

## Universal Large Screw Extraction System

...Because Every Minute Counts®

# Surgical Technique Guide



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S9MAXI Screwdrivers



### Introduction

The Xtract-All® Maxi (S9MAXI) Universal Large Screw Extraction System is designed to remove large bone screws with minimal bone loss.

36 distinct drivers come in solid & flexible versions, allowing removal of any large screw in any location. Use drivers manually with the Ratcheting Handle (SSD240) or connect to power with the Hudson Quick Connect Adapter (SAD001).

#### **Driver Configurations:**

- 8 sizes of hex driver (SDR240-247/SDR270-277)
- 6 sizes of torx driver (SDR248-253/SDR278-283)
- Medium & large cruciform drivers (SDR254-255/SDR284-285)
- Flat drivers (SDR256/SDR286)
- Phillips drivers (SDR257/SDR287)

### Warning and Precautions

#### Preoperative

- Clear x-rays and surgical notes may be used to identify manufacturer, brand, location, & condition of implanted hardware.
- The surgeon should be familiar with general principles and techniques for the removal of orthopedic implants.
- The instruments should be inspected for visible damage prior to use. Do not use the product if damage is suspected.
- Only validated cleaning and sterilization procedures should be used.

#### 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.

### **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 during cleaning. Instruments must be reassembled prior to sterilization. Machine washing is not recommended. Maintenance and care using an autoclaveable 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.

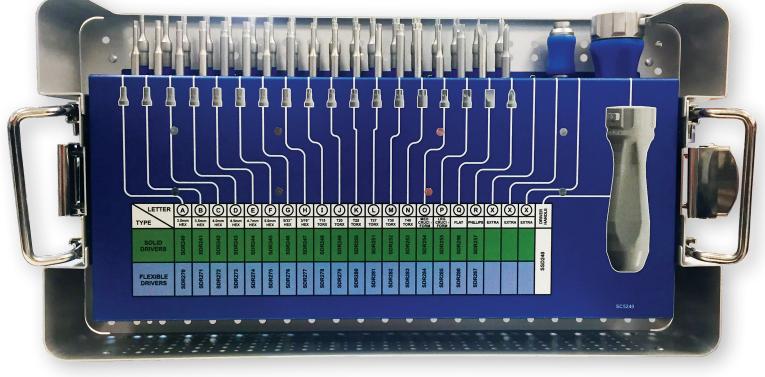
#### For detailed cleaning and sterilization instructions, please visit www.ShuklaMedical.com/Sterilization

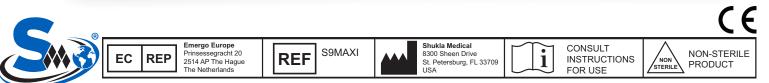


### Xtract-All® Maxi (S9MAXI) Universal Large Screw Extraction System

	S9MAXI	Xtract-All® Maxi L	Jniversal	Large Scre	w Extraction System	۱
	SCS240	Case & Lid				
	SSD240	Ratcheting Handle				
	SAD001	Hudson Quick Connect A	Adapter (1/4"	Shaft)		
ID	Solid Drive	rs	Qty	Flexible Dr	ivers	Qty
Α	SDR240	Hex 3.0mm	1	SDR270	Hex 3.0mm	1
В	SDR241	Hex 3.5mm	1	SDR271	Hex 3.5mm	1
С	SDR242	Hex 4.0mm	1	SDR272	Hex 4.0mm	1
D	SDR243	Hex 4.5mm	1	SDR273	Hex 4.5mm	1
Е	SDR244	Hex 4.7mm	1	SDR274	Hex 4.7mm	1
F	SDR245	Hex 5.0mm	1	SDR275	Hex 5.0mm	1
G	SDR246	Hex 5/32"	1	SDR276	Hex 5/32"	1
н	SDR247	Hex 3/16"	1	SDR277	Hex 3/16"	1
I	SDR248	T15 Torx	1	SDR278	T15 Torx	1
J	SDR249	T20 Torx	1	SDR279	T20 Torx	1
К	SDR250	T25 Torx	1	SDR280	T25 Torx	1
L	SDR251	T27 Torx	1	SDR281	T27 Torx	1
м	SDR252	T30 Torx	1	SDR282	T30 Torx	1
Ν	SDR253	T40 Torx	1	SDR283	T40 Torx	1
ο	SDR254	Cruciform 3.8mm	1	SDR284	Cruciform 3.8mm	1
Ρ	SDR255	Cruciform 5.46mm	1	SDR285	Cruciform 5.46mm	1
Q	SDR256	Flat	1	SDR286	Flat	1
R	SDR257	Phillips	1	SDR287	Phillips	1

Connect Adapter



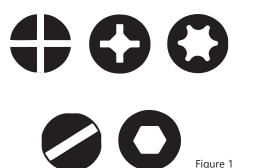


Solid Drivers	Flexib	le Drivers
•		
Hex		3.0mm HEX DRIVE 10000
	3.0mm HEX DRIVE 0000 SDR240 Hex 3.0mm	SDR270 Hex 3.0mm
	3.5mm HEX DRIVE	3.5mm HEX DRIVE 1077 Kxxxxx
	<b>SDR241</b> Hex 3.5mm	<b>SDR271</b> Hex 3.5mm
l O	4.0mm HEX DRIVE CONSTANT	4.0mm HEX DRIVE (STRAND
0	4.5mm HEX DRIVE 50044	SDR272 Hex 4.0mm
	SDR243 Hex 4.5mm	<b>SDR273</b> Hex 4.5mm
Û	4.7mm HEX DRIVE	4.7mm HEX DRIVE 1019 2000
	<b>SDR244</b> Hex 4.7mm	<b>SDR274</b> Hex 4.7mm
	5.0mm HEX DRIVE 10004	SDR275 Hex 5.0mm
	SDR246 Hex 5/32"	<b>SDR276</b> Hex 5/32"
Î	3/16" HEX DRIVE 007877	3/16 HEX DRIVE 1018 XXXXXX
	<b>SDR247</b> Hex 3/16"	<b>SDR277</b> Hex 3/16"
Torx	C Tor	Y
Θ	T15 TORX DRIVE SUPPA	T15 TORX DRIVE 101977
	SDR248 T15 Torx	<b>SDR278</b> T15 Torx
9	SDR249 T20 Torx	120 TORX DRIVE 10000000 11 SDR279 T20 Torx
	SDR250 T25 Torx	SDR280 T25 Torx
	T27 TORX DRIVE SORES	T27 TORX DRIVE CORA
	SDR251 T27 Torx	<b>SDR281</b> T27 Torx
8	T30 TORX DRIVE LOTS XXXXXX	T30 TORX DRIVE SOURCE
	<b>SDR252</b> T30 Torx	<b>SDR282</b> T30 Torx
2 2	SDR253 T40 Torx	SDR283 T40 Torx
Cruciform		ciform
0	SDR254 Cruciform 3.8mm	SDR284 Cruciform 3.8mn
۵		
	SDR255 Cruciform 5.46mm	SDR285 Cruciform 5.46m
Elat	Flat	
Flat		
0	SDR256 Flat	SDR286 Flat
	Spitzo Hat	SURLOU Hat
Phillips	🕒 Phi	llips
i innips		
	PHILLIPS DRIVER SDR257	PHILLIPS DRIVE SOREST



### Surgical Technique

- - Determine bone screw configuration & size (Fig. 1) and corresponding driver from the S9MAXI system.



Set drive mode (Fig. 4) for the ratcheting handle: Δ Center: Ratcheting disabled Forward: Insert screws Back: Remove screws BACK: FORWARD: Remove screws Insert screws

Choose solid or flexible driver style. (Fig. 2)

Solid drivers are recommended for screws with a straightforward approach.

Flexible drivers are recommended for use when access to screw placement is more challenging.



3 Connect driver to Ratcheting Handle (SSD240) by inserting the 1/4" hex driver base into handle until it clicks into place. (Fig. 3)



#### 5 To remove the driver, press release button and pull driver and handle apart. (Fig. 5)

Figure 4



#### Optional: Adapt for use under power

Attach driver to Hudson Quick Connect Adapter (SAD001) to use under power. Slide outer sleeve towards shaft to load or unload any driver. (Fig. 6)



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For more information on the Xtract-All<sup>®</sup> Maxi (S9MAXI) Universal Large Screw Extraction System Call us at 888-4-SHUKLA (888-474-8552) or visit www.ShuklaMedical.com



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