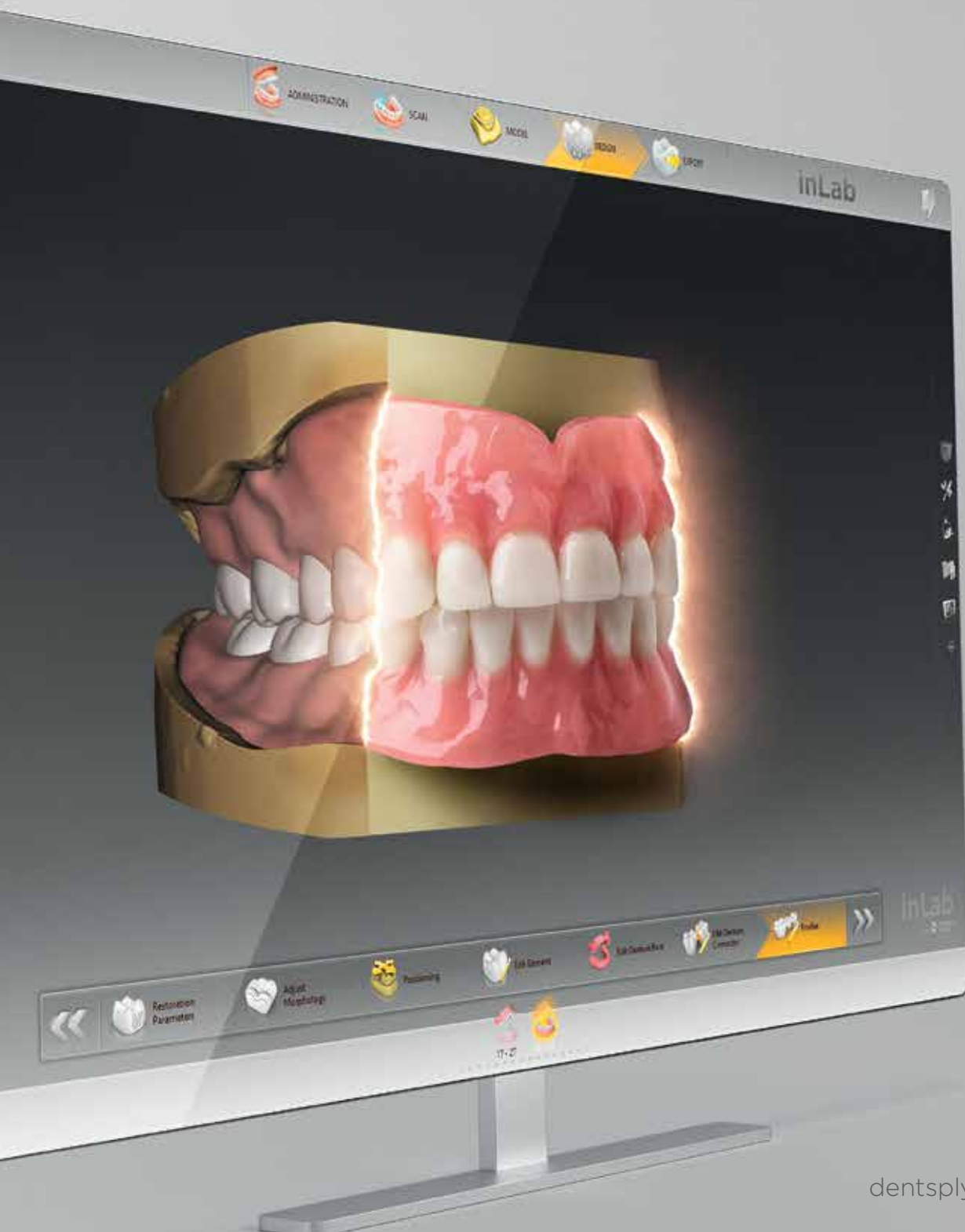


Full dentures with inLab SW 20.0

Simply digital



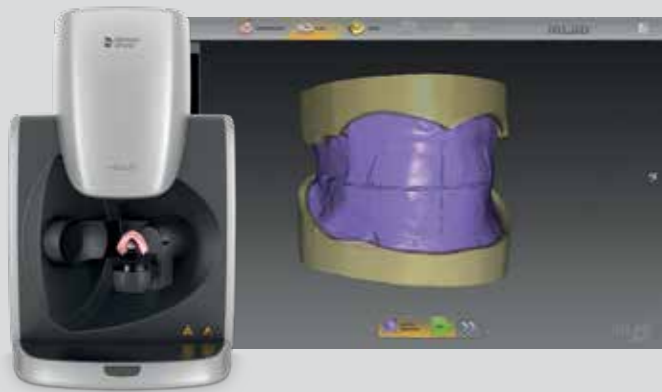
# Full dentures with inLab SW 20.0 – Simply digital



From inLab SW 20.0, the indication “Denture” is integrated in the software module Removables\*. This provides the dental laboratory with a simple and fast access to this digitalized field of application. From the accurate capture of bite registration with the inEos X5 extraoral scanner, to an automated and careful model analysis, to the initial proposal of the tooth set-up and the design of the denture base – the inLab Software offers coordinated process steps combined with a high level of user comfort. The laboratory also remains flexible in the subsequent production options.



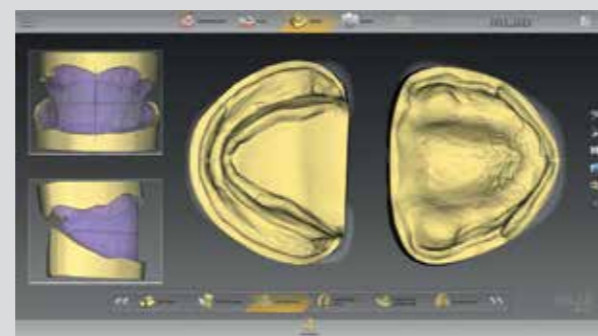
## The digital workflow at a glance



### Scanning with inEos X5

The new scanning phase of the inLab SW 20.0 provides support with a clear user interface, new step menu and interactive help – for a fast and complete scanning process.

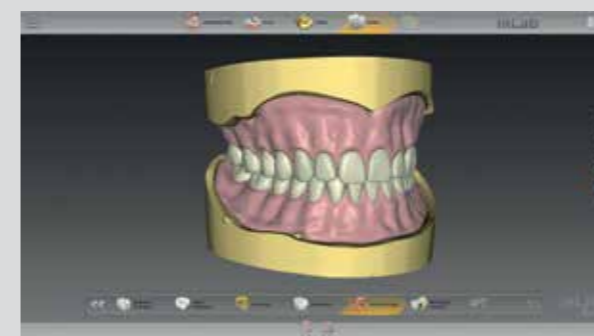
Page 6



### Model phase

Optimal basis for the subsequent model analysis: inLab SW 20.0 guides you step-by-step through the model phase, generates an initial proposal for the denture base line and supports automated in model analysis, based on proven positioning concepts.

Page 8



### Design

The inLab SW 20.0 offers two options for tooth set-up: the individual tooth set-up according to the biogeneric principle or the selection from a digital tooth library.

Page 10



### Manufacturing

The manufacturing of the dental base and the Try-In is possible using the inLab MC X5, another suitable milling unit or a 3D printer. Depending of the tooth selection, prefabricated teeth or milled teeth are bonded into the denture.

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\* Full denture solution from inLab Software version 20.0 for upper and lower jaw. Single-arch dentures feature will follow soon.



# Efficient working right from the start

### Phase menu

The phase menu always indicates which software phase is currently running: Administration - Scan - Model - Design - Export

### Order details

All relevant details of the case are defined with a few clicks and selection menus.

### Tooth segmentation

Depending on aesthetic or production requirements, with individual tooth set-up, the tooth arch can be segmented or manufactured as one unit.

### Design options

When selecting an indication a choice between denture teeth and individual teeth (biogeneric) can be made.



### Try-In option

A Try-In can optionally be selected and defined with corresponding manufacturing options.

### Step menu

Each software phase consists of different process steps, through which the user is guided and additionally supported with graphical hints.



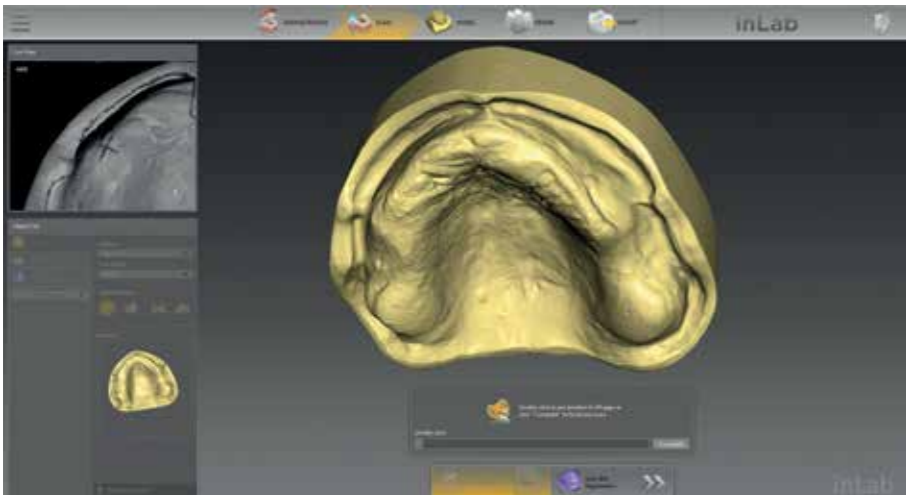


# New scan phase with inEos X5

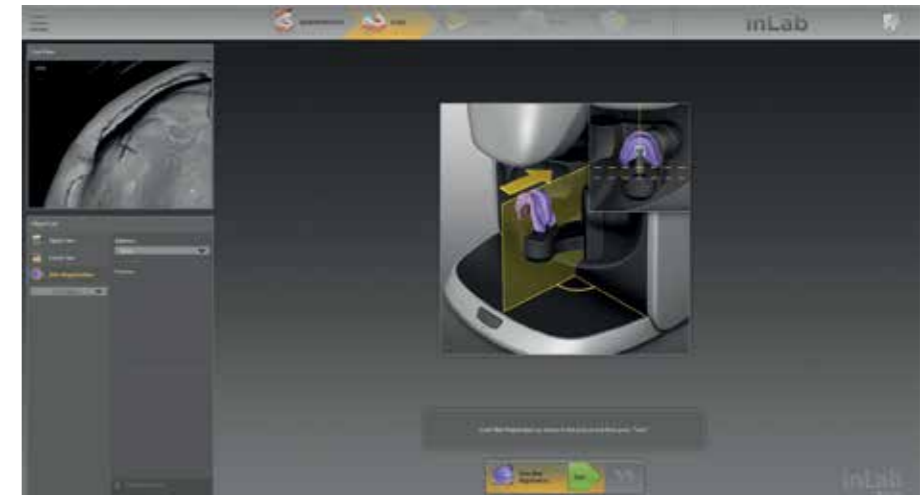
The inEos X5 scanning technology enables the digital capture of almost all kinds of dental objects - with proven accuracy.\* From inLab Software 20.0 inEos X5 offers enhanced user guidance to make even the most complex digitization task user-friendly and intuitive - for both new and experienced users. Particularly in the case of digital dentures, the scanner is ideally suited for the accurate capture of all relevant information from functional impressions and bite registration.



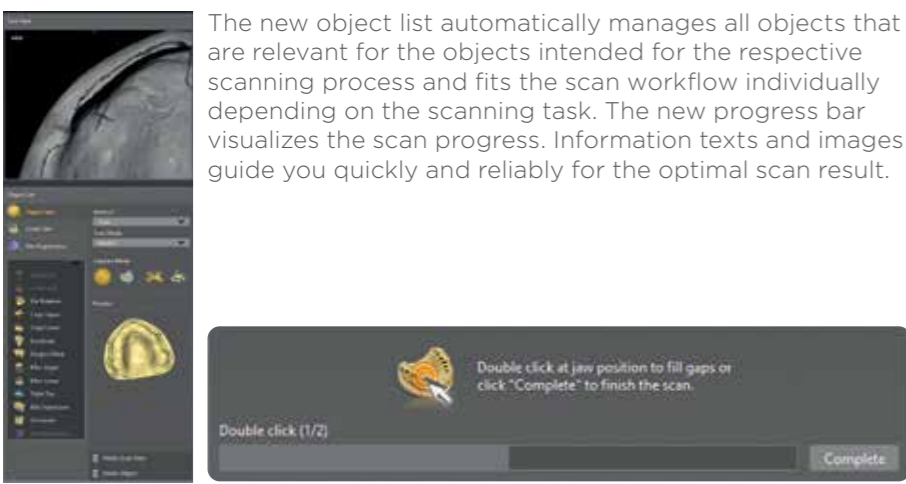
A new denture holder developed especially for digital dentures positions the bite register for reliable, shake-free scanning in just one step.



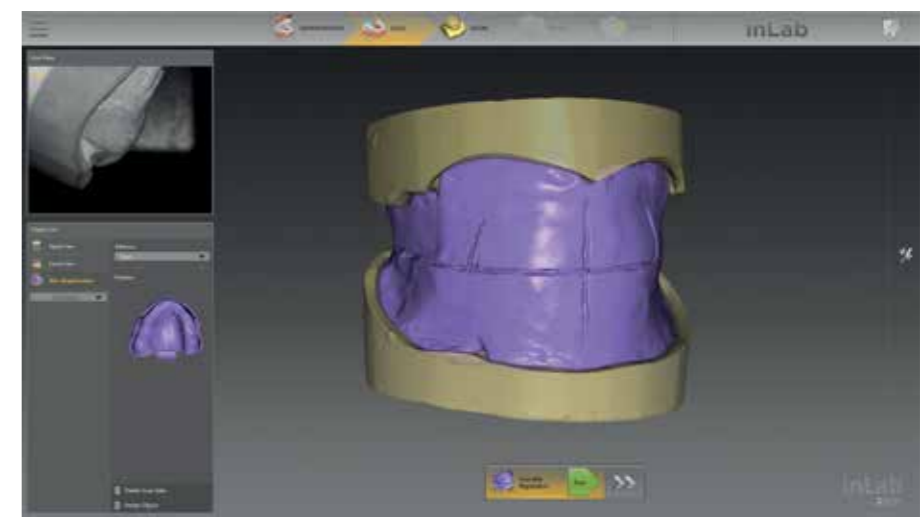
In the interactive software workflow, it is always possible to see at which points additional scans are required.



The software optimized for dentures enables a new and unique scanning workflow for the exact correlation of upper and lower jaw - the optimal basis for the required model analysis and the subsequent design.



The new object list automatically manages all objects that are relevant for the objects intended for the respective scanning process and fits the scan workflow individually depending on the scanning task. The new progress bar visualizes the scan progress. Information texts and images guide you quickly and reliably for the optimal scan result.



The complete scan of the upper, lower jaw and bite registration is sent in the inLab Software seamlessly to the subsequent model calculation. Alternatively, the scan data can be used as an open STL file for further processing.

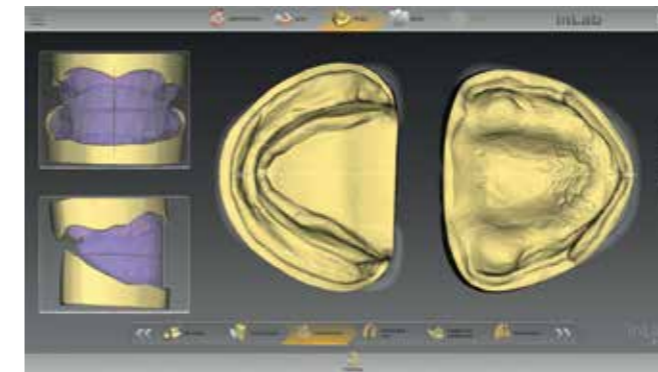
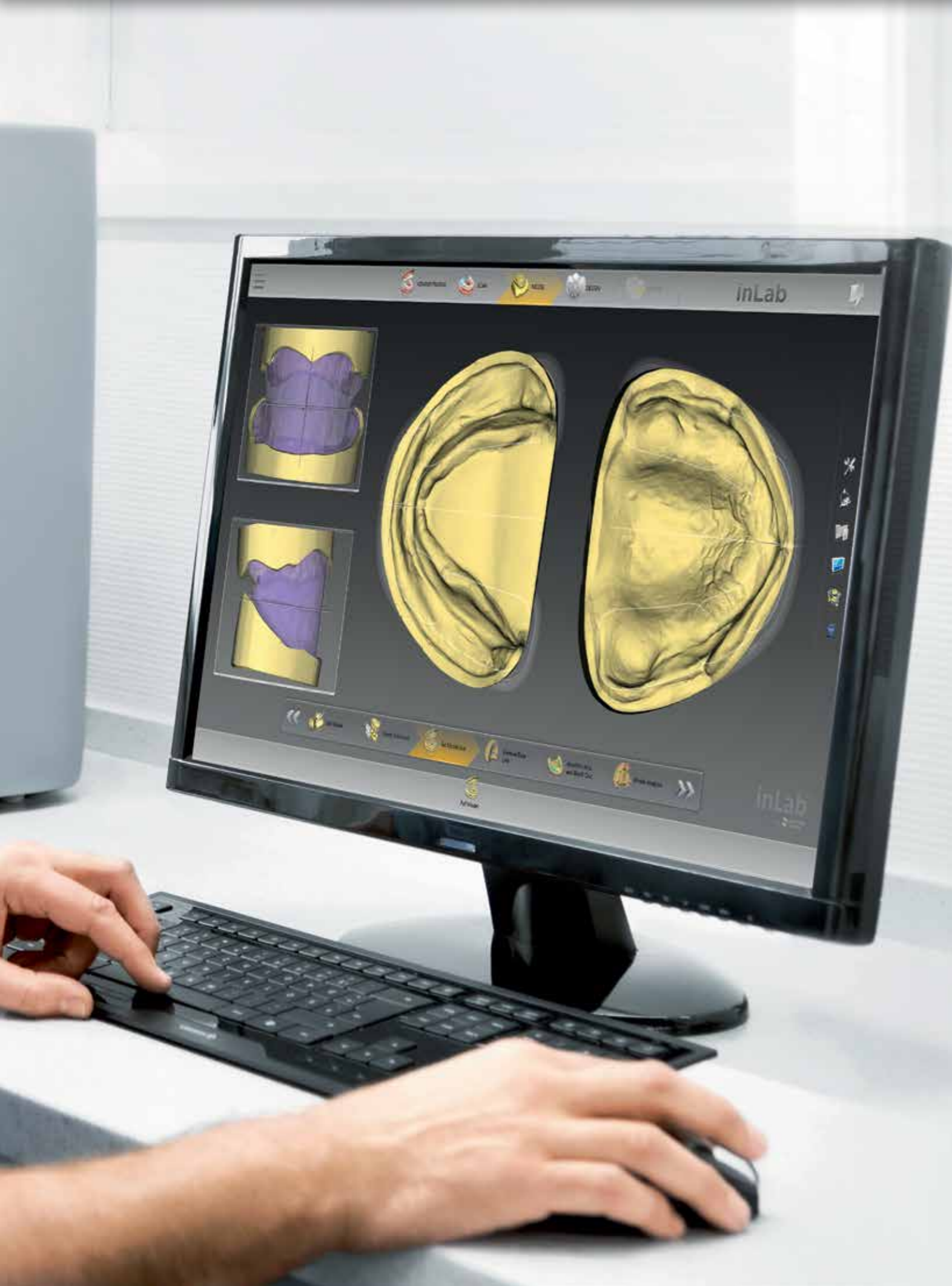
\* The accuracy of the results of the inEos X5 with inLab CAD SW 16 was verified according to DIN EN ISO 12836:2015. The demonstrated accuracy on standard "bridge" test specimens was at 2.1 ± 2.8 µm, and on standard "inlay" test specimens, 1.3 ± 0.4 µm.



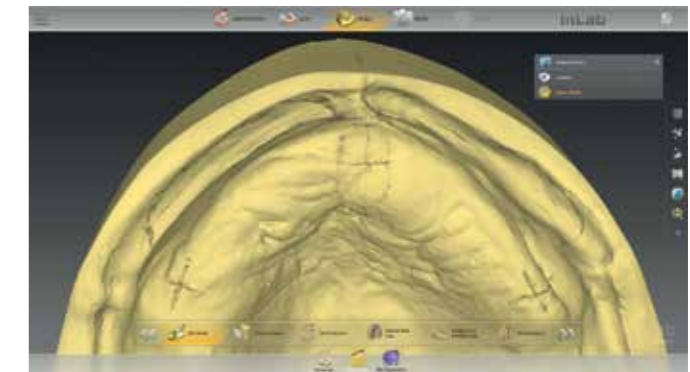


## Model phase

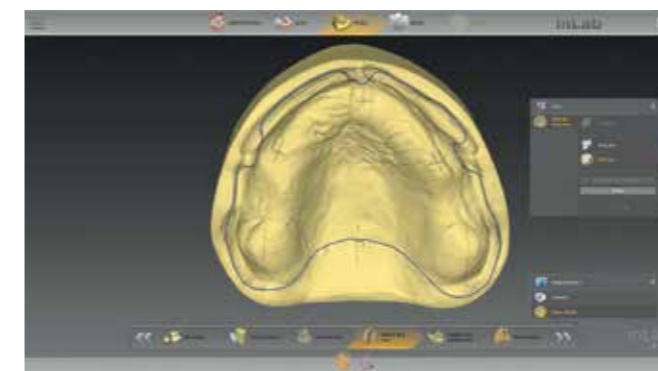
The model phase of the inLab Software enables optimal preparation and provides important information for automated model analysis, with which relevant anatomical landmarks are detected and suggested.



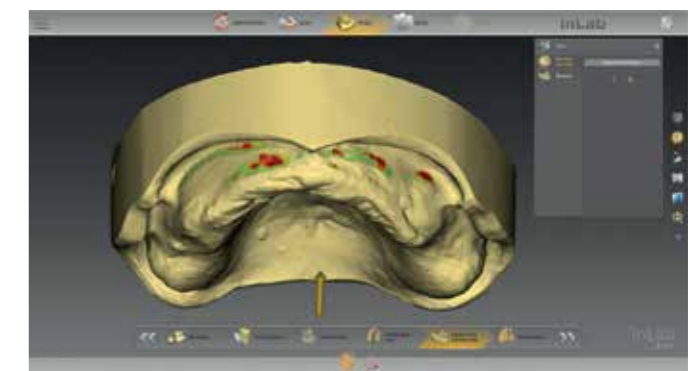
When aligning the axis for the model, the optional display of bite registration provides orientation for determining the correct median and occlusal plane.



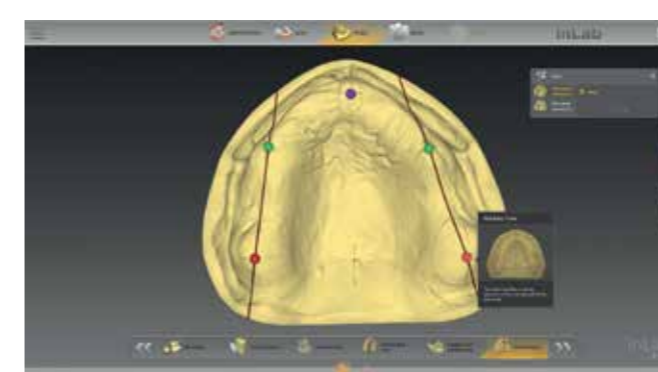
Markers that were used for planning on the model can be displayed for orientation if required.



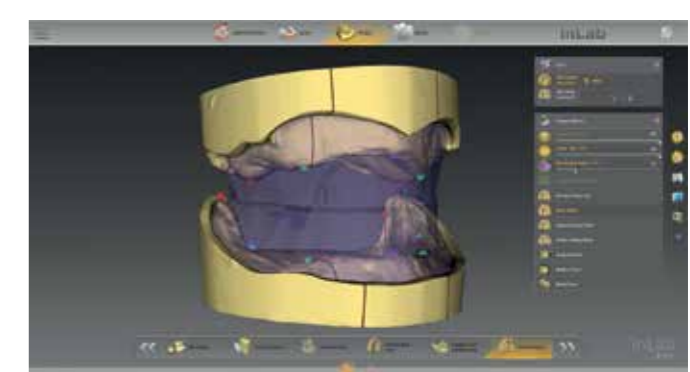
The denture base line is automatically suggested by the inLab Software and can be edited individually or alternatively drawn by the user.



By adjusting the insertion axis, undercuts can be displayed, analysed and, if necessary, blocked out automatically or individually.



In the step "model analysis" the software automatically displays anatomical landmarks based on the digitized jaw situation. The anatomical landmarks, such as the position of the premolars, incisive papilla, tuberosity and retromolar pad can be corrected manually. The initial proposal of the tooth set-up is based on the alignment of the models and the model analysis. If the help option is activated in the inLab Software, additional graphics and help texts for model analysis are displayed.





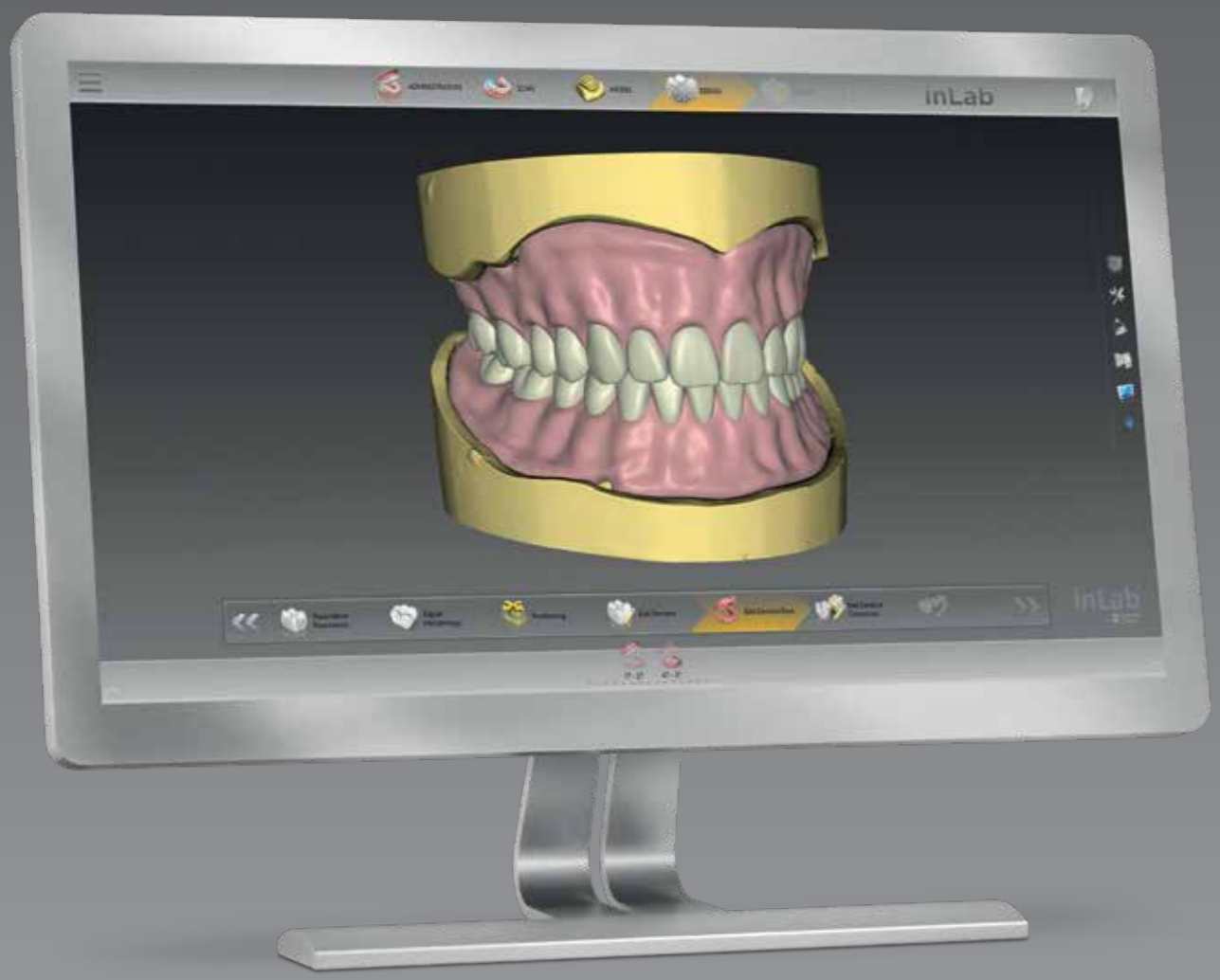


# Digital denture design.

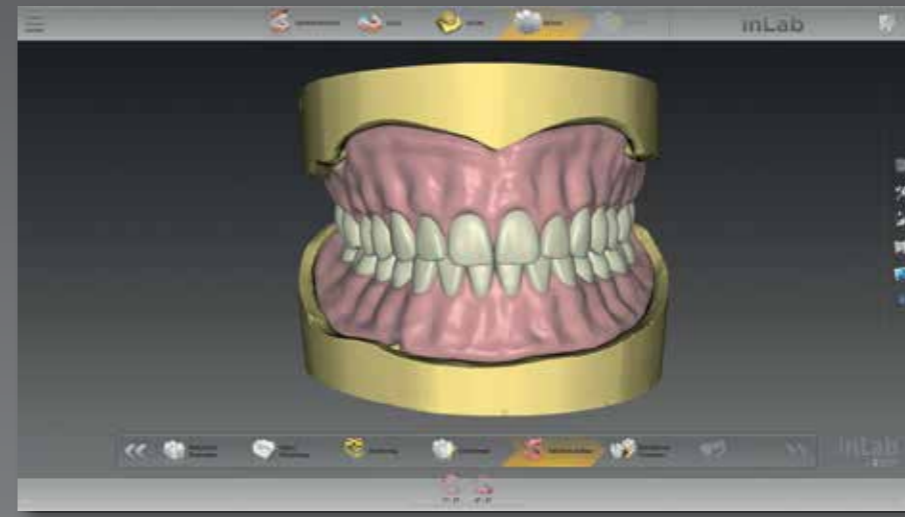
inLab SW 20.0 offers the laboratory two options for digital tooth set-up: the use of digitized denture teeth from a tooth library or individual tooth set-up. Both are based on the unique biogeneric method, which the software uses to adapt the occlusion of the teeth the given jaw.

The individual tooth set-up is determined by two essential and unique procedures: bio-jaw and biogeneric. Both procedures were developed by Prof. Dr. Dr. Albert Mehl (University of Zurich) and are based on machine learning or artificial intelligence, i.e. the generation of knowledge from experience. The bio-jaw calculates a plausible and natural set-up from more than 160 real jaw situations and almost 10,000 individual teeth, which is optimally adapted to

the available statics or model analysis. For the design of fixed restorations, this procedure has been used with great success for years. In concrete terms, this is an algorithm with which the software suggests an accurate restoration design to the dental technician based on the existing jaw situation. This central element of the inLab Software is also used for full denture.



The digital process has many advantages, for example defining different parameter settings for the consistent protection of minimum wall thicknesses, pocket sizes, etc.



Regardless of the selected tooth set-up, the denture base is then calculated according to the tooth set-up and the ridge. The gingiva can be individually processed using the software tools.

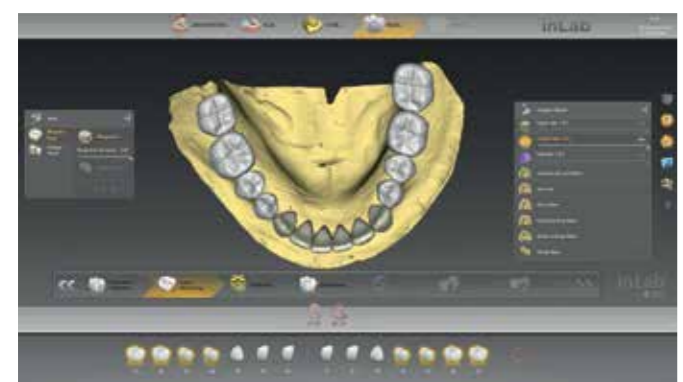


Regardless of the type of tooth set-up, it is always possible to produce a monolithic Try-In.

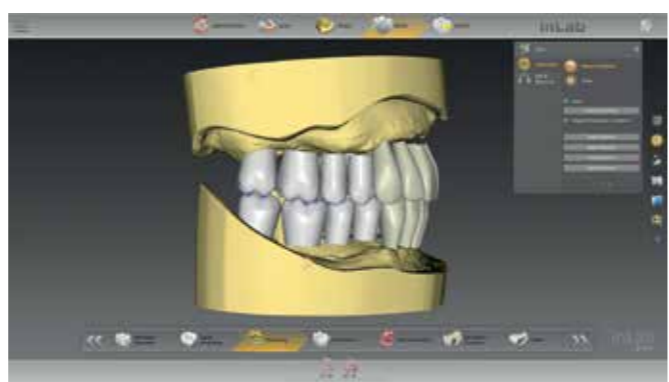


## Digital denture design: Individual tooth set-up

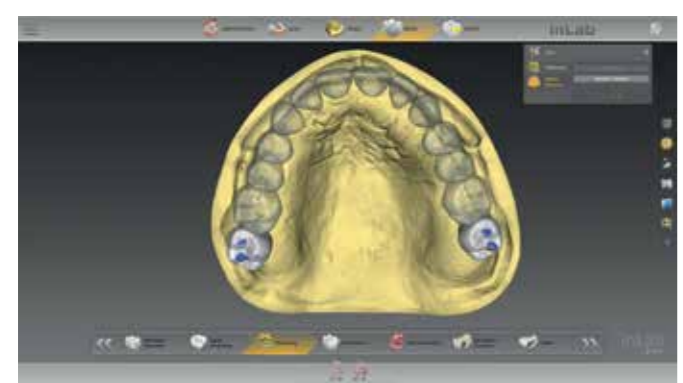
With the individual tooth set-up, there are various treatment options regardless of occlusion. Based on the available data, the inLab Software provides step-by-step automated support right up to the initial proposal, which the dental technician can check and adapt as required. The tooth arch can be created entirely or divided into several segments down to a single tooth, e.g., when creating complex cases or for different aesthetic requirements, especially in the anterior region.



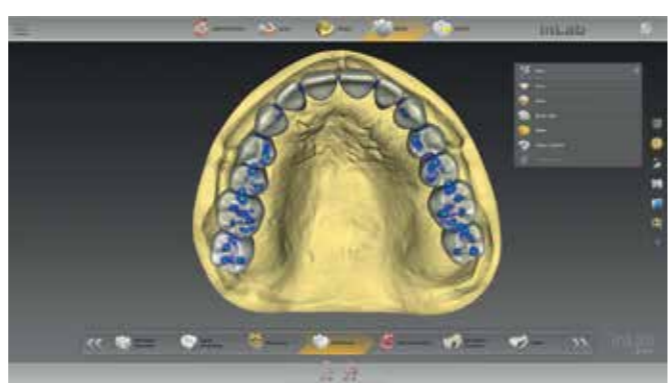
For individual tooth set-up, the biogeneric of the inLab Software is used for the initial proposal. The biogeneric variation is set and/or an anterior tooth shape is selected. The tooth shape of individual teeth can also be changed.



Positioning: Teeth can be changed in position individually, in groups or as a whole tooth arch.



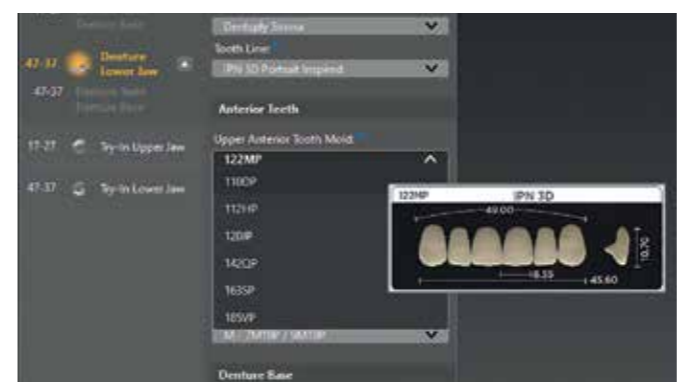
Depending on the available space, the 2<sup>nd</sup> molar can be omitted or added even in the advanced design phase without having to switch to administration again. This saves time and offers design freedom.



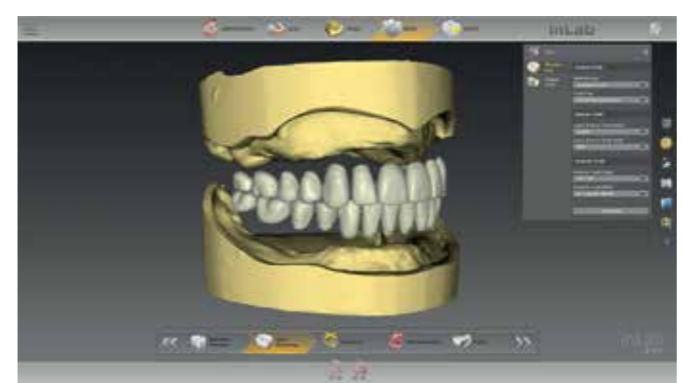
The initial proposal for tooth set-up is based on previous model analysis, pre-positioning and other individual adjustment tools.

## Digital denture design: Tooth library

When using digitized denture teeth from the tooth database, with inLab SW 20.0 and higher, the new IPN 3D™ Digital Denture Teeth from Dentsply Sirona\* developed specially for the digital process are used. They have a reduced base to largely prevent penetration of the denture base. After positioning the teeth in the inLab Software, the denture base with the respective pockets is designed. For this, a unique position locator system enables plug-n-play assembly, thus making it faster to position and bond the teeth.



Already in the administration phase of the inLab Software, the denture details are specified, the shape and set for anterior and posterior teeth are selected and displayed using preview images.



After the automatic set-up by the software in the design step, the position of the single teeth can be adjusted, the 2<sup>nd</sup> molar added or removed.

\* IPN 3D™ Digital Denture Teeth Portrait Inspired is optional in inLab SW 20.0. Due to various certification and registration periods, not all products are immediately available in all countries.



ADMINISTRATION



SCAN



MODEL



DESIGN



EXPORT

inLab



# Digital denture

## Flexible manufacturing with inLab SW 20.0

In the final preparation of the denture base and tooth placement, the inLab system continues to follow the principle of seamless, validated and open connection to suitable manufacturing processes. The inLab Software thus provides the dental laboratory with flexible design freedom in the fabrication of digital dentures.



### Seamless

From the scan to the finished result - users of the inLab system benefit from the coordinated hardware and software components - for fast, convenient, and reliable work.



### Validated

Validated materials and coordinated digital workflows give added reliability for integrating CAD/CAM process partners.



### Open

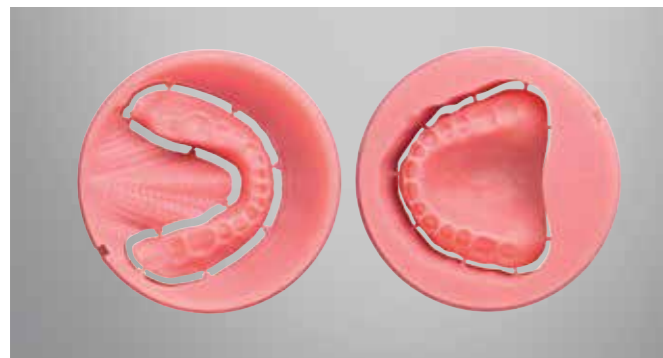
inLab users remain flexible via STL interfaces for integrating existing CAD/CAM solutions - for independent and economical production processes.



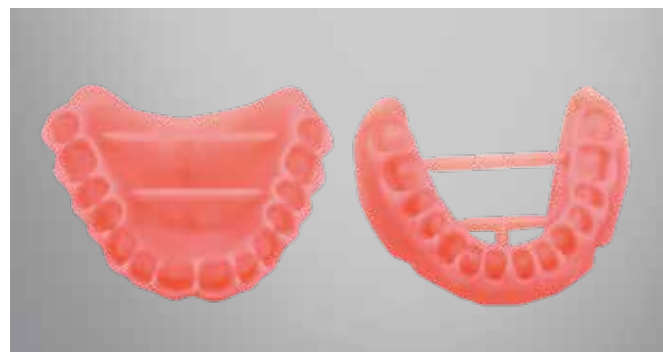


## Manufacturing of the denture base

The denture base (and monolithic Try-In) can each be milled from a disc or produced by 3D printing. The design data are sent seamlessly within the inLab system to the inLab CAM Software or alternatively exported in STL format via the optional interface module of the inLab CAD Software.



For milling the denture base, e.g., with inLab MC X5 or another suitable 5-axis milling unit, Dentsply Sirona offers a high-quality denture material with the Lucitone disc materials (Lucitone® 199 Denture Base Disc\*) in the standard 98.5 mm format - for high impact strength and ultimate bending strength as well as True Color Technology in several colors. The inLab MC X5 milling unit and inLab CAM Software guarantee a validated workflow for precise milling results and a long service life of the milling tools.

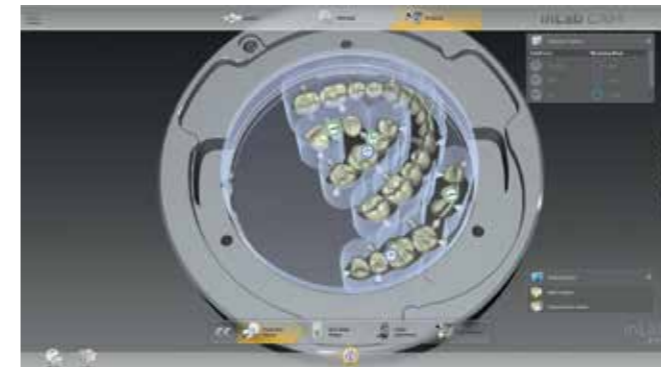


Alternatively, the denture base can be produced in a suitable 3D printing process.\*

\* The inLab CAD SW Interface module is a prerequisite for the STL export of design data.

## Final tooth positioning

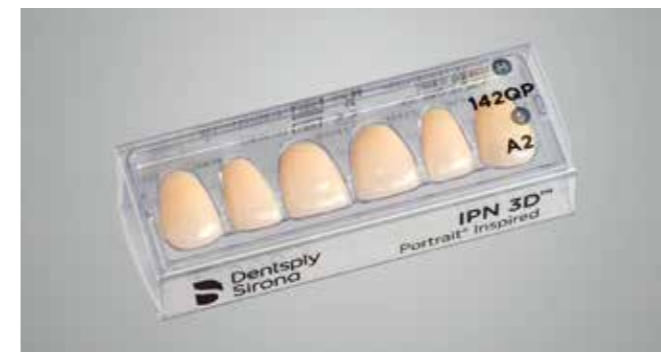
After individual tooth positioning, the tooth arch or segments of the tooth arch can be milled from a suitable blank material with inLab MC X5 or another production unit. When using digitized denture teeth, the prefabricated IPN 3D™ Digital Denture Teeth\*\* are inserted.



The design data is seamlessly and automatically transferred to the inLab CAM Software. Depending on the requirements, the milling objects can be individually positioned and sprue position can be defined. inLab MC X5 offers the unique multi-stage **Smart Denture Finishing** process - for an optimal fit and occlusion with minimum reworking. In the case of apical protrusion of the denture teeth or possible occlusal deviations caused by the manual adhesive process, the denture can be digitally corrected and re-milled to ensure that the digitally designed form has been achieved. This process is made possible by the unique disc adapter concept of the inLab MC X5 milling unit, which ensures precise repositioning of the Lucitone 199® disc.

### IPN 3D™ Digital Denture Teeth\*\* - Designed for printed denture designs Inspired by Portrait®

- Pre-configured and pre-occluded libraries for quick design
- Smart assortment meets > 80% of patient needs
- Unique position locator system enables plug-n-play assembly
- Permits new and experienced technicians to set-up with accuracy
- Packaged in innovative and time-saving "wax-free" cards
- 14 anterior and 12 posterior moulds
- 16 A-D shade designations\*\*\*, BL1 and BL3

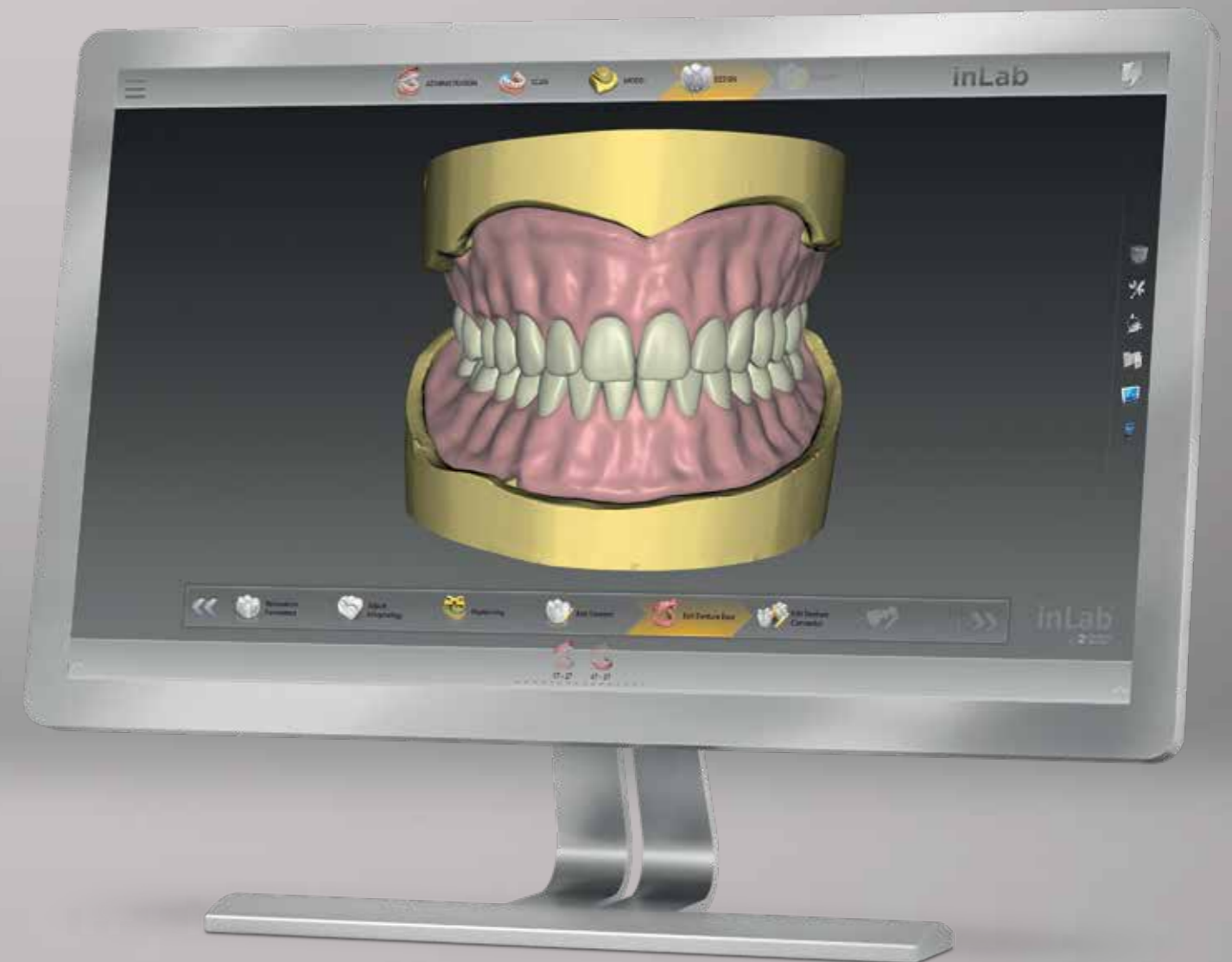


\*\* IPN 3D™ Digital Denture Teeth Portrait® Inspired is optional in inLab SW 20.0. Due to various certification and registration periods, not all products are immediately available in all countries.

\*\*\* The A1-D4 designations correspond to the VITA classical A1-D4\* shade guide which is meant to be a guide, not a match. VITA, VITA classical A1-D4, and 3D Master are registered trademarks of VITA Zahnfabrik H. Rauter GmbH & Co.



Full dentures with  
inLab SW 20.0 –  
Simply digital





**Dentsply Sirona**

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