



Universal Implant and Screw Removal Kit

Developed with Surgeons for Maximum Efficiency

The Universal Implant and Screw Removal Kit has been developed in close collaboration with experienced orthopedic surgeons to facilitate the removal of locking and non-locking screws, with or without screw heads, as well as a wide range of orthopedic implants. Its intuitive instrumentation and optimized design improve surgical precision, reduce operating room time, and support safer and more efficient patient care.

Designed to meet the demanding requirements of orthopedic and trauma surgery

This CE-marked extraction system enables the rapid and safe removal of a broad range of screws and implants. Compatible with many leading implant systems, including Zimmer, Stryker, Synthes, and other major manufacturers, it provides a versatile solution that simplifies surgical procedures while reducing the need for multiple manufacturer-specific extraction sets.



Universal Extraction Kit: Components and Accessories

A Versatile Instrumentation System Designed to Simplify Implant Removal

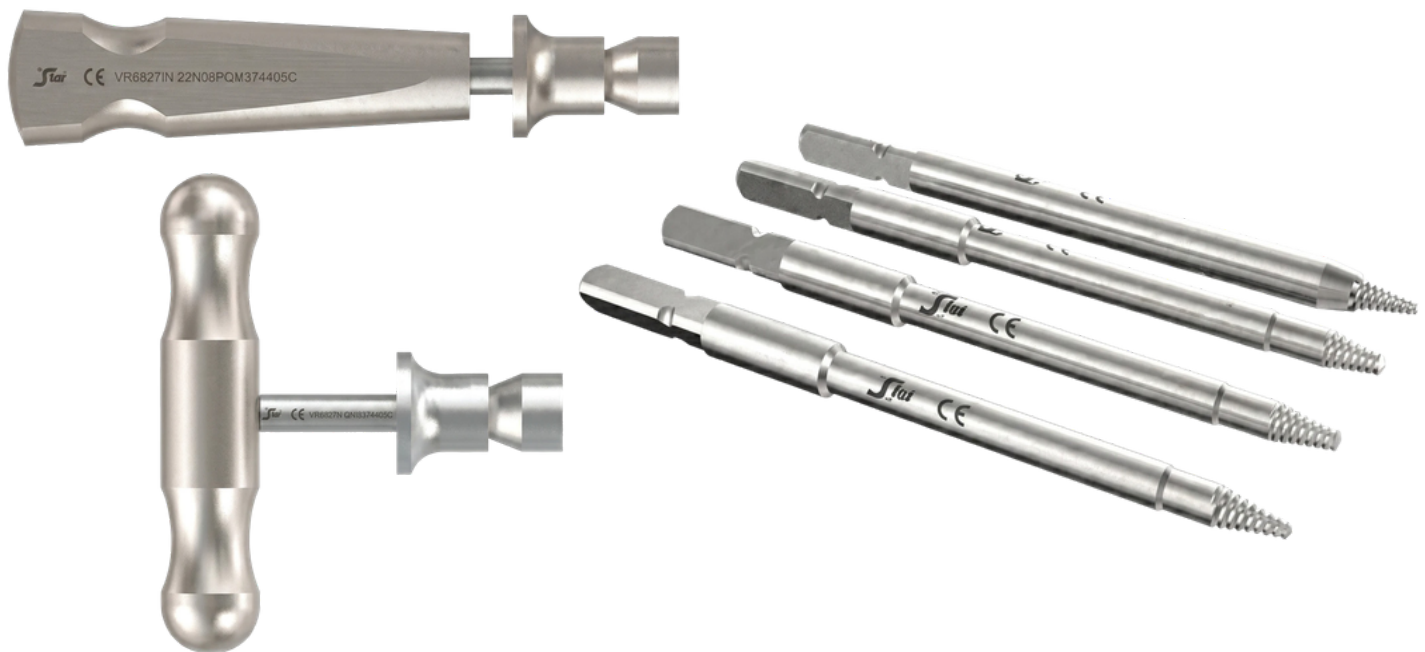
The Universal Extraction Kit has been specifically designed to provide surgical teams with a comprehensive, versatile, and readily accessible solution. Featuring a two-tier instrument case and a carefully selected range of extraction instruments, it enables efficient management of a wide variety of clinical situations using a single system.

Compatible with numerous osteosynthesis systems and orthopedic implants, the kit minimizes the need for multiple manufacturer-specific extraction sets.

This approach simplifies inventory management, optimizes operating room organization, and helps reduce costs associated with storage, maintenance, and instrument replacement.

Developed to facilitate the safe and efficient extraction of orthopedic screws and implants, the kit provides surgeons with a reliable and high-performance solution suitable for both routine procedures and more complex revision surgeries.

Certified in accordance with European Medical Device Regulations (MDR), it meets stringent requirements for safety, quality, and traceability.



Screwdriver Blade Details

The kit includes six screwdriver blade profiles designed to accommodate a wide variety of orthopedic screws and implants: hexagonal, Torx (star), slotted, Phillips, square, and T-pin configurations.

This wide range of interfaces ensures broad compatibility with the most commonly used implant systems in orthopedic and trauma surgery. Each blade has been engineered to provide optimal torque transmission and facilitate extraction procedures, even in the most demanding surgical situations.

Star-tip instruments are available in six different sizes: T8, T10, T15, T20, T25, and T30.



The kit also includes a T-Pin Extractor, which can be used for the removal of pedicle screws utilized in spinal surgery.



Square-tip instruments are available in two sizes: 1.2 mm and 1.5 mm.



The Phillips screwdriver blade features a 2.0 mm tip width.



Two slotted screwdriver blade sizes are included to accommodate different slotted screw configurations.



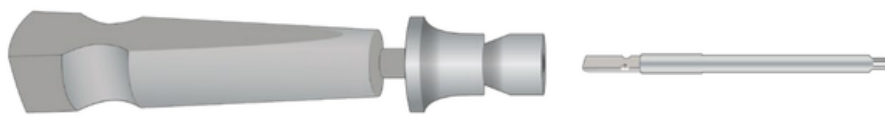
Hexagonal Drivers : 1,5,1,7, 2,0, 2,5, 3,0,3,5, 4,0, 4,5, 5,0 et 5,5 mm.



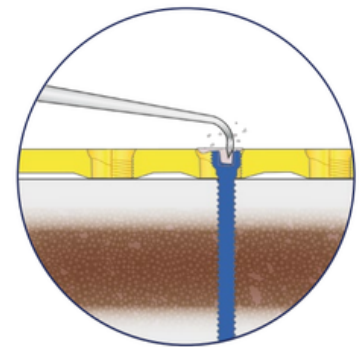
Universal Extraction Kit : Instructions for Use

Preparation

The appropriate extraction tip and quick-lock handle are selected according to the type and diameter of the screw to be removed. The screwdriver is then assembled by attaching the selected tip to the handle, as illustrated in the figure below.



Prior to screw extraction, any bony overgrowth or residual soft tissue obstructing the screw head must be carefully removed using a pointed curette. If the screw is deeply embedded in bone, a pointed drill may be used to expose the screw head and provide adequate access for extraction.



pointed curette



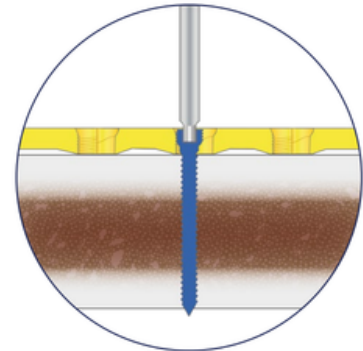
pointed drill bit

The geometry and condition of the exposed screw head recess are assessed prior to extraction. .

Universal Extraction Kit : Instructions for Use

When the Screw Head Is Intact

Insert the screwdriver fully into the screw head recess. If necessary, gently tap the screwdriver with a mallet to ensure proper seating. The screwdriver must remain aligned with the axis of the screw throughout the procedure; otherwise, damage to the screw head or the screwdriver may occur. Remove the screw by turning the screwdriver counterclockwise.



When the Screw Head Is Damaged

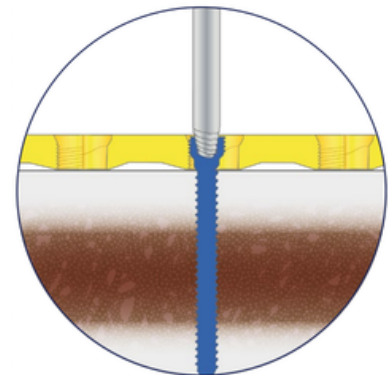
If the screwdriver tip rotates freely within the damaged screw recess, the Internal Threaded Screw Extractor should be used to remove the damaged screw.

Featuring a specially designed reverse-threaded configuration, the Internal Threaded Screw Extractor engages the damaged screw head when rotated counterclockwise, providing excellent grip and extraction capability.

Four sizes of Internal Threaded Screw Extractors are available, compatible with screwdriver inserts measuring 1.7 mm, 2.5 mm, 3.5 mm, and 4.0 mm.

The Internal Threaded Screw Extractor features a tapered design with a reverse-threaded configuration. Once the tapered tip has been fully inserted into the damaged screw recess, it should be pressed firmly and rotated counterclockwise to engage the screw and initiate extraction.

Care must be taken to keep the extractor aligned with the axis of the screw throughout the procedure, while applying sufficient axial pressure. The extraction process should be performed manually using steady and adequate pressure. The use of powered instruments is strongly discouraged.



Universal Extraction Kit : Instructions for Use

Four sizes of Internal Threaded Screw Extractors are included in the kit.



The table alongside indicates the compatible screwdriver sizes and screw recess configurations for each Internal Threaded Screw Extractor size. These recommendations may vary depending on the extent of damage to the screw head recess.

Screw Sizes and Recess Types (mm).		Internal Threaded Screw Extractor				Screw Extractor Pilot Hole			
		1.7 mm	2.5 mm	3.5 mm	4.0 mm	3.0 mm	5.0 mm	6.0 mm	7.0 mm
	1.5, 2.0, 2.5	☒	☐	☐	☐	☒	☐	☐	☐
	T8, T10	☒	☐	☐	☐	☒	☐	☐	☐
	1.2, 1.5	☒	☐	☐	☐	☒	☐	☐	☐
	2.0	☒	☐	☐	☐	☒	☐	☐	☐
	2.5, 3.5, 4.0	☐	☒	☐	☐	☒	☒	☐	☐
	T15, T20	☐	☒	☐	☐	☒	☒	☐	☐
	4.5, 5.0, 5.5	☐	☐	☒	☐	☐	☒	☒	☐
	T25	☐	☐	☒	☐	☐	☒	☒	☐
	5.5	☐	☐	☐	☒	☐	☐	☒	☒
	T30	☐	☐	☐	☒	☐	☐	☒	☒

Universal Extraction Kit : Instructions for Use

When the Screw Recess Is Damaged and the Internal Threaded Screw Extractor Rotates Freely Within the Damaged Recess

The damaged screw recess is enlarged using an appropriate carbide drill. The kit includes four carbide drill diameters (3 mm, 5 mm, 6 mm, and 7 mm).

These drills are specifically designed for machining hard metallic materials such as titanium and stainless steel. The diameter of the damaged screw head remaining within the threaded plate hole must first be determined.

The appropriate drill is then selected and mounted onto the surgical power tool.

Refer to the compatibility chart on page 10 to select the appropriate drill size.

The drill is carefully centered on the screw head, and the screw head is lightly countersunk.

During this procedure, metallic debris should be removed continuously by irrigation and suction.

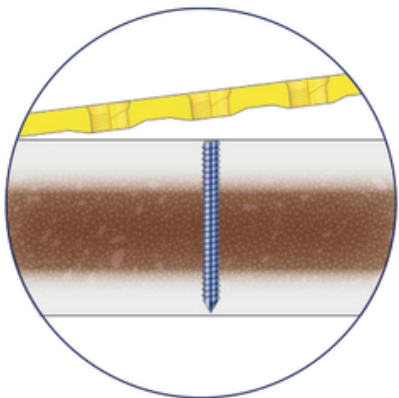
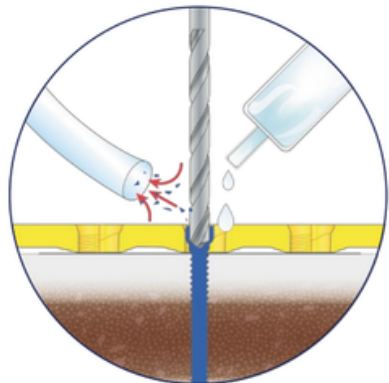
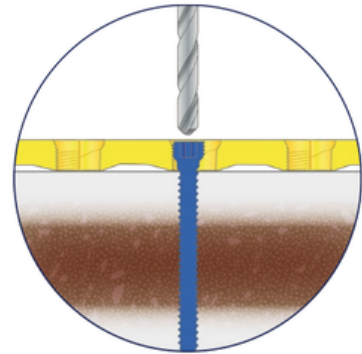
The damaged screw head is progressively milled using an appropriate drill bit. The kit includes four tungsten carbide drill diameters (3 mm, 5 mm, 6 mm, and 7 mm), specifically designed for machining hard metallic materials such as titanium and stainless steel.

The diameter of the remaining screw head within the threaded plate hole must first be determined. The appropriate drill is then selected and mounted onto the surgical power tool.

Milling is continued until the screw head has been sufficiently weakened to separate from the screw shaft. To ensure efficient cutting performance, a constant rotational speed should be maintained while applying steady axial pressure along the screw axis.

Once the screw head has been detached, the plate may be removed.

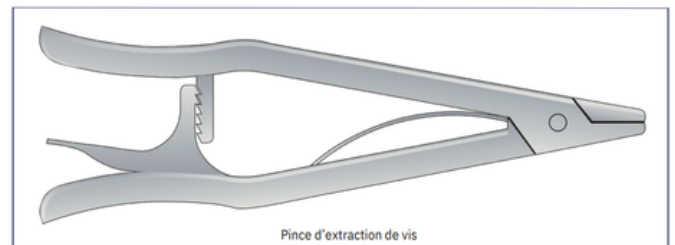
The drill bits are single-use devices. Used drill bits must not be reused, reprocessed, or resterilized under any circumstances.



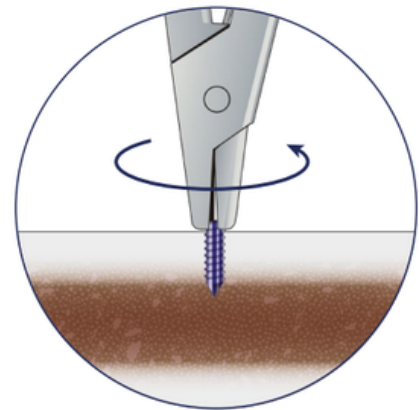
Universal Extraction Kit : Instructions for Use

When the Broken Screw Head Is Partially Protruding

For the removal of short fractured screws in such situations, the use of screw extraction forceps is recommended.



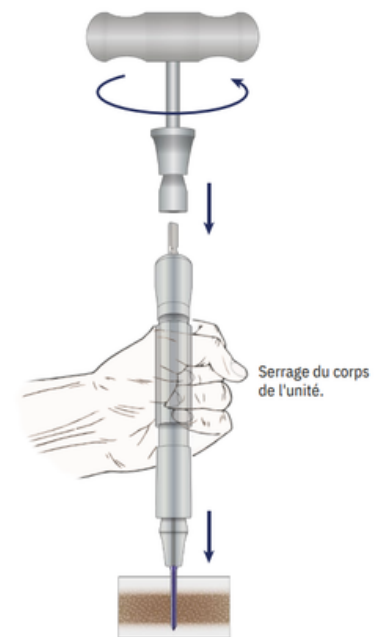
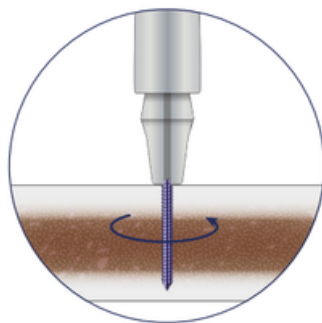
The screw should be removed by rotating it counterclockwise while maintaining a firm grip with the extraction forceps. Upward traction or pushing forces must be avoided.



When a portion of a fractured long screw protrudes above the bone surface, the Broken Screw Extractor may be used. The Broken Screw Extractor is available in two sizes: 3.5 mm and 4.5 mm. For screws with a diameter of 4.5 mm or less, the 3.5 mm Broken Screw Extractor should be used. For screws with a diameter greater than 4.5 mm and up to 5.0 mm, the 4.5 mm Broken Screw Extractor should be selected.

Once the body of the extraction device has been tightened, it is connected to the T-Quick handle. The T-handle is then rotated counterclockwise, enabling the extraction tip to grip and engage the screw securely.

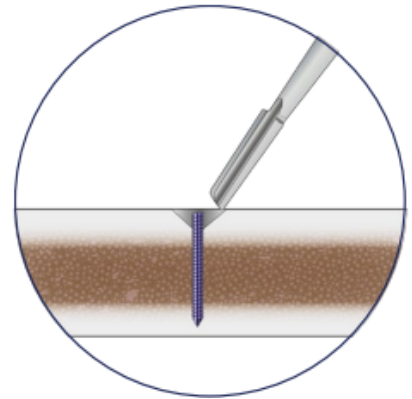
Screw extraction is completed by continuing to rotate the T-handle counterclockwise until the screw has been fully removed.



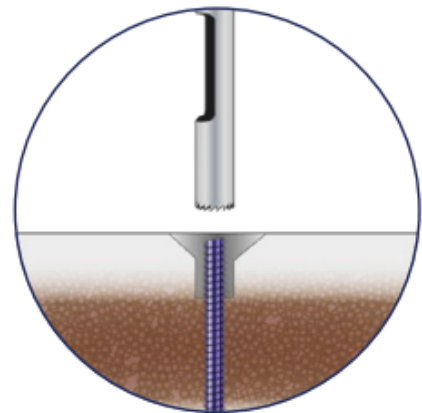
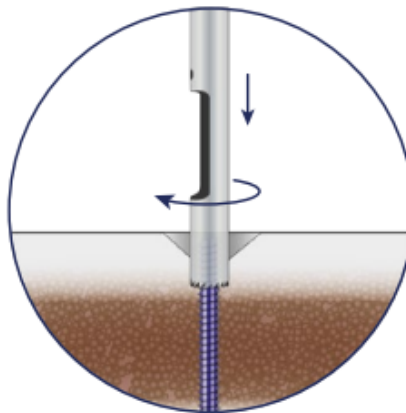
Universal Extraction Kit : Instructions for Use

When the Fractured Screw Is Completely Embedded Within the Bone Surface

Using the screw extractor bone gouge, a centered access channel is created around the screw to accommodate the hollow drill. If the tip of the screw is accessible, it may alternatively be grasped using the screw extraction forceps.



Using the hollow drill equipped with a saw-toothed tip, a 6 mm deep channel is created around the screw. This procedure may be performed manually or using a surgical power tool. Please refer to the chart on page 10 to determine the appropriate hollow drill size.



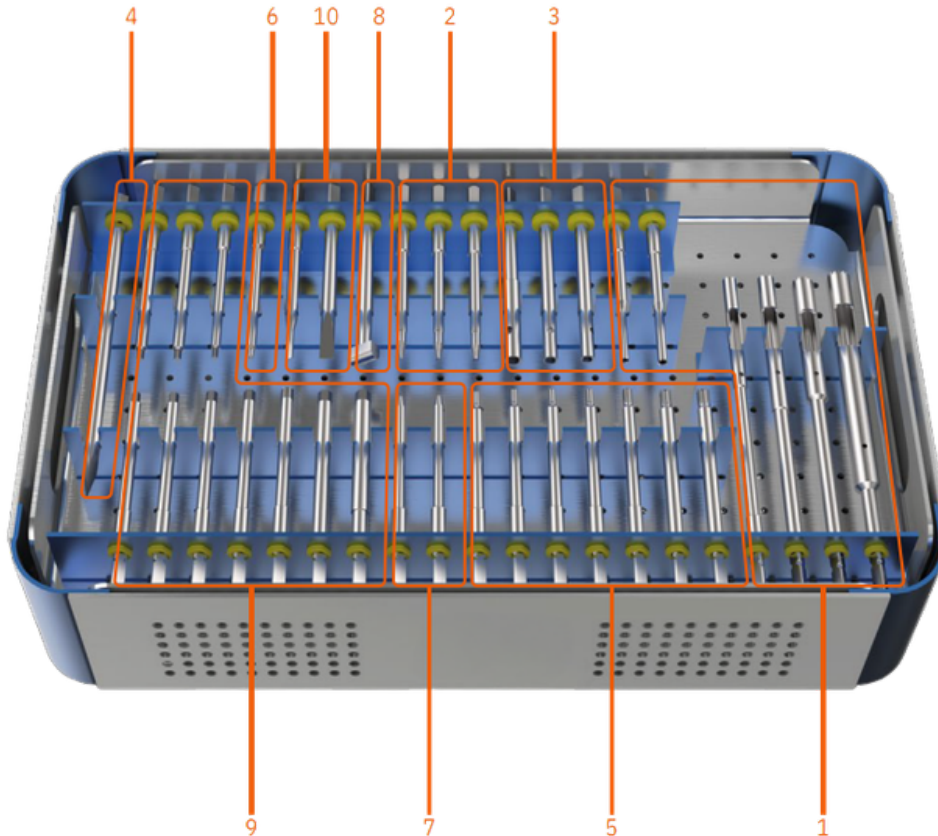
The screw can be engaged by the threads by applying gentle axial pressure with an Internal Threaded Screw Extractor. The tapered, reverse-threaded extractor is then rotated counterclockwise, creating a secure grip on the screw. Extraction is completed by continuing the counterclockwise rotation. Throughout the extraction procedure, the extractor must remain aligned with the axis of the screw. Various sizes of Internal Threaded Screw Extractors are available depending on the diameter of the screw shaft. Extractors are available for screws with diameters of 3.5 mm, 4.5 mm, 5.0 mm, and 5.5 mm to 6.5 mm. Using the screw extractor bone gouge, a centered access channel is created around the screw to accommodate the hollow drill. If the tip of the screw is accessible, it may alternatively be grasped using the screw extraction forceps. Please refer to the chart on page 10 to select the appropriate hollow drill size. Fluoroscopic verification is recommended following the removal of bone screws.

Universal Extraction Kit : Instructions for Use

		Screw Extractor and Hollow Drill					
Screw Head	Screw Size (mm)	2.0 mm	2.7 mm	4.0 mm	5.0 mm	6.5 mm	8.0 mm
	1.5, 2.0	■					
	T8, T10	■					
	1.2, 1.5	■					
	2.0	■					
	2.5, 3.0		■				
	3.5, 4.0			■			
	T15, T20			■			
	4.5, 5.0				■		
	5.5, 6.0, 6.5					■	
	T25					■	
	7.3						■
	T30						■

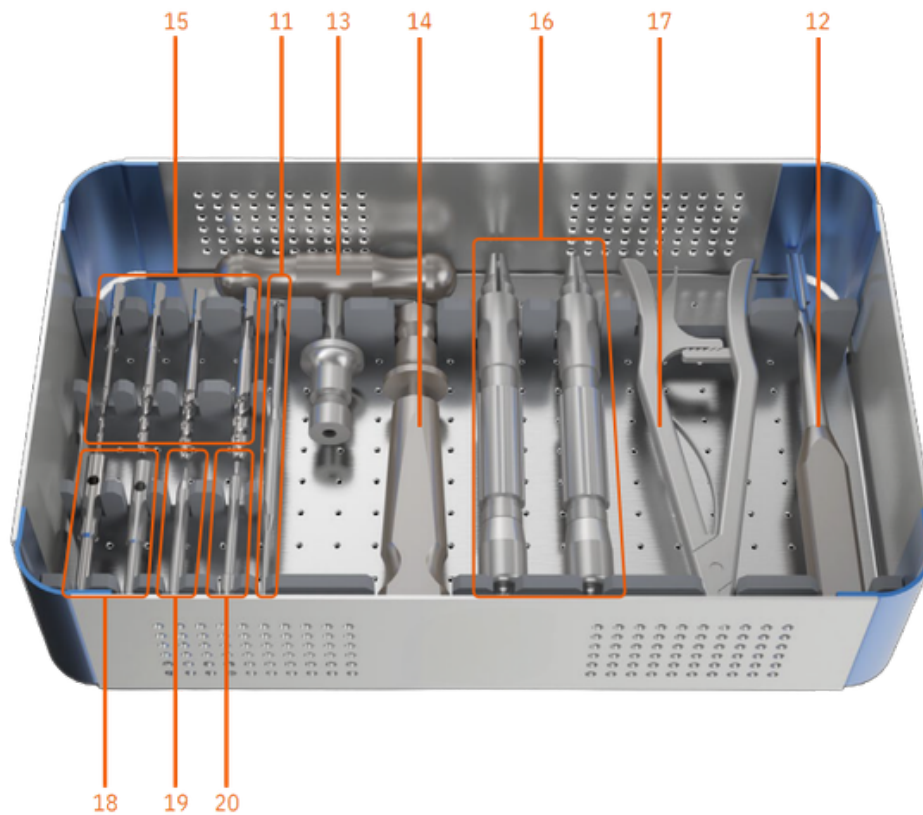
		Internal Threaded Screw Extractor				
Screw Head	Screw Size (mm)	3.5 mm	4.5 mm	5.0 mm	5.5 mm	6.5 mm
	3.5, 4.0	■				
	T15, T20	■				
	4.5		■			
	5.0			■		
	5.5, 6.0				■	
	6.5, 7.5					■
	T25					■
	T30					■

Universal Extraction Kit: Instrument Tray 1



No.	Code	Barcode	Description	Qty
1	02121002020	ZQ21618RN	HOLLOW DRILL 2.0 MM	1
	02121002027	ZQ21648RN	HOLLOW DRILL 2.7 MM	1
	02121002040	ZQ21668RN	HOLLOW DRILL 4.0 MM	1
	02121002050	ZQ21718RN	HOLLOW DRILL 5.0 MM	1
	02121002065	ZQ21748RN	HOLLOW DRILL 6.5 MM	1
	02121002080	ZQ21778RN	HOLLOW DRILL 8.0 MM	1
2	02121000001	ZQ21548RN	WITH INTERNAL THREAD 2.5 MM	1
	02121000002	ZQ21568RN	WITH INTERNAL THREAD 3.5 MM	1
	02161000026	ZQ21578RN	WITH INTERNAL THREAD 4.0 MM	1
3	02121000003	ZQ21808RN	WITH INTERNAL THREAD 3.5 MM	1
	02121000007	ZQ21828RN	WITH INTERNAL THREAD 4.5 MM	1
	02121000008	ZQ21858RN	WITH INTERNAL THREAD 6.5 MM	1
4	02121002150	ZQ19478RN	SPIRAL DRILL 5 MM	1
5	02121000300	ZQ21348HN	STAR SCREWDRIVER T20	1
	02121000320	ZQ21358HN	STAR SCREWDRIVER T25	1
	02121000300	ZQ21318HN	STAR SCREWDRIVER T20	1
	02121003150	ZQ21308HN	STAR SCREWDRIVER T15	1
	02121003100	ZQ21258HN	STAR SCREWDRIVER T10	2
	02121003260	ZQ21278HN	STAR SCREWDRIVER T8	1
6	02121004020	ZQ21608RN	STAR SCREWDRIVER WITH HOLLOW TIP 2.0 MM	1
7	02121006015	ZQ20938HN	SQUARE SCREWDRIVER 1.5 MM	1
	02121006012	ZQ20928HN	SQUARE SCREWDRIVER 2.2 MM	1
8	02121008000	ZQ13538HN	T-SCREWDRIVER	1
9	02121005055	ZQ20678HN	HEX SCREWDRIVER 5.5 MM	1
	02121005050	ZQ20668HN	HEX SCREWDRIVER 5.0 MM	1
	02121005045	ZQ20658HN	HEX SCREWDRIVER 4.5 MM	1
	02121005040	ZQ20648HN	HEX SCREWDRIVER 4.0 MM	1
	02121005035	ZQ20638HN	HEX SCREWDRIVER 3.5 MM	1
	02121005030	ZQ20628RN	HEX SCREWDRIVER 3.0 MM	1
	02121005025	ZQ20818RN	HEX SCREWDRIVER 2.5 MM	2
	02121005020	ZQ20608RN	HEX SCREWDRIVER 2.0 MM	1
	02121005015	ZQ20798HN	HEX SCREWDRIVER 1.5 MM	1
10	02121003000	ZQ21068RN	T-SCREWDRIVER	1
	02121001000	ZQ21018RN	DESIGN PLATE	1

Universal Extraction Kit : Tray 2



No.	Code	Barcode	Description
11	02083000002	ZQ19478RN	SHARP POINTED CURETTE
12	02121006001	ZQ12408RN	BONE GOUGE FOR SCREW EXTRACTOR
13	02121006002	ZQ21898RN	RAPID LOCKING HANDLE FOR SCREW EXTRACTOR
14	02121006003	ZQ21888RN	RIGHT-ANGLE RAPID LOCKING HANDLE FOR SCREW EXTRACTOR
15	02121001030	DZ1178R	EXTRACTION TAP 3.0 MM FOR SCREW EXTRACTOR
	02121001050	ZQ21448RN	EXTRACTION TAP 5.0 MM FOR SCREW EXTRACTOR
	02121001060	ZQ21478RN	EXTRACTION TAP 6.0 MM FOR SCREW EXTRACTOR
	02121001070	ZQ21508RN	EXTRACTION TAP 7.0 MM FOR SCREW EXTRACTOR
16	02121001035	ZQ21158RN	SCREW EXTRACTOR FOR 3.5 MM BROKEN SCREWS
	02121001045	ZQ21168RN	SCREW EXTRACTOR FOR 4.5 MM BROKEN SCREWS
17	02121006004	ZQ21218RN	EXTRACTION PLIERS
18	02161000017	DZ22518RN	SCREW EXTRACTOR WITH INTERNAL THREAD Ø 1.7 MM
	00340215080		CONTAINER

Additional Options Available Upon Request

Torx Mini Fragments:

- T4 (Reference: DZ5315RN)
- T5 (Reference: DZ5316RN)
- T6 (Reference: DZ5317RN)
- T7 (Reference: DZ5318RN)

Tungsten Carbide Taps – CE Marked, Single Use:

- 2.6 mm (Reference: 40.5657.026)
- 3.4 mm (Reference: 40.5657.034)
- 4.7 mm (Reference: 40.5657.047)
- 6.2 mm (Reference: 40.5657.062)

Decontamination, cleaning and sterilization For non implantable medical devices Manufactured from stainless steel

Warning

The following recommendations do not replace the protocols provided by disinfectant and detergent suppliers, autoclave manufacturers, or the local Infection Control Committee (CLIN) of each healthcare facility. However, the summary below is intended solely to give users an overview of the key steps typically involved in the sterilization of surgical instruments.

Technical Data

Do not hesitate to contact us for any further information. Our team is available to provide a prompt and personalized response. You can also find the full description at www.medfirst.care

General guidelines

- Clean, disinfect and sterilize new SURGICAL INSTRUMENTS before their first use.
- Clean, disinfect and sterilize SURGICAL INSTRUMENTS as soon as possible after use.
- Set aside worn, corroded, deformed or otherwise damaged SURGICAL INSTRUMENTS and return them to Medfirst.
- Process micro surgery SURGICAL INSTRUMENTS separately.

Cleaning / Disinfection

- Strictly follow the dosage, application time and temperatures recommended in validated protocols for disinfection and cleaning.
- The use of bleach on stainless steel instruments is prohibited, as it can cause corrosion.
- Avoid overloading washer disinfectors and ultrasonic cleaners and make sure instruments are positioned to prevent shadow areas.
- Open articulated instruments for cleaning and decontamination.
- Never use metal brushes or metal sponges for manual cleaning.
- Rinse thoroughly after washing, using demineralized water whenever possible.
- Carefully dry the SURGICAL INSTRUMENTS after rinsing.

Sterilization

- Do not forget that sterilization cannot replace preliminary treatments such as cleaning and disinfection. It is an essential complementary step.
- The recommended sterilization method is autoclaving, or moist heat: Temperature 134°C, pressure 2 bar, duration 18 minutes.
- Sterilization loads must be validated by qualified personnel in accordance with procedures approved by the Infection Control Committee (CLIN).

Do not hesitate to contact us for any further information.