

Triathlon® Medial Stabilized Insert

Surgical protocol
addendum



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This publication sets forth detailed validated procedures for implantation of the Triathlon Medial Stabilized Insert. It offers instructions that you should heed, but, as with any such technical guide, each surgeon must consider the particular needs of each patient and make appropriate adjustments when and as required.

Compatibility

Femoral Component/insert compatibility

Size matching: Size-on compatibility, or one up, one down (e.g., size 5 insert/baseplate with size 4, 5 or 6 femur).

► **Note:** Triathlon Gold can be implanted with or without cement.

Femoral Components						
Insert type				Cementless		
	CR cemented	PS cemented	TS cemented	Triathlon Gold	CR beaded with PA	PS beaded with PA
MS	✓	✓	No	✓	✓	✓

Tibial Insert/Baseplate compatibility

Size matching: Size specific (e.g., size 4 insert to be used only with size 4 baseplate).

Tibial Baseplates					
Insert type			Cementless		
	Cemented primary	Cemented universal	Beaded with PA Primary	Beaded with PA Screw Fix	Titanium
MS	✓	✓	✓	✓	✓

This protocol addendum contains instructions on tibial insert sizing, trialing and component implantation of the Triathlon Medial Stabilized Insert only. Please refer to the Triathlon Knee System surgical protocol compendium (TRIATH-SP-30) for instructions on the remaining surgical steps. Please refer to the Triathlon Knee System Universal Baseplate surgical protocol (TRIATH-SP-16) for the surgical steps if implanting the Universal Tibial Baseplate. Please refer to the Triathlon Pro PS Femoral Preparation surgical protocol addendum (JR-TRIA-SURGP-630073) if trialing with the Triathlon Pro Femoral Trials. Please refer to the Triathlon Gold Femoral Components surgical protocol addendum (JR-TRIAGLD-SURGP-2053995) if implanting the Triathlon Gold Femoral Component.

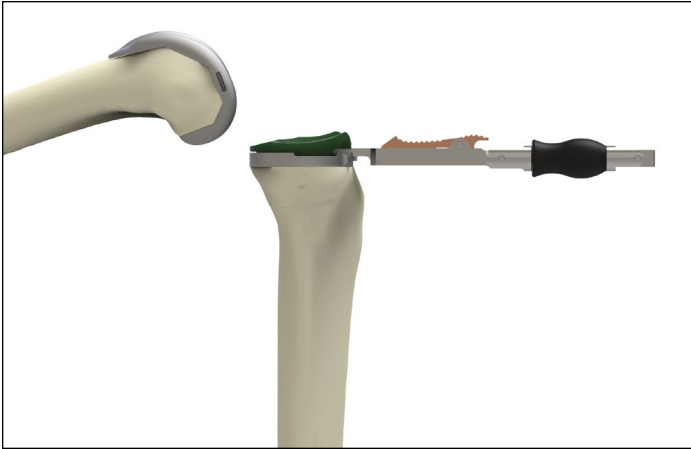


Figure 1

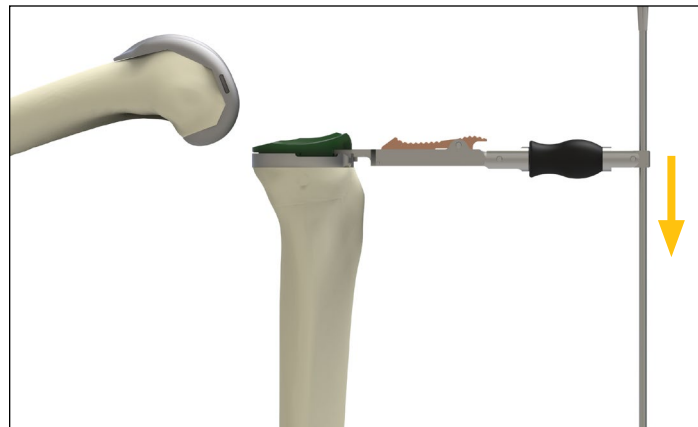


Figure 2

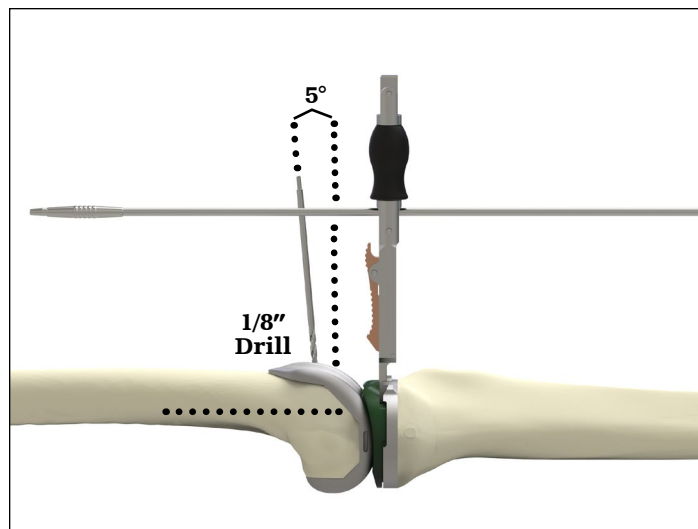


Figure 3

Tibial component sizing

Place a PS or CR Femoral Trial on the femur. Sublux the tibia anteriorly. Assemble a Tibial Template, Tibial Alignment Handle and an appropriate size, **side** and thickness Tibial Insert Trial.

- **Note:** Verify the trial type (MS), size, thickness and **side** via the associated part markings before assembling.

Place the assembly on the resected tibial plateau and choose the size that best addresses rotation and coverage (**Figure 1**).

- **Note:** Lightly impact the Tibial Insert Trial, if required. In the event that excessive resistance or misalignment is encountered during insertion of the Tibial Insert Trial, remove, reposition and reinsert the Tibial Insert Trial. Ensure all excess debris (bone and soft tissue) is cleared from the Tibial Template.

If Headed Nails are placed in the anterior-vertical pin-holes with the Headed Nail Impactor Extractor (applicable only to sizes 3, 4, 5, 6, 7 and 8) of the Tibial Template, ensure that the Tibial Insert Trial is inserted posterior to the Headed Nails.

Perform a trial reduction to assess overall component fit, ligament stability and joint range of motion.

- **Note:** Ensure all excess debris (bone and soft tissue) is cleared from the Tibial Template.

Tibial Trial assessment

For an optional tibial alignment check, insert a Universal Alignment Rod into the most anterior hole of the Tibial Alignment Handle and check alignment (**Figure 2**).

Place the knee in full extension and assess overall alignment in the A/P and M/L planes.

One of the 1/8" Drills can be inserted into the lateral hole on the anterior surface of the Femoral Trial to aid in alignment (**Figure 3**).

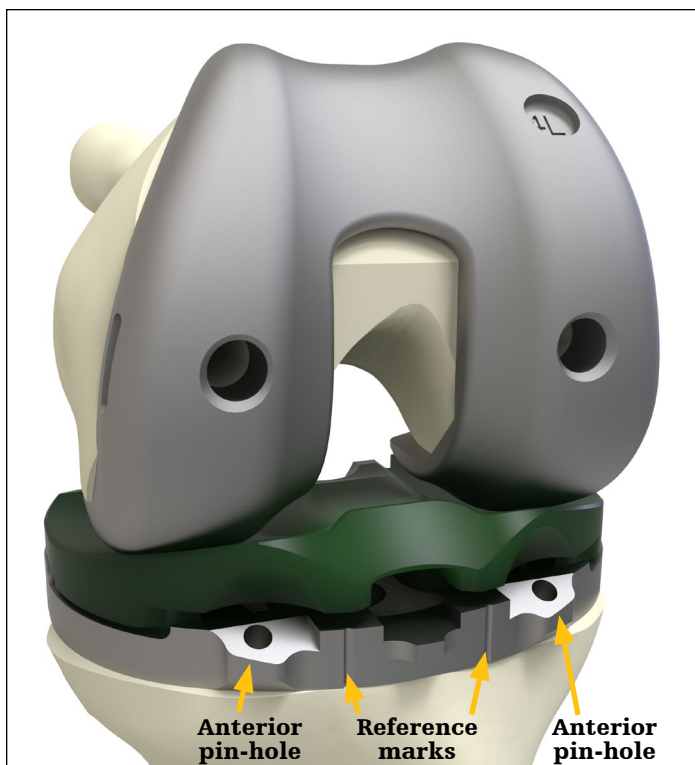


Figure 4

There are two options to secure the Tibial Template to the tibia:

Option 1:

Once satisfactory alignment and tibial component orientation are achieved, remove the PS or CR Femoral Trial. Place two Headless or Fluted Headless 1/8" Pins in the anterior holes (**Figure 4**) of the Tibial Template, disassemble the Tibial Insert Trial from the Tibial Template and secure by pinning.

Option 2:

Once satisfactory alignment and tibial component orientation are achieved, mark the anterior tibial cortex in line with the reference marks (**Figure 4**) on the anterior border of the Tibial Template. Remove the PS or CR Femoral Trial and disassemble the Tibial Trial Insert from the Tibial Template. Reposition the Tibial Template (if required) by aligning the anterior reference marks on the template with the reference marks on the anterior cortex. The template is positioned flush to the anterior tibial cortex. Place two Headless Pins or Fluted Headless 1/8" Pins in the anterior holes to secure the Tibial Template.

If additional fixation is required after either Option 1 or 2 are used, place up to four Headed Nails in the holes on the Tibial Template into the tibial plateau (**Figure 5**) by tapping them in place using the Headed Nail Impactor Extractor.

Trials may be reassembled to the pinned template for any subsequent trial reductions.



Figure 5



Figure 6



Figure 7



Figure 8

Tibial Baseplate implantation – Cemented/Cementless

Connect the Tibial Baseplate Impactor Extractor to the Impaction Handle. To connect this assembly to the Tibial Baseplate, ensure the locking lever is in the unlocked position and place the head onto the Tibial Baseplate straddling the central island. Ensure the Tibial Baseplate Impactor Extractor sits flat on the top surface of the Tibial Baseplate and move the locking lever to the locked position.

If using a cemented implant, the surgeon should apply bone cement to the implant and/or bone surface in accordance with the specific Instructions for Use for the bone cement.

Introduce the Tibial Baseplate onto the prepared tibia and impact until the baseplate is seated (**Figure 6**). Unlock the locking lever and remove the assembly from the Tibial Baseplate.

To further seat the baseplate, attach the Tibial Baseplate Impactor to the Impaction Handle.

Place the Tibial Baseplate Impactor on to the Tibial Baseplate straddling the central island. Ensure the Tibial Baseplate Impactor sits flat on the top surface of the Tibial Baseplate.

Impact until the Tibial Baseplate is fully seated (**Figure 7**).

► **Note:** Clear all excess bone cement (does not apply to cementless component) while maintaining position of the Tibial Baseplate.

Tibial Insert implantation

Prior to assembly of the appropriate Tibial Insert, the Tibial Trial Insert may be placed on the Tibial Baseplate to once more assess joint stability and range of motion. The Tibial Trial Inserts are marked 'Trial Do Not Implant'. Once joint stability and range of motion are assessed, ensure that the Tibial Trial Insert is removed.

Verify the appropriate insert type (MS), size, thickness **and side** via the associated part markings before assembling. To assemble the Tibial Insert, distract the joint and angle the insert posteriorly into the Tibial Baseplate. The posterior lip of the Tibial Insert must fit beneath the lip on the posterior Tibial Baseplate wall.

Attach the Tibial Insert Impactor to the Impaction Handle. Impact to snap the Insert in place anteriorly (**Figure 8**). Ensure that the Tibial Insert is fully seated by verifying the locking wire is locked under the barbs on the anterior/interior surface of the Tibial Baseplate wall.

Implants

Part number	Description	Size	Quantity
Triathlon MS Tibial Inserts			
5533-G-X09-R	Triathlon X3 MS Tibial Insert #X 9mm-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X10-R	Triathlon X3 MS Tibial Insert #X 10mm-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X11-R	Triathlon X3 MS Tibial Insert #X 11mm-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X12-R	Triathlon X3 MS Tibial Insert #X 12mm-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X14-R	Triathlon X3 MS Tibial Insert #X 14mm-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X16-R	Triathlon X3 MS Tibial Insert #X 16mm-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X09-L	Triathlon X3 MS Tibial Insert #X 9mm-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X10-L	Triathlon X3 MS Tibial Insert #X 10mm-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X11-L	Triathlon X3 MS Tibial Insert #X 11mm-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X12-L	Triathlon X3 MS Tibial Insert #X 12mm-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X14-L	Triathlon X3 MS Tibial Insert #X 14mm-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-G-X16-L	Triathlon X3 MS Tibial Insert #X 16mm-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
Triathlon Tibial Baseplates			
5520-B-X00	Triathlon Primary Tibial Baseplate - Cemented	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5521-B-X00	Triathlon Universal Tibial Baseplate	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5526-B-X00	Triathlon Primary Tibial Baseplate-Beaded with Peri-Apatite	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5527-B-X00	Triathlon Screw-Fix Tibial Baseplate with PA	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5536-B-X00	Triathlon Tritanium Tibial Baseplate	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5520-M-X00	Triathlon Low Profile Tibial Baseplate	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
Triathlon Femoral Components			
5510-F-X01	Triathlon CR Femoral Component - Left Cemented	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5510-F-X02	Triathlon CR Femoral Component - Right Cemented	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5517-F-X01	Triathlon CR Femoral Component - Left Cementless Beaded w/ PA	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5517-F-X02	Triathlon CR Femoral Component - Right Cementless Beaded w/ PA	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5518-F-X01	Triathlon Gold CR Femoral Left Component	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5518-F-X02	Triathlon Gold CR Femoral Right Component	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5515-F-X01	Triathlon PS Femoral Component - Left Cemented	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5515-F-X02	Triathlon PS Femoral Component - Right Cemented	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5516-F-X01	Triathlon PS Femoral Component - Left Cementless Beaded w/ PA	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5516-F-X02	Triathlon PS Femoral Component - Right Cementless Beaded w/ PA	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
8515-F-X01	Triathlon Pro PS Femoral Component - Left Cemented	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
8515-F-X02	Triathlon Pro PS Femoral Component - Right Cemented	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size

Instruments

Part number	Description	Size	Quantity
Triathlon MS Tibial Insert Trials			
5533-T-X09-R	Triathlon No X MS TIBIAL INSERT TRIAL 9MM-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X10-R	Triathlon No X MS TIBIAL INSERT TRIAL 10MM-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X11-R	Triathlon No X MS TIBIAL INSERT TRIAL 11MM-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X12-R	Triathlon No X MS TIBIAL INSERT TRIAL 12MM-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X14-R	Triathlon No X MS TIBIAL INSERT TRIAL 14MM-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X16-R	Triathlon No X MS TIBIAL INSERT TRIAL 16MM-Right	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X09-L	Triathlon No X MS TIBIAL INSERT TRIAL 9MM-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X10-L	Triathlon No X MS TIBIAL INSERT TRIAL 10MM-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X11-L	Triathlon No X MS TIBIAL INSERT TRIAL 11MM-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X12-L	Triathlon No X MS TIBIAL INSERT TRIAL 12MM-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X14-L	Triathlon No X MS TIBIAL INSERT TRIAL 14MM-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
5533-T-X16-L	Triathlon No X MS TIBIAL INSERT TRIAL 16MM-Left	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
Triathlon Tibial Templates			
5555-230X	Triathlon Precision Tibial Template	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
6541-2-60X	Triathlon Universal Tibial Template	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size
6541-2-60XY	Triathlon Pro Tibial Template	X= 0, 1, 2, 3, 4, 5, 6, 7, 8	1 each size
Triathlon Universal Baseplate Trial			
5521-T-X00	Triathlon Universal Baseplate Trial	X= 1, 2, 3, 4, 5, 6, 7, 8	1 each size

Note: The Triathlon Precision Tibial Templates are packaged in the Triathlon CR Single-use Tibial Prep Kits (5555-232X, X=1, 2, 3, 4, 5, 6, 7, 8) or Triathlon PS Single-use Tibial Prep Kits (5555-236X, X=1, 2, 3, 4, 5, 6, 7, 8).

Instruments (continued)

Part number	Description	Quantity
Miscellaneous Instruments Kit contents		
3170-0000	1/8" Drill	2
6541-4-003 or 6541-4-003A	Headless Pins - 3"	4
6541-4-300	Headed Nail Impactor Extractor (Optional)	1
6541-4-515	Headed Nails - 1 1/2" (Optional)	2
6541-4-575	Headed Nails - 3/4" (Optional)	2
6541-4-602	Universal Alignment Rods	2
6541-4-805	Tibial Baseplate Impactor Extractor	1
6541-4-810	Impaction Handle	2
6541-4-812	Tibial Baseplate Impactor	1
6541-4-813	Tibial Insert Impactor	1
6541-2-807	Triathlon Tibial Alignment Handle	1
6541-2-807Y	Triathlon Pro Tibial Alignment Handle	1
Triathlon CR Femoral Trials		
5510-T-101	CR Femoral Trial #1 Left	1
5510-T-102	CR Femoral Trial #1 Right	1
5510-T-201	CR Femoral Trial #2 Left	1
5510-T-202	CR Femoral Trial #2 Right	1
5510-T-301	CR Femoral Trial #3 Left	1
5510-T-302	CR Femoral Trial #3 Right	1
5510-T-401	CR Femoral Trial #4 Left	1
5510-T-402	CR Femoral Trial #4 Right	1
5510-T-501	CR Femoral Trial #5 Left	1
5510-T-502	CR Femoral Trial #5 Right	1
5510-T-601	CR Femoral Trial #6 Left	1
5510-T-602	CR Femoral Trial #6 Right	1
5510-T-701	CR Femoral Trial #7 Left	1
5510-T-702	CR Femoral Trial #7 Right	1
5510-T-801	CR Femoral Trial #8 Left	1
5510-T-802	CR Femoral Trial #8 Right	1

Instruments (continued)

Part number	Description	Quantity
Triathlon PS Femoral Trials		
5511-T-101	Triathlon PS Femoral Trial #1 LT	1
5511-T-102	Triathlon PS Femoral Trial #1 RT	1
5511-T-201	Triathlon PS Femoral Trial #2 LT	1
5511-T-202	Triathlon PS Femoral Trial #2 RT	1
5511-T-301	Triathlon PS Femoral Trial #3 LT	1
5511-T-302	Triathlon PS Femoral Trial #3 RT	1
5511-T-401	Triathlon PS Femoral Trial #4 LT	1
5511-T-402	Triathlon PS Femoral Trial #4 RT	1
5511-T-501	Triathlon PS Femoral Trial #5 LT	1
5511-T-502	Triathlon PS Femoral Trial #5 RT	1
5511-T-601	Triathlon PS Femoral Trial #6 LT	1
5511-T-602	Triathlon PS Femoral Trial #6 RT	1
5511-T-701	Triathlon PS Femoral Trial #7 LT	1
5511-T-702	Triathlon PS Femoral Trial #7 RT	1
5511-T-801	Triathlon PS Femoral Trial #8 LT	1
5511-T-802	Triathlon PS Femoral Trial #8 RT	1
Triathlon Precision CR Universal Femoral Trials		
5555-0601	Universal Femoral Trial Size 1	1
5555-0602	Universal Femoral Trial Size 2	1
5555-0603	Universal Femoral Trial Size 3	1
5555-0604	Universal Femoral Trial Size 4	1
5555-0605	Universal Femoral Trial Size 5	1
5555-0606	Universal Femoral Trial Size 6	1
5555-0607	Universal Femoral Trial Size 7	1
5555-0608	Universal Femoral Trial Size 8	1

Note: The Precision CR Universal Femoral Trials are packaged in the Triathlon CR Single-use Femoral Prep Kits (5555-220X, X=1,2,3,4,5,6,7,8).

Instruments (continued)

Part number	Description	Quantity
Triathlon Pro Femoral Trials		
8510-T-101Y	Triathlon Pro Femoral Trial #1LT	1
8510-T-102Y	Triathlon Pro Femoral Trial #1RT	1
8510-T-201Y	Triathlon Pro Femoral Trial #2LT	1
8510-T-202Y	Triathlon Pro Femoral Trial #2RT	1
8510-T-301Y	Triathlon Pro Femoral Trial #3LT	1
8510-T-302Y	Triathlon Pro Femoral Trial #3RT	1
8510-T-401Y	Triathlon Pro Femoral Trial #4LT	1
8510-T-402Y	Triathlon Pro Femoral Trial #4RT	1
8510-T-501Y	Triathlon Pro Femoral Trial #5LT	1
8510-T-502Y	Triathlon Pro Femoral Trial #5RT	1
8510-T-601Y	Triathlon Pro Femoral Trial #6LT	1
8510-T-602Y	Triathlon Pro Femoral Trial #6RT	1
8510-T-701Y	Triathlon Pro Femoral Trial #7LT	1
8510-T-702Y	Triathlon Pro Femoral Trial #7RT	1
8510-T-801Y	Triathlon Pro Femoral Trial #8LT	1
8510-T-802Y	Triathlon Pro Femoral Trial #8RT	1
Triathlon Pro Modular CR Patella Track Trials		
8510-T-100Y	Triathlon Pro Modular CR Patella Track Trials #1	1
8510-T-200Y	Triathlon Pro Modular CR Patella Track Trials #2	1
8510-T-300Y	Triathlon Pro Modular CR Patella Track Trials #3	1
8510-T-400Y	Triathlon Pro Modular CR Patella Track Trials #4	1
8510-T-500Y	Triathlon Pro Modular CR Patella Track Trials #5	1
8510-T-600Y	Triathlon Pro Modular CR Patella Track Trials #6	1
8510-T-700Y	Triathlon Pro Modular CR Patella Track Trials #7	1
8510-T-800Y	Triathlon Pro Modular CR Patella Track Trials #8	1

Instruments (continued)

Part number	Description	Quantity
Triathlon Pro Modular PS Box Trials		
8515-T-100Y	Triathlon Pro Modular PS Box Trial #1	1
8515-T-200Y	Triathlon Pro Modular PS Box Trial #2	1
8515-T-300Y	Triathlon Pro Modular PS Box Trial #3	1
8515-T-400Y	Triathlon Pro Modular PS Box Trial #4	1
8515-T-500Y	Triathlon Pro Modular PS Box Trial #5	1
8515-T-600Y	Triathlon Pro Modular PS Box Trial #6	1
8515-T-700Y	Triathlon Pro Modular PS Box Trial #7	1
8515-T-800Y	Triathlon Pro Modular PS Box Trial #8	1
Triathlon Precision PS Universal Femoral Trials		
5555-0801	Universal Femoral Trial Size 1	1
5555-0802	Universal Femoral Trial Size 2	1
5555-0803	Universal Femoral Trial Size 3	1
5555-0804	Universal Femoral Trial Size 4	1
5555-0805	Universal Femoral Trial Size 5	1
5555-0806	Universal Femoral Trial Size 6	1
5555-0807	Universal Femoral Trial Size 7	1
5555-0808	Universal Femoral Trial Size 8	1

Note: The Precision PS Universal Femoral Trials are packaged in the Triathlon PS Single-use Femoral Prep Kits (5555-225X, X=1,2,3,4,5,6,7,8).

Trays

Part number	Description	Quantity
6541-9-205-R	Triathlon MS Insert Trial Tray - Right (Size 1-8)	1
6541-9-205-L	Triathlon MS Insert Trial Tray - Left (Size 1-8)	1
6541-9-207-R	Triathlon MS Insert Trial Tray - Right (Size 0-7)	1
6541-9-207-L	Triathlon MS Insert Trial Tray - Left (Size 0-7)	1

These listed trays contain the Triathlon MS Tibial Insert Trials. To identify the trays that contain the remaining instrumentation in the catalog listing, see the catalog listings in TRIATH-SP-30, TRIATH-SP-16 and JR-TRIA-SURGP-630073.

For more information on the devices in this surgical protocol, including indications, contraindications, warnings, precautions and potential adverse effects, please see the instructions for use included in the product package or visit ifu.stryker.com. To locate a relevant eIFU on ifu.stryker.com, search the catalog number or product number listed within the surgical protocol.

Before using instrumentation, verify:

- Instruments have been properly disassembled prior to cleaning and sterilization;
- Instruments have been properly assembled post-sterilization;
- Instruments have maintained design integrity; and
- Proper size configurations are available.

For Instructions for Cleaning, Sterilization, Inspection and Maintenance of Orthopaedic Medical Devices, refer to LSTPI-B and SLI0001 (ifu.stryker.com).

Joint Replacement

A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that surgeons be trained in the use of any particular product before using it in surgery.

The information presented is intended to demonstrate the breadth of Stryker's product offerings. A surgeon must always refer to the package insert, product label and/or instructions for use before using any of Stryker's products. Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your sales representative if you have questions about the availability of products in your area.

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JR-TRIA-SURGP-1001355

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Howmedica Osteonics Corp.
325 Corporate Drive
Mahwah, NJ 07430, USA
A subsidiary of Stryker Corporation
t: 201 831 5000

stryker.com