SURGICAL TECHNIQUE GUIDE

#11-14

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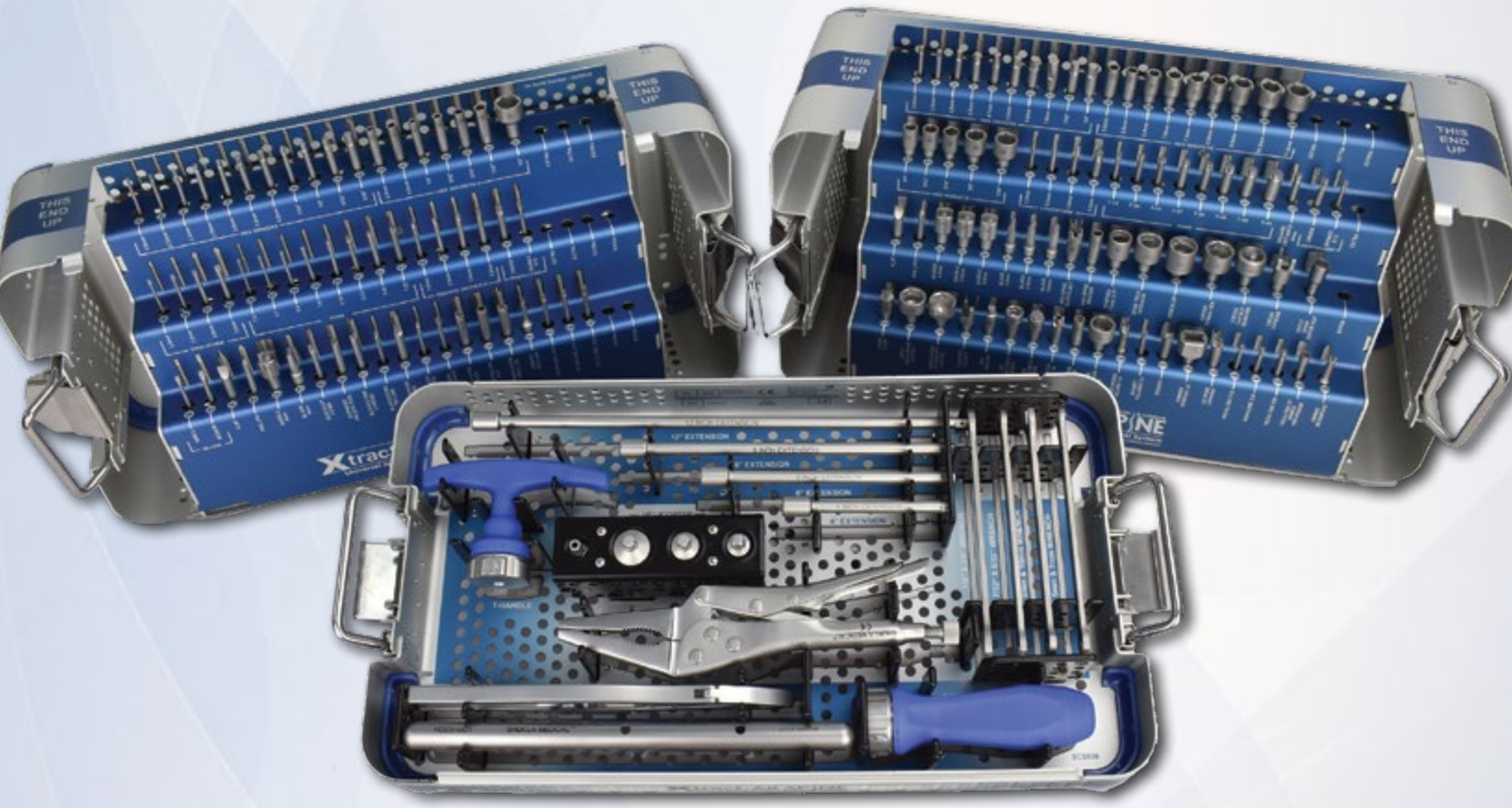
SHUKLA SPINE

Universal Spinal Screw Removal Solution



SHUKLA MEDICAL®

Universal Orthopedic Extraction Technologies

Revolutionizing the Art of Revision Surgery

CONTENTS

1

SHUKLA SPINE

Universal Spinal Screw Removal Solution

1.1 System Name: SHUKLA Spine-C, Spine-TL, Spine-CTL, Spine Plus

Part Number: S9SPINE-C, S9SPINE-TL, S9SPINE, S9SPINE-PLUS

Version: SPINE-C (v3), SPINE-TL (v4), SPINE-CTL (v3)

1.2 Primary Use

The SHUKLA Spine family of systems (Cervical, Thoracic, and Lumbar, and Total) are designed to remove spinal screws, locking caps, rods, and plates from any cervical, thoracic, or lumbar implant system. Across dedicated cervical & thoracolumbar driver systems, they contain more than 130 drivers compatible with standard configurations, as well as more than 40 proprietary implant systems.

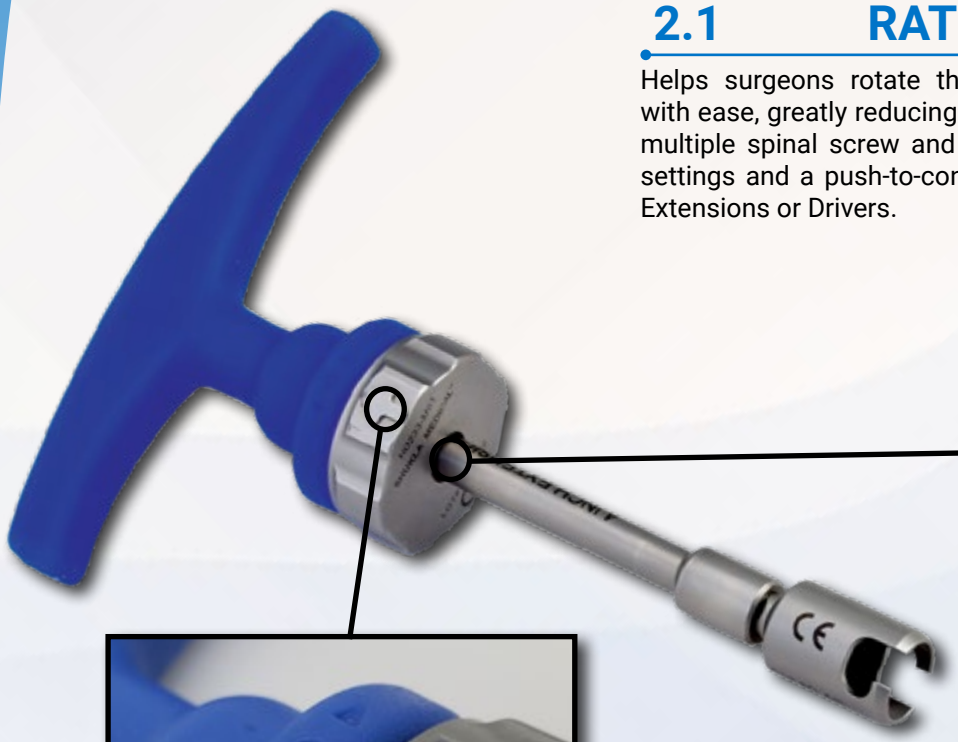
1.3 System History

The first SHUKLA Thoracic and Lumbar Spine set debuted back in 2000 and the first SHUKLA Cervical set came out in 2005. Thanks to the efforts of both the Shukla Medical Product Development Manager as well as invaluable input from surgeons, the Shukla family of spine systems became the most comprehensive ones on the market. The release of the Spine-Cervical (Spine-C) in addition to the existing Spine-Thoracolumbar (Spine-TL) made the total capabilities of Shukla's Spine family truly universal.

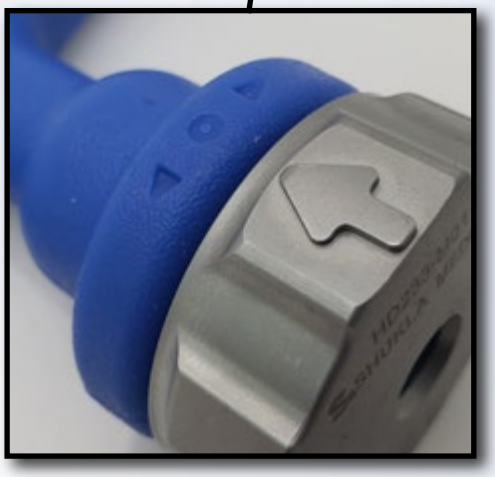
In 2018, the latest version of our Spine systems released, making an already amazing set even better and more comprehensive with additional drivers, proprietary drivers, helicopter sockets, and more.

2.1 RATCHETING T-HANDLE

Helps surgeons rotate the spinal construct out counterclockwise with ease, greatly reducing the risk of hand fatigue during a case with multiple spinal screw and rod constructs. Features three ratcheting settings and a push-to-connect chuck allowing for rapid insertion of Extensions or Drivers.



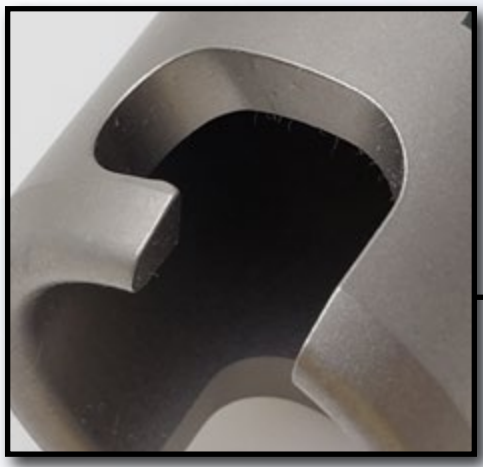
Push-to-Connect chuck allows any of the Extensions or Drivers to connect with ease.



Toggle Cap allows the T-Handle to switch between Forward Ratchet, Fixed, and Reverse Ratchet settings.

2.2 HELICOPTER SOCKETS

Engineered to fit the spine rod. Once inserted, the rod will not slip or pull off. The helicopter sockets work with all spine rods up to 6.35mm in diameter and are available in three different sizes.



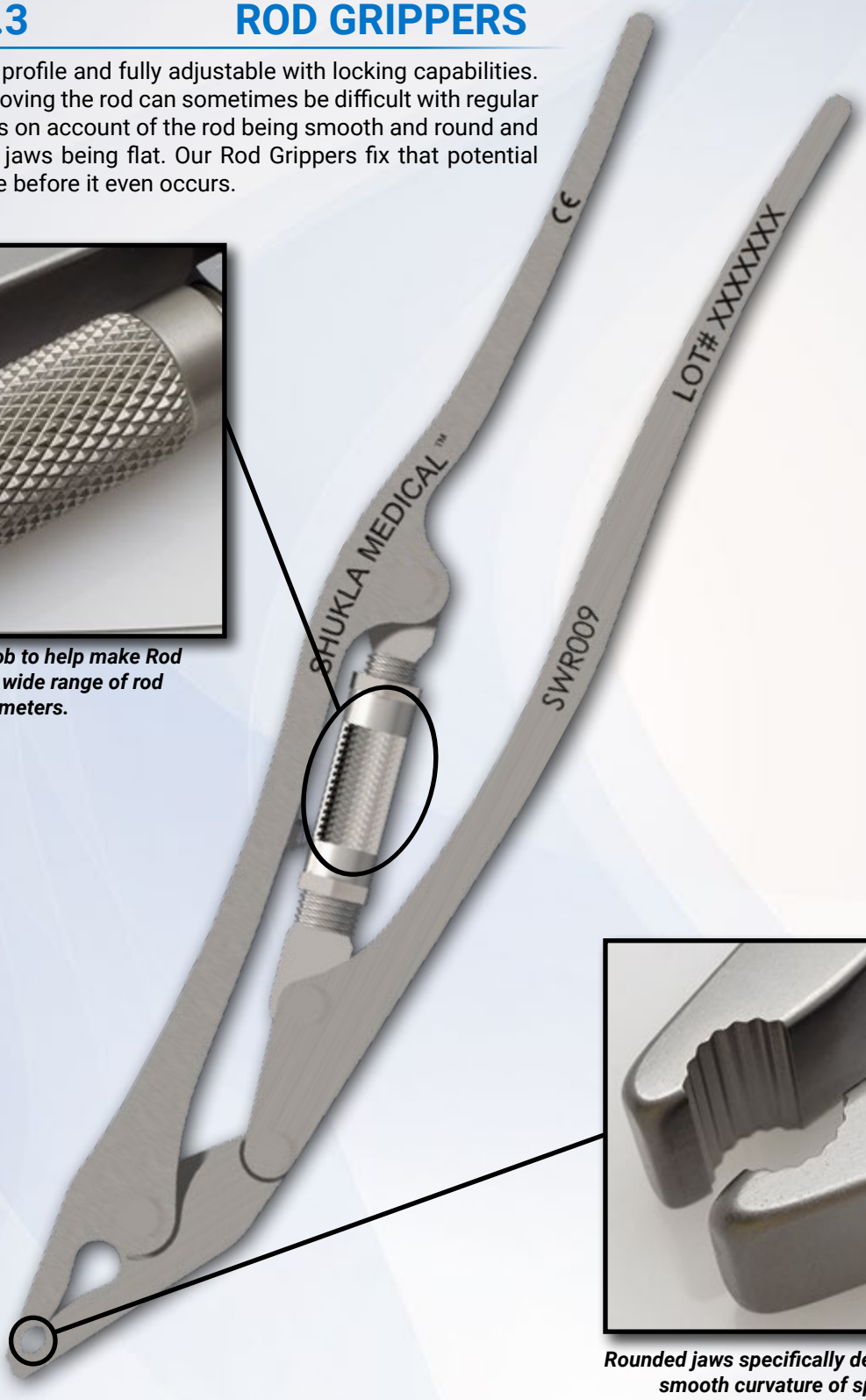
The Spinal Rod Slot secures the spine rod during removal.

Parts not shown to scale

2.3 ROD GRIPPERS

Low profile and fully adjustable with locking capabilities. Removing the rod can sometimes be difficult with regular pliers on account of the rod being smooth and round and plier jaws being flat. Our Rod Grippers fix that potential issue before it even occurs.

Adjustment knob to help make Rod Grippers fit a wide range of rod diameters.



Rounded jaws specifically designed to grasp smooth curvature of spinal rods.

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 of revision surgery and techniques for removal of 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.
- The surgeon should be cautious with spinal position change and/or excessive force exertion while removing implants using the instrumentation provided in the tray.
- All instrumentation has physical limits. Excessive force may result in instrument failure. It is recommended to maintain access to the SHUKLA Screw Universal Broken & Stripped Screw Extraction System (S9SCREW) in the event that instrumentation fails.

3.3 Storage

- It is recommended to store all Shukla Medical instrumentation in a clean, dry environment. Under 50% relative humidity; ≤75ºF/24ºC.

3.4 Intended Use

The SHUKLA Spine Universal Spinal Screw Removal System (S9SPINE) is designed to simplify spinal revisions.

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 Spine (S9SPINE) is appropriate for any spinal revision case. For use by, or as directed by, a surgeon during spinal revision surgeries. The system includes over 130 implant drivers in a wide range of configurations and sizes, covering both standard and proprietary implant configurations. They can be used to remove hardware from virtually any spinal implant system.

3.6 Contraindications

The SHUKLA Spine system is designed to be used when removing spinal hardware with intact screw heads. The system cannot be used with broken or stripped screws. For broken and stripped screw removal, please contact Shukla Medical Customer Service for information about the SHUKLA Screw Universal Broken & Stripped Screw Extraction System (S9SCREW).

3.7 Additional Recommendations

The SHUKLA Spine (S9SPINE) Universal Spinal Screw Removal System is recommended for use in conjunction with the SHUKLA Mini (S9MINI) Universal Small Screw Removal System, the SHUKLA Maxi (S9MAXI) Large Bone Screw Removal System, and the SHUKLA Screw (S9SCREW) Universal Broken & Stripped Screw Extraction System.

1 Identification & Selection

Identify the spinal implant system from the surgical notes and X-rays. Select the appropriate SHUKLA Spine drivers.

- If a range of drivers is recommended or the spinal implant system cannot be identified, inspect the locking nuts & screws to visually select the most appropriate driver.
- If the appropriate driver cannot be identified, or a nut or screw is unable to be removed from the construct, the Helicopter Method may be used.

Note: For broken and stripped screws, please contact Shukla Medical Customer Service for information about the SHUKLA Screw (S9SCREW) Universal Broken & Stripped Screw Extraction System.

Pre-op Planning: For assistance identifying implants and determining compatible drivers, please contact Shukla Medical Customer Service and let our team of experts help you.

2 Assemble Driver

Insert the selected driver into the appropriate Extension Shaft (SXN007-SXN010) if needed. Insert Extension Shaft into Ratcheting Screwdriver Handle (HD233 or MRHS0311). Rotate handle to change between ratcheting mode.

Forward: Insert screws
Fixed: Ratcheting disabled
Reverse: Remove screws

Multiple handle styles are included depending upon surgeon preference and desired level of torsion.

Ratcheting In-Line Handle
MRHS0311

Suitable for most implant removals. Ratcheting mode switches between forward, reverse, or fixed.

Ratcheting T-Handle
HD233

Suitable when additional torque is required during manual implant removal. Ratcheting mode switches between forward, back, or fixed. Use while in reverse or fixed for the Helicopter Method (facing page).

Breaker Bar
HD239

A breaker bar is included in case of difficulty due to well-fixed screws. Using the breaker bar can generate significant torsional force that may not be optimal in some spinal procedures. Use with caution.

3 Rod Removal

a. Remove locking nuts with assembled screwdriver (Fig. A, panels 1 & 2).

b. Stabilize & remove spinal rods using Rod Gripper (SWR009) and/or Long Nose Locking Pliers (SWR008) (Fig. A, panels 3 & 4).

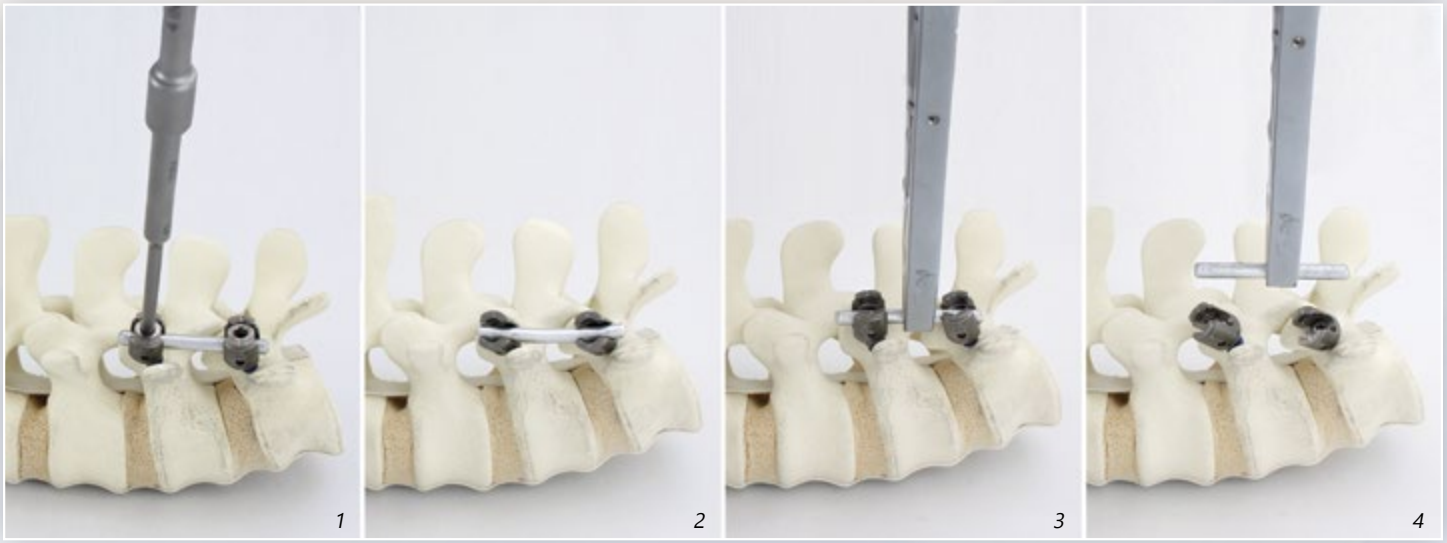


Figure A

4 Screw Removal

Select the appropriate driver. Assemble screwdriver as per Step 2.

- **Note:** For screws that do not have an internal configuration at the bottom of their uni-axial screw, use the blade or saddle drivers (SDR784-SDR815). If available drivers do not fit, reassemble the locking nut & proceed to use the *Helicopter Method (pg 9).*

Remove screw using screwdriver assembly. Locking Pliers (SWR008) may be used to aid with removal. (Fig. B)

Figure B

The Helicopter Method facilitates total screw construct removal by rotating the pedicle screw while still attached to the rod using a Helicopter Socket (SDR813-SDR815).

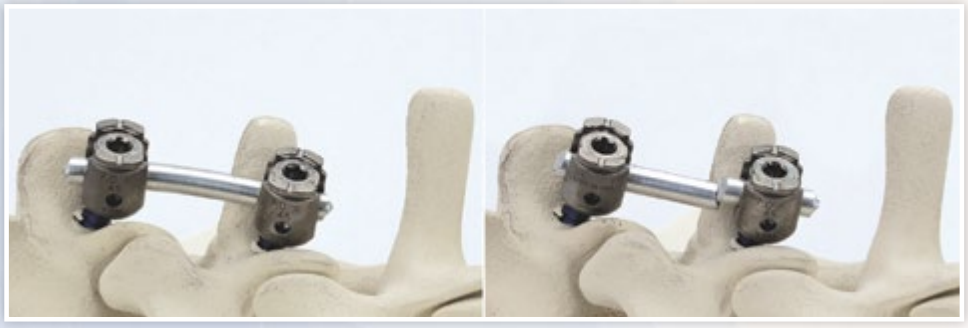
The screw construct consists of the screw, rod, & locking cap.

Indications for the *Helicopter Method*:

- If the correct driver cannot be identified
- If any cap, nut, or screw is fixed so tightly that it cannot be removed

1 Cut rod on either side of tulip

- Approximately 5mm of rod should remain extending from sides of tulip head.
- Rod cut length must be long enough to engage with helicopter socket, but short enough to minimize damage to surrounding live tissue as screw construct rotates.
    - Instrumentation to cut the spinal rod is not included in the SHUKLA Spine systems



2 Assemble driver with Helicopter Socket

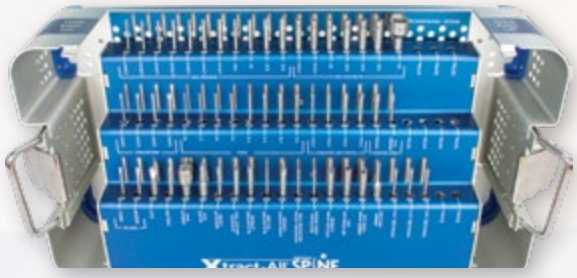
- Select Helicopter Socket (SDR813-SDR815) that best fits over tulip head.
- Connect socket to an Extension Shaft (SXN007-SXN010), then attach socket assembly to T-Handle (HD233).
    - Ratcheting mode must be fixed or set to reverse.

3 Use Helicopter Socket to remove screw construct

- Screw construct must be fully assembled in order for the Helicopter Method to be effective.
- Place Helicopter Socket over tulip and rod, so that rod is engaged in socket grooves.
- Turn counterclockwise until screw construct backs out.
    - If additional torque is needed, attach Breaker Bar (HD239) to extension and turn counterclockwise.

Cervical System

The Cervical Case includes 56 drivers covering standard and proprietary implant configurations.



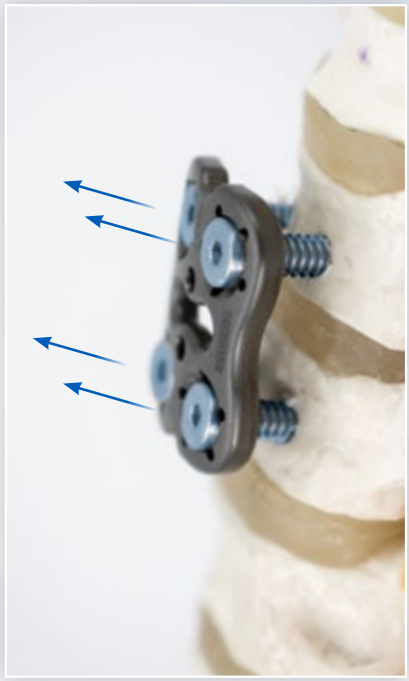
Thoracolumbar System

The TL Case includes 76 drivers covering standard and proprietary configurations.

Plate Removal via the *Levitating Plate Method*

Bone screws secured with locking o-rings

If screws holding plate are secured with locking o-rings, plate may be removed by loosening all bone screws incrementally so that they lift the plate evenly from the surface of the bone all together.



Rod or Screw Removal

Well-fixed locking nuts or screws

If additional torque is required, use the breaker bar (HD239). Using the breaker bar can generate significant torsional force that may not be optimal in some spinal procedures. Use with caution.

6 CLEANING & STERILIZATION

SHUKLA Spine

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

CE

EC REP **Emergo Europe**
Prinsessegracht 20
2514 AP The Hague
The Netherlands

REF S9SPINE
S9SPINE-C
S9SPINE-TL

SHUKLA Medical
8300 Sheen Drive
St. Petersburg, FL 33709
USA

CONSULT INSTRUCTIONS FOR USE

NON STERILE NON-STERILE PRODUCT

7 COMPONENTS LIST

SHUKLA Spine

Standard Drivers for Cervical Spine

Hex

1	SDR701	Hex 2.0mm
2	SDR702	Hex 2.25mm
3	SDR703	Hex 2.5mm
4	SDR704	Hex 2.75mm
5	SDR705	Hex 3.0mm
7	SDR707	Hex 3.5mm
8	SDR708	Hex 4.0mm
16	SDR716	Hex 7/64"
17	SDR717	Hex 1/8"
18	SDR718	Hex 5/32"
19	SDR719	Hex 3/16"

Hex Sockets

24	SDR724	Hex Socket 3.5mm
25	SDR725	Hex Socket 4.0mm
37	SDR737	Hex Socket 1/8"
38	SDR738	Hex Socket 5/32"
39	SDR739	Hex Socket 3/16"
40	SDR740	Hex Socket 7/32"
46	SDR746	Hex Socket 1/2"

Cruciform

49	SDR749	Cruciform 2.0mm
50	SDR750	Cruciform 2.5mm
51	SDR751	Cruciform 3.0mm
52	SDR752	Cruciform 3.5mm

Torx

56	SDR756	Torx T6
57	SDR767	Torx T7
58	SDR757	Torx T8
59	SDR768	Torx T9

Torx (continued)

60	SDR758	Torx T10
61	SDR759	Torx T15
62	SDR760	Torx T20
63	SDR761	Torx T25

Flat

80	SDR780	Flat Small
81	SDR781	Flat Medium
82	SDR782	Flat Large

Phillips

83	SDR783	Phillips

Saddle

84	SDR784	Saddle 4.0mm

87	SDR787	Blade 4.0mm

Hexalobe

145	SDR875	Hexalobe X10
146	SDR876	Hexalobe X15
147	SDR877	Hexalobe X20

Proprietary Drivers for Cervical Spine

Aesculap®

95	SDR800	Aesculap® 5-Star

Alphatec Spine®

96	SDR801	Alphatec® Unlock Tool

Blackstone®

97	SDR802	Blackstone® 2-Prong

Proprietary Drivers for Cervical Spine

Blackstone®

98	SDR803	Blackstone® Tri-Lobe

Biomet®

77	SDR777	Biomet® Pentalobe S15

Corin®

99	SDR804	Corin® Cervive 3-Prong

EBI®

104	SDR809	EBI® SpineLink® ACS

Interpore Cross®

76	SDR776	Interpore Cross® Pentalobe

101	SDR806	Interpore Cross® Unlocking Tool

Medtronic®

102	SDR807	Medtronic® Quad

Orthofix®

69	SDR769	Orthofix® Square 2.0mm
70	SDR770	Orthofix® Square 2.5mm
71	SDR771	Orthofix® Square 3.0mm
72	SDR772	Orthofix® Square 3.5mm

Stryker®

103	SDR808	Stryker Spine® 4-Prong

Zimmer®

105	SDR810	Zimmer Spine® Cervi-Lok®

107	SDR812	Zimmer® Nex-Link®

Standard Drivers for TL Spine

Hex

5	SDR705	Hex 3.0mm
7	SDR707	Hex 3.5mm
8	SDR708	Hex 4.0mm
9	SDR709	Hex 4.5mm
10	SDR710	Hex 4.7mm
11	SDR711	Hex 5.0mm

Hex (continued)

12	SDR712	Hex 6.0mm
13	SDR713	Hex 7.0mm
20	SDR720	Hex 7/32"
21	SDR721	Hex 1/4"

Hex Sockets

26	SDR726	Hex Socket 5.0mm
27	SDR727	Hex Socket 5.5mm
28	SDR728	Hex Socket 6.0mm
29	SDR729	Hex Socket 7.0mm
30	SDR730	Hex Socket 7.5mm
31	SDR731	Hex Socket 8.0mm
32	SDR732	Hex Socket 9.0mm
33	SDR733	Hex Socket 10.0mm
34	SDR734	Hex Socket 11.0mm
41	SDR741	Hex Socket 1/4"
42	SDR742	Hex Socket 9/32"
43	SDR743	Hex Socket 5/16"
44	SDR744	Hex Socket 3/8"
45	SDR745	Hex Socket 7/16"

Flat

82	SDR782	Flat Large

Cruciform

51	SDR751	Cruciform 3.0mm
52	SDR752	Cruciform 3.5mm
53	SDR753	Cruciform 4.5mm
54	SDR754	Cruciform 6.0mm

Torx

61	SDR759	Torx T15
62	SDR760	Torx T20
63	SDR761	Torx T25
64	SDR762	Torx T27
65	SDR763	Torx T30
66	SDR764	Torx T40
67	SDR765	Torx T45
68	SDR766	Torx T50

Phillips

83	SDR783	Phillips

Pedicle Screws

138	SDR868	4-Prong Pedicle Screw

Standard Drivers for TL Spine

Hexalobe

146	SDR876	Hexalobe X15
147	SDR877	Hexalobe X20
148	SDR878	Hexalobe X25

Saddle

84	SDR784	Saddle 4.0mm
85	SDR785	Saddle 5.0mm
86	SDR786	Saddle 6.0mm

87	SDR787	Blade 4.0mm
88	SDR788	Blade 5.0mm
89	SDR789	Blade 6.0mm

Proprietary Drivers for TL Spine

Advanced Spine®

120	SDR850	Advanced Spine® Sleeve Nut

121	SDR851	Advanced Spine® Anchor

Aesculap®

124	SDR854	Aesculap® 4-Prong

Biomet®

77	SDR777	Biomet® Pentalobe S15

139	SDR869	Biomet® Polaris® 5.5

Corin®

128	SDR858	Corin® 3-Lok

Depuy®

100	SDR805	Depuy Spine® Outer Nut

129	SDR859	Depuy® Moss-Miami® Socket

130	SDR860	Depuy® Moss-Miami® Interrupted Socket

EBI®

132	SDR862	EBI® Square

133	SDR863	EBI® SpineLink® II Socket

134	SDR864	EBI® SpineLink® II

Interpore Cross®

125	SDR855	Interpore Cross® Hex 13.8mm

126	SDR856	Interpore Cross® Cap Nut Remover

127	SDR857	Interpore Cross® 2-Prong

76	SDR776	Interpore Cross® Pentalobe

Orthofix®

73	SDR773	Orthofix® Square 4.0mm

Theken Spine®

142	SDR872	Theken Spine® Driver

Spine Tech®

123	SDR853	Spine Tech® Octagon

Stryker®

135	SDR865	Stryker® Xia® Pedicle Screw

136	SDR866	Stryker® Xia® III Hexalobe

Synthes®

122	SDR852	Synthes® 11mm 12pt Hex

131	SDR861	Synthes® Click'X®

Zimmer®

106	SDR811	Zimmer® Incompass®

137	SDR867	Zimmer® Silhouette® Heptagon 1/2"

143	SDR873	Zimmer® Dynesys® L.I.S.

149	SDR879	Zimmer® Pathfinder® Hexalobe E7

US Spine®

144	SDR874	US Spine® 3-Prong

COMPONENTS LIST

Component List				
Std Qty	ID #	Part Number	Description	
1		HD233	THandle, Ratcheting, Square, 1/4"	Instrumentation
1		HD239	Handle, Breaker Bar	
1		MHRS0311	Handle Assy, In-Line, Ratcheting, Square, 1/4"	
1		SAD005	Adapter, 1/4" Square to Hudson	
1		SCS044	Case, Helicopter Socket System	
1		SCS045	Lid, Helicopter Socket System	
1		SCS036	Case, Spine System, Instruments	
1		SCS039	Lid, Spine System, Instruments	
1		SDR813	Driver Assy, Socket, Helicopter, Small	
1		SDR814	Driver Assy, Socket, Helicopter, Medium	
1		SDR815	Driver Assy, Socket, Helicopter, Large	
1		SWR003	Wrench, Double Open End, 7/32" & 9/32"	
1		SWR004	Wrench, Double Open End, 1/4" & 3/8"	
1		SWR005	Wrench, Double Open End, 5 mm & 7 mm	
1		SWR006	Wrench, Double Open End, 6 mm & 10 mm	
1		SWR008	Pliers, Long Nose, Locking, 9"	
1		SWR009	Pliers, Rod Gripper	
1		SXN007	Extension Assy, 4"	
1		SXN008	Extension Assy, 6"	
1		SXN009	Extension Assy, 8"	
1		SXN010	Extension Assy, 12"	
1		SCS035	Case, Thoracic & Lumbar Spine System, Drivers	Thoracic & Lumbar
1		SCS038	Lid, Thoracic & Lumbar Spine System, Drivers	
1	5	SDR705	Driver Assy, Male, Hex, 3 mm	
1	7	SDR707	Driver Assy, Male, Hex, 3.5 mm	
1	8	SDR708	Driver Assy, Male, Hex, 4 mm	
1	9	SDR709	Driver Assy, Male, Hex, 4.5 mm	
1	10	SDR710	Driver Assy, Male, Hex, 4.7 mm	
1	11	SDR711	Driver Assy, Male, Hex, 5 mm	
1	12	SDR712	Driver Assy, Male, Hex, 6 mm	
1	13	SDR713	Driver Assy, Male, Hex, 7 mm	
1	20	SDR720	Driver Assy, Male, Hex, 7/32"	
1	21	SDR721	Driver Assy, Male, Hex, 1/4"	
1	26	SDR726	Driver Assy, Female, Hex, 5 mm	
1	27	SDR727	Driver Assy, Female, Hex, 5.5 mm	
1	28	SDR728	Driver Assy, Female, Hex, 6 mm	
1	29	SDR729	Driver Assy, Female, Hex, 7 mm	
1	30	SDR730	Driver Assy, Female, Hex, 7.5 mm	
1	31	SDR731	Driver Assy, Female, Hex, 8 mm	
1	32	SDR732	Driver Assy, Female, Hex, 9 mm	
1	33	SDR733	Driver Assy, Female, Hex, 10 mm	

Component List				
Std Qty	ID #	Part Number	Description	
1	34	SDR734	Driver Assy, Female, Hex, 11 mm	Thoracic & Lumbar
1	41	SDR741	Driver Assy, Female, Hex, 1/4"	
1	42	SDR742	Driver Assy, Female, Hex, 9/32"	
1	43	SDR743	Driver Assy, Female, Hex, 5/16"	
1	44	SDR744	Driver Assy, Female, Hex, 3/8"	
1	45	SDR745	Driver Assy, Female, Hex, 7/16"	
1	51	SDR751	Driver Assy, Male, Cruciform, 3 mm	
1	52	SDR752	Driver Assy, Male, Cruciform, 3.5 mm	
1	53	SDR753	Driver Assy, Male, Cruciform, 4.5 mm	
1	54	SDR754	Driver Assy, Male, Cruciform, 6 mm	
1	61	SDR759	Driver Assy, Male, Torx, T15	
1	62	SDR760	Driver Assy, Male, Torx, T20	
1	63	SDR761	Driver Assy, Male, Torx, T25	
1	64	SDR762	Driver Assy, Male, Torx, T27	
1	65	SDR763	Driver Assy, Male, Torx, T30	
1	66	SDR764	Driver Assy, Male, Torx, T40	
1	67	SDR765	Driver Assy, Male, Torx, T45	
1	68	SDR766	Driver Assy, Male, Torx, T50	
1	73	SDR773	Driver Assy, Male, Square, 4 mm for Orthofix	
1	76	SDR776	Driver Assy, Male, Pentalobe for Interpore Cross	
1	77	SDR777	Driver Assy, Male, Pentalobe, S15	
1	82	SDR782	Driver Assy, Male, Flat Head, .250" Wide	
1	83	SDR783	Driver Assy, Male, Phillips	
1	84	SDR784	Driver Assy, Saddle, 4 mm	
1	85	SDR785	Driver Assy, Saddle, 5 mm	
1	86	SDR786	Driver Assy, Saddle, 6 mm	
1	87	SDR787	Driver Assy, Blade, 4 mm	
1	88	SDR788	Driver Assy, Blade, 5 mm	
1	89	SDR789	Driver Assy, Blade, 6 mm	
1	100	SDR805	Driver Assy, Female, Dodecagon, for Outer Nut by Depuy Spine	
1	106	SDR811	Driver Assy, Male, 2-Prong, for Incompass by Zimmer	
1	120	SDR850	Driver Assy, Sleeve Nut, For Adv Spine	
1	121	SDR851	Driver Assy, Anchor, For Adv Spine	
1	122	SDR852	Driver Assy, Double Hex, 11 mm, For Synthes	
1	123	SDR853	Driver Assy, Octagon, For Spine Tech	
1	124	SDR854	Driver Assy, 4 prong, For Aesculap	
1	125	SDR855	Driver Assy, Female, Hex, 13.8mm, For Interpore Cross	
1	126	SDR856	Driver Assy, Female, Hex, Cap Nut Remover for Interpore Cross	
1	127	SDR857	Driver Assy, 2 Prong, For Interpore Cross	
1	128	SDR858	Driver Assy, Trilobe, Male, For 3-lok by Corin	
1	129	SDR859	Driver Assy, Female, For Moss-Miami by DePuy	
1	130	SDR860	Driver Assy, Female, Horse Shoe, For Moss-Miami by DePuy	

COMPONENTS LIST

Component List				
Std Qty	ID #	Part Number	Description	
1	131	SDR861	Driver Assy, 2 prong, For Click'X by Synthes	Thoracic & Lumbar
1	132	SDR862	Driver Assy, Male, Square, For EBI	
1	133	SDR863	Driver Assy, Female, Flower Shaped, for Spinelink II by EBI	
1	134	SDR864	Driver Assy, Male, Flower Shaped, for Spinelink II by EBI	
1	135	SDR865	Driver Assy, Male, 4 prong, for Xia by Stryker Spine	
1	136	SDR866	Driver Assy, Female, Hexalobe, for Xia III by Stryker Spine	
1	137	SDR867	Driver Assy, Female, Heptagon, 1/2", for Silhouette by Zimmer	
1	138	SDR868	Driver Assy, 4 prong, for Radius by Stryker Spine	
1	139	SDR869	Driver Assy, Male, Pentalobe, for Polaris 5.5 by Biomet	
1	142	SDR872	Driver Assy, Male, 2-Prong, for Theken	
1	143	SDR873	Driver Assy, Female, for Dynesys LIS by Zimmer	
1	144	SDR874	Driver Assy, Male, 3-Prong, for US Spine	
1	146	SDR876	Driver Assy, Male, Hexalobe, X15	
1	147	SDR877	Driver Assy, Male, Hexalobe, X20	
1	148	SDR878	Driver Assy, Male, Hexalobe, X25	
1	149	SDR879	Driver Assy, Female, Hexalobe, E7, for Pathfinder by Zimmer	
1		SCS034	Case, Cervical Spine System, Drivers	Cervical
1		SCS037	Lid, Cervical Spine System, Drivers	
1	1	SDR701	Driver Assy, Male, Hex, 2 mm	
1	2	SDR702	Driver Assy, Male, Hex, 2.25 mm	
1	3	SDR703	Driver Assy, Male, Hex, 2.5 mm	
1	4	SDR704	Driver Assy, Male, Hex, 2.75 mm	
1	5	SDR705	Driver Assy, Male, Hex, 3 mm	
1	7	SDR707	Driver Assy, Male, Hex, 3.5 mm	
1	8	SDR708	Driver Assy, Male, Hex, 4 mm	
1	16	SDR716	Driver Assy, Male, Hex, 7/64"	
1	17	SDR717	Driver Assy, Male, Hex, 1/8"	
1	18	SDR718	Driver Assy, Male, Hex, 5/32"	
1	19	SDR719	Driver Assy, Male, Hex, 3/16"	
1	24	SDR724	Driver Assy, Female, Hex, 3.5 mm	
1	25	SDR725	Driver Assy, Female, Hex, 4 mm	
1	37	SDR737	Driver Assy, Female, Hex, 1/8"	
1	38	SDR738	Driver Assy, Female, Hex, 5/32"	
1	39	SDR739	Driver Assy, Female, Hex, 3/16"	
1	40	SDR740	Driver Assy, Female, Hex, 7/32"	
1	46	SDR746	Driver Assy, Female, Hex, 1/2"	
1	49	SDR749	Driver Assy, Male, Cruciform, 2 mm	
1	50	SDR750	Driver Assy, Male, Cruciform, 2.5 mm	
1	51	SDR751	Driver Assy, Male, Cruciform, 3 mm	

Component List				
Std Qty	ID #	Part Number	Description	
1	52	SDR752	Driver Assy, Male, Cruciform, 3.5 mm	Cervical
1	56	SDR756	Driver Assy, Male, Torx, T6	
1	58	SDR757	Driver Assy, Male, Torx, T8	
1	60	SDR758	Driver Assy, Male, Torx, T10	
1	61	SDR759	Driver Assy, Male, Torx, T15	
1	62	SDR760	Driver Assy, Male, Torx, T20	
1	63	SDR761	Driver Assy, Male, Torx, T25	
1	57	SDR767	Driver Assy, Male, Torx, T7	
1	59	SDR768	Driver Assy, Male, Torx, T9	
1	69	SDR769	Driver Assy, Male, Square, 2 mm for Orthofix	
1	70	SDR770	Driver Assy, Male, Square, 2.5 mm for Orthofix	
1	71	SDR771	Driver Assy, Male, Square, 3 mm for Orthofix	
1	72	SDR772	Driver Assy, Male, Square, 3.5 mm for Orthofix	
1	76	SDR776	Driver Assy, Male, Pentalobe for Interpore Cross	
1	77	SDR777	Driver Assy, Male, Pentalobe, S15	
1	80	SDR780	Driver Assy, Male, Flat Head, .110" Wide	
1	81	SDR781	Driver Assy, Male, Flat Head, .140" Wide	
1	82	SDR782	Driver Assy, Male, Flat Head, .250" Wide	
1	83	SDR783	Driver Assy, Male, Phillips	
1	84	SDR784	Driver Assy, Saddle, 4 mm	
1	87	SDR787	Driver Assy, Blade, 4 mm	
1	95	SDR800	Driver Assy, Male, Star shaped, for Aesculap	
1	96	SDR801	Driver Assy, Male, U shape, unlock tool, for Alphatec	
1	97	SDR802	Driver Assy, Male, 2 prong, for Blackstone	
1	98	SDR803	Driver Assy, Male, Tri-Lobe, for Blackstone	
1	99	SDR804	Driver Assy, Male, 3 prong, for Cervive by Corin	
1	101	SDR806	Driver Assy, Male, Square, Unlock tool, For Interpore by Cross	
1	102	SDR807	Driver Assy, Male, Square, For Medtronic	
1	103	SDR808	Driver Assy, Male, 4 prong, for Stryker Spine	
1	104	SDR809	Driver Assy, Male, Flower Shaped, For Spinelink ACS by EBI	
1	105	SDR810	Driver Assy, Male, 3 pronged, for Cervi-Lok by Zimmer	
1	107	SDR812	Driver Assy, Male, 3-Prong, for Nex-Link by Zimmer	
1	145	SDR875	Driver Assy, Male, Hexalobe, X10	
1	146	SDR876	Driver Assy, Male, Hexalobe, X15	
1	147	SDR877	Driver Assy, Male, Hexalobe, X20	

SHUKLA MEDICAL®

Universal Orthopedic Extraction Technologies

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.

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.

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