

GTF II™ Stem

Revision Femoral Hip System



Surgical Technique Guide

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Device Description

GTF II stem –

The GTF II stem is a cemented stem indicated for patients with femoral head, neck and intertrochanteric fractures, and severe proximal bone loss. Its adoption of a cement friendly trapezoidal cross-sectional geometric design facilitates in the reduction of bone-cement interface stresses to avoid cement failure.

The GTF II stem allows for two resection levels, and offers two options of stem diameter and stem length to account for differing bone conditions.

INDICATIONS

For use as a Bipolar Hip Replacement

1. Femoral head/neck fractures or non-unions.
2. Aseptic necrosis of the femoral head.
3. Osteo-, rheumatoid, and post-traumatic arthritis of the hip with minimal acetabular involvement or distortion.

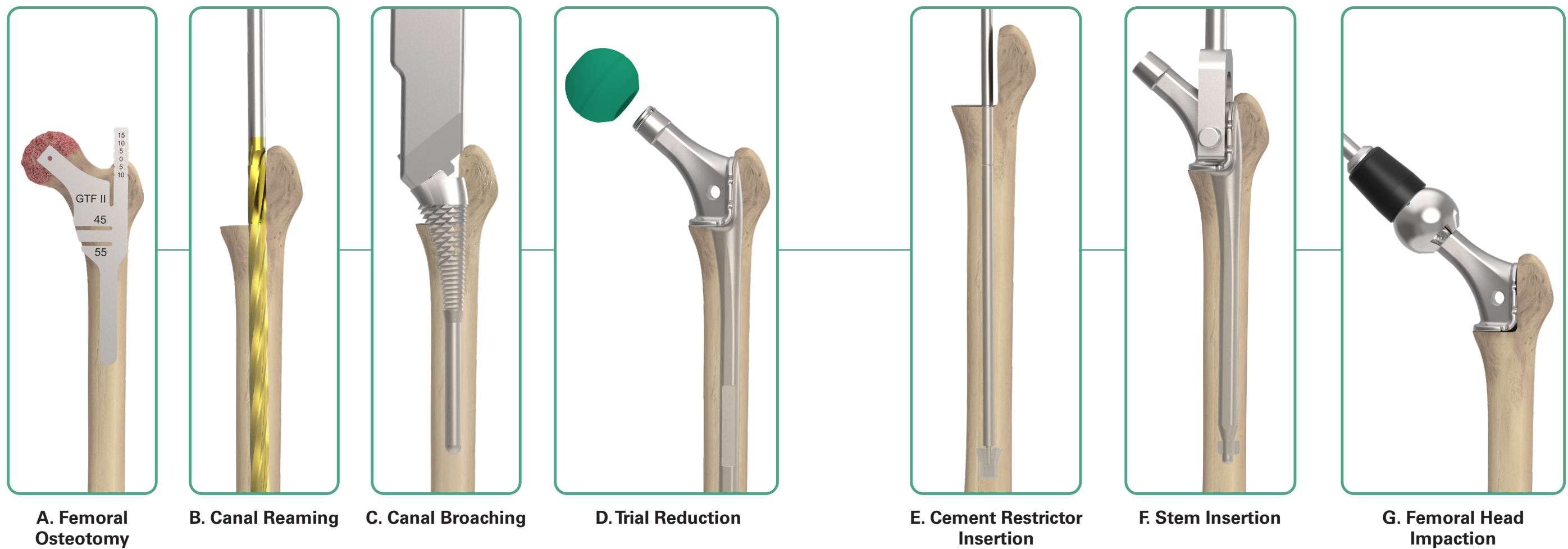
For use as a Total Hip Replacement

1. Painful, disabling joint disease of the hip resulting from: degenerative arthritis, rheumatoid arthritis, post-traumatic arthritis or late stage avascular necrosis.
2. Revision of previous unsuccessful femoral head replacement, cup arthroplasty or other procedure.
3. Clinical management problems where arthrodesis or alternative reconstructive techniques are less likely to achieve satisfactory results.

Please refer to the package inserts for important product information, including, but not limited to contraindications, warnings, precautions, and adverse effects.



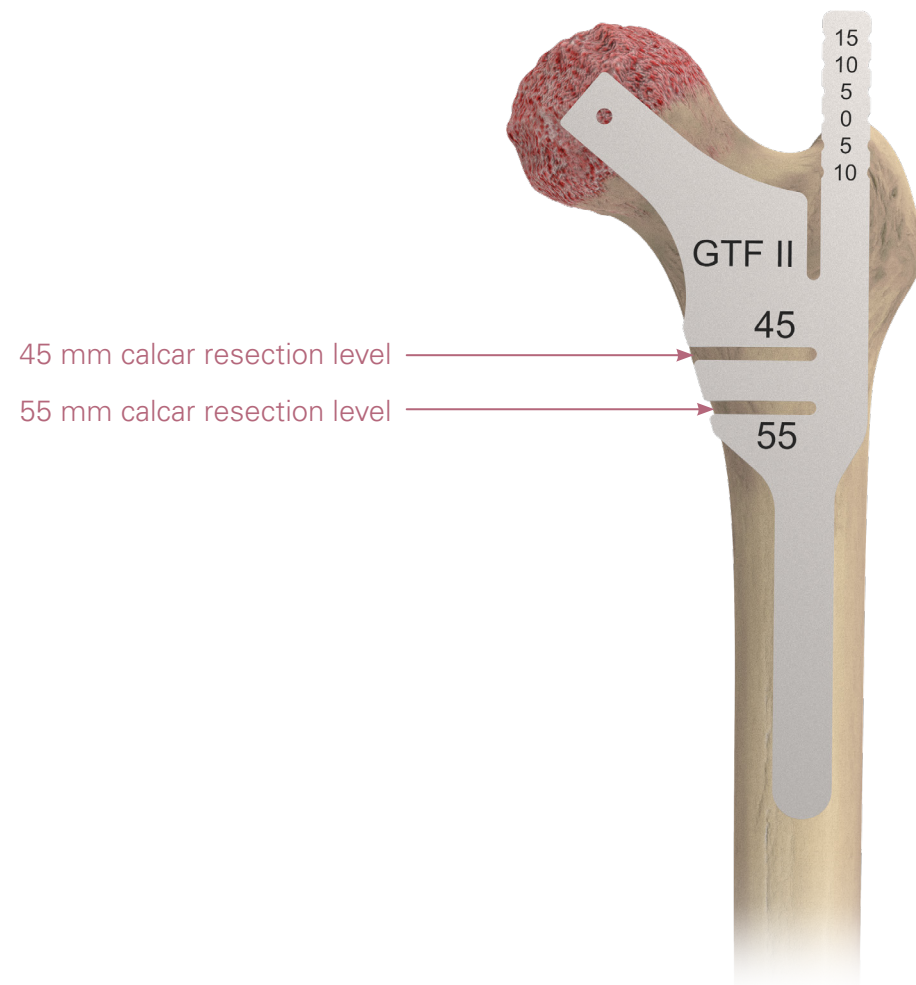
Surgical Overview



A. Femoral Osteotomy

The proximal femoral resection can be determined via the level of bone loss. The 45 mm calcar resection level is appropriate for bone loss above the lesser trochanter whereas the 55 mm resection is designed for bone loss below the lesser trochanter.

Use the **GTF II Stem Resection Guide** to mark the desired bone resection level and finish femoral resection. Thorough debridement of the femur and accurate preparation of the resected platform is important for prosthesis seating.



Instruments



GTF II Stem Resection Guide

B. Canal Reaming

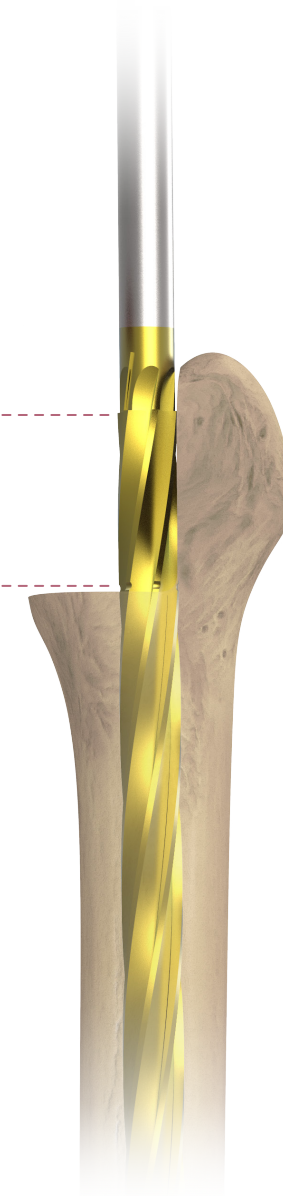
The length options of the stem include 130 mm and 160 mm. Ream to the appropriate depth according to the depth marking on the **GTF II Stem Reamer**.

Note:

It is recommended that final reamer diameter be 3 mm larger or more to allow a proper cement mantle thickness.

Depth marking, 160 mm

Depth marking, 130 mm



Instruments



GTF II Stem Reamer

C. Canal Broaching

Shape the proximal femoral canal by using the **GTF II Stem Broach** and the **Broach Handle**.

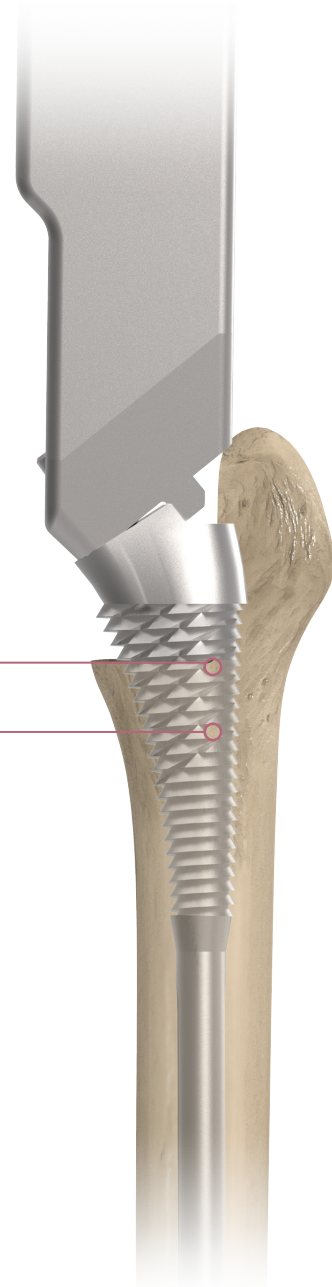
The two holes on the broach indicate the references of the 45 mm and 55 mm calcar resection. Stop at the correct calcar resection as selected.

⚠ Caution:

Do not fully advance the broach into the canal.

45 mm calcar resection

55 mm calcar resection



Instruments



GTF II Stem Broach



Broach Handle

D. Trial Reduction

Once the canal is well-prepared, utilize the **GTF II Stem Trial** and **Femoral Head Trial** to perform trial reduction for desired assessment of leg length and functional check.

✓ Note:

The size and label on the stem trial are the same as the actual implant without the thickness of cement mantle.



Instruments



GTF II Stem Trial

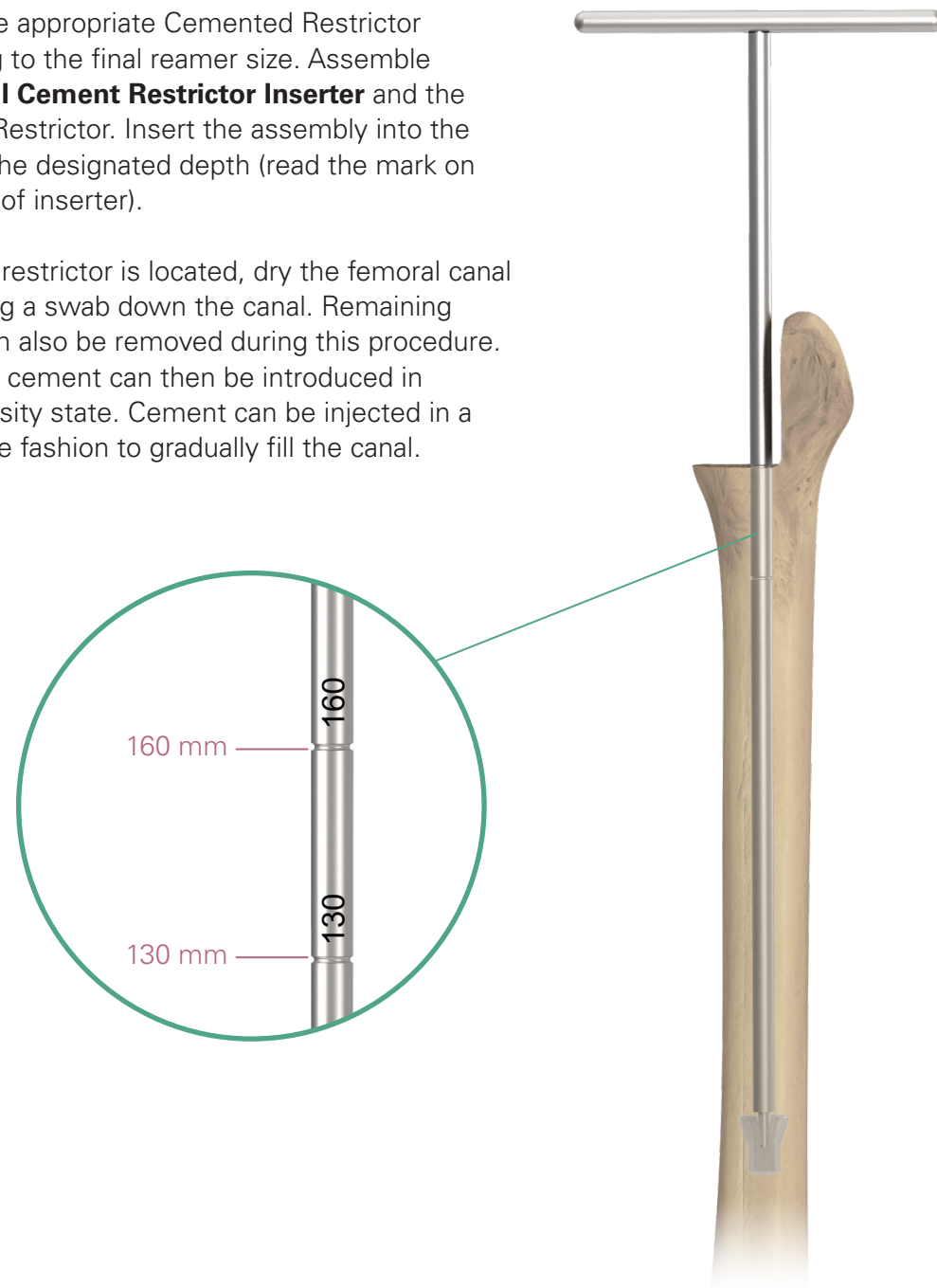


Femoral Head Trial

E. Cement Restrictor Insertion

Select the appropriate Cemented Restrictor according to the final reamer size. Assemble the **GTF II Cement Restrictor Inserter** and the Cement Restrictor. Insert the assembly into the canal to the designated depth (read the mark on the shaft of inserter).

After the restrictor is located, dry the femoral canal by passing a swab down the canal. Remaining debris can also be removed during this procedure. The bone cement can then be introduced in low viscosity state. Cement can be injected in a retrograde fashion to gradually fill the canal.



Instruments



GTF II Cement Restrictor Inserter

F. Stem Insertion

Use the size of the final reamer to select the proper Centralizer attached at the tip of the stem.

Use the **GTF II Stem Inserter** together with the **GTF II Stem Head Pin** to hold and place the stem into the canal. If needed, cable the greater trochanter with the stem via the cutouts of the lateral flange and through the hole.



Instruments



GTF II Stem Inserter



GTF II Stem Head Pin

G.Femoral Head Impaction

Perform a final trial reduction to confirm stability and leg length by using the **Femoral Head Trials**. After the appropriate femoral head size has been determined, place it onto the cleaned and dried trunnion by hand.

Connect the **Femoral Head Impactor** and **Universal Handle** and moderately impact the femoral head until it is firmly seated.



Instruments



Femoral Head Trial



Femoral Head Impactor



Universal Handle

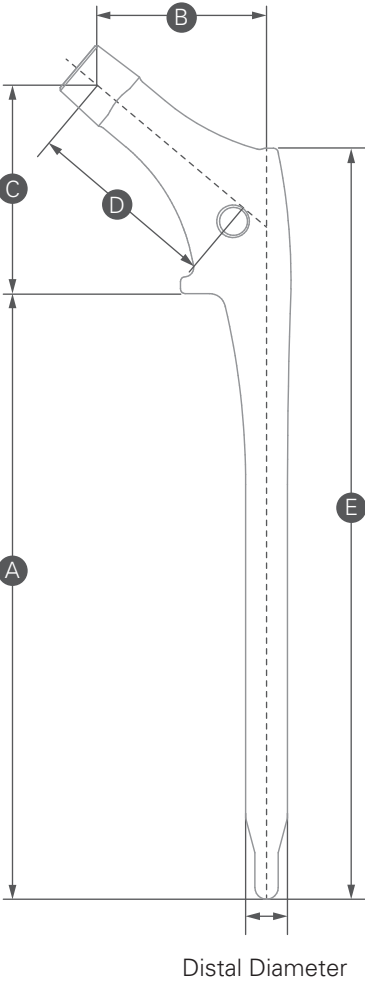
Order Information

Catalog Number	Description
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GTF II Stem



	Distal Diameter	Resection Level	Medial Length
1108 - 3041	Ø 9 mm	45 mm	130 mm
1108 - 3043	Ø 9 mm	45 mm	160 mm
1108 - 3051	Ø 9 mm	55 mm	130 mm
1108 - 3053	Ø 9 mm	55 mm	160 mm
1108 - 5041	Ø 11 mm	45 mm	130 mm
1108 - 5043	Ø 11 mm	45 mm	160 mm
1108 - 5051	Ø 11 mm	55 mm	130 mm
1108 - 5053	Ø 11 mm	55 mm	160 mm



Distal Diameter	A Medial Length	B Offset	C Vertical Height	D Neck Length	E Lateral Length
Ø 9	130	36	45	47	161
Ø 9	160	36	45	47	191
Ø 9	130	36	55	47	161
Ø 9	160	36	55	47	191
Ø 11	130	39	45	51	161
Ø 11	160	39	45	51	191
Ø 11	130	39	55	51	161
Ø 11	160	39	55	51	191

Unit: mm

Catalog Number	Description
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Centralizer




1904 - 5010	Ø 10 mm
1904 - 5011	Ø 11 mm
1904 - 5012	Ø 12 mm
1904 - 5013	Ø 13 mm
1904 - 5014	Ø 14 mm

Cement Restrictor



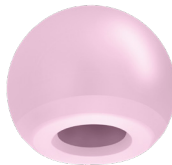
	ØA	ØB
1905 - 7007	7 mm	13 mm
1905 - 7008	8 mm	14 mm
1905 - 7009	9 mm	15 mm
1905 - 7010	10 mm	16 mm
1905 - 7011	11 mm	17 mm
1905 - 7012	12 mm	18 mm
1905 - 7013	13 mm	19 mm
1905 - 7014	14 mm	20 mm
1905 - 7015	15 mm	21 mm
1905 - 7016	16 mm	22 mm

Femoral Head

Catalog Number		Description (mm)	
U2 Femoral Head 	1206 - 1122	* Ø 22	+ 0
	1206 - 1322	* Ø 22	+ 3
	1206 - 1522	* Ø 22	+ 6
	1206 - 1722	* Ø 22	+ 9
	1206 - 1026	Ø 26	- 2
	1206 - 1126	Ø 26	+ 0
	1206 - 1326	Ø 26	+ 3
	1206 - 1526	Ø 26	+ 6
	1206 - 1726	Ø 26	+ 9
	1206 - 1028	Ø 28	- 3
	1206 - 1128	Ø 28	+ 0
	1206 - 1228	Ø 28	+ 2.5
	1206 - 1428	Ø 28	+ 5
	1206 - 1628	Ø 28	+ 7.5
	1206 - 1828	Ø 28	+ 10
	1206 - 1032	Ø 32	- 3
	1206 - 1132	Ø 32	+ 0
	1206 - 1232	Ø 32	+ 2.5
	1206 - 1432	Ø 32	+ 5
	1206 - 1632	Ø 32	+ 7.5
	1206 - 1832	Ø 32	+ 10
	1206 - 1036	Ø 36	- 3
	1206 - 1136	Ø 36	+ 0
	1206 - 1236	Ø 36	+ 2.5
	1206 - 1436	Ø 36	+ 5
	1206 - 1636	Ø 36	+ 7.5
	1206 - 1836	Ø 36	+ 10

* The actual spherical diameter of a 22 mm metal head is 22.2 mm.

Femoral Head

Catalog Number		Description (mm)	
BIOLOX® delta Ceramic Head 	1203 - 5028	Ø 28	S - 2.5
	1203 - 5228	Ø 28	M + 1
	1203 - 5428	Ø 28	L + 4
	1203 - 5032	Ø 32	S - 3
	1203 - 5232	Ø 32	M + 1
	1203 - 5432	Ø 32	L + 5
	1203 - 5632	Ø 32	XL + 8
	1203 - 5036	Ø 36	S - 3
	1203 - 5236	Ø 36	M + 1
	1203 - 5436	Ø 36	L + 5
	1203 - 5636	Ø 36	XL + 9
	1203 - 5040	Ø 40	S - 3
	1203 - 5240	Ø 40	M + 1
	1203 - 5440	Ø 40	L + 5
	1203 - 5640	Ø 40	XL + 9

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



Each Step
We Care

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