

# SLR-PLUS<sup>®</sup>

Revision Stem, Non-cemented,  
according to Prof. Dr. med. K. Zweymüller

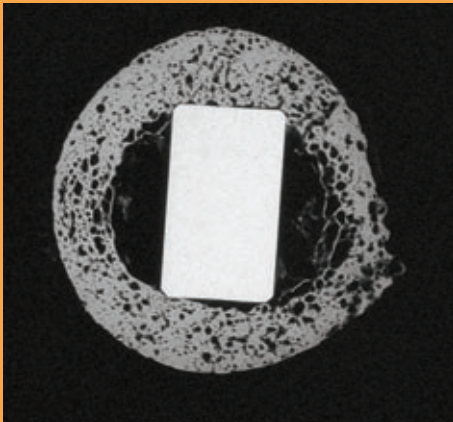
Product Information



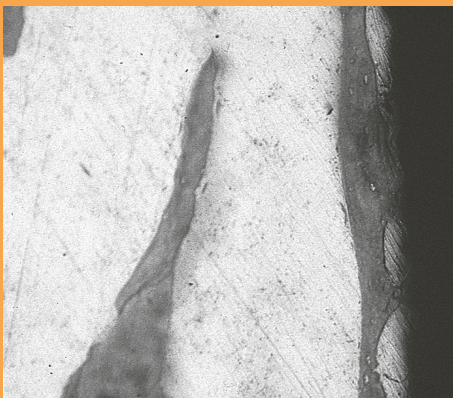
# SLR-PLUS® Revision Stem

## Non-cemented, according

### *SLR-PLUS® Revision Stem, non-cemented*



The contact surface between the prosthesis and the prepared bone bed provides a primary stable anchorage able to withstand rotation.



2<sup>1</sup>/<sub>2</sub> months post-operatively. The bone shows direct, firm contact with the implant (enlarged 100 times).

#### **Design**

The new revision stem design with adjusted lengths and optimized growth factors ensures immediate and stable anchorage.

#### **Stem Geometry**

The innovative stem geometry guarantees both proximal and distal load transmission, thus securing the primary stable anchorage – in particular against rotary forces.

#### **Calcar Form**

The novel calcar form (calcar polynomial) allows a better adaptation to natural conditions.

#### **Osteointegration**

Maximum primary stability permits secondary osteointegration, guaranteeing long-term clinical success.

#### **Handling**

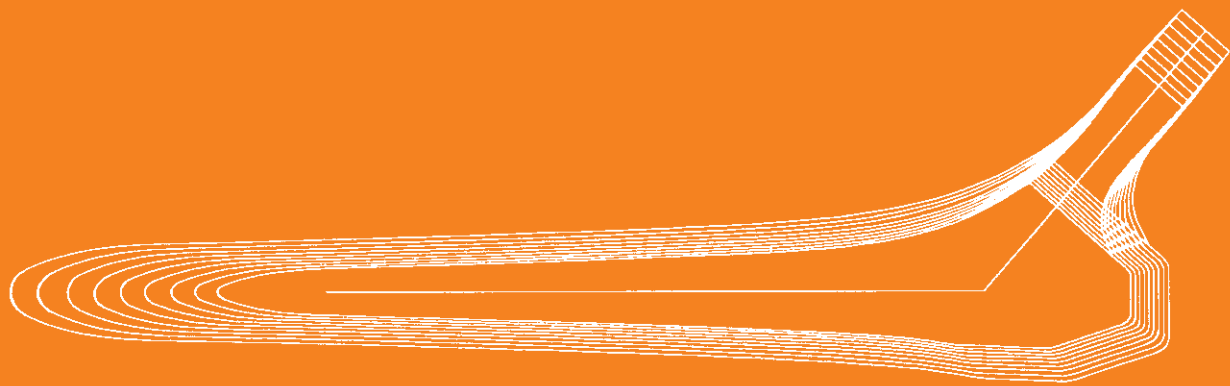
The new axis-oriented insertion and extraction system facilitates intraoperative handling.

### *Dimensions/Technical Details*

- 9 stem sizes (181 – 227 mm) and 2 special sizes (170 – 175 mm)
- Titanium-niobium wrought alloy Ti-6Al-7Nb in accordance with ISO 5832-11
- Surface roughness: 4 – 6 µm
- Standard (CeramTec) cone 14
- CCD-angle 131°

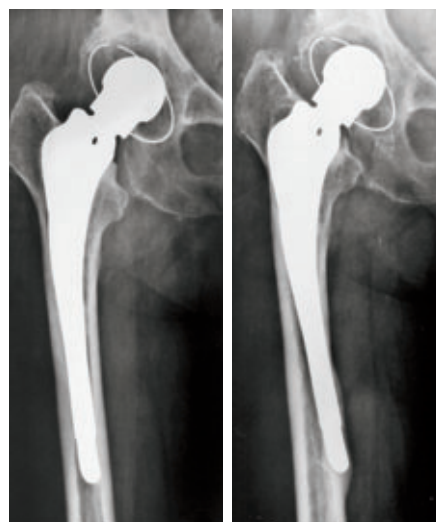
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Width, thickness and length of the stem as well as the length of the neck are adjusted according to growth factors.

- **1a:** Condition after replacement of right hip joint with a non-cemented system consisting of a cup with polyethylene foot and curved stem.
- **1b:** 12 years postoperation: As can be clearly seen the implant has sunk in and media-lised. The medial cortical bone is perforating around the end of the stem.
- **1c:** Condition following non-cemented replacement with a BICON-PLUS® cup and SLR-PLUS stem. Postoperation X-ray picture.
- **1d:** Control X-ray taken two years after the operation. The good seating of the cup and the stem has not changed. There has been some bone regrowth in the lesser trochanter region. The area around the tip of the prosthesis has also regenerated with new bone tissue. No spongy plastic was used with this operation.



1a

1b



1c

1d

Implants	Art. No.	Size	Length (L)
Cone 14	11803	03	181 mm
	11804	04	186 mm
	11805	05	191 mm
	11806	06	197 mm
	11807	07	203 mm
	11808	08	209 mm
	11809	09	215 mm
	11810	10	221 mm
	11811	11	227 mm
		11801	01
*special size	11802	02	175 mm*

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### *Remarks from the Author's Clinic*

The operative replacement of loose hip endoprostheses continues to grow in importance. Allowing bony anchorage, cementless systems have for years been successfully employed for the primary implantation of hip endoprostheses. It thus seemed only logical to use non-cemented hip endoprosthesis systems for revisions, but compromises were often unavoidable.

To date, prostheses have only been available either for exceptionally simple or extremely difficult cases. I am now pleased to report the development of an appropriate system suitable for regular revisions: the SLR-PLUS revision stem can be used for up to 80% of all standard revisions.

The innovative geometry of the SLR-PLUS stem facilitates the integration of strong distal bone substance as the implant is anchored. Together with the new design (stem lengths modified to the revision specifications), this feature guarantees immediate and stable anchorage. The titanium-niobium wrought alloy – which has now been in use for years – ensures with its tried-and-tested surface roughness not only subsequent secondary stability through osteointegration but also promises long-term clinical success.

Prof. Dr. med. K. Zweymüller  
Orthopedic Clinic  
Vienna – Gersthof

**Manufacturer**  
Smith & Nephew Orthopaedics AG  
Erlenstrasse 4a  
6343 Rotkreuz  
Switzerland

For further information please  
contact our local sales office.  
[www.smith-nephew.com](http://www.smith-nephew.com)

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**AURA Medical s.r.o.**  
K Verneráku 4  
148 00 Praha 4  
Tel.: 244910200  
[aura@auragroup.cz](mailto:aura@auragroup.cz)  
[www.auragroup.cz](http://www.auragroup.cz)