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MORE THAN
MILLION
SII HIP STEMS SOLD



SII Model Lubinus Hip Stem

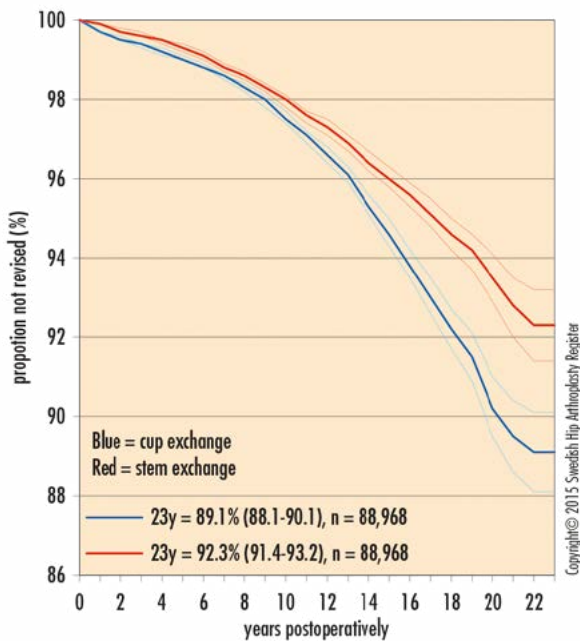
Anatomically Adapted Cemented Hip System

“The 1990-2000 results for Lubinus SP do not significantly differ from the 1979-1989 cohort after 10 years. An explanation for this could be that the SP stem is “forgiving” and less complicated to insert in an adequate position. Well-designed instruments were also introduced early for the Lubinus system.”¹

1 H. Malchau et al; Prognosis of Total Hip Replacement, Department of Orthopaedics, Göteborg University, Sweden, 2002

After 23 years 92.3% survival rate (n=88,968) of Lubinus SPII stem²

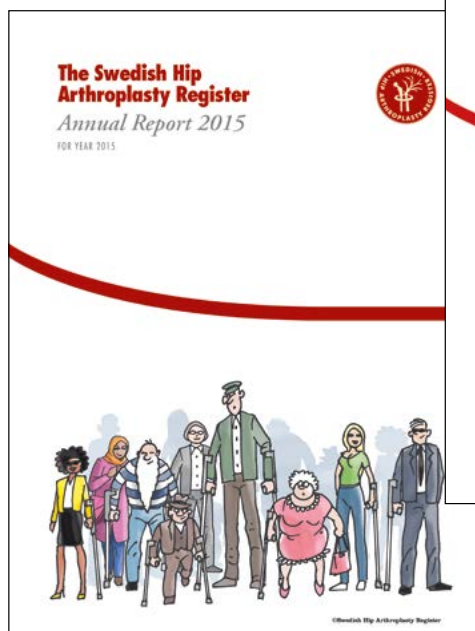
Lubinus all-poly (Lubinus SP II)
cup-/stem revision – all diagnoses and all reasons



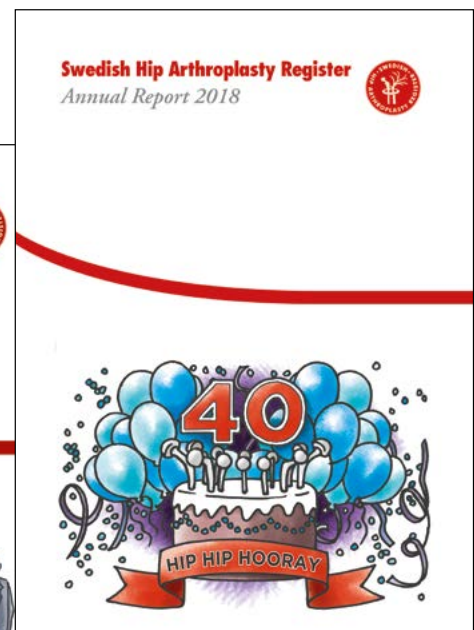
Lubinus SPII is the most used stem in Sweden according to the Swedish Hip Arthroplasty Register with more than 160,000 stems implanted in the last 40 years.

Stem	Stems Implanted 2019	Proportion
Lubinus SPII	158,398	57.2 %
Exeter polished	82,038	29.6 %
Corail collarless	20,369	7.4 %
MS 30 polished	16,007	5.8 %

Source: Annual Report 2019



2 Annual Report 2015; www.shpr.se



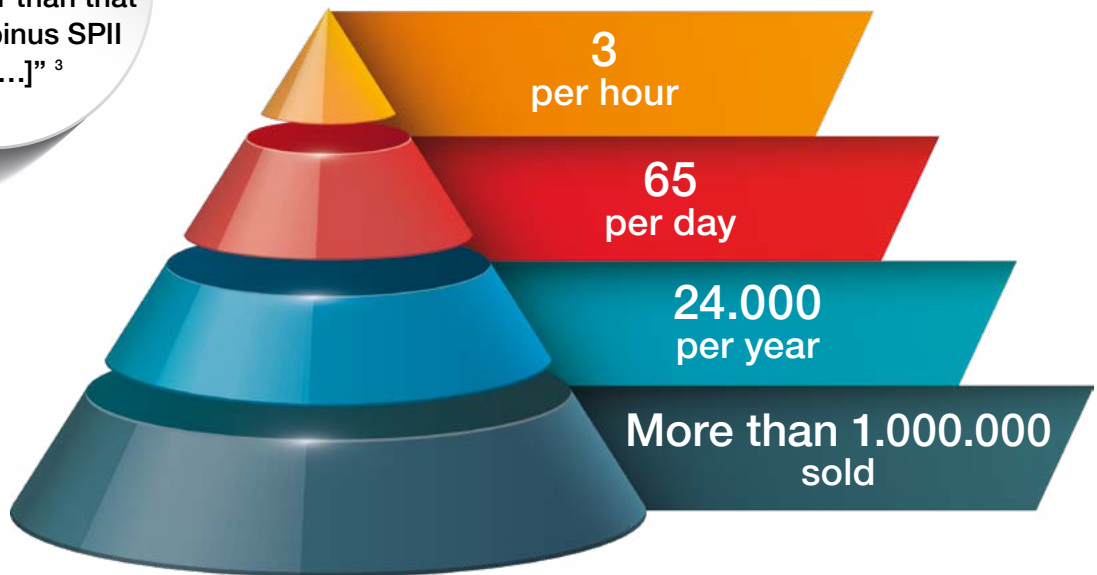
Annual Report 2018; www.shpr.se

SPII Model Lubinus Hip Stem - Anatomically Adapted Hip System

Sold in
74
countries

Reliable,
easily
reproducible
surgical
technique

“The hazard ratio for the Exeter stem was about five times higher than that for the Lubinus SPII stem [...]”³



Successful
since
1978

15A*
ODEP
rating⁴

³ Thien, Truike M., et al. Periprosthetic Femoral Fracture within Two Years After Total Hip Replacement Analysis of 437,629 Operations in the Nordic Arthroplasty Register Association Database: “[...] Das Revisionsrisiko aufgrund einer frühen periprosthetischen Fraktur stieg in dem Zeitraum von 2003 bis 2009 gegenüber dem Zeitraum von 1995 bis 2002 sowohl vor als auch nach Korrektur hinsichtlich demographischer Faktoren und Fixierung (relatives Risiko 1,44 [95%-Konfidenzintervall 1,18 bis 1,69]; $p < 0,0005$). Das Risikoverhältnis war beim Exeter-Schaft etwa fünfmal höher als beim Lubinus SP II-Schaft (Hazard-Ratio 5,03 [95%-Konfidenzintervall 3,29 bis 7,70]; $p < 0,0005$) [...]“ (The Journal of Bone & Joint Surgery 96.19 (2014): e167; übersetzt aus dem Englischen).

⁴ www.odep.org.uk; Orthopaedic Data Evaluation Panel

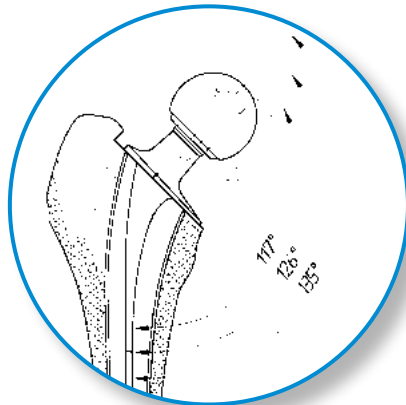
Anatomical design includes built-in anatomic antetorsion

The stems in the SPII system have a 12/14 taper and can be combined with every modular ceramic or metal prosthesis head, having a 12/14 taper, made by LINK. The stem has an anatomic design with an S-shaped curvature in sagittal plane.



Modular System

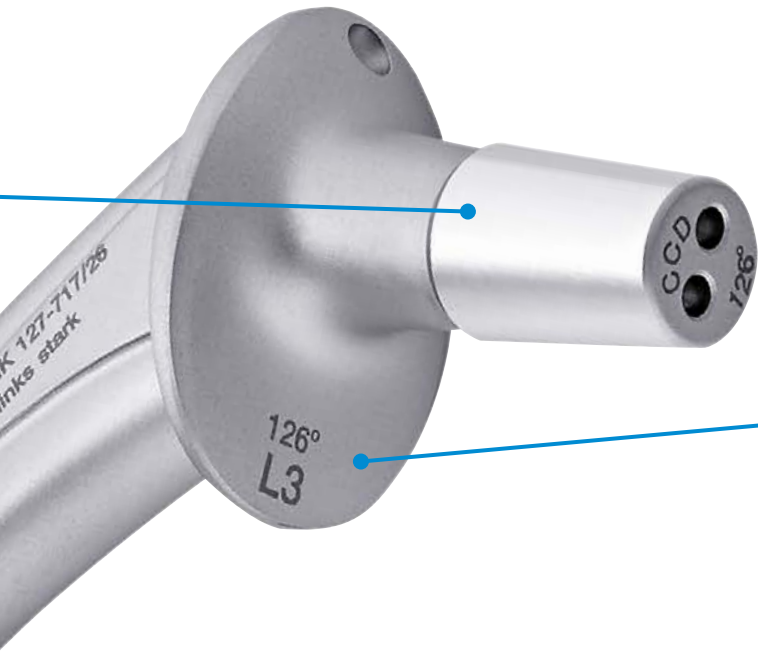
- Three standard stem lengths (130, 150 and 170 mm) and four additional revision surgery stem lengths of 200 to 350 mm
- Three CCD angles, one standard and one extra-long neck and up to four head-neck lengths for exact adjustment of lateralization and leg length



Anatomic stem design

neutralizes torsional forces⁵

⁵ W.T. Stillwell.
The Art of the Total Arthroplasty.
Grune & Stratton, Inc. 1987; pp. 296



Calcar collar

avoids subsidence of the stem

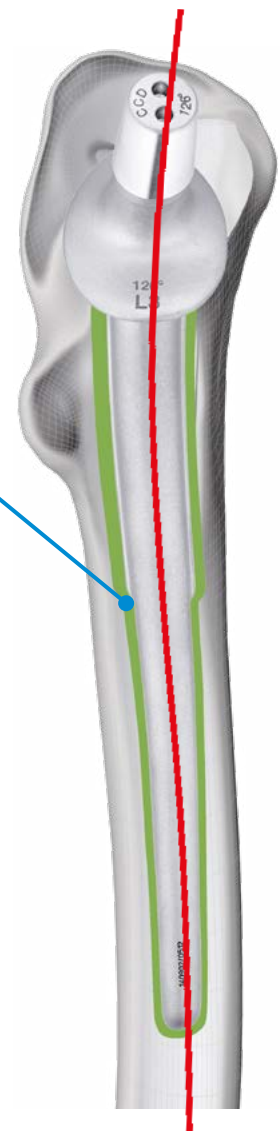


Straight stems produce stress risers in the anatomically S-shaped medullary canal



S-shaped stems result in even stress distribution

The anatomic stem shape promotes an **uniform cement mantle** around the whole stem within the medullary canal.



Photoelastic study of stresses

Stress-load analysis proves that the true adaption to the femur of the LINK anatomically shaped hip stems result in a more natural stress distribution, eliminating the harmful pinpoint stress concentrations at the bone (cement)/implant interface.⁶

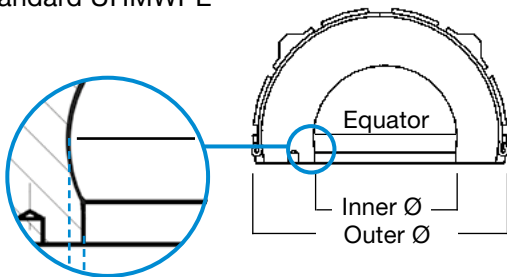
⁶ Langhans et al. (1992). Der Einfluß der Formgebung des Prothesenschaftes auf die Beanspruchung des proximalen Femurs. EUR J TRAUMA EMERG SURG. 18. 266-273.
Noble et al. (1988). The anatomic basis of femoral component design. Clin Orthop Relat Res. 235. 148-165.

Lubinus Eccentric Polyethylene Acetabular Cup, cemented

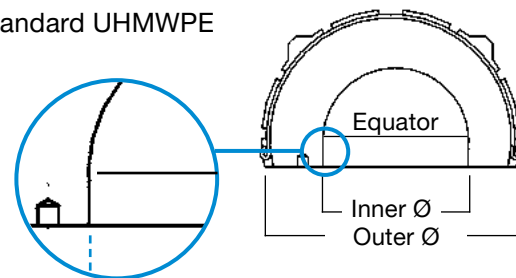
- X-LINKed* or standard UHMWPE
- Optimal cement fixation due to horizontal and vertical grooves
- Anti-luxation option >180°
- Optimized material thickness in the main area of wear
- Integrated spacers for homogenous cement mantle
- Wide spectrum of sizes in 2 mm increments Ø 38 - 68 mm (16 sizes)
- Clearance between head and cup allows for lubrication = less wear



with snap fit
standard UHMWPE



without snap fit
X-LINKed* PE or
standard UHMWPE

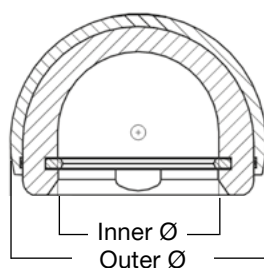


* X-LINKed is a highly crosslinked UHMWPE made by Waldemar Link GmbH & Co. KG. X-LINKed is not available in the U.S.

Vario-Cup Bipolar Head



- CoCrMo alloy and UHMWPE
- Available in outer diameters ranging from 39 to 65 mm in 1 mm increments
- Can be combined with prosthesis heads B for internal diameters 22, 28 and 32 mm
- Vario-Cup can be used in combination with LINK Total Hip Systems
- Safety ring at cup entrance minimizes risk of dislocation
- Self centering



15A* ODEP rating⁴



**IP Polyethylene
Acetabular Cups**

15A* ODEP rating⁴



**Lubinus Polyethylene
Acetabular Cups**

15A ODEP rating⁴



**FAL Polyethylene
Acetabular Cups**

15A* ODEP rating⁴



4 www.odep.org.uk; Orthopaedic Data Evaluation Panel

Waldemar Link GmbH & Co. KG, Hamburg

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