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Cemented Hip Joint Cup - type 02/II



Preface

This publication should serve as an surgical manual for implanting the concrete implant and instrumentation set. For reasons of brevity is focused only on the matter of implanting the given type of endoprosthesis, and it assumes that the surgeon in charge and other personnel are fully acquainted with the general rules for the replacement of a hip joint. The aim of the publication is to allow doctors and suture nurses rapid acquaintance with and correct use of the individual elements of the instrumentation set in order that optimal results are achieved and, last but not least, so that there should not be needless damage and depreciation of the instrumentation set or even the implant. In no way is this a textbook of surgical technique.



Description of implant

The cemented cup of the type 02/II has been designed on the basis of the latest findings concerning methods of cement fixing and experience with previous types of cup.

For correct function of the cup it is essential for the layer of cement to be of equal thickness on the entire interface between the surface of the polyethylene cup and the prepared acetabulum and for it to be well compressed and forced into the osseous bed and the grooves on the surface of the cup which secure the cup against rotation and movement in the acetabulum.

The external shape of the cup consists of a spherical surface around the circumference which are six fixing points of so-called centralizers, and one on the cap. The height of the centralizers secures the eccentric cup in the prepared acetabulum and coverage of the entire polyethylene surface of the cup with a cement layer 2mm thick. Many radial and diagonal grooves on this surface secure the cup in the acetabulum against movement and rotation.

On the upper part on perimeter it has a compression collar with three grooves for the compression and the venting of surplus bone cement.

A diagnostic ring in the upper part above the collar makes it possible to ascertain the position of the cup on an x-ray. For an offset cup there is also a diagnostic peg located at the highest point of the cup in parallel with the axis.

Characteristics of implant:

Material: Crosslinked UHMWPE (ISO 5834-2)

Significant improvement in abrasion resistance.

Use of centralizers

Centralizers ensure an even 2mm layer of bone cement.

Stamped-on centralizers

There is no danger of them coming loose.

Compression collar

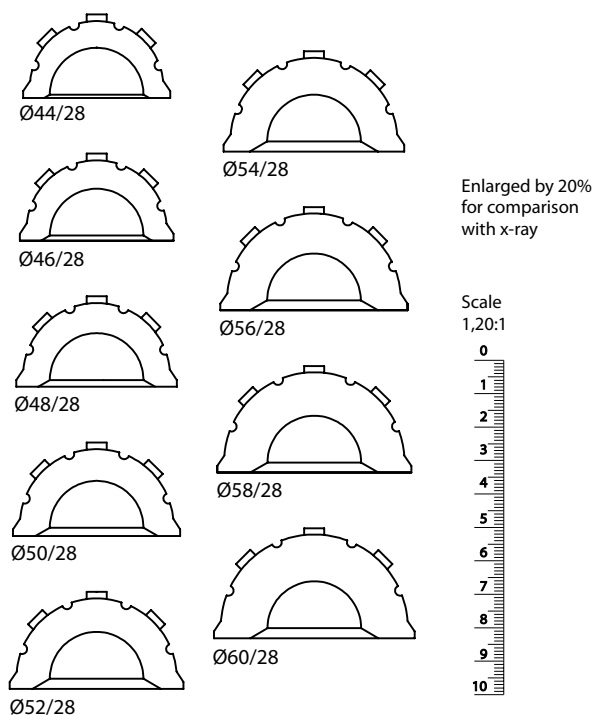
Filling of entire acetabulum with bone cement.

Various options:

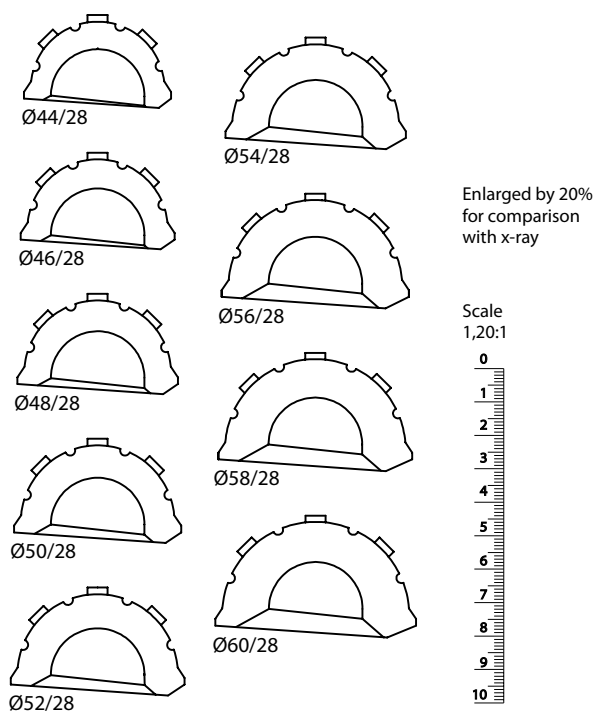
- Standard – for most indications.
- Offset – with raised edge where there is a danger of luxation.
- Antiluxation – provides maximum protection against luxation.

Example of supplied templates for comparison with x-ray

Cemented hip joint cup - type 02/II Standard



Cemented hip joint cup - type 02/II Offset



Conversion tables of cups of original option - type 02 and new option - type 02/II (Crosslinked)

ORIGINAL OPTION		NEW OPTION CROSSLINKED	
Type 02/N - Ø28 (Standard)		Type 02/II/N - Ø28 (Standard)	
Ø	Order number	Ø	Order number
44	330600	44	330880
46	330602	46	330881
48	330604	48	330882
50	330606	50	330883
52	330608	52	330884
54	330610	54	330885
56	330612	56	330886
58	330614	58	330887
60	330616	60	330888

ORIGINAL OPTION		NEW OPTION CROSSLINKED	
Type 02/N - Ø32 (Standard)		Type 02/II/N - Ø32 (Standard)	
Ø	Order number	Ø	Order number
48	330804	48	330931
50	330806	50	330932
52	330808	52	330933
54	330810	54	330934
56	330812	56	330935
58	330814	58	330936
60	330816	60	330937

Type 02/10 - Ø28 (Offset)		Type 02/II/10 - Ø28 (Offset)	
Ø	Order number	Ø	Order number
44	330620	44	330890
46	330622	46	330891
48	330624	48	330892
50	330626	50	330893
52	330628	52	330894
54	330630	54	330895
56	330632	56	330896
58	330634	58	330897
60	330636	60	330898

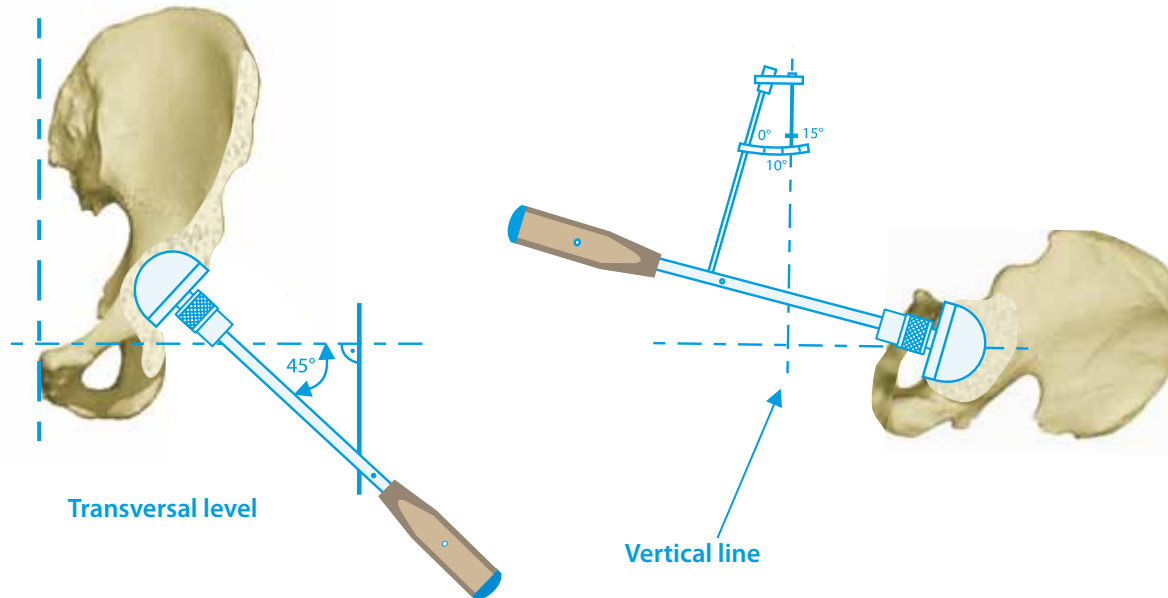
Typ 02/10 - Ø32 (Offset)		Typ 02/II/10 - Ø32 (Offset)	
Ø	Order number	Ø	Order number
48	330824	48	330941
50	330826	50	330942
52	330828	52	330943
54	330820	54	330944
56	330822	56	330945
58	330824	58	330946
60	330826	60	330947

Type 02/10 - Ø28 (Antiluxation)		Typ 02/II/A - Ø28 (Antiluxation)	
Ø	Order number	Ø	Order number
44	330660		
46	330662	46	330901
48	330664	48	330902
50	330666	50	330903
52	330668	52	330904
54	330660	54	330905
56	330662	56	330906
58	330664	58	330907
60	330666	60	330908

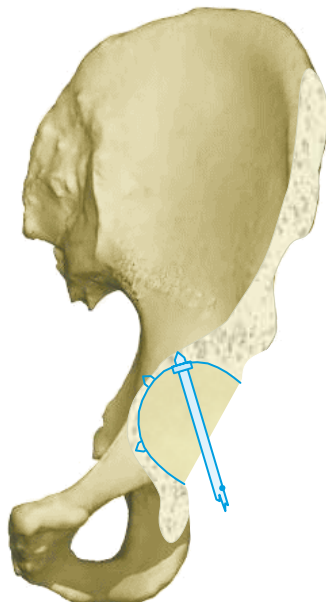
Typ 02/A - Ø32 (Antiluxation)		Typ 02/II/A - Ø32 (Antiluxation)	
Ø	Order number	Ø	Order number
48	330864	48	330951
50	330866	50	330952
52	330868	52	330953
54	330870	54	330954
56	330872	56	330955
58	330874	58	330956
60	330876	60	330957

Surgical technique

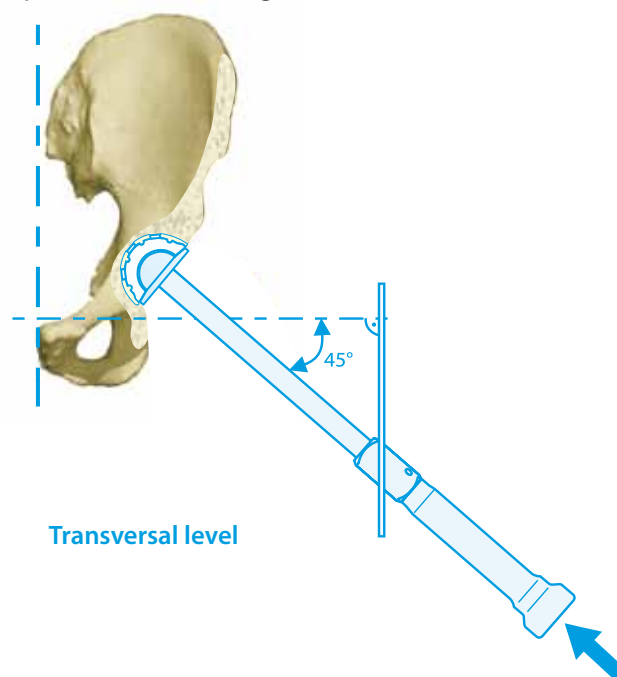
1. After the removal of large edge osteophytes we prepare the acetabulum using an acetabular reamer under the angle of 45° from the longitudinal axis of the patient and at 10° to 15° in the anteverse.



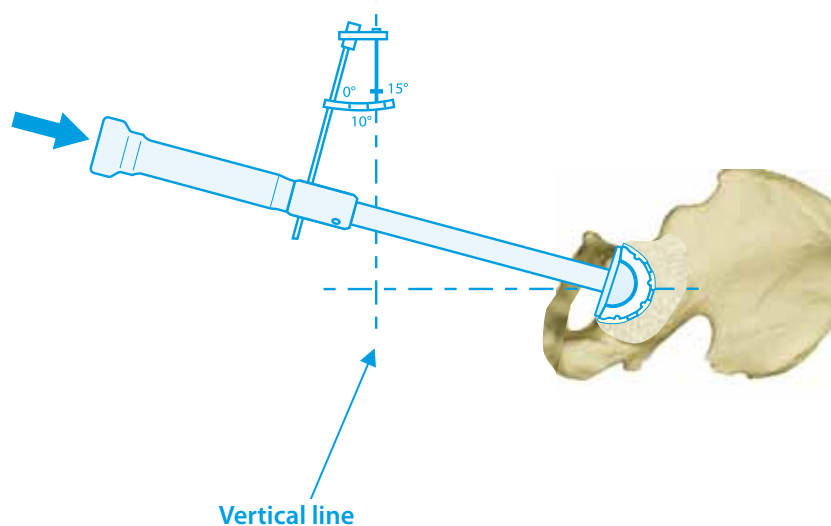
2. After the preparation of the acetabulum using the reamer we create anchorage holes (preferably 4) for the bone cement using a drill for the anchorage holes in the acetabulum.



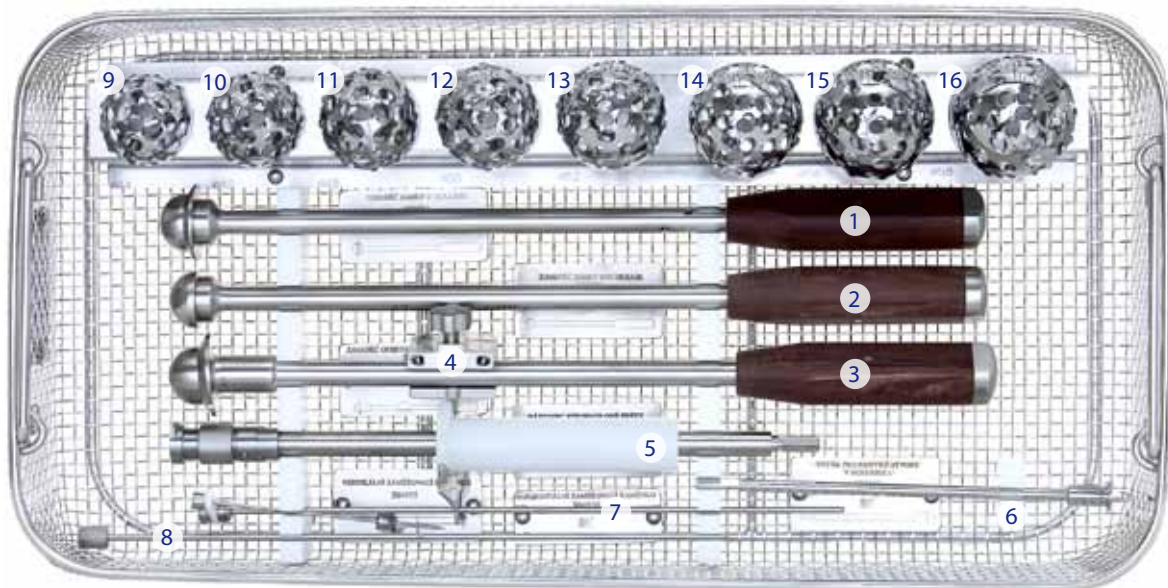
3. We insert the bone cement, formed into the shape of the cup, into the prepared acetabulum and then we introduce the cup with centralizers. Their spacing ensures an equal layer of bone cement over the entire surface of the cup. In the frontal level the cup must close with the horizontal line an angle of 45° . The horizontal measuring shoulder of the inserting instrument, which is parallel with the operating table and longitudinal axis of the patient, simplifies this centring for us.



4. We center the cup at 10° to 15° in the anteversion. The angle gauge on the vertical measuring arm shows precisely the correct position of the cup.



Instrumentation set



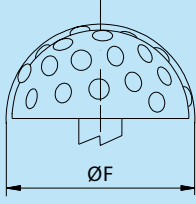
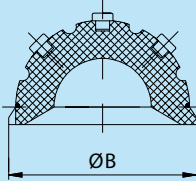
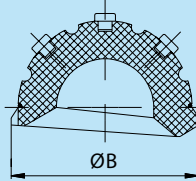
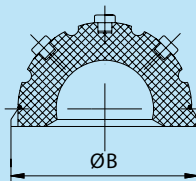
INSTRUMENTS FOR APPLICATION OF CEMENTED HIP JOINT CUP OF THE TYPE 02 TRAY LAYOUT

	Denomination	Qty	Order number
	Complete set		300360
1	Cup introducing instrument with edge diameter 28 mm	1pc	302820
2	Cup introducing instrument without edge diameter 28 mm	1pc	302870
3	Offset cup introducing instrument with edge diameter 28 mm	1pc	302825
4	Holder for introducing instrument	1pc	302900
5	Attachment of acetabular reamer – three-sided end (Synthes)	1pc	304102
6	Drill for anchorage holes in acetabulum	1pc	302100
7	Shoulder of vertical measuring instrument with angle gauge	1pc	304935
8	Shoulder of horizontal measuring instrument	1pc	304930
9	Acetabular reamer with quick-change attachment, diameter 44 mm	1pc	304625
10	Acetabular reamer with quick-change attachment, diameter 46 mm	1pc	304635
11	Acetabular reamer with quick-change attachment, diameter 48 mm	1pc	304640
12	Acetabular reamer with quick-change attachment, diameter 50 mm	1pc	304645
13	Acetabular reamer with quick-change attachment, diameter 52 mm	1pc	304650
14	Acetabular reamer with quick-change attachment, diameter 54 mm	1pc	304655
15	Acetabular reamer with quick-change attachment, diameter 56 mm	1pc	304665
16	Acetabular reamer with quick-change attachment, diameter 58 mm	1pc	304670
For a cup of diameter 32 mm use introducing instrument for application of cemented cup:			
17	Cup introducing instrument with edge diameter of 32 mm	1pc	302720
18	Cup introducing instrument without edge diameter 32 mm	1pc	302770
An introducing instrument will be supplied outside the set:			
19	Offset cup introducing instrument with edge diameter of 32 mm	1pc	302722

Note: The tray layout is for information purposes only.



Dimensions of reamers necessary for implantation of cemented hip joint cup of the type 02/II

Diameters of acetabular reamers	Dimensions of cups		
	Standard 	Offset 	Antiluxation 
Ø F	Ø B		
44	44		
46	46		
48	48		
50	50		
52	52		
54	54		
56	56		
58	58		
60	60		

The diameters of the reamers correspond to the external diameter of the cup, which is shown on the packaging.

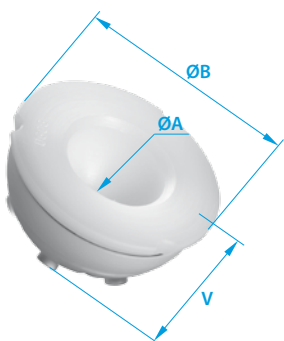
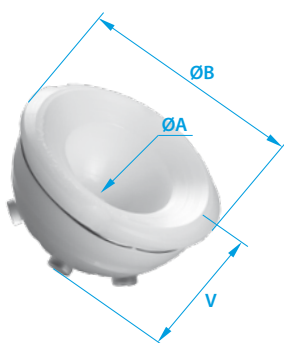
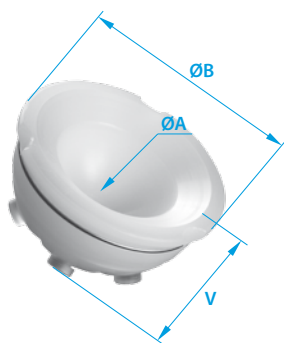
Implants

Material: Cup - low-pressure high-molecular polyethylene - UHMWPE highly crosslinked (ISO 5834-2C)

Centralizer - Polymethyl-methacrylate (PMMA)

Diagnostic ring, diagnostic peg - stainless steel (ISO 5832-1)

Note: The modification (crosslinking) UHMWPE is performed according to own patented procedure and should ensure a reduction in the abrasion of UHMWPE wear in vivo by approximately from 70 to 80%.

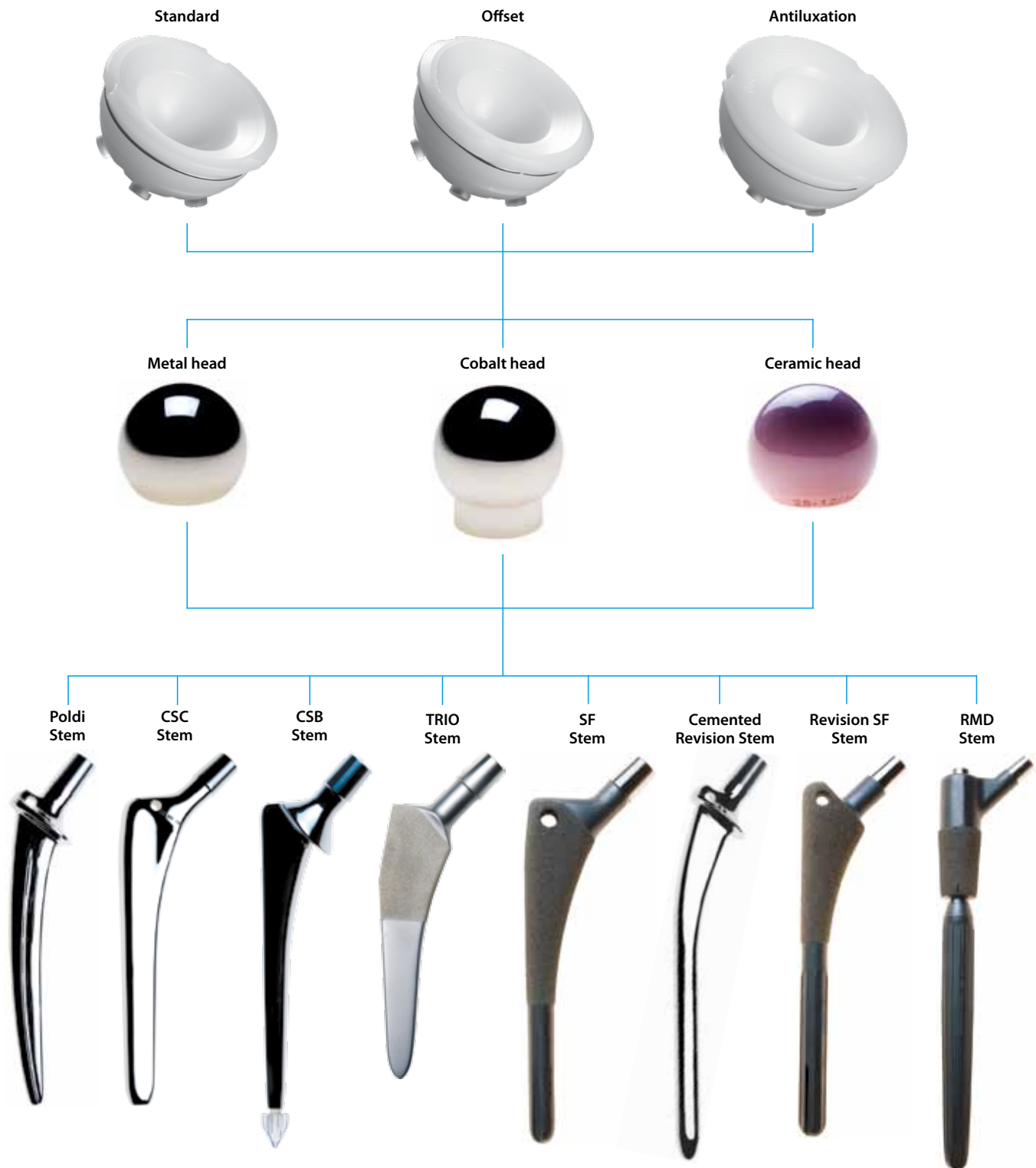


Standard								
02/II/N ØA = 28 mm			02/II/N ØA = 32 mm			ØA=36 mm		
ØB [mm]	V [mm]	Order number	ØB [mm]	V [mm]	Order number	ØB [mm]	V [mm]	Order number
44	25	330880	48	29	330931	54	32	330838
46	26	330881	50	30	330932	56	33	330839
48	27	330882	52	31	330933	58	34	330840
50	28	330883	54	32	330934	60	35	330841
52	29	330884	56	33	330935	62	36	330842
54	30	330885	58	34	330936	64	37	330843
56	31	330886	60	35	330937	66	38	330844
58	32	330887						
60	33	330888						

Offset								
02/II/10 ØA = 28 mm			02/II/10 ØA = 32 mm			ØA=36 mm		
ØB [mm]	V [mm]	Order number	ØB [mm]	V [mm]	Order number	ØB [mm]	V [mm]	Order number
44	25	330890	48	29	330941	54	32	330846
46	26	330891	50	30	330942	56	33	330847
48	27	330892	52	31	330943	58	34	330848
50	28	330893	54	32	330944	60	35	330849
52	29	330894	56	33	330945	62	36	330850
54	30	330895	58	34	330946	64	37	330851
56	31	330896	60	35	330947	66	38	330852
58	32	330897						
60	33	330898						

Antiluxation								
02/II/A ØA = 28 mm			02/II/A ØA = 32 mm			ØA=36 mm		
ØB [mm]	V [mm]	Order number	ØB [mm]	V [mm]	Order number	ØB [mm]	V [mm]	Order number
46	26	330901	48	29	330951	54	32	330854
48	27	330902	50	30	330952	56	33	330855
50	28	330903	52	31	330953	58	34	330856
52	29	330904	54	32	330954	60	35	330857
54	30	330905	56	33	330955	62	36	330858
56	31	330906	58	34	330956	64	37	330859
58	32	330907	60	35	330957	66	38	330860
60	33	330908						

Combining Cup 02 with Other BEZNOSKA Implants





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