

Smart Product Descriptions

Bone Level Tapered Implant

The Bone Level Tapered Implant (BLT) is a Bone Level Implant suitable for implant treatments at bone level in combination with transmucosal or submucosal healing. The rough implant surface extends to the top of the implant and the microgap shifted inwards away from the bone.

 We recommend Straumann® Smart users to let the implant heal transmucosally. In this classic one-stage surgical procedure the implant is not covered with soft tissue during the healing phase, but the soft tissue is sutured around the Healing Abutment. This provides a less invasive and time-saving treatment on your patients by avoiding a second surgical intervention.

Endosteal implant diameters and color code

Bone Level Tapered Implants are available in three endosteal diameters: Ø 3.3 mm, Ø 4.1 mm, and Ø 4.8 mm. A unified color code simplifies identification of instruments and implants.

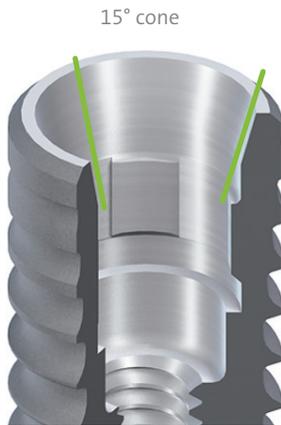
Color coding		
	yellow	Endosteal implant diameter 3.3 mm
	red	Endosteal implant diameter 4.1 mm
	green	Endosteal implant diameter 4.8 mm



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Implant-abutment connection

Bone Level Tapered Implants feature the Straumann® CrossFit® connection. The mechanically locking friction fit of this 15° conical-cylindrical connection with four internal grooves has excellent long-term stability under all loading conditions and virtually eliminates screw loosening.



Bone Level Tapered Implants with an endosteal diameter of 3.3 mm feature the Narrow CrossFit® connection (NC). The corresponding secondary components have a yellow color code.

Bone Level Tapered Implants with endosteal diameters of 4.1 mm and 4.8 mm feature the Regular CrossFit® connection (RC). They share the same magenta-colored secondary components.

Connection types		
NC: Narrow CrossFit® Ø 3.3 mm	Ø 3.3 mm 	
RC: Regular CrossFit® Ø 4.1 and Ø 4.8 mm	Ø 4.1 mm 	Ø 4.8 mm

Thread pitch

Bone Level Tapered Implants have an apically tapered and self-cutting design with a thread pitch of 0.8 mm, designed for excellent primary stability.

Implant lengths

Bone Level Tapered Implants are available in lengths of 8, 10, 12, 14, 16 and 18 mm.

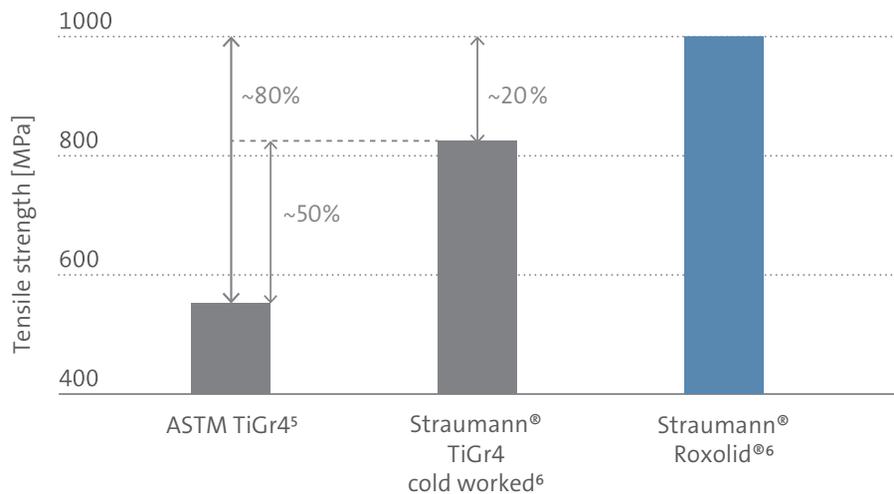
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Implant materials

Bone Level Tapered Implants are offered in two different materials – Straumann® Roxolid® and Titanium Grade 4.

Straumann® Roxolid® is a metal alloy composed of 15 % zirconium and 85 % titanium. The combination of these two metals leads to an implant material with a higher tensile and fatigue strength than comparable titanium implants have^{1,2}.

Mechanical tests have proven that Roxolid® is actually stronger than Titanium Grade 4. The unique implant material combines high mechanical strength with excellent osteoconductivity. Thanks to their outstanding biological and mechanical properties, Roxolid® Implants offer more treatment options than conventional titanium implants^{3,4}.



Roxolid® shows a 20 % higher tensile strength than Straumann cold worked titanium and a 80 % higher strength than standard Titanium Grade 4.

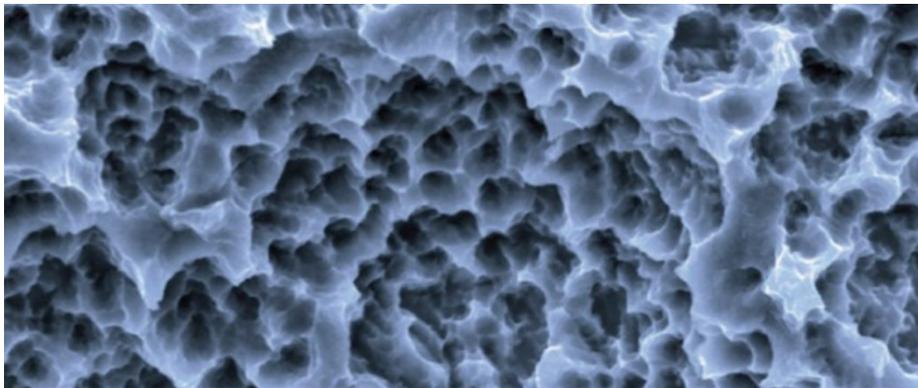
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Implant surfaces

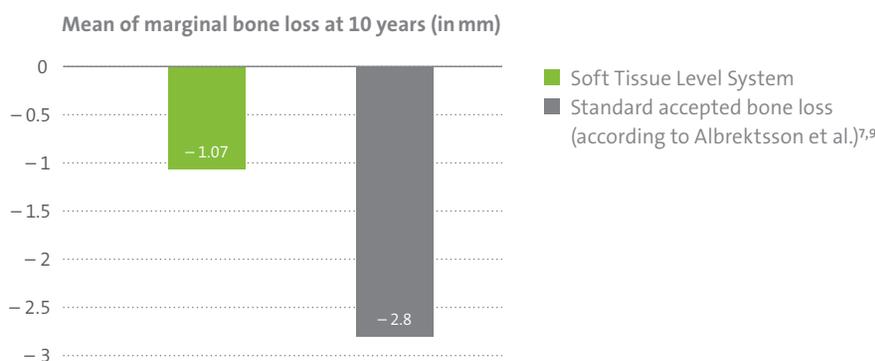
Straumann® Bone Level Tapered (NC/RC) Implants are available with two different implant surfaces – SLA® and SLActive®.

1. SLA® surface

The Straumann® SLA® surface is one of the most documented rough surfaces in implantology. The SLA® surface is produced using a technique that generates a macro-roughness on the implant surface followed by etching that superposes a micro-roughness. The resulting topography offers an ideal structure for cell attachment.



The longevity of Straumann implants with the SLA® surface has been demonstrated in a long-term study. The following outstanding 10-year results on the SLA® surface were shown^{7,8}:

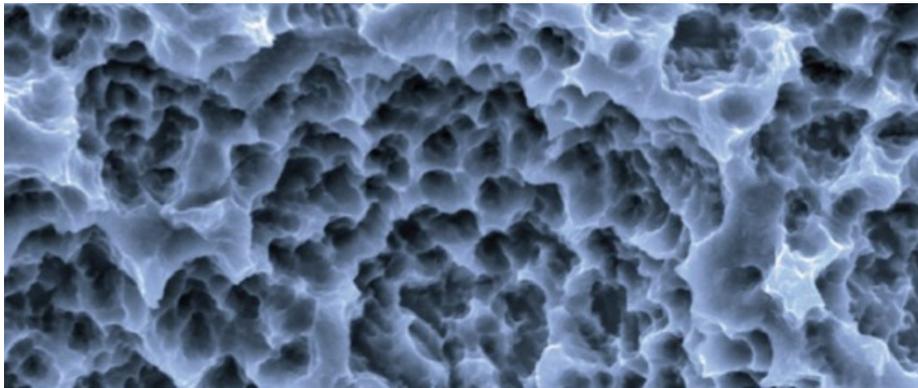


- Unchanged survival rate: in the examined 23 patients, no implants were lost between years 5 and 10
- No statistically significant bone loss occurred between 5 and 10 years
- Prosthesis survival of 96 %
- No signs of peri-implantitis were noted at 10 years
- Patient satisfaction was high

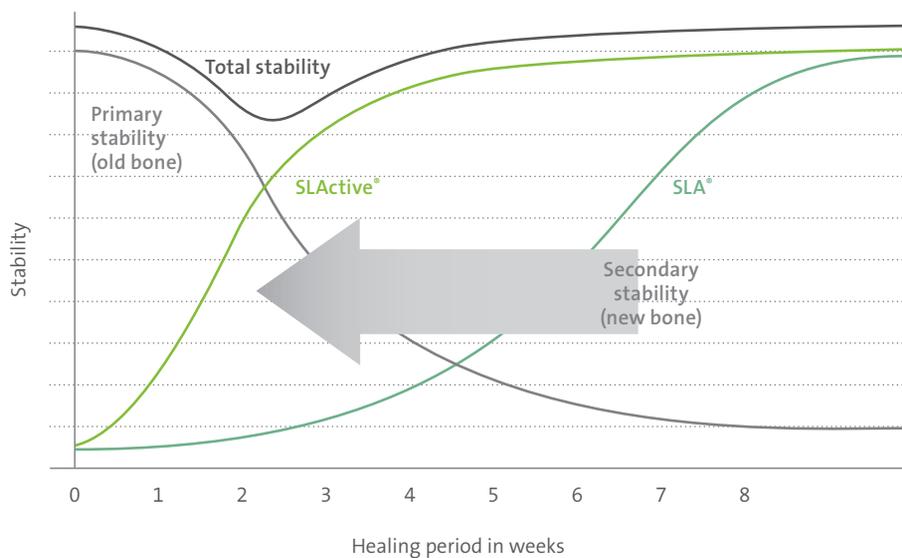
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2. SLActive® surface

The Straumann® SLActive® surface is based on the scientifically proven SLA® topography.



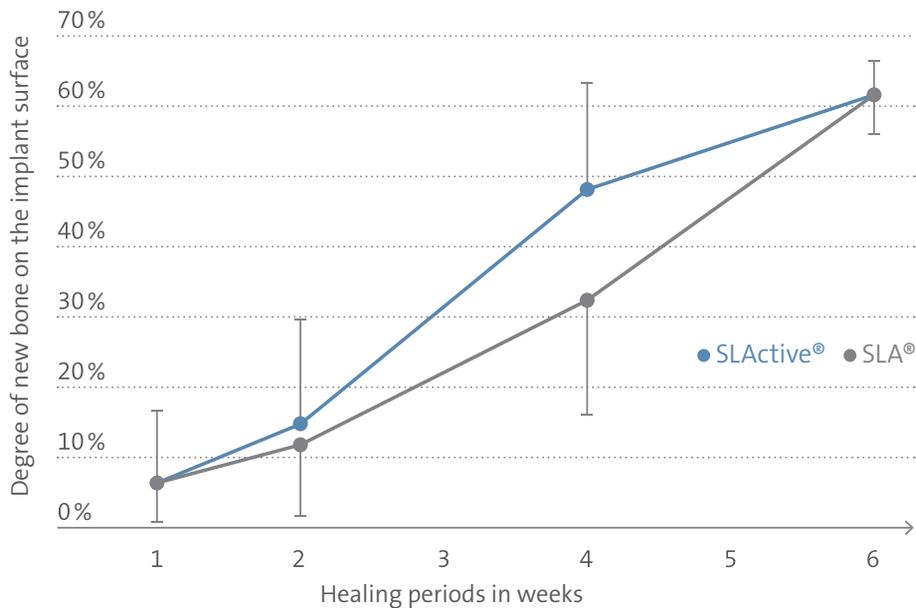
In addition, it has a fundamentally improved hydrophilic surface chemistry. SLActive® significantly accelerates the osseointegration process in the early healing phase (weeks 2-4) and delivers everything you expect from a successful and patient-friendly implant treatment.



Benefits:

- Safer and faster treatment in 3-4 weeks for all indications¹⁰⁻¹⁹
- Reduced healing times from 6-8 weeks down to 3-4 weeks^{15,19-23}
- Increased treatment predictability in critical protocols²⁴

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The SLActive® surface shows a faster integration into new bone after 4 weeks (50 %) compared to the SLA® surface (30 %).

Most early implant failures occur in the critical healing period between weeks 2 and 4 after implant placement¹⁷. Although similar healing patterns were observed for both SLA® and SLActive® Implants, bone-to-implant contact (BIC) was greater after 2 weeks and significantly greater after 4 weeks for SLActive® (p-value < 0.05)¹⁶.

With the chemically active and hydrophilic SLActive® surface Straumann has established a new standard in oral implantology.

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Loxim™ Transfer Piece

Straumann® Bone Level Tapered (NC/RC) Implants are delivered with the Loxim™ Transfer Piece, which is connected to the implant with a snap-in mounting. Its design offers various great features and benefits.

Pre-mounted Loxim™ Transfer Piece for ease of use

- Secures transport into mouth

Self-retaining

- Detaches with adapter after implant insertion

Small diameter/short

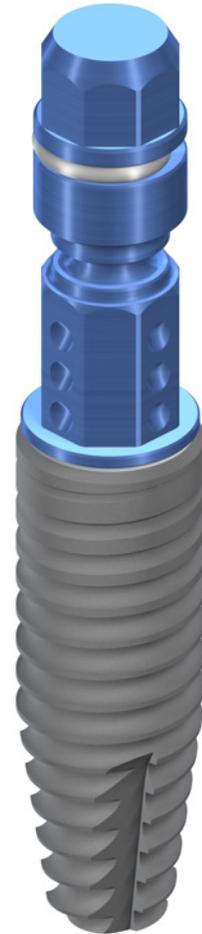
- Easy access to narrow interdental spaces and the posterior region
- Clockwise and counterclockwise turns
- Integrated extraction function in case of implant removal (only during implant insertion)

Alignment Pin

- Can be re-inserted into the implant
- Alignment in multiple implant situations

Restoration-safe torque stop

- Pre-determined breaking point protects implant connection from a higher than recommended insertion torque
- Designed for ease of implant restoration

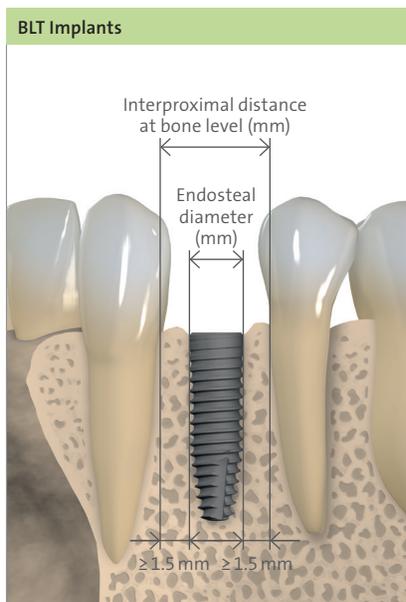


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Recommended use of BLT NC/RC Implants for Straumann® Smart cases

Chart of minimum widths of bone for planning which BLT (NC/RC) Implant to use

Implant type (endosteal diameter)	Endosteal diameter (mm)	Interproximal distance at bone level (mm)	Bucco-lingual or bucco-palatal width of bone (mm)	Recommended use for Straumann® Smart cases
BLT Ø 3.3 mm NC 	3.3	6.5	5.5	For narrow interdental spaces and narrow partially or fully edentulous bone ridges. Caution/Precaution: Small-diameter implants are not recommended for the posterior region.
BLT Ø 4.1 mm RC 	4.1	7	6	For use in the maxilla and mandible, for restoration of partially or fully edentulous patients.
BLT Ø 4.8 mm RC 	4.8	8	7	For use in the maxilla and mandible, for restoration of partially or fully edentulous patients in wide interdental spaces and bony ridges.



For BLT Implants, the shoulder diameter is the same as the endosteal diameter at bone level.

⚠ Caution/Precaution:

Always select the largest-diameter implant that can be supported by the available bone thickness, bone quality, interdental spacing, and anticipated mastication forces.

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Summary

Bone Control Design™ allows optimized crestal bone preservation and soft tissue stability.

Roxolid® is a unique material with excellent mechanical properties.

Apically tapered implant body design allows underpreparation and supports a high primary stability in soft bone.



CrossFit® connection makes handling easier and provides confidence for component positioning.

SLActive® surface allows fast and predictable osseointegration.

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DISCLAIMER

Straumann® Smart is a blended training and education program focused on the education of general dentists who want to become surgically active in the field of dental implantology. The program is limited to information pertaining to straightforward implant cases and focuses on a reduced portfolio of products that are suitable for the treatment of such cases.

All clinical Straumann® Smart content – such as texts, medical record forms, pictures and videos – was created in collaboration with Prof. Dr. Christoph Hämmerle, Prof. Dr. Ronald Jung, Dr. Francine Brandenburg-Lustenberger and Dr. Alain Fontolliet from the University of Zürich, Clinic for Fixed and Removable Prosthodontics and Dental Material Science, Switzerland.

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