



USTAR II™

Hinge Knee & Limb Salvage System



United Orthopedic Portfolio of Products –

The USTAR II Primary and & Revision Hinge Knee and Limb Salvage System is part of the United Orthopedic portfolio of arthroplasty and limb salvage products.

USTAR II was designed based on 20 years-experience with the previous USTAR system and is part of the United Orthopedic comprehensive family of primary knee, revision knee and limb salvage products featuring the following shared benefits:

Platform-based approach. The consistent design philosophy allows a platform-based approach to provide surgeons flexibility for a wide range of procedures.

Demand-matching. Includes a wide range of product options for demand-matching to optimize solutions based on patient need.

Advanced surgical technologies. Builds on proven design philosophies with advanced surgical technologies to help deliver reproducible clinical outcomes and a streamlined procedure.

Overview –

The USTAR II System is a next generation hinge knee and limb salvage system designed for extensive reconstruction of the hip and knee joint. The system is indicated for the procedures requiring the following implant systems:

- Primary & Revision Hinge Knee (HK)
- Distal Femoral Replacement (DFR)
- Total Femoral Replacement (TFR)
- Proximal Femoral Replacement (PFR)
- Proximal Tibial Replacement (PTR)



USTAR II Primary & Revision Hinge Knee System

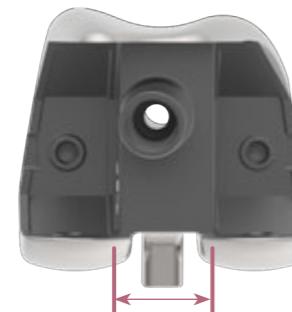
A next-generation, rotating-platform, hinge knee system.

Designed to have an optimal condylar loading design.

Features a small profile, pre-assembled hinge mechanism centered on the femur and tibia.

Connected intra-operatively by a single screw.

The system has a reduced femoral profile to preserve bone.



Small Profile Allows a Smaller Resection

- Designed with the same AP, ML and chamfer resections as the U2 PS Primary and PSA Revision Knee Systems to preserve bone. It also has the same box width (the box height is varied).



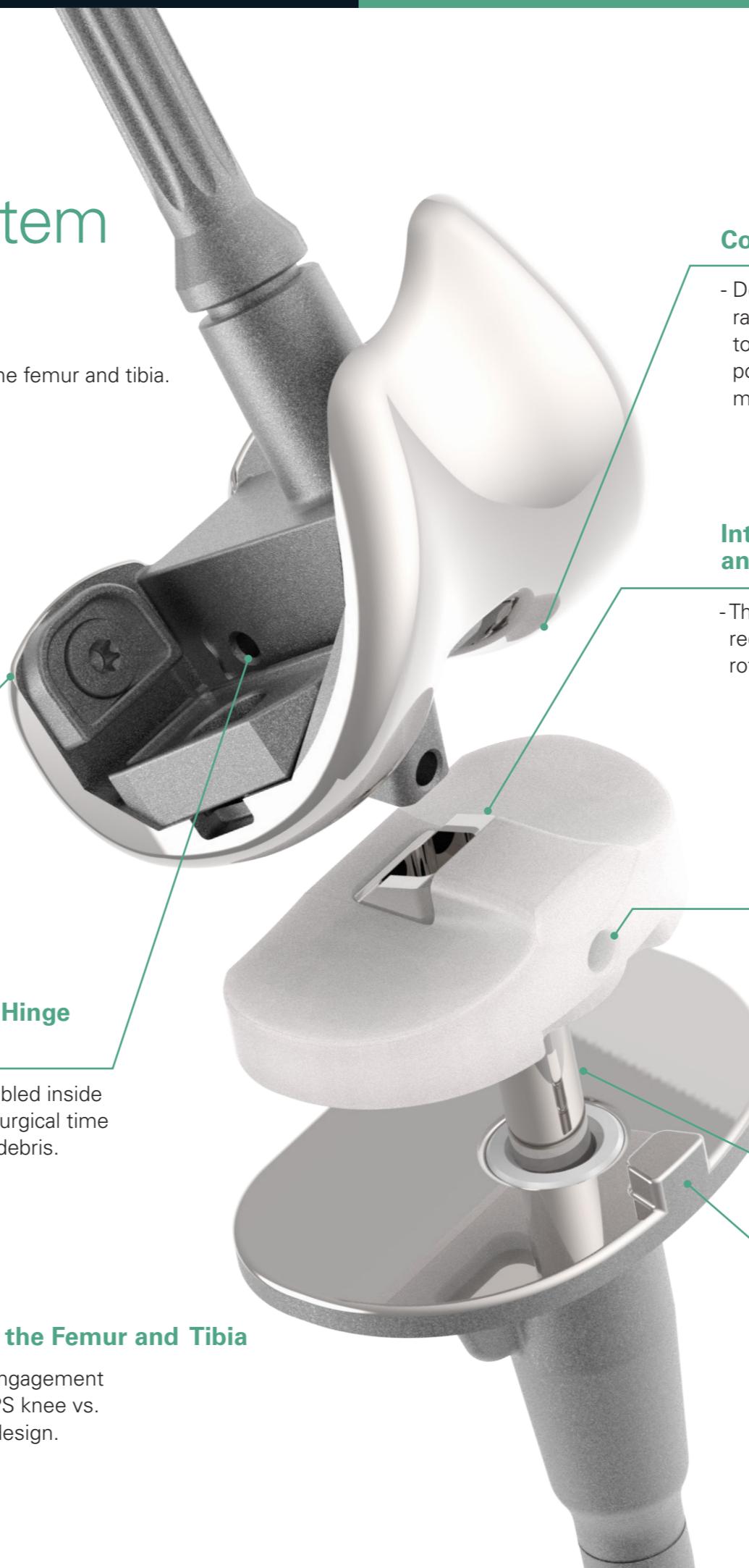
Small Profile, Pre-assembled Hinge Mechanism

- The hinge mechanism is pre-assembled inside the femoral component to reduce surgical time and potential for wear and cement debris.



Hinge Mechanism Centered on the Femur and Tibia

- Designed to provide a femoral-tibial engagement point more comparable to a primary PS knee vs. a traditional 'book-end' engagement design.



Condylar Loading Design

- Designed to transfer $\geq 95\%$ of the load during range of motion through the femoral condyles to the central portion of the tibia to reduce the potential for component loosening and hinge mechanism failure^[1].



Interlocking Femoral Component and Tibial Insert

- The hinge assembly is connected with a rectangular inter-locking design to control the rotational movement of the tibial insert.



Connected Intra-operatively by a Single Screw

- The set screw is pre-positioned in the tibial insert to reduce surgical time and is designed to prevent back-out.



Forged Tibial Post

- The forged Cobalt Chromium (CoCr) post has a minimum jump-height of $> 40\text{ mm}$.



Rotating Platform

- Designed with a built-in tibial rotation stopper to allow $\pm 25^\circ$ of tibial insert rotation for improved movement.

USTAR II Limb Salvage System

USTAR II has a comprehensive range of segment and stem options and is designed to offer soft-tissue 'friendly' components with a more secured connection.

Features a bone preserving implant design and reduced length segment options to allow the opportunity for reduced resections and the chance to preserve bone.

The USTAR II Limb Salvage System has the same novel hinge mechanism as the USTAR II Primary and Revision Hinge Knee System.



Comprehensive Segment Options

- 21 segment length options from 25 mm to 220 mm with suture/wire holes distributed adjacent to the components.



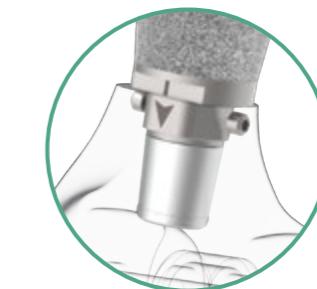
Expanded Portfolio of Cemented and Press-Fit Stems

- USTAR II features over 50 different megaprosthesis stem options, including fixed and curved, coated and low-profile non-coated cemented stems and full-coated cementless, press-fit stems.



'Tissue Friendly' Component Design

- An expanded offering of suture/wire holes and extensive Titanium Plasma Spray (TPS) coating area is designed to provide expanded tissue and bone attachment options.



Enhanced Junction Fixation

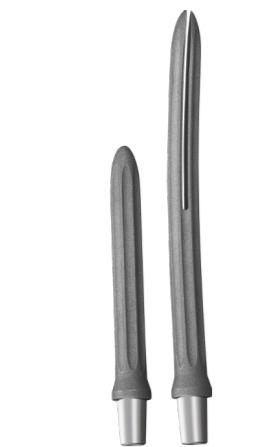
- Designed with dual set screws and anti-rotation hex connection. The set screws are designed for enhanced fixation vs. taper-fixation only designs. The anti-rotation hex connection is intended to prevent mal-connection.



Smaller Profile Component Design

- Components are designed with a smaller profile to provide a minimal resection option for the DFR (61 mm minimal resection), the PFR (70 mm) and PTR (87 mm) implants when paired with the non-coated, low profile cemented stem.

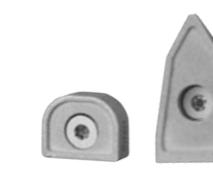
The USTAR II System Overview



Femoral Press-Fit Stem Options^[2]



Femoral Offset Adaptor Options^[2]



Femoral Distal and Posterior Augment Options^[2]



Tibial Augment Options



Hinge Femoral Components



Hinge Tibial Baseplate Components



Tibial Stem Options

Proximal Femoral Replacement (PFR) Components



Low-Profile



Standard Trochanteric



Trochanteric Claw Plate Options



Bridge Implant Segment



Implant Segment Options



Distal Femoral Replacement (DFR) Components



Proximal Tibial Replacement (PTR) Components



Megaprosthetic Stem Options

^[2] These items only are the same used in PSA Revision Knee System

Order Information

Proximal Femoral Replacement (PFR) Component

Offered in standard trochanteric and low-profile configurations. Each configuration has a Left and Right option. The component has 15° femoral ante-version and a 130° neck angle. The component length is 64 mm. The minimum proximal femoral resection is 70 mm. Made with Cobalt Chromium (CoCr) and 500-Micron Titanium Plasma Spray (TPS) coating.



| Standard Trochanteric | |
|-----------------------|-----------|
| Left | Right |
| 1115-9110 | 1115-9210 |



| Low Profile | |
|-------------|-----------|
| Left | Right |
| 1115-9120 | 1115-9220 |

* Low Profile type is not CE Marked

Hinge Femoral Component

Compatible with the Hinge Tibial Baselpate and Proximal Tibial Replacement components. Each size and has a Left and Right option. Made with Cobalt Chromium (CoCr).



| | Left | Right | A/P | M/L |
|----|-----------|-----------|-----|-----|
| #1 | 2115-1310 | 2115-1410 | 52 | 56 |
| #2 | 2115-1320 | 2115-1420 | 56 | 60 |
| #3 | 2115-1330 | 2115-1430 | 60 | 64 |
| #4 | 2115-1340 | 2115-1440 | 64 | 68 |
| #5 | 2115-1350 | 2115-1450 | 68 | 72 |
| #6 | 2115-1360 | 2115-1460 | 72 | 76 |

Note :
All sizes of Femoral Components fits all Tibial Inserts

Distal Femoral Replacement (DFR) Component

The standard option is size Small. Includes Left and Right options. The component length is 55 mm. The minimum distal femoral resection is 61 mm. Made with Cobalt Chromium (CoCr).



| | Left | Right | A/P | M/L |
|---|-----------|-----------|-----|-----|
| S | 2115-3310 | 2115-3410 | 52 | 56 |

Order Information

XPE Tibial Insert Options

Compatible with the Hinge Tibial Baselpate and Proximal Tibial Replacement components. Made with HXLPE (Highly-Cross Linked Polyethylene), Titanium (Ti) Alloy screw and a forged Cobalt Chromium (CoCr) post.



| | 12 mm | 14 mm | 17 mm | 20 mm | 23 mm | 26 mm | 30 mm |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| S | 2315-3211 | 2315-3212 | 2315-3213 | 2315-3214 | 2315-3215 | 2315-3216 | 2315-3217 |
| M | 2315-3241 | 2315-3242 | 2315-3243 | 2315-3244 | 2315-3245 | 2315-3246 | 2315-3247 |

Note :
1. Size S match #1 - #3 Baseplate
2. Size M match #4 - #6 Baseplate

Hinge Tibial Baseplate

Compatible with the Hinge Femoral and Distal Femoral Replacement components. Made with Cobalt Chromium (CoCr).



| | Cat. No. | A/P | M/L |
|----|-----------|-----|-----|
| #1 | 2215-1410 | 42 | 63 |
| #2 | 2215-1420 | 45 | 66 |
| #3 | 2215-1430 | 47 | 69 |
| #4 | 2215-1440 | 50 | 72 |
| #5 | 2215-1450 | 53 | 76 |
| #6 | 2215-1460 | 56 | 80 |

Note :
No offset option for tibial baseplate

Proximal Tibial Replacement (PTR) Component

Compatible with the Hinge Femoral and Distal Femoral Replacement components. The standard option is size Small. The component length is 81mm (with 12 mm thickness tibial insert). The minimum proximal tibial resection is 87 mm. Made with Cobalt Chromium (CoCr) and 500-Micron Titanium Plasma Spray (TPS) coating.



| | Cat. No. | A/P | M/L |
|---|-----------|-----|-----|
| S | 2215-3410 | 42 | 63 |

Order Information

Implant Segment Options

The component diameter is 22 mm. Made with Titanium (Ti) Alloy.



| 25 mm | 30 mm | 40 mm | 50 mm | 60 mm | 70 mm | 80 mm |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2915-1025 | 2915-1030 | 2915-1040 | 2915-1050 | 2915-1060 | 2915-1070 | 2915-1080 |
| 90 mm | 100 mm | 110 mm | 120 mm | 130 mm | 140 mm | 150 mm |
| 2915-1090 | 2915-1100 | 2915-1110 | 2915-1120 | 2915-1130 | 2915-1140 | 2915-1150 |
| 160 mm | 170 mm | 180 mm | 190 mm | 200 mm | 210 mm | 220 mm |
| 2915-1160 | 2915-1170 | 2915-1180 | 2915-1190 | 2915-1200 | 2915-1210 | 2915-1220 |

Order Information

Cemented Megaprostheses Stem Options

Made with forged CoCr Alloy. The stem with the coated proximal body includes a 500-Micron Titanium Plasma Spray (TPS) coating.



Coated Standard Cemented Stems

| | Straight | | Curved | |
|-----|-----------|-----------|-----------|-----------|
| | 100 mm | 125 mm | 125 mm | 150 mm |
| Ø9 | 2715-1009 | 2715-1109 | 2515-1109 | 2515-1209 |
| Ø11 | 2715-1011 | 2715-1111 | 2515-1111 | 2515-1211 |
| Ø13 | 2715-1013 | 2715-1113 | 2515-1113 | 2515-1213 |
| Ø15 | 2715-1015 | 2715-1115 | 2515-1115 | 2515-1215 |
| Ø17 | 2715-1017 | 2715-1117 | 2515-1117 | 2515-1217 |

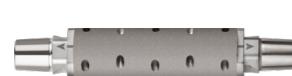


Non-Coated, Low Profile Cemented Stems

| | Straight | | Curved | |
|-----|-----------|-----------|-----------|-----------|
| | 100 mm | 125 mm | 125 mm | 150 mm |
| Ø9 | 2715-3009 | 2715-3109 | 2515-3109 | 2515-3209 |
| Ø11 | 2715-3011 | 2715-3111 | 2515-3111 | 2515-3211 |
| Ø13 | 2715-3013 | 2715-3113 | 2515-3113 | 2515-3213 |
| Ø15 | 2715-3015 | 2715-3115 | 2515-3115 | 2515-3215 |
| Ø17 | 2715-3017 | 2715-3117 | 2515-3117 | 2515-3217 |

Bridge Implant Segment

The component diameter is 22 mm. Made with Titanium (Ti) Alloy.



80 mm
2915-3080

Full-Coated Cementless Megaprostheses Stem Options

Made with Titanium (Ti) Alloy and 500-Micron Titanium Plasma Spray (TPS) coating.

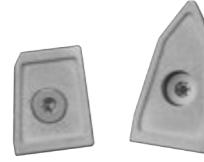


| | Straight | | Curved | |
|-----|-----------|-----------|-----------|-----------|
| | 150 mm | 200 mm | 150 mm | 200 mm |
| Ø11 | 1115-3211 | 1115-3411 | 1115-1211 | 1115-1411 |
| Ø13 | 1115-3213 | 1115-3413 | 1115-1213 | 1115-1413 |
| Ø15 | 1115-3215 | 1115-3415 | 1115-1215 | 1115-1415 |
| Ø17 | 1115-3217 | 1115-3417 | 1115-1217 | 1115-1417 |

Order Information

Femoral Component Options

Made with Titanium (Ti) Alloy unless otherwise noted.



| Distal Femoral Augment | | | | | |
|------------------------|--------------|--------------|--------------|--------------|-----------|
| | 4 mm LM / RL | 4 mm LL / RM | 8 mm LM / RL | 8 mm LL / RM | 12 mm |
| #1 | 2603-5111 | 2603-5211 | 2603-5112 | 2603-5212 | 2603-5313 |
| #2 | 2603-5121 | 2603-5221 | 2603-5122 | 2603-5222 | 2603-5323 |
| #3 | 2603-5131 | 2603-5231 | 2603-5132 | 2603-5232 | 2603-5333 |
| #4 | 2603-5141 | 2603-5241 | 2603-5142 | 2603-5242 | 2603-5343 |
| #5 | 2603-5151 | 2603-5251 | 2603-5152 | 2603-5252 | 2603-5353 |
| #6 | 2603-5161 | 2603-5261 | 2603-5162 | 2603-5262 | 2603-5363 |
| | | | | | 2603-5364 |

Note :

1. LM / RL : Left Medial or Right Lateral
2. LL / RM : Left Lateral or Right Medial
3. 12 mm and 16 mm augments are symmetrical shape, x2 shall be prepared for each surgery
4. 12 mm and 16 mm augments are unable to use together with posterior augments

| Posterior Femoral Augment | | |
|---------------------------|-----------|-----------|
| | 4 mm | 8 mm |
| #1 | 2603-5011 | 2603-5012 |
| #2 | 2603-5021 | 2603-5022 |
| #3 | 2603-5031 | 2603-5032 |
| #4 | 2603-5041 | 2603-5042 |
| #5 | 2603-5051 | 2603-5052 |
| #6 | 2603-5061 | 2603-5062 |



| Offset Adaptor | | |
|----------------|-----------|-----------|
| | 2 mm | 4 mm |
| 2903-1010 | 2903-1020 | 2903-1030 |



| Straight Press-Fit Femoral Stems | | | | | |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|
| | 30 mm | 75 mm | 100 mm | 150 mm | 200 mm |
| Ø10 | NA | 2703-5011 | 2703-5021 | 2703-5051 | 2703-5061 |
| Ø12 | NA | 2703-5012 | 2703-5022 | 2703-5052 | 2703-5062 |
| Ø14 | 2703-5003 | 2703-5013 | 2703-5023 | 2703-5053 | 2703-5063 |
| Ø16 | NA | 2703-5014 | 2703-5024 | 2703-5054 | 2703-5064 |
| Ø18 | NA | 2703-5015 | 2703-5025 | 2703-5055 | 2703-5065 |
| Ø20 | NA | 2703-5016 | 2703-5026 | 2703-5056 | 2703-5066 |
| Ø22 | NA | 2703-5017 | 2703-5027 | 2703-5057 | 2703-5067 |
| Ø24 | NA | 2703-5018 | 2703-5028 | 2703-5058 | NA |

Note : Designed for press-fit fixation

Order Information

Tibial Baseplate Component Options

Made with Titanium (Ti) Alloy unless otherwise noted.



| Tibial Augment | | | |
|----------------|-----------|-----------|---------------|
| | 5 mm | 10 mm | 15 mm LM / RL |
| #1 | 2815-1011 | 2815-1012 | 2815-1113 |
| #2 | 2815-1021 | 2815-1022 | 2815-1123 |
| #3 | 2815-1031 | 2815-1032 | 2815-1133 |
| #4 | 2815-1041 | 2815-1042 | 2815-1143 |
| #5 | 2815-1051 | 2815-1052 | 2815-1153 |
| #6 | 2815-1061 | 2815-1062 | 2815-1163 |
| | | | 2815-1263 |

Note :

1. LM / RL : Left Medial or Right Lateral
2. LL / RM : Left Lateral or Right Medial
3. 5 mm and 10 mm augments are symmetrical shape, x2 shall be prepared for each surgery



| Cemented Tibial Stem | | | | | |
|----------------------|-----------|-----------|-----------|-----------|-----------|
| | 20 mm | 45 mm | 70 mm | 95 mm | 120 mm |
| Ø9 | 2715-5109 | 2715-5209 | 2715-5309 | 2715-5409 | 2715-5509 |
| | | | | 2715-5609 | |

Made with Cobalt Chromium (CoCr).

| Press-Fit Tibial Stem | | | |
|-----------------------|-----------|-----------|-----------|
| | 45 mm | 70 mm | 95 mm |
| Ø12.5 | 2715-7212 | 2715-7312 | 2715-7412 |
| Ø14 | 2715-7214 | 2715-7314 | 2715-7414 |
| | | | 2715-7512 |
| | | | 2715-7514 |

Cement Restrictor, I-Type

Made with UHMWPE (Ultra High Molecular Weight Polyethylene).



| Cat. No. | Size | Canal size (mm) |
|-----------|------|-----------------|
| 1907-1008 | #8 | 8-9 |
| 1907-1010 | #10 | 10-11 |
| 1907-1012 | #12 | 12-13 |
| 1907-1014 | #14 | 14-15 |
| 1907-1016 | #16 | 16-17 |
| 1907-1018 | #18 | 18-19 |

Order Information

BIOLOX® *delta* Ceramic Femoral Head Options



| | -3 mm | -2.5 mm | +1 mm | +4 mm | +5 mm | +8 mm | +9 mm |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ø28 | NA | 1203-5028 | 1203-5228 | 1203-5428 | NA | NA | NA |
| Ø32 | 1203-5032 | NA | 1203-5232 | NA | 1203-5432 | 1203-5632 | NA |
| Ø36 | 1203-5036 | NA | 1203-5236 | NA | 1203-5436 | NA | 1203-5636 |
| Ø40 | 1203-1036 | NA | 1203-1136 | NA | 1203-1236 | NA | 1203-1436 |

*BIOLOX® is a registered trademark of the CeramTec Group, Germany

Cobalt Chrome (CoCr) Femoral Head Options



| | -3 mm | -2 mm | +0 mm | +2.5 mm | +3 mm | +5 mm | +6 mm | +7.5 mm | +9 mm | +10 mm |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ø22 | NA | NA | 1206-1122 | NA | 1206-1322 | NA | 1206-1522 | NA | 1206-1722 | NA |
| Ø26 | NA | 1206-1026 | 1206-1126 | NA | 1206-1326 | NA | 1206-1526 | NA | 1206-1726 | NA |
| Ø28 | 1206-1028 | NA | 1206-1128 | 1206-1228 | NA | 1206-1428 | NA | 1206-1628 | NA | 1206-1828 |
| Ø32 | 1206-1032 | NA | 1206-1132 | 1206-1232 | NA | 1206-1432 | NA | 1206-1632 | NA | 1206-1832 |
| Ø36 | 1206-1036 | NA | 1206-1136 | 1206-1236 | NA | 1206-1436 | NA | 1206-1636 | NA | 1206-1836 |

Order Information

Trochanteric Claw Plate Options

Made with Cobalt Chromium (CoCr).



| Size | Cat. No. |
|-------|-----------|
| Small | 1915-1010 |
| Large | 1915-1020 |

* Trochanteric Claws are not CE Marked

Femoral Screw

Made with Titanium (Ti) Alloy.



| | |
|------------|-----------|
| M5 x 14 mm | 2903-1014 |
|------------|-----------|

Extra Small (XS) Limb Salvage Options

Extra Small (XS) components are compatible only with each-other (E.g. a DFR component with a hinge tibial baseplate, or a hinge femur with a PTR component). Extra Small (XS) components are compatible with standard size implant segments and megaprosthesis stems.

Extra Small (XS) Hinge Femoral Component

Includes a Left and Right option. Has a fixed femoral stem length. Distal and posterior femoral resections are 7 mm. No augment or offset options are available. Made with Cobalt Chromium (CoCr).



| Left | Right | A/P | M/L |
|-----------|-----------|-----|-----|
| 2115-1300 | 2115-1400 | 45 | 50 |

Extra Small (XS) Distal Femoral Replacement Component

Includes a Left and Right option. The component length is 50 mm. The minimum distal femoral resection is 56 mm. Made with Cobalt Chromium (CoCr).



| Left | Right | A/P | M/L |
|-----------|-----------|-----|-----|
| 2115-3300 | 2115-3400 | 45 | 50 |

Extra Small (XS) Limb Salvage Options

Extra Small (XS) XPE Tibial Insert

Compatible with the Extra Small (XS) Hinge Tibial Baseplate and Extra Small (XS) Proximal Tibial Replacement component. Made with HXLPE (Highly-Cross Linked Polyethylene), Titanium (Ti) Alloy screw and a forged Cobalt Chromium (CoCr) post.



12 mm
2315-3201

Extra Small (XS) Proximal Tibial Replacement Component

Compatible with the Extra Small (XS) Hinge Femoral and Extra Small (XS) Distal Femoral Replacement components. The component length is 73 mm (with XS tibial insert). The minimum proximal tibial resection is 79 mm. Made with Cobalt Chromium (CoCr) and 500-Micron Titanium Plasma Spray (TPS) coating.



| Cat. No. | A/P | M/L |
|-----------|-----|-----|
| 2215-3400 | 38 | 58 |

Extra Small (XS) Hinge Tibial Baseplate

Compatible with the Extra Small (XS) Distal Femoral Replacement component. Made with Cobalt Chromium (CoCr).



| Cat. No. | A/P | M/L |
|-----------|-----|-----|
| 2215-1400 | 38 | 58 |

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