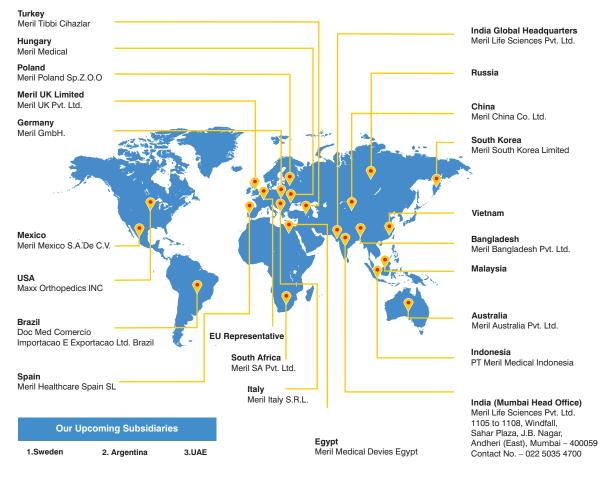
#### **OUR GLOBAL REACH & FOOTPRINT**

















# For more information about LATITUD™ Please contact your local representative.

Please see the package insert for complete device description, product selection information, indications, contraindications, precautions, adverse effects, warnings, materials, sterilization and patient guidance associated with the LATITUD™ Hip System.

CAUTION: THIS DEVICE IS RESTRICTED TO SALE BY OR ON THE ORDER OF A LICENSED PHYSICIAN

Disclaimers

BIOLOX® is registered trademark of CeramTec GmbH

LATITUD™ is manufactured by Meril Healthcare Pvt. Ltd. and LATITUD™ is registered trademark of Meril Healthcare Pvt. Ltd.



Meril is a global medical device company dedicated towards design and development of novel, clinically relevant, 'state-of-the-art' and 'best-in-class' devices to alleviate human suffering and improve the quality of life, spanning board operational canvas from vascular interventional devices to orthopedics, in-vitro diagnostics endo-surgery and robotics.

We share an enduring commitment to advance healthcare solutions, so more patients live longer, healthier lives. We thus have a strong commitment towards R&D and adherence to best standards in manufacturing, scientific communication and distribution.

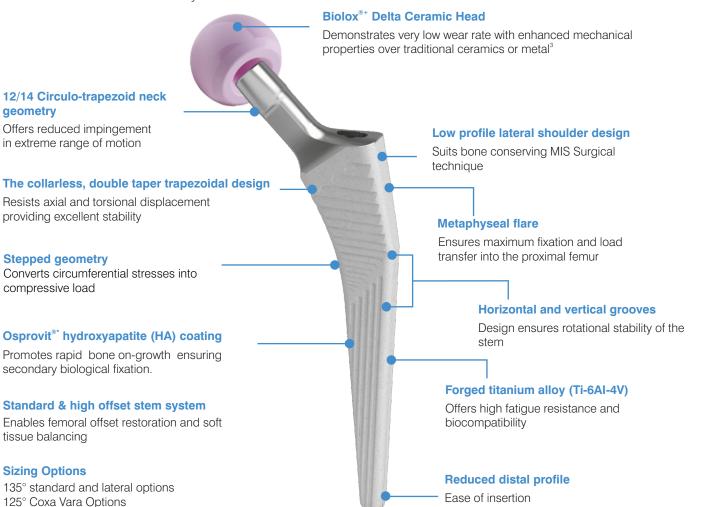
Meril orthopedics, a venture of Meril in association with Maxx Ortho Inc (www.maxxortho.com), is at the helm of developing and marketing innovative orthopedic implants. Our joint replacement technologies and wide range of products make us valuable to healthcare institutions in more than 80+ countries.

## Meril Orthopedics | HIP SYSTEM

At Meril, with Latitud<sup>™</sup> - Hip Replacement System, we are combining long term clinically proven implant designs with a simple, efficient & precise instrumentation along with versatile & optimised implants inventory. Meril's Latitud<sup>™</sup> - Hip Replacement System consists of both cementless and cemented femoral components along with cementless, cemented acetabular components and bipolar options. Operating surgeons have option of offering Delta Ceramic or Metal Heads with clinically proven highly cross linked PE to their patients.



Cementless Stem System



The combination of design and the HA coating of the LATITUD™ Hip Replacement System has been proven to work with over 25 years of clinical evidences.

LATITUD™ cementless stems are recommended to be used with Latitud CoCr Metal Heads or Biolox®+ Delta Ceramic Heads.

LATITUD™ cementless size zero(0) stem is recommended to be used for patient's weight within 50 kg's.

#### References

- 1. Hallan G. Lie SA. Furnes O. Engesaeter LB. Vollset SE. Havelin L. Medium and long-term performance of 11 516 uncemented primary femoral stems from the Norwegian arthroplasty register, J. Bone
- 2. Røkkum M, Brandt M, Bye K, Hetland KR, Waage 5, Reigstad A. Polyethylene Wear, Osteolysis and Acetabular Loosening with an HA Coated Hip Prosthesis. J. Bone Joint Surg, 1999,81-B:582-589
- 3. Kurtz M. Validation of New High performance Alumina Matrix Composite for use in Total Joint replacement, Seminars in Arthroplasty, 2006;17:141-145
- + Biolox® is registered trademark of Ceramtec BV
- \* Osprovit® is registered trademark of LINCOTEK TRENTO S.p.A



#### Cementless Acetabular System



#### **Patented Transference Taper Lock ETST Technology**

Polished edge of the Shell

To protect the psoas from irritation and prevent impingement

Taper lock

Liner holds shell without compromising on stress and strain

Snap Fit rim locking

Liner achieves press fit into shell for insertion and is resistant to extraction

Tab locking

Avoids rotation and micro motion between shell and

#### Forged Titanium Alloy (Ti-6AI-4V)

Offers high fatigue resistance and biocompatibility

#### **Technical Features**

- Surface roughness: Rt 300-600 m
- Coating thickness: 500 ±100 m
- Coating adhesion strength:  $>35 \mu Mpa$
- Porosity: 30 70%
- 1. Laurent M, Blanchard C, Yao JQ, et al. The wear of highly cross-linked UHMWPE in the presence of abrasive particles: Hip and knee simulator studies. In: Kurtz SM, Gsell R, Martell JM, editors.
- 2. Muratoglu O, Bragdon C, O'Connor D, et al. The comparison of the wear behaviour of four different types of cross-linked acetabular components. 46th Annual Meeting, Orthopaedic Research Society. 2000.
- 3. Meril Latitud™ 180-ongoing, multi-centeric clinical study.



Exhibits a reduction in wear rates remove up to 90% as compared to conventional PE in prospective randomised clinical studies<sup>3</sup>

#### **Optimum Surgical Selection**

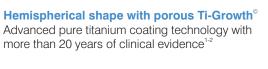
Acetabular components are available from size 40-70 mm with 2 mm increments for optimised patient fit

References:











Uncemented Femoral Stem



## Latitud<sup>™</sup> Hip Replacement System Implant Details

## **Uncemented Femoral Stems**

Part Code No.	Product Description
STAC-35/00	Ti Alloy Cementless Stem 135° Standard Size 0
STBC-35/00	Ti Alloy Cementless Stem 135° Lateral Size 0
STAC-25/01	Ti Alloy Cementless Stem 125° Standard Size 1
STAC-35/01	Ti Alloy Cementless Stem 135° Standard Size 1
STBC-35/01	Ti Alloy Cementless Stem 135° Lateral Size 1
STAC-25/02	Ti Alloy Cementless Stem 125° Standard Size 2
STAC-35/02	Ti Alloy Cementless Stem 135° Standard Size 2
STBC-35/02	Ti Alloy Cementless Stem 135° Lateral Size 2
STAC-25/03	Ti Alloy Cementless Stem 125° Standard Size 3
STAC-35/03	Ti Alloy Cementless Stem 135° Standard Size 3
STBC-35/03	Ti Alloy Cementless Stem 135° Lateral Size 3
STAC-25/04	Ti Alloy Cementless Stem 125° Standard Size 4
STAC-35/04	Ti Alloy Cementless Stem 135° Standard Size 4
STBC-35/04	Ti Alloy Cementless Stem 135° Lateral Size 4
STAC-25/05	Ti Alloy Cementless Stem 125° Standard Size 5
STAC-35/05	Ti Alloy Cementless Stem 135° Standard Size 5
STBC-35/05	Ti Alloy Cementless Stem 135° Lateral Size 5
STAC-25/06	Ti Alloy Cementless Stem 125° Standard Size 6
STAC-35/06	Ti Alloy Cementless Stem 135° Standard Size 6
STBC-35/06	Ti Alloy Cementless Stem 135° Lateral Size 6
STAC-25/07	Ti Alloy Cementless Stem 125° Standard Size 7
STAC-35/07	Ti Alloy Cementless Stem 135° Standard Size 7
STBC-35/07	Ti Alloy Cementless Stem 135° Lateral Size 7



## **Uncemented Femoral Stems**

Part Code No.	Product Description
STAC-25/08	Ti Alloy Cementless Stem 125° Standard Size 8
STAC-35/08	Ti Alloy Cementless Stem 135° Standard Size 8
STBC-35/08	Ti Alloy Cementless Stem 135° Lateral Size 8
STAC-25/09	Ti Alloy Cementless Stem 125° Standard Size 9
STAC-35/09	Ti Alloy Cementless Stem 135° Standard Size 9
STBC-35/09	Ti Alloy Cementless Stem 135° Lateral Size 9
STAC-25/10	Ti Alloy Cementless Stem 125° Standard Size 10
STAC-35/10	Ti Alloy Cementless Stem 135° Standard Size 10
STBC-35/10	Ti Alloy Cementless Stem 135° Lateral Size 10





Note: Based upon laboratory testing, 125 standard (Coxa Vara) size 1 stem is not recommended for use with modular femoral head size above 32 mm, +7 mm head offset.

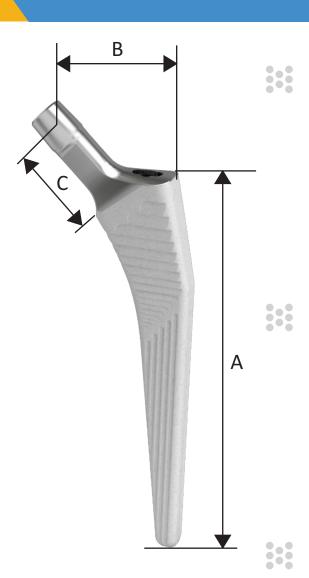


## Uncemented Femoral Stem

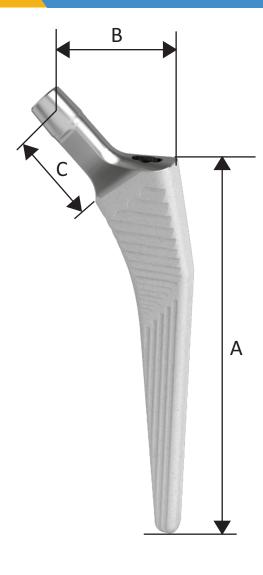


Unc	Uncemented Femoral Stem 125° Standard (125° Neck Angle)													
	А		В						С					
Size	Stem Length							Nec	k Lenç	gth (mi	m)			
	(mm)	-4.0	-3.5	STD	+3.5	+4.0	+7.0	-4.0	-3.5	STD	+3.5	+4.0	+7.0	
00	115	41.7	42.2	45.0	47.9	48.3	50.8	34.8	35.3	38.8	42.3	42.8	45.8	
01	130	42.2	42.7	45.5	48.4	48.8	51.3	34.8	35.3	38.8	42.3	42.8	45.8	
02	140	43.2	43.7	46.5	49.4	49.8	52.3	34.8	35.3	38.8	42.3	42.8	45.8	
03	145	43.7	44.2	47.0	49.9	50.3	52.8	34.8	35.3	38.8	42.3	42.8	45.8	
04	150	44.7	45.2	48.0	50.9	51.3	53.8	34.8	35.3	38.8	42.3	42.8	45.8	
05	154	45.2	45.7	48.5	51.4	51.8	54.3	34.8	35.3	38.8	42.3	42.8	45.8	
06	160	45.7	46.2	49.0	51.9	52.3	54.8	34.8	35.3	38.8	42.3	42.8	45.8	
07	165	46.7	47.2	50.0	52.9	53.3	55.8	34.8	35.3	38.8	42.3	42.8	45.8	
80	170	47.2	47.7	50.5	53.4	53.8	56.3	34.8	35.3	38.8	42.3	42.8	45.8	
09	180	48.2	48.7	51.5	54.4	54.8	57.3	34.8	35.3	38.8	42.3	42.8	45.8	
10	189	49.2	49.7	52.5	55.4	55.8	58.3	34.8	35.3	38.8	42.3	42.8	45.8	

Uncemented Femoral Stem 135° Standard (135° Neck Angle)														
	A	В						с						
Size	Stem Length		Horizontal Offset(mm)						Neck Length (mm)					
	(mm)	-4.0	-3.5	STD	+3.5	+4.0	+7.0	-4.0	-3.5	STD	+3.5	+4.0	+7.0	
00	115	35.2	35.5	38.0	40.5	40.8	43.0	34.8	35.3	38.8	42.3	42.8	45.8	
01	130	35.7	36.0	38.5	41.0	41.3	43.5	34.8	35.3	38.8	42.3	42.8	45.8	
02	140	36.7	37.0	39.5	42.0	42.3	44.5	34.8	35.3	38.8	42.3	42.8	45.8	
03	145	37.2	37.5	40.0	42.5	42.8	45.0	34.8	35.3	38.8	42.3	42.8	45.8	
04	150	38.2	38.5	41.0	43.5	43.8	46.0	34.8	35.3	38.8	42.3	42.8	45.8	
05	154	38.7	39.0	41.5	44.0	44.3	46.5	34.8	35.3	38.8	42.3	42.8	45.8	
06	160	39.2	39.5	42.0	44.5	44.8	47.0	34.8	35.3	38.8	42.3	42.8	45.8	
07	165	40.2	40.5	43.0	45.5	45.8	48.0	34.8	35.3	38.8	42.3	42.8	45.8	
08	170	40.7	41.0	43.5	46.0	46.3	48.5	34.8	35.3	38.8	42.3	42.8	45.8	
09	180	41.7	42.0	44.5	47.0	47.3	49.5	34.8	35.3	38.8	42.3	42.8	45.8	
10	189	42.7	43.0	45.5	48.0	48.3	50.5	34.8	35.3	38.8	42.3	42.8	45.8	



	Α			В	1					С			
Size	Stem							Neck Length (mm)					
	Length (mm)	-4.0	-3.5	STD	+3.5	+4.0	+7.0	-4.0	-3.5	STD	+3.5	+4.0	+7.0
00	115	42.2	42.5	45.0	47.5	47.8	50.0	39.0	39.5	43.0	46.5	47.0	50.0
01	130	42.7	43.0	45.5	48.0	48.3	50.5	39.0	39.5	43.0	46.5	47.0	50.0
02	140	43.7	44.0	46.5	49.0	49.3	51.5	39.0	39.5	43.0	46.5	47.0	50.0
03	145	44.2	44.5	47.0	49.5	49.8	52.0	39.0	39.5	43.0	46.5	47.0	50.0
04	150	45.2	45.5	48.0	50.5	50.8	53.0	39.0	39.5	43.0	46.5	47.0	50.0
05	154	45.7	46.0	48.5	51.0	51.3	53.5	39.0	39.5	43.0	46.5	47.0	50.0
06	160	46.2	46.5	49.0	51.5	51.8	54.0	39.0	39.5	43.0	46.5	47.0	50.0
07	165	47.2	47.5	50.0	52.5	52.8	55.0	39.0	39.5	43.0	46.5	47.0	50.0
80	170	47.7	48.0	50.5	53.0	53.3	55.5	39.0	39.5	43.0	46.5	47.0	50.0
09	180	48.7	49.0	51.5	54.0	54.3	56.5	39.0	39.5	43.0	46.5	47.0	50.0
10	189	49.7	50.0	52.5	55.0	55.3	57.5	39.0	39.5	43.0	46.5	47.0	50.0





Acetabular Cup System

# Meril Orthopedics

## Liner Thickness Chart

Shell	Liner				Hea	d Optio	ns				
Size	Size	22		28		32		36		40	
OD (mm)	OD (mm)	Dome (mm)	45° (mm)								
40	35	9.2	9.1	6.2	6.1						
42	37	10.1	9.9	7.1	6.9						
44											
46											
48	40			8.6	7.9	6.6	5.9				
50											
52	44			9.9	9.6	7.9	7.6	5.9	5.6		
54											
56	48			12.3	12	10.3	10	8.3	8	6.3	6
58	.0			12.5		10.5	10	0.0		0.5	
60											
62											
64	52					12.5	11.9	10.5	9.9	8.5	7.9
66	32					12.3	11.5	10.5	5.5	0.5	7.5
68											
70											

## Latitud<sup>™</sup> Hip Replacement System Implant Details



## Modular Shell

Part Code No	Product Description
MSAC-40/35	Forged Ti Alloy Modular Shell Size 40 mm, with 2 screw holes options
MSAC-42/37	Forged Ti Alloy Modular Shell Size 42 mm, with 2 screw holes options
MSAC-44/37	Forged Ti Alloy Modular Shell Size 44 mm, with 2 screw holes options
MSBC-46/40	Forged Ti Alloy Modular Shell Size 46 mm, with 3 screw holes options
MSBC-48/40	Forged Ti Alloy Modular Shell Size 48 mm, with 3 screw holes options
MSBC-50/44	Forged Ti Alloy Modular Shell Size 50 mm, with 3 screw holes options
MSBC-52/44	Forged Ti Alloy Modular Shell Size 52 mm, with 3 screw holes options
MSBC-54/44	Forged Ti Alloy Modular Shell Size 54 mm, with 3 screw holes options
MSBC-56/48	Forged Ti Alloy Modular Shell Size 56 mm, with 3 screw holes options
MSBC-58/48	Forged Ti Alloy Modular Shell Size 58 mm, with 3 screw holes options
MSBC-60/52	Forged Ti Alloy Modular Shell Size 60 mm, with 3 screw holes options
MSBC-62/52	Forged Ti Alloy Modular Shell Size 62 mm, with 3 screw holes options
MSBC-64/52	Forged Ti Alloy Modular Shell Size 64 mm, with 3 screw holes options
MSBC-66/52	Forged Ti Alloy Modular Shell Size 66 mm, with 3 screw holes options
MSBC-68/52	Forged Ti Alloy Modular Shell Size 68 mm, with 3 screw holes options
MSBC-70/52	Forged Ti Alloy Modular Shell Size 70 mm, with 3 screw holes options







Acetabular Cup System



## Modular Liner



Part Code No	Product Description
MLAD-35/22	Modular Liner Size 35/22
MLAD-35/28	Modular Liner Size 35/28
MLAD-37/22	Modular Liner Size 37/22
MLAD-37/28	Modular Liner Size 37/28
MLAD-40/28	Modular Liner Size 40/28
MLAD-40/32	Modular Liner Size 40/32
MLAD-44/28	Modular Liner Size 44/28
MLAD-44/32	Modular Liner Size 44/32
MLAD-44/36	Modular Liner Size 44/36
MLAD-48/28	Modular Liner Size 48/28
MLAD-48/32	Modular Liner Size 48/32
MLAD-48/36	Modular Liner Size 48/36
MLAD-48/40	Modular Liner Size 48/40
MLAD-52/32	Modular Liner Size 52/32
MLAD-52/36	Modular Liner Size 52/36
MLAD-52/40	Modular Liner Size 52/40



Part Code No	Product Description
MLCD-35/22	Liner 10° Oblique Size 35/22
MLCD-35/28	Liner 10° Oblique Size 35/28
MLCD-37/22	Liner 10° Oblique Size 37/22
MLCD-37/28	Liner 10° Oblique Size 37/28
MLCD-40/28	Liner 10° Oblique Size 40/28
MLCD-40/32	Liner 10° Oblique Size 40/32
MLCD-44/28	Liner 10° Oblique Size 44/28
MLCD-44/32	Liner 10° Oblique Size 44/32
MLCD-44/36	Liner 10° Oblique Size 44/36
MLCD-48/28	Liner 10° Oblique Size 48/28
MLCD-48/32	Liner 10° Oblique Size 48/32
MLCD-48/36	Liner 10° Oblique Size 48/36
MLCD-48/40	Liner 10° Oblique Size 48/40
MLCD-52/32	Liner 10° Oblique Size 52/32
MLCD-52/36	Liner 10° Oblique Size 52/36
MLCD-52/40	Liner 10° Oblique Size 52/40

## Bone Screws

Part Code No	Product Description
SWAC-65/15	Ti Alloy, Self Tapping Bone Screw 6.5 x 15 mm
SWAC-65/20	Ti Alloy, Self Tapping Bone Screw 6.5 x 20 mm
SWAC-65/25	Ti Alloy, Self Tapping Bone Screw 6.5 x 25 mm
SWAC-65/30	Ti Alloy, Self Tapping Bone Screw 6.5 x 30 mm
SWAC-65/35	Ti Alloy, Self Tapping Bone Screw 6.5 x 35 mm
SWAC-65/40	Ti Alloy, Self Tapping Bone Screw 6.5 x 40 mm
SWAC-65/45	Ti Alloy, Self Tapping Bone Screw 6.5 x 45 mm
SWAC-65/50	Ti Alloy, Self Tapping Bone Screw 6.5 x 50 mm



Part Code No	Product Description
AOAC-IO/35	Ti Alloy M10 x 3.5 hex drive apical hole cover

## Cup Liner compatibility sizing chart

Modular Shell	Modular Liner	Modular Head							
40	35	22	28						
42	37		28						
44	31	22							
46	40		28	32					
48	40		20	02					
50	44								
52			28	32	36				
54									
56	48		28	32	36	40			
58	40		20	32	30	40			
60									
62									
64	52			00	00	4.0			
66				32	36	40			
68									
70									





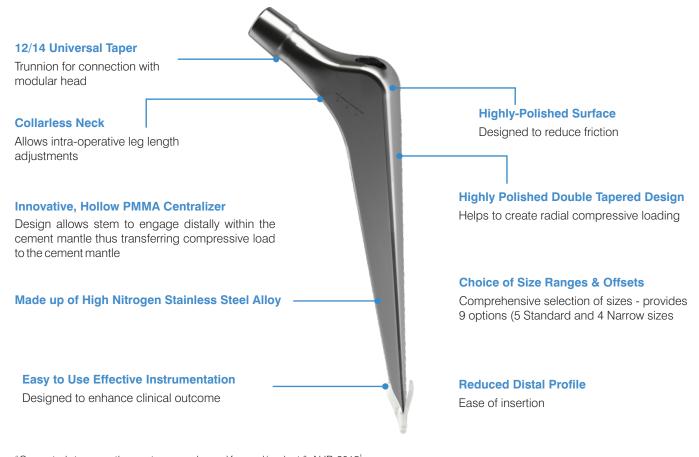








#### Cemented Stem System



"Cemented stems are the most commonly used femoral implant.": NJR-2015<sup>1</sup>

Latitud™ cemented stems are recommended to be used with Latitud HNSS Metal heads or Biolox®+ Delta Ceramic heads.

Latitud™ cemented stems double tapered design philosophy and highly polished surface allows it to micro-subside freely at the stem-cement interface and thus act as a self-locking taper, effectively and continually tightening step by step throughout the life of the hip.

#### References

- 1. www.njrcentre.org.uk, 12th annual report 2015, National joint registry for England, Wales, Northern Ireland and the Isle of Man Surgical data to 31 December 2014, ISSN 2054-183X (Online).
- + Biolox® is registered trademark of Ceramtec BV



Cemented Femoral Stem

## Latitud™ HIP Replacement System Implant Details

#### LATITUD™ Cemented Femoral Stem

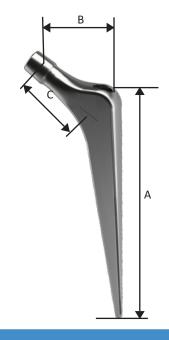
Part Code No.	Product Description
STCM-00/00	Cemented Stem Standard Size 00
STCM-00/01	Cemented Stem Standard Size 01
STCM-00/02	Cemented Stem Standard Size 02
STCM-00/03	Cemented Stem Standard Size 03
STCM-00/04	Cemented Stem Standard Size 04
STCM-00/05*	Cemented Stem Standard Size 05*
STDM-00/01	Cemented Stem Narrow Size 01
STDM-00/02	Cemented Stem Narrow Size 02
STDM-00/03	Cemented Stem Narrow Size 03
STDM-00/04	Cemented Stem Narrow Size 04
STDM-00/05*	Cemented Stem Narrow Size 05*
STDM-00/06*	Cemented Stem Narrow Size 06*



<sup>\*</sup>Available on special request.

## **Cemented Femoral Stem Standard (125° Neck Angle)**

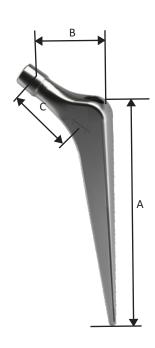
	Α		ı	В			C	<b>;</b>	
Size	Stem Length	Horizontal Offset (mm)				Neck Length (mm)			m)
	(mm)	-3.5	STD	+3.5	+7.0	-3.5	STD	+3.5	+7.0
00	127	34.2	07.0	00.0	40.0	20.6	26.1	20.6	40.4
00	121	34.2	37.0	39.9	42.8	32.6	36.1	39.6	43.1
01	149	42.2	45.0	47.9	50.8	37.1	40.6	44.1	47.6
02	149	42.2	45.0	47.9	50.8	37.1	40.6	44.1	47.6
03	149	42.2	45.0	47.9	50.8	37.1	40.6	44.1	47.6
04	149	42.2	45.0	47.9	50.8	37.1	40.6	44.1	47.6





## **Cemented Femoral Stem Narrow (125° Neck Angle)**

	A	В				C	;		
Size	Stem Length	Hori	zontal	Offset	(mm)	Ne	ck Len	gth (m	m)
	(mm)	-3.5	STD	+3.5	+7.0	-3.5	STD	+3.5	+7.0
01	149	35.2	38.0	40.9	43.8	34.7	38.2	41.7	45.2
02	149	35.2	38.0	40.9	43.8	35.1	38.6	42.1	45.6
03	149	35.2	38.0	40.9	43.8	35.1	38.6	42.1	45.6
04	149	35.2	38.0	40.9	43.8	35.1	38.6	42.1	45.6



#### **Cement Restrictor**

Part Code No.	Product Description
CRAG-20/15	UHMWPE Cement Restrictor Medium
CRBG-12/10	UHMWPE Cement Restrictor Small







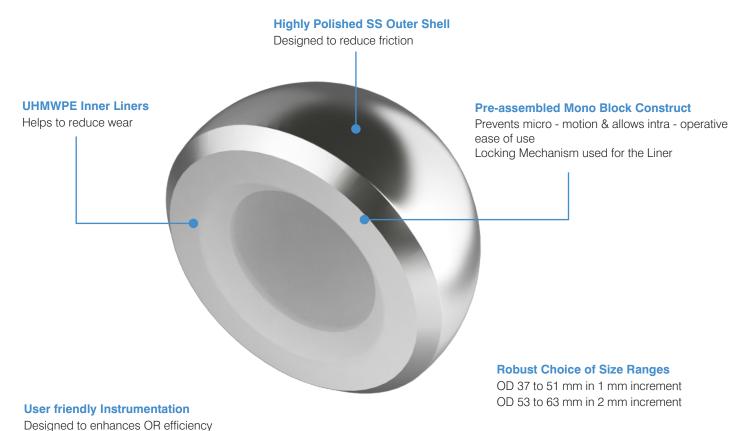
### Centralizer

Part Code No.	Product Description
SCBN-08/21	Centralizer Small (non-winged)
SCAG-20/24	Centralizer Universal (winged)
SCBG-08/21	UHMWPE Centralizer (non-winged & winged)
SCAG-20/24	UHMWPE Centralizer (non-winged & winged)





#### Bipolar Monoblock Shell



#### **Multiple Neck Length Head Options**

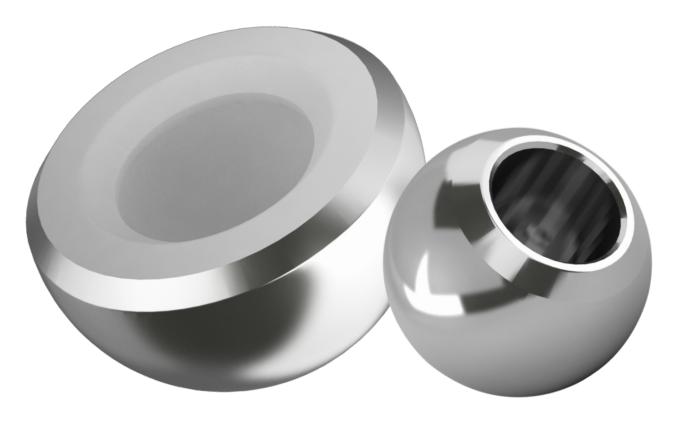
To optimally restore joint biomechanics intra-op

Partial THA or Hemi Hip Arthroplasty using bipolar system can be reliable and effective treatment option for hip fractures and diseased femoral heads and/or necks. The Bipolar shell articulates against the host acetabular cartilage, preserving acetabular bone stock for future considerations.



Bipolar Monoblock Shell





Stainless Steel Shell(SS-316L)
Ultra High Molecular Weight Polyethylene (UHMWPE)

Note: The Latitud™ Bipolar system has been designed to assemble with all femoral stems that utilize compatible 22 mm & 28 mm modular femoral heads.

Warning: The Bipolar Monoblock Shell component must not be undersized or oversized.

Failure to select the correct diameter component will increase the risk of premature failure.

## LATITUD™ Hip Replacement System Implant Details

## LATITUD™ Bipolar Monoblock Shell

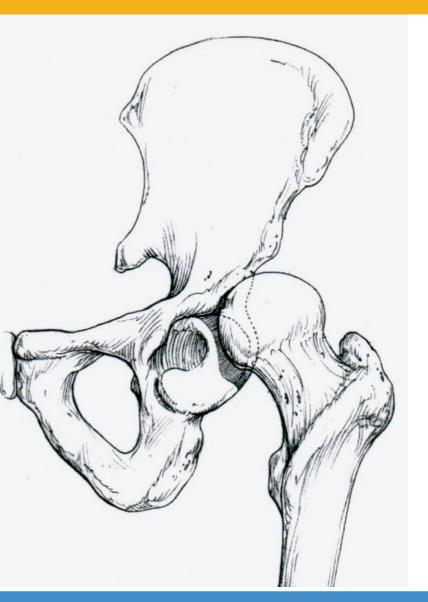
Part Code No.	Bipolar Monoblock Shell Size (mm)	Modular Femoral Head Size (mm)
BABL-37/22	37	22
BABL-38/22	38	22
BABL-39/22	39	22
BABL-40/22	40	22
BABL-41/22	41	22
BABL-42/22	42	22
BABL-43/22	43	22
BABL-42/28*	42	28
BABL-44/28	44	28
BABL-45/28	45	28
BABL-46/28	46	28
BABL-47/28	47	28
BABL-48/28	48	28
BABL-49/28	49	28
BABL-50/28	50	28
BABL-51/28	51	28
BABL-52/28	52	28
BABL-53/28	53	28
BABL-55/28	55	28
BABL-56/28*	56	28
BABL-57/28	57	28
BABL-59/28	59	28
BABL-60/28*	60	28
BABL-61/28	61	28
BABL-63/28	63	28

<sup>\*</sup>Available on special request.



Cemented Acetabular Cup

# The Latitud<sup>™</sup> Cemented Acetabular Cup System enhances cemented socket longevity through advanced design features





- •The design, incorporates integrated spacers that assist in achieving a uniform 2 mm cement mantle.
- •The cup also features 10° inclined face for extended femoral head coverage.



The 10° inclined face option can be used to help prevent dislocation

Two holes in the cup face accommodate the cup positioner during insertion

Notched circumferential grooves facilitate cement interdigitation

An added flange to help pressurize cement

Stainless steel radiopaque wires on the pole and equator aid in assessing cup position

Four 2 mm integrated spacers, strategically positioned in load-bearing areas, centralize the cup and create a uniform cement mantle





### Cemented Acetabular Cup Design Rationale

#### **Material**

• Ultra-high molecular weight polyethylene (UHMWPE) optimizes cup strength and performance.

### **Optimal Sizing**

• Available in 22, 28, 32, 36 or 40 mm inner diameters, with outer diameter sizes ranging from 38 to 60 mm to enhance patient fit and versatility.

## **Anatomic Alignment**

• 45° opening angle optimizes hip stability, while a 55° primary fixation groove angle provides greater cement encapsulation of the cup within substantive bony structures.

### **Enhanced Cement Management**

- Longitudinal cement channels designed to enhance cement anchorage into the primary fixation grooves.
- Polyethylene spacers designed to provide a uniform 2 millimeter cement mantle around the cup surface.
- Rim designed to encourage cement intrusion and interdigitation as the cup nears final seating.



Size (OD)	ID (mm)	Cement mantle	Nominal Liner Thickness (mm)
38	22	2	5.9
40	22	2	6.9
42	22	2	7.9
44	22	2	8.9
44	28	2	5.9
46	28	2	6.9
48	28	2	7.9
48	32	2	5.9
50	28	2	8.9
50	32	2	6.9
52	28	2	9.9

Size (OD)	ID (mm)	Cement mantle	Nominal Liner Thickness (mm)
52	32	2	7.9
52	36	2	5.9
56	28	2	11.9
56	32	2	9.9
56	36	2	7.9
56	40	2	5.9
60	28	2	13.9
60	32	2	11.9
60	36	2	9.9
60	40	2	7.9





Cemented Acetabular Cup Design Rationale

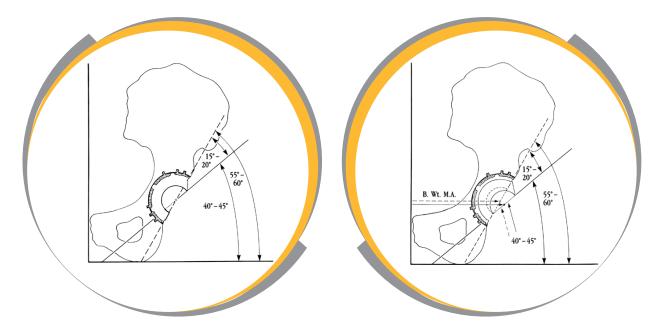
# Meril Orthopedics

## LATITUD<sup>™</sup> Cemented Acetabular Cup System Ordering Information

	10° Cem	ented Cup	0-
CING-38/22	Size 38/22	CING-52/32	Size 52/32
CING-40/22	Size 40/22	CING-52/36	Size 52/36
CING-42/22	Size 42/22	CING-56/28	Size 56/28
CING-44/22	Size 44/22	CING-56/32	Size 56/32
CING-44/28	Size 44/28	CING-56/36	Size 56/36
CING-46/28	Size 46/28	CING-56/40	Size 56/40
CING-48/28	Size 48/28	CING-60/28	Size 60/28
CING-48/32	Size 48/32	CING-60/32	Size 60/32
CING-50/28	Size 50/28	CING-60/36	Size 60/36
CING-50/32	Size 50/32	CING-60/40	Size 60/40
CING-52/28	Size 52/28		



The cemented cup does not lateralize the center of the natural acetabulum, an important design feature for reconstruction of hip geometry (Figure 1). Some competitive designs can lateralize the natural center of the joint (see Figure 2). When the center of hip rotation is lateralized, the body weight moment arm is increased and the abductor moment arm is relatively decreased. Thus, joint force is increased and the resultant joint force direction is lateralized. This acts on the overhang portion of the cup which will tend to rock the implant and cause plastic deformation and may lead to eventual early loosening of the implant (Figure 2). In addition, the laterally protruded large overhang that other systems employ makes reduction of the femoral head extremely difficult during the reduction maneuver. The Latitud Cemented Cup design minimizes these problems.







Femoral Heads

# Meril Orthopedics

## Latitud<sup>™</sup> Hip Replacement System Implant Details

### Latitud™ Femoral Heads available with variable offsets and diameters



Extremely hard, very high fracture resistant and wear resistant composite ceramic material based on Aluminium and Zirconium oxide, chemically stable & biologically inert with diamond-like hardness of the material.



Modular femoral heads are manufactured from Cobalt-Chromium alloy (Co-Cr) conforming to ASTM F1537-11, Cobalt-Chromium-Molybdenum alloy (Co-Cr-Mo) – ISO 5832-12.

Co-Cr alloys have high specific strength and are hard, tough, corrosion resistant, biocompatible materials.



Modular femoral heads are manufactured from High Nitrogen Stainless Steel as per ISO -5832 -9 to mate with 12/14 taper of femoral stems.

## Biolox Delta Ceramic Femoral Head



Part Code No	Product Description
HDAI-28/00	Biolox Delta Ceramic Femoral Head 28 mm +0 M, 12/14 Taper
HDAI-28/35-	Biolox Delta Ceramic Femoral Head 28 mm -3.5S, 12/14 Taper
HDAI-28/35+	Biolox Delta Ceramic Femoral Head 28 mm +3.5L, 12/14 Taper
HDAI-32/00	Biolox Delta Ceramic Femoral Head 32 mm +0 M, 12/14 Taper
HDAI-32/40-	Biolox Delta Ceramic Femoral Head 32 mm -4 S, 12/14 Taper
HDAI-32/40+	Biolox Delta Ceramic Femoral Head 32 mm +4 L, 12/14 Taper
HDAI-32/70+	Biolox Delta Ceramic Femoral Head 32 mm +7XL, 12/14 Taper
HDAI-36/00	Biolox Delta Ceramic Femoral Head 36 mm +0 M, 12/14 Taper
HDAI-36/40-	Biolox Delta Ceramic Femoral Head 36 mm -4 S, 12/14 Taper
HDAI-36/40+	Biolox Delta Ceramic Femoral Head 36 mm +4 L, 12/14 Taper
HDAI-36/80+	Biolox Delta Ceramic Femoral Head 36 mm +8 XL, 12/14 Taper
HDAI-40/00	Biolox Delta Ceramic Femoral Head 40 mm +0 M, 12/14 Taper
HDAI-40/40-	Biolox Delta Ceramic Femoral Head 40 mm -4 S, 12/14 Taper
HDAI-40/40+	Biolox Delta Ceramic Femoral Head 40 mm +4 L, 12/14 Taper
HDAI-40/80+	Biolox Delta Ceramic Femoral Head 40 mm +8 XL, 12/14 Taper







Femoral Heads

# Meril Orthopedics

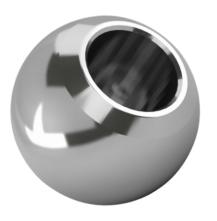
## CoCr Modular Femoral Head

Part Code No.	Product Description
HDAA-22/00	CoCr Modular Femoral Head 22 mm, +0 , 12/14 Taper
HDAA-22/35+	CoCr Modular Femoral Head 22 mm +3.5, 12/14 Taper
HDAA-28/35-	CoCr Modular Femoral Head 28 mm -3.5, 12/14 Taper
HDAA-28/00	CoCr Modular Femoral Head 28 mm +0 , 12/14 Taper
HDAA-28/35+	CoCr Modular Femoral Head 28 mm +3.5, 12/14 Taper
HDAA-28/70+	CoCr Modular Femoral Head 28 mm +7, 12/14 Taper
HDAA-32/40-	CoCr Modular Femoral Head 32 mm -4, 12/14 Taper
HDAA-32/00	CoCr Modular Femoral Head 32 mm +0, 12/14 Taper
HDAA-32/40+	CoCr Modular Femoral Head 32 mm +4, 12/14 Taper
HDAA-32/70+	CoCr Modular Femoral Head 32 mm +7, 12/14 Taper
HDAA-36/40-	CoCr Modular Femoral Head 36 mm -4, 12/14 Taper
HDAA-36/00	CoCr Modular Femoral Head 36 mm +0 , 12/14 Taper
HDAA-36/40+	CoCr Modular Femoral Head 36 mm +4, 12/14 Taper
HDAA-36/70+	CoCr Modular Femoral Head 36 mm +7, 12/14 Taper
HDAA-40/40-	CoCr Modular Femoral Head 40 mm -4, 12/14 Taper
HDAA-40/00	CoCr Modular Femoral Head 40 mm +0, 12/14 Taper
HDAA-40/40+	CoCr Modular Femoral Head 40 mm +4, 12/14 Taper
HDAA-40/70+	CoCr Modular Femoral Head 40 mm +7, 12/14 Taper



## HNSS Modular Femoral Head

Part Code No.	Product Description
HDAM-22/00	HNSS Modular Femoral Head 22+0
HDAM-22/35+	HNSS Modular Femoral Head 22+3.5
HDAM-28/00	HNSS Modular Femoral Head 28+0
HDAM-28/35+	HNSS Modular Femoral Head 28+3.5
HDAM-28/70+	HNSS Modular Femoral Head 28+7
HDAM-28/35-	HNSS Modular Femoral Head 28-3.5
HDAM-32/00	HNSS Modular Femoral Head 32+0
HDAM-32/40+	HNSS Modular Femoral Head 32+4
HDAM-32/70+	HNSS Modular Femoral Head 32+7
HDAM-32/40-	HNSS Modular Femoral Head 32-4
HDAM-36/00	HNSS Modular Femoral Head 36+0
HDAM-36/40+	HNSS Modular Femoral Head 36+4
HDAM-36/70+	HNSS Modular Femoral Head 36+7
HDAM-36/40-	HNSS Modular Femoral Head 36-4
HDAM-40/00	HNSS Modular Femoral Head 40+0
HDAM-40/40+	HNSS Modular Femoral Head 40+4
HDAM-40/70+	HNSS Modular Femoral Head 40+7
HDAM-40/40-	HNSS Modular Femoral Head 40-4





## TAPER REDUCED STEM



3 Offset Options

to facilitate restoration of hip biomechanics

Tapered neck

designed to increase range of motion

Highly polished neck

designed to minimize soft tissue damage & liner wear

Lateral shoulder

designed for ease of insertion

Ti-GrowthC®\* coating

designed for initial stability

Comprehensive sizes

with 18 sizes in each offset option

Distal reduction

designed for better fit in proximal / distal mismatch

Vertical grooves

designed for rotational and axial stability

#### **MATERIAL SPECIFICATIONS**

• Titanium Alloy (Ti6Al4V – ELI) with Ti-GrowthC® coating applied as a plasma spray

#### Ti-GROWTHC® COATING DETAILS

- Surface roughness: Rt 300 600 μm
- Coating thickness: 500 ± 127 μm
- Coating adhesion strength: > 20 Mpa
- Porosity 30 70%

Notes: