

# Crystaloc™ Abutment Screw

The new Crystaloc™ abutment screw has been introduced after considerable research and development.

The abutment screw remains one of the key components in successful implantology. It needs to maintain a constant preload and resist screw loosening and fatigue loads throughout the clinical lifetime of an implant prosthesis. In reviewing screw characteristics it is clear that static strength, fatigue strength and preload are key parameters.

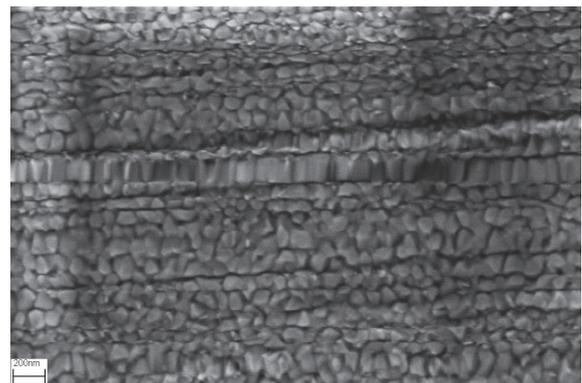
The Crystaloc™ abutment screw utilises state of the art material engineering to optimise these parameters.



Crystaloc™ screw (right), conventional gold and titanium screws (left)

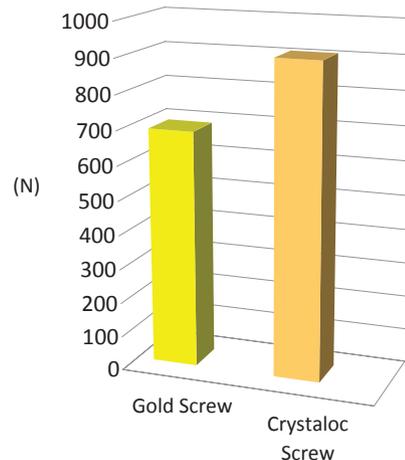
## Neoss Crystaloc™ Abutment Screw features:

- **Design** – Crystaloc™ makes use of a high strength Grade V titanium alloy onto which a hard coating is applied. A layer of gold is then deposited on this hard crystalline surface.
- **Strength** – Research indicates that the Crystaloc™ screw is approximately 30% stronger than gold screws of the same geometry in static strength testing. In fatigue testing, the Crystaloc™ screw performs as well as gold screws under standard loads and even better under high load cases.
- **Screw Preload** – The soft gold coating on the Crystaloc™ layer acts as a lubricant reducing friction and increasing the clamping force between the abutment and implant. Friction characteristics are optimised by this combination of hard and soft coatings. The Crystaloc™ screw has an approximately 50% higher preload than conventional titanium abutment screws of the same geometry.
- **Loosening Torque** – Gold screws loose 40% of their tightening torque while Crystaloc™ screws loose only 20%.



SEM showing Crystaloc™ surface

## Static Bending Strength at 30 Degrees and 32 Ncm



The Crystaloc™ abutment screw will gradually replace the current gold abutment screw from August. The blister label will identify if the Crystaloc™ screw is included.