



Atlantis®

Design guide –  
Atlantis® patient-specific  
suprastructures



# Atlantis®

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This manual provides an instructional overview of laboratory procedures and design options for Atlantis suprastructures.

The Atlantis suprastructures can be designed and produced for all major implant systems and are available in titanium and cobalt-chrome.

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### Reference material

To obtain or access to the following reference materials, please contact Customer Service. All files can also be downloaded from the Atlantis suprastructures section under **Help** in Atlantis WebOrder:

- Atlantis WebOrder - User guide
- Atlantis suprastructures design guide
- Atlantis suprastructures compatibility chart
  - Implant systems
- Atlantis suprastructures compatibility chart
  - Attachment provisions and bar profiles
- Atlantis shipping guide

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# Introduction

Atlantis suprastructures can be utilized for all types of implant-supported structures, for removable and fixed prostheses, including Atlantis Bar, Atlantis 2in1, Atlantis Bridge, Atlantis BridgeBase and Atlantis Hybrid, as well as with different combinations of implant systems within the same case.

Atlantis suprastructures is available for your choice of implant system, and on both implant and abutment level. (Restrictions apply, refer to “Atlantis suprastructures compatibility chart – Implant systems” for more information.) The implant suprastructures are produced by additive manufacturing and/or milling and available in titanium or cobalt-chrome.

Atlantis suprastructures are digitally designed based on diagnostic tooth set-up scanned on working model. The products are accessible through Atlantis WebOrder.

## Removable Restorations



### Atlantis® Bar

Intended for removable prosthesis on standard or custom bars. An extensive library of attachment provisions and bar profiles is available. Made by milling.



### Atlantis® 2in1 (bridge and hybrid)

Intended for removable prosthesis. The primary structure is a custom bar and the secondary structure can either be a bridge or a hybrid. The secondary structures are suitable for acrylic layering (bridge) or using acrylic denture teeth with individual support for each tooth (hybrid). Made by milling.

## Fixed Restorations



### Atlantis® BridgeBase

Intended for screw-retained prosthesis consisting of an Atlantis BridgeBase that is to be finished with a digitally lab-made secondary. A specific design without undercuts, cement shoulders and basal high gloss. The structure comes with a Core File so that the lab can design their secondary structure that can be cemented extra-orally.

The BridgeBase comes with all the advantages of Atlantis suprastructures like Angulated Screw Access and passive fit. Structure is produced by Additive manufacturing and corrective milling on connection level.



### Atlantis® Bridge

Intended for screw-retained prosthesis designed for porcelain or acrylic application. The design allows for individual space for veneering material and surface structure. Structure is produced by Additive manufacturing and corrective milling on connection level.



### Atlantis® Hybrid

Intended for screw-retained prosthesis, commonly used for acrylic denture teeth with individual support for each tooth, as a “wrap-around” or a “wrap-on” solution. Structure is produced by Additive manufacturing and corrective milling on connection level.

## Laboratory procedure



### Working model

A stone model with implant analogues, including a stable, removable silicone soft tissue mask and a diagnostic tooth set-up is always required. Each order can only include restorations in one jaw; no antagonist model needs to be provided. The diagnostic tooth set-up will work as reference for the design.

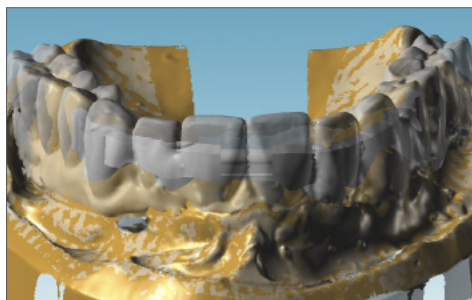


### Order

Enter your order in Atlantis WebOrder ([www.atlantisweborder.com](http://www.atlantisweborder.com)). Print and send the order ticket with the model in the Atlantis CaseSafe box to Dentsply Sirona Implants.

**Note:** Please refer to “Atlantis shipping guide” for detailed shipping instructions.

New users must register to access Atlantis WebOrder. Click the Register link to start the registration process. An Atlantis WebOrder user guide and start-up material are also available. Contact your Dentsply Sirona Implants representative for assistance.

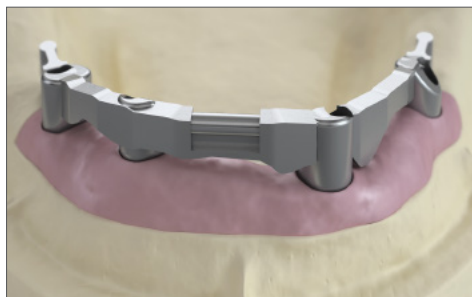


### Design and production

The model and the diagnostic tooth set-up are scanned.

An Atlantis suprastructures designer will send a proposed structure design, which should be reviewed using the Atlantis Viewer. Changes and/or approval of the design are communicated back before manufacturing.

**Note:** Implant suprastructures are produced only after review and final approval of the CAD design, in Atlantis Viewer.



### Final restoration

The final prosthesis can be fabricated once the Atlantis suprastructures is received.

# Atlantis® suprastructures order data

The design options and preferences for the Atlantis suprastructures differs between all products and will be described thoroughly under each product presentation. Below is a description of the design options common for all Atlantis suprastructures products:

## Material

Titanium (grade 4), titanium AM (Ti-6Al-4V), cobalt-chrome (alloy) or cobalt-chrome AM (alloy).

The Atlantis 2in1 (both primary and secondary) is only available in titanium (grade 4).



### Numbers of pieces

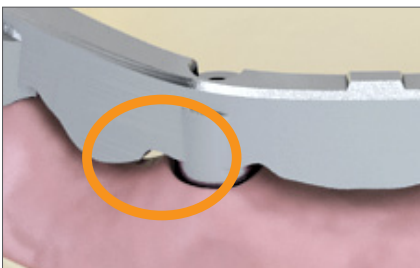
When four or more implants are selected, the Atlantis suprastructures can be divided in two-piece restorations (e.g. if there is a rest bite in the anterior region).

**Note:** Limited vertical height or severe angulation of implants can also be a reason for a two-piece restoration).



### Distance to gingiva

Distance between framework and gingiva.



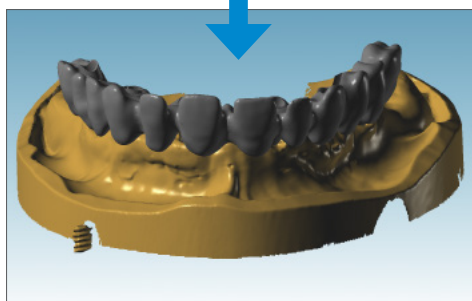
### Extra cleaning space

Facilitates increased space for cleaning around the implant connection (when applicable).



## Diagnostic tooth set-up and reduced diagnostic wax-up

Atlantis Bar and 2in1 require a diagnostic tooth set-up. The Atlantis suprastructures designer will create the understructure, based on the diagnostic tooth set-up. This will also guide the height as an antagonist model is not required.



Atlantis Bridge and Atlantis Hybrid require a diagnostic tooth set-up (referred to as “suprastructures CAD design” in Atlantis WebOrder) or a reduced diagnostic wax-up (referred to as “Design guidance” in Atlantis WebOrder). The removable reduced diagnostic wax-up provided will be used to replicate the design of the final bridge/hybrid framework. Material dimensions will be checked for strength before the milling of the implant suprastructure.



**Note:** All Atlantis suprastructures orders requires design approval, which means that a design file will be sent for both “suprastructures CAD design” and “Design guidance.”

## Prosthetic screws

Bridge screws are not automatically provided for Atlantis suprastructures orders. However, next to the Implant selection in Atlantis WebOrder, it is possible to order up to two (2) prosthetic screws per implant. If the note “Not available” is displayed, the specific screw is currently not available.

**Note:** For complete implant and screw availability in Atlantis WebOrder, please refer to “Atlantis suprastructures Compatibility chart – Implant systems” in the Help section under Atlantis suprastructures in Atlantis WebOrder.

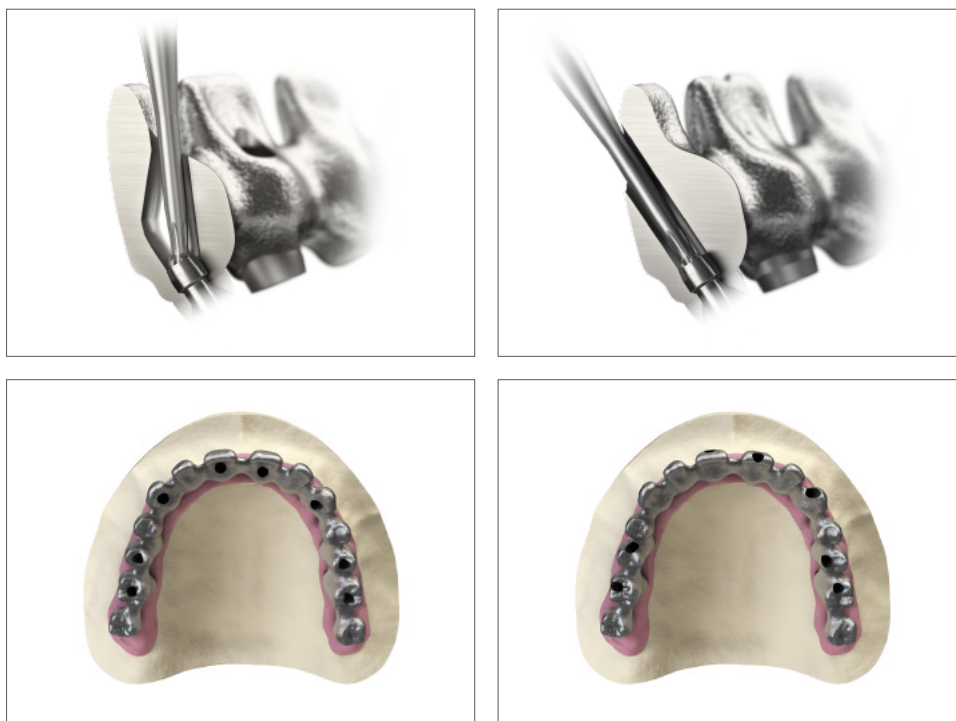


## Angulated screw access

Angulated screw access allows the prosthetic screw access channel to be angled up to 30 degrees off the implant/abutment axis, for optimal esthetics and function.

Each connection is designed by an Atlantis suprastructures designer, taking into account angulation and height parameters of each connection to meet customer requests.

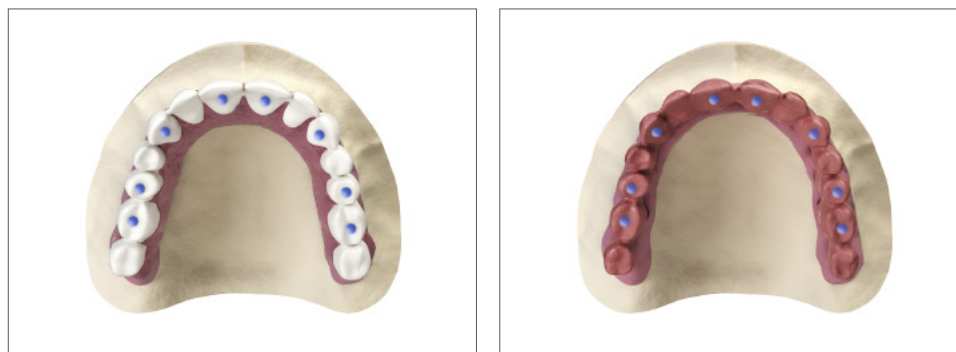
This feature is available for Atlantis BridgeBase, Atlantis Bridge and Atlantis Hybrid.



Results with angulated screw access (L) and without (R)

## Wax indication

The ideal access positions are indicated on the diagnostic tooth set-up or the reduced wax-up using a drop of wax. These implant positions are also indicated in Atlantis WebOrder. The Atlantis suprastructures designers will make every attempt to produce an optimized design for the desired position indicated.



Wax indication on diagnostic tooth set-up

Wax indication on reduced diagnostic tooth set-up

## Optimized screw head and screwdriver design

Every connection with the new angulated screw access is supplied with a corresponding Atlantis suprastructures prosthetic screw. The screws are specifically designed for use with the angulated screw access feature. Additionally, the hexalobular design of the screwdriver makes engaging the screw easy and ensures that insertion forces are always applied perpendicularly to the screw axis. Use of the screw and screwdriver significantly reduces the risk of stripping the screw head.



Head of screw driver



Shape of ASA screw head



Connection between screw and driver

# Atlantis® Bar

Atlantis Bars are divided in two main types:

standard bars and custom bars, both intended to support removable prostheses. The standard bar type has a wide range of different brands and types of profiles and attachments, whereas the custom bar type is an individualized bar with four different taper angles to choose from.

Both the standard and the custom bar consist of two main components: segment (pieces conjoining the implants) and extension (optional).

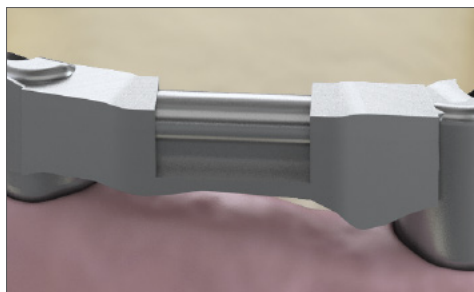
**Note:** For complete implant availability in Atlantis WebOrder, please refer to “Atlantis suprastructures compatibility chart – Implant systems” in the Help section in Atlantis WebOrder.



## Segments

There are two segment options:

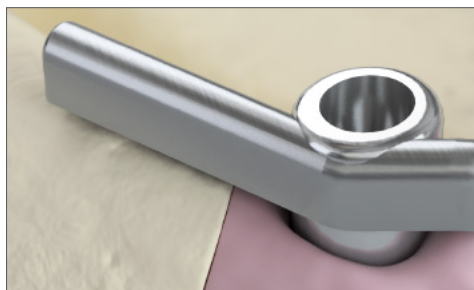
- Bar — the bar segment can vary in many different shapes (e.g. Dolder bar).
- Attachment — there is also a wide range of attachment adaptor segments (e.g. Preci-Horix-Bar). Female attachments are not included and needs to be ordered from the manufacturer). Choose between one or two attachments per segment.



**Note:** Maximum span between 2 implants:

- Micro Bar profiles: 20 mm
- Macro Bar profiles: 40 mm
- Custom Bar: 40 mm

For more information on standard attachment provisions and bar profiles, please refer to “Atlantis suprastructures compatibility chart – Attachment provisions and bar profiles” in the Help section in Atlantis WebOrder.



## Extensions (optional)

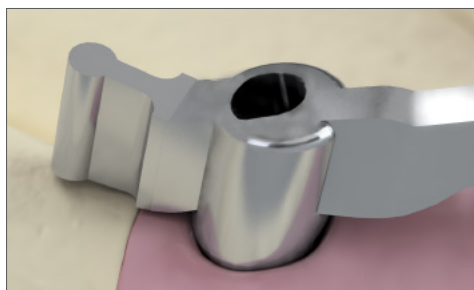
There are two optional bar extension selections:

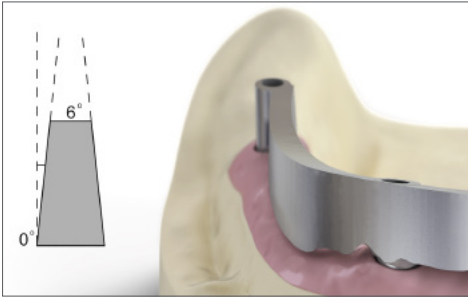
- Bar
- Attachment

If chosen, you can specify how far you want to extend this part in Atlantis WebOrder.

**Note:** Range between:

- Micro Bar profiles: 5–6 mm
- Macro Bar profiles: 5–8 mm
- Attachment Bar: 15 mm

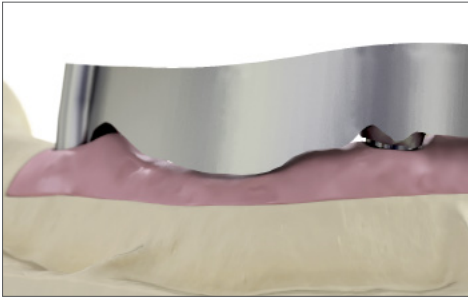




### Angle

Available for custom bars only.

Taper of the custom bar: options include 0°, 2°, 4° or 6°.



### Adapt to gingiva

Clicking **Adapt to gingiva** will create a flat gingiva-following base. Not selecting **Adapt to gingiva** will make the gingival part follow the occlusal part of the bar.

**Note:** For design requests not included in the above mentioned preferences, please specify them under **Additional case instructions** in Atlantis WebOrder.

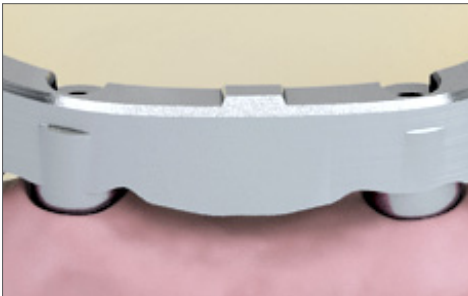
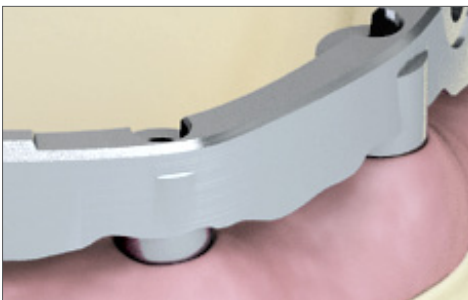
# Atlantis® 2in1 (Bridge and Hybrid)

Atlantis 2in1 Bridge and Hybrid are intended for removable prostheses. The primary structure is a custom bar with a 4° taper angle.

The secondary structure, which will have a friction fit to the primary structure, can either be a bridge or a hybrid. Both the primary and the secondary structures are available in titanium, which makes these products suitable for acrylic layering (bridge) or using acrylic denture teeth with individual support for each tooth (hybrid). Porcelain firing on the secondary structure is not recommended as it will affect the friction fit to the primary bar.



## Primary structure (Bar)



### Segment

Available bar segments for Atlantis 2in1 is only custom bar.

For Atlantis 2in1, it is mandatory to add at least two attachments to the bar segments and/or extensions (female attachments are not included and needs to be ordered from the manufacturer).

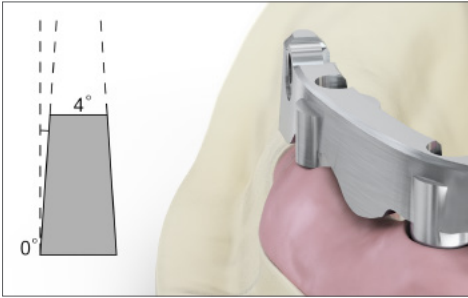
For more information on attachments, please refer to “Atlantis suprastructures compatibility chart – Attachment provisions and bar profiles” in the Help section in Atlantis WebOrder.

The bar will also be equipped with occlusal stops on which the secondary structure will rest. These occlusal stops can then be adjusted by the dentist in order to regain the friction fit.

**Note:** Maximum span between 2 implants:  
Custom Bar profile: 40 mm

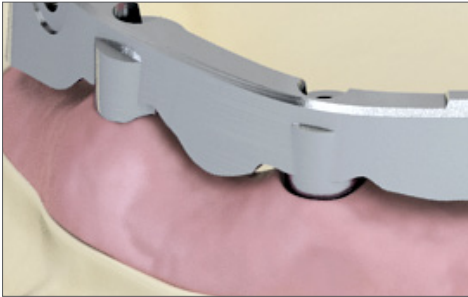
### Segment extension

A bar extension is optional. If chosen, you can specify in the Atlantis WebOrder how far you want to extend this part (range between 5-15 mm, including the extension of the secondary structure).



### Angle

Taper angle of the Atlantis 2in1 primary structure will be 4°.

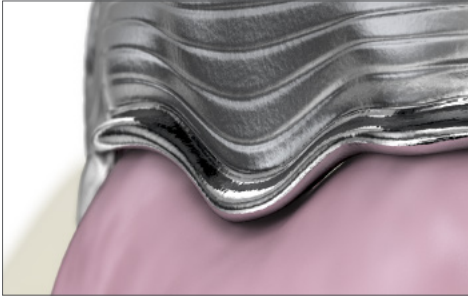


### Adapt to gingiva

Clicking **Adapt to gingiva** will create a flat gingiva-following base.

Not selecting **Adapt to gingiva** will make the gingival part follow the occlusal part of the bar.

## Secondary structure (Bridge)



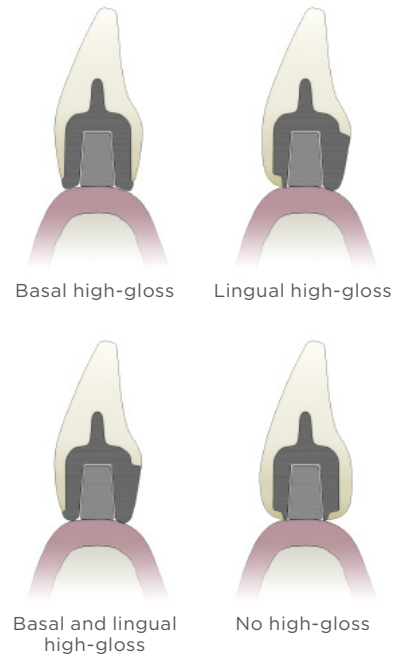
### High-gloss

Selecting **Basal** high-gloss will create a high-glossed basal finish line for the acrylic to connect to.

Selecting **Lingual** high-gloss will create a high-glossed lingual finish line for the acrylic to connect to.

Selecting both **Basal** and **Lingual** high-gloss will combine these two.

Not selecting any high-glossed finish line will create space for an acrylic finish line.



### Units

Total number of teeth in the bridge.



### Cut-back reduction

Space for porcelain layering (Facial/Lingual, Mesial/Distal and Occlusal). The Mesial/Distal option refers to the interproximal distance to the neighboring teeth.

### Surface

Rough surface of the secondary bridge intended to support acrylic layering.

**Note:** Material dimensions will be checked for strength before the production of the Atlantis suprastructure.

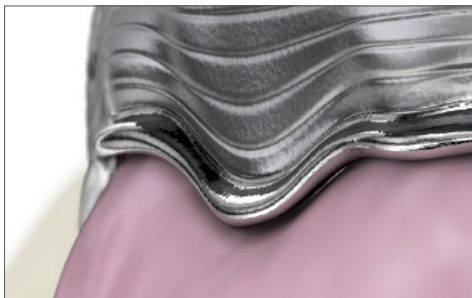
Maximum extension: 2 units (max 15 mm including primary structure)

Maximum span between implants: 40 mm

For design requests not included in the above mentioned references, please specify them under **Additional case instructions** in Atlantis WebOrder.



## Secondary structure (Hybrid)



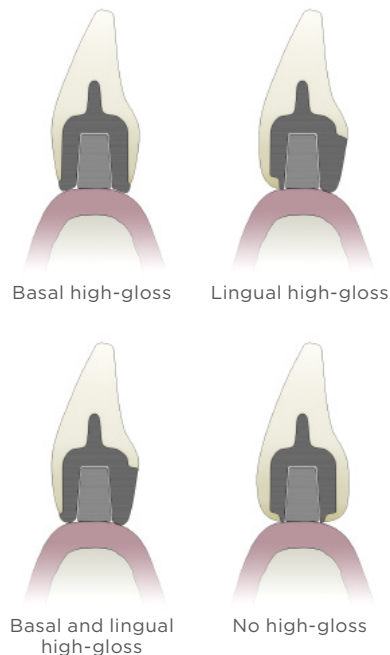
### High-gloss

Selecting **Basal** high-gloss will create a high-glossed basal finish line for the acrylic to connect to.

Selecting **Lingual** high-gloss will create a high-glossed lingual finish line for the acrylic to connect to.

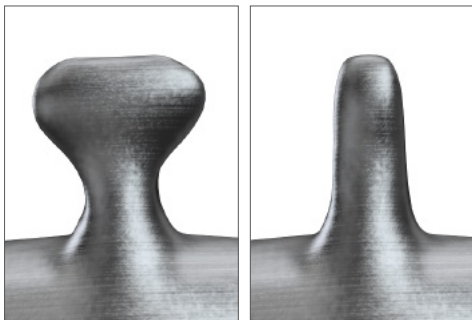
Selecting both **Basal** and **Lingual** high-gloss will combine these two.

Not selecting any high-glossed finish line will create space for an acrylic finish line.



### Units

Total number of teeth in the hybrid. In the example to the left, there are 12 Atlantis suprastructures units.



### Retention pins

T-shaped or I-shaped retention pins.

**Note:** Material dimensions will be checked for strength before the production of the Atlantis suprastructure.

Maximum extension: 2 units (max 15 mm including primary structure)

Maximum span between implants: 40 mm

For design requests not included in the above mentioned references, please specify them under **Additional case instructions** in Atlantis WebOrder.



# Atlantis® Bridge

Atlantis Bridges are intended to support fixed prostheses for porcelain or acrylic application. The bridges are digitally designed based on the diagnostic tooth set-up scanned on the model or based on the reduced diagnostic wax-up, which will be used to replicate the design of the final bridge framework.

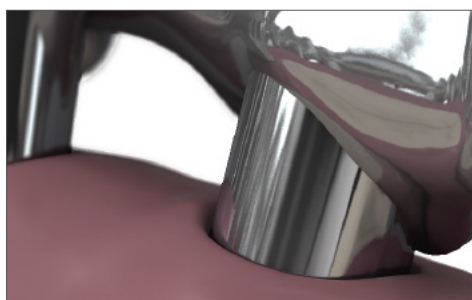
**Note:** Material dimensions will be checked for strength before the milling of the implant suprastructure.

**Note:** Additive manufacturing.



## Units

Total number of teeth in the bridge.



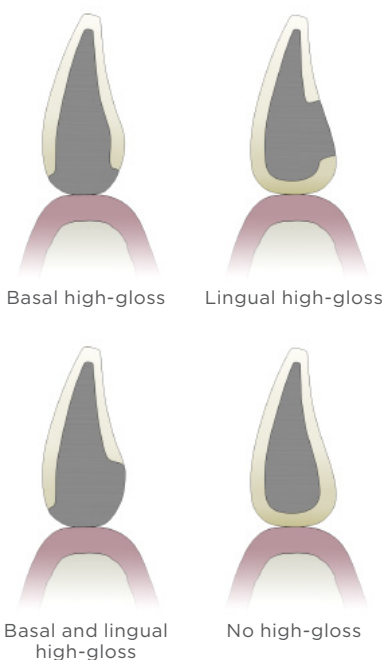
## High-gloss

Selecting **Basal** high-gloss will create a high-glossed basal finish line for the porcelain/acrylic to connect to.

Selecting **Lingual** high-gloss will create a high-glossed lingual finish line for the porcelain/acrylic to connect to.

Selecting both **Basal** and **Lingual** high-gloss will combine these two.

Not selecting any high-glossed finish line will create space for porcelain/acrylic all around the bridge.



## Cut-back reduction

Space for porcelain/acrylic layering (Facial/Lingual, Mesial/Distal and Occlusal). The Mesial/Distal option refers to the interproximal distance to the neighboring teeth.

## Cut-back margin

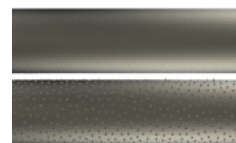
High-gloss finish line for supporting the porcelain or acrylic layering.

## Surface

Smooth surface of the bridge.

## Extra retention

- None for porcelain
- Pin retention for acrylic



**Note:** Maximum extension: 2 units (max 15 mm)

Maximum span between implants: 40 mm

For design requests not included in the above mentioned references, please specify them under **Additional case instructions** in Atlantis WebOrder.

# Atlantis® BridgeBase

Atlantis BridgeBase is a primary framework that is designed specifically to be finished with a digitally lab-made secondary. We provide a design without undercuts, cement shoulders and basal high gloss. The structure comes with a Core File so that the lab can design their secondary structure that can be cemented extra-orally.



The BridgeBase comes with all the advantages of Atlantis suprastructures like Angulated Screw Access and passive fit.

**Note:** Material dimensions will be checked for strength before the production of the Atlantis suprastructure.

**Note:** Additive manufacturing.



## Units

Total number of teeth in the bridge.



## High-gloss

Not selectable: Atlantis BridgeBase always has **Basal** high-gloss below the Cement shoulder line.



## Cement Shoulder location

This is a finish line that supports the secondary lab-made structure. Default is a cement shoulder on the buccal and lingual side. It is possible to select to only have a lingual shoulder.

## Cement Shoulder Size

This is a finish line that supports the secondary lab-made structure. It is possible to choose between a small and large cement shoulder.

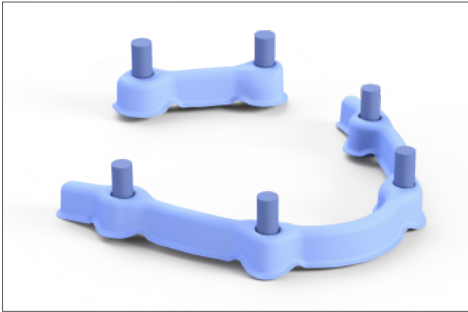
## Cleaning channels

Extra cleaning spaces around the implant location for an interdental brush.



### **Tissue Compression (Distance to gingiva)**

The amount of pressure that the Atlantis BridgeBase needs to have on the soft tissue. Can be chosen in 0.1 mm increments.



### **BridgeBase Core File**

Always included. This is a file that contains all components in a digital file format so that a secondary can be created to fit the Atlantis BridgeBase.

**Note:** Maximum extension: 2 units (max 15 mm)

Maximum span between implants: 40 mm.

For design requests not included in the above mentioned references, please specify them under **Additional case instructions** in Atlantis WebOrder.

# Atlantis® Hybrid

Atlantis Hybrids are screw-retained structures intended for fixed prostheses and commonly used for acrylic denture teeth with individual support for each tooth, as a “wrap-around” or a “wrap-on” solution. Hybrids are digitally designed based on the diagnostic tooth set-up scanned on the model or based on the reduced diagnostic wax-up, which will be used to replicate the design of the final hybrid framework.

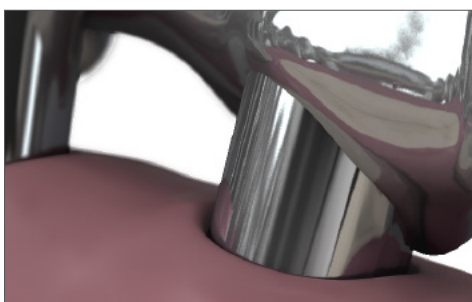
**Note:** Material dimensions will be checked for strength before the milling of the implant suprastructure.

**Note:** Additive manufacturing



## Units

Total number of teeth in the bridge.



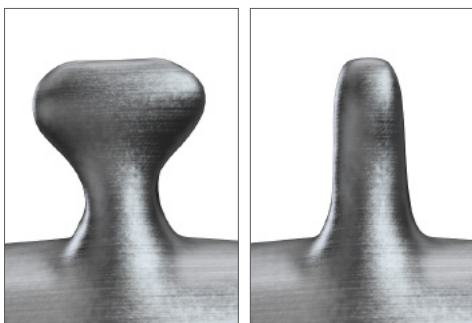
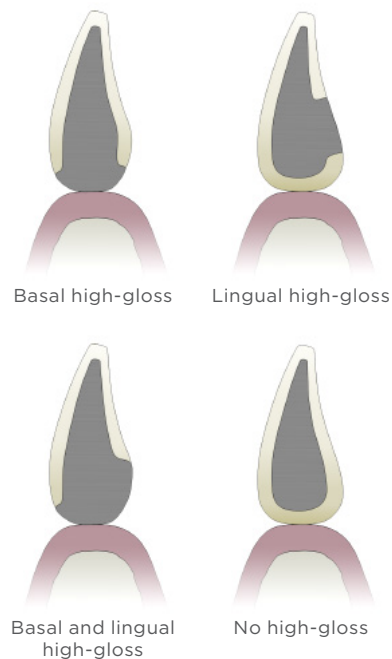
## High-gloss

Selecting **Basal** high-gloss will create a high-glossed basal finish line for the acrylic to connect to.

Selecting **Lingual** high-gloss will create a high-glossed lingual finish line for the acrylic to connect to.

Selecting both **Basal** and **Lingual** high-gloss will combine these two.

Not selecting any high-glossed finish line will create space for acrylic all around the hybrid.



## Retention pins

T-shaped or I-shaped retention pins.

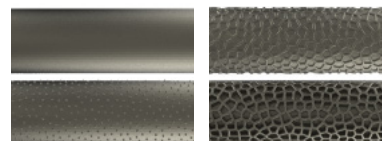
## Cut-back margin

High-gloss finish line for supporting the acrylic layering.

## Extra retention

Enlarged surface for acrylic

- None
- Pin retention
- Cell retention



**Note:** Maximum extension: 2 units (max 15 mm)

Maximum span between implants: 40 mm

For design requests not included in the above mentioned references, please specify them under **Additional case instructions** in Atlantis WebOrder.







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