Sleeved ceramic heads such as BIOLOX®OPTION offer the possibility of revising a femoral head implant while retaining connections. The BIOLOX®OPTION system has proven to be safe and is reliable in revisions for ALTR or metallosis. Extensive tests and retrieval studies have shown that the use of an adapter sleeve mitigates the risk of fretting corrosion. The BIOLOX®delta ceramic exhibits very high wear and fretting corrosion resistance and is associated with lower rates of revision compared to metal heads. Most arthroplasty registries from all over the world confirm that the use of ceramic heads is associated with lower rates of revision compared to metal heads.

BIOLOX® is registered in the USA by CeramTec's customers. BIOLOX®OPTION are registered by CeramTec's customers. BIOLOX®CONTOURA® is an alumina matrix ceramic composite composed of alumina, zirconia, and certain metal (CoCr) oxide. BIOLOX®delta ceramic has proven its performance, biocompatibility, and excellent tribological properties including excellent wettability and very high wear resistance. It is safe in terms of metal ion release and pathogenic reactions to ceramic particles are decreased. The material is less prone to biofilm formation and its use may decrease the risk of revision due to infection. The use of ceramic bearings in hip arthroplasty has increased over the last years. By now, BIOLOX®delta ceramic has been proven in numerous scientific studies. Bearings are associated with a lower risk of revision compared to metal bearings. Studies that have examined the cost effectiveness of different bearing-materials and analyzed the relation between initial cost and long-term benefit of the bearing have shown that ceramics are associated with a high potential for cost-savings in THA, therefore bearing have shown that on-soft bearings of all bearing materials. Extensive tests and retrieval studies have shown that the use of an adapter sleeve for the BIOLOX®delta ceramic is a highly biocompatible and hypoallergenic ceramic material. There is no known clinical evidence indicating the occurrence of adverse reactions directly related to adsorption, and reduced incidence of bacterial hypersensitivity. Delta ceramic has proven its chemical stability in physiological environments. Due to the nature of the covalent and ionic bonds of its structure, BIOLOX®delta ceramic demonstrates high chemical stability and structural performance. Delta ceramic has high hardness and toughness, which is an important factor for the material's ability/capability to perform its desired function and generate the most appropriate tissue response, but also for long-term performance and biological turnover. Delta ceramic has high wettability, protein biocompatibility, and exhibits excellent tribological properties, including very high wear resistance and low friction. Due to the high hardness and toughness, delta ceramic has no significant effect on the corrosion of modular taper connections. Delta ceramic has proven to be safe and is highly biocompatible in revisions for ALTR or metallosis. Extensive tests and retrieval studies have shown that the use of an adapter sleeve mitigates the risk of fretting corrosion. The BIOLOX®delta ceramic is associated with lower rates of revision compared to metal heads.