Vario-Cup Prosthesis System & Large Heads

Presented by:

CE 0123

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Vario-Cup Prosthesis System & Large Heads

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Important Information

System Description

The Vario-Cup Prosthesis System

The Vario-Cup Prosthesis System consists of an UHMWPE acetabular component encased in an ultra-smooth polished outer metal casing, for articulation in the bony acetabulum. It is to be used in conjunction with femoral components from the LINK® Total Hip Systems.

The Vario-Cup Prostheses are available in outer diameters ranging from 39 to 65 mm in 1 mm increments. Acetabular prostheses that are too small or too large lead to bone reactions due to inappropriate spread of loading in the bony acetabulum. By choosing a component that fits correctly from the finely graduated range of prosthesis sizes, this complication can be avoided.

The Vario-Cup prostheses are available with inner diameters of 24.1, 28.1 and 32.1 mm. These are intended for use with LINK Prosthesis Heads with sizes of 24 mm, 28 mm and 32 mm respectively. (The outer diameters of the corresponding acetabular components are 39 - 43 mm, 44 - 65 mm and 49 - 65 mm respectively.)

To prevent dislocation, an anti-luxation system has been developed for the acetabular components with inner diameters of 28.1 and 32.1 mm. An UHMWPE safety ring is placed in a slot in the mouth of the polyethylene insert after assembly of acetabular and femoral components.
This safety measure can be implemented either before or after implantation of the femoral component, but should be carried out prior to reposition of the Vario-Cup in the bony acetabulum.

Large Heads

Large Head prostheses are available as an alternative to the Vario-Cup system. The Large Head prostheses are manufactured using a tried and trusted cobalt-chromium-molybdenum alloy. A high gloss polished surface is provided for articulation in the bony acetabulum.

Large Head prostheses are available with external diameters ranging from 38 to 54 mm so that all patients can be given appropriate models.

Note:
LINK® prosthesis systems are manufactured to ensure precise intercompatibility so that appropriate components can be combined without incurring problems of function. They cannot be used with hip components made by other manufacturers.

Features

- Instrument sets for Vario-Cup System and Large Head prostheses are clear and easy to use
- Surgeon is free to choose intraoperatively between Vario-Cup and Large Head prostheses
- Abrasion is minimized by exact size matching and precision manufacturing
- Vario-Cup prostheses and Large Head prostheses are made from tried and trusted CoCrMo cast alloy

Advantages

Vario-Cup Prosthesis System

- Movement of Vario-Cup prosthesis in the acetabulum is minimal because the main articulation between prosthesis head and polyethylene cup insert is shifted
- Vario-Cup can be used in combination with LINK® Total Prosthesis Systems
- Safety ring at edge of cup minimizes risk of dislocation
- Can be combined with prosthesis heads B for internal diameters 24, 28 and 32 mm
- Resistance to abrasion: PE insert and metal casings are joined so that micromovement is reduced to a minimum

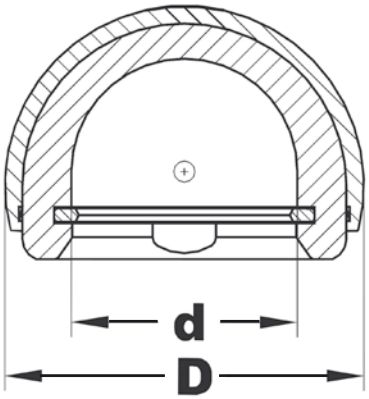
Large Heads

- Optimized range of sizes ensures maximal bone retention
- Natural range of movement is restored
- Easy implantation

Indications/Contraindications

Note: Specific Indications/Contraindications see page 15.

LINK® Vario-Cup Prostheses – self-centering –



Materials:
CoCrMo alloy and UHMWPE

Inner Ø (d)			Outer Ø (D)
24.1 mm	28.1 mm	32.1 mm	mm
Item no.	Item no.	Item no.	
107-210/39*#	-	-	39
107-210/40*#	-	-	40
107-210/41*	-	-	41
107-210/42*	-	-	42
107-210/43*	-	-	43
-	107-220/44	-	44
-	107-220/45	-	45
-	107-220/46	-	46
-	107-220/47	-	47
-	107-220/48	-	48
-	107-220/49	107-230/49	49
-	107-220/50	107-230/50	50
-	107-220/51	107-230/51	51
-	107-220/52	107-230/52	52
-	107-220/53	107-230/53	53
-	107-220/54	107-230/54	54
-	107-220/55	107-230/55	55
-	107-220/56	107-230/56	56
-	107-220/57	107-230/57	57
-	107-220/58	107-230/58	58
-	107-220/59	107-230/59	59
-	107-220/60	107-230/60	60
-	107-220/61	107-230/61	61
-	107-220/62	107-230/62	62
-	107-220/63	107-230/63	63
-	107-220/64	107-230/64	64
-	107-220/65	107-230/65	65

* without safety ring
\# not self-centering

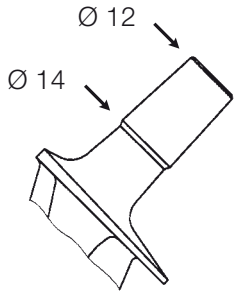
Safety Ring for Vario-Cup Prostheses
Material: UHMWPE, height 2.1 mm

Item No.	Head Ø mm
107-200/28	28
107-200/32	32

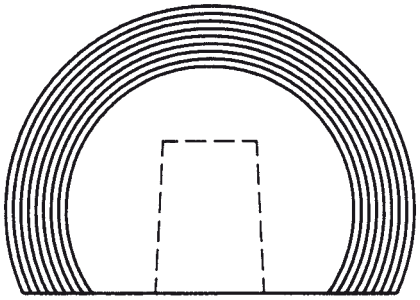
Large Heads

Material: CoCrMo alloy

Taper 12/14 mm



Item no.	Head Ø mm	Head-neck length mm
126-838	38	52
126-840	40	53
126-842	42	54
126-844	44	55
126-846	46	56
126-848	48	57
126-850	50	58
126-852	52	59
126-854	54	60
99-0150/31	56	61
99-0150/32	58	62
99-0150/33	60	63



Head Ø 38 - 60 mm

Prosthesis Heads B

Material: CoCrMo alloy

Item no.	Head Ø mm	Taper mm	Neck length mm
128-824/01	24	12/14	short -3.5
128-824/02	24	12/14	medium 0
128-828/01	28	12/14	short -3.5
128-828/02	28	12/14	medium 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
128-832/03	32	12/14	long +4.0
128-832/04**	32	12/14	extra long +8.5

** on request

LINK® Vario-Cup Prosthesis System

130-799/13
Instrument Set, complete
in Standard Container N11, on tray with storage inserts and product illustrations

consisting of:

05-2001/03
N11 Standard Container, 575 x 275 x 100 mm

130-799/14
Tray, empty
perforated stainless steel, 550 x 265 x 50 mm

162-160
Universal handle, 325 mm

Trial Cups for Vario-Cup Prosthesis System

Item no.	Ø mm	Item no.	Ø mm	Item no.	Ø mm	Item no.	Ø mm	Item no.	Ø mm
130-821/39	39	130-821/45	45	130-821/51	51	130-821/57	57	130-821/63	63
130-821/40	40	130-821/46	46	130-821/52	52	130-821/58	58	130-821/64	64
130-821/41	41	130-821/47	47	130-821/53	53	130-821/59	59	130-821/65	65
130-821/42	42	130-821/48	48	130-821/54	54	130-821/60	60		
130-821/43	43	130-821/49	49	130-821/55	55	130-821/61	61		
130-821/44	44	130-821/50	50	130-821/56	56	130-821/62	62		

130-819
Hook for applying or removing safety rings, 145 mm

Large Heads

05-2001/03 N11 Standard Container, 575 x 275 x 100 mm

Trial Large Heads Taper 12/14				**Coloured Trial Head** Taper 12/14
Item no.	Ø mm	Head-neck length mm	Corresponding prosthesis head	Item no.
130-798/38	38	52	126-838	130-797/38
130-798/40	40	53	126-840	130-797/40
130-798/42	42	54	126-842	130-797/42
130-798/44	44	55	126-844	130-797/44
130-798/46	46	56	126-846	130-797/46
130-798/48	48	57	126-848	130-797/48
130-798/50	50	58	126-850	130-797/50
130-798/52	52	59	126-852	130-797/52
130-798/54	54	60	126-854	130-797/54
130-798/56	56	61	99-0150/31	130-797/56
130-798/58	58	62	99-0150/32	130-797/58
130-798/60	60	63	99-0150/33	130-797/60

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.

For the best possible results the appropriate implant should be selected using the X-ray templates which are available at a scale of 1.1:1. When used in combination with recent pelvic X-rays (A/P and M/L views) these templates serve as a useful aid in planning surgery and determining implant size.

When planning the resection level, the femoral neck must be considered along with centre of rotation and leg length. The femoral neck should remain intact as far as possible so that the original anatomy can be reconstructed.

The choice of implant should ensure that the Vario-Cup, or the Large Head prostheses, fills the acetabulum completely.

When these implants are used it is essential that there is no arthritis in the acetabulum and that no injuries are found during implantation.

Instructions for use of the Vario-Cup Prosthesis System

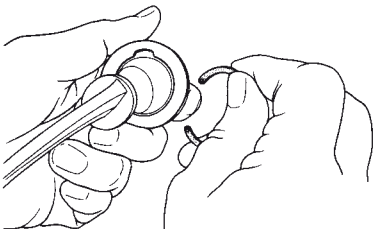


Fig. 1
Fit the Vario-Cup Prosthesis onto the head of the femoral component.

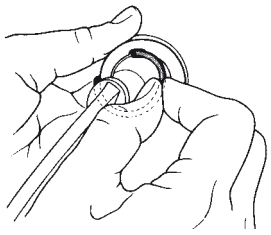


Fig. 2
Insert one end of the flexible safety ring into the groove just inside the mouth of the polyethylene insert.

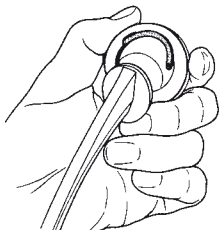


Fig. 3
Feed in the rest of the flexible safety ring so that it is seated in the groove.

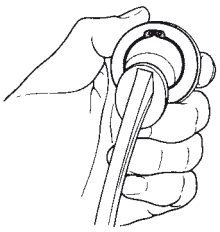


Fig. 4
Inserting the safety ring makes the mouth of the insert smaller and thus prevents dislocation.

Fig. 5
The safety ring can be removed easily with the help of an angled hook. If the holes in the ends of the ring are not visible, use the hook to rotate the ring in the socket until the holes appear. Then insert the hook in one of the holes and extract the ring.

Surgical Approaches

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** (Fig. A)
- lateral - **Hardinge** (Fig. B)
- postero-lateral - **Moore** (Fig. C)

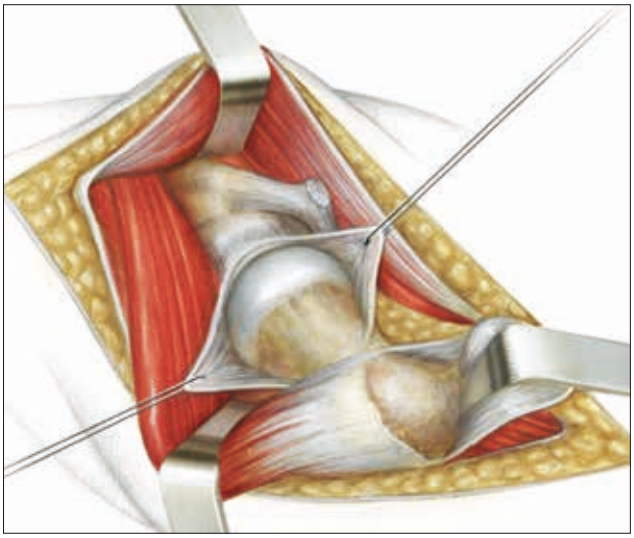
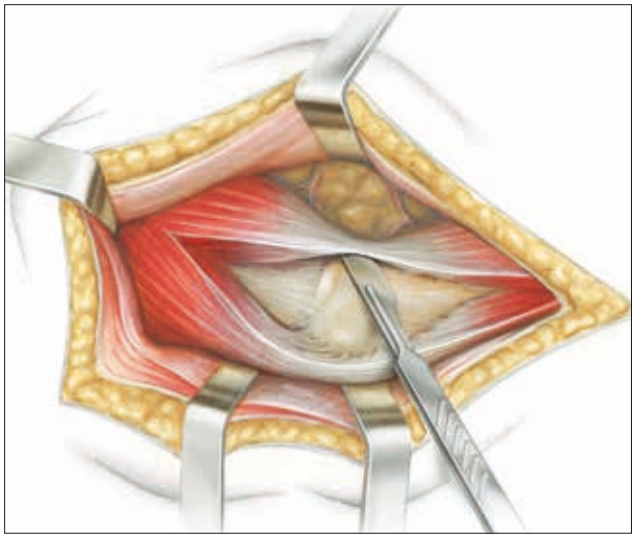


Fig. A: Watson Jones



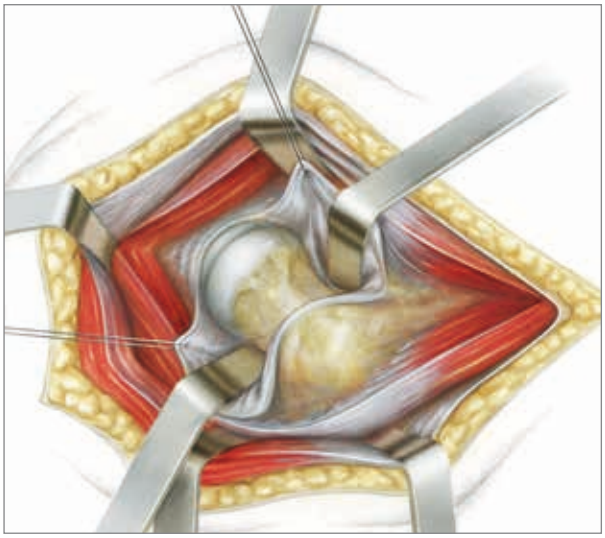
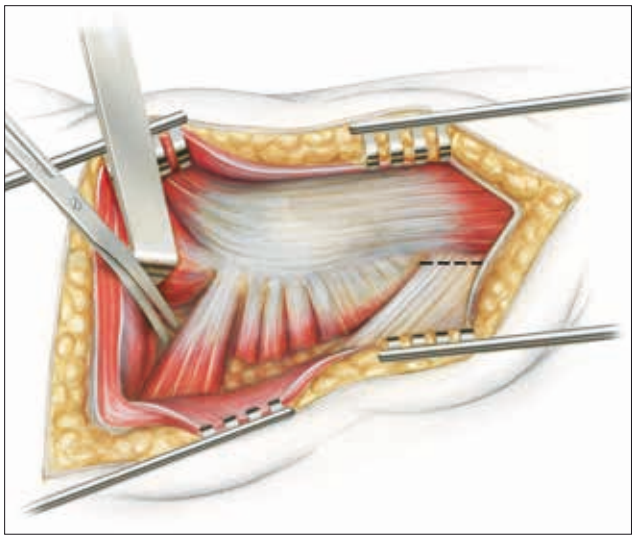


Fig. B: Hardinge



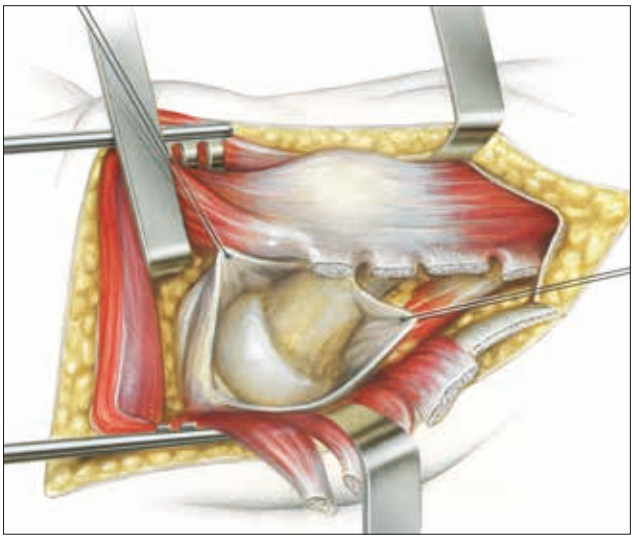


Fig. C: Moore

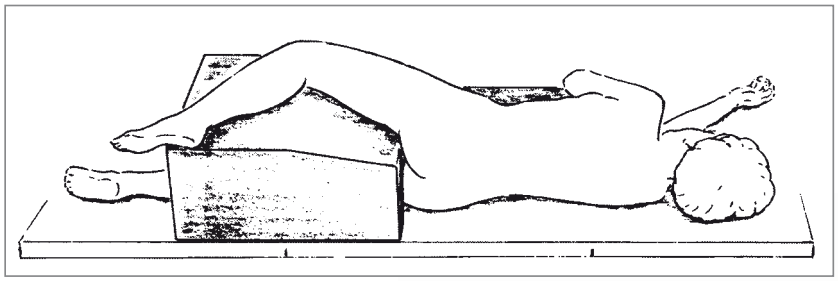


Fig. 1

Place the patient in the lateral decubitus position.
The recommended approach is dorsolateral.
A different approach may be used depending on the surgeon's experience.

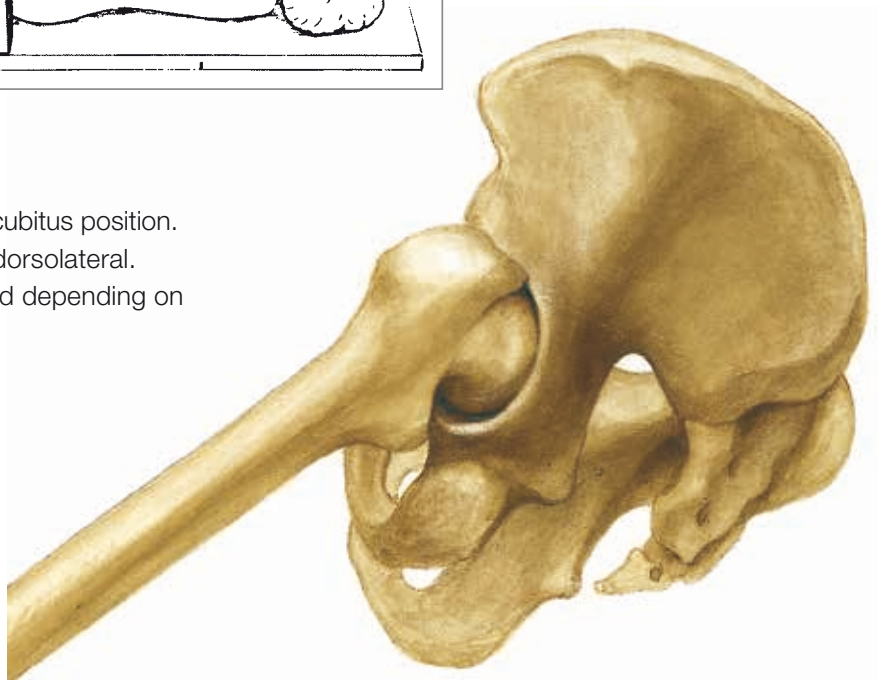


Fig. 2

Luxate the femoral head using internal rotation and 90° flexion of the femur.

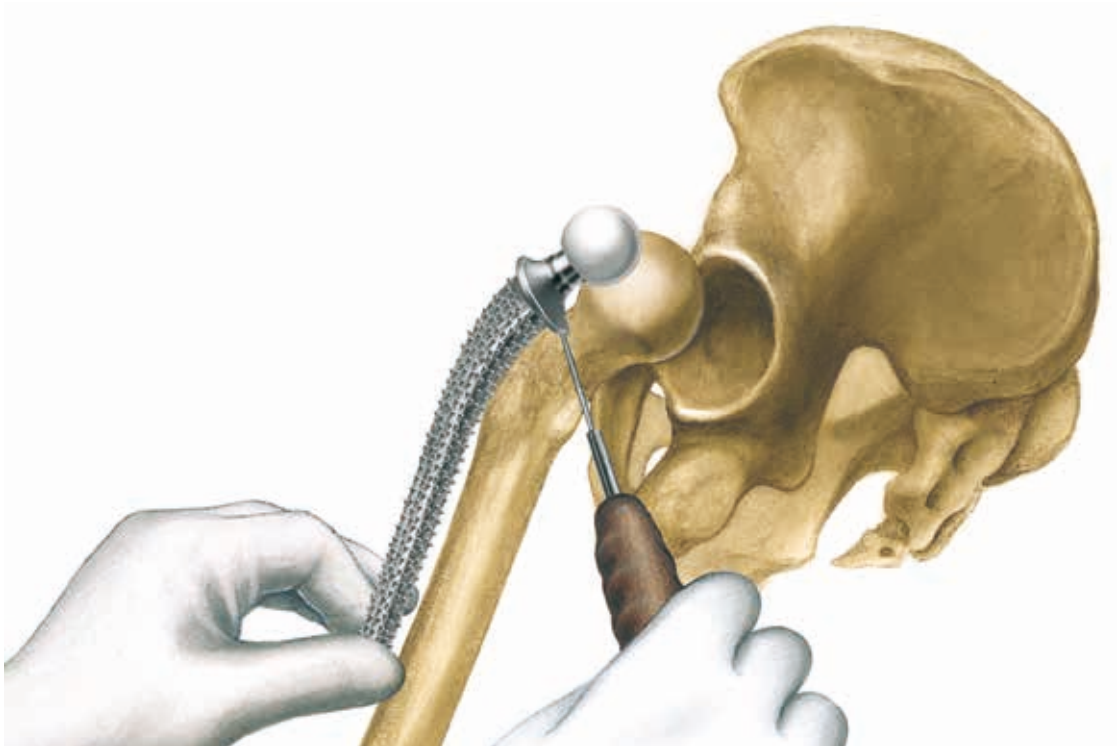


Fig. 3

Use a rasp stem for comparison with the existing bone to help determine the resection level. Sparing resection is advisable to allow for any additional resection or reaming that may be necessary. The resection angle is perpendicular to the axis of the femoral neck.

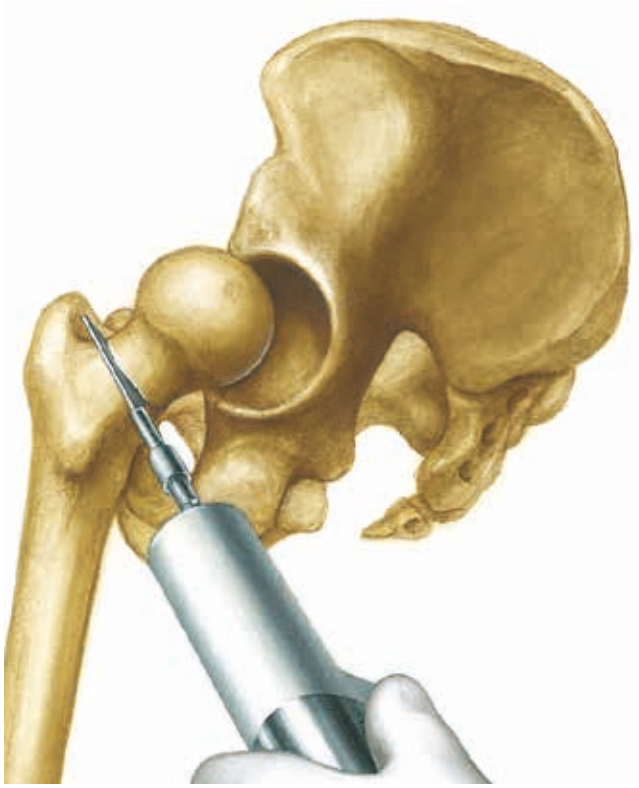


Fig. 4

Resection of the femoral head according to preoperative planning.

Fig. 5

Exposure of the acetabulum after femoral head resection.

Note:
Surgical techniques for the different prosthesis stems are described in detail in separate catalogues for each individual system (see p. 14, Additional Prosthesis Systems)

Fig. 6

Use the colored plastic trial heads to confirm which head size is needed.

Note:
This step is not necessary when Large Head prostheses are used.

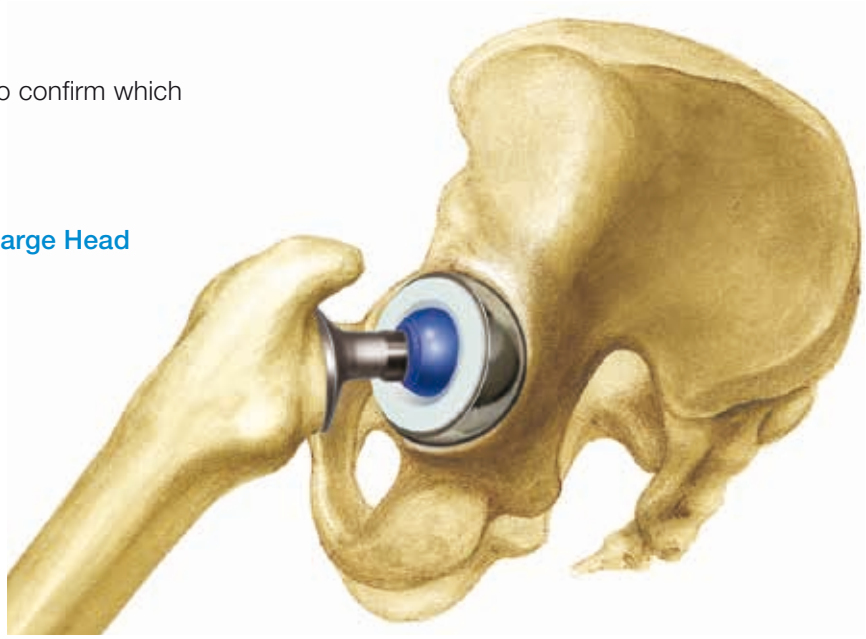


Fig. 7

Place the femoral head on the carefully cleaned taper of the stem and fix it with a light tap on the impactor.

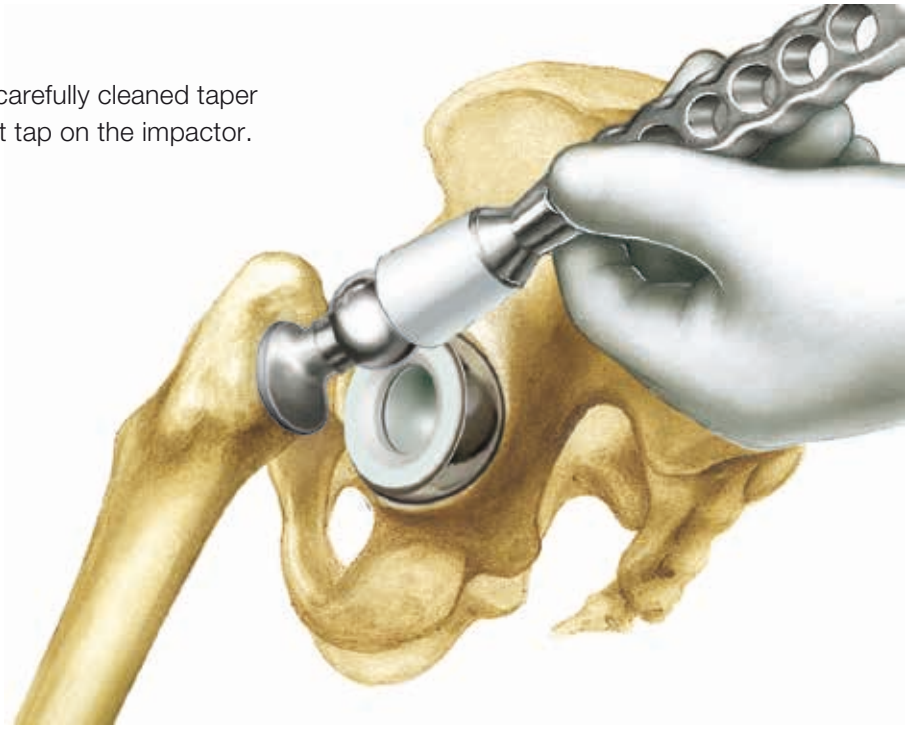
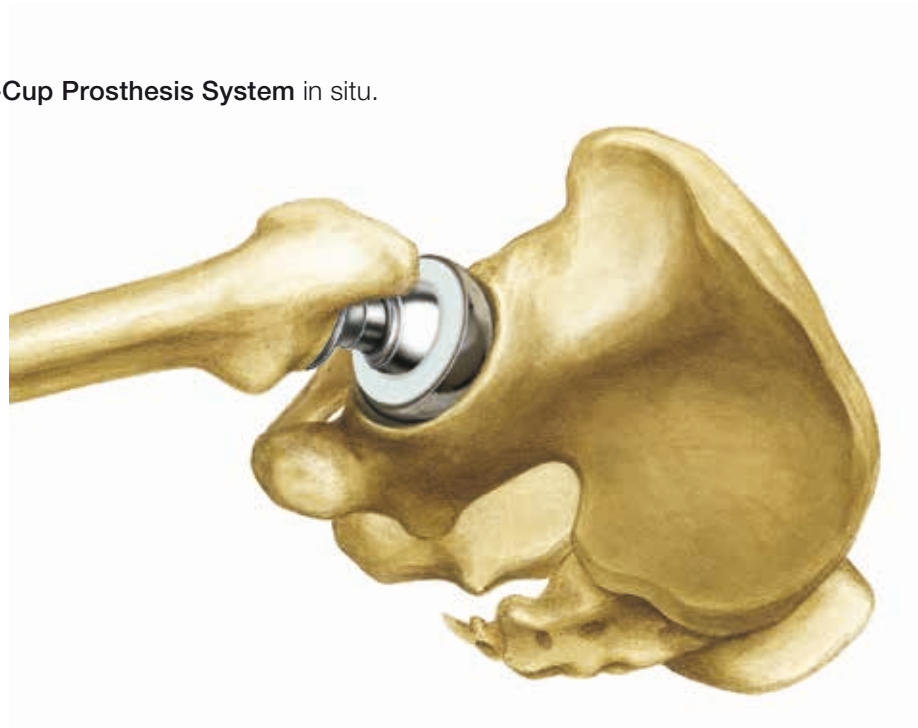


Fig. 8

The **Vario-Cup Prosthesis System** in situ.

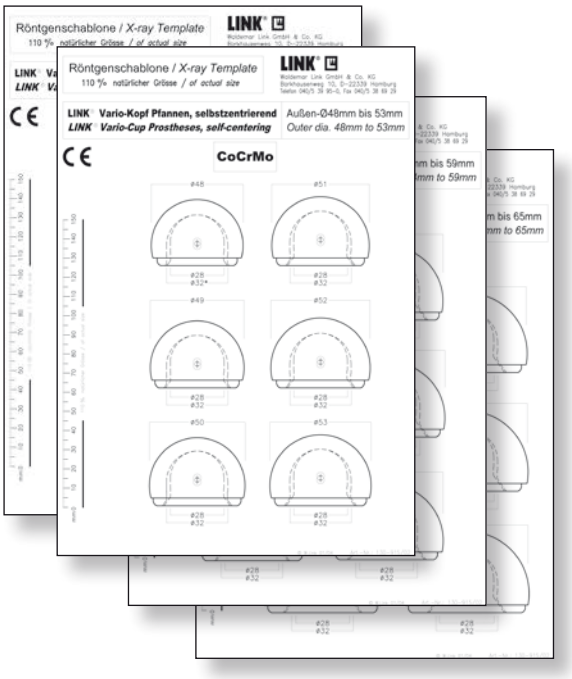


■ X-ray Templates

130-915/02

X-ray templates for LINK® Vario-Cup Prosthesis System – self-centering

Set of 4 sheets, 110 % actual size



130-910/01

X-ray templates for LINK® Large Heads

Outer Ø 38-60 mm, taper 12/14, set of 2 sheets

110 % actual size for:

126-838 to **126-854**

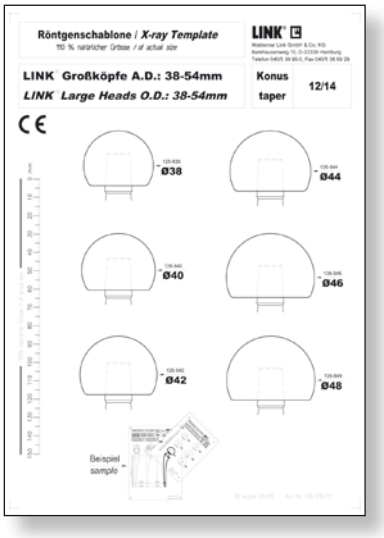
99-0413

X-ray templates for LINK® Large Heads

Outer Ø 38-60 mm, taper 12/14, set of 2 sheets

120 % actual size for:

126-838 to **126-854**



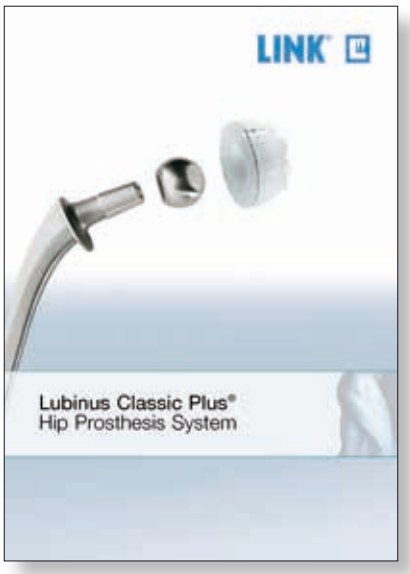
Literature

Frisch, W., Kaiser, N.
Die Variokopfprothese. Erfahrungsbericht über die Versorgung medialer Schenkelhalsfrakturen beim alten Menschen mit dem alleinigen Hüftkopfersatz. Chir. Praxis 42.85-91 (1990)

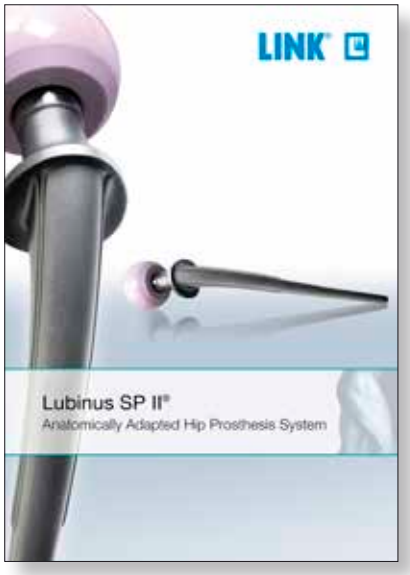
Niebuhr, H., Nahrstedt, U., Brüning, M., Rückert, K.
Die Variokopfendoprothese in der Behandlung der Schenkelhals- und schenkelhalsnahen Fraktur. Unfallchirurgie, Sonderdruck 17:146-151 (1991)

Additional Prosthesis Systems

The **Vario-Cup Prosthesis System** and **Large Heads** can be combined with other LINK® Hip Prosthesis Systems:



LINK® Lubinus Classic Plus®
Catalog: 666_LCP_Impl. Instr. OP_en



LINK® Lubinus SPII®
Catalog: 642_SPII_Impl. Instr._OP_en

LINK® Ripped System
Implants and Instruments, Catalog: 638dt-en Impl.
Surgical Technique, Catalog: 638dt-en OP-Techn.

Products	Prosthesis Heads		
	Prosthesis Head B	Vario-Cup Prosthesis System	Large Heads
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		
Osteoarthritis	X		
Necrosis of the femoral head	X	X	X*
Femoral neck fractures	X	X	X*
Revision after implant loosening	X		
Contraindications			
Poor general state of health	X	X	X
Acute and chronic infections, local and systemic	X	X	X
Allergies 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- or quality which prevents a stable anchor of the prosthesis	X	X	X
Acetabulum fracture		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
Acetabular defects		X	X

*for older, less mobile or immobile patients

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.

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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

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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.

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