

RealGUIDE™ Z3D Guided Surgery Kit

Designed for TSX™, TSV®, Trabecular Metal™, and Eztetic® Dental Implants





RealGUIDE Z3D Guided Surgery Kit

The RealGUIDE Z3D Guided Surgery Kit has been designed for use with TSX, Tapered Screw-Vent, Trabecular Metal, and 3.1 mm Eztetic Implants. The kit consists of diamond-like carbon (DLC) coated surgical drills and mounting devices for fully guided surgery. The kit can be used to place implant diameters 3.1mm, 3.7mm, 4.1mm, and 4.7 mm. The 1.25 mmD Hex Driver for surgical and prosthetic screws (HXGR1.25), ratchet for implant placement (RSR), and the Z3D TSX Staging Tools (3DM00633ZIMS/3DM00633ZIML) are not included in the kit and must be added for completion.

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Surgical Kit Overview

Color Coding

Color coding on the tray corresponds to the recommended surgical sequence for the diameter of the implant. The color coding of the implant mounts corresponds to the diameters of the prosthetic platforms of the dental implants.



Drills

The drills in the RealGUIDE Z3D Guided Surgery Kit are made of hardened AISI 420B stainless steel and coated with DLC (Diamond-Like Carbon) treatment which provides an increase in surface hardness and reduces the friction generated during use. The wear resistance aids cutting efficiency and minimizes bone overheating. Additionally, this treatment also minimizes corrosion potential during the cleaning and sterilization cycles. Drills should be used for no more than 15 patients. Thoroughly inspect the cutting portion of the drills before every use. The use of worn drills could compromise the osseointegration process of the implant. Use of copious irrigation during drilling is highly recommended.



Drilling System

The drilling protocol is sequential and each drill has laser markings indicating the diameter of the drill and the implant length. The cylindrical portion of the drill preceding the cutting edge engages in 5 mm diameter guide sleeves. A 9 mm guide path is provided, consisting of the sleeve of the surgical guide (4 mm) and the maximum thickness of the soft tissues (5 mm). The smaller diameter of the stepped drills is consistent with the full diameter of the previous drill, providing further guidance in the sequence from one drill to the next.



Pin Drills and Anchor Pins

The Pin Drills, with a diameter of 1.5 mm, and vestibular Anchor Pins make up the stabilization system provided for the surgical guide in cases of total edentulism or significant partial edentulism.



Extension Tool

The extension tool for the ratchet and the handpiece implant driver have been designed to be connected to the guided Implant Mounts.



Mouth Opening Gauge/Bite Gauge

The Bite Gauge simulates the maximum size of the drills in the RealGUIDE Z3D Guided Surgery Kit and are used before the patient's CT/CBCT exam. The size of the hexagon at the base of the gauge is the same size as the hexagon of the guide sleeve incorporated in the resin of the surgical guide.



Recommendations

Surgical instruments are supplied **NON-STERILE** and **MUST BE STERILIZED BEFORE USE**. Sterilize in a steam autoclave according to the autoclave manufacturer's specifications (*minimum 20 minutes at a temperature between 132°C and 135°C or 270°F and 275°F*). Repeated sterilization cycles result in a progressive deterioration of the surgical instruments. Therefore it is necessary to periodically review all the instruments to check their condition (*including unused instruments*).

¹ Nilay Er, DDS, PhD; Alper Alkan, DDS, PhD, Serim Ilday, PhD, Erman Bengu, PhD
"Improved dental implant drill durability and performance using heat and wear resistant protective coatings"
J Oral Implantol (2018) 44 (3): 168–175

Surgical Kit Overview

Fixation Pin Drill

The Fixation Pin Drill is used to create temporary osteotomies in edentulous patients and to allow stabilization of the surgical guide by buccal anchoring pins. Insert the tool into the fixation pin sleeve with the motor stopped and once it comes into contact with the soft tissue, start the motor. A spare drill is provided.



Fixation Pins

Fixation Pins are used for anchoring surgical guides for total edentulism. Press-fit the pins through the fixation pin sleeves in the surgical guide and into the osteotomy created by the pin drill and ensure that the surgical guide is in the correct and stable position.



Mucotome/Tissue Punch

The Tissue Punch is used in the flapless technique to remove soft tissue. Insert the tool into the guide sleeve with the motor stopped and once it comes into contact with the soft tissue, start the motor.



Bone Crest Leveler

The Bone Crest Leveler is used to smooth the irregular surfaces of the bone crest. Insert the tool into the guide sleeve with the motor stopped and once it comes into contact with the hard tissue, start the motor.



Start Drill

The Start Drill is used to create the opening on the bone crest prior to the first drill. Insert the tool into the guide sleeve with the motor stopped and once it comes into contact with hard tissue, start the motor.



2.4 mm x 6.0 mm Drill

The 2.4 mm x 6.0 mm Drill is used to allow the next drill to take advantage of a guided path, especially in cases of an irregular bone crest. Insert the tool into the guide sleeve with the motor stopped and once it comes into contact with the hard tissue, start the motor.



Implant Mounts

For TSV or TM implants, place the implant vial on the dedicated implant staging pedestal corresponding to the implant length. After removing the Fixture Mount Transfer (FMT) on the TSV and TM implant, connect the Z3D guided mount to the implant using the integrated passing screw and the 1.25 mm Hex Driver HXGR 1.25 mm, not included in the kit, but available for optional purchase). Connect the handpiece driver to the mount and remove the implant from the vial. Insert the tool into the guide sleeve with the motor stopped and once it comes into contact with the hard tissue, start the motor. Note that TSX and Eztetic implants are not packaged with a FMT. Eztetic and TSX implant inner packaging vials do not fit on the fixed staging Pedestal. For Eztetic implants secure utilizing another method.



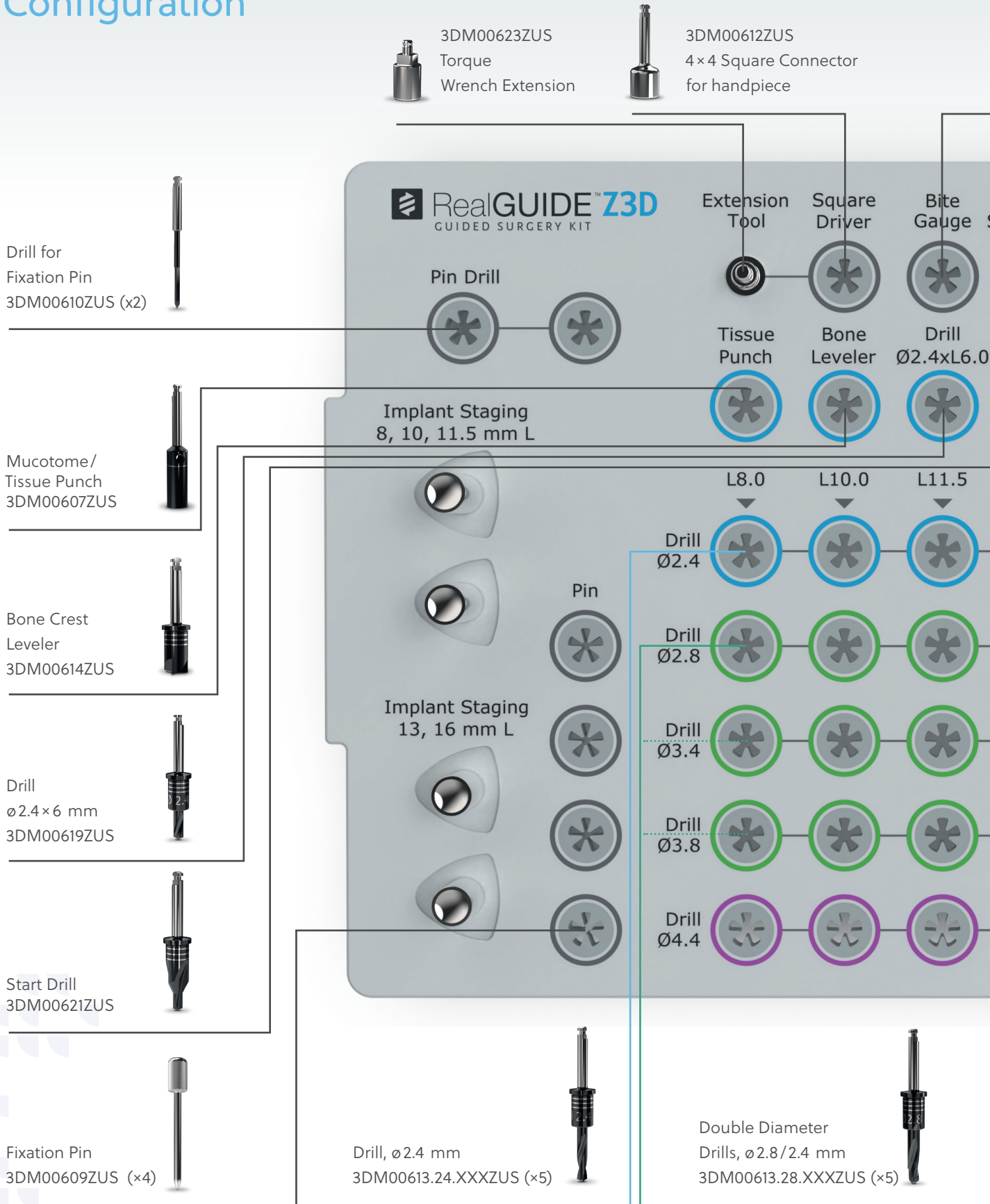
For TSX implants, insert both the short and long Z3D TSX Staging Tools (3DM00633ZIMS and 3DM00633ZIML), 3DM00633ZIMS (Z3D TSX Staging Tool, Short, 8/10 mmL) and 3DM00633ZIML (Z3D TSX Staging Tool, Long, 11.5/13/16 mmL), sold separately, into the two extra grommet spaces labeled 'additional mounts' in the Z3D kit, with the wide rounded end of Z3D TSX Staging Tool engaging the grommet. Position 8 and 10 mmL TSX implants in their inner vial packaging over the 3DM00633ZIMS (laser marked with implant lengths on top and a "S" on the side) aligning the shaft of the Staging Tool with the hole at the bottom of the titanium sleeve that holds the implant. Using slight pressure, lower the implant inner vial onto the Staging Tool, allowing the tip of the tool to insert into the titanium sleeve and lift the implant. The implant platform will rise approximately 1.0 mm above the packaging, enabling access to attach the implant mount. Engage the implant mount and tighten screw. For the longer 11.5, 13, and 16 mmL TSX implants repeat the process above using the long Staging Tool (3DM00633ZIML).



Z3D TSX Staging Tools*
3DM00633ZIMS/3DM00633ZIML

*Material is titanium alloy

Configuration





3DM00622ZUS
Mouth Opening
Gauge/Bite Gauge

(3DM00633ZIMS)



(3DM00633ZIML)

(HXGR1.25)

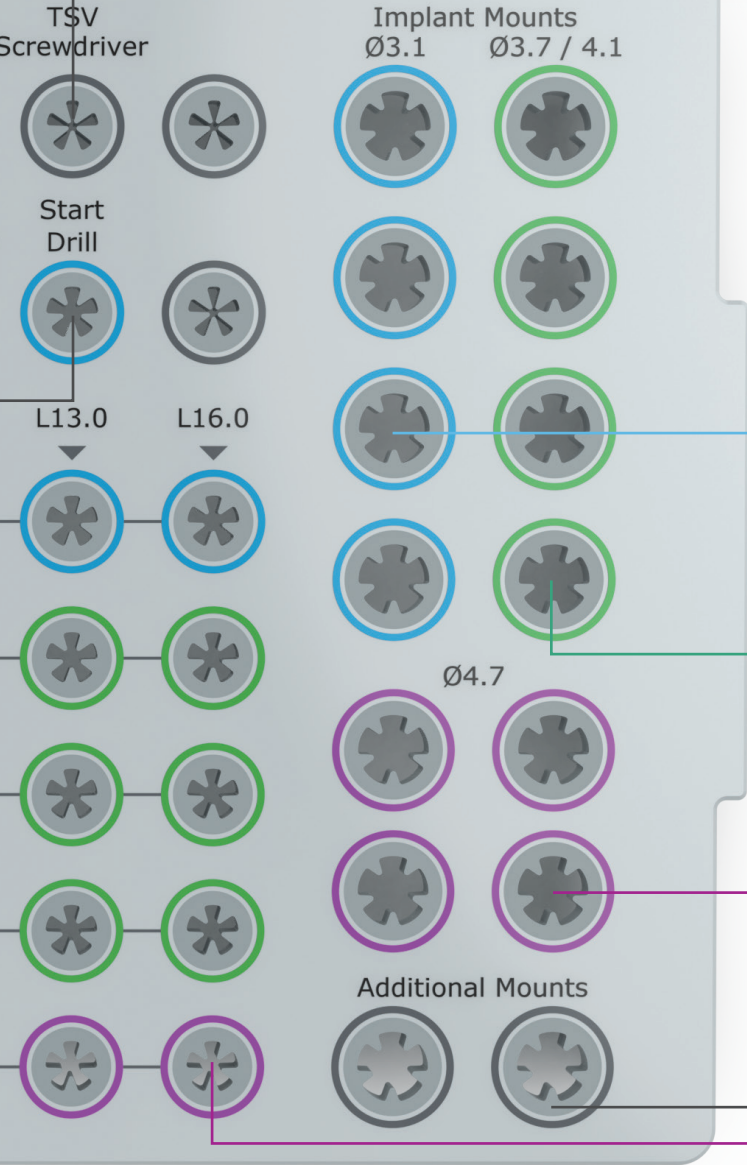


(RSR)

**1.25 mm Hex Driver, Ratchet, and
Z3D TSX Staging Tools ...**

... do not come prepackaged
in the RealGUIDE Z3D Surgical Kit.
They can be bundled with the kit purchase,
or use the instruments from your existing
standard TSVKIT or TSVKITG.

Four empty slots are also provided for
additional instrumentation and implant
mounts. Additional implant mounts are
available for purchase. Z3D TSX Staging
Tools may be placed in the 'Additional
Mounts' empty slots.



Implant Mount
(ZimVie TSX/Eztetic $\varnothing 3.1$ mm)
3DM00606ZIM31US (x4)



Implant Mount
(ZimVie TSX $\varnothing 3.7/4.1/4.7$ mm
and TSV $\varnothing 3.7/4.1$ mm)
3DM00606ZIM35US (x4)



Implant Mount
(ZimVie TSV $\varnothing 4.7$ mm)
3DM00606ZIM47US (x4)



TSX Z3D Staging Tools
(Short for 8/10 mL Implants)
3DM00633ZIMS
(Long for 11.5/13/16 mL Implants)
3DM00633ZIML

Double Diameter
Drills, $\varnothing 3.4/2.8$ mm
3DM00613.34.XXXZUS (x5)



Double Diameter
Drills, $\varnothing 3.8/3.4$ mm
3DM00613.38.XXXZUS (x5)



Double Diameter
Drills, $\varnothing 4.4/3.8$ mm
3DM00613.44.XXXZUS (x5)



Ordering Information



RealGUIDE Z3D Guided Surgery Kit




Product	Part No.
RealGUIDE Z3D Surgical Kit (fully loaded)*	3DM0070ZUS
Autoclavable Kit RealGUIDE Z3D Box	3DM00632ZUS

*The RSR, HXGR1.25, 3DM00633ZIMS, and 3DM00633ZIML are sold separately.

Configuration





Product	Part No.
Drill for Fixation Pin max. 1,000 rpm, hardened stainless steel AISI 420B with DLC coating	 3DM00610ZUS
Fixation Pin TiAl6V4 ASTM F136	 3DM00609ZUS
Torque Wrench Extension max. 50 Ncm, hardened stainless steel AISI 420F MOD	 3DM00623ZUS
4×4 Square Connector for handpiece max. 50 Ncm, hardened stainless steel AISI 420F MOD	 3DM00612ZUS
Mouth Opening Gauge / Bite Gauge hardened stainless steel AISI 303	 3DM00622ZUS
Mucotome/Tissue Punch Internal diameter: 4.2 mm, max. 100 rpm, hardened stainless steel AISI 420F MOD with DLC coating	 3DM00607ZUS
Bone Crest Leveler max. 600 rpm, hardened stainless steel AISI 420B with DLC coating	 3DM00614ZUS
Start Drill Implant site preparation drill, max. 600 rpm, hardened stainless steel AISI 420B with DLC coating	 3DM00621ZUS
Drill $\phi 2.4 \times 6$ mm max. 800 rpm, hardened stainless steel AISI 420B with DLC coating	 3DM00619ZUS

Implant Mounts (hardened stainless steel AISI 420F MOD)

Product		Part No.
Implant Mount (ZimVie TSX \varnothing 3.1 mm/Eztetic \varnothing 3.1 mm) incl. screw, max. 20 rpm, 50 Ncm		3DM00606ZIM31US
Implant Mount (ZimVie TSX \varnothing 3.7/4.1/4.7* mmD and TSV \varnothing 3.7/4.1 mm) incl. screw, max. 20 rpm, 50 Ncm		3DM00606ZIM35US
Implant Mount (ZimVie TSV \varnothing 4.7 mm) incl. screw, max. 20 rpm, 50 Ncm		3DM00606ZIM47US

*The \varnothing 4.7 mm TSX implant utilizes the \varnothing 3.7/4.1 (3.5 mm platform) Driver/Mount.

Drills (hardened stainless steel AISI 420B with DLC coating)

Length	Drill \varnothing 2.4 mm	Double Diameter Drill \varnothing 2.8/2.4 mm	Double Diameter Drill \varnothing 3.4/2.8 mm	Double Diameter Drill \varnothing 3.8/3.4 mm	Double Diameter Drill \varnothing 4.4/3.8 mm
	max. 800 rpm				
					
8 mm	3DM00613.24.080ZUS	3DM00613.28.080ZUS	3DM00613.34.080ZUS	3DM00613.38.080ZUS	3DM00613.44.080ZUS
10 mm	3DM00613.24.100ZUS	3DM00613.28.100ZUS	3DM00613.34.100ZUS	3DM00613.38.100ZUS	3DM00613.44.100ZUS
11.5 mm	3DM00613.24.115ZUS	3DM00613.28.115ZUS	3DM00613.34.115ZUS	3DM00613.38.115ZUS	3DM00613.44.115ZUS
13 mm	3DM00613.24.130ZUS	3DM00613.28.130ZUS	3DM00613.34.130ZUS	3DM00613.38.130ZUS	3DM00613.44.130ZUS
16 mm	3DM00613.24.160ZUS	3DM00613.28.160ZUS	3DM00613.34.160ZUS	3DM00613.38.160ZUS	3DM00613.44.160ZUS

Surgical Guide Accessories

Product	Part No.
Surgical Guide Sleeve RG CAD Procedure 5.05 mm, compatible 3DM RG, ZimVie Z3D, Nobel RP Kit (10 pcs)	3DM00670
Surgical Guide Pin Fixation Sleeve RG CAD Procedure (10 pcs)	3DM00671

Surgical Drill Sequence

The drill sequences suggested below refer to a uniform and qualitatively ideal bone. They do not replace the clinical experience of the surgeon and do not consider the need to obtain primary implant stability by under preparing the surgical alveolus.

Always refer to the specifications of the implant surgical manual and IFU for complete information.

DENSE BONE: drills sequence in bold/italics only for dense bone (For soft bone, stop at the previous step)

Implant Diameter (mm)	3.1				
Implant Length (mm)	8	10	11.5	13	16
Sleeve	Z3D				
Depth Control	Yes	Yes	Yes	Yes	Yes
SURGICAL SEQUENCE					
Tissue Punch	Yes	Yes	Yes	Yes	Yes
Bone Leveler	Yes	Yes	Yes	Yes	Yes
Drill 2.4 × 6	Yes	Yes	Yes	Yes	Yes
Start Drill	Yes	Yes	Yes	Yes	Yes
Drill	2.4 × 8	2.4 × 8	2.4 × 8	2.4 × 8	2.4 × 8
Drill	2.8 × 8	2.4 × 10	2.4 × 11.5	2.4 × 11.5	2.4 × 11.5
Drill	-	2.8 × 8	2.8 × 8	2.4 × 13	2.4 × 16
Drill	-	2.8 × 10	2.8 × 11.5	2.8 × 8	2.8 × 8
Drill	-	-	-	2.8 × 11.5	2.8 × 11.5
Drill	-	-	-	2.8 × 13	2.8 × 16
Driver /Mount (TSX/Eztetic)	ø3.1 (2.9 mm platform)				

Implant Diameter (mm)	3.7				
Implant Length (mm)	8	10	11.5	13	16
Sleeve	Z3D				
Depth Control	Yes	Yes	Yes	Yes	Yes
SURGICAL SEQUENCE					
Tissue Punch	Yes	Yes	Yes	Yes	Yes
Bone Leveler	Yes	Yes	Yes	Yes	Yes
Drill 2.4 × 6	Yes	Yes	Yes	Yes	Yes
Start Drill	Yes	Yes	Yes	Yes	Yes
Drill	2.4 × 8	2.4 × 8	2.4 × 8	2.4 × 8	2.4 × 8
Drill	2.8 × 8	2.4 × 10	2.4 × 11.5	2.4 × 11.5	2.4 × 11.5
Drill	3.4 × 8	2.8 × 8	2.8 × 8	2.4 × 13	2.4 × 16
Drill	-	2.8 × 10	2.8 × 11.5	2.8 × 8	2.8 × 8
Drill	-	3.4 × 8	3.4 × 8	2.8 × 11.5	2.8 × 11.5
Drill	-	3.4 × 10	3.4 × 11.5	2.8 × 13	2.8 × 16
Drill	-	-	-	3.4 × 8	3.4 × 8
Drill	-	-	-	3.4 × 11.5	3.4 × 11.5
Drill	-	-	-	3.4 × 13	3.4 × 16
Driver /Mount (TSX/TSV)	ø3.7/4.1 (3.5 mm platform)				

Implant Diameter (mm)	4.1				
Implant Length (mm)	8	10	11.5	13	16
Sleeve	Z3D				
Depth Control	Yes	Yes	Yes	Yes	Yes
SURGICAL SEQUENCE					
Tissue Punch	Yes	Yes	Yes	Yes	Yes
Bone Leveler	Yes	Yes	Yes	Yes	Yes
Drill 2.4 × 6	Yes	Yes	Yes	Yes	Yes
Start Drill	Yes	Yes	Yes	Yes	Yes
Drill	2.4 × 8	2.4 × 8	2.4 × 8	2.4 × 8	2.4 × 8
Drill	2.8 × 8	2.4 × 10	2.4 × 11.5	2.4 × 11.5	2.4 × 11.5
Drill	3.4 × 8	2.8 × 8	2.8 × 8	2.4 × 13	2.4 × 16
Drill	3.8 × 8	3.4 × 8	3.4 × 8	2.8 × 8	2.8 × 8
Drill	-	3.4 × 10	3.4 × 11.5	3.4 × 8	3.4 × 8
Drill	-	3.8 × 8	3.8 × 8	3.4 × 11.5	3.4 × 11.5
Drill	-	3.8 × 10	3.8 × 11.5	3.4 × 13	3.4 × 16
Drill	-	-	-	3.8 × 8	3.8 × 8
Drill	-	-	-	3.8 × 11.5	3.8 × 11.5
Drill	-	-	-	3.8 × 13	3.8 × 16
Driver/Mount (TSX/TSV)	ø3.7/4.1 (3.5 mm platform)				

Implant Diameter (mm)	4.7				
Implant Length (mm)	8	10	11.5	13	16
Sleeve	Z3D				
Depth Control	Yes	Yes	Yes	Yes	Yes
SURGICAL SEQUENCE					
Tissue Punch	Yes	Yes	Yes	Yes	Yes
Bone Leveler	Yes	Yes	Yes	Yes	Yes
Drill 2.4 × 6	Yes	Yes	Yes	Yes	Yes
Start Drill	Yes	Yes	Yes	Yes	Yes
Drill	2.4 × 8	2.4 × 8	2.4 × 8	2.4 × 8	2.4 × 8
Drill	2.8 × 8	2.4 × 10	2.4 × 11.5	2.4 × 11.5	2.4 × 11.5
Drill	3.4 × 8	2.8 × 8	2.8 × 8	2.4 × 13	2.4 × 16
Drill	3.8 × 8	3.4 × 8	3.4 × 8	2.8 × 8	2.8 × 8
Drill	4.4 × 8	3.8 × 8	3.8 × 8	3.4 × 8	3.4 × 8
Drill	-	3.8 × 10	3.8 × 11.5	3.8 × 8	3.8 × 8
Drill	-	4.4 × 8	4.4 × 8	3.8 × 11.5	3.8 × 11.5
Drill	-	4.4 × 10	4.4 × 11.5	3.8 × 13	3.8 × 16
Drill	-	-	-	4.4 × 8	4.4 × 8
Drill	-	-	-	4.4 × 11.5	4.4 × 11.5
Drill	-	-	-	4.4 × 13	4.4 × 16
Driver/Mount (TSX)	ø3.7/4.1 (3.5 mm platform)				
Driver/Mount (TSV)	ø4.7 (4.5 mm platform)				

Customized Drill Report

The RealGUIDE Software Suite allows you to automatically generate a customized drill report from an implant project planned with the TSX, TSV, Trabecular Metal, Extetic Implants, and Z3D sleeve, as in the example shown:

RealGUIDE Z3D
GUIDED SURGERY KIT

Implant concierge

PATIENT NAME:
CLINICIAN NAME:
PROJECT DATE:

NOTES:
Color-coding corresponds with the colors of the Zimmer® Implant System.
Surgical kit designed for Tapered-Screw Vents® TSV®, Trabecular Metal® and 3.1mm Extetic® Implants.

INSTRUMENT SPEED RECOMMENDATIONS:
Pin Drill = max 1000rpm
Tissue Punch = max 100rpm
Start Drill = max 600rpm
Depth & Preparation Drills = max 800rpm
Implant Mount = max 20rpm, 50Ncm

DENSE BONE: drills sequence in bold/italics only for dense bone (for soft bone, stop at the previous step)

Implant Information	
Tooth Number	35
Implant Model	Trabecular Metal
Implant Diameter (mmD)	4.1
Implant Length (mm)	Z3D
Sleeve	Yes
Depth Control	Yes
Tissue Punch	Yes
Bone Leveler	Yes
Surgical Sequence	
1 Drill	2.4x8
2 Drill	2.4x13
3 Drill	2.6x8
4 Drill	3.4x8
5 Drill	3.4x11.5
6 Drill	3.4x13
7 Drill	3.8x8
8 Drill	3.8x11.5
9 Drill	3.8x13
10 Drill	
11 Drill	3.7/4.1
12 Drill	
13 Drill	
14 Drill	
15 Driver	

The Z3D protocol listed above is for this patient-specific case only and is based on the implant diameters and lengths in the submitted case plan. Changes to the surgical plan may require changes in implant diameters and lengths resulting in a change to the surgical protocol and surgical guide. If you have any additional questions or require clarification on case planning or patient specific guide, please contact the guide manufacturer.

Note: taps are not included in the Z3D kit. If tapping is required or preferred, a TSV tap may be utilized in a non-guided, freehand manner.

PLAN **APP** **GUIDE**

RealGUIDE Software Suite with PLAN, APP, GUIDE Modules



 **RealGUIDE™ Z3D**
GUIDED SURGERY KIT



MORE INFORMATION
ABOUT THE RealGUIDE Z3D
GUIDED SURGERY KIT AT
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