

Xtract-All[®] mini

Universal Small Screw Extraction System

Surgical Technique Guide



FCD-0496 REV: 01

SHUKLA MEDICAL[®]
Universal Orthopedic Extraction Technologies

Introduction

The Xtract-All® Mini (S9MINI) is a small bone screw driver system intended to remove or insert virtually all small bone screws commonly used in hand, foot, cranio-maxillo-facial and spine procedures.

The Xtract-All® Mini system also includes extractors that were designed to achieve minimal bone loss when removing broken and stripped screws.

The system consists of:

- A **Ratcheting Handle** for use when removing or inserting screws manually
- Set of 3 **Hex Screwdrivers**: Sizes range from 1.5mm to 2.5mm
- ⊕ Set of 3 **Cruciform Screwdrivers**: Sizes range from small to large.
- ⊖ Set of 2 **Slotted Screwdrivers**: Sizes range from 1.5mm to 3.0mm
- ◻ Set of 5 **Center Screwdrivers**: Sizes range from 1.0mm to 3.5mm
- ⊖ 2.7mm **Clutch Screwdriver**
- ⊕ 2.0mm to 2.7mm **Phillips Head Screwdriver**
- ⊕ Set of 6 **Torx Screwdrivers**: Sizes range from T4 to T10
- **Osteotome Blade**
- Set of 2 **Broken Screw Extractor**
- Set of 4 **Stripped Screw Extractors**



Warning and Precautions

Preoperative

The surgeon should be familiar with the general principles and techniques for the removal or insertion of orthopedic implants.

The instruments should be inspected for visible damage prior to use. DO NOT use the product if damage is suspected or visible.

Operative

Proper handling and storage of the instrumentation is mandatory. Damage to the instrumentation may produce stresses and cause defects, which could become a focal point for failure.

The surgeon should be cautious with limb position change and/or excessive force exertion while extracting or inserting implants using the instrumentation provided.

List of Components (S9MINI)

1. Hex Drivers



2. Cruciform Drivers



3. Slotted Drivers



4. Center Drivers



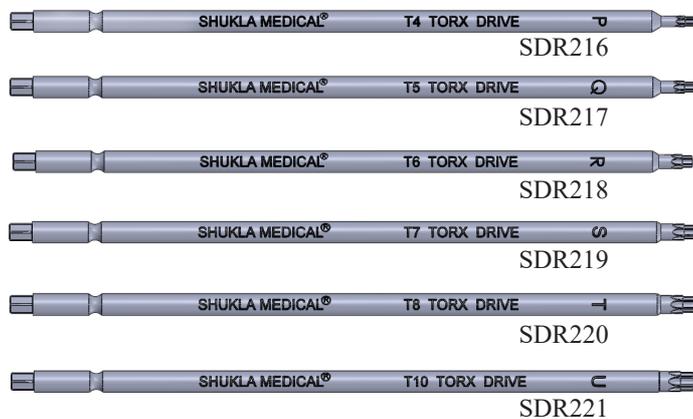
5. Clutch Driver



6. Phillips Driver



7. Torx Drivers



8. Osteotome Blade



9. Broken Screw Extractor

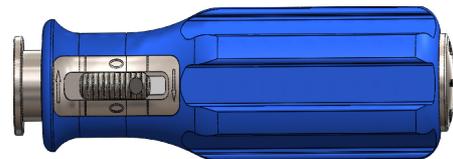


10. Stripped Screw Extractors



NOTE: SXT201, SXT202 and SXT203 are SINGLE USE ONLY and must be discarded after use.

11. Ratcheting Handle



SHN201

Surgical Technique

Step 1:

Determine the screwdriver configuration of the bone screw (See Figure 1).

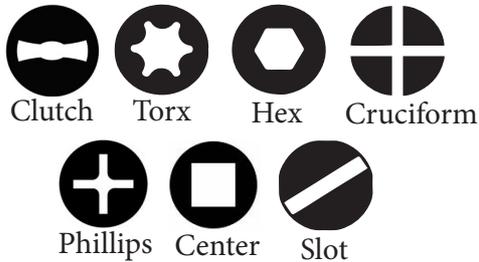


Figure 1

Step 2:

Select the proper size from the corresponding screwdriver shaft from the Mini Ratcheting Screwdriver Set.

If removing a broken screw, the tip of the extractor must be centered over the broken screw allowing the screw to engage with the internal threads of the extractor. Care must be taken to prevent the teeth of the extractor from making contact with the broken screw, as this might cause the extractor teeth to break (See Figure 2).

If removing a stripped or seized screw, select an extractor that will fit into the stripped screw opening without bottoming out in the well of the stripped screw (See Figure 3).



Figure 2



Figure 3

Step 3:

Insert the driver shaft into the handle by pushing the handle collar down. The driver shaft should click into place and the collar will return to its original position (See Figure 4).



Figure 4

Step 4:

Slide the switch forward to insert screws, backwards to remove screws, and in the center position to disable the ratcheting feature (See Figure 5). Note: The center position should be used when using the osteotome blade.

The handle has an impact cap on the end which can be used to help seat the driver into the screw with a mallet if necessary (See Figure 6*).



Figure 5



Figure 6

Step 5:

To remove the driver, press down onto the collar of the handle and pull the driver out of the handle (See Figure 7).

Figure 7



*Disclaimer: Only use gentle force when striking handle. Excessive force can result in damaging the ratcheting mechanism.

Surgical Technique (Continued)

No.	Part Number	Description	Qty
1	SCS201	Case	1
2	SHN201	Ratcheting Handle	1
3	SDR201	Hex 1.5mm	1
4	SDR202	Hex 2.0mm	1
5	SDR203	Hex 2.5mm	1
6	SDR204	Small Cruciform	1
7	SDR205	Medium Cruciform	1
8	SDR206	Large Cruciform	1
9	SDR207	Slotted 1.5mm - 2.0mm	1
10	SDR208	Slotted 3.0mm	1
11	SDR209	Center 1.0mm	1
12	SDR210	Center 1.5mm	1
13	SDR211	Center 2.0mm	1
14	SDR212	Center 2.7mm	1
15	SDR213	Center 3.5mm	1
16	SDR214	Clutch 2.7mm	1
17	SDR215	Phillips 2.0mm - 2.7mm	1
18	SDR216	T4 Torx	1
19	SDR217	T5 Torx	1
20	SDR218	T6 Torx	1

No.	Part Number	Description	Qty
21	SDR219	T7 Torx	1
22	SDR220	T8 Torx	1
23	SDR221	T10 Torx	1
24	SDR222	Osteotome	1
*25	SXT201	Broken Screw Extractor	2
*26	SXT202	Small Stripped Screw Extractor	2
*27	SXT203	Large Stripped Screw Extractor	2

***NOTE: SXT201, SXT202 and SXT203 are SINGLE USE ONLY and must be discarded after use.**

Cleaning and Sterilization

For detailed sterilization instructions, please refer to industry standards ANSI/AAMI ST79:2012 & A1:2012 and ANSI/AAMI ST8:2001.

NOTE: All Shukla Medical surgical instruments require manual cleaning with a neutral pH cleanser. Open and disassemble all instruments, making sure to remove all contamination prior to sterilization. Machine washing is not recommended. Maintenance and care using an autoclavable lubricant on movable parts is required to preserve the life of the instrument. For more cleaning, inspection, maintenance and care tips, contact Shukla Medical directly.

