



C.F.P.® Hip Prosthesis System



C€ 0482

Presented by:

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C.F.P.® Hip Prosthesis System

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Important Information



Bioharmony in Total Hip Replacement

The LINK® C.F.P.®* Prosthesis Stem and the T.O.P.** Cementless Acetabular Cup System have been designed especially for biologically young and active patients. With conventional hip prostheses such patients are subjected to increased rates of aseptic loosening because of their long life-expectancy.

The C.F.P.® and T.O.P. take into account the biomechanical load and fixation principles dictated by hip anatomy and physiology patterns, the retention of the femoral neck and uncemented fixation techniques to provide strong and stable implant anchorage. They thus provide an optimal basis for any future interventions.

- * Collum Femoris Preserving
- ** Trabekel Orientierte Pfanne

C.F.P.® Hip Prosthesis Stem

- Minimal bone resection because femoral neck and proximal cancellous bone are preserved
- Parts of the circumflex artery's vascular network are preserved thereby maintaining the vascular supply of the femoral neck after resection of the femoral head
- Stem shape and surgical technique allow an uncemented implantation with up to 87% prosthesis-to-bone contact
- Prosthesis stem takes account of anatomical stem shape and anteversion
- Different stem curvatures enable secure support of the stem at the medial cortex
- Collar allows reintroduction of physiological loads into the femur
- Made of Tilostan® (Ti6Al4V)

■ System Description – Indications/Contraindications

X-LINKed® – highly crosslinked Polyethylene for Acetabular Cups and Inserts

The LINK® Acetabular Cup Portfolio covers a wide range of indications for acetabular treatment. LINK® Acetabular Cups are used in many cases for both biologically young, active patients and older patients and are also used in surgical revision.

Prosthesis heads with a diameter of up to 36 mm can be used with cups made from X-LINKed® Polyethylene. This increases the range of movement and gives optimal joint stability.

By using X-LINKed® Polyethylene, abrasive wear can be reduced significantly which extends the service life of the implant components.

X-LINKed® Polyethylene is available for the following acetabular cup systems:

Cementless fixation

- T.O.P. Polyethylene inserts
- BetaCup® Polyethylene inserts

Cementable fixation

- Lubinus Eccentric/Dysplastic Polyethylene Acetabular Cup, without snap fit
- IP Polyethylene Acetabular Cup
- FAL Polyethylene Acetabular Cup, anti-luxation

Indications/Contraindications

Note: For specific indications/contraindications, see page 26.



■ Prosthesis Stems, cementless, taper 12/14 mm

Material: **Tilotan**[®] with HX[®] Coating (calcium phosphate)

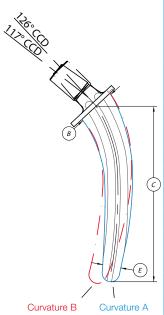
HX® coated



Curvature A (slight)				Curvature B	(strong)
CCD angle 117°	CCD angle 126°	HX® coa	ited	CCD angle 117°	CCD angle 126°
Item no.	Item no.	Size	Version	Item no.	Item no.
290-118/17	290-118/26	x-small	right	290-170/17	290-170/26
290-120/17	290-120/26	small	right	290-174/17	290-174/26
290-126/17	290-126/26	medium	right	290-178/17	290-178/26
	290-128/26	medium large	right		290-180/26
290-132/17	290-132/26	large	right	290-182/17	290-182/26
290-138/17	290-138/26	x-large	right	290-186/17	290-186/26
290-119/17	290-119/26	x-small	left	290-171/17	290-171/26
290-121/17	290-121/26	small	left	290-175/17	290-175/26
290-127/17	290-127/26	medium	left	290-179/17	290-179/26
	290-129/26	medium large	left		290-181/26
290-133/17	290-133/26	large	left	290-183/17	290-183/26
290-139/17	290-139/26	x-large	left	290-187/17	290-187/26

Material: Tilostan®

mikroporous ≈ 70 µm roughness



Curvature A	(slight) Curvature B (strong)			(strong)	
CCD angle 117°	CCD angle 126°	micropor with 70 µm ro		CCD angle 117°	CCD angle 126°
Item no.	Item no.	Size	Version	Item no.	Item no.
290-094/17	290-094/26	x-small	right	290-150/17	290-150/26
290-100/17	290-100/26	small	right	290-154/17	290-154/26
290-106/17	290-106/26	medium	right	290-158/17	290-158/26
	290-108/26	medium large	right		290-160/26
290-112/17	290-112/26	large	right	290-162/17	290-162/26
290-114/17	290-114/26	x-large	right	290-166/17	290-166/26
290-095/17	290-095/26	x-small	left	290-151/17	290-151/26
290-101/17	290-101/26	small	left	290-155/17	290-155/26
290-107/17	290-107/26	medium	left	290-159/17	290-159/26
	290-109/26	medium large	left		290-161/26
290-113/17	290-113/26	large	left	290-163/17	290-163/26
290-115/17	290-115/26	x-large	left	290-167/17	290-167/26

Curvature A or E	3		
Size	B mm	C mm	E mm
x-small	19.5	82	11
small	22	105	10
medium	24	115	11.5
medium large	25	120	12
large	26	125	13.5
x-large	28	135	15.5

■ Implants

■ Exchangeable Collars, cementless



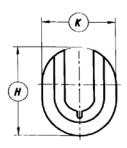
All C.F.P.® hip prostheses are supplied with a standard size collar.

Material: Unalloyed titanium and HX® Coating (calcium phosphate)

Item no.	HX [®] coated, for stem size	Item no.
Standard		Large
290-190/01	x-small	290-191/01
290-190/02	small	290-191/02
290-190/03	medium	290-191/03
290-190/13	medium large	290-191/13
290-190/04	large	290-191/04
290-190/05	x-large	290-191/05

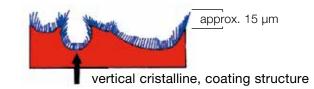
Material: Unalloyed titanium

Item no.	microporous surface, 70 µm roughness, for stem size	Item no.
Standard		Large
290-192/01	x-small	290-193/01
290-192/02	small	290-193/02
290-192/03	medium	290-193/03
290-192/13	medium large	290-193/13
290-192/04	large	290-193/04
290-192/05	x-large	290-193/05



Sta	Standard For stem size		Laı	Large	
H mm	K mm		H mm	K mm	
32	26	x-small	36	29	
34	28	small	38	31	
36	30	medium	40	33	
37	31	medium large	41	34	
38	32	large	42	35	
40	34	x-large	44	37	

HX® Coating (calcium phosphate)



The HX® Coating is an osteoconductive coating approximately 15 µm thick. The unique electrochemical coating process gives it immense mechanical strength, which is necessary for it to endure the stresses during implantation. The large porous structure provides the optimal environment for bone ongrowth.

The HX® Coating preserves the open-pored structure of the implant surface because it is so thin – thanks to the process of electrochemically coating.



Prosthesis Heads

Prosthesis heads A

Material: BIOLOX® forte* - ceramic



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
128-928/03	28	12/14	long +3.5
128-932/01	32	12/14	short -4
128-932/02	32	12/14	medium 0
128-932/03	32	12/14	long +4
128-936/01	36	12/14	short -4
128-936/02	36	12/14	medium 0
128-936/03	36	12/14	long +4
128-940/01**	40	12/14	short -4
128-940/02**	40	12/14	medium 0
128-940/03**	40	12/14	long +4

Prosthesis heads A

Material: BIOLOX® delta* - ceramic



All BIOLOX® forte* and BIOLOX® delta* components are inter compatible.

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
128-791/03	28	12/14	long +3.5
128-792/01	32	12/14	short -4
128-792/02	32	12/14	medium 0
128-792/03	32	12/14	long +4
128-792/04**	32	12/14	extra long +7
128-793/01	36	12/14	short -4
128-793/02	36	12/14	medium 0
128-793/03	36	12/14	long +4
128-793/04**	36	12/14	extra long +8
128-794/01	40	12/14	short -4
128-794/02	40	12/14	medium 0
128-794/03	40	12/14	long +4
128-794/04**	40	12/14	extra long +8

^{**}On request

■ Implants

Prosthesis heads B Material: CoCrMo alloy





Item no.	Head Ø mm	Taper mm	Neck length mm
128-822/01	22	12/14	short -3.5
128-822/02	22	12/14	medium 0
128-824/01	24	12/14	short -3.5
128-824/02	24	12/14	medium 0
128-826/01	26	12/14	short -3.5
128-826/02	26	12/14	medium 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
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
128-832/02	32	12/14	medium 0
128-832/03	32	12/14	long +4
128-832/04**	32	12/14	extra long +8.5
128-836/01	36	12/14	short -4
128-836/02	36	12/14	medium 0
128-836/03	36	12/14	long +4
128-836/04**	36	12/14	extra long +8

^{**}On request



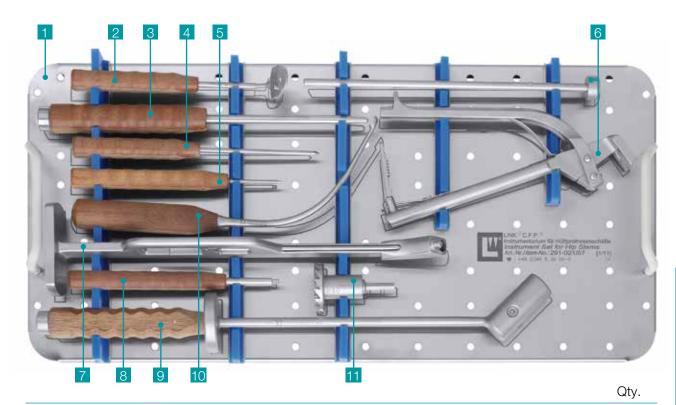
■ Instrument Set for LINK® C.F.P.® Prosthesis Stems



Item no.	Instrument set, complete (container 1 + 2)
291-020/16	Set complete in 2 standard containers N11 & N31, on 3 trays with product illustrations and storage inserts
05-2003/03	N31 standard container, empty, 575 x 275 x 170 mm
05-2001/03	N11 standard container, empty, 575 x 275 x 100 mm
291-021/07	Upper tray (container 1), empty, perforated stainless steel, 550 x 265 x 50 mm
291-023/06	Lower Tray (container 1), empty, perforated stainless steel, 550 x 265 x 50 mm
291-022/07	Tray (container 2), empty, perforated stainless steel, 550 x 265 x 50 mm

■ Instruments

291-021/07 Upper Tray



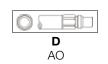
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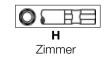
*How to order: 131-406/01B = with Hudson fitting





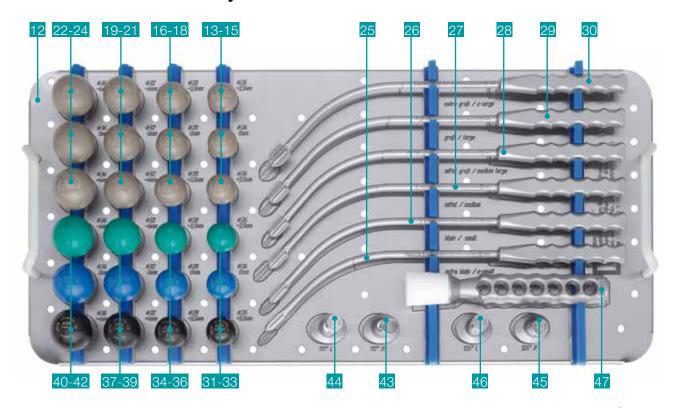








291-023/06 Lower Tray



					Qty.
12	291-023/06	Lower tray (co 550 x 265 x 50	tray (container 1), empty, perforated stainless steel, 65 x 50 mm		1
		Grey plastic tri	al heads with snap-fit fo	r compressor cylinder	
	Item no.	Ø	Neck length	Neck length mm	Qty.
13	291-826/01	26	short	-3.5	1
14	291-826/02	26	medium	0	1
15	291-826/03	26	long	+3.5	1
6	291-828/01	28	short	-3.5	1
7	291-828/02	28	medium	0	1
8	291-828/03	28	long	+3.5	1
	291-828/04*	28	extra long	+10.5	1
9	291-832/01	32	short	-4	1
20	291-832/02	32	medium	0	1
1	291-832/03	32	long	+4	1
	291-832/04*	32	extra long	+8.5	1
	291-832/05*	32	extra long	+7	1
22	291-836/01	36	short	-4	1
23	291-836/02	36	medium	0	1
24	291-836/03	36	long	+4	1
	291-836/04*	36	extra long	+8	1
	291-840/01*	40	short	-4	1
	291-840/02*	40	medium	0	1
	291-840/03*	40	long	+4	1
	291-840/04*	40	extra long	+8	1

Curved probes with sizing olives, graduated, 300 mm

	Item no.	Size	For prosthesis stem	Qty.
25	291-102/01	1	x-small	1
26	291-100/02	2	small	1
27	291-100/03	3	medium	1
28	291-100/35	35	medium large	1
29	291-100/04	4	large	1
30	291-100/05	5	x-large	1

Colored plastic trial heads,

taper 12/14 mm

■ Instruments









	Item no.	Ø	Neck length	Neck length mm	Color	Qty.
31	131-926/01	26	short	-3.5	green	1
32	131-926/02	26	medium	0	blue	1
33	131-926/03	26	long	+3.5	black	1
34	131-928/01	28	short	-3.5	green	1
35	131-928/02	28	medium	0	blue	1
36	131-928/03	28	long	+3.5	black	1
	131-928/04*	28	extra long	+10.5	brown	1
37	131-932/01	32	short	-4	green	1
38	131-932/02	32	medium	0	blue	1
39	131-932/03	32	long	+4	black	1
	131-932/04*	32	extra long	+8.5	brown	1
	131-932/05*	32	extra long	+7	orange	1
40	131-936/01	36	short	-4	green	1
41	131-936/02	36	medium	0	blue	1
42	131-936/03	36	long	+4	black	1
	131-936/04*	36	extra long	+8	brown	1
	131-940/01*	40	short	-4	green	1
	131-940/02*	40	medium	0	blue	1
	131-940/03*	40	long	+4	black	1
	131-940/04*	40	extra long	+8	brown	1

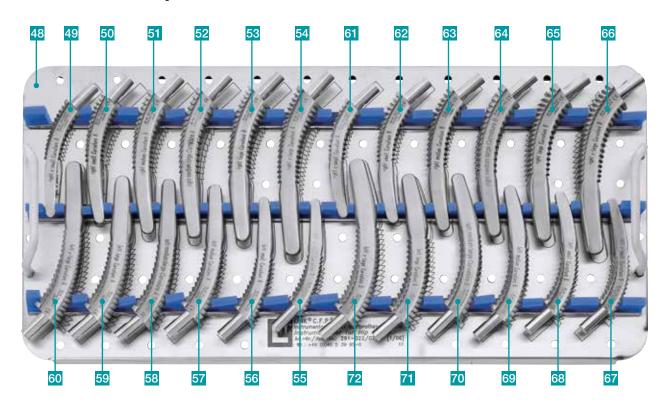
Trial neck sections

	Item no.	CCD angle	Version	Qty.
43	291-120/17	117°	right	1
44	291-121/17	117°	left	1
45	291-120/26	126°	right	1
46	291-121/26	126°	left	1

4.7	130-600	Driver for prosthesis heads	Qty.
47	130-000	with exchangeable plastic head, 170 mm	1



291-022/07 Tray



Tray (container 2), empty, perforated stainless steel, 550 x 265 x 50 mm 1 Qty.							
Bone compressors, curvature A							
Item no.	Size	Version	Item no.	Size	Version		
49 291-200/03	x-small	right	<u>55</u> 291-200/04	x-small	left		
50 291-201/01	small	right	56 291-201/02	small	left		
51 291-202/01	medium	right	57 291-202/02	medium	left		
52 291-202/11	medium large	right	58 291-202/12	medium large	left		
53 291-203/01	large	right	59 291-203/02	large	left		
54 291-204/01	x-large	right	60 291-204/02	x-large	left		
	Bone compress	sors, curvatu	ıre B				
Item no.	Size	Version	Item no.	Size	Version		
61 291-210/03	x-small	right	67 291-210/04	x-small	left		
62 291-211/01	small	right	68 291-211/02	small	left		
63 291-212/01	medium	right	69 291-212/02	medium	left		
64 291-212/11	medium large	right	70 291-212/12	medium large	left		
65 291-213/01	large	right	71 291-213/02	large	left		
66 291-214/01	x-large	right	72 291-214/02	x-large	left		

Instruments

Additional Instruments

(not included in instrument set for C.F.P.® Prosthesis Stems)



130-601 Replacement head for driver 130-600



130-165 MalletØ 30 mm, 270 mm, 600 gram



130-393/25 Handle for rasp stems, left hip, angled



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. Careful planning helps surgeons to foresee and avoid surgical problems.

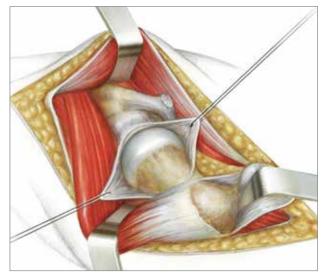
For the best possible results the appropriate implant should be selected using C.F.P.® X-ray templates which are available at a scale of 1.1:1. When used in combination with recent pelvic X-rays (A/P and M/L views) these templates serve as a useful aid in planning surgical procedure and determining implant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

In 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 greatest possible length of hip stem lies along the Adam's Bow. Stems are available with two different curvatures, curve A and curve B, for this purpose.

The distal tip of the prosthesis should run along the centre of the medullary canal and should not have any distal cortical contact.

■ Surgical Technique

Surgical Approaches

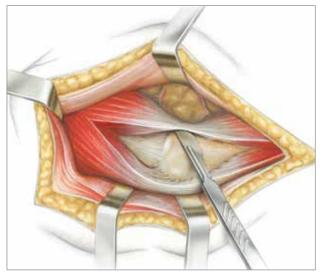


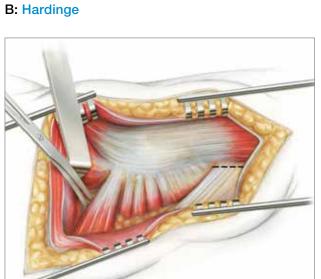
A: Watson Jones

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

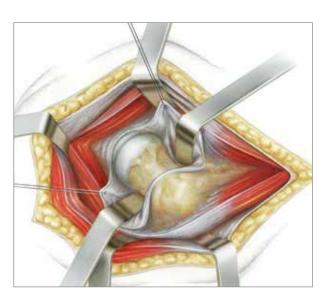
The following approaches are common:

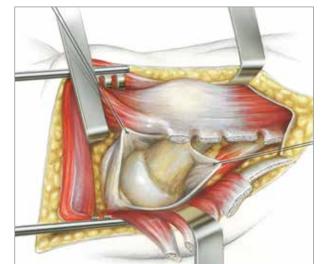
- antero-lateral Watson Jones (A)
- lateral Hardinge (B)
- postero-lateral Moore (C)





C: Moore









1

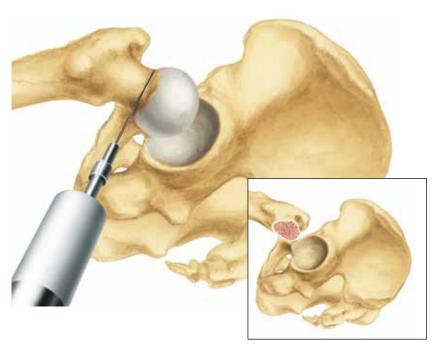
Dislocation of Femoral Head

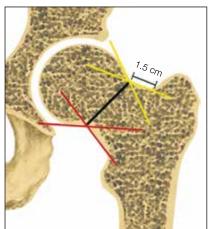
After dislocation of the femoral head the femoral neck and the proximal rim of both trochanters are exposed and existing osteophytes of the femoral head removed.

2 and 3

Femoral Head Resection

During preoperative planning the osteotomy site is determined by applying tangents as shown in Fig. 3. The line of the resection on the isthmus corresponds to the line connecting the intersection points of the tangents. The distance from the base of the major trochanter is usually 1.5 cm.



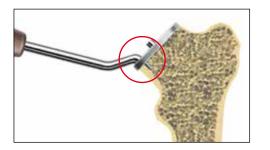


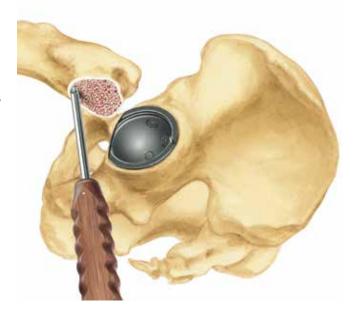
■ Surgical Technique

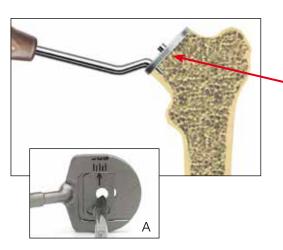
3

Preparation of Proximal Femur

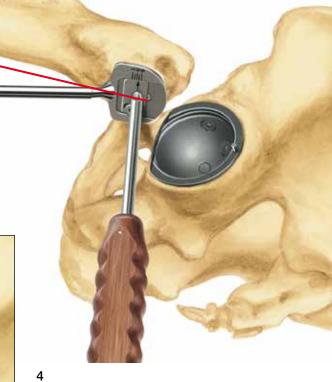
Using a trocar awl a small hole is made in the resected femoral neck, as far medially as possible, to accommodate the pin of the guide.











Targeting opening of femoral canal

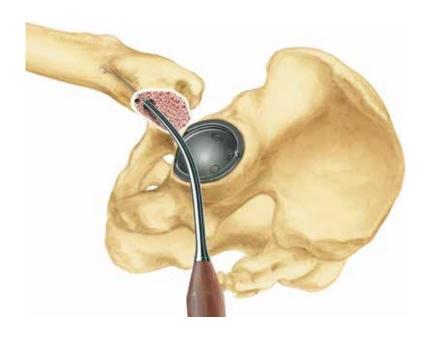
The guide is adjusted to the planned prosthesis size (A) and placed on the resection site taking the premarked hole into consideration. The trocar awl is used to site the opening of the medullary cavity.



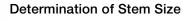
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Opening of Femoral Canal

The femoral canal is opened using a curved bone curette.

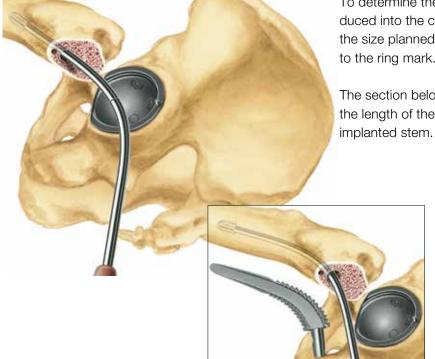


6



To determine the stem size a curved probe is introduced into the canal starting with one size below the size planned. Each curved probe is inserted up to the ring mark.

The section below to the ring mark corresponds to the length of the bone compressor and of the final implanted stem.



■ Surgical Technique



7

Placing of Compressor

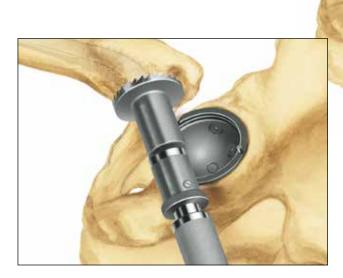
Finally the femoral canal is prepared for seating of the prosthesis stem by compressing the cancellous bone with the bone compressor. The choice of bone compressor depends on the stem curvature determined at the planning stage and the size indicated by the curved probe.

Initially a compressor should be used which is one or two sizes smaller than the planned size of the final implant. At this stage it is important to ensure that the medial teeth of the compressor do not remove the cortical bone at the calcar bow. When the smallest C.F.P.® prosthesis stem is used preparation of the femoral canal with a smaller compressor is not necessary. In this case preparation of the femoral bone with a curved bone curette and the sizing olive is sufficient.

8

Fitting of Compressor

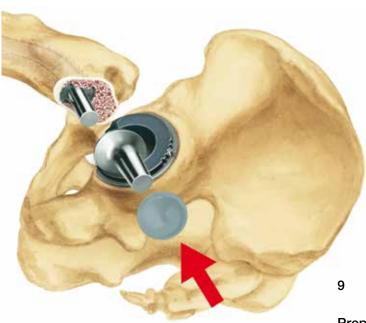
The bone compressor is driven in below the resection level so that reaming with the calcar reamer produces a smooth surface on which the removable collar can be seated.



Attention:

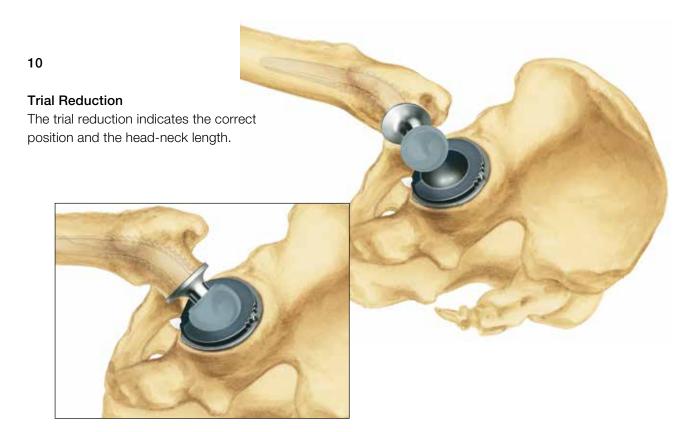
To prevent the reamer from being damaged it must always be pushed as far as possible onto the guide pin before starting to ream.





Preparation of Trial Reduction

Trial neck (left or right and 117° or 126° CCD angle) and trial head are attached to the bone compressor in situ. The bone compressor now serves as a trial stem.



■ Surgical Technique



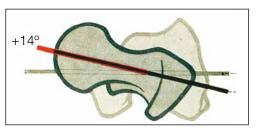
11

Implantation of Stem

The final C.F.P.® stem is placed in the stem inserter. To prevent damage to the taper of the stem it is important to ensure that the inserter locks firmly onto the end face of the taper and holds the stem correctly beneath the taper. The C.F.P.® stem is then inserted as far as possible into the femoral canal using the stem inserter.

The design of the C.F.P.® stem incorporates the anatomical anteversion of the femoral neck. Adjustment of the anteversion, as performed when implanting straight stems, would lead to rotational malpositioning and must therefore be avoided.

Anteversion



12

Driving in Stem

Placing the tip of the impactor into the recess on the lateral collar the C.F.P.® stem can be driven home into the canal. Before it is finally driven home the collar may be removed in order to insert additional bone into the grooves.

The fixation screw on the collar must then be firmly tightened anticlockwise.

Note: LINK strongly recommends to not remove the collar. In case the surgeon does not follow this advice and the stem is implanted without collar, he/she has to make sure that the collar locking screw is removed as well.





13

Final Trial Reduction with Trial Head

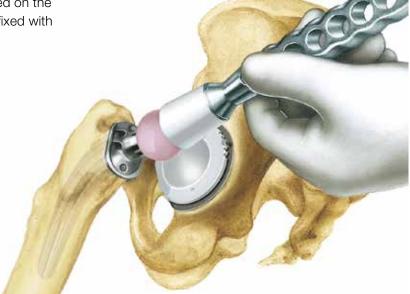
As a precaution, a final trial run is performed using colored plastic trial heads.



14

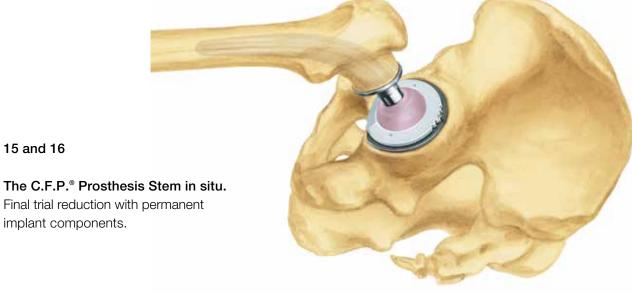
Positioning of Prosthesis Head

The final prosthesis head is then mounted on the carefully cleaned taper of the stem and fixed with a light blow on the impactor.



■ Surgical Technique





15 and 16

Final trial reduction with permanent implant components.



X-ray Templates

X-ray templates for C.F.P.® Prosthesis Stems, cementless (with neutral head-neck length), taper 12/14 mm, 110% actual size

Curvature A			
Item no.	Head Ø mm	CCD angle	Stem size
290-258/52	28, 32, 36, 40	117°	x-small, small, medium, large, x-large
290-258/32	28, 32, 36, 40	126°	x-small, small, medium, medium large, large, x-large
Curvature B			
Our value D			
Item no.	Head Ø mm	CCD angle	Stem size
	Head Ø mm 28, 32, 36, 40	CCD angle	Stem size x-small, small, medium, large, x-large

Instructions for Cleaning and Maintenance

Specific instructions for instruments are available on request via E-mail customer@linkhh.de

■ Literature

F. Pipino, L. Molfetta, M. Grandizio

Preservation of the femoral neck in hip arthroplasty: resultsof a 13- to 17-year follow-up Orthopaedics and Traumatology 2000 1:31-39 (H110)

F. Pipino

CFP prosthetic stem in mini-invasive total hip arthroplasty

Orthopaedics and Traumatology 2004 4:165-171 (H137)

F. Biggi, F. Pipino, F. Franclin, R. Lovato

DEXA evaluation of total hip arthroplasty with neck-preserving technique: 4-year follow-up Orthopaedics and Traumatology 2004 5:156-159 (H138)

1. F. Pipino

2. F. Pipino, A. Keller

- 1. Tissue sparing surgery (TSS) in hip and knee arthroplasty
- 2. Tissue-sparing surgery: 25 years' experience with femoral neck preserving hip arthroplasty Orthopaedics and Traumatology 2006 Vol. 7, Nr. 1 (H144)

S. M. Röhrl, M. G. Li, E. Pedersen, G. Ullmark, B. Nivbrant

Migration Pattern of a short Femoral Neck Preserving Stem Clinical Orthopaedics & Related Research 2006 Nr. 448, pp. 73-78 (H146)

H. Wacha, G. Domsel, R. Motz

Follow-up-Studie – 3 Jahre nach Implantation einer Collum femoris erhaltenden Totalendoprothese der Hüfte Orthopädische Praxis Jahrg. 43, Heft 8 2007 (H151)

G. von Foerster

Minimal Invasive Hüft-Endoprothetik posteriorer Zugang – langzeitiger Nutzen? MOT 5/2007 (H153)



Link News - Orthopedics Update

Case Histories:

C.F.P.® Hip Prosthesis Stem T.O.P.® Acetabular Cup

Order number: Nr.10 en (English)

Link News Spezial - Orthopädie aktuell

Veranstaltung Frankfurt a. M., 2002 C.F.P.® Hüftprothesenschaft T.O.P.® Hüftpfanne Order number: Nr.15 dt (German)

Link News - Orthopädie aktuell

Knochensparende Wechseloperation mit dem C.F.P.®-Hüftprothesenschaft Order number: Nr.19 dt (German)

D. Briem, M. Schneider, N. Bogner, N. Botha, M. Gebauer, T. Gehrke, B. Schwantes

Mid-term results of 155 patients treated with a collum femoris preserving (CFP) short stem prosthesis International Orthopaedics (SICOT), July 2010

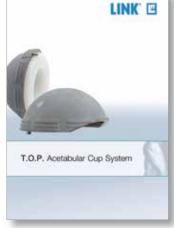
M. Pons

Learning curve and short-term results with a short-stem C.F.P. $^{\mbox{\tiny 0}}$ system

HIP International, Vol. 20, Suppl. 7, pp. 52-57, April-June 2010

Catalog T.O.P. Order number: 672en





Catalog BetaCup® Order number: 603en



Catalog
MIT-H®
Order number:
674en



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

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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