for rapid-prototyping models

B&B Dental has designed a special line of laboratory analogues for applications based on intraoral scanning or models for guided surgery.

A cylindrical design with 2 anti-rotation faces and fixation screw at the bottom ensures high precision for relocation and fixation on the model.

The 3D analogues need not be cemented to the model and can be reused for several clinical cases thanks to the easy disconnection from the model that permits the preservation of its technical characteristics.

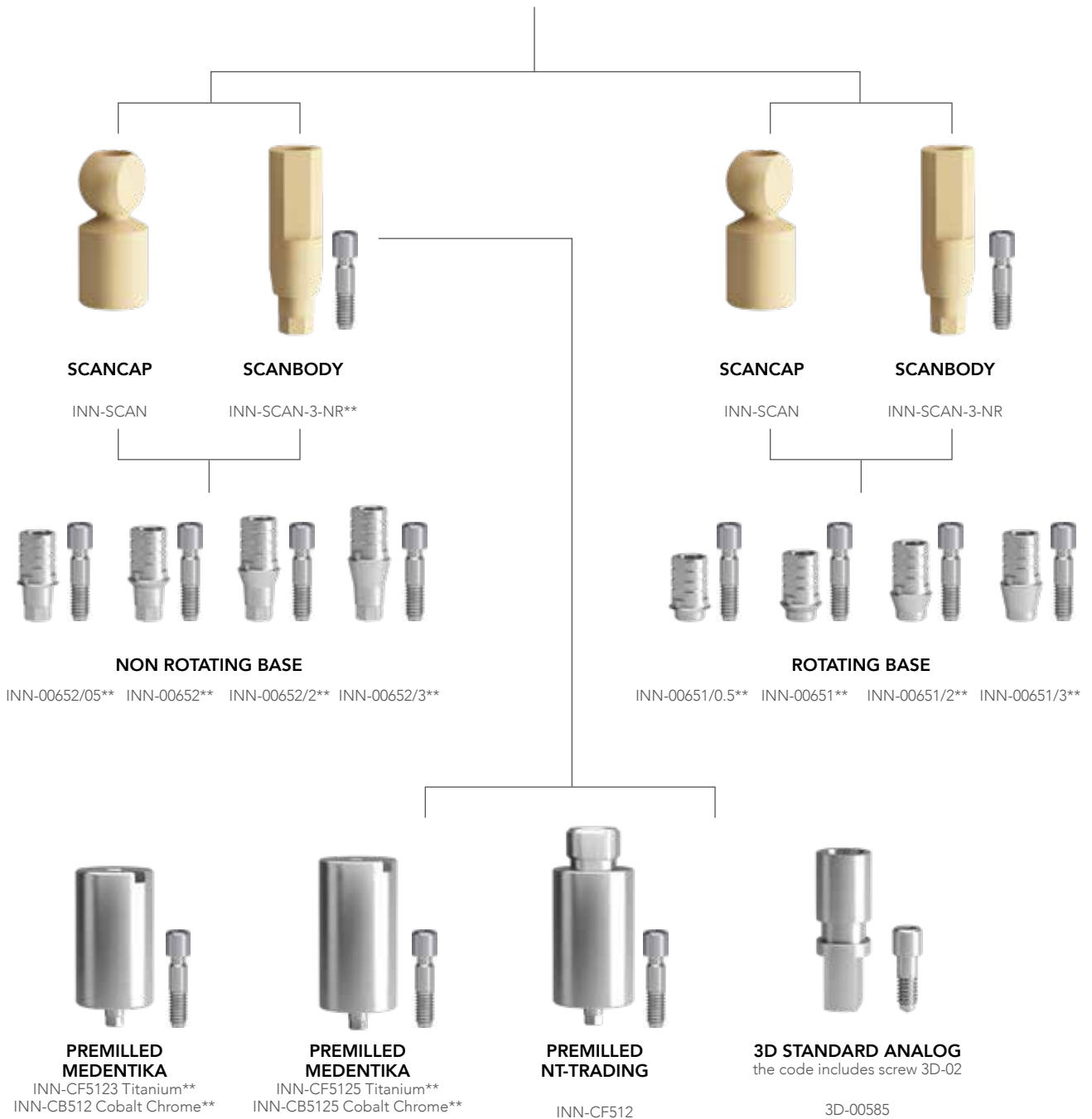
The 3D analogues are also supported by implant libraries included with many software products available on the international market.



# EV-3P-WIDE



LABORATORY Scanner



\*\* the codes include screw INN-6050

# MUA



## NON ROTATING MUA SCAN

SCAN-MUA

the code includes screw 6051



### MUA BASE

the codes include screw  
INN-6051

3D-5144

3D-5145



### STRAIGHT MUA

INN-4750/1 - Abt. H1  
INN-4750/2 - Abt. H2  
INN-4750/3 - Abt. H3  
INN-4750/4 - Abt. H4  
INN-4750/5 - Abt. H5



### ANGLED 17° MUA

the codes include screw INN-5146

INN-1760/1 - Abt. H1  
INN-1750/2 - Abt. H2  
INN-1750/3 - Abt. H3  
INN-1750/4 - Abt. H4  
INN-1750/5 - Abt. H5  
INN-1750/6 - Abt. H6



### ANGLED 30° MUA

INN-3050/1 - Abt. H1  
INN-3050/2 - Abt. H2  
INN-3050/3 - Abt. H3  
INN-3050/4 - Abt. H4  
INN-3050/5 - Abt. H5  
INN-3050/6 - Abt. H6



### MUA ANALOG

the code includes screw 3D-02

3D-00586

OR



### COMPONENTS FOR ANGLED HOLES

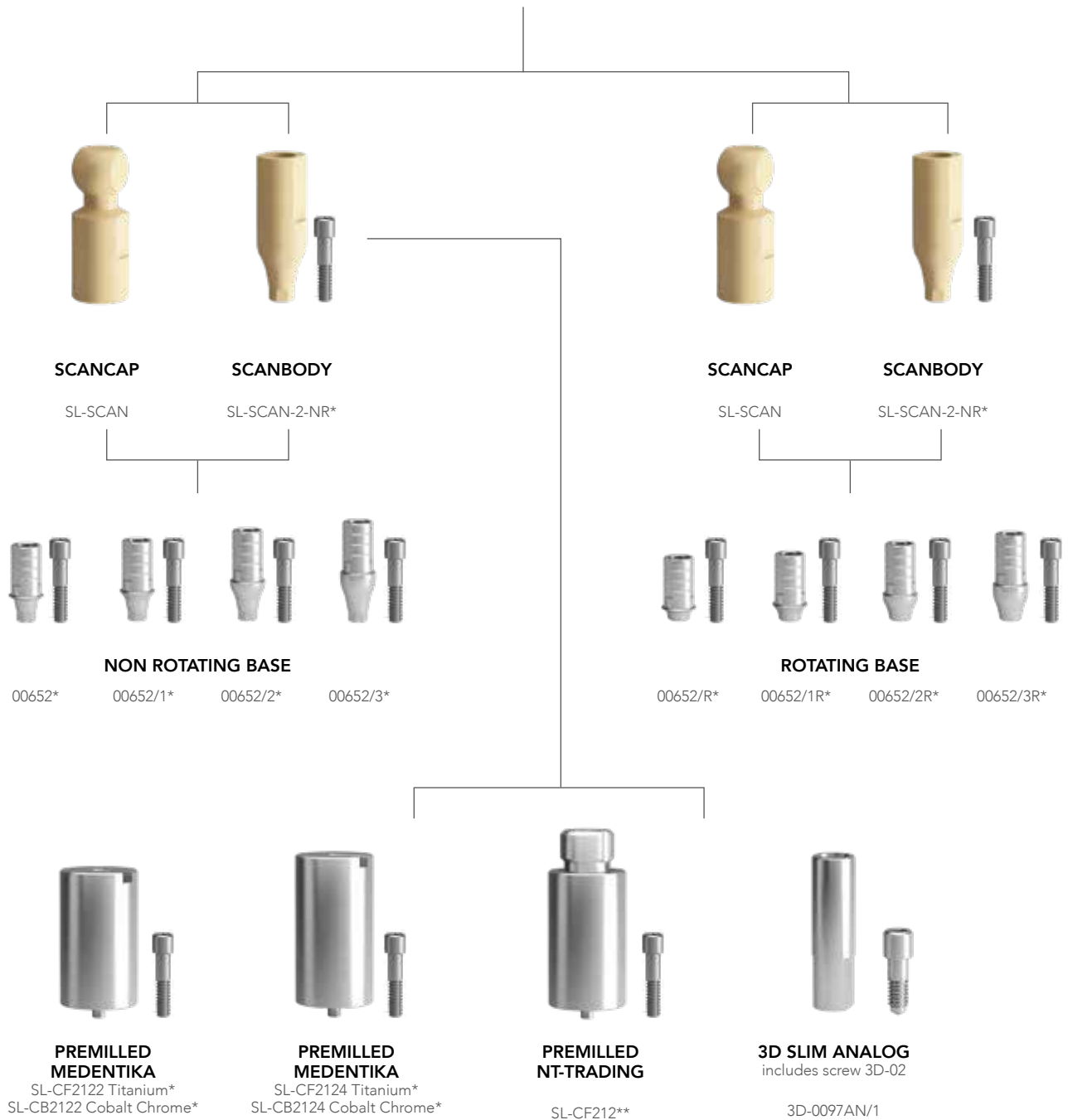
the codes include screw  
3D-14

3D-5143

# SLIM



LABORATORIES Scanner



\*the code includes screw 00358/V



# FLAT



**FLAT SCAN**  
SCAN-FLAT  
the code includes screw INN-00690



**FLAT BASE**  
the codes include screw  
INN-00690  
3D-00687/1      3D-00687/2



**FLAT ABUTMENTS  
FOR STANDARD LINE**  
INN-00669 - Abt. H2  
INN-00669/3 - Abt. H3  
INN-00669/4 - Abt. H4



**FLAT ABUTMENTS  
FOR SLIM LINE**  
SL-00669 - Abt. H2  
SL-00669/3 - Abt. H3  
SL-00669/4 - Abt. H4



**3D FLAT ANALOG**  
the code includes screw 3D-02  
3D-00736



The base code 3D-00687/1 can be used for inclined holes by purchasing the screw code 3D-16

## KEYS FOR NORMAL SCREWS



SHORT  
INN-61000S



MEDIUM  
INN-61000



LONG  
INN-61000L

## KEYS FOR INCLINED HOLES



SHORT  
3D-17018



MEDIUM  
3D-17024



LONG  
3D-17032

## Intraoral impression

B&B Dental uses optical scanning systems that make the procedure easier and faster.

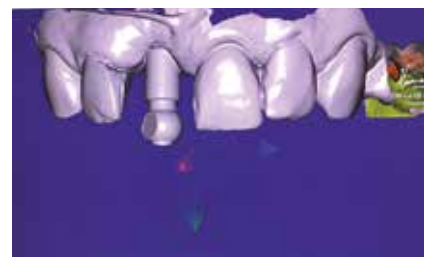
Latest generation intraoral scanners have been designed to make scanning as convenient, ergonomic and low-cost as possible.

Thanks to these new technological solutions, B&B Dental paves the way for ultra-efficient workflows, making such processes as digital impression making, digital modelling and the delivery of scans to dental laboratories easy and fast.



## Clinical case

The following are the steps of a case treated with an entirely digital workflow. It is essential to use the scan abutment appropriate to the type of implant and process requested from our milling center.



# B&B DENTAL MILLING SERVICE

Thanks to the predictable surgical result as planned for with the software, it is possible to design and build the prosthetic structure beforehand and apply it after surgery. This can be performed at our drilling center and—at the discretion of the doctor—in any laboratory with suitable facilities. On our website there is a dedicated platform to order any structure with different materials or finishings.

## Important information

Please note that the product is delivered to the carrier on the date indicated in the “file submission platform”. This does not take into consideration the average shipping period upon which should be added the processing time (please look up the specific shipping time of the carrier in your local area on the carrier’s website).

The delivery time of the restoration of the submitted model to the carrier starts on the day the model is received by the B&B Dental milling center if delivered before 12:00; otherwise an extra day will be added.

For all semi-finished products manufactured by B&B Dental by creating a CAD project from a model, please note that their manufacture is subject to the customer’s approval of the project created by our technical staff. The time taken by the customer to approve a project must be added to the delivery time for standard work.

Preparation time refers only and exclusively to the time required to physically manufacture the requested model. It therefore refers to the DELIVERY TIME OF THE PRODUCT TO THE CARRIER, and does not include the specific carrier’s delivery time to the selected destination, which will need to be added.



## Warranty and returns

### CAD / CAM products

In the event of ascertained defects in workmanship, B&B Dental reserves the right to replace the goods under warranty with items free of defects - the defective material must be returned in a sterile state to B&B Dental with an invoice and order documents.

Pre-requisites for the warranty replacement of semi-finished products manufactured by the milling center are the following: an indication of the file number and the date of submission for the dental work based on submitted files; a shipping note for the dental work based on the submitted model.

A rework request: the defective material must be returned. In the event of any manufacturing defects by B&B Dental, the warranty covers 100% of the price of the defective semi-finished product.



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UNI EN ISO 13485