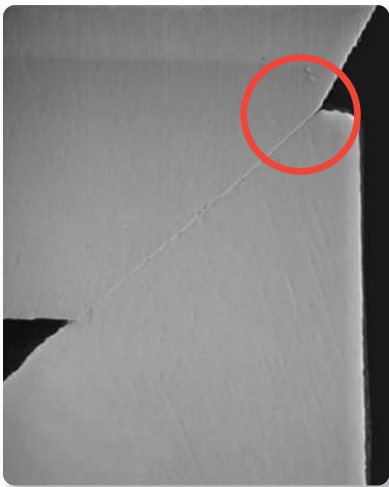




Zimmer Dental's Internal Friction-Fit Connection: The Original Platform Force Shield

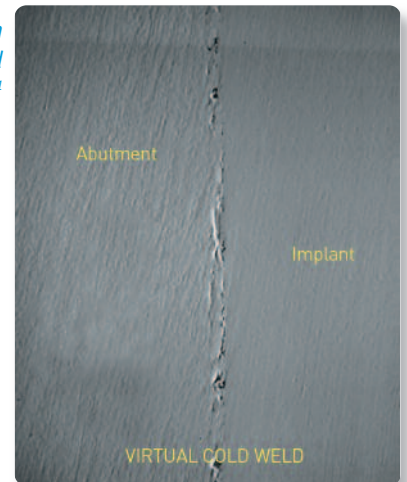


Intimate contact between Zimmer's mated implant and abutment bevels

Many implant manufacturers have tried to copy, but have never duplicated, Zimmer's internal friction-fit interface. With over 18 years of clinical success in the hands of thousands of dentists worldwide, Zimmer's *Platform Plus™* Technology was the **first to introduce an indented platform interface** that also shields both the abutment screw and crestal bone region from concentrated occlusal forces.¹⁻²

Screw loosening initiates abutment micromovements and tipping, which can cause bone loss, component breakage, and even implant failure.¹ Unable to reproduce our proprietary technology, late-comers to internal connections have introduced the concept of "platform switching" (or "platform shifting") in an attempt to diminish problem crestal bone loss with their implants.³ Finite element analysis has shown, however, that platform switching also redirects occlusal forces away from the crestal bone region and onto the abutment screw⁴; which is a leading, documented cause of screw loosening.^{1,5}

Virtual cold weld that forms between Zimmer's internal hex implant and friction-fit abutment system¹



Platform Plus Technology

Zimmer's *Tapered Screw-Vent®* Implant System features the exclusive *Platform Plus* Technology that creates highly favorable conditions for long-term crestal bone maintenance:

- Lead-in Bevel – Designed to reduce horizontal stresses better than flat "butt-joint" connections¹⁻²
- Friction-Fit Connection – Virtually eliminates abutment micromovement associated with screw loosening¹
- 1.5mm Deep Internal Hex – Shields the abutment retention screw from excess loading, distributing occlusal forces deep into the implant¹

One-degree taper forms a friction-fit connection with the implant to **virtually eliminate micromovement**¹

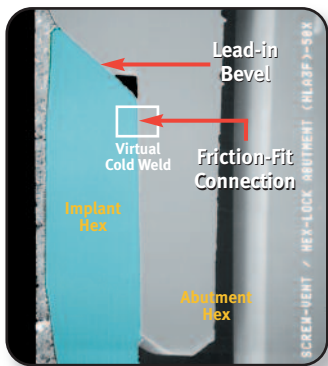


1.5mm deep internal hex shields the retention screw from excess loading¹



Lead-in bevel designed to reduce horizontal stresses on crestal bone¹⁻²

Does your implant system provide the benefits of *Platform Plus* Technology found in the *Tapered Screw-Vent* Implant System?



Unique, beveled interface designed to reduce stresses



Fixture Mount/Transfer

- Functions as a fixture mount, impression post, and preparable temporary abutment⁶⁻⁷
- Minimizes chair time and financial investment⁶⁻⁷

Internal Hex Connection with a Variety of Friction-Fit Abutment Options

- Zimmer® Patient Specific Abutments in Titanium
- Hex-Lock® Contour Abutments
- Hex-Lock Cast-To Gold Abutments

Other Esthetic Abutment Options with Our Proprietary, Internal Hex-Protecting Titanium Ring

- Zimmer Contour Zirconia Abutments⁸
- Zimmer Patient Specific Abutments in Zirconia

Surface Options

- **MTX® Microtextured Surface** designed to enhance bone apposition⁹
- **MP-1® HA Dual Transition Selective Surface** featuring highly crystalline MP-1 HA Coating, MTX-microtextured cervical and apical regions, and a coronal 1mm zone of machined titanium for soft tissue maintenance

Triple-Lead Threads

- Allow for 3 times faster insertion than implants with a standard thread pitch¹⁰



¹ Binon PP. The evolution and evaluation of two interference-fit implant interfaces. *Postgraduate Dentistry*. 1996;3:3-13.

² Mihalko WM, May TC, Kay JF, Krause WR. Finite element analysis of interface geometry effects on the crestal bone surrounding a dental implant. *Implant Dent*. 1992;1:212-216.

³ Lazzara RJ, Porter SS. Platform switching: a new concept in implant dentistry for controlling postrestorative crestal bone level. *Int J Periodontics Restorative Dent*. 2006;26:9-17.

⁴ Maeda Y, Miura J, Taki I, Sogo M. Biomechanical analysis on platform switching: is there any biomechanical rationale? *Clin Oral Impl Res*. 2007;18:581-584

⁵ Binon PP. Implants and components: entering the new millennium. *Int J Oral Maxillofac Implants*. 2000;15:76-94.

⁶ McCarthy GR, Morgan VL Jr. Useful modifications of an implant fixture mount. *J Prosthet Dent*. 1995;73:104.

⁷ Rosenlicht JL. SmartStepsSM to immediate implant impressions. *Australasian Dental Practice*. 2002;13:70-74.

⁸ Joo W. Zimmer® Contour Ceramic Abutments. Precision-engineered for strength, esthetics & clinical versatility. *Dental Inc*. 2008;2:34-38.

⁹ Trisi P, Marcato C, Todisco M. Bone-to-implant apposition with machined and MTX microtextured implant surfaces in human sinus grafts. *Int J Periodontics Restorative Dent*. 2003;23:427-437.

¹⁰ Rosenlicht JL. SwissPlus Implant System, part 1: surgical aspects and intersystem comparisons. *Implant Dent*. 2002;11:144-153.

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