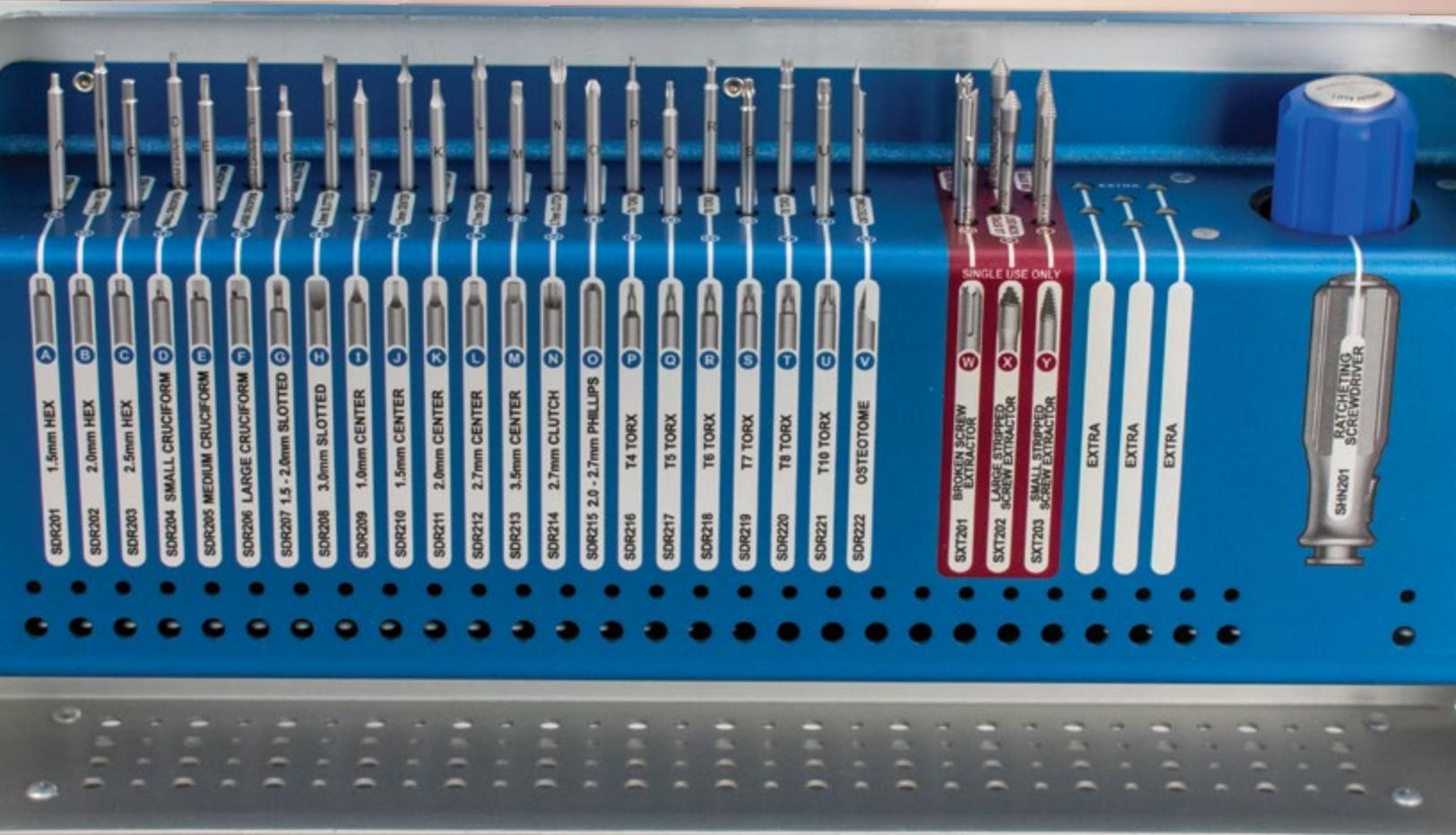


PRODUCT GUIDE

#1
System 1 of 15

SHUKLA *mini*

Universal Small Screw Removal Solution



SHUKLA MEDICAL®

Universal Orthopedic Extraction Technologies

Revolutionizing the Art of Revision Surgery

SHUKLA mini

Universal Small Screw Removal Solution

System Name: SHUKLA Mini v4

Primary Use

The SHUKLA Mini is a comprehensive screwdriver system designed to simplify removal of virtually all small bone screws found in craniomaxillofacial, hand, wrist, foot, ankle, & spine procedures.



System History

There was always a universal need for small screw removal for hand, foot, and facial revision surgery. It was the lack of an all-encompassing solution to this problem that led to the creation of the first Mini system.

The original Mini system was in a laydown tray and debuted in 1996. It was developed by the product manager at Snap-On Medical. Once Snap-On Medical was acquired by what is Now SHUKLA Medical, a senior executive with a lifetime of experience in Orthopedic instruments spearheaded the development of the second version (v2) in 2008. The v2 added broken & stripped screw capabilities as well as brand new tip configurations. The third version (v3) in 2011 was an update that brought with it even more drivers, a newly designed vertical case, and a brand new ergonomic handle. Finally, the current version, version 4 (v4) introduced in 2017, further refined the handle design and added even more drivers and tip configurations.

1996: Version 1 Introduced

2008: Version 2 Introduced

- Broken & Stripped Screw Capabilities
- More Drivers
- Vertically Designed Case

2011: Version 3 Introduced

- More Drivers
- Newly Designed Vertical Case
- New Ergonomic Handle Design
- Battery Powered Driver (removed)

2017: Version 4 Introduced

- More Drivers
- More Tip Configurations
- Further Refined Handle Design
- Staggered Design for Drivers

Key Benefits

- 25 drivers across a universal spectrum. Includes drivers and extractors as small as 1 mm in size to remove even the smallest of screws.
- Minimize bone loss - less cost to the O.R. and less risk to the patient
- Ergonomic Handle designed to minimize surgeon fatigue. Impact Cap was flattened to reduce mallet deflection.



L: SHUKLA Mini v3 Handle (2011)

vs.

R: SHUKLA Mini v4 Handle (2017)

- Broken and Stripped Extractors - A backup option to help make sure you can always close a case successfully.



- Included Osteotome blade allows for the removal of bone ingrowth from screw wells.
- Minimize lost time searching for compatible driver - universal compatibility

Universal Shukla System Benefits for Better Patient Outcomes

Less Time Spent in O.R.

- Reduces risk of infection to patient
- Reduces time spent under anesthesia
- Reduces cost to the hospital

Universal Designs

- Less prep time for surgeons
- Less space taken up in the O.R.
- Reduces need for other systems or tools

Ergonomic Design

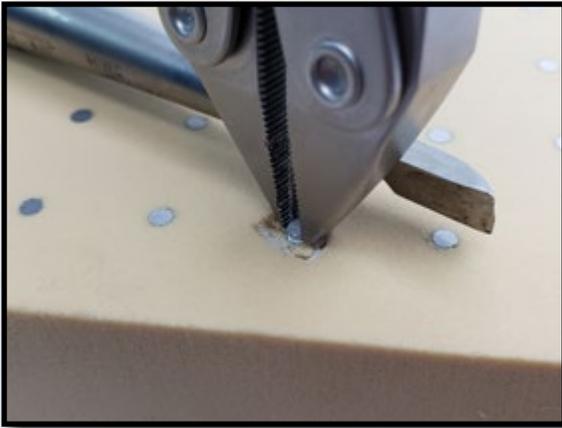
- Reduces surgeon stress
- Reduces surgeon fatigue
- Better grip/reduces slippage

Comprehensive Design

- Addresses all known challenges
- Tools ensure surgery is a success
- Provides backup solutions during surgery

Alternative Method Comparison

Without a SHUKLA Mini system or the correct driver designed for the screw, the alternative method for removing a broken small screw during revision surgery would be to use a bone chisel to chip away at the bone surrounding the screw and then try to grip the screw shaft with pliers to twist it out. This was not only costly in O.R. time and led to surgeon fatigue but also costly in bone loss to the patient, not to mention not the best success rate. Not having correct drivers on-hand could mean that technicians will make trips to instrument rooms in search of correct drivers. This can be stressful and would extend the O.R. time for the patient. Why not get it right the first time and eliminate the need to hunt down the proper driver with every case?



Pliers attempting to remove a screw after a bone chisel chipped away at the surrounding bone.



Left: Bone loss after screw removal via chisel/pliers combo

Right: Bone loss after screw removal via SHUKLA Mini system

Return On Investment Justification

According to a study published in JAMA Surgery, the cost of one minute in an O.R. can vary anywhere from \$36 per minute to \$100 per minute. It is estimated that having all the right drivers on-hand can save about 30 minutes per surgery. Taking just the lowest estimate of time savings, the savings per surgery can be estimated at 30 minutes x \$36 per minute = \$1,080. At this rate, the SHUKLA Mini, which sells for \$6,400 would pay for itself when you use it only six times.

When You Don't Have It

Imagine the frustration and stress caused by having to close up a patient and calling the case unsuccessful because a series of small screws were being uncooperative? No one wants to be the surgeon that has to tell their patient that their hand surgery couldn't be completed because "there were a few screws we couldn't remove."

Surgeons often struggle to find the right drivers and tips for the screws they need to remove. The Mini system sells itself not only on its universal capabilities but also on its ability to grant peace of mind.

How We Compare

Most orthopaedic implant manufacturers provide revision/extraction tools suited *only* for their own implants. Even suppliers that claim to offer extraction sets basically have an assortment of tools thrown together as an afterthought. For Shukla Medical, **extraction is what we do**. Our engineers design truly universal tools to help remove any implant/hardware out there, making our competition essentially nonexistent. Our patented designs are revolutionizing the art of revision surgery; we proudly stand alone. We have still tried to provide a comparison to other systems on the market.

The SHUKLA Mini has few primary competitors. The other alternative sets cost more than the SHUKLA Mini (sometimes significantly) and offer fewer drivers to remove screws. The SHUKLA Mini has 29 drivers, double what the other small screw removal sets on the market provide. None of our competitors offer a ratcheting handle in their system. Our ratcheting handle not only offers an ergonomic grip but also a push-to-connect chuck with a rear impact cap.

PATENT

- Quick-Connect Ratcheting Driver Handle

The engineers at Shukla are the best at what they do. They've worked hard to create ingenious patented items just for the SHUKLA Mini system.

The tools and instruments they come up with are wonderful and always help make every step of the process easier.



Handle

Designed with ergonomic comfort in mind. The quick-connect ratcheting driver handle has a three-way mechanism and can ratchet forward and in reverse, or can be fixed into place. Drivers snap into the handle with a simple push.

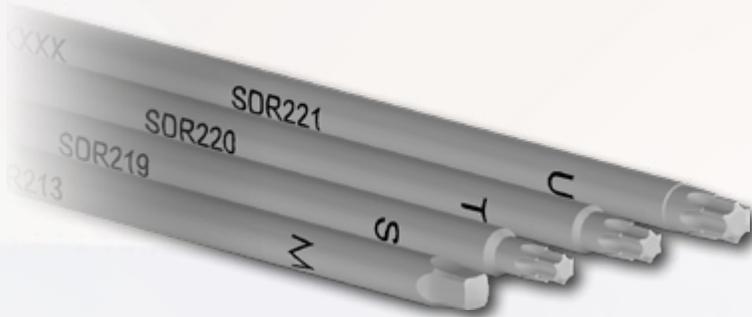
Impact Cap

When there is bone ingrowth in the screw, the impact cap allows the surgeon to gently tap the driver into the screw head. The impact cap is also useful when using the osteotome blade.



Attention to Detail

The move to a vertical case was inspired by the suggestions from surgeons in the O.R. They wanted the system to take less space during the surgery. Based on feedback from surgeons, the ergonomic handle was refined to cause less slippage and give more comfort to the grip.

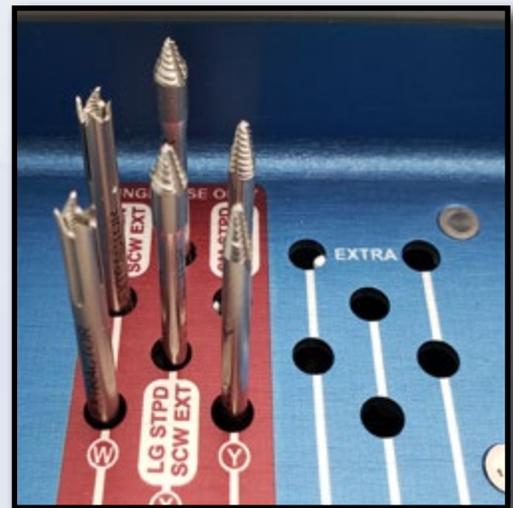


The new Mini v4 added four new drivers, 7, T8, and T10 Torx, and a 3.5 mm Square, to the set, increasing the total count to 25 drivers.

Each new driver added is the result of tireless research by the engineering team to help guarantee the maximum quality and capability of screw removal, every time.

The Mini v4 case was redesigned to have a more staggered display of extractors and drivers. This change allows for easier access to what the surgeon needs, when they need it.

The case also allows for six extra slots for proprietary drivers, extra extractors, or extra standard drivers as well.



The case was designed for very easy-to-read identification of the drivers, making selection of the correct one a snap.

The SHUKLA Mini contains multiple types of drivers:

- Clutch
- Torx
- Hex
- Cruciform
- Phillips
- Square
- Flat

Components List

Component List		
Std Qty	Part Number	Description
1	SCS201	Case, Mini V3 Screw System
1	SDR201	Driver, Hex, 1.5 mm
1	SDR202	Driver, Hex, 2.0 mm
1	SDR203	Driver, Hex, 2.5 mm
1	SDR204	Driver, Cruciform, 1.37 mm
1	SDR205	Driver, Cruciform, 2 mm
1	SDR206	Driver, Cruciform, 2.5 mm
1	SDR207	Driver, Flat, 1.5 mm to 2 mm
1	SDR208	Driver, Flat, 3 mm
1	SDR209	Driver, Square, 1 mm
1	SDR210	Driver, Square, 1.5 mm
1	SDR211	Driver, Square, 2 mm
1	SDR212	Driver, Square, 2.7 mm
1	SDR213	Driver, Square, 3.5 mm
1	SDR214	Driver, Clutch, 2.7 mm
1	SDR215	Driver, Phillips, 2 to 2.7 mm
1	SDR216	Driver, Torx, T4
1	SDR217	Driver, Torx, T5
1	SDR218	Driver, Torx, T6
1	SDR219	Driver, Torx, T7
1	SDR220	Driver, Torx, T8
1	SDR221	Driver, Torx, T10
1	SDR222	Driver, Osteotome
1	SHN201	Handle Assy, Ratcheting, for MINI
2	SXT201	Extractor, Broken Screw, 2mm for MINI, Single Use
2	SXT202	Extractor, Stripped Screw, .157" for MINI, Single Use
2	SXT203	Extractor, Stripped Screw, .122" for MINI, Single Use



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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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.