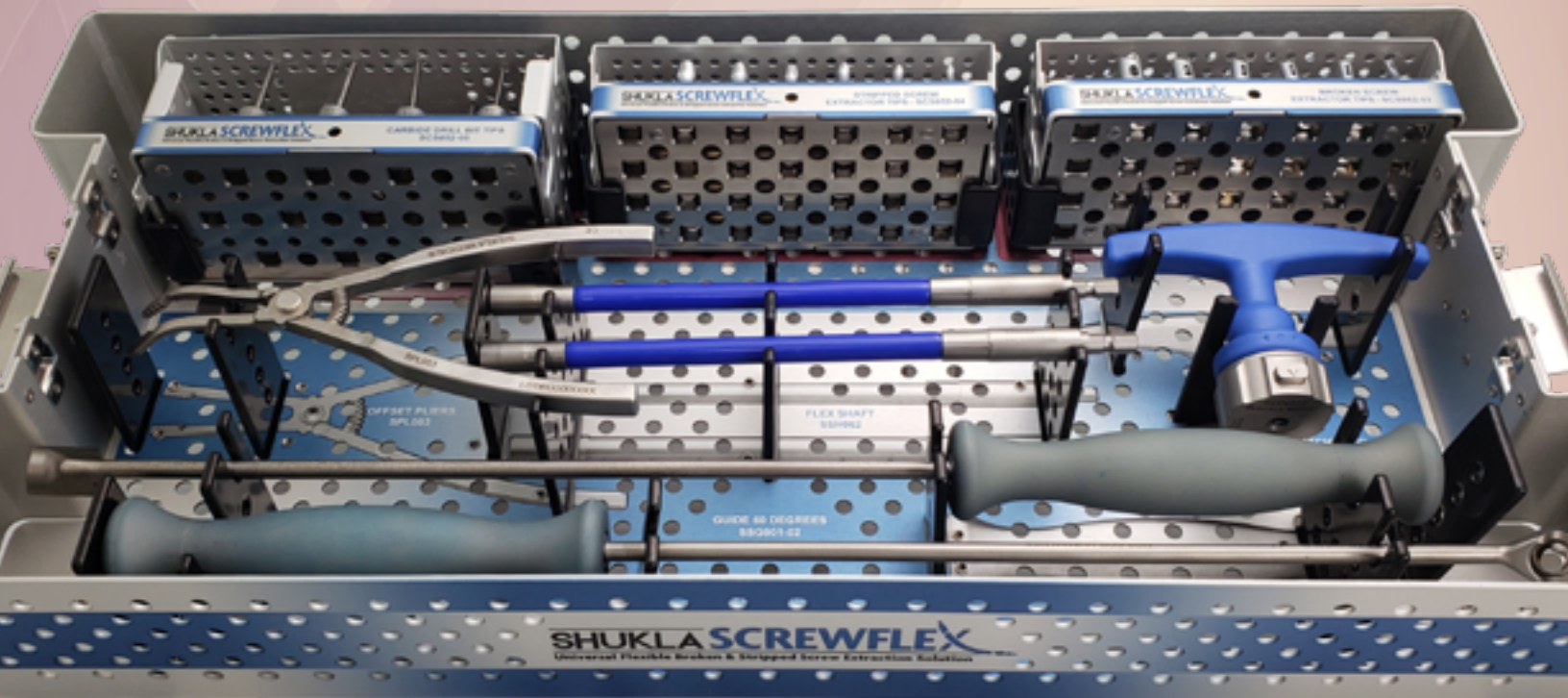


PRODUCT GUIDE

SHUKLA SCREWFLEX

Universal Flexible Broken & Stripped Screw Extraction System

#20
System 20 of 25



SHUKLA MEDICAL[®]

Universal Orthopedic Extraction Technologies

THE EXTRACTION EXPERTS

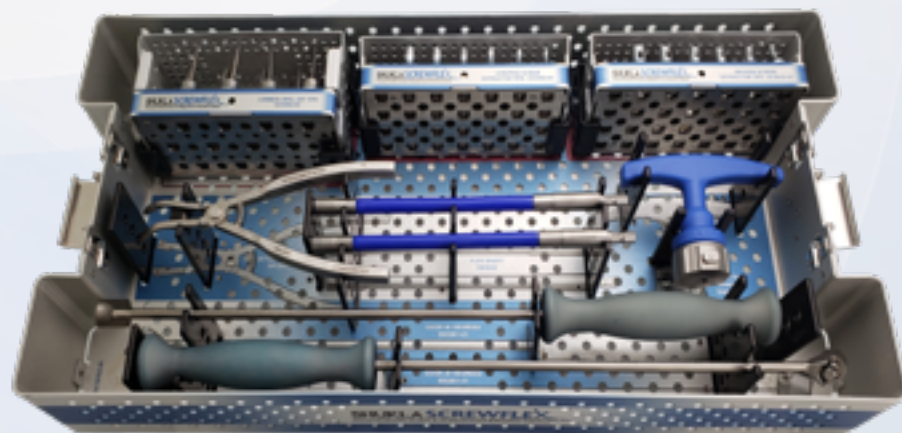
SHUKLA SCREWFLEX

Universal Flexible Broken & Stripped Screw Extraction System

System Name: SHUKLA ScrewFlex v1

Primary Use

The SHUKLA Broken & Stripped ScrewFlex system is a universal screw removal system designed to remove all broken, stripped, and seized bone screws with minimal bone loss to the patient. This set is perfect for acetabular cup revision procedures.



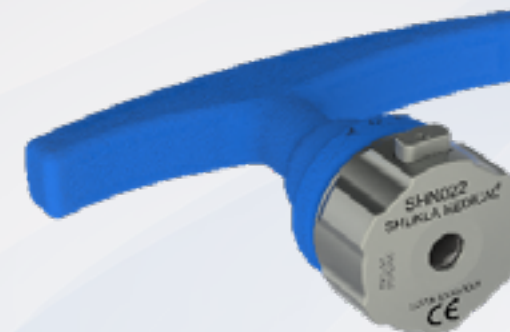
System History

Over the years, as more and more surgeons began using our SHUKLA Screw system, we noticed that during acetabular cup and shoulder revisions, it was difficult for surgeons to properly access the screws that needed removing. Normally, our SHUKLA Maxi system was used on those cases, but when a screw ended up broken or stripped, it presented a problem. In 2018, our engineers began development on the SHUKLA ScrewFlex to provide surgeons with a solution. In 2023, they realized their vision - the same industry leading broken and stripped screw removal capabilities as our SHUKLA Screw married with the patented flexible shaft technology of our SHUKLA Maxi.

2022: Version 1 Introduced

Key Benefits

- Ratcheting quick-connect T-Handle with locking capability and ergonomic design grants easier and simpler screw removal with less fatigue.



- Flexible shafts allow access to hard-to-reach geometry without sacrificing torque for the removal of screws.



- Carbide Drill bits allow for the creation of a well when one isn't readily available. The carbide tips make short work of all commonly used orthopaedic metals.



- Reverse threads quickly engage with the broken or stripped screw and remove it with ease.
- Universal compatibility - six sizes of Stripped Extractors, six sizes of Broken Extractors, and six sizes of Drill Bits ensure that a universal range of screws can be removed.
- Minimize bone loss - less cost to the O.R., less risk to the patient. Our extractors remove the screw with an amazingly low amount of bone loss.

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

Ergonomic Design

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

Universal Designs

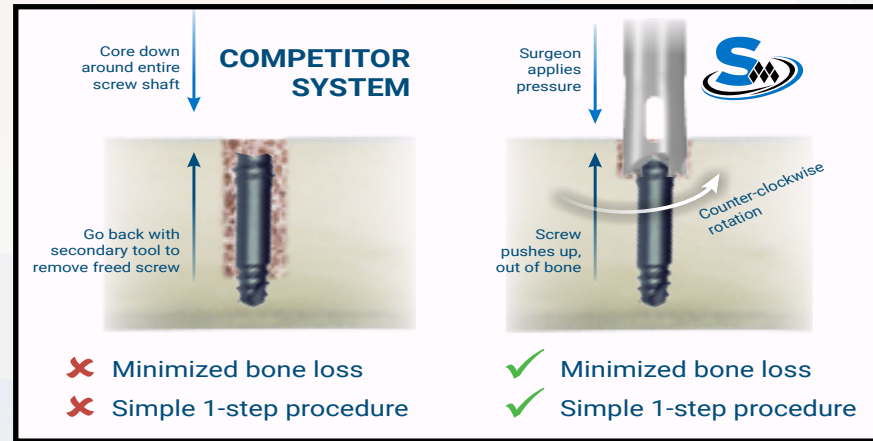
- Less prep time for surgeons
- Less space taken up in the O.R.
- Reduces need for other systems or tools

Comprehensive Design

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

Alternative Method Comparison

Before Shukla arrived on the scene with this revolutionary screw extraction system, surgeons had to do a lot of prep or a lot of waiting to get broken or stripped screws removed. Without the SHUKLA system, surgeons would need to core the bone down around the screw shaft and use a second tool to try and remove the shaft. This would lead to higher O.R. costs, lower success rates, higher surgeon frustration, and lower patient satisfaction. The SHUKLA ScrewFlex helps alleviate all of those issues, along with being able to reach inconveniently located acetabular cup screws with ease.



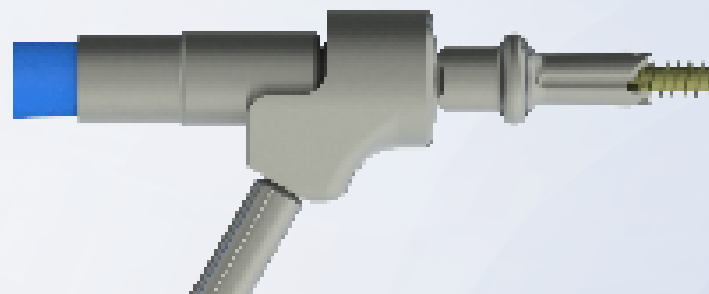
Return On Investment Justification

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, with the average cost of a minute in the O.R. at a staggering \$66! Using this system, you can save anywhere from 30 minutes to 60 minutes per surgery. With the SHUKLA system, what used to take anywhere up to 60 minutes can be accomplished faster than it took to type this sentence. At an average savings of 45 minutes per surgery and using the lowest O.R. rate of \$36/minute, the savings per surgery comes to an average of \$1,620. A SHUKLA ScrewFlex sells for \$14,900, meaning that even at the lowest cost per minute in the O.R. it would only take 9 uses to fully pay itself off.

When You Don't Have It

There are two guarantees that occur when not having a SHUKLA ScrewFlex in the O.R. during an acetabular cup revision. The first is that your time spent in the O.R. rises dramatically. The second is that the potential for unnecessary bone loss also significantly rises. Think on this common scenario: As a surgeon, you have a patient with several broken and stripped screws in their acetabular cup. You have no reliable way to reach the screws at that angle to chip away at the bone around the screw. Even if you could, that would just mean needing to spend time and money on bone cement or a biologic later on. Trying to remove the screw presents its own complications - the time spent on just the screws starts to rack up higher and higher.

Or you can use a SHUKLA ScrewFlex system and save yourself time, effort, and frustration.



How We Compare

Most orthopedic 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.

Shukla Medical's extractor designs are one of the main reasons why the ScrewFlex system stands apart from our competitors. Other systems utilize a multi-step process that always results in extra, unnecessary bone loss and extra time wasted. The SHUKLA ScrewFlex system, by contrast, is a single-step process that grabs the screw from the proximal end and removes it in mere seconds without creating any large voids or bone loss.

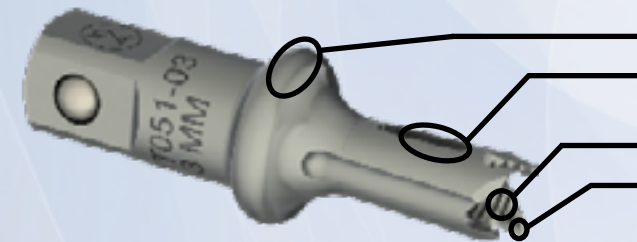
The SHUKLA ScrewFlex system offer a wider range of sizes of extractors than anyone else on the market. Our patented flexible shaft technology means that our extractors can easily reach screws in locations that standard extractors rarely can. No one else can remove broken and damaged screws as easily, as quickly, and with as little bone loss as us.

PATENTS

- Broken Screw Extractor
- Stripped Screw Extractor
- Reverse Carbide Drill Bit
- Flex Shaft
- Flex Shaft Guide

The SHUKLA ScrewFlex system is incredible at what it does, and that is because of our engineering team.

Their patented Broken and Stripped Screw Extractors are a big part of why our Screw set is so powerful.

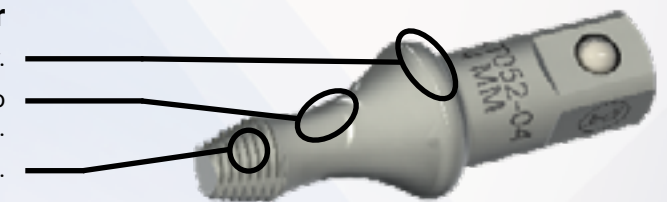


Broken Screw Extractor

- Collar for easy removal of extractor from guide or caddy.
- Bone clearing window to allow bone to pass through to prevent blockage.
- Tapered reverse threads capture the screw quickly.
- Trephine teeth cut through bone with ease.

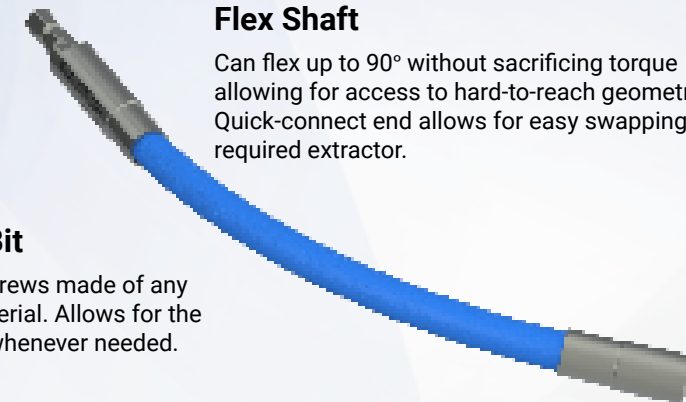
Stripped Screw Extractor

- Collar for easy removal of extractor from guide or caddy.
- Low profile angle to help reach further. Can even go through spinal tulips to get to the screw inside.
- Reverse threading cuts new threads into the wall of the stripped screw well.



Flex Shaft

- Can flex up to 90° without sacrificing torque allowing for access to hard-to-reach geometry.
- Quick-connect end allows for easy swapping of the required extractor.



Carbide Drill Bit

- Can cut through screws made of any medical grade material. Allows for the creation of a well whenever needed.



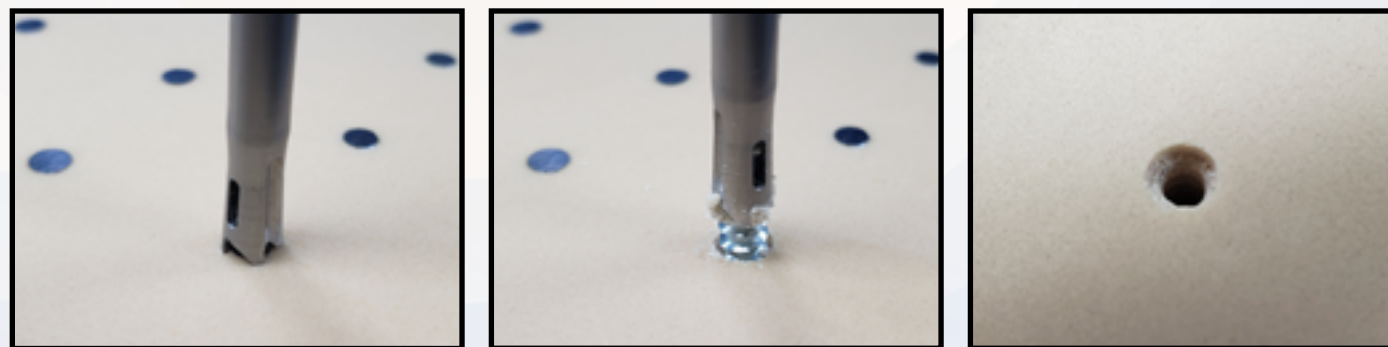
Flex Shaft Guide

- Allow surgeons to hold the perfect angle when removing screws from hard-to-reach areas. Comes with two different base angles - 20° and 60°.



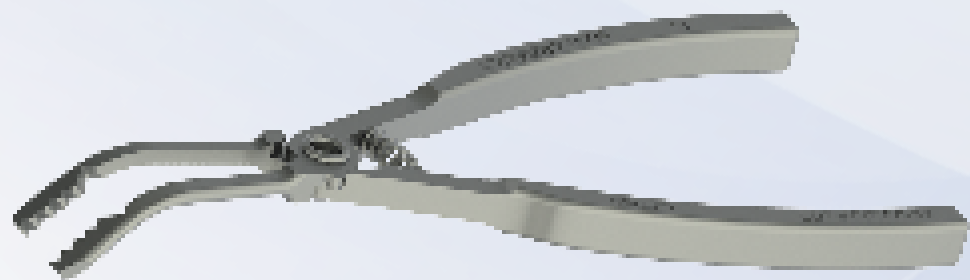
Attention to Detail

The SHUKLA ScrewFlex's broken screw extractors are designed with bone preservation in mind. The built in trephine teeth coupled with the one step process preserves every bit of bone possible. The teeth only dig down far enough for the extractor to reach the broken screw, and once it is engaged, will automatically start reverse threading the screw out leaving healthy bone intact. It is possible to re-insert a screw of the same diameter into the same hole and still engage healthy bone; that is a claim that not even the biggest ortho companies can make.



The simplicity of using the SHUKLA ScrewFlex to remove a broken screw in seconds with minimal bone loss.

The Offset Pliers in the system are angled at their tip, allowing surgeons access to hard-to-reach geometry to retrieve extractor bits when needed.



The flexible shafts in the SHUKLA ScrewFlex system are manufactured by the world leader in flexible shaft technology, S.S. White Technologies. These shafts are made from medical and aerospace grade 17-7PH stainless steel wrapped in a protective silicone casing. Why are S.S. White flexible shafts so useful? Our company has not only been designing and manufacturing them since before the invention of the electric light bulb, we also pioneered their use in the medical field. We are the first and only company with proprietary software called Perflexion® to optimize every characteristic of the flexible shaft. This results in our flexible shafts delivering a nearly full 1:1 torque ratio through the full range of bend radii in **BOTH** forward and reverse.

The flexible drivers are a 'must' in acetabular cup cases, shoulder cases and anything else where you do not have a direct line of access to the screw you are removing. Rest assured that you can remove any screw, in any location, at any time.

Components List

Component List			
Std Qty	Part Number	Description	Effective Range
1	SCS052-01	Case, Broken and Stripped Screw, Flexible System	
1	SCS052-02	Lid, Broken and Stripped Screw, Flexible System	
1	SCS052-03	Caddy, Broken and Stripped Screw, Flexible System, Broken Extractor Tips	
1	SCS052-04	Caddy, Broken and Stripped Screw, Flexible System, Stripped Extractor Tips	
1	SCS052-05	Caddy, Broken and Stripped Screw, Flexible System, Carbide Drill Bit Tips	
1	SSH062	Flex Shaft with 1/4" Square Connection	
1	SSG001-01	Guide, 20 Degrees	
1	SSG001-02	Guide, 60 Degrees	
1	SPL003	Offset Pliers	
1	SHN022	Ratcheting T-Handle	
2	SBT034-02	Drill Bit Assy, Carbide, Hudson End, 2 mm, Single Use	
2	SBT034-03	Drill Bit Assy, Carbide, Hudson End, 3 mm, Single Use	
2	SBT034-04	Drill Bit Assy, Carbide, Hudson End, 4 mm, Single Use	
2	SBT034-05	Drill Bit Assy, Carbide, Hudson End, 5 mm, Single Use	
2	SBT034-06	Drill Bit Assy, Carbide, Hudson End, 6 mm, Single Use	
2	SBT034-07	Drill Bit Assy, Carbide, Hudson End, 7 mm, Single Use	
4	SXT051-02	Extractor, Broken Screw, 2 mm, Single Use	2.0-2.5mm
4	SXT051-03	Extractor Tip, Broken Screw, 3 mm, Single Use	2.5-3.5mm
4	SXT051-04	Extractor Tip, Broken Screw, 4 mm, Single Use	3.5-4.5mm
4	SXT051-05	Extractor Tip, Broken Screw, 5 mm, Single Use	4.5-5.5mm
4	SXT051-06	Extractor Tip, Broken Screw, 6 mm, Single Use	5.5-6.5mm
4	SXT051-07	Extractor Tip, Broken Screw, 7 mm, Single Use	6.0-8.0mm
4	SXT052-02	Extractor Tip, Stripped Screw, 2 mm, Single Use	2.0mm
4	SXT052-03	Extractor Tip, Stripped Screw, 3 mm, Single Use	2.5-3.5mm
4	SXT052-04	Extractor Tip, Stripped Screw, 4 mm, Single Use	3.5-4.5mm
4	SXT052-05	Extractor Tip, Stripped Screw, 5 mm, Single Use	4.5-5.5mm
4	SXT052-06	Extractor Tip, Stripped Screw, 6 mm, Single Use	5.5-6.5mm
4	SXT052-07	Extractor Tip, Stripped Screw, 7 mm, Single Use	6.0-7.0mm



THE EXTRACTION EXPERTS

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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CONSULT
INSTRUCTIONS
FOR USE



NON-STERILE
PRODUCT



SHUKLA Surgical Tech Support
24 hours a day, 7 days a week
727-626-2771

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.