SURGICAL TECHNIQUE

PRECISION SPINE

MD-Vue™

LATERAL FUSION SYSTEM

PRECISION SPINE®

Discover the Difference

Made in the USA

TECHNOLOGY DRIVEN

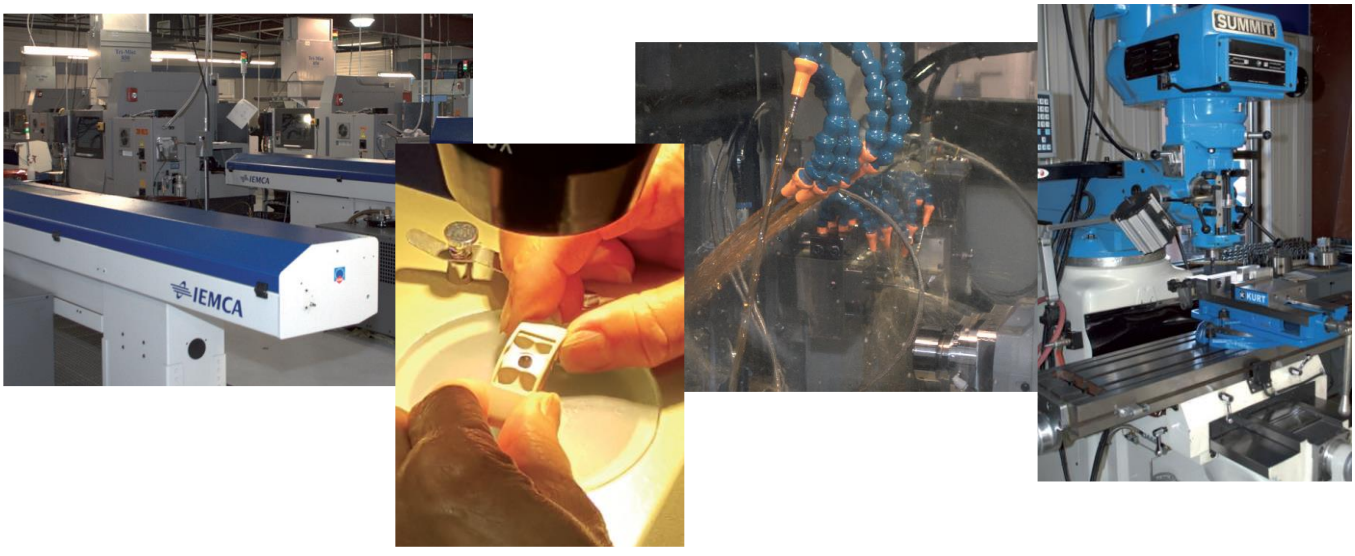
Ingenuity and sophisticated engineering are at the core of every device and instrument we design and manufacture. Additionally, by using internal resources to seamlessly integrate all facets of production, we are able to remove inefficiencies while optimizing quality, cost-effectiveness and timely delivery.

CUSTOMER DRIVEN

Understanding the complexity of spinal surgery helps us deliver a seamless OR experience to our surgeon customers. By maintaining a lean, entrepreneurially oriented management team, we are able to shorten the decision chain and provide highly focused education, literature and technical assistance.

OUTCOME DRIVEN

At Precision Spine, our primary concern is patient outcomes. We continually strive to advance treatment options with the goal of improving quality of life for those impacted by disorders of the spine. And we do so by engineering high quality products backed by outstanding customer support and competitive pricing.



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MD-VUE™ LATERAL ACCESS SYSTEM OVERVIEW

DEVICE DESCRIPTION

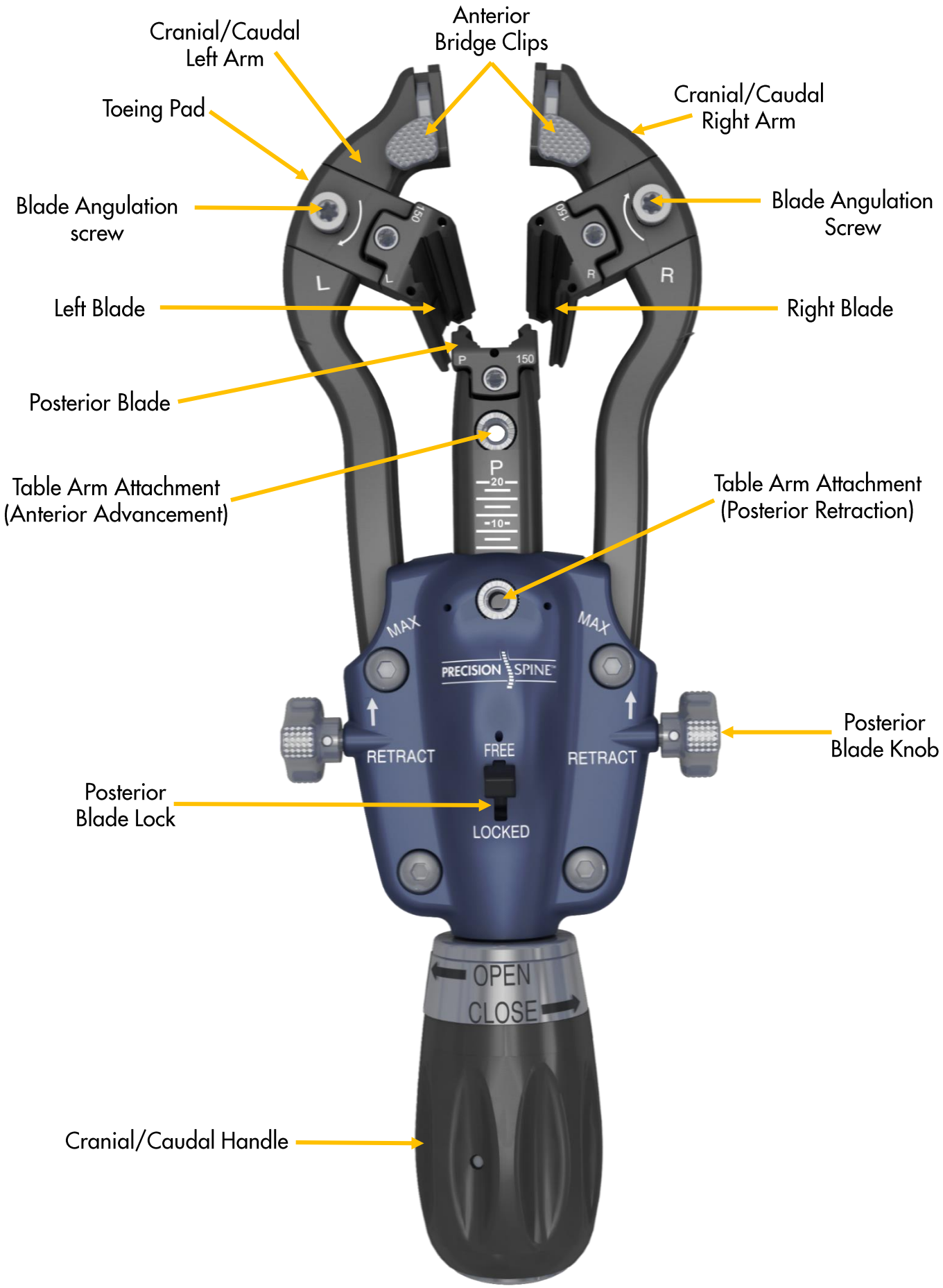
The MD-Vue Lateral Access System was designed in collaboration with top lateral spine surgeons and represents many years of lateral procedure experience. MD-Vue is the only lateral retractor that offers a unique and patented Nested 3-Blade Design which prevents blade creep during insertion. MD-Vue also incorporates a larger blade diameter, for increased surface area contact, which minimizes the pressure on neural structures during retraction. In addition, MD-Vue features an industry leading, adjustable dual light source, as well as infinite retraction resolution and an improved rotary retraction mechanism that provides better control and tactile feel during retraction.

INDICATIONS

The Precision Spine ShurFit® LLIF Lateral Lumbar Interbody Device is indicated for intervertebral body fusion of the spine in skeletally mature patients. The device system is designed for use with autograft to facilitate fusion. One device is used per intervertebral space for the LLIF system.

Both the ShurFit LLIF Lateral Lumbar Interbody and the AccuFit® Lateral Plate are intended for use at either one level or two contiguous levels in the lumbar spine from L2 to S1, for treatment of degenerative disc disease (DDD) with up to Grade 1 spondylolisthesis. DDD is defined as back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies. The interbody device is to be used with supplemental fixation and autogenous bone graft. Patients should have at least six months of non-operative treatment prior to treatment with a lumbar intervertebral fusion device.

Please refer to the Instructions for Use (IFU) for complete system description, indications and warnings.


Cranial/Caudal
Left Arm
Anterior
Bridge Clips
Toeing Pad
Cranial/Caudal
Right Arm
Blade Angulation
screw
Blade Angulation
Screw
Left Blade
Right Blade
Posterior Blade
Table Arm Attachment
(Anterior Advancement)
Table Arm Attachment
(Posterior Retraction)
Posterior
Blade Knob
Posterior
Blade Lock
Cranial/Caudal Handle
L
R
P
150
20
10
MAX
MAX
PRECISION SPINE
RETRACT
FREE
RETRACT
LOCKED
OPEN
CLOSE

MD-VUE™ SYSTEM FEATURES

MD-VUE RETRACTOR

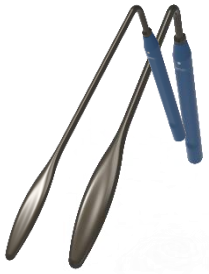
- Infinite resolution retraction
- Increased retraction
- Multiple Table Arm attachments

PATENTED BLADE DESIGN

- Nested 3-blade design
- Independent blade angulation (up to 20°) with 0° position
- Integrated neuro monitoring cannulas

ANTERIOR BLADE OPTION

- Quick snap-on anterior bridge
- Narrow & wide, 180 & 220mm retractor options
- Multi-position capability



BLADE FIXATION OPTIONS

- 20 & 30mm posterior intradiscal shims
- 20mm vertebral body fixation pin
- 25mm widening shims for cranial/caudal blades
- 10mm lengthening shim for cranial/caudal blades

INTEGRATED LED LIGHTING

- LED illumination for optimal visibility
- Adjustable position within retractor blades

LIGHT BOX

- 43-5000

PRECISION SPINE SHURFIT® LLIF CAGES

The ShurFit® LLIF interbody design provides multiple footprints with a parallel, 7° and 15° lordotic angles to assist in reproducing the patient's sagittal profile while providing anterior column support.

Bulleted Leading Edge

- The Large Graft Window optimizes biological ingrowth
- The Self-distracting Bulleted Leading Edge allows for easy insertion
- Sizing
  - Lordosis – 0, 7 & 15 Degrees
  - Width – 18 & 22mm
  - Length – 45, 50, 55 & 60mm
  - Height – 8, 10, 12, 14, 16 & 18mm*

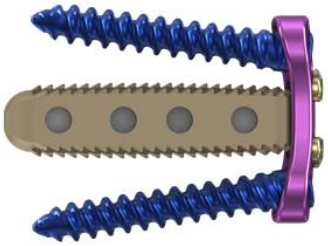
18mm Height is only available for the 15° lordosis and by request only.
Please contact Customer Relations for product availability.

PRECISION SPINE

AccuFit®

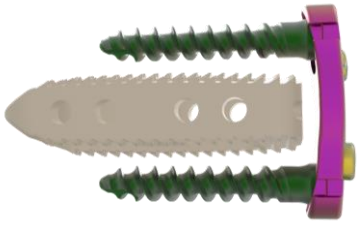
LATERAL PLATE SYSTEM

The AccuFit® Lateral Plate features a low-profile design and two plating options – 4-hole plate and 2-hole plate.



The 4-Hole Plate comes in the following five lengths (30, 32, 34, 36, & 38mm lengths).

The 2-Hole Plate comes in the following five lengths (28, 30, 32, 34, & 36mm lengths).



Note: Plate lengths are based on the overall length of plate, not hole-to-hole distance.

The system also features a unique, plate placement locking guide to assist with easy screw insertion.

Other features include:

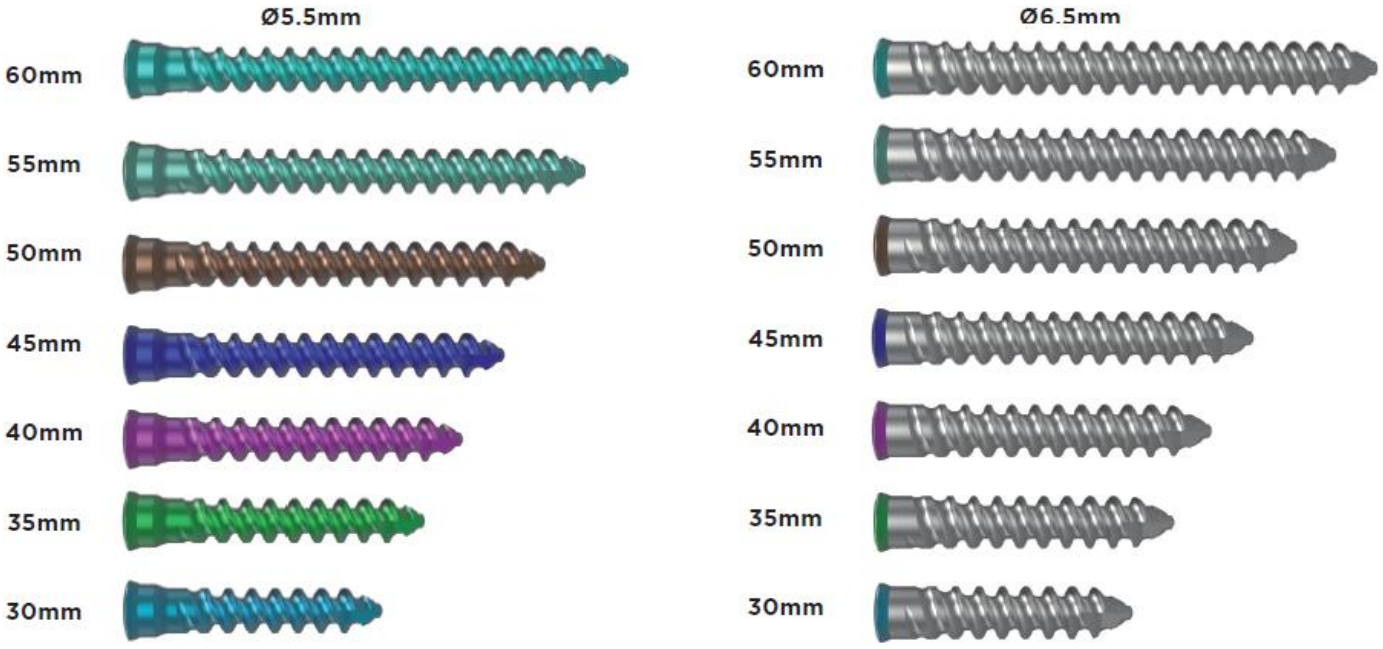
- Double Lead Screw provides efficient delivery
- Retention Driver allows for secure screw placement
- Variable Angle Plate provides optimal screw placement
- Screw Sizing
    - Diameter 5.5 & 6.5mm
    - Length 30-60mm (5mm inc.)

ACCUFIT® LATERAL PLATE SIZES

4-Hole Plate Sizes

2-Hole Plate Sizes

ACCUFIT LATERAL PLATE SCREW SIZES



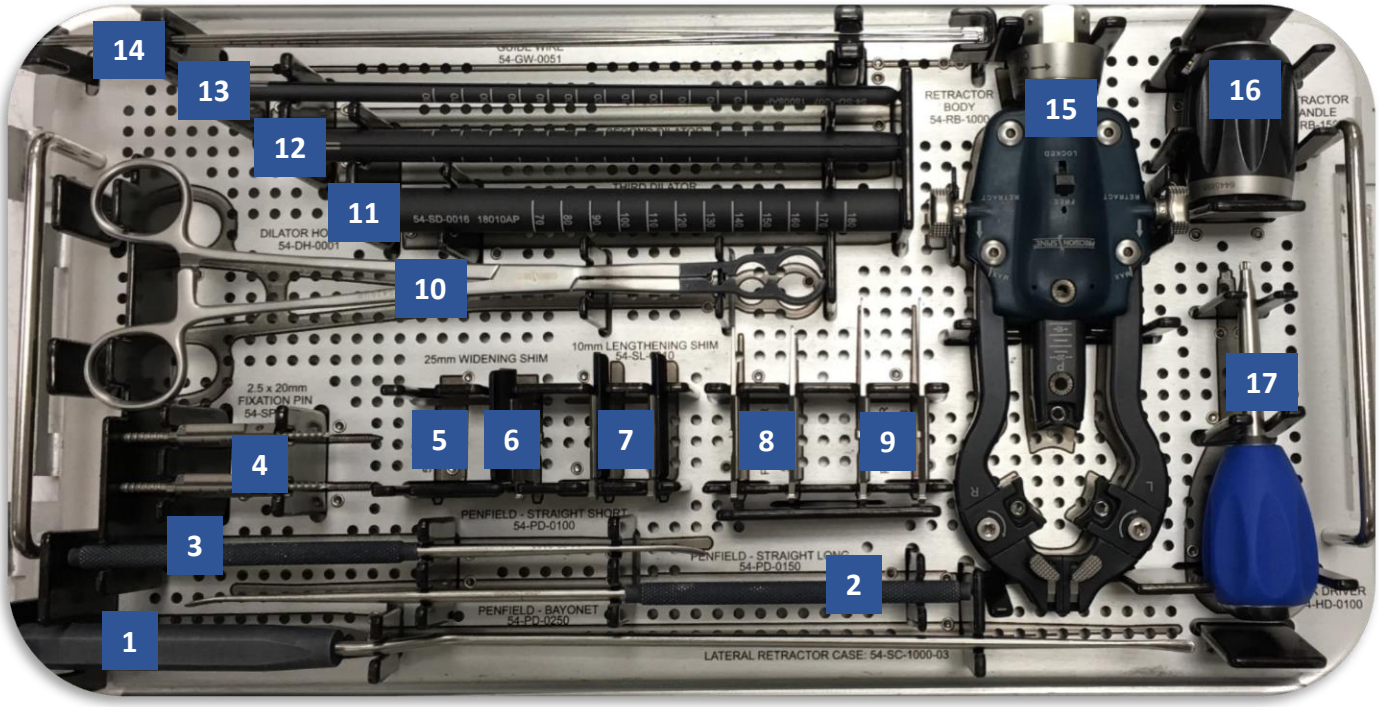
*25mm available by Special Request

MD-VUE™ LATERAL SYSTEM DISPOSABLES

Neuromonitoring Probe (Sterile)	PNM1.0/275	
Ball Tip Probe (Sterile)	302404-000-160	
SST Guidewire	54-GW-0051	
Annulotomy Knife (Sterile)	1587-03	
20mm Posterior Shim	54-SP-0020	
30mm Posterior Shim	54-SP-0030	
2.5mm x 20mm Fixation Pin	54-SP-2520	
Bipolar Forceps (Sterile)	54-BP-5000	
Bifurcated Illuminator (Sterile)	54-LC-5200	

54-BK-1000 INSTRUMENT TRAY

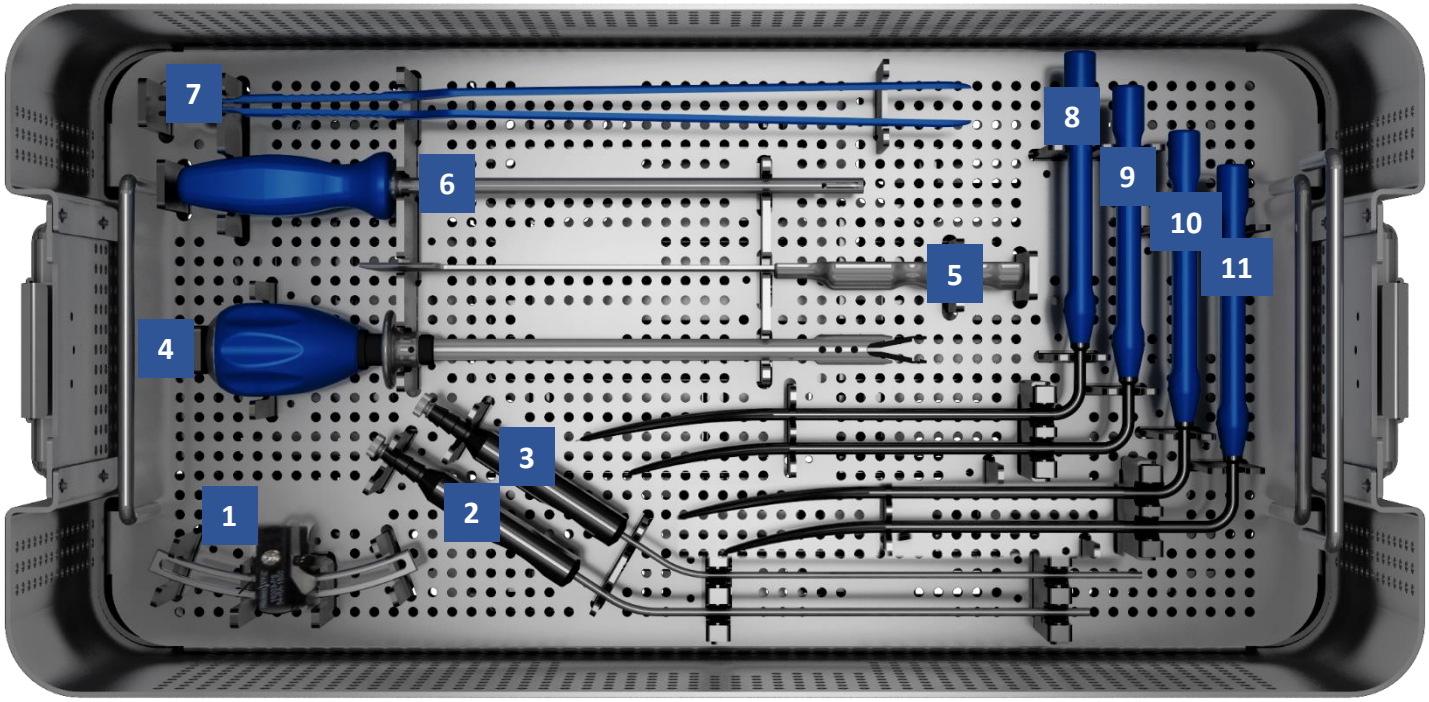
TOP LEVEL



#	Part No.	Description	Qty
1.	54-PD-0250	Bayonetted Penfield Dissector – 250mm	1
2.	54-PD-0150	Long Penfield Dissector – 150mm	1
3.	54-PD-0100	Short Penfield Dissector – 100mm	1
4.	54-SP-2520	Fixation Pins	2
5.	54-SW-2510	Left Widening Shim	1
6.	54-SW-2511	Right Widening Shim	1
7.	54-SL-0010	10mm – Lengthening Shims	2
8.	54-SP-0020	20mm – Intradiscal Shims	2
9.	54-SP-0030	30mm – Intradiscal Shims	2
10.	54-DH-0001	Dilator Holder	1
11.	54-SD-0016	16mm Serial Dilator	1
12.	54-SD-0012	12mm Serial Dilator	1
13.	54-SD-0007	7mm Serial Dilator	1
14.	54-GW-0051	Guidewire	10
15.	54-RB-1000	Retractor Body	1
16.	54-RB-1500	Retractor Body Handle	1
17.	54-HD-0100	T-20 Hexalobe Driver	1

54-BK-1000 INSTRUMENT TRAY

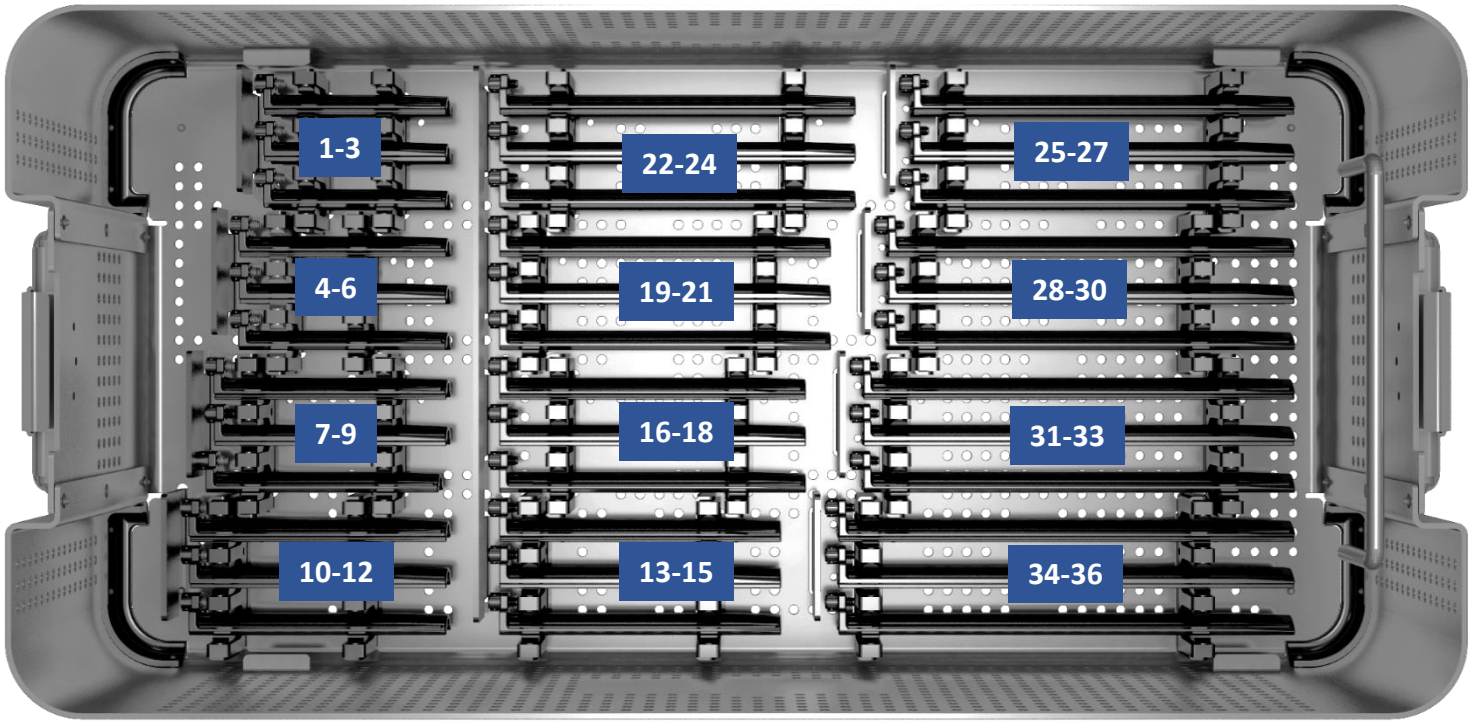
MIDDLE LEVEL



#	Part No.	Description	Qty
1.	54-RA-1500	Anterior Bridge	1
2.	54-SS-0012	Suction – 12 French Long	1
3.	54-SS-0010	Suction – 10 French Long	1
4.	54-ST-0200	Shim Remover	1
5.	54-ST-0100	Shim Inserter	1
6.	54-HD-0200	Fixation Pin Driver	1
7.	54-BP-1000	Reusable Bipolar	1
8.	54-RA-2180	180mm Anterior Retractors, Wide	1
9.	54-RA-1180	180mm Anterior Retractors, Narrow	1
10.	54-RA-2220	220mm Anterior Retractors, Wide	1
11.	54-RA-1220	220mm Anterior Retractors, Narrow	1

54-BK-1000 INSTRUMENT TRAY

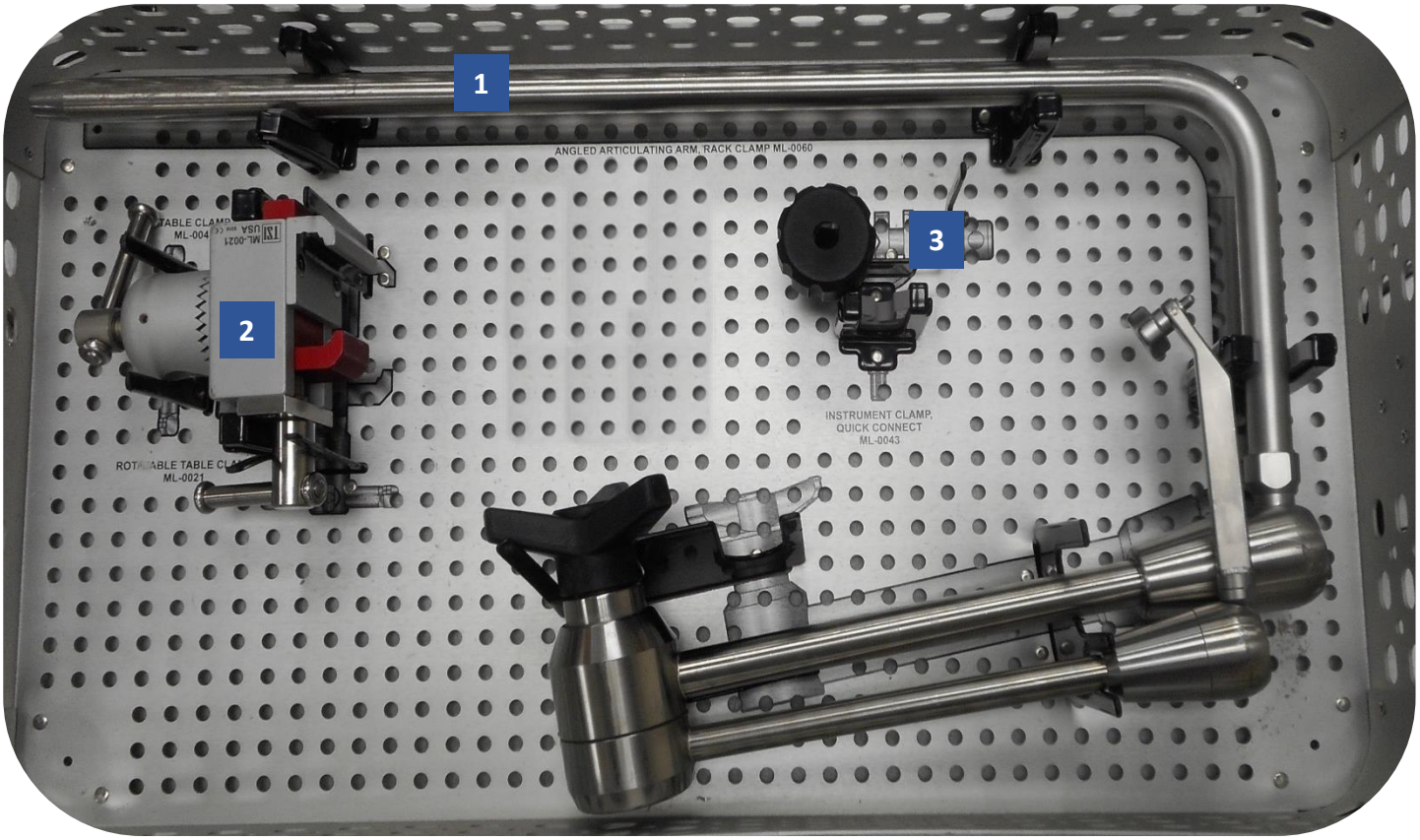
BOTTOM LEVEL



#	Part No.	Description	Qty
1.	54-BR-0070	70mm Blades (Right)	1
2.	54-BL-0070	70mm Blades (Left)	1
3.	54-BP-0070	70mm Blades (Posterior)	1
4.	54-BR-0080	80mm Blades (Right)	1
5.	54-BL-0080	80mm Blades (Left)	1
6.	54-BP-0080	80mm Blades (Posterior)	1
7.	54-BR-0090	90mm Blades (Right)	1
8.	54-BL-0090	90mm Blades (Left)	1
9.	54-BP-0090	90mm Blades (Posterior)	1
10.	54-BR-0100	100mm Blades (Right)	1
11.	54-BL-0100	100mm Blades (Left)	1
12.	54-BP-0100	100mm Blades (Posterior)	1
13.	54-BR-0110	110mm Blades (Right)	1
14.	54-BL-0110	110mm Blades (Left)	1
15.	54-BP-0110	110mm Blades (Posterior)	1
16.	54-BR-0120	120mm Blades (Right)	1
17.	54-BL-0120	120mm Blades (Left)	1
18.	54-BP-0120	120mm Blades (Posterior)	1

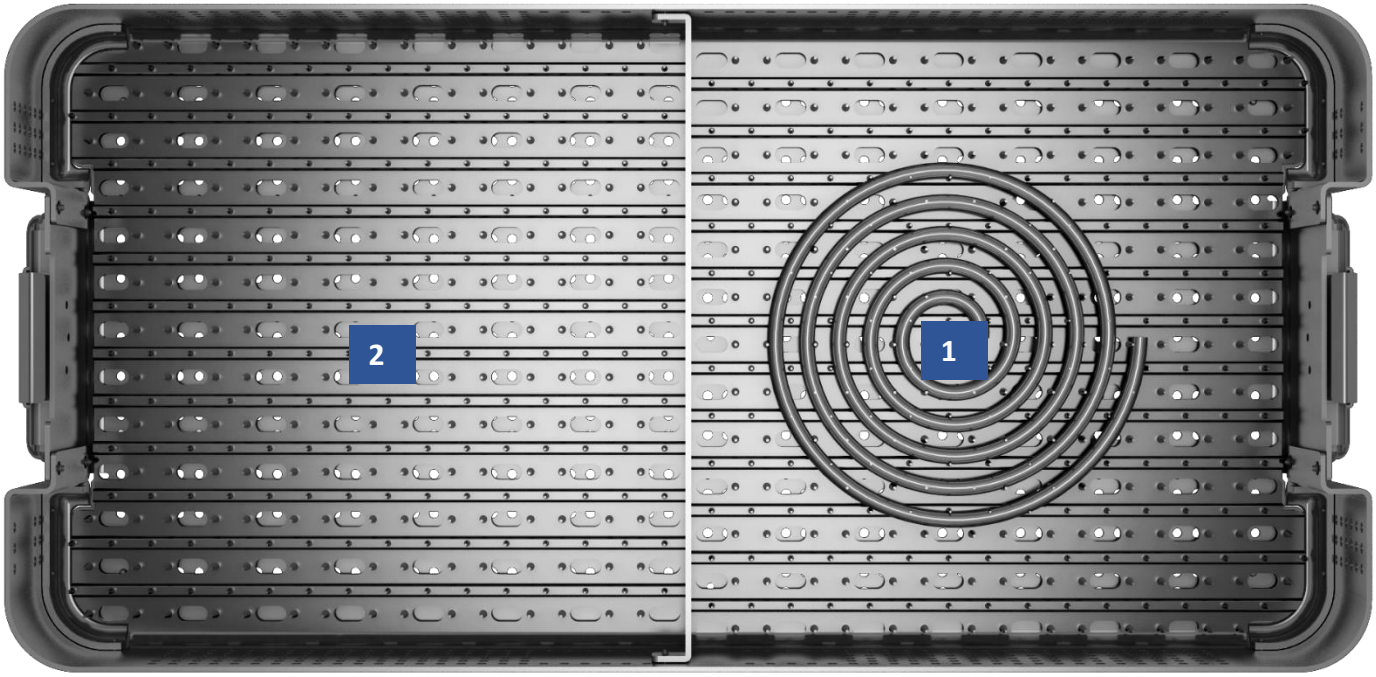
#	Part No.	Description	Qty
19.	54-BR-0130	130mm Blades (Right)	1
20.	54-BL-0130	130mm Blades (Left)	1
21.	54-BP-0130	130mm Blades (Posterior)	1
22.	54-BR-0140	140mm Blades (Right)	1
23.	54-BL-0140	140mm Blades (Left)	1
24.	54-BP-0140	140mm Blades (Posterior)	1
25.	54-BR-0150	150mm Blades (Right)	1
26.	54-BL-0150	150mm Blades (Left)	1
27.	54-BP-0150	150mm Blades (Posterior)	1
28.	54-BR-0160	160mm Blades (Right)	1
29.	54-BL-0160	160mm Blades (Left)	1
30.	54-BP-0160	160mm Blades (Posterior)	1
31.	54-BR-0170	170mm Blades (Right)	1
32.	54-BL-0170	170mm Blades (Left)	1
33.	54-BP-0170	170mm Blades (Posterior)	1
34.	54-BR-0180	180mm Blades (Right)	1
35.	54-BL-0180	180mm Blades (Left)	1
36.	54-BP-0180	180mm Blades (Posterior)	1

ML-0709 TABLE ARM TRAY



#	Part No.	Description	Qty
1.	54-TA-1000	Table Arm	1
2.	ML-0021	Table Arm Clamp	1
3.	54-RB-2000	Posterior Lobe Handle	1

54-BK-3000 LIGHT CABLE TRAY

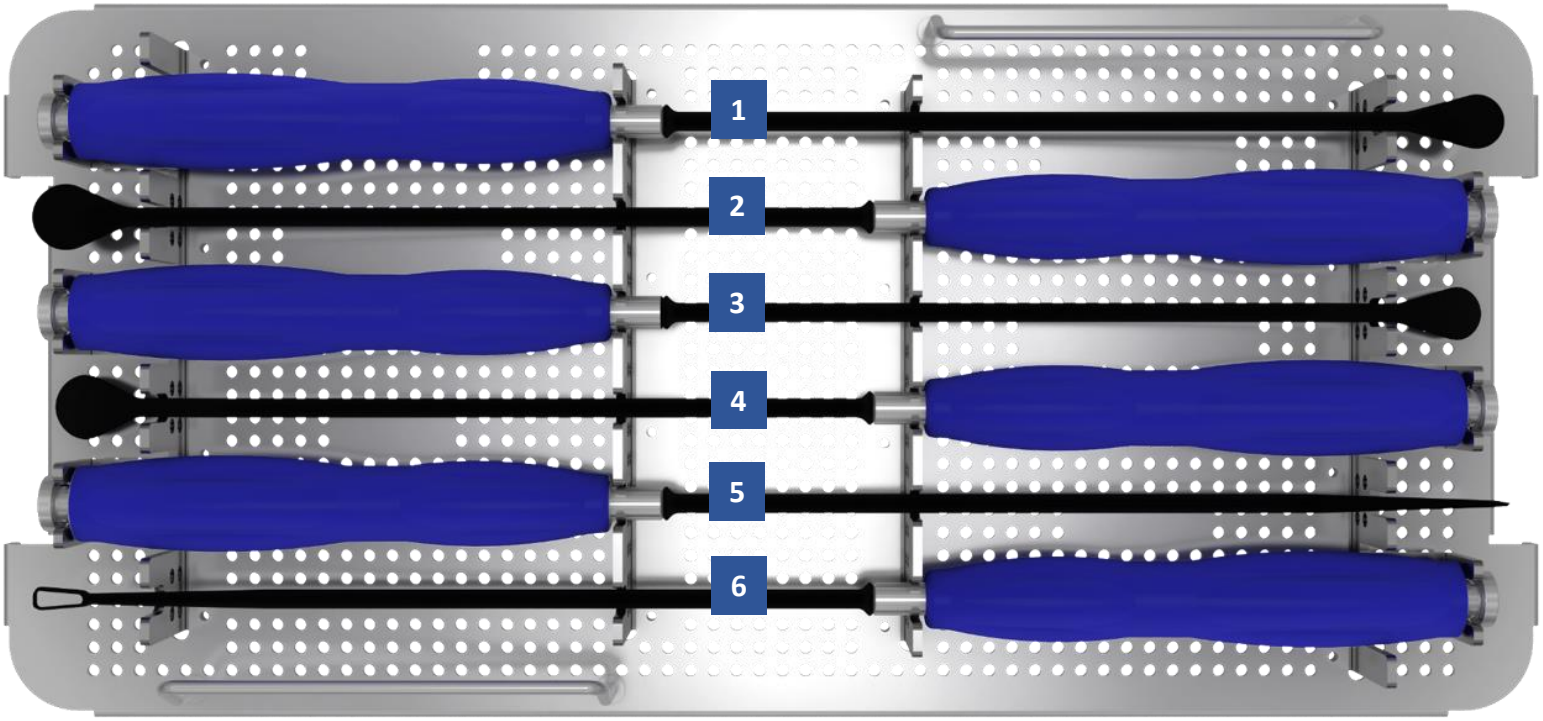


#	Part No.	Description	Qty
1.	54-LC-5100	Reusable Light Cable	1
2.	54-SD-0025	25mm Dilator (not pictured)	1

60-BK-1000 INSTRUMENT TRAY

DISC PREPARATION #1: COBBS/CURETTES

TOP LEVEL

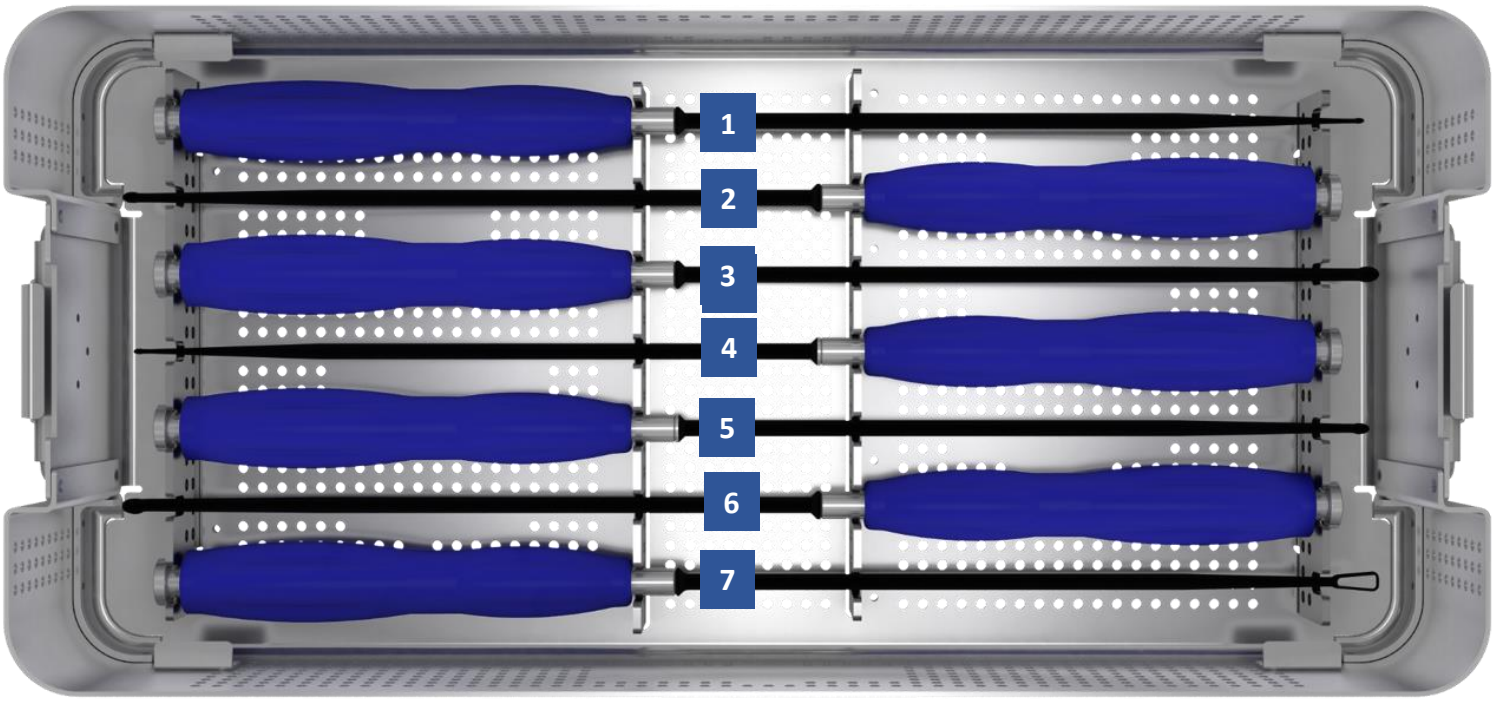


#	Part No.	Description	Qty
1.	60-CE-9018	Straight Cobb Elevator – 18mm	1
2.	60-CE-9022	Straight Cobb Elevator – 22mm	1
3.	60-CE-9118	Angled Cobb Elevator – 18mm	1
4.	60-CE-9122	Angled Cobb Elevator – 22mm	1
5.	60-CT-9012	Chisel – 12mm	1
6.	60-CB-9006	Box Curette – 6mm	1

60-BK-1000 INSTRUMENT TRAY

DISC PREPARATION #1: COBBS/CURETTES

BOTTOM LEVEL

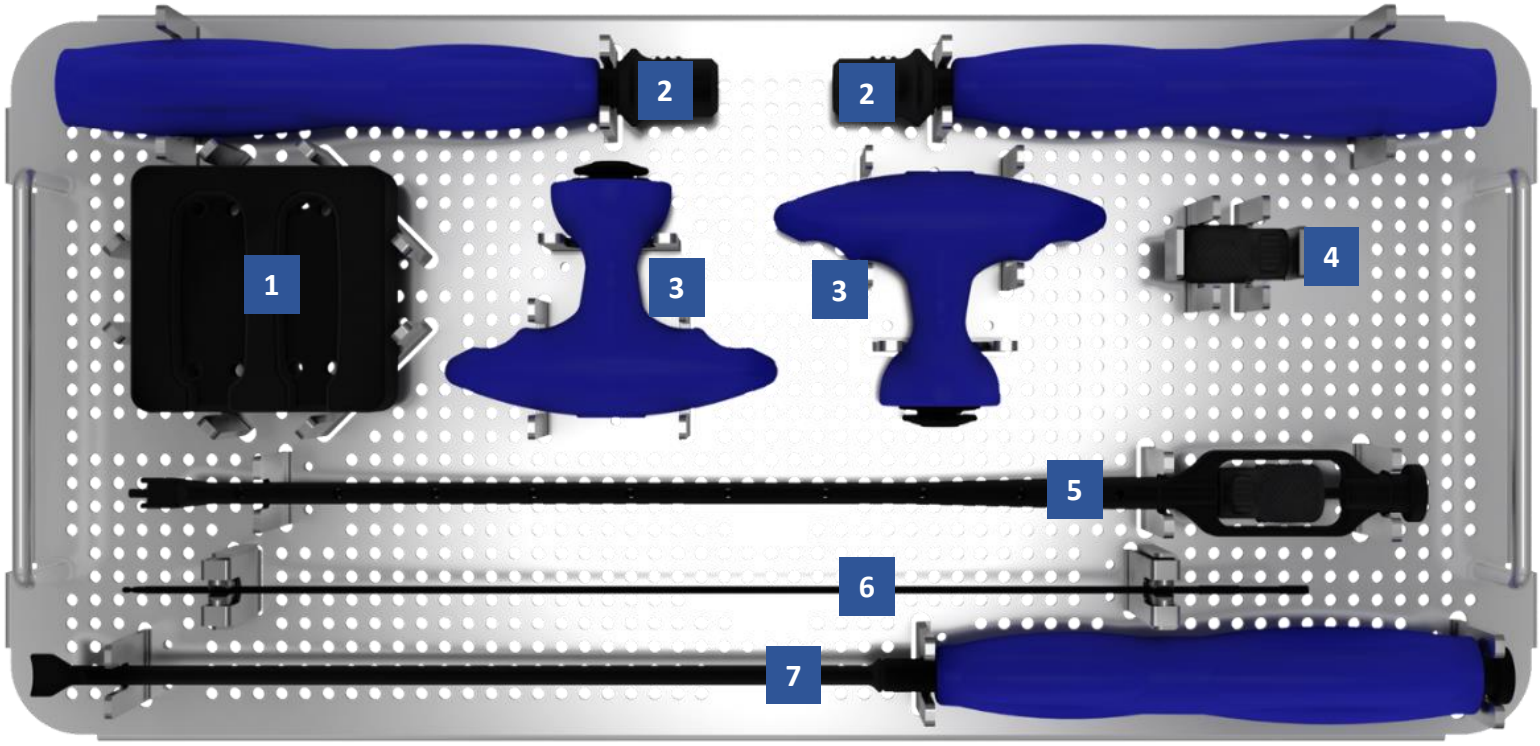


#	Part No.	Description	Qty
1.	60-CC-9002	Cup Curette 2mm	1
2.	60-CC-9004	Cup Curette 4mm	1
3.	60-CC-9006	Cup Curette 6mm	1
4.	60-CC-9452	Cup Curette 2mm x 45° Up Biting	1
5.	60-CC-9454	Cup Curette 4mm x 45° Up Biting	1
6.	60-CC-9456	Cup Curette 6mm x 45° Up Biting	1
7.	60-ES-9010	Endplate Scraper – 10mm	1

60-BK-2000 IMPLANTATION INSTRUMENT TRAY

DISC PREPARATION #2

TOP LEVEL

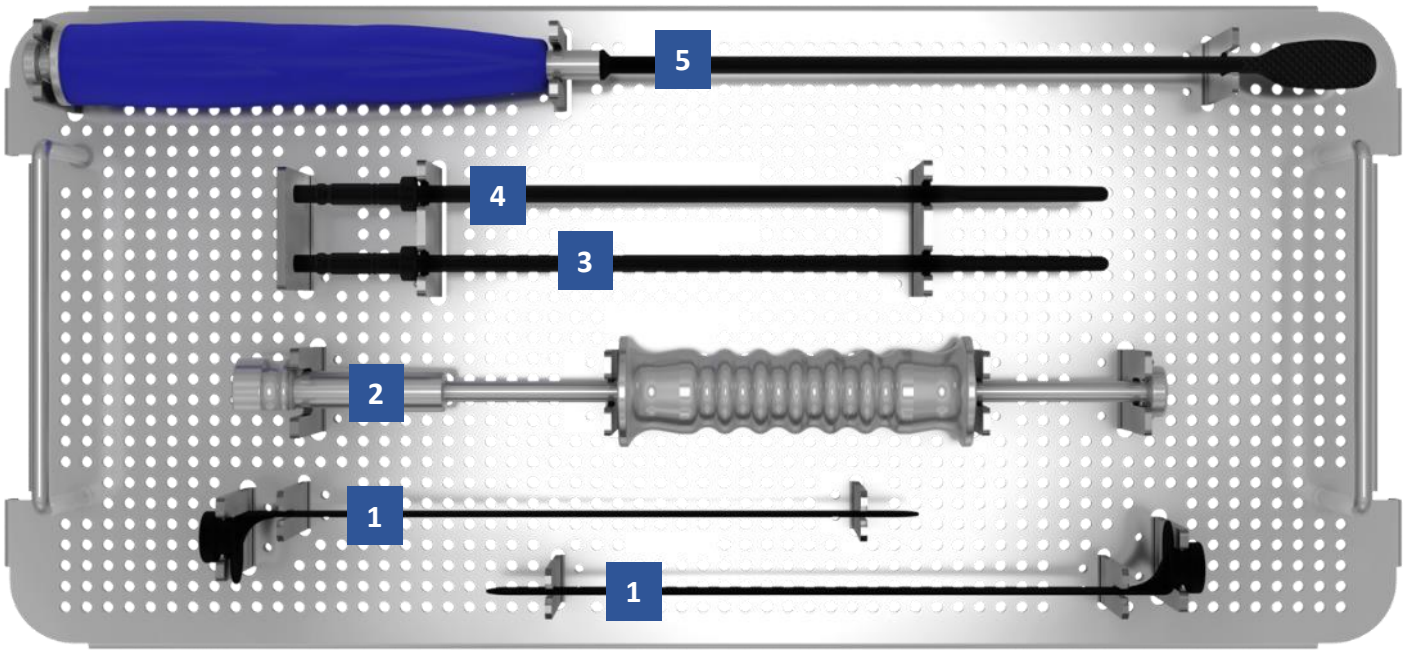


#	Part No.	Description	Qty
1.	60-PB-9001	Packing Block	1
2.	60-CH-0002	Sport Grip Handle	2
3.	60-CH-0003	Stealth T-Handle	2
4.	60-IN-5002	Inserter Shaft Handle	1
5.	60-IN-5001	Implant Inserter	1
6.	60-IN-5010	Implant Removal Shaft	1
7.	60-IT-9001	Implant Tamp	1

60-BK-2000 IMPLANTATION INSTRUMENT TRAY

DISC PREPARATION #2

MIDDLE LEVEL

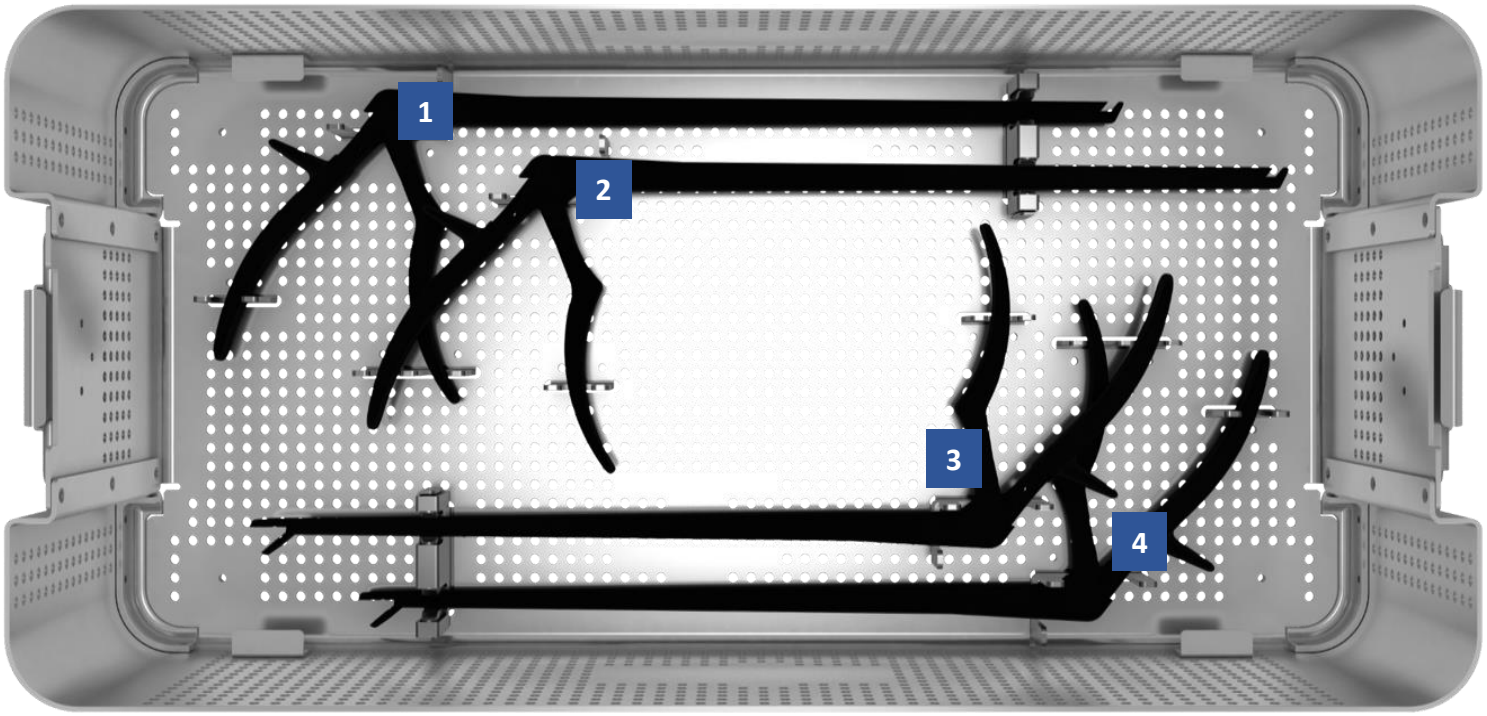


#	Part No.	Description	Qty
1.	60-SL-9018	Slides	2
2.	60-SH-9001	Slap Hammer	1
3.	60-DS-9506	Paddle Distractor – 6mm	1
4.	60-DS-9504	Paddle Distractor – 4mm	1
5.	60-RS-9006	Rasp – 6mm	1

60-BK-2000 IMPLANTATION INSTRUMENT TRAY

DISC PREPARATION #2

BOTTOM LEVEL

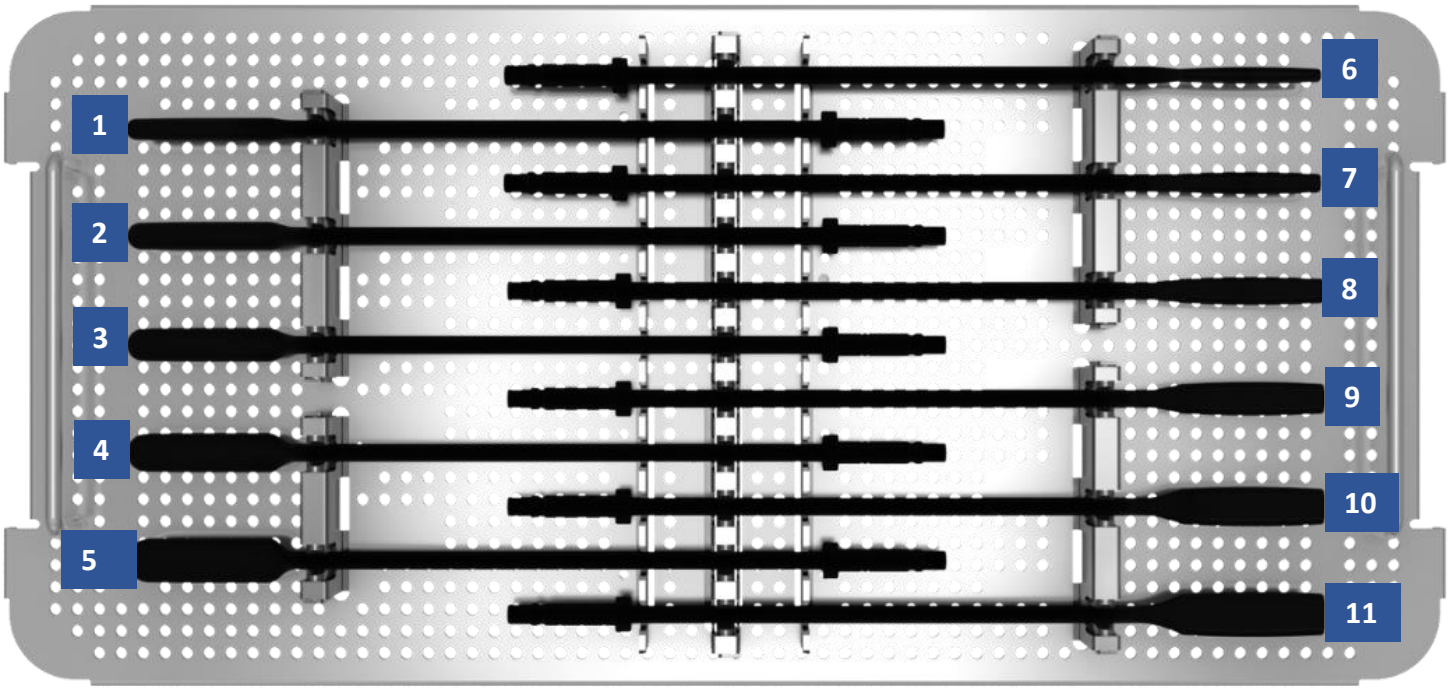


#	Part No.	Description	Qty
1.	60-RK-9334	Kerrison Punch 40° – 4mm x 330mm	1
2.	60-RK-9336	Kerrison Punch 40° – 6mm x 330mm	1
3.	60-RP-9334	Pituitary Rongeur – 4mm x 330mm	1
4.	60-RP-9336	Pituitary Rongeur – 6mm x 330mm	1

60-BK-3000 INSTRUMENT TRAY

DISC PREPARATION #3: PADDLES/CUTTERS

TOP LEVEL

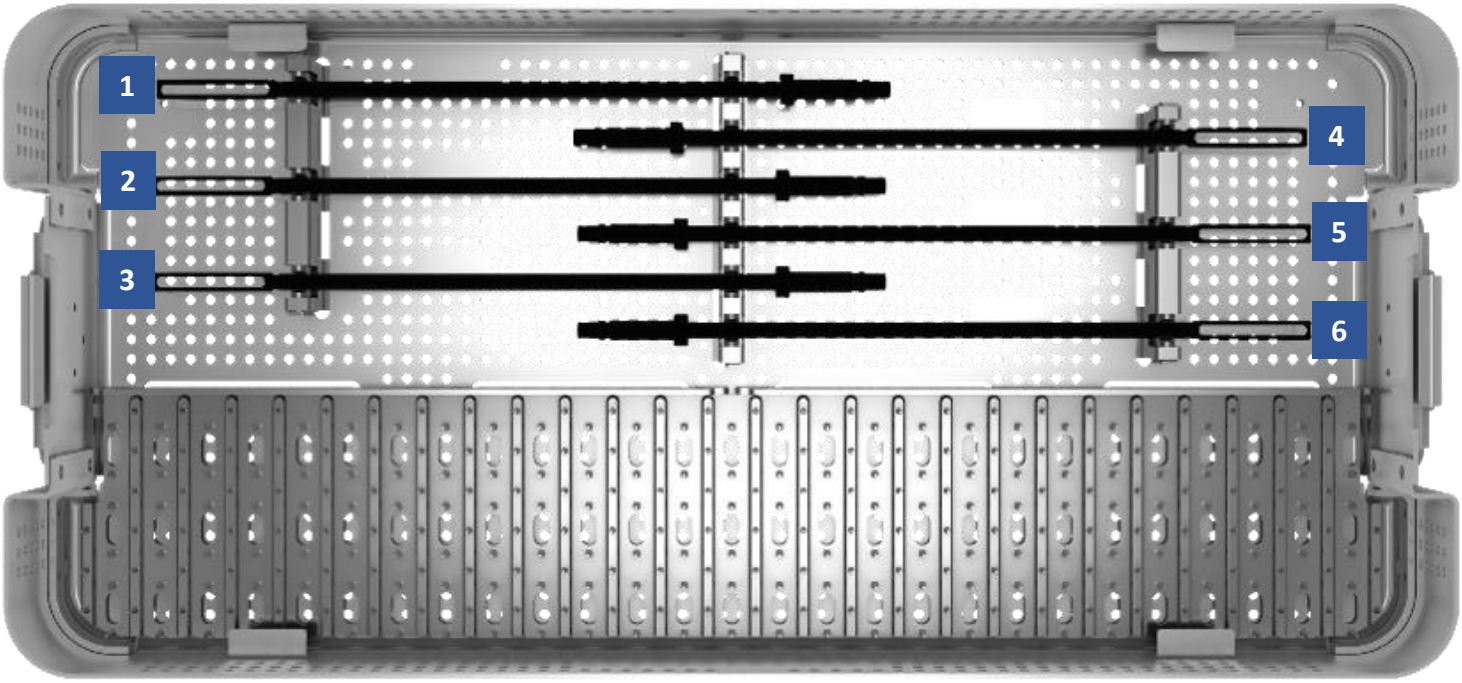


#	Part No.	Description	Qty
1.	60-DS-9508	Paddle Distractor – 8mm	1
2.	60-DS-9510	Paddle Distractor – 10mm	1
3.	60-DS-9512	Paddle Distractor – 12mm	1
4.	60-DS-9514	Paddle Distractor – 14mm	1
5.	60-DS-9516	Paddle Distractor – 16mm	1
6.	60-PS-9506	Paddle Shaver – 6mm	1
7.	60-PS-9508	Paddle Shaver – 8mm	1
8.	60-PS-9510	Paddle Shaver – 10mm	1
9.	60-PS-9512	Paddle Shaver – 12mm	1
10.	60-PS-9514	Paddle Shaver – 14mm	1
11.	60-PS-9516	Paddle Shaver – 16mm	1

60-BK-3000 INSTRUMENT TRAY

DISC PREPARATION #3: PADDLES/CUTTERS

BOTTOM LEVEL

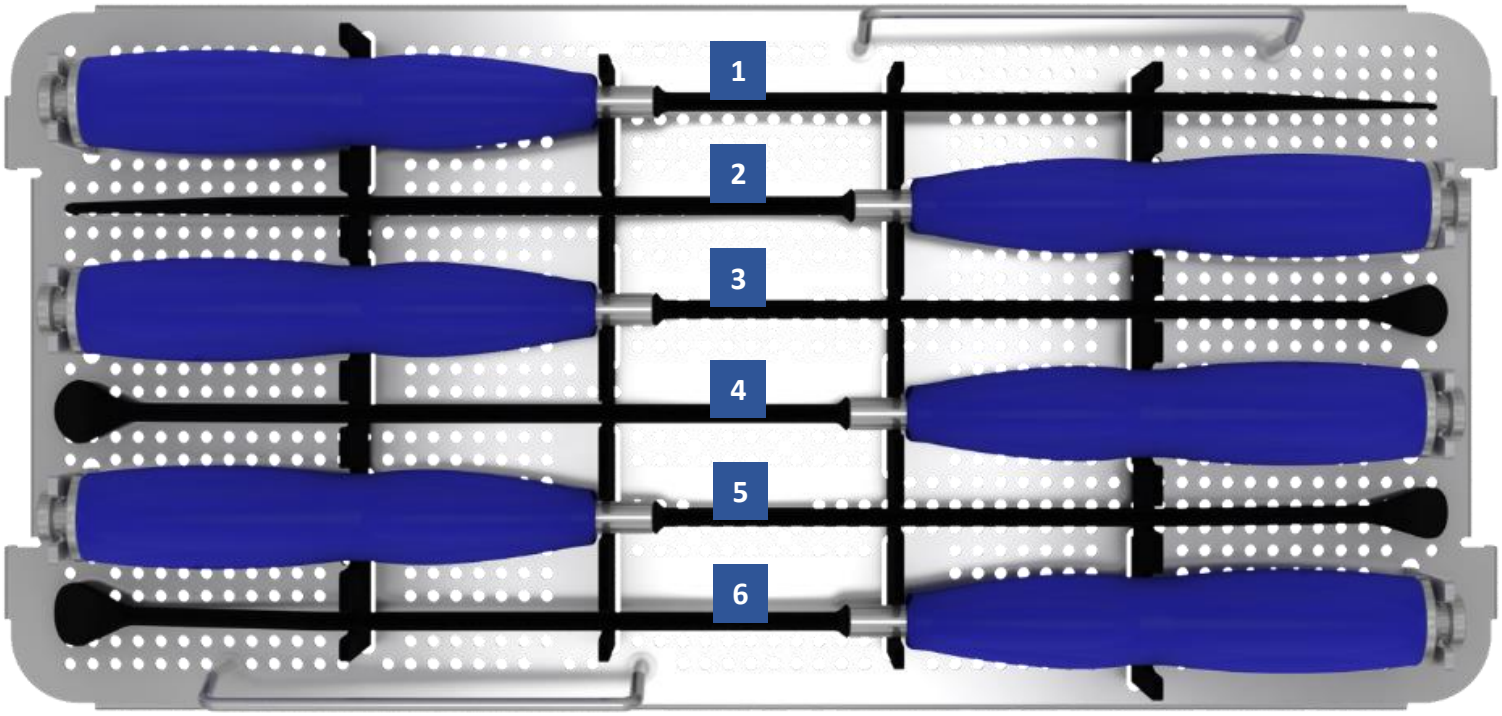


#	Part No.	Description	Qty
1.	60-DC-9506	Disc Cutter – 6mm	1
2.	60-DC-9508	Disc Cutter – 8mm	1
3.	60-DC-9510	Disc Cutter – 10mm	1
4.	60-DC-9512	Disc Cutter – 12mm	1
5.	60-DC-9514	Disc Cutter – 14mm	1
6.	60-DC-9516	Disc Cutter – 16mm	1

60-BK-4000 INSTRUMENT TRAY
60-BK-4005 INSTRUMENT TRAY – 15°

DISC PREPARATION #4: ANGLED INSTRUMENTS

TOP LEVEL



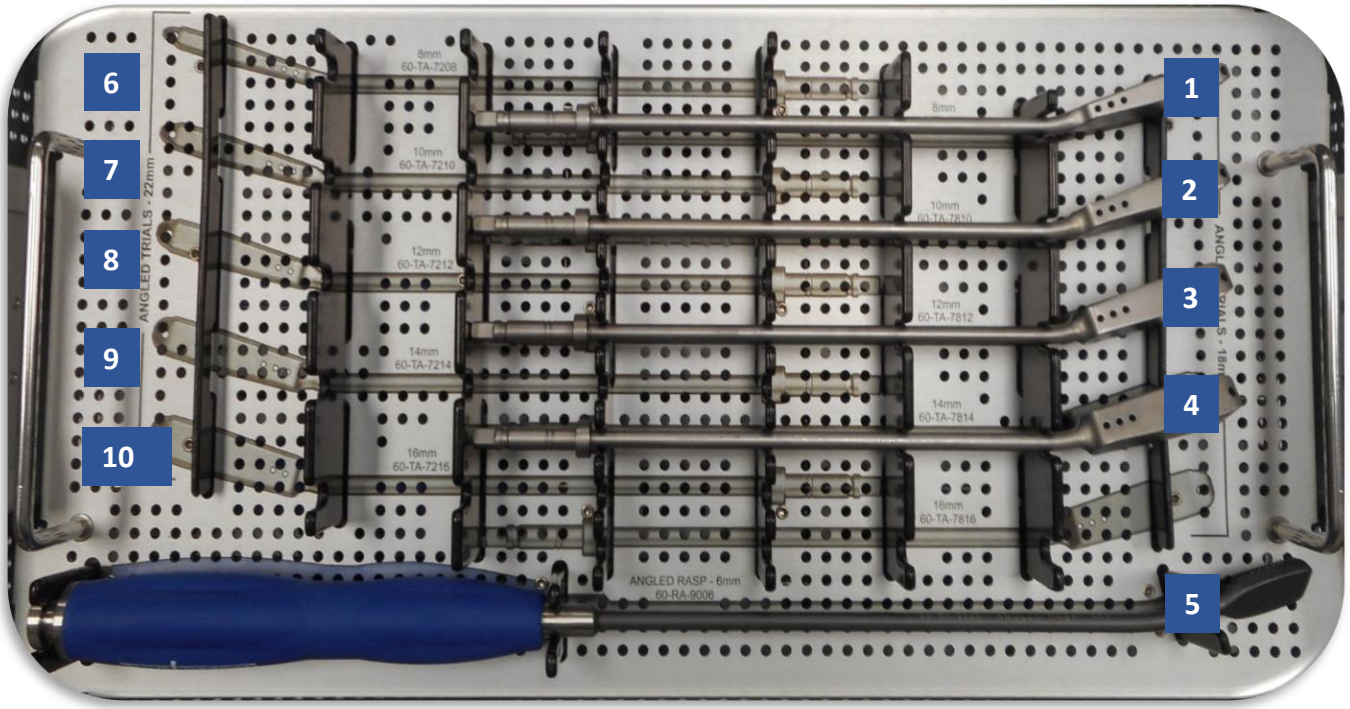
#	Part No.	Description	Qty
1.	60-CC-9852	Cup Curette 2mm x 45° Up Biting, Angled	1
2.	60-CC-9854	Cup Curette 4mm x 45° Up Biting, Angled	1
3.	60-CE-9218	Angled Up Cobb Elevator – 18mm	1
4.	60-CE-9222	Angled Up Cobb Elevator – 22mm	1
5.	60-CE-9318	Angled Down Cobb Elevator – 18mm	1
6.	60-CE-9322	Angled Down Cobb Elevator – 22mm	1

**By Request Only. Please contact Customer Relations for product availability.*

60-BK-4000 INSTRUMENT TRAY
60-BK-4005 INSTRUMENT TRAY – 15°

DISC PREPARATION #4: ANGLED INSTRUMENTS

MIDDLE LEVEL



#	Part No.	Description	Qty
1.	60-TA-0808	Angled Trial 18 W x 08mm - 0°	1
2.	60-TA-0810	Angled Trial 18 W x 10mm - 0°	1
3.	60-TA-0812	Angled Trial 18 W x 12mm - 0°	1
4.	60-TA-0814	Angled Trial 18 W x 14mm - 0°	1
5.	60-RA-9006	Angled Rasp – 6mm	1

Additional Instruments Included: 60-BK-4005 Instrument Tray - 15 °

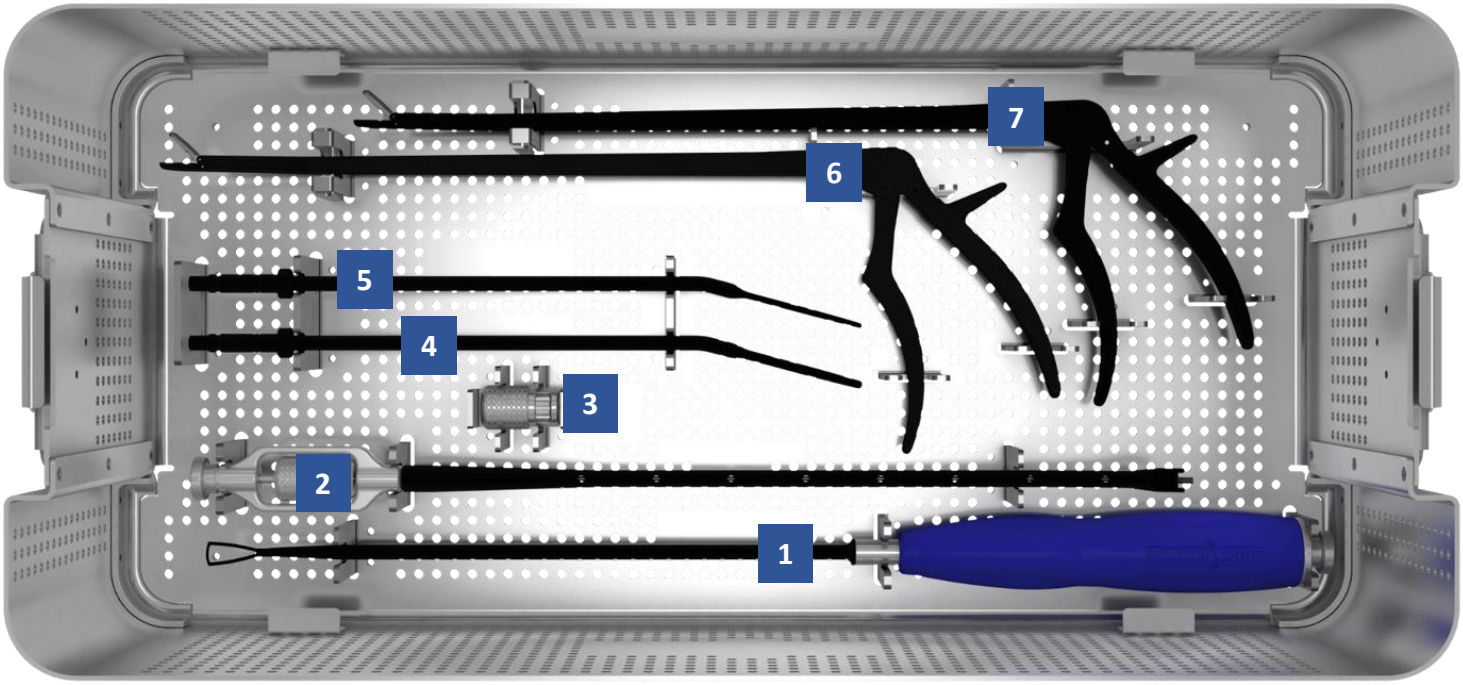
#	Part No.	Description	Qty
6.	60-TA-6810	Angled Trial, 18mm x 10mm, 15°, Left Side Up	1
7.	60-TA-6812	Angled Trial, 18mm x 12mm, 15°, Left Side Up	1
8.	60-TA-6814	Angled Trial, 18mm x 14mm, 15°, Left Side Up	1
9.	60-TA-6816	Angled Trial, 18mm x 16mm, 15°, Left Side Up	1
10.	60-TA-6818*	Angled Trial, 18mm x 18mm, 15°, Left Side Up	1

**By Request Only. Please contact Customer Relations for product availability.*

60-BK-4000 INSTRUMENT TRAY
60-BK-4005 INSTRUMENT TRAY – 15°

DISC PREPARATION #4: ANGLED INSTRUMENTS

BOTTOM LEVEL

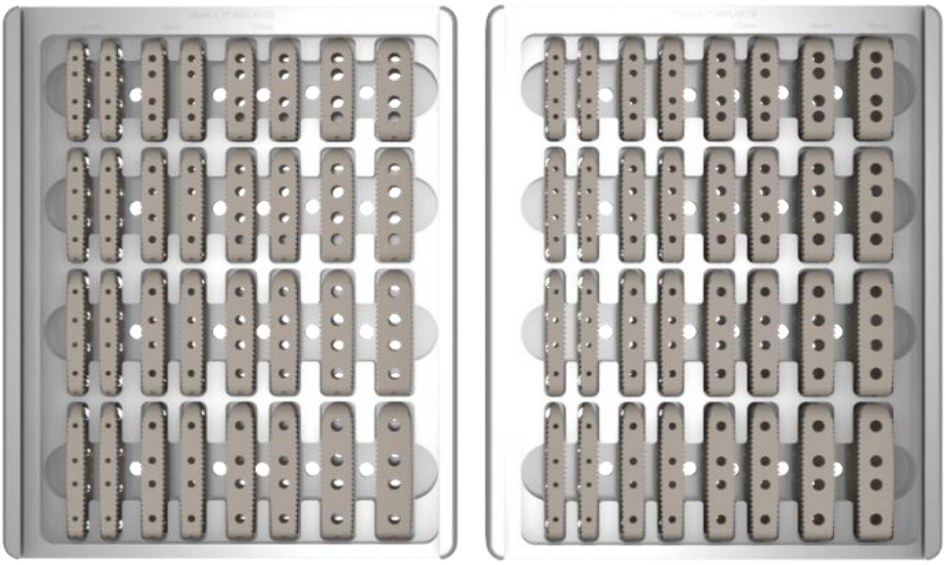


#	Part No.	Description	Qty
1.	60-EA-9010	Angled Endplate Scraper	1
2.	60-IN-5100	Angled Implant Inserter	1
3.	60-IN-5002	Inserter Shaft Handle	1
4.	60-DA-9506	Angled Paddle Distractor – 6mm	1
5.	60-DA-9504	Angled Paddle Distractor – 4mm	1
6.	60-AR-0006	Angled Rongeur, Left, 6mm	1
7.	60-AR-0004	Angled Rongeur, Left, 4mm	1

**By Request Only. Please contact Customer Relations for product availability.*

SHURFIT® LLIF CAGE
60-BK-5000 IMPLANT TRAY

7° IMPLANTS
TOP LEVEL



#	Part No.	Description	Qty
1.	23-EC1845-08	LLIF 7° Cage Peek 18mm W x 45mm L x 08mm H	2
2.	23-EC1845-10	LLIF 7° Cage Peek 18mm W x 45mm L x 10mm H	2
3.	23-EC1845-12	LLIF 7° Cage Peek 18mm W x 45mm L x 12mm H	2
4.	23-EC1845-14	LLIF 7° Cage Peek 18mm W x 45mm L x 14mm H	1
5.	23-EC1845-16	LLIF 7° Cage Peek 18mm W x 45mm L x 16mm H	1
6.	23-EC1850-08	LLIF 7° Cage Peek 18mm W x 50mm L x 08mm H	2
7.	23-EC1850-10	LLIF 7° Cage Peek 18mm W x 50mm L x 10mm H	2
8.	23-EC1850-12	LLIF 7° Cage Peek 18mm W x 50mm L x 12mm H	2
9.	23-EC1850-14	LLIF 7° Cage Peek 18mm W x 50mm L x 14mm H	1
10.	23-EC1850-16	LLIF 7° Cage Peek 18mm W x 50mm L x 16mm H	1
11.	23-EC1855-08	LLIF 7° Cage Peek 18mm W x 55mm L x 08mm H	2
12.	23-EC1855-10	LLIF 7° Cage Peek 18mm W x 55mm L x 10mm H	2
13.	23-EC1855-12	LLIF 7° Cage Peek 18mm W x 55mm L x 12mm H	2
14.	23-EC1855-14	LLIF 7° Cage Peek 18mm W x 55mm L x 14mm H	1
15.	23-EC1855-16	LLIF 7° Cage Peek 18mm W x 55mm L x 16mm H	1
16.	23-EC1860-08	LLIF 7° Cage Peek 18mm W x 60mm L x 08mm H	2
17.	23-EC1860-10	LLIF 7° Cage Peek 18mm W x 60mm L x 10mm H	2
18.	23-EC1860-12	LLIF 7° Cage Peek 18mm W x 60mm L x 12mm H	2
19.	23-EC1860-14	LLIF 7° Cage Peek 18mm W x 60mm L x 14mm H	1
20.	23-EC1860-16	LLIF 7° Cage Peek 18mm W x 60mm L x 16mm H	1

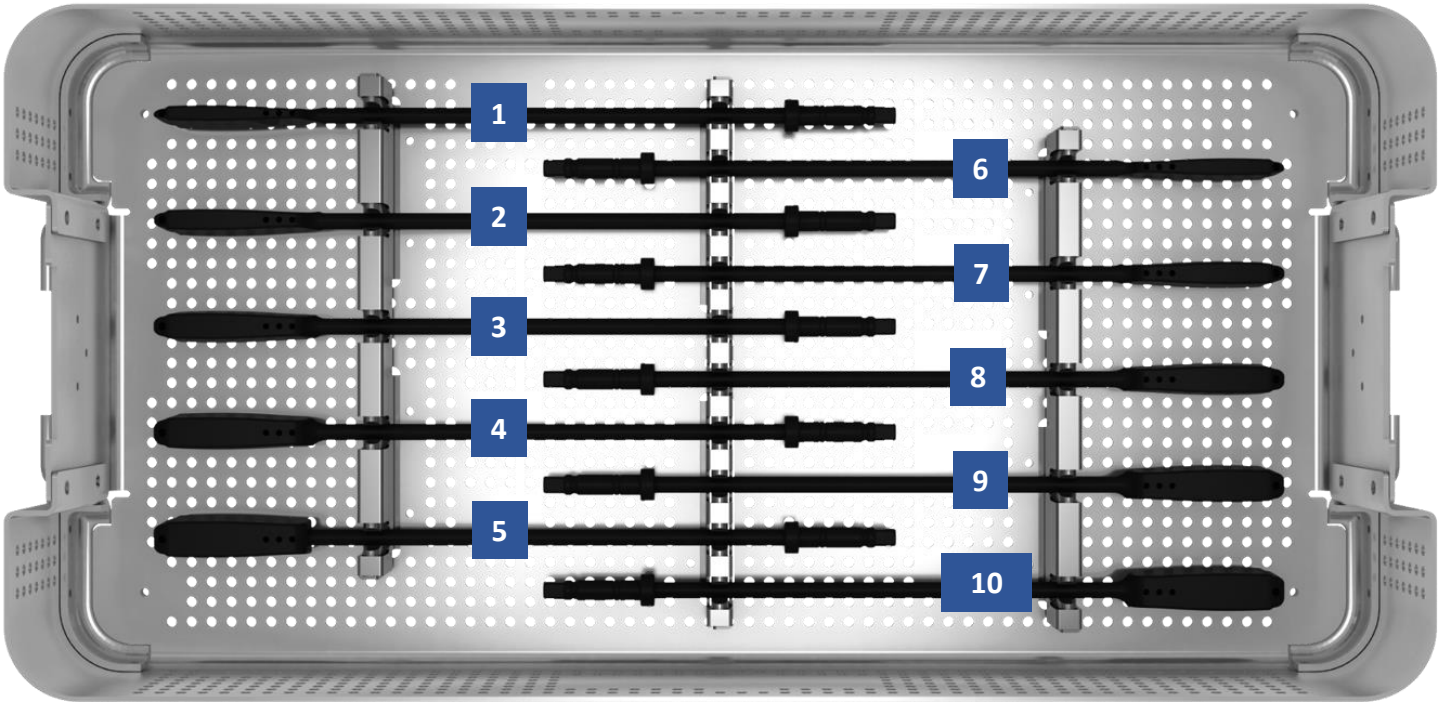
#	Part No.	Description	Qty
21.	23-EC2245-08	LLIF 7° Cage Peek 22mm W x 45mm L x 08mm H	2
22.	23-EC2245-10	LLIF 7° Cage Peek 22mm W x 45mm L x 10mm H	2
23.	23-EC2245-12	LLIF 7° Cage Peek 22mm W x 45mm L x 12mm H	2
24.	23-EC2245-14	LLIF 7° Cage Peek 22mm W x 45mm L x 14mm H	1
25.	23-EC2245-16	LLIF 7° Cage Peek 22mm W x 45mm L x 16mm H	1
26.	23-EC2250-08	LLIF 7° Cage Peek 22mm W x 50mm L x 08mm H	2
27.	23-EC2250-10	LLIF 7° Cage Peek 22mm W x 50mm L x 10mm H	2
28.	23-EC2250-12	LLIF 7° Cage Peek 22mm W x 50mm L x 12mm H	2
29.	23-EC2250-14	LLIF 7° Cage Peek 22mm W x 50mm L x 14mm H	1
30.	23-EC2250-16	LLIF 7° Cage Peek 22mm W x 50mm L x 16mm H	1
31.	23-EC2255-08	LLIF 7° Cage Peek 22mm W x 55mm L x 08mm H	2
32.	23-EC2255-10	LLIF 7° Cage Peek 22mm W x 55mm L x 10mm H	2
33.	23-EC2255-12	LLIF 7° Cage Peek 22mm W x 55mm L x 12mm H	2
34.	23-EC2255-14	LLIF 7° Cage Peek 22mm W x 55mm L x 14mm H	1
35.	23-EC2255-16	LLIF 7° Cage Peek 22mm W x 55mm L x 16mm H	1
36.	23-EC2260-08	LLIF 7° Cage Peek 22mm W x 60mm L x 08mm H	2
37.	23-EC2260-10	LLIF 7° Cage Peek 22mm W x 60mm L x 10mm H	2
38.	23-EC2260-12	LLIF 7° Cage Peek 22mm W x 60mm L x 12mm H	2
39.	23-EC2260-14	LLIF 7° Cage Peek 22mm W x 60mm L x 14mm H	1
40.	23-EC2260-16	LLIF 7° Cage Peek 22mm W x 60mm L x 16mm H	1

Please contact Customer Relations for product availability.

SHURFIT® LLIF CAGE
60-BK-5000 IMPLANT TRAY

7° TRIALS

BOTTOM LEVEL

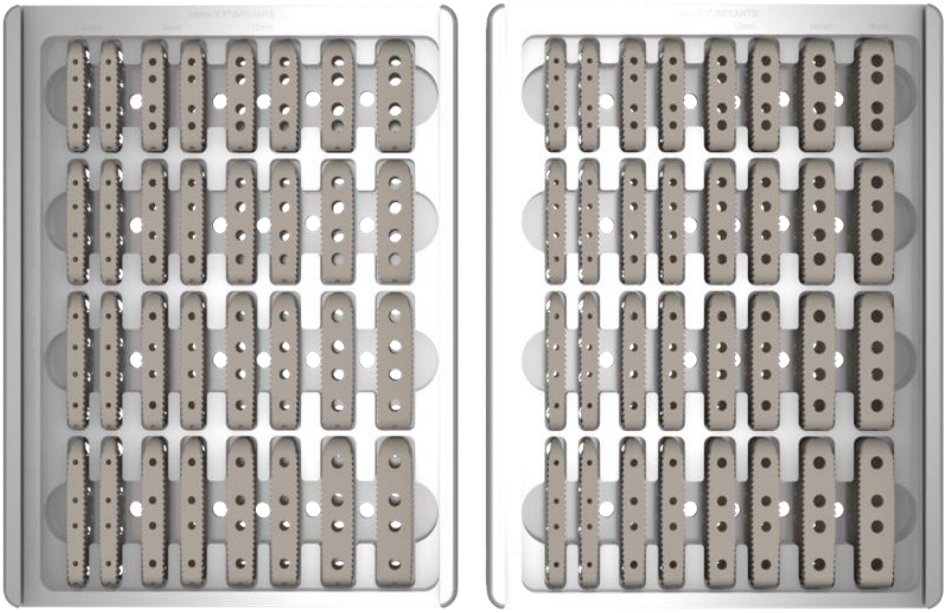


#	Part No.	Description	Qty
1.	60-TS-7208	Trial 22mm W x 08mm – 7°	1
2.	60-TS-7210	Trial 22mm W x 10mm – 7°	1
3.	60-TS-7212	Trial 22mm W x 12mm – 7°	1
4.	60-TS-7214	Trial 22mm W x 14mm – 7°	1
5.	60-TS-7216	Trial 22mm W x 16mm – 7°	1
6.	60-TS-7808	Trial 18mm W x 08mm – 7°	1
7.	60-TS-7810	Trial 18mm W x 10mm – 7°	1
8.	60-TS-7812	Trial 18mm W x 12mm – 7°	1
9.	60-TS-7814	Trial 18mm W x 14mm – 7°	1
10.	60-TS-7816	Trial 18mm W x 16mm – 7°	1

SHURFIT® LLIF CAGE
60-BK-6000 IMPLANT TRAY

0° IMPLANTS

TOP LEVEL



#	Part No.	Description	Qty
1.	23-PC1845-08	LLIF 0° Cage Peek 18mm W x 45mm L x 08mm H	2
2.	23-PC1845-10	LLIF 0° Cage Peek 18mm W x 45mm L x 10mm H	2
3.	23-PC1845-12	LLIF 0° Cage Peek 18mm W x 45mm L x 12mm H	2
4.	23-PC1845-14	LLIF 0° Cage Peek 18mm W x 45mm L x 14mm H	1
5.	23-PC1845-16	LLIF 0° Cage Peek 18mm W x 45mm L x 16mm H	1
6.	23-PC1850-08	LLIF 0° Cage Peek 18mm W x 50mm L x 08mm H	2
7.	23-PC1850-10	LLIF 0° Cage Peek 18mm W x 50mm L x 10mm H	2
8.	23-PC1850-12	LLIF 0° Cage Peek 18mm W x 50mm L x 12mm H	2
9.	23-PC1850-14	LLIF 0° Cage Peek 18mm W x 50mm L x 14mm H	1
10.	23-PC1850-16	LLIF 0° Cage Peek 18mm W x 50mm L x 16mm H	1
11.	23-PC1855-08	LLIF 0° Cage Peek 18mm W x 55mm L x 08mm H	2
12.	23-PC1855-10	LLIF 0° Cage Peek 18mm W x 55mm L x 10mm H	2
13.	23-PC1855-12	LLIF 0° Cage Peek 18mm W x 55mm L x 12mm H	2
14.	23-PC1855-14	LLIF 0° Cage Peek 18mm W x 55mm L x 14mm H	1
15.	23-PC1855-16	LLIF 0° Cage Peek 18mm W x 55mm L x 16mm H	1
16.	23-PC1860-08	LLIF 0° Cage Peek 18mm W x 60mm L x 08mm H	2
17.	23-PC1860-10	LLIF 0° Cage Peek 18mm W x 60mm L x 10mm H	2
18.	23-PC1860-12	LLIF 0° Cage Peek 18mm W x 60mm L x 12mm H	2
19.	23-PC1860-14	LLIF 0° Cage Peek 18mm W x 60mm L x 14mm H	1
20.	23-PC1860-16	LLIF 0° Cage Peek 18mm W x 60mm L x 16mm H	1

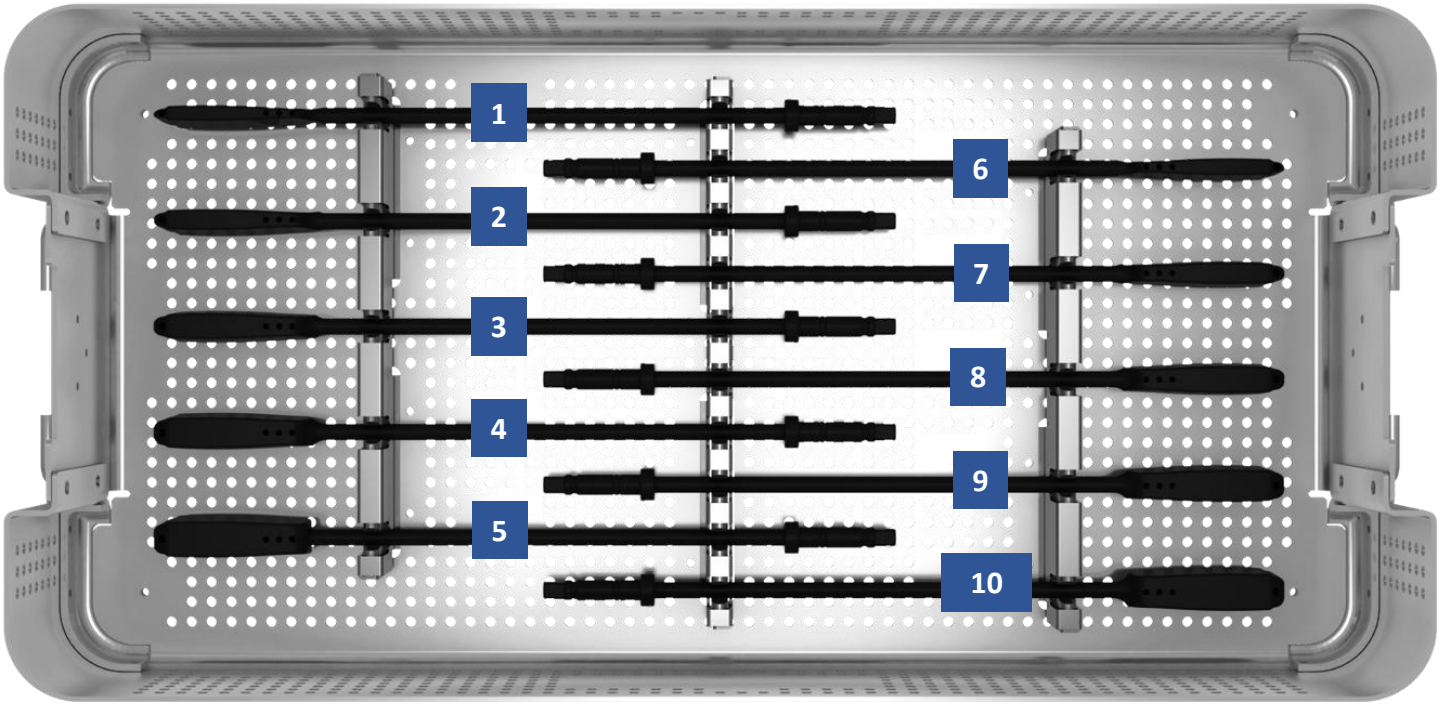
#	Part No.	Description	Qty
21.	23-PC2245-08	LLIF 0° Cage Peek 22mm W x 45mm L x 08mmH	2
22.	23-PC2245-10	LLIF 0° Cage Peek 22mm W x 45mm L x 10mm H	2
23.	23-PC2245-12	LLIF 0° Cage Peek 22mm W x 45mm L x 12mm H	2
24.	23-PC2245-14	LLIF 0° Cage Peek 22mm W x 45mm L x 14mm H	1
25.	23-PC2245-16	LLIF 0° Cage Peek 22mm W x 45mm L x 16mm H	1
26.	23-PC2250-08	LLIF 0° Cage Peek 22mm W x 50mm L x 08mm H	2
27.	23-PC2250-10	LLIF 0° Cage Peek 22mm W x 50mm L x 10mm H	2
28.	23-PC2250-12	LLIF 0° Cage Peek 22mm W x 50mm L x 12mm H	2
29.	23-PC2250-14	LLIF 0° Cage Peek 22mm W x 50mm L x 14mm H	1
30.	23-PC2250-16	LLIF 0° Cage Peek 22mm W x 50mm L x 16mm H	1
31.	23-PC2255-08	LLIF 0° Cage Peek 22mm W x 55mm L x 08mm H	2
32.	23-PC2255-10	LLIF 0° Cage Peek 22mm W x 55mm L x 10mm H	2
33.	23-PC2255-12	LLIF 0° Cage Peek 22mm W x 55mm L x 12mm H	2
34.	23-PC2255-14	LLIF 0° Cage Peek 22mm W x 55mm L x 14mm H	1
35.	23-PC2255-16	LLIF 0° Cage Peek 22mm W x 55mm L x 16mm H	1
36.	23-PC2260-08	LLIF 0° Cage Peek 22mm W x 60mm L x 08mm H	2
37.	23-PC2260-10	LLIF 0° Cage Peek 22mm W x 60mm L x 10mm H	2
38.	23-PC2260-12	LLIF 0° Cage Peek 22mm W x 60mm L x 12mm H	2
39.	23-PC2260-14	LLIF 0° Cage Peek 22mm W x 60mm L x 14mm H	1
40.	23-PC2260-16	LLIF 0° Cage Peek 22mm W x 60mm L x 16mm H	1

Please contact Customer Relations for product availability.

SHURFIT® LLIF CAGE
60-BK-6000 IMPLANT TRAY

0° TRIALS

BOTTOM LEVEL



#	Part No.	Description	Qty
1.	60-TS-0208	Trial 22mm W x 08mm – 0°	1
2.	60-TS-0210	Trial 22mm W x 10mm – 0°	1
3.	60-TS-0212	Trial 22mm W x 12mm – 0°	1
4.	60-TS-0214	Trial 22mm W x 14mm – 0°	1
5.	60-TS-0216	Trial 22mm W x 16mm – 0°	1
6.	60-TS-0808	Trial 18mm W x 08mm – 0°	1
7.	60-TS-0810	Trial 18mm W x 10mm – 0°	1
8.	60-TS-0812	Trial 18mm W x 12mm – 0°	1
9.	60-TS-0814	Trial 18mm W x 14mm – 0°	1
10.	60-TS-0816	Trial 18mm W x 16mm – 0°	1

SHURFIT® LLIF CAGE
60-BK-8000 IMPLANT TRAY

15° IMPLANTS
TOP LEVEL

Tapered Leading Edge

#	Part No.	Description	Qty
1.	23-LC1845-10	LLIF 15° Cage Peek 18mm W x 45mm L x 10mm H	2
2.	23-LC1845-12	LLIF 15° Cage Peek 18mm W x 45mm L x 12mm H	2
3.	23-LC1845-14	LLIF 15° Cage Peek 18mm W x 45mm L x 14mm H	1
4.	23-LC1845-16	LLIF 15° Cage Peek 18mm W x 45mm L x 16mm H	1
5.	23-LC1850-10	LLIF 15° Cage Peek 18mm W x 50mm L x 10mm H	2
6.	23-LC1850-12	LLIF 15° Cage Peek 18mm W x 50mm L x 12mm H	2
7.	23-LC1850-14	LLIF 15° Cage Peek 18mm W x 50mm L x 14mm H	1
8.	23-LC1850-16	LLIF 15° Cage Peek 18mm W x 50mm L x 16mm H	1

#	Part No.	Description	Qty
21.	23-LC2245-10	LLIF 15° Cage Peek 22mm W x 45mm L x 10mm H	2
22.	23-LC2245-12	LLIF 15° Cage Peek 22mm W x 45mm L x 12mm H	2
23.	23-LC2245-14	LLIF 15° Cage Peek 22mm W x 45mm L x 14mm H	1
24.	23-LC2245-16	LLIF 15° Cage Peek 22mm W x 45mm L x 16mm H	1
25.	23-LC2250-10	LLIF 15° Cage Peek 22mm W x 50mm L x 10mm H	2
26.	23-LC2250-12	LLIF 15° Cage Peek 22mm W x 50mm L x 12mm H	2
27.	23-LC2250-14	LLIF 15° Cage Peek 22mm W x 50mm L x 14mm H	1
28.	23-LC2250-16	LLIF 15° Cage Peek 22mm W x 50mm L x 16mm H	1

BY REQUEST ONLY

Part No.	Description
23-LC1845-18	LLIF 15° Cage Peek 18mm W x 45mm L x 18mm H
23-LC1850-18	LLIF 15° Cage Peek 18mm W x 50mm L x 18mm H
23-LC1855-10	LLIF 15° Cage Peek 18mm W x 55mm L x 10mm H
23-LC1855-12	LLIF 15° Cage Peek 18mm W x 55mm L x 12mm H
23-LC1855-14	LLIF 15° Cage Peek 18mm W x 55mm L x 14mm H
23-LC1855-16	LLIF 15° Cage Peek 18mm W x 55mm L x 16mm H
23-LC1855-18	LLIF 15° Cage Peek 18mm W x 55mm L x 18mm H
23-LC1860-10	LLIF 15° Cage Peek 18mm W x 60mm L x 10mm H
23-LC1860-12	LLIF 15° Cage Peek 18mm W x 60mm L x 12mm H
23-LC1860-14	LLIF 15° Cage Peek 18mm W x 60mm L x 14mm H
23-LC1860-16	LLIF 15° Cage Peek 18mm W x 60mm L x 16mm H
23-LC1860-18	LLIF 15° Cage Peek 18mm W x 60mm L x 18mm H

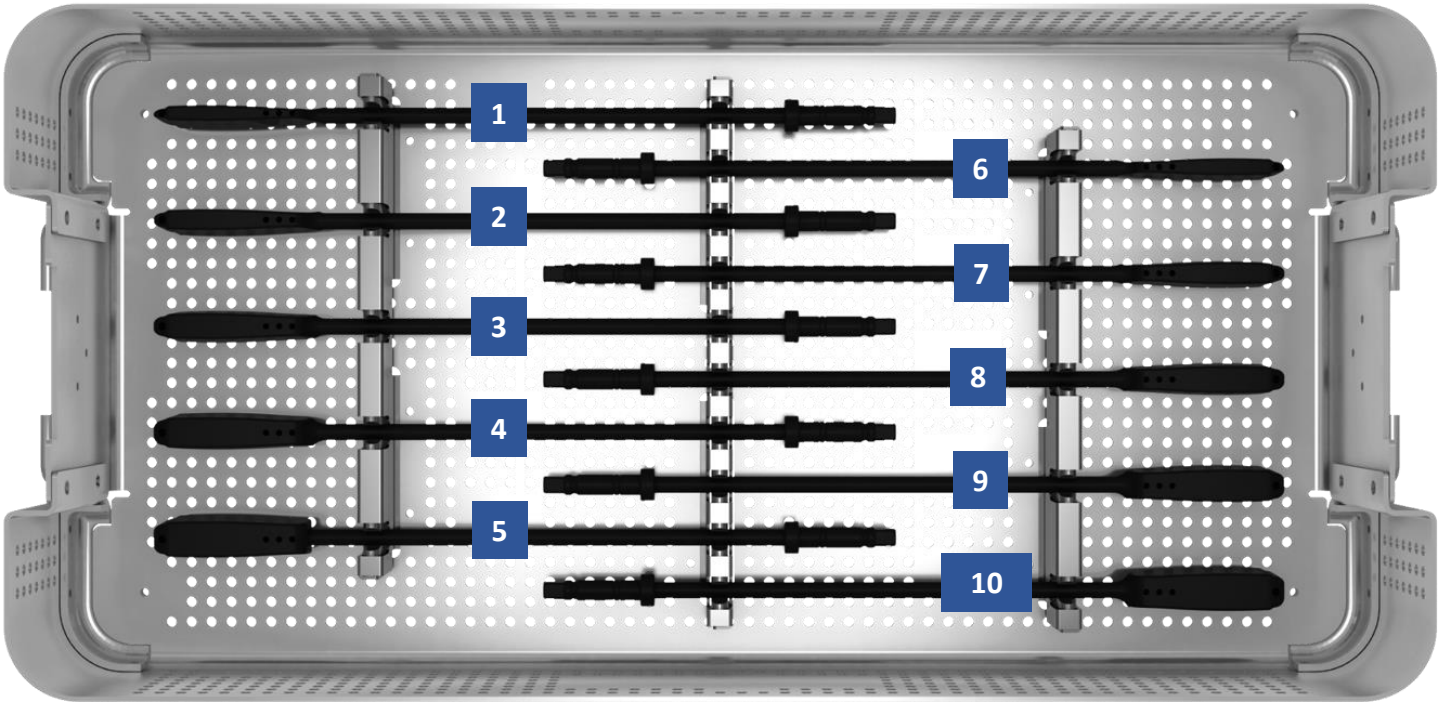
Part No.	Description
23-LC2245-18	LLIF 15° Cage Peek 22mm W x 45mm L x 18mm H
23-LC2250-18	LLIF 15° Cage Peek 22mm W x 50mm L x 18mm H
23-LC2255-10	LLIF 15° Cage Peek 22mm W x 55mm L x 10mm H
23-LC2255-12	LLIF 15° Cage Peek 22mm W x 55mm L x 12mm H
23-LC2255-14	LLIF 15° Cage Peek 22mm W x 55mm L x 14mm H
23-LC2255-16	LLIF 15° Cage Peek 22mm W x 55mm L x 16mm H
23-LC2255-18	LLIF 15° Cage Peek 22mm W x 55mm L x 18mm H
23-LC2260-10	LLIF 15° Cage Peek 22mm W x 60mm L x 10mm H
23-LC2260-12	LLIF 15° Cage Peek 22mm W x 60mm L x 12mm H
23-LC2260-14	LLIF 15° Cage Peek 22mm W x 60mm L x 14mm H
23-LC2260-16	LLIF 15° Cage Peek 22mm W x 60mm L x 16mm H
23-LC2260-18	LLIF 15° Cage Peek 22mm W x 60mm L x 18mm H

All sizes in red are by request only.
Please contact Customer Relations for product availability.

SHURFIT® LLIF CAGE
60-BK-8000 IMPLANT TRAY

15° TRIALS

BOTTOM LEVEL



#	Part No.	Description	Qty
1.	60-TS-5810	Trial 18mm W x 10mm – 15°	1
2.	60-TS-5812	Trial 18mm W x 12mm – 15°	1
3.	60-TS-5814	Trial 18mm W x 14mm – 15°	1
4.	60-TS-5816	Trial 18mm W x 16mm – 15°	1
5.	60-TS-5818*	Trial 18mm W x 18mm – 15°	1
6.	60-TS-5210	Trial 22mm W x 10mm – 15°	1
7.	60-TS-5212	Trial 22mm W x 12mm – 15°	1
8.	60-TS-5214	Trial 22mm W x 14mm – 15°	1
9.	60-TS-5216	Trial 22mm W x 16mm – 15°	1
10.	60-TS-5218*	Trial 22mm W x 18mm – 15°	1

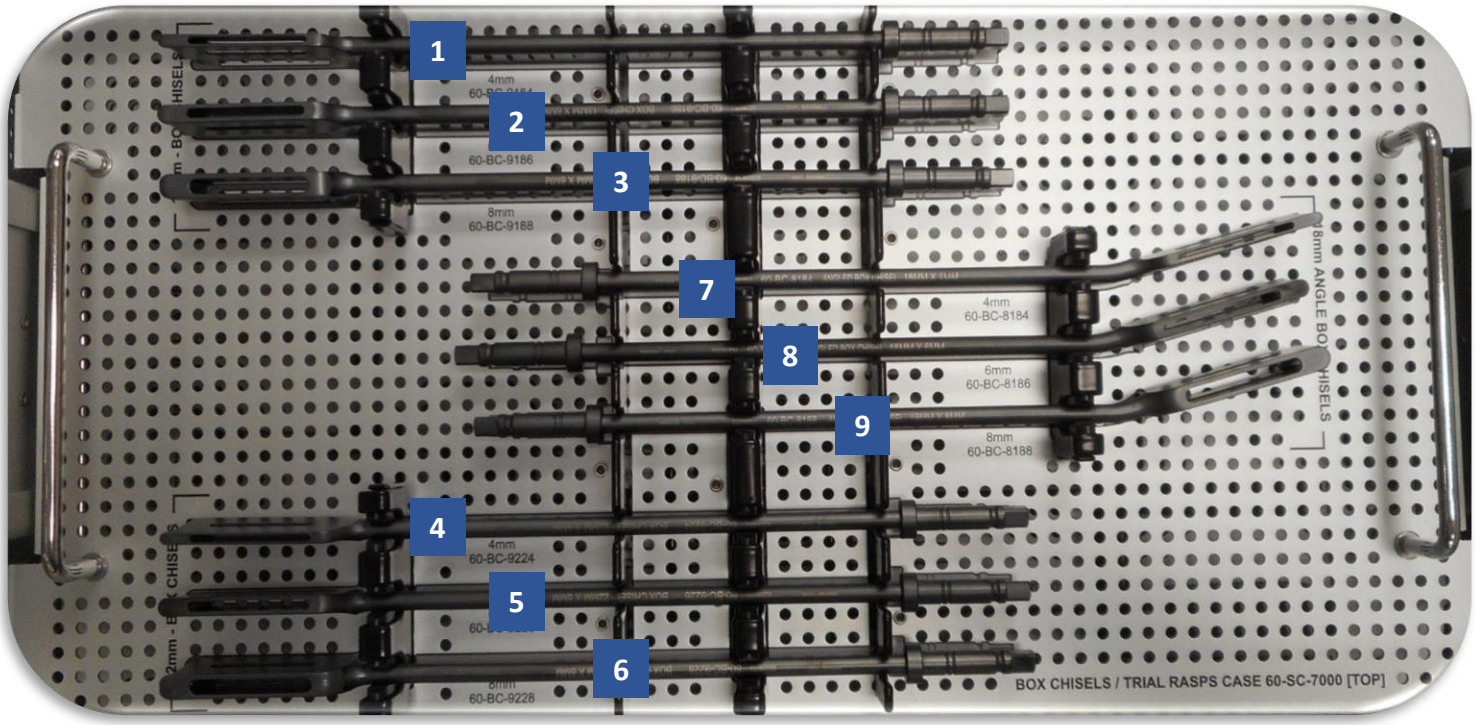
18MM Straight Trials are available by request only.
Please contact Customer Relations for product availability.

60-BK-7000 INSTRUMENT TRAY

(BY REQUEST ONLY)

BOX CHISELS & TRIAL RASPS

TOP LEVEL



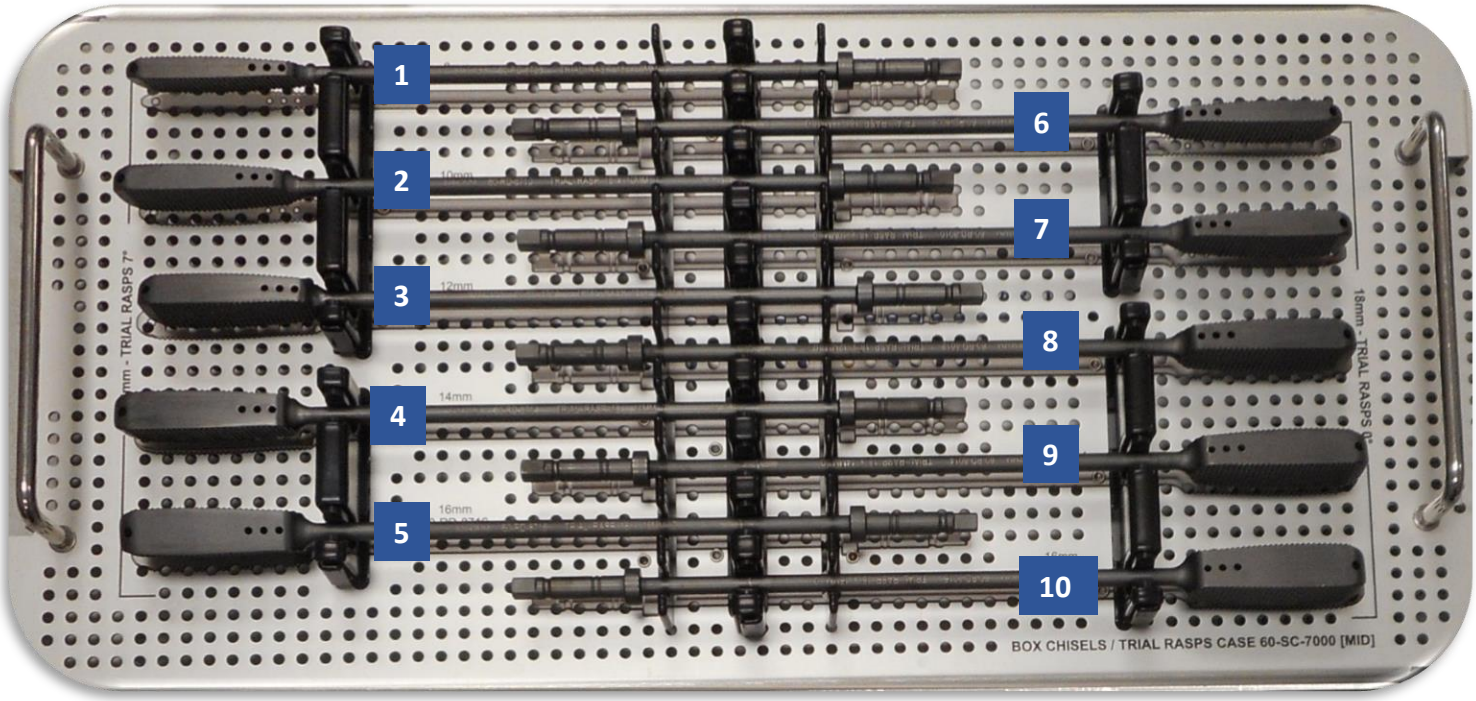
#	Part No.	Description	Qty
1.	60-BC-9184	Box Chisel, 18mm x 4mm	1
2.	60-BC-9186	Box Chisel, 18mm x 6mm	1
3.	60-BC-9188	Box Chisel, 18mm x 8mm	1
4.	60-BC-9224	Box Chisel, 22mm x 4mm	1
5.	60-BC-9226	Box Chisel, 22mm x 6mm	1
6.	60-BC-9228	Box Chisel, 22mm x 8mm	1
7.	60-BC-8184	Angled Box Chisel, 18mm x 4mm	1
8.	60-BC-8186	Angled Box Chisel, 18mm x 6mm	1
9.	60-BC-8188	Angled Box Chisel, 18mm x 8mm	1

Please contact Customer Relations for product availability.

60-BK-7000 INSTRUMENT TRAY
(BY REQUEST ONLY)

BOX CHISELS & TRIAL RASPS

MIDDLE LEVEL



#	Part No.	Description	Qty
1.	60-RD-8708	Trial Rasp, 18mm x 8mm, 7°	1
2.	60-RD-8710	Trial Rasp, 18mm x 10mm, 7°	1
3.	60-RD-8712	Trial Rasp, 18mm x 12mm, 7°	1
4.	60-RD-8714	Trial Rasp, 18mm x 14mm, 7°	1
5.	60-RD-8716	Trial Rasp, 18mm x 16mm, 7°	1
6.	60-RD-8008	Trial Rasp, 18mm x 8mm, 0°	1
7.	60-RD-8010	Trial Rasp, 18mm x 10mm, 0°	1
8.	60-RD-8012	Trial Rasp, 18mm x 12mm, 0°	1
9.	60-RD-8014	Trial Rasp, 18mm x 14mm, 0°	1
10.	60-RD-8016	Trial Rasp, 18mm x 16mm, 0°	1

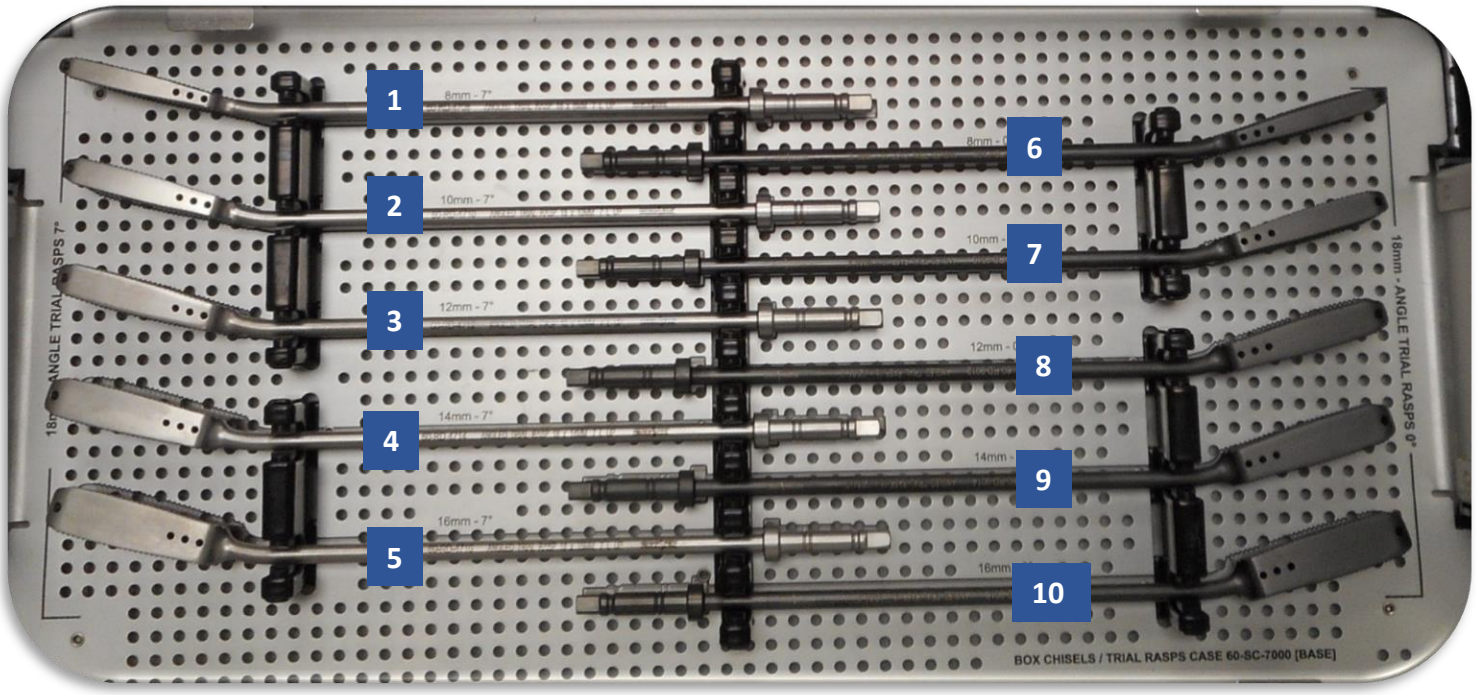
15° lordosis options are also available by request only.
Please contact Customer Relations for product availability.

60-BK-7000 INSTRUMENT TRAY

(BY REQUEST ONLY)

BOX CHISELS & TRIAL RASPS

BOTTOM LEVEL



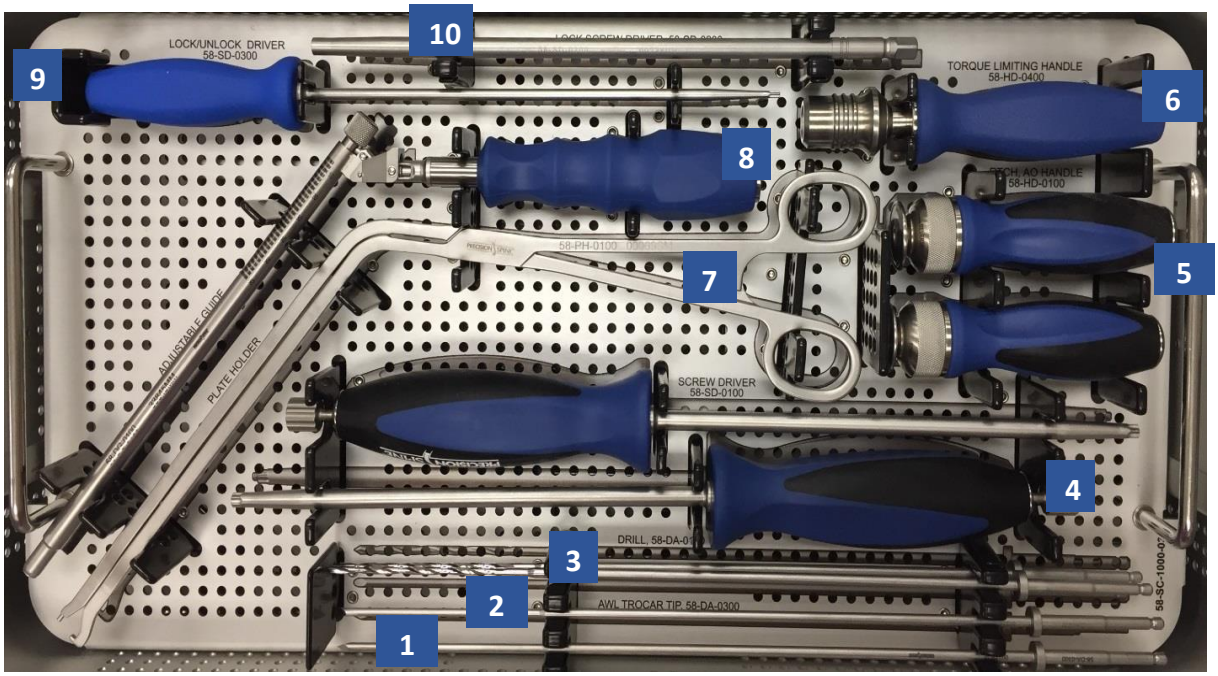
#	Part No.	Description	Qty
1.	60-RD-4708	Angled Trial Rasp, 18mm x 8mm, 7°, Left Up	1
2.	60-RD-4710	Angled Trial Rasp, 18mm x 10mm, 7°, Left Up	1
3.	60-RD-4712	Angled Trial Rasp, 18mm x 12mm, 7°, Left Up	1
4.	60-RD-4714	Angled Trial Rasp, 18mm x 14mm, 7°, Left Up	1
5.	60-RD-4716	Angled Trial Rasp, 18mm x 16mm, 7°, Left Up	1
6.	60-RD-9008	Angled Trial Rasp, 18mm x 8mm, 0°	1
7.	60-RD-9010	Angled Trial Rasp, 18mm x 10mm, 0°	1
8.	60-RD-9012	Angled Trial Rasp, 18mm x 12mm, 0°	1
9.	60-RD-9014	Angled Trial Rasp, 18mm x 14mm, 0°	1
10.	60-RD-9016	Angled Trial Rasp, 18mm x 16mm, 0°	1

15° lordosis options are also available by request only.
Please contact Customer Relations for product availability.

ACCUFIT® LATERAL PLATE

58-BK-1000 TRAY for the (4-Hole Plate)
58-BK-1001 TRAY for the (2-Hole Plate)

TOP LEVEL



#	Part No.	Description	Qty
1	58-DA-0300	Awl, Trocar Tip	1
2	58-DA-0200	Awl, Bevel Tip	1
3	58-DA-0100	Drill (Ø3mm & 83mm length)	2
4	58-SD-0100	Screw Driver	2
5	58-HD-0100	Ratcheting A-O Handle	2
6	58-SD-0400	Torque Limiting Handle (5 in-lbs. torque)	1
7	58-PH-0100*	4-Hole Plate Holder	1
8	58-DG-0100	Variable Drill Guide	1
9	58-SD-0300	Lock/Unlock Driver	1
10	58-SD-0200	Lock Screw Driver (use with 58-SD-0400)	1

*Note: *Item #7 will be 58-PH-0200 (2-Hole Plate Holder) for 58-BK-1001*

BY REQUEST ONLY FOR 2-HOLE PLATES

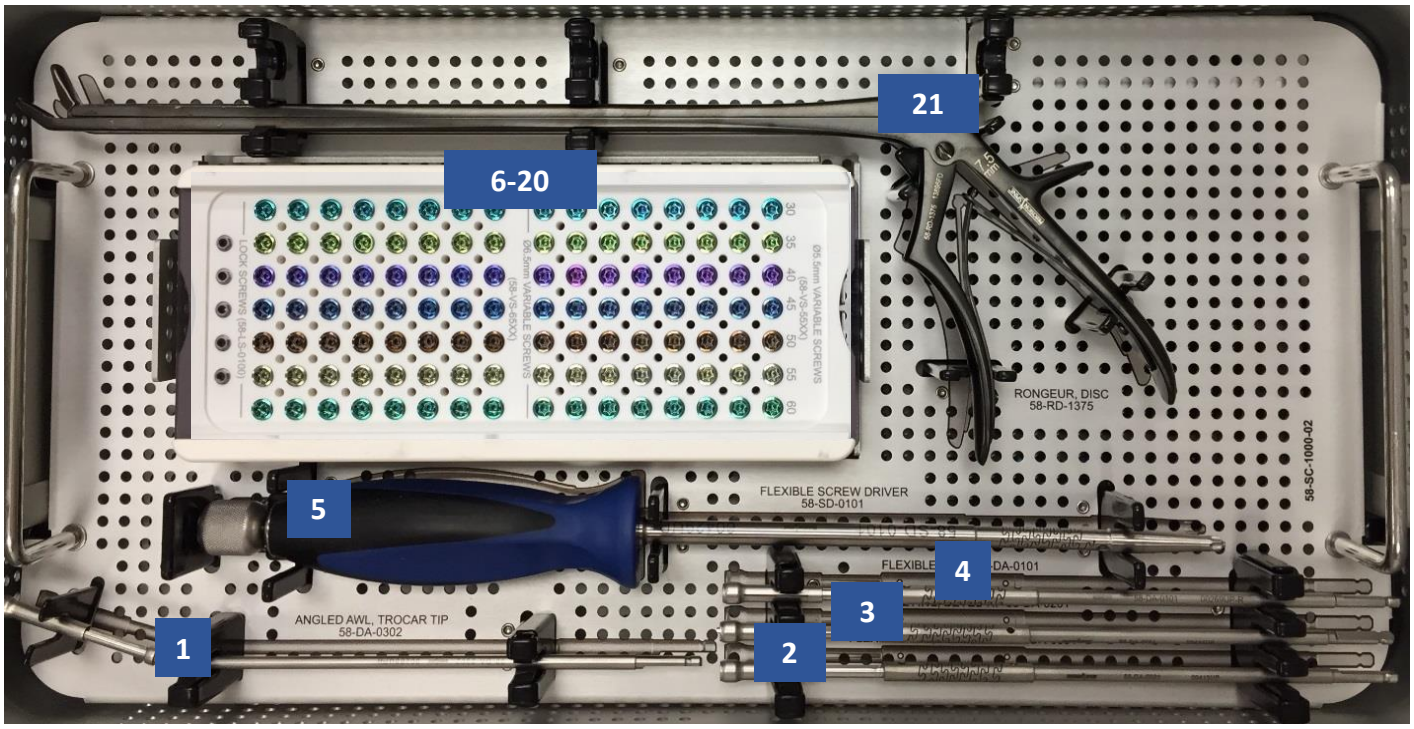
Part No.	Description
58-PH-0300	2-Hole 7° DTS/Guide Plate Holder
58-DA-0325	2-Hole DTS/Guide Drill – 25mm

Please contact Customer Relations for product availability.

ACCUFIT® LATERAL PLATE

58-BK-1000 TRAY for the (4-Hole Plate)
58-BK-1001 TRAY for the (2-Hole Plate)

MIDDLE LEVEL



#	Part No.	Description	Qty
1	58-DA-0302	Angled Awl, Trocar Tip	1
2	58-DA-0301	Flexible Awl, Trocar Tip	1
3	58-DA-0201	Flexible Awl, Bevel Tip	1
4	58-DA-0101	Flexible Drill	1
5	58-SD-0101	Flexible Screw Driver	1
6	58-VS-5530	Ø5.5 x 30mm Variable Screw	8
7	58-VS-5535	Ø5.5 x 35mm Variable Screw	8
8	58-VS-5540	Ø5.5 x 40mm Variable Screw	8
9	58-VS-5545	Ø5.5 x 45mm Variable Screw	8
10	58-VS-5550	Ø5.5 x 50mm Variable Screw	8
11	58-VS-5555	Ø5.5 x 55mm Variable Screw	8
12	58-VS-5560	Ø5.5 x 60mm Variable Screw	8

#	Part No.	Description	Qty
13	58-VS-6530	Ø6.5 x 30mm Variable Screw	8
14	58-VS-6535	Ø6.5 x 35mm Variable Screw	8
15	58-VS-6540	Ø6.5 x 40mm Variable Screw	8
16	58-VS-6545	Ø6.5 x 45mm Variable Screw	8
17	58-VS-6550	Ø6.5 x 50mm Variable Screw	8
18	58-VS-6555	Ø6.5 x 55mm Variable Screw	8
19	58-VS-6560	Ø6.5 x 60mm Variable Screw	8
20	58-LS-0100	Lock Screw	5
21	58-RD-1375	7.5mm Up-Biting Rongeur, Disc	1

ACCUFIT® LATERAL PLATE

58-BK-1000 TRAY for the (4-Hole Plate)
58-BK-1001 TRAY for the (2-Hole Plate)

BOTTOM LEVEL

4-Hole Lateral Plate

#	Part No.	Description	Qty
1	58-LP-0030	30mm Lateral Plate	3
2	58-LP-0032	32mm Lateral Plate	4
3	58-LP-0034	34mm Lateral Plate	4
4	58-LP-0036	36mm Lateral Plate	4
5	58-LP-0038	38mm Lateral Plate	3

2-Hole Lateral Plate

#	Part No.	Description	Qty
1	58-LP-0228	28mm Lateral Plate	4
2	58-LP-0230	30mm Lateral Plate	4
3	58-LP-0232	32mm Lateral Plate	4
4	58-LP-0234	34mm Lateral Plate	4
5	58-LP-0236	36mm Lateral Plate	4

MD-VUE™ SURGICAL TECHNIQUE

1 PATIENT PREPARATION

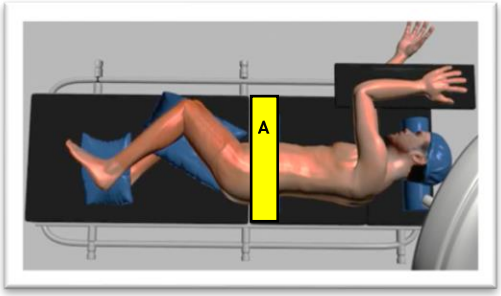
The patient is placed on a flexible surgical table in a true lateral decubitus (90°) position so that the patient's greater trochanter or iliac crest is directly over the table break. Place an auxiliary roll, bean bag or other device underneath the patient's greater trochanter. Place pillows under the head, between the knees and under the upper arm.

Tape patient to the table at the following locations:

A. Directly across the table, just beneath the iliac crest.
B. Over the thoracic region just under the shoulder.
C. Superior and anterior to the iliac crest, down to the foot of the table, around the corner of the table and back to the iliac crest.
D. Superior and posterior to the iliac crest, down to the foot of the table, around the corner of the table and back to the iliac crest.
E. From the iliac crest, straight down to the end of the table.
F. From the anterior edge of the table, over the knee and along the lower leg to the posterior, inferior corner of the table.

This taping configuration ensures that the pelvis tilts away from the spine, providing greater access to all lumbar levels, particularly L4-L5. Using fluoroscopy, the table should be flexed to open the interval between the 12th rib and iliac crest and provide direct access to the disc space. Once the patient is secured, the table should be adjusted so that the C-arm provides true AP images when at 0° and true lateral images when at 90°. At this time, attach Table Arm Clamp (ML - 0021) to the table rail on the anterior side of the patient and secure. The Table Arm Clamp should be placed approximately one foot away from the incision site and towards the head.

A



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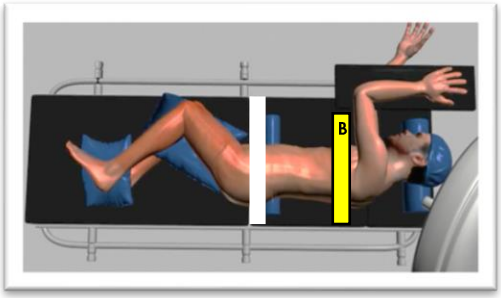

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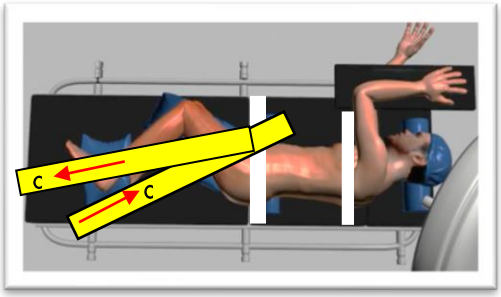

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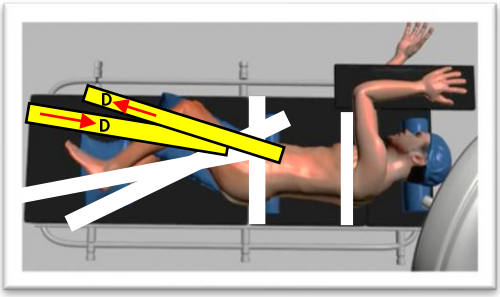

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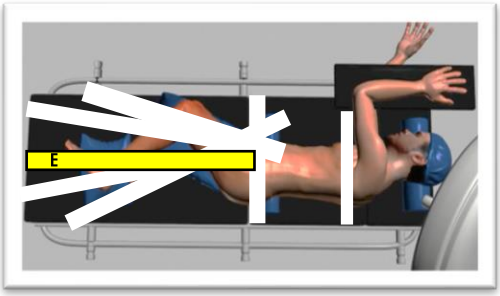

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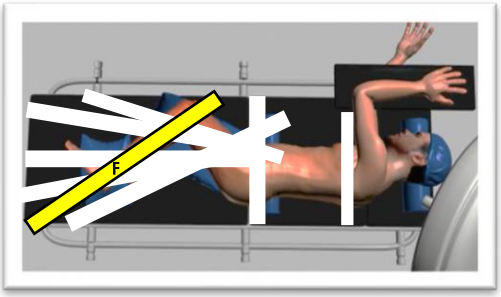
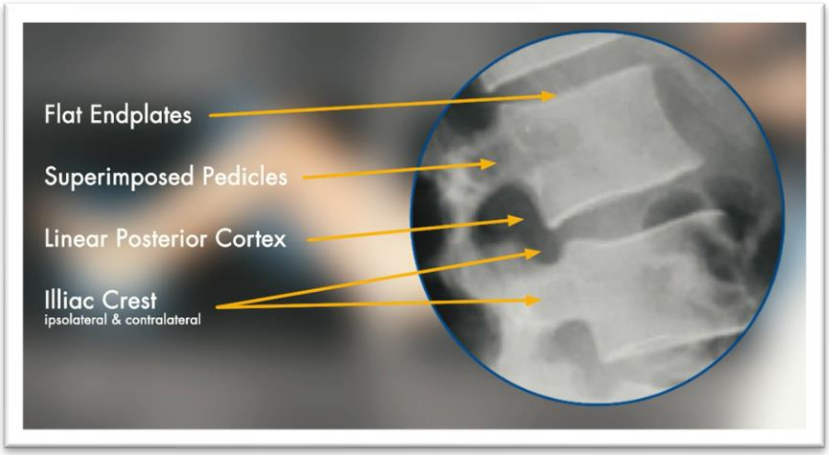


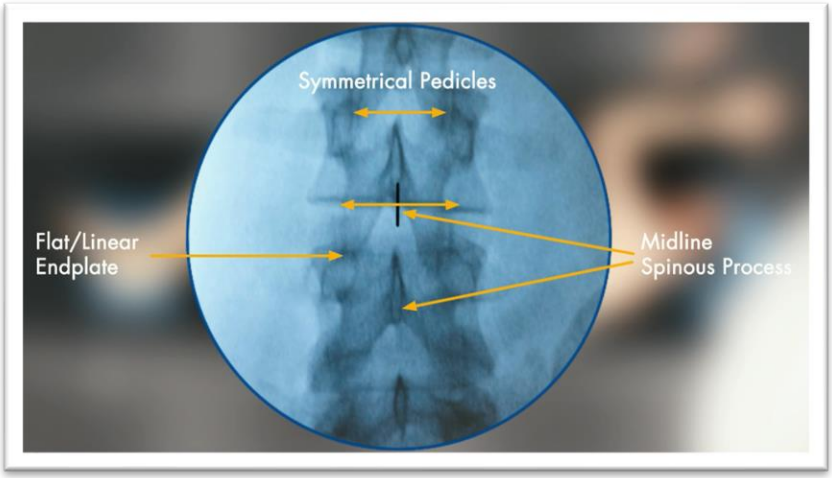
SURGICAL TECHNIQUE

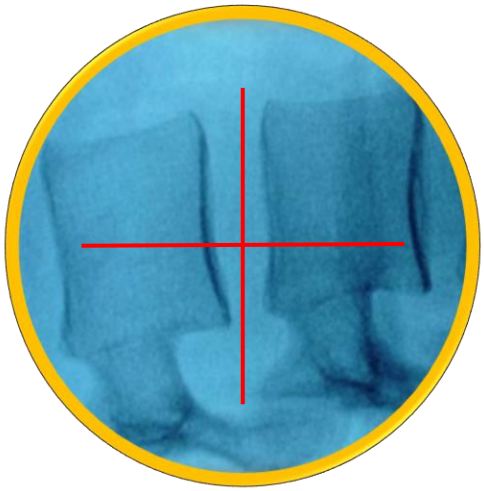
2 LANDMARK IDENTIFICATION

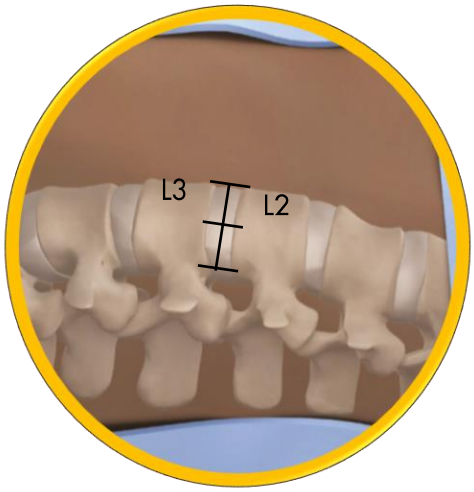
Under fluoroscopic guidance, flex the table to open the interval between the 12th rib and the iliac crest to provide direct access to the disc space. The table should be adjusted so that the C-arm provides true AP images when at 0° and true lateral images when at 90°.

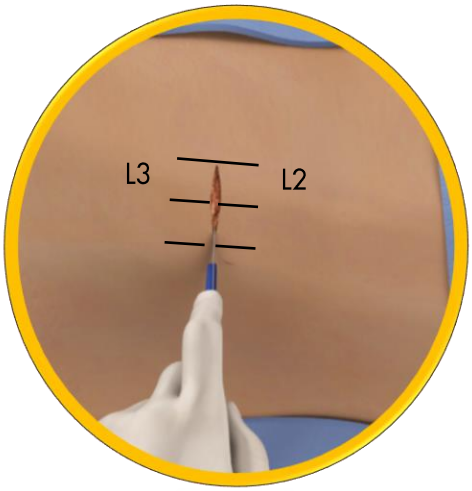
Use fluoroscopy to identify the level to be fused by laying two cross Guidewires (54-GW-0051) on the skin above the surgical site. Mark the skin at the anterior and posterior margins of the vertebral body, through the center and posterior third of the disc space. The skin incision is made and the subcutaneous tissue divided.





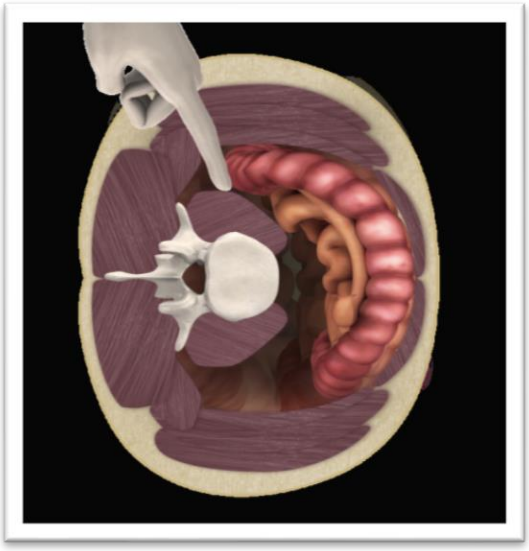


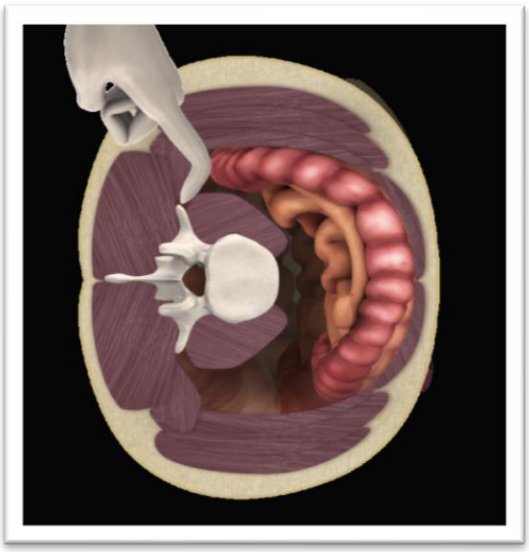


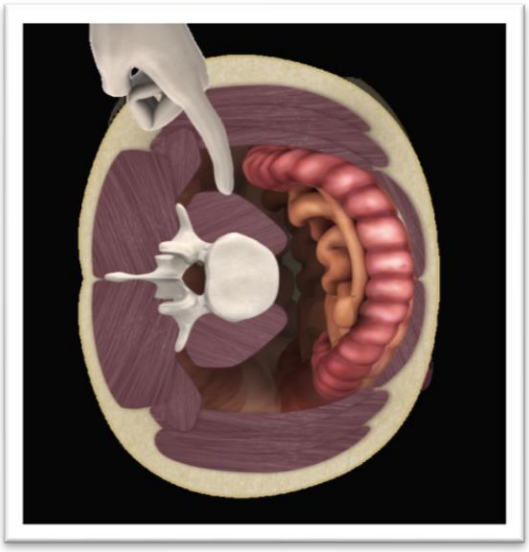


3 SURGICAL APPROACH – SINGLE INCISION

Following the skin incision, the oblique muscles of the abdomen will now be visible. Separate the psoas muscle using blunt dissection and enter the retroperitoneal space. Move the peritoneum anteriorly with the forefinger and continue blunt dissection. Slide the finger forward to the retro-psoas recess to ensure the retroperitoneal viscera have been safely retracted anteriorly.

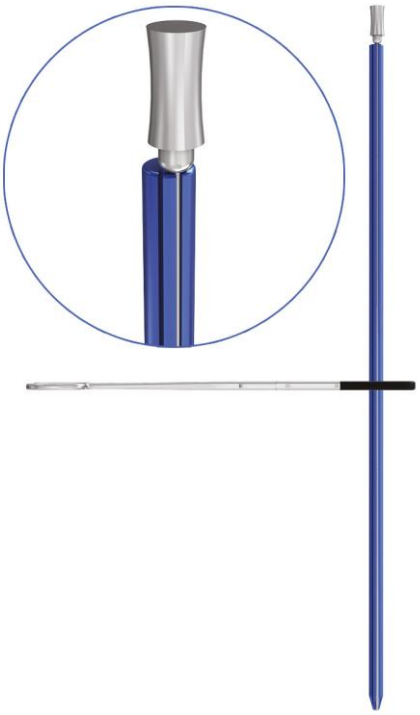






SURGICAL TECHNIQUE

4 DILATOR INSERTION

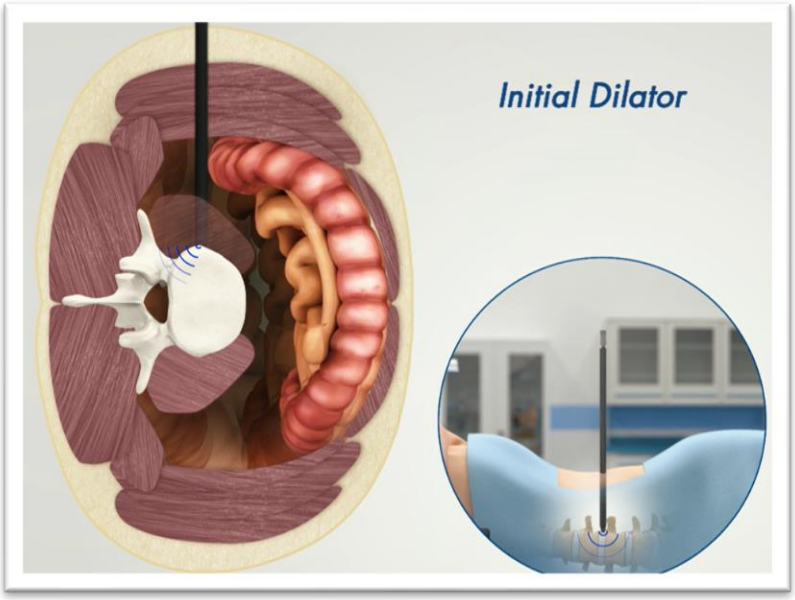


If neuromonitoring is going to be used, connect the Neuromonitoring Probe (PNM1.0/275) and insert it into the outer cannula of the Initial Dilator (54-SD-007).

Guide the Initial Dilator down into the retroperitoneal space until the tip of the Dilator is at the lateral margin of the psoas muscle. Confirm positioning using lateral fluoroscopy. If needed, the Dilator can be held in place with the Dilator Holder (54-DH-0001).

Continue advancing the Dilator through the psoas muscle until it reaches the annulus of the disc. Ensure that there is no soft tissue trapped under the Dilator.

Reconfirm positioning using lateral fluoroscopy. If necessary, use the Dilator Holder. If neuromonitoring is being used, stimulate the Neuromonitoring Probe.



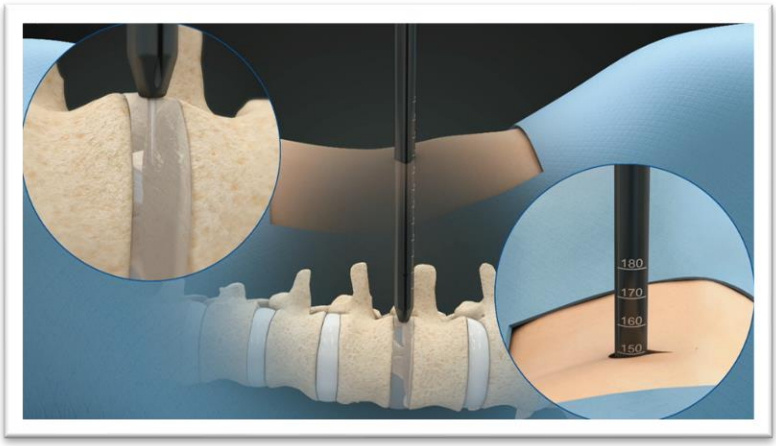
SURGICAL TECHNIQUE

4 DILATOR INSERTION (continued)

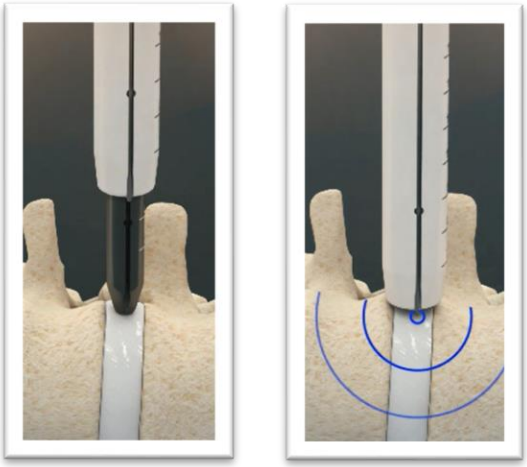
Insert a Guidewire (54-GW-0051) through the center of the Initial Dilator and advance it until it is securely fixed, no more than 30mm into the disc space. Markings on the guidewire indicate depth. Verify the position of the Guidewire and Initial Dilator using A/P and lateral fluoroscopy. The retractor blade length can be chosen by noting the markings on the initial dilator at the skin level.

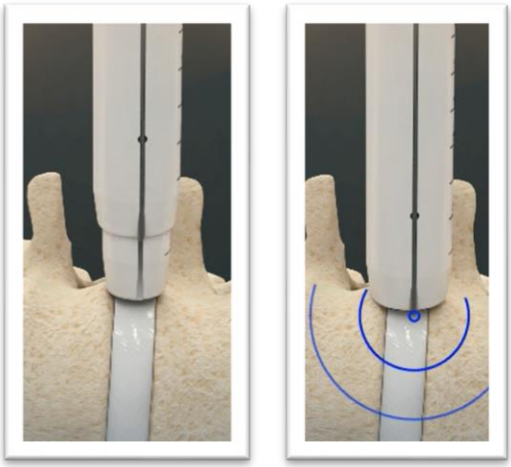
Remove the Neuromonitoring Probe from the Initial Dilator and place it in the outer cannula of the Second 12mm Dilator (54-SD-0012). Advance the Second Dilator over the Initial Dilator until it is through the psoas and flush against the disc. If neuromonitoring is being used, stimulate the Neuromonitoring Probe.

Remove the Neurmonitoring Probe from the Second Dilator and place it in the outer cannula of the Third 16mm Dilator (54-SD-0016). Advance the Third Dilator over the Second Dilator until it is through the psoas and flush against the disc. If neuromonitoring is being used, stimulate the Neuromonitoring Probe.



7mm Initial Dilator


12mm Dilator


16mm Dilator

SURGICAL TECHNIQUE

5 BLADE INSERTION

Insert the Retractor Body Handle (54-RB-1500) onto the Retractor Body (54-RB-1000). If needed, rotate the Retractor Body Handle clockwise to close the Cranial/Caudal Right/Left Arms. If needed, move the Posterior Blade Lock on the Retractor Body to the free position and rotate the Posterior Knob counterclockwise to close the Posterior arm. Once the Posterior Arm is closed, move the Posterior Blade Lock to the Locked position.

If needed, use the Hexalobe Driver (54-HD-0100) to turn the Cranial/Caudal Right/Left angulation set screws counterclockwise until the toeing pads are completely flush against the Retractor Body. The Retractor is now in the complete neutral position for blade loading.

Insert the appropriate Posterior Blade (54-BP-0XXX) labeled "P" down the Posterior Arm of the Retractor Body and tighten with the Hexalobe Driver. Slide the appropriate Cranial/Caudal Blades labeled "R" (Right) (54-BR-0XXX) and "L" (Left) (54-BL-0XXX) down the appropriate arms of the Retractor Body and tighten with the Hexalobe Driver.

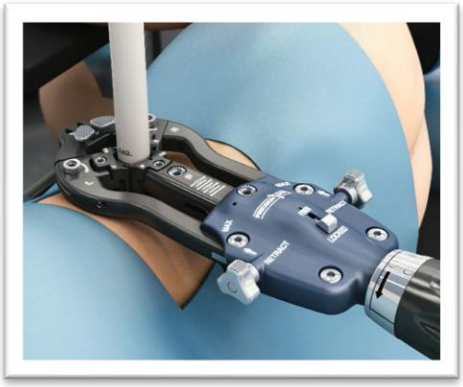
Posterior Blade

Right Blade

Left Blade

Toeing Pad Set Screw

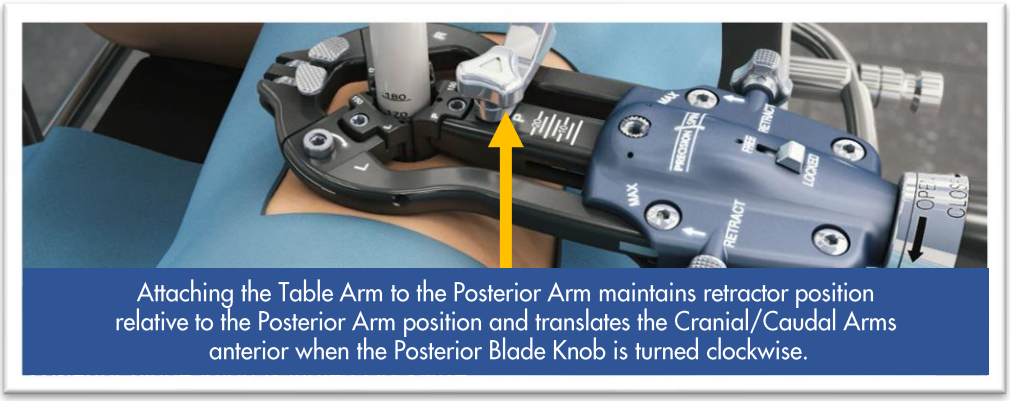
6 RETRACTOR INSERTION



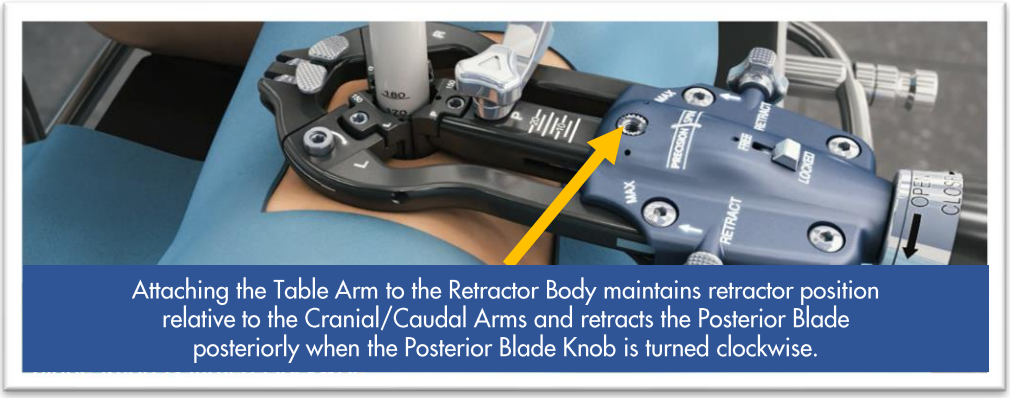
Slide the Retractor Body assembly over the Third Dilator. Align the Retractor Body with the C-arm and verify using fluoroscopy so that the Blades of the Retractor Body are in line with the disc space. Attach the Table Arm (54-TA-1000) to the Retractor Body of Posterior Arm, maintaining downward pressure on the Retractor Body. The Posterior Lobe Handle (54-RB-2000) may be used if extra leverage is needed to lock the Table Arm in place.

Attaching the Table Arm to the Posterior Arm maintains retractor position relative to the Posterior Arm position and translates the Cranial/Caudal Arms anterior when the Posterior Blade Knob is turned clockwise.

Attaching the Table Arm to the Retractor Body maintains retractor position relative to the Cranial/Caudal Arms and retracts the Posterior Blade posteriorly when the Posterior Blade Knob is turned clockwise.



Attaching the Table Arm to the Posterior Arm maintains retractor position relative to the Posterior Arm position and translates the Cranial/Caudal Arms anterior when the Posterior Blade Knob is turned clockwise.



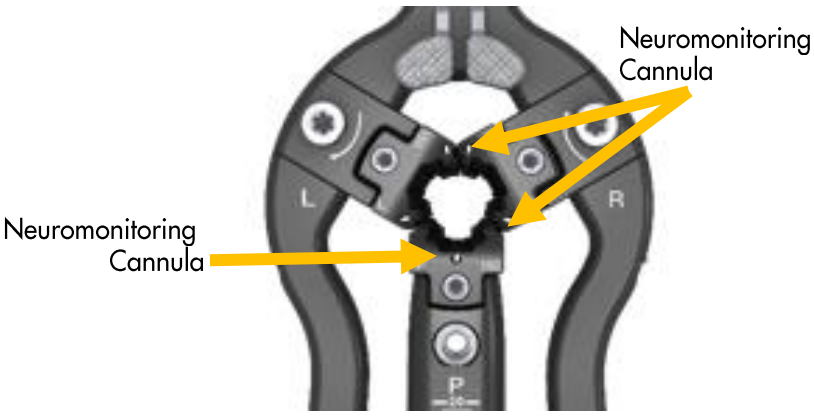
Attaching the Table Arm to the Retractor Body maintains retractor position relative to the Cranial/Caudal Arms and retracts the Posterior Blade posteriorly when the Posterior Blade Knob is turned clockwise.

6 RETRACTOR INSERTION (continued)

Verify that the top surface of the Retractor Body is parallel to the floor. While applying downward pressure to the Retractor Body, lock the Table Arm in the desired position.

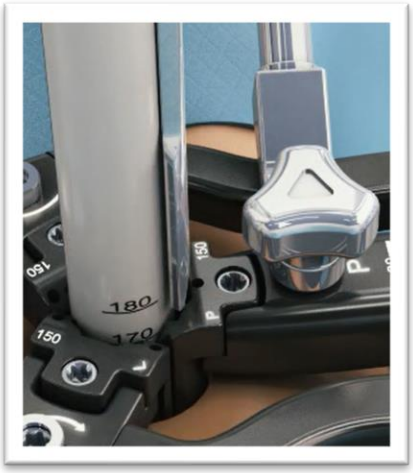
- The Cranial/Caudal Right/Left Blades are designed with two cannulas in which the Neuromonitoring Probe can be inserted.
- The Posterior Blade is designed with one center cannula in which the Neuromonitoring Probe can be inserted.
- Load the appropriate Intradiscal Shim (54-SP-00XX) into the appropriately sized Posterior Blade using the Shim Inserter/Impactor until it bottoms out in the Blade.
- Remove the Initial Dilator, the Second Dilator and the Third Dilator.

NOTE: If desired, and at the surgeon's discretion, the Neuromonitoring Probe may be placed into the blades to check for proximity to the neural elements.



Neuromonitoring probe through posterior blade

Placement of Docking Shim



Shim Inserter/Impactor

SURGICAL TECHNIQUE

7 TISSUE RETRACTION

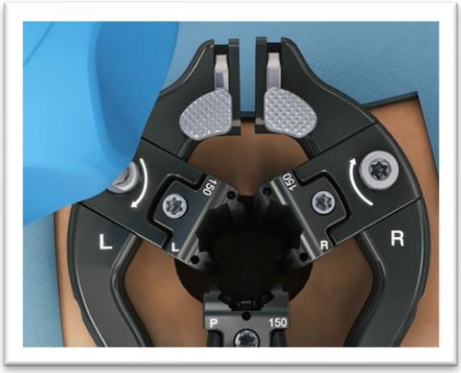
Open the Cranial/Caudal Right/Left Arms by rotating the Retractor Body Handle Counterclockwise. If needed, toe the Cranial/Caudal Right/Left Blades outward using a clockwise rotation with the Hexalobe Driver.

If needed, and depending on the Table Arm attachment, either advance the Cranial/Caudal Right/Left Blades anteriorly or the Posterior Blade posteriorly by rotating the Posterior Knob clockwise.

If needed intraoperatively, the Lengthening Shims (54-SL-0010) or Widening Shims (54-SW-25XX) can be loaded into the Cranial/Caudal Right/Left Blades using the Shim Inserter/Impactor (54-ST-0100).

Attach the Bifurcated Illuminator (54-LC-5200) to the Reusable Light Cable (54-LC-5100). Slide the illuminators down the slot in the Cranial/Caudal Right/Left Blades and bend the illuminator to the appropriate angle. Turn on the Light Source (43-5000) and adjust the light intensity as needed.

If additional anterior retraction is needed, the Anterior Bridge (54-RA-1500) may be attached to the Retractor Body. The appropriate Anterior Retractor (54-RA-XXXX) can then be inserted and attached to the Anterior Bridge by depressing the arm on the side of the Anterior Bridge.



Optional Anterior Bridge

SURGICAL TECHNIQUE

8 DISC PREPARATION

Locate the anterior border of the disc space and use the Retractable Annulotomy Knife (1587-03) to cut the annulus. Use a Straight Cobb Elevator to disrupt the disc from both vertebral endplates and release the contralateral annulus.

Pituitary Rongeurs, Curettes, Ring Curettes and Rasps are provided for disc removal and endplate preparation.

SURGICAL TECHNIQUE

9 SHURFIT® LLIF SIZING

Use the Implant Sizers (60-TX-XXXX) to determine the correct LLIF Interbody cage size. Confirm correct placement of the cage using fluoroscopy. The Sizer should be centered across the disc space and appropriately centered in the anterior/posterior plane. Select the corresponding size LLIF cage. Attach the LLIF cage to the Inserter (60-IN-5001)

- There are two locating pins that help center the Inserter over the insertion hole of the LLIF cage.
- Rotate the thumb wheel clockwise until the LLIF cage is securely attached to the Inserter.

NOTE: The ShurFit LLIF Cages are marked with the letters "A" and "P" to designate Anterior and Posterior position as it relates to the implant.

SURGICAL TECHNIQUE

10 SHURFIT® LLIF INSERTION

Impact the LLIF cage into the disc space. Fluoroscopy should be used to confirm correct implant placement. The LLIF cage should traverse the apophyseal ring and be centered within the disc space.

Remove the Inserter from the LLIF cage by depressing the button on the thumb wheel and lifting up on the Inserter. The Guidewire will be left in the LLIF Cage.

A ¼ turn counterclockwise may be required to depress button and release tension on the implant.

SURGICAL TECHNIQUE

11 ACCUFIT® LATERAL PLATE INSERTION

Determine the appropriate size lateral plate.

If using the 4-Hole Plate:

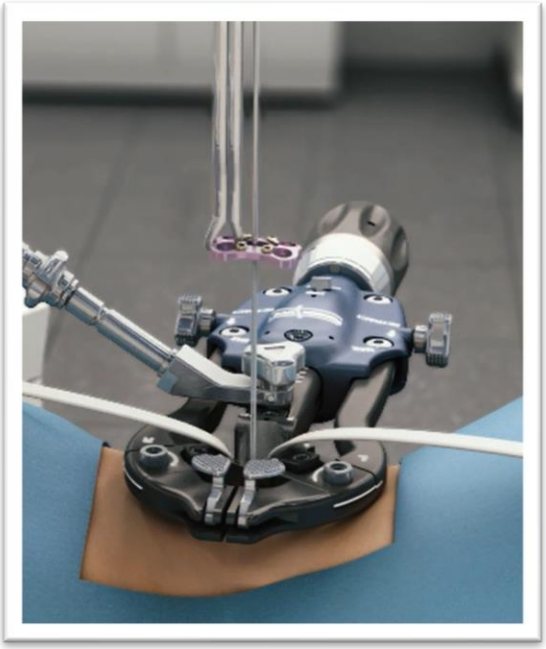
Pick up the 4-Hole Plate (58-LP-00XX) using the 4-Hole Plate Holder (58-PH-0100) by placing the pin of the plate holder through one of the two small center holes and the second arm into the corresponding groove. Insert the Plate into the surgical site by placing the center hole of the plate over the guidewire.

If using the 2-Hole Plate:

Pick up the 2-Hole Plate (58-LP-02XX) using the 2-Hole Plate Holder (58-PH-0200) by grabbing onto the lateral slots of both sides of the plate. Insert the Plate into the surgical site by placing the center hole of the plate over the guidewire.

4-Hole Plate Holder
(58-PH-0100)

2-Hole Plate Holder
(58-PH-0200)



SURGICAL TECHNIQUE

11 INSERTION FOR 2-HOLE LATERAL PLATE ONLY (OPTIONAL)

Optional Instruments for 2-Hole Plate

The 2-Hole 7° DTS/Guide Plate Holder (58-PH-0300)* and 2-Hole DTS/Guide Drill (58-DA-0325)* are optional instruments for the 2-Hole Plate only. The 2-Hole 7° DTS/Guide Plate Holder can be used in place of the 2-Hole Forceps Plate Holder (58-PH-0200).

Pick up the 2-Hole Plate (58-LP-02XX) using the 2-Hole 7° DTS/Guide Plate Holder by orienting the DTS/Guide Plate Holder with black laser mark line facing away from the midline of the plate. (Figure 1)

Grab the lateral slot of the plate and rotate down aligning across the plate connecting the 2-Hole Plate to the DTS/Guide Plate Holder. (Figure 2)

Insert the Plate into the surgical site.

2-Hole 7° DTS/Guide Plate Holder
(58-PH-0300)

Figure 1

Figure 2

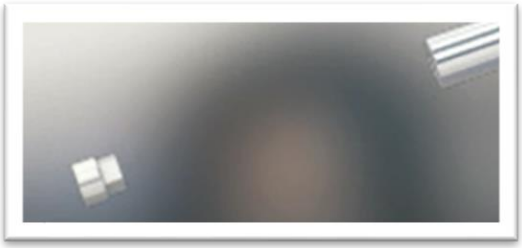
By Request Only. Please contact Customer Relations for product availability.

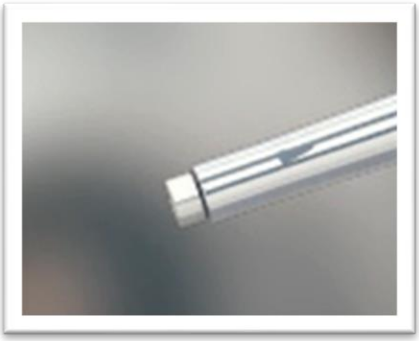
SURGICAL TECHNIQUE

12 LOCK SCREW INSERTION

Connect the Lock Screw Driver (58-SD-0200) to the Torque Limiting Handle (58-HD-0400). Using the Lock Screw Driver (58-SD-0200) pick up the Lock Screw (58-LS-0100) and slide it over the guidewire. Lower the lock screw until it engages with the guidewire threads. Use the Lock Screw Driver to screw the lock screw until it mates with the inner shelf of the center plate hole. The Torque Limiting Handle will click when the required Locking Torque, 5 in-lbs, has been applied. Ensure that the plate is positioned as intended.

Note: The Guidewire and Lock Screw cannot be used with the 2-Hole DTS/Guide Plate Holder.

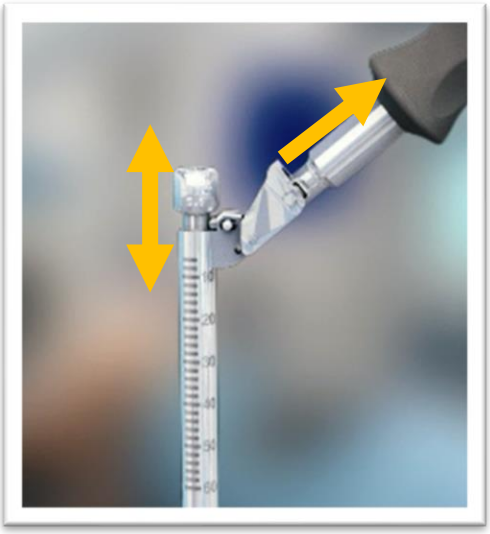


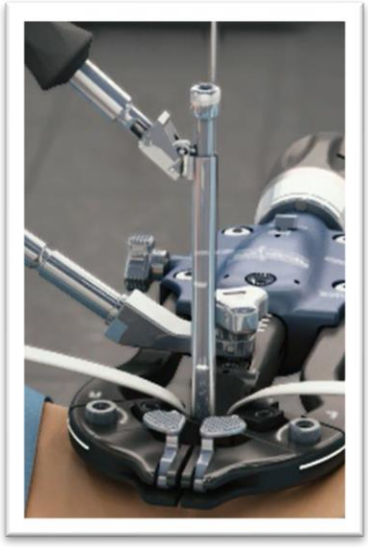


SURGICAL TECHNIQUE

13 SCREW PREPARATION

Adjust the Variable Guide (58-DG-0100) to the appropriate length based on surgeon preference. Place the Variable Guide into the screw hole of the plate and determine appropriate screw trajectory. Connect the Drill (58-DA-0100) or Awl, Bevel Tip (58-DA-0200) or Trocar Tip (58-DA-0300) to the Ratcheting AO Handle (58-HD-0100) and insert through variable guide and drill or awl to depth. Repeat for the remaining pilot holes.





13 SCREW PREPARATION FOR 2-HOLE LATERAL PLATE ONLY (OPTIONAL)

If the 2-Hole DTS/Guide Plate Holder is used, the 2-Hole DTS/Guide Drill – 25mm (58-DA-0200) should be used to prepare the pilot hole for each screw.

Connect the Ratcheting AO Handle (58-HD-0100) to the 2-Hole DTS/Guide Drill – 25mm and insert through the DTS Plate Holder until the depth stop is reached.

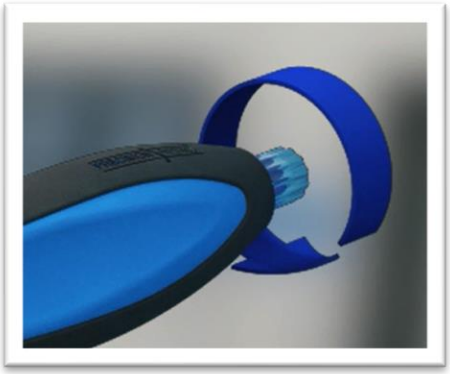
Ratcheting AO Handle
(58-HD-0100)

2-Hole DTS/Guide Drill - 25mm
(58-DA-0200)

SURGICAL TECHNIQUE

14 SCREW INSERTION

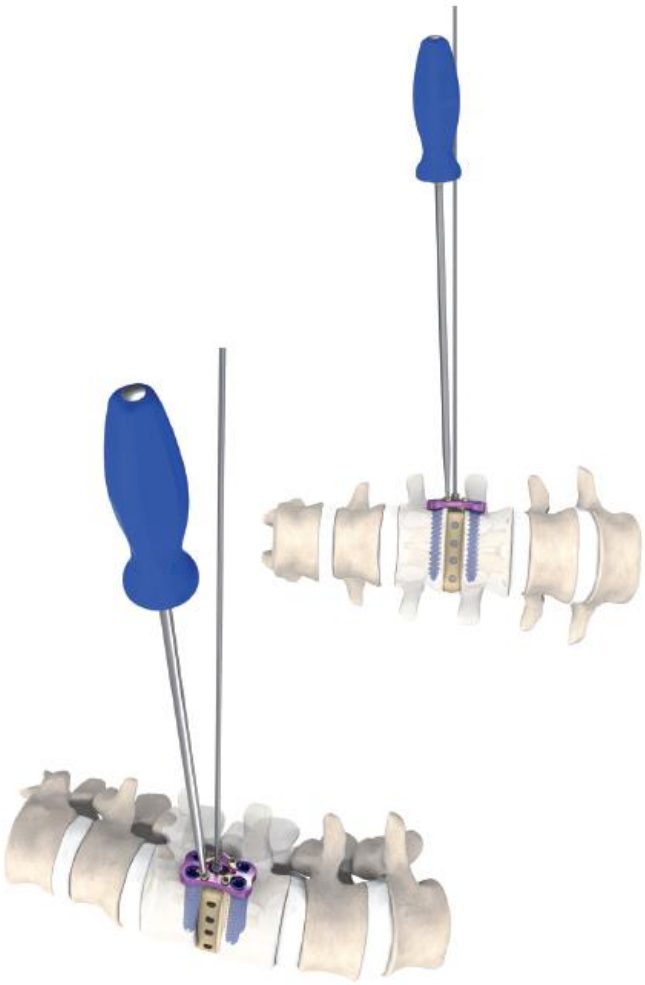
Screw length is determined using interbody length and pilot hole depth. Add additional length if bi-cortical purchase is desired. Insert the appropriate length 5.5mm screw (58-VS-55XX) onto the tip of the Screw Driver (58-SD-0100) or Flexible Screw Driver (58-SD-0101) and thread the inner shaft of the driver into the screw to rigidly attach the screw to the driver. Insert the screw into the plate screw hole. Drive the screw through the bone following the pilot hole. Drive the screw until the head of the screw is fully inserted in the plate screw hole. Unthread the bone screw driver inner shaft and release screw driver from the screw. Repeat screw insertion procedure for the remaining segments.

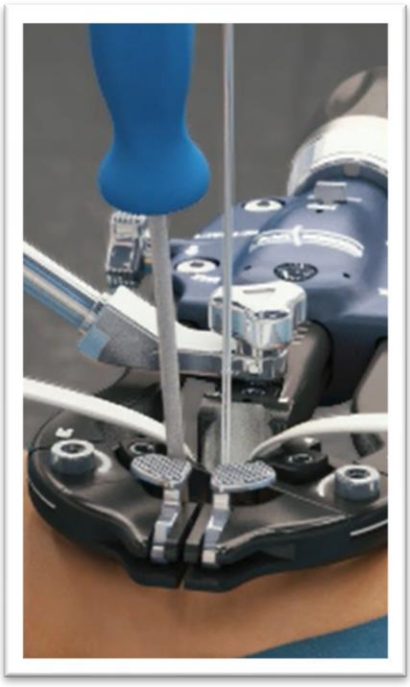


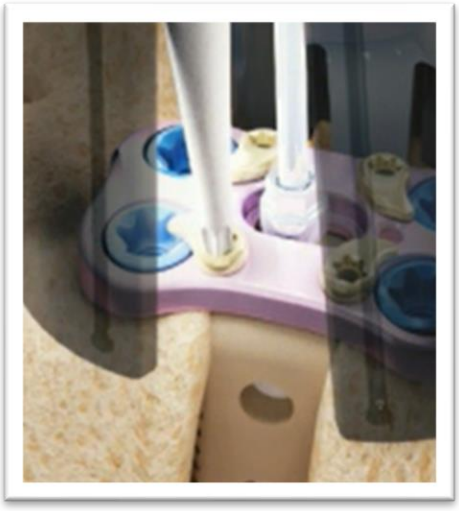
SURGICAL TECHNIQUE

15 SCREW ANTI-BACKOUT

Insert the tip of Lock Unlock Driver (58-SD-0300) into the rivet and turn until the flange of the rivet is over the screw head. Repeat for all remaining screws.



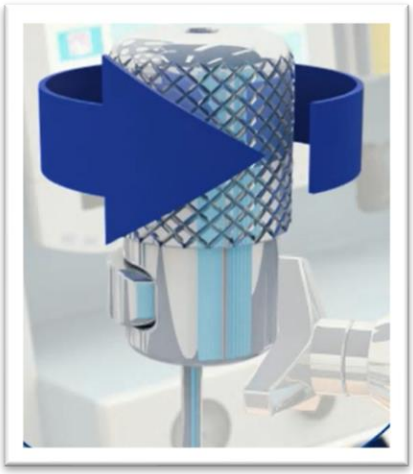


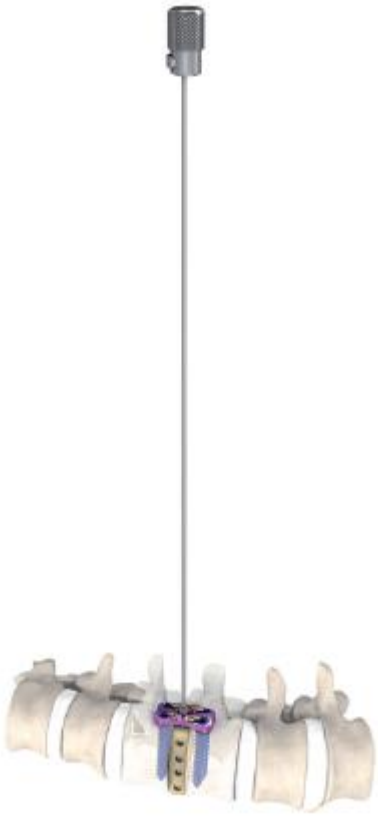


SURGICAL TECHNIQUE

16 GUIDE WIRE AND LOCK SCREW REMOVAL

After the plate rivets are locked, connect the guidewire handle (60-IN-5002) to the guide wire and unthread guide wire from the LLIF cage. The lock screw will also be removed along with the guide wire.





SURGICAL TECHNIQUE

17 IMPLANT REMOVAL

Using the Lock Unlock Driver, insert the driver into the plate rivet. Turn until the head of screw is fully unobstructed. Repeat for remaining plate rivets.

Insert the Screw Driver into the screw and thread the inner shaft into the screw. Turn counterclockwise to remove the screw from the plate. Repeat for remaining screws.

Remove the plate by placing the pin of the plate holder on arm one through one of the two small center holes and the second arm into the corresponding groove. Remove the plate from the surgical site. As an alternative, forceps can be used as well to remove the plate.

LLIF Cage Removal

Insert the Implant Removal Shaft (60-IN-5010) into the Implant Inserter (60-IN-5001). Thread the Implant Removal Shaft into the cage and align the two locating pins on the Implant Inserter into the corresponding holes on the LLIF Cage.

Rotate the thumb wheel on the Implant Inserter clockwise to securely attach it to the LLIF cage.

Attach the Slap Hammer (60-SH-9001) to the Implant Inserter and pull up on the Slap Hammer until the LLIF cage is removed.

MD-VUE™ RETRACTOR

WARNINGS

- Breakage, slippage, misuse, or mishandling of instruments or Precision Spine Sterilization Containment Units, such as on sharp edges, may cause injury to the patient, or surgical or reprocessing personnel.
- Improper maintenance, handling, or inadequate cleaning procedures can render the instrument or Precision Spine Sterilization Containment Units (cases, trays, lids) unsuitable for their intended purpose or may even be dangerous to the patient or surgical or reprocessing personnel.
- There are particular risks involved in the use of instruments used for bending and cutting rods. Use of these types of instruments can cause injury to the patient by virtue of the extremely high forces required. Do not cut rods *in situ*.
- Any breakage of an instrument or implant in this situation could be extremely hazardous.
- The physical characteristics required for many instruments do not permit them to be manufactured from implantable materials, and if any broken fragments of instruments remain in the body of a patient, the patient could have allergic or infectious consequences.
- The surgeon should use extreme caution when working in close proximity to vital organs, nerves, or vessels.
- Excessive force should not be used when positioning instruments, since it could cause injury to the patient.
- Correct handling of Precision Spine Sterilization Containment Units is extremely important. Do not modify Precision Spine Sterilization Containment Units. Do not notch or bend Precision Spine Sterilization Containment Units. Notches, scratches, or other damage and/or wear in Precision Spine Sterilization Containment Units occurring during surgery may contribute to breakage.

POSSIBLE ADVERSE EFFECTS

- Nerve damage, paralysis, pain, or damage to soft tissue, visceral organs, or joints.
- Infection, if instruments or Precision Spine Sterilization Containment Units, are not properly reprocessed.
- Pain, discomfort, or abnormal sensations resulting from the presence of the device.
- Nerve damage due to surgical trauma.
- Dural leak in cases of excessive load application.
- Impingement of close vessels, nerves, and organs by slippage or misplacement of the instrument.
- Damage due to spontaneous release of clamping devices or spring mechanisms of certain instruments.
- Cutting of skin or gloves of surgical or reprocessing personnel.
- Bony fracture in cases of deformed spine or weak bone.
- Tissue damage to the patient, physical injury to surgical personnel, and/or increased operating time that may result from the accidental disassembly of multi-component instruments occurring during surgery.

The methods of use of instruments are determined by the user's experience and training in surgical procedures. A successful result is not always achieved in every surgical case. This fact is especially true in spinal surgery where other patient conditions may compromise the results.

Physician note: Although the physician is the learned intermediary between the company and patient, the important medical information given in this document should be conveyed to the patient.

For US audiences only

Caution: Federal (US) law restricts these devices to sale by or on the order of a physician. These devices should only be used by physicians familiar with the devices, their intended use, any additional instrumentation, and any available surgical techniques. In addition, these devices should only be reprocessed by personnel familiar with the devices and the reprocessing information contained within this document.

SHURFIT® INTERBODY SYSTEM

CONTRAINDICATIONS:
The ShurFit® Interbody Fusion Devices contraindications include, but not limited to:

1. Prior fusion at the level(s) to be treated
2. Any condition not described in the indications for use
3. Previous vascular approach
4. Iliofemoral arteriosclerosis
5. Morbid obesity
6. Mental illness
7. Pregnancy
8. Local infection or inflammation
9. Any case needing to mix metals from different components
10. Any patient unwilling to cooperate with postoperative instructions
11. All cases not stated in the indications
12. Reuse, or multiple use

POTENTIAL ADVERSE AFFECTS:
The following potential adverse affects associated with the procedure have been shown to occur with the use of similar spinal systems. All patients considered candidates for fusion should be informed concerning the pathogenesis of their spinal abnormality, the rationale for fusion with instrumentation, and the potential adverse affects. The following are potential adverse affects, but not limited to:

1. Loss of proper spinal curvature, correction, height, and/or reduction
2. Infection
3. Non-Union or delayed union
4. Foreign body reaction to the implants
5. Hemorrhaging
6. Loss of neurological function, dural tear, pain, and/or discomfort
7. Autograft fracture, vertebral body fracture or discontinued growth of fused at, above and/or below the surgery level
8. Bending, loosening, fracture, disassembly, slippage and/or migration of the components
9. Pain or discomfort
10. Change in mental status
11. Bursitis
12. Bone loss and/or bone fracture due to stress shielding
13. Inability to resume activities of normal daily activities
14. Revision surgery
15. Death

WARNINGS:
The following are warnings of this device.

1. Patients with previous spinal surgery at the level(s) to be treated may have different clinical outcomes compared to those without previous surgery.
2. Potential risks identified with the use of this device system, which may require additional surgery, include device component fracture, loss of fixation, non-union, fracture of the vertebrae, necrosis of the bone, neurological injury, and/or vascular or visceral injury.
3. The benefit of spinal fusions utilizing any interbody fusion device has not been adequately established in patients with stable spines.
4. Patient selection and compliance will greatly affect the results. Patients suffering from obesity, malnutrition, and/or poor bone quality are poor candidates for spinal fusion. Patients who smoke or abuse alcohol are poor candidates for spinal fusion.
5. Patients who smoke should be advised of the consequences of the fact that an increased incidence of non-union has been reported with patients who smoke.
6. The implants and instruments are provided non-sterile and must be cleaned and sterilized before use. Device components should be sterilized using one of the noted validated sterilization cycle parameters.
7. A successful result is not always achieved in every surgical case due to many extenuating circumstances. This is especially true in spinal surgeries where other patient conditions may compromise the results.
8. Never reuse an internal fixation device under any circumstances.
9. This device is not intended to be the sole means of spinal support. The ShurFit Interbody Fusion Devices must be used with additional anterior and/or posterior instrumentation to augment stability.
10. Only surgeons trained and experienced in spinal decompression and autografting techniques should use the ShurFit Interbody Fusion Devices. Preoperative and operating procedures, including knowledge of surgical techniques and proper selection and placement of the implants are essential considerations in the utilization of this device.
11. Physician note: Although the physician is the learned intermediary, the important medical information given in this document should be conveyed to the patient.
12. Do not reuse implants. Discard used, damaged, or otherwise suspect implants. **AN IMPLANT SHOULD NEVER BE RE-USED.** Any implant, once used, should be discarded. Even though it appears undamaged, it may have small defects and internal stress patterns that may lead to failure. Reuse can potentially compromise device performance and patient safety.

ACCUFIT® LATERAL PLATE

CONTRAINDICATIONS:

The AccuFit® Lateral Plate System contraindications include but are not limited to:

1. A systemic infection
2. A local inflammation at the bone site
3. Rapidly progressive joint disease or bone absorption syndromes such as Paget's disease, osteopenia, osteoporosis, or osteomyelitis,
4. Known or suspected metal allergies
5. With any other medical, surgical, or psychological condition that would preclude potential benefits of internal fixation surgery such as the presence of tumors, congenital abnormalities, elevation of sedimentation rate unexplained by other disease, elevation of white blood cells or a marked shift in white blood cell differential count
6. Previous vascular approach
7. Iliofemoral arteriosclerosis
8. Morbid obesity
9. Mental illness
10. Pregnancy
11. Any case needing to mix metals from different components
12. Any patient unwilling to cooperate with postoperative instructions
13. All cases not stated in the indications
14. Reuse
15. Multiple use

POTENTIAL ADVERSE EFFECTS:

The following potential adverse effects associated with the procedure have been shown to occur with the use of similar spinal systems. All patients considered candidates for fusion should be informed concerning the pathogenesis of their spinal abnormality, the rationale for fusion with instrumentation, and the potential adverse effects. The following are potential adverse effects, but not limited to:

1. Loss of proper spinal curvature, correction, height, and/or reduction
2. Infection
3. Non-union or delayed union
4. Foreign body reaction to the implants
5. Hemorrhaging
6. Loss of neurological function, dural tear, pain, and/or discomfort
7. Bone graft fracture, vertebral body fracture or discontinued growth of fused at, above and/or below the surgery level
8. Bending, loosening, fracture, disassembly, slippage and/or migration of the components
9. Pain or discomfort
10. Change in mental status
11. Bursitis
12. Bone loss and/or bone fracture due to stress shielding
13. Inability to resume activities of normal daily activities
14. Revision surgery
15. Death

WARNINGS:

The following are warnings for this device.

1. Potential risks identified with the use of this device system, which may require additional surgery, include device component fracture, loss of fixation, non-union, fracture of the vertebrae, necrosis of the bone, neurological injury, and/or vascular or visceral injury.
2. The AccuFit Lateral Plate System is not approved for screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic, or lumbar spine.
3. Patient selection and compliance will greatly affect the results. Patients suffering from obesity, malnutrition, and/or poor bone quality are poor candidates for spinal fusion. Patients who smoke or abuse alcohol are poor candidates for spinal fusion.
4. Patients who smoke should be advised of the consequences of the fact that an increased incidence of non-union has been reported with patients who smoke.
5. The implants and instruments are provided non-sterile and must be cleaned and sterilized before use. Device components should be sterilized using one of the noted validated sterilization cycle parameters.
6. A successful result is not always achieved in every surgical case due to many extenuating circumstances. This is especially true in spinal surgeries where other patient conditions may compromise the results.
7. Never reuse an internal fixation device under any circumstances.
8. Only surgeons trained and experienced in spinal decompression and bone grafting techniques should use the AccuFit Lateral Plate System. Preoperative and operating procedures, including knowledge of surgical techniques and proper selection and placement of the implants are essential considerations in the utilization of this device.
9. Physicians note: Although the physician is the learned intermediary, the important medical information given in this document should be conveyed to the patient.
10. Do not reuse implants. Discard used, damaged, or otherwise suspect implants. **AN IMPLANT SHOULD NEVER BE RE-USED**. Any implant, once used, should be discarded. Even though it appears undamaged, it may have small defects and internal stress patterns that may lead to failure. These Single Use devices have not been designed to undergo or withstand any form of alteration, such as disassembly, cleaning or re-sterilization, after a single patient use. Reuse can potentially compromise device performance and patient safety.

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Caution: Federal (USA) law restricts these devices to sale by, or on the order of, a physician.