Ceramic Heads with Titanium Sleeve

Product Rationale and Surgical Technique
Features and Benefits

DEPUY BIOLOX® DELTA TS FOR PRIMARY AND REVISION SURGERIES

• The BIOLOX DELTA TS (Titanium Sleeve) system is available as revision option for bearing combinations with ceramic head sizes 28, 32, 36, 40 and 44 mm outer diameter with different neck lengths, on a DePuy 12/14 ARTICUL/EZE® taper. Ceramic heads in sizes 40 and 44 mm outer diameter are only available with a sleeve.

• The Titanium Sleeve (TS, TiAl6V4) offers the surgeon the ability to choose the optimised bearing combination for the patient even on the used taper of a well-fixed stem, including changing to a ceramic head in a revision case.

• The improved strength and strength distribution of BIOLOX DELTA material allows a greater factor of component safety.1,2

VARIOUS OPTIONS: DEPUY BIOLOX DELTA TS IN A PINNACLE® CUP

Ceramic-on-MARATHON™
• MARATHON provides 95% wear reduction in-vivo compared to standard polyethylene.3
• Significant wear reduction compared to metal-on-polyethylene (MoP) due to scratch resistance.4,5
• MARATHON high performance liners are available for PINNACLE cups up to size 80 mm outer diameter with face changing options.
• DePuy BIOLOX DELTA TS heads are offered in sizes up to 44 mm outer diameter.

ALTRX™
• Through the exclusive ALTRA-LINK™ material enhancement process, ALTRX polyethylene was optimised to balance wear reduction and mechanical integrity while eliminating oxidation.8,9
• To address a growing trend toward high demand patients, ALTRX polyethylene liners were developed to reduce wear by 92 percent versus standard polyethylene and 51 percent versus MARATHON polyethylene liners using 28mm heads.8,9
• Because ALTRX is moderately cross-linked at 75 kiloGrays (7.5 MRad), the risk of cracking or fractures is reduced compared with a highly cross-linked material.9
• ALTRX polyethylene is available for the PINNACLE Acetabular Cup System from an outer diameter of 44 mm onwards with a 32 mm head in a 48mm cup and 36mm head in a 52 mm cup.

Ceramic-on-Ceramic
• Superior wear attributes compared to other material combinations.1,6
• The DePuy BIOLOX DELTA material provides excellent properties to resist crack propagation.7
• CERAMAX™ ceramic-on-ceramic (CoC) combinations are available in a PINNACLE cup from an outer diameter of 44 mm onwards with a 28 mm head and from 52 mm outer diameter onwards with a 36 mm head, either for primary and revision cases.
Surgical Technique

STEP 1
Ensure male taper of well-fixed femoral stem is wiped clean of any blood, bone chips or other foreign materials.
- **IT IS ESSENTIAL** that the taper on the stem be examined for damage.
- Please refer to examples below for an acceptable level of damage to use BIOLOX DELTA TS heads.

Note: Taper sleeves are available for DePuy stems with a 12/14 taper.

Note: Used heads on TS taper sleeves may not be used.

Note: DePuy BIOLOX DELTA TS heads may only be used with DePuy ARTICUL/EZE 12/14 tapers and DePuy cup inserts.

STEP 2
Select the appropriate BIOLOX DELTA TS head with the desired head size and neck length and place it onto the stem.

Please note the head and taper sleeve are ready assembled and sterilised prior to packaging.

Apply finger pressure to firmly seat the head onto the stem.

STEP 3
Utilising the femoral head impactor, impact the BIOLOX DELTA TS head onto the stem with two slight blows of a mallet.

![Acceptable Taper Damage](image1)
Acceptable Taper Damage
Appropriate for use with DELTA TS Heads

- Undamaged Taper
- Taper with scratches/warping

![Unacceptable Taper Damage](image2)
Unacceptable Taper Damage
Do not use with DELTA TS Heads

- Slanted Taper
- Taper with broad truncation
- Crushed Taper
## Ordering Information

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## References


