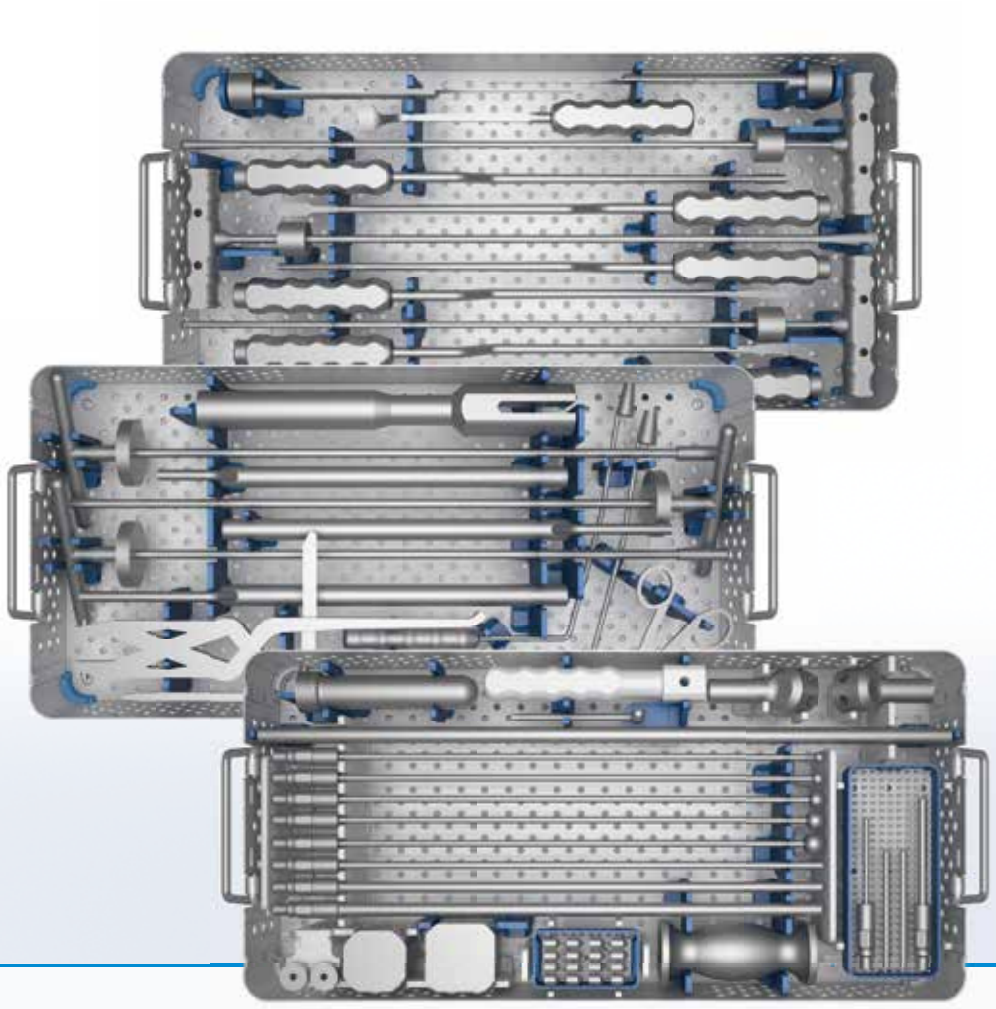
LINK®



Instruments for Revision Surgery

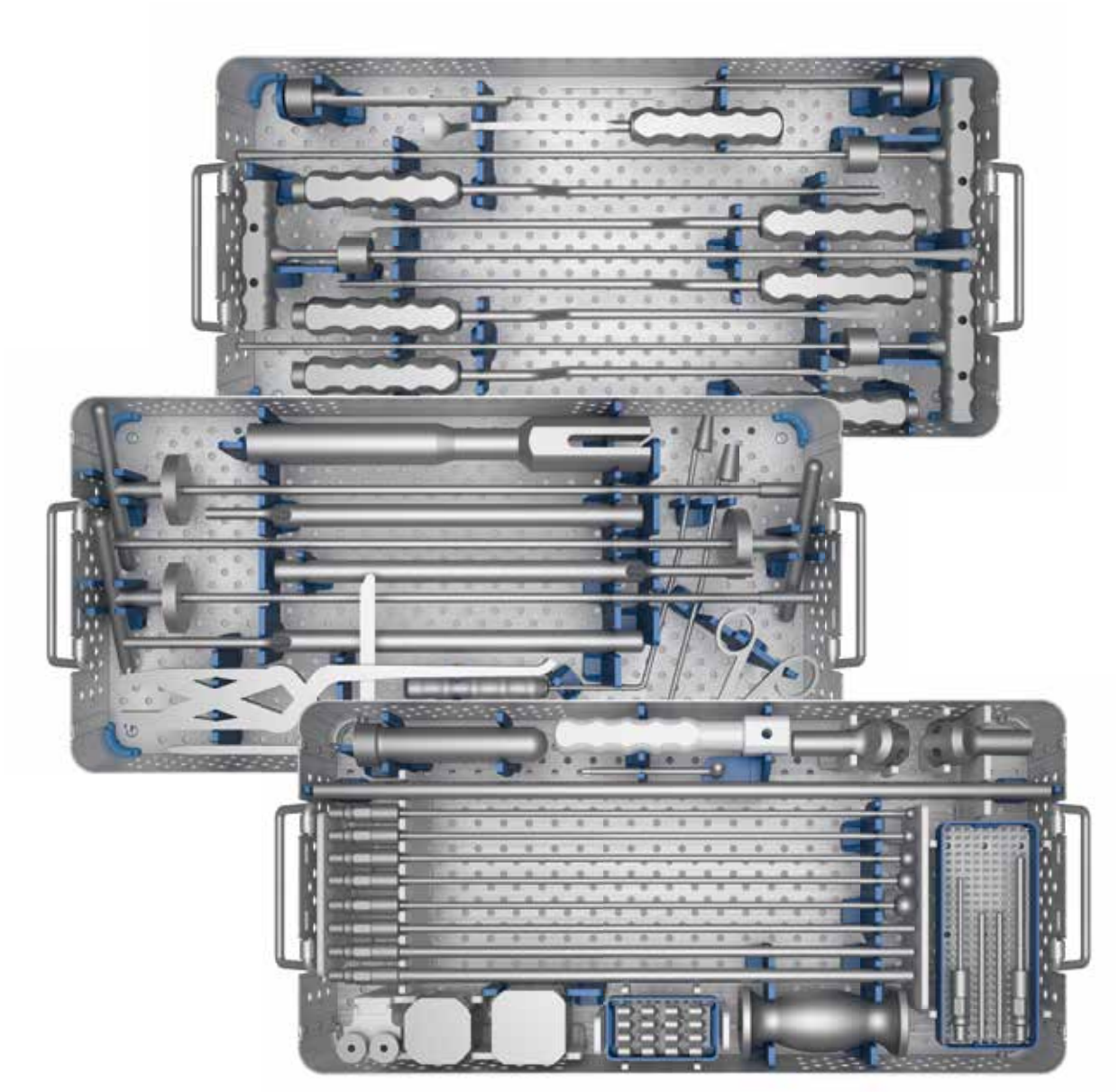
Instruments

CE 0482

Explanation of Pictograms			
	Manufacturer	REF	Article number
MAT	Material (number)	CE	Product meets the applicable requirements, which are regulated in the EU harmonization legislation for the affixing of the CE marking.

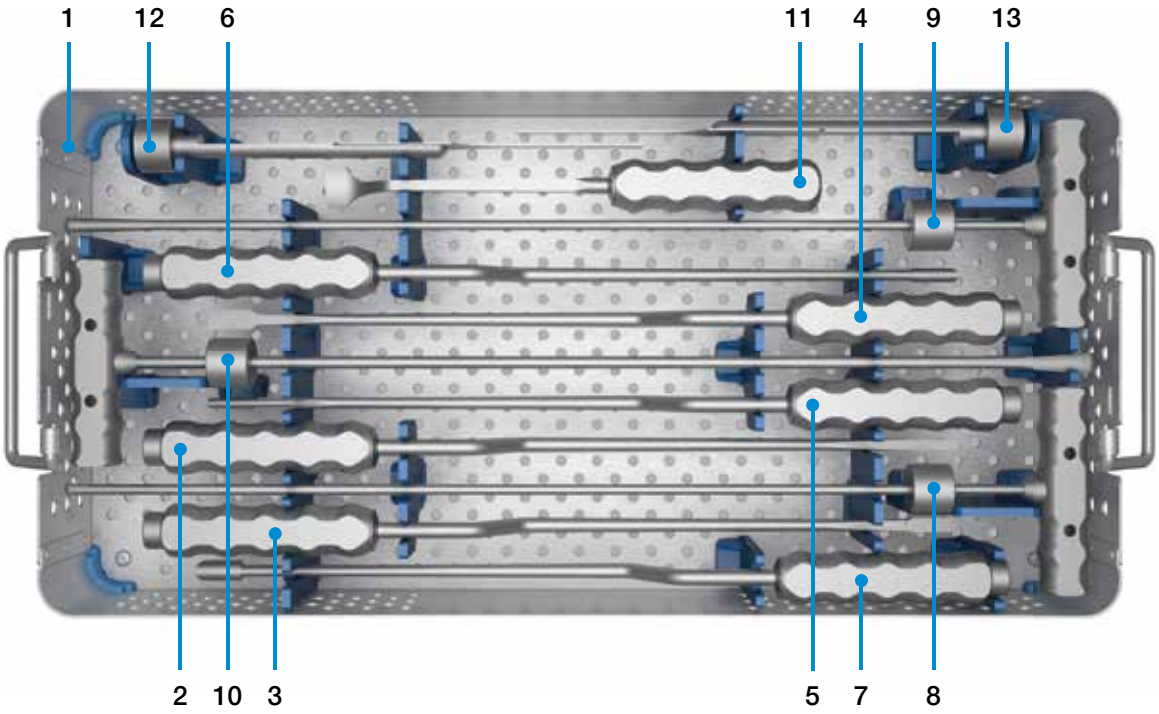
Instruments for Revision Surgery

Instrument Set for Revision Surgery



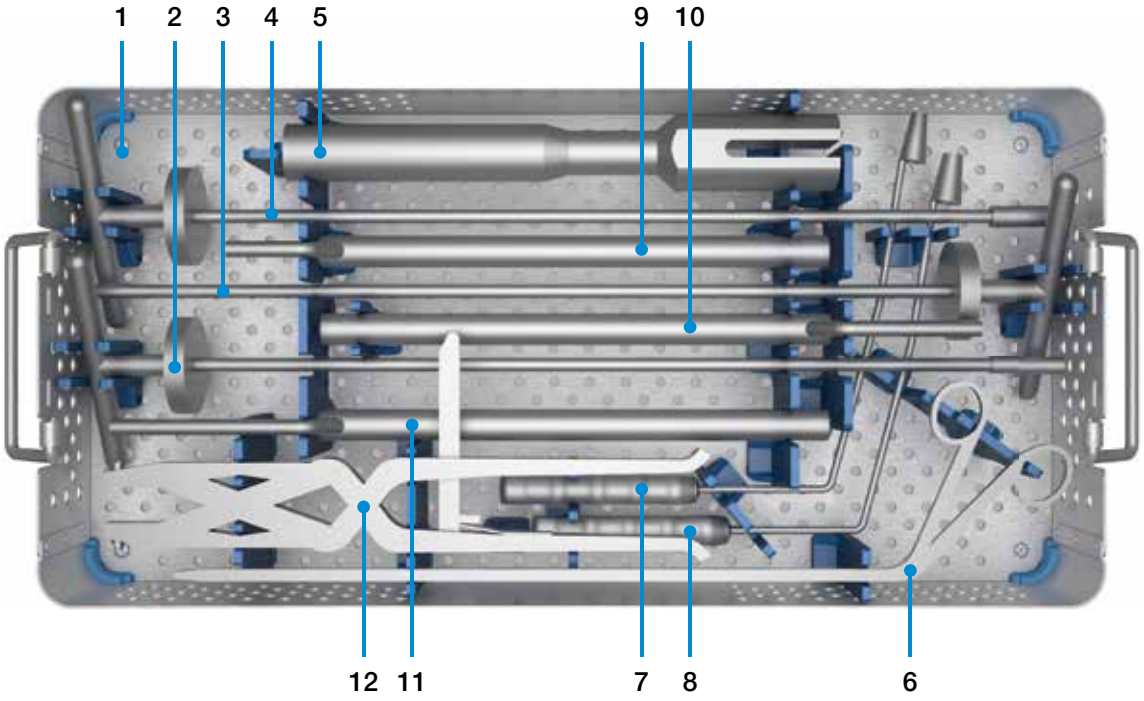
REF	Instrument set for revision surgery
130-698/14	**ReOP instruments chisels, complete**
130-698/15	**ReOP instruments cement extraction, complete**
130-698/16	**ReOP instruments stem extraction, complete**

130-698/14 **ReOP instruments chisels, complete**



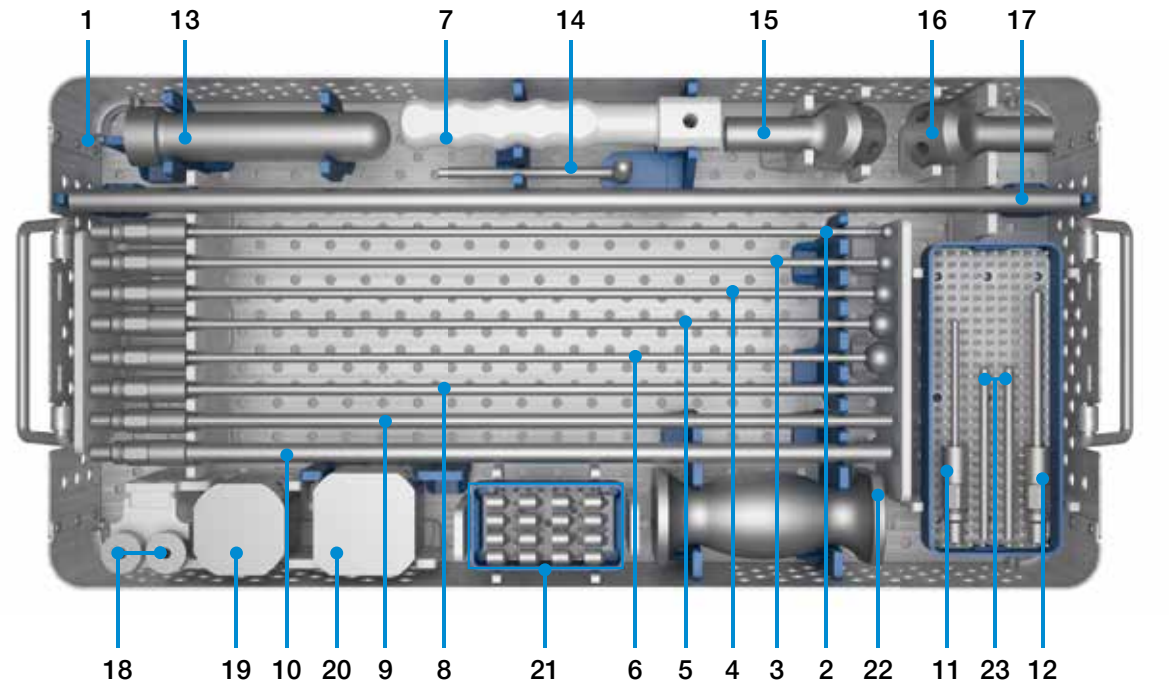
	REF	Description	Qty.
1	130-698/11	**Instrument tray**, empty	1
2	130-780	**Bone cement chisels, 400 mm,** Width 5 mm	1
3	130-781	**Bone cement chisels, 400 mm,** Width 7 mm	1
4	130-782	**Bone cement chisels, 400 mm,** Width 10 mm	1
5	130-783	**Bone cement gouges, 400 mm,** Width 5 mm	1
6	130-784	**Bone cement gouges, 400 mm,** Width 7 mm	1
7	130-785	**Bone cement gouges, 400 mm,** Width 10 mm	1
8	130-775	**Retrograde cement chisels, 500 mm,** Width 5 mm	1
9	130-776	**Retrograde cement chisels, 500 mm,** Width 7 mm	1
10	130-777	**Retrograde cement chisels, 500 mm,** Width 10 mm	1
11	15-1431	**LINK acetabular cup gouge**, 270 mm	1
12	65-1701/04	**LINK osteotomes, 250 mm,** Blade width 4 mm / length 65 mm	1
13	65-1701/06	**LINK osteotomes, 250 mm,** Blade width 6 mm / length 65 mm	1

130-698/15 **ReOP instruments cement extraction, complete**



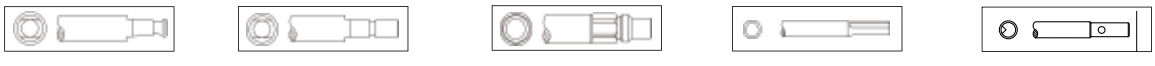
	REF	Description	Qty.
1	130-698/12	**Instrument tray**, empty	1
2	130-680	**Cement extractor,** Ø 7 mm	1
3	130-682	**Cement extractor,** Ø 9 mm	1
4	130-684	**Cement extractor,** Ø 11 mm	1
5	130-686	**Slotted driver**, 270 mm	1
6	130-744	**Cement grasping forceps**, 430 mm	1
7	130-676	**Drill guides** for twist drill, Ø 6 mm	1
8	130-678	**Drill guides** for twist drill, Ø 8 mm	1
9	130-654	**Prosthesis extraction drivers,** Length 300 mm	1
10	130-656	**Prosthesis extraction drivers,** Length 330 mm	1
11	130-658	**Prosthesis extraction drivers,** Length 360 mm	1
12	130-750	**Ewerwahn acetabular cup extraction forceps,** 290 mm	1

130-698/16 **ReOP instruments stem extraction, complete**



	REF	Description	Qty.
1	130-698/13	**Instrument tray**, empty	1
2	130-720B*	**Ball reamers, 400 mm,** fittings optional* Ø 8 mm	1
3	130-724B*	**Ball reamers, 400 mm,** fittings optional* Ø 10 mm	1
4	130-728B*	**Ball reamers, 400 mm,** fittings optional* Ø 12 mm	1
5	130-732B*	**Ball reamers, 400 mm,** fittings optional* Ø 14 mm	1
6	130-736B*	**Ball reamers, 400 mm,** fittings optional* Ø 16 mm	1
7	15-1137/10	**Guide handle for ball reamers,** 160 mm	1
8	130-662B*	**Twist drills, 400 mm,** fittings optional* Ø 6 mm	1
9	130-666B*	**Twist drills, 400 mm,** fittings optional* Ø 8 mm	1
10	130-670B*	**Twist drills, 400 mm,** fittings optional* Ø 10 mm	1
11	130-642B*	**Carbide metal twist drills**, fittings optional* Ø 4 mm x Length 110 mm	1
12	130-648B*	**Carbide metal twist drills**, fittings optional* Ø 6 mm x Length 130 mm	1
13 - 23	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

***How to order:** 130-720B = with Hudson fitting



B*
Hudson

C
Harris

D
AO

E
Jacobs Chuck

F
Trinkle

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 Ø 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.)

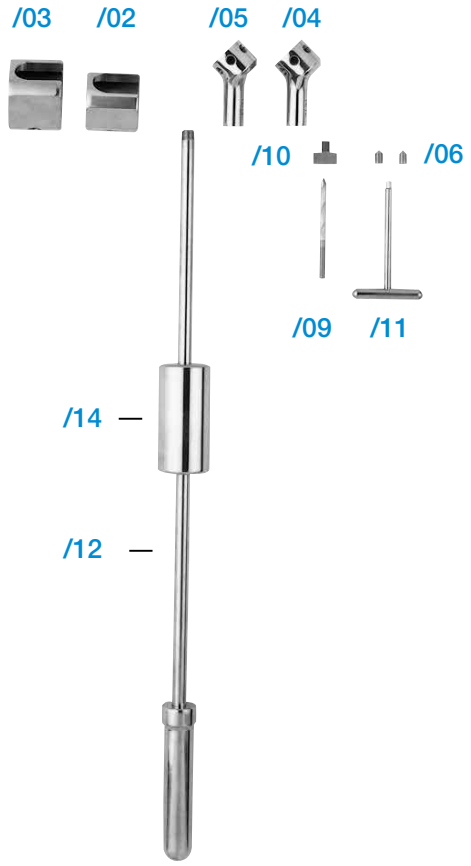
15-1436/10 Drill guide (2 ea.)

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.

Carbide metal twist drills
with widia cutting edges, fittings optional*

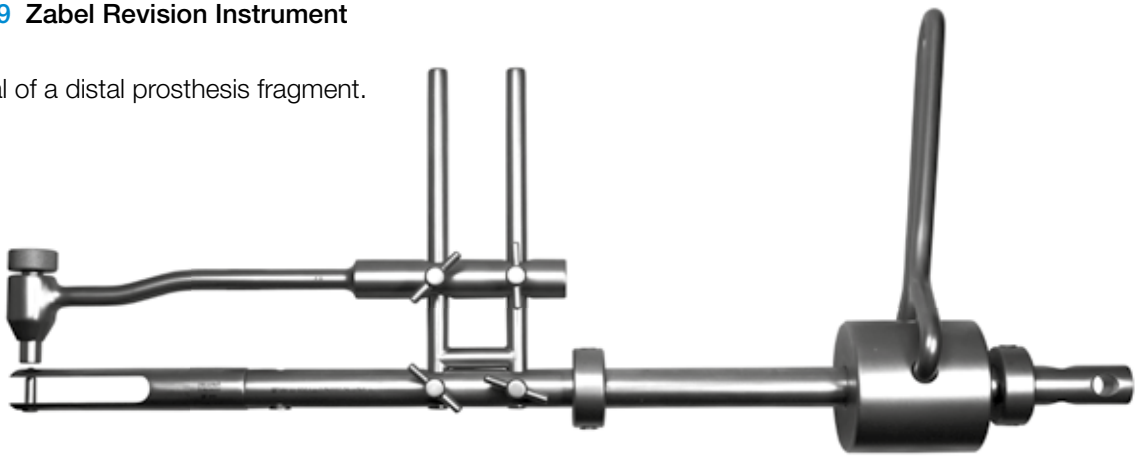
REF	Length mm	Ø mm
130-642	110	4
130-648	130	6

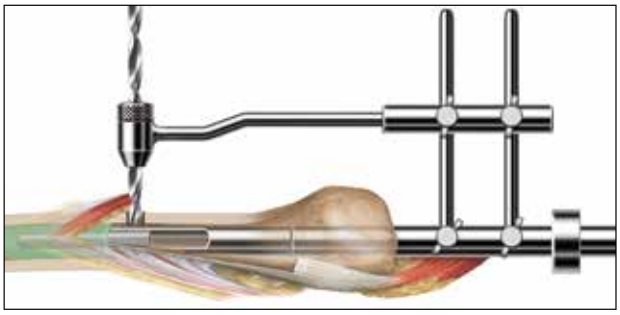
* Please specify fitting: see page 05

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

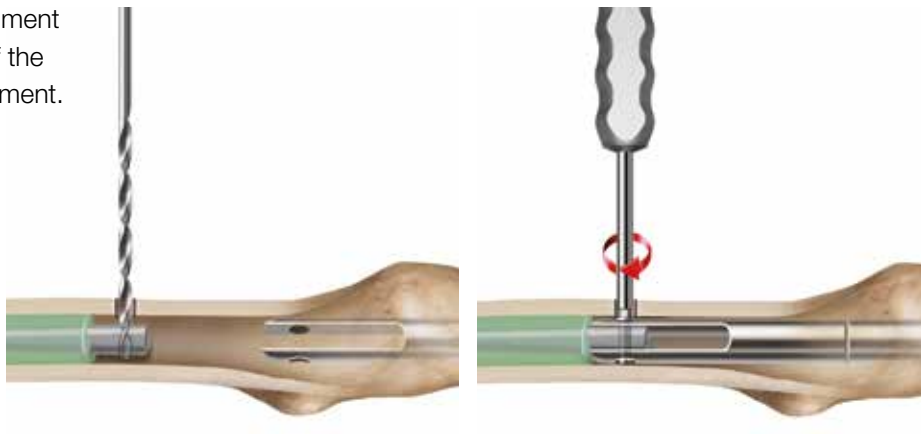
For removal of a distal prosthesis fragment.



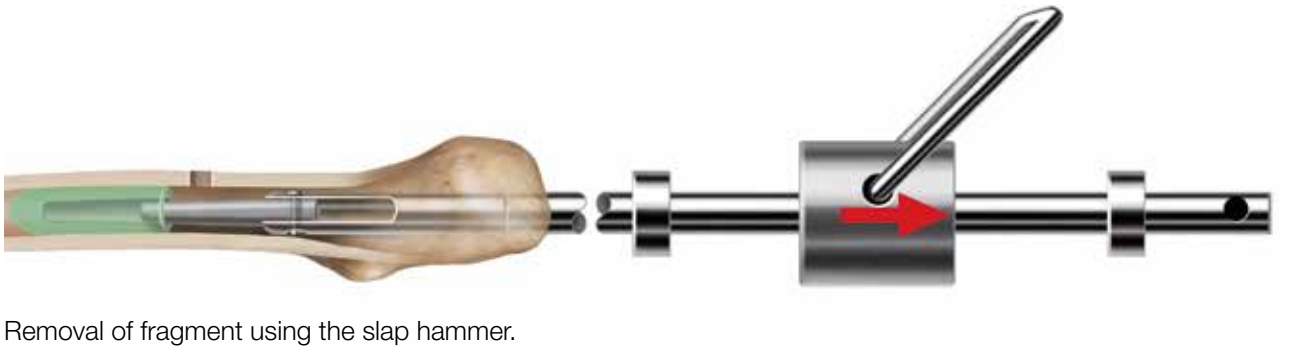


Complete perforation of the fragment without drill gauge. Sliding on of the load arm of the extraction instrument. Insertion of the metal screw.

Note:
Drilling into the implants material produces metal cuttings that may negatively affect patient's health as well as the durability of the revision implant.



Note: The screw should be fully seated in the prosthesis fragment, otherwise the instrument might slip off or the screw might tilt into the cortical bone



Removal of fragment using the slap hammer.

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

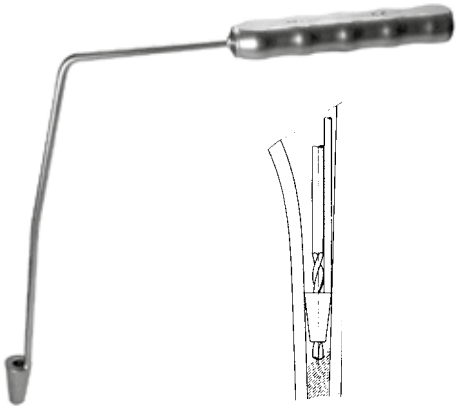
Prosthesis extraction drivers,
bayonet-shaped, 8 mm diameter

REF	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.

Drill guides with handle for twist drill

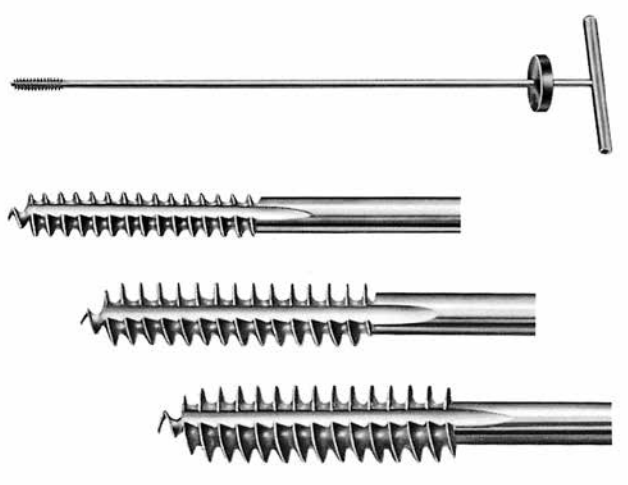
REF	Twist drill Ø mm
130-676	6
130-678	8



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

REF	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

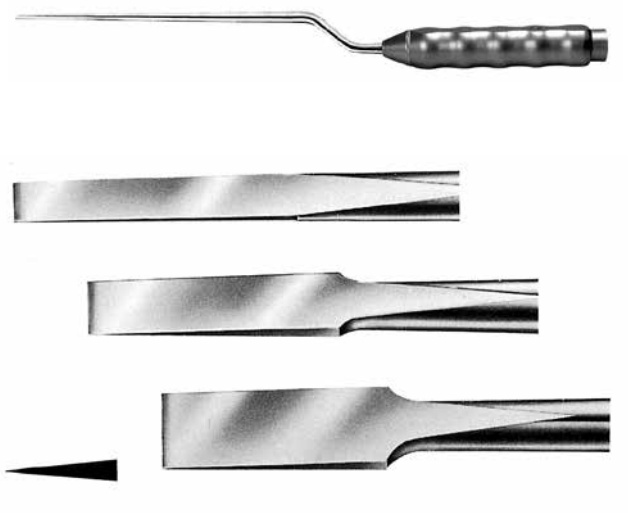
130-744 Cement grasping forceps
working length 350 mm, overall length 430 mm

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

Bone cement chisels,
bayonet-shaped, osteotome bevelled, 400 mm

REF	Width mm
130-780	5
130-781	7
130-782	10

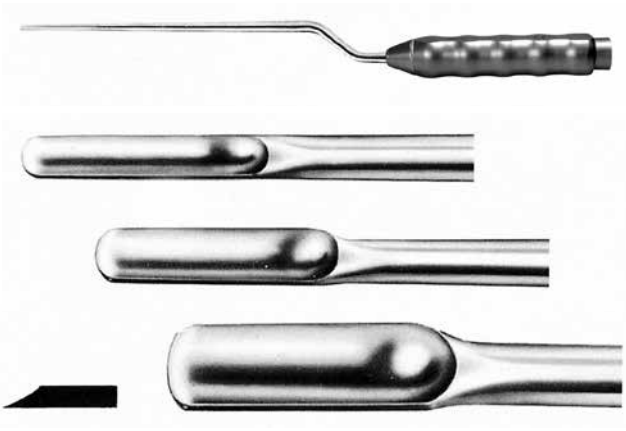
The bayonet-shaped shafts of these chisels allow the surgeon a better overall view of the operating area during removal of bone cement from the medullary canal. The metal shaft runs all the way through the metal handle. Hitting the end thus ensures the direct transmission of impact to the cement.



Bone cement gouges,
with internal bevel, bayonet-shaped, 400 mm

REF	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

REF	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.

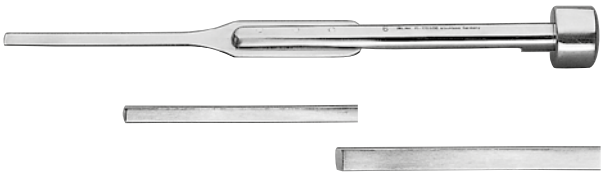
Tip guards
to protect cutting edges see page 23.

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

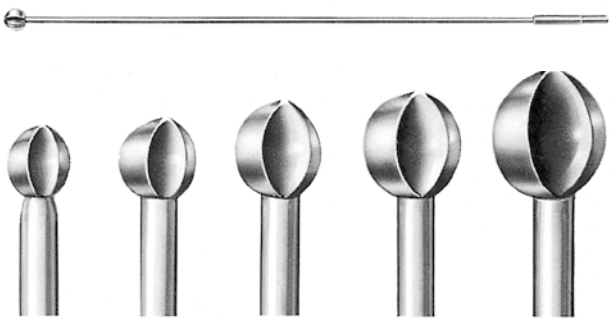
REF	Blade width mm	Working length mm
65-1701/04	4	65
65-1701/06	6	65



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.

Ball reamers, 400 mm, fittings optional*

REF	Ø mm
130-720	8
130-724	10
130-728	12
130-732	14
130-736	16



* Please specify fitting: see page 05

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, PA12 Polyamid

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.

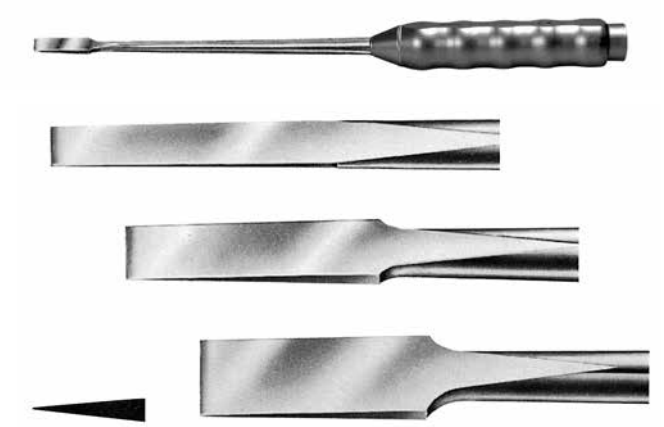
Reference: Ewerwahn, W. J. (1975) Extraktionszange für Kunststoff-Hüftpfannen.
Der Chirurg 46, 574

Note: The Ewerwahn acetabular cup extraction forceps is only intended for extracting UHMWPE acetabular cups

Additional Instruments

Bone cement chisels, straight, 310 mm

REF	Width mm
130-690	5
130-692	7
130-694	10

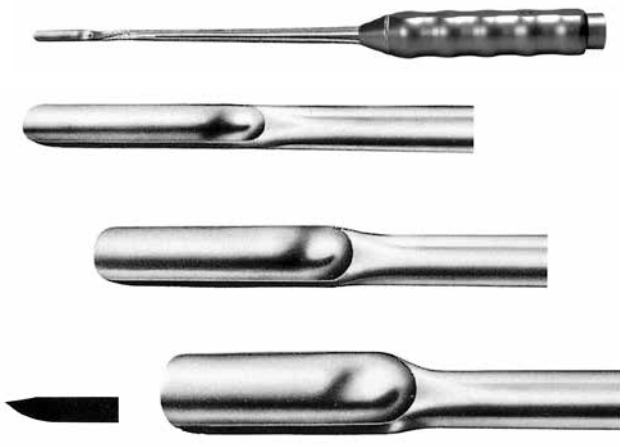


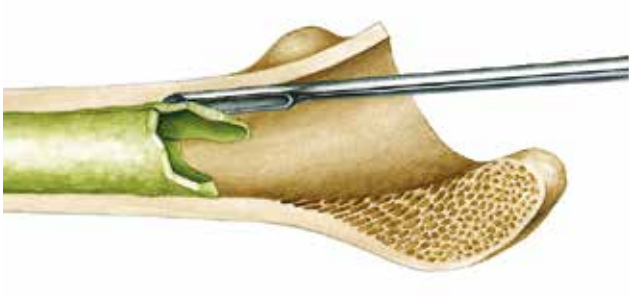
Bone cement chisels,
bayonet-shaped, 400 mm, single-sided bevel

REF	Width mm
15-1440/05	5
15-1440/07	7
15-1440/10	10

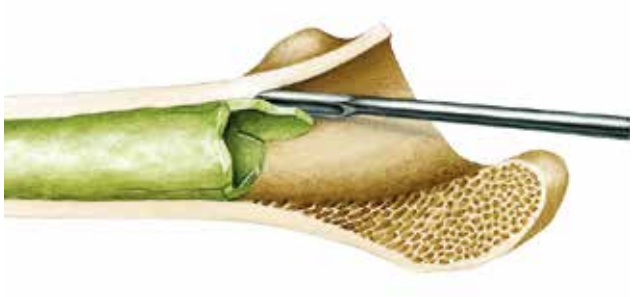
Bone cement gouges,
bevelled outer edge, straight, 310 mm

REF	Width mm
130-700	5
130-702	7
130-704	10





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

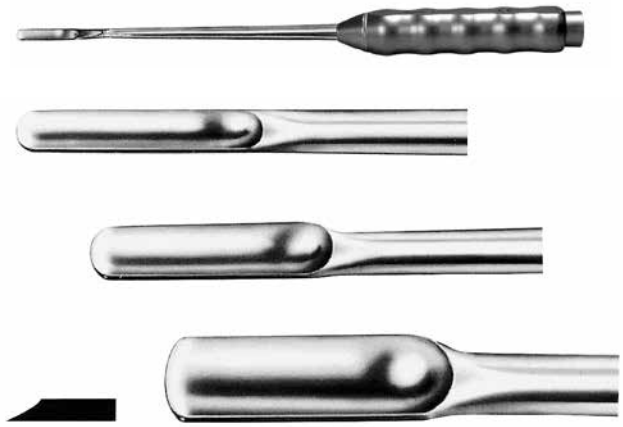


Gouges with a bevelled outer edge are more difficult to use than those with an internal bevel but they allow leverage and deviate less easily into the bone.

Bone cement gouges,
bevelled inner edge, straight, 310 mm

REF	Width mm
130-710	5
130-712	7
130-714	10

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



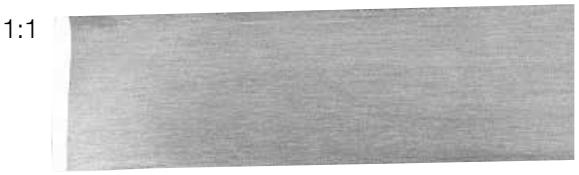
Tip guards
to protect cutting edges see page 23.

Sheathed osteotomes, 250 mm

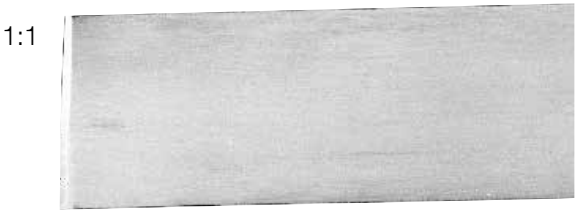
REF	Width mm	Working length mm
65-1700/04	4	65
65-1700/06	6	65
65-1700/20	20	65
65-1700/25	25	65

4 mm

6 mm



20 mm

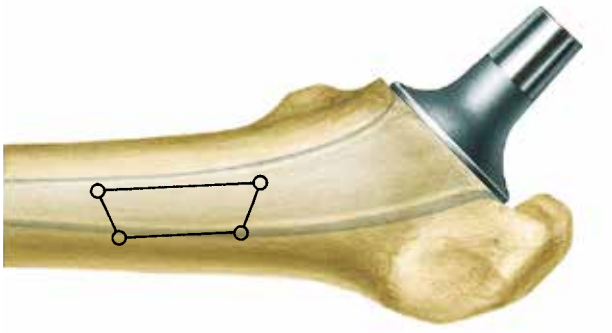


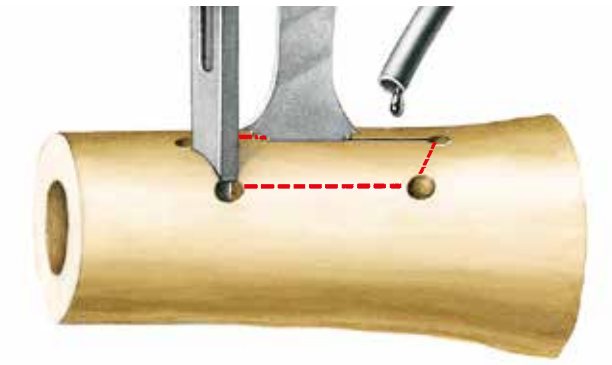
25 mm

Replacement blades, only

REF	Width mm
65-1702/04	4
65-1702/06	6
65-1702/20	20
65-1702/25	25

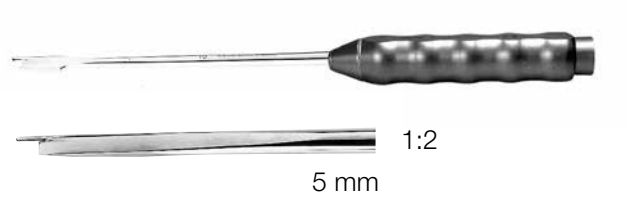
The thin-bladed sheathed osteotomes are recommended where fenestration of the femur is necessary to allow stem removal. The area of the fenestration is marked with drill holes prior to osteotomy.





Bone cement splitting chisels, straight, 310 mm

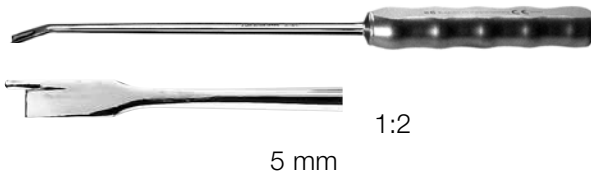
REF	Width mm
130-787/05	5
130-787/10	10



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

REF	Width mm
130-786/05	5
130-786/10	10

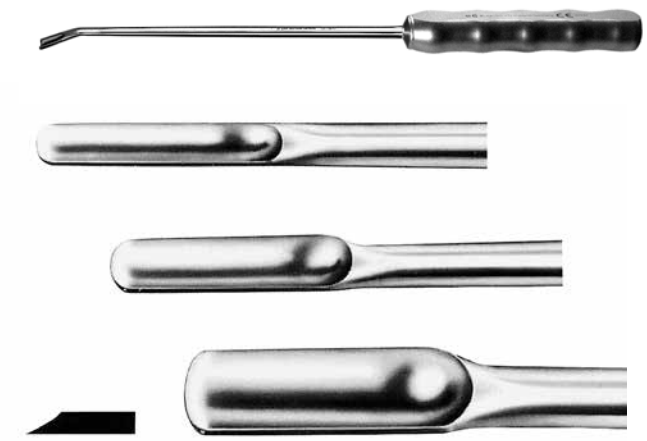


Diamond-coated cement rasps, 520 mm

REF	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



REF	Width mm
130-796/05	5
130-796/07	7
130-796/10	10

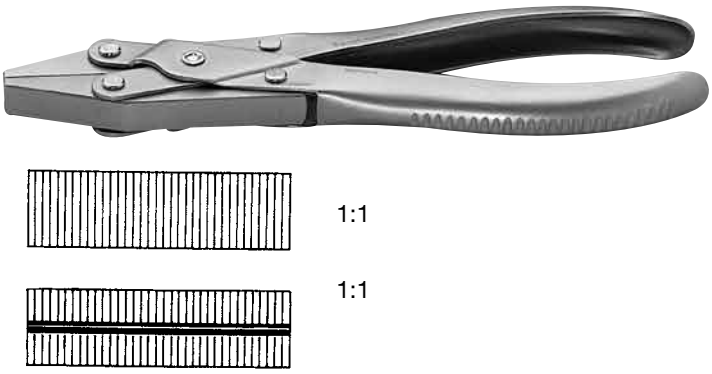
The bevelled inner edge enables these gouges to cut extremely thin cement slivers.

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

REF	Width mm
130-797/05	5
130-797/07	7
130-797/10	10

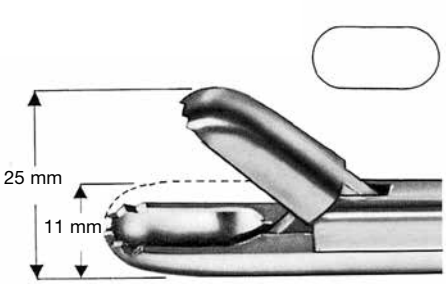
These gouges are used for removal of bone cement which is not visible from the proximal end of the bone. They are inserted through a stem fenestration.

64-4200/14 Parallel grip pliers,
double action, 185 mm.

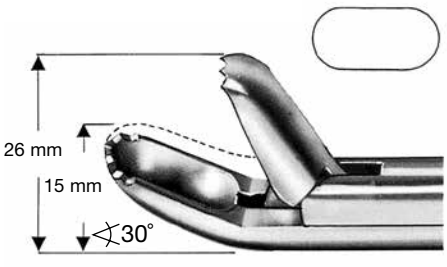


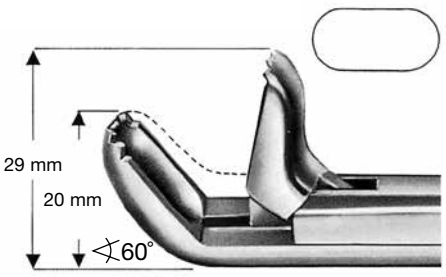
Cement rongeur,
heavy-duty pattern, 8 x 17 mm cup-shaped jaws have deep serrations at distal ends, shaft length 300 mm

REF	Version
130-745	straight
130-746	angulated 30° upwards
130-747	angulated 60° upwards

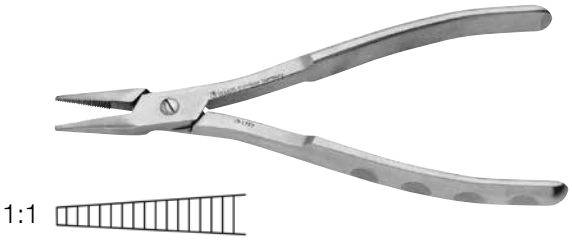


The different cement rongeurs are used to remove cement remnants from the medullary canal. Stable construction and frontal serration of the rongeurs' jaws allow powerful manipulations so that even firmly fixed islets of bone cement can be removed.





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

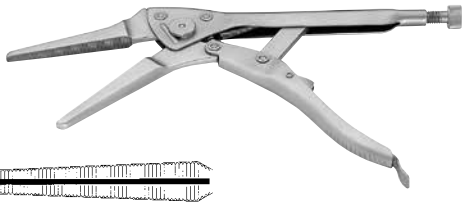


1:1

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

1:1

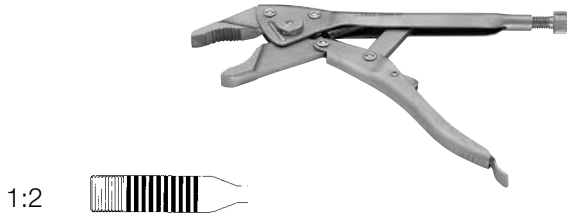
130-752/24 **Universal power grip pliers,**
small, with long jaws 5 x 60 mm, 240 mm



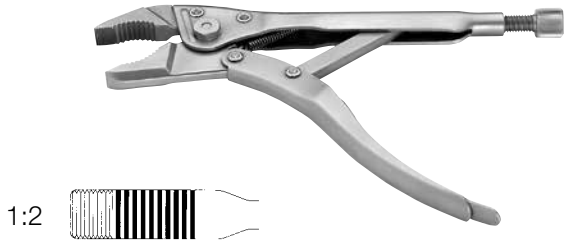
1:2

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

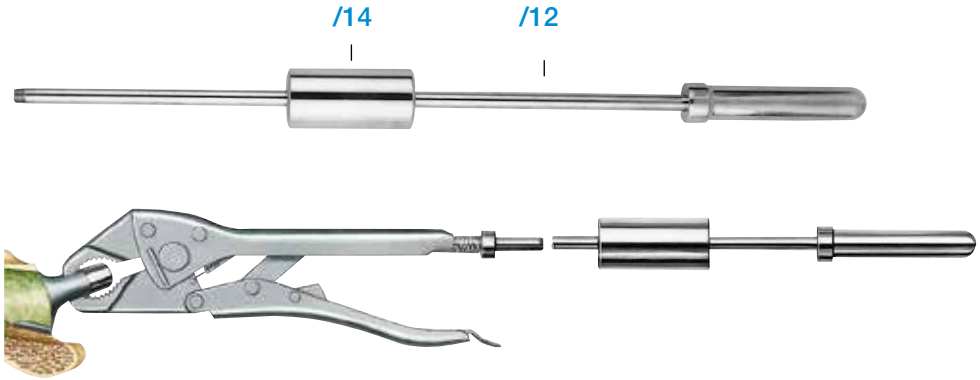


130-753/25 Universal power grip pliers,
large, with pipe-wrench jaws 13 mm wide, 250 mm

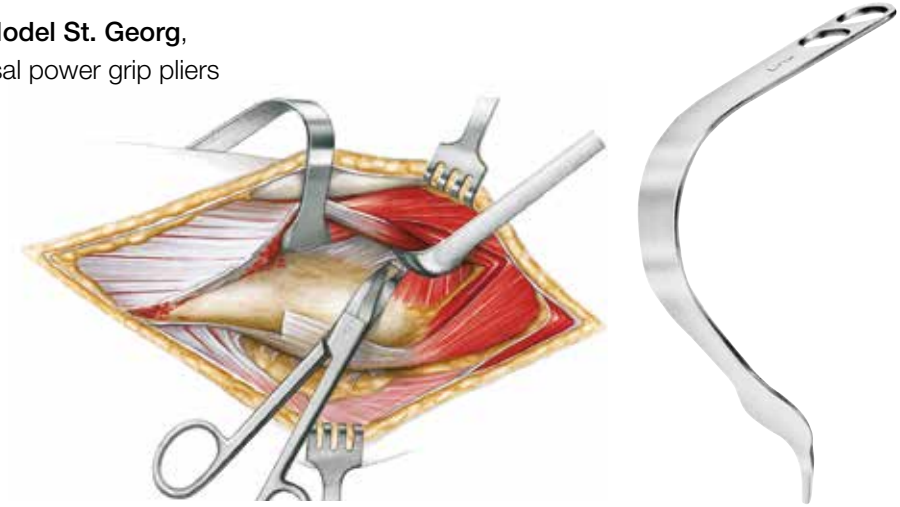


15-1436/12 Stem
15-1436/13 Handle
15-1436/14 Slaphammer
for universal power grip pliers

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



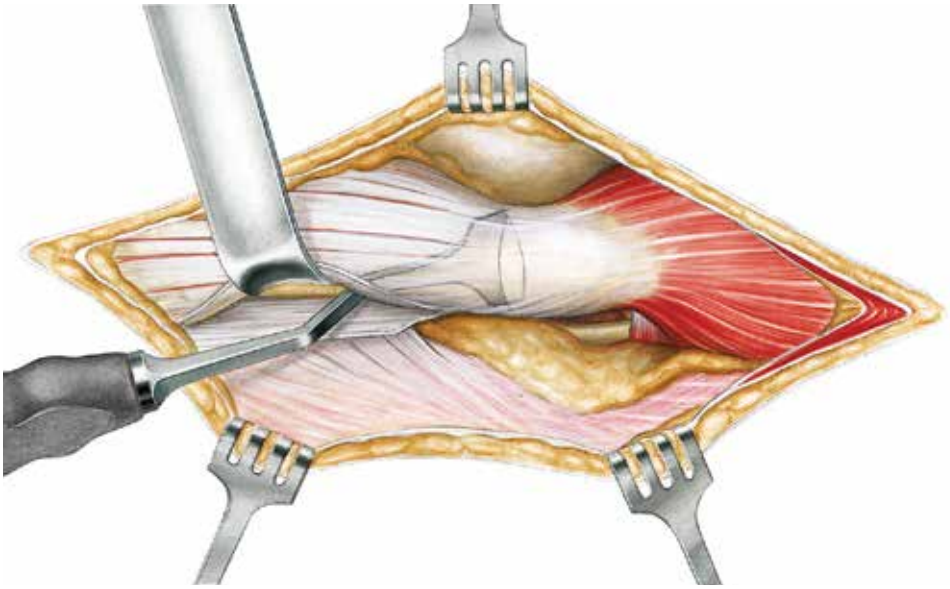
The cartilage scissors are used to dissect the vastus and gluteal tendon attachments, soft tissues and ventral capsule.

Cartilage scissors

REF	Version	Length mm
50-2562	straight	220
50-2564	curved	220

15-1040 Lexer gouge,
modified, bayonet-shaped, 30 mm wide, 230 mm

15-1041 Lexer gouge,
modified, bayonet-shaped, 45 mm wide, 275 mm

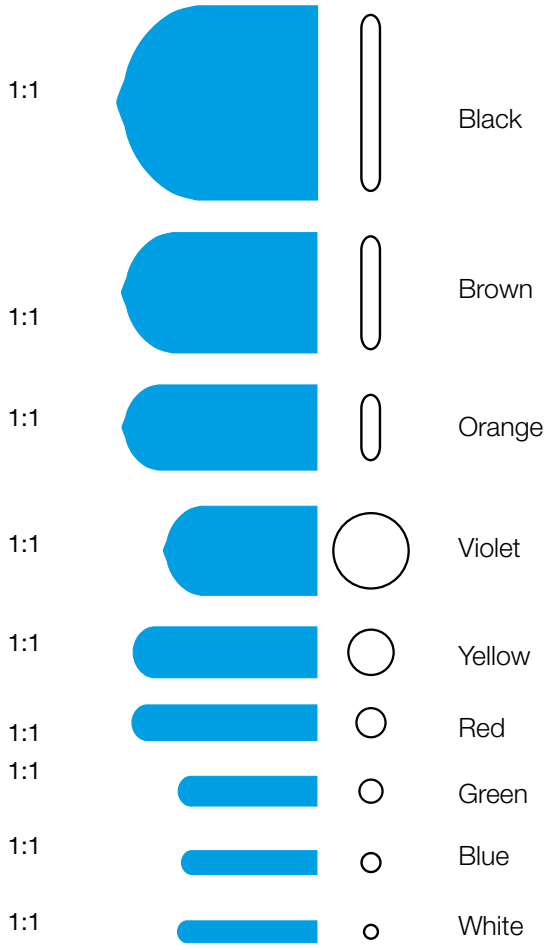


The bayonet-shaped lexer gouges are primarily used to detach the trochanter attachments of the gluteal tendon. This trochanteric approach protects the soft tissues between greater trochanter and vastus lateralis.

Tip Guards

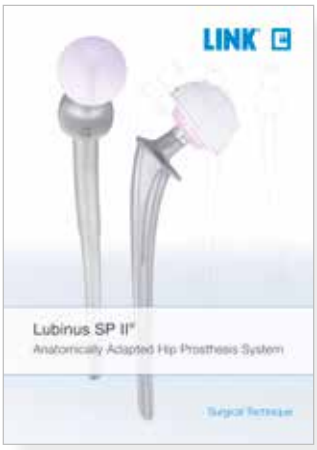
Tip Guards, protective covers, autoclavable, for cutting edges of instruments.

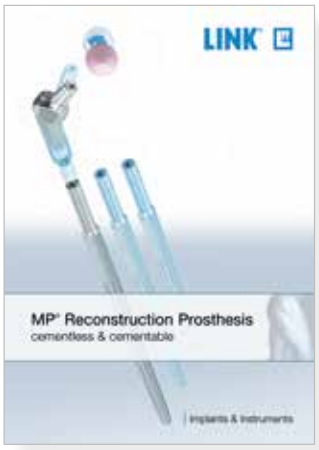
REF	Size	Color
10-2285/01	1	Black
10-2285/02	2	Brown
10-2285/03	3	Orange
10-2285/04	4	Violet
10-2285/05	5	Yellow
10-2285/06	6	Red
10-2285/07	7	Green
10-2285/08	8	Blue
10-2285/09	9	White



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

Instrument Systems for Hip Surgery





For more information please register for our LINK Media Library (linkorthopaedics.com)

Instructions for Cleaning and Maintenance

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

Literature

Nieder E. Revisionsalloarthroplastik des Hüftgelenks. In: Bauer, Kerschbaumer, Poisel, Hrsg. Orthopädische Operationslehre, Teil I. Stuttgart: Thieme; 1994

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 determines the size and shape of the implant and also limits 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 used again.

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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