Revitalize™ Patient Solutions

Surgical And Restorative Technique Guide
RevitaliZe Patient Solutions allow you to offer full-arch Immediate Load Provisional Screw-retained Restorations for the edentulous mandible or maxilla. This Surgical and Restorative Technique Guide provides guidelines for the surgical procedure for a tilted implant case utilizing four (4) Tapered Screw-Vent® Implants along with step-by-step instructions for the Conversion of the Provisional Denture. RevitaliZe Patient Solutions encompass a simplified approach and the flexibility to choose the right surgical protocol and restorative option for each individual patient.

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Surgical Guide
Edentulous patient with surgical guide in place. A duplicate of the patient’s ideal denture or trial setup can be used as a surgical guide to assist with placement of implants in proper position and angulation. The lingual aspect of the duplicate denture can be removed to allow surgical access, but still retain the patient’s occlusal form.

Lines for the implant positions may be drawn on the surgical guide to provide visual guidance for implant placement. Lines for distal implants can be drawn up to 45° to the plane of occlusion.

Make The Incision
Remove the surgical guide and make incision along the crest of the ridge. Make releasing incisions and reflect the flap utilizing a periosteal elevator.

Nerve Identification/Position
Identify the mental foramen. The anterior loop of the mental nerve can transverse anterior to the mental foramen by as much as five to seven millimeters. Ideally, the most distal implant should be parallel to the angle of the most mesial aspect of this loop.
Mark The Implant Site
Use a round bur to mark the initial position of the implant. A small indentation in the bone will allow subsequent drills to gain the proper point of entry.

Initiate The Osteotomy
The 2.3 mmD Drill is used to create a pilot hole, following the angulation indicated on the surgical guide. Drill to the depth of the implant to be used and flush the hole to remove all debris.

Insert The Paralleling Pin
Place smooth side of the pin into the 2.3 mmD osteotomy and confirm placement and alignment relative to the surgical guide.

Remove The Surgical Guide
Remove the surgical guide for the remainder of the drilling sequence, correcting the osteotomy during the subsequent drilling steps as necessary.
Surgical Procedure And Implant Placement

Expand The Osteotomy
Utilize the next drill in the drilling sequence for the implant diameter being placed to create an intermediate hole to the depth of the implant to be used. Continue widening the osteotomy by following the appropriate drilling sequence for the implant diameter being placed, considering bone quality prior to selection of the final drill. Please refer to the TSV/SV Surgical Manual for more detailed information on hard- and soft-bone protocols.

Remove The Implant From The Vial
Remove the implant outer vial from the box and open the outer vial to break the seal. Drop the sterile inner vial contents onto a sterile field. Flip the white top of the inner vial open by pressing on the flat side with access hole. Press the top to the inner vial body to lock in the top.

The implant is supplied pre-attached to a multi-functional Fixture Mount/Transfer for easy delivery. Remove the implant from the inner vial by using one of the delivery instruments.

Note: The supplied Surgical Cover Screw is located in the lid of the inner vial with an access hole for the 1.25 mm Hex Driver.

Delivering The Implant To The Site
The implant may be driven manually or with the use of a surgical motor at speeds up to 30 rpm. The following instruments can be used for implant delivery to the site:

1) The GemLock® Retaining Square Ratchet (RSR) or the Screwdriver Handle (SSHS) attached directly to the Fixture Mount/Transfer.

2) The GemLock Retaining Square Ratchet (RSR) attached to the 2.5mm GemLock Retaining Hex Drivers (RH2.5, RHL2.5) which engage the female hexagon of the Fixture Mount/Transfer.

3) The GemLock Retaining Square Ratchet (RSR) attached to the 2.5mm GemLock Retaining Hex Drivers (RH2.5, RHL2.5) or the 3.0mm Hex Driver (HX3.0-S, HXL3.0-S) inserted directly into the implant when space is limited or to facilitate placement in dense bone.

4) A motor handpiece attached to the 2.5 mm GemLock Retaining Hex Driver (RHD2.5) for placement with the Fixture Mount/Transfer or for placement of an implant with a 2.5 mmD internal hexagon without the Fixture Mount/Transfer, or the 3.0 mm Hex Driver (HX3.0D) for placement of an implant with a 3.0 mmD internal hexagon.

Note: The 2.5 mm GemLock Hex Tools and Hex Drill engage the female hexagon of the Fixture Mount/Transfer (Trabecular Metal™, Tapered Screw-Vent and AdVent® Implants) or the 2.5 mm internal hexagon implants directly (3.7-4.7 mmD Trabecular Metal and Tapered Screw-Vent Implants). The 3.0 mm Hex Drivers and Drill directly engage the 3.0 mm internal hexagon implants (6.0 mmD Trabecular Metal, Tapered Screw-Vent and AdVent Implants) only.
Implant Placement
Seat the implant into the osteotomy.

Thread the implant into the prepared site using the GemLock Retaining Square Ratchet (RSR) attached to the Fixture Mount/Transfer. Alternatively, one of the methods previously described in Delivering The Implant To The Site can also be utilized.

Orient The Implant
The Fixture Mount/Transfer is manufactured with two (2) flat sides that align with flats on the implant’s internal hex. To ensure proper orientation of the Zimmer Biomet Dental Angled Tapered Abutment, care should be taken to align one of the flat sides of the Fixture Mount/Transfer either facing the angulation correction desired (to the mesial in this illustration) or opposite angulation correction (in the distal position in this case; flat not visible in illustration).

Prepare The Remaining Osteotomies
The same steps of the drilling sequence are repeated to place the anterior implants. Care should be taken to follow the planned location and angulation of the surgical guide. The anterior implants are inserted and ratcheted into place.
Implant And Abutment Placement

Implant Placement
The drilling sequence is repeated for the remaining angled implant site. Planned angulation should follow the surgical guide and once again be parallel to the mesial aspect of the anterior loop of the mental nerve. If the flat sides of the Fixture Mounts/Transfers are positioned in a mesial/distal direction, the flat side of the hex of the implant will be properly aligned to accept the angled tapered abutment.

Remove The Fixture Mount/Transfer
Once the implants are seated in the desired position, use the 1.25 mmD (0.50") Hex Driver (HXGR1.25, HXLGR1.25) to unthread the retaining screws and remove the Fixture Mount/Transfers. It may be necessary to contour the bone prior to seating the abutment subcrestally. Care should be taken not to damage the internal connection or coronal portion of the implant.

Place The Angled Tapered Abutment
The angled tapered abutment is packaged with an abutment delivery tool to assist in the placement and orientation of the abutment in the mouth. Hand tighten the abutment delivery tool to confirm attachment to the cone of the abutment. Thread dental floss through the floss hole in the delivery tool and tie. Utilizing the abutment delivery tool, deliver the angled tapered abutment into the mouth, aligning the angled abutment in the appropriate orientation to ensure that the abutment cone parallels the anterior implants as closely as possible.

Tighten Abutment Retaining Screw
Use a 1.25 mm Hex Driver to hand tighten the abutment retaining screw. A contra angle hand piece with a 1.25 mmD latch-lock driver may also be used for initial delivery.
Abutment Placement

Place Tapered Abutments
Deliver the straight tapered abutments to the anterior implants. Tighten with the 1.25 mm Hex Driver. The abutments should also be visually inspected to verify complete seating into the implant.

Remove Abutment Delivery Tool
Visually confirm that the angled tapered abutment is completely seated into the implant. Remove the abutment delivery tool by unscrewing counter clockwise. Care should be taken as the abutment delivery tool will disengage quickly from the abutment and it is recommended to utilize dental floss in the floss hole to prevent accidental swallowing or inhalation when removing the delivery tool.

Place Angled Tapered Abutment
Place the final angled tapered abutment in the distal position, following the same placement sequence previously described.
Abutment Placement

Verify Abutment Seating
Once all of the abutments are placed, verify with a periapical radiograph that all of the abutments are seated completely into the implants.

Torque The Abutments
Tighten the angled tapered abutment retaining screws and the straight tapered abutments to 30 Ncm with the Restorative Torque Wrench (TWR).

Place Tapered Abutment Healing Caps And Suture The Soft Tissue
If the abutments will not be immediately restored with a provisional or final restoration, place the Tapered Abutment Titanium Healing Cap (TATHC) to prevent irritation of the soft tissue and to prevent the ingress of material in the screw access of the abutment cone. Hand tighten using the 1.25 mm Hex Driver. Soft tissue can be sutured into position using suture material of choice.

If an immediate Provisional Restoration will be placed at time of surgery, please proceed to page 15 for the Fabrication of the Provisional Denture.
Abutment Level Transfer Procedures

Option 1: Indirect Transfer Using A Closed Tray Procedure

Remove Healing Caps
Remove the Tapered Abutment Titanium Healing Caps from each of the abutments using the 1.25 mm Hex Driver to prepare for a standard closed tray impression technique. Retighten the abutments to 30 Ncm using the Restorative Torque Wrench (TWR).

Attach The Indirect Transfers
Place Tapered Abutment Indirect Transfer Copings (ACTIT) onto each abutment and hand tighten using the 1.25 mm Hex Driver. To avoid ingress of impression material into the hex holes, block out the tops of the transfer copings with material of choice. Try in custom tray and assess for fit and clearance.

Make The Impression
Inject light- or medium-body impression material around the transfers and fill the tray with medium to heavy-body impression material. An elastomeric impression material is recommended, such as vinyl polysiloxane.
Abutment Level Transfer Procedures

Complete The Transfer Procedure
Remove transfers from abutments using 1.25 mm Hex Driver. Replace healing caps back onto the abutments and complete transfer procedure. Attach Tapered Abutment Indirect Transfer Copings (ACTIT) to the Tapered Abutment Replica (ACTR). Make sure the transfer coping is fully seated on the analog.

Seat Analogs In Impression
Insert Tapered Abutment Indirect Transfer Copings and attached Tapered Abutment Replica back into the impression.

Seat the tray in the mouth and make a full-arch impression. Remove tray from the mouth after impression material has set according to the manufacturer’s recommendations.
All four Tapered Abutment Indirect Transfer Copings with attached analogs are seated into the final impression. Low expansion die stone is poured into the impression and allowed to set per manufacturer’s directions.

Prepare The Stone Cast
Separate the impression from the stone cast to reveal the Tapered Abutment Indirect Transfer Copings positioned in the cast in the same manner that they were positioned in the mouth.

Remove Copings From Cast
Remove the Tapered Abutment Indirect Transfer Copings to reveal the Tapered Abutment Replicas positioned accurately in the stone cast. The stone cast is ready for the fabrication of a provisional or final restoration.
Abutment Level Transfer Procedures

Option 2: Direct Transfer Using A Open Tray Procedure

Remove Healing Caps
Remove the Tapered Abutment Titanium Healing Caps from each of the abutments using the 1.25 mm Hex Driver to prepare for a standard open tray impression technique. Retighten the abutments to 30 Ncm using the Restorative Torque Wrench (TWR).

Attach The Direct Transfers
For an open tray impression, the Tapered Abutment Direct Transfer Copings (ACTDT) are attached to the cone of the angled tapered abutments and tapered abutments for an abutment level transfer procedure. The transfer coping is secured to the abutment using the center screw and hand tightened using the 1.25 mm Hex Driver.

Verify The Fit Of The Custom Tray
Ideally, a custom tray is fabricated with open access directly above each of the transfer copings. The fit of the open-access custom tray is verified in the patient’s mouth. Block out the hex holes in the tops of the screws with the material of choice to prevent ingress of the impression material.
Complete The Transfer Procedure
Unthread and remove the screws from the transfer copings with the 1.25 mm Hex Driver. After removing all four screws, remove the impression from the patient’s mouth. Replace healing caps back onto the abutments and complete transfer procedure.

The Tapered Abutment Direct Transfer Copings will remain in the impression material. This is helpful to avoid distortion of the impression material when the impression transfer copings are very divergent from each other.

Make The Impression
Load the tray with medium-body impression material. Reseat gently in the patient’s mouth. Gently wipe away excess material from the top of the Tapered Abutment Direct Transfer Copings to allow easier access to the screw for intraoral removal. Allow impression material to set according to the manufacturer’s instructions.
Attach the transfer screw to the hex driver and insert the screw through the respective access hole in the top of the impression. Pass the screw through the embedded transfer body and thread it into the abutment replica to lock the components together. Make an opposing arch impression.

Prepare The Stone Cast
Separate the impression from the stone cast to reveal the Tapered Abutment Replicas positioned in the cast in the same manner that they were positioned in the mouth. The stone cast is ready for the fabrication of a provisional or final restoration.
Fabrication Of The Provisional Denture

Option 1: Chairside Pick-Up And Denture Conversion

Materials Required

- Patient’s existing denture or newly fabricated Provisional Denture
- Denture repair resin
- Small mixing cups
- Disposable brush
- White rope wax
- Cotton tip applicator
- Single injection syringe
- Indelible marking stick

Connect The Anterior Titanium Temporary Copings
Place Titanium Temporary Copings onto the two anterior tapered abutments. Secure the temporary copings with the coping screws and hand tighten with the 1.25 mm Hex Driver.

Mark Temporary Copings
Wet the end of an indelible marking stick and mark the top surface of the temporary copings.

Transfer Coping Position To Denture
Place patient’s provisional denture in mouth and press denture onto the temporary copings to transfer the colored ink to the denture. The provisional denture may be the patient’s existing denture or a newly made immediate denture ready for insertion into the mouth.
Fabrication Of The Provisional Denture

Drill Holes For Copings
Remove denture from the mouth and inspect the tissue side surface. Ink marks should be apparent indicating where holes should be drilled through the denture. Use an acrylic bur, laboratory bur or slow speed hand piece to relieve the denture base in the marked areas. Continue to remove acrylic until holes are made completely through the denture.

Reseat/Try In Denture
Try the denture back into the mouth to confirm that there is relief around the temporary copings and that the rest of the denture base is in contact with the soft tissue. Confirm that the patient can close lightly into the proper occlusion against the opposing denture or dentition. If temporary copings interfere with seating, reduce the height of the temporary copings extraorally just enough to ensure proper occlusion. Block out screw access holes with cotton pellet or material of choice to prevent acrylic from getting into holes.

Intraoral Pick-Up
Prepare the auto-cured denture resin material for use in a brush-bead technique. Place liquid powder mixture between the temporary copings and repeat this step until the union between the denture base and coping is achieved. Once the union is achieved, the patient should close lightly into occlusion so that this denture meets with the opposing teeth while the auto-cure resin is setting. Auto-cure resin should be allowed to set completely before removing the denture. Follow manufacturer’s instructions for set times.

Detach Denture
Use the 1.25 mm Hex Driver to remove the coping screws and remove the denture from the mouth. Inspect the underside of the denture and remove any excess resin and/or fill in any voids with additional denture repair resin.
Transfer Coping Position To Denture
Place the denture into mouth and transfer the colored ink onto the undersurface of the denture. Inspect the undersurface of the denture to assure that the ink has been transferred to the denture, marking the location of the copings in relation to the denture base. Use an acrylic bur, laboratory bur or slow speed hand piece to relieve the denture base in the marked areas.

Re-seat/Try In Denture
Seat the denture back into the mouth to confirm that enough relief has been created around each cylinder and to allow complete seating of the denture onto the soft tissue. Confirm that the patient can close lightly into proper occlusion. If temporary copings interfere with seating, reduce the height of the temporary copings extraorally just enough to ensure proper occlusion.

Block out posterior screw access holes with cotton pellet or material of choice to prevent ingress of acrylic into holes.

Reconnect Anterior Copings
Begin by confirming that the Titanium Temporary Copings are completely seated on the abutments. Small anterior windows can be removed from the denture flange so that easy inspection of the junction between the coping and the abutment can be visualized. After confirming complete seating of the anterior Titanium Temporary Copings on the abutments, reattach the coping screws to reattach the denture to the anterior abutments.
Fabrication Of The Provisional Denture

Intraoral Pick-Up
Lute temporary copings to the denture base using the “brush-bead” technique previously described. As the auto-cure resin is setting, the patient should close lightly into occlusion for the duration of the set time.

Detach Denture
Use the 1.25 mm Hex Driver to remove all four coping screws and remove the denture from the mouth. Inspect the undersurface to confirm that all four Titanium Temporary Copings are securely luted into place. Denture flange and all concavities must now be removed from the underside of the prosthesis. “Brush-bead” additional resin into any large concavities on the denture undersurface. Place prosthesis in pressure pot for the resin to cure. After additional resin has set, adjust prosthesis with large flame shaped acrylic bur to remove all concavities.

Shorten The Titanium Temporary Copings
Use a separating disk or bur to shorten temporary copings. Use water irrigation while grinding metal to assure that the acrylic around the temporary copings does not soften from the heat generated during this procedure. Shorten all four of the temporary copings to be flush with the denture base surface.
Reseat Denture/Torque Coping Screws
Place the coping screws through the temporary copings and secure the prosthesis to the abutments using the 1.25 mm Hex Driver. Torque the coping screws to 20 Ncm using the Restorative Torque Wrench (TWR).

Hygiene Access
Adequate access for hygiene should be apparent around all of the abutments.

Finish/Polish The Denture
Polish the entire prosthesis using wet, fine pumice and a rag wheel on a lathe operating at low speed. Use traditional metal polishing techniques to finish and polish the coronal surfaces of the temporary copings. Place the prosthesis into the patient’s mouth to confirm the fit.
Fabrication Of The Provisional Denture

**Distal Cantilevers**
Distal cantilever should not extend more than half a molar behind the most distal screw access hole.

**Final Occlusion Checks**
Final occlusion should be checked and adjusted as necessary.

**Block Out Coping Screw Holes**
Screw access holes can be filled with composite resin after a cotton pellet is placed over the screw.
Option 2: Combination Chairside/Cast Technique

Make Impression
Follow procedure for closed tray impression (page 9) or open tray impression (page 12).

Pour Cast
Pour up cast with quick set stone and articulate.

Intraoral Pick-Up: Anterior Titanium Temporary Copings
Follow the procedure for the Chairside Pick-up of the Anterior Titanium Temporary Copings (page 15 of Chairside Pick-up and Denture Conversion)
Fabrication Of The Provisional Denture

Cast/Pick-Up Of Posterior Copings
Utilize the cast for the pick-up of the posterior Titanium Temporary Copings following the same steps on the cast that are performed in the mouth (page 17 of Chairside Pick-up and Denture Conversion).

Complete Denture conversion and check occlusion on articulated casts.

Transfer/Attach Converted Denture To Mouth
Transfer the prosthesis to the patient’s mouth and reattach the copings (in the denture) to the abutments using the Coping Screws. Have the patient bite down into occlusion and make adjustments to the occlusion as necessary.

Torque Coping Screws
Torque Coping Screws to 20 Ncm. Fill screw access holes with resin or material of choice.
**Tapered Abutments, One-Piece**
Tapered abutments are for multiple-unit, screw-retained restorations. Abutments do not engage the internal hex connection. Not for use in single-unit. Includes a Healing Cap (TATHC).

<table>
<thead>
<tr>
<th>Implant Platform</th>
<th>Cuff Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.75 mm</td>
</tr>
<tr>
<td>3.5 mmD</td>
<td>TAC1</td>
</tr>
<tr>
<td>4.5 mmD</td>
<td>TACW1</td>
</tr>
<tr>
<td>5.7 mmD</td>
<td>TASC1</td>
</tr>
</tbody>
</table>

**Angled Tapered Abutments, 15°**
Angled tapered abutments are for multiple-unit screw-retained restorations. Abutment retaining screw is preassembled in the abutment. Each abutment includes an abutment delivery tool.

<table>
<thead>
<tr>
<th>Implant Platform</th>
<th>Cuff Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0 mm/2.0 mm (a/b)</td>
</tr>
<tr>
<td>3.5 mmD</td>
<td>15AT312</td>
</tr>
<tr>
<td>4.5 mmD</td>
<td>15AT412</td>
</tr>
</tbody>
</table>

**Angled Tapered Abutments, 30°**
Angled tapered abutments are for multiple-unit screw-retained restorations. Abutment retaining screw is preassembled in the abutment. Each abutment includes an abutment delivery tool.

<table>
<thead>
<tr>
<th>Implant Platform</th>
<th>Cuff Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.0 mm/4.0 mm (a/b)</td>
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<tr>
<td>3.5 mmD</td>
<td>30AT324</td>
</tr>
<tr>
<td>4.5 mmD</td>
<td>30AT424</td>
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</tbody>
</table>

**Tapered Abutment Healing Cap**
Healing Cap threads onto the tapered abutment and angled tapered abutment.

<table>
<thead>
<tr>
<th>Description</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tapered Abutment Titanium Healing Cap</td>
<td>TATHC</td>
</tr>
</tbody>
</table>
**Tapered Abutment Transfer Components**
Transfers thread onto the tapered abutment and angled tapered abutment for impression-taking. This method transfers the tapered abutment and angled tapered abutment position.

<table>
<thead>
<tr>
<th>Description</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tapered Abutment Direct Transfer (Open-Tray)</td>
<td></td>
</tr>
<tr>
<td>Includes Transfer Screw (SCDTS).</td>
<td>ACTDT</td>
</tr>
<tr>
<td>Tapered Abutment Indirect Transfer (Closed-Tray)</td>
<td></td>
</tr>
<tr>
<td>Tapered Abutment Replica</td>
<td>ACTIT</td>
</tr>
<tr>
<td>Tapered Abutment Replica</td>
<td>ACTR</td>
</tr>
</tbody>
</table>

**Tapered Abutment Copings, Sheaths and Bar Systems**
The copings listed below fit over the tapered abutment and angled tapered abutment and are secured with a coping screw.

<table>
<thead>
<tr>
<th>Description</th>
<th>Height/Length</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Temporary Coping</td>
<td>9.5mm</td>
<td>ACTT</td>
</tr>
<tr>
<td>Includes screw (SCTS).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tapered Abutment Gold Coping</td>
<td>—</td>
<td>ACTGC</td>
</tr>
<tr>
<td>Includes screw (SCTS).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic Castable Coping</td>
<td>5mm</td>
<td>ACTP</td>
</tr>
<tr>
<td>Includes screw (SCTS).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bar Gold Coping</td>
<td>3mm</td>
<td>TGC3</td>
</tr>
<tr>
<td>Includes screw (SCTS).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bar Gold Coping, Long</td>
<td>5mm</td>
<td>TGC5</td>
</tr>
<tr>
<td>Includes screw (SCTS).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium Bar Coping</td>
<td>5mm</td>
<td>TTC5</td>
</tr>
<tr>
<td>Includes screw (SCTS).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacement Screw for Copings</td>
<td>—</td>
<td>SCTS</td>
</tr>
<tr>
<td>Tapered Abutment Waxing Screw</td>
<td>12mm</td>
<td>SCWS</td>
</tr>
</tbody>
</table>
**Implant Platform Color-Coding**

The chart below indicates which color corresponds to each Trabecular Metal and Tapered Screw-Vent Implant’s internal hex platform.

<table>
<thead>
<tr>
<th>Implant Diameter</th>
<th>Implant Platform</th>
<th>Color-Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7 mmD</td>
<td>3.5 mmD</td>
<td>Green</td>
</tr>
<tr>
<td>4.1 mmD</td>
<td>3.5 mmD</td>
<td>Purple</td>
</tr>
<tr>
<td>4.7 mmD</td>
<td>4.5 mmD</td>
<td>Yellow</td>
</tr>
<tr>
<td>6.0 mmD</td>
<td>5.7 mmD</td>
<td></td>
</tr>
</tbody>
</table>

**Tapered Screw-Vent Implants With MTX® Surface**

Includes fixture mount/transfer and cover screw.

<table>
<thead>
<tr>
<th>Implant Diameter</th>
<th>Implant Platform</th>
<th>Connection</th>
<th>8.0 mmL</th>
<th>10 mmL</th>
<th>11.5 mmL</th>
<th>13 mmL</th>
<th>16 mmL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7 mmD</td>
<td>3.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVB8</td>
<td>TSVB10</td>
<td>TSVB11</td>
<td>TSVB13</td>
<td>TSVB16</td>
</tr>
<tr>
<td>4.1 mmD</td>
<td>3.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSV4B8</td>
<td>TSV4B10</td>
<td>TSV4B11</td>
<td>TSV4B13</td>
<td>TSV4B16</td>
</tr>
<tr>
<td>4.7 mmD</td>
<td>4.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVWB8</td>
<td>TSVWB10</td>
<td>TSVWB11</td>
<td>TSVWB13</td>
<td>TSVWB16</td>
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<tr>
<td>6.0 mmD</td>
<td>5.7 mmD</td>
<td>3.0 mmD Internal Hexagon</td>
<td>TSV6B8</td>
<td>TSV6B10</td>
<td>TSV6B11</td>
<td>TSV6B13</td>
<td>TSV6B16</td>
</tr>
</tbody>
</table>

Note: While the implant platform color code for the 4.1 mmD Tapered Screw-Vent Implant is green, the implant surgical sequence is color-coded white on the surgical kit surface.

**Tapered Screw-Vent Implants With MP-1® HA Dual Transition Selective Surface**

Includes fixture mount/transfer and cover screw.

<table>
<thead>
<tr>
<th>Implant Diameter</th>
<th>Implant Platform</th>
<th>Connection</th>
<th>8.0 mmL</th>
<th>10 mmL</th>
<th>11.5 mmL</th>
<th>13 mmL</th>
<th>16 mmL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7 mmD</td>
<td>3.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVH8</td>
<td>TSVH10</td>
<td>TSVH11</td>
<td>TSVH13</td>
<td>TSVH16</td>
</tr>
<tr>
<td>4.1 mmD</td>
<td>3.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSV4H8</td>
<td>TSV4H10</td>
<td>TSV4H11</td>
<td>TSV4H13</td>
<td>TSV4H16</td>
</tr>
<tr>
<td>4.7 mmD</td>
<td>4.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVWH8</td>
<td>TSVWH10</td>
<td>TSVWH11</td>
<td>TSVWH13</td>
<td>TSVWH16</td>
</tr>
<tr>
<td>6.0 mmD</td>
<td>5.7 mmD</td>
<td>3.0 mmD Internal Hexagon</td>
<td>TSV6H8</td>
<td>TSV6H10</td>
<td>TSV6H11</td>
<td>TSV6H13</td>
<td>TSV6H16</td>
</tr>
</tbody>
</table>

Note: While the implant platform color code for the 4.1 mmD Tapered Screw-Vent Implant is green, the implant surgical sequence is color-coded white on the surgical kit surface.

**Tapered Screw-Vent Implants With Full MTX Surface Texturing and Microgrooves**

Includes fixture mount/transfer and cover screw.

<table>
<thead>
<tr>
<th>Implant Diameter</th>
<th>Implant Platform</th>
<th>Connection</th>
<th>8.0 mmL</th>
<th>10 mmL</th>
<th>11.5 mmL</th>
<th>13 mmL</th>
<th>16 mmL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7 mmD</td>
<td>3.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVTB8</td>
<td>TSVTB10</td>
<td>TSVTB11</td>
<td>TSVTB13</td>
<td>TSVTB16</td>
</tr>
<tr>
<td>4.1 mmD</td>
<td>3.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVTB8</td>
<td>TSVTB10</td>
<td>TSVTB11</td>
<td>TSVTB13</td>
<td>TSVTB16</td>
</tr>
<tr>
<td>4.7 mmD</td>
<td>4.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVTB8</td>
<td>TSVTB10</td>
<td>TSVTB11</td>
<td>TSVTB13</td>
<td>TSVTB16</td>
</tr>
<tr>
<td>6.0 mmD</td>
<td>5.7 mmD</td>
<td>3.0 mmD Internal Hexagon</td>
<td>TSVTB8</td>
<td>TSVTB10</td>
<td>TSVTB11</td>
<td>TSVTB13</td>
<td>TSVTB16</td>
</tr>
</tbody>
</table>

Note: While the implant platform color code for the 4.1 mmD Tapered Screw-Vent Implant is green, the implant surgical sequence is color-coded white on the surgical kit surface.
Tapered Screw-Vent Implants With 0.5 mm Machined Collar, MTX Surface and Microgrooves
Includes fixture mount/transfer and cover screw.

<table>
<thead>
<tr>
<th>Implant Diameter</th>
<th>Implant Platform</th>
<th>Connection</th>
<th>8.0 mmL</th>
<th>10 mmL</th>
<th>11.5 mmL</th>
<th>13 mmL</th>
<th>16 mmL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7 mmD</td>
<td>3.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVMB8</td>
<td>TSVMB10</td>
<td>TSVMB11</td>
<td>TSVMB13</td>
<td>TSVMB16</td>
</tr>
<tr>
<td>4.1 mmD</td>
<td>3.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVM4B8</td>
<td>TSVM4B10</td>
<td>TSVM4B11</td>
<td>TSVM4B13</td>
<td>TSVM4B16</td>
</tr>
<tr>
<td>4.7 mmD</td>
<td>4.5 mmD</td>
<td>2.5 mmD Internal Hexagon</td>
<td>TSVMWB8</td>
<td>TSVMWB10</td>
<td>TSVMWB11</td>
<td>TSVMWB13</td>
<td>TSVMWB16</td>
</tr>
<tr>
<td>6.0 mmD</td>
<td>5.7 mmD</td>
<td>3.0 mmD Internal Hexagon</td>
<td>TSM6B8</td>
<td>TSM6B10</td>
<td>TSM6B11</td>
<td>TSM6B13</td>
<td>TSM6B16</td>
</tr>
</tbody>
</table>

Note: While the implant platform color code for the 4.1 mmD Tapered Screw-Vent Implant is green, the implant surgical sequence is color-coded white on the surgical kit surface.

Trabecular Metal Dental Implant, MTX Surface, 0.5 mm Machined Collar With Microgrooves
Includes fixture mount/transfer and cover screw.

<table>
<thead>
<tr>
<th>Implant Diameter</th>
<th>Implant Platform</th>
<th>10 mmL</th>
<th>11.5 mmL</th>
<th>13 mmL</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 mmD</td>
<td>3.5 mmD</td>
<td>TMM4B10</td>
<td>TMM4B11</td>
<td>TMM4B13</td>
</tr>
<tr>
<td>4.7 mmD</td>
<td>4.5 mmD</td>
<td>TMMWB10</td>
<td>TMMWB11</td>
<td>TMMWB13</td>
</tr>
<tr>
<td>6.0 mmD</td>
<td>5.7 mmD</td>
<td>TMM6B10</td>
<td>TMM6B11</td>
<td>TMM6B13</td>
</tr>
</tbody>
</table>

Note: While the implant platform color code for the 4.1 mmD Tapered Screw-Vent Implant is green, the implant surgical sequence is color-coded white on the surgical kit surface.

Trabecular Metal Dental Implant, MTX Surface, Fully Textured With Microgrooves
Includes fixture mount/transfer and cover screw.

<table>
<thead>
<tr>
<th>Implant Diameter</th>
<th>Implant Platform</th>
<th>10 mmL</th>
<th>11.5 mmL</th>
<th>13 mmL</th>
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<tbody>
<tr>
<td>4.1 mmD</td>
<td>3.5 mmD</td>
<td>TMT4B10</td>
<td>TMT4B11</td>
<td>TMT4B13</td>
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<tr>
<td>4.7 mmD</td>
<td>4.5 mmD</td>
<td>TMTWB10</td>
<td>TMTWB11</td>
<td>TMTWB13</td>
</tr>
<tr>
<td>6.0 mmD</td>
<td>5.7 mmD</td>
<td>TMT6B10</td>
<td>TMT6B11</td>
<td>TMT6B13</td>
</tr>
</tbody>
</table>

Note: While the implant platform color code for the 4.1 mmD Tapered Screw-Vent Implant is green, the implant surgical sequence is color-coded white on the surgical kit surface.
### Tapered Screw-Vent And Trabecular Metal Implants

**Soft-bone protocol:** follow solid color bars until the segmented color bar. The segmented color bar indicates the final drill for soft-bone protocol.

**Dense-bone protocol:** follow solid color bars only. The last solid bar in the sequence represents the final drill for dense bone.

**ATTENTION:** Follow the same protocol for Trabecular Metal Implants in corresponding diameters. When placing the Trabecular Metal Dental Implant in dense bone, do not under-prepare the osteotomy.

#### Drilling Sequence Guidelines

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Implant Type</th>
<th>Drilling Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7 mmD</td>
<td>Tapered Screw-Vent (3.5 mmD Platform)</td>
<td>1. SV2.3DN 2.3 mmD Drill</td>
</tr>
<tr>
<td>4.1 mmD</td>
<td>Tapered Screw-Vent (3.5 mmD Platform)</td>
<td>1. SV2.3DN 2.3 mmD Drill</td>
</tr>
<tr>
<td>4.7 mmD</td>
<td>Tapered Screw-Vent (4.5 mmD Platform)</td>
<td>1. SV2.3DN 2.3 mmD Drill</td>
</tr>
<tr>
<td>6.0 mmD</td>
<td>Tapered Screw-Vent (5.7 mmD Platform)</td>
<td>1. SV2.3DN 2.3 mmD Drill</td>
</tr>
</tbody>
</table>

* When placing in mandibles with a dense (Type D1), thick, inferior border where apical implant engagement is expected, follow the dense-bone protocol for the 4.1 mmD Trabecular Metal Dental Implant with the following exception. After the drill sequence step using the TSV3.8DN or TSV3.8DSN, add an additional drill step utilizing the SV3.8DN or SV3.8DSN drill. If needed, also use the optional TT4.1 Cortical Bone Tap.
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