

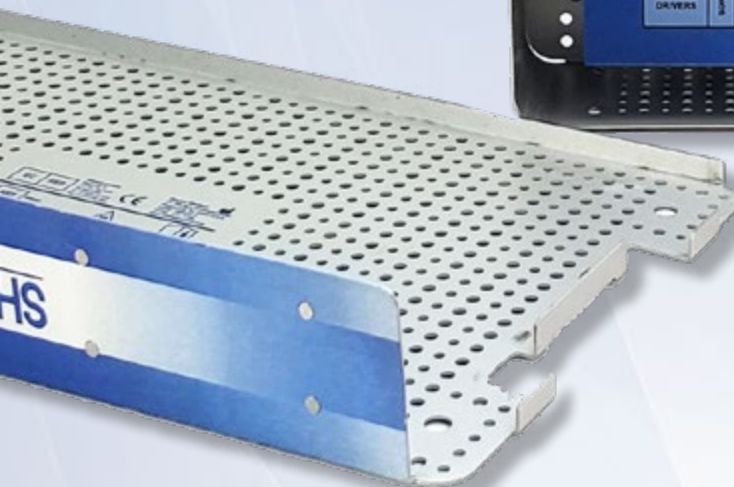
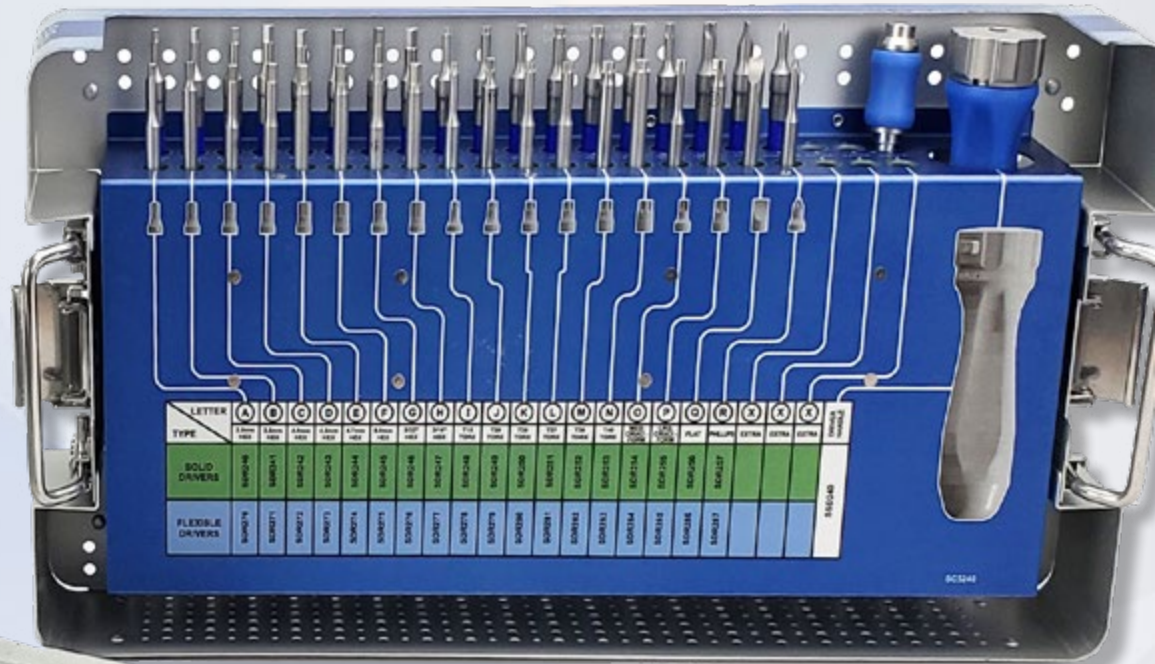
SURGICAL TECHNIQUE GUIDE

#2

System 2 of 15

SHUKLA MAX

Universal Large Screw Extraction Solution



SHUKLA MEDICAL®

Universal Orthopedic Extraction Technologies

Revolutionizing the Art of Revision Surgery

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SHUKLA MAXI

Universal Large Screw Extraction Solution

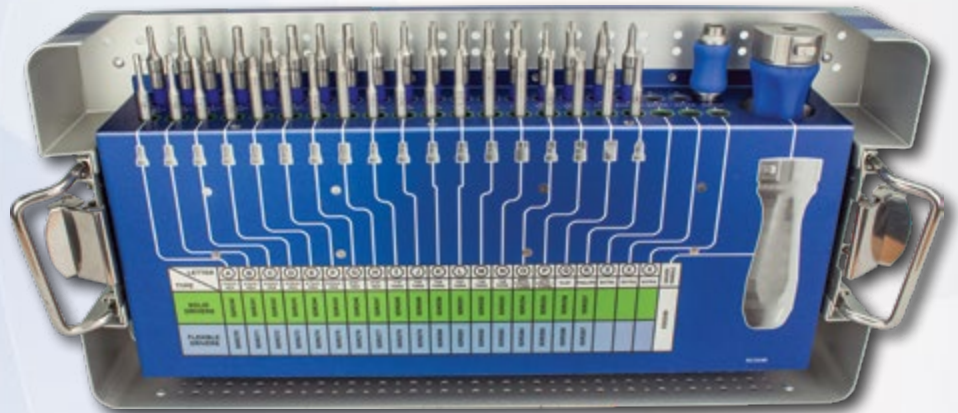
1.1 System Name: SHUKLA Maxi

Part Number: S9MAXI

Version: 3

1.2 Primary Use

The SHUKLA Maxi Universal Large Screw Extraction System from Shukla Medical is a comprehensive screwdriver system designed to simplify the removal and insertion of large bone screws commonly found in both trauma and total joint surgeries.



1.3 System History

The original SHUKLA Maxi system was created due to the lack of an all-encompassing solution to the ongoing issue of finding the proper driver for the screws encountered during surgery.

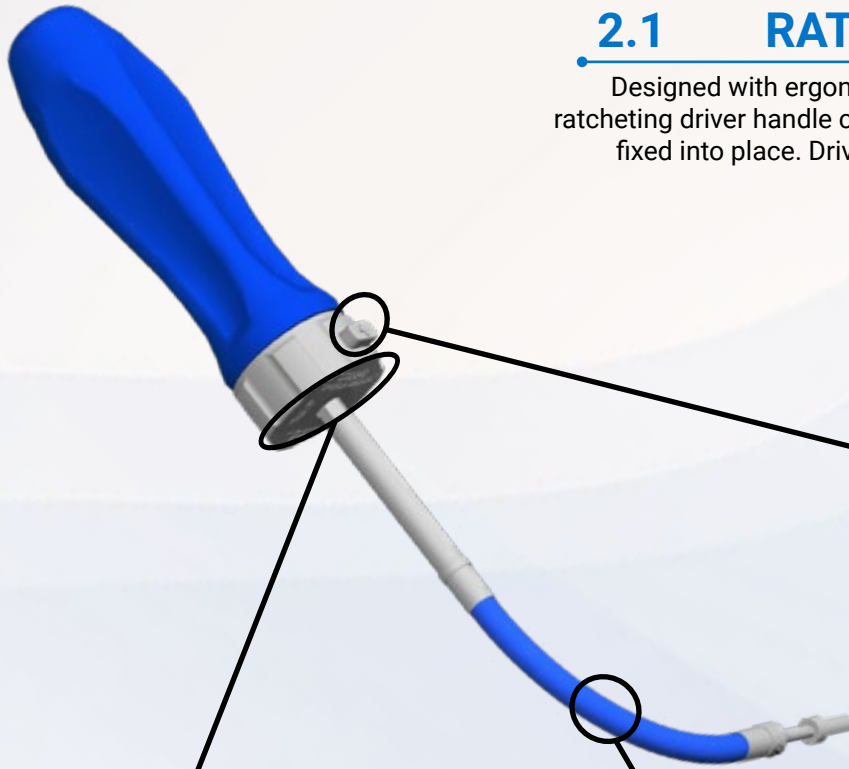
The original Maxi system was an acquired product from the original acquisition of Snap-On in the '90s. The first Maxi system was in a laydown tray and debuted in 1996, pioneered by our product manager. Version 2 however, was the brainchild of the S.S. White Medical president, and came to fruition in 2009.

The Maxi v2 not only added brand new tip configurations, but also updated the case design to be vertical as well as added flexible shaft versions for the various drivers. V3 arrived in 2019, bringing additional new drivers, a new hex connection, a brand new handle, a power adaptor, and more.

Parts not shown to scale

2.1 RATCHETING HANDLE

Designed with ergonomic comfort in mind. The push-to-connect ratcheting driver handle can ratchet forward and in reverse, or can be fixed into place. Drivers lock into the handle with a simple push.



Easily visible markings denote whether the handle will ratchet forward, in reverse, or will be locked into place.



Push-to-Connect chuck allows for easy locking of drivers so that no time is lost in the O.R.



Flexible shaft drivers can reach difficult geometry with ease without a loss in torque.

3.1 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.

3.2 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.

3.3 Storage

- It is recommended to store all Shukla Medical instrumentation in a clean, dry environment. Under 50% relative humidity; $\leq 75^{\circ}\text{F}/24^{\circ}\text{C}$.
- Proper handling and storage of the instrumentation is mandatory. Long-term use of this system may produce stresses and cause weakness, which could become a focal point for failure.

3.4 Intended Use

The SHUKLA Maxi (S9MAXI) Universal Large Screw Extraction System is designed to remove or insert large bone screws with minimal bone loss.

Instrumentation from Shukla Medical is recommended for use only within the intended design, and only by licensed healthcare professionals. Any uses other than those indicated may cause adverse results to the instrumentation or to the patient.

3.5 Indications for Use

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)

3.6 Additional Recommendations

During revision procedures, the SHUKLA Mini (for smaller screws) and the SHUKLA Screw (for broken or stripped screws) are recommended for use in conjunction with the SHUKLA Maxi for universal screw removal capabilities.

4 SURGICAL TECHNIQUE

SHUKLA Maxi | Drivers & Handle

STEP 1

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



Image 1

STEP 2

Choose solid or flexible driver style. (Image 2)

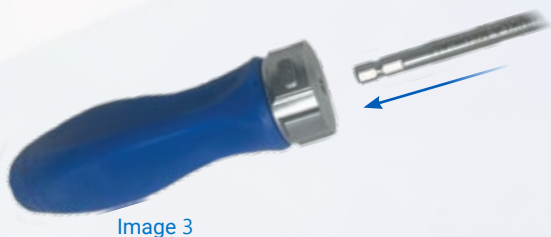
Tip: Rigid drivers are recommended for screws with a straightforward approach.

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



STEP 3

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



STEP 4

Set drive mode (Image 4) for the ratcheting handle:

Center: Ratcheting disabled

Forward: Insert screws

Back: Remove screws

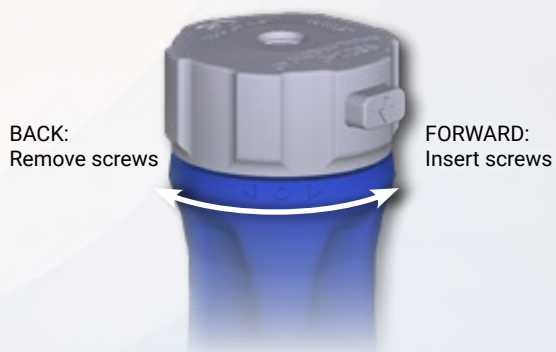


Image 4

STEP 5

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

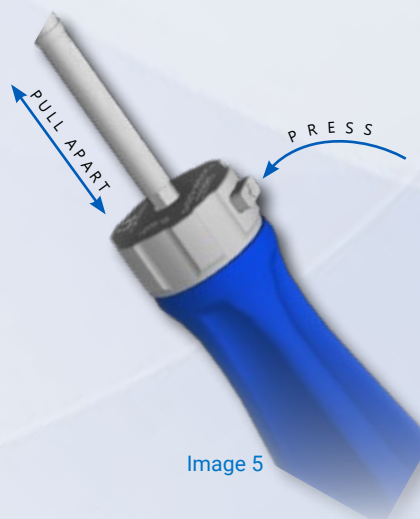


Image 5

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. (Image 6)

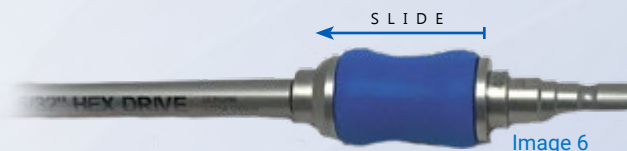


Image 6

5 CLEANING & STERILIZATION

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



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CONSULT
INSTRUCTIONS
FOR USE



NON-STERILE
PRODUCT

6 COMPONENTS LIST

Component List		
Std Qty	Part Number	Description
1	SAD001	Adapter Assy, Hudson Power Drill, 2.75"
1	SCS240	Case & Lid, MAXI System
1	SDR240	Driver, Rigid, Hex, 3 mm
1	SDR241	Driver, Rigid, Hex, 3.5 mm
1	SDR242	Driver, Rigid, Hex, 4 mm
1	SDR243	Driver, Rigid, Hex, 4.5 mm
1	SDR244	Driver, Rigid, Hex, 4.7 mm
1	SDR245	Driver, Rigid, Hex, 5 mm
1	SDR246	Driver, Rigid, Hex, 5/32"
1	SDR247	Driver, Rigid, Hex, 3/16"
1	SDR248	Driver, Rigid, Torx, T15
1	SDR249	Driver, Rigid, Torx, T20
1	SDR250	Driver, Rigid, Torx, T25
1	SDR251	Driver, Rigid, Torx, T27
1	SDR252	Driver, Rigid, Torx, T30
1	SDR253	Driver, Rigid, Torx, T40
1	SDR254	Driver, Rigid, Cruciform, 3.8 mm
1	SDR255	Driver, Rigid, Cruciform, 5.5 mm
1	SDR256	Driver, Rigid, Flat
1	SDR257	Driver, Rigid, Phillips

Component List		
Std Qty	Part Number	Description
1	SDR270	Driver Assy, Flexible, Hex, 3 mm
1	SDR271	Driver Assy, Flexible, Hex, 3.5 mm
1	SDR272	Driver Assy, Flexible, Hex, 4 mm
1	SDR273	Driver Assy, Flexible, Hex, 4.5 mm
1	SDR274	Driver Assy, Flexible, Hex, 4.7 mm
1	SDR275	Driver Assy, Flexible, Hex, 5 mm
1	SDR276	Driver Assy, Flexible, Hex, 5/32"
1	SDR277	Driver Assy, Flexible, Hex, 3/16"
1	SDR278	Driver Assy, Flexible, Torx, T15
1	SDR279	Driver Assy, Flexible, Torx, T20
1	SDR280	Driver Assy, Flexible, Torx, T25
1	SDR281	Driver Assy, Flexible, Torx, T27
1	SDR282	Driver Assy, Flexible, Torx, T30
1	SDR283	Driver Assy, Flexible, Torx, T40
1	SDR284	Driver Assy, Flexible, Cruciform, 3.8 mm
1	SDR285	Driver Assy, Flexible, Cruciform, 5.5 mm
1	SDR286	Driver Assy, Flexible, Flat
1	SDR287	Driver Assy, Flexible, Phillips
1	SSD240	Handle Assy, In-Line, Ratcheting, Hex, 1/4"



Revolutionizing the Art of Revision Surgery

Shukla Medical designs and manufactures instrumentation for orthopedic implant extraction at our headquarters in St. Petersburg, Florida, USA. We are proud to be an ISO 13485:2016 Certified company.

In 1998, aerospace component manufacturer S.S. White Technologies, Inc. acquired the Medical Products Division of Snap-On. S.S. White rebranded the medical division in 2007 to create Shukla Medical.

Today, Shukla Medical is the industry leader in orthopedic implant extraction tools. We are the only company to offer a comprehensive, truly universal orthopedic revision line for removing IM nails, hip and knee implants, spine hardware, and broken or stripped screws. Surgeons and industry leaders know: **If Shukla can't get it out, no one can.**

Contact us to learn more

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24 hours a day, 7 days a week
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When you have tried all known techniques to extract an implant or remove a screw but determine you need suggestions for alternate techniques, help is only a phone call away. We will quickly put you in touch with our Technical Experts who will suggest other solutions to use our tools.



SHUKLA Medical offers the best warranty in the industry. Every component in a SHUKLA extraction system is designed and manufactured by us. Every component in our extraction systems that is not a single-use* or a wear* component is warranted against manufacturing defects for the life* of the system. All other parts are covered for as long as the purchased version of the system is actively marketed by SHUKLA Medical.

*Please see our website for the complete explanation of these terms and full details on our warranty.