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# Persona<sup>®</sup> Revision Knee System

Large Defect Surgical Technique



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## Quick Reference: Abbreviated Surgical Technique



**Step 1:**  
Size Tibial Defect



**Step 2:**  
Tibial Perimeter  
Cone Preparation



**Step 3:**  
Tibial Perimeter Cone Provisional  
Assembly and Insertion



**Step 4:**  
Tibial Perimeter Cone  
Implant Assembly



**Step 5:**  
Tibial Perimeter Cone  
Implant Preassembly

## Quick Reference:

### Instrumentation

**Note:** Do not use implants and/or instruments from other knee systems unless expressly labeled for such use.

**Note:** Do not use implants and/or instruments from the Persona Revision Knee System with other knee systems unless expressly labeled for such use.

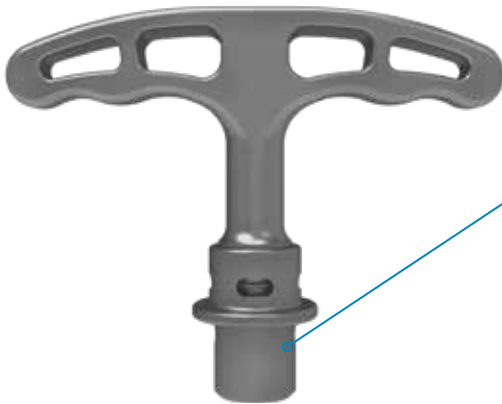
### Quick Connect (QC) Handle

#### Attaches to:

- Tibial and femoral impactor pads
- Tibial central and perimeter cone impactor heads
- Femoral central and metaphyseal cone impactor head
- Persona Primary Femoral 4-in-1 Cut Block



### T-Handle



#### Attaches to:

- Reamers
- Stem extension post
- Broach pilot adapter
- Cannulated reamers
- Tilt reamers
- 5 mm hex driver
- Tapered stem drill bits

### Slap Hammer

#### Attaches to:

- Stem extractor
- Stem provisionals

#### Removes the:

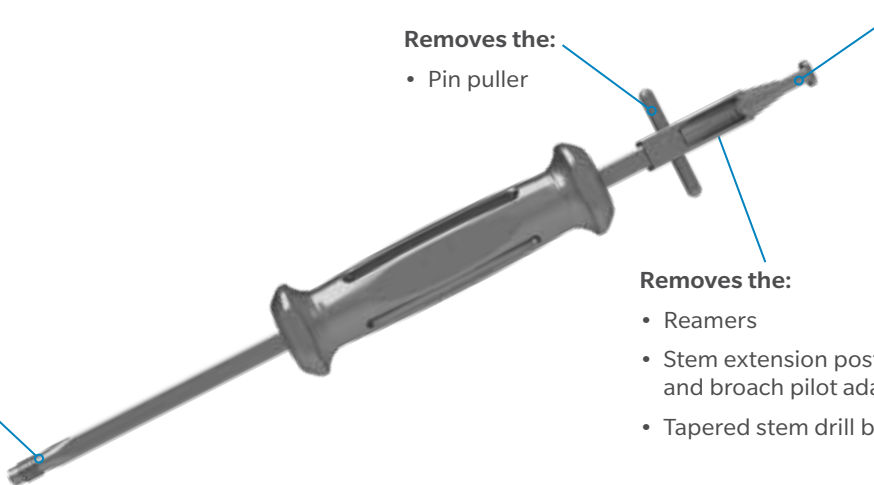
- Pin puller

#### Removes the:

- Tibial and femoral provisionals
- Persona Primary Femoral 4-in-1 Cut Block
- Cone provisionals

#### Removes the:

- Reamers
- Stem extension post and broach pilot adapter
- Tapered stem drill bits



## Quick Reference: Instrumentation (cont.)

### 5 mm Hex Driver

**Removes the:**

- Reamers
- Stem extension post
- Broach pilot adapter
- Tapered stem drill bits

**Attaches to:**

- T-Handle

**Loosens/Tightens the:**

- Tibial boom knob
- Valgus alignment guide knob
- Tibial resection cut guide

**Fastens the:**

- Tibial and femoral provisional components to stem provisionals
- Tibial and femoral cone/sleeve drill guides to the stem extension post
- Femoral straight and offset reamer adapters to the reamer
- Femoral/sizing cut guide adapters to the cut guide

### 3.5 mm Hex Driver

**Fastens the:**

- TASP locking screw
- Tibial and femoral augment implant screws

**Rotates the:**

- Offset stem provisionals

### Diaphyseal Referencing (DR) Handle

**Note:** Do not use over canal reamers. The DR handle passes over the stem extension post or broach pilot adapter.

**Attaches to:**

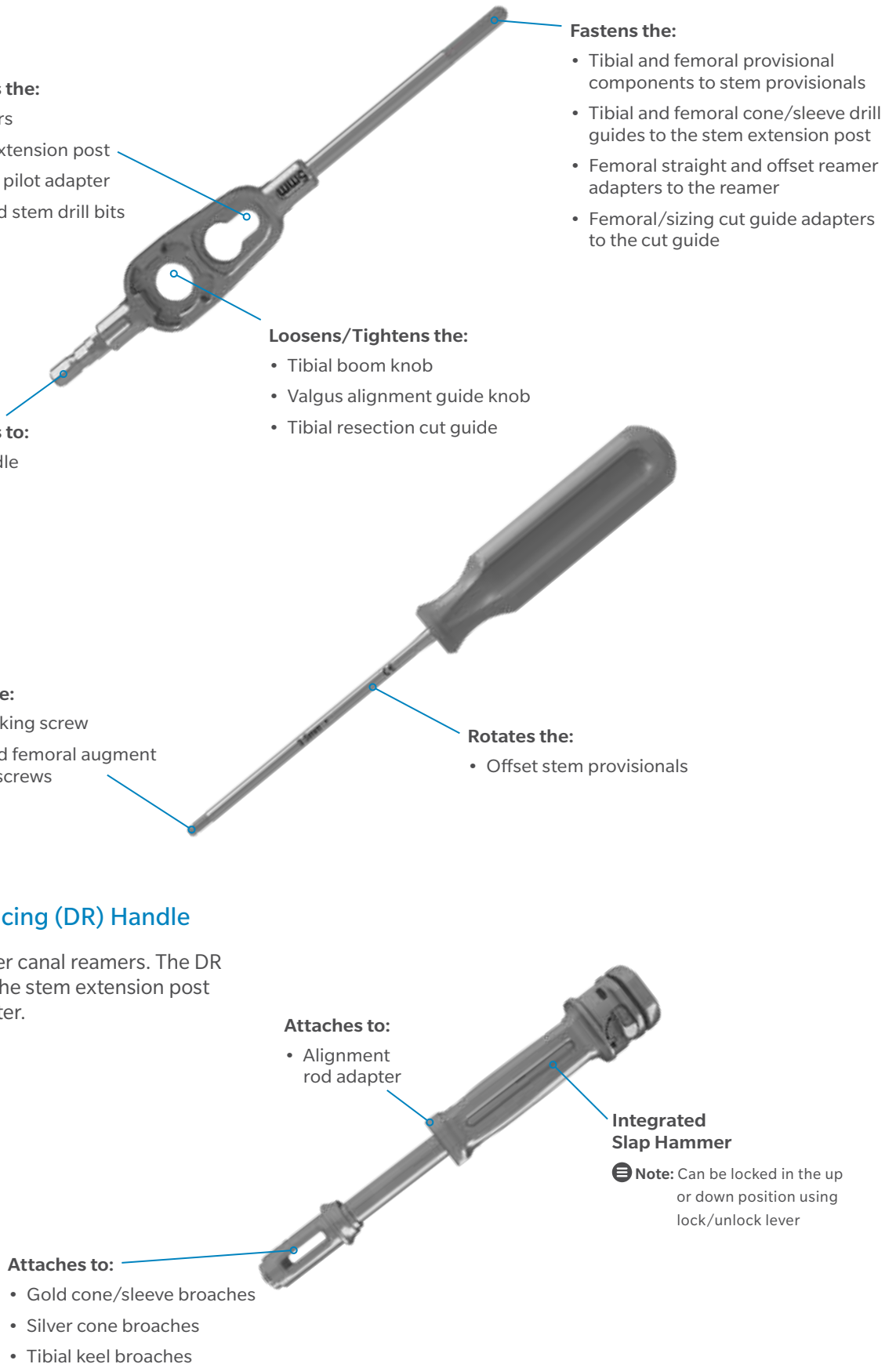
- Alignment rod adapter

**Attaches to:**

- Gold cone/sleeve broaches
- Silver cone broaches
- Tibial keel broaches

**Integrated Slap Hammer**

**Note:** Can be locked in the up or down position using lock/unlock lever



## Femoral/Tibial Depths

- A** Tilt Reamer
- B** Canal Reamer
- C** Stem Extension Post
- D** Broach Pilot Adapter
- E** Cannulated Reamer

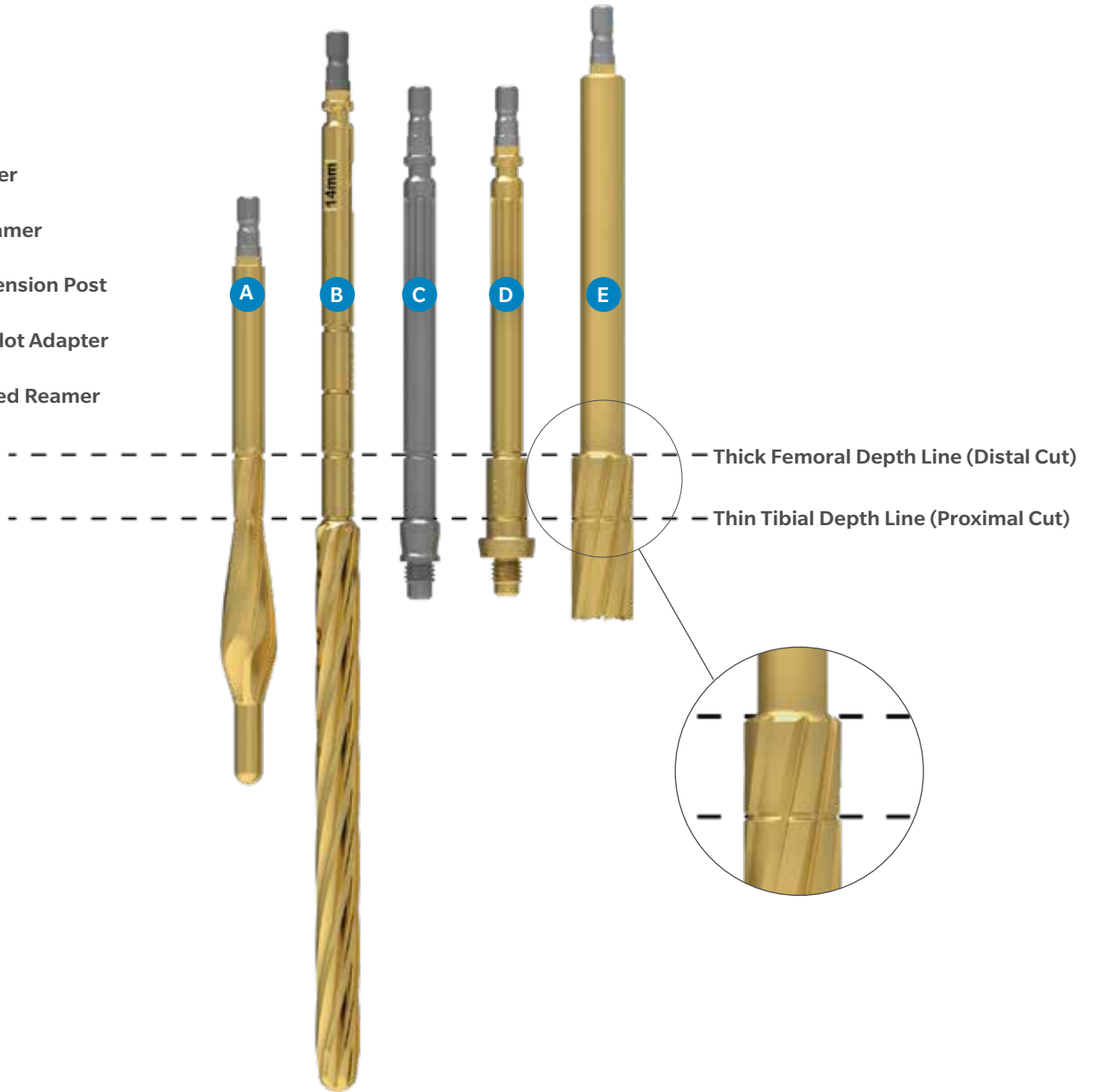




Figure 1



Figure 2

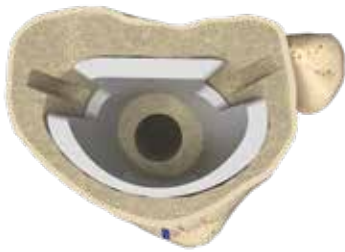


Figure 3

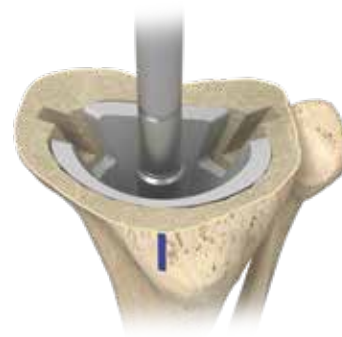


Figure 4

## Tibial Perimeter Cone Preparation

ⓘ **Note:** The following surgical steps only cover the Trabecular Metal Tibial Perimeter Cone preparation and implantation. To prepare the tibia, reference the Persona Revision Knee System Surgical Technique 1832.1-GLBL-en for surgical steps.

Invert the opposite side tibial perimeter cone provisional to simulate the size of the proximal void that the cone will accommodate. For example, if the defect is a “Left” small tibial perimeter cone provisional, use the “Right” small tibial perimeter cone provisional and invert over the defect (Figure 1). This will help provide an estimate of the A/P and M/L position of the defect, relative to the center of the tibial IM canal. With methylene blue or bovie, trace around the outside of the provisional where bone remains to serve as a guide for bone removal.

Using a high speed burr, remove enough bone in order to seat the tibial perimeter cone provisional in the defect (Figure 2). Insert the appropriately sized tibial

perimeter cone provisional by hand and assess the fit (Figure 3).

Remove any excess bone with the burr in order for the tibial perimeter cone provisional to seat properly.

ⓘ **Note:** Alternatively, the tilt reamer can be used to manually remove bone if desired.

Insert the stem extension post and stem provisional construct into the tibial canal to check for size and position of the cone relative to the tibial IM canal (Figure 4). Confirm the cone orientation and verify that the fin cutouts are aligned to the previous placement of the tibial baseplate provisional.

Ensure the tibial perimeter cone provisional sits at or distal to the proximal surface of the tibia. If the tibial perimeter cone provisional is not placed distal enough, it will cause the tibial baseplate to sit proud.

ⓘ **Note:** A 1 mm cement mantel is recommended between the cone and tibial baseplate implant.



Figure 5

Figure 6

Figure 7

Figure 8

## Tibial Perimeter Cone Preparation (cont.)

### Tibial Perimeter Cone Insertion

Insert the tibial provisional construct into the tibial canal by hand. Assemble the tibial impactor pad to the QC handle and impact until fully seated (Figures 5–7).

- ⓘ **Note:** If the cone provisional is difficult to remove, use the non-threaded end of the slap hammer to hook under the cone provisional (Figure 8).
- ⓘ **Note:** If the tibial provisional construct does not fit through the tibial perimeter cone provisional, preassembly of the tibial perimeter cone provisional on the tibial baseplate provisional is required. This assembly step applies to the final construct assembly as well.

Ensure the provisional construct is stable and the desired cement mantle clearance between the tibial

baseplate provisional and proximal tibia can be achieved. If the tibial baseplate provisional sits proud, use a high speed burr to remove any additional bone to achieve distal placement of the cone.



Figure 9



Figure 10



Figure 11



Figure 12

## Tibial Perimeter Cone Implant Assembly

On the back table, use the provisional constructs as a guide for building the final implants. Verify that the stem implant will pass through the Trabecular Metal Perimeter Tibial Cone Implant.

If the stem implant does not pass through the Trabecular Metal Perimeter Tibial Cone Implant, you will need to preassemble the Trabecular Metal Tibial Cone Implant to the tibial baseplate implant prior to implanting the construct. Proceed to the Tibial Cone Assembly with an Offset or Large Diameter Stem section, on page 10 for assembly instructions, if necessary.

Assemble the appropriate tibial perimeter cone impactor head to the QC handle by pulling back on the lever and attach (Figure 9).

**Note:** The tibial perimeter impactor head can be flipped to mate with both the “Left” and “Right” tibial perimeter cone implants.

Implant the Trabecular Metal Perimeter Tibial Cone Implant into the tibia using the QC handle and ensure proper rotation and location of the keel cut outs (Figures 10 and 11). Impact until fully seated in the tibial canal (Figure 12).

If excessive force is used to seat the cone implant, tibial fracture may occur. If necessary, consider removing additional bone to seat the cone further distally.

If gaps exist between the periphery of the cone and the endosteal surface, bone grafting material may be utilized with autogenous bone, allogenic bone or bone putty.

Proceed to the Persona Revision Knee System Surgical Technique 1832.1-GLBL-en for implant assembly.

Stem Extensions			
Tibial Perimeter Cones	Straight (Splined)	Cemented (Smooth)	
	FIXED	14 mm	14 mm
	SML	17 mm	18 mm
	MED	18 mm	20 mm
	LRG	18 mm	20 mm

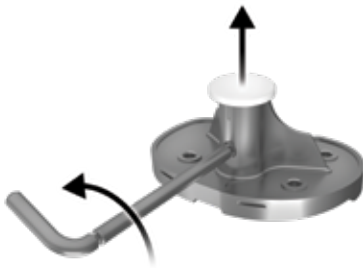


Figure 13



Figure 14



Figure 15



Figure 16

Figure 16a

## Tibial Perimeter Cone Implant Assembly (cont.)

### Tibial Cone Assembly with an Offset or Large Diameter Stem

The largest straight stems that can fit through the perimeter cones are contained in the chart above. If the stem implant does not pass through the Trabecular Metal Perimeter Cone Implant or it was found during trialing, the Trabecular Metal Cone Implant will need to be preassembled to the tibial baseplate implant prior to implanting the construct.

It is highly recommended that new gloves be applied prior to handling the tibial implant.

Prior to assembly of the final construct, use the 2 mm hex driver to loosen the set screw to remove the taper cap from the tibial implant. Ensure the set screw in the stem housing is backed out in order for the stem to seat fully (Figure 13).

The tibial impaction base may be used to aid in assembling the stem implant to the tibial baseplate implant. Place the tibial baseplate implant on the tibial impaction base (Figure 14). Assemble the Trabecular Metal Tibial Perimeter Cone Implant over the tibial stem housing making sure to properly align the Trabecular Metal Tibial Perimeter Cone Implant with the fins of the keel (Figure 15). If using a straight splined stem, align the slots of the stem so that one slot runs directly A/P and the other runs directly M/L (Figure 16).

If using an offset splined stem, insert the stem into the tibial baseplate implant and rotate the stem until the predetermined number lines up with the reference mark on the anterior of the stem housing (Figure 16a). Confirm stem alignment by referencing the provisional components.

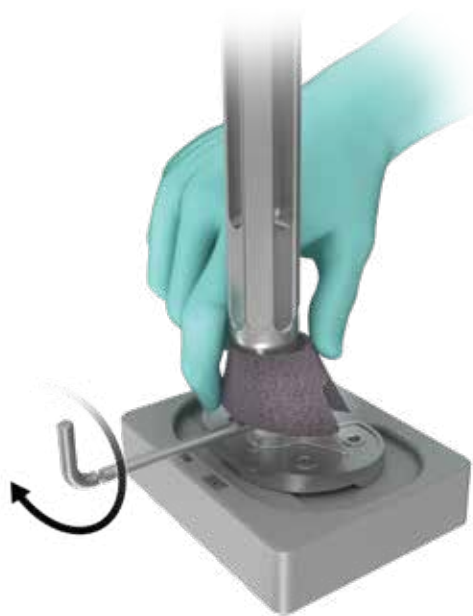


Figure 17

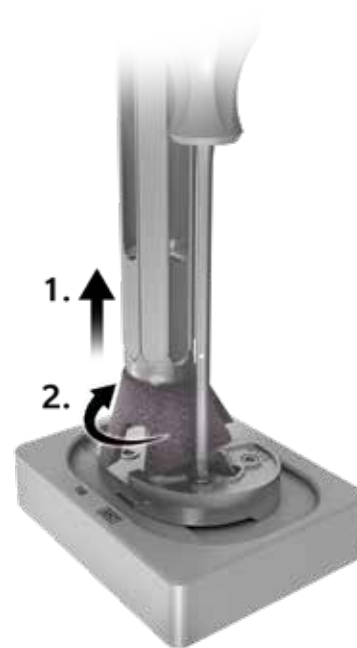


Figure 18

## Tibial Perimeter Cone Implant Assembly (cont.)

While protecting the tip of the stem with a soft cloth, firmly impact the stem to engage the tapers. Lift the Trabecular Metal Tibial Perimeter Cone Implant and tighten the set screw with the 2 mm hex driver in a clockwise direction (Figure 17).

- ⓘ **Note:** The 2 mm hex driver has an over-torque limiter built into the design of the handle so it will break to prevent over-torquing.
- ⓘ **Note:** Do not cement the cone prior to tightening the set screw.

### Optional Tibial Augment Assembly

If an augment is being utilized, position the augment on the underside of the tibial baseplate implant and align the screws with the thread holes. Use the 3.5 mm hex driver to start both augment screws in a

clockwise direction. Once both screws have been started, align the augment with the perimeter of the tibial baseplate implant as desired. Tighten the screws until the augment is rigidly attached to the tibial baseplate implant (Figure 18).

- ⓘ **Note:** The cone may need to be lifted and rotated in order to gain access and tighten the augment screws.
- ⓘ **Note:** Augments must be attached after the stem has been assembled. The 10 and 15 mm augment thicknesses will block access to the 2 mm set screw anteriorly.

Reference the Persona Revision Surgical Technique 1832.1-GLBL-en for the Two Stage Cementing Technique and Component Implantation surgical steps.

## Product Compatibility Charts

Persona Revision Femoral Component Used on Persona Revision CCK, Persona CPS or Persona PS Bearing

		Persona Revision Femoral Components												
		1	1+	3	3+	5	5+	7	7+	9	9+	11	11+	13
Persona Tibial Plates	A	1-1+/AB		3-5+/AB										
	B	1-1+/AB		3-5+/AB										
	C	1-1+/CD		3-5+/CD				7-9+/CD						
	D	1-1+/CD		3-5+/CD				7-9+/CD						
	E			3-5+/EF				7-9+/EF				11-11+/EF		
	F			3-5+/EF				7-9+/EF				11-11+/EF		
	G							7-9+/GH				11-13/GH		
	H							7-9+/GH				11-13/GH		
	J											11-13/J		

Persona Revision Femoral Component Used with Persona Patellae

		Persona Revision Femoral Component												
		1	1+	3	3+	5	5+	7	7+	9	9+	11	11+	13
Persona All-Poly (UHMWPE) Patellar Component (42-5400-000-XX) Vivacit-E® Patellar Component (42-5402-000-XX) (mm sizes)	26	i	i	i	i	i	i	i	i	i	i	i	i	i
	29											i	i	i
	32											i	i	i
	35													
	38													
	41													

i: INSET patella with Persona Revision Femoral Component

Compatible  
 Incompatible

Persona Revision Femoral Component Used with NexGen® Patellae

		Persona Revision Femoral Component												
		1	1+	3	3+	5	5+	7	7+	9	9+	11	11+	13
NexGen All-Poly Patellar Component (00-5972-065-XX) Prolong® Patellar Component (00-5972-066-XX) (mm sizes)	26	i	i	i	i	i	i	i	i	i	i	i	i	i
	29											i	i	i
	32											i	i	i
	35													
	38													
	41													

i: INSET patella with Persona Revision Femoral Component

Compatible  
 Incompatible

Persona Revision Femoral Component Used with NexGen Patellae (cont.)

		Persona Revision Femoral Component												
		1	1+	3	3+	5	5+	7	7+	9	9+	11	11+	13
NexGen Primary Porous Patellar Component (00-5878-065-XX) (mm sizes)	32											i	i	i
	35													
	38													
	41													

i: INSET patella with Persona Revision Femoral Component

Compatible  
 Incompatible

Persona Revision Femoral Component Used with Persona Revision Femoral Metaphyseal and Central Cone

		Persona Revision Femoral Components												
		1	1+	3	3+	5	5+	7	7+	9	9+	11	11+	13
Persona Revision Femoral Central Cones	SML													
	MED													
	LRG													
	XLRG													

Compatible  
 Incompatible

Persona Revision Femoral Metaphyseal Cone Used with Persona Revision Posterior Femoral Augments

		Persona Revision Femoral Components													
		1	1+	3	3+	5	5+	7	7+	9	9+	11	11+	13	
Persona Revision Femoral Metaphyseal Cones	SML			5 mm				5, 10 mm				5, 10, 15 mm			
	MED					5 mm				5, 10 mm				5, 10, 15 mm	
	LRG							5 mm				5, 10 mm			
	XLRG									5 mm				5, 10 mm	

Compatible  
 Incompatible



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