Straumann® PURE Ceramic Implant System

Basic information on the surgical and prosthetic procedures
About this guide

This surgical and prosthetic procedure describes the steps required for implantation and restoration of the Straumann® PURE Ceramic Implant System. The Straumann® PURE Ceramic Implant System is recommended for use only by clinicians with advanced surgical skills. It is assumed that the user is familiar with placing dental implants. Not all detailed information will be found in this guide. Reference to existing Straumann procedure manuals will be made throughout this document.
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1. Straumann® PURE Ceramic Implant System

The Straumann® PURE Ceramic Implant System is available as monotype design in the endosteal diameters of 4.1 mm and 3.3 mm and as two-piece design in the endosteal diameter of 4.1 mm.

1.1 Straumann® PURE Ceramic Implant

The Straumann® PURE Ceramic Implant has a two-piece design based on features of the Straumann® Tissue Level Standard Plus and Straumann® Bone Level Implants.

The Straumann® PURE Ceramic Implant is available in the endosteal diameter Ø4.1 mm. It has a 1.8 mm high machined neck and an internal connection. The internal connection is equipped with a rotational lock and an inner thread, the latter is for fixation of the temporary components and final abutments.

The Straumann® PURE Ceramic Implant prosthetic components are identified with RD (Regular Diameter) corresponding to the neck diameter of 4.8 mm.

<table>
<thead>
<tr>
<th>Color coding</th>
<th>Straumann® PURE Ceramic Implant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Endosteal implant diameter 4.1 mm</td>
</tr>
</tbody>
</table>

The Straumann® PURE Ceramic Implant uses the same unified color code of instruments and implants that is used with Straumann® Tissue Level titanium implants.

A nomenclature, similar to Straumann® Tissue Level titanium implants, is used for identification of Straumann® PURE Ceramic Implant auxiliaries. All these components can be identified with the RD (Regular Diameter) code which corresponds to a shoulder diameter of Ø4.8 mm.

<table>
<thead>
<tr>
<th>Implant overview</th>
<th>Straumann® PURE Ceramic Implant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>RD</td>
</tr>
<tr>
<td>Shoulder diameter</td>
<td>Ø4.8 mm</td>
</tr>
<tr>
<td>• Conical design in coronal region</td>
<td></td>
</tr>
<tr>
<td>• Thread pitch known from Straumann® Bone Level: 0.8 mm thread pitch</td>
<td></td>
</tr>
<tr>
<td>Endosteal diameter</td>
<td>Ø4.1 mm</td>
</tr>
<tr>
<td>ZrO₂</td>
<td>ZLA®</td>
</tr>
<tr>
<td>8 mm</td>
<td>032.0005</td>
</tr>
<tr>
<td>10 mm</td>
<td>032.0015</td>
</tr>
<tr>
<td>12 mm</td>
<td>032.0025</td>
</tr>
<tr>
<td>14 mm</td>
<td>032.0035</td>
</tr>
</tbody>
</table>
1.2 Straumann® PURE Ceramic Implant Monotype

The Straumann® PURE Ceramic Implant Monotype has a one-piece monotype design based on features of the Straumann® Tissue Level Standard Plus and Straumann® Bone Level Implants.

The Straumann® PURE Ceramic Implant Monotype is available in two endosteal diameters, Ø3.3 mm and Ø4.1 mm, and each comes with two abutment heights, 4 mm and 5.5 mm. The Straumann® PURE Ceramic Implant Monotype uses the same unified color code of instruments and implants that is used with Straumann® Tissue Level titanium implants.

<table>
<thead>
<tr>
<th>Color coding</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>Endosteal implant diameter 3.3 mm</td>
</tr>
<tr>
<td>Red</td>
<td>Endosteal implant diameter 4.1 mm</td>
</tr>
</tbody>
</table>

A nomenclature, similar to Straumann® Tissue Level titanium implants, is used for identification of Straumann® PURE Ceramic Implant Monotype auxiliaries. All these components can be identified with the ND (Narrow Diameter) and RD (Regular Diameter) code which corresponds to a shoulder diameter of Ø3.5 mm and Ø4.8 mm respectively.

<table>
<thead>
<tr>
<th>Implant overview</th>
<th>Straumann® PURE Ceramic Implant Monotype Ø3.3 ND</th>
<th>Straumann® PURE Ceramic Implant Monotype Ø4.1 RD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>Abutment height</td>
<td>AH 4 mm</td>
<td>AH 5.5 mm</td>
</tr>
<tr>
<td>Shoulder diameter</td>
<td>Ø3.5 mm</td>
<td>Ø3.5 mm</td>
</tr>
<tr>
<td></td>
<td>• Conical design in coronal region</td>
<td>• Conical design in coronal region</td>
</tr>
<tr>
<td></td>
<td>• Thread pitch known from Straumann® Bone Level: 0.8 mm thread pitch</td>
<td>• Thread pitch known from Straumann® Bone Level: 0.8 mm thread pitch</td>
</tr>
<tr>
<td>Endosteal diameter</td>
<td>Ø3.3 mm</td>
<td>Ø3.3 mm</td>
</tr>
<tr>
<td>ZrO₂ ZLA®</td>
<td>8 mm 031.001S</td>
<td>8 mm 031.001S</td>
</tr>
<tr>
<td></td>
<td>10 mm 031.002S</td>
<td>12 mm 031.003S</td>
</tr>
<tr>
<td></td>
<td>14 mm 031.004S</td>
<td>14 mm 031.004S</td>
</tr>
<tr>
<td></td>
<td>10 mm 031.012S</td>
<td>10 mm 031.012S</td>
</tr>
<tr>
<td></td>
<td>12 mm 031.013S</td>
<td>12 mm 031.013S</td>
</tr>
<tr>
<td></td>
<td>14 mm 031.014S</td>
<td>14 mm 031.014S</td>
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<tr>
<td></td>
<td>10 mm 031.022S</td>
<td>10 mm 031.022S</td>
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<td></td>
<td>12 mm 031.023S</td>
<td>12 mm 031.023S</td>
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<td></td>
<td>14 mm 031.024S</td>
<td>14 mm 031.024S</td>
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<td></td>
<td>10 mm 031.032S</td>
<td>10 mm 031.032S</td>
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<tr>
<td></td>
<td>12 mm 031.033S</td>
<td>12 mm 031.033S</td>
</tr>
<tr>
<td></td>
<td>14 mm 031.034S</td>
<td>14 mm 031.034S</td>
</tr>
</tbody>
</table>
2. Implant features and benefits

2.1 Material

The Straumann® PURE Ceramic Implant System is made from 100 % yttria-stabilized zirconia (Y-TZP). This material has been used for a long time in orthopedics with successful results.

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Titanium grade 4</th>
<th>Y-TZP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>g/cm³</td>
<td>4.5</td>
<td>6.05</td>
</tr>
<tr>
<td>Hardness</td>
<td>HV</td>
<td>250</td>
<td>1100–1500</td>
</tr>
<tr>
<td>Strength</td>
<td>MPa</td>
<td>680 (tensile)</td>
<td>≥ 1200 (4-point bending strength)</td>
</tr>
<tr>
<td>Mod. of elasticity</td>
<td>GPa</td>
<td>110</td>
<td>200–220</td>
</tr>
</tbody>
</table>

⚠️ Warning

No grinding of any part of the implant or implant abutment (Monotype) is allowed. Grinding can lead to micro-cracks in the material which may result in a significant reduction of the implant strength.

2.2 Surface

The Straumann® ZLA® surface features a topography characterized by macro- and micro-roughness to offer a structure for cell attachment. In preclinical studies, the ZLA® surface demonstrated similar healing patterns, healing times and osseointegration in terms of peri-implant bone density and bone-to-implant contact (BIC) as seen for the SLA® surface\(^1,2\).

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2.3 Design

Abutment design for cementable restorations

1.8 mm machined neck

ZLA® surface topography comparable to Straumann® SLA®

Apical tip known from Bone Level/Tapered Effect Implants

Internal connection
Internal connection design equipped with a rotational lock and an inner thread for fixation of temporary and final components

Conical shape in the coronal region known from Bone Level Implants

Ivory color for natural-looking esthetics

Thread pitch 0.8 mm from Straumann® Bone Level

PURE Ceramic Implant System
3. Indications and contraindications

3.1 Intended use

The Straumann® PURE Ceramic Implant is suitable for the treatment of oral endosteal implantation in the upper and lower jaw and for the functional and esthetic oral rehabilitation of edentulous and partially edentulous patients (unless specific indications and limitations are specified).

3.2 Indications

The Straumann® PURE Ceramic Implants are indicated for the restoration of single-tooth gaps and in edentulous or partially edentulous jaws via corresponding prosthetics components.

3.3 Contraindications

Non-completed maxillary and mandibular growth, drug or alcohol abuse, allergies or hypersensitivity to chemical ingredients of the zirconium dioxide material: zirconium dioxide (ZrO₂), yttrium oxide (Y₂O₃), hafnium dioxide (HfO₂), aluminum oxide (Al₂O₃), all conditions that would be normally contraindicated for oral surgery.

<table>
<thead>
<tr>
<th>Implant type</th>
<th>Indications and distinctive features</th>
<th>Minimal ridge width*</th>
<th>Minimal gap width**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straumann®</td>
<td>For oral endosteal implant indications in the maxilla and mandible, for functional and esthetic rehabilitation of edentulous and partially edentulous patients</td>
<td>6 mm</td>
<td>7 mm</td>
</tr>
<tr>
<td>PURE Ceramic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ø4.1 mm RD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Straumann®</td>
<td>Small-diameter implant for narrow interdental spaces and ridges for central and lateral incisors Caution: Placement in the premolar and molar region is not recommended.</td>
<td>5.5 mm</td>
<td>5.5 mm</td>
</tr>
<tr>
<td>PURE Ceramic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implant Monotype</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ø3.3 mm ND</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Straumann®</td>
<td>For oral endosteal implant indications in the maxilla and mandible, for functional and esthetic rehabilitation of edentulous and partially edentulous patients</td>
<td>6 mm</td>
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<tr>
<td>Implant Monotype</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Ø4.1 mm RD</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Minimal ridge width: Minimal orofacial ridge width, rounded off to 0.5 mm
** Minimal gap width: Minimal mesial-distal gap width for a single-tooth restoration, between adjacent teeth, rounded off to 0.5 mm
4. Surgical procedure for Straumann® PURE Ceramic Implant System

The Straumann® PURE Ceramic Implant System can be placed with the existing Straumann® Surgical Cassette while using a very similar surgical procedure as the Bone Level surgical protocol. The workflow for the surgical procedure for the Straumann® PURE Ceramic Implant System includes 4 steps: Preoperative planning, basic implant bed preparation, fine implant bed preparation and implant insertion.

4.1 Preoperative planning

For the preoperative planning, the implant position and the planning aids will provide all information required to determine the most suitable position for the implant and its prosthetic reconstruction. The design of the Straumann® PURE Ceramic Implant Monotype requires the planning of the implant placing to be very thorough and detailed. A prosthetic-driven planning is recommended and also particularly important for the Straumann® PURE Ceramic Implant Monotype as a perfect axis for implant insertion during implant bed preparation is crucial.

4.1.1 Implant position

To plan implant positioning, the following three basic rules must be followed (see also Basic Information on the Surgical Procedures – Straumann® Dental Implant System), NAMLIT 1017.

**Rule 1**
Distance to adjacent tooth at bone level: The required minimal distance from the implant shoulder to the adjacent tooth at bone level (mesial and distal) is 1.5 mm.

**Rule 2**
Distance to adjacent implants at bone level: The recommended minimal distance between two adjacent implant shoulders (mesiodistal) is 3 mm.
Shoulder Diameter D [mm] | Gap Width a_{min} [mm] | Distance between teeth at bone level b_{min} [mm] | Shoulder Diameter D_1 [mm] | Shoulder Diameter D_2 [mm] | a_{max} [mm] | b_{max} [mm] | c_{max} [mm] | L_{max} [mm] 
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- 
Ø3.5 (ND) | 5.5 | 6.5 | Ø3.5 (ND) | Ø3.5 (ND) | 3 | 6.5 | 3 | 12.5 
Ø4.8 (RD) | 7 | 8 | Ø3.5 (ND) | Ø4.8 (RD) | 3 | 7 | 4 | 14 
Ø3.5 (ND) | Ø4.8 (RD) | 4 | 8 | 4 | 16 

**Rule 3**

Special attention should be paid to the Straumann® PURE Ceramic Implant Monotype in order to achieve an optimal orofacial positioning of the implant, as the abutments must not be modified.
4.1.2 Planning aids
For diagnostics and pre-planning purposes, use the Straumann® Diagnostic T and the Straumann® Implant Distance Indicator using the NN & RN symbol as a reference for ND and RD implants respectively. (For specific information, please review the Basic Information on the Surgical Procedures – Straumann® Dental Implant System)

Additionally the Straumann® X-ray template (150.215) is used for comparison and can be used for both types of Straumann® PURE Ceramic Implants.

The X-ray template also assists the user in selecting the suitable length. Similar to the distortions that occur in X-rays, the implant dimensions are shown on the individual templates with the corresponding distortion factors (1:1 to 1.7:1). Determining each magnification factor or scale is facilitated by showing the X-ray reference sphere on the template (next to the scale reference).

Note
Use only the X-ray template specific to the implant type. To calculate the effective bone availability use the following formula:

\[
\text{effective bone availability} = \frac{\text{X-ray reference sphere } 5\, \text{mm} \times \text{bone availability (X-ray²)}}{\text{Reference sphere diameter on the X-ray}}
\]
Digital planning with coDiagnostiX®
This 3D diagnostics and implant planning software is designed for the image-guided surgical planning of dental implants, including the Straumann® PURE Ceramic Implant System, which are included in the digital library of the system. Working with the software is based on a patient’s medical image data such as a CT (Computed Tomography) and DVT (Digital Volume Tomography) that is processed by coDiagnostiX®.

Planning is performed by the calculation of several views (such as virtual OPG or a 3-dimensional reconstruction of the image dataset) and the analysis of the image data and the virtual replacement of implants, abutments and drilling sleeves.

codiagnostix software is designed for use by persons who have appropriate knowledge in implantology and surgical dentistry.

DWOS Synergy workflow
DWOS Synergy provides real-time communication between the implant planning software (coDiagnostiX®) and the lab software (i.e. Straumann®CARES®Visual) and improves implant planning by allowing the visualization of the relationship between the proposed implant position and the proposed restoration. Of special interest in regard to the Straumann® PURE Ceramic Implant Monotype, is that one can design the restoration and ensure that the planned position will not require modification for restorative materials.
4.2 Basic implant bed preparation

For preparing the implant bed the Straumann® Surgical Cassette is used.

4.2.1 Position indicator

For the Straumann® PURE Ceramic Implant Monotype a specific new instrument is introduced in the surgical procedure, and it is used only during the basic implant bed preparation.

4.2.1.1 Intended use
The Straumann® PURE Ceramic Implant Monotype position indicators are instruments used to ensure correct positioning of the implant during implant bed preparation. The Straumann® PURE Ceramic Implant Monotype position indicators are made of titanium. They are delivered non-sterile and must be sterilized prior to use.

4.2.1.2 Characteristics

Handling feature
- Allows for easy removal from implant bed by use of perio probe or if dental floss is inserted through hole prior to insertion.
- Can also be used to secure against aspiration.

Product identification
- Laser marked platform and endosteal diameter identification.

<table>
<thead>
<tr>
<th>Abutment height</th>
<th>Straumann® PURE Ceramic Implant Monotype Ø3.3 ND</th>
<th>Straumann® PURE Ceramic Implant Monotype Ø4.1 RD</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH 4 mm</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>AH 5.5 mm</td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Endosteal diameter</th>
<th>Straumann® PURE Ceramic Implant Monotype Ø3.3 ND</th>
<th>Straumann® PURE Ceramic Implant Monotype Ø4.1 RD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø2.2</td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
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<tr>
<td>Ø2.8</td>
<td>031.102</td>
<td>031.112</td>
</tr>
<tr>
<td>Ø3.5</td>
<td><img src="image7.png" alt="Image" /></td>
<td>031.125</td>
</tr>
<tr>
<td>–</td>
<td>–</td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
</tbody>
</table>

Note

Position Indicators can be cleaned, disinfected and sterilized like all other Straumann instruments. Detailed instructions are provided in the brochure Care and Maintenance of Surgical and Prosthetic Instruments, NAMILIT 1055.
4.2.2 Preparing the implant bed
After opening the gingiva, the basic implant bed preparation begins with preparing the alveolar ridge (Step 1) and marking the implantation site with a round bur (Step 2). After that follows the implant bed preparation with pilot and twist drills (Step 3–5), according to the endosteal implant diameter.

Step 1 – Prepare the alveolar ridge
Carefully reduce and smooth a narrow tapering ridge with a large round bur. This will provide a flat bone surface and a sufficiently wide area of bone. For scalloped situations, ensure there is sufficient space for the flaring neck.

Step 2 – Mark the implantation site
Using the Ø1.4 mm round bur, mark the implantation site determined during the implant position planning. The implant distance indicator can be used for that purpose. Widen and correct the position of the mark with the Ø2.3 mm or the Ø3.1 mm round bur, if necessary.

Step 3 – Mark the implant axis
and prepare the implant bed to Ø2.2 mm
With the Ø2.2 mm pilot drill, mark the implant axis by drilling to a depth of about 6 mm. Insert the short side of the depth gauge with the distance indicator to check the depth.

Pre-drill the implant bed to the final preparation depth with the Ø2.2 mm pilot drill. Use the Ø2.2 mm alignment pin to check the preparation depth.
After depth check with the alignment pin, insert the Ø2.2 mm monotype implant Position Indicator to check the implant position, angulation and restorability.

Depending on the implant that is placed, choose the correct position indicator, which visualizes the implant shoulder diameter of 3.5 mm (ND) or 4.8 mm (RD) and shows the future position of the implant shoulder and abutment. The hole in the abutment of the position indicator can be used for easy removal from implant bed and securing with a dental floss against inhaling/swallowing.

**Step 4 – Widen the implant bed to Ø2.8 mm**
Continue with the implant bed preparation. If necessary, correct the implant position with the Ø2.8 mm pilot drill. Use the Ø2.8 mm depth gauge to check the preparation depth.

After depth check, if a Ø3.3 Straumann® PURE Ceramic Implant will be placed, insert the Ø2.8 mm monotype implant Position Indicator to check the implant position, angulation and restorability.

Basic implant-bed preparation for a Ø3.3 Straumann® PURE Ceramic Implant ends here, continue with the fine implant bed preparation.

**Step 5 – Widen the implant bed to Ø3.5 mm**
Continue with the Ø3.5mm Straumann® Twist Drill PRO and check the final preparation depth with the Ø3.5 mm depth gauge.

After depth check with the alignment pin, insert the Ø3.5 mm monotype implant position indicator for check of implant position, angulation and restorability.

For an implant with an endosteal diameter of 4.1 mm, basic preparation ends here.
4.3 Final implant bed preparation

The final implant bed preparation encompasses profile drilling and subsequent tapping.

Step 1 – Profile drill
The profile drill prepares the implant bed for the Straumann® PURE Ceramic Implant and must be used to ensure that no excessive force is applied to the implant or implant bed during insertion.

For the Straumann® PURE Ceramic Implant, a Straumann® Bone Level profile drill is to be used. Insert the profile drill up to the planned insertion depth of the implant.

Step 2 – Tapping the thread in dense bone
Tapping prepares the implant bed for a specific thread type, in the case of the Straumann® PURE Ceramic Implant it is the same tap that is used for Bone Level implants. It is an optional step that gives the surgeon the flexibility to adjust the surgical protocol to the bone class to help achieve optimal primary stability.

For further information, please refer to the Basic Information on the Surgical Procedures – Straumann® Dental Implant System, NAMLIT 1017.
4.4 Implant insertion

4.4.1 Opening the implant package

Step 1 – Opening of the blister and removal of the implant carrier
Note: The blister ensures the sterility of the implant. Do not open the blister until immediately before implant placement.

Step 2 – Opening of the implant carrier
Hold the base of the implant carrier with two fingers in the middle. Using the other hand, lift off the lid. The implant is held by a ceramic pin.

Note: The transfer piece is not pre-mounted. The transfer piece is an instrument used specifically with the Straumann® PURE Ceramic Implant System. It is made from medical grade stainless steel.

Features

- Retentive ring
  - TAN ring to ensure secure retention to handpiece or ratchet.

- Pre-defined breaking point
  - Pre-defined breaking point to ensure excess torque is not applied to the implant.

- Hard coating
  - To reduce visible wear marks of the insertion tool on the ceramic abutment.

- Marking dots
  - For ideal prosthetic abutment orientation.
  - A quarter turn to the next drilled holes corresponds to a vertical displacement of 0.2 mm.
  - Dots indicate distance to implant shoulder and are 1,2,3 mm away from it.

- Snap feature/Retentive TAN ring
  - To ensure secure retention of the implant.
The Straumann® PURE Ceramic Implant System can be placed either (a) with the aid of the handpiece or (b) manually with the ratchet.

Step 3 – Attach the adapter to the handpiece/ratchet
Connect the transfer piece to an appropriate length adapter for the handpiece/ratchet. Before pushing down the adapter on the transfer piece, assure correct alignment of the octagon. A click is heard when the adapter is attached correctly. Remove the transfer piece by pulling it to the side.

Step 4 – Attach the transfer piece to the implant
Push the transfer piece onto the implant (snap on). A click is heard when the transfer piece is attached correctly.

Step 5 – Remove the implant from the carrier
By turning counterclockwise the implant can be removed from the ceramic pin.
Step 3 – Attach the adapter to the handpiece/ratchet
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Step 5 – Remove the implant from the carrier
By turning counterclockwise the implant can be removed from the ceramic pin.
4.4.2 Placing the implant

Step 1 – Insert the implant
Always insert the implant to the correct depth. The implant is designed to have the implant shoulder sit 1.8 mm above the crestal bone. When using the handpiece, turn it clockwise with the recommended speed of 15 rpm.

Step 2 – Correct implant orientation
While approaching the final implant position, ensure the dots on the transfer piece are positioned buccally/lingually. This will place the abutment walls parallel with neighboring teeth or implants which will reduce the chance of complications (lack of interdental space) during the restorative phase.

⚠️ Caution: Avoid vertical position corrections using reverse rotations (counterclockwise). Reverse rotations may lead to a decrease in primary stability.

Step 3 – Removal of the transfer piece
3a – Remove the handpiece vertically and disassemble the transfer piece from the adapter for the handpiece.

3b – Remove the ratchet from the adapter. Remove the adapter vertically from the implant and disassemble the transfer piece from the adapter.

Note: In case the transfer piece can not be disassembled easily from the implant, carefully do a 1/8 turn (not more) in reverse (counterclockwise) direction.
Step 1 – Insert the implant
Always insert the implant to the correct depth. The implant is designed to have the implant shoulder sit 1.8 mm above the crestal bone. When using the handpiece, turn it clockwise with the recommended speed of 15 rpm.

Step 2 – Correct implant orientation
While approaching the final implant position, ensure the dots on the transfer piece are positioned buccally/lingually. This will place the abutment walls parallel with neighboring teeth or implants which will reduce the chance of complications (lack of interdental space) during the restorative phase.

⚠️ Caution: Avoid vertical position corrections using reverse rotations (counterclockwise). Reverse rotations may lead to a decrease in primary stability.

Step 3 – Removal of the transfer piece
3a – Remove the handpiece vertically and disassemble the transfer piece from the adapter for the handpiece.

3b – Remove the ratchet from the adapter. Remove the adapter vertically from the implant and disassemble the transfer piece from the adapter.
4.4.3 Additional information for Straumann® PURE Ceramic Implant with the transfer piece

**Release aid for the transfer piece**
For situations in which any removal force is to be avoided, a release aid for the transfer piece can be used. Place the release aid onto the implant shoulder and hold it in place while detaching the Adapter with the transfer piece.

**Important additional information**
An insertion torque of 35 Ncm is recommended. If 35 Ncm are achieved before the implant has reached its final position, make sure the implant bed preparation is correct to avoid bone overcompression.

**Warning:** In case the implant has to be removed after implant placement, the retention of the transfer piece in the implant may be reduced. Always secure the implant against aspiration when removing the implant.

The transfer piece is provided with a pre-determined breaking point to ensure excess torque is not applied to the implant. If the transfer piece breaks during implant insertion, one part remains in the Adapter and the other part in the implant. Both parts can be removed with tweezers.

To extract the implant after the pre-determined breaking point breaks, simply take out the broken part of the transfer piece from the adapter and re-insert the Adapter on the transfer piece part remaining in the implant. Counterclockwise turns will remove the implant.

The part of the transfer piece below the pre-determined breaking point is not secured in the Adapter and, additionally, needs to be secured against aspiration when taking out the implant.

**Caution:** The broken part of the transfer piece no longer protects against high torque. Therefore, it is not to be used to advance the placement of the implant.
5. Prosthetic procedure for Straumann® PURE Ceramic Implant

5.1 Healing phase

A healing period of at least 6 weeks is recommended for conditions where there is good bone quality and adequate bone quantity. For cancellous bone quality, at least 12 weeks are recommended. For all other conditions, such as bone augmentation or incomplete contact with the bone, a longer healing period is recommended.

When a good primary stability is achieved, a provisional out of occlusion can be placed immediately.

<table>
<thead>
<tr>
<th>Situation</th>
<th>Healing phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Good bone quality and adequate bone quantity</td>
<td>At least 6 weeks</td>
</tr>
<tr>
<td>• Implants with a diameter of 4.1 mm</td>
<td></td>
</tr>
<tr>
<td>• Cancellous bone quality</td>
<td>At least 12 weeks</td>
</tr>
<tr>
<td>• Straumann® ZLA® surface is not completely in contact with the bone</td>
<td></td>
</tr>
<tr>
<td>• Bone augmentation measures are necessary</td>
<td>Healing phase corresponding to the situation</td>
</tr>
</tbody>
</table>

Note: Micro-movements disturb osseointegration and can lead to loss of implants.

5.2 Healing components

Choose between a submucosal and transmucosal healing. Both options are possible using a set of secondary healing components such as Closure Caps and Healing Caps. Both, Closure Caps and Healing Caps are delivered sterile and are made out of titanium.

<table>
<thead>
<tr>
<th>Healing components</th>
<th>Closure Cap</th>
<th>Healing Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 mm</td>
<td>032.0305</td>
<td></td>
</tr>
<tr>
<td>2 mm</td>
<td></td>
<td>032.0325</td>
</tr>
<tr>
<td>3 mm</td>
<td></td>
<td>032.0335</td>
</tr>
</tbody>
</table>
5.3 Submucosal healing with Closure Caps

For submucosal healing (healing under closed mucoperiosteal flap), Ti Closure Caps are used to close the implant.

Step 1 – Picking up the Closure Cap
Open the blister and pick up the Closure Cap with the SCS Screwdriver. The friction fit will secure the Closure Cap to the instrument during insertion and will allow a safe handling.

Step 2 – Inserting the Closure Cap after implant placement
Ensure that the internal configuration of the implant is clean and bloodless. Hand-tighten the Closure Cap.

Step 3 – Wound closure
Adapt the mucoperiosteal flaps carefully and suture according to standard procedure.
Make sure a tight seal is formed over the implant whilst avoiding excessive tissue compression.

Step 4 – Reopening and removal: second surgery
Locate the implant. Make a small crestal incision down to the closure screw.

Spread the flap slightly and remove the Closure Cap with the SCS Screwdriver.
5.4 Transmucosal healing with Healing Caps

Transmucosal healing can be performed with Healing Caps. Healing Caps allow the soft tissue to be shaped during healing. A range of Ti Healing Caps is available. After soft tissue healing, these Healing Caps will be replaced by the appropriate temporary or final restoration.

Step 1 – Inserting the Healing Cap after implant placement

Ensure that the internal configuration of the implant is clean and bloodless. Insert the Healing Cap with the SCS Screwdriver. The friction fit secures the components to the instrument during insertion and ensures a safe handling.

Hand-tighten the Healing Cap.

Step 2 – Wound closure

Adapt the soft tissue and suture it tightly around the abutment whilst avoiding excessive tissue compression.
5.5 Impression taking

5.5.1 Open-tray impression for the Straumann® PURE Ceramic Implant

Characteristics
- **Simple**: Guide screw can be tightened either by hand or with the SCS Screwdriver.
- **Reliable**: High-precision impression components give an exact replica of the intraoral situation.

**Note**
- Open-tray impression procedure requires a custom-made tray with individual perforations for the positioning screw.
- Impression posts are intended for single use only to ensure optimal fit and precise impression taking for each patient.

<table>
<thead>
<tr>
<th>Impression Post</th>
<th>Repositionable Implant Analog with Sleeve</th>
<th>Repositional Implant Analog</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Impression Post Image]</td>
<td>![Repositionable Implant Analog Image]</td>
<td>![Repositional Implant Analog Image]</td>
</tr>
<tr>
<td>032.029</td>
<td>032.027</td>
<td>032.018</td>
</tr>
</tbody>
</table>
5.5.2 Open-tray impression – Dentist procedure

Step 1 – Positioning the Impression Post
- Ensure sufficient access to the implant site in order to avoid pinching the gingival tissue. Be aware that the sulcus may collapse rapidly once the healing components have been removed.
- Clean the internal configuration of the implant thoroughly from blood, tissue, etc. prior to the impression procedure.
- Place the Impression Post accurately into the implant and hand-tighten the guide screw.

Step 2 – Impression taking
- Make perforations in the custom-made impression tray (light cured resin) according to the individual situation so that the positioning screw of the Impression Post sticks out.
- Take the impression using an elastomeric precision impression material (VPS or Polyether materials should be used)
- Uncover the screw before the material is cured.
- Once the material is cured, loosen the guide screw and remove the tray.
5.5.3 Open tray impression – Lab procedure

Step 1 – Implant Analog repositioning and fixing
- Assemble the corresponding implant analog in the impression.
- Fix the implant analog in the impression using the guide screw.

Step 2 – Apply sleeve
- Position sleeve on to the implant analog.
- Mount the sleeve onto the Repositionable Implant Analog.
- The sleeve ensures proper fit of the Repositionable Implant Analog and controls occlusion height in the master cast.

Step 3 – Fabricating the master cast
- Fabricate the master cast using standard methods and type 4 dental stone (ISO 6873).
- A gingival mask should always be used to ensure that the emergence profile of the crown is optimally contoured and to check the fit of the final coping in vertical/axial direction.
5.6 Straumann® Temporary Abutment VITA CAD-Temp®

Intended use
- Individual soft tissue management for esthetic cases.
- Screw- or cement-retained temporary crowns.

Characteristics

Simple
- Polymer material allows for easy and quick chair-side modification.
- Easy-to-achieve esthetics due to tooth-colored and modifiable polymer material.

Reliable
- Precise fit and high stability due to reinforcement with titanium alloy inlay.

Note
- Do not use for longer than 180 days.
- Place temporary restoration out of occlusion.
- The devices are provided non-sterile and are for single use only.
- Clean by rinsing under flowing water while brushing the outer and inner side with adequate brushes.
- The pre-treated product can be cleaned either manually, with ultrasonic support, or by using an automated cleaning and disinfection method.
- When using an automated cleaning and disinfection method choose an appropriate cleaning detergent (e.g. neodisher® Mediclean) and follow the manufacturer’s instructions.
- The abutment can be steam-sterilized (fractioned vaccum 121°C (250°F) for 20 minutes).
5.6.1 Prosthetic procedure for Straumann® Temporary Abutment VITA CAD-Temp®

Option A: Screw-retained temporary crown

Step 1 – Customizing
Individualize the temporary abutment on an implant analog according to the mouth situation. Fine-cut tungsten carbide tools are recommended.

Guidelines for modifications:
- Height reduction at most to the metal margin of the core.
- Width reduction not further than the lower metal margins.

Maximum reduction of the temporary abutment according to guidelines mentioned above.

Step 2 – Insertion
Hand-tighten the temporary abutment in the implant/Implant Analog with the SCS Screwdriver and temporarily seal the screw channel (e.g. with wax).

Step 3 – Fabrication
Use a standard technique to fabricate the temporary restoration, e.g. direct veneering or vacuum stents.

Note
- Before adding up any material or performing corrections with veneering material (i.e. VITA VM® LC materials, refer to the manufacturer’s instructions), the surface of the temporary restorations must be cleaned and wetted with modeling liquid.
- Clean abutment with a steam jet.
Step 4 – Finishing
Remove excess acrylic, reopen the screw channel and finish the temporary restoration.

Note
- Restorations made from VITA CAD-Temp® can be pre-polished with a suitable silicone polisher and a small goat hair brush. Standard acrylic polishing agents that are also suitable for intraoral use are used for high luster polishing.
- Avoid creating excessive heat.

Important
- Careful polishing is absolutely necessary to achieve an optimal result and to avoid plaque accumulation and related negative effects on the shade.
- Use a polishing aid or implant analog to protect the implant configuration while polishing the temporary restoration.

Step 5 – Insertion of the temporary restoration
Clean and sterilize the polished temporary restoration (refer to the manufacturer’s instructions of the veneering material). Place the temporary restoration on the implant and tighten the screw between 15 Ncm and 35 Ncm (depending on implant stability) using the SCS Screwdriver along with the Ratchet and the Torque Control Device.
Option B: Cement-retained temporary crown

Step 1 – Customizing
Individualize the temporary abutment on an implant analog according to the mouth situation. Fine-cut tungsten carbide tools are recommended.

For modification guidelines, please see Option A Screw-retained temporary crown on page 35.

Step 2 – Fabrication
Use a standard procedure to fabricate the temporary restoration.

Step 3 – Insertion
Clean and sterilize the polished temporary abutment. Place the customized temporary abutment on the implant and tighten the screw between 15 Ncm and 35 Ncm (depending on implant stability) using the SCS Screwdriver along with the Ratchet and the Torque Control Device.

Cover the screw head with absorbent cotton or gutta-percha and close the screw channel temporarily (e.g. with absorbent cotton).

Step 4 – Cementation
Coat the internal configuration of the crown with temporary cement and cement it on the temporary abutment.
5.7 Creation and fixation of the final restoration

Digital Workflow (CADCAM)

Final abutment

The Straumann® PURE Ceramic Abutments are used for the restoration of RD Straumann® PURE Ceramic Implants available in an endosteal diameter of 4.1 mm.

Straumann® PUREbase

The Straumann® PUREbase prosthetic components for Straumann® PURE Ceramic Implants provide dental laboratories with the flexibility to create customized prosthetic restorations with their chosen in-lab workflow of either pressing or casting while ensuring a highly esthetic design and favorable soft tissue conditions.

For more information on the Straumann® PUREbase, please refer to the brochure *Basic information on CI RD Straumann® PUREbase*, NAMLIT 1195.

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Highly esthetic design.
Direct contact of crown/coping on implant shoulder.
No shine through.
No contact of Straumann® PUREbase with tissue.

**Note:** To ensure precise seating of the prosthetic restoration on the PUREbase, always bond on the master model.

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New: PUREbase and crown/coping sit at one level on the implant. PUREbase is the inner core, the crown/coping forms the outer shell to the soft tissue.
6. Prosthetic procedure for Straumann® PURE Ceramic Implant Monotype

The workflow for the prosthetic procedure for the Straumann® PURE Ceramic Implant Monotype includes 4 steps: Protection during healing phase, impression taking, temporization and final restoration.

6.1 Protection during the healing phase

6.1.1 Healing phase

A healing period of at least 6 weeks is recommended for conditions where there is good bone quality and adequate bone quantity. For cancellous bone quality, at least 12 weeks are recommended. For all other conditions, such as bone augmentation or incomplete contact with the bone, a longer healing period is recommended.

Due to the design of the one-piece implant the implant abutment needs to be protected against chewing, cheek and tongue pressure with a protective device when there is low primary stability. When a good primary stability is achieved, a provisional out of occlusion can be placed immediately.

<table>
<thead>
<tr>
<th>Situation</th>
<th>Healing phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Good bone quality and adequate bone quantity</td>
<td>At least 6 weeks</td>
</tr>
<tr>
<td>• Implants with a diameter of 4.1 mm.</td>
<td></td>
</tr>
<tr>
<td>• Cancellous bone quality.</td>
<td>At least 12 weeks</td>
</tr>
<tr>
<td>• Implants with a diameter of 3.3 mm.</td>
<td></td>
</tr>
<tr>
<td>• Straumann® ZLA® surface is not completely in contact with the bone.</td>
<td>Healing phase corresponding to the situation</td>
</tr>
<tr>
<td>• Bone augmentation measures are necessary</td>
<td></td>
</tr>
</tbody>
</table>

Note: Micro-movements disturb osseointegration and can lead to loss of implants.
6.1.1.1 Protective cap (optional step)

Intended use

The Straumann® PURE Ceramic Implant Protective Cap is intended to serve as protection for the implant abutment during the healing phase after implant placement. The use of the protective cap is optional.

Characteristics

- Snap-on mechanism to the abutment allows proper and secure seating.
- Conical shape allows sufficient space for a load-free temporization.
- Soft tissue management: Supports the generation of the emergence profile and keeps the implant shoulder free of gingival tissue; it thus provides ideal conditions for the impression taking.
- Smooth outer surface to minimize plaque retention.

Note

- The device must be secured against aspiration during intraoral handling.
- The devices are provided non-sterile and are for single use only.
- Do not use longer than 180 days.
- Protective caps may be sterilized using either:
  - Pre-Vacuum steam sterilization at 132°C for 4 minutes, drying time of 30 minutes; wrapped in two applications of 1-ply polypropylene wrap (e.g. Kimguard KC600).
  - Gravity steam sterilization at 132°C for 15 minutes, drying time of 30 minutes double pouched in self sterilization pouches (e.g. Cardinal Health; catalog #92510 and 92713).
- The devices are for immediate use after sterilization, no storage recommended.

<table>
<thead>
<tr>
<th>Protective Cap</th>
<th>AH 4 mm</th>
<th>AH 5.5 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Ø3.3 (ND)</td>
<td>031.320</td>
<td>031.321</td>
</tr>
<tr>
<td>For Ø4.1 (RD)</td>
<td>031.330</td>
<td>031.331</td>
</tr>
</tbody>
</table>
6.1.1.2 Protection of the Straumann® PURE Ceramic Implant Monotype

Step 1 – Preparation
Clean and dry the implant abutment. Ensure the implant shoulder and the upper part of the implant neck is free of blood and gingival tissue.

Step 2 – Placing of the protective cap
Snap the Straumann® Protective Cap for ceramic implants onto the Straumann® PURE Ceramic Implant Monotype. Hearing a click indicates that the protective cap is correctly seated.

Note
Due to its high retention to the implant shoulder, a cementation of the protective cap with temporary cement is not mandatory.

Step 3 – Fabrication of the protective device (optional, e.g. in case of low primary stability)
Use a standard technique to fabricate a protective device onto the protective cap during the healing phase (thermoplastic clasp denture, protective splint etc.).

Keep a space of 1.5–2.0 mm between protective device and the protective cap in order to ensure a load-free healing of the implant.
6.2 Impression taking

6.2.1 Closed-tray impression

Characteristics

Simple

- Color-coded components corresponding to abutment height.
- No additional preparation (i.e. perforation) of tray required.

Reliable

- High precision impression components give an exact replica of the intraoral situation.
- Clear-cut tactile response from the prosthetic connection verifies proper seating of components.

Note

- Impression posts are intended for single use only to ensure optimal fit and precise impression taking for each patient.
- Do not sterilize the impression posts. In order to prevent any damage (loss of elasticity or embrittlement), they must be protected from strong light or heat irradiation.
- The parts can be disinfected as required using standard commercial disinfection agents for plastic products (refer to the manufacturer’s instructions).

<table>
<thead>
<tr>
<th>Imprint Caps</th>
<th>AH 4 mm</th>
<th>AH 5.5 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Ø3.3 (ND)</td>
<td>031.250</td>
<td>031.251</td>
</tr>
<tr>
<td>For Ø4.1 (RD)</td>
<td>031.260</td>
<td>031.261</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implant Analogs</th>
<th>AH 4 mm</th>
<th>AH 5.5 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Ø3.3 (ND)</td>
<td>031.200</td>
<td>031.201</td>
</tr>
<tr>
<td>For Ø4.1 (RD)</td>
<td>031.210</td>
<td>031.211</td>
</tr>
</tbody>
</table>
6.2.2 Closed-tray impression – Dentist procedure

Step 1 – Preparation
Remove the Straumann® PURE Ceramic Implant Monotype Protective cap. Clean the abutment, the implant shoulder and the upper part of the implant neck thoroughly and make sure the area is free from blood, tissue etc. before the impression procedure. In case temporary cement was used to cement the protective cap, ensure all remnants are carefully removed. Be aware that the sulcus may collapse rapidly once the protective cap has been removed.

Step 2 – Positioning the impression cap
Select the right impression cap with the help of the color coding (black for 4 mm abutment height, and white for 5.5 mm abutment height). Snap the impression cap onto the Straumann® PURE Ceramic Implant Monotype abutment. Hearing a click indicates that the impression cap is correctly positioned to the implant. To ensure accuracy of the impression procedure, do not damage the inner aspect of the impression cap.

Step 3 – Impression taking
Take the impression using an elastomeric precision impression material. Once the material is cured, carefully remove the tray. The impression cap remains in the impression material.

Note
Due to its low tensile strength, hydrocolloid is not suitable for this application.

6.2.3 Closed-tray impression – Lab procedure

Step 1 – Implant analog fixation
Select the right implant analog. The implant analog with the white ring is intended for the white impression cap, and the implant analog with the black ring for the black impression cap. Snap the corresponding implant analog in the impression. Hearing a click indicates that the impression cap is correctly positioned to the implant analog.

Step 2 – Fabricating the master cast
Fabricate the master cast using standard methods and type-4 dental stone (ISO 6873). A gingival mask should always be used to ensure that the emergence profile of the crown is optimally contoured.
6.3 Temporization

6.3.1 Straumann® PURE Ceramic Implant Monotype Temporary Coping

Intended use
Serves as basis for temporary restorations for Straumann® PURE Ceramic Implants Monotype.

Two types of temporary copings are available:
Crown provisional (engaging)
Bridge provisional (non-engaging)

Characteristics
• Optimal surface roughness.
• Neck part of coping is very smooth which reduces plaque adhesion.
• Retentive surface is rough for better bonding with veneering material.
• Clear-cut tactile response from the prosthetic connection verifies proper seating of components.

Note
• Do not use longer than 180 days.
• Place temporary restoration out of occlusion.
• The devices are provided non-sterile and are for single use only.
• The device must be secured against aspiration during intraoral handling.
• Do not sterilize in order to prevent any damage (loss of elasticity or embrittlement), they must be protected from strong light or heat irradiation.
• The parts can be disinfected as required using standard commercial disinfection agents for plastic products (refer to the manufacturer’s instructions).

<table>
<thead>
<tr>
<th>Temporary Copings</th>
<th>For crowns</th>
<th>For bridges</th>
</tr>
</thead>
<tbody>
<tr>
<td>For ø3.3 (ND)</td>
<td>031.300</td>
<td>031.301</td>
</tr>
<tr>
<td>For ø4.1 (RD)</td>
<td>031.310</td>
<td>031.311</td>
</tr>
</tbody>
</table>
6.3.2 Chairside temporization with the Straumann® PURE Ceramic Implant Monotype Temporary Coping

Step 1 – Preparation
Snap the temporary coping onto the Straumann® PURE Ceramic Implant Monotype abutment in the patient’s mouth. Mark the appropriate height according to the individual situation and shorten the coping as necessary.

**Note**
The temporary coping must be secured against aspiration.

Step 2 – Fabricate the provisional restoration
Use a standard procedure to fabricate the provisional. The retention rings ensure proper mechanical bonding of the veneering material to the coping. The plateau of the coping helps to prevent the veneering material from flowing under the implant shoulder.

Step 3 – Finalize fabrication of the provisional restoration
After polymerization, take the provisional out of the mouth. Grind down and polish the emergence profile to achieve an even profile. To avoid tissue irritation the interface needs to be smooth and flush with the restoration.

Step 4 – Inserting the provisional
Remove the lip of the snap-on mechanism from the temporary coping to allow proper extrusion of excess cement. Use a scalpel, knife or handpiece/rubber wheel. Apply temporary cement to the inner part of the coping and cement it onto the abutment.

**Note**
- Do not use the Straumann® Reamer for 45° shoulders (046.243) as this will damage the internal connection of the temporary coping.
- Keep the temporary restoration out of occlusion.
- Temporary copings must not be kept in the mouth for longer than 30 days.
6.4 Creation and cementation of the final restoration

6.4.1 Lab procedure

Straumann® PURE Ceramic Monotype Implant should be restored with all-ceramic restorations.

Use a conventional or digital procedure to fabricate the ceramic coping (or full-contour restoration).

6.4.1.1 Conventional

Step 1 – Wax-up

For optimal planning, design a full anatomical wax-up. Use a silicone key to check the critical distances (occlusally, laterally, emergence profile) for the intended restoration. Do not modify the shape of the implant analog.

Note

Straumann® PURE Ceramic Implant Monotype abutments must not be mechanically finished under any circumstances: e.g., ground, sandblasted, or polished as this might cause the product to fail.

Mesial and/or distal extension of the restoration is not permissible under any circumstances (Cantilevered pontic).

Step 2 – Fabricating the suprastructure

Use the press technique to fabricate the suprastructure conventionally.

6.4.1.2 Digital

Step 1 – Data digitization

a. The patient situation can be scanned with a Straumann approved intra-oral scanner. The data is then imported in the Straumann approved software

b. The patient situation can also be taken with a conventional impression tray. The dental laboratory scans the fabricated model with a Straumann approved desktop scanner.

Note

Scan spray might be applied to the master model.
Step 2 – Design of the Straumann® CARES® coping or full-contour crown
The restoration is designed with the (Straumann compatible) software.
Additional information on the different Straumann® CARES® prosthetic restorations are available in the brochure “Basic Information on Straumann® CARES® Tooth Prosthetic Procedures”, available on the Straumann website: www.straumann.com.

Note
If a scan spray was used for the data digitization, the default parameters of the “Die parameters” should be slightly adapted when designing the Straumann® CARES® prosthetic restoration with the Straumann® CARES® Visual software 7.x and higher.

Step 3 – Finalization of the Straumann® CARES® coping or full-contour crown
Depending on the final material and processing technique selected, the delivered Straumann® CARES® coping and full-contour crown can be directly seated or finalized in different steps (e.g. layering).

6.4.2 Dentist procedure
The final restoration is placed on the master cast when delivered to the doctor’s office.

Final insertion:
• Remove the temporary restoration.
• Clean the abutment thoroughly and remove all remaining temporary cement.
• Prepare the surface of the Straumann® PURE Ceramic Implant Monotype abutment, and of the superstructure according to the instructions given by the corresponding cement manufacturer.
• Cement the superstructure onto the abutment.
• Carefully remove any excess cement.

Clinical Considerations for Success - Restorative
• Design the restoration according to correct anatomical considerations
• Do not modify the abutment so you don’t introduce microfractures into the implant or abutment
• Ensure that the restoration is seated stress-free.
• Keep static, occlusal contacts low compared to neighboring teeth and avoid dynamic occlusal contacts.
• Incomplete removal of excess cement may cause increased biofilm formation resulting in inflammation and infection.
7. Aftercare and cleaning of Straumann® PURE Ceramic Implant

Regular prosthetic aftercare of the Straumann® PURE Ceramic Implants is necessary, as in all implant systems. Since individual factors such as oral hygiene of the patient, cooperation, etc. are of great importance in determining regular prosthetic aftercare, the aftercare should be adapted to each patient individually.

Zirconia has very low affinity to plaque. However, regular and adequate prophylaxis is recommended. For cleaning Straumann® PURE Ceramic Implants, use non-metallic hand scalers and curettes only.

Rinsing solutions of chlorhexidine and/or alcohol basis can be used temporarily without reservation. These solutions are not recommended for continuous use due to possible discoloration of the tooth hard substance as well as of cement gaps.

Do not use any ultrasound-operated, metallic cleaning aids for cleaning Straumann® PURE Ceramic Implants. Avoid application of ultrasound through metallic transmitters onto Straumann® PURE Ceramic Implants. The surface can be damaged permanently by incorrect use and application of ultrasound. When metallic cleaning aids are used (ultrasound-operated scalers or hand curettes or scalers) metallic abrasion might occur on the surface of the implant.

Do not use any abrasive prophylactic pastes for cleaning Straumann® PURE Ceramic Implants. Powder/water jet cleaners are not suitable for cleaning Straumann® PURE Ceramic Implants.

8. Troubleshooting

8.1 Implant removal

Non-osseointegrated implant (spinner)
The 48h Explantation Device for Straumann® PURE Ceramic Implant System can be used to help remove a non-osseointegrated implant.

Note
Osseointegrated implant: Bone preservation is considered to be a core competence required by the clinician in the case of implant removal. The clinician should use a technique suitable to the implant and patient situation. Please refer to the brochure Guidance for Implant Removal NAMLIT 426.

8.2 Fracture of the abutment (Straumann® PURE Ceramic Implant Monotype)

If part of the PURE Ceramic Implant Monotype abutment fractures, the clinician needs to determine if another restoration can be placed or the implant must be explanted. When determining if there is enough minimum support and retentive area, use the same parameters that apply for a natural tooth stump.

Chipping or cracking of crown
In the event of a chipped or cracked crown, where the crown needs to be removed, care should be taken to avoid damaging the implant shoulder or abutment.
9. Product reference list

9.1 Straumann® PURE Ceramic Implant

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>Article</th>
<th>Dimension</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>032.000S</td>
<td>Straumann® PURE Ceramic Implantat, ∅4.1 mm RD</td>
<td>ZLA® L 8 mm</td>
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### 9.2 Straumann® PURE Ceramic Implant Monotype

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**Product reference list**

- **Features and Benefits**
- **Indications and Contraindications**
- **Surgical Procedure**
- **Prosthetic Procedure**
- **Prosthetic Procedure Monotype**
- **Aftercare and Cleaning**
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- **Troubleshooting and Cleaning**
- **Troubleshooting**
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