
Bencox[®]

Mirabo Cup

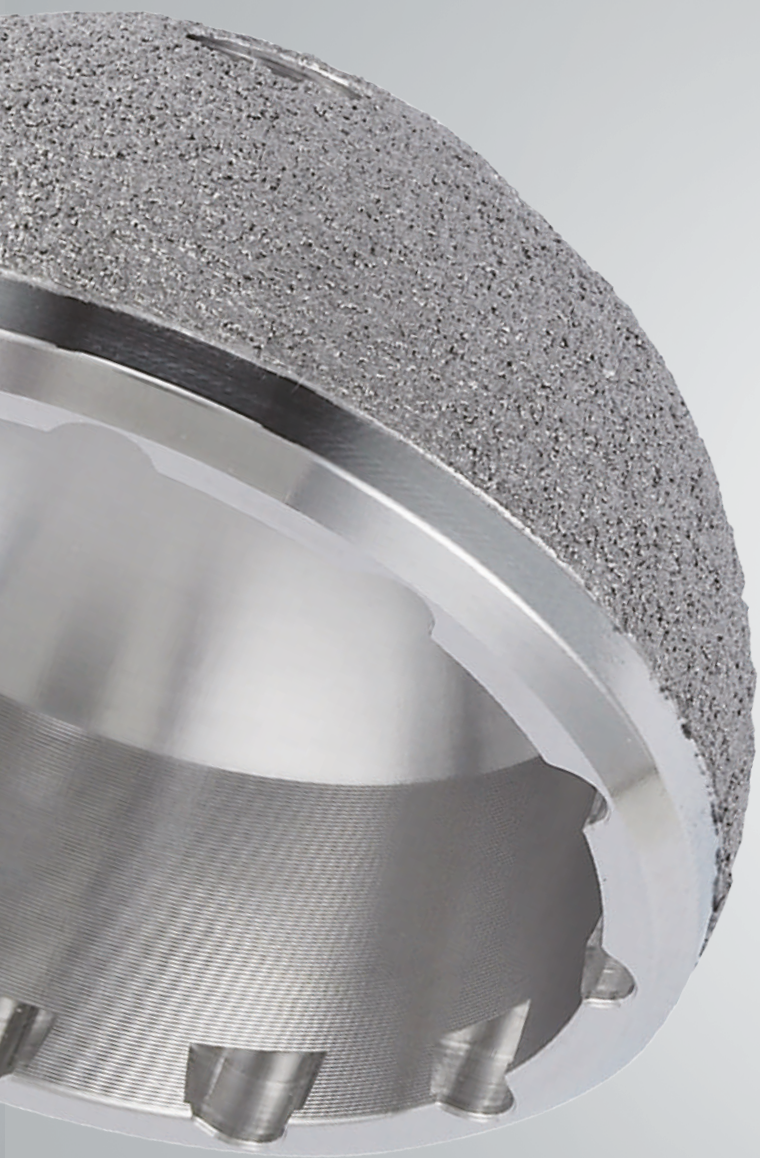
Enhanced Stability!
Enhanced Technology!



INNOVATIVE

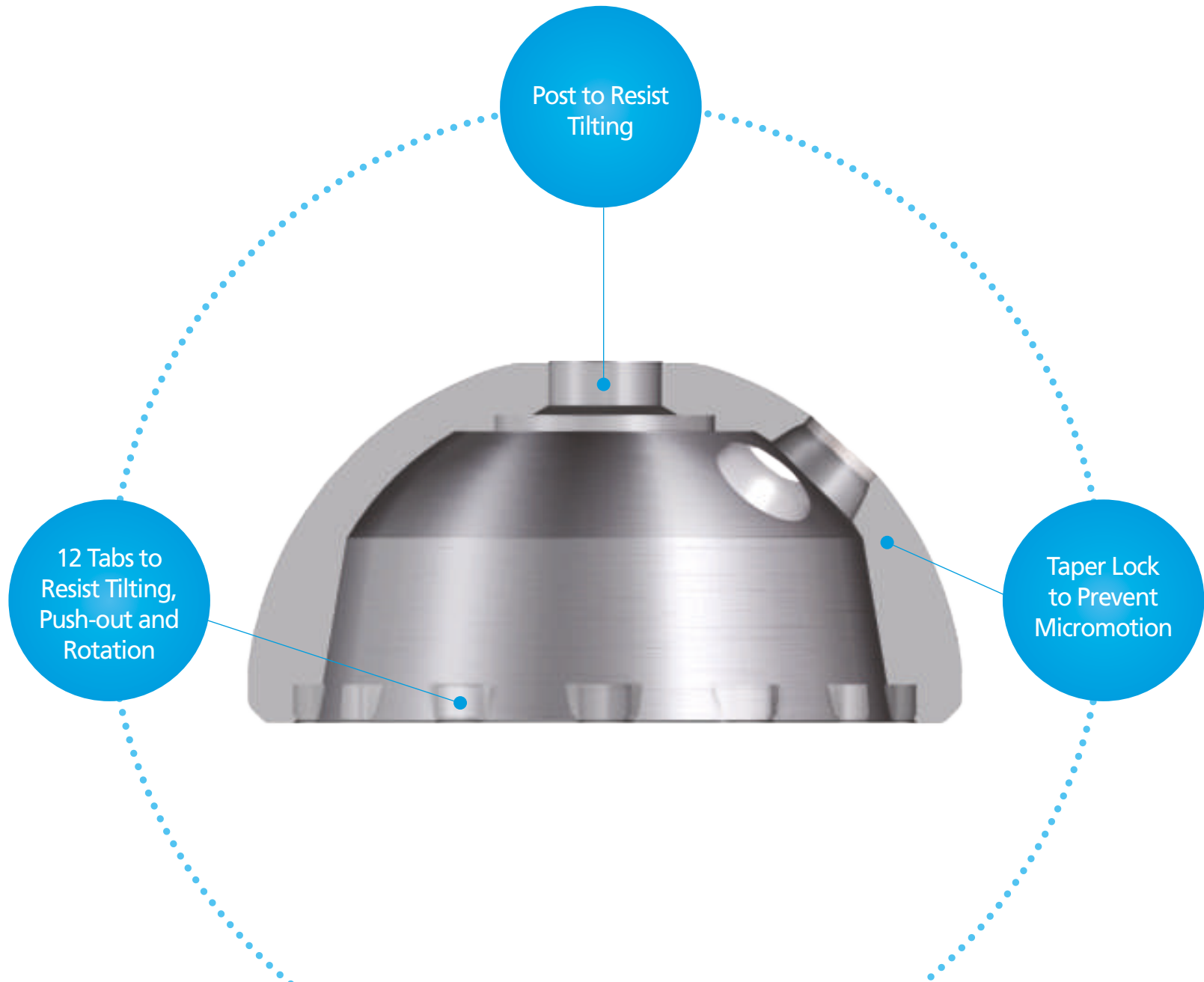
- Secure Locking Mechanism
- Wear Mechanism
- Laser 3D Coating Technology



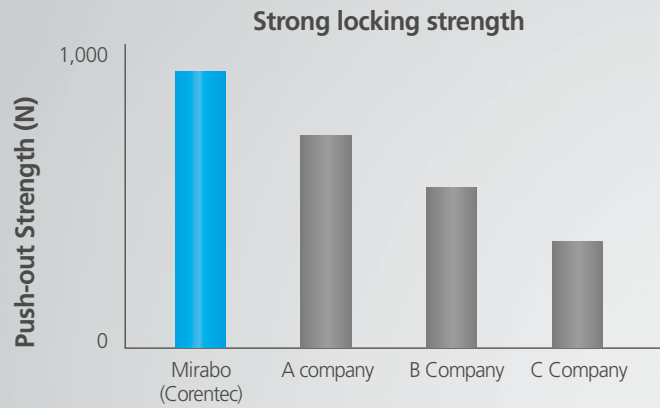


» Secure Locking Mechanism

Locking with PE Liner

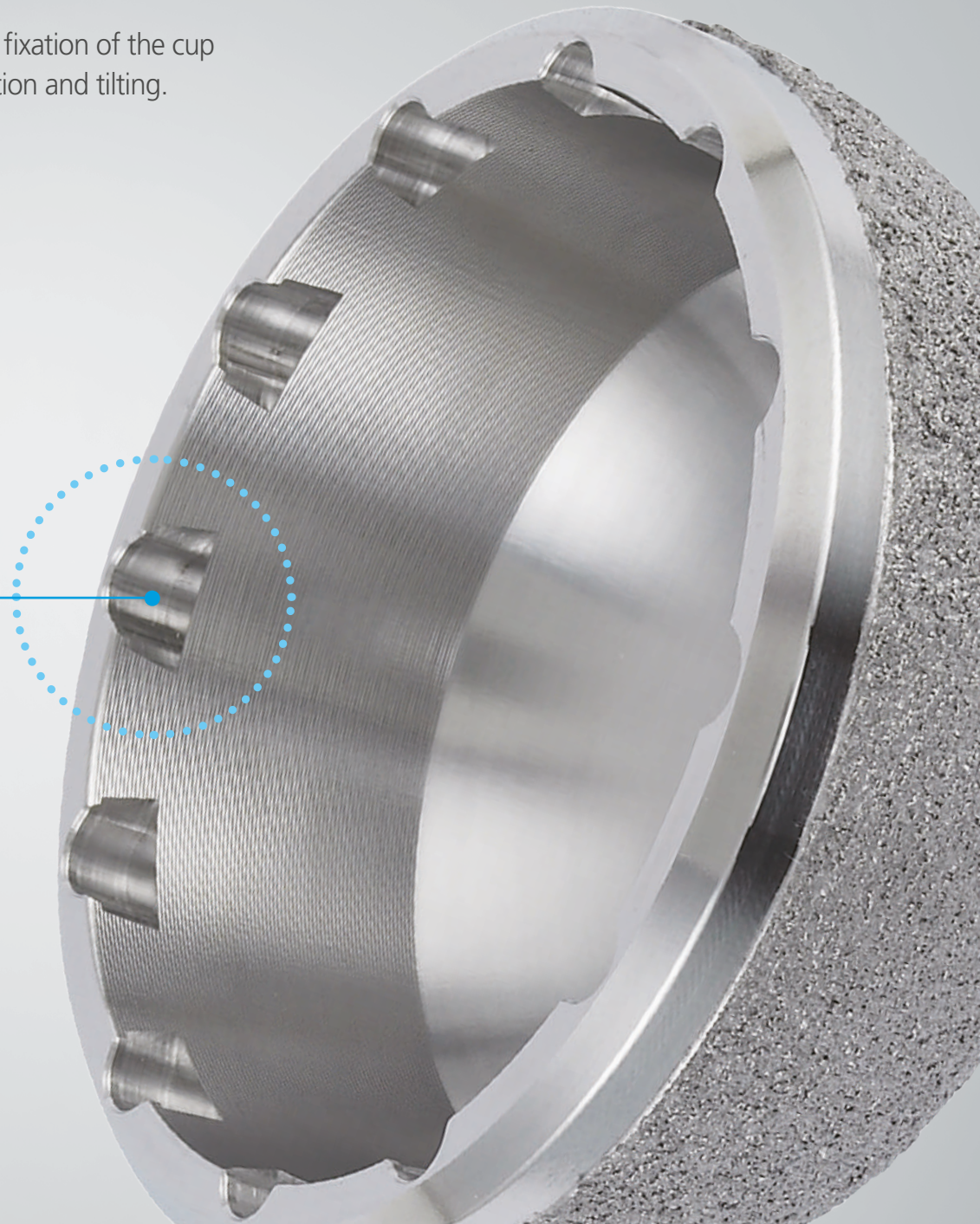


The patented* locking mechanism allows for secure fixation of the cup and liner with excellent resistance to push-out, rotation and tilting.



• Data on file at Coretec

12 anti-rotational tabs
* Patent no. : 9,144,497 (U.S.A)
2 674 132 (EUROPE)
ZL201180067109.1 (CHINA)
10-1268106 (KOREA)
10-1279095 (KOREA)



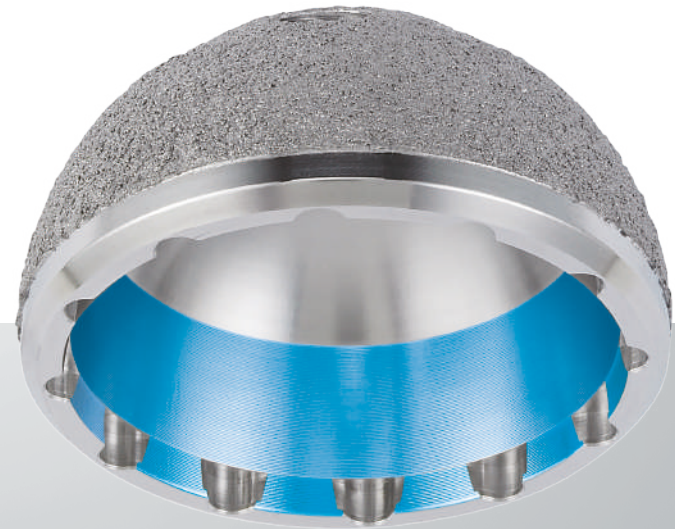
» Secure Locking Mechanism

Locking with Ceramic Liner

Cup and ceramic insert provide a secure taper locking mechanism while providing a self-locating feature to ease the insert placement.

Increased taper length prevents mal-positioning of the ceramic liner.

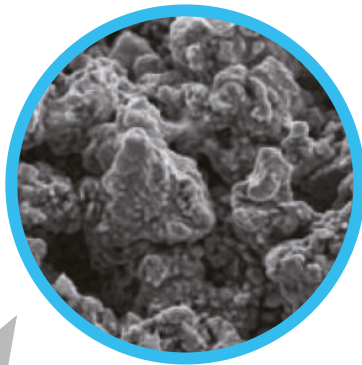
● Taper Lock



» Surface Treatment

TPS Coating

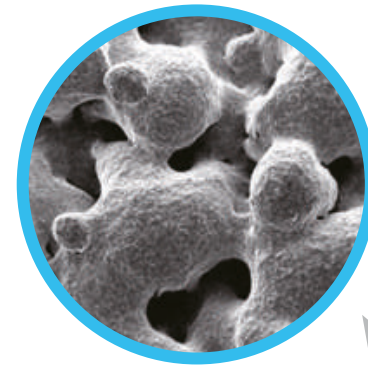
The microporous pure titanium coating with pores of 50-200 μm diameter and more than 30% porosity leads to direct bone apposition for secondary stability.



Mag. 100x

Laser 3D Coating

Laser 3D coating technique produces layers of titanium powder using laser beam. The coating with pores of 200-500 μm diameter and 50~70% porosity leads to bone-in-growth. Increased roughness from the Laser 3D coating allows about 1.4 times stronger initial fixation than Ti Plasma Spray coating.

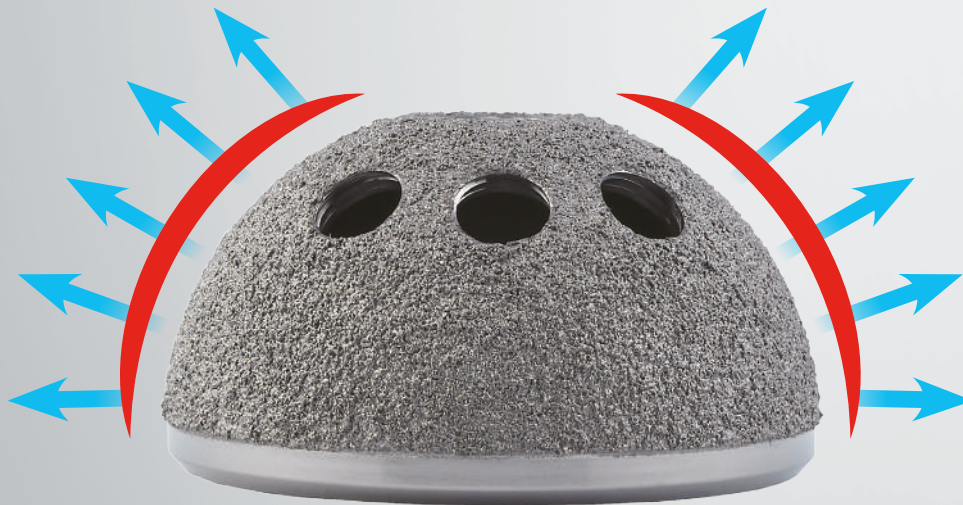


Mag. 100x

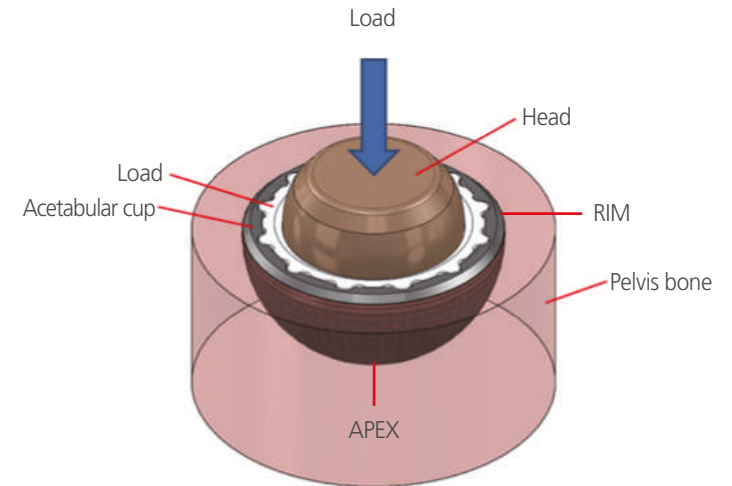


» Secure Peripheral Fixation of Cup

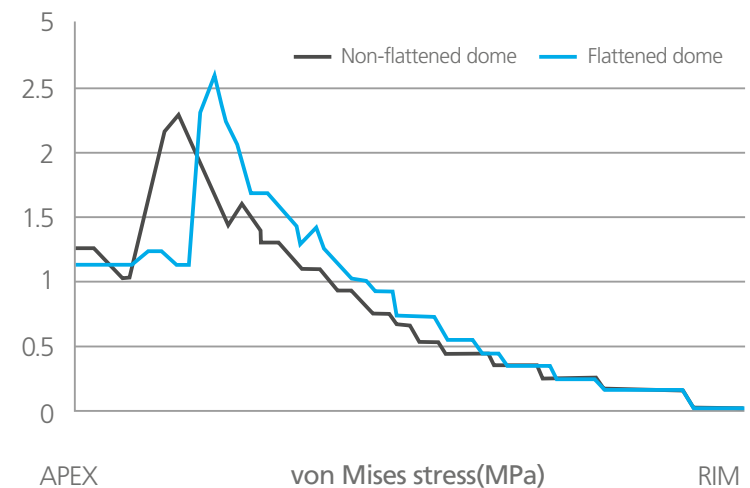
Slightly flattened dome establishes physiological load transfer throughout the periphery of the cup.



FE analysis model

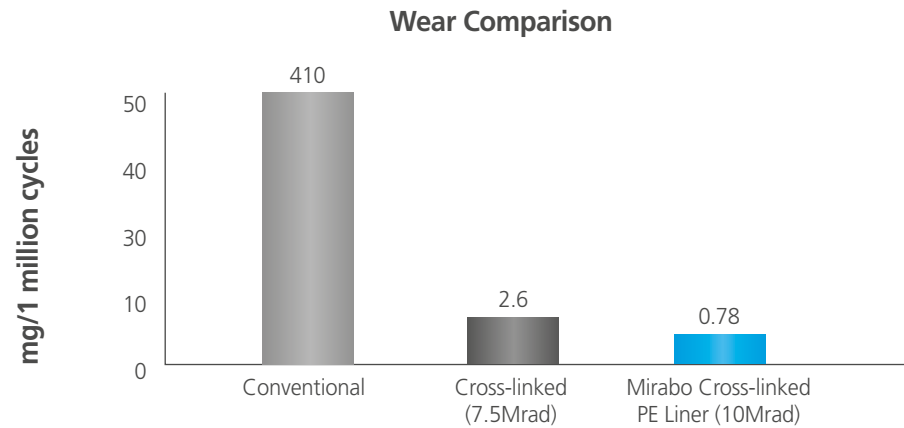


Secure Initial Fixation



Enhanced Wear Characteristics

In-vitro tests showed that Mirabo PE liner exhibited 99.8% less wear than the conventional PE liners.



Standard type

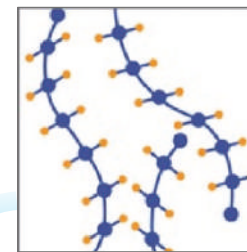


15° Elevated type

Highly Crosslinked Polyethylene Manufacturing Process

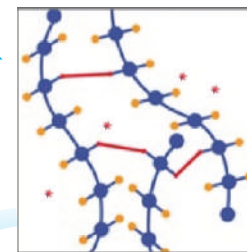
- Compression molded UHMWPE (GUR 1050) rod stock material.
- Gamma irradiated at 10Mrad at room temperature to facilitate cross-linking.
- Following irradiation, the rods are heated above the melting point to eliminate residual free radicals and form additional cross-links.
- PE liners are machined, cleaned, packaged, and EtO sterilized.

10Mrad
Gamma
Irradiation

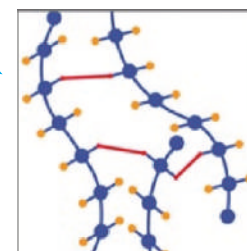


UHMWPE
(GUR 1050)

Remelting



Cross linking with
free radicals present



Free radicals
eliminated

Combination Chart

| Cup size | 46mm | 48mm | 50mm | 52mm | 54mm | 56mm | 58mm | 60mm | 62mm | 64mm | 66mm | 68mm |
|---------------|-------|-------|------|---------------|------|------|---------------|------|------|---------------|------|------|
| Ceramic Liner | 28/37 | 32/39 | | 36/44 | | | 36/48 | | | 36/52 | | |
| PE Liner | 28/37 | 28/39 | | 28, 32, 36/44 | | | 28, 32, 36/48 | | | 28, 32, 36/52 | | |

*Unusable combination: PE Liner Elevated type assembled with Skirted 28 & 32 metal head.

Ordering Information

Bencox® Mirabo Cup

| Part No. | Description |
|-------------|-------------|
| H1.A11.1046 | 46mm |
| H1.A11.1048 | 48mm |
| H1.A11.1050 | 50mm |
| H1.A11.1052 | 52mm |
| H1.A11.1054 | 54mm |
| H1.A11.1056 | 56mm |
| H1.A11.1058 | 58mm |
| H1.A11.1060 | 60mm |
| H1.A11.1062 | 62mm |
| H1.A11.1064 | 64mm |
| H1.A11.1066 | 66mm |
| H1.A11.1068 | 68mm |

Bencox® Mirabo PE Liner

| Part No. | | Description |
|-------------|--------------|-------------|
| Standard | 15° Elevated | |
| H1.L61.2837 | H1.L66.2837 | 28/37 |
| H1.L61.2839 | H1.L66.2839 | 28/39 |
| H1.L61.3244 | H1.L66.3244 | 32/44 |
| H1.L61.3248 | H1.L66.3248 | 32/48 |
| H1.L61.3644 | *H1.L66.3644 | 36/44 |
| H1.L61.3648 | *H1.L66.3648 | 36/48 |
| H1.L61.3652 | H1.L66.3652 | 36/52 |
| H1.L61.4048 | H1.L66.4048 | *40/48 |
| H1.L61.4052 | H1.L66.4052 | *40/52 |

* Option

Bencox® Delta Liner

| Part No. | Description |
|-----------|-------------|
| 01.01.261 | 28/37 |
| 01.01.267 | 32/39 |
| 01.01.272 | 36/44 |
| 01.01.273 | 36/48 |
| 01.01.274 | 36/52 |
| 01.01.275 | *40/48 |
| 01.01.276 | *40/52 |

* Option

Bencox® Metal Head (Standard Type)

| Part No. | Description |
|-----------|--------------|
| 01.02.405 | 28mm/S(-3.5) |
| 01.02.410 | 28mm/M(0) |
| 01.02.415 | 28mm/L(+3.5) |
| 01.02.418 | 28mm/XL(+7) |
| 01.02.420 | 32mm/S(-4) |
| 01.02.425 | 32mm/M(0) |
| 01.02.430 | 32mm/L(+4) |
| 01.02.433 | 32mm/XL(+7) |
| 01.02.440 | 36mm/S(-4) |
| 01.02.445 | 36mm/M(0) |
| 01.02.450 | 36mm/L(+4) |
| 01.02.452 | 36mm/XL(+7) |
| 01.02.460 | *40mm/S(-4) |
| 01.02.465 | *40mm/M(0) |
| 01.02.470 | *40mm/L(+4) |
| 01.02.472 | *40mm/XL(+7) |

* Option

Bencox® Metal Head (Skirted Type)

| Part No. | Description |
|-----------|-------------|
| 01.02.417 | 28mm/XL(+7) |
| 01.02.432 | 32mm/XL(+7) |

Bencox® Bone Screw

| Part No. | Description |
|-------------|-------------|
| H1.B11.0015 | 15mm |
| H1.B11.0020 | 20mm |
| H1.B11.0025 | 25mm |
| H1.B11.0030 | 30mm |
| H1.B11.0035 | 35mm |
| H1.B11.0040 | 40mm |
| H1.B11.0045 | 45mm |
| H1.B11.0050 | 50mm |
| H1.B11.0055 | 55mm |
| H1.B11.0060 | 60mm |

Bencox® Delta Head

| Part No. | Description |
|-----------|--------------|
| 01.01.281 | 28mm/S(-3.5) |
| 01.01.282 | 28mm/M(0) |
| 01.01.283 | 28mm/L(+3.5) |
| 01.01.284 | 32mm/S(-4) |
| 01.01.285 | 32mm/M(0) |
| 01.01.286 | 32mm/L(+4) |
| 01.01.294 | 32mm/XL(+7) |
| 01.01.287 | 36mm/S(-4) |
| 01.01.288 | 36mm/M(0) |
| 01.01.289 | 36mm/L(+4) |
| 01.01.295 | *36mm/XL(+8) |
| 01.01.290 | *40mm/S(-4) |
| 01.01.291 | *40mm/M(0) |
| 01.01.292 | *40mm/L(+4) |
| 01.01.293 | *40mm/XL(+8) |

* Option



Bencox[®] Hip System



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