



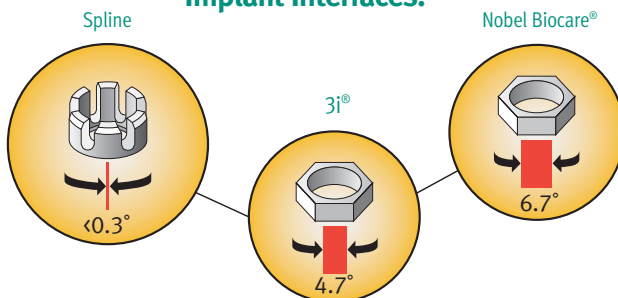
Spline® Dental Implant Interface



The way it fits together is the what sets it apart

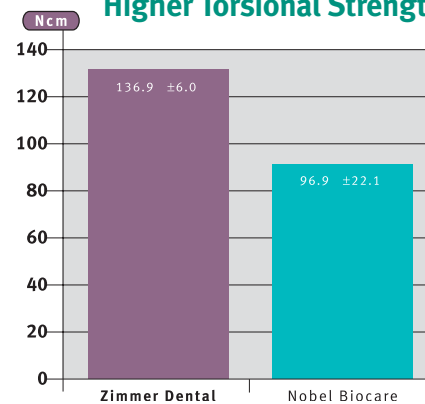
- Interdigitating projections and slots provide exceptionally precise fit.
- Enhanced sense of tactile engagement.
- Solves rotational problems.^{3,4}
- Reduces micromovement.¹

Comparison of Rotational Tolerances in Implant Interfaces.^{7,8}



The precision of the *Spline* implant interface reduces screw loosening, thereby reducing secondary patient appointments needed for screw tightening or replacement.

Higher Torsional Strength

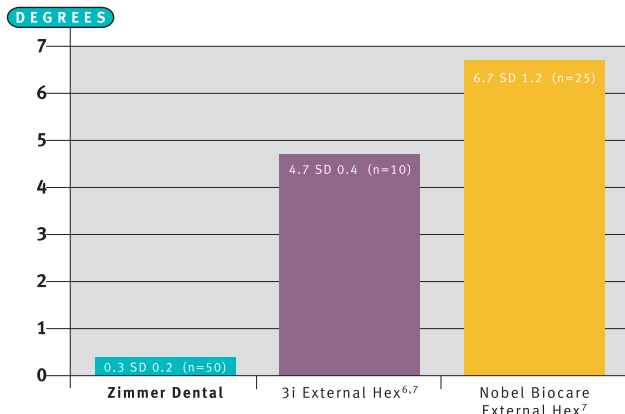


Torsional forces are highest while self-tapping in dense bone. In an independent university study, the *Spline* implant interface demonstrated 41% higher torsional strength than a Ti-6Al-4V external hex.⁵

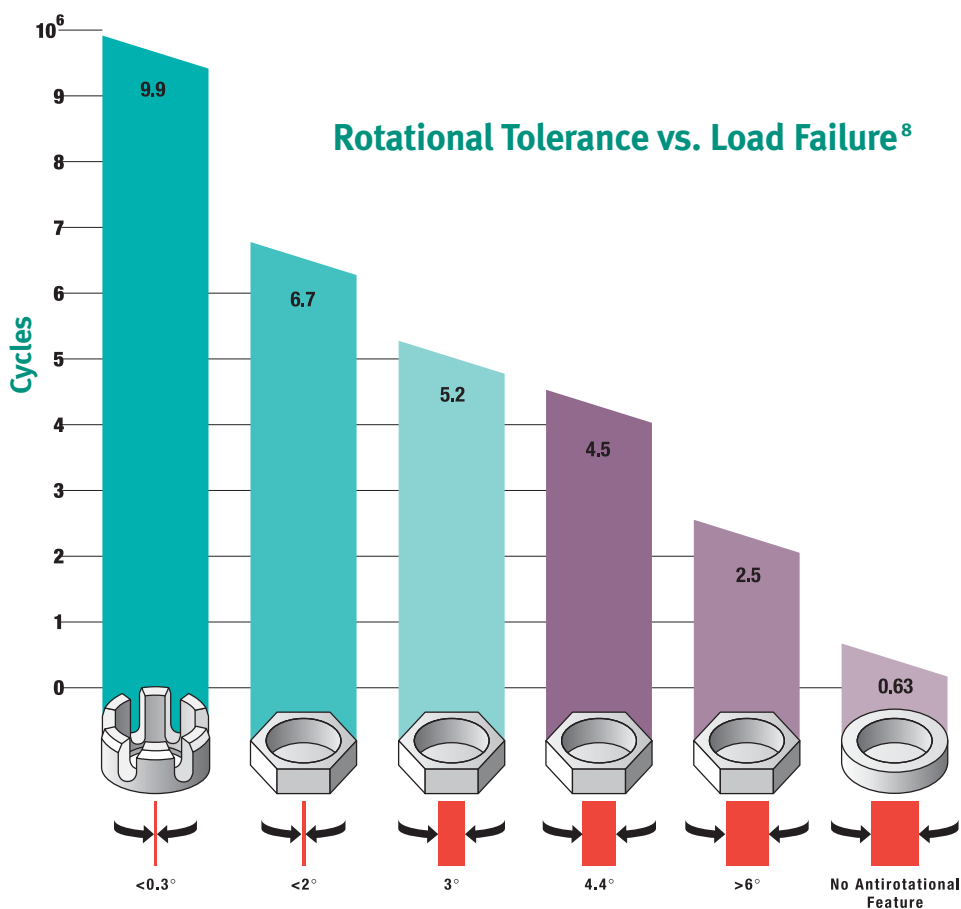
Spline Implant: 136.9Ncm ± 6.0 vs Hex: 96.9Ncm ± 22.1

This significantly reduces the risk of stripping or deforming the antirotational mechanism while self-tapping.

Reduced Micromovement



The high-strength *Spline* implant interface allows the implant and the abutment to form a precise "lock," reducing joint failure.



Research has shown that the *Spline* implant interface resists screw loosening better than external hex designs under controlled load conditions.

1. ASTM Specification B348.
2. Data on file.
3. Carlsson, et al, JOMI, Volume 3, number 1, pp. 21-24, 1988.
4. Buser et al, J of Biomedical Mat Res, Vol. 25, pp. 889-902, 1991.
5. Master J, Holloway J. Rotational Resistance and Preload of Hex and Spline Implants. Data presented at the 1996 Academy of Osseointegration meeting, March 1, 1996
6. Results from animal studies cannot be directly correlated to results in humans.
7. Binon, PP Int, J Prosthodont 1995; 8; 162-178.
8. Binon, PP Int, J Prosthodont 1996; 9; 419-433.

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