

BencoxCup System

Bencox Cup System



Bencox Hibrid Cup(2tab/3hole)
For both Ceramic and PE bearing

Acetabular Component

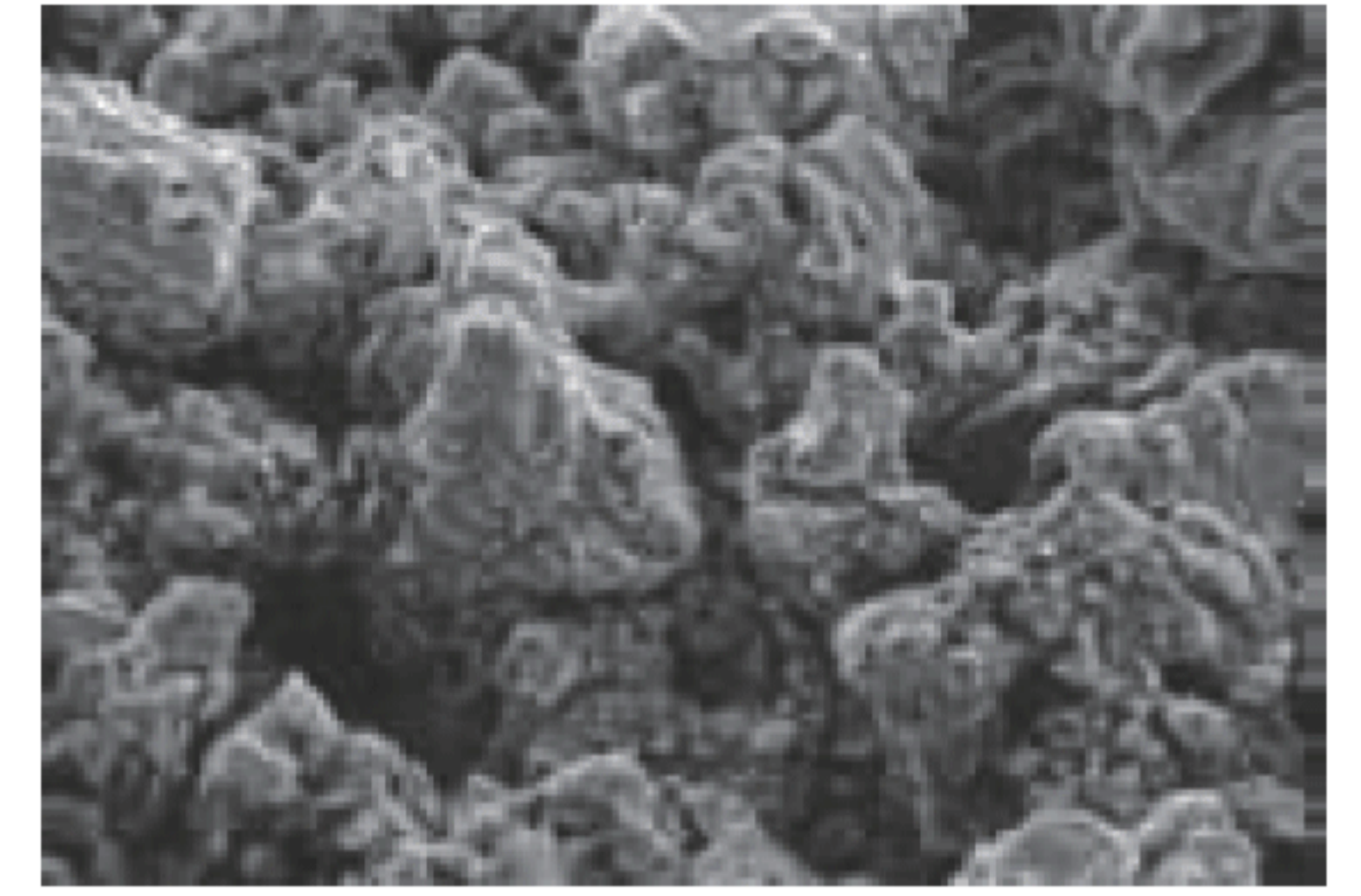
- Acetabular Component is hemisphere-shaped, maximizing the peripheral and polar contact at once.
- Three screw holes are anatomically designed and located for more effective fixation; and enough insertion angles are allowed to simplify the surgery.



Surface Treatment

Plasma Sprayed Ti Coating

- The surface treatment on an artificial joint is an essential factor for success ; at the same time, it's the precise indication of a manufacturer's technique.
- Acetabular Component of Bencox Hip System is coated using plasma spray method.
- The microporous pure titanium coating with more than 30% porosity leads to direct bone apposition for secondary stability. Rough surface supports a more stable primary fixation.



Two-in one Bearing Cup System

- Unique locking design allows for ceramic and PE liner in one cup.



Secure Locking Mechanism

- Cup and ceramic insert provides a secure locking mechanism while providing a self-locating feature to ease insert placement.
- The locking mechanism between cup and PE liner allows for secure fixation with superior congruency for the push-out, rotation and tilting.



Various Choice of Acetabular Cups

- Outer diameter from 44 to 74mm allows precise patient matching for optimal patient fit.

	*44mm	46mm	48mm	50mm	52mm	54mm	56mm	58mm	60mm	62mm	64mm	66mm	68mm	70mm	72mm	74mm
Forte (BENCOX Cup)	28/37G	28/39G				32/44G		32/48G		32/52G						
						36/44G		36/48G		36/52G						
Delta (BENCOX Cup)	28/37G	32/39G				36/44G		36/48G		36/52G						
								40/48G		40/52G						
Metal on PE (BENCOX Hybrid Cup)		28/39G				28/44G		28/48G		28/52G						
						32/44G		32/48G		32/52G						
						36/44G		36/48G		36/52G						
						40/44G		40/48G		40/52G						

*Custom Order

Various Choice of Heads

- Outer diameter from 28 to 40mm allows normal patient's ROM and resists the dislocation of the femoral head.

Metal Head
 -22/S, M, L, L Skirted
 -28/S, M, L, XL, XL Skirted
 -32/S, M, L, XL, XL Skirted
 -36/S, M, L, XL
 -40/S, M, L, XL

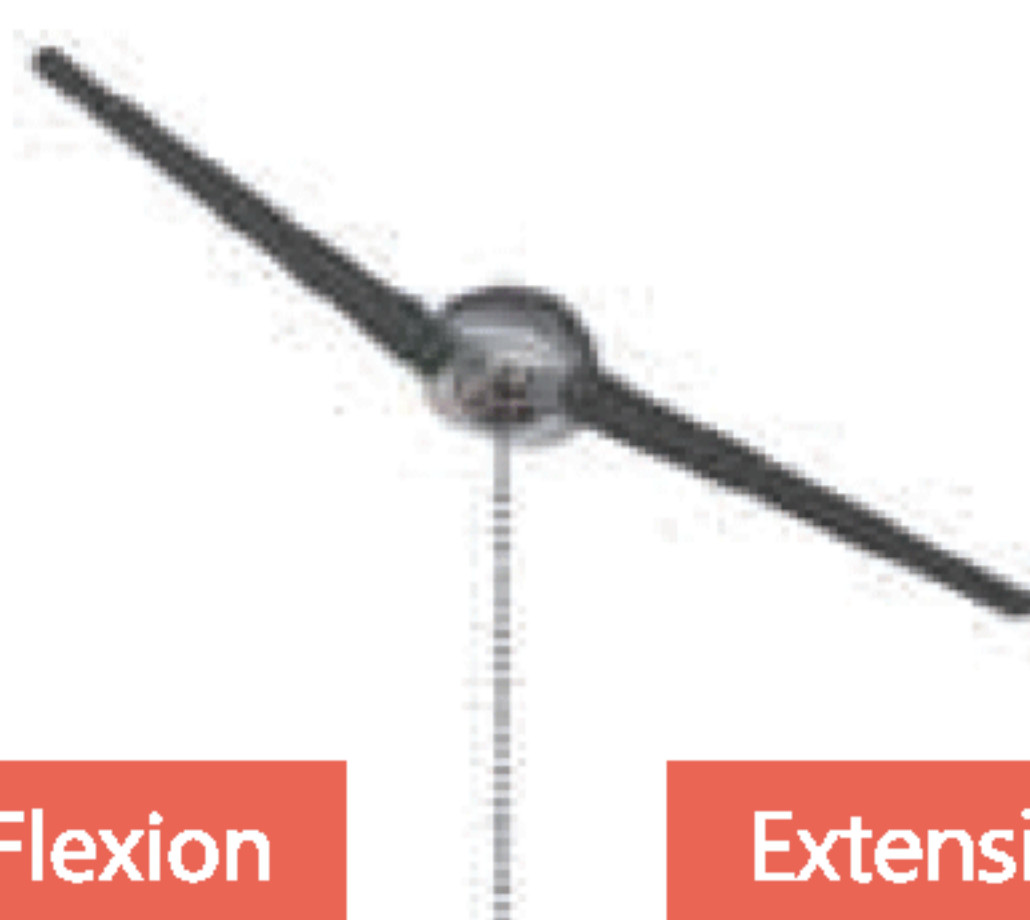
Forte Head
 -28/S, M, L
 -32/S, M, L
 -36/S, M, L

Delta Head
 -32/S, M, L
 -36/S, M, L
 -40/S, M, L



Improved Range of Motion

- Optimal range of motion with the innovative stem neck design reduces the potential for impingement and dislocation.
- P-ROM following to the different head diameter and offset.



Flexion

Extension

MOTION	28M	28XL Non-skirt	28XL Skirted	32M	32XL Non-skirt	32XL Skirted	36mm
Flexion	123°	113°	98°	124°	118°	106°	128°
Extension	63°	54°	38°	65°	58°	46°	70°
Total (Flexion+Extension)	186°	167°	136°	189°	176°	152°	198°
Abduction	63°	64°	52°	63°	67°	58°	66°
Adduction	58°	51°	39°	58°	54°	45°	61°
Total (Abduction+Adduction)	121°	115°	91°	121°	121°	103°	127°
Internal Rotation	128°	128°	109°	129°	133°	118°	133°
External Rotation	64°	64°	45°	65°	69°	54°	70°
Total (Int. Rot.+Ext. Rot.)	192°	192°	154°	194°	202°	172°	203°

Various Choice of PE Liners

- Standard, extended and elevated type allows for the use in extended indication situations.
- PE liner offers use with 28, 32, 36, 40mm CoCr Mo femoral heads.
- The wear resistance

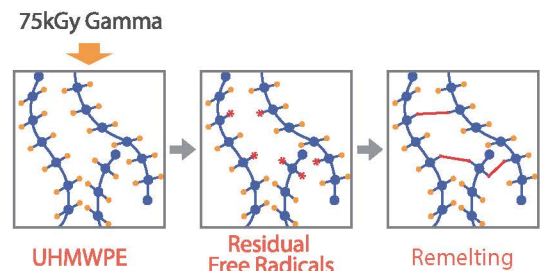


POLYETHYLENE THICKNESS							
HEAD SIZE	OUTER DIAMETER	LOADING POINT	DOME	HEAD SIZE	OUTER DIAMETER	LOADING POINT	DOME
28mm	37mm	6.0mm	4.8mm	32mm	52mm	9.1mm	8.6mm
28mm	39mm	6.7mm	5.5mm	36mm	44mm	6.0mm	5.3mm
28mm	44mm	9.1mm	8.3mm	36mm	48mm	7.0mm	6.5mm
28mm	48mm	10.1mm	9.5mm	36mm	52mm	8.0mm	7.6mm
28mm	52mm	10.6mm	11.1mm	40mm	44mm	9.2mm	9.3mm
32mm	44mm	7.1mm	6.3mm	40mm	48mm	6.7mm	6.5mm
32mm	48mm	8.1mm	7.5mm	40mm	52mm	7.7mm	7.6mm



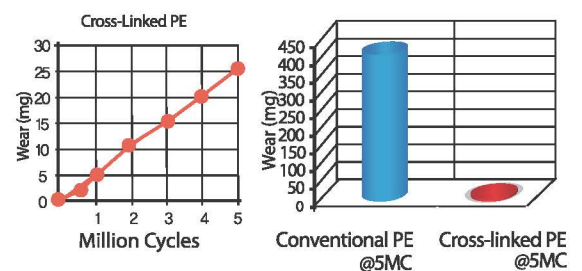
Cross-Linked UHMWPE for PE Liner

- Compression molded GUR 1020 rods are used.
- Initial toughness and strength is higher than 1050.
- Gamma irradiated at room temp. to a 75kGy to facilitate cross-linking
- After irradiation, the rods are heated above the melting point to eliminate residual free radicals and form additional cross-links.
- PE liners are machined and cleaned, packaged, and EtO sterilized



Enhanced Wear Characteristics

- Cross-linked PE liners exhibit 94% less wear in vitro tests than conventional PE liners.



Bencox Delta

Bencox Delta is a high performance ceramic biocomposite material with the potential to be used in applications which were not previously possible using ceramics. It combines the excellent material properties of alumina ceramics in terms of chemical and hydrothermal stability with extremely low wear, superior mechanical strength and improved fracture toughness.

Bencox Delta is composed of approximately 75% aluminum oxide, which provides the basic hardness and wear resistance and approximately 25% zirconia, which together with other additives provides the improved mechanical properties compared with pure aluminum oxide ceramic. Bencox delta offers higher mechanical properties including higher fracture toughness.

Bencox Forte

Bencox Forte composed of High purity aluminum oxide ceramic (Al_2O_3), was first used in artificial hip joints at the start of the 1970s: full resistance to attack within the body, very good biocompatibility, excellent surface finish and dimensional stability, extreme resistance to wear, and minimal friction. The diameter sizes are available \varnothing 28mm, 32mm and 36mm.

Bencox Hybrid Cup (2tab/3hole)

Part No.	Description	Ceramic Liner	PE Liner
01.02.054	Cup 46	Forte Liner 28/39G, Delta Liner 32/39G	PE Liner 28/39G
01.02.056	Cup 48	Forte Liner 28/39G, Delta Liner 32/39G	PE Liner 28/39G
01.02.058	Cup 50	Forte Liner 28/39G, Delta Liner 32/39G	PE Liner 28/39G
01.02.060	Cup 52	Forte Liner 32/44G, Delta Liner 36/44G	PE Liner 28/44G, 32/44G, 36/44G, 40/44G*
01.02.062	Cup 54	Forte Liner 32/44G, Delta Liner 36/44G	PE Liner 28/44G, 32/44G, 36/44G, 40/44G*
01.02.064	Cup 56	Forte Liner 32/44G, Delta Liner 36/44G	PE Liner 28/44G, 32/44G, 36/44G, 40/44G*
01.02.066	Cup 58	Forte Liner 32/44G, Delta Liner 36/44G	PE Liner 28/44G, 32/44G, 36/44G, 40/44G*
01.02.068	Cup 60	Forte Liner 32/48G, Delta Liner 36/48G, Delta Liner 40/48G	PE Liner 28/48G, 32/48G, 36/48G, 40/48G
01.02.070	Cup 62	Forte Liner 32/48G, Delta Liner 36/48G, Delta Liner 40/48G	PE Liner 28/48G, 32/48G, 36/48G, 40/48G
01.02.072	Cup 64	Forte Liner 32/48G, Delta Liner 36/48G, Delta Liner 40/48G	PE Liner 28/48G, 32/48G, 36/48G, 40/48G
01.02.074	Cup 66	Forte Liner 32/52G, Delta Liner 36/52G, Delta Liner 40/52G	PE Liner 28/52G, 32/52G, 36/52G, 40/52G
01.02.076	Cup 68	Forte Liner 32/52G, Delta Liner 36/52G, Delta Liner 40/52G	PE Liner 28/52G, 32/52G, 36/52G, 40/52G
01.02.078	Cup 70	Forte Liner 32/52G, Delta Liner 36/52G, Delta Liner 40/52G	PE Liner 28/52G, 32/52G, 36/52G, 40/52G
01.02.080	Cup 72	Forte Liner 32/52G, Delta Liner 36/52G, Delta Liner 40/52G	PE Liner 28/52G, 32/52G, 36/52G, 40/52G
01.02.082	Cup 74	Forte Liner 32/52G, Delta Liner 36/52G, Delta Liner 40/52G	PE Liner 28/52G, 32/52G, 36/52G, 40/52G

*01.02.052 Cup 44 Custom Order(available upon request) Forte Liner 28/37G,Delta Liner 28/37G

Bencox PE Liner

Standard Type

Part No.	Description
01.02.621	PE Liner 28/37G
01.02.622	PE Liner 28/39G
01.02.623	PE Liner 28/44G
01.02.625	PE Liner 28/48G
01.02.627	PE Liner 28/52G
01.02.633	PE Liner 32/44G
01.02.635	PE Liner 32/48G
01.02.637	PE Liner 32/52G
01.02.643	PE Liner 36/44G
01.02.645	PE Liner 36/48G
01.02.647	PE Liner 36/52G
01.02.655	PE Liner 40/48G
01.02.657	PE Liner 40/52G

Extended Type

Part No.	Description
01.02.653	PE Liner 40/44G

Bencox PE Liner

Elevated Type

Part No.	Description
01.02.661	PE Liner 28/37G
01.02.662	PE Liner 28/39G
01.02.663	PE Liner 28/44G
01.02.665	PE Liner 28/48G
01.02.667	PE Liner 28/52G
01.02.673	PE Liner 32/44G
01.02.675	PE Liner 32/48G
01.02.677	PE Liner 32/52G
01.02.683	PE Liner 36/44G
01.02.685	PE Liner 36/48G
01.02.687	PE Liner 36/52G
01.02.695	PE Liner 40/48G
01.02.697	PE Liner 40/52G

Bencox Metal Head

Standard Type

Part No.	Description
01.02.375	Metal Head 22mm/S(-2)
01.02.380	Metal Head 22mm/M(0)
01.02.386	Metal Head 22mm/L(+3)
01.02.405	Metal Head 28mm/S(-3.5)
01.02.410	Metal Head 28mm/M(0)
01.02.415	Metal Head 28mm/L(+3.5)
01.02.418	Metal Head 28mm/XL(+7)
01.02.420	Metal Head 32mm/S(-4)
01.02.425	Metal Head 32mm/M(0)
01.02.430	Metal Head 32mm/L(+4)
01.02.433	Metal Head 32mm/XL(+7)
01.02.440	Metal Head 36mm/S(-4)
01.02.445	Metal Head 36mm/M(0)
01.02.450	Metal Head 36mm/L(+4)
01.02.452	Metal Head 36mm/XL(+7)
01.02.460	Metal Head 40mm/S(-4)
01.02.465	Metal Head 40mm/M(0)
01.02.470	Metal Head 40mm/L(+4)
01.02.472	Metal Head 40mm/XL(+7)

Skirted Type

Part No.	Description
01.02.385	Metal Head 22mm/L(+3)
01.02.417	Metal Head 28mm/XL(+7)
01.02.432	Metal Head 32mm/XL(+7)

Bencox Cup System

Ordering Information

Bencox Cup(3 Holes)

Part No.	Description	Ceramic Liner
01.01.844	Cup 46	Forte Liner 28/39G, Delta Liner 32/39G
01.01.846	Cup 48	Forte Liner 28/39G, Delta Liner 32/39G
01.01.848	Cup 50	Forte Liner 28/39G, Delta Liner 32/39G
01.01.850	Cup 52	Forte Liner 32/44G, Delta Liner 36/44G
01.01.852	Cup 54	Forte Liner 32/44G, Delta Liner 36/44G
01.01.854	Cup 56	Forte Liner 32/44G, Delta Liner 36/44G
01.01.856	Cup 58	Forte Liner 32/44G, Delta Liner 36/44G
01.01.858	Cup 60	Forte Liner 32/48G, Delta Liner 36/48G, Delta Liner 40/48G
01.01.860	Cup 62	Forte Liner 32/48G, Delta Liner 36/48G, Delta Liner 40/48G
01.01.862	Cup 64	Forte Liner 32/48G, Delta Liner 36/48G, Delta Liner 40/48G
01.01.864	Cup 66	Forte Liner 32/52G, Delta Liner 36/52G, Delta Liner 40/52G
01.01.866	Cup 68	Forte Liner 32/52G, Delta Liner 36/52G, Delta Liner 40/52G

*01.01.842 Cup 44 Custom Order(available upon request) Forte Liner 28/37G, Delta Liner 28/37G

Bencox Forte Liner

Part No.	Description
01.01.232	Forte Liner 28/39G
01.01.239	Forte Liner 32/44G
01.01.240	Forte Liner 32/48G
01.01.241	Forte Liner 32/52G
01.01.242	Forte Liner 36/44G
01.01.243	Forte Liner 36/48G
01.01.244	Forte Liner 36/52G

*01.01.231 Forte Liner 28/37G
Custom Order(available upon request)

Bencox Delta Liner

Part No.	Description
01.01.267	Delta Liner 32/39G
01.01.272	Delta Liner 36/44G
01.01.273	Delta Liner 36/48G
01.01.274	Delta Liner 36/52G
01.01.275	Delta Liner 40/48G
01.01.276	Delta Liner 40/52G

*01.01.261 Delta Liner 28/37G
Custom Order(available upon request)

Bencox Bone Screw

Part No.	Description
01.01.201	Bone Screw 15mm
01.01.202	Bone Screw 20mm
01.01.203	Bone Screw 25mm
01.01.204	Bone Screw 30mm
01.01.205	Bone Screw 35mm
01.01.206	Bone Screw 40mm
01.01.207	Bone Screw 45mm
01.01.208	Bone Screw 50mm
01.01.209	Bone Screw 55mm
01.01.210	Bone Screw 60mm

Bencox Forte Head

Part No.	Description
01.01.251	Forte Head 28mm/S(-3.5)
01.01.252	Forte Head 28mm/M(0)
01.01.253	Forte Head 28mm/L(+3.5)
01.01.254	Forte Head 32mm/S(-4)
01.01.255	Forte Head 32mm/M(0)
01.01.256	Forte Head 32mm/L(+4)
01.01.257	Forte Head 36mm/S(-4)
01.01.258	Forte Head 36mm/M(0)
01.01.259	Forte Head 36mm/L(+4)

Bencox Delta Head

Part No.	Description
01.01.281	Delta Head 28mm/S(-3.5)
01.01.282	Delta Head 28mm/M(0)
01.01.283	Delta Head 28mm/L(+3.5)
01.01.284	Delta Head 32mm/S(-4)
01.01.285	Delta Head 32mm/M(0)
01.01.286	Delta Head 32mm/L(+4)
01.01.287	Delta Head 36mm/S(-4)
01.01.288	Delta Head 36mm/M(0)
01.01.289	Delta Head 36mm/L(+4)
01.01.290	Delta Head 40mm/S(-4)
01.01.291	Delta Head 40mm/M(0)
01.01.292	Delta Head 40mm/L(+4)
01.01.293	Delta Head 40mm/XL(+7)

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