Dentistry is evolving, starting from diagnosis and treatment planning all the way through the types of materials being used in the manufacturing of restorations. Technology is streamlining the workflow in the dental office and dental laboratory while new materials offer dentists greater options for treatment. Traditionally, the creation of a long-span fixed partial denture was a multi-stage intensely laborious process, starting from waxing up the prosthesis to stacking of the porcelain. For larger frameworks, dentists would normally bring the patient in for a framework try-in. Recent advances in both CAD/CAM technology and dental materials are revolutionizing the way dentistry is being practiced. Dentists are now exploring how to incorporate Digital Dentistry into their practices. Digital Dentistry encompasses a broad scope of options including selection of software and equipment. However, navigating through the variety of choices in this constantly changing arena has become confusing.
PALTOP offers you an exciting opportunity to create a personalized, advanced, simplified and cost-effective digital treatment workflow.

PALTOP’s digital treatment workflow enables you to perform simple, safe and accurate pre-planned surgical procedures utilizing cutting edge technology, with no need to invest in expensive equipment.

PERSONALIZED:
PALTOP will build with you a digital treatment workflow according to the needs of your office, based upon your existing equipment and treatment methods.

ADVANCED:
PALTOP’s digital treatment workflow is based upon pioneering technology and continuously progresses as technology evolves.

SIMPLIFIED:
PALTOP’s user-friendly interface and comprehensive customer support makes cutting-edge technology accessible and easy to use.

COST-EFFECTIVE:
PALTOP offers attractive pricing for its services. There is no need to invest in expensive equipment. The digital treatment workflow will save you chair time and thereby reduce costs.

FULL TREATMENT SERVICE INCLUDING SURGERY AND RESTORATION
DATA COLLECTION

ORAL SURFACE SCANNING
An Oral Surface Scan provides 3D surface data of the jaw and teeth required for planning of the surgery and the pre-prepared prosthesis.

INTRA-ORAL SCANNING
An Intra-oral Scanner enables the immediate creation of a virtual 3D model of the jaw and teeth.

MODEL SCANNING
In cases where there is no Intra-oral Scanner available, a conventional impression may be taken and the stone model will be scanned in a desk scanner to obtain the 3D oral image.

CBCT SCAN
A Cone Beam CT provides detailed images of the bone and is performed to evaluate diseases of the jaw, dentition, bony structures of the face, nasal cavity, sinuses and nerve pathways.

TREATMENT PLAN INSTRUCTIONS
The Treatment Plan Instructions, composed by the dentist, provide the required information in order to plan the surgery and prosthetics.
PALTOP 3D planning is based on an advanced well-established and comprehensive software that apply for both surgery and restorative planning.

Using designated software, data (CBCT and oral surface scan) is being merged into a full 3D model of the bone and teeth. This virtual model is the basis for implant and restorative planning according to the dentist's instructions.

Case planning is performed “top down” starting from the desired esthetic outcome of the teeth which will dictate the implant and abutment positions and configuration.

3D digital planning enables selecting the optimal implant position in regards to the desired prosthetic outcome (crown or bridge), while considering anatomical aspects of bone density and avoiding unwanted penetration into anatomy such as sinus, nerve and blood vessels.

The Digital Treatment Plan is always approved by the dentist prior to manufacturing. PALTOP’s professional team of dental treatment designers are available for discussion and further instructions.
3D Milling (Custom Abutments)

3D Printing (Surgical Guide)
A designated 3D printing system builds 3D objects from liquid resin using a projector, based on a specified design. The projector, known as a Digital Light Processing or DLP Projector, builds solid 3D objects by translating voxel data so that it is reproduced in liquid resin, thereby curing the resin to solid. Each data set is made up of tiny volumetric pixels, with dimensions as small as 16 μm x 16 μm x 15 μm in the X, Y, and Z directions.

CAM
Computer-Aided Manufacturing
PALTOP offers a Pilot Surgical Guide that enables accurate positioning of the implants based on 3D CAD digital planning. The surgical guide enables optimal placement of the implant in position, angulation and depth.

PALTOP's Pilot Surgical Guide, combined with PALTOP's unique Step Drills and Drill Stop Kit enables precise implant positioning while drilling of the full protocol “free hand”. This eliminates the need for additional accessoires, yields full visibility of the implant site and allows for effective irrigation.

The full PALTOP drilling protocol is accomplished with sequential stepped drills. Pilot guide marker drill and 2mm cylindrical guide drill accurately position the initial osteotomy. After preparing the initial 2mm osteotomy the rest of the process follows PALTOP’s standard protocol. All following sequential twist drills have a 7mm lead that ensures that the next drill will follow the same osteotomy path. The Drill Stop Kit sets the accurate desired depth. There is no need for addition surgical kits and tools.

**SURGICAL GUIDES**

- Optimal implant position
- Accurate drilling
- Full visibility
- Effective irrigation
- Simple to use
- Match PALTOP’s Standard protocol and surgical kit

PALTOP Pilot Guide Drills are 2mm cylindrical drills specially designed to match the PALTOP surgical guide. Four drills are available: marker drill for initial marking of the implantation site and 19mm, 23mm and 27mm drills. The Pilot Guide drills are synchronized with PALTOP drilling protocol for easy and safe treatment workflow.

PALTOP Step Drills are uniquely designed so that each drill leads to the following drill for fast and accurate drilling. PALTOP presents specially designed Step Drills with dimensions and shapes that best match the implant, with an optimized cutting edge to achieve the best possible drilling. The special step drill mechanism reduces vibrations and shaking. PALTOP drills have special matte finish that does not reflect light, enabling clear visibility of the markings on the drill.

The PALTOP Drill Stop Kit is designed to simplify the drilling process, enabling drilling to the exact desired depth with safety and confidence.

**Surgical Guides**

- Optimal implant position
- Accurate drilling
- Full visibility
- Effective irrigation
- Simple to use
- Match PALTOP's Standard protocol and surgical kit
With PALTOP's digital treatment workflow, treatment is planned completely in advance, allowing preparation of custom-made components before the surgery, thus providing the patient with the full restoration in one session. Custom abutments are designed to correspond optimally with the shape of the patient’s natural teeth. Customer preferences together with the CAD software design are used to create patient specific components.

- Patient specific customization
- Optimal fit to teeth tooth structure
- Compensation for anatomical considerations
- Pre-surgical preparation
- Full restoration in one session

PALTOP offers custom abutments ideal for implant-based oral restorations for providing a compatible match to a patient’s oral anatomy.

A dental implant’s profile is symmetric and round, as are our prefabricated abutments. However, natural tooth anatomy is not round and symmetric.

Traditionally, abutments are modified by the dental technician in an intensely laborious process to accommodate the individual patient’s needs. In order to create implant restorations that look and function like natural teeth, anatomically shaped abutments allow the doctor to provide results with higher esthetics and function.

CUSTOM ABUTMENTS

PALTOP provides custom abutments for implant-based oral restorations, ensuring a compatible match to a patient’s oral anatomy.

A dental implant's profile is symmetric and round, similar to our prefabricated abutments. However, natural tooth anatomy deviates from this shape.

Traditionally, abutments are customized by the dental technician through a labor-intensive process to meet individual patient needs. To create implant restorations that mimic the appearance and function of natural teeth, custom abutments designed with anatomical shapes are achieved.

With PALTOP's digital workflow, the treatment plan is completed in advance, allowing for the preparation of custom-made components before surgery. This ensures a full restoration in a single session. Custom abutments are designed to optimally fit the patient's natural teeth, taking into account individual anatomical considerations.

Customer preferences in conjunction with the CAD software design are used to produce patient-specific components. When anatomical factors necessitate an implant position off-center from the required tooth restoration, custom abutments are designed to compensate for such differences, providing the correct emergence profile and tissue support.

In a cement-retained bridge, custom abutments may be designed to be parallel to each other, even when the implant positions are not parallel.
PALTOP offers custom healing abutments dedicated to optimal shaping of the tissue emergence profile during the healing period.

In some cases, immediate loading of the implant with a temporary restoration is not recommended. Instead, a healing period is required for the implant site. In these cases, a custom healing abutment is ideal for shaping the tissue to create an emergence profile to match the future restoration.

With the PALTOP digital treatment workflow, treatment is planned completely in advance, allowing preparation of a custom healing abutment, pre-surgically. Customer preferences together with the CAD software design are used to create patient specific components.
PALTOP Scan Abutments retain a unique geometry that allows easy and accurate scanning. A titanium base ensures a precise fit for accurate scanning, while the PEEK top allows visibility of the component in the oral surface scan. PALTOP Scan Abutments are suitable for both intra-oral and laboratory scanning.

### Available for All PALTOP Implant Platforms:

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<tr>
<th>Platform</th>
<th>Single-unit</th>
<th>Multi-unit</th>
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<td>ADVANCED NP</td>
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<td>PCA Conical</td>
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### Compatible with the following Editing and Design Software:

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<tr>
<td>3Shape</td>
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<td>Exocad</td>
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<td>Planmeca</td>
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<td>Dental Wings</td>
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PALTOP offers 3D printed models that will replace traditional stone models.
3D Printed Models are more accurate and simple to produce.
Specially designed DIM Analogs represent implant connections.
DIM Analogs are also available separately for laboratory use.
PALTOP’s Smart Box includes all components required for your case, and will arrive at your office within 5 business days from when you placed your on-line order.

PALTOP’s Smart Box may include the following items, based upon your request:
- Surgical Guide
- Surgical Drills
- Implants
- Custom Healing Abutments
- Custom Abutments
- 3D Printed Models

* Delivery time may be longer depending upon data provided, doctor’s availability for communication regarding treatment planning and doctor’s confirmation of the design (implant position, custom healing abutment, custom abutment).