

# **TRI®** Dental Implants

SBA Surface TRI®-Narrow, TRI®-Vent & TRI®-Octa

### For predictable osseointegration

Die TRI<sup>®</sup> SBA (Sandblasted, large grit, acid-etched) surface si one of the industry gold standards for more than 20 years. It is created by blasting the implant surface under pressure with corundum particles. In the final step the surface is acid-etched twice in order to attain a medium roughness.



#### Machined implant neck

The bone level implants feature a 0,5mm machined neck in the crestal area.

#### Gingiva coloured implant neck

 The tissue level implant features a 1,8mm machined implant collar for optimal esthetic results in the transmucosal area.

#### Medium roughness

 The entire implantat body is blasted with coarse-grained corundum particles of 200-400µ before being double acid-etched.



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**Bone Level** 

Tissue Level



### For predictable osseointegration

Surface technology: TRI®-SBA "Gold Standard" in the industry



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Quelle: Independent test institute RMS (Robert Mathys Foundation) Switzerland

### For predictable osseointegration

### Surface texture

A makrostructure of  $20-40\mu$  and a microstructure of  $20-40\mu$  as an ideal basis for exczellent osseointegration. This structure has been proven by numerous clinical studies for this surface type.





#### In Cooperation with:



Deep craters by blasting with coarse corundum (Al2O3), grain size 200-400µ. This crater shows an average size of 60-80µ (distance peak-to-peak).

Fine roughness within the crater by dual acid etching. Characterized fine crater with a mean size of  $2-5\mu$  (peak-to-peak distance).







\*Active osteoblasts present themselves as large (20-30 microns by measuring), clumsy, basophil cells with usually eccentric round nucleus (Webb and Tricker 2000).



For predictable osseointegration

Blasting the implants with corundum(Al<sub>2</sub>O<sub>3</sub>)

• Each implant is individually blasted on a separate holder.















For predictable osseointegration

Thread of a TRI®-Vent implant - after the surface treatment\*





100% Schweizer Qualität



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T]

dental implants

\*Source: CEN

### For predictable osseointegration

• Roughness & highs parameter of the TRI<sup>®</sup> - SBA surface\*



#### 2D-Parameter

0.5

\*Source: Diener AG - Switzerland

1.5

3D-Parameter

ISO 4287				ISO 25	178				
Amplituden-Parameter - Rauheitsprofil				Höhen-Parameter					
Ra	2.62	μm	Gauss-Filter, 0.8 mm	Sa	2.96	μm		Arithmetische Durchschnitthähe	
Rz	17.1	μm	Gauss-Filter, 0.8 mm	Sq	3.67	μm		Durchschnittliche quadratische H	đ
Rt	19.5	μm	Gauss-Filter, 0.8 mm	Sz	22.2	μm		Maximale Höhe	
				Feature-I	Parameter				
				S10z	15.7	μm	Pruning = 535	Zehn-Punkte-Hähe	
µm / 15 - 10 -		Läng	e = 4.00 mm Pt = 17.1 μm	Maßstab = 30.	0 µm		; /	Ra = 2.62 um	
	1.17							The second pill	

2.5

3.5

4 mm



100% Schweizer Qualität





TRI dental implants

### For predictable osseointegration

• BDIZ Study 2014-2015\*





### TRI meets all quality criteria in the new edition of the BDZ EDI implant study 2014/2015.

Preliminary results with the permission of BDIZ

The final report of the implant study BDIZ EDI 2014/2015 (www.bdizedi.org) examined, the investigated TRI-Vent implant meets the following criteria:

- ✓ free from organic impurities.
- no significant residues from the manufacturing process.
- ✓ precision-machined outer geometry.

Dr. med. Dent. Dirk U. Duddeck Director of studies, University Hospital of Cologne



Source: (BDIZ EDI) Implant-Study 2014/2015 Quantitative and qualitative element –analysis of implant-surfaces by SEM and EDX PRELIMINARY STUDY REPORT







### **SBA Success Rate**



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\* Source:Quantitative and qualitative element-analysis of implant surfaces by SEM and EDX



 det
 HV
 mag
 WD

 ETD
 15.0 kV
 71 x
 7.5 mm



22 det HV mag WD ETD 15.0 kV 68 x 9.4 mm





22 det HV mag WD ETD 15.0 kV 64 x 12.2 mm



det HV mag WD ETD 15.0 kV 71 x 8.7 mm



det HV mag WD ETD 15.0 kV 68 x 12.3 mm



det HV mag WD ETD 15.0 kV 60 x 15.8 mm



22 det HV mag WD ETD 15.0 kV 67 x 10.5 mm









det HV mag WD ETD 15.0 kV 68 x 9.6 mm



22 det HV mag WD ETD 15.0 kV 68 x 9.6 mm







det HV mag WD ETD 15.0 kV 3 000 x 10.4 mm



det HV mag WD ETD 15.0 kV 3 000 x 10.9 mm