SURGICAL TECHNIQUE GUIDE

#16
System 16 of 25

SHUKLA SHOULDER

Universal Shoulder Implant Extraction System

SHUKLA MEDICAL®

Universal Orthopedic Extraction Technologies

Revolutionizing the Art of Revision Surgery

CONTENTS

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SHUKLA SHOULDER

Universal Shoulder Implant Extraction System

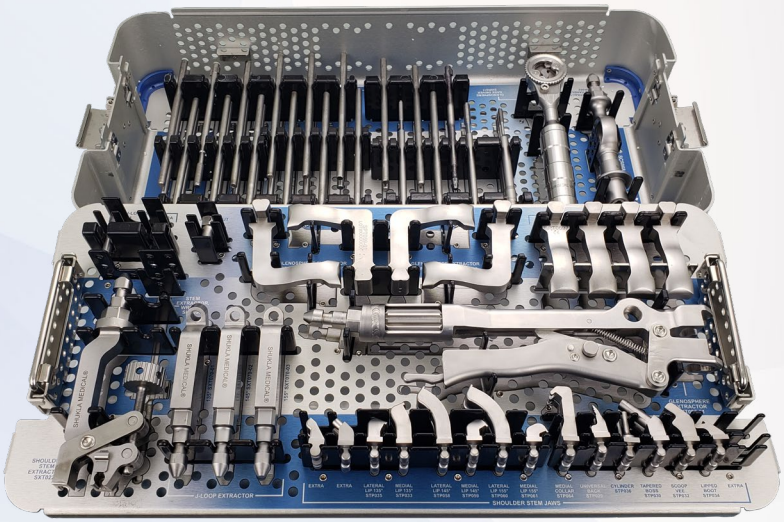
1.1 System Name: SHUKLA Shoulder

Part Number: S9SHLDR

Version: 1

1.2 Primary Use

The SHUKLA Shoulder Universal Shoulder Implant Extraction System is designed to remove any shoulder implant on the market today. Every part of this system is designed with surgeon efficiency in mind. With universal compatibility across the spectrum of implant features, the SHUKLA Shoulder system gives surgeons every tool they need for a successful extraction.

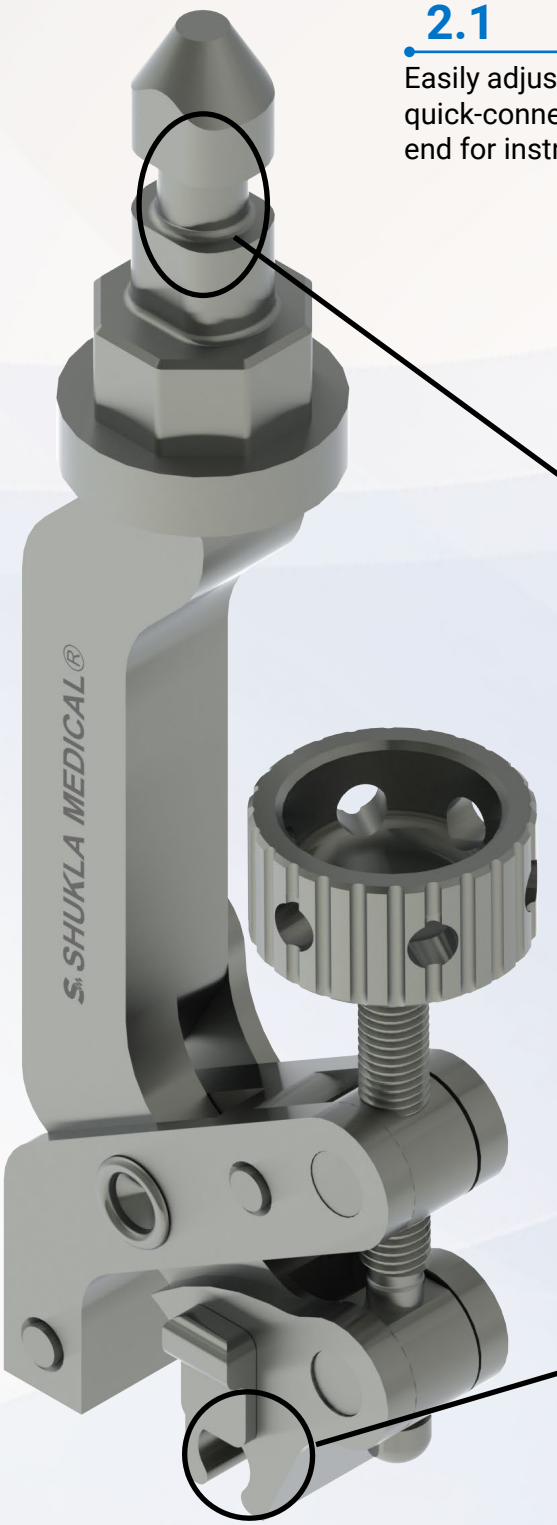


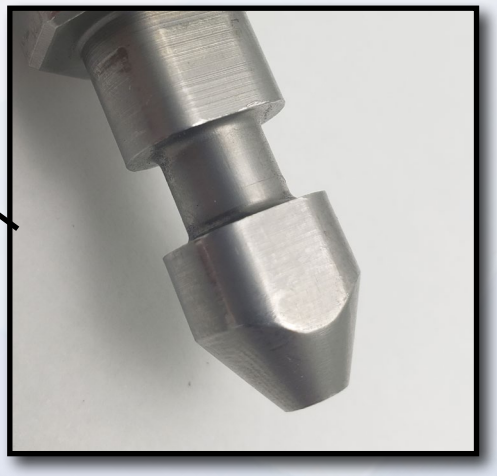
1.3 System History

Numerous surgeons over the years constantly asked Shukla Medical if they had a shoulder implant extraction system, and if not, when would they? That level of demand led our engineers to begin development of the SHUKLA Shoulder system in 2017. Our engineers worked alongside notable surgeons to make sure that the system would be universally compatible with the wide range of shoulder implants on the market. The SHUKLA Shoulder system eventually grew to become our largest, most comprehensive set yet and launched in late 2021.

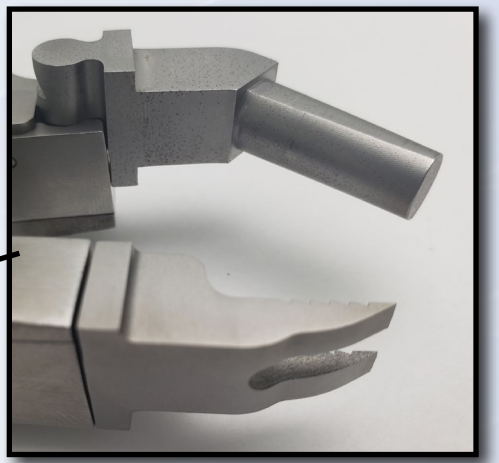
2.1 SHOULDER STEM EXTRACTOR

Easily adjusts to accomodate all sizes of implants. Includes two quick-connect slots for modular jaws, as well as a quick-connect end for instrumentation.





Quick-connect hub end on the extractor allows for instrumentation to be inserted and removed whenever needed.

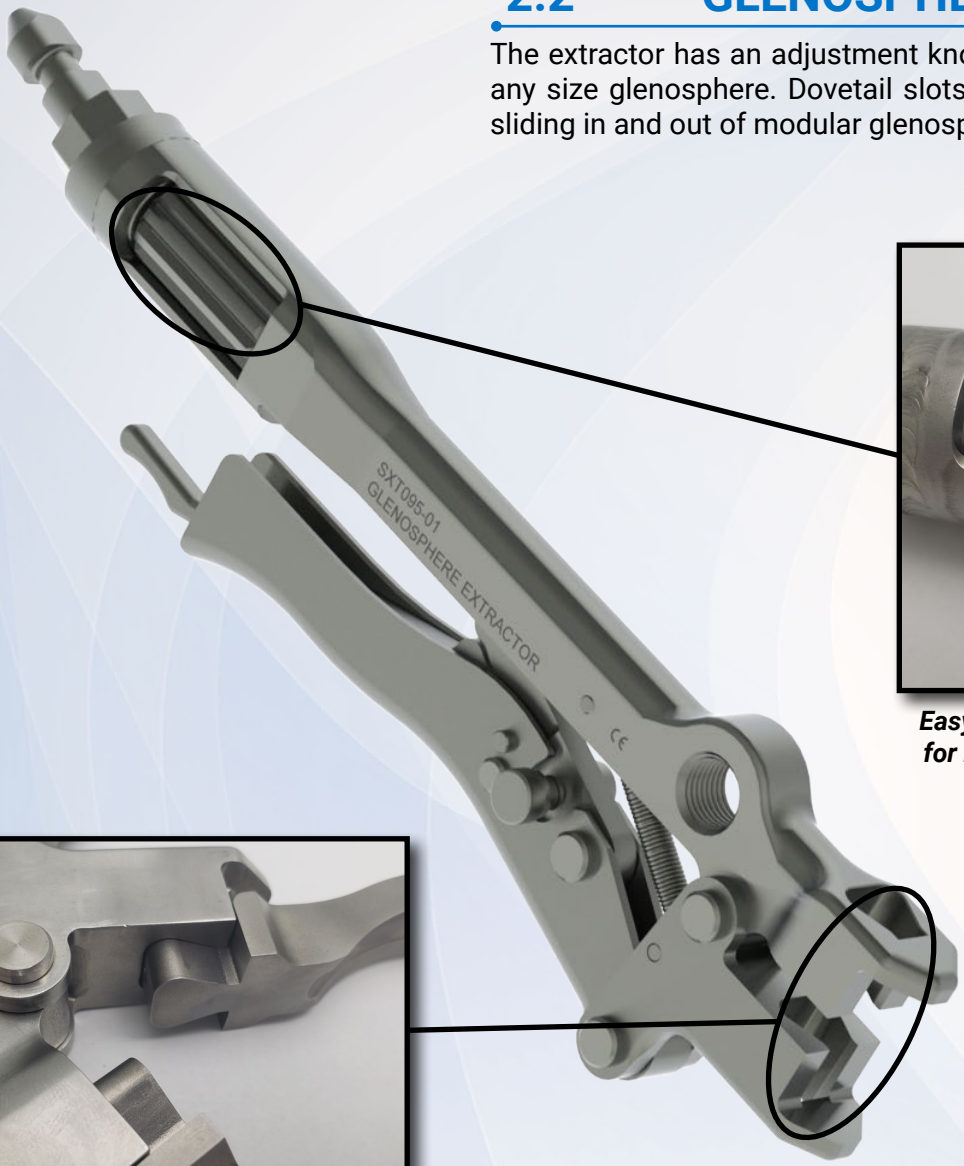


Two quick-connect slots for modular jaws allow the jaws to be mixed and matched into any needed configuration.

Parts not shown to scale

2.2 GLENOSPHERE EXTRACTOR

The extractor has an adjustment knob to ensure a tight grip on any size glenosphere. Dovetail slots on the end allow for easy sliding in and out of modular glenosphere jaws.



Easy-to-use adjustment knob allows for rapid tightening onto any size of glenosphere.

Dovetail slots in the extractor allow for the rapid insertion of any of the modular glenosphere jaws.

2.3 THREADED EXTRACTORS

18 different sized thread configurations available for quick engagement of any type of threaded implant.

3.1 Preoperative

- Appropriate x-rays and surgical notes may be used to identify manufacturer, brand, location, & condition of implanted hardware.
- The surgeon should be familiar with the general principles of revision surgery and techniques for the removal of implants.
- The instrumentation should be inspected for visible wear prior to use (see Reusable Instrument Inspection Manual, FCD-17089). Do not use the product if damage is suspected.
- Only recommended cleaning and sterilization guidelines 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.
- The surgeon should be cautious with limb position change and/or excessive torque or twisting while using the instrumentation provided in the tray.

3.3 Storage

- It is recommended to store all Shukla Medical instrumentation in a clean, dry environment. Under 50% relative humidity; ≤75°F/24°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 Shoulder (S9SHLDR) is intended for use during revision procedures to remove shoulder implants.

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

The SHUKLA Shoulder (S9SHLDR) is indicated for use during any orthopedic revision procedure in which a shoulder implant or component requires explanation.

3.6 Additional Recommendations

During shoulder revision procedures, the SHUKLA Shoulder system is recommended for use in conjunction with the SHUKLA Shoulder Blade (S9SHLDR-BLADE) flexible osteotome system, the SHUKLA Maxi (S9MAXI) large screw extraction system, the SHUKLA Mini (S9MINI) small screw extraction system, the SHUKLA Screw (S9SCREW) broken and stripped screw extraction system, and/or the SHUKLA Screwflex (S9SCREWFLEX) flexible broken and stripped screw extraction system.

STEP 1

Clearing Bone

Over the course of the procedure, it is recommended to break up as much of the bone interface and bone cement from the shoulder implant (Image 1) as possible whenever applicable. The SHUKLA Shoulder Blade (S9SHLDR-BLADE) flexible osteotome system is recommended for this purpose. Proceed to **Step 2**.

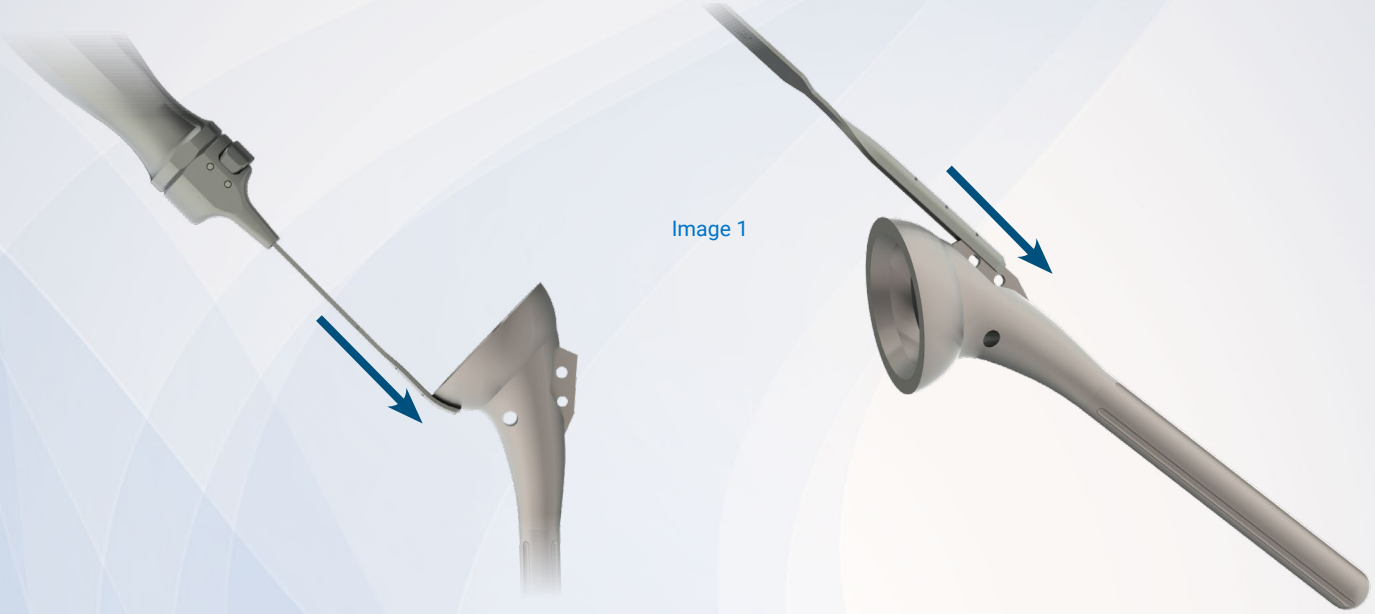


Image 1

Note: For detailed instructions on how to utilize the SHUKLA Shoulder Blade system, please consult the S9SHLDR-BLADE Surgical Technique Guide.

STEP 2

Determining Implant Type

Using any x-rays or preoperative notes available, determine whether the implant is an anatomical implant or a reverse implant.

An anatomical implant consists of a stem, a humeral head, and a glenoid. If the implant is anatomical, proceed to **Step 3**.

A reverse implant consists of a stem, a glenosphere, and stem poly liner. If the implant is reverse, skip to **Step 8**.

Anatomical (with trunnion)

Reverse

ANATOMICAL

STEP 3 Humeral Head - Option 1

The humeral head taper lock on the anatomically designed implant can be broken up using the Humeral Head Wedge (SXT020). Take the Humeral Head Wedge and wedge it between the implant's humeral head and stem. Impact the Humeral Head Wedge's impact cap (Image 2) with the Slotted Mallet (SMT003) until the lock is broken and the head is detached from the stem.

If the Humeral Head Wedge is unavailable or this method is not possible, proceed to **Step 4**. If the taper lock is successfully broken, proceed to **Step 5**.

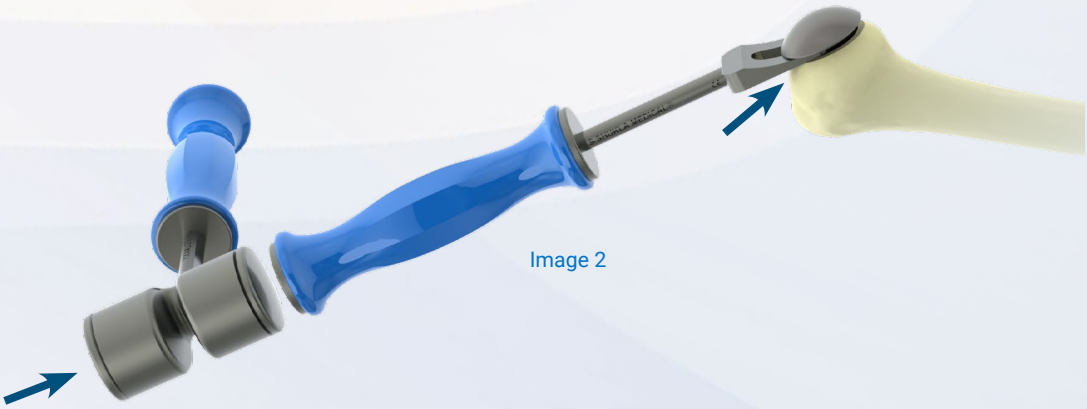


Image 2

STEP 4 Humeral Head - Option 2

If the Humeral Head Wedge option is not viable, the implant's humeral head can be pulled off using the Retrograde Lipped Puller (SOS035).

Place the lip of the puller so that it contacts the distal side of the humeral head. Slide the Slotted Mallet down the length of the Retrograde Lip Puller in a retrograde direction (Image 3) until the humeral head becomes detached from the head.

Once the humeral head has been removed, Proceed to **Step 5**.

Image 3

STEP 5

Glenoid Extraction

Using any x-rays or preoperative notes available, determine whether the anatomic shoulder implant's glenoid component has a metal base or not. If the glenoid does not have a base, proceed to **Step 6**. If the glenoid component does have a base, skip to **Step 7**.

STEP 6

Glenoid Chisel

For glenoid components without a base, the Glenoid Chisel (SOS019) should be used. Prep the glenoid component by using the Glenoid Chisel to remove the cement around it. To remove the glenoid component, position the chisel underneath it and pry the glenoid component off (Image 4). Apply light impacts using the Slotted Mallet (SMT003) if necessary. Once removed, skip to **Step 26**.

Note: If the glenoid component also consists of a keel, the Glenoid Chisel can be used to cut through.

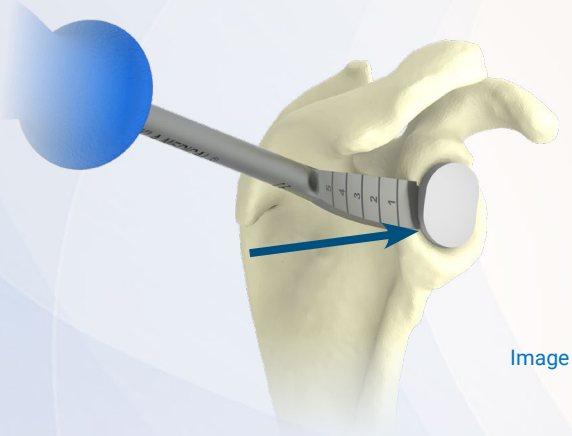


Image 4

STEP 7

Poly Extractor

For a glenoid component with a base, use the Poly Extractor (SXT096) in order to remove it. Chuck the Poly Extractor into a drill, and drill forward into the glenoid component (Image 5). Once the drill bottoms out, the glenoid component will be pushed off the glenoid base (Image 6). The glenoid component can then be removed from the Poly Extractor. After it has been successfully removed, skip to **Step 26**.

Note: Make sure to keep the drill as straight as possible to avoid bending the tip of the Poly Extractor.

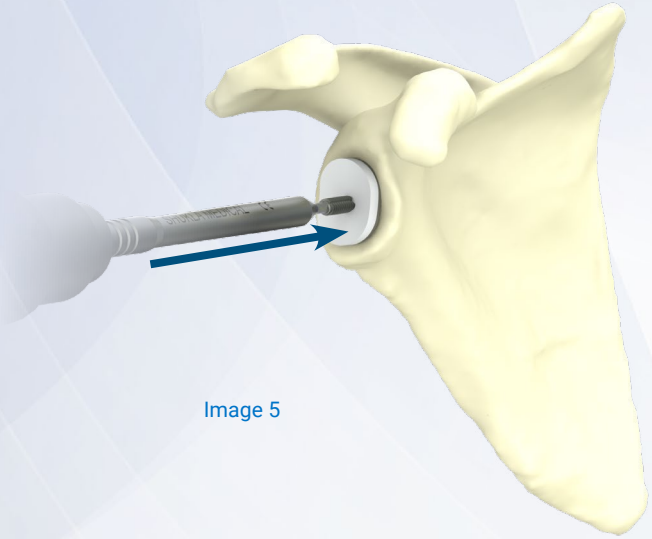


Image 5

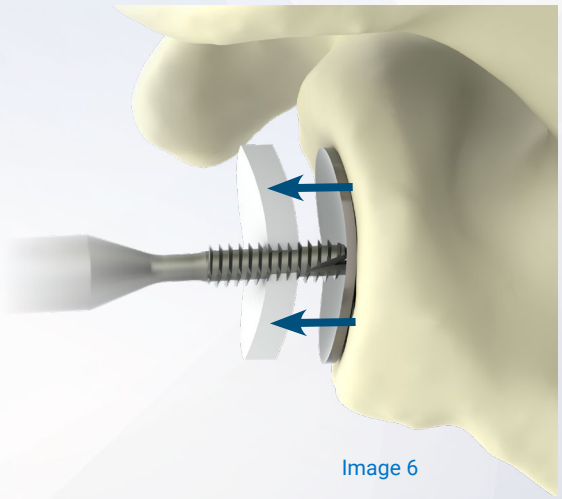
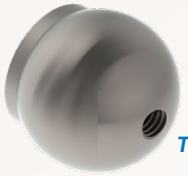


Image 6

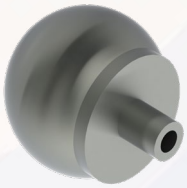
REVERSE

STEP 8 Glenosphere Locking Screw Removal

Determine if the glenosphere either has a taper lock or is threaded. If it has a taper lock, the screw is missing, or there is no screw hole opening, proceed to **Step 9**.



Threaded



Taper Lock

If the glenosphere is threaded and if the screw size is known, use the appropriate Maxi driver from the SHUKLA Maxi system (S9MAXI) or the SHUKLA Mini system (S9MINI) to remove the locking screw (Image 7). If the screw size is unknown or is stripped, use the appropriate stripped screw extractor from the SHUKLA Screw system (S9SCREW) to remove the screw (Image 8). Once complete, skip to **Step 10**.

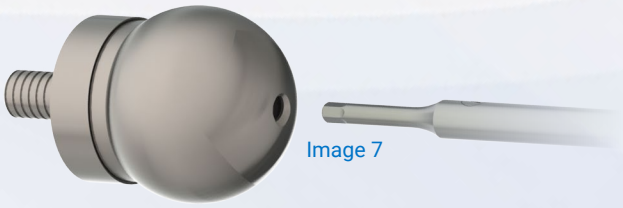


Image 7

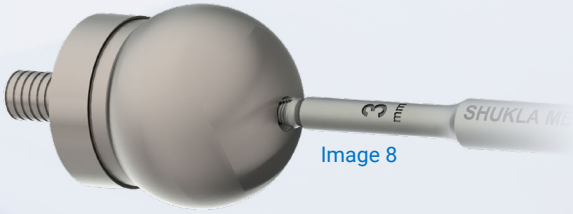
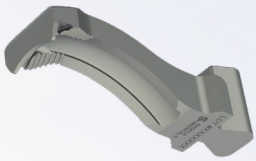


Image 8

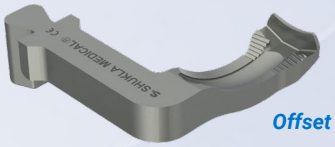
STEP 9 Glenosphere Extractor

If the glenosphere has a taper lock or the screw has been removed, you can choose between the Glenosphere Extractor (SXT095-01) or a Threaded Extractor. If there is no screw hole opening, the Glenosphere Extractor is the only option. If using the Threaded Extractor method, skip to **Step 14**.

Choose the Glenosphere Jaws that will best access the opening: Straight (STP067) or Offset (STP069-01, STP069-2).



Straight



Offset

Note: Unlike the Stem Extractor Jaws, the Glenosphere Extractor Jaws must be matched up and cannot be mix and matched.

STEP 10

Attach the Glenosphere Extractor Jaws (Straight or Offset) using the 'dovetail' connection between the jaws and the extractor. Push the dovetail of the jaw into the extractor (Image 9) until you hear the small click of the ball detent engaging and the jaw bottoms out against the extractor.

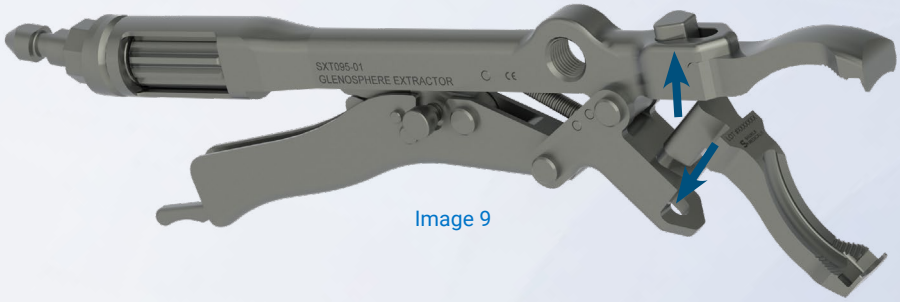


Image 9

STEP 11

Ensure the locking button on the extractor is toggled to 'unlock'. Open the extractor by turning the knob on the back of the extractor counterclockwise (Image 10) until the flats of the jaws can go over the glenosphere.

Image 10

STEP 12

Close the extractor by turning the knob clockwise so that the flats of the jaws will be flush against the face of the glenosphere and so that the jaws are touching the outer surface of the implant. (Image 11) Continue tightening the knob until you can no longer squeeze the handles together. At that point, loosen the knob slightly until you can once more squeeze the handles together.

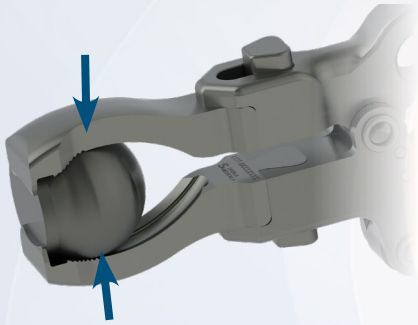


Image 11

STEP 13

On the bottom handle, switch the locking button from the 'unlock' position to the 'lock' position by pushing in the button (Image 12) to prevent the handle from opening during impact. Once locked, skip to **Step 15** (for Strike Plate) or **Step 16** (for Slide Hammer) if using Straight Jaws or skip to **Step 19** (for Side Strike Plate) **or Step 20** (for Perpendicular Hub) if using Offset Jaws.

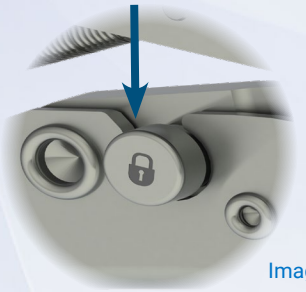


Image 12

STEP 14

Threaded Extractor

Use the screw that was removed (if applicable) to properly size the threaded extractor. Find the Threaded Extractor (SXT036-01 - SXT036-12, SXT037-01 - SXT037-06) size that will thread into the threaded hole in the glenosphere.

Take the Threaded Extractor Driver (SDR002) and quick-connect the Threaded Extractor into it. Connect the T-Handle (SHN031) to the rear hub of the extractor and thread the extractor into the glenosphere (Image 13). Once threaded in fully, detatch the T-Handle from the Threaded Extractor and proceed to **Step 15** (for Strike Plate) or **Step 16** (for Slide Hammer).

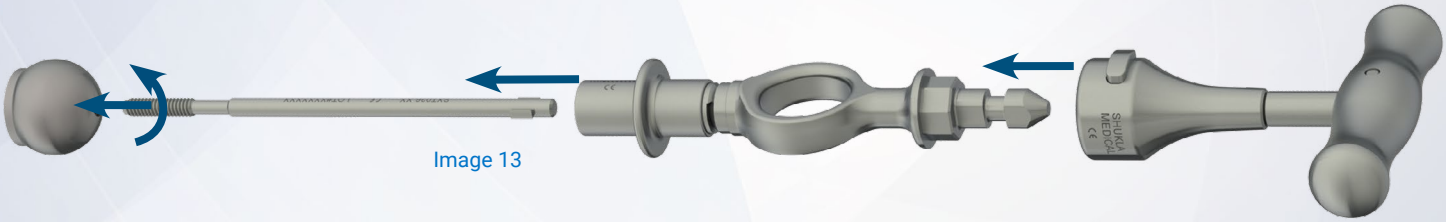


Image 13

STRAIGHT JAW OR THREADED EXTRACTOR OPTIONS

STEP 15 Strike Plate

Place the Strike Plate (SBD106) on the octagon feature over the rear hub of the extractor. Position it at any of the eight different available configurations (Image 14). To connect the T-Handle (SHN031) for extraction, skip to **Step 17**. To use the Inline Handle (SHN054) for extraction, skip to **Step 18**.

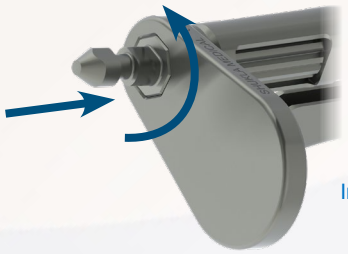


Image 14

STEP 16 Slide Hammer

Connect the Slide Hammer (SIN010) to the rear hub of the extractor (Image 15) until the locking hub clicks into place. Once secured, skip to **Step 21**.

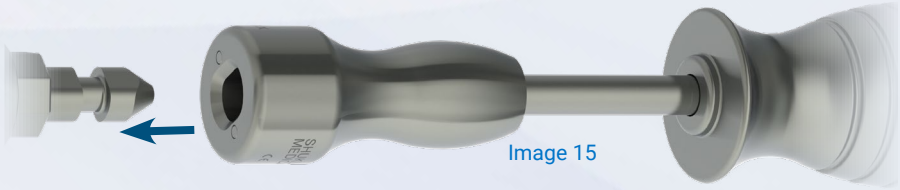


Image 15

STEP 17 T-Handle

Push the T-handle to connect it to the rear hub of the chosen extractor (Image 16) until the locking hub clicks into place. This will lock the Strike Plate into its current orientation. Once secured, skip to **Step 21**.

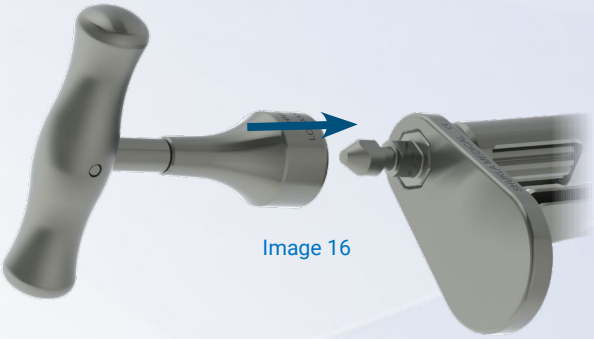


Image 16

STEP 18 Inline Handle

Connect the Inline Handle to the rear hub of the chosen extractor (Image 17) until the locking hub clicks into place. This will lock the Strike Plate into its current orientation and provide a grip to hold while striking. Once secured, skip to **Step 21**.

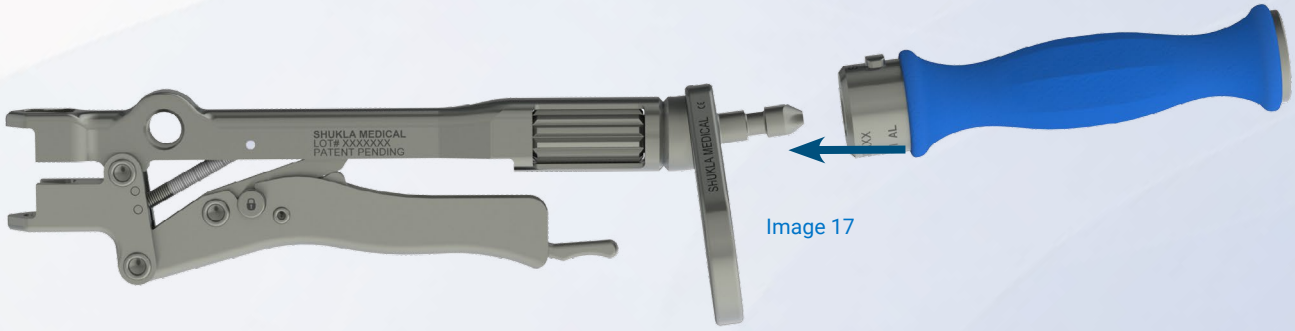


Image 17

OFFSET JAW OPTIONS

STEP 19 Side Strike Plate

Thread the Side Strike Plate (SBD133) onto the side of the extractor closest to the implant (Image 18). This will provide a strike surface for the Slotted Mallet during extraction. Once threaded in and secure, skip to **Step 21**.

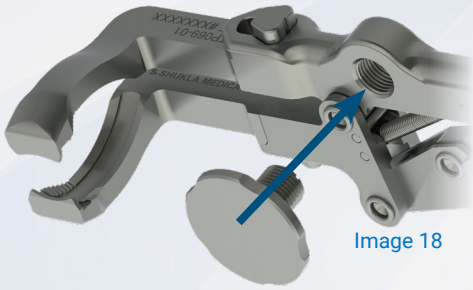


Image 18

STEP 20 Perpendicular Hub

Thread the Perpendicular Hub (SBD132) onto the side of the extractor opposite of the implant (Image 19). The hub will allow for the Strike Plate as well as any quick-connect component to attach to it, just like the Glenosphere Extractor's rear connector. Once the hub and the surgeon's preferred attachment are secure, proceed to **Step 21**.

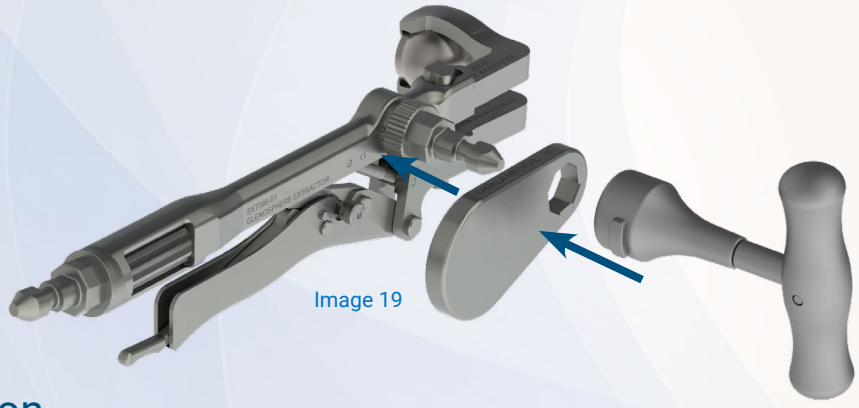
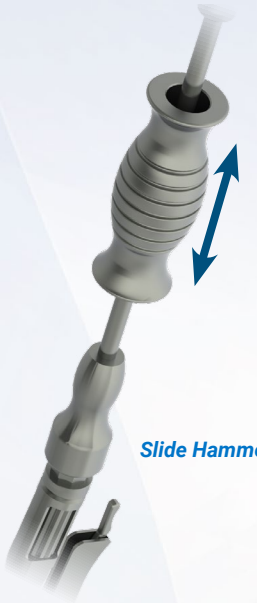


Image 19

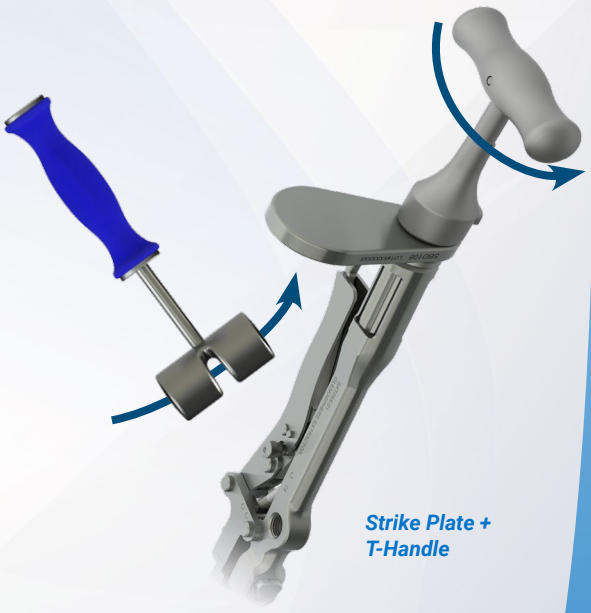
STEP 21 Extraction

Once the strike option has been selected and attached, proceed to impact the extractor in the selected way: Slotted Mallet with Strike Plate or Slide Hammer. If you are using the T-Handle as well, it can be used to help twist and pull on the implant if it is loose enough. Once the glenosphere has been extracted, proceed to **Step 22**.

Strike Plate + Inline Handle



Slide Hammer



Strike Plate + T-Handle

STEP 22 Glenosphere Base Extraction

Identify what drivers are necessary to remove the locking screws (if applicable). Remove the screws using the SHUKLA Maxi system (S9MAXI) or SHUKLA Mini system (S9MINI) (Image 20). If the locking screws are stripped, use the appropriate size stripped screw extractor from the SHUKLA Screw system (S9SCREW) to remove them.

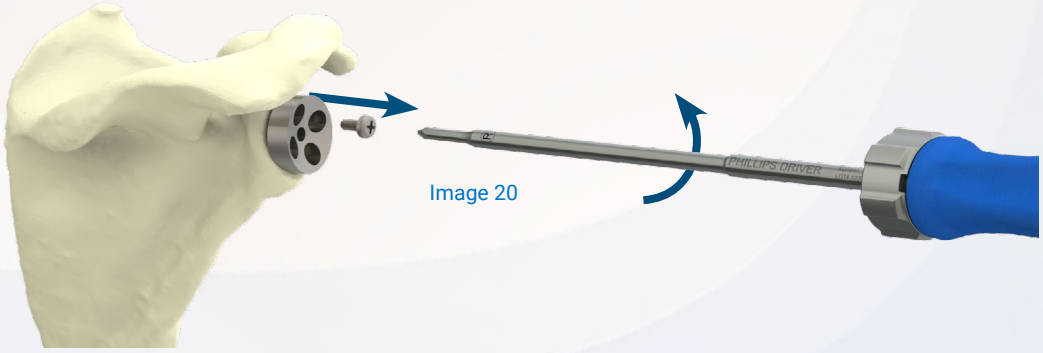


Image 20

STEP 23

If the glenosphere base's center post screw can be fit with a driver from the SHUKLA Maxi system (S9MAXI) or SHUKLA Mini system (S9MINI), use it to turn the base until it is removed (Image 21). Once removed, skip to **Step 25**. If the center post screw is stripped, the correct size of driver is not available, or more torque is required to turn the base, proceed to **Step 24**.

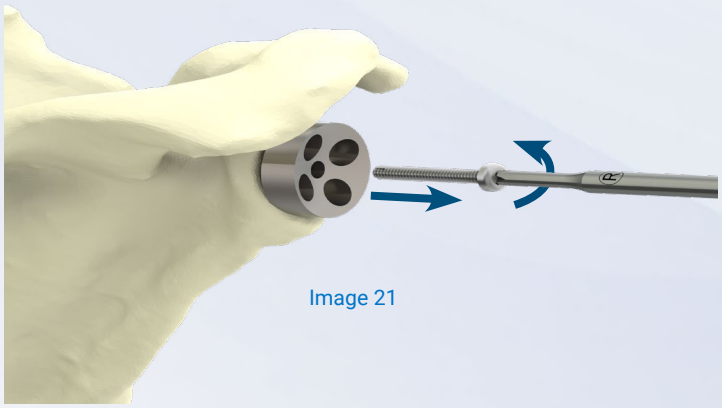


Image 21

STEP 24

Use the Glenosphere Base Driver (SWR011) to remove a glenosphere base that can not be removed with a screwdriver. Turn the knob on the Glenosphere Base Driver to adjust the two pins until they line up with two opposite holes on the glenosphere base. Push the pins into the holes and turn the base driver counterclockwise until the glenosphere base starts to move (Image 22). The base driver will ratchet itself, so turn it clockwise in order to turn it once more counterclockwise. Continue until the glenosphere base is removed. Once removed, proceed to **Step 25**.

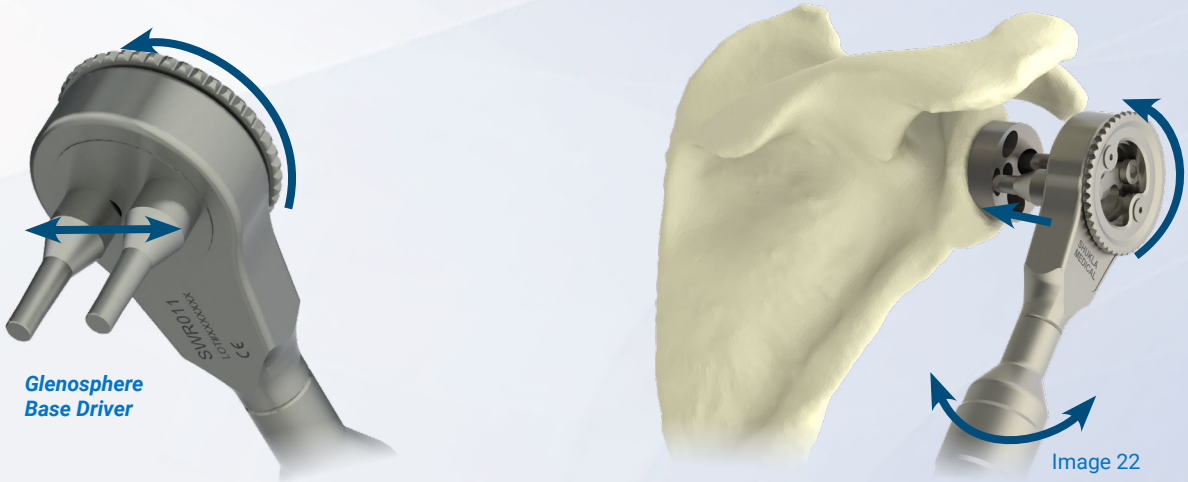


Image 22

STEP 25 Stem Poly Liner Extraction

Take the Poly Extractor (SXT096) and chuck it into a Hudson drill chuck. Set the drill in the forward position and position the Poly Extractor over the stem poly liner. Press down on the liner and begin drilling. Continue drilling until the stem poly liner comes off the stem. One removed, proceed to **Step 26**.

STEP 26 Stem Extraction

Identify the features of the implant that can be gripped with the Shoulder Extractor Jaws, such as a trunnion, collar, etc. Use the chart below to help determine which jaw set to use.

Find the features on the implant stem and then look across the row for the applicable jaw or jaws. If only one jaw is available in the row, seek another feature on the stem to find another applicable jaw. Once you have identified the appropriate jaws needed, proceed to **Step 27**.

Shukla Medical 8300 Sheen Dr, St. Petersburg, FL, USA 33709 1(888) 4SHUKLA, www.ShuklaMedical.com		JAW											Implant Type	
Part Numbers		STP036	STP035 STP059 STP061	STP033 STP058 STP060	STP034	STP032	STP030	STP029	STP064	STP068	STP080	SXT070 01 - 03	Anatomic	Reverse
Description		Cylinder	Lateral Lip	Medial Lip	Lipped Boot	Scoop Vee	Tapered Boss	Universal Back Jaw	Medial Collar	Reverse Vee	Extruded Boss Mini	J-Loop Extractor		
FEATURE	Collar								●				●	●
	Proximal Notched Lip				●								●	
	Male Trunnion					●				●			●	
	Female Trunnion						●				●		●	
	Threaded Hole											●	●	●
	Inner Lip		●	●										●
	Fins							●					●	
	Pinhole	●											●	

STEP 27

Open or close the Shoulder Stem Extractor (SXT022) by turning the knob counterclockwise/clockwise as needed. Attach the selected jaws in the quick connect ends of the extractor (Image 23) by pushing down until they lock in. Once the jaws are connected to the Shoulder Stem Extractor, proceed to the following step based on implant features present on the implant stem:

IMPLANT FEATURE	STEP
Collar	28
Male Trunnion	29
Female Trunnion	30
Lipped	31
Lateral Side	32
Pinhole	33
Threaded	34

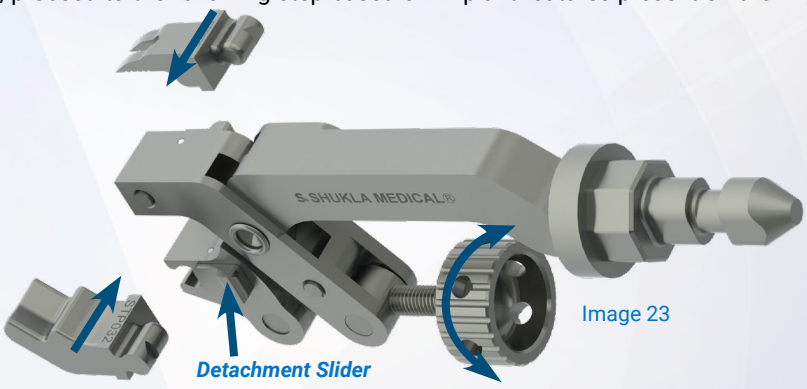
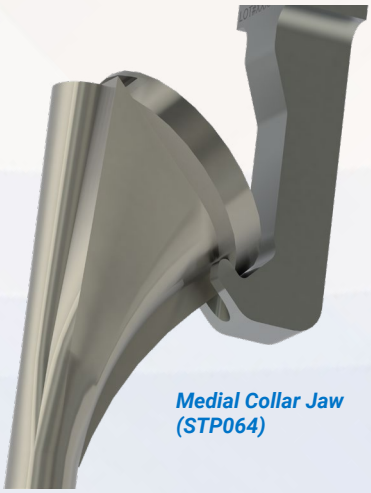


Image 23

Note: To detach a jaw from the extractor, push up on the slider near the jaw and pull the jaw out.

STEP 28 Collar

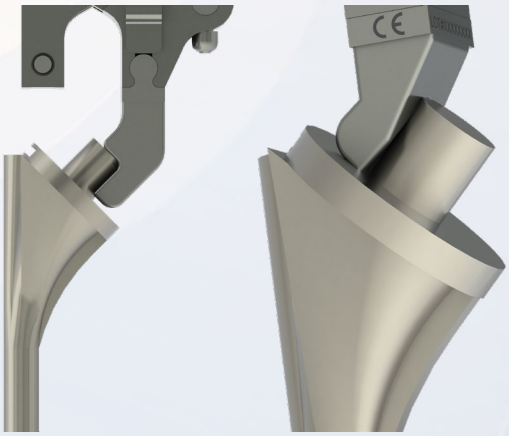
The selected jaw will act as a hook to grab onto the stem's collar feature. The hooking jaw should be the first jaw into position followed by the accompanying jaw. In the case of using two hooking jaws on both ends of the collar, position the Medial Collar Jaw (STP064) first. Once successfully secured to the implant stem, skip to **Step 35**.



Medial Collar Jaw (STP064)

STEP 29 Male Trunnion

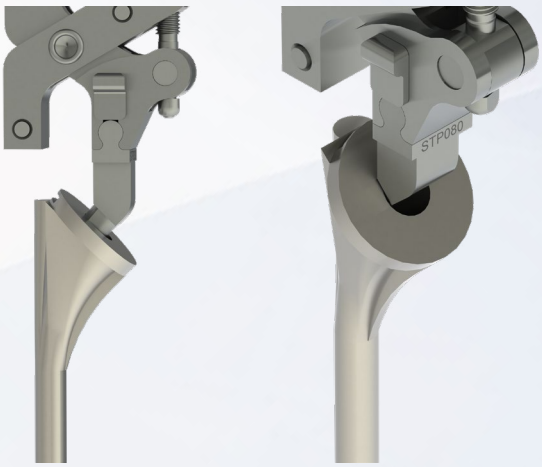
Attach to the male trunnion by positioning the selected male trunnion jaw onto the stem's trunnion with the jaw centered. Press the jaw into the trunnion when the jaw's "V" shape is centered without slipping to either side. Once successfully secured to the implant stem, skip to **Step 35**.



L: Scoop Vee Jaw (STP032)
R: Reverse Vee Jaw (STP068)

STEP 30 Female Trunnion

Identify the trunnion hole size and decide the proper jaw size to use: Tapered Boss Jaw (STP030) for larger holes and Extruded Boss Mini (STP080) for smaller holes. Using the selected jaw, insert into the female trunnion and correctly align the accompanying jaw. Tighten the extractor for a secure fit onto each feature. Once successfully secured to the implant stem, skip to **Step 35**.

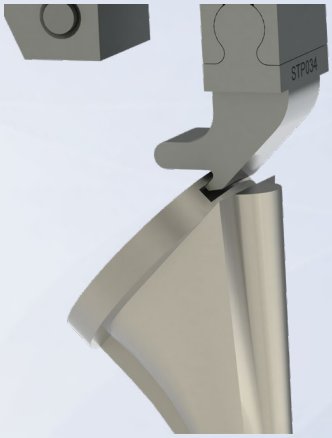


Tapered Boss Jaw (STP030)

STEP 31 Lipped

Determine if the lip is a notched proximal lip or an inner lip found on a reverse stem. For a notched proximal lip use the Lipped Boot Jaw (STP034). For an inner lip choose the correct pair of medial and lateral lip jaws to best correspond to the stem angle of the implant, which come in 135°, 145°, and 155° options.

Position the extractor so that the jaw(s) align with the lip of the stem. Adjust the extractor so the jaw(s) grab the inside of the lip firmly. Once successfully secured to the implant stem, skip to **Step 35**.



Lipped Boot Jaw (STP034)

Medial Lip 145° Jaw (STP059)
Lateral Lip 145° Jaw (STP058)

STEP 32 Lateral Side

The lateral side of the implant can be grabbed to extract the implant in many cases. Choose the jaw for another implant feature that can help extract the implant.

Attach the Universal Back Jaw inline with the stem of the implant. The jaw should rest flat against the lateral side of the implant. If the implant has a fin down the lateral side, place the Universal Back Jaw (STP029) over the center of the fin. Once successfully secured to the implant stem, skip to **Step 35**.

Universal Back Jaw (STP029)

Note: If required, use the Back Jaw Chisel (SOS040) to clear space for the Universal Back Jaw.

STEP 33 Pinhole

If a small pinhole or indent is present, use the Cylinder Jaw (STP036) alongside a jaw for another implant feature. Align the Cylinder Jaw with the hole or indent inline with the stem of the implant. Once successfully secured to the implant stem, skip to **Step 35**.

Cylinder Jaw (STP036)

STEP 34 Threaded

If the implant has a thread present, attach one of the J-Loops (SXT070-01 - 03) to the extractor. There are 3 angles of J-Loops: 135°, 145°, and 155°. Determine which angle matches the implant stem and align the holes of the implant and J-Loop and thread into the hole using the J-Loop Screw (SSC024) through the hole in the J-Loop itself. Secure the J-Loop by tightening the J-Loop Nut (SNT008) into place (Image 24). Once successfully secured to the implant stem, proceed to **Step 35**.

155°, 145°, and 135° J-Loop Extractors

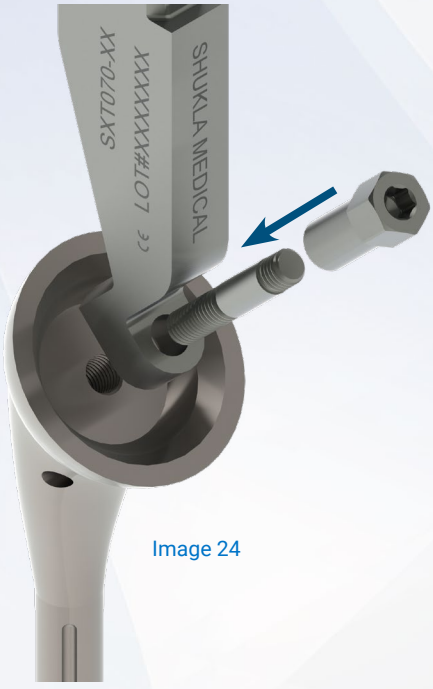
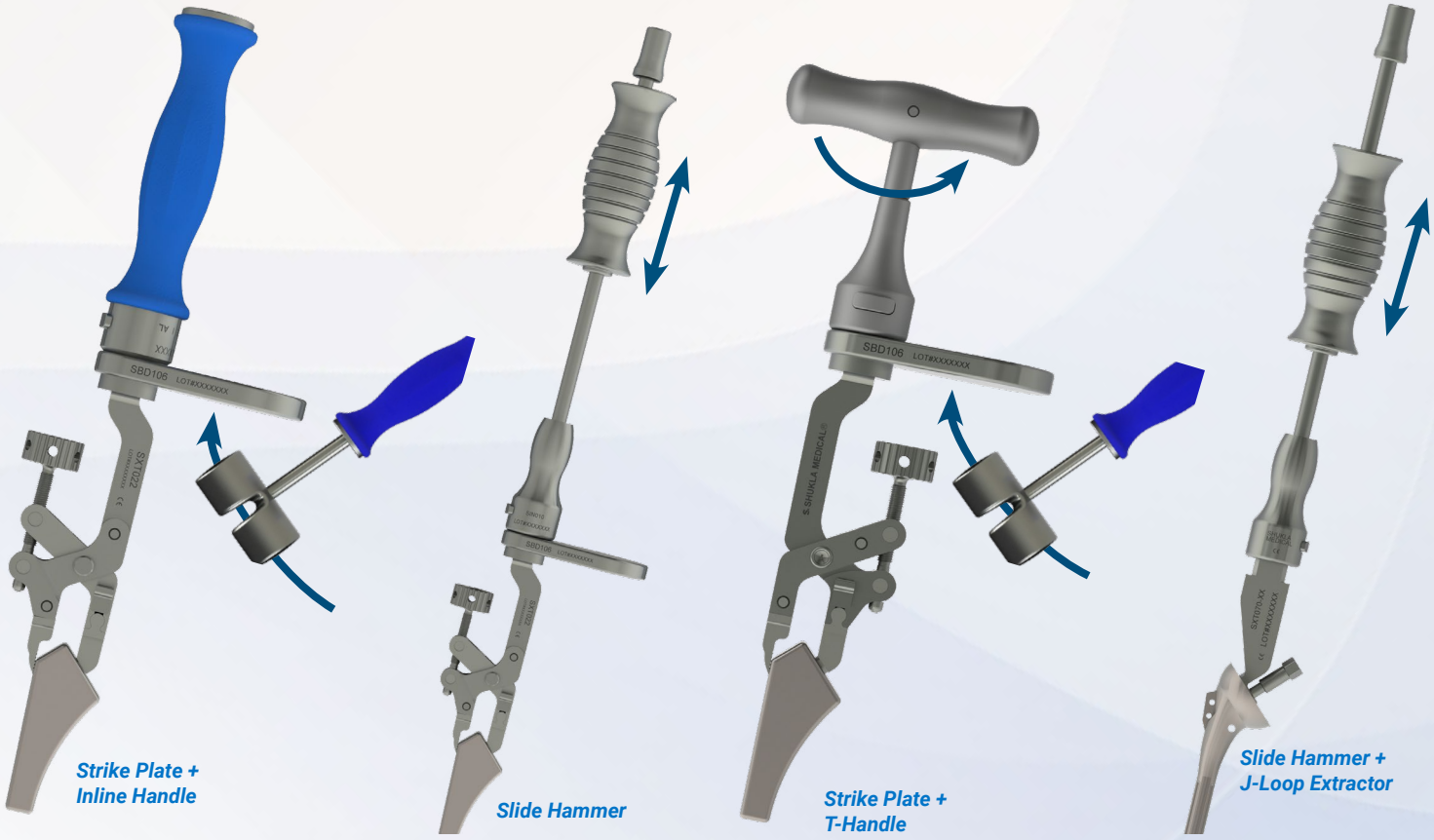


Image 24

J-Loop Extractor Secured to Implant

STEP 35 Extraction

Attach the Strike Plate to the Stem Extractor or J-Loop and adjust it to the desired angle. Attach the Inline Handle or T-Handle to lock the Strike Plate in place. Use the Slotted Mallet to impact the plate while holding the handle until the stem implant is fully extracted. The Slide Hammer can be used instead for both the Stem Extractor and the J-Loop Extractor.



5 TIPS and TRICKS SHUKLA Shoulder

- Since humeral heads and glenospheres have similar geometries, the Glenosphere Extractor (SXT095-01) can be used in order to remove the humeral head.
- If the glenoid has keels that break off, a broken extractor from the S9SCREW system can be used to remove them.
- The Stem Extractor (SXT022) does not need to be excessively tightened to get a good hold on the implant. However, if you require extra tightening, the holes in the knob can be used with the Stem Extractor Wrench (SHN095).
- The Side Strike Plate (SBD133) has a slot at the end of the threads. If it ever gets stuck or breaks off in the extractor, you can use a screwdriver to remove it.
- The Reverse Curette (SOS020) and the Notched Cement Chisel (SOS023) both provide cement clearing options for before and after implant extraction.
- If a screw head has been covered in bone, use the Screw Head Pick (SOS024) to clear it out.
- The Retrograde Lipped Puller (SOS035) can also be used to help remove glenoids if the Glenoid Chisel (SOS019) is not enough.
- The Lipped Extraction Punch (SXT035) can be used to remove humeral stems by wedging the tipped end underneath the proximal medial edge of the stem. Once the punch is wedged under the stem, impact the end of the handle with the hammer until the stem is removed from the humerus.

6 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. 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

CE

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CONSULT INSTRUCTIONS FOR USE

NON STERILE NON-STERILE PRODUCT

7 COMPONENTS LIST

Components List

Component List			
Std Qty	**Part Number**	**Description**	
1	SCS067	Shoulder System Case 1	CASE 1
1	SCS064	Shoulder System, Case 1, Lid	
1	SCS065	Shoulder System, Case 1, Tray	
1	SHN054	Handle, In-Line	
1	SHN031	T-Handle, Female Chuck	
2	SBD106	Strike Plate, Octagon ID	
1	SIN010	Slide Hammer, Female Chuck	
1	SMT003	Mallet, Slotted	
1	SBD132	Perpendicular Hub, Vise Grip	
1	SBD133	Side Strike Plate, Vise Grip	
1	SOS040	Universal Back Jaw Chisel	
1	SOS020	Reverse Currette 7.5mm	
2	SOS024	Screw Head Pick	
1	SOS023	Notched Cement Chisel	
1	SOS019	Glenoid Chisel	
1	SXT020	Humeral Head Wedge	
1	SXT035	Lipped Extraction Punch	
1	SOS035	Retrograde Lipped Puller	
1	SCS068	Shoulder System Case 2	CASE 2
1	SCS071	Shoulder System, Case 2, Lid	
1	SCS072	Shoulder System, Case 2, Tray	
1	SXT022	Extractor, Shoulder Stem	
1	SHN095	Stem Extractor, Wrench	
2	STP036	Shoulder Stem Extractor Jaw, Cylinder	
2	STP035	Shoulder Stem Extractor Jaw, Lateral Lip, 135°	
2	STP058	Shoulder Stem Extractor Jaw, Lateral Lip, 145°	
2	STP060	Shoulder Stem Extractor Jaw, Lateral Lip, 155°	
2	STP033	Shoulder Stem Extractor Jaw, Medial Lip, 135°	
2	STP059	Shoulder Stem Extractor Jaw, Medial Lip, 145°	
2	STP061	Shoulder Stem Extractor Jaw, Medial Lip, 155°	
2	STP034	Shoulder Stem Extractor Jaw, Lipped Boot	
2	STP032	Shoulder Stem Extractor Jaw, Scoop Vee	
2	STP030	Shoulder Stem Extractor Jaw, Tapered Boss	

Component List			
Std Qty	**Part Number**	**Description**	
2	STP029	Shoulder Stem Extractor Jaw, Universal Back Jaw	CASE 2
2	STP068	Shoulder Stem Extractor Jaw, Reverse Vee	
2	STP080	Shoulder Stem Extractor Jaw, Extruded Boss Mini	
2	STP064	Shoulder Stem Extractor Jaw, Medial Collar	
1	SXT070-01	J-Loop Extractor 135°	
1	SXT070-02	J-Loop Extractor 145°	
1	SXT070-03	J-Loop Extractor 155°	
2	SNT008	J-Loop Nut	
2	SSC024	J-Loop Screw	
1	SXT095-01	Extractor, Glenosphere	
4	STP067	Glenosphere Extractor Jaw, Straight	
2	STP069-01	Glenosphere Extractor Jaw, Offset 1	
2	STP069-02	Glenosphere Extractor Jaw, Offset 2	
1	SDR002	Threaded Extractor Driver	
2	SXT036-01	Threaded Extractor, 8-32 UNC-2A, Single Use	
2	SXT036-02	Threaded Extractor, 10-24 UNC-2A, Single Use	
2	SXT036-03	Threaded Extractor, 10-32 UNF-2A, Single Use	
2	SXT036-04	Threaded Extractor, 12-24 UNC-2A, Single Use	
2	SXT036-05	Threaded Extractor, 12-28 UNF-2A, Single Use	
2	SXT036-06	Threaded Extractor, 1/4-20 UNC-2A, Single Use	
2	SXT036-07	Threaded Extractor, 1/4-28, UNF-2A, Single Use	
2	SXT036-08	Threaded Extractor, 5/16-18 UNC-2A, Single Use	
2	SXT036-09	Threaded Extractor, 5/16-24 UNF-2A, Single Use	
2	SXT036-10	Threaded Extractor, 5/16-32 UNEF-2A, Single Use	
2	SXT036-11	Threaded Extractor, 3/8-16 UNC-2A, Single Use	
2	SXT036-12	Threaded Extractor, 3/8-24 UNF-2A, Single Use	
2	SXT037-01	Threaded Extractor, M5 X 0.8 - 6G, Single Use	
2	SXT037-02	Threaded Extractor, M6 X 0.75 - 6G, Single Use	
2	SXT037-03	Threaded Extractor, M6 X 1.0 - 6G, Single Use	
2	SXT037-04	Threaded Extractor, M7 X 1.0 - 6G, Single Use	
2	SXT037-05	Threaded Extractor, M8 X 1.25 - 6G, Single Use	
2	SXT037-06	Threaded Extractor, M8 X 1.0 - 6G, Single Use	
3	SXT096	Poly Extractor, Single Use	
1	SWR011	Glenosphere Base Driver	

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 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.

WARRANTY

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.

L3-SHLDR-STG-REVISED: DEC-14-21