



labline™

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EXCLUSIVE INTERVIEW

Olivier Schaeren

„There are no failures,
there are only experiences!”

CLINICAL REPORT

**The maxillary central incisor
Observing beyond the limits of
traditional morphology**

ANDREAS CHATZIMPATZAKIS

LABLINE ACADEMY

Refractory Hybrid Model

ALLAN VICENTINI, RAFAEL VILORIA,
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JOAO MACIEL, CRISTIANO SOARES

LEARNING KNOWS NO BOUNDS!

WEBINARS AND LIVE WEB-CONFERENCES FOR THE WHOLE TECHNO-CLINICAL TEAM

Comprehensive CAD/CAM assistance is essential. Training – the solution to every technical, dental and methodological problem – is key to the proper management of one’s workflow, CAD/CAM system and materials. While timely CAD/CAM support is essential to modern lab business, digital workflow education is the foundation to prevent and manage workflow and material challenges. At Zirkonzahn, we provide comprehensive training programmes at the Zirkonzahn School (“Die Zirkonzahn Schule”) to help our customers become digital dental heroes. The Zirkonzahn School is comprised of courses and schools. Courses are available in Zirkonzahn education centres worldwide, whereas schools take place in the company’s homeland of South Tyrol, offering extended learning to participants based on experience and technical focus.

Getting together to learn and share ideas is the best way to develop knowledge and build one’s network. When in-person meetings are not possible, the Zirkonzahn School offers the perfect solution for continued learning and improvement from home. Thanks to a full series of LIVE webinars and web-conferences available in different languages, both company experts and renowned international talent cover a wide range of topics for dental professionals of any experience. Along with live case presentations, the lecturers provide knowledge – as well as tips and tricks – on the latest hardware, software and material innovations. Implant planning, virtual patient analysis, efficient workflow design, aesthetic tips, website development, the new Zirkonzahn.Modifier software... and much, much more!

ZIRKONZAHN NEW IMPLANT PROSTHETIC COMPONENTS

WEB CONFERENCE REVIEW FROM THE ZIRKONZAHN SCHOOL

In this article, we wish to provide you with a review of a web-conference by MDT Antonio Corradini on Zirkonzahn implant prosthetic components. Our portfolio of implant prosthetic components, available for more than 100 implant systems and produced entirely in our homeland, South Tyrol (Italy), is comprised of a great range of products: regular titanium bases, Scanmarkers, White Scanmarkers, ScanAnalogs (our laboratory analogues used as scanmarkers), impression copings, laboratory analogues, Multi Unit Abutments, Raw-Abutments®, healing caps. Our product line has been recently expanded with innovations, such as the all new titanium bases with adaptable length or with angled screw channel, White Metal Scanmarkers, Zirkonzahn Titanium Posts and LOC-Connectors. During his web-conference, MDT Antonio Corradini provided the participants with a detailed description of new Zirkonzahn components, showing how they can be implemented in the digital workflow through specific software libraries and how the different components can impact on the final aesthetic outcome.

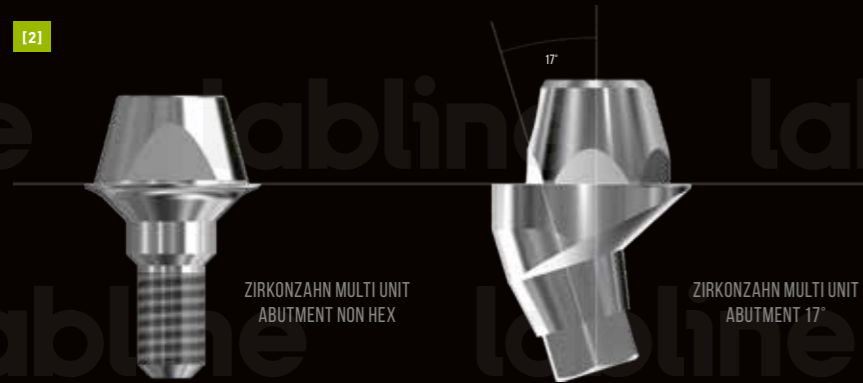
For the full video, scan the QR code at the end of the article!



[1] Zirkonzahn’s wide range of implant prosthetic components, available for more than 100 implant systems.

MULTI UNIT ABUTMENT (MUA) 17°

[2]



[3]



[2-3] Multi Unit Abutments straight and angled (17°) are excellent for complicated full arches where the screw channels are strongly divergent. They can be utilised for all types of works, from bars and Prettau® Bridges to even small bridges or single crowns with uncomfortable implant positions.

Multi Unit Abutments (MUA) exist in different heights and are especially suited for multi-unit restorations. The connections to the secondary structure are unified so that the latter can be screwed directly – or with additional titanium bases – on different implants. Thanks to the standardised connection, also other components such as titanium bases, Scanmarkers, etc., are reduced to one connection to compensate for divergences. Multi Unit Abutments exist in two different versions: straight and angled.

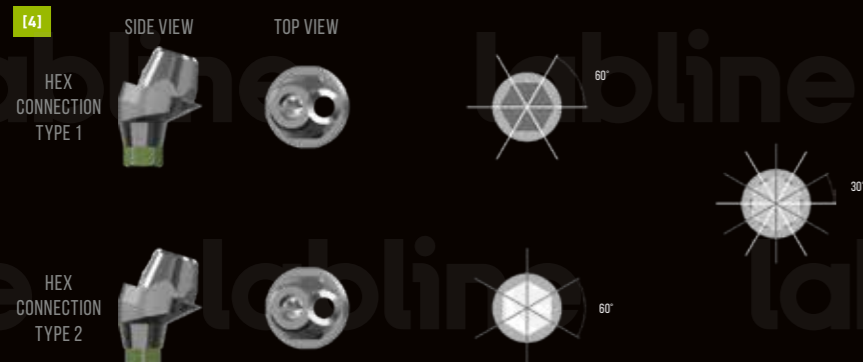
- Straight MUAs are characterised by a non-hex connection without anti-rotation feature to simplify multi-unit restorations. Their application is extremely easy, because all types of implants have been adapted on a standard platform. Available in five gingival heights for flexible treatment options, Zirkonzahn Multi Unit Abutments are used in combination with conical cemented titanium bases.

- The new Multi Unit Abutments Angled are currently available with a 17° angle and two differently angled hex implant connections to compensate for implant inclination. Indicated for single and multi-unit restorations, a sterilisable screw-in aid (PEEK) is included for proper positioning. The abutments are screwed onto the implant with a specific Ratched Wrench and MUA Screwdriver. Special MUA screws are available for this purpose.

MUAs are incorporated to correct the insertion direction of structures retained by divergent implants. A variety of platforms is offered: (hexagonal, square, triangular and octagonal): each geometry is available in two different typologies (1 and 2), effectively doubling the connection possibilities.

CONNECTION POSSIBILITES MULTI UNIT ABUTMENT

[4]



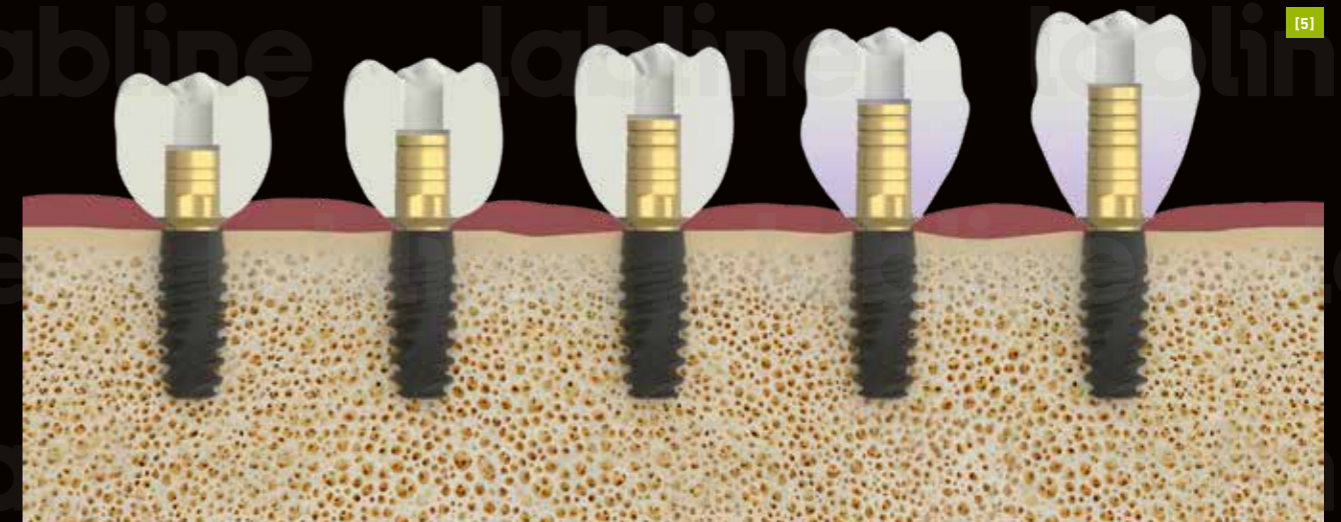
[4] MUAs can be used for indications requiring different divergence degrees. Indeed, they can be purchased with different connections (hexagonal, square, triangular and octagonal): each connection is available in two different typologies (1 and 2), so that the number of connection possibilities is doubled.

TITANIUM BASES K85 AND K80 ANGLED SCREW CHANNEL (ASC)

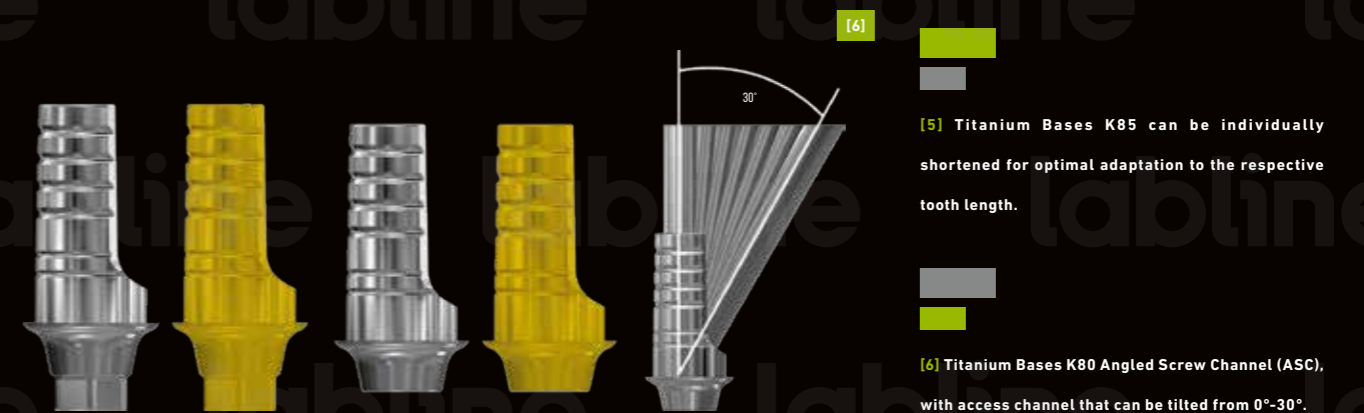
As with all Zirkonzahn implant prosthetic components, our titanium bases are manufactured with high-quality medical titanium alloy. Our portfolio of titanium bases recently expanded with the addition of new innovations for flexible and patient-specific restorative design:

- Titanium Bases K85 can be individually shortened for optimal adaptation to the respective tooth length. Available in conical or parallel shafts, the Titanium Bases K85 can be integrated with or without an anti-rotation device according to the restorative indication.

- Titanium Bases K80 Angled Screw Channel (ASC) combine the advantages of adjustable abutment height with adjustable screw channel angulation. Angled screw channels compensate for sub-optimal implant positioning by tilting the access hole between 0°-30°. Available in conical or parallel shafts, the Titanium Bases K80 Angled Screw Channel (ASC) can be integrated with or without an anti-rotation device according to the restorative indication. A Ball Head screwdriver, special torque wrench (Ratched Wrench) and adapter are required for insertion.



[5]



[6]

[5] Titanium Bases K85 can be individually shortened for optimal adaptation to the respective tooth length.

[6] Titanium Bases K80 Angled Screw Channel (ASC), with access channel that can be tilted from 0°-30°.

NEW IMPLANT COMPONENTS –

WORKFLOW AND CASE EXAMPLE IN ZIRKONZAHN.SOFTWARE

Every treatment performed within the Zirkonzahn workflow begins with prescription entry in the Zirkonzahn.Archiv software - a database management system of cases.

For the treatment below, we selected Wax-up element on six implants. The treatment is opened in the Zirkonzahn. Scan software where models can be scanned or intraoral scans can be imported.

It is also possible to set up and save the project in one of the virtual articulators available before starting the CAD-design.

To demonstrate the versatile application and the possible solutions of Zirkonzahn implant prosthetic components, one implant model with angulated - not optimally placed - screw channels was prepared for the web-conference and a possible solution approach was shown:

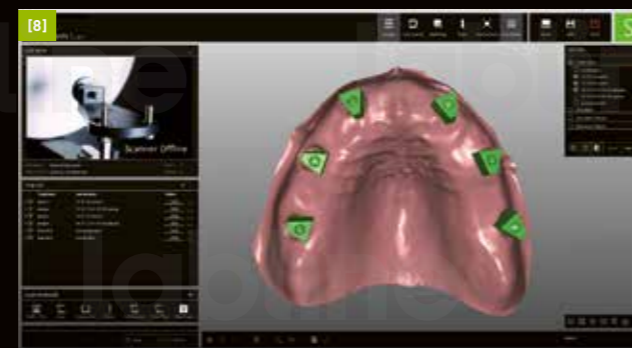
A wax-up scan was also incorporated in the Zirkonzahn. Scan project and two milled models with Scananaloges have been created.

On top of one of the models Zirkonzahn MUA components were used which allowed to show the two different results.

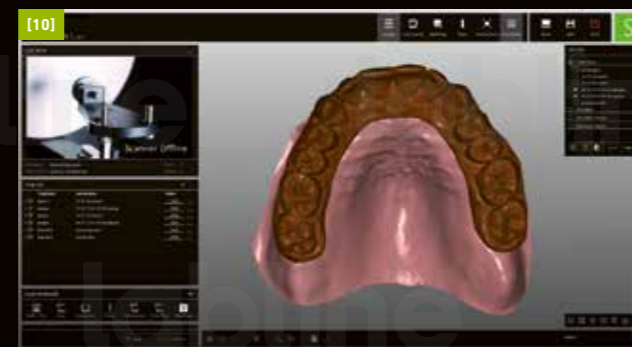
The technical project is imported into the CAD software (Zirkonzahn.Modellier or the add-on software Zirkonzahn.Modifier), for the framework design. Prior to elaborating the bridge, the implant prosthetic components are selected from the Zirkonzahn implant library. Here, users choose the implant platform, capture and indexing method (Scanmarkers, White Scanmarkers or ScanAnaloges) and suitable titanium base. For example, implants placed at bone level or in close proximity are best captured with regular Scanmarkers and restored with Zirkonzahn Narrow titanium bases thanks to a minimised platform diameter. Sealing screws for threaded screw channels are also selected within the Zirkonzahn implant library. Once the implant prosthetic components are selected from the implant library, the bridge is designed and adapted to the implant prosthetic components with robust customisation options for the emergence profile, margins, screw channel inclination, etc.



[7] The two different models: one with MUA, the other one with just the ScanAnaloges

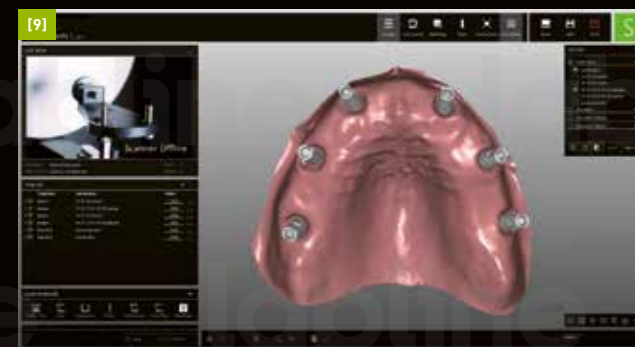


[8] The digitisation of the model with regular Scanmarkers on MUA.



[9] The digitisation of the model with White Scanmarkers directly on the analogues.

[10] The digital wax-up matched to the scanned initial situation.



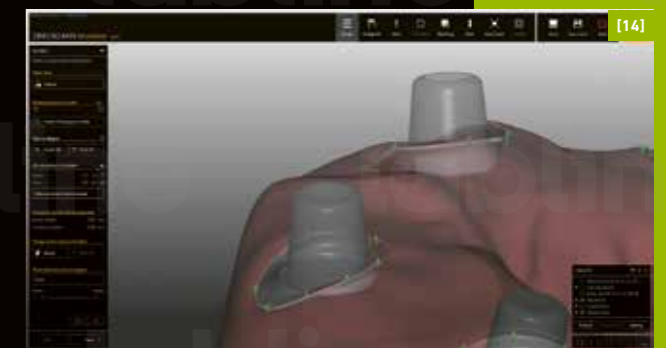
[11] In the Zirkonzahn.Modellier software, implants and components have to be selected before starting the treatment. The software allows the user to download only the library with the implants and components needed for the specific treatment.



[12] The CAD software shows directly the threads for the selected screw channel.



[13] The emergence profile can be drawn in order to design each implant area individually.



[14] Margins can also be adapted and designed individually.

MDT Antonio Corradini showed possible combinations of Zirkozahn implant components, explaining advantages and disadvantages:

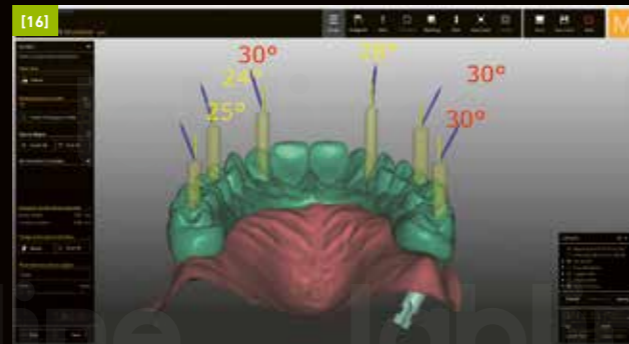
- In this kind of treatment, the usage of conical titanium bases screwed directly on the restoration without Multi Unit Abutments is not appropriate because the implant holes appear on the vestibular area. The software permits to change the screw channels inclinations manually, however, without any MUA or Titanium Bases K80 Angled Screw Channel (ASC), the milling results can be incorrect if the angular modification of the channel is substantial. For this reason, for implants with a 0°-30° divergence Titanium Bases K80 are recommended, whereas for restorations with 60°-80° divergence or deep implants, MUAs are highly recommended for better outcomes.

- With the usage of Titanium Bases K80 Angled Screw Channel, each channel can be moved individually according to the implant inclination, thanks to the specific opening that characterises these new titanium bases. In this case, the size 2.9 was selected. Once the framework design is merged, the right screw

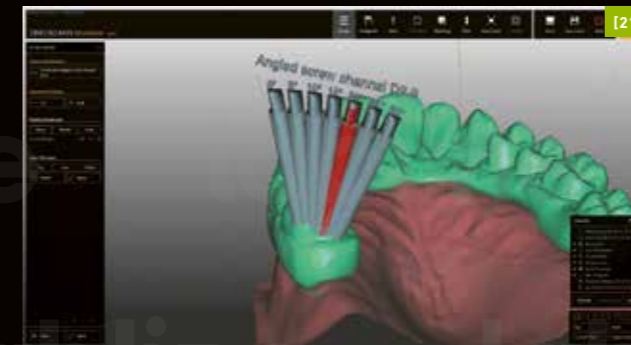
channel size can be chosen in the FreeForm tool and then matched to the restoration's screw channels according to the correct inclination. The connection between the titanium base and the screw channel is perfectly fitting and will not cause imprecisions during milling.



[15] The usage of conical titanium bases screwed directly on the restoration without Multi Unit Abutment is not the best solution because the implant holes appear on the vestibular area.

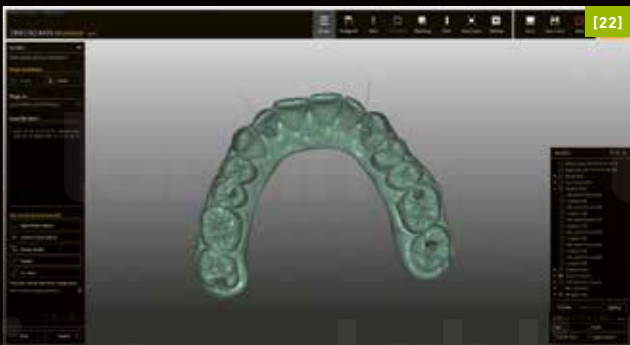


[16] The software permits to change the screw channels inclinations manually, however for precise outcomes, Titanium Bases K80 and MUAs 17° are highly recommended in case of divergent implants.



[19] With the Titanium Bases K80 Angled Screw Channel, each screw channel can be moved individually according to the implant inclination.

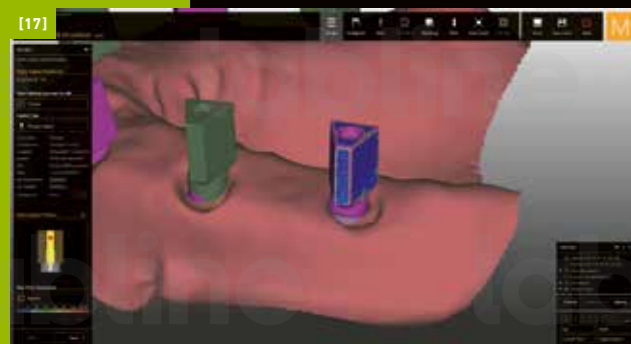
[21] The screw channel is then matched with the desired inclination.



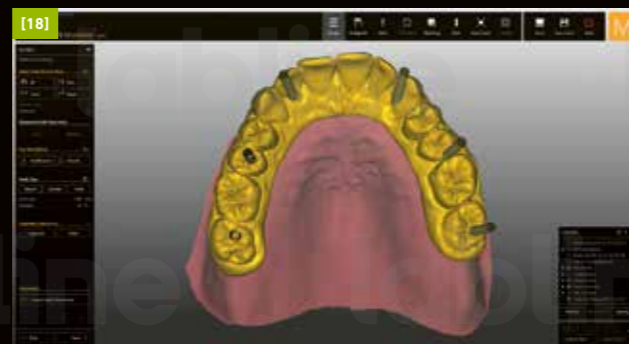
[20] After merging the framework to the scan, the right screw channel is selected from the library.

[22] With the Titanium Bases K80 Angled Screw Channel, the restoration's screw channels are visible on the occlusal surface, with no influence on the final restoration aesthetic. But they are anyway difficult to be milled correctly in this specific case with the required inclination of the screw channels.

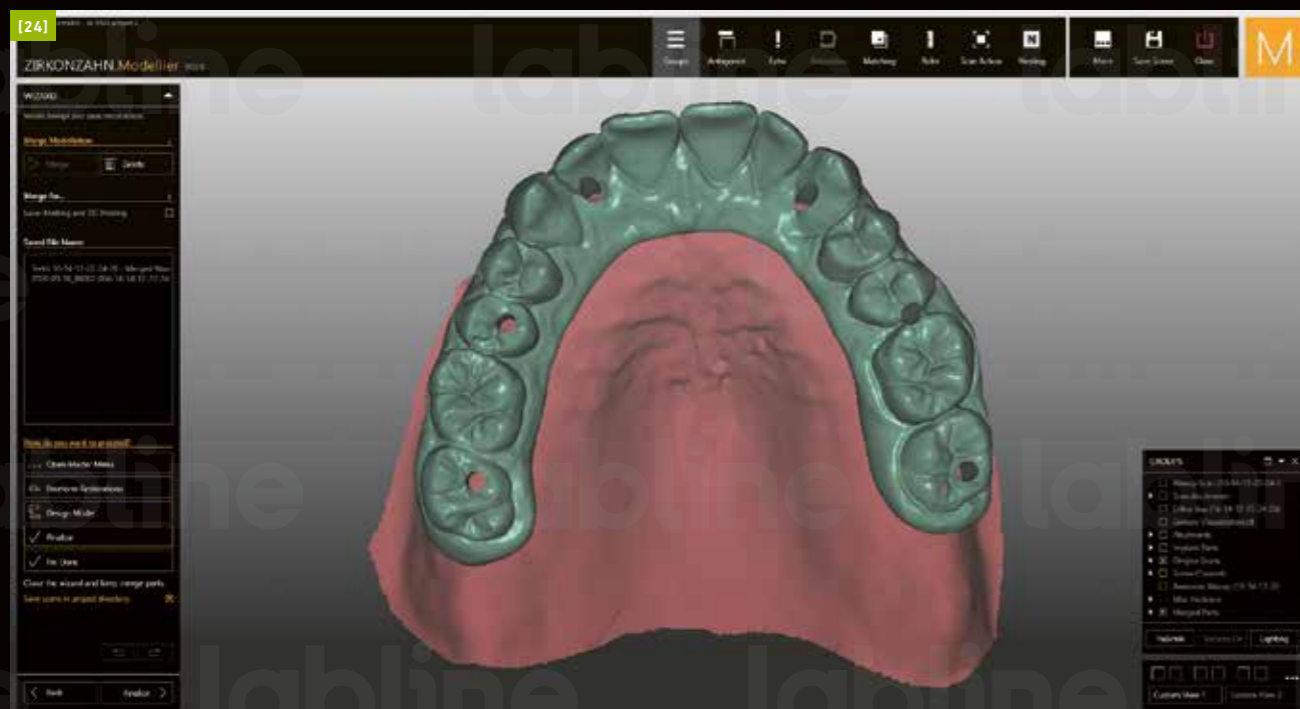
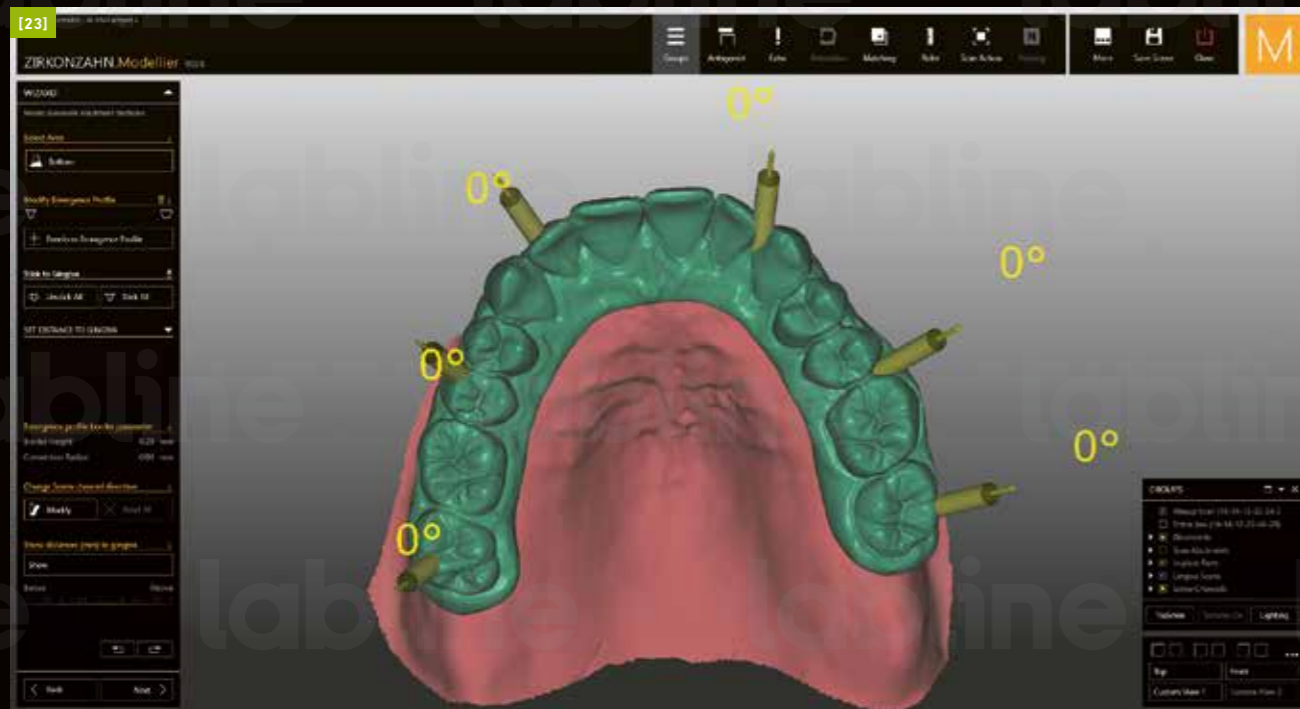
- The choice of MUA 17° on Scanmarkers with regular conical titanium bases changes the aesthetic outcome: indeed, the screw channels come out straight on the occlusal surface.



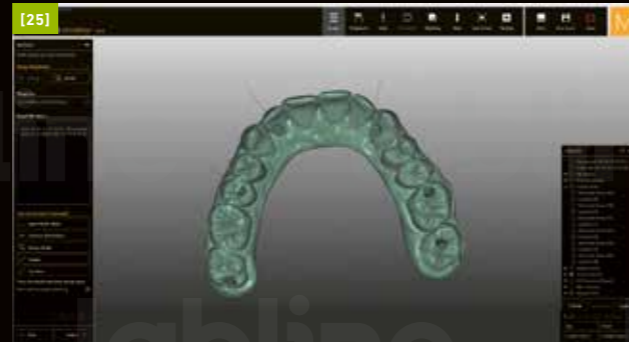
[17] The blue colour indicates that the digital Scanmarker is perfectly matched to the scanned one.



[18] Using the MUA 17°, the screw channels come out straight on the occlusal surface, with no impact on the aesthetic result.



[23-25] An overview of the different outcomes according to the implant components used: the usage of White Scanmarkers with conical titanium bases screwed directly on the restoration without MUAs is not appropriate because the implant holes appear on the vestibular area. With the new MUAs 17° and titanium bases K80 Angled Screw Channel, the screw channels are visible on the occlusal surface, causing no impact on the final aesthetic result, but the screw channel area, milled with Titanium Bases K80 with an inclination of more than 30° might not result perfect. The MUA solution seemed to be the best one for this specific case.



A 30-YEAR WARRANTY

FOR ALL ZIRKONZAHN IMPLANT ABUTMENTS!

For the manufacture of our implant-supported components, we use a high-quality medical titanium alloy (Ti-6Al-4V ELI according to ASTM F136 and DIN EN ISO 5832-3). As one of the world's largest manufacturers, we meet the strictest quality criteria (ISO 13485 MDSAP; Medical Device Directive 93/42/EEC) and all of our components are conceived and manufactured at our production site in our homeland, South Tyrol (Italy). We believe in what we do and we assume the responsibility for our products granting voluntarily – in addition to the legally prescribed warranty obligation – up to 30 years warranty on all Zirkonzahn implant abutments used (titanium bases, Multi Unit Abutments, Multi Unit Abutments Angled, Raw-Abutments® as well as the corresponding screws). Within the current Zirkonzahn warranty regulation, we explicitly include in our warranty also implants from other manufacturers used with Zirkonzahn implant abutments.

Have a look at our renewed range of components at www.zirkonzahn.com and check if they are compatible with your implant system! According to the country, orders placed before 11 a.m. will be delivered within 24 hours.

Just email info@zirkonzahn.com or call us at **+39 0474 066 660!**

WATCH THE COMPLETE CONFERENCE: SCAN THE QR CODE!

