

陶瓷球头

BIOLOX® forte
BIOLOX® delta



事实与数据	BIOLOX® forte	BIOLOX® delta
BIOLOX® 陶瓷	<ul style="list-style-type: none"> ● 1994年上市 ● 已销售363万件球头(2016) ● 全球超过20年经验证的临床应用历史 	<ul style="list-style-type: none"> ● THA领先陶瓷技术 ● 2003年上市 ● 已销售499万件球头(2016) ● 全球14年经验证的临床应用历史^{3,4}
材料性能	<ul style="list-style-type: none"> ● 氧化铝陶瓷异常坚硬，高抗碎裂性和高耐磨性 	<ul style="list-style-type: none"> ● 氧化锆和氧化铝基复合陶瓷材料异常坚硬，超高抗碎裂性和高耐磨性² ● 和BIOLOX® forte比较，明确表现出更高的抗条状磨损现象⁶ ● 体内更高的耐磨性⁸ ● BIOLOX® delta球头有更低的容积磨损⁹

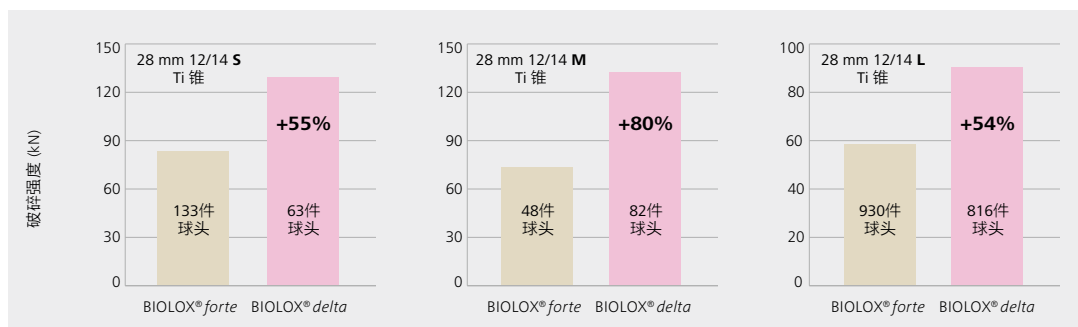
性能	BIOLOX® forte	BIOLOX® delta	
弯曲强度	650 MPa	1360 MPa	更高的弯曲强度相当于更高的破碎强度
韧性	3.5 MPa √m	5.9 MPa √m	超低的磨损和碎裂率归功于高韧性
抗刮擦	10 N	20 N	高抗刮擦导致更高的抗条状磨损 ⁷

破碎强度比较

BIOLOX® forte / BIOLOX® delta

根据球头型号大小，BIOLOX® delta球头显示出更高的破碎强度，因此减少碎裂率。

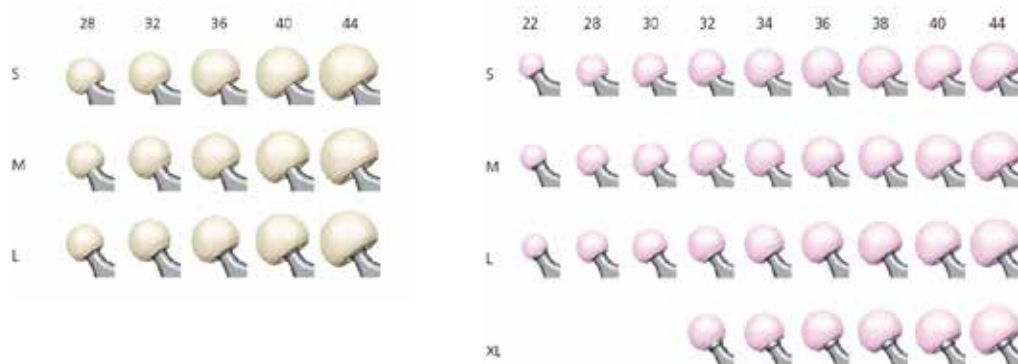
对于破碎强度通常为最低的28mm球头，BIOLOX® delta的破碎强度提高54%至80%。



BIOLOX® forte / BIOLOX® delta

型号范围

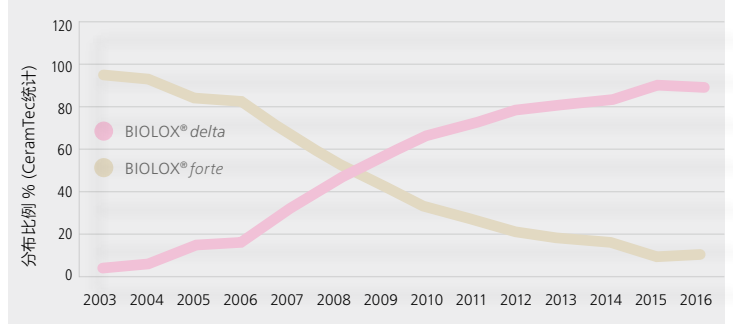
BIOLOX® delta球头提供更多的颈长和球头型号。



事实与数据: BIOLOX® forte / BIOLOX® delta

BIOLOX® forte / BIOLOX® delta 球头的分布比例(%)

根据CeramTec目前统计, BIOLOX® delta球头的植入比例超过85%。趋势已被登记中心证实。AOANJRR 2016 报告显示在2015年使用的97.4%的陶瓷股骨头是复合陶瓷。¹



CeramTec 临床投诉统计

BIOLOX® delta 碎裂率比BIOLOX® forte 低一个数量级。

球头	BIOLOX® forte	BIOLOX® delta
销售部件(总计)	363万件	499万件
术后临床投诉	22/100000	1/100000
碎裂率	0.022%	0.001%

BIOLOX® OPTION – 髌翻修的首选⁵

- 显著减少翻修后与磨损相关的骨溶解发生率
- 柄固定良好原位保留时的翻修选择
- 罕见的陶瓷部件碎裂后的解决方案
- 初次手术调整颈长的备选



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