# Integration Straumann into Exocad

| Date | 25 May 2023 |
|------|-------------|
| Version | 1.5 |

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# 1.  Customer Registration

Customer registration is necessary for communication with Straumann and for order administration tasks. This ensures that all aspects of an order such as delivery documents and invoices work correctly. As a new Straumann customer, you will receive a Straumann SAP customer number by your local Straumann subsidiary. Please contact your sales representative or your local Straumann subsidiary.

For customer registration, following information is needed:
- Straumann SAP customer number
- exocad Dongle No. (only once for Straumann support)
- Name of Dental Lab and contact person
- Scanner info (used system / Distributor)

The shipping address can be different from the customer address. Both customer and shipping address must be in the same country. For consistency reasons and to guarantee seamless shipping please fill in your Dental lab address with the same format.

# 2.  Implementation before starting Exocad

## 2.1.  WorkParamsDB

Go to https://www.straumann.com/connectivity.html and download the WorkParamsDB and StraumannGroup libraries folders.

Drag and Drop the Straumann WorkParamsDB file "WorkParamsDB-Straumann_Group.xml" into the Configuration folder on the following path of the Exocad Software: DentalDB\config
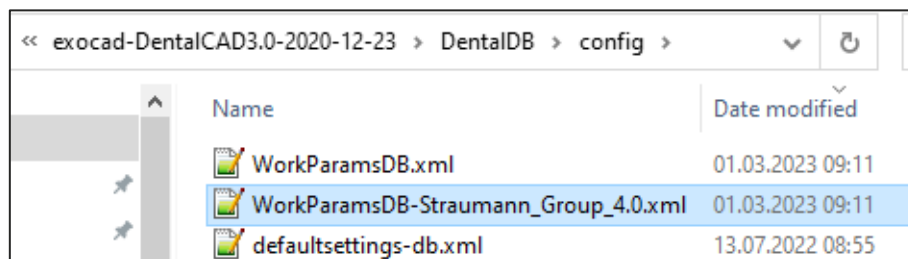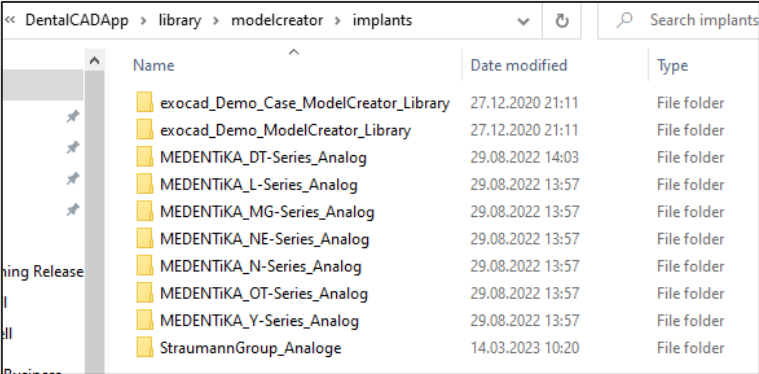
## 2.2. Straumann Library

Drag and Drop the StraumannGroup libraries folders into the Configuration folder on the following path of the Exocad Software: DentalCADApp\library\ implant
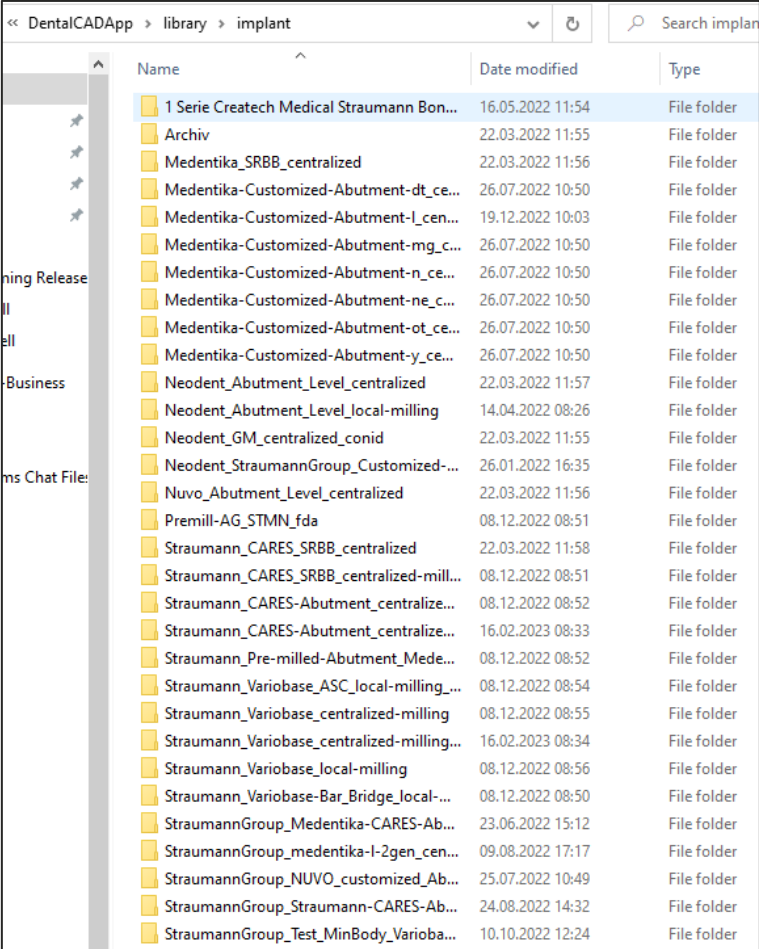


Please note that Model Analog Libraries (local production only!) are to be placed at the specific modelcreator path.

## 3. Using the Straumann WorkParamsDB

After starting the Exocad DentalDB change the material configuration to the implemented "WorkParamsDB-Straumann_Group_X.x.xml" configuration by opening the "Material configuration selection" via the setting dropdown menue.
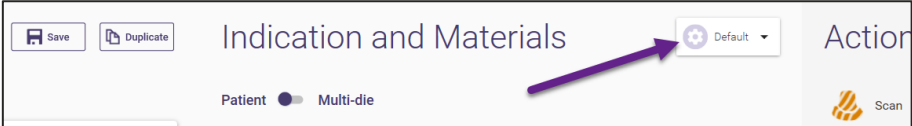


The window "Material configuration selection" opens and the configuration can be changed. There you select the previously implemented "WorkParamsDB-Straumann_Group_X.x"
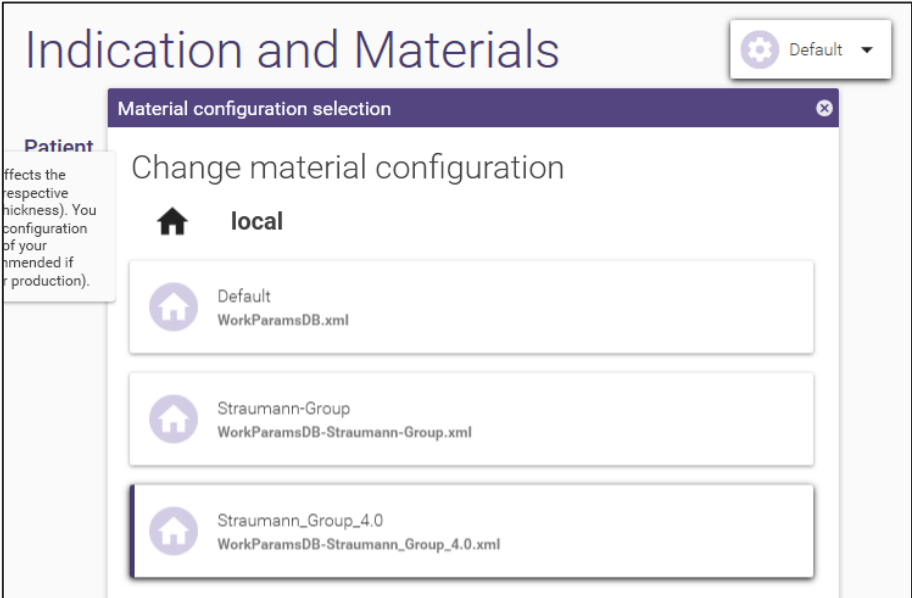
# 4. Straumann Portfolio

## 4.1. Order Creation

General Information

Institut Straumann AG provides design libraries for non-Straumann CADCAM systems that allow the CAD design of patient-specific devices to fit to Straumann implants and prosthetic solutions.  As with all medical devices, certain restrictions for market access may apply, depending on the specific local legal rules and the regulatory clearance status for the subject jurisdiction. The user of the CADCAM system is responsible for ensuring that the use of the CADCAM System including the materials and milling blanks used or manufacture are in compliance with the legal and regulatory requirements of your respective country. For further questions please contact your local Straumann representative. The Straumann configuration contains Implant Systems and Materials (see Chapter Implant Systems and Materials).

Please see http://ifu.straumann.com

Please avoid mutated vowel when editing any order as this will cause the loss of it when sending to Straumann centralized milling.

For products with the anatomical shape of crowns or copings, the Materials for Straumann restorations are available.

Tooth borne: 1. Indication-> 2. Material without any suffix -> 3. No implant at "Implant-based?"
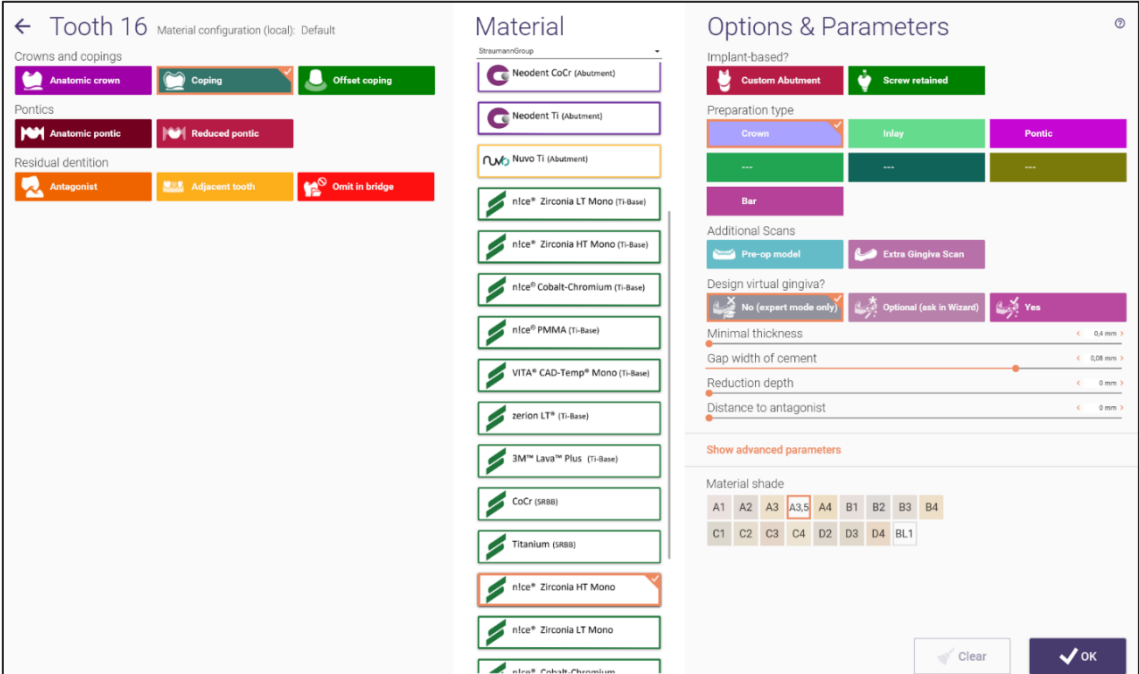


Implant borne - Variobase: 1. Indication-> 2. Material with (Ti-Base) suffix-> 3. Screw retained at "Implant-based?"
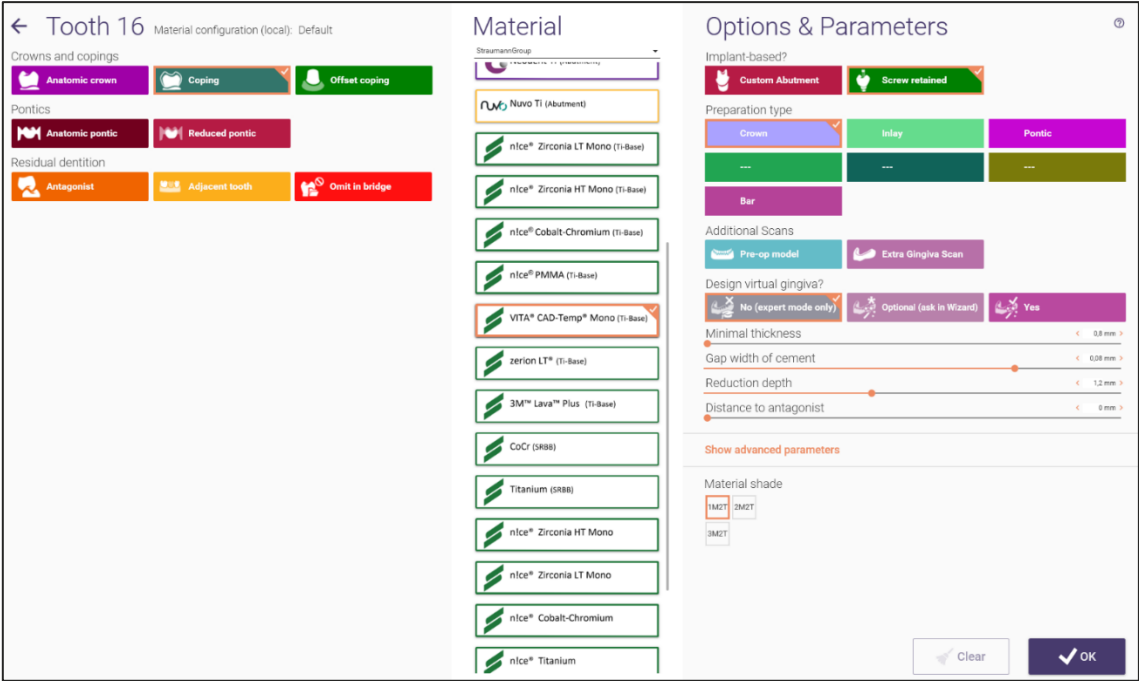
Implant borne – customized Abutment: 1. Indication-> 2. Material with (Abutment) suffix-> 3. Custom Abutment at "Implant-based?"
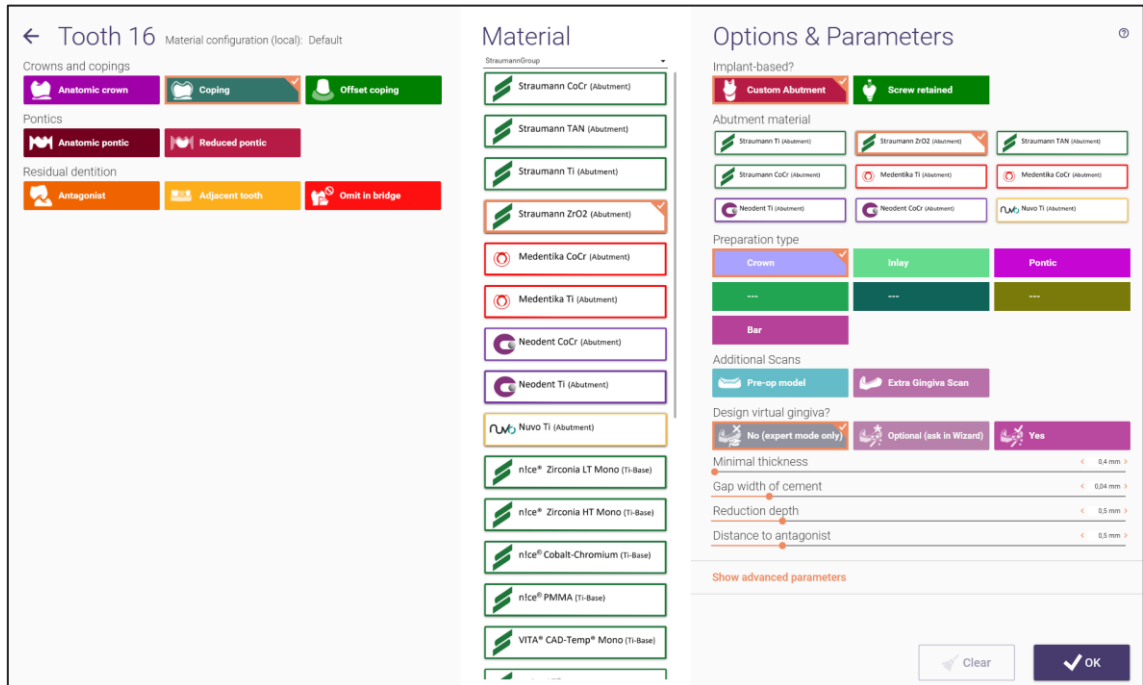


Implant borne – screw retained bridges: 1. Indication-> 2. Material with (SRBB) suffix-> 3. Screw retained at "Implant-based?"
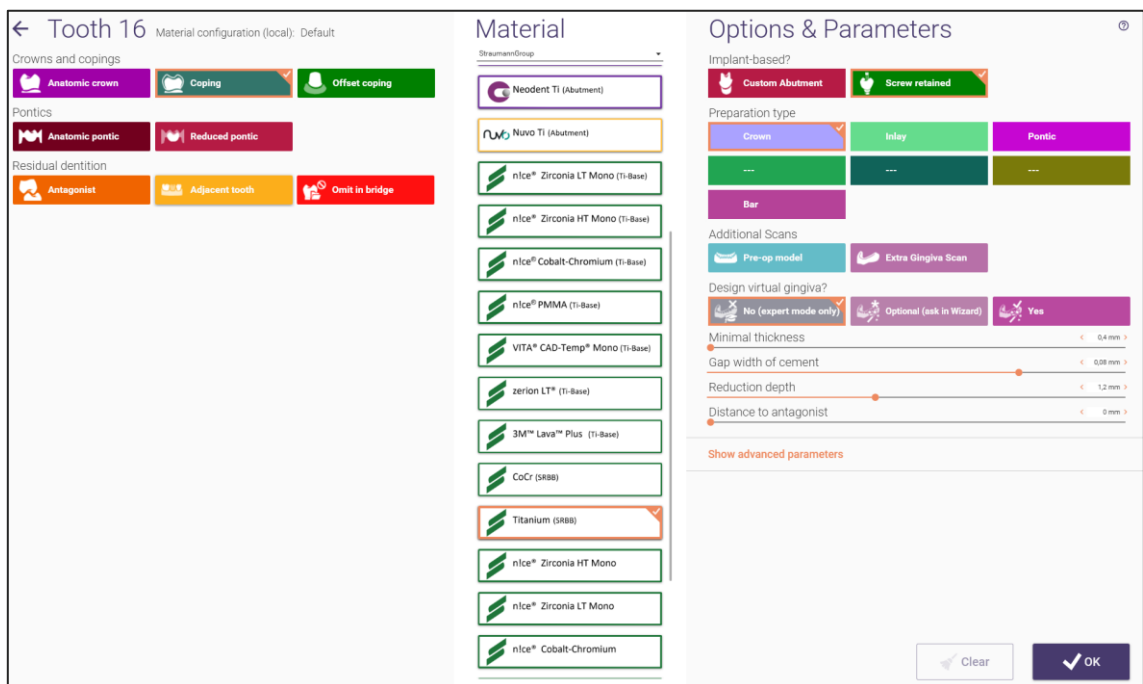


**Caution:** Ensure you choose the correct Material for the Ti-base, Abutment, SRBB or Toothborne.

**Please note** that our Portfolio differs depending on the installed libraries.

There is the option to choose between the Screw Retained and the Custom Abutment variation for Implant based restorations. For Straumann Abutment, Ti-Base and SRBB the option "Screw Retained" as well as "Custom Abutment" for customized Abutments is a default setting already.



Implant borne (Custom Abutment): 1. Indication-> 2. Material-> 3. On Custom Abutment-> matching selection (to selected Material) at "Implant-based?" is essential!
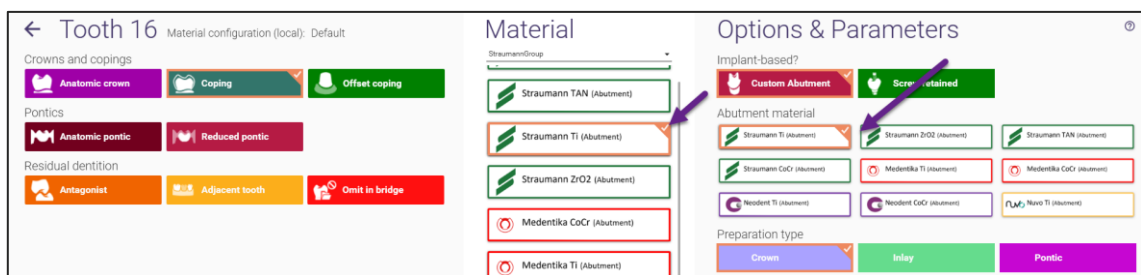


Tip for Split-file orders:

1- Customized Abutment centralized with separate Crown/Coping on Top milled locally: These kind of project needs to be done in 2 steps. First create the Abutment and send it to Straumann centralized production by using the StraumannOrderTool, before proceeding to design the Crown/Coping on Top.

2- Customized Abutment separate Crown/Coping on Top, both milled centralized: These kind of project needs to be done in 2 separate orders.

Implant borne (Ti-Base / SRBB): 1. Indication-> 2. Material-> 3. Screw-Retained at "Implant-based?"
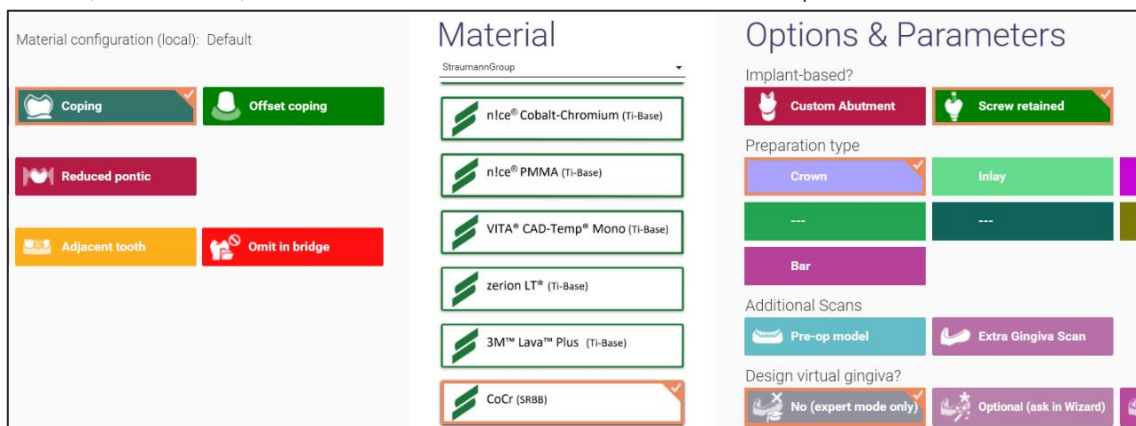
## 4.2. CAD – Implant Selection at "Detect Implant Position"

First choose a StraumannGroup Library, the second step is the indication and the last is the implant interface via drop-down menu.
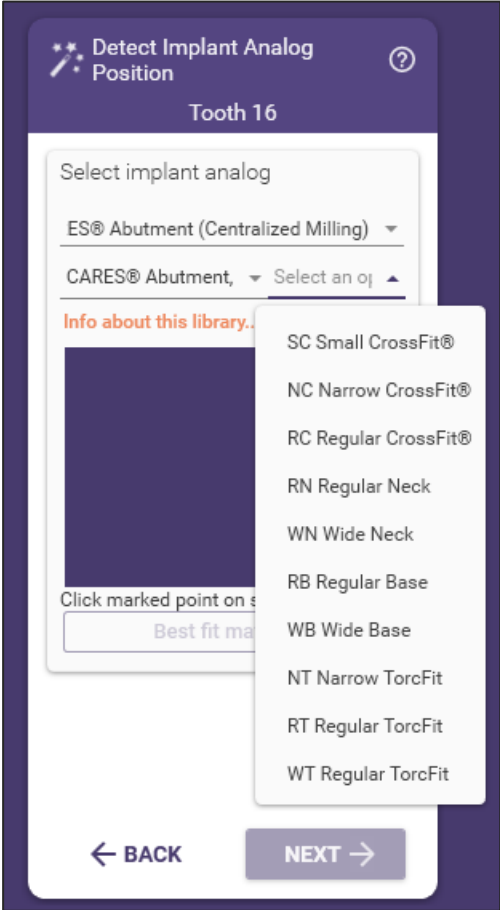


**Please note:** Our BLX interfaces RB Regular Base and WB Wide Base are only available with material selection TAN as well as CoCr/n!ce Cobalt-Chromium, whilst interface SC Small CrossFit is available in TAN only.

# 5. Straumann Order Tool

To send a restoration to the Straumann milling center, open the Straumann Order Tool and follow the steps of the <u>Operating procedure</u>.
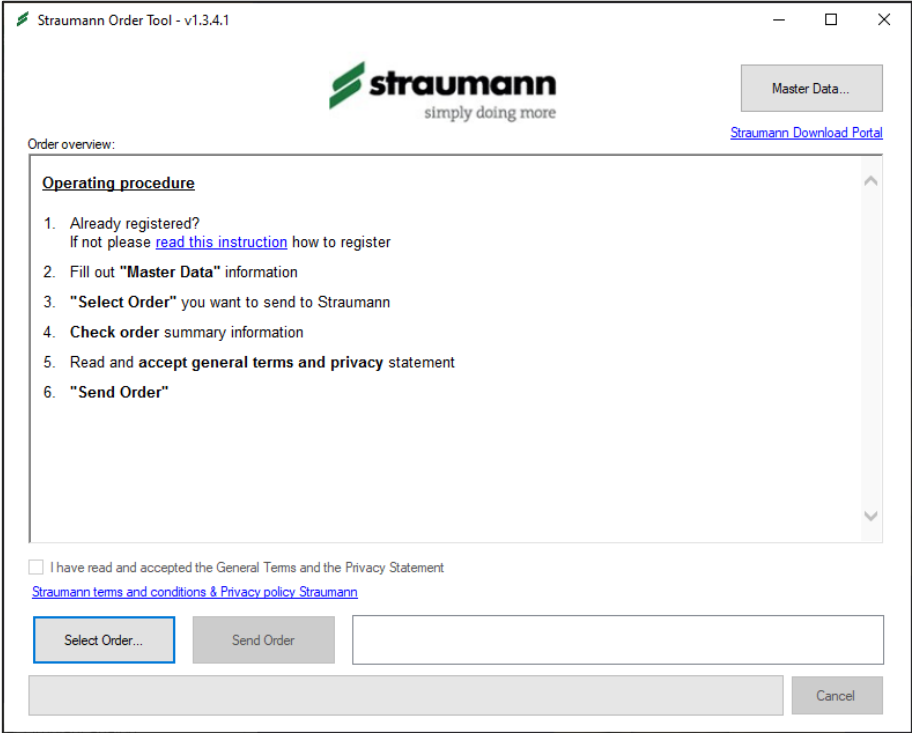


In case it is implemented into your system, click on the belonging Tab on the right side from order creation site.
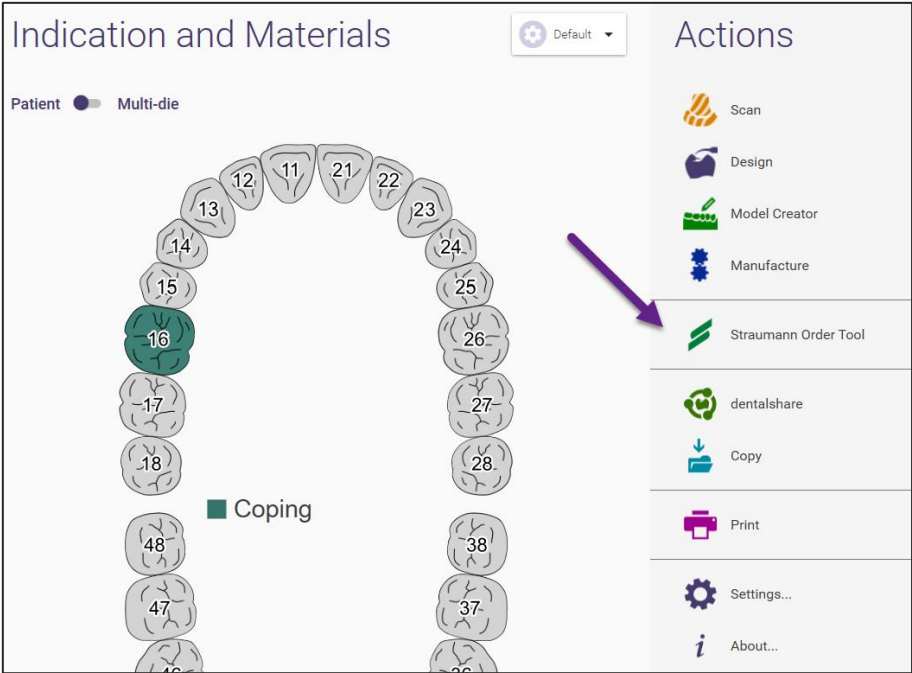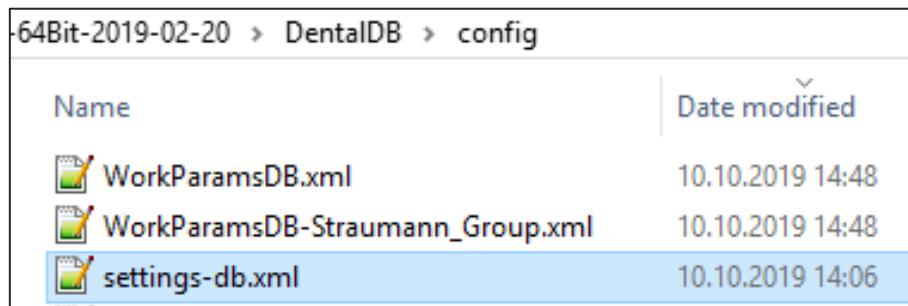
## Files needed to set up the System - obtained from 1st Level support

1) Straumann Order Tool (whole Folder)

➔ needs to be placed inside ...\DentalDB\config
(Same place as our WorkParamsDB-Straumann_Group.xml)

2) settings-db.xml

➔ needs to be placed inside ...\DentalDB\config
(Same place as our WorkParamsDB-Straumann_Group.xml)



3) StraumannLogo.png

➔ Needs to be placed inside ...\DentalDB\icons



Please pay attention that Straumann can't assure this works with every distributor due to the unknown differences in their specific system setup.

# 6. Using and Ordering Straumann Materials

To use and order Straumann materials the core exocad software is required (users are recommended always to use the latest release).
Each of the Straumann materials with its indications has an IFU that can be obtain directly from the internet:
 ifu.straumann.com

## 6.1. Cautions and Advice

### 6.1.1. Scanner Source

The source of scanned data and preparation of the tooth model are critical for the quality of the interface to the prosthetics. Ensure that the scanned data correctly represents the patient situation in order to avoid the need for later filing and fitting tasks that may also reduce the strength of the restoration.

### 6.1.2. Blank Size

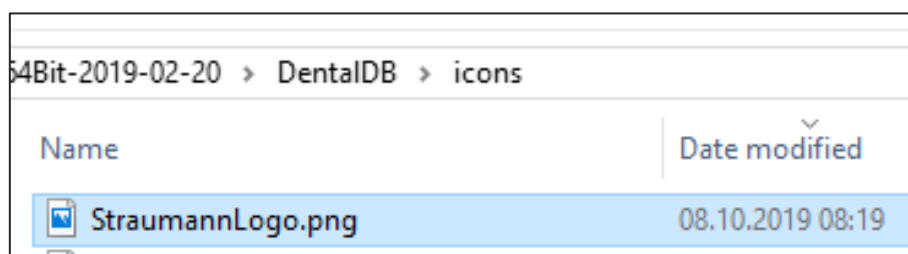Maximum blank sizes for manufacture in Straumann disk materials are not shown with the restoration design. If a design is bigger than the maximum blank size then the order cannot be manufactured and must be adjusted before resending.  The maximum heights of Straumann disk blanks by material are:

| | |
|---|---|
| n!ce Zirconia LT Mono | 15,35 mm |
| n!ce Zirconia HT Mono | 23,35 mm |
| zerion LT Straumann | 15,35 mm |
| 3M™ Lava™ Plus  Straumann | 23,21 mm |
| n!ce Cobalt-Chromium | 17,4 mm |
| n!ce  Titanium | 14,9 mm |
| n!ce PMMA | 28,60 mm |
| VITA CAD-Temp monoColor Straumann | 19,20 mm |
| VITA CAD-Temp multiColor Straumann | 17,20 mm |

### 6.1.3. Limitations

Design of indications that are not included in the libraries may result in restoration of insufficient strength and the order cannot be manufactured.

## 6.1.4. Indication and Materials

The following indications and materials are available for centralized production - the indications permitted are dependent on the material type

| Material (Display name) | Type | | | | |
|---|---|---|---|---|---|
| | Crowns/Copings | | | Pontics | |
| | Anatomic crown | Coping | Offset coping | Anatomic pontic | Reduced pontic |
| Straumann CoCr (Abutment) | x | x | x | | |
| Straumann Tan (Abutment) | x | x | x | | |
| Straumann Ti (Abutment) | x | x | x | | |
| Straumann ZrO2 (Abutment) | x | x | x | | |
| Medentika CoCr (Abutment) | x | x | x | | |
| Medentika Ti (Abutment) | x | x | x | | |
| Neodent CoCr (Abutment) | x | x | x | | |
| Neodent Ti (Abutment) | x | x | x | | |
| Nuvo Ti (Abutment) | x | x | x | | |
| n!ce® Cobalt-Chromium (Ti-Base) | x | x | x | | |
| n!ce® PMMA (Ti-Base) | x | x | x | | |
| n!ce® Zirconia LT Mono (Ti-Base) | x | x | x | | |
| n!ce® Zirconia HT Mono (Ti-Base) | x | x | x | | |
| Vita CAD Temp Mono (Ti-Base) | x | x | x | | |
| zerion® LT (Ti-Base) | x | x | x | | |
| 3M Lava Plus (Ti-Base) | x | x | x | | |
| CoCr (SRBB) | x | x | x | x | x |
| Titanium (SRBB) | x | x | x | x | x |
| n!ce® Zirconia LT Mono | x | x | x | x | x |
| n!ce® Zirconia HT Mono | x | x | x | x | x |
| n!ce® Cobalt-Chromium | x | x | x | x | x |
| n!ce® Titanium | x | x | x | x | x |
| Vita CAD Temp Mono | x | x | x | x | x |
| 3M Lava Plus | x | x | x | x | x |
| n!ce® PMMA | x | | x | | |
| Zerion® LT | x | x | x | x | x |

### 6.1.5.  Cautions

• **Minimum and Maximum Dimension Controls**

Straumann has developed and tested the limits of dimensions of features in the prosthesis type. These dimensions are controlled through use of normal design tools in the Dental Designer software. Some of these limits could be exceeded or undershot through use of design tool combinations, when this occurs the prosthesis may not have sufficient strength or may not be manufacturable.  Do not decrease cross-sections using wax knives or increase lengths using material addition, when a limit has already been reached with geometry "handles" or other tools.

• **Margin thickness**

Do not decrease the default minimum margin thickness values, the prosthetic may not be strong enough

• **Screw channel thickness**

The default  Screw Channel Thickness  is too thin, you have to use exocad "Screw Hole Design" to increase the thickness and do this step manually to create a valid design for centralized production.

<u>Attention:</u> It is mandatory to alter the "Screw Hole Design" to meet a minimum Thickness of 0.4mm
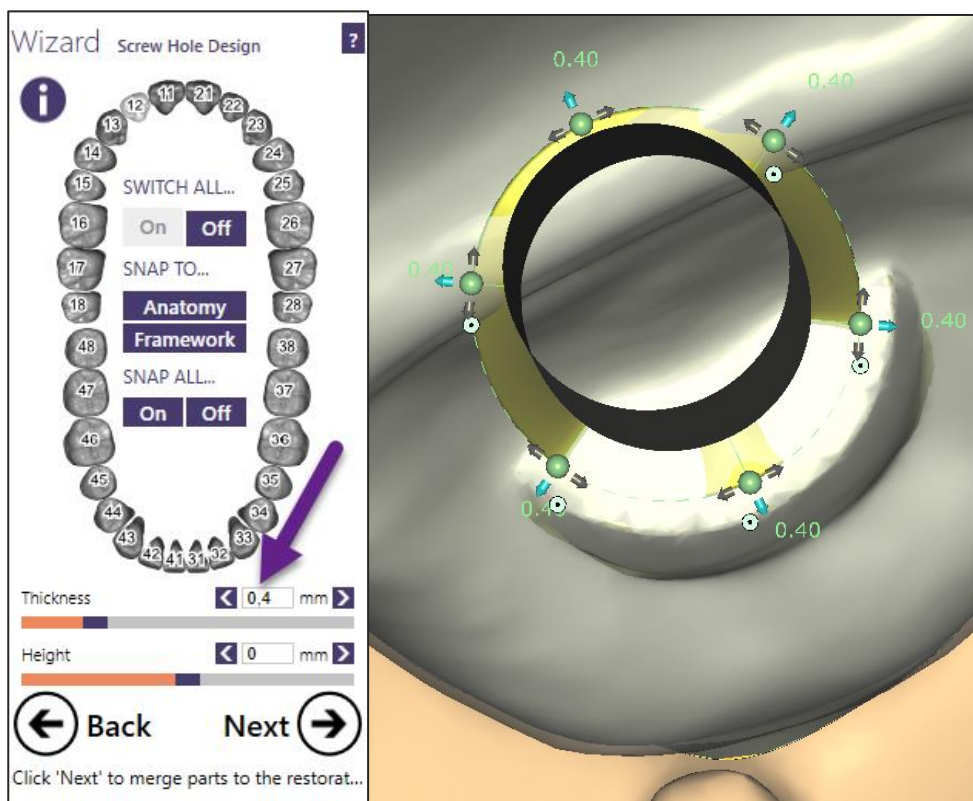
- **Number of pontics**

Do limit the number of pontics please see ifu.straumann.com for the recommended maximum number of pontics in front and side areas of mouth

- **Cross-section of pontics**

Do not make a pontic smaller than the minimum connector cross-section area.

- **Local milling – Material dependency**

Only use material and variobase combinations that are approved in your country. Ensure that the recommended minimum wallthickness are used, always read the material manufacturer's IFU.

- **Always optimize for free-forming and 3D printing**

**Important:** Tick the "Always optimize for free-forming and 3D printing" option to ensure your design can be milled in Straumann centralized production (Select: Tools -> Settings…-> System Information). If the option is not set, you might receive an error message within the Straumann Order Tool and cannot send the order to production.
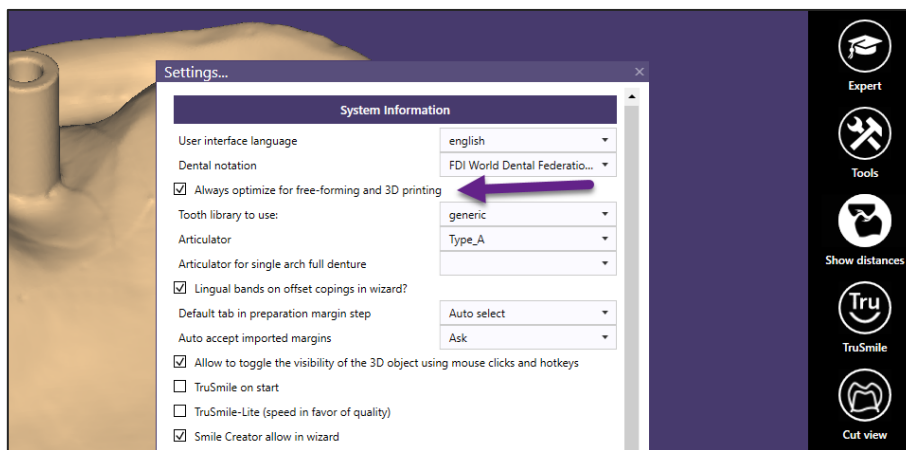
## 7. Terms and Conditions (AGB) for Straumann Products

Practitioners must have appropriate knowledge and instruction in the handling of the Straumann products for using them safely and properly in accordance with their instructions for use.  It is the practitioner's responsibility to use the device in accordance with the instructions for use and to determine, if the device fits to the individual patient situation.

The Straumann Product is part of an overall concept and must be used only in conjunction with the corresponding original components and instruments distributed by Institut Straumann AG, its ultimate parent company and all affiliates or subsidiaries of such parent company ("Straumann"), except if stated otherwise in the instructions for use. If use of products made by third parties is not recommended by Straumann in the instructions for use, any such use will void any warranty or other obligation, express or implied, of Straumann.

Links to Detailed Terms and Conditions (to be read before ordering):

http://www.straumann-cares-digital-solutions.com/content/dam/internet/straumann_com/Resources/AGB/AGB_EN.pdf

http://www.straumann-cares-digital-solutions.com/content/dam/internet/straumann_com/Resources/AGB/PRIVACY_EN.pdf

**Contact:**

Contact country subsidiary