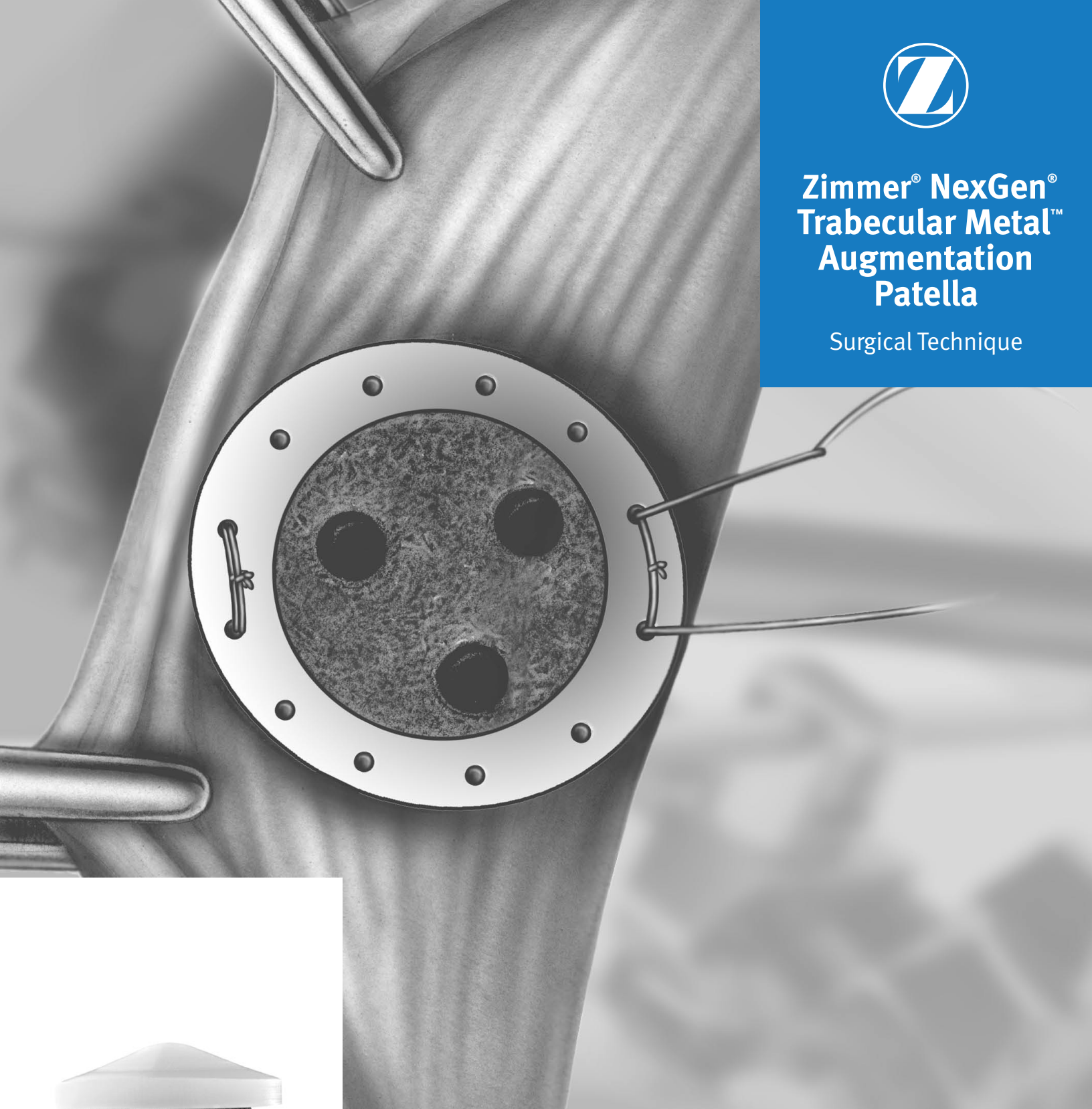




Zimmer® NexGen® Trabecular Metal™ Augmentation Patella

Surgical Technique



A Simple Solution for a Difficult Problem

Indications for the Augmentation Patella* include:

- Revision total knee arthroplasty with inadequate patellar bone stock for standard patellar revision.
- Patellar fracture after total knee arthroplasty.

1 Patellar Component Size Selection and Bone Preparation

Expose the extensor mechanism in the normal manner. Determine the thickness of the remaining patellar bone stock using a caliper. The Augmentation Patella may be used if the remaining patella is less than 10mm thick and patellar resurfacing with a standard implant is not feasible.

Note: Determine position, size, tilt, and depth of the Augmentation Patella Base prior to reaming.

Use a spherical reamer to prepare the patellar bone bed. Reamer size should be selected according to the anticipated size of the implant base, as shown in this table (Fig. 1).

Reamer Diameter	A - NexGen Knee System Augmentation Patella Overall Thickness	B - Continuum Knee System® Augmentation Patella Overall Thickness
Medium, 52mm	Medium, 19.5mm	Medium, 19mm
Medium, 38mm	Medium, 22.5mm	Medium, 22mm
Large, 62mm	Large, 20mm	Large, 19mm
Large, 44mm	Large, 23mm	Large, 22mm

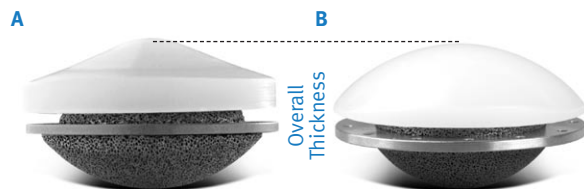


Fig. 1

2 Trial Reduction

Select the appropriate size Augmentation Patella Provisional and secure it with sutures in several places to the patellar tendon. Sutures provide stability during the trial reduction. With the joint reduced, ensure that the Augmentation Patella Provisional easily engages the trochlear groove of the femoral component at 25° flexion. When the proper position and orientation have been established, clamp the patella and mark the component position with a skin marker or cautery (Fig. 2).

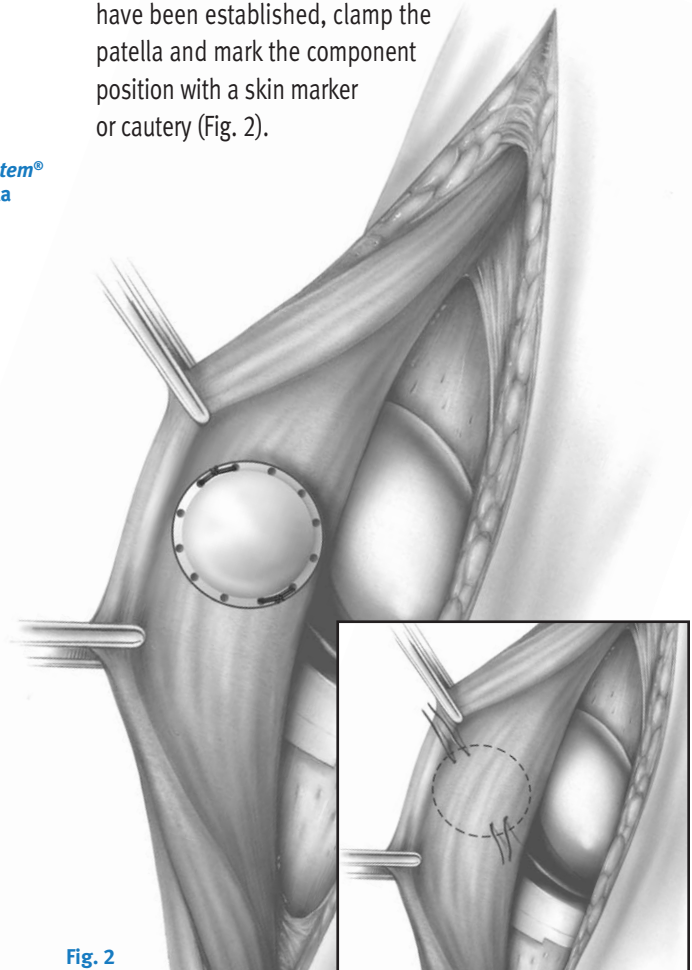
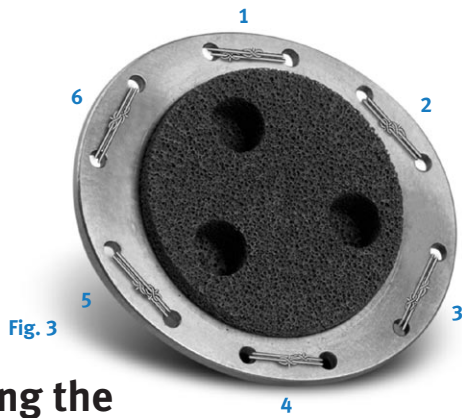


Fig. 2

* Indicated for use with bone cement in the US.



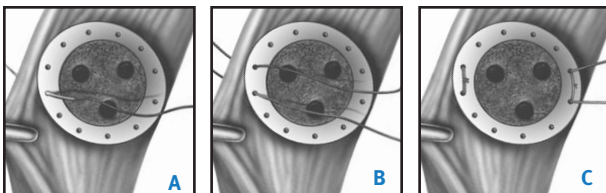
3 Securing the Augmentation Patella Base

Apply an adequate amount of bone cement to the anterior aspect (*Trabecular Metal* dome shape) of the Augmentation Patella. Then, place the device against the remaining patella bone stock and clamp until the cement is fully cured.

Suture the Augmentation Patella Base to the extensor tendon. The holes in the Augmentation Patella Base are chamfered to minimize the potential for abrasion of the sutures. Pass the sutures through the holes in the titanium ring, and tie the sutures on the posterior aspect of the Augmentation Patella Base, as shown. A 1/16in. (or 1mm) drill can be used to create holes in the native patella, if necessary. Often, the patella is thin enough to permit placement of a suture without drilling.

Use an interrupted suture pattern. Insert a #2 nonabsorbable suture through a hole on the posterior surface of the titanium ring (Fig. 3a). Bring the needle from the anterior surface back through an adjacent hole and cut suture (Fig. 3b). Repeat suture pass through same set of holes; cut suture; and tie two independent knots. (**Note:** *This can also be accomplished by doubling the suture through the eye of the needle and making one pass.*) The knots are tied on the posterior surface of the patella. Repeat the same steps in two holes on the side opposite the completed suture (Fig. 3c). Alternating sutures on opposite sides helps ensure proper implant position and soft-tissue balance. The Patellar Clamp can be used to hold the patella and augment while suturing.

Note: *Tight sutures on the base can compromise circulation. After the tourniquet is released, check the soft tissues to be sure they return to their normal color. If not, the sutures may need to be replaced with looser knots tied around the base.*



4 Cementing the All-Polyethylene Patella

At the surgeon's discretion, implant position can be confirmed with an intraoperative radiograph.

Perform an additional trial reduction using the All-Polyethylene Patella Provisional placed onto the secured Augmentation Patella Base. Select the All-Polyethylene Patella that matches the implanted Augmentation Patella Base. The All-Polyethylene Patella will completely cover the underlying base and suture ring. Apply bone cement in its doughy state to the Augmentation Patella Base and post holes, completely covering the suture ring. It is necessary to completely fill the space between the All-Polyethylene Patella and the suture ring, so the sutures are protected and the All-Polyethylene Patella is supported appropriately. Align the pegs of the All-Polyethylene Patella with the holes in the Augmentation Patella Base and assemble the two together. Clamp the patella; remove excess cement, and allow the cement to fully cure prior to removing the clamp (Fig. 4).

After the cement has hardened, observe patellar tracking through the full range of knee motion. Close the knee with a standard technique.

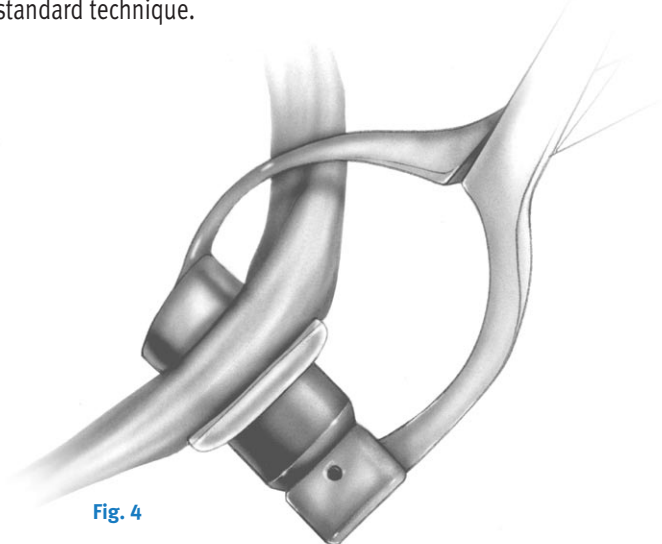


Fig. 4

Augmentation Patella for use with NexGen Complete Knee Solution

Catalog No.	Description	Size	Thickness*
00-5876-009-00	Implant Kit (incl. 1 of ea. implant)		
00-5876-010-19	Augmentation Patella	Medium	19.5mm
00-5876-010-22	Augmentation Patella	Medium	22.5mm
00-5876-011-20	Augmentation Patella	Large	20mm
00-5876-011-23	Augmentation Patella	Large	23mm

Instruments

Catalog No.	Description	Size	Thickness*
00-5973-030-00	Instrument Kit		
00-5877-010-19	Augmentation Patella Provisional	Medium	19.5mm
00-5877-010-22	Augmentation Patella Provisional	Medium	22.5mm
00-5877-011-20	Augmentation Patella Provisional	Large	20mm
00-5877-011-23	Augmentation Patella Provisional	Large	23mm
00-5877-010-10	All-Polyethylene Patella Provisional	Medium	
00-5877-011-11	All-Polyethylene Patella Provisional	Large	
00-5781-041-00	Patellar Clamp		
00-5877-090-00	Augmentation Patella Instrument Case		
00-5877-012-38	NexGen Agmt Patella Sph Reamer	38mm Diam Bld	
00-5877-012-44	NexGen Agmt Patella Sph Reamer	44mm Diam Bld	
00-5877-009-52	NexGen Agmt Patella Sph Reamer	52mm Diam Bld	
00-5877-009-62	NexGen Agmt Patella Sph Reamer	62mm Diam Bld	
00-5877-077-00	NexGen Agmt Patella Reamer Shaft		

* Total thickness consists of the All-Polyethylene Patella and the Augmentation Patella Base.

Augmentation Patella for use with Continuum Knee System Implants

Catalog No.	Description	Size	Thickness*
00-5876-009-01	Implant Kit (incl. 1 of ea. implant)		
00-5876-036-19	Augmentation Patella	Medium	19mm
00-5876-036-22	Augmentation Patella	Medium	22mm
00-5876-039-19	Augmentation Patella	Large	19mm
00-5876-039-22	Augmentation Patella	Large	22mm

Instruments

Catalog No.	Description	Size	Thickness*
00-5877-009-00	Patella Instrument Set		
00-5877-036-19	Augmentation Patella Provisional	Medium	19mm
00-5877-036-22	Augmentation Patella Provisional	Medium	22mm
00-5877-039-19	Augmentation Patella Provisional	Large	19mm
00-5877-039-22	Augmentation Patella Provisional	Large	22mm
00-5877-036-10	All-Polyethylene Patella Provisional	Medium	
00-5877-039-10	All-Polyethylene Patella Provisional	Large	

* Total thickness consists of the All-Polyethylene Patella and the Augmentation Patella Base.



Note: When ordering Continuum Knee System Augmentation Patella Set only, order Patella Clamp (00-5781-041-00) and Case (00-5877-090-00) separately.

Please refer to package insert for complete product information, including contraindications, warnings, precautions, and adverse effects.

Contact your Zimmer representative or visit us at www.zimmer.com

