

# The Straumann® Novaloc® Retention System

## Let your patients benefit from a durable treatment solution.

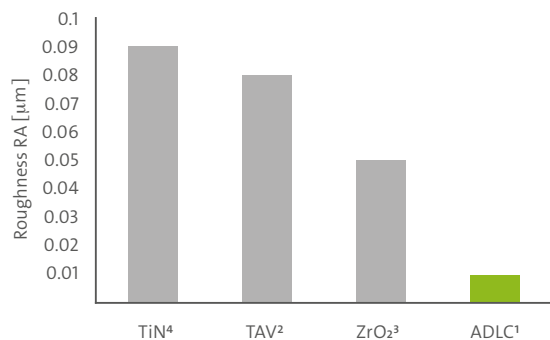
Some situations require solid connections. However, there are moments in life when you want a connection to be exceptionally reliable.

Although removable dentures have become a very popular treatment option for edentulous patients, some hybrid denture attachment systems on the market have been facing limitations in challenging situations.



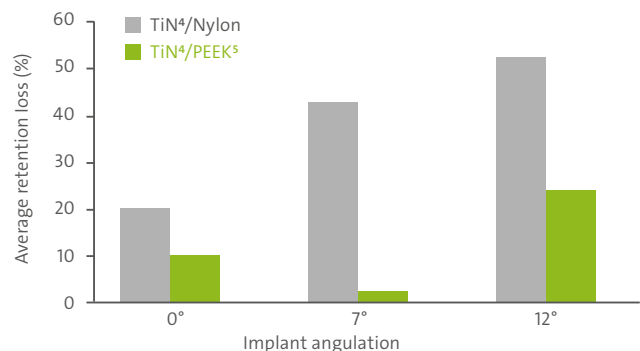
**In-vitro studies conducted at Straumann laboratories and also by independent researchers clearly demonstrate superior performance of the Straumann® Novaloc® system over other available denture retention solutions.**

### Novaloc Abutment: ADLC-coating for less abrasion

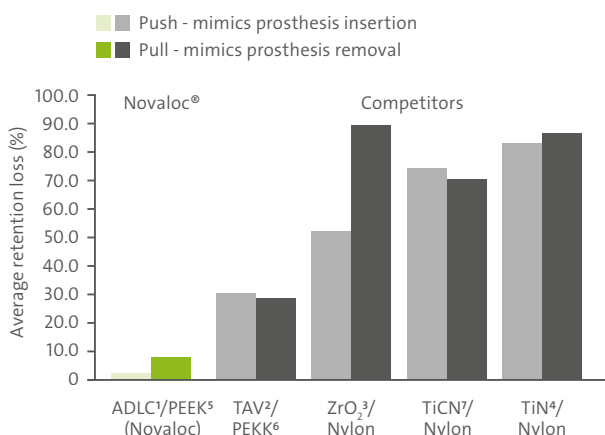


Comparison of surface roughness (Ra) of retentive abutments for hybrid dentures. The smaller the Ra parameter value is the smoother is the surface. A smooth abutment surface is less abrasive against the retention (source: Straumann, data on file).

### Novaloc retention inserts: PEEK material for stable and comparable retention forces independent of the angulation\*



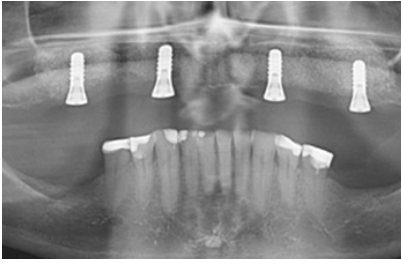
Comparison of retention loss after 2880 cycles (roughly equivalent to 2 years of use) in the following setup: (i) TiN abutment + PEEK retention insert (Novaloc®) and (ii) TiN abutment + Nylon retention insert (competitor) (source: Rianne Biemans 2013).



### Combination of ADLC-coated abutment and PEEK retention inserts: A reliable connection that endures

Retention loss after 10000 cycles of the straight abutment performed in phosphate buffered saline (pH 7.4) at room temperature. Data represents difference between the basal (100 cycles) and final (10000 cycles) measurements (Fmax) and is presented as % of change (source: Straumann, data on file).

<sup>1</sup> Amorphous diamond-like carbon, <sup>2</sup> Titanium Aluminum Vanadium, <sup>3</sup> Zirconium dioxide, <sup>4</sup> Titanium-Nitride, <sup>5</sup> Polyether ether ketone, <sup>6</sup> Polyetherketoneketone, <sup>7</sup> Titanium Carbonitride, \* 2 implants with straight abutments on placed in different angulations (0°, 7°, 12°)



**A maxillary overdenture retained by four Novaloc® abutments.** The patient was 61 years old female, non-smoker, in a very good general health condition and no sign or history of temporo-mandibular disorders. Intraorally, the patient presented with a failing dentition in the upper jaw.

After removal of all remaining teeth in the maxilla, tissue augmentation and a sufficient healing time, four Straumann® Roxolid® SLActive® soft tissue level implants were placed in the regions #16, #13, #23 and #26. Next, the Novaloc® abutments were screwed into the implants and torqued with 35Ncm. The retention of the denture was chosen to be light with the white Novaloc PEEK retention inserts that exhibit retention force of approximately 750g. The patient was extremely pleased with the treatment and the outcome.

*Clinical case: courtesy of Prof. Dr. med. dent. Martin Schimmel*

## Success stories from our customers

« I have completely switched to the Straumann® Novaloc® retentive system due to a heavy material wear observed on the competitor products after certain period of time followed by need to exchange of some parts to assure the system performance – which is time consuming and expensive. My patients are satisfied with the Straumann® Novaloc® treatment and so am I, that I have an easy handling and high quality solution I can offer them. »



Dr. Michael Kristensen,  
Aarhus Tandcenter,  
Denmark

« I have been using the Straumann® Novaloc® retentive system for almost one year. The patients that I have treated so far are very satisfied with the treatment outcome. With its innovative abutment coating and durable matrices, the Straumann® Novaloc® system represents an easy to use and reliable solution, therefore I am very happy to be able to offer it to my patients. »



Dr. Ilze Indrikšone,  
Rīga Stradiņš University,  
Latvia

« The Novaloc® system showed an incredible retention and comfort for the patient, referring to us several times the treatment has changed his life. »



Dr. Philippe Chapelot,  
Monthey,  
Switzerland

### REFERENCES

- 1 Rianne Biemans. Retentieverlies bij matrixsystemen voor de overkappingprothese [dissertation]. Nijmegen: Radboud University; 2013.
- 2 Straumann, data on file.