

Our PVD coatings for your DRILLS and ABUTMENTS

ZrN

TiN

DLC

PVD
Physical vapor deposition

PVD coatings

PVD (physical vapor deposition) coatings such as titanium nitride or zirconium nitride are applied to rotating dental instruments to increase the wear resistance and to implant components for cosmetic reasons.

The ceramic TiN coating can increase the product lifetime of rotating instruments. The coating is biocompatible and therefore also suitable for implant components (abutments).

DLC coatings are amorphous carbon coatings consisting of chromium and carbon. In a PVD process, both elements are converted into the hard DLC surface. DLC coatings exhibit a high level of adhesion strength combined with significant microhardness.*

*Literature on request

Characterization of the surface

Test criteria	Result titanium nitride (TiN)	Result zirconium nitride (ZrN)	Result diamond-like carbon (DLC)
Color	Golden yellow	Light gold	Black
Roughness	Ra ≤ 0.05 µm	Ra ≤ 0.05 µm	Ra ≤ 0.05 µm
Coating thickness	0.5-7 µm	0.5-6 µm	0.5-2.5 µm
Tensile strength	Class 0 and 1	Class 0 and 1	HF 1-3
Coating hardness	~2300 HV	~2500 HV	~700 HV

Advantages of the surface

- Extended durability as a result of reduced wear
- Biocompatible