



# Product Catalog online issue 11.2024 Simplify Mobility





























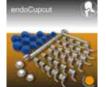












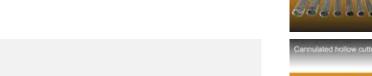




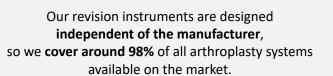






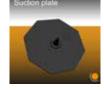












Simplify Mobility



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# safeConnect

Safe impaction of taper junctions

### Safe. Precise. Replicable.













#### Safe impaction of conical connections



The result of applying manual forces with a mallet to join taper junctions of femoral heads and cup inlays is a wide range of impaction forces.

This represents a potential risk for corrosion and micro motion at the taper junction. Current scientific studies show that a high and constant impact force has a significant impact on the joined tapers' safety.

Under continuous scientific evaluation a standardized impacting procedure has been developed which guarantees a replicable force application to the taper junctions of femoral heads and cup inlays. A new instrument replaces the mallet driven and manual impaction process.

safeConnect is the essential instrument for primary and revision arthroplasty.

#### Functional principle

The instrument is placed on the ball head or cup inlay and is manually pushed in the axial direction of the prosthesis. A mechanism is automatically triggered and releases a constant impulse to the components. As a result, the taper connection is connected by a precise and replicable force.

#### **Advantages**

- Standardized and safe procedure
- Precise and replicable application of impaction force
- One instrument for ball heads and cup inlays
- Simplified operation handling

#### safeConnect - the ingenious innovation for hip arthroplasty



#### 740126 Plunger for ceramic inlays

Accessory for loosening of fixed ceramic inlays and ball heads.

#### Worldwide patented product

#### Manufacturer:

endocon GmbH In der Au 5 - 69257 Wiesenbach Germany

# Safe. Precise. Replicable.



#### **Equipment and accessories**

Article	Reference
740000	safeConnect Set instrument with ball head / cup inlay adapter with diameter 28, 32 and 36 mm
740100	Instrument safeConnect
740120	Ball head attachment safeConnect
740124	Attachment Inlay Ø 22 mm safeConnect
740121	Attachment Inlay Ø 28 mm safeConnect
740122	Attachment Inlay Ø 32 mm safeConnect
740123	Attachment Inlay Ø36 mm safeConnect
740126	Ceramic-inlay tappet safeConnect



# OrthoClast2<sup>®</sup> system

The no. 1 solution for cement removal and cementless prosthesis revisions

### Precise. Efficient. Safe.













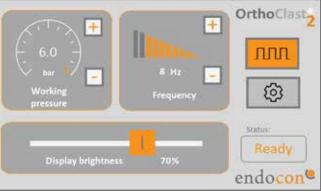
Chisel tip for cementless stem removal

#### Flexible chisel

- Working depth up to 190 mm
- Slim 5mm version for Wagner and ribbed shafts
- Pre-defined bone and prosthesis side
- Single-use chisel, multiple reprocessable

#### **Cementless prosthesis revision** with OrthoClast.





#### Revision of cementless prostheses

with pneumatic shock waves

The removal of cementless prosthesis using the conventional technique with a transfemoral access mostly ends with a major damage of the bone. The OrthoClast System in combination with the flexible micro chisel preserves the bone stock and normally avoids the transfemoral access. The OrthoClast System works with a shock wave technology comparable with a pneumatic hammer.

#### Field of use

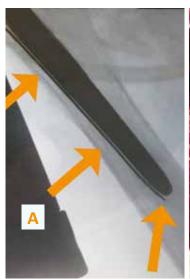
- Structured / unstructured prosthesis stem
- Septic / aseptic release of prosthesis stem
- Broken / damaged prosthesis stem
- Misaligned prosthesis stem
- Endo-Exo Femoral Prosthesis.

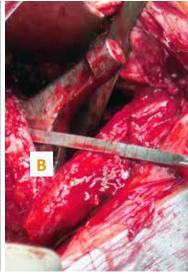
The OrthoClast handpiece works with a narrow, flexible chisel with a working depth of up to 190 mm.

- Dissection of the bone-prosthesis-interface
- Controlled sliding of the flat chisel along (A) the prosthesis **stem.** No bone perforations or fissures of the bone.
- Chisel with pre-defined bone and prosthesis side (B)

#### **Advantages**

- No femoral fenestration, minimal bone trauma
- Controlled sliding of the chisel, without bone perforation
- Bone saving method to dissect the bone-prosthesis-interface
- Significant reduction of the operating time





Steps of a conventional operation

Preparation Manual exposure of the Extraction of Closing the Reimplantation of the proximal prosthesis the prosthesis femoral femoral fenestration fenestration

#### Steps of an operation using OrthoClast

with OrthoClast Dissection of the Extraction of Reimplantation bone-prosthethe prosthesis sis-interface

Time reduction

#### Revision of cemented prostheses

#### using endoscopic view

The manual removal of bone cement during the cemented arthroplasty revision with conventional chisels is exhausting, imprecise and potentially full of complications. The OrthoClast System simplifies all processes, preserves the bone stock and normally avoids the fenestration.

#### Field of use

- Proximal bone cement removal for hip and knee revisions arthroplasty
- Medial and distal bone cement removal with endoscopic view
- Removal of the distal cement tip and the medullary plug with endoscopic view

This method is based on decades of experience in the development and application of pneumatically generated shock waves in the medical field.

#### **Advantages**

- Endoscopic view to the end of the medullary cavity
- Precise and controlled guiding of the chisel, significant reduced danger of cortical bone perforation
- Removal of cement by saving the bone structure all the way down to the bottom
- Unimpaired, intact cortical bone, no cerclages necessary
- Minimal bone trauma
- Significant reduction of operation time
- Reduction of convalescence period for the patient











Chisel tips for cement removal

#### Chisels

- Length 120 mm 270 mm
- Straight and curved stems
- Negative and positive tips
- Reusable

## **Cement removal with OrthoClast and OrthoScope**



#### Steps of a conventional operation

Proximal	Extraction	Proximal femoral	Distal "blind"	Femoral	Removal of the distal	Closing the	Reimplan-
cement	of the	cavity cement	cement removal	fenestration	cement tip and the med-	fenestration	tation
removal	prosthesis	removal			ullary plug		

#### Steps of an operation using **OrthoClast**

		with OrthoClast	with OrthoScope	withOrthoScope	
Proximal cement removal	of the	Proximal femoral cavity cement removal	cavity cement removal	cement tip and	tation
			using ende	scopic view	

Time reduction up to 40%

#### OrthoClast System

Safety first with better operation results:

- Proper control of the chisel guidance
- Flexible micro chisel for cementless arthroplasty revision
- Chisels set for cement removal
- Significant operation time reduction
- Endoscopic controlled bone cement removal
- Reduction of intra and postoperative complications
- Reduction of convalescence period for the patient

#### **OrthoClast-Set**

- Ergonomic handset
- Compact control unit
- Widespread chisel set

Individual, versatile chisels enable an effective and fast bone cement removal. The cement fragmentation is carried out without any heat development. No risk of thermal tissue damages and mechanical bone damages.

Separate chisel to dissect the bone-prosthesis-interface.

#### Technical data

#### **Control unit**

- Hospital compressed air supply
- Integrated waste air return system
- To be operated in sterile orthopaedic theatres

#### Handpiece

 No electrical connection to patient or surgeon

#### **Extraction-Set**

- Kirschner wire with drill tip
- Cannulated drill
- Cannulated extractor

These components complete the OrthoClast System. Precise positioning of the guiding Kirschner wire is ensured by the OrthoScope. Removal of the distal cement tip and the medullar plug is performed gently and safely. Therefore the transfemoral access is mostly obsolete. The cannulated instruments avoid an intra-femoral increase of pressure thus minimizing the risk of fat embolism and thrombosis.

#### Technical data

- Kirschner wire with drill tip, 450 mm
- · Cannulated drill, 300 mm
- Cannulated extractor with T-handle, 400 mm

### OrthoScope-Set

Specifications:

Cup inlay (ceramic)

Ball heads (all materials)

 Endoscope with integrated flushing and suction

Plunger for ceramic inlays FR-063

Function: for loosening and releasing

fixed ceramic inlays and ball heads.

- Integrated suction cannula
- Flushing valve on the optic tip

The invention of the OrthoScope rod-lens optical system with integrated flushing / suction is the vital breakthrough in bone cement removal. An adjustable suction cannula facilitates viewing even inside of heavily bleeding femoral cavities. The safe visual control of bone cement removal of the OrthoScope fulfils the highest demands in medical diagnostics.

#### Technical data

- Intra-femoral endoscope
- Viewing angle 25°, image angle 97°
- Stem dimension 8 mm x 5 mm, Length 260 mm
- Lens cleaning system with adjustable suction cannula

#### OrthoClast Generator Cement tip



#### Cement tip extraction set



#### OrthoScope



#### OrthoClast® Basic set EH-078G Pneumatic pedal OrthoClast2 FT-200 OrthoClast2® basic unit 230V EH-078 Pneumatic pedal OrthoClast EH-077-OC2 EL-147 Handpiece OrthoClast Handpiece tube FT-200 to EL-147 EH-077 Handpiece tube FT-118 to EL-147 SteriTray handpiece Compressed air connection 20010260 Dräger Air-Motor air hose 20080261 FR-073 4-Kant air hose SteriTray handpiece with lid 200xxxx Many models available! Ask us for air hose specific adapted to your county standards OrthoClast® Components for non cemented removal FR-078 - SINGLE USE\* FR-079 - SINGLE USE\* working length up to 160 mm, tip 7mm working length up to 190 mm, tip 7mm Flexible microstructure chisel Long flexible microstructure chisel FR-077 - SINGLE USE\* working length up to 160 mm, thin tip FR-062 (5mm). Flexible microstructure chisel Split mallet Suitable for Wagner and ribbed stems FR-063 Plunger for ceramic inlay removal FR-063 \* Manufacturer's specification: Plunger for ceramic inlay removal Multiple reprocessable (sterilisable), Field of use: Cup, ceramic SINGLE USE for application. OrthoClast setting: 1-shot



OrthoClast® Cement r	emoval module	
FR-059	Chisels set	
	FR-047 Screwdriver tip Ø 5.00 mm, 120mm	FR-048 Short negative gouge tip Ø 4.0 mm, 200mm
	FR-049 Long positive gouge tip Ø 4.0 mm, 200mm	FR-050 Short negative gouge tip Ø 4.0 mm, 270mm
	FR-051 Short negative gouge tip Ø 3.2 mm, 270 mm	FR-052 Short negative gouge tip, curved shaft Ø 4.0 mm, 270mm
	FR-053 Long positive gouge tip Ø 3.2 mm, 270 mm	FR-054 Hollow screwdriver tip Ø 4.0 mm, 270mm
	FR-055 Screwdriver tip Ø 3.2 mm, 270 mm	FR-056 Long negative gouge tip Ø 3.2 mm, 270 mm
	FR-057 Long positive gouge tip, curved shaft Ø 4.0 mm, 270mm	FR-058 Long negative gouge tip, curved shaft Ø 4.0 mm, 270mm
FR-064	Set Extraction distal plug	
No.	FR-060 Canulated drill	 FR-061 Extractor for distal plug
	FR-062 Split mallet	FR-069 Kirchner's wire 450 mm (2 units)
	FR-074 SteriTray chisels set with lid	

OrthoScope® Full module endoscopic view				
FR-046	Set OrthoScope®			
	FR-046/1 OrthoScope® optic		FR-046/2 Suction sheath	
-	FR-046/3 Standard flushing valve		FR-046/4 Valve cartridge, multiple use (one packing unit contains 5 pieces)	
	FR-046/6 Flexible light guide	2017	FR-046/7 Set of tube adaptors (4 pieces)	
	FR-046/8 Cleaning brush (packing unit contains 3 pieces)		FR-072 SteriTray OrthoScope® with lid	
FR-096	Set Coaxial flushing valve			
	FR-046/10 Coaxial flushing valve	0	BC-157 O-Rings (one packing unit contains 2 pieces)	
	BE-016 Silicones for FR-046/10 (one packing unit contains 5 pieces)		FR-046/9 O-Rings (one packing unit contains 2 pieces)	
	DV-038 Suction canula, sterile, single use (one packing unit contains 5 pieces)			

### The most efficient technology using ultrasound



# **TORS**

Ultrasound instrument for revision of endoprostheses.

### For removing bone cement.











### **TORS** - Bone cement removal

TORS is currently the newest and most modern system for bone cement removal. The use of innovative technologies and modern techniques enable a significantly more effective, gentler and safer bone cement removal than comparable systems on the market.

The new designed probes increase the effectiveness of the cement removal and thus the saving of operating theatre working time. The technically well-engineered system convinces with an extremely stable functional performance, as well as an easy and comfortable handling.













#### **SOFT TISSUE SET**

The new soft tissue scalpel works by means of an ultrasound-based procedure that enables haemostatic skin and muscle incisions equivalent to monopolar diathermy. However, the temperature development is significantly reduced, therefore correspondingly gentler and thus enables significantly better bleeding control.



T1T1TT
TORS soft tissue dissector



TORS foot switch for Soft Tissue

Optionen, Ersatzteile			
	T1T1G TORS Generator mit Netzkabel.		T1T1CC TORS Anschlusskabel Zementhandstück
	T1T1CT TORS Handstück Zemententfernung.	59	T1T1FC TORS Fußschalter Zementhandstück.
	T1P4R2 TORS Bohrer Sonde 200 Ø4 mm		T1P6R1 TORS Bohrer Sonde 100 Ø6 mm T1P6R2 TORS Bohrer Sonde 200 Ø6 mm
	T1P8R1 TORS Bohrer Sonde 100 Ø8 mm T1P8R2 TORS Bohrer Sonde 200 Ø8 mm		T1P10R2 TORS Bohrer Sonde 200 Ø10 mm
	T1S6R1 TORS Schaber Sonde 100 Ø6 mm T1S6R2 TORS Schaber Sonde 200 Ø6 mm		T1S8R1 TORS Schaber Sonde 100 Ø8 mm T1S8R2 TORS Schaber Sonde 200 Ø8 mm
	T1S10R2 TORS Schaber Sonde 200 Ø10 mm		T1ECR1 TORS Verlängerungsstück Sonde gebogen
	T1ESR2 TORS Verlängerungsstück Sonde gerade 132mm		T1ESR1 TORS Verlängerungsstück Sonde gerade 90mm
The second second	T1T1CW TORS Sonden-Reinigungspatrone	City	T1T1AH TORS Handstückaufnahme STERIL - SU
	T1T1AT TORS Sterilisationssieb T1T1SM TORS TORS Einlage Sterilisationssieb	3	T1T1S TORS Gabelschlüssel SW 9
	T1T1TT TORS Handstück Soft Tissue		T1T1FT TORS Fußschalter Soft Tissue

# Tip! Individual instrument development!

Do you have any change requests? ... or your own ideas and suggestions for solutions?

We are specialised in the development of instruments and manufacture them in our own factory, even in very small quantities. Do not hesitate to contact us!



# **Cup-Instruments**

## endoCupex - Acetabular cup extractor

# Universal instrument for the removal of threaded cups, cemented and cementless acetabular cups

Quick to learn. Easy handling. Flexible.



The all-rounder for multiple applications by stepless spreading and solid wedging in the acetabular cup. **Suitable for all cup sizes**.

Universally applicable for the removal of:

- Threaded cups / threaded rings
- Press-Fit cups
- Cemented PE cups
- PE inlays

#### **Advantages**

- All sizes of implants can be covered reliably with only one instrument
- Costs-profitable solution for a wide range of applications
- Manufacturer independent acetabular cup replacement instrument
- Accelerates the revision-operation and increases the efficiency of the operation cycle

#### Technical specifications of the span

- Minimal inside diameter 24.4 mm
- Maximum inside diameter 72 mm

endoCupex eases and accelerates the removal of the cup.



#### Options, spare parts



780901

780907 780911

#### 780900

endoCupex Professional set
Main instrument with T-handle, handle,
cone and slot hammer, system tray

(sieve insert and basket)

Main instrument endoCupex
Cone endoCupex
Handle endoCupex



700012

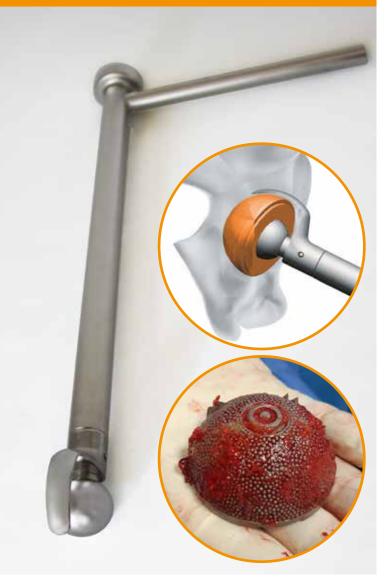
endoCupex main instrument endoCupex with T-handle, handle, cone and slot hammer without system tray

780912	Slot mallet endoCupex
780922	T-handle endoCupex
780913	Complete instrument - without tray

## endoCupcut - Acetabular cup cutter

# Universal instrument for the emoval of cementless acetabular cups

Gentle with the bones. Time saving. Indispensable.



The modular system includes all cutter sizes for a convenient cup removal. The quick and safe extraction reduces the operation time. The spherical cutter permits a precise and gentle bone incision along the acetabular rim to the bottom of the cup. The minor bone damage permits a fast convalescence.

- Blades inserts wear-resistant and reusable
- 15 different blades for a cup diameter of 44 up to 72 mm
- 15 short blades as pre-cutting blades
- Various ball heads diameter guarantees for perfect centering of the instrument in the cup inlay



#### **Advantages**

- Sophisticated precision technology for profitable applications
- Short convalescence time for the patient and shorter operation cycles
- Reduced investment costs due to a single modular system
- Manufacturer independent acetabular cup instrument

endoCupcut for a bone gentle treatment by the acetabular cup removal.

#### Optional kit ball-shaped heads

- Accessories for the revision of surface replacement prostheses, Duo Mobility cups and for use with damaged / removed inlays.
- Precision-fit ball heads in sizes 38 to 60mm





endoCupcut Professional







#### That's why the endoCupcut system is the right choice:

The blades of the endoCupcut are designed to allow a precise cut along the profile of the cup. The double curvature of the blade (longitudinal and transversal) guarantees a close-fitting cut with minimal bone loss.

Experienced surgeons report cup revisions in which the same cup size has been used again.

The endoCupcut is described by experienced users as "the Ferrari" among the cup cuttingng systems.

#### Options and spare parts





#### 780992

endoCupcut Professional set

Main tool endoCupcut; 3 ball heads 28, 32 and 36 mm; 15 short blades and 15 long blades size 44 up to 72 mm; Set ball-heads for surface replacement with 12 heads 38 up to 60 mm; Disassembling handle; Spread over 2 trays, both with sieve insert and basket.





#### 780990

endoCupcut Medium set

Main tool endoCupcut; 3 ball heads 28, 32 and 36 mm; 15 short blades and 15 long blades size 44 up to 72 mm; Disassembling handle; Spread over 2 trays, both with sieve insert and basket.



#### 780994

endoCupcut Small set

Main tool endoCupcut; 3 ball heads 28, 32 and 36 mm; 7 short blades and 7 long blades size 48 up to 60 mm; Disassembling handle; Tray with sieve insert and basket.



#### 780930

Handle with holder



#### Resharpening service!

We offer you the possibility to have your set inspected by us. We take care of all its parts and bring the blades back into form! Ask us!

### *endo*Cupcut

• 42	780966 Blade insert dia 42 short	-	780979 Blade insert dia 68 short
• 13	780933 Blade insert dia 42 long		780949 Blade insert dia 68 long
	780967 Blade insert dia 44 short		780980 Blade insert dia 70 short
9	780937 Blade insert dia 44 long		780950 Blade insert dia 70 long
	780968 Blade insert dia 46 short	-	780981 Blade insert dia 72 short
•	780938 Blade insert dia 46 long		780951 Blade insert dia 72 long
	780969 Blade insert dia 48 short	1	780959 Disassembling handle
•	780939 Blade insert dia 48 long		780918 Ball head dia 22 Steel
N. 50	780970 Blade insert dia 50 short		780931 Ball head dia 28 Steel
head	780940 Blade insert dia 50 long		780932 Ball head dia 32 Steel
-	780971 Blade insert dia 52 short		780919 Ball head dia 36 Steel
-	780941 Blade insert dia 52 long		780884 Ball head dia 38
N*56	780972 Blade insert dia 54 short		780885 Ball head dia 40
N. W. ST	780942 Blade insert dia 54 long		780886 Ball head dia 42
	780973 Blade insert dia 56 short		780887 Ball head dia 44
-	780943 Blade insert dia 56 long		780888 Ball head dia 46
7	780974 Blade insert dia 58 short		780889 Ball head dia 48
-	780944 Blade insert dia 58 long		780890 Ball head dia 50
-2	780975 Blade insert dia 60 short		780891 Ball head dia 52
	780945 Blade insert dia 60 long		780892 Ball head dia 54
-	780976 Blade insert dia 62 short		780893 Ball head dia 56
1	780946 Blade insert dia 62 long		780894 Ball head dia 58
<u>}</u>	780977 Blade insert dia 64 short		780895 Ball head dia 60
7	780947 Blade insert dia 64 long		801017 Tray insert small
	780978 Blade insert dia 66 short		801020 Tray insert medium/professiona
1	780948 Blade insert dia 66 long		801001 Steri tray 1/1 60mm



# Osteotoms mod. Smith-Petersen for cup revision

Osteotomes with curved blades for manual removal of acetabular cups. There are four different sizes S, M, L and XL to choose from.

The robust osteotomes have a continuous metallic core and are very handy with a silicone handle.

Article	Reference
0020070 Osteotomes Set	Osteotome modified Smith-Petersen set 4 Osteotome - sizes S to XL
00200730 Size S	Osteotome for cup revision with silicone handle - S Total length: 310mm; Blade: 18mm x 20mm. Handle length: 136 mm
00200731 Size M	Osteotome for cup revision with silicone handle - M Total length: 330mm; Blade: 18mm x 32mm. Handle length: 136 mm
00200732 Size L	Osteotome for cup revision with silicone handle - L Total length: 345mm; Blade: 18mm x 48mm. Handle length: 136 mm
00200733 Size XL	Osteotome for cup revision with silicone handle - XL Total length: 360mm; Blade: 18mm x 64mm. Handle length: 136 mm

# Tip! Individual instrument development!

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# Other instruments

## **StemExtractor** - Hip stem extractor

# Universal extraction tool for the safe removal of cement-free and cemented hip stems

The StemExtractor is a proven surgical instrument for total hip replacement femoral components that should be available in every revision surgery.

#### **Advantages**

- Only a few steps necessary for safe fixation of the instrument to the neck of the prosthesis
- Axial force transfer and stable clamping force by patented system
- Transfer of clamping force along a curved tool head to the prosthesis cone
- Minimized size of the instrument head, designed for limited space conditions
- Efficient, rational and cost-saving surgical operations
- Since 1993 successful in clinical use
- Complete decomposability of the instrument without additional tools
- Easy and validated instrument reprocessing

#### Technical specifications

- Cone size from 8 mm to 16 mm possible with clamps
- Slide hammer weight: 1.2 kg (standard) or 1.7 kg
- Total weight: 2.4 kg (standard)

Total length: 550 mm STANDARD

635 mm LONG

Driving distance: 205 mm STANDARD

275 mm LONG

StemExtractor - the state of the art instrument for hip stem removal

Simple handling. Safe. Ergonomic.





#### **Stem prosthesis revisions**



# RevisioLine

Universal chisel system for the arthroplasty

### Precise. Reliable. Reusable.





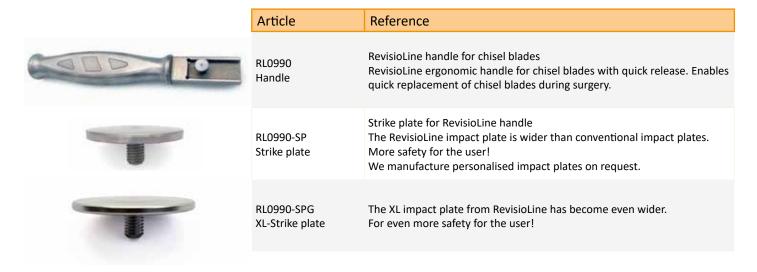






### **RevisioLine** - Blade system for the arthroplasty

The blades set has been specially developed for the revision of cementless and cemented stem prostheses. The set consists of 10 straight, flexible, ground faced blades. The different sizes offer the greatest flexibility in stem revision. The hardened-stainless-steel-handle with quick coupling function enables the chisel blades to be changed fast and easily without additional tools.



#### RevisioLine - 60 mm, straight

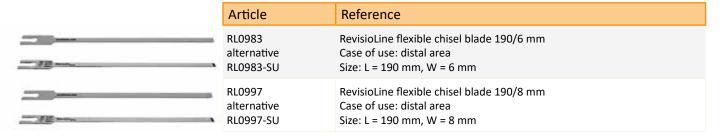


•	
Article	Reference
RL0981 alternative RL0981-SU	RevisioLine flexible chisel blade 60/6 mm Case of use: proximal area Size: L = 60 mm, W = 6 mm
RL0991 alternative RL0991-SU	RevisioLine flexible chisel blade 60/8 mm Case of use: proximal area Size: L = 60 mm, W = 8 mm
RL0992 alternative RL0992-SU	RevisioLine flexible chisel blade 60/10 mm Case of use: proximal area Size: L = 60 mm, W = 10 mm
RL0993 alternative RL0993-SU	RevisioLine flexible chisel blade 60/12 mm Case of use: proximal area Size: L = 60 mm, W = 12 mm
RL0984 alternative RL0984-SU	RevisioLine flexible chisel blade 60/25 mm  Case of use: proximal area  Size: L = 60 mm, W = 25 mm

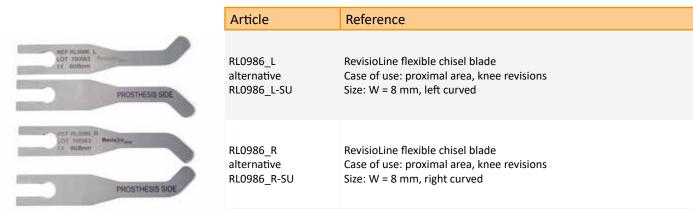
#### RevisioLine - 125 mm, straight

	Article	Reference
and the forest factor for the factor	RL0982 alternative RL0982-SU	RevisioLine flexible chisel blade 125/6 mm Case of use: distal area Size: L = 125 mm, W = 6 mm
grand-time state	RL0994 alternative RL0994-SU	RevisioLine flexible chisel blade 125/8 mm Case of use: distal area Size: L = 125 mm, W = 8 mm
produces also	RL0995 alternative RL0995-SU	RevisioLine flexible chisel blade 125/10 mm Case of use: distal area Size: L = 125 mm, W = 10 mm
continue pass of the back frame	RL0996 alternative RL0996-SU	RevisioLine flexible chisel blade 125/12 mm Case of use: distal area Size: L = 125 mm, W = 12 mm
Of the control of the	RL0985 alternative RL0985-SU	RevisioLine flexible chisel blade 125/25 mm Case of use: distal area Size: L = 125 mm, W = 25 mm

#### RevisioLine - 190 mm, straight



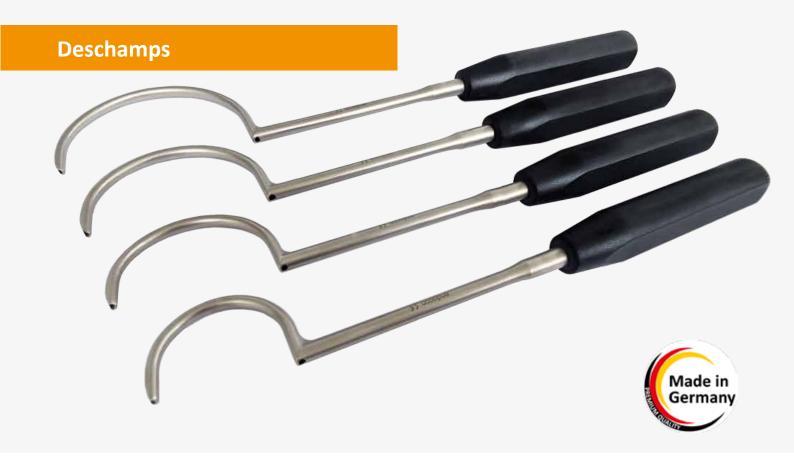
#### RevisioLine - chisel curved for knee revisions



#### Options and spare parts

Please note: all chisels have one side for the prosthesis and one side for the bone part. All RevisioLine chisels are available as:

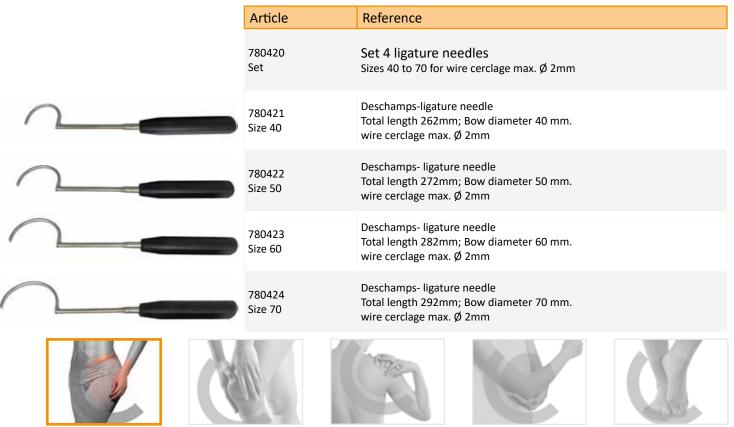
- STANDARD, multiple sterilisable and usable
- SINGLE USE (SU), multiple sterilisable but single use for application



## Ligature needle for revisions

Deschamps / ligature needle. Instrument for manual transfer of wire cerclages up to  $\emptyset$  2 mm. Four different sizes 40, 50, 60 and 70 mm are available.

The robust wire guide of the instruments is seamless and can be used for various wire cerclages up to  $\emptyset$  2 mm, robust silicone handle, reusable several times.







## Hollow cutters - set for revisions

The hollow cutters have been specially developed for the revision of broken stem prostheses and fixed modular stem prostheses. They are also used for the revision of broken intramedullary nail systems and broken Endo-exo prostheses. In this case, the prosthesis segments are milled over and picked up in parts in the cavity of the milling cutter.

#### Field of use:

- Loosening / removal of implant fragments and modular stem prostheses.
- Exposure / preparation of implant fragments and modular stem prostheses for the attachment of a removal or unscrewing instrument or for the attachment of locking forceps.

Inner diameter of 12-18 mm; holder for JAKOBS chuck.



Article	Reference			
200089 Trephine Ø12 mm	Bore depth 200mm; ext. diameter 15mm; int. diameter 12mm, Jacobs drill chuck.			
200090 Trephine Ø13 mm	Bore depth 200mm; ext. diameter 16mm; int. diameter 13mm, Jacobs drill chuck.			
200091 Trephine Ø14 mm	Bore depth 200mm; ext. diameter 17mm; int. diameter 14mm, Jacobs drill chuck.			
200092 Trephine Ø15 mm	Bore depth 200mm; ext. diameter 18mm; int. diameter 15mm, Jacobs drill chuck.			
200093 Trephine Ø16 mm	Bore depth 200mm; ext. diameter 19mm; int. diameter 16mm, Jacobs drill chuck.			
200094 Trephine Ø17 mm	Bore depth 200mm; ext. diameter 20mm; int. diameter 17mm, Jacobs drill chuck.			
200095 Trephine Ø18 mm	Bore depth 200mm; ext. diameter 21mm; int. diameter 18mm, Jacobs drill chuck.			
200099 Complete set	Set for revision Ø12-18 mm			













Cannulated hollow cutters for orthopaedics and tumour surgery

The cannulated hollow burrs were specially developed for tumour surgery in order to mill out bone tumours. A K-wire is used for centring, ensuring precise guidance of the cutter. The milled tissue is collected inside the hollow cutter and can be ejected by means of a pusher.

Inner diameters of 6 / 8 / 10 mm are available in lengths of 110 and 150 mm. Holder for JAKOBS chuck.

#### Field of use:

- Excision of tumours in bone tissue
- · Excision of cysts in bone















# Locking pliers - 3-sided

These locking pliers are used for the retrieval of:

- Stuck / broken prosthesis segments
- Stuck / broken intramedullary nails
- Stuck / broken screws

A special joint mechanism allows the pliers to be locked securely in a specific position. A defined pressure point is targeted and then tightened. A separate lever for releasing the tension ensures comfortable handling.

An extension with a sliding hammer can be optionally adapted at three different contact points, allowing various force/impact directions to be chosen.

The locking pliers with movable jaws are available as either blunt or pointed jaw pliers.

	Article	Reference
o co	820121 820122 820104	Pointed jaw pliers 3-sided Small: 22 cm Medium: 25 cm Large: 30 cm
	820106 820105	Locking pliers 3-sided Medium: 20 cm Large: 24 cm
	820102 400 gr	Pull-out hammer 400 g
	820103 700 gr	Pull-out hammer 700 g

## Intramedullary Nail extraction

# Universal tool for the removal of intramedullary nails with internal threads.

The instrument consists of an impact tube with a sliding hammer and a push rod, which is guided through a fine thread in the impact tube. The conical tip of the push rod is used to spread a tip which is selected according to the diameter of the nail receiver in the manner of a plug.

The tension of the push rod is thus held in the rear part by a spring assembly. Due to the clamping range of the tips, 3 sizes are sufficient to cover all internal threads. It should be noted that the sizes of the tips are selected so that they fit into the borehole of the nail with the least possible clearance. This achieves the maximum stable combination of extractor and nail.

Provided with the instruments are a straight and a candan handle for a set of long hex bits from 2.5 to 5.5 mm ascending in steps of 0.5 mm. The bits are suitable to remove screws with corresponding hex sockets. At the tip the surfaces of the bits are slightly converging, so that they can be secured onto the bit by a slight knocking of the bit into the hex socket of the plug and can thus be easily removed.

#### Intramedullary Nail extraction - indispensable in each OR



Fast.
Unproblematic.
Safe.

#### **Advantages**

- Fast and safe extraction of intramedullary nails with internal thread
- · Easy assembly and tensioning
- Fast and safe, significant reduction in OP time
- Includes various handles, allen wrench, universal joint and hammer
- Clean, organised storage





Intramedullary nail extractor - Options and spare parts				
	820000 Intramedullary nail extractor complete			
	820002 Medullary nail extractor main instrument	.=	820027 Tension bar	
4	820003 Mallet 200g		820004 Quick coupling t-handle	
	820005 Quick coupling handle nail extractor		820006 Universal quick coupling with cardan joint	
•	820007 Driver hexagonal SW 2,5	<b>•</b>	820008 Driver hexagonal SW 3,0	
<u> </u>	820009 Driver hexagonal SW 3,5		820010 Driver hexagonal SW 4,0	
	820011 Driver hexagonal SW 4,5	<u> </u>	820012 Driver hexagonal SW 5,0	
•	820013 Punch tool 3,5	2	820014 End wrench SW9	
	820015 Screwdriver with guide pin	O	820016 Socket wrench size 6	
	820017 Conical extraction screw	0	820022 Socket wrench size 4	
	820018 Expansion adapter size 1 - 6-9mm		820029 Expansion adapter size 1,5	
<b>-</b>	820019 Expansion adapter size 2 - 9-12mm		820030 Expansion adapter size 2,5	
	820020 Expansion adapter size 3 - 12-15mm	<del></del>	820028 Tension piece	
	820021 Screwdriver bit SW 8,0	<b>(</b>	820025 Blade six round T25	
	820023 Screwdriver bit SW 10		820024 Blade six round T40	
	820026 Stencil - Alu Contents overview		820001 Sterilization tray nail extractor	

### **SOS-Set**

# Universal OP-removal-tool for damaged and broken bone screws. Screw removal set complete.

Universal set for loosening or removing broken and damaged screws. Safe and reliable.

Specifications:

- Overtightened screw heads
- Broken / torn off screws

The set contains all necessary instruments for the exposure of screws, cleaning of screw heads in order to apply the instrument, safe gripping of damaged hexagonal / cross and Torx screws up to the left removal of thread fragments in depth. The respective application is illustrated by means of a simple template.

All tools available for screw size: 1.5 / 2.0 / 2.7 / 3.5 / 4.0 / 4.5 / 5.0 / 6.5 / 7.0 mm

SOS-Set - for a smooth operation

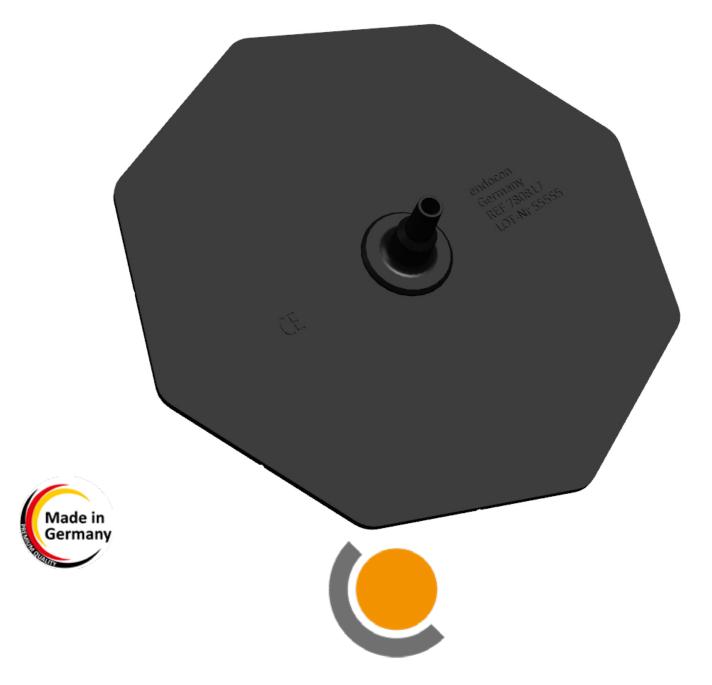
Compact. Universal. Essential.





#### SOS-Set Options and spare parts





# Suction plate Competitive universal solution

Reusable. Powerful. Clean.











## **Suction plate**

# Accessories for universal surgical suction device in the operating room. Quick removal of surgical fluids and blood.

Ensure safe and efficient suction of fluids and blood from the ground during a surgery.

#### Advantages at a glance:

- Significant cost reduction against disposable products
- Reusable suction plate, made of hardened aluminum
- Optimized suction power
- Tested long term working product
- Simple cleaning / preparation of the suction plate
- Universal connection to all suction systems

#### Specifications:

- Orthopedic Surgery
- Gynecology
- Urology
- Neurosurgery
- Trauma and reconstructive surgery
- Ambulance
- Laboratory

#### Suction plate:

the efficient and economic solution for the operating room



#### Equipment and accessories

Article	Reference
780817	Suction plate
780818	Connection hose











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