

Instruments for Revision Surgery リビジョン手術用器械





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## **C€** 0123

Presented by:

WALDEMAR LINK GmbH & Co. KG
Barkhausenweg 10 · 22339 Hamburg, Germany
P.O. Box 63 05 52 · 22315 Hamburg, Germany
Tel.: +49 40 53995-0 · Fax: +49 40 5386929
E-mail: info@linkhh.de · Internet: www.linkhh.de

# Instruments for Revision Surgery

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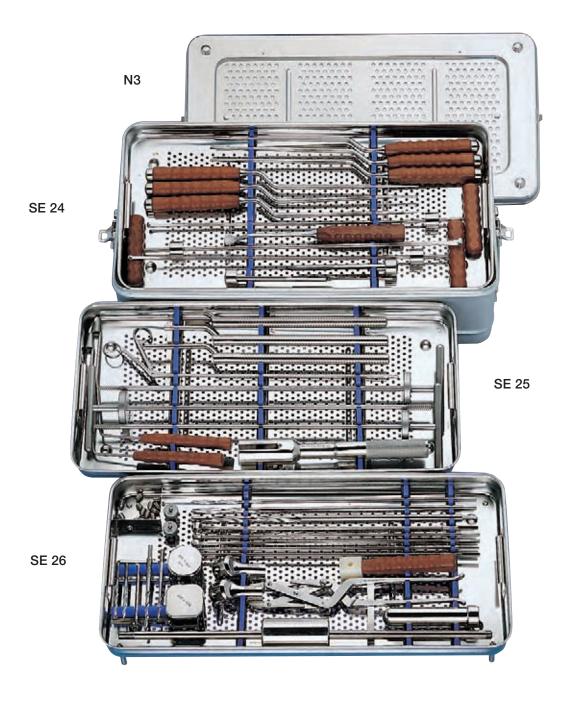
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Important Information

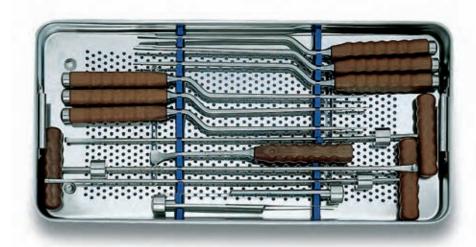


# ■ Instrument Set for Revision Surgery



Item no.	Instrument set for revision surgery
130-698/01	Set complete, in stackable container, on three trays with storage inserts
05-2003/01	N3 stackable container, container lid of stainless steel, container base of molded aluminium, 575 x 275 x 170 mm
130-698/02	SE 24-N tray, empty, with storage inserts, stainless steel, 550 x 265 x 50 mm
130-698/04	SE 25-N tray, empty, with storage inserts, stainless steel, 550 x 265 x 50 mm
130-698/06	SE 26-N tray, empty, with storage inserts, stainless steel, 550 x 265 x 50 mm

# 130-698/02 Tray SE 24



	Bone cement chisels, 400 mm	
Item no.	Width mm	Qty.
130-780	5	1
130-781	7	1
130-782	10	1
	Bone cement gouges, 400 mm	
Item no.	Width mm	Qty.
130-783	5	1
130-784	7	1
130-785	10	1
	Retrograde cement chisels, 500 mm	
Item no.	Width mm	Qty.
130-775	5	1
130-776	7	1
130-777	10	1
15-1431	LINK® acetabular cup gouge, 270 mm	1
	LINK® osteotomes, 250 mm	
Item no.	Blade width/length mm	Qty.
65-1701/04	4/65	1
65-1701/06	6/65	1

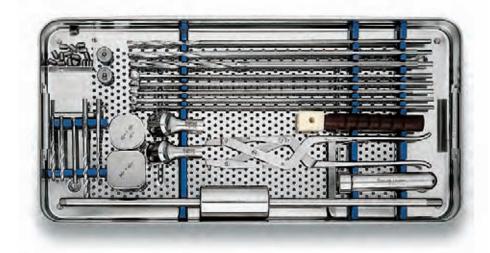


# 130-698/04 Tray SE 25



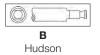
	Cement extractor	
Item no.	Ø mm	Qty.
130-680	7	1
130-682	9	1
130-684	11	1
130-686	Slotted driver, 270 mm 1	
130-744	Cement grasping forceps, 430 mm	
	Drill guides for twist drill	
Item no.	Ø mm	Qty.
130-676	6	1
130-678	8	1
	Prosthesis extraction drivers	
Item no.	Length mm	Qty.
130-654	300	1
130-656	330	1
130-658	360	1

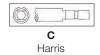
# 130-698/06 Tray SE 26

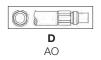


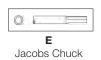
	Ball reamers, 400 mm, fittings optional*	
Item no.	Ø mm	Qty.
130-720	8	1
130-724	10	1
130-728	12	1
130-732	14	1
130-736	16	1
15-1137	Guide handle for ball reamers, 160 mm	1
	Twist drills, 400 mm, fittings optional*	
Item no.	Ø mm	Qty.
130-662	6	1
130-666	8	1
130-670	10	1
	Carbide metal twist drills, fittings optional*	
Item no.	Ø x Length mm	Qty.
130-642	4 x 110	1
130-648	6 x 130	1
15-1436/01	Extraction instrument set, complete, for prosthesis with fixed head and for prosthesis stems with taper 12/14 mm or taper 14/16 mm	1
130-750	Ewerwahn acetabular cup extraction forceps, 290 mm	1

<sup>\*</sup>How to order: 130-720B = with Hudson fitting













#### General Instruments

#### 15-1436/01 Extraction instrument set, complete,

for prostheses with fixed heads and for prosthesis stems with taper 12/14 mm or taper 14/16 mm

#### consisting of:

**15-1436/02 Fitting** for prosthesis with integral head Ø 28 to 33 mm (1 ea.)

**15-1436/03** Fitting for prosthesis with integral head  $\varnothing$  35 to 38 mm (1 ea.)

**15-1436/04 Fitting** for prosthesis stems with taper 12/14 mm (1 ea.)

**15-1436/05 Fitting** for prosthesis stems with taper 14/16 mm (1 ea.)

**15-1436/06** Fixation screws (16 ea.)

15-1436/09 Metal drill bit

Ø 5 mm, length 85 mm (2 ea.)

15-1436/10 Drill guide (2 ea.)

15-1436/11 Hex screw driver

with T-handle for fixation screws (1 ea.)

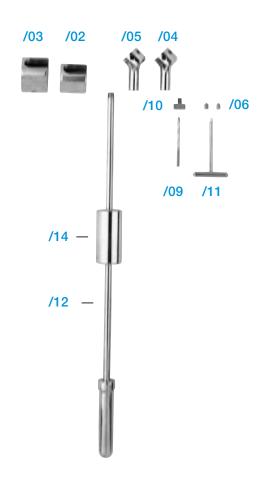
**15-1436/12 Stem** (1 ea.)

**15-1436/13** Handle (1 ea.)

15-1436/14 Slaphammer (1 ea.)

To extract a modular stem the matching cylindrical fitting is placed over the taper. Using a drill guide at least two holes are drilled into the taper. The taper is then connected to the extraction instrument with screws driven into the prepared holes. Hard blows with the slaphammer are usually sufficient to free the modular stem.

The correct fitting is placed over the prosthesis head. The head is then removed, either complete with the stem or alone if the prosthesis is modular, using quick hard blows of the slaphammer.





# **■ Instruments**

#### Carbide metal twist drills

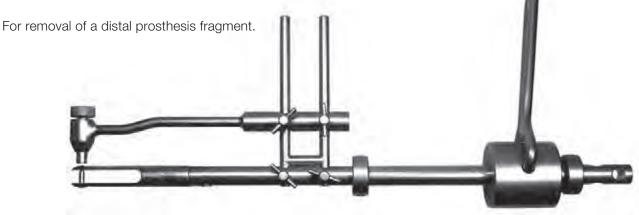
with widia cutting edges, fittings optional\*

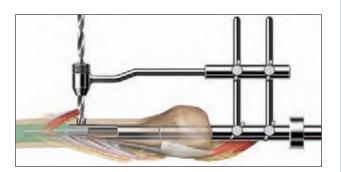
ltem no.	Length mm	Ø mm
130-642	110	4
130-648	130	6



These drills can be used to drill a hole into the prosthesis stem as a target for chiseling once a bone fenestration has been created.

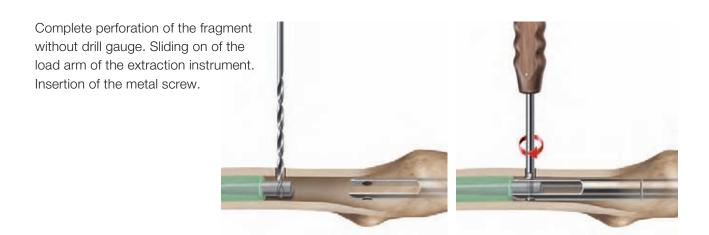
## 99-0001/99 Zabel Revision Instrument

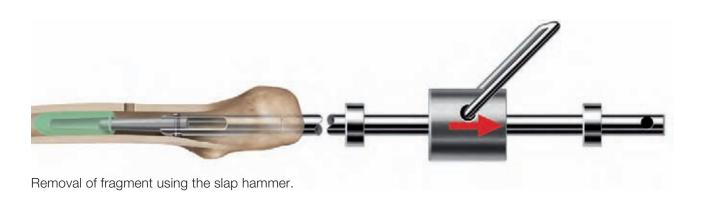




<sup>\*</sup> Please specify fitting: see page 05







Using the drill gauge to drill a hole in the proximal end of the fragment.



# **■ Instruments**

#### Prosthesis extraction drivers,

bayonet-shaped, 8 mm diameter

ltem no.	Tip length mm	Overall mm
130-654	30	300
130-656	60	330
130-658	90	360

Prosthesis extraction drivers are designed to remove femoral prostheses through a window made in the femur at a point distal to the stem. The driver with the shortest tip is used first, followed by those with medium and long tips in this sequence.





Twist drills, 400 mm, fittings optional\*

ltem no.	Ø mm
130-662	6
130-666	8
130-670	10



These long twist drills are especially well suited for drilling a central guide hole in distal cement sections.

The drill guide centers the drill in the femoral cavity. It is especially suitable for drilling into sloping cement surfaces.



## Drill guides with handle for twist drill

Item no.	Twist drill Ø mm
130-676	6
130-678	8

The drill guide ensures that the twist drill remains centralized when drilling into the cement base.

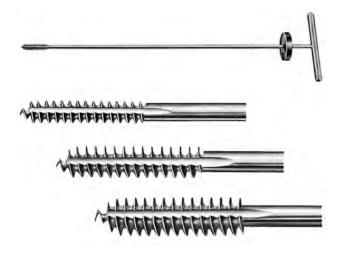




#### Cement extractor

with T-Handle and driving plate, used with slotted driver 130-686

ltem no.	Ø mm	Twist drill Ø mm
130-680	7	6
130-682	9	8
130-684	11	10



After drilling a centered hole in the cement, the corresponding cement extractor is screwed in. The cement block is then removed with short, hard taps. Either the slotted driver or the special mallet (15-1170) is used depending on the situation.



#### 130-686 Slotted driver

for cement extractor and retrograde cement chisel, 270 mm



## 130-744 Cement grasping forceps

working length 350 mm, overall length 430 mm



The flat, slim jaws of these forceps make them particularly effective in reaching and removing residual bone cement particles.



## ■ Instruments

#### Bone cement chisels,

bayonet-shaped, osteotome bevelled, 400 mm

ltem no.	Width mm
130-780	5
130-781	7
130-782	10

The bayonet-shaped shafts of these chisels allow the surgeon a better overall view of the operating area during removal of bone cement from the medullary canal. The metal shaft runs all the way through the linen phenolic handle. Hitting the end thus ensures the direct transmission of impact to the cement.

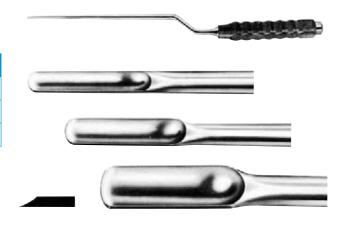


#### Bone cement gouges,

with internal bevel, bayonet-shaped, 400 mm

ltem no.	Width mm
130-783	5
130-784	7
130-785	10

The gouges have an internal bevel. This ensures that the chisel blade remains at the junction between cement and bone and does not drift into the middle of the medullary cavity.



#### Retrograde cement chisels, 500 mm

Item no.	Width mm
130-775	5
130-776	7
130-777	10

Retrograde cement chisels are designed for scraping residual cement from the walls of the medullary cavity using brief, sharp blows of the slotted hammer to the driving plate. The handle at their end enables the surgeon to guide the chisel with ease and precision.



#### Tip guards

to protect cutting edges see page 26.





15-1431 Acetabular cup gouge

bayonet-shaped, set-off, width 20 mm, length 270 mm



The acetabular cup gouge is specially shaped to facilitate removal of cement-fixed acetabular components.



## Osteotomes, 250 mm

Item no.	Blade width mm	Working length mm
65-1701/04	4	65
65-1701/06	6	65



The thin-bladed osteotomes are particularly suitable for revision operations because of their razor-type blade with which it is possible to cut the bone/cement border deep inside the femoral canal.



# **■ Instruments**

Ball reamers, 400 mm, fittings optional\*

ltem no.	Ø mm
130-720	8
130-724	10
130-728	12
130-732	14
130-736	16



The extra long ball reamers may be used to ream cement layers and to remove cement islands in the distal femoral cavity.



Reaming of the cement mantle with a set of extra long ball reamers. The surgeon must be able to see into the femoral canal during reaming.



#### 15-1137 Guide handle

for long ball reamers 130-720 to 130-736, 160 mm, plastic and linen phenolic







<sup>\*</sup> Please specify fitting: see page 05



## Additional Instruments

**130-750** Ewerwahn acetabular cup extraction forceps with parallel action jaws and lock, hand forged, 290 mm

The jaws of these forceps are equipped with sharp external pins to firmly grip the internal wall of the acetabular cup to be extracted. The long arms provide excellent leverage so that even firmly cemented cups can be loosened.

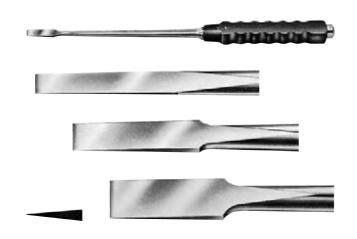
Reference: Ewerwahn, W. J. (1975) Extraktionszange für Kunststoff-Hüftpfannen.

Der Chirurg 46, 574



#### Bone cement chisels\*, straight, 310 mm

Item no.	Width mm
130-690	5
130-692	7
130-694	10



#### Bone cement chisels\*,

bayonet-shaped, 400 mm, single-sided bevel

Item no.	Width mm
15-1440/05	5
15-1440/07	7
15-1440/10	10



<sup>\*</sup>not included in instrument set

# ■ Additional Instruments

## Bone cement gouges\*,

bevelled outer edge, straight, 310 mm

Item no.	Width mm
130-700	5
130-702	7
130-704	10







Gouges with a bevelled inner edge are entially used to cut between bone and cement. They are not suitable for leverage and may deviate into the bone.

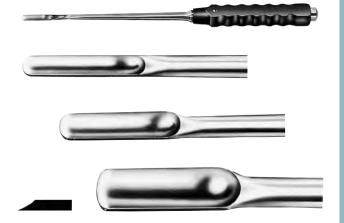
Gouges with a bevelled outer edge are more difficult to use than those with an internal bevel but they allow leverage and deviate less easily into the bone.

## Bone cement gouges\*,

bevelled inner edge, straight, 310 mm

ltem no.	Width mm
130-710	5
130-712	7
130-714	10

For removing cement block and/or residual cement during revision.



#### Tip guards

to protect cutting edges see page 26.



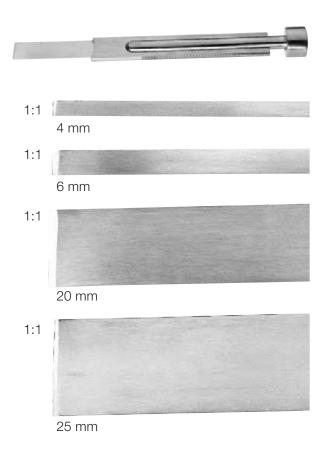


## Sheathed osteotomes\*, 250 mm

Item no.	Width	Working length
	mm	mm
65-1700/04	4	65
65-1700/06	6	65
65-1700/20	20	65
65-1700/25	25	65

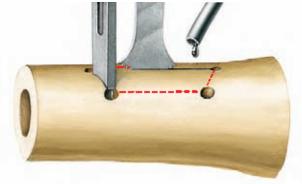
## Replacement blades\*, only

ltem no.	Width mm
65-1702/04	4
65-1702/06	6
65-1702/20	20
65-1702/25	25



The thin-bladed sheathed osteotomes are recommended where fenestration of the femur is necessary to allow stem removal. The area of the fenestration is marked with drill holes prior to osteotomy.





# ■ Additional Instruments

Bone cement splitting chisels\*, straight, 310 mm

Item no.	Width mm
130-787/05	5
130-787/10	10



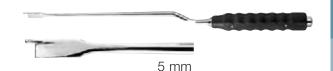
After the stem has been extracted the bone cement splitting chisel is used to cut the cement mantle radially into individual segments which are easily removable.



#### Bone cement splitting chisels\*,

bayonet-shaped, 400 mm

Item no.	Width mm
130-786/05	5
130-786/10	10

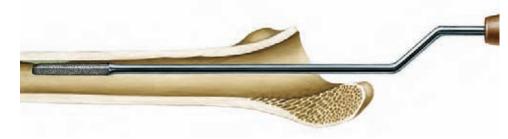


## Diamond-coated cement rasps\*, 520 mm

Item no.	Diamond rasp
130-788/01	flat curve
130-788/02	acute curve
130-788/03	slight V-shape

The rasps enable the surgeon to remove small cement islands remaining in the medullary cavity leaving a slightly rough surface for future implantation.

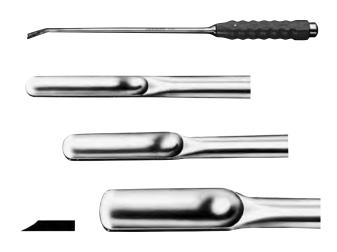






**Gouges\***, with bevelled inner edge and distally angled shaft, 400 mm

ltem no.	Width mm
130-796/05	5
130-796/07	7
130-796/10	10



The bevelled inner edge enables these gouges to cut extremely thin cement slivers.



Gouges\*, with bevelled inner edge and distally angled bayonet shaped shaft, 400 mm

ltem no.	Width mm
130-797/05	5
130-797/07	7
130-797/10	10

These gouges are used for removal of bone cement which is not visible from the proximal end of the bone. They are inserted through a stem fenestration.



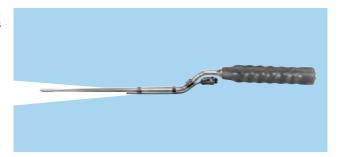


## ■ Additional Instruments

#### 130-790 Fiber-optic light tip\*

with clips for mounting onto bayonet-shaped chisels and gouges 130-780 to 130-785

The Fiber-optic light tip provides excellent illumination of the medullary cavity during the operation.



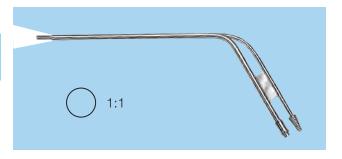
#### 130-795 Fiber-optic light cable\*,

extra long, Ø 3.5 mm, 250 cm (not illustrated)

#### Suction lamp\*, 250 mm

ltem no.	Ø mm
130-794	6

For suction of fluids from the medullary cavity. Fiberoptic light fibers are arranged around the edge of the suction tube to aid vision when working on deep sections of the medullary cavity.



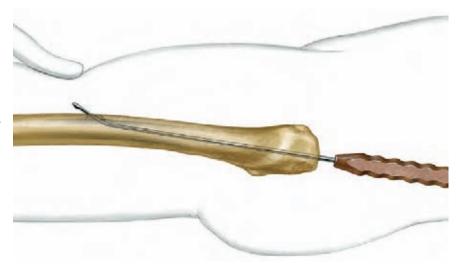
#### 15-1150 Probe\*,

flexible and graduated, 385 mm

To probe the femoral cavity for a possible perforations.



The flexible probe is especially suitable for locating cortical defects. The graduations make it possible to estimate distances.





## 15-1170 Special mallet\*,

with linen phenolic handle and safety clamps, 400 g, 270 mm



## 15-1042 Mallet\*,

linen phenolic, lead-filled, with support rings, Ø 45 mm diameter, 350 g, 260 mm



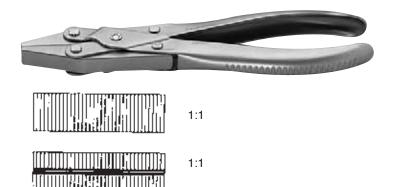
## 130-688 Mallet\*,

Ø 30 and 42 mm, 530 g, 240 mm



## 64-4200/14 Parallel grip pliers\*,

double action, 185 mm.



# ■ Additional Instruments

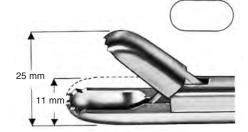
## Cement rongeur\*,

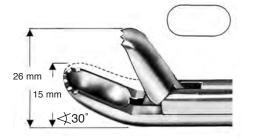
heavy-duty pattern, 8 x 17 mm cup-shaped jaws have deep serrations at distal ends, shaft length 300 mm

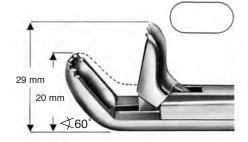
Item no.	Version	
130-745	straight	
130-746	angulated 30° upwards	
130-747	angulated 60° upwards	

The different cement rongeurs are used to remove cement remnants from the medullary canal. Stable construction and frontal serration of the rongeurs' jaws allow powerful manipulations so that even firmly fixed islets of bone cement can be removed.











10-1727 Pliers\* with tapered jaws, 200 mm



10-1728 Pliers\* with rounded jaws, 200 mm



**64-4200/32** Wire tightener/twister\*, for wire of Ø up to 1.6 mm, 280 mm



**130-752/24 Universal power grip pliers\*,** small, with long jaws 5 x 60 mm, 240 mm

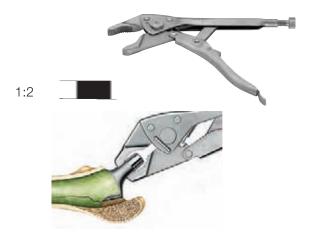


# ■ Additional Instruments

**130-752/30 Universal power grip pliers\*,** large, with long jaws 7 x 80 mm, 300 mm



# **130-753/20 Universal power grip pliers\*,** small, with pipe-wrench jaws 9 mm wide, 200 mm



# 130-753/25 Universal power grip pliers\*, large, with pipe-wrench jaws 13 mm wide, 250 mm



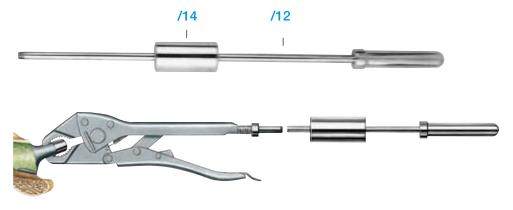


15-1436/12 Stem 15-1436/13 Handle

15-1436/14 Slaphammer

for universal power grip pliers

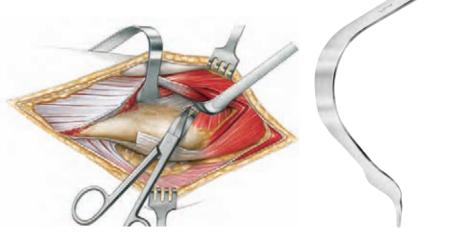
The different types of universal power grip pliers are used to grip and hold implant fragments for extraction. These pliers have a very strong joint region as a result of the ridges in the shanks just below the jaws and the large flat joint screws. The internal thread of the adjustment screw can be used to attach the slaphammer to the pliers.



#### 15-1024 Hohmann Retractor Model St. Georg™\*,

30 mm wide, 200 mm, for universal power grip pliers

The cartilage scissors are used to dissect the vastus and gluteal tendon attachments, soft tissues and ventral capsule.



## Cartilage scissors\*

Item no.	Version	Length mm	
50-2562	straight	220	
50-2564	curved	curved 220	



<sup>\*</sup>not included in instrument set

# ■ Additional Instruments

## 15-1040 Lexer gouge\*,

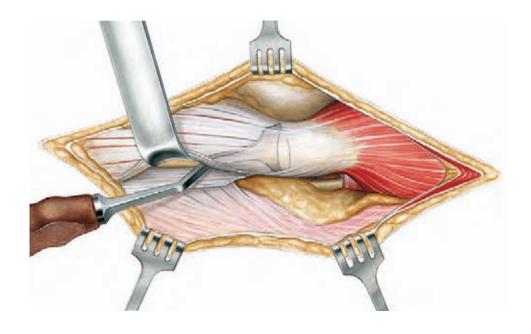
modified, bayonet-shaped, 30 mm wide, 230 mm



## 15-1041 Lexer gouge\*,

modified, bayonet-shaped, 45 mm wide, 275 mm





The bayonet-shaped lexer gouges are primarily used to detach the trochanter attachments of the gluteal tendon. This trochanteric approach protects the soft tissues between greater trochanter and vastus lateralis.

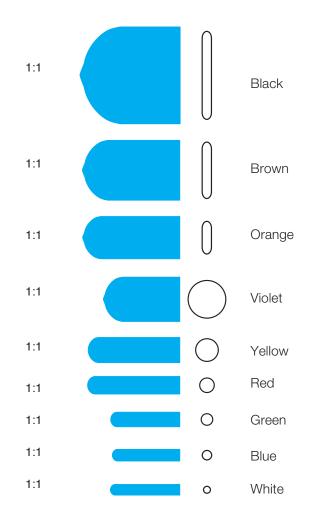


# ■ Tip Guards

**Tip Guards,** protective covers, autoclavable, for cutting edges of instruments.



Item no.	Size	Color	
10-2285/01	1	Black	
10-2285/02	2	Brown	
10-2285/03	3	Orange	
10-2285/04	4	Violet	
10-2285/05	5	Yellow	
10-2285/06	6	Red	
10-2285/07	7	Green	
10-2285/08	8	Blue	
10-2285/09	9	White	

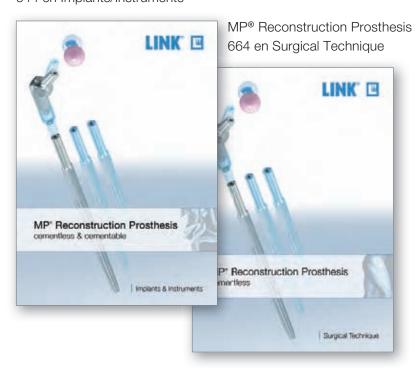


10-2285/20 Tip Guards, assorted, 100 per package

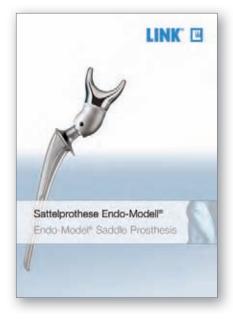


## ■ Instrument Systems for Hip Surgery

MP® Reconstruction Prosthesis 644 en Implants/Instruments



Endo-Model® Saddle Prosthesis 655 dt-en





Partial Pelvis Replacement

# Instructions for Cleaning and Maintenance

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



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<b>65-1701/04, 65-1701/06</b>	130-788/01, 130-788/03	17
<b>65-1702/04</b> to <b>65-1702/25</b> 16	130-790	19
	130-794	19
<b>99-0001/99</b> 07	130-795	19
	130-796/05 to 130-796/10	18
	130-797/05 to 130-797/10	18

# **■** 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!

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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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〒106-0031 東京都港区西麻布3-6-4 TEL:03-3403-5432(代表) 03-6447-1899(営業部) FAX:03-3403-5433 http://www.alphamed.jp



