LINK®

Lubinus Classic Plus™

Hip Prosthesis System

LINK®

Presented by:

CE 0123

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Lubinus Classic Plus™
Hip Prosthesis System

Lubinus Classic Plus™

Lubinus Classic Plus™ is a contemporary hip system, which is a class of its own.

Lubinus Classic Plus™ combines the practical and economic advantages of a modern standard hip prosthesis system with high quality of material and workmanship, that have been associated with LINK® for more than 40 years.

The metal components are of high-purity CoCrMo alloy, which is ideal for long-term cemented implants.

Lubinus Classic Plus™ features a familiar design. Its parameters bring biomechanical advantages and have been shown to aid the long-term fixation of the prosthesis.

LINK's Lubinus Classic Plus™ opens up a new dimension in contemporary standard hip replacement. While offering top level product safety, Lubinus Classic Plus™ is based on the Lubinus Total Hip System, already in use for decades whose excellent performance has been documented by the Swedish Hip Register*.

*Annual Report 2011, Swedish Hip Arthroplasty Register, www.shpr.se

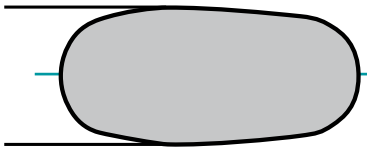
Features and benefits of the Lubinus Classic Plus™ Hip Prosthesis Stem:

- **Minimal bone resection**
- **Calcar collar** transfers physiological forces to the femur
- **Reliable, easily reproduced surgical technique**
- **Prosthesis heads in 4 head-neck lengths**
- **Anatomical calcar curvature** allows physiological load transmission
- **4 stem widths for optimal adaptation to individual situations**
- **1 standard stem length,** 150 mm
- **1 CCD angle,** 126°
- **Taper 12/14 mm**

Lubinus Classic Plus™ Characteristics

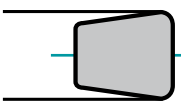
The collar provides optimal support

Advanced proximal stem profile

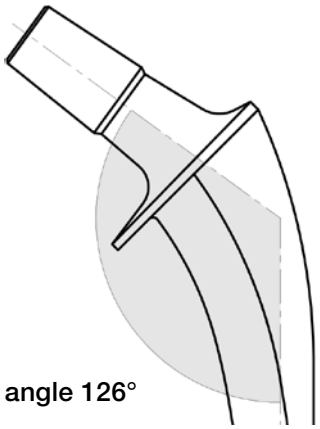


Broad, rounded medial and lateral sections preserve the cement bed and improve fixation

Advanced distal stem profile



The CCD angle (**c**aput-**c**ollum-**d**iaphyseal) of 126° takes into account the physiological changes to the angle of the femoral neck which generally occur in geriatric patients



CCD angle 126°

CoCrMo alloy with Link's traditional top-quality material and workmanship

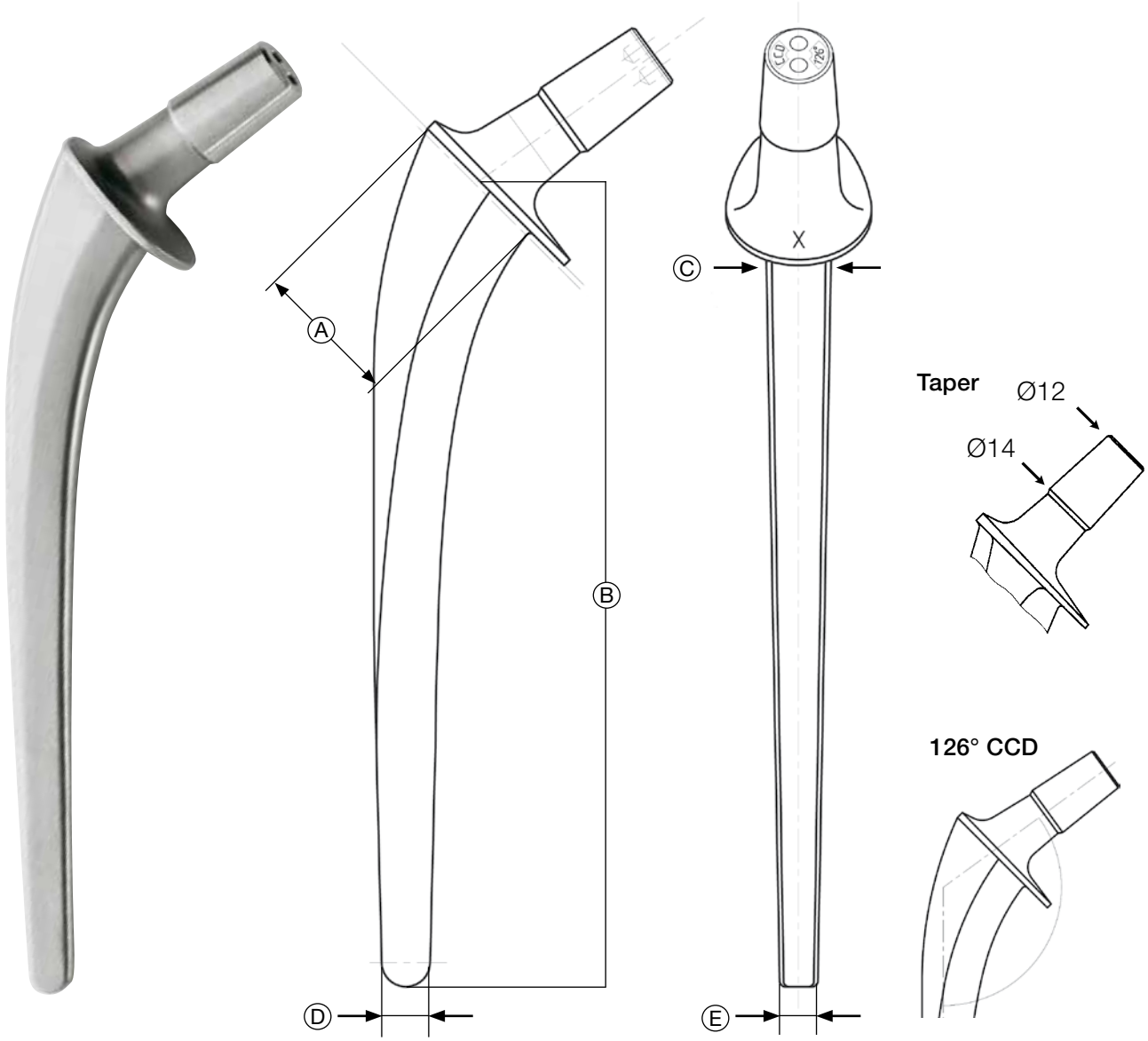
Note: For specific indications/contraindications, see page 22.

Lubinus Classic Plus™ Hip Prosthesis Stems

Material: CoCrMo

Item no.	Stem width	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
120-415/26	narrow	23.0	150.0	10.5	7.0	5.0
120-410/26	medium	25.0	150.0	11.5	8.0	6.0
120-405/26	large	27.0	150.0	12.5	9.0	7.0
120-400/26	x-large	30.0	150.0	13.5	10.0	8.0

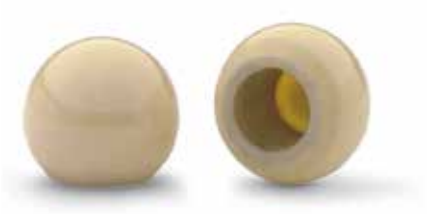
All dimensions in mm



Prosthesis Heads

Prosthesis Heads A - Ceramic

Material: BIOLOX® forte*



* BIOLOX® delta and BIOLOX® forte are made by CeramTec GmbH, Plochingen, Germany

Item no.	Head Ø mm	Taper mm	Neck length mm	
128-928/01	28	12/14	short	-3.5
128-928/02	28	12/14	medium	0.0
128-928/03	28	12/14	long	+3.5
128-932/01	32	12/14	short	-4.0
128-932/02	32	12/14	medium	0.0
128-932/03	32	12/14	long	+4.0
128-936/01	36	12/14	short	-4.0
128-936/02	36	12/14	medium	0.0
128-936/03	36	12/14	long	+4.0
128-940/01	40	12/14	short	-4.0
128-940/02	40	12/14	medium	0.0
128-940/03	40	12/14	long	+4.0

Prosthesis Heads A - Ceramic

Material: BIOLOX® delta*

All BIOLOX® forte* and BIOLOX® delta* components are compatible with each other.

Item no.	Head Ø mm	Taper mm	Neck length mm	
128-791/01	28	12/14	short	-3.5
128-791/02	28	12/14	medium	0.0
128-791/03	28	12/14	long	+3.5
128-792/01	32	12/14	short	-4.0
128-792/02	32	12/14	medium	0.0
128-792/03	32	12/14	long	+4.0
128-792/04**	32	12/14	extra long	+7.0
128-793/01	36	12/14	short	-4.0
128-793/02	36	12/14	medium	0.0
128-793/03	36	12/14	long	+4.0
128-793/04**	36	12/14	extra long	+8.0
128-794/01	40	12/14	short	-4.0
128-794/02	40	12/14	medium	0.0
128-794/03	40	12/14	long	+4.0
128-794/04**	40	12/14	extra long	+8.0

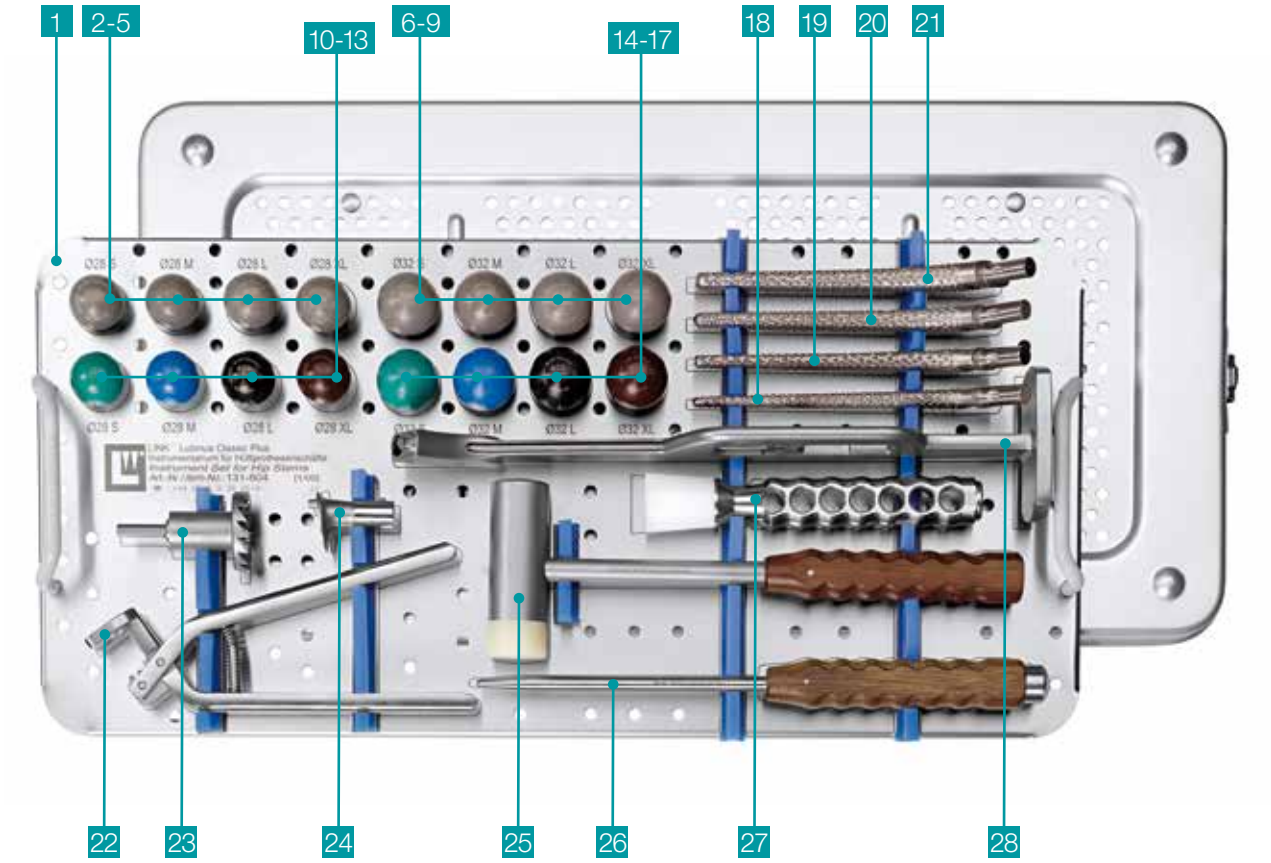
Prosthesis Heads B

Material: CoCrMo alloy

**on request

Item no.	Head Ø mm	Taper mm	Neck length mm	
128-826/01	26	12/14	short	-3.5
128-826/02	26	12/14	medium	0.0
128-826/03	26	12/14	long	+3.5
128-828/01	28	12/14	short	-3.5
128-828/02	28	12/14	medium	0.0
128-828/03	28	12/14	long	+3.5
128-828/04**	28	12/14	extra long	+10.5
128-832/01	32	12/14	short	-4.0
128-832/02	32	12/14	medium	0.0
128-832/03	32	12/14	long	+4.0
128-832/04**	32	12/14	extra long	+8.5
128-836/01	36	12/14	short	-4.0
128-836/02	36	12/14	medium	0.0
128-836/03	36	12/14	long	+4.0
128-836/04**	36	12/14	extra long	+8.0

Instrument Set for Lubinus Classic Plus™ **Hip** Prosthesis Stems



Item no.	Instrument Set for Lubinus Classic Plus™ Hip Prosthesis Stems
131-801/60	**Instrument set, complete, head Ø 28 mm** stem 150 mm, in standard container, 1 set
131-803/60	**Instrument set, complete, head Ø 32 mm** stem 150 mm, in standard container, 1 set

	05-2001/03	**N11 standard container,** 575 x 275 x 100 mm
1	131-804	**Tray,** empty, 550 x 265 x 50 mm

Grey plastic trial heads, for use with neck section with guide pin, for head Ø 28 or 32 mm

		Head Ø mm	Neck length			Head Ø mm	Neck length
2	131-828/01	28	short	6	131-832/01	32	short
3	131-828/02	28	medium	7	131-832/02	32	medium
4	131-828/03	28	long	8	131-832/03	32	long
5	131-828/04	28	extra long	9	131-832/04	32	extra long

Colored plastic trial heads, to mount on taper of modular stem, for head Ø 28 or 32 mm

		Head Ø mm	Neck length			Head Ø mm	Neck length
10	131-928/01	28	short	14	131-932/01	32	short
11	131-928/02	28	medium	15	131-932/02	32	medium
12	131-928/03	28	long	16	131-932/03	32	long
13	131-928/04**	28	extra long	17	131-932/04**	32	extra long

Rasp stems, 150 mm

		Size			Size
18	131-825/60	narrow	20	131-815/60	large
19	131-820/60	medium	21	131-810/60	extra large

22	131-830/01	**Inserting forceps** for modular stems, taper 12/14 mm, 200 mm
23	130-406/01* 175-606/01*	**Calcar reamer** for plane-parallel resection, fittings optional* Ø 40 mm Ø 46 mm**
24	131-828	**Neck section with guide pin**
25	130-165	**Mallet,** Ø 30 mm, 270 mm
26	130-611	**Impactor,** 280 mm
27	130-600	**Driver,** for prosthesis heads, 170 mm
28	130-393/60	**Handle with quick coupling**

Accesories:

130-165/01	**Replacement head*** ** for mallet 130-165
10-5373	**Hex screwdriver*** ** for rasp handle 130-393/60

Grey plastic trial heads*,** for use with neck section with guide pin

	Head Ø mm	Neck length		Head Ø mm	Neck length
131-826/01	26	short	131-836/01	36	short
131-826/02	26	medium	131-836/02	36	medium
131-826/03	26	long	131-836/03	36	long
			131-836/04**	36	extra long

Colored plastic trial heads*,** to mount on taper of modular stem

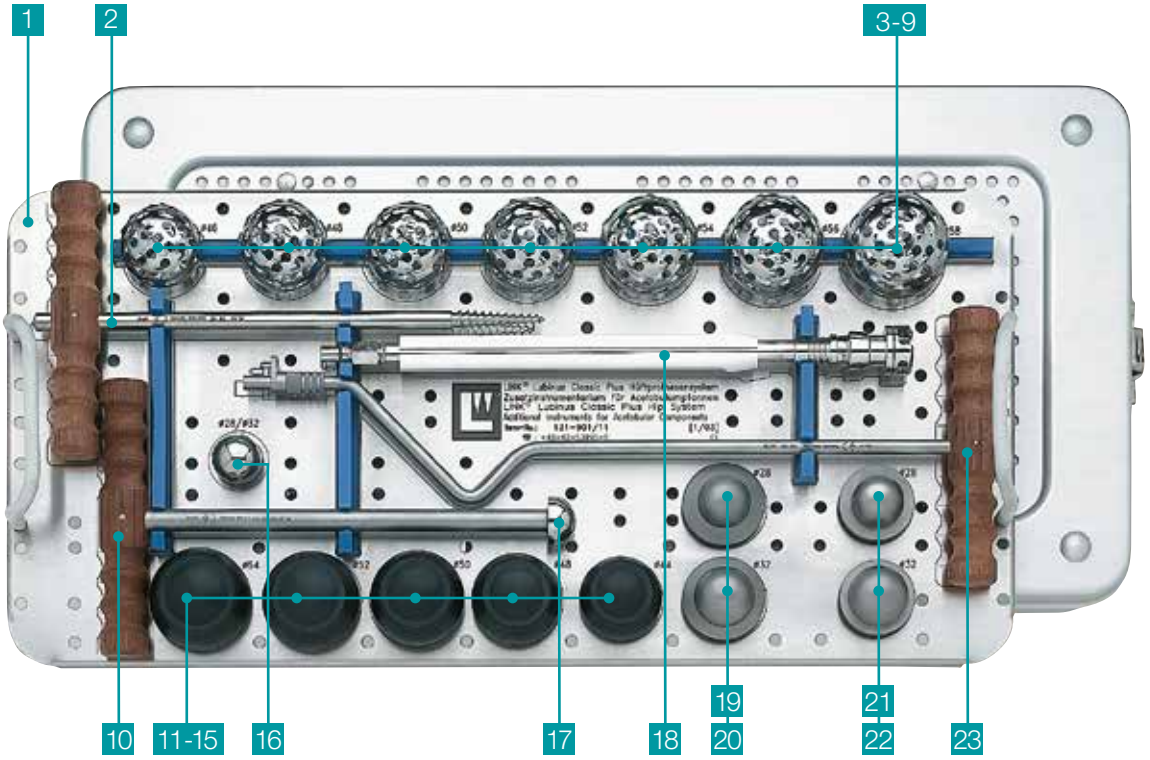
	Head Ø mm	Neck length		Head Ø mm	Neck length
131-926/01	26	short	131-936/01	36	short
131-926/02	26	medium	131-936/02	36	medium
131-926/03	26	long	131-936/03	36	long
			131-936/04**	36	extra long

** on request
***not included in instrument set, on request

***Fittings** How to order: 130-406/01D = with AO fitting

A	B	C	D	H
Jacobs Chuck	Hudson	Harris	AO	Zimmer

Additional Instrument Set for Acetabular Cups



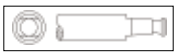
Item no.	Additional Instrument Set for Acetabular Cups
131-900/11	**Additional instruments for acetabular cups,** complete, in N11 standard container on a tray with product illustrations and storage racks, 1 set

	05-2001/03	**N11 standard container**, 575 x 275 x 100 mm
1	131-901/11	**Tray,** empty, 550 x 265 x 50 mm
2	130-150	**Femoral head extractor**, 270 mm
		Acetabular reamer heads, exchangeable
		Reamer Ø mm
3	131-170/46	46
4	131-170/48	48
5	131-170/50	50
6	131-170/52	52
7	131-170/54	54
8	131-170/56	56
9	131-170/58	58
10	130-350/05	**T-handle for cup pusher,** 290 mm
		Lubinus®/IP trial acetabular cup
		Outer Ø mm
11	130-345/44	44
12	130-345/48	48
13	130-345/50	50
14	130-345/52	52
15	130-345/54	54
		Head for cup pusher
16	130-350/02	Inner Ø 32 mm
17	130-351/02	Inner Ø 28 mm
18	131-171*	**Shaft** with handle for acetabular reamers, fittings optional
		Applicator head
		Acetabular cups, Model Lubinus®
19	130-328	Ø 28 mm
20	130-330	Ø 32 mm
		Acetabular cups, Model IP
21	130-338	Ø 28 mm
22	130-340	Ø 32 mm
23	130-860/01	**Acetabular cup applicator and trial cup handle,** 400 mm

Accessories:

131-171/01	**Handle** for 131-171B-H

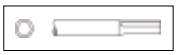
***Fittings** How to order: 131-171E = with Jacobs Chuck fitting



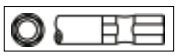
B
Hudson

C
Harris

D
AO



E
Jacobs Chuck



H
Zimmer

Colored Plastic Trial Heads for Taper 12/14 mm

Item no.	Head Ø mm	Neck length	Neck length mm	Color
131-926/01	26	short	-3.5	green
131-926/02	26	medium	0.0	blue
131-926/03	26	long	+3.5	black
131-928/01	28	short	-3.5	green
131-928/02	28	medium	0.0	blue
131-928/03	28	long	+3.5	black
131-928/04*	28	extra lang	+10.5	brown
131-932/01	32	short	-4.0	green
131-932/02	32	medium	0.0	blue
131-932/03	32	long	+4.0	black
131-932/04*	32	extra long	+8.5	brown
131-932/05*#	32	extra long	+7.0	orange
131-936/01	36	short	-4.0	green
131-936/02	36	medium	0.0	blue
131-936/03	36	long	+4.0	black
131-936/04*	36	extra long	+8.0	brown

*on request
not illustrated

General Instruments for Implanting Hip Prostheses

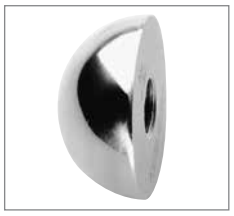
(not included in instrument set)

Acetabular cup pusher
with T-handle, 260 mm

Item no.	For acetabular cups
130-350	Inner Ø 32 mm
130-351	Inner Ø 28 mm
130-352/01	Inner Ø 36 mm

Replacement heads for cup pusher

Item no.	For cup pusher
130-350/02	for 130-350
130-351/02	for 130-351
130-352/02	for 130-352/01



130-350/05 **T-handle** only
for cup pusher 130-350, 130-351 and 130-352/01

130-610 **Cement packer**
Ø 10 mm, 300 mm

Bone plug packer
to insert bone plugs into the medullary cavity,
400 mm

Item no.	Ø mm
unthreaded	
131-200	8.0
131-202	10.0
131-204	12.0
131-206	14.0
131-208	16.0
131-210	18.0
threaded	
131-220	8.0
131-222	10.0
131-224	12.0
131-226	14.0
131-228	16.0
131-230	18.0

131-250/26 **Inserter for medullary plug**
graduated, 355 mm, Qty. 2

Intramedullary plug
Material: UHMWPE

Item no.	Ø mm
109-130/12	12.0
109-130/13	13.0
109-130/14	14.0
109-130/15	15.0
109-130/16	16.0
109-130/17	17.0
109-130/18	18.0
109-130/19	19.0
109-130/20	20.0

131-250/23 **T-handle**
for inserter 131-250/26

130-165 **Mallet**
Ø 30 mm, 270 mm, 600 gram

Preoperative Planning

The aim in preoperative planning is to establish the approximate size of implant required and the optimal position in which to place it. Surgical complications should be avoided by means of careful planning.

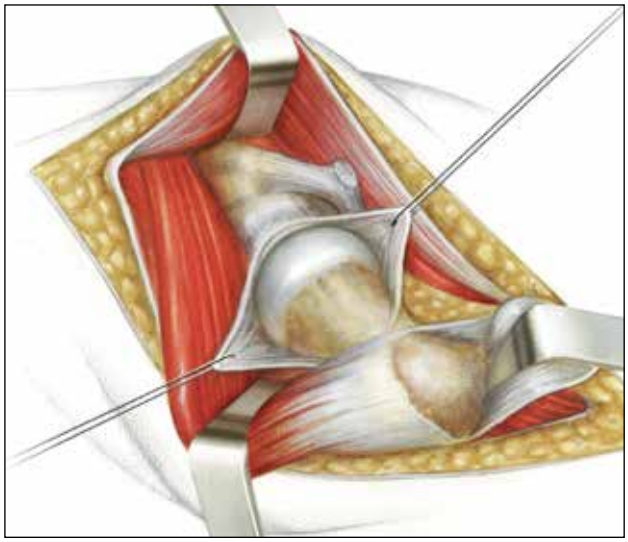
For the best possible results the appropriate implant should be selected using Lubinus Classic Plus™ X-ray templates which are available at a scale of 110%

When used in combination with recent pelvic X-rays (A/P and M/L views) these templates serve as a useful aid when planning surgical procedure and determining implant size.

When planning the resection level, the centre of rotation must be considered along with leg length, which should remain the same if possible to reconstruct the original anatomy.

The choice of implant should ensure that an appropriate thickness of cement coating is achieved.

Surgical Approaches

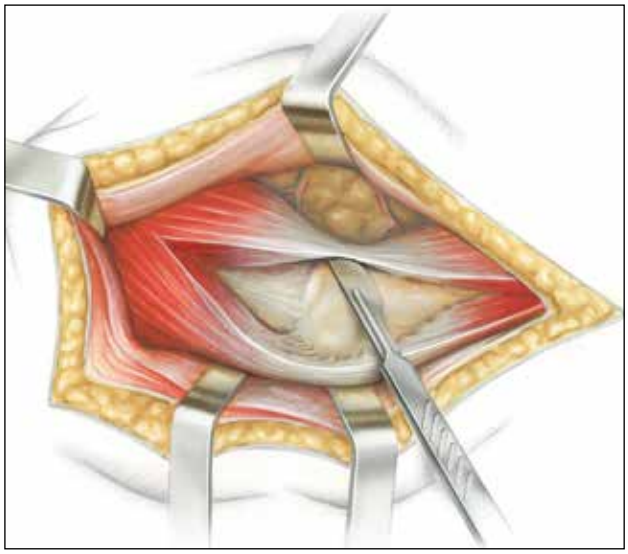


A: Watson Jones

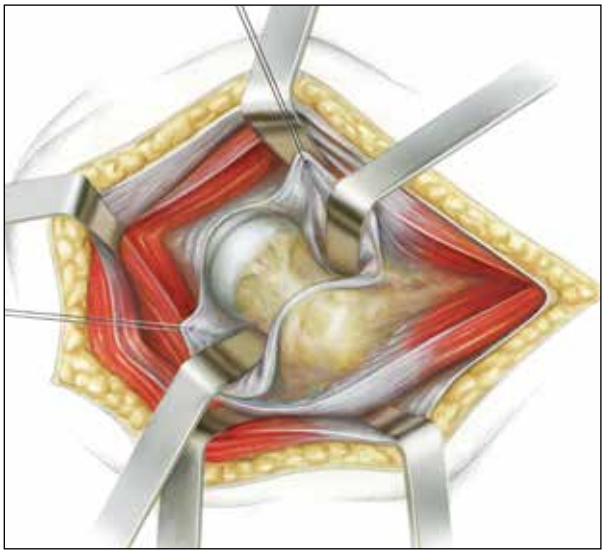
The choice depends on the surgeon‘s experience and his/her decision based on the individual situation.

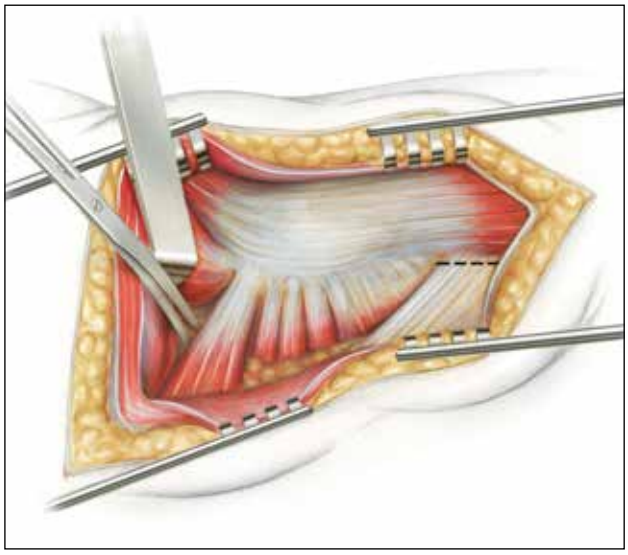
The following approaches are usual:

- antero-lateral – **Watson Jones** (A)
- direct lateral – **Hardinge** (B)
- postero-lateral – **Moore** (C)

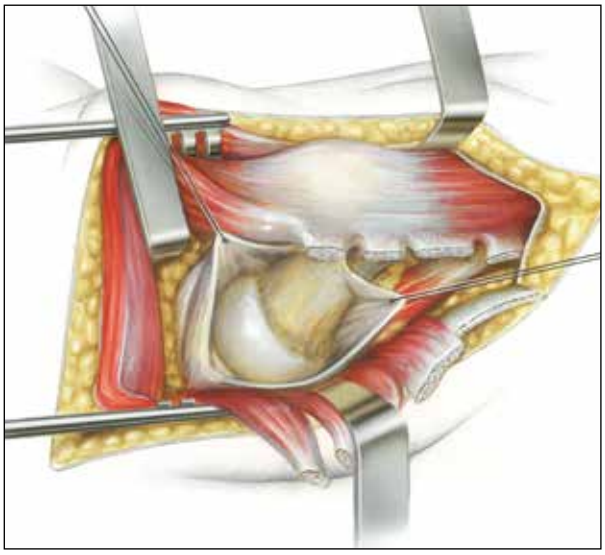


B: Hardinge





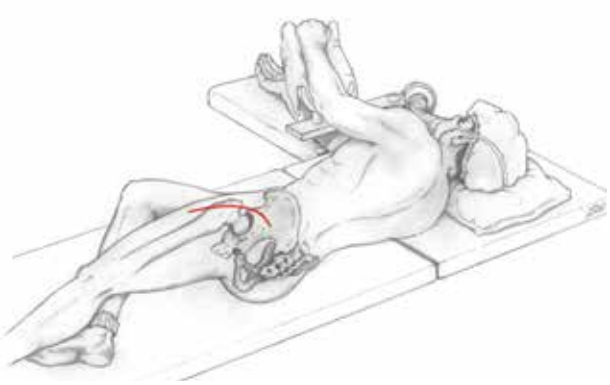
C: Moore



Surgical Technique

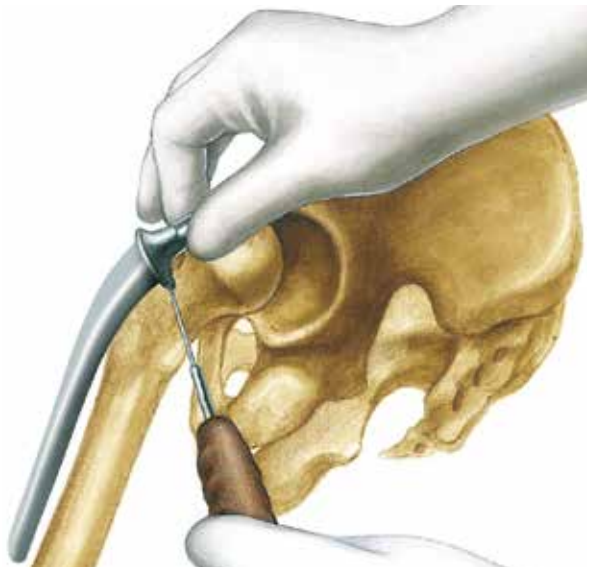
1

Position of the Patient
The patient is placed on his/her side, in the dorsolateral position. A different approach may be used depending on the surgeon‘s experience.



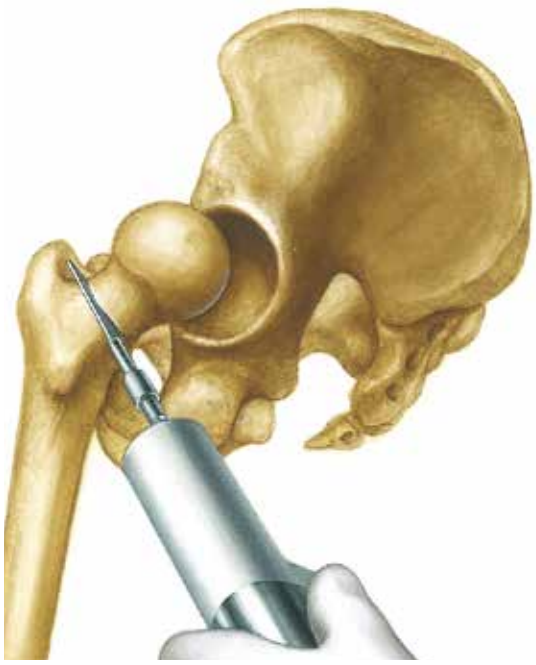
2

Luxation of Femoral Head
The femoral head is luxated using internal rotation of the femur and 90° flexion of the knee.



3

Determining Resection Level
The level and angle of the resection plane are determined.
It should be at an angle of approximately 90° to the neck of the femur. Sparing resection allows optimal seating of the prosthesis as additional reaming or resection remains possible.



4

Resection of Femoral Head
Resection of the femoral head according to preoperative planning.

5

Exposure of the Acetabulum
The acetabulum is exposed after femoral head resection.

6

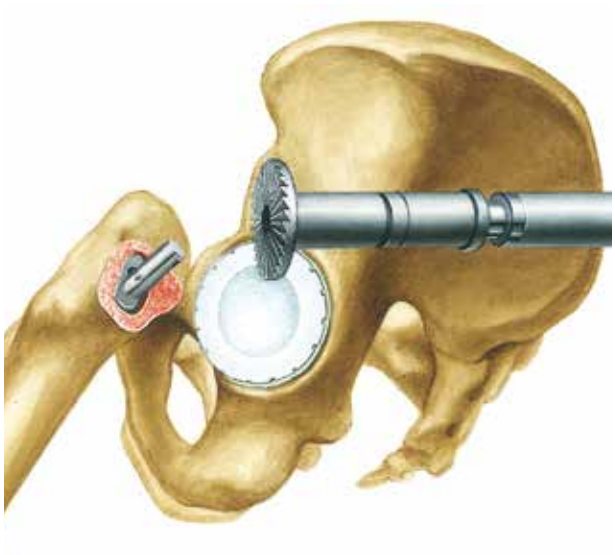
Preparation of Proximal Femur
Driving in rasp stem with handle mounted

Always start with the smallest rasp stem (item no. 131-825/60, narrow). The implant bed can be extended with successively larger rasp stems if pre-operative planning has found this to be necessary. Take care to use rasp stems in the correct sequence (item no. 131-820/60, medium → 131-815/60, large → 131-810/60 x-large).

The femoral rasps correspond approximately to the prosthesis stem sizes. To create a cement mantle of approximately 2 to 3 mm the prosthesis stem size selected should be one size smaller than the last rasp size used (e.g. large rasp stem = medium prosthesis stem).

7

Position of Rasp Stem in Femur
The rasp is then left in situ. The rasp stem is inserted so that its rasp section is completely embedded in the femoral shaft and the smooth neck section begins just below the lowest point of the resection plane.



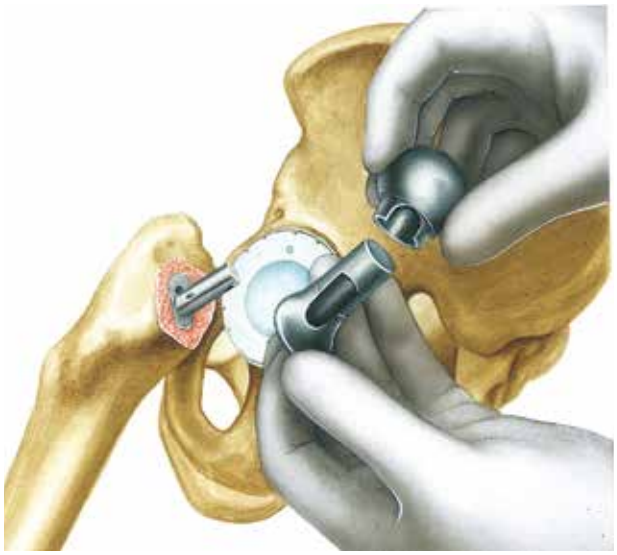
8

Final Reaming of Resection Area
A calcar reamer is used for final precise reaming of the resected end of the femur, guided by the rasp neck.

9

Creation of Flat Surface
The calcar reamer is now used to create a flat surface on the proximal femur at the correct angle for the collar.

Attention:
To prevent the reamer from being damaged it must always be pushed as far as possible onto the neck of the rasp before starting to ream.

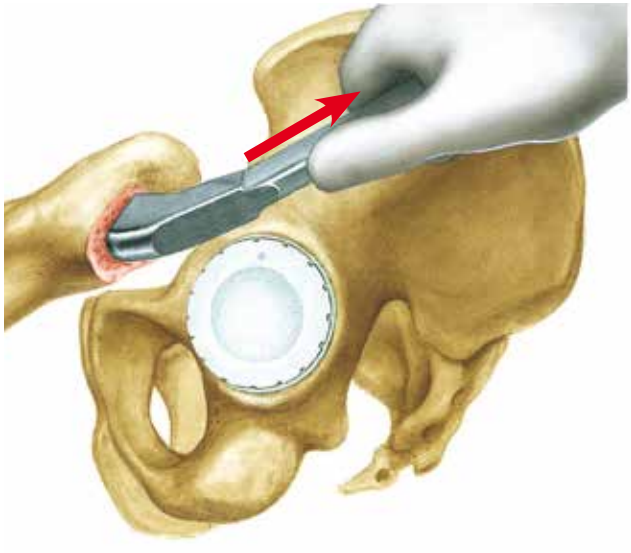


10

Preparation of Trial Reduction
The rasp now serves as a trial stem. A trial neck section with taper is fitted on the neck of the rasp and trial heads can then be attached as required.

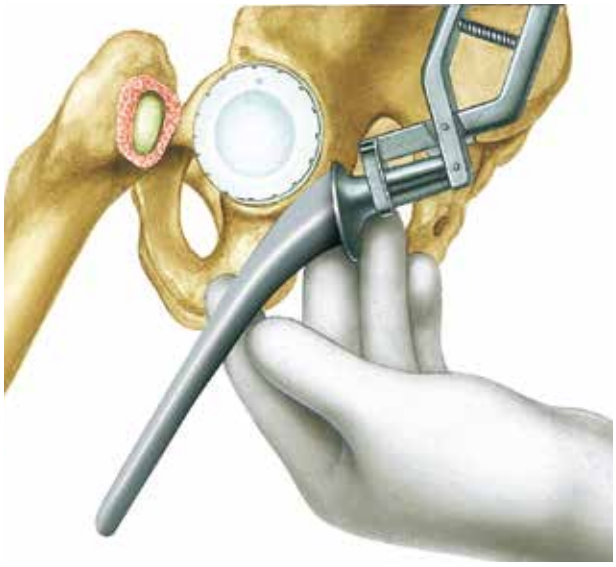
11

Trial Reduction
This trial checks the stability and range of motion of the joint. If necessary the femoral neck can be further resected using the calcar reamer. The optimal head-neck length can be determined by using trial heads and necks of different sizes.



12

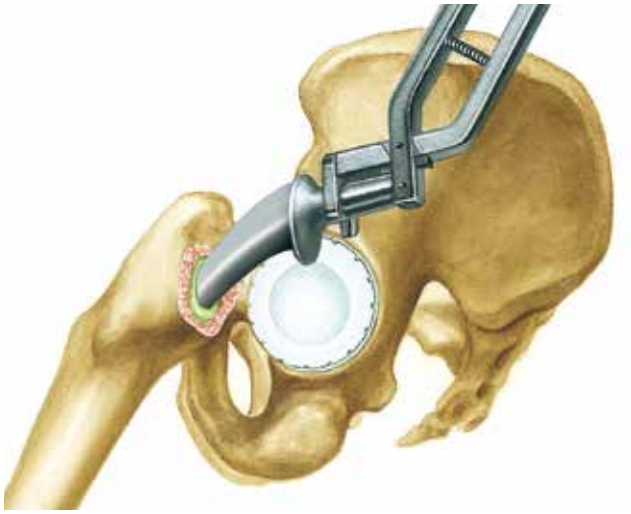
Removal of Rasp
After trialing the rasp is removed using the rasp handle.



13

Implantation of Stem

The improved implanting technique requires that introducing forceps be used to insert the femoral component into the femur. This avoids damage to the taper and enables the femoral component to be inserted securely into its soft cement bed.



14

Placing of Stem

The medullary space is blocked slightly below the planned position of the tip of the femoral stem using either a bone plug or an appropriate intramedullary plug. After cement application, the stem is introduced into the femoral cavity approximately and inserted to about half its length using the insertion forceps.

15

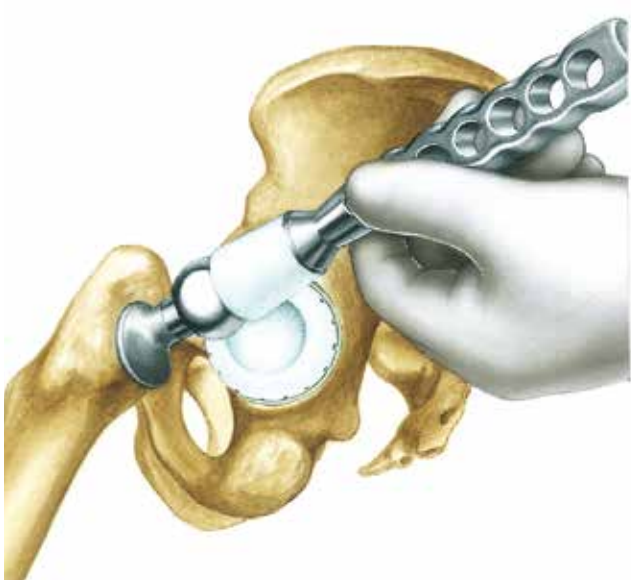
Hardening of Cement

The stem is driven into its final position using the impactor. While the cement hardens, the stem is pressed firmly into the cement bed with the tip of the impactor located in the hemispherical depression on the lateral collar, thus avoiding transmission of the surgeon's movements to the stem.

16

Final Trial Reduction with Trial Head

A final precautionary trial run is carried out using colored plastic trial heads.



17

Positioning of Prosthesis Head
After final dislocation testing the selected femoral head is placed on the carefully cleaned taper of the stem and fixed with a light tap on the impactor.

Attention:
To prevent damage to the surface of the prosthesis head the plastic impact surface of the driver has to be clean and undamaged. If this part of the driver becomes damaged it must be replaced before the driver can be used again.

18

Lubinus Classic Plus™ Hip Prosthesis Stem in situ.

Final trial reduction with permanent implant components.

Accessories

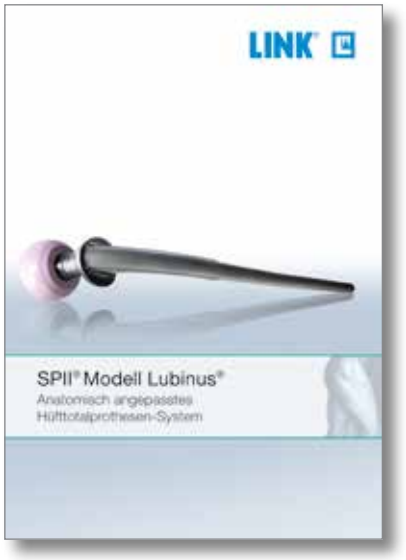
X-ray Templates for Lubinus Classic Plus™ Hip Prosthesis Stems
CCD angle 126°, head Ø 28 + 32 mm, (with neutral head-neck length), 110 % actual size, set of 4 sheets

Item no.	X-ray templates
131-836/26	**Lubinus Classic Plus™ Hip Prosthesis Stems**

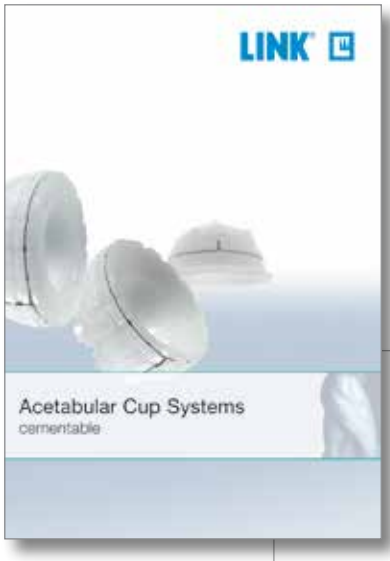
Instructions for Cleaning and Maintenance

Specific instructions for instruments are available on request from customer@linkhh.de

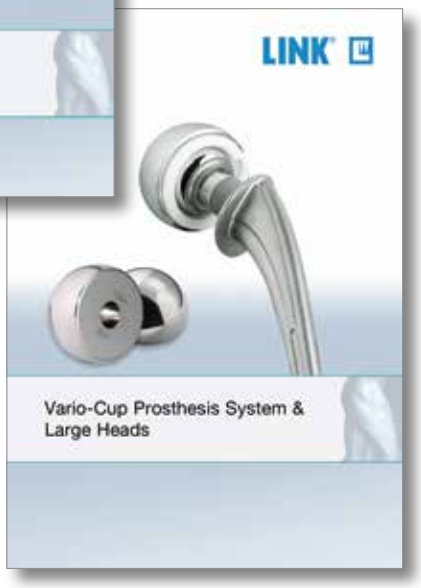
Literature



Lubinus® SPII®
Catalog: 642 en



Acetabular Cups
cementable
Catalog: 609en



Vario-Cup
Prosthesis System &
Large Heads
Catalog: 604 en

Indications/Contraindications

Products	Hip Prosthesis	Prothesis Heads	
	Lubinus Classic Plus™	BIOLOX® forte* + delta* Prosthesis Heads A	Prosthesis Heads B
General Indications			
Mobility-limiting diseases, fractures or defects which cannot be treated by conservative or osteosynthetic procedures	X	X	X
Indications			
Primary and secondary coxarthrosis	X	X	X
Osteoarthritis	X	X	X
Necrosis of the femoral head	X	X	X
Femoral neck fractures	X	X	X
Revision after implant loosening		X	X
Contraindications			
Poor general state of health	X	X	X
Acute and chronic infections, local and systemic	X	X	X
Allergies due to (implant) materials	X	X	X
Distinctive muscular-, nerve-, vascular or other diseases which put the affected limb at risk	X	X	X
Insufficient/inadequate bone mass which prevents a stable anchor of the prosthesis	X	X	X
Relative Contraindications			
Adiposity	X	X	X
Lacking or foreseeable not assured compliance	X	X	X
Foreseeable overload/overstressing of the joint prosthesis	X	X	X

Please note: These indications/contraindications refer to standard cases. The ultimate decision on whether or not an implant is suitable for a patient must be made by the surgeon based on his/her individual analysis and his/her experience.

* BIOLOX® forte and BIOLOX® delta are made by CeramTec GmbH, Plochingen, Germany

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Important Information

Please note the following regarding the use of our implants:

1. **Choosing the right implant is very important.**
   The size and shape of the human bone determine the size and shape of the implant and also limit the load capacity. Implants are not designed to withstand unlimited physical stress. Demands should not exceed normal functional loads.

2. **Correct handling of the implant is very important.**
   Under no circumstances should the shape of a finished implant be altered, as this shortens its life span. Our implants must not be combined with implants from other manufacturers.

   The instruments indicated in the Surgical Technique must be used to ensure safe implantation of the components.

3. **Implants must not be reused.**
   Implants are supplied sterile and are intended for single use only. Used implants must not be reused.

4. **After-treatment is also very important.**
   The patient must be informed of the limitations of the implant. The load capacity of an implant cannot compare with that of healthy bone!

5. **Unless otherwise indicated, implants are supplied in sterile packaging.**
   Note the following conditions for storage of packaged implants:
- Avoid extreme or sudden changes in temperature.
- Sterile implants in their original, intact protective packaging may be stored in permanent buildings up until the “Use by” date indicated on the packaging.
- They must not be exposed to frost, dampness or direct sunlight, or mechanical damage.
- Implants may be stored in their original packaging for up to 5 years after the date of manufacture. The “Use by” date is indicated on the product label.
- Do not use an implant if the packaging is damaged.

6. **Traceability is important.**
   Please use the documentation stickers provided to ensure traceability.

7. **Further information** on the material composition is available on request from the manufacturer.

Follow the instructions for use!

Waldemar Link GmbH & Co. KG, Hamburg

The Surgical Technique described has been written to the best of our knowledge and belief, but it does not relieve the surgeon of his/her responsibility to duly consider the particularities of each individual case.

Unless otherwise indicated, all instruments are made of surgical stainless steel.

Waldemar Link GmbH & Co. KG

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