

# TEDAN SURGICAL INNOVATIONS



PHANTOM SERIES  
catalog edition 5



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# Phantom

## TEDAN SURGICAL QUALITY STATEMENT

TeDan Surgical Innovations, LLC (TSI) dedication to delivering state of the art surgical retractor systems has allowed TSI to become the leader in an ever advancing medical industry. TSI strives to meet our customer needs and market demands in a timely manner through our experienced and innovative management team.

### Ordering

Email: [sales@tedansurgical.com](mailto:sales@tedansurgical.com)

Fax: 713-726-0846

A purchase order is required for all orders, samples and consignments.

### Shipping and Packaging

TSI thoroughly inspects and packages to prevent damages caused during transit. If the packaging is damaged and/or altered, contact the customer service department within 48 hours of receipt. All orders will be shipped FedEx Ground unless noted otherwise.

TeDan Surgical	<a href="mailto:sales@tedansurgical.com">sales@tedansurgical.com</a>
12615 W. Airport Blvd.	<a href="mailto:custservice@tedansurgical.com">custservice@tedansurgical.com</a>
Suite #200	Toll Free: 877-726-0886
Sugar Land, TX 77478	Local: 713-726-0886
Attn: Customer Service	Fax: 713-726-0846

### Terms

Terms of sales are net 30 days from invoice date. All merchandise is invoiced when the shipment is made. TSI reserves the right to require adequate credit information and references. TeDan reserves the right to change credit terms to C.O.D. prior to shipping on credit and without prior notice to customer.

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### Warranty

All reusable products offered by TeDan Surgical Innovations, LLC, are guaranteed by a Lifetime Warranty against defects in materials and workmanship from the date of purchase. TSI's Lifetime Warranty does not cover damages caused by normal wear, failure to follow instructions, misuse and products that have been repaired or modified in ways not approved by TSI. Pre-packaged sterile products are warranted to be free from defect until expiration date. Any product that proves to be defective during this period will be repaired or replaced at no charge. TeDan Surgical Innovations, LLC shall not be held responsible for consequential or indirect damage arising from the sale or use of any product.

PHANTOM CS SETS CS-1600 - CS-1603, CS-1600L & CS-1601L

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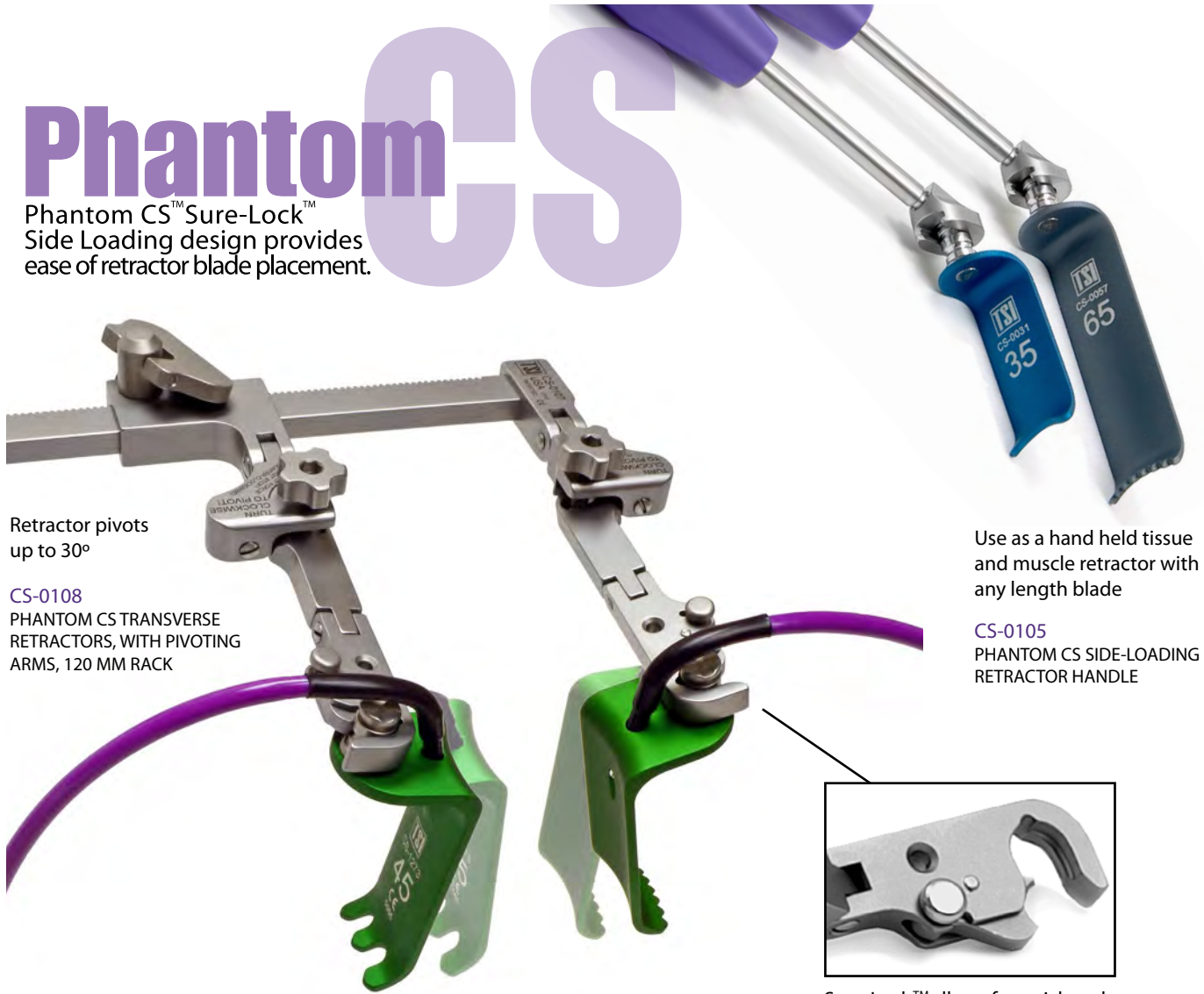
# Phantom

PHANTOM CS SURE-LOCK & LIGHTED SIDE-LOADING SETS  
**CS-1600 - CS-1603, CS-1600L & CS-1601L**

**INSTRUMENT SPECIFICATIONS**

# Phantom CS

Phantom CS™ Sure-Lock™ Side Loading design provides ease of retractor blade placement.



Retractor pivots up to 30°

**CS-0108**  
 PHANTOM CS TRANSVERSE RETRACTORS, WITH PIVOTING ARMS, 120 MM RACK

Use as a hand held tissue and muscle retractor with any length blade

**CS-0105**  
 PHANTOM CS SIDE-LOADING RETRACTOR HANDLE



Sure-Lock™ allows for quick and secure connection



**CS-1276**  
 CERVICAL LONG TEETH BLADES W/LIGHT GUIDE



**CS-1293**  
 CERVICAL MICRO BLADE SHORT TEETH BLADES W/LIGHT GUIDE



Angled hole enables insertion of TSI's fiber optic light cable

All blades are radiolucent

## CS SIDE-LOADING RETRACTOR &amp; DISTRACTION SET



CS-1600

## CS-1600 PHANTOM CS SIDE-LOADING RETRACTOR &amp; DISTRACTOR SET

CS-0030	CERVICAL BLDE BLUNT 20 X 30 MM, SILVER	2	CS-0081	CERVICAL MICRO BLDE BLUNT 14 X 40 MM, RED	2
CS-0031	CERVICAL BLDE BLUNT 20 X 35 MM, BLUE	2	CS-0082	CERVICAL MICRO BLDE BLUNT 14 X 45 MM, GREEN	2
CS-0032	CERVICAL BLDE BLUNT 20 X 40 MM, RED	2	CS-0083	CERVICAL MICRO BLDE BLUNT 14 X 50 MM, VIOLET	2
CS-0033	CERVICAL BLDE BLUNT 20 X 45 MM, GREEN	2	CS-0084	CERVICAL MICRO BLDE BLUNT 14 X 55 MM, BLACK	2
CS-0034	CERVICAL BLDE BLUNT 20 X 50 MM, VIOLET	2	CS-0085	CERVICAL MICRO BLDE BLUNT 14 X 60 MM, GOLD	2
CS-0035	CERVICAL BLDE BLUNT 20 X 55 MM, BLACK	2	CS-0090	CERVICAL MICRO BLDE SHRT TEETH 14 X 35 MM, BLUE	2
CS-0036	CERVICAL BLDE BLUNT 20 X 60 MM, GOLD	2	CS-0091	CERVICAL MICRO BLDE SHRT TEETH 14 X 40 MM, RED	2
CS-0037	CERVICAL BLDE BLUNT 20 X 65 MM, NAVY	2	CS-0092	CERVICAL MICRO BLDE SHRT TEETH 14 X 45 MM, GREEN	2
CS-0038	CERVICAL BLDE BLUNT 20 X 70 MM, LIGHT GREEN	2	CS-0093	CERVICAL MICRO BLDE SHRT TEETH 14 X 50 MM, VIOLET	2
CS-0039	CERVICAL BLDE BLUNT 20 X 75 MM, ORANGE	2	CS-0094	CERVICAL MICRO BLDE SHRT TEETH 14 X 55 MM, BLACK	2
CS-0040	PADDLE BLDE 20 X 55 MM, BLACK	2	CS-0095	CERVICAL MICRO BLDE SHRT TEETH 14 X 60 MM, GOLD	2
CS-0050	CERVICAL BLDE SHORT TEETH 23 X 30 MM, SILVER	1	CS-0100	TRANSVERSE RETRACTOR W/DBLE HINGE, 120 MM RACK	1
CS-0051	CERVICAL BLDE SHORT TEETH 23 X 35 MM, BLUE	1	CS-0101	LONGITUDINAL RETRACTOR W/DBLE HINGE	1
CS-0052	CERVICAL BLDE SHORT TEETH 23 X 40 MM, RED	1	CS-0105	SIDE-LOADING RETRACTOR BLADE HANDLE	2
CS-0053	CERVICAL BLDE SHORT TEETH 23 X 45 MM, GREEN	1	CS-0106	COLOR-CODED DEPTH GAUGE	1
CS-0054	CERVICAL BLDE SHORT TEETH 23 X 50 MM, VIOLET	1	CS-0112	TWIST DRILL FOR DISTRACTION SCREW	1
CS-0055	CERVICAL BLDE SHORT TEETH 23 X 55 MM, BLACK	1	CS-0114	DISTRACTION SCREW DRIVER, W/O SPRING	2
CS-0056	CERVICAL BLDE SHORT TEETH 23 X 60 MM, GOLD	1	CS-0115	ACF DISTRACTOR LEFT, 120 MM RACK	1
CS-0057	CERVICAL BLDE SHORT TEETH 23 X 65 MM, NAVY	1	CS-0116	ACF DISTRACTOR RIGHT, 120 MM RACK	1
CS-0070	CERVICAL BLDE LONG TEETH 23 X 30 MM, SILVER	1	CS-0119	UNIVERSAL DISTRACTION SCREW DRILL GUIDE	1
CS-0071	CERVICAL BLDE LONG TEETH 23 X 35 MM, BLUE	1	CS-0120	CALIPER	1
CS-0072	CERVICAL BLDE LONG TEETH 23 X 40 MM, RED	1	CS-0121	BONE TAMP 6 X 10 MM	1
CS-0073	CERVICAL BLDE LONG TEETH 23 X 45 MM, GREEN	1	CS-0122	BONE TAMP 6 X 10 MM WITH GUARD	1
CS-0074	CERVICAL BLDE LONG TEETH 23 X 50 MM, VIOLET	1	CS-0600	STERILIZATION TRAY (FOR CS-1600, CS-1601 & CS-1600L SETS)	1
CS-0075	CERVICAL BLDE LONG TEETH 23 X 55 MM, BLACK	1			
CS-0076	CERVICAL BLDE LONG TEETH 23 X 60 MM, GOLD	1			
CS-0077	CERVICAL BLDE LONG TEETH 23 X 65 MM, NAVY	1			
CS-0080	CERVICAL MICRO BLDE BLUNT 14 X 35 MM, BLUE	2			

## CS LIGHTED SIDE-LOADING RETRACTOR &amp; DISTRACTOR SET



CS-1600L

## CS-1600L PHANTOM CS LIGHTED SIDE-LOADING RETRACTOR &amp; DISTRACTOR SET

CS-1220	CERV. BLADE BLUNT 23 X 30 MM, W/LIGHT GUIDE, SILVER	2	CS-1292	CERV. MICRO BLDE SHRT TEETH 14 X 40 MM, W/LGHT GDE, RED	2
CS-1221	CERV. BLADE BLUNT 23 X 35 MM, W/LIGHT GUIDE, BLUE	2	CS-1293	CERV. MICRO BLDE SHRT TEETH 14 X 45 MM, W/LGHT GDE, GRN	2
CS-1222	CERV. BLADE BLUNT 23 X 40 MM, W/LIGHT GUIDE, RED	2	CS-1294	CERV. MICRO BLDE SHRT TEETH 14 X 50 MM, W/LGHT GDE, VIOLET	2
CS-1223	CERV. BLADE BLUNT 23 X 45 MM, W/LIGHT GUIDE, GREEN	2	CS-1295	CERV. MICRO BLDE SHRT TEETH 14 X 55 MM, W/LGHT GDE, BLCK	2
CS-1224	CERV. BLADE BLUNT 23 X 50 MM, W/LIGHT GUIDE, VIOLET	2	CS-1296	CERV. MICRO BLDE SHRT TEETH 14 X 60 MM, W/LGHT GDE, GLD	2
CS-1225	CERV. BLADE BLUNT 23 X 55 MM, W/LIGHT GUIDE, BLACK	2	CS-1297	CERV. MICRO BLDE SHRT TEETH 14 X 65 MM, W/LGHT GDE, GRAY	2
CS-1226	CERV. BLADE BLUNT 23 X 60 MM, W/LIGHT GUIDE, GOLD	2	CS-1298	CERV. MICRO BLDE SHRT TEETH 14 X 70 MM, W/LGHT GDE, LGHT GRN	2
CS-1227	CERV. BLADE BLUNT 23 X 65 MM, W/LIGHT GUIDE, GRAY	2	CS-1299	CERV. MICRO BLDE SHRT TEETH 14 X 75 MM, W/LGHT GDE, ORNGE	2
CS-1228	CERV. BLADE BLUNT 23 X 70 MM, W/LGHT GDE, LGHT GRN	2	CS-0100	TRANSVERSE RETRACTOR W/DOUBLE HINGE, 120 MM RACK	1
CS-1229	CERV. BLADE BLUNT 23 X 75 MM, W/LIGHT GUIDE, ORANGE	2	CS-0101	LONGITUDINAL RETRACTOR W/DOUBLE HINGE	1
CS-1250	CERV. BLADE SHRT TEETH 23 X 30 MM, W/LGHT GDE, SILVER	1	CS-0105	SIDE-LOADING RETRACTOR BLADE HANDLE	2
CS-1251	CERV. BLADE SHRT TEETH 23 X 35 MM, W/LGHT GDE, BLUE	1	CS-0106	COLOR-CODED DEPTH GAUGE	1
CS-1252	CERV. BLADE SHRT TEETH 23 X 40 MM, W/LGHT GDE, RED	1	CS-0112	TWIST DRILL FOR DISTRACTION SCREW	1
CS-1253	CERV. BLADE SHRT TEETH 23 X 45 MM, W/LGHT GDE, GRN	1	CS-0114	DISTRACTION SCREW DRIVER, W/O SPRING	2
CS-1254	CERV. BLADE SHRT TEETH 23 X 50 MM, W/LGHT GDE, VIOLET	1	CS-0115	ACF DISTRACTOR LEFT, 120 MM RACK	1
CS-1255	CERV. BLADE SHRT TEETH 23 X 55 MM, W/LIGHT GUIDE, BLCK	1	CS-0116	ACF DISTRACTOR RIGHT, 120 MM RACK	1
CS-1256	CERV. BLADE SHRT TEETH 23 X 60 MM, W/LIGHT GUIDE, GOLD	1	CS-0119	UNIVERSAL DISTRACTION SCREW DRILL GUIDE	1
CS-1257	CERV. BLADE SHRT TEETH 23 X 65 MM, W/LIGHT GUIDE, NAVY	1	CS-0120	CALIPER	1
CS-1258	CERV. BLDE SHRT TEETH 23 X 70 MM, W/LGHT GDE, LGHT GRN	1	CS-0121	BONE TAMP 6 X 10 MM	1
CS-1259	CERV. BLDE SHRT TEETH 23 X 75 MM, W/LGHT GUIDE, ORANGE	1	CS-0122	BONE TAMP 6 X 10 MM WITH GUARD	1
CS-1270	CERV. BLADE LONG TEETH 23 X 30 MM, W/LIGHT GUIDE, SILVER	1	CS-0600L	STERILIZATION TRAY (FOR CS-1600L & CS-1601L SETS)	1
CS-1271	CERV. BLADE LONG TEETH 23 X 35 MM, W/LIGHT GUIDE, BLUE	1	ML-0045	ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH	1
CS-1272	CERV. BLADE LONG TEETH 23 X 40 MM, W/LIGHT GUIDE, RED	1	ML-0051	ML LED LIGHT SOURCE	1
CS-1273	CERV. BLADE LONG TEETH 23 X 45 MM, W/LIGHT GUIDE, GRN	1			
CS-1274	CERV. BLADE LONG TEETH 23 X 50 MM, W/LGHT GDE, VIOLET	1			
CS-1275	CERV. BLADE LONG TEETH 23 X 55 MM, W/LIGHT GDE, BLACK	1			
CS-1276	CERV. BLADE LONG TEETH 23 X 60 MM, W/LIGHT GUIDE, GOLD	1			
CS-1277	CERV. BLADE LONG TEETH 23 X 65 MM, W/LIGHT GUIDE, NAVY	1			
CS-1278	CERV. BLDE LONG TEETH 23 X 70 MM, W/LGHT GDE, LGHT GRN	1			
CS-1279	CERV. BLADE LONG TEETH 23 X 75 MM, W/LGHT GDE, ORANGE	1			
CS-1290	CERV. MICRO BLDE SHRT TEETH 14 X 30 MM, W/LGHT GDE, SLVR	2			
CS-1291	CERV. MICRO BLDE SHRT TEETH 14 X 35 MM, W/LGHT GDE, BLUE	2			



CS SIDE-LOADING RETRACTOR BASIC SET



CS-1601

CS-1601 PHANTOM CS SIDE-LOADING RETRACTOR BASIC SET

CS-0030	CERVICAL BLDE BLUNT 20 X 30 MM, SILVER	ea.	CS-0081	CERVICAL MICRO BLDE BLUNT 14 X 40 MM, RED	ea.
CS-0031	CERVICAL BLDE BLUNT 20 X 35 MM, BLUE	2	CS-0082	CERVICAL MICRO BLDE BLUNT 14 X 45 MM, GREEN	2
CS-0032	CERVICAL BLDE BLUNT 20 X 40 MM, RED	2	CS-0083	CERVICAL MICRO BLDE BLUNT 14 X 50 MM, VIOLET	2
CS-0033	CERVICAL BLDE BLUNT 20 X 45 MM, GREEN	2	CS-0084	CERVICAL MICRO BLDE BLUNT 14 X 55 MM, BLACK	2
CS-0034	CERVICAL BLDE BLUNT 20 X 50 MM, VIOLET	2	CS-0085	CERVICAL MICRO BLDE BLUNT 14 X 60 MM, GOLD	2
CS-0035	CERVICAL BLDE BLUNT 20 X 55 MM, BLACK	2	CS-0090	CERVICAL MICRO BLDE SHRT TEETH 14 X 35 MM, BLUE	2
CS-0036	CERVICAL BLDE BLUNT 20 X 60 MM, GOLD	2	CS-0091	CERVICAL MICRO BLDE SHRT TEETH 14 X 40 MM, RED	2
CS-0037	CERVICAL BLDE BLUNT 20 X 65 MM, NAVY	2	CS-0092	CERVICAL MICRO BLDE SHRT TEETH 14 X 45 MM, GREEN	2
CS-0038	CERVICAL BLDE BLUNT 20 X 70 MM, LIGHT GREEN	2	CS-0093	CERVICAL MICRO BLDE SHRT TEETH 14 X 50 MM, VIOLET	2
CS-0039	CERVICAL BLDE BLUNT 20 X 75 MM, ORANGE	2	CS-0094	CERVICAL MICRO BLDE SHRT TEETH 14 X 55 MM, BLACK	2
CS-0040	PADDLE BLDE 20 X 55 MM, BLACK	2	CS-0095	CERVICAL MICRO BLDE SHRT TEETH 14 X 60 MM, GOLD	2
CS-0050	CERVICAL BLDE SHORT TEETH 23 X 30 MM, SILVER	1	CS-0100	TRANSVERSE RETRACTOR W/DBLE HINGE, 120 MM RACK	1
CS-0051	CERVICAL BLDE SHORT TEETH 23 X 35 MM, BLUE	1	CS-0101	LONGITUDINAL RETRACTOR W/DOUBLE HINGE	1
CS-0052	CERVICAL BLDE SHORT TEETH 23 X 40 MM, RED	1	CS-0105	SIDE-LOADING RETRACTOR BLDE HANDLE	2
CS-0053	CERVICAL BLDE SHORT TEETH 23 X 45 MM, GREEN	1	CS-0106	COLOR-CODED DEPTH GAUGE	1
CS-0054	CERVICAL BLDE SHORT TEETH 23 X 50 MM, VIOLET	1	CS-0600	STERILIZATION TRAY (FOR CS-1600 & 1601 SETS)	1
CS-0055	CERVICAL BLDE SHORT TEETH 23 X 55 MM, BLACK	1			
CS-0056	CERVICAL BLDE SHORT TEETH 23 X 60 MM, GOLD	1			
CS-0057	CERVICAL BLDE SHORT TEETH 23 X 65 MM, NAVY	1			
CS-0070	CERVICAL BLDE LONG TEETH 23 X 30 MM, SILVER	1			
CS-0071	CERVICAL BLDE LONG TEETH 23 X 35 MM, BLUE	1			
CS-0072	CERVICAL BLDE LONG TEETH 23 X 40 MM, RED	1			
CS-0073	CERVICAL BLDE LONG TEETH 23 X 45 MM, GREEN	1			
CS-0074	CERVICAL BLDE LONG TEETH 23 X 50 MM, VIOLET	1			
CS-0075	CERVICAL BLDE LONG TEETH 23 X 55 MM, BLACK	1			
CS-0076	CERVICAL BLDE LONG TEETH 23 X 60 MM, GOLD	1			
CS-0077	CERVICAL BLDE LONG TEETH 23 X 65 MM, NAVY	1			
CS-0080	CERVICAL MICRO BLDE BLUNT 14 X 35 MM, BLUE	2			

**CS LIGHTED SIDE-LOADING RETRACTOR BASIC SET**



CS-1601L

**CS-1601L PHANTOM CS LIGHTED SIDE LOADING RETRACTOR BASIC SET**

		ea.			ea.
CS-1220	CERVICAL BLDE BLUNT 23 X 30 MM, W/LIGHT GUIDE, SILVER	2	CS-1293	CERV. MICRO BLDE SHRT TEETH 14 X 45 MM, W/LGHT GDE, GRN	2
CS-1221	CERVICAL BLDE BLUNT 23 X 35 MM, W/LIGHT GUIDE, BLUE	2	CS-1294	CERV. MICRO BLDE SHRT TEETH 14 X 50 MM, W/LGHT GDE, VLET	2
CS-1222	CERVICAL BLDE BLUNT 23 X 40 MM, W/LIGHT GUIDE, RED	2	CS-1295	CERV. MICRO BLDE SHRT TEETH 14 X 55 MM, W/LGHT GDE, BLK	2
CS-1223	CERVICAL BLDE BLUNT 23 X 45 MM, W/LIGHT GUIDE, GREEN	2	CS-1296	CERV. MICRO BLDE SHRT TEETH 14 X 60 MM, W/LGHT GDE, GLD	2
CS-1224	CERVICAL BLDE BLUNT 23 X 50 MM, W/LIGHT GUIDE, VIOLET	2	CS-1297	CERV. MICRO BLDE SHRT TEETH 14 X 65 MM, W/LGHT GDE, GRY	2
CS-1225	CERVICAL BLDE BLUNT 23 X 55 MM, W/LIGHT GUIDE, BLACK	2	CS-1298	CERV. MIC. BLDE SHRT TEETH 14 X 70 MM, W/LGHT GDE, LT GRN	2
CS-1226	CERVICAL BLDE BLUNT 23 X 60 MM, W/LIGHT GUIDE, GOLD	2	CS-1299	CERV. MIC. BLDE SHRT TEETH 14 X 75 MM, W/LGHT GDE, ORNG	2
CS-1227	CERVICAL BLDE BLUNT 23 X 65 MM, W/LIGHT GUIDE, GRAY	2	CS-0100	TRANSVERSE RETRACTOR W/DOUBLE HINGE, 120 MM RACK	1
CS-1228	CERVICAL BLDE BLUNT 23 X 70 MM, W/LIGHT GDE, LGHT GRN	2	CS-0101	LONGITUDINAL RETRACTOR W/DOUBLE HINGE	1
CS-1229	CERVICAL BLDE BLUNT 23 X 75 MM, W/LIGHT GUIDE, ORNGE	2	CS-0105	SIDE-LOADING RETRACTOR BLADE HANDLE	2
CS-1250	CERVICAL BLDE SHRT TEETH 23 X 30 MM, W/LGHT GDE, SLVR	1	CS-0106	COLOR-CODED DEPTH GAUGE	1
CS-1251	CERVICAL BLDE SHRT TEETH 23 X 35 MM, W/LGHT GDE, BLUE	1	CS-0600L	STERILIZATION TRAY (FOR CS-1600L & CS-1601L SETS)	1
CS-1252	CERVICAL BLDE SHRT TEETH 23 X 40 MM, W/LGHT GDE, RED	1	ML-0045	ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH	1
CS-1253	CERVICAL BLDE SHRT TEETH 23 X 45 MM, W/LGHT GDE, GRN	1	ML-0051	ML LED LIGHT SOURCE	1
CS-1254	CERVICAL BLDE SHRT TEETH 23 X 50 MM, W/LGHT GDE, VIOLET	1			
CS-1255	CERVICAL BLDE SHRT TEETH 23 X 55 MM, W/LGHT GDE, BLCK	1			
CS-1256	CERVICAL BLDE SHRT TEETH 23 X 60 MM, W/LGHT GDE, GOLD	1			
CS-1257	CERVICAL BLDE SHRT TEETH 23 X 65 MM, W/LGHT GDE, NAVY	1			
CS-1258	CERV. BLDE SHRT TEETH 23 X 70 MM, W/LGHT GDE, LGHT GRN	1			
CS-1259	CERVICAL BLDE SHRT TEETH 23 X 75 MM, W/LGHT GDE, ORNGE	1			
CS-1270	CERVICAL BLDE LONG TEETH 23 X 30 MM, W/LGHT GDE, SILVER	1			
CS-1271	CERVICAL BLDE LNG TEETH 23 X 35 MM, W/LGHT GDE, BLUE	1			
CS-1272	CERVICAL BLDE LNG TEETH 23 X 40 MM, W/LGHT GDE, RED	1			
CS-1273	CERVICAL BLDE LONG TEETH 23 X 45 MM, W/LHT GDE, GREEN	1			
CS-1274	CERVICAL BLDE LONG TEETH 23 X 50 MM, W/LGHT GDE, VIOLET	1			
CS-1275	CERVICAL BLDE LONG TEETH 23 X 55 MM, W/LGHT GDE, BLACK	1			
CS-1276	CERVICAL BLDE LONG TEETH 23 X 60 MM, W/LGHT GDE, GOLD	1			
CS-1277	CERVICAL BLDE LONG TEETH 23 X 65 MM, W/LGHT GDE, NAVY	1			
CS-1278	CERVICAL BLDE LONG TEETH 23 X 70 MM, W/LGHT GDE, LT GRN	1			
CS-1279	CERVICAL BLDE LONG TEETH 23 X 75 MM, W/LGHT GDE, ORNGE	1			
CS-1290	CERV. MICRO BLDE SHRT TEETH 14 X 30 MM, W/LGHT GDE, SLVR	2			
CS-1291	CERV. MICRO BLDE SHRT TEETH 14 X 35 MM, W/LGHT GDE, BLUE	2			
CS-1292	CERV. MICRO BLDE SHRT TEETH 14 X 40 MM, W/LGHT GDE, RED	2			

CS SIDE-LOADING RETRACTOR & DISTRACTION BASIC SET



CS-1602

**CS-1602 PHANTOM CS SIDE-LOADING RETRACTOR & DISTRACTOR BASIC SET**

CS-0030	CERVICAL BLADE BLUNT 20 X 30 MM, SILVER	ea.	2	CS-0105	SIDE-LOADING RETRACTOR BLADE HANDLE	ea.	2
CS-0031	CERVICAL BLADE BLUNT 20 X 35 MM, BLUE		2	CS-0106	COLOR-CODED DEPTH GAUGE		1
CS-0032	CERVICAL BLADE BLUNT 20 X 40 MM, RED		2	CS-0114	DISTRACTION SCREW DRIVER, W/O SPRING		2
CS-0033	CERVICAL BLADE BLUNT 20 X 45 MM, GREEN		2	CS-0119	UNIVERSAL DISTRACTION SCREW DRILL GUIDE		1
CS-0034	CERVICAL BLADE BLUNT 20 X 50 MM, VIOLET		2	CS-0127	DISTRACTOR W/60 MM HINGED ARMS, 120 MM RACK		1
CS-0035	CERVICAL BLADE BLUNT 20 X 55 MM, BLACK		2	CS-0602	STERILIZATION TRAY (FOR CS-1602 & 1603 SETS)		1
CS-0036	CERVICAL BLADE BLUNT 20 X 60 MM, GOLD		2				
CS-0037	CERVICAL BLADE BLUNT 20 X 65 MM, NAVY		2				
CS-0038	CERVICAL BLADE BLUNT 20 X 70 MM, LIGHT GREEN		2				
CS-0039	CERVICAL BLADE BLUNT 20 X 75 MM, ORANGE		2				
CS-0050	CERVICAL BLADE SHORT TEETH 23 X 30 MM, SILVER		1				
CS-0051	CERVICAL BLADE SHORT TEETH 23 X 35 MM, BLUE		1				
CS-0052	CERVICAL BLADE SHORT TEETH 23 X 40 MM, RED		1				
CS-0053	CERVICAL BLADE SHORT TEETH 23 X 45 MM, GREEN		1				
CS-0054	CERVICAL BLADE SHORT TEETH 23 X 50 MM, VIOLET		1				
CS-0055	CERVICAL BLADE SHORT TEETH 23 X 55 MM, BLACK		1				
CS-0056	CERVICAL BLADE SHORT TEETH 23 X 60 MM, GOLD		1				
CS-0057	CERVICAL BLADE SHORT TEETH 23 X 65 MM, NAVY		1				
CS-0070	CERVICAL BLADE LONG TEETH 23 X 30 MM, SILVER		1				
CS-0071	CERVICAL BLADE LONG TEETH 23 X 35 MM, BLUE		1				
CS-0072	CERVICAL BLADE LONG TEETH 23 X 40 MM, RED		1				
CS-0073	CERVICAL BLADE LONG TEETH 23 X 45 MM, GREEN		1				
CS-0074	CERVICAL BLADE LONG TEETH 23 X 50 MM, VIOLET		1				
CS-0075	CERVICAL BLADE LONG TEETH 23 X 55 MM, BLACK		1				
CS-0076	CERVICAL BLADE LONG TEETH 23 X 60 MM, GOLD		1				
CS-0077	CERVICAL BLADE LONG TEETH 23 X 65 MM, NAVY		1				
CS-0100	TNSVERSE RETRACTOR W/DBLE HINGE, 120 MM RACK		1				
CS-0101	LONGITUDINAL RETRACTOR W/DOUBLE HINGE		1				

## CS SIDE-LOADING RETRACTOR BASIC SET



CS-1603

## CS-1603 PHANTOM CS SIDE-LOADING RETRACTOR BASIC SET

		ea.
CS-0030	CERVICAL BLADE BLUNT 20 X 30 MM, SILVER	2
CS-0032	CERVICAL BLADE BLUNT 20 X 40 MM, RED	2
CS-0034	CERVICAL BLADE BLUNT 20 X 50 MM, VIOLET	2
CS-0036	CERVICAL BLADE BLUNT 20 X 60 MM, GOLD	2
CS-0038	CERVICAL BLADE BLUNT 20 X 70 MM, LIGHT GREEN	2
CS-0050	CERVICAL BLADE SHORT TEETH 23 X 30 MM, SILVER	1
CS-0052	CERVICAL BLADE SHORT TEETH 23 X 40 MM, RED	1
CS-0054	CERVICAL BLADE SHORT TEETH 23 X 50 MM, VIOLET	1
CS-0056	CERVICAL BLADE SHORT TEETH 23 X 60 MM, GOLD	1
CS-0070	CERVICAL BLADE LONG TEETH 23 X 30 MM, SILVER	1
CS-0072	CERVICAL BLADE LONG TEETH 23 X 40 MM, RED	1
CS-0074	CERVICAL BLADE LONG TEETH 23 X 50 MM, VIOLET	1
CS-0076	CERVICAL BLADE LONG TEETH 23 X 60 MM, GOLD	1
CS-0100	TRANSVERSE RETRACTOR W/DOUBLE HINGE, 120 MM RACK	1
CS-0101	LONGITUDINAL RETRACTOR W/DOUBLE HINGE	1
CS-0105	SIDE-LOADING RETRACTOR BLADE HANDLE	2
CS-0106	COLOR-CODED DEPTH GAUGE	1
CS-0114	DISTRACTION SCREW DRIVER, W/O SPRING	2
CS-0127	DISTRACTOR W/60 MM HINGED ARMS, 120 MM RACK	1
CS-0602	STERILIZATION TRAY (FOR CS-1602 & 1603 SETS)	1

LONGITUDINAL RETRACTORS



CS-0101

- CS-0101 PHANTOM CS LONGITUDINAL SIDE LOADING RETRACTOR W/DOUBLE HINGE
- CS-0098 PHANTOM CS LONGITUDINAL TOP LOADING RETRACTOR W/BALL SNAP

TRANSVERSE RETRACTORS



CS-0100

- CS-0100 PHANTOM CS TRANSVERSE SIDE-LOADING RETRACTOR W/DOUBLE HINGE - 120 MM RACK
- CS-0099 PHANTOM CS TRANSVERSE TOP LOADING RETRACTOR W/BALL SNAP - 120 MM RACK
- CS-0103 PHANTOM CS TRANSVERSE SIDE-LOADING RETRACTOR W/DOUBLE HINGE - 150 MM RACK

## TRANSVERSE RETRACTOR W/PIVOTING ARMS



CS-0108

- CS-0107 PHANTOM CS TRANSVERSE RETRACTOR W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 150 MM RACK  
 CS-0108 PHANTOM CS TRANSVERSE RETRACTOR W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 120 MM RACK

## TRANSVERSE STEP OVER RETRACTOR



CS-0102

- CS-0102 PHANTOM CS TRANSVERSE STEP OVER RETRACTOR W/DOUBLE HINGE - 120 MM RACK

SCOVILLE RETRACTORS



CS-0096

- CS-0096 SCOVILLE SIDE-LOADING RETRACTOR W/SIDE-LOADING - 200 MM RACK
- CS-0097 SCOVILLE TOP LOADING RETRACTOR W/BALL SNAP - 200 MM RACK

SCOVILLE PIVOTING RETRACTOR



CS-0104

- CS-0104 SCOVILLE SIDE-LOADING RETRACTOR W/PIVOTING ARMS, W/T-HANDLE LS-0451 - 200 MM RACK

## HAND-HELD RETRACTORS



CS-0210, CS-0218, CS-0220, CS-0223

CS-0210	PHANTOM TL CERVICAL HAND HELD RETRACTOR, 18 X 50 MM, GREEN
CS-0218	PHANTOM TL CERVICAL HAND HELD RETRACTOR, 18 X 70 MM, PURPLE
CS-0220	PHANTOM TL CERVICAL HAND HELD RETRACTOR, 20 MM W/BIG LIP, RED
CS-0223	PHANTOM TL CERVICAL HAND HELD RETRACTOR, 23 MM W/SMALL LIP, BLUE

## DUAL BLADE HOLDER FOR MULTI LEVEL



CS-1710

CS-1710 PHANTOM CS DUAL BLADE HOLDER FOR MULTI LEVEL



RETRACTOR BLADE HANDLE



CS-0105

CS-0105 PHANTOM CS SIDE-LOADING RETRACTOR BLADE HANDLE

LOCKING RETRACTOR BLADE HANDLE



CS-0126

- Only compatible with TSI Cross Cut Blades

CS-0126 PHANTOM CS SIDE-LOADING LOCKING RETRACTOR BLADE HANDLE

T-HANDLE FOR RETRACTOR W/PIVOTING ARMS



LS-0451

LS-0451 PHANTOM T-HANDLE FOR RETRACTOR W/PIVOTING ARMS

HEX DRIVER TOOL



ML-0505

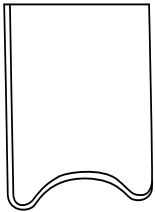
ML-0505 PHANTOM XL HEX DRIVER TOOL

PADDLE BLADES - BLUNT - (ALUMINUM)



CS-0040

BLUNT  
END



CS-0040

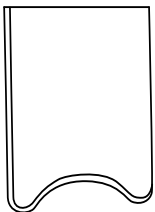
PHANTOM CS PADDLE BLADE 20 X 55 MM, BLACK

PADDLE BLADES - BLUNT - (ALUMINUM)



CS-0042

BLUNT  
END



CS-0042

PHANTOM CS PADDLE BLADE 20 X 65 MM, NAVY

RETRACTOR BLADES - BLUNT - (ALUMINUM)



CS-0023

BLUNT  
BLADES



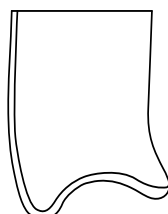
- CS-0020 PHANTOM CS 23 X 30 MM, SILVER
- CS-0021 PHANTOM CS 23 X 35 MM, BLUE
- CS-0022 PHANTOM CS 23 X 40 MM, RED
- CS-0023 PHANTOM CS 23 X 45 MM, GREEN
- CS-0024 PHANTOM CS 23 X 50 MM, VIOLET
- CS-0025 PHANTOM CS 23 X 55 MM, BLACK
- CS-0026 PHANTOM CS 23 X 60 MM, GOLD
- CS-0027 PHANTOM CS 23 X 65 MM, NAVY
- CS-0028 PHANTOM CS 23 X 70 MM, LIGHT GREEN
- CS-0029 PHANTOM CS 23 X 75 MM, ORANGE

RETRACTOR BLADES - BLUNT - (ALUMINUM)



CS-0033

BLUNT  
BLADES



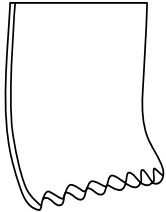
- CS-0030 PHANTOM CS 20 X 30 MM, SILVER
- CS-0031 PHANTOM CS 20 X 35 MM, BLUE
- CS-0032 PHANTOM CS 20 X 40 MM, RED
- CS-0033 PHANTOM CS 20 X 45 MM, GREEN
- CS-0034 PHANTOM CS 20 X 50 MM, VIOLET
- CS-0035 PHANTOM CS 20 X 55 MM, BLACK
- CS-0036 PHANTOM CS 20 X 60 MM, GOLD
- CS-0037 PHANTOM CS 20 X 65 MM, NAVY
- CS-0038 PHANTOM CS 20 X 70 MM, LIGHT GREEN
- CS-0039 PHANTOM CS 20 X 75 MM, ORANGE

RETRACTOR BLADES - SHORT TEETH - (ALUMINUM)



CS-0054

SHORT  
TEETH



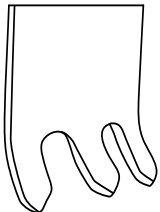
- CS-0050 PHANTOM CS 23 X 30 MM, SILVER
- CS-0051 PHANTOM CS 23 X 35 MM, BLUE
- CS-0052 PHANTOM CS 23 X 40 MM, RED
- CS-0053 PHANTOM CS 23 X 45 MM, GREEN
- CS-0054 PHANTOM CS 23 X 50 MM, VIOLET
- CS-0055 PHANTOM CS 23 X 55 MM, BLACK
- CS-0056 PHANTOM CS 23 X 60 MM, GOLD
- CS-0057 PHANTOM CS 23 X 65 MM, NAVY
- CS-0058 PHANTOM CS 23 X 70 MM, LIGHT GREEN
- CS-0059 PHANTOM CS 23 X 75 MM, ORANGE

RETRACTOR BLADES - LONG TEETH - (ALUMINUM)



CS-0075

LONG  
TEETH



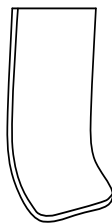
- CS-0070 PHANTOM CS 23 X 30 MM, SILVER
- CS-0071 PHANTOM CS 23 X 35 MM, BLUE
- CS-0072 PHANTOM CS 23 X 40 MM, RED
- CS-0073 PHANTOM CS 23 X 45 MM, GREEN
- CS-0074 PHANTOM CS 23 X 50 MM, VIOLET
- CS-0075 PHANTOM CS 23 X 55 MM, BLACK
- CS-0076 PHANTOM CS 23 X 60 MM, GOLD
- CS-0077 PHANTOM CS 23 X 65 MM, NAVY
- CS-0078 PHANTOM CS 23 X 70 MM, LIGHT GREEN
- CS-0079 PHANTOM CS 23 X 75 MM, ORANGE

RETRACTOR BLADES - MICRO - BLUNT - (ALUMINUM)



CS-0082

**BLUNT  
END**



- CS-0080 PHANTOM CS 14 X 35 MM, BLUE
- CS-0081 PHANTOM CS 14 X 40 MM, RED
- CS-0082 PHANTOM CS 14 X 45 MM, GREEN
- CS-0083 PHANTOM CS 14 X 50 MM, VIOLET
- CS-0084 PHANTOM CS 14 X 55 MM, BLACK
- CS-0085 PHANTOM CS 14 X 60 MM, GOLD

RETRACTOR BLADES - MICRO - SHORT TEETH - (ALUMINUM)



CS-0093

**SHORT  
TEETH**



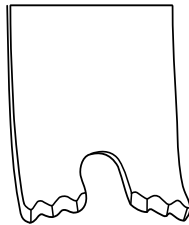
- CS-0090 PHANTOM CS 14 X 35 MM, BLUE
- CS-0091 PHANTOM CS 14 X 40 MM, RED
- CS-0092 PHANTOM CS 14 X 45 MM, GREEN
- CS-0093 PHANTOM CS 14 X 50 MM, VIOLET
- CS-0094 PHANTOM CS 14 X 55 MM, BLACK
- CS-0095 PHANTOM CS 14 X 60 MM, GOLD

RETRACTOR BLADES - DISCECTOMY - SHORT TEETH - (ALUMINUM)



CS-0302

DISCECTOMY  
BLADES



- CS-0300 PHANTOM CS 23 X 30 MM, SILVER
- CS-0301 PHANTOM CS 23 X 40 MM, RED
- CS-0302 PHANTOM CS 23 X 50 MM, VIOLET
- CS-0303 PHANTOM CS 23 X 60 MM, GOLD
- CS-0304 PHANTOM CS 23 X 70 MM, LIGHT GREEN

RETRACTOR BLADES W/ LIGHT GUIDE - BLUNT - (ALUMINUM)



CS-1220 - CS-1229

BLUNT  
END



- CS-1220 PHANTOM CS 23 X 30 MM, SILVER
- CS-1221 PHANTOM CS 23 X 35 MM, BLUE
- CS-1222 PHANTOM CS 23 X 40 MM, RED
- CS-1223 PHANTOM CS 23 X 45 MM, GREEN
- CS-1224 PHANTOM CS 23 X 50 MM, VIOLET
- CS-1225 PHANTOM CS 23 X 55 MM, BLACK
- CS-1226 PHANTOM CS 23 X 60 MM, GOLD
- CS-1227 PHANTOM CS 23 X 65 MM, GREY
- CS-1228 PHANTOM CS 23 X 70 MM, LIGHT GREEN
- CS-1229 PHANTOM CS 23 X 75 MM, ORANGE

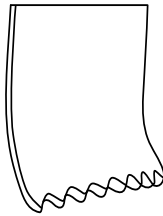
\*BLADES AVAILABLE W/ CONICAL CONNECTION UPON REQUEST

RETRACTOR BLADES W/ LIGHT GUIDE - SHORT TEETH - (ALUMINUM)



CS-1250 - CS-1259

**SHORT TEETH**



- CS-1250 PHANTOM CS 23 X 30 MM, SILVER
- CS-1251 PHANTOM CS 23 X 35 MM, BLUE
- CS-1252 PHANTOM CS 23 X 40 MM, RED
- CS-1253 PHANTOM CS 23 X 45 MM, GREEN
- CS-1254 PHANTOM CS 23 X 50 MM, VIOLET
- CS-1255 PHANTOM CS 23 X 55 MM, BLACK
- CS-1256 PHANTOM CS 23 X 60 MM, GOLD
- CS-1257 PHANTOM CS 23 X 65 MM, GREY
- CS-1258 PHANTOM CS 23 X 70 MM, LIGHT GREEN
- CS-1259 PHANTOM CS 23 X 75 MM, ORANGE

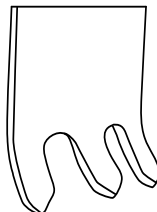
*\*BLADES AVAILABLE W/ CONICAL CONNECTION UPON REQUEST*

RETRACTOR BLADES W/ LIGHT GUIDE - LONG TEETH - (ALUMINUM)



CS-1270 - CS-1279

**LONG TEETH**



- CS-1270 PHANTOM CS 23 X 30 MM, SILVER
- CS-1271 PHANTOM CS 23 X 35 MM, BLUE
- CS-1272 PHANTOM CS 23 X 40 MM, RED
- CS-1273 PHANTOM CS 23 X 45 MM, GREEN
- CS-1274 PHANTOM CS 23 X 50 MM, VIOLET
- CS-1275 PHANTOM CS 23 X 55 MM, BLACK
- CS-1276 PHANTOM CS 23 X 60 MM, GOLD
- CS-1277 PHANTOM CS 23 X 65 MM, GREY
- CS-1278 PHANTOM CS 23 X 70 MM, LIGHT GREEN
- CS-1279 PHANTOM CS 23 X 75 MM, ORANGE

*\*BLADES AVAILABLE W/ CONICAL CONNECTION UPON REQUEST*



RETRACTOR BLADES W/ LIGHT GUIDE - MICRO - SHORT TEETH - (ALUMINUM)



CS-1290- CS-1299

**SHORT TEETH**



- CS-1290 PHANTOM CS 14 X 30 MM, SILVER
- CS-1291 PHANTOM CS 14 X 35 MM, BLUE
- CS-1292 PHANTOM CS 14 X 40 MM, RED
- CS-1293 PHANTOM CS 14 X 45 MM, GREEN
- CS-1294 PHANTOM CS 14 X 50 MM, VIOLET
- CS-1295 PHANTOM CS 14 X 55 MM, BLACK
- CS-1296 PHANTOM CS 14 X 60 MM, GOLD
- CS-1297 PHANTOM CS 14 X 65 MM, GREY
- CS-1298 PHANTOM CS 14 X 70 MM, LIGHT GREEN
- CS-1299 PHANTOM CS 14 X 75 MM, ORANGE

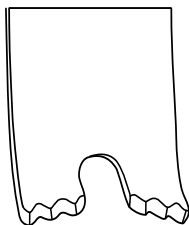
*\*BLADES AVAILABLE W/ CONICAL CONNECTION UPON REQUEST*

RETRACTOR BLADES - DISCECTOMY - SHORT TEETH - (TITANIUM)



CS-0344

**DISCECTOMY BLADES**



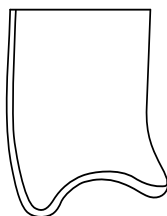
- CS-0340 PHANTOM CS 23 X 30 MM
- CS-0341 PHANTOM CS 23 X 35 MM
- CS-0342 PHANTOM CS 23 X 40 MM
- CS-0343 PHANTOM CS 23 X 45 MM
- CS-0344 PHANTOM CS 23 X 50 MM
- CS-0345 PHANTOM CS 23 X 55 MM
- CS-0346 PHANTOM CS 23 X 60 MM
- CS-0347 PHANTOM CS 23 X 65 MM
- CS-0348 PHANTOM CS 23 X 70 MM
- CS-0349 PHANTOM CS 23 X 75 MM

**RETRACTOR BLADES - BLUNT - (TITANIUM)**



CS-1034

**BLUNT  
BLADES**



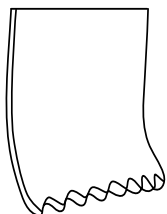
CS-1029	PHANTOM CS 23 X 25 MM
CS-1030	PHANTOM CS 23 X 30 MM
CS-1031	PHANTOM CS 23 X 35 MM
CS-1032	PHANTOM CS 23 X 40 MM
CS-1033	PHANTOM CS 23 X 45 MM
CS-1034	PHANTOM CS 23 X 50 MM
CS-1035	PHANTOM CS 23 X 55 MM
CS-1036	PHANTOM CS 23 X 60 MM
CS-1037	PHANTOM CS 23 X 65 MM
CS-1038	PHANTOM CS 23 X 70 MM

**RETRACTOR BLADES - SHORT TEETH - (TITANIUM)**



CS-1054

**SHORT  
TEETH**



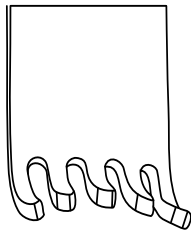
CS-1049	PHANTOM CS 23 X 25 MM
CS-1050	PHANTOM CS 23 X 30 MM
CS-1051	PHANTOM CS 23 X 35 MM
CS-1052	PHANTOM CS 23 X 40 MM
CS-1053	PHANTOM CS 23 X 45 MM
CS-1054	PHANTOM CS 23 X 50 MM
CS-1055	PHANTOM CS 23 X 55 MM
CS-1056	PHANTOM CS 23 X 60 MM
CS-1057	PHANTOM CS 23 X 65 MM
CS-1058	PHANTOM CS 23 X 70 MM
CS-1059	PHANTOM CS 23 X 75 MM

RETRACTOR BLADES - LONG TEETH - (TITANIUM)



CS-1075

**TOOTHED  
BLADES**



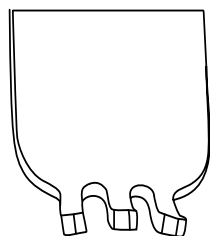
CS-1069	PHANTOM CS 23 X 25 MM
CS-1070	PHANTOM CS 23 X 30 MM
CS-1071	PHANTOM CS 23 X 35 MM
CS-1072	PHANTOM CS 23 X 40 MM
CS-1073	PHANTOM CS 23 X 45 MM
CS-1074	PHANTOM CS 23 X 50 MM
CS-1075	PHANTOM CS 23 X 55 MM
CS-1076	PHANTOM CS 23 X 60 MM
CS-1077	PHANTOM CS 23 X 65 MM
CS-1078	PHANTOM CS 23 X 70 MM
CS-1079	PHANTOM CS 23 X 75 MM

RETRACTOR BLADES - MODIFIED TEETH - (TITANIUM)



CS-1084

**MODIFIED  
TOOTHED  
BLADES**



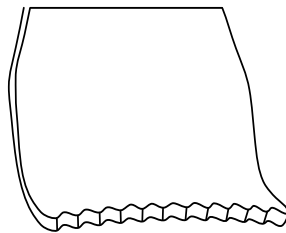
CS-1080	PHANTOM CS 23 X 30 MM
CS-1081	PHANTOM CS 23 X 35 MM
CS-1082	PHANTOM CS 23 X 40 MM
CS-1083	PHANTOM CS 23 X 45 MM
CS-1084	PHANTOM CS 23 X 50 MM
CS-1085	PHANTOM CS 23 X 55 MM
CS-1086	PHANTOM CS 23 X 60 MM
CS-1087	PHANTOM CS 23 X 65 MM
CS-1088	PHANTOM CS 23 X 70 MM

RETRACTOR BLADES - DELTA STYLE - SHORT TEETH - (TITANIUM)



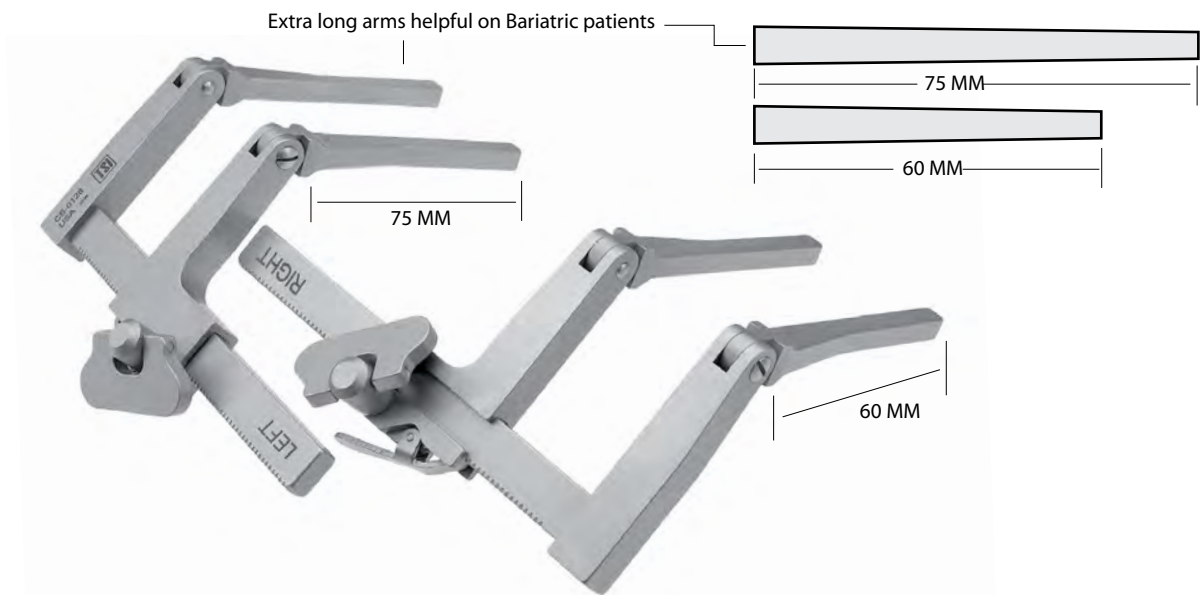
CS-1733

DELTA STYLE BLADES



CS-1730	PHANTOM CS 35 X 30 MM
CS-1731	PHANTOM CS 35 X 35 MM
CS-1732	PHANTOM CS 35 X 40 MM
CS-1733	PHANTOM CS 35 X 45 MM
CS-1734	PHANTOM CS 35 X 50 MM
CS-1735	PHANTOM CS 35 X 55 MM
CS-1736	PHANTOM CS 35 X 60 MM

ACF DISTRACTOR



- Compatible with all Distraction Screws

CS-0127 - CS-0128

CS-0127	PHANTOM CS ACF DISTRACTOR, W/60 MM HINGED ARM 120 MM RACK
CS-0128	PHANTOM CS ACF DISTRACTOR, W/75 MM HINGED ARM 120 MM RACK

HINGED LOCKING DISTRACTOR



- Compatible with TSI Phantom Quick Start Distraction Screws (DS-0022, DS-0024, DS-0026, DS-0222, DS-0224, & DS-0226)

CS-0137

CS-0136	PHANTOM CS 120 MM RACK, 60 MM ARMS, RIGHT
CS-0137	PHANTOM CS 120 MM RACK, 60 MM ARMS, LEFT
CS-0138	PHANTOM CS 120 MM RACK, 80 MM ARMS, RIGHT
CS-0139	PHANTOM CS 120 MM RACK, 80 MM ARMS, LEFT

HINGED-REVERSIBLE BLACK DISTRACTOR

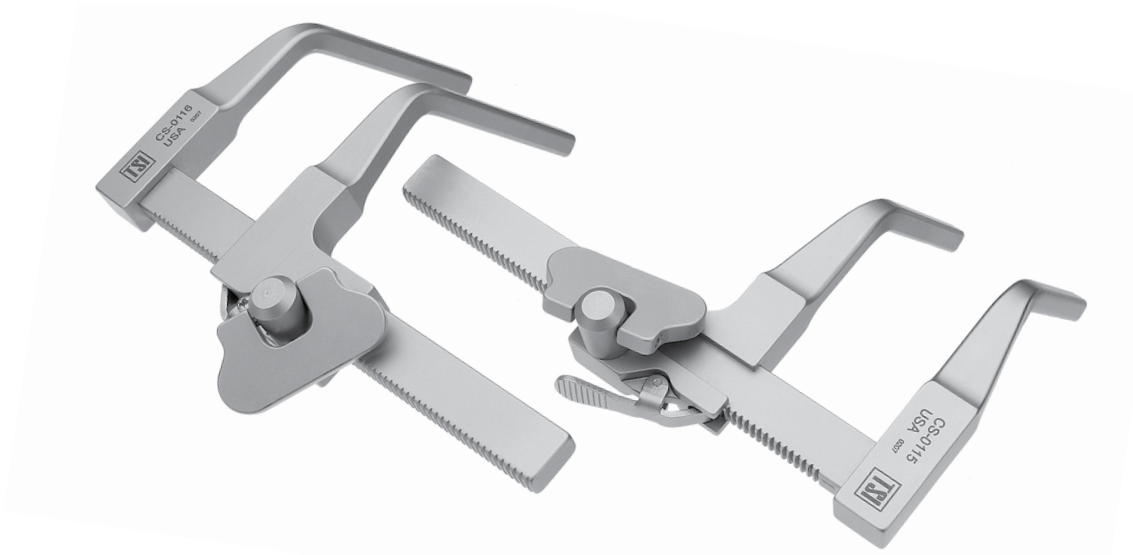


- Compatible with all Distraction Screws

CS-0129

CS-0129	PHANTOM CS DISTRACTOR W/ 60 MM HINGED ARM, 120 MM RACK, BLACK
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## ACF DISTRACTOR



- Compatible with all Distraction Screws

CS-0115 - CS-0116

CS-0115	PHANTOM CS ACF DISTRACTOR, LEFT W/120 MM RACK
CS-0116	PHANTOM CS ACF DISTRACTOR, RIGHT W/120 MM RACK
CS-0117	PHANTOM CS ACF DISTRACTOR, LEFT W/100 MM RACK
CS-0118	PHANTOM CS ACF DISTRACTOR, RIGHT W/100 MM RACK

## DISTRACTION SCREW DRILL GUIDE



- Compatible with ACF Distractors (p. 29)

CS-0130 - CS-0131

CS-0130	PHANTOM CS DISTRACTION SCREW DRILL GUIDE, FITS ALL DISTRACTORS - LEFT-HANDED
CS-0131	PHANTOM CS DISTRACTION SCREW DRILL GUIDE, FITS ALL DISTRACTORS - RIGHT-HANDED

## CASPAR STYLE TUBULAR ACF DISTRACTOR



- Compatible with all Distraction Screws

CS-0132 - CS-0133

CS-0132	PHANTOM CS CASPAR STYLE TUBULAR ACF DISTRACTOR RIGHT, 100 MM RACK
CS-0133	PHANTOM CS CASPAR STYLE TUBULAR ACF DISTRACTOR LEFT, 100 MM RACK
CS-0134	PHANTOM CS CASPAR STYLE TUBULAR ACF DISTRACTOR RIGHT, 120 MM RACK
CS-0135	PHANTOM CS CASPAR STYLE TUBULAR ACF DISTRACTOR LEFT, 120 MM RACK

## DUAL KNOB DISTRACTOR WITH HINGED ARMS



- Compatible with all Distraction Screws

CS-0148

CS-0148	PHANTOM CS DISTRACTOR W/75 MM HINGED ARMS, 120 MM RACK, BLACK, DUAL KNOBS
CS-0149	PHANTOM CS DISTRACTOR W/60 MM HINGED ARMS, 120 MM RACK, BLACK, DUAL KNOBS

## DISTRACTION SCREW DRILL GUIDE



- Compatible with ACF Distractors (p. 29)

CS-0119

CS-0110	PHANTOM CS DISTRACTION SCREW DUAL DRILL GUIDE, FITS ALL DISTRACTORS
CS-0119	PHANTOM CS UNIVERSAL DISTRACTION SCREW DRILL GUIDE, FITS ALL DISTRACTORS

## ACF BONE TAMPS

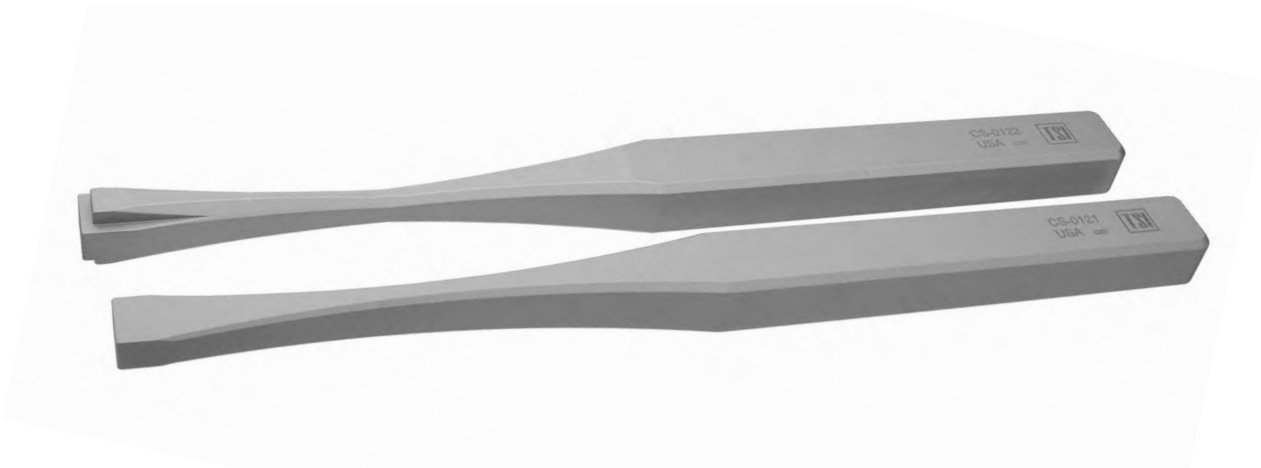


CS-0123 - CS-0125

CS-0123	PHANTOM CS ANTERIOR CERVICAL FUSION BONE TAMP, 3 MM
CS-0124	PHANTOM CS ANTERIOR CERVICAL FUSION BONE TAMP, 5 MM
CS-0125	PHANTOM CS ANTERIOR CERVICAL FUSION BONE TAMP, 8 MM



BONE TAMPS



CS-0121 - CS-0122

- CS-0121 PHANTOM CS BONE TAMP 6 X 10 MM
- CS-0122 PHANTOM CS BONE TAMP 6 X 10 MM W/ GUARD

COLOR-CODED DEPTH GAUGE



CS-0106

- CS-0106 PHANTOM CS COLOR-CODED DEPTH GAUGE

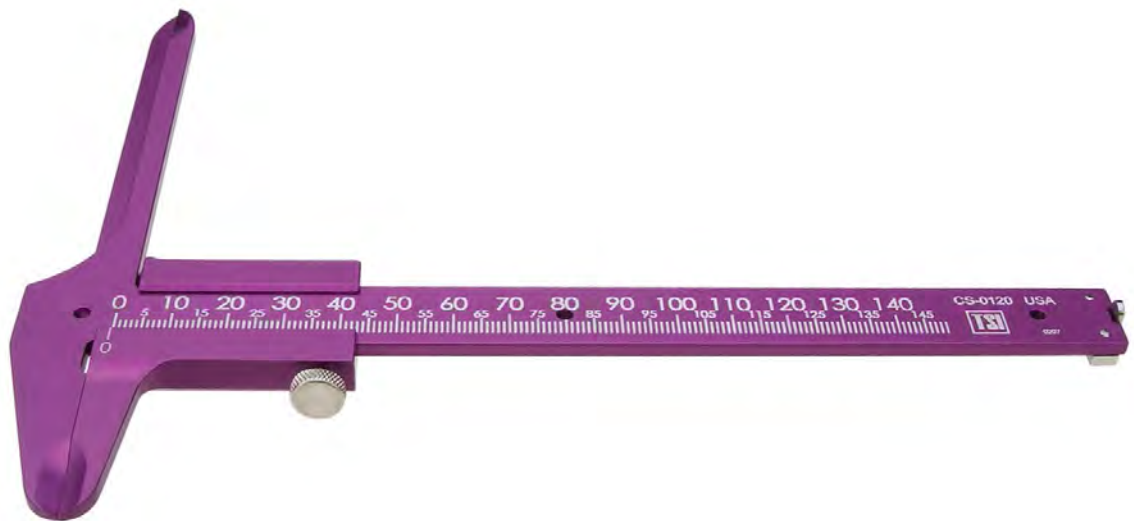
## TWIST DRILL



CS-0112

- CS-0109 TWIST DRILL W/HANDLE FOR DISTRACTION SCREW, 10 MM LENGTH, 1.70 MM OUTER DIAMETER  
CS-0112 TWIST DRILL FOR DISTRACTION SCREW, 10 MM LENGTH, 1.70 MM OUTER DIAMETER

## CALIPER - (ALUMINUM)



CS-0120

CS-0120 PHANTOM CS CALIPER

## DISTRACTION SCREW DRIVER



- Compatible with all Distraction Screws

CS-0114

CS-0114 PHANTOM CS DISTRACTION SCREW DRIVER, W/O SPRING

## DISTRACTION SCREWS



DS-0212, DS-0214, DS-0216

DS-0012	TSI 12 MM DISTRACTION SCREWS, 5 PER BOX, PRE-PACKAGED STERILE, SINGLE USE
DS-0014	TSI 14 MM DISTRACTION SCREWS, 5 PER BOX, PRE-PACKAGED STERILE, SINGLE USE
DS-0016	TSI 16 MM DISTRACTION SCREWS, 5 PER BOX, PRE-PACKAGED STERILE, SINGLE USE
DS-0212	TSI 12 MM DISTRACTION SCREWS, EACH, NON-STERILE, SINGLE USE
DS-0214	TSI 14 MM DISTRACTION SCREWS, EACH, NON-STERILE, SINGLE USE
DS-0216	TSI 16 MM DISTRACTION SCREWS, EACH, NON-STERILE, SINGLE USE

**QUICK START DISTRACTION SCREWS**



**3 CUTTING FLUTES**

**TWO RINGS**

- Only compatible with CS-0114 Distraction Screw Driver w/o Spring (pg. 28)

DS-0222, DS-0224, DS-0226

DS-0022	TSI 12 MM DISTRACTION SCREWS, QUICK START, 5 PER BOX, STERILE, SINGLE USE
DS-0024	TSI 14 MM DISTRACTION SCREWS, QUICK START, 5 PER BOX, STERILE, SINGLE USE
DS-0026	TSI 16 MM DISTRACTION SCREWS, QUICK START, 5 PER BOX, STERILE, SINGLE USE
DS-0222	TSI 12 MM DISTRACTION SCREW, QUICK START, EACH, NON-STERILE
DS-0224	TSI 14 MM DISTRACTION SCREW, QUICK START, EACH, NON-STERILE
DS-0226	TSI 16 MM DISTRACTION SCREW, QUICK START, EACH, NON-STERILE

**LIGHT CABLE W/TEDAN CONNECTOR**



ML-0046

ML-0045	PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
ML-0046	PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, - (5 PER BOX), 10 FT LENGTH, PRE-PACKAGED STERILE, SINGLE USE
ML-0047	PHANTOM ML LIGHT CABLE, SINGLE ENDED W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
ML-0048	PHANTOM ML LIGHT CABLE, STRONG CURVE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE

LED LIGHT SOURCE



ML-0051

ML-0051 ML LED LIGHT SOURCE, 52 WATTS, ONLY COMPATIBLE W/ TSI LIGHT CABLES

CS-1600 & CS-1601, CS-1600L & CS-1601L INSTRUMENT CASE



CS-0600

- CS-0600 PHANTOM CS-1600 - CS-1601 INSTRUMENT CASE
- CS-0600L PHANTOM CS-1600L - CS-1601L INSTRUMENT CASE
- CS-0600-05 PHANTOM CS LIGHTED BLADE TRAY INSERT

CS-1602 & CS-1603 INSTRUMENT CASE



CS-0602

CS-0602 PHANTOM CS-1602 - CS-1603 INSTRUMENT CASE

**NOTES**

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PHANTOM CS BB-STYLE COMPLETE SET CS-1900

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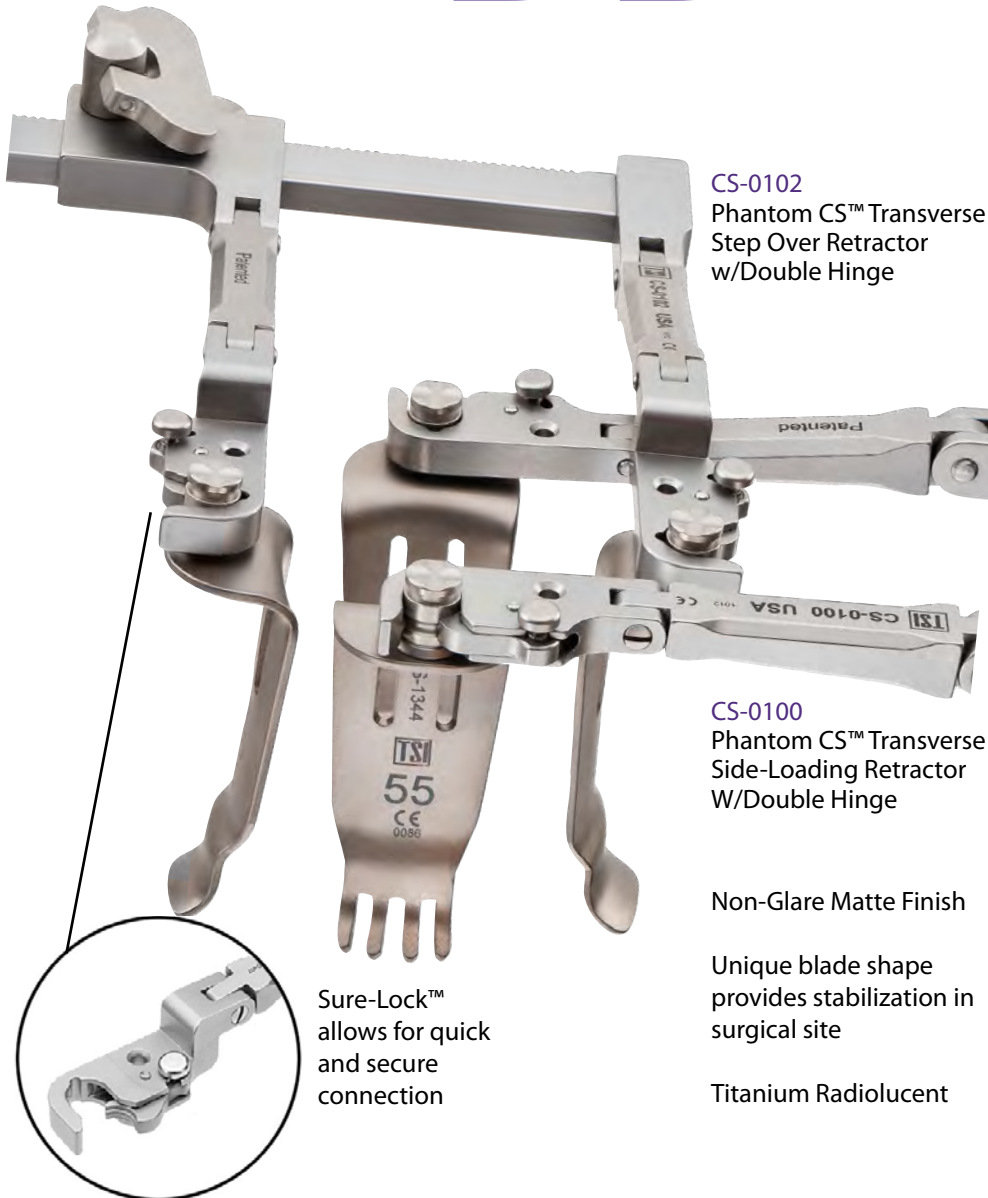


PHANTOM CS BB STYLE CERVICAL RETRACTOR SET  
CS-1900

INSTRUMENT SPECIFICATIONS

# Phantom BB

Phantom CS™ Patented Sure-Lock™  
Front Loading design provides  
ease of retractor blade placement.



**CS-0102**  
Phantom CS™ Transverse  
Step Over Retractor  
w/Double Hinge

**CS-0100**  
Phantom CS™ Transverse  
Side-Loading Retractor  
W/Double Hinge

Sure-Lock™  
allows for quick  
and secure  
connection

Non-Glare Matte Finish

Unique blade shape  
provides stabilization in  
surgical site

Titanium Radiolucent



**CS-1334**  
BB Style  
Cervical Blades  
Blunt



**CS-1323**  
BB Style  
Cervical Blades  
Long Teeth



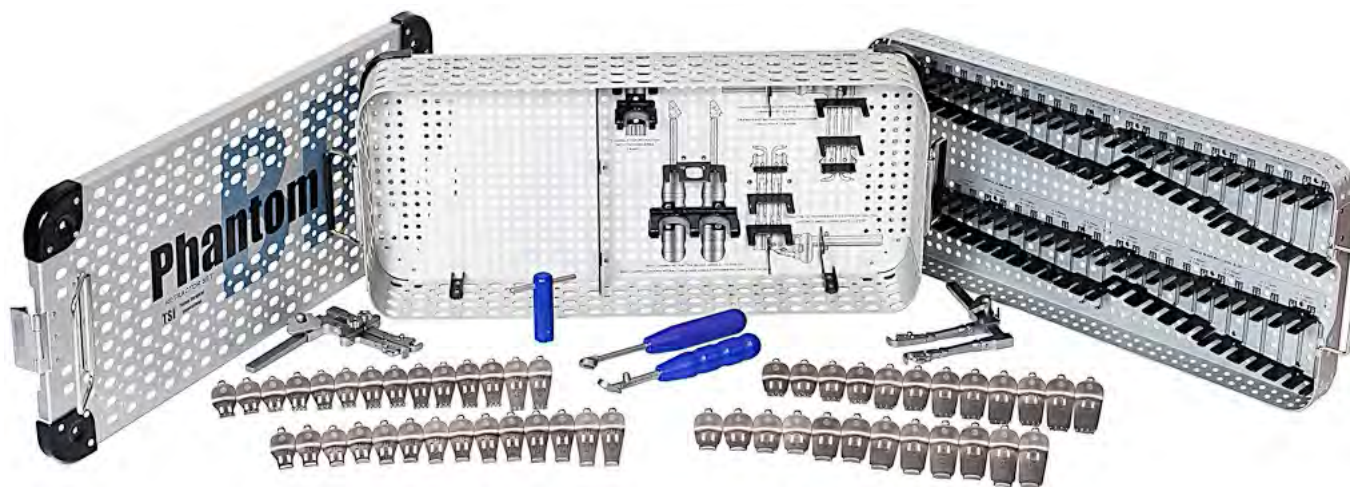
**CS-1354**  
BB Style  
Cervical Blades  
Multi Level  
Blunt



**CS-1344**  
BB Style  
Cervical Blades  
Multi Level  
Long Teeth



## CS BB-STYLE CERVICAL SET



CS-1900

## CS-1900 PHANTOM CS BB-STYLE CERVICAL SET

		ea.
CS-0100	TRANSVERSE RETRACTOR W/DOUBLE HINGE, 120 MM RCK	1
CS-0102	TRNSVRSE STEP OVER RTRCTR W/DBLE HINGE, 120 MM RCK	1
CS-0105	SIDE-LOADING RETRACTOR BLADE HANDLE	2
CS-1320	BB STYLE CERV. BLADE LNG TTH 22 X 34 MM, Ti	2
CS-1321	BB STYLE CERV. BLADE LNG TTH 22 X 40 MM, Ti	2
CS-1322	BB STYLE CERV. BLADE LNG TTH 22 X 45 MM, Ti	2
CS-1323	BB STYLE CERV. BLADE LNG TTH 22 X 50 MM, Ti	2
CS-1324	BB STYLE CERV. BLADE LNG TTH 22 X 55 MM, Ti	2
CS-1325	BB STYLE CERV. BLADE LNG TTH 22 X 60 MM, Ti	2
CS-1327	BB STYLE CERV. BLADE LNG TTH 22 X 70 MM, Ti	2
CS-1330	BB STYLE CERV. BLADE BLNT 22 X 34 MM, Ti	2
CS-1331	BB STYLE CERV. BLADE BLNT 22 X 40 MM, Ti	2
CS-1332	BB STYLE CERV. BLADE BLNT 22 X 45 MM, Ti	2
CS-1333	BB STYLE CERV. BLADE BLNT 22 X 50 MM, Ti	2
CS-1334	BB STYLE CERV. BLADE BLNT 22 X 55 MM, Ti	2
CS-1335	BB STYLE CERV. BLADE BLNT 22 X 60 MM, Ti	2
CS-1337	BB STYLE CERV. BLADE BLNT 22 X 70 MM, Ti	2
CS-1341	BB STYLE CERV. BLADE MULTI LEVEL LNG TTH, 27 X 40 MM, Ti	2
CS-1342	BB STYLE CERV. BLADE MULTI LEVEL LNG TTH, 27 X 47 MM, Ti	2
CS-1344	BB STYLE CERV. BLADE MULTI LEVEL LNG TTH, 27 X 55 MM, Ti	2
CS-1346	BB STYLE CERV. BLADE MULTI LEVEL LNG TTH, 27 X 65 MM, Ti	2
CS-1347	BB STYLE CERV. BLADE MULTI LEVEL LNG TTH, 27 X 70 MM, Ti	2
CS-1348	BB STYLE CERV. BLADE MULTI LEVEL LNG TTH, 27 X 75 MM, Ti	2
CS-1351	BB STYLE CERV. BLADE MULTI LEVEL BLNT, 27 X 40 MM, Ti	2
CS-1352	BB STYLE CERV. BLADE MULTI LEVEL BLNT, 27 X 47 MM, Ti	2
CS-1354	BB STYLE CERV. BLADE MULTI LEVEL BLNT, 27 X 55 MM, Ti	2
CS-1356	BB STYLE CERV. BLADE MULTI LEVEL BLNT, 27 X 65 MM, Ti	2
CS-1357	BB STYLE CERV. BLADE MULTI LEVEL BLNT, 27 X 70 MM, Ti	2
CS-1358	BB STYLE CERV. BLADE MULTI LEVEL BLNT, 27 X 75 MM, Ti	2
CS-0900	STERILIZATION TRAY (FOR CS-1900 SET)	1

## TRANSVERSE RETRACTOR



CS-0100

CS-0100 PHANTOM CS TRANSVERSE SIDE-LOADING RETRACTOR W/ DOUBLE HINGE, 120 MM RACK

## TRANSVERSE STEP OVER RETRACTOR



CS-0102

CS-0102 PHANTOM CS TRANSVERSE STEP OVER RETRACTOR W/ DOUBLE HINGE, 120 MM RACK

RETRACTOR BLADE HANDLE



CS-0105

CS-0105 PHANTOM CS SIDE-LOADING RETRACTOR BLADE HANDLE

LOCKING RETRACTOR BLADE HANDLE

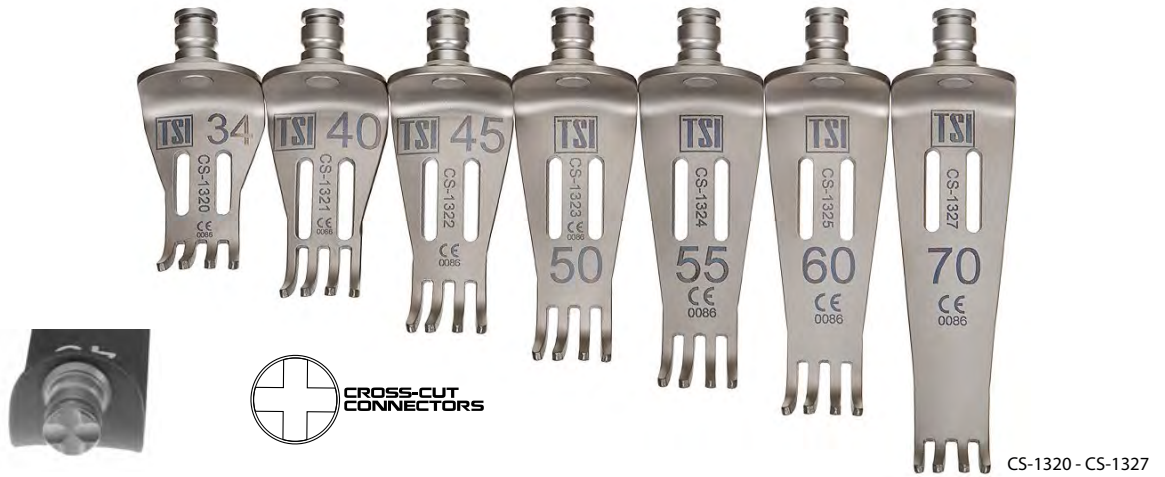


CS-0126

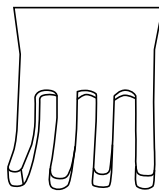
- Only compatible with TSI Cross Cut Blades

CS-0126 PHANTOM CS SIDE-LOADING LOCKING RETRACTOR BLADE HANDLE

RETRACTOR BLADES - BB STYLE - LONG TEETH - (TITANIUM)



LONG  
TEETH

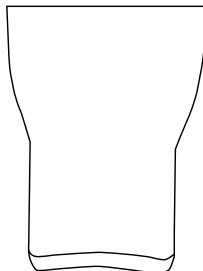


CS-1320	PHANTOM CS 22 X 34 MM
CS-1321	PHANTOM CS 22 X 40 MM
CS-1322	PHANTOM CS 22 X 45 MM
CS-1323	PHANTOM CS 22 X 50 MM
CS-1324	PHANTOM CS 22 X 55 MM
CS-1325	PHANTOM CS 22 X 60 MM
CS-1327	PHANTOM CS 22 X 70 MM

RETRACTOR BLADES - BB STYLE - BLUNT - (TITANIUM)



BLUNT  
END



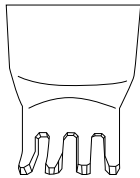
CS-1330	PHANTOM CS 22 X 34 MM
CS-1331	PHANTOM CS 22 X 40 MM
CS-1332	PHANTOM CS 22 X 45 MM
CS-1333	PHANTOM CS 22 X 50 MM
CS-1334	PHANTOM CS 22 X 55 MM
CS-1335	PHANTOM CS 22 X 60 MM
CS-1337	PHANTOM CS 22 X 70 MM

RETRACTOR BLADES - BB STYLE - MULTI LEVEL - LONG TEETH - (TITANIUM)



CS-1341 - CS-1348

**LONG  
TEETH**



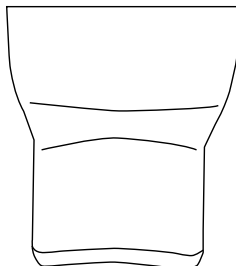
- |         |                       |
|---------|-----------------------|
| CS-1341 | PHANTOM CS 27 X 40 MM |
| CS-1342 | PHANTOM CS 27 X 47 MM |
| CS-1344 | PHANTOM CS 27 X 55 MM |
| CS-1346 | PHANTOM CS 27 X 65 MM |
| CS-1347 | PHANTOM CS 27 X 70 MM |
| CS-1348 | PHANTOM CS 27 X 75 MM |

RETRACTOR BLADES - BB STYLE - MULTI LEVEL - BLUNT - (TITANIUM)



CS-1351 - CS-1358

**BLUNT  
END**



- |         |                       |
|---------|-----------------------|
| CS-1351 | PHANTOM CS 27 X 40 MM |
| CS-1352 | PHANTOM CS 27 X 47 MM |
| CS-1354 | PHANTOM CS 27 X 55 MM |
| CS-1356 | PHANTOM CS 27 X 65 MM |
| CS-1357 | PHANTOM CS 27 X 70 MM |
| CS-1358 | PHANTOM CS 27 X 75 MM |

**CS-1900 INSTRUMENT CASE**



CS-0600

CS-0900 PHANTOM CS-1900 STERILIZATION TRAY

**NOTES**

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PHANTOM TL SIDE-LOADING SETS CS-1400 & CS-1401

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# Phantom

PHANTOM TL SIDE-LOADING SETS  
**CS-1400 & CS-1401**

## INSTRUMENT SPECIFICATIONS

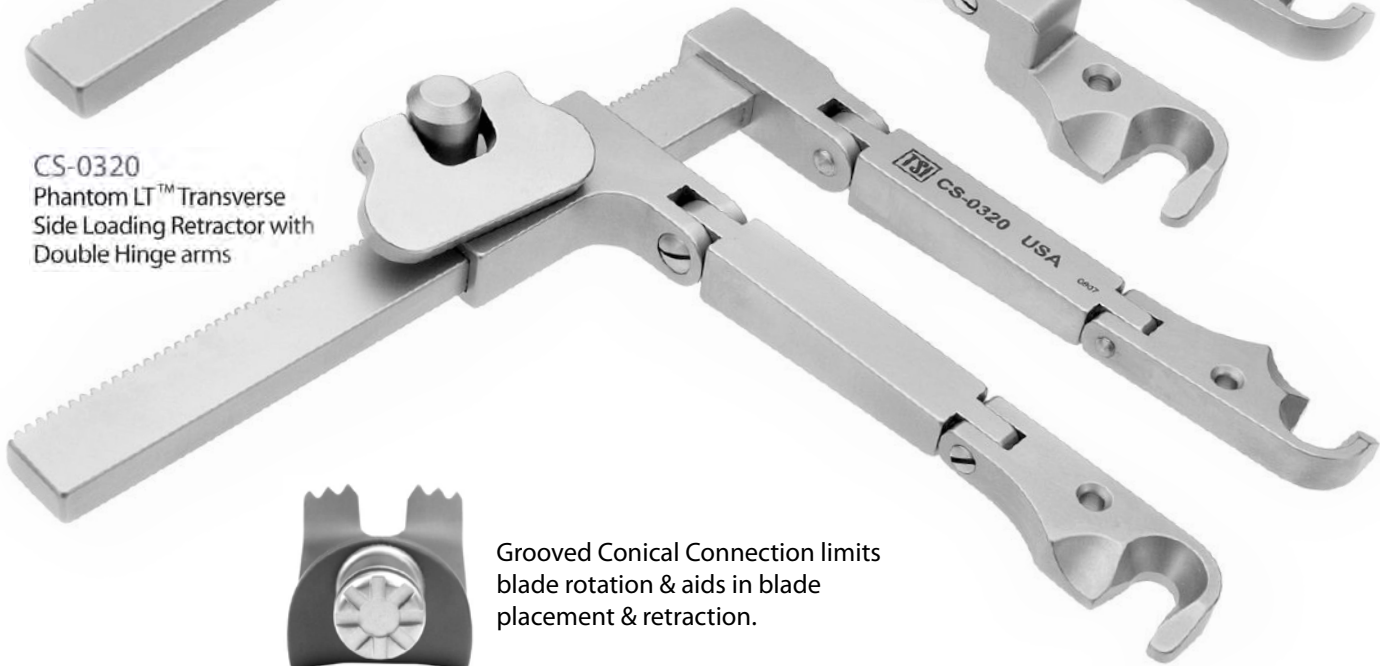
# Phantom

Phantom TL™ Conical Style Side Loading design provides ease of retractor blade placement.

**CS-0321**  
 Phantom TL™ Longitudinal Step Over Side Loading Retractor with Double Hinge arms



**CS-0320**  
 Phantom LT™ Transverse Side Loading Retractor with Double Hinge arms



Grooved Conical Connection limits blade rotation & aids in blade placement & retraction.

**CS-0325**  
 Phantom TL™ Side-Loading Retractor Handle





TL SIDE-LOADING CONICAL RETRACTOR & DISTRACTION SET



CS-1400

CS-1400 PHANTOM TL SIDE-LOADING CONICAL RETRACTOR & DISTRACTOR SET



CS-0040C	TL PADDLE BLADE 20 X 55 MM, BLACK	2	CS-0268	TL BLADE BLUNT 20 X 75 MM, ORANGE	2
CS-0106	CS COLOR-CODED DEPTH GAUGE	1	CS-0320	TL TRANSVERSE RETRACTOR FRAME	1
CS-0112	CS TWIST DRILL FOR DISTRACTION SCREW	1	CS-0321	TL TRANSVERSE RETRACTOR FRAME, STEP OVER	1
CS-0114	CS DISTRACTION SCREW DRIVER, W/O SPRING	2	CS-0325	TL SIDE-LOADING RETRACTOR BLADE HANDLE	2
CS-0115	CS ACF DISTRACTOR LEFT, 120 MM RACK	1	CS-0400	TL STERILIZATION TRAY (FOR CS-1400 & 1401 SETS)	1
CS-0116	CS ACF DISTRACTOR RIGHT, 120 MM RACK	1			
CS-0119	CS UNIVERSAL DISTRACTION SCREW DRILL GUIDE	1			
CS-0120	CS CALIPER	1			
CS-0121	CS BONE TAMP 6 X 10 MM	1			
CS-0122	CS BONE TAMP 6 X 10 MM WITH GUARD	1			
CS-0210	TL CERVICAL HAND HELD RETRACTOR, 18 X 50 MM, GREEN	1			
CS-0218	TL CERVICAL HAND HELD RETRACTOR, 18 X 70 MM, PURPLE	1			
CS-0220	TL CERVICAL HAND HELD RETRACTOR, 20 MM W/BIG LIP, RED	1			
CS-0223	TL CERV. HAND HELD RETRACTOR, 23 MM W/SMALL LIP, BLUE	1			
CS-0250	TL LATERAL DISCECTOMY BLADE 23 X 30 MM, SILVER	2			
CS-0251	TL LATERAL DISCECTOMY BLADE 23 X 35 MM, BLUE	2			
CS-0252	TL LATERAL DISCECTOMY BLADE 23 X 40 MM, RED	2			
CS-0253	TL LATERAL DISCECTOMY BLADE 23 X 45 MM, GREEN	2			
CS-0254	TL LATERAL DISCECTOMY BLADE 23 X 50 MM, VIOLET	2			
CS-0255	TL LATERAL DISCECTOMY BLADE 23 X 55 MM, BLACK	2			
CS-0256	TL LATERAL DISCECTOMY BLADE 23 X 60 MM, GOLD	2			
CS-0257	TL LATERAL DISCECTOMY BLADE 23 X 65 MM, NAVY	2			
CS-0258	TL LATERAL DISCECTOMY BLADE 23 X 70 MM, LIGHT GREEN	2			
CS-0259	TL BLADE BLUNT 20 X 30 MM, SILVER	2			
CS-0260	TL BLADE BLUNT 20 X 35 MM, BLUE	2			
CS-0261	TL BLADE BLUNT 20 X 40 MM, RED	2			
CS-0262	TL BLADE BLUNT 20 X 45 MM, GREEN	2			
CS-0263	TL BLADE BLUNT 20 X 50 MM, VIOLET	2			
CS-0264	TL BLADE BLUNT 20 X 55 MM, BLACK	2			
CS-0265	TL BLADE BLUNT 20 X 60 MM, GOLD	2			
CS-0266	TL BLADE BLUNT 20 X 65 MM, NAVY	2			
CS-0267	TL BLADE BLUNT 20 X 70 MM, LIGHT GREEN	2			



## TL SIDE-LOADING CONICAL RETRACTOR SET



CS-1401

## CS-1401 PHANTOM TL SIDE-LOADING CONICAL RETRACTOR SET



		ea.
CS-0210	TL CERVICAL HAND HELD RETRACTOR, 18 X 50 MM, GREEN	1
CS-0218	TL CERVICAL HAND HELD RETRACTOR, 18 X 70 MM, PURPLE	1
CS-0220	TL CERVICAL HAND HELD RETRACTOR, 20 MM W/BIG LIP, RED	1
CS-0223	TL CERV. HAND HELD RETRACTOR, 23 MM W/SMALL LIP, BLUE	1
CS-0250	TL LATERAL DISCECTOMY BLADE 23 X 30 MM, SILVER	2
CS-0252	TL LATERAL DISCECTOMY BLADE 23 X 40 MM, RED	2
CS-0254	TL LATERAL DISCECTOMY BLADE 23 X 50 MM, VIOLET	2
CS-0256	TL LATERAL DISCECTOMY BLADE 23 X 60 MM, GOLD	2
CS-0258	TL LATERAL DISCECTOMY BLADE 23 X 70 MM, LIGHT GREEN	2
CS-0259	TL BLADE BLUNT 20 X 30 MM, SILVER	2
CS-0261	TL BLADE BLUNT 20 X 40 MM, RED	2
CS-0263	TL BLADE BLUNT 20 X 50 MM, VIOLET	2
CS-0265	TL BLADE BLUNT 20 X 60 MM, GOLD	2
CS-0267	TL BLADE BLUNT 20 X 70 MM, LIGHT GREEN	2
CS-0320	TL TRANSVERSE RETRACTOR FRAME	1
CS-0321	TL TRANSVERSE RETRACTOR FRAME, STEP OVER	1
CS-0325	TL SIDE-LOADING RETRACTOR BLADE HANDLE	2
CS-0400	TL STERILIZATION TRAY (FOR CS-1400 & 1401 SETS)	1

TRANSVERSE RETRACTOR



CS-0310, CS-0320

- CS-0310 PHANTOM TL TRANSVERSE RETRACTOR FRAME, W/CONICAL CONNECTION, W/LOCK - 120 MM RACK
- CS-0320 PHANTOM TL TRANSVERSE RETRACTOR FRAME, W/CONICAL CONNECTION- 120 MM RACK

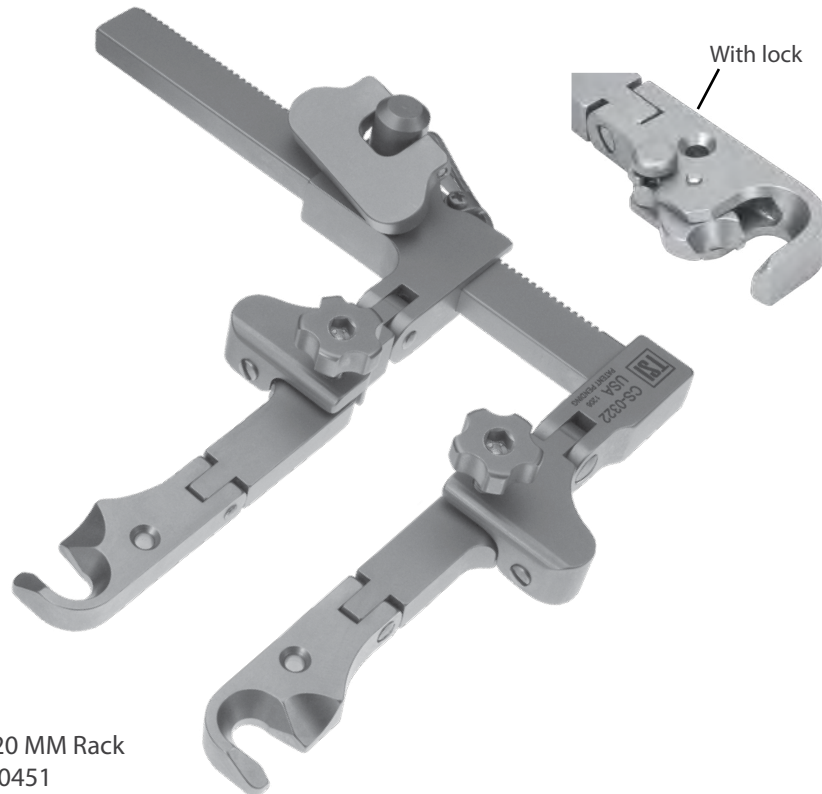
TRANSVERSE STEP OVER RETRACTOR



CS-0311, CS-0321

- CS-0311 PHANTOM TL TRANSVERSE RETRACTOR FRAME, STEP OVER, W/CONICAL CONNECTION W/LOCK - 120 MM RACK
- CS-0321 PHANTOM TL TRANSVERSE RETRACTOR FRAME, STEP OVER, W/CONICAL CONNECTION - 120 MM RACK

## TRANSVERSE PIVOTING RETRACTOR FRAME



- Pivoting up to 30° - 120 MM Rack
- Includes T-Handle LS-0451

CS-0314, CS-0322

CS-0314	PHANTOM TL TRANSVERSE RETRACTOR FRAME W/PIVOTING ARMS W/CONICAL CONNECTION W/LOCK - 120 MM RACK
CS-0322	PHANTOM TL TRANSVERSE RETRACTOR FRAME W/PIVOTING ARMS W/CONICAL CONNECTION - 120 MM RACK

## T-HANDLE FOR RETRACTOR W/PIVOTING ARMS



LS-0451

LS-0451 PHANTOM T-HANDLE FOR RETRACTOR W/PIVOTING ARMS

HEX DRIVER TOOL



ML-0505

ML-0505 PHANTOM XL HEX DRIVER TOOL

RETRACTOR BLADE HANDLE



CS-0325

CS-0325 PHANTOM TL SIDE-LOADING LOCKING RETRACTOR BLADE HANDLE, W/CONICAL CONNECTION

LOCKING RETRACTOR BLADE HANDLE



CS-0326

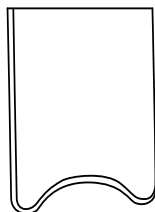
CS-0326 PHANTOM TL SIDE-LOADING LOCKING RETRACTOR BLADE HANDLE, W/CONICAL CONNECTION

PADDLE BLADES - BLUNT - (ALUMINUM)



CS-0040

BLUNT END



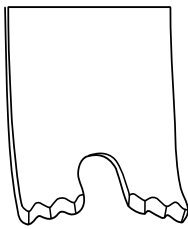
CS-0040C PHANTOM TL 20 X 55 MM, W/CONICAL CONNECTION

RETRACTOR BLADES - DISCECTOMY- SHORTEETH- (ALUMINUM)



CS-0254

DISCECTOMY  
BLADES



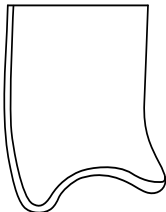
- |         |                                    |
|---------|------------------------------------|
| CS-0250 | PHANTOM TL 23 X 30 MM, SILVER      |
| CS-0251 | PHANTOM TL 23 X 35 MM, BLUE        |
| CS-0252 | PHANTOM TL 23 X 40 MM, RED         |
| CS-0253 | PHANTOM TL 23 X 45 MM, GREEN       |
| CS-0254 | PHANTOM TL 23 X 50 MM, VIOLET      |
| CS-0255 | PHANTOM TL 23 X 55 MM, BLACK       |
| CS-0256 | PHANTOM TL 23 X 60 MM, GOLD        |
| CS-0257 | PHANTOM TL 23 X 65 MM, NAVY        |
| CS-0258 | PHANTOM TL 23 X 70 MM, LIGHT GREEN |

RETRACTOR BLADES - BLUNT - (ALUMINUM)



CS-0264

BLUNT  
BLADES



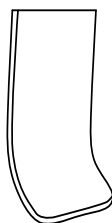
- |         |                                    |
|---------|------------------------------------|
| CS-0259 | PHANTOM TL 20 X 30 MM, SILVER      |
| CS-0260 | PHANTOM TL 20 X 35 MM, BLUE        |
| CS-0261 | PHANTOM TL 20 X 40 MM, RED         |
| CS-0262 | PHANTOM TL 20 X 45 MM, GREEN       |
| CS-0263 | PHANTOM TL 20 X 50 MM, VIOLET      |
| CS-0264 | PHANTOM TL 20 X 55 MM, BLACK       |
| CS-0265 | PHANTOM TL 20 X 60 MM, GOLD        |
| CS-0266 | PHANTOM TL 20 X 65 MM, NAVY        |
| CS-0267 | PHANTOM TL 20 X 70 MM, LIGHT GREEN |
| CS-0268 | PHANTOM TL 20 X 75 MM, ORANGE      |

RETRACTOR BLADES - MICRO - BLUNT - (ALUMINUM)



CS-0272

**BLUNT  
END**



- CS-0270 PHANTOM TL MICRO BLADES BLUNT, 14 X 35 MM, BLUE
- CS-0271 PHANTOM TL MICRO BLADES BLUNT, 14 X 40 MM, RED
- CS-0272 PHANTOM TL MICRO BLADES BLUNT, 14 X 45 MM, GREEN
- CS-0273 PHANTOM TL MICRO BLADES BLUNT, 14 X 50 MM, VIOLET
- CS-0274 PHANTOM TL MICRO BLADES BLUNT, 14 X 55 MM, BLACK
- CS-0275 PHANTOM TL MICRO BLADES BLUNT, 14 X 60 MM, GOLD

RETRACTOR BLADES - MICRO - SHORT TEETH - (ALUMINUM)



CS-0281

**SHORT  
TEETH**



- CS-0278 PHANTOM TL MICRO BLADES W/SHORT TEETH, 14 X 35 MM, BLUE
- CS-0279 PHANTOM TL MICRO BLADES W/SHORT TEETH, 14 X 40 MM, RED
- CS-0280 PHANTOM TL MICRO BLADES W/SHORT TEETH, 14 X 45 MM, GREEN
- CS-0281 PHANTOM TL MICRO BLADES W/SHORT TEETH, 14 X 50 MM, VIOLET
- CS-0282 PHANTOM TL MICRO BLADES W/SHORT TEETH, 14 X 55 MM, BLACK
- CS-0283 PHANTOM TL MICRO BLADES W/SHORT TEETH, 14 X 60 MM, GOLD



DAVIS BLADES - (ALUMINUM)



CS-0230 - CS-0234 , CS-0240 - CS-0244

- CS-0230 PHANTOM TL 23 X 40 MM - DAVIS BLADE W/CONICAL CONNECTION, RED
- CS-0232 PHANTOM TL 23 X 50 MM - DAVIS BLADE W/CONICAL CONNECTION, VIOLET
- CS-0234 PHANTOM TL 23 X 60 MM - DAVIS BLADE W/CONICAL CONNECTION, GOLD
  
- CS-0240 PHANTOM TL 47 X 40 MM - DAVIS BLADE W/CONICAL CONNECTION, RED
- CS-0242 PHANTOM TL 47 X 50 MM - DAVIS BLADE W/CONICAL CONNECTION, VIOLET
- CS-0244 PHANTOM TL 47 X 60 MM - DAVIS BLADE W/CONICAL CONNECTION, GOLD

SCREW FOR DAVIS BLADES



- Compatible w/ Davis blades shown above
- Use w/ Distraction Screw Driver (CS-0114)

CS-0246 - CS-0248

- CS-0246 40 MM - DAVIS SCREW FOR CERVICAL BLADES, RED
- CS-0247 50 MM - DAVIS SCREW FOR CERVICAL BLADES, VIOLET
- CS-0248 60 MM - DAVIS SCREW FOR CERVICAL BLADES, GOLD

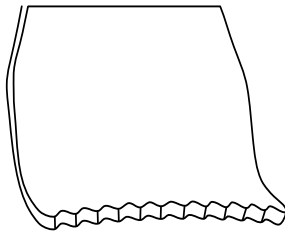


RETRACTOR BLADES - DELTA STYLE - SHORT TEETH - (TITANIUM)



CS-1733C

DELTA STYLE  
BLADES



CS-1730C	PHANTOM TL 35 X 30 MM - W/CONICAL CONNECTION
CS-1731C	PHANTOM TL 35 X 35 MM - W/CONICAL CONNECTION
CS-1732C	PHANTOM TL 35 X 40 MM - W/CONICAL CONNECTION
CS-1733C	PHANTOM TL 35 X 45 MM - W/CONICAL CONNECTION
CS-1734C	PHANTOM TL 35 X 50 MM - W/CONICAL CONNECTION
CS-1735C	PHANTOM TL 35 X 55 MM - W/CONICAL CONNECTION
CS-1736C	PHANTOM TL 35 X 60 MM - W/CONICAL CONNECTION

COLOR - CODED DEPTH GAUGE



CS-0106

CS-0106 PHANTOM CS COLOR-CODED DEPTH GAUGE

## HAND-HELD RETRACTORS



CS-0210, CS-0218, CS-0220, CS-0223

CS-0210	PHANTOM TL 18 X 50 MM, GREEN
CS-0218	PHANTOM TL 18 X 70 MM, PURPLE
CS-0220	PHANTOM TL 20 MM W/BIG LIP, RED
CS-0223	PHANTOM TL 23 MM W/SMALL LIP, BLUE

## TWIST DRILL



CS-0112

CS-0109	TWIST DRILL W/HANDLE FOR DISTRACTION SCREW, 10 MM LENGTH, 1.70 MM OUTER DIAMETER
CS-0112	TWIST DRILL FOR DISTRACTION SCREW, 10 MM LENGTH, 1.70 MM OUTER DIAMETER

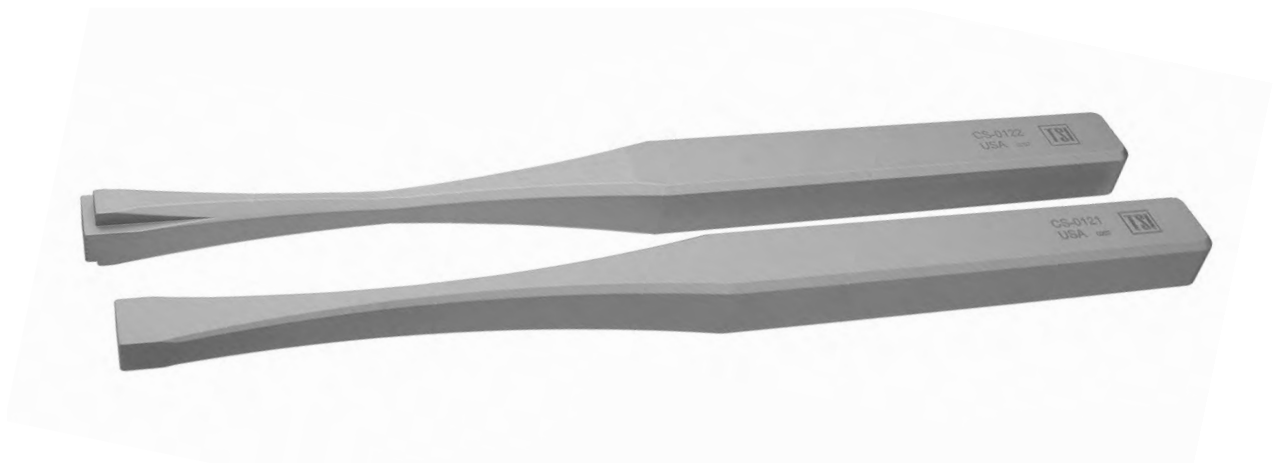
## ACF BONE TAMPS



CS-0123 - CS-0125

CS-0123	PHANTOM CS ANTERIOR CERVICAL FUSION BONE TAMP, 3 MM
CS-0124	PHANTOM CS ANTERIOR CERVICAL FUSION BONE TAMP, 5 MM
CS-0125	PHANTOM CS ANTERIOR CERVICAL FUSION BONE TAMP, 8 MM

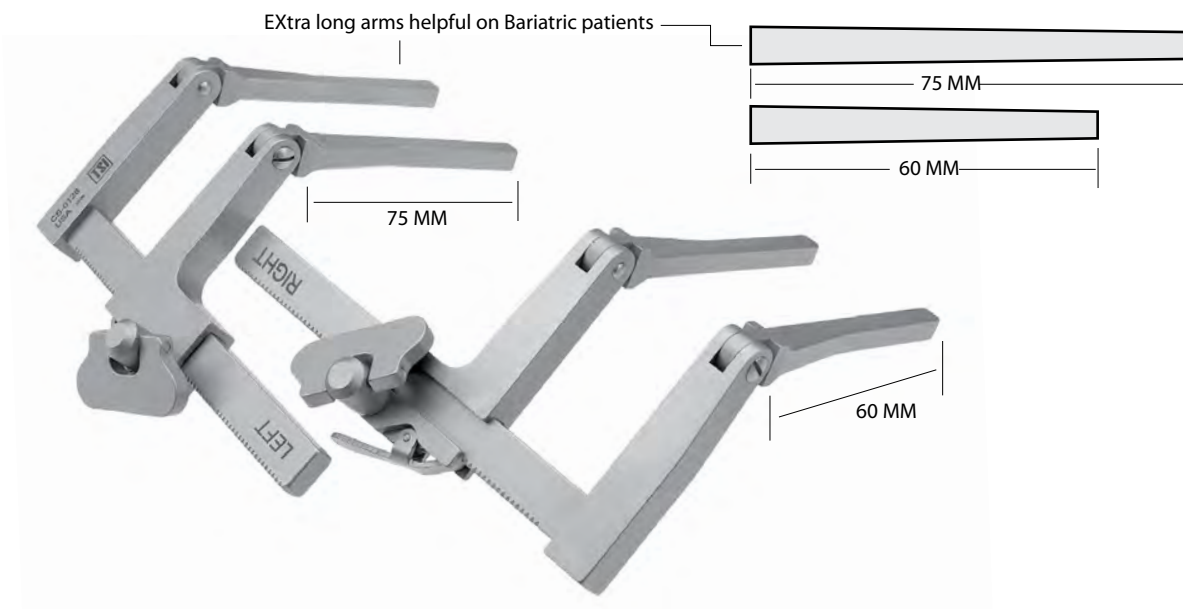
## BONE TAMPS



CS-0121 - CS-0122

CS-0121	PHANTOM CS BONE TAMP 6 X 10 MM
CS-0122	PHANTOM CS BONE TAMP 6 X 10 MM W/GUARD

ACF DISTRACTOR - HINGED

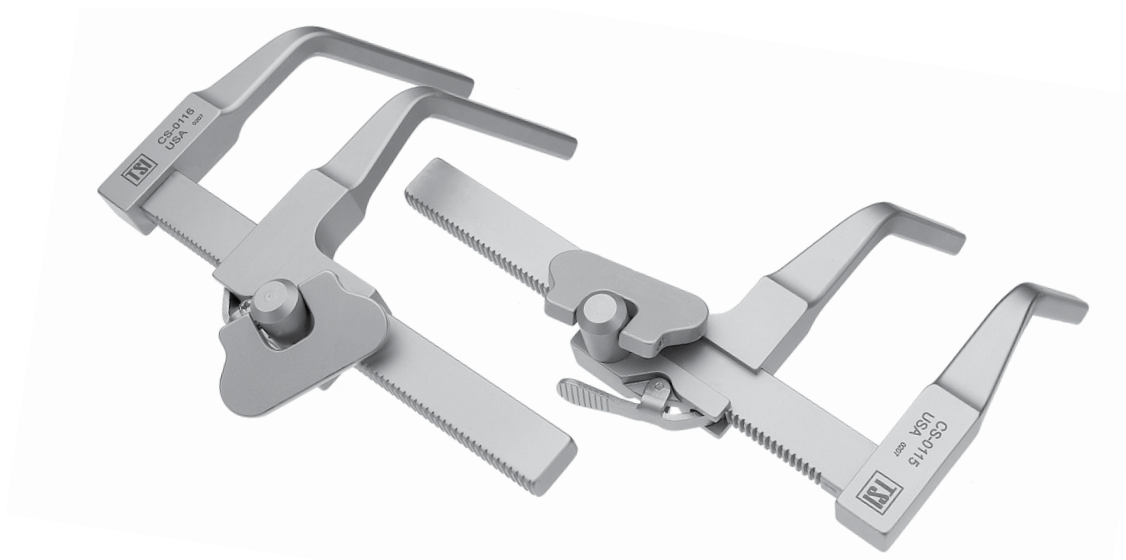


- Compatible with all Distraction Screws

CS-0127 - CS-0128

- CS-0127 PHANTOM CS ACF DISTRACTOR, W/60 MM HINGED ARM 120 MM RACK
- CS-0128 PHANTOM CS ACF DISTRACTOR, W/75 MM HINGED ARM 120 MM RACK

ACF DISTRACTOR

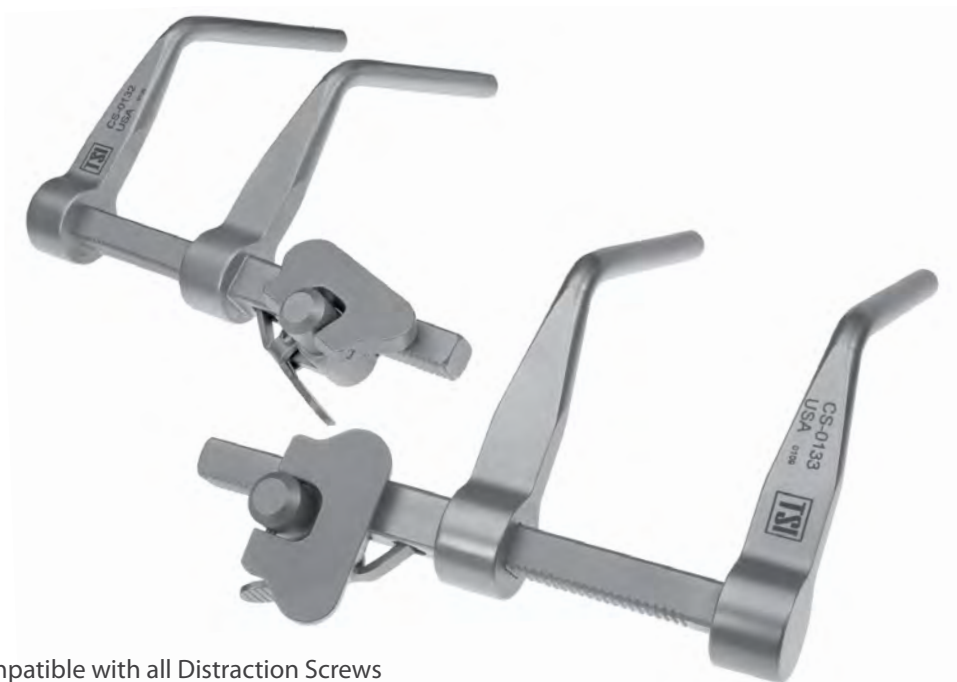


- Compatible with all Distraction Screws

CS-0115 - CS-0116

- CS-0115 PHANTOM CS ACF DISTRACTOR, LEFT W/120 MM RACK
- CS-0116 PHANTOM CS ACF DISTRACTOR, RIGHT W/120 MM RACK
- CS-0117 PHANTOM CS ACF DISTRACTOR, LEFT W/100 MM RACK
- CS-0118 PHANTOM CS ACF DISTRACTOR, RIGHT W/100 MM RACK

## CASPAR STYLE TUBULAR ACF DISTRACTOR



- Compatible with all Distraction Screws

CS-0132 - CS-0133

CS-0132	PHANTOM CS CASPAR STYLE TUBULAR ACF DISTRACTOR, W/100 MM RACK - RIGHT
CS-0133	PHANTOM CS CASPAR STYLE TUBULAR ACF DISTRACTOR, W/100 MM RACK - LEFT
CS-0134	PHANTOM CS CASPAR STYLE TUBULAR ACF DISTRACTOR, W/120 MM RACK - RIGHT
CS-0135	PHANTOM CS CASPAR STYLE TUBULAR ACF DISTRACTOR, W/120 MM RACK - LEFT

## HINGED LOCKING DISTRACTOR

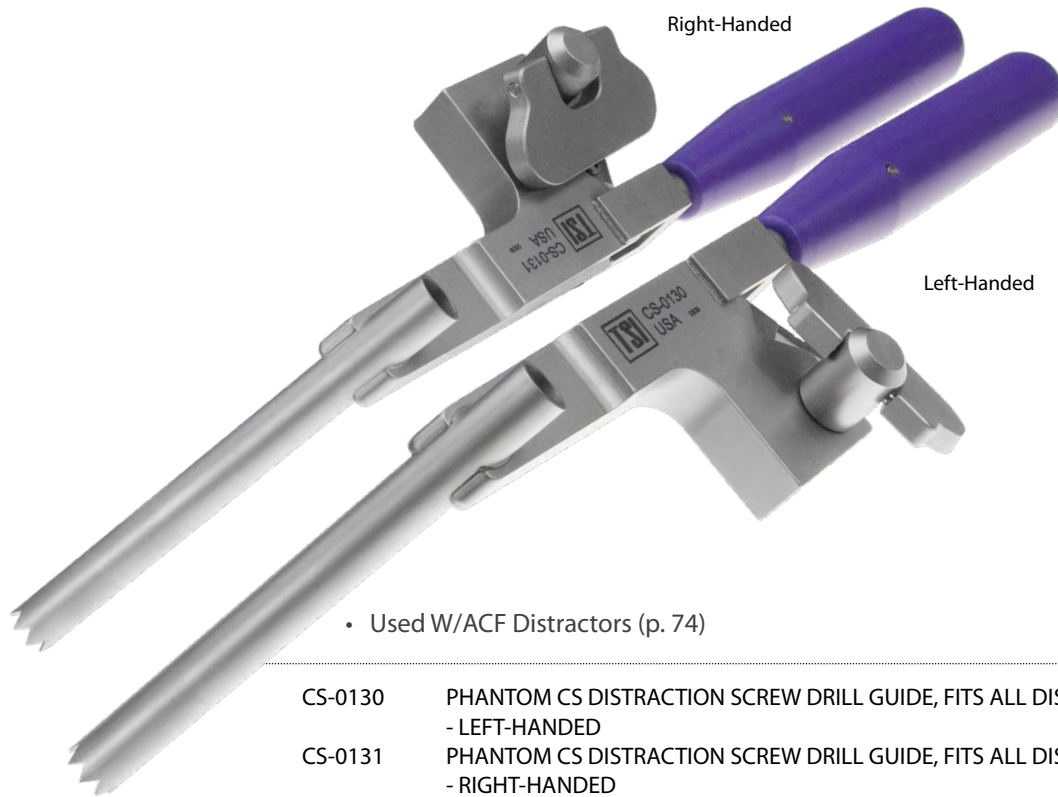


- Compatible with TSI Phantom Quick Start Distraction Screws (DS-0022, DS-0024, DS-0026, DS-0222, DS-0224, & DS-0226)

CS-0137

CS-0136	PHANTOM CS 120 MM RACK, 60 MM ARMS, RIGHT
CS-0137	PHANTOM CS 120 MM RACK, 60 MM ARMS, LEFT
CS-0138	PHANTOM CS 120 MM RACK, 80 MM ARMS, RIGHT
CS-0139	PHANTOM CS 120 MM RACK, 80 MM ARMS, LEFT

DISTRACTION SCREW DRILL GUIDE



• Used W/ACF Distractors (p. 74)

CS-0130 - CS-0131

- CS-0130 PHANTOM CS DISTRACTION SCREW DRILL GUIDE, FITS ALL DISTRACTORS  
- LEFT-HANDED
- CS-0131 PHANTOM CS DISTRACTION SCREW DRILL GUIDE, FITS ALL DISTRACTORS  
- RIGHT-HANDED

DISTRACTION SCREW DRILL GUIDE



• Used W/ACF Distractors (p. 74)

CS-0119

- CS-0110 DISTRACTION SCREW DUAL DRILL GUIDE, FITS ALL DISTRACTORS
- CS-0119 DISTRACTION SCREW DRILL GUIDE, FITS ALL DISTRACTORS

## DISTRACTION SCREW DRIVER



- Compatible with all Distraction Screws

CS-0114

CS-0114 PHANTOM CS DISTRACTION SCREW DRIVER, W/O SPRING

## DISTRACTION SCREWS



DS-0212, DS-0214, DS-0216

DS-0012	TSI 12 MM DISTRACTION SCREWS, 5 PER BOX, PRE-PACKAGED STERILE, SINGLE USE
DS-0014	TSI 14 MM DISTRACTION SCREWS, 5 PER BOX, PRE-PACKAGED STERILE, SINGLE USE
DS-0016	TSI 16 MM DISTRACTION SCREWS, 5 PER BOX, PRE-PACKAGED STERILE, SINGLE USE
DS-0212	TSI 12 MM DISTRACTION SCREWS, EACH, NON-STERILE, SINGLE USE
DS-0214	TSI 14 MM DISTRACTION SCREWS, EACH, NON-STERILE, SINGLE USE
DS-0216	TSI 16 MM DISTRACTION SCREWS, EACH, NON-STERILE, SINGLE USE



QUICK START DISTRACTION SCREWS



3 CUTTING FLUTES



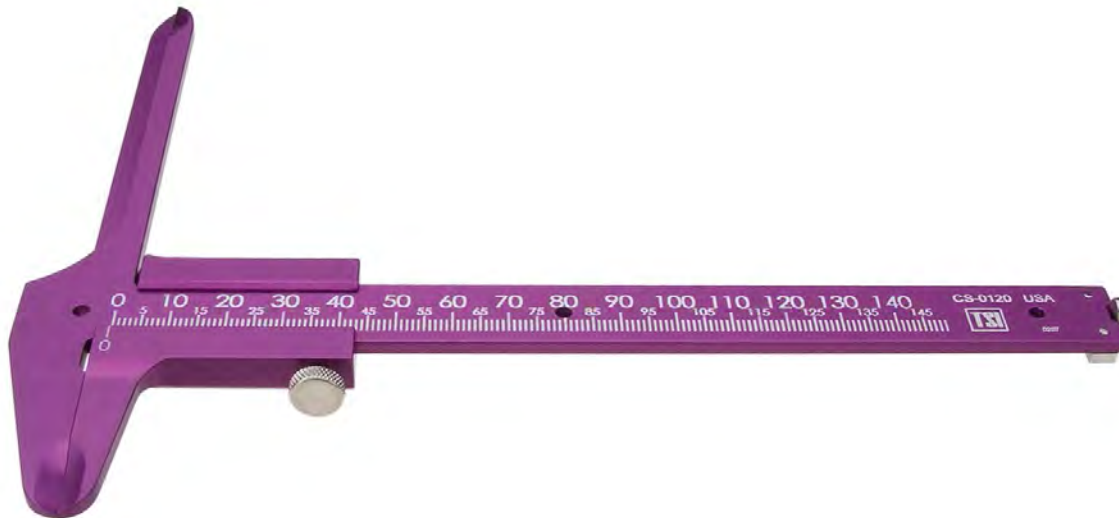
TWO RINGS

- Compatible only with CS-0114 Distraction Screw Driver w/o Spring

DS-0222, DS-0224, DS-0226

DS-0022	TSI 12 MM DISTRACTION SCREWS, QUICK START, 5 PER BOX, PRE-PACKAGED STERILE, SINGLE USE
DS-0024	TSI 14 MM DISTRACTION SCREWS, QUICK START, 5 PER BOX, PRE-PACKAGED STERILE, SINGLE USE
DS-0026	TSI 16 MM DISTRACTION SCREWS, QUICK START, 5 PER BOX, PRE-PACKAGED STERILE, SINGLE USE
DS-0222	TSI 12 MM DISTRACTION SCREWS, QUICK START, EACH, NON-STERILE, SINGLE USE
DS-0224	TSI 14 MM DISTRACTION SCREWS, QUICK START, EACH, NON-STERILE, SINGLE USE
DS-0226	TSI 16 MM DISTRACTION SCREWS, QUICK START, EACH, NON-STERILE, SINGLE USE

CALIPER - (ALUMINUM)



CS-0120

CS-0120 PHANTOM CS CALIPER



CS-1400 & CS-1401 INSTRUMENT CASE



CS-0400

CS-0400 PHANTOM CS-1400 - CS-1401 INSTRUMENT CASE

NOTES

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PHANTOM CURETTES  
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CERVICAL AND LUMBAR CURETTES.....68-74  
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INSTRUMENT SPECIFICATIONS

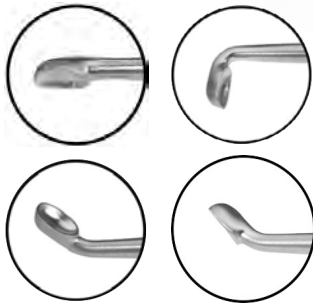
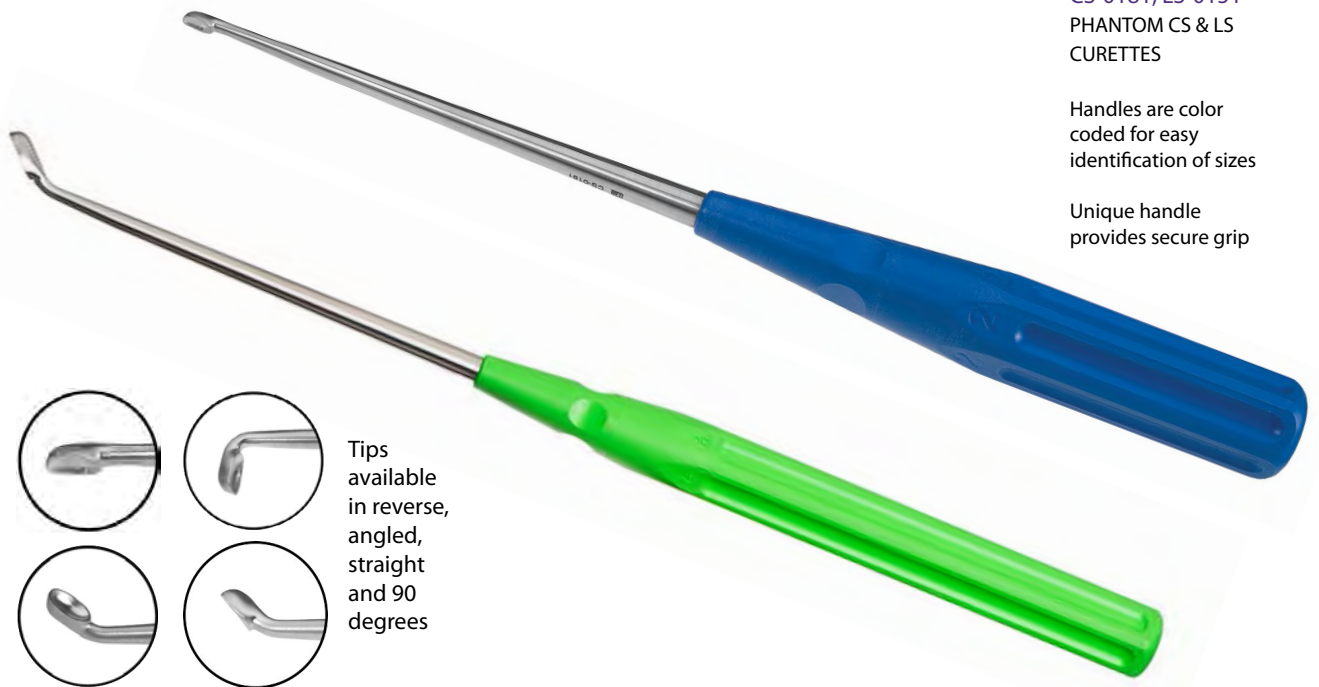
# PHANTOM CURETTES

Phantom CS, LS and Karlin Style Currettes™

CS-0181, LS-0151  
PHANTOM CS & LS  
CURETTES

Handles are color  
coded for easy  
identification of sizes

Unique handle  
provides secure grip



Tips  
available  
in reverse,  
angled,  
straight  
and 90  
degrees

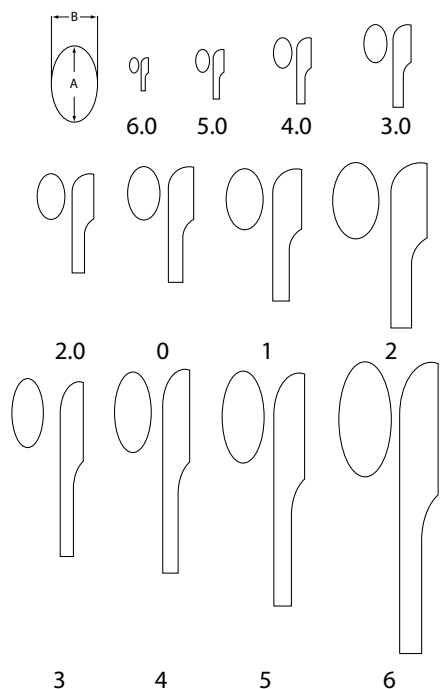


CS-0366  
KARLIN STYLE  
CURETTE  
BACKWARD ANGLE

### CURETTE - REVERSE



REVERSE



A	B	
2.30	1.60	$\frac{6}{0}$
2.80	2.00	$\frac{5}{0}$
3.40	2.40	$\frac{4}{0}$
4.00	2.80	$\frac{3}{0}$
4.60	3.20	$\frac{2}{0}$
5.10	3.60	0
6.00	4.20	1
7.10	5.00	2
7.90	5.50	3
10.70	7.50	4
12.00	8.00	5
14.00	9.00	6

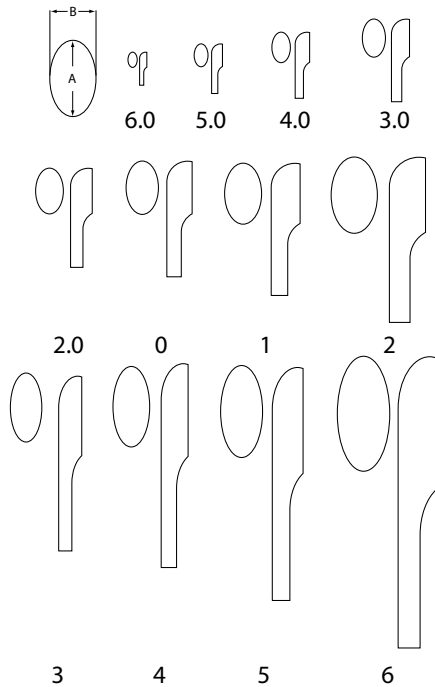
CS-0157

- CS-0150 PHANTOM CS CURETTE REVERSE 6/0, 10", RED
- CS-0151 PHANTOM CS CURETTE REVERSE 5/0, 10", GRAY
- CS-0152 PHANTOM CS CURETTE REVERSE 4/0, 10", VIOLET
- CS-0153 PHANTOM CS CURETTE REVERSE 3/0, 10", AQUA
- CS-0154 PHANTOM CS CURETTE REVERSE 2/0, 10", YELLOW
- CS-0155 PHANTOM CS CURETTE REVERSE 0, 10", GREEN
- CS-0156 PHANTOM CS CURETTE REVERSE 1, 10", ORANGE
- CS-0157 PHANTOM CS CURETTE REVERSE 2, 10", BLUE**
- CS-0158 PHANTOM CS CURETTE REVERSE 3, 10", FUSCHIA
- CS-0159 PHANTOM CS CURETTE REVERSE 4, 10", BLACK
- CS-0160 PHANTOM CS CURETTE REVERSE 5, 10", LIGHT BROWN
- CS-0161 PHANTOM CS CURETTE REVERSE 6, 10", LIGHT GREEN

CURETTE - ANGLED



ANGLED



A	B	
2.30	1.60	$\frac{6}{0}$
2.80	2.00	$\frac{5}{0}$
3.40	2.40	$\frac{4}{0}$
4.00	2.80	$\frac{3}{0}$
4.60	3.20	$\frac{2}{0}$
5.10	3.60	0
6.00	4.20	1
7.10	5.00	2
7.90	5.50	3
10.70	7.50	4
12.00	8.00	5
14.00	9.00	6

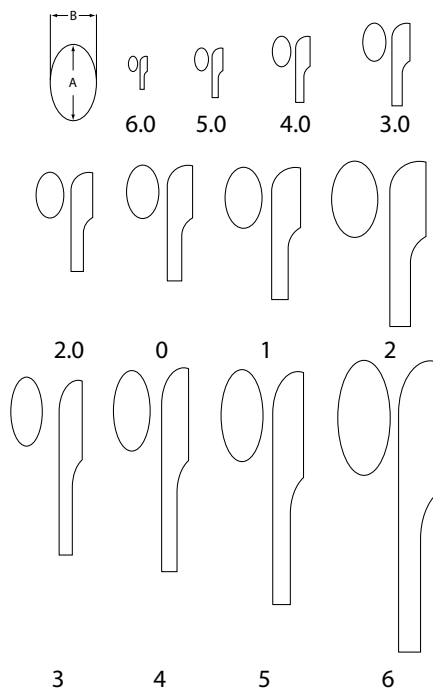
CS-0169

- CS-0162 PHANTOM CS CURETTE ANGLED 6/0, 10", RED
- CS-0163 PHANTOM CS CURETTE ANGLED 5/0, 10", GRAY
- CS-0164 PHANTOM CS CURETTE ANGLED 4/0, 10", VIOLET
- CS-0165 PHANTOM CS CURETTE ANGLED 3/0, 10", AQUA
- CS-0166 PHANTOM CS CURETTE ANGLED 2/0, 10", YELLOW
- CS-0167 PHANTOM CS CURETTE ANGLED 0, 10", GREEN
- CS-0168 PHANTOM CS CURETTE ANGLED 1, 10", ORANGE
- CS-0169 PHANTOM CS CURETTE ANGLED 2, 10", BLUE**
- CS-0170 PHANTOM CS CURETTE ANGLED 3, 10", FUSCHIA
- CS-0171 PHANTOM CS CURETTE ANGLED 4, 10", BLACK
- CS-0172 PHANTOM CS CURETTE ANGLED 5, 10", LIGHT BROWN
- CS-0173 PHANTOM CS CURETTE ANGLED 6, 10", LIGHT GREEN

### CURETTE - STRAIGHT



STRAIGHT



A	B	
2.30	1.60	$\frac{6}{0}$
2.80	2.00	$\frac{5}{0}$
3.40	2.40	$\frac{4}{0}$
4.00	2.80	$\frac{3}{0}$
4.60	3.20	$\frac{2}{0}$
5.10	3.60	0
6.00	4.20	1
7.10	5.00	2
7.90	5.50	3
10.70	7.50	4
12.00	8.00	5
14.00	9.00	6

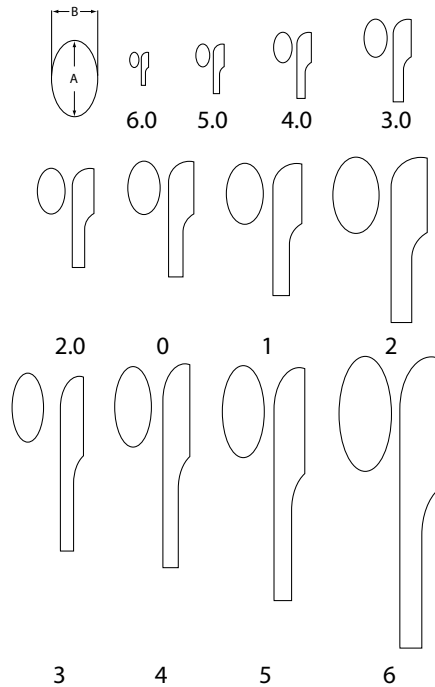
CS-0181

- CS-0174 PHANTOM CS CURETTE STRAIGHT 6/0, 10", RED
- CS-0175 PHANTOM CS CURETTE STRAIGHT 5/0, 10", GRAY
- CS-0176 PHANTOM CS CURETTE STRAIGHT 4/0, 10", VIOLET
- CS-0177 PHANTOM CS CURETTE STRAIGHT 3/0, 10", AQUA
- CS-0178 PHANTOM CS CURETTE STRAIGHT 2/0, 10", YELLOW
- CS-0179 PHANTOM CS CURETTE STRAIGHT 0, 10", GREEN
- CS-0180 PHANTOM CS CURETTE STRAIGHT 1, 10", ORANGE
- CS-0181 PHANTOM CS CURETTE STRAIGHT 2, 10", BLUE**
- CS-0182 PHANTOM CS CURETTE STRAIGHT 3, 10", FUSCHIA
- CS-0183 PHANTOM CS CURETTE STRAIGHT 4, 10", BLACK
- CS-0184 PHANTOM CS CURETTE STRAIGHT 5, 10", LIGHT BROWN
- CS-0185 PHANTOM CS CURETTE STRAIGHT 6, 10", LIGHT GREEN

CURETTE - 90 DEG



90°



A	B	
2.30	1.60	$\frac{6}{8}$
2.80	2.00	$\frac{5}{8}$
3.40	2.40	$\frac{4}{8}$
4.00	2.80	$\frac{3}{8}$
4.60	3.20	$\frac{2}{8}$
5.10	3.60	0
6.00	4.20	1
7.10	5.00	2
7.90	5.50	3
10.70	7.50	4
12.00	8.00	5
14.00	9.00	6

CS-0193

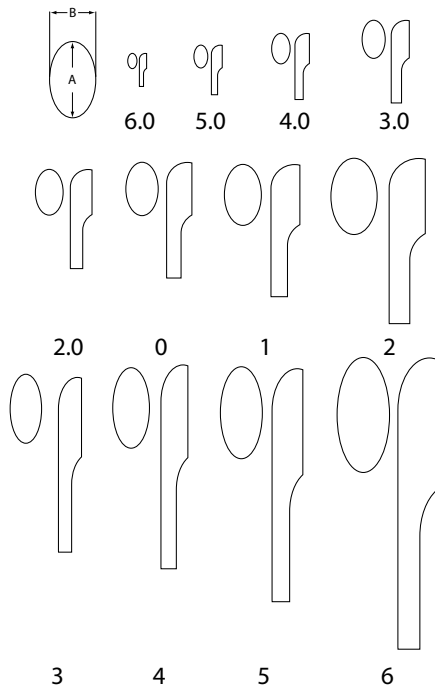
- CS-0186 PHANTOM CS CURETTE 90 DEG 6/0, 10", RED
- CS-0187 PHANTOM CS CURETTE 90 DEG 5/0, 10", GRAY
- CS-0188 PHANTOM CS CURETTE 90 DEG 4/0, 10", VIOLET
- CS-0189 PHANTOM CS CURETTE 90 DEG 3/0, 10", AQUA
- CS-0190 PHANTOM CS CURETTE 90 DEG 2/0, 10", YELLOW
- CS-0191 PHANTOM CS CURETTE 90 DEG 0, 10", GREEN
- CS-0192 PHANTOM CS CURETTE 90 DEG 1, 10", ORANGE
- CS-0193 PHANTOM CS CURETTE 90 DEG 2, 10", BLUE
- CS-0194 PHANTOM CS CURETTE 90 DEG 3, 10", FUSCHIA
- CS-0195 PHANTOM CS CURETTE 90 DEG 4, 10", BLACK
- CS-0196 PHANTOM CS CURETTE 90 DEG 5, 10", LIGHT BROWN
- CS-0197 PHANTOM CS CURETTE 90 DEG 6, 10", LIGHT GREEN



CURETTE - REVERSE



REVERSE



A	B	
2.30	1.60	$\frac{5}{8}$
2.80	2.00	$\frac{5}{8}$
3.40	2.40	$\frac{4}{8}$
4.00	2.80	$\frac{3}{8}$
4.60	3.20	$\frac{2}{8}$
5.10	3.60	0
6.00	4.20	1
7.10	5.00	2
7.90	5.50	3
10.70	7.50	4
12.00	8.00	5
14.00	9.00	6

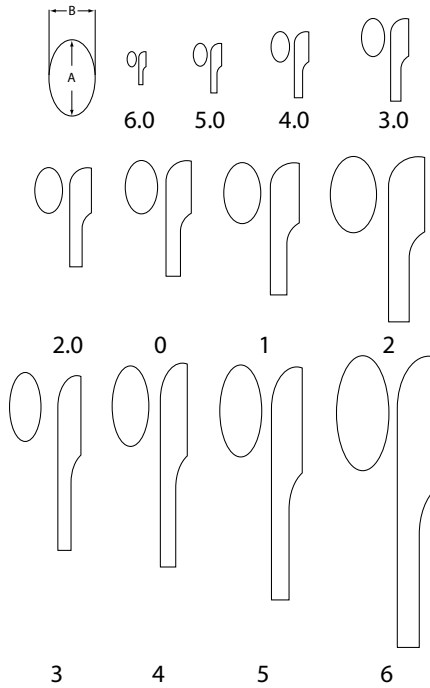
LS-0151

- LS-0140 LUMBAR REVERSE 6/0, 13.75", RED
- LS-0141 LUMBAR REVERSE 5/0, 13.75", GRAY
- LS-0142 LUMBAR REVERSE 4/0, 13.75", VIOLET
- LS-0143 LUMBAR REVERSE 3/0, 13.75", AQUA
- LS-0144 LUMBAR REVERSE 2/0, 13.75", YELLOW
- LS-0145 LUMBAR REVERSE 0, 13.75", GREEN
- LS-0146 LUMBAR REVERSE 1, 13.75", ORANGE
- LS-0147 LUMBAR REVERSE 2, 13.75", BLUE
- LS-0148 LUMBAR REVERSE 3, 13.75", FUSCHIA
- LS-0149 LUMBAR REVERSE 4, 13.75", BLACK
- LS-0150 LUMBAR REVERSE 5, 13.75", LIGHT BROWN
- LS-0151 LUMBAR REVERSE 6, 13.75", LIGHT GREEN

CURETTE - ANGLED



ANGLED



A	B	
2.30	1.60	$\frac{6}{0}$
2.80	2.00	$\frac{5}{0}$
3.40	2.40	$\frac{4}{0}$
4.00	2.80	$\frac{3}{0}$
4.60	3.20	$\frac{2}{0}$
5.10	3.60	0
6.00	4.20	1
7.10	5.00	2
7.90	5.50	3
10.70	7.50	4
12.00	8.00	5
14.00	9.00	6

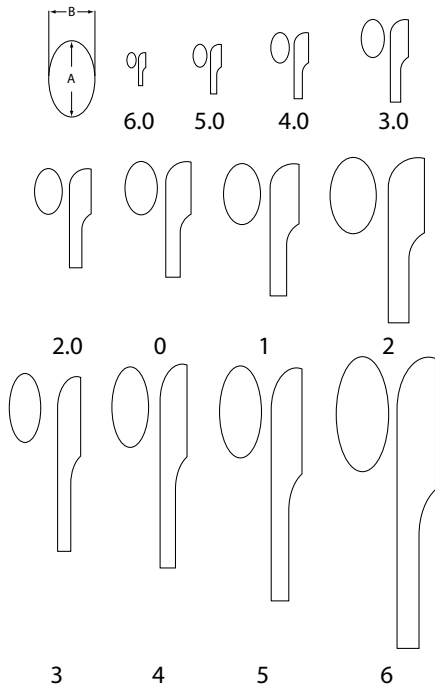
LS-0171

- LS-0160 LUMBAR ANGLED 6/0, 13.75", RED
- LS-0161 LUMBAR ANGLED 5/0, 13.75", GRAY
- LS-0162 LUMBAR ANGLED 4/0, 13.75", VIOLET
- LS-0163 LUMBAR ANGLED 3/0, 13.75", AQUA
- LS-0164 LUMBAR ANGLED 2/0, 13.75", YELLOW
- LS-0165 LUMBAR ANGLED 0, 13.75", GREEN
- LS-0166 LUMBAR ANGLED 1, 13.75", ORANGE
- LS-0167 LUMBAR ANGLED 2, 13.75", BLUE
- LS-0168 LUMBAR ANGLED 3, 13.75", FUCHSIA
- LS-0169 LUMBAR ANGLED 4, 13.75", BLACK
- LS-0170 LUMBAR ANGLED 5, 13.75", LIGHT BROWN
- LS-0171 LUMBAR ANGLED 6, 13.75", LIGHT GREEN

### CURETTE - STRAIGHT



STRAIGHT



A	B	
2.30	1.60	$\frac{6}{0}$
2.80	2.00	$\frac{5}{0}$
3.40	2.40	$\frac{4}{0}$
4.00	2.80	$\frac{3}{0}$
4.60	3.20	$\frac{2}{0}$
5.10	3.60	0
6.00	4.20	1
7.10	5.00	2
7.90	5.50	3
10.70	7.50	4
12.00	8.00	5
14.00	9.00	6

LS-0191

- LS-0180 LUMBAR STRAIGHT 6/0, 13.75", RED
- LS-0181 LUMBAR STRAIGHT 5/0, 13.75", GRAY
- LS-0182 LUMBAR STRAIGHT 4/0, 13.75", VIOLET
- LS-0183 LUMBAR STRAIGHT 3/0, 13.75", AQUA
- LS-0184 LUMBAR STRAIGHT 2/0, 13.75", YELLOW
- LS-0185 LUMBAR STRAIGHT 0, 13.75", GREEN
- LS-0186 LUMBAR STRAIGHT 1, 13.75", ORANGE
- LS-0187 LUMBAR STRAIGHT 2, 13.75", BLUE
- LS-0188 LUMBAR STRAIGHT 3, 13.75", FUCHSIA
- LS-0189 LUMBAR STRAIGHT 4, 13.75", BLACK
- LS-0190 LUMBAR STRAIGHT 5, 13.75", LIGHT BROWN
- LS-0191 LUMBAR STRAIGHT 6, 13.75", LIGHT GREEN

KARLIN STYLE CURETTE - FORWARD STRAIGHT



FORWARD STRAIGHT



HEAD SHAPE  
DETAIL

A	B
+0.40 / -0.20	±0.10
5.00	3.00
4.00	2.50
3.00	2.00
2.50	1.50

CS-0351

**CERVICAL CURETTES**

- CS-0351 FORWARD STRAIGHT, 0, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0352 FORWARD STRAIGHT, 00, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0353 FORWARD STRAIGHT, 000, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0354 FORWARD STRAIGHT, 0000, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH

**LUMBAR CURETTES**

- LS-0751 FORWARD STRAIGHT, 0, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0752 FORWARD STRAIGHT, 00, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0753 FORWARD STRAIGHT, 000, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0754 FORWARD STRAIGHT, 0000, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH

KARLIN STYLE CURETTE - FORWARD ANGLE



A	B
+0.40 / -0.20	±0.10
5.00	3.00
4.00	2.50
3.00	2.00
2.50	1.50

CS-0356

**CERVICAL CURETTES**

- CS-0356 FORWARD ANGLE, 0, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0357 FORWARD ANGLE, 00, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0358 FORWARD ANGLE, 000, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0359 FORWARD ANGLE, 0000, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH

**LUMBAR CURETTES**

- LS-0756 FORWARD ANGLE, 0, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0757 FORWARD ANGLE, 00, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0758 FORWARD ANGLE, 000, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0759 FORWARD ANGLE, 0000, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH

KARLIN STYLE CURETTE - BACKWARD STRAIGHT



HEAD SHAPE  
DETAIL

A	B
+0.40 / -0.20	±0.10
5.00	3.00
4.00	2.50
3.00	2.00
2.50	1.50

CS-0361

**CERVICAL CURETTES**

- CS-0361 BACKWARD STRAIGHT, 0, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0362 BACKWARD STRAIGHT, 00, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0363 BACKWARD STRAIGHT, 000, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0364 BACKWARD STRAIGHT, 0000, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH

**LUMBAR CURETTES**

- LS-0761 BACKWARD STRAIGHT, 0, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0762 BACKWARD STRAIGHT, 00, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0763 BACKWARD STRAIGHT, 000, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0764 BACKWARD STRAIGHT, 0000, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH

KARLIN STYLE CURETTE - BACKWARD ANGLE



HEAD SHAPE  
DETAIL

A	B
+0.40 / -0.20	±0.10
5.00	3.00
4.00	2.50
3.00	2.00
2.50	1.50

CS-0366

**CERVICAL CURETTES**

- CS-0366 BACKWARD ANGLE, 0, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0367 BACKWARD ANGLE, 00, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0368 BACKWARD ANGLE, 000, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH
- CS-0369 BACKWARD ANGLE, 0000, 8.5" TOT. LENGTH, 3.4" WKNG LENGTH

**LUMBAR CURETTES**

- LS-0766 BACKWARD ANGLE, 0, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0767 BACKWARD ANGLE, 00, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0768 BACKWARD ANGLE, 000, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH
- LS-0769 BACKWARD ANGLE, 0000, 9.5" TOT. LENGTH, 4.4" WKNG LENGTH

## CURETTE TRAY



CS-0205

CS-0205 CURETTE TRAY, HOLDS 12 CURETTES, CURETTES SOLD SEPARATELY  
LS-0703 CURETTE TRAY, HOLDS 12 CURETTES, CURETTES SOLD SEPARATELY



PHANTOM LS SURE-LOCK SETS LS-1700 - LS-1710

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# Phantom

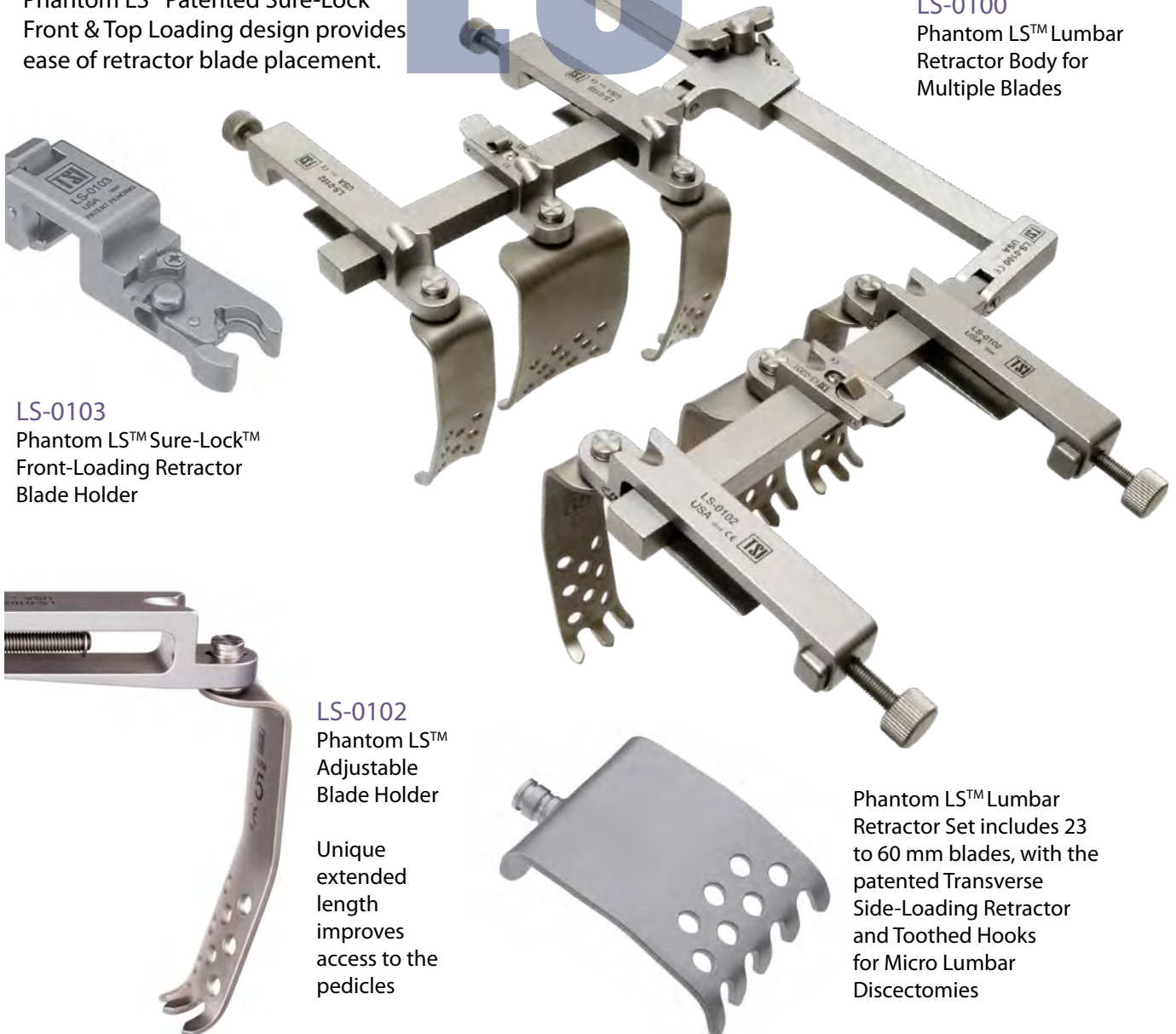
## PHANTOM LS SURE-LOCK SETS LS-1500 & LS-1501, LS-1700 & LS-1710

### INSTRUMENT SPECIFICATIONS

# Phantom

Phantom LS™ Patented Sure-Lock™  
Front & Top Loading design provides  
ease of retractor blade placement.

LS-0100  
Phantom LS™ Lumbar  
Retractor Body for  
Multiple Blades



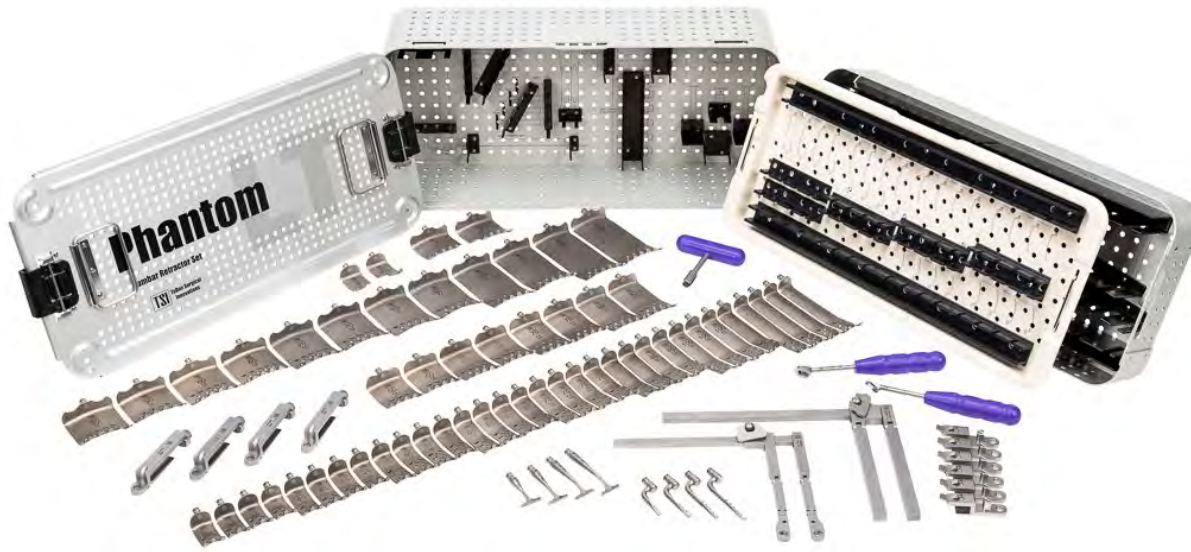
LS-0103  
Phantom LS™ Sure-Lock™  
Front-Loading Retractor  
Blade Holder

LS-0102  
Phantom LS™  
Adjustable  
Blade Holder

Unique  
extended  
length  
improves  
access to the  
pedicles

Phantom LS™ Lumbar  
Retractor Set includes 23  
to 60 mm blades, with the  
patented Transverse  
Side-Loading Retractor  
and Toothed Hooks  
for Micro Lumbar  
Discectomies

LT RETRACTOR SET

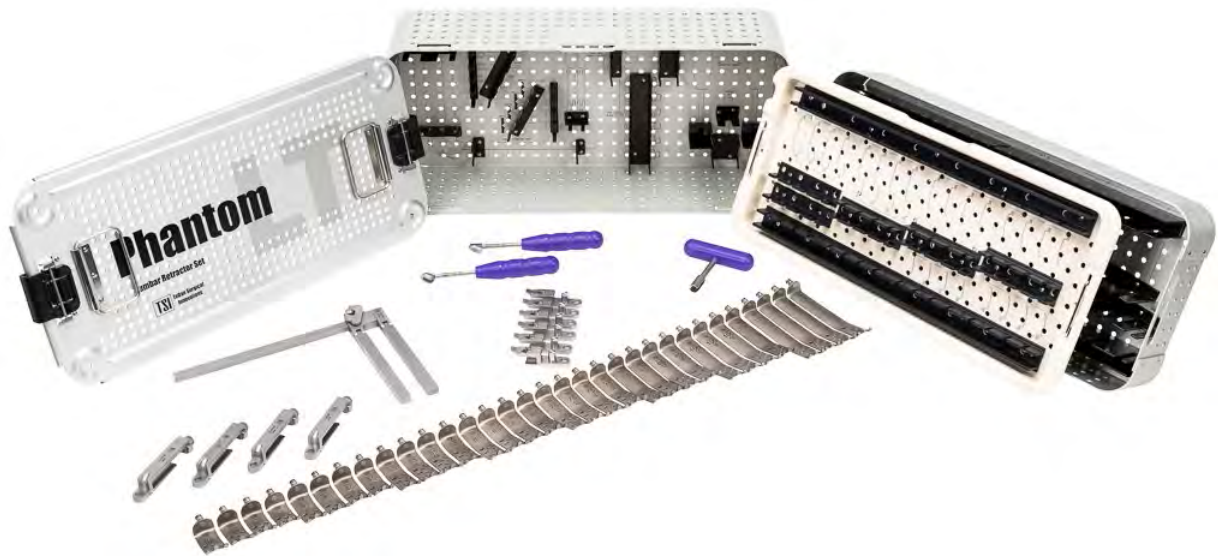


LS-1500

LS-1500 PHANTOM LT LUMBAR RETRACTOR SET

CS-0097	CS SCOVILLE RETRACTOR BODY W/BALL SNAP	1	LS-0250	LT T-BAR, 40 MM	1
CS-0105	CS SIDE-LOADING RETRACTOR BLADE HANDLE	2	LS-0251	LT T-BAR, 50 MM	1
LS-0030	LS LUMBAR BLADE 15° W/TEETH, 23 X 35 MM, Ti	4	LS-0252	LT T-BAR, 60 MM	1
LS-0031	LS LUMBAR BLADE 15° W/TEETH, 23 X 45 MM, Ti	4	LS-0253	LT T-BAR, 70 MM	1
LS-0032	LS LUMBAR BLADE 15° W/TEETH, 23 X 55 MM, Ti	4	LS-0701	LT STERILIZATION TRAY (FOR LS-1500 & 1501 SETS)	1
LS-0033	LS LUMBAR BLADE 15° W/TEETH, 23 X 65 MM, Ti	4			
LS-0034	LS LUMBAR BLADE 15° W/TEETH, 23 X 75 MM, Ti	4			
LS-0035	LS LUMBAR BLADE 15° W/TEETH, 23 X 85 MM, Ti	4			
LS-0036	LS LUMBAR BLADE 15° W/TEETH, 23 X 100 MM, Ti	4			
LS-0037	LS LUMBAR BLADE 15° W/TEETH, 23 X 120 MM, Ti	4			
LS-0050	LS LUMBAR BLADE 15° W/TEETH, 45 X 50 MM, Ti	2			
LS-0051	LS LUMBAR BLADE 15° W/TEETH, 45 X 60 MM, Ti	2			
LS-0052	LS LUMBAR BLADE 15° W/TEETH, 45 X 70 MM, Ti	2			
LS-0053	LS LUMBAR BLADE 15° W/TEETH, 45 X 80 MM, Ti	2			
LS-0070	LS SACRAL CUTOUT, RIGHT, W/TEETH, 30 X 40 MM, Ti	1			
LS-0071	LS SACRAL CUTOUT, LEFT, W/TEETH, 30 X 40 MM, Ti	1			
LS-0072	LS SACRAL CUTOUT, RIGHT, W/TEETH, 60 X 45 MM, Ti	1			
LS-0073	LS SACRAL CUTOUT, LEFT, W/TEETH, 60 X 45 MM, Ti	1			
LS-0080	LS MICRO LUMBAR DISSEC. HOOK W/ TEETH, 40 MM	1			
LS-0081	LS MICRO LUMBAR DISSEC. HOOK W/ TEETH, 50 MM	1			
LS-0082	LS MICRO LUMBAR DISSEC. HOOK W/ TEETH, 60 MM	1			
LS-0083	LS MICRO LUMBAR DISSEC. HOOK W/ TEETH, 70 MM	1			
LS-0100	LS LUMBAR RETRACTOR BODY	1			
LS-0101	LS T-HANDLE CRANK	1			
LS-0102	LS ADJUSTABLE BLADE HOLDER	4			
LS-0201	LT TOP LOADING RETRACTOR BLADE HOLDER	6			
LS-0230	LT BLADE 15° ANG W/TEETH 60 X 50 MM, TITANIUM	2			
LS-0231	LT BLADE 15° ANG W/TEETH 60 X 60 MM, TITANIUM	2			
LS-0232	LT BLADE 15° ANG W/TEETH 60 X 70 MM, TITANIUM	2			
LS-0233	LT BLADE 15° ANG W/TEETH 60 X 80 MM, TITANIUM	2			
LS-0234	LT BLADE 15° ANG W/TEETH 60 X 100 MM, TITANIUM	2			
LS-0235	LT BLADE 15° ANG W/TEETH 60 X 120 MM, TITANIUM	2			

## LT RETRACTOR BASIC SET



LS-1501

## LS-1501 PHANTOM LT LUMBAR RETRACTOR BASIC SET

		ea.
CS-0105	CS SIDE-LOADING RETRACTOR BLADE HANDLE	2
LS-0030	LS LUMBAR BLADE 15° W/TEETH, 23 X 35 MM, TITANIUM	4
LS-0031	LS LUMBAR BLADE 15° W/TEETH, 23 X 45 MM, TITANIUM	4
LS-0032	LS LUMBAR BLADE 15° W/TEETH, 23 X 55 MM, TITANIUM	4
LS-0033	LS LUMBAR BLADE 15° W/TEETH, 23 X 65 MM, TITANIUM	4
LS-0034	LS LUMBAR BLADE 15° W/TEETH, 23 X 75 MM, TITANIUM	4
LS-0035	LS LUMBAR BLADE 15° W/TEETH, 23 X 85 MM, TITANIUM	4
LS-0036	LS LUMBAR BLADE 15° W/TEETH, 23 X 100 MM, TITANIUM	4
LS-0037	LS LUMBAR BLADE 15° W/TEETH, 23 X 120 MM, TITANIUM	4
LS-0100	LS LUMBAR RETRACTOR BODY	1
LS-0101	LS T-HANDLE CRANK	1
LS-0102	LS ADJUSTABLE BLADE HOLDER	4
LS-0201	LT TOP LOADING RETRACTOR BLADE HOLDER	6
LS-0701	LT STERILIZATION TRAY (FOR LS-1500 & 1501 SETS)	1

## LS RETRACTOR SET



LS-1700

## LS-1700 PHANTOM LS LUMBAR RETRACTOR SET

		ea.
CS-0100	CS TRANSVERSE RETRACTOR W/DOUBLE HINGE, 120 MM RACK	1
CS-0105	CS SIDE-LOADING RETRACTOR BLADE HANDLE	2
LS-0030	LS LUMBAR BLADE 15° W/TEETH, 23 X 35 MM, TITANIUM	4
LS-0031	LS LUMBAR BLADE 15° W/TEETH, 23 X 45 MM, TITANIUM	4
LS-0032	LS LUMBAR BLADE 15° W/TEETH, 23 X 55 MM, TITANIUM	4
LS-0033	LS LUMBAR BLADE 15° W/TEETH, 23 X 65 MM, TITANIUM	4
LS-0034	LS LUMBAR BLADE 15° W/TEETH, 23 X 75 MM, TITANIUM	4
LS-0035	LS LUMBAR BLADE 15° W/TEETH, 23 X 85 MM, TITANIUM	4
LS-0036	LS LUMBAR BLADE 15° W/TEETH, 23 X 100 MM, TITANIUM	4
LS-0037	LS LUMBAR BLADE 15° W/TEETH, 23 X 120 MM, TITANIUM	4
LS-0050	LS LUMBAR BLADE 15° W/TEETH, 45 X 50 MM, TITANIUM	2
LS-0051	LS LUMBAR BLADE 15° W/TEETH, 45 X 60 MM, TITANIUM	2
LS-0052	LS LUMBAR BLADE 15° W/TEETH, 45 X 70 MM, TITANIUM	2
LS-0053	LS LUMBAR BLADE 15° W/TEETH, 45 X 80 MM, TITANIUM	2
LS-0054	LS LUMBAR BLADE 15° W/TEETH, 45 X 100 MM, TITANIUM	2
LS-0055	LS LUMBAR BLADE 15° W/TEETH, 45 X 120 MM, TITANIUM	2
LS-0070	LS SACRAL CUTOUT, RIGHT, W/TEETH, 30 X 40 MM, TITANIUM	1
LS-0071	LS SACRAL CUTOUT, LEFT, W/TEETH, 30 X 40 MM, TITANIUM	1
LS-0072	LS SACRAL CUTOUT, RIGHT, W/TEETH, 60 X 45 MM, TITANIUM	1
LS-0073	LS SACRAL CUTOUT, LEFT, W/TEETH, 60 X 45 MM, TITANIUM	1
LS-0080	LS MICRO LUMBAR DISCECTOMY HOOK WITH TEETH, 40 MM	1
LS-0081	LS MICRO LUMBAR DISCECTOMY HOOK WITH TEETH, 50 MM	1
LS-0082	LS MICRO LUMBAR DISCECTOMY HOOK WITH TEETH, 60 MM	1
LS-0083	LS MICRO LUMBAR DISCECTOMY HOOK WITH TEETH, 70 MM	1
LS-0100	LS LUMBAR RETRACTOR BODY	1
LS-0101	LS T-HANDLE CRANK	1
LS-0102	LS ADJUSTABLE BLADE HOLDER	4
LS-0103	LS FRONT-LOADING RETRACTOR BLADE HOLDER FOR LS-0100	6
LS-0700	LS STERILIZATION TRAY (FOR LS-1700 & 1701 SETS)	1

## LS RETRACTOR BASIC SET



LS-1701

## LS-1701 PHANTOM LS LUMBAR RETRACTOR BASIC SET

		ea.
CS-0105	CS SIDE-LOADING RETRACTOR BLADE HANDLE	2
LS-0030	LS LUMBAR BLADE 15° W/TEETH, 23 X 35 MM, TITANIUM	4
LS-0031	LS LUMBAR BLADE 15° W/TEETH, 23 X 45 MM, TITANIUM	4
LS-0032	LS LUMBAR BLADE 15° W/TEETH, 23 X 55 MM, TITANIUM	4
LS-0033	LS LUMBAR BLADE 15° W/TEETH, 23 X 65 MM, TITANIUM	4
LS-0034	LS LUMBAR BLADE 15° W/TEETH, 23 X 75 MM, TITANIUM	4
LS-0035	LS LUMBAR BLADE 15° W/TEETH, 23 X 85 MM, TITANIUM	4
LS-0036	LS LUMBAR BLADE 15° W/TEETH, 23 X 100 MM, TITANIUM	4
LS-0037	LS LUMBAR BLADE 15° W/TEETH, 23 X 120 MM, TITANIUM	4
LS-0100	LS LUMBAR RETRACTOR BODY	1
LS-0101	LS T-HANDLE CRANK	1
LS-0102	LS ADJUSTABLE BLADE HOLDER	4
LS-0103	LS FRONT-LOADING RETRACTOR BLADE HOLDER FOR LS-0100	6
LS-0700	LS STERILIZATION TRAY (FOR LS-1700 & 1701 SETS)	1

LS RETRACTOR SET W/ HOOKS



LS-1702

LS-1702 PHANTOM LS RETRACTOR SET W/ HOOKS

CS-0100	CS TRNSVRSE RTRCTOR W/DBLE HINGE,120 MM RACK	1	ea.	LS-0123	LS OFFSET HOOK, 85 MM	4	ea.
CS-0105	CS SIDE-LOADING RETRACTOR BLADE HANDLE	2		LS-0124	LS OFFSET HOOK, 95 MM	4	
LS-0030	LS LUMBAR BLADE 15° W/TEETH, 23 X 35 MM, Ti	4		LS-0125	LS OFFSET HOOK, 115 MM	4	
LS-0031	LS LUMBAR BLADE 15° W/TEETH, 23 X 45 MM, Ti	4		LS-0700	LS STERILIZATION TRAY (FOR LS-1700 & 1701 SETS)	1	
LS-0032	LS LUMBAR BLADE 15° W/TEETH, 23 X 55 MM, Ti	4		LS-0705	LS HOOK STERILIZATION TRAY	1	
LS-0033	LS LUMBAR BLADE 15° W/TEETH, 23 X 65 MM, Ti	4					
LS-0034	LS LUMBAR BLADE 15° W/TEETH, 23 X 75 MM, Ti	4					
LS-0035	LS LUMBAR BLADE 15° W/TEETH, 23 X 85 MM, Ti	4					
LS-0036	LS LUMBAR BLADE 15° W/TEETH, 23 X 100 MM, Ti	4					
LS-0037	LS LUMBAR BLADE 15° W/TEETH, 23 X 120 MM, Ti	4					
LS-0085	LS HOOK STRAIGHT, 30 MM	4					
LS-0086	LS HOOK STRAIGHT, 40 MM	4					
LS-0087	LS HOOK STRAIGHT, 50 MM	4					
LS-0088	LS HOOK STRAIGHT, 60 MM	4					
LS-0089	LS HOOK STRAIGHT, 70 MM	4					
LS-0090	LS HOOK STRAIGHT, 80 MM	4					
LS-0091	LS HOOK STRAIGHT, 90 MM	4					
LS-0092	LS HOOK STRAIGHT, 100 MM	4					
LS-0093	LS HOOK STRAIGHT, 120 MM	4					
LS-0100	LS LUMBAR RETRACTOR BODY	1					
LS-0101	LS T-HANDLE CRANK	1					
LS-0102	LS ADJUSTABLE BLADE HOLDER	4					
LS-0103	LS FRNT-LDING RTRCTOR BLDE HLDER FOR LS-0100	6					
LS-0118	LS OFFSET HOOK, 30 MM	4					
LS-0119	LS OFFSET HOOK, 40 MM	4					
LS-0120	LS OFFSET HOOK, 50 MM	4					
LS-0121	LS OFFSET HOOK, 60 MM	4					
LS-0122	LS OFFSET HOOK, 75 MM	4					

## LS HOOK SET



LS-1710

## LS-1710 PHANTOM LS HOOK SET

		ea.
LS-0086	LS HOOK STRAIGHT, 40 MM	4
LS-0087	LS HOOK STRAIGHT, 50 MM	4
LS-0088	LS HOOK STRAIGHT, 60 MM	4
LS-0089	LS HOOK STRAIGHT, 70 MM	4
LS-0090	LS HOOK STRAIGHT, 80 MM	4
LS-0091	LS HOOK STRAIGHT, 90 MM	4
LS-0092	LS HOOK STRAIGHT, 100 MM	4
LS-0093	LS HOOK STRAIGHT, 120 MM	4
LS-0118	LS OFFSET HOOK, 30 MM	4
LS-0119	LS OFFSET HOOK, 40 MM	4
LS-0120	LS OFFSET HOOK, 50 MM	4
LS-0121	LS OFFSET HOOK, 60 MM	4
LS-0122	LS OFFSET HOOK, 75 MM	4
LS-0123	LS OFFSET HOOK, 85 MM	4
LS-0124	LS OFFSET HOOK, 95 MM	4
LS-0125	LS OFFSET HOOK, 115 MM	4
LS-0705	LS HOOK STERILIZATION TRAY	1



GELPI HOOK - STRAIGHT



CROSS-CUT CONNECTORS



LS-0090

- LS-0085 PHANTOM LS HOOK 30 MM
- LS-0086 PHANTOM LS HOOK 40 MM
- LS-0087 PHANTOM LS HOOK 50 MM
- LS-0088 PHANTOM LS HOOK 60 MM
- LS-0089 PHANTOM LS HOOK 70 MM
- LS-0090 PHANTOM LS HOOK 80 MM**
- LS-0091 PHANTOM LS HOOK 90 MM
- LS-0092 PHANTOM LS HOOK 100 MM
- LS-0093 PHANTOM LS HOOK 120 MM
- LS-0095 PHANTOM LS HOOK 25 MM
- LS-0096 PHANTOM LS HOOK 35 MM
- LS-0097 PHANTOM LS HOOK 45 MM

GELPI HOOK - OFFSET



CROSS-CUT CONNECTORS



LS-0120

- LS-0118 PHANTOM LS HOOK 30 MM
- LS-0119 PHANTOM LS HOOK 40 MM
- LS-0120 PHANTOM LS HOOK 50 MM**
- LS-0121 PHANTOM LS HOOK 60 MM
- LS-0122 PHANTOM LS HOOK 75 MM
- LS-0123 PHANTOM LS HOOK 85 MM
- LS-0124 PHANTOM LS HOOK 95 MM
- LS-0125 PHANTOM LS HOOK 115 MM

## MICRO LUMBAR MULTI TOOTH DISCECTOMY HOOK

CROSS-CUT  
CONNECTORS

LS-0082

LS-0078	PHANTOM LS HOOK 25 MM
LS-0079	PHANTOM LS HOOK 30 MM
LS-0080	PHANTOM LS HOOK 40 MM
LS-0081	PHANTOM LS HOOK 50 MM
LS-0082	PHANTOM LS HOOK 60 MM
LS-0083	PHANTOM LS HOOK 70 MM
LS-0084	PHANTOM LS HOOK 80 MM

## T-BAR

CROSS-CUT  
CONNECTORS

LS-0252

LS-0250	PHANTOM LT T-BAR 40 MM
LS-0251	PHANTOM LT T-BAR 50 MM
LS-0252	PHANTOM LT T-BAR 60 MM
LS-0253	PHANTOM LT T-BAR 70 MM

TRANSVERSE RETRACTOR



CS-0100

CS-0100 PHANTOM CS TRANSVERSE SIDE-LOADING RETRACTOR W/ DOUBLE HINGE-120 MM RACK

TRANSVERSE RETRACTOR W/PIVOTING ARMS



CS-0108

CS-0107 PHANTOM CS TRANSVERSE RETRACTOR W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 150 MM RACK  
 CS-0108 PHANTOM CS TRANSVERSE RETRACTOR W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 120 MM RACK

## SCOVILLE RETRACTORS



CS-0096

- CS-0096 SCOVILLE RETRACTOR BODY WITH SIDE-LOADING - 200 MM RACK  
 CS-0097 SCOVILLE TOP LOADING RETRACTOR BODY WITH BALL SNAP - 200 MM RACK

## SCOVILLE PIVOTING RETRACTOR



CS-0104

- CS-0104 SCOVILLE SIDE-LOADING RETRACTOR W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 200 MM RACK

RETRACTOR BLADE HANDLE



CS-0105

CS-0105 PHANTOM CS SIDE-LOADING RETRACTOR BLADE HANDLE

LOCKING RETRACTOR BLADE HANDLE



CS-0126

- Only compatible with TSI Cross Cut Blades

CS-0126 PHANTOM CS SIDE-LOADING LOCKING RETRACTOR BLADE HANDLE

## T-HANDLE FOR RETRACTOR W/PIVOTING ARMS



LS-0451

LS-0451 PHANTOM T-HANDLE FOR RETRACTOR W/PIVOTING ARMS

## HEX DRIVER TOOL



ML-0505

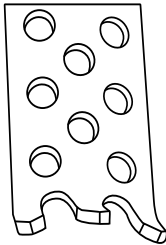
ML-0505 PHANTOM XL HEX DRIVER TOOL

RETRACTOR BLADES - W/TEETH - (TITANIUM)



LS-0033

LONG  
TEETH



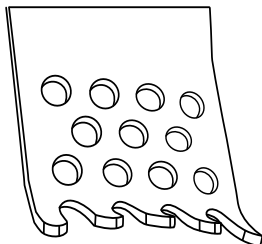
LS-0030	PHANTOM LS 23 X 35 MM
LS-0031	PHANTOM LS 23 X 45 MM
LS-0032	PHANTOM LS 23 X 55 MM
LS-0033	PHANTOM LS 23 X 65 MM
LS-0034	PHANTOM LS 23 X 75 MM
LS-0035	PHANTOM LS 23 X 85 MM
LS-0036	PHANTOM LS 23 X 100 MM
LS-0037	PHANTOM LS 23 X 120 MM

RETRACTOR BLADES - W/TEETH - (TITANIUM)



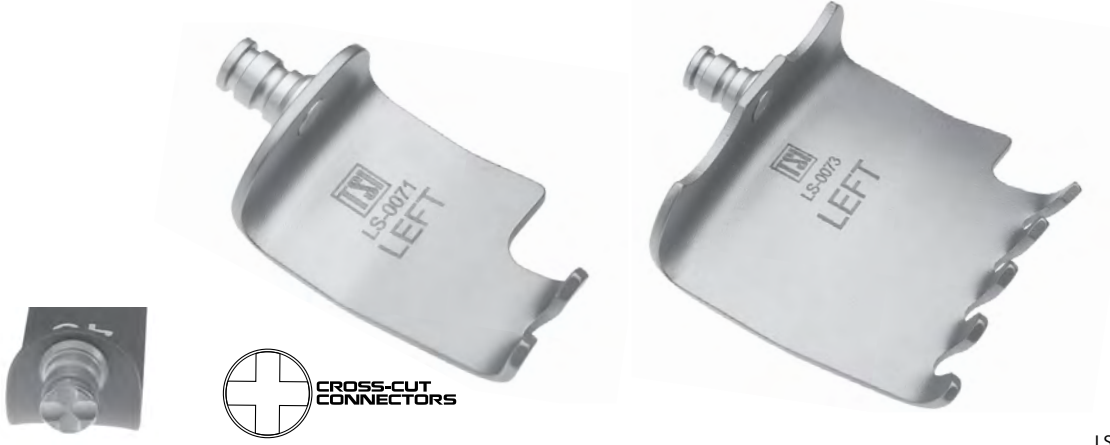
LS-0053

LONG  
TEETH



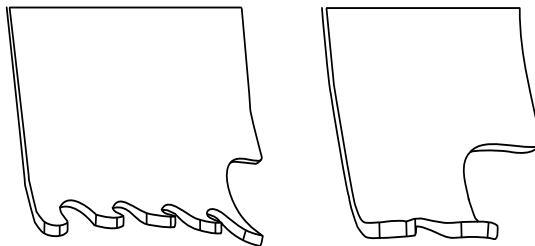
LS-0050	PHANTOM LS 45 X 50 MM
LS-0051	PHANTOM LS 45 X 60 MM
LS-0052	PHANTOM LS 45 X 70 MM
LS-0053	PHANTOM LS 45 X 80 MM
LS-0054	PHANTOM LS 45 X 100 MM
LS-0055	PHANTOM LS 45 X 120 MM

SACRAL CUTOUT BLADES - (TITANIUM)



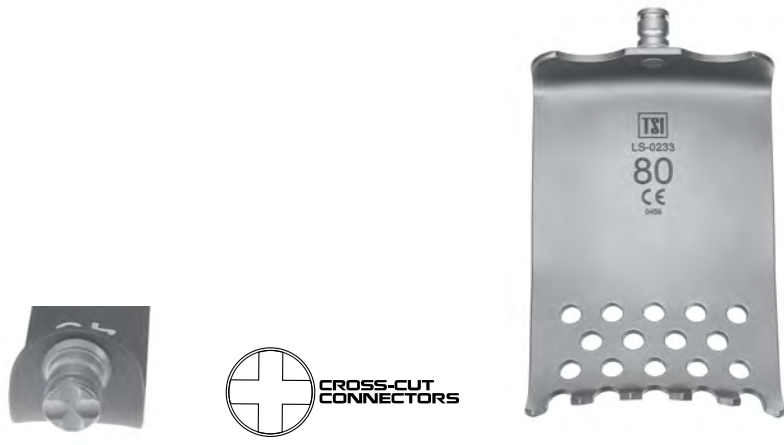
LS-0071, LS-0073

LONG  
TEETH



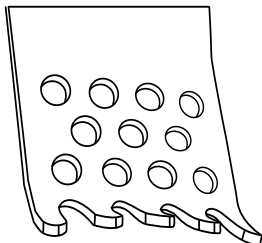
- LS-0070 PHANTOM LS RIGHT, 30 X 40 MM
- LS-0071 PHANTOM LS LEFT, 30 X 40 MM
- LS-0072 PHANTOM LS RIGHT, 60 X 45 MM
- LS-0073 PHANTOM LS LEFT, 60 X 45 MM

RETRACTOR BLADES - W/TEETH - (TITANIUM)



LS-0233

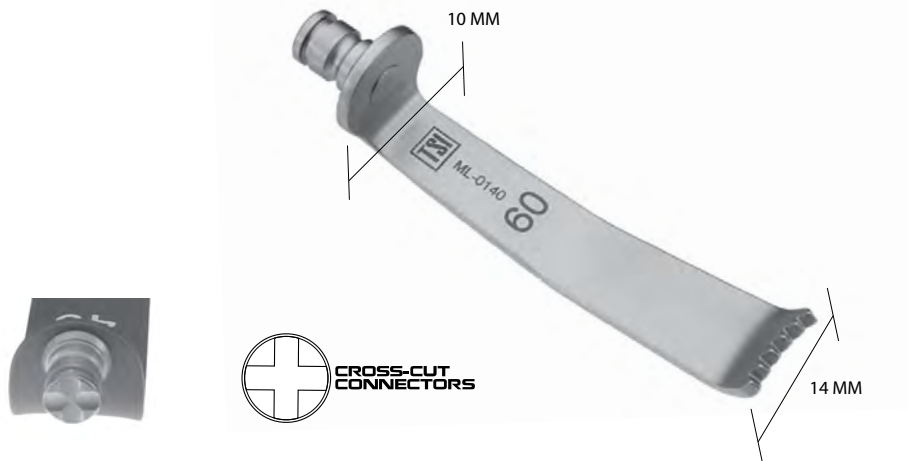
LONG  
TEETH



- LS-0230 PHANTOM LS BLADE 60 X 50 MM
- LS-0231 PHANTOM LS BLADE 60 X 60 MM
- LS-0232 PHANTOM LS BLADE 60 X 70 MM
- LS-0233 PHANTOM LS BLADE 60 X 80 MM
- LS-0234 PHANTOM LS BLADE 60 X 100 MM
- LS-0235 PHANTOM LS BLADE 60 X 120 MM



MLD BLADES - (TITANIUM)



ML-0140

MLD  
BLADES



ML-0135	PHANTOM MLD BLADE ANG 15 DEG., 14 X 35 MM
ML-0136	PHANTOM MLD BLADE ANG 15 DEG., 14 X 40 MM
ML-0137	PHANTOM MLD BLADE ANG 15 DEG., 14 X 45 MM
ML-0138	PHANTOM MLD BLADE ANG 15 DEG., 14 X 50 MM
ML-0139	PHANTOM MLD BLADE ANG 15 DEG., 14 X 55 MM
ML-0140	PHANTOM MLD BLADE ANG 15 DEG., 14 X 60 MM
ML-0141	PHANTOM MLD BLADE ANG 15 DEG., 14 X 65 MM
ML-0142	PHANTOM MLD BLADE ANG 15 DEG., 14 X 70 MM
ML-0143	PHANTOM MLD BLADE ANG 15 DEG., 14 X 75 MM
ML-0144	PHANTOM MLD BLADE ANG 15 DEG., 14 X 80 MM
ML-0146	PHANTOM MLD BLADE ANG 15 DEG., 14 X 90 MM

LUMBAR RETRACTOR FRAME



LS-0100

LS-0100 PHANTOM LS LUMBAR RETRACTOR BODY FOR MULTIPLE BLADES - 250 MM RACK

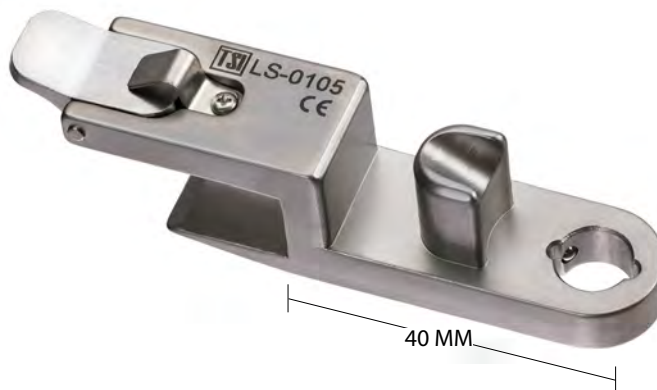
## FRONT-LOADING RETRACTOR BLADE HOLDER



LS-0103

LS-0103 PHANTOM LS FRONT-LOADING RETRACTOR BLADE HOLDER FOR LS-0100

## TOP LOADING RETRACTOR BLADE HOLDER



LS-0105

LS-0105 PHANTOM LS TOP LOADING RETRACTOR BLADE HOLDER, EXTENDED LENGTH

ADJUSTABLE BLADE HOLDER



- Retractor blade not included

LS-0102

LS-0102 PHANTOM LS ADJUSTABLE BLADE HOLDER FOR LS-0100

TOP LOADING RETRACTOR BLADE HOLDER



LS-0201

LS-0201 PHANTOM LS TOP LOADING RETRACTOR BLADE HOLDER, EXTENDED LENGTH

## BLADE HOLDER FOR MULTI LEVEL



CS-1710

CS-1710 PHANTOM CS BLADE HOLDER FOR MULTI LEVEL

## T-HANDLE CRANK



LS-0101

LS-0101 PHANTOM LS T-HANDLE CRANK FOR LS-0100

### LS-1700 - LS-1702 LUMBAR INSTRUMENT CASE



LS-0700

LS-0700 PHANTOM LS-1700 - LS-1702 INSTRUMENT CASE

### LS-1710 LUMBAR INSTRUMENT CASE



LS-0705

LS-0705 PHANTOM LS-1702 - LS-1710 INSTRUMENT CASE

**LT-1500 & LT-1501 LUMBAR INSTRUMENT CASE**



LS-0701

LS-0701 PHANTOM LT-1500 - LT-1501 INSTRUMENT CASE

**NOTES**

A series of 15 horizontal lines provided for writing notes.

PHANTOM MC SETS LS-1800 - LS-1802, LS-1801L

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# Phantom

PHANTOM MC SETS  
LS-1800 - LS-1802, LS-1801L

INSTRUMENT SPECIFICATIONS

# Phantom MC

Phantom MC™ Front Loading Retractor System

LS-0300 & LS-0398  
PHANTOM MC™ FRONT-LOADING  
RETRACTOR

Unique extended length improves  
access to the pedicles and multi  
level procedures

LS-0300  
PHANTOM MC™  
FRONT-LOADING  
RETRACTOR

LS-0398  
PHANTOM MC™  
EXTENSION BAR

Stackable Blades  
& Hooks





## MC LUMBAR RETRACTOR SET W/ LONG BLADES & HOOKS



LS-1800

### LS-1800 PHANTOM MC RETRACTOR SET W/LONG BLADES & HOOKS

		ea.			ea.
LS-0300	HINGED RETRACTOR FRAME, 120 MM RACK	1	LS-0374	HOOK, 80 MM	1
LS-0302	WIDE MUSCLE BLADE, 27 X 40 MM, RED	2	LS-0376	HOOK, 90 MM	1
LS-0304	WIDE MUSCLE BLADE, 27 X 50 MM, VIOLET	2	LS-0378	HOOK, 100 MM	1
LS-0306	WIDE MUSCLE BLADE, 27 X 60 MM, GOLD	2	LS-0390	5 MM MANIPULATION HOOK, ANGLED	1
LS-0308	WIDE MUSCLE BLADE, 27 X 70 MM, LIGHT GREEN	2	LS-0392	9" DOUBLED-ENDED BLUNT ELEVATOR	1
LS-0310	WIDE MUSCLE BLADE, 27 X 80 MM, TURQUOISE	2	LS-0393	10.5" COBB STYLE ELEVATOR, SEMISHARP, 19 MM	1
LS-0312	WIDE MUSCLE BLADE, 27 X 90 MM, FUCHSIA	2	LS-0394	5" ATRAUMATIC SUCTION TUBE, 5 FR	1
LS-0314	WIDE MUSCLE BLADE, 27 X 100 MM, CHOCOLATE	2	LS-0395	5" ATRAUMATIC SUCTION TUBE, 7 FR	1
LS-0316	WIDE MUSCLE BLADE, 27 X 110 MM, TURQ. SPLASH	2	LS-0396	5" ATRAUMATIC SUCTION TUBE, 9 FR	1
LS-0320	NARROW MUSCLE BLADE, 22 X 40 MM, RED	2	LS-0397	5" ATRAUMATIC SUCTION TUBE, 12 FR	1
LS-0322	NARROW MUSCLE BLADE, 22 X 50 MM, VIOLET	2	LS-0398	E X TENSION BAR	2
LS-0324	NARROW MUSCLE BLADE, 22 X 60 MM, GOLD	2	LS-0399	FORAMINAL PROBE	1
LS-0326	NARROW MUSCLE BLADE, 22 X 70 MM, LIGHT GREEN	2	LS-0400	BALL TIP PROBE 4 MM	1
LS-0328	NARROW MUSCLE BLADE, 22 X 80 MM, TURQUOISE	2	LS-0401	BALL TIP PROBE 7 MM	1
LS-0330	NARROW MUSCLE BLADE, 22 X 90 MM, FUCHSIA	2	LS-0402	NERVE ROOT RETRACTOR	1
LS-0332	NARROW MUSCLE BLADE, 22 X 100 MM, CHOCOLATE	2	CS-0106	CS COLOR-CODED DEPTH GAUGE	1
LS-0334	NARROW MUSCLE BLADE, 22 X 110 MM, TURQ. SPLASH	2	LS-0800	STERILIZATION TRAY (FOR LS-1800, 1801, & 1802 SETS)	1
LS-0340	MULTI TOOTHED HOOK, 30 MM	1			
LS-0342	MULTI TOOTHED HOOK, 40 MM	1			
LS-0344	MULTI TOOTHED HOOK, 50 MM	1			
LS-0346	MULTI TOOTHED HOOK, 60 MM	1			
LS-0348	MULTI TOOTHED HOOK, 70 MM	1			
LS-0350	MULTI TOOTHED HOOK, 80 MM	1			
LS-0352	MULTI TOOTHED HOOK, 90 MM	1			
LS-0354	MULTI TOOTHED HOOK, 100 MM	1			
LS-0360	WIDE MUSCLE BLADE OFFSET, 27 X 60 MM, GOLD	2			
LS-0362	WIDE MUSCLE BLADE OFFSET, 27 X 70 MM, LGHT GRN	2			
LS-0364	WIDE MUSCLE BLADE OFFSET, 27 X 80 MM, TURQ.	2			
LS-0366	WIDE MUSCLE BLADE OFFSET, 27 X 90 MM, FUCHSIA	2			
LS-0368	WIDE MUSCLE BLADE OFFSET, 27 X 100 MM, CHOCOLATE	2			
LS-0370	WIDE MUSCLE BLADE OFFSET, 27 X 110 MM, TURQ. SPLSH	2			
LS-0380	HOOK, 30 MM	1			
LS-0382	HOOK, 40 MM	1			
LS-0384	HOOK, 50 MM	1			
LS-0386	HOOK, 60 MM	1			
LS-0388	HOOK, 70 MM	1			

MC LUMBAR LIGHTED RETRACTOR SET

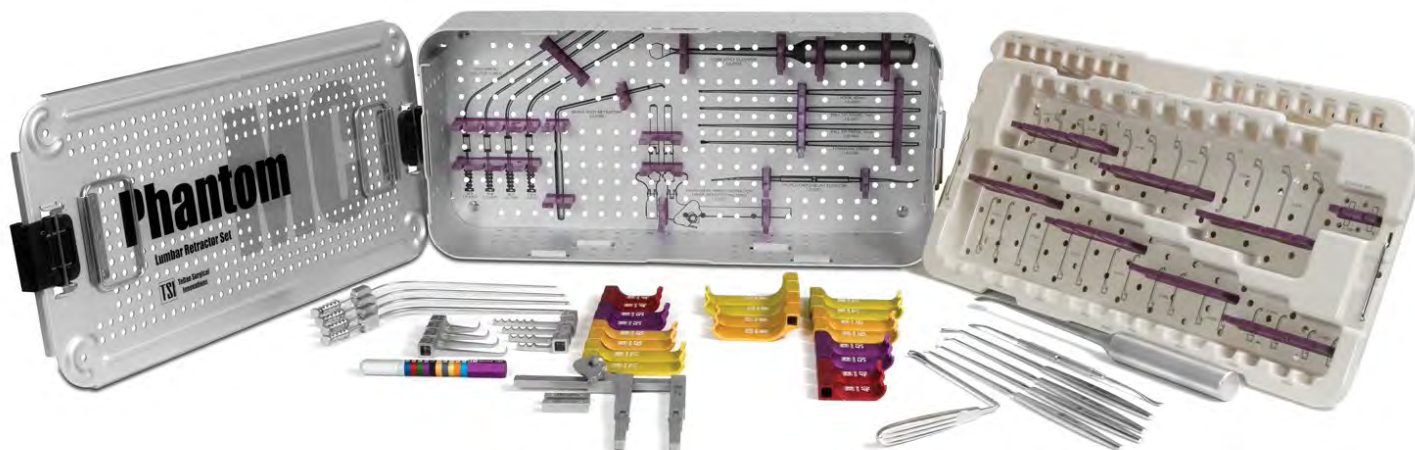


LS-1801L

LS-1800L PHANTOM MC LIGHTED RETRACTOR SET

		ea.			ea.
LS-0300	HINGED RETRACTOR FRAME, 120 MM RACK	1	LS-0393	10.5" COBB STYLE ELEVATOR, SEMISHARP, 19 MM	1
LS-0500	LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 40 MM, RED	2	LS-0394	5" ATRAUMATIC SUCTION TUBE, 5 FR	1
LS-0501	LIGHTED, NARROW MUSCLE BLDE OFFSET, 22 X 50 MM, VIOLET	2	LS-0395	5" ATRAUMATIC SUCTION TUBE, 7 FR	1
LS-0502	LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 60 MM, GOLD	2	LS-0396	5" ATRAUMATIC SUCTION TUBE, 9 FR	1
LS-0503	LIGHTED, NARROW MUSC. BLDE OFFSET, 22 X 70 MM, LGHT GRN	2	LS-0397	5" ATRAUMATIC SUCTION TUBE, 12 FR	1
LS-0504	LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 80 MM, TURQ.	2	LS-0398	E X TENSION BAR	2
LS-0505	LIGHTED, NRRW MUSCLE BLADE OFFSET, 22 X 90 MM, FUCHSIA	2	LS-0399	FORAMINAL PROBE	1
LS-0506	LIGHTED, NRRW MUSCLE BLDE OFFSET, 22 X 100 MM, CHOC.	2	LS-0400	BALL TIP PROBE 4 MM	1
LS-0507	LIGHT., NRRW MSCLE BLDE OFFSET, 22 X 110 MM, TURQ. SPLSH	2	LS-0401	BALL TIP PROBE 7 MM	1
LS-0340	MULTI TOOTHED HOOK, 30 MM	1	LS-0402	NERVE ROOT RETRACTOR	1
LS-0342	MULTI TOOTHED HOOK, 40 MM	1	CS-0106	PHANTOM CS COLOR-CODED DEPTH GAUGE	1
LS-0344	MULTI TOOTHED HOOK, 50 MM	1	LS-0800L	STERILIZATION TRAY (FOR LS-1800L SET)	1
LS-0346	MULTI TOOTHED HOOK, 60 MM	1	ML-0045	PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR	1
LS-0348	MULTI TOOTHED HOOK, 70 MM	1	ML-0051	PHANTOM ML LED LIGHT SOURCE	1
LS-0350	MULTI TOOTHED HOOK, 80 MM	1			
LS-0352	MULTI TOOTHED HOOK, 90 MM	1			
LS-0354	MULTI TOOTHED HOOK, 100 MM	1			
LS-0510	LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 60 MM, GOLD	2			
LS-0511	LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 70 MM, LGHT GRN	2			
LS-0512	LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 80 MM, TURQ.	2			
LS-0513	LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 90 MM, FUCHSIA	2			
LS-0514	LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 100 MM, CHOC.	2			
LS-0515	LIGH., WIDE MSCLE BLDE OFFSET, 27 X 110 MM, TURQ. SPLASH	2			
LS-0380	HOOK, 30 MM	1			
LS-0382	HOOK, 40 MM	1			
LS-0384	HOOK, 50 MM	1			
LS-0386	HOOK, 60 MM	1			
LS-0388	HOOK, 70 MM	1			
LS-0374	HOOK, 80 MM	1			
LS-0376	HOOK, 90 MM	1			
LS-0378	HOOK, 100 MM	1			
LS-0390	5 MM MANIPULATION HOOK, ANGLED	1			
LS-0392	9" DOUBLED-ENDED BLUNT ELEVATOR	1			

## MC LUMBAR RETRACTOR BASIC SET

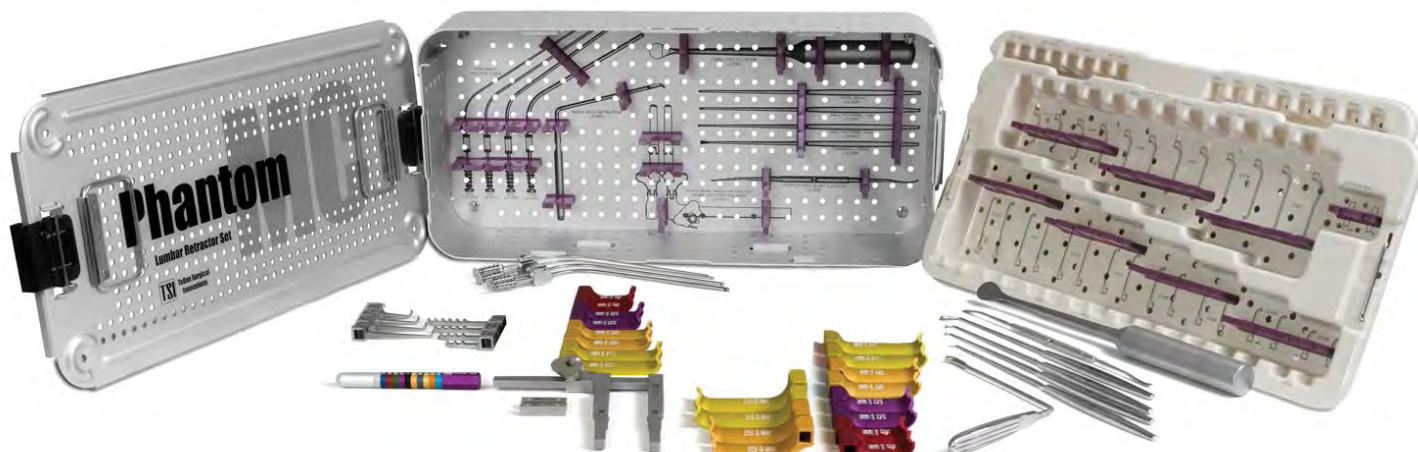


LS-1801

### LS-1801 PHANTOM MC RETRACTOR BASIC SET

		ea.
LS-0300	HINGED RETRACTOR FRAME, 120 MM RACK	1
LS-0302	WIDE MUSCLE BLADE, 27 X 40 MM, RED	2
LS-0304	WIDE MUSCLE BLADE, 27 X 50 MM, VIOLET	2
LS-0306	WIDE MUSCLE BLADE, 27 X 60 MM, GOLD	2
LS-0308	WIDE MUSCLE BLADE, 27 X 70 MM, LIGHT GREEN	2
LS-0320	NARROW MUSCLE BLADE, 22 X 40 MM, RED	2
LS-0322	NARROW MUSCLE BLADE, 22 X 50 MM, VIOLET	2
LS-0324	NARROW MUSCLE BLADE, 22 X 60 MM, GOLD	2
LS-0326	NARROW MUSCLE BLADE, 22 X 70 MM, LIGHT GREEN	2
LS-0340	MULTI TOOTHED HOOK, 30 MM	1
LS-0342	MULTI TOOTHED HOOK, 40 MM	1
LS-0344	MULTI TOOTHED HOOK, 50 MM	1
LS-0346	MULTI TOOTHED HOOK, 60 MM	1
LS-0360	WIDE MUSCLE BLADE OFFSET, 27 X 60 MM, GOLD	2
LS-0362	WIDE MUSCLE BLADE OFFSET, 27 X 70 MM, LGHT GRN	2
LS-0380	HOOK, 30 MM	1
LS-0382	HOOK, 40 MM	1
LS-0384	HOOK, 50 MM	1
LS-0386	HOOK, 60 MM	1
LS-0398	E X TENSION BAR	2
CS-0106	PHANTOM CS COLOR-CODED DEPTH GAUGE	1
LS-0800	STERILIZATION TRAY (FOR LS-1800, 1801, & 1802 SETS)	1

## MC LUMBAR RETRACTOR SET



LS-1802

## LS-1802 PHANTOM MC RETRACTOR SET

		ea.
LS-0300	HINGED RETRACTOR FRAME, 120 MM RACK	1
LS-0302	WIDE MUSCLE BLADE, 27 X 40 MM, RED	2
LS-0304	WIDE MUSCLE BLADE, 27 X 50 MM, VIOLET	2
LS-0306	WIDE MUSCLE BLADE, 27 X 60 MM, GOLD	2
LS-0308	WIDE MUSCLE BLADE, 27 X 70 MM, LIGHT GREEN	2
LS-0320	NARROW MUSCLE BLADE, 22 X 40 MM, RED	2
LS-0322	NARROW MUSCLE BLADE, 22 X 50 MM, VIOLET	2
LS-0324	NARROW MUSCLE BLADE, 22 X 60 MM, GOLD	2
LS-0326	NARROW MUSCLE BLADE, 22 X 70 MM, LIGHT GREEN	2
LS-0340	MULTI TOOTHED HOOK, 30 MM	1
LS-0342	MULTI TOOTHED HOOK, 40 MM	1
LS-0344	MULTI TOOTHED HOOK, 50 MM	1
LS-0346	MULTI TOOTHED HOOK, 60 MM	1
LS-0360	WIDE MUSCLE BLADE OFFSET, 27 X 60 MM, GOLD	2
LS-0362	WIDE MUSCLE BLADE OFFSET, 27 X 70 MM, LGHT GRN	2
LS-0380	HOOK, 30 MM	1
LS-0382	HOOK, 40 MM	1
LS-0384	HOOK, 50 MM	1
LS-0386	HOOK, 60 MM	1
LS-0390	5 MM MANIPULATION HOOK, ANGLED	1
LS-0392	9" DOUBLED-ENDED BLUNT ELEVATOR	1
LS-0393	10.5" COBB STYLE ELEVATOR, SEMISHARP, 19 MM	1
LS-0394	5" ATRAUMATIC SUCTION TUBE, 5 FR	1
LS-0395	5" ATRAUMATIC SUCTION TUBE, 7 FR	1
LS-0396	5" ATRAUMATIC SUCTION TUBE, 9 FR	1
LS-0397	5" ATRAUMATIC SUCTION TUBE, 12 FR	1
LS-0398	EXTENSION BAR	2
LS-0399	FORAMINAL PROBE	1
LS-0400	BALL TIP PROBE 4 MM	1
LS-0401	BALL TIP PROBE 7 MM	1
LS-0402	NERVE ROOT RETRACTOR	1
CS-0106	PHANTOM CS COLOR-CODED DEPTH GAUGE	1
LS-0800	STERILIZATION TRAY (FOR LS-1800, 1801, & 1802 SETS)	1

## HINGED RETRACTOR FRAME



LS-0300

LS-0300 PHANTOM MC HINGED RETRACTOR FRAME - 120 MM RACK

## HINGED RETRACTOR W/PIVOTING ARMS



LS-0449

LS-0449 PHANTOM MC HINGED RETRACTOR FRAME W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 120 MM RACK  
LS-0450 PHANTOM MC HINGED RETRACTOR FRAME W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 150 MM RACK

T-HANDLE FOR RETRACTOR W/PIVOTING ARMS



LS-0451

LS-0451 PHANTOM T-HANDLE FOR RETRACTOR W/PIVOTING ARMS

HEX DRIVER TOOL



ML-0505

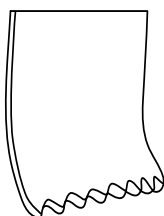
ML-0505 PHANTOM XL HEX DRIVER TOOL

### RETRACTOR BLADES - NARROW MUSCLE - SHORT TEETH - (ALUMINUM)



LS-0320 - LS-0334

**SHORT TOOTHED BLADES**



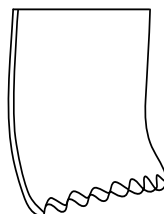
LS-0320	PHANTOM MC 20 X 40 MM, RED
LS-0322	PHANTOM MC 20 X 50 MM, VIOLET
LS-0324	PHANTOM MC 20 X 60 MM, GOLD
LS-0326	PHANTOM MC 20 X 70 MM, LIGHT GREEN
LS-0328	PHANTOM MC 20 X 80 MM, TURQUOISE
LS-0330	PHANTOM MC 22 X 90 MM, FUCHSIA
LS-0332	PHANTOM MC 22 X 100 MM, CHOCOLATE
LS-0334	PHANTOM MC 22 X 110 MM, TURQUOISE SPLASH

### RETRACTOR BLADES - WIDE MUSCLE - SHORT TEETH - (ALUMINUM)



LS-0302 - LS-0316

**SHORT TOOTHED BLADES**



LS-0302	PHANTOM MC 27 X 40 MM, RED
LS-0304	PHANTOM MC 27 X 50 MM, VIOLET
LS-0306	PHANTOM MC 27 X 60 MM, GOLD
LS-0308	PHANTOM MC 7 X 70 MM, LIGHT GREEN
LS-0310	PHANTOM MC 27 X 80 MM, TURQUOISE
LS-0312	PHANTOM MC 27 X 90 MM, FUCHSIA
LS-0314	PHANTOM MC 27 X 100 MM, CHOCOLATE
LS-0316	PHANTOM MC 27 X 110 MM, TURQUOISE SPLASH

RETRACTOR BLADES - OFFSET - SHORT TEETH - (ALUMINUM)



OFFSET

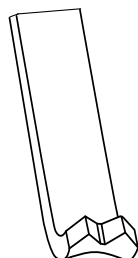
LS-0360 - LS-0370

- LS-0360 PHANTOM MC 27 X 60 MM, GOLD
- LS-0362 PHANTOM MC 27 X 70 MM, LIGHT GREEN
- LS-0364 PHANTOM MC 27 X 80 MM, TURQUOISE
- LS-0366 PHANTOM MC 27 X 90 MM, FUCHSIA
- LS-0368 PHANTOM MC 27 X 100 MM, CHOCOLATE
- LS-0370 PHANTOM MC 27 X 110 MM, TURQUOISE SPLASH

RETRACTOR BLADES - MICRO MUSCLE - SHORT TEETH - (ALUMINUM)



MICRO NARROW BLADES



LS-0460 - LS-0468

- LS-0460 PHANTOM MC 12 X 30 MM, SILVER
- LS-0461 PHANTOM MC 12 X 40 MM, RED
- LS-0462 PHANTOM MC 12 X 50 MM, VIOLET
- LS-0463 PHANTOM MC 12 X 60 MM, GOLD
- LS-0464 PHANTOM MC 12 X 70 MM, LIGHT GREEN
- LS-0465 PHANTOM MC 12 X 80 MM, TURQUOISE
- LS-0466 PHANTOM MC 12 X 90 MM, FUCHSIA
- LS-0467 PHANTOM MC 12 X 100 MM, CHOCOLATE
- LS-0468 PHANTOM MC 12 X 110 MM, TURQUOISE SPLASH



### RETRACTOR BLADES W/ LIGHT GUIDE - NARROW MUSCLE - (ALUMINUM)



- LS-0500 MC LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 40 MM, RED
- LS-0501 MC LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 50 MM, VIOLET
- LS-0502 MC LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 60 MM, GOLD
- LS-0503 MC LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 70 MM, LIGHT GREEN
- LS-0504 MC LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 80 MM, TURQUOISE
- LS-0505 MC LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 90 MM, FUCHSIA
- LS-0506 MC LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 100 MM, CHOCOLATE
- LS-0507 MC LIGHTED, NARROW MUSCLE BLADE OFFSET, 22 X 110 MM, TURQUOISE SPLASH

### RETRACTOR BLADES W/ LIGHT GUIDE- WIDE MUSCLE - (ALUMINUM)



- LS-0510 MC LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 60 MM, GOLD
- LS-0511 MC LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 70 MM, LIGHT GREEN
- LS-0512 MC LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 80 MM, TURQUOISE
- LS-0513 MC LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 90 MM, FUCHSIA
- LS-0514 MC LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 100 MM, CHOCOLATE
- LS-0515 MC LIGHTED, WIDE MUSCLE BLADE OFFSET, 27 X 110 MM, TURQUOISE SPLASH

MULTI TOOTHED HOOKS



LS-0340 - LS-0348

LS-0340	PHANTOM MC HOOK 30 MM
LS-0342	PHANTOM MC HOOK 40 MM
LS-0344	PHANTOM MC HOOK 50 MM
LS-0346	PHANTOM MC HOOK 60 MM
LS-0348	PHANTOM MC HOOK 70 MM
LS-0350	PHANTOM MC HOOK 80 MM
LS-0352	PHANTOM MC HOOK 90 MM
LS-0354	PHANTOM MC HOOK 100 MM

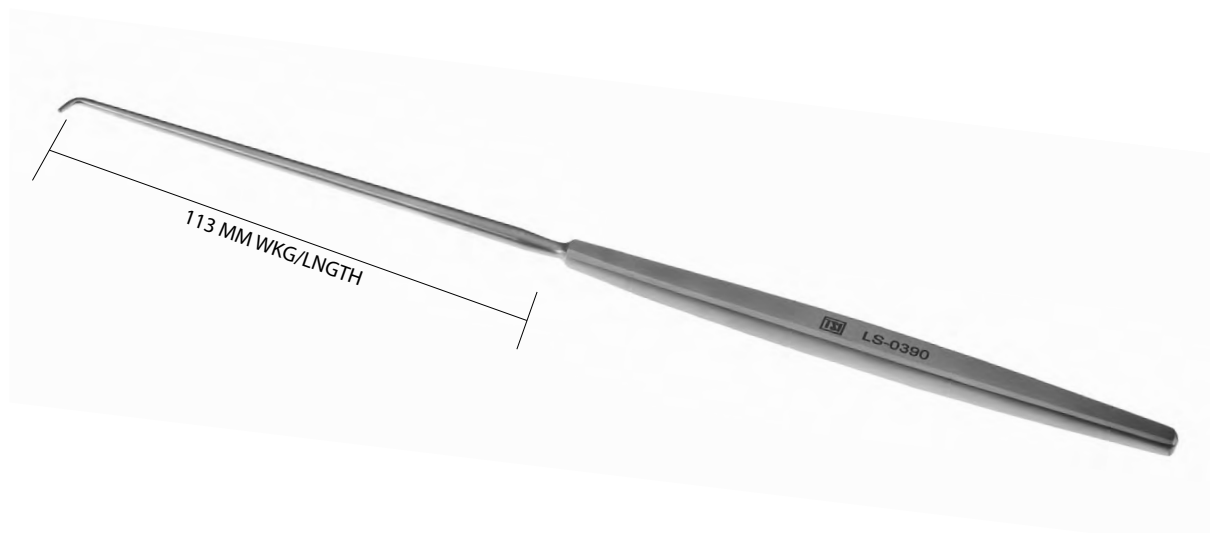
HOOKS



LS-0380 - LS-0388

LS-0380	PHANTOM MC HOOK 30 MM
LS-0382	PHANTOM MC HOOK 40 MM
LS-0384	PHANTOM MC HOOK 50 MM
LS-0386	PHANTOM MC HOOK 60 MM
LS-0388	PHANTOM MC HOOK 70 MM
LS-0374	PHANTOM MC HOOK 80 MM
LS-0376	PHANTOM MC HOOK 90 MM
LS-0378	PHANTOM MC HOOK 100 MM

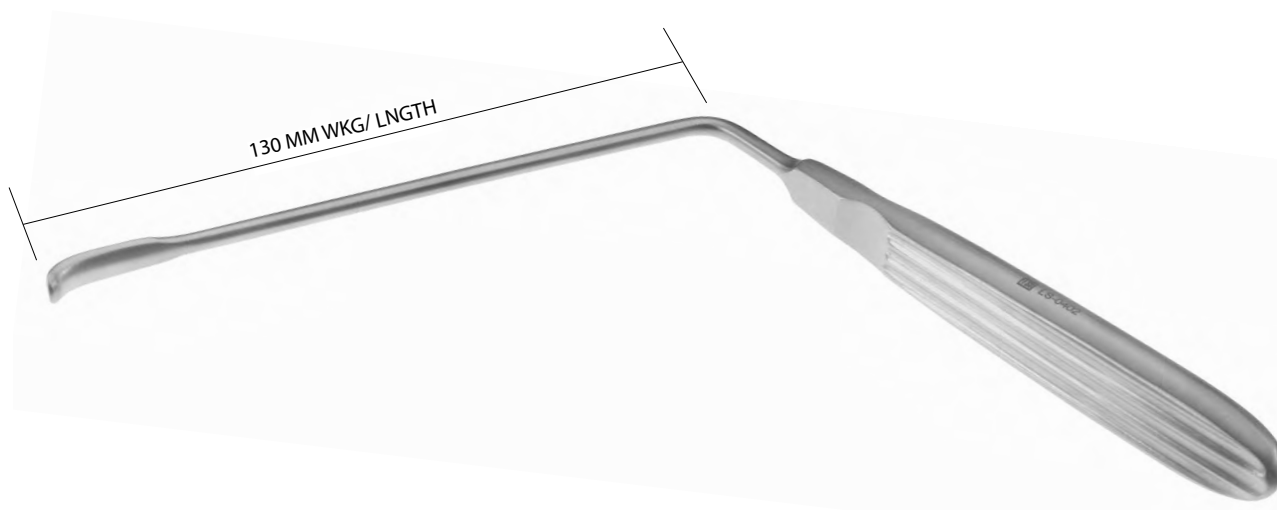
### 5 MM MANIPULATION HOOK / ANGLED



LS-0390

LS-0390 PHANTOM MC 9.4" (24 CM) MANIPULATION HOOK, ANGLED, 5 MM

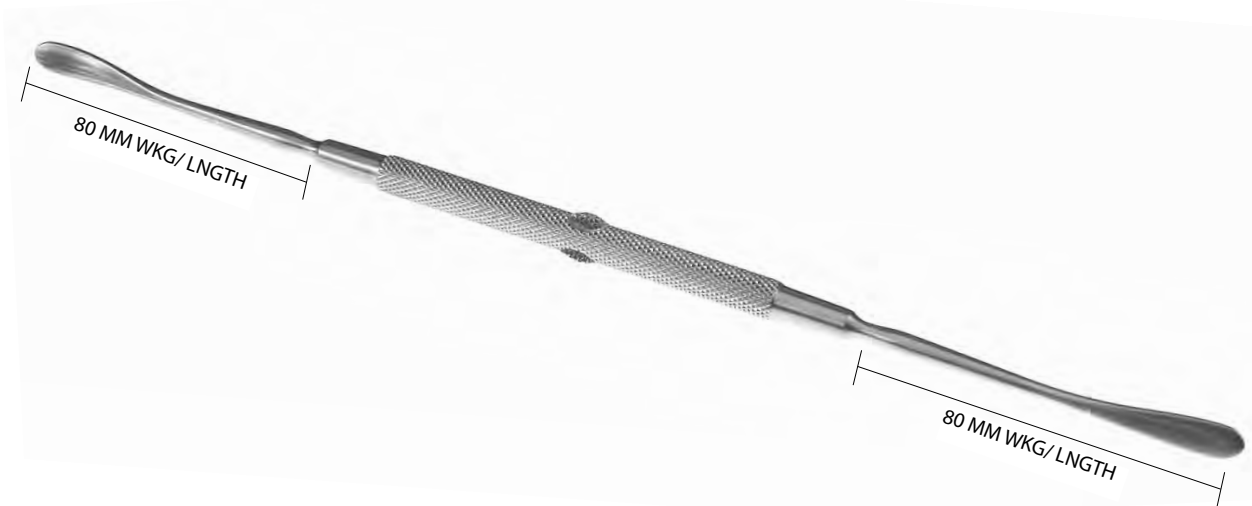
### 5" NERVE ROOT RETRACTOR



LS-0402

LS-0402 PHANTOM MC 5" (12.7 CM) NERVE ROOT RETRACTOR, 6 MM

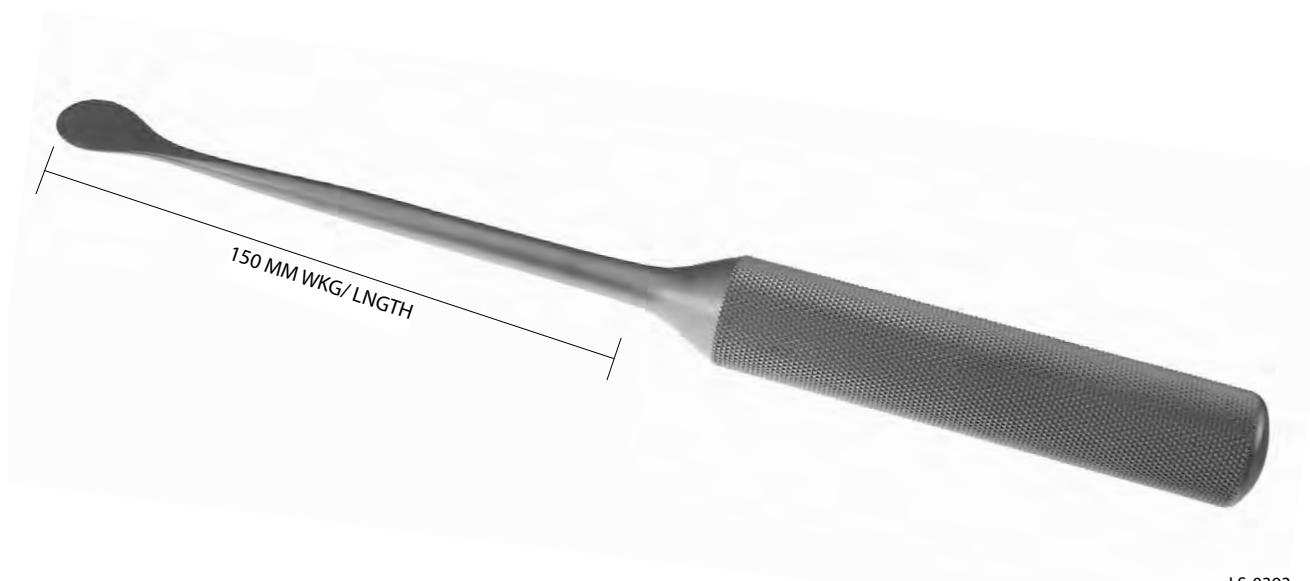
9" DOUBLE-ENDED ELEVATOR - BLUNT



LS-0392

LS-0392 PHANTOM MC 9" (23 CM) DOUBLE-ENDED BLUNT ELEVATOR

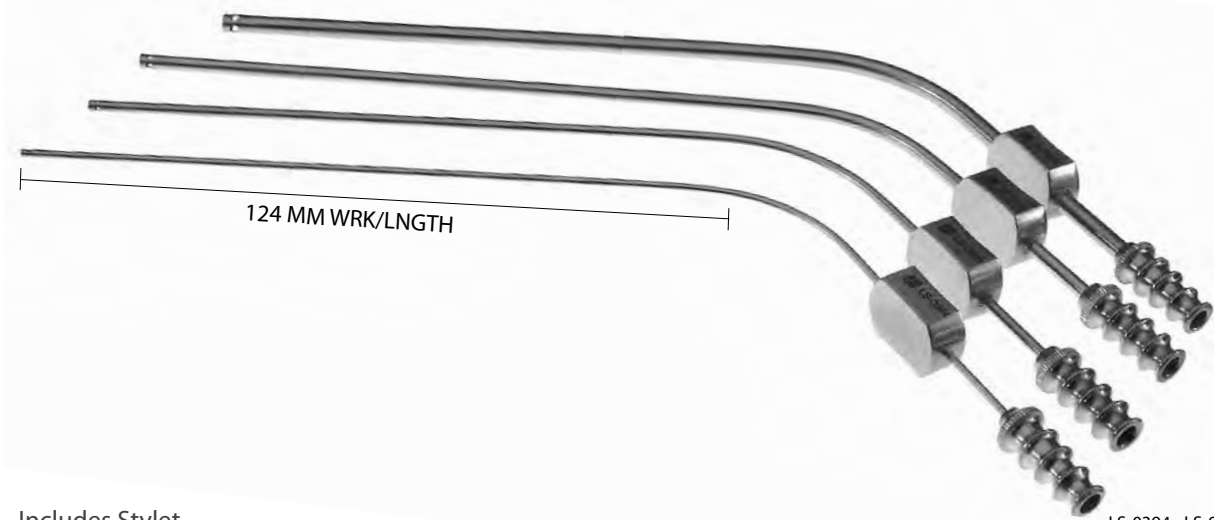
10.5" COBB STYLE ELEVATOR - SEMISHARP



LS-0393

LS-0393 PHANTOM MC 10.5" (27 CM) COBB STYLE ELEVATOR, SEMISHARP, 19 MM

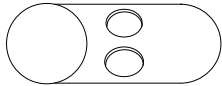
## 5" SUCTION TUBES



LS-0394 - LS-0397

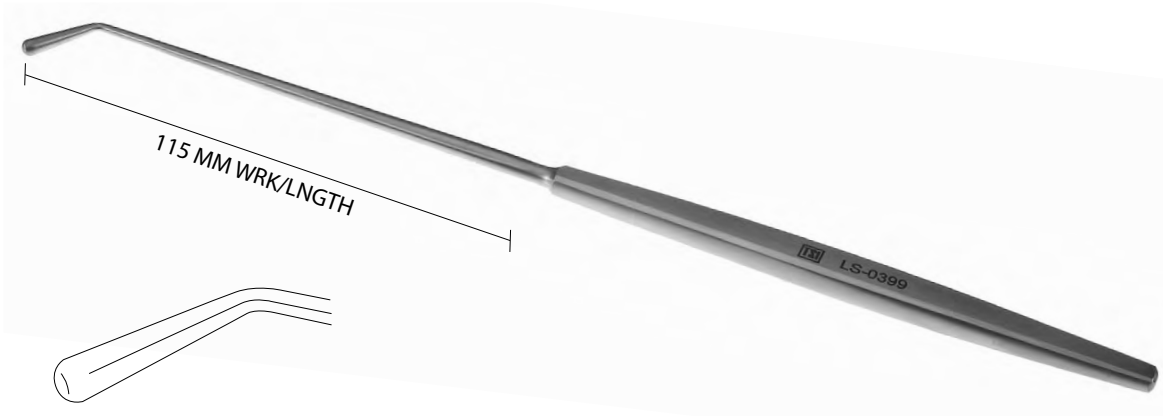
- Includes Stylet

### ATRAUMATIC TIPS



LS-0394	5" ATRAUMATIC SUCTION TUBE, 5 FR
LS-0395	5" ATRAUMATIC SUCTION TUBE, 7 FR
LS-0396	5" ATRAUMATIC SUCTION TUBE, 9 FR
LS-0397	5" ATRAUMATIC SUCTION TUBE, 12 FR

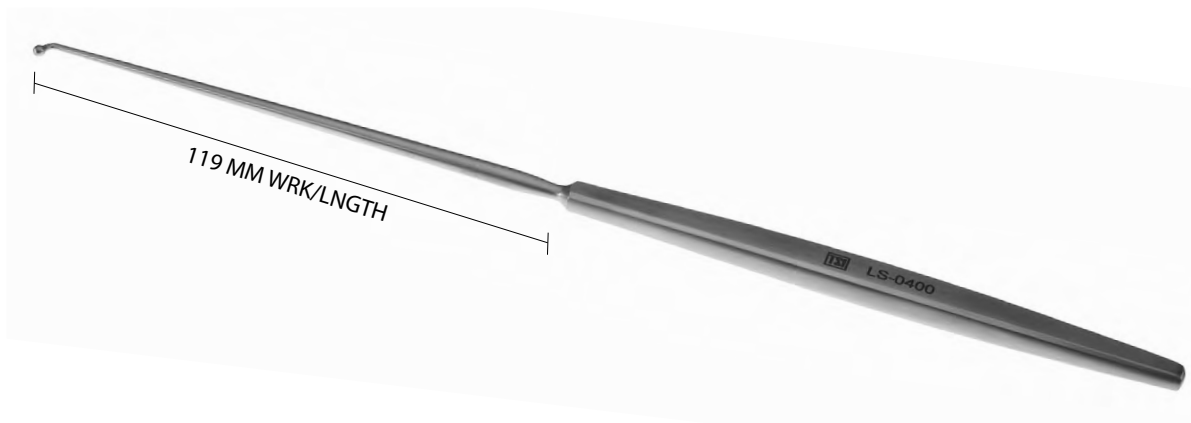
## FORAMINAL PROBE



LS-0399

LS-0399 PHANTOM MC 9" (23 CM) FORAMINAL PROBE, BALL TIP PROBE, 4 MM

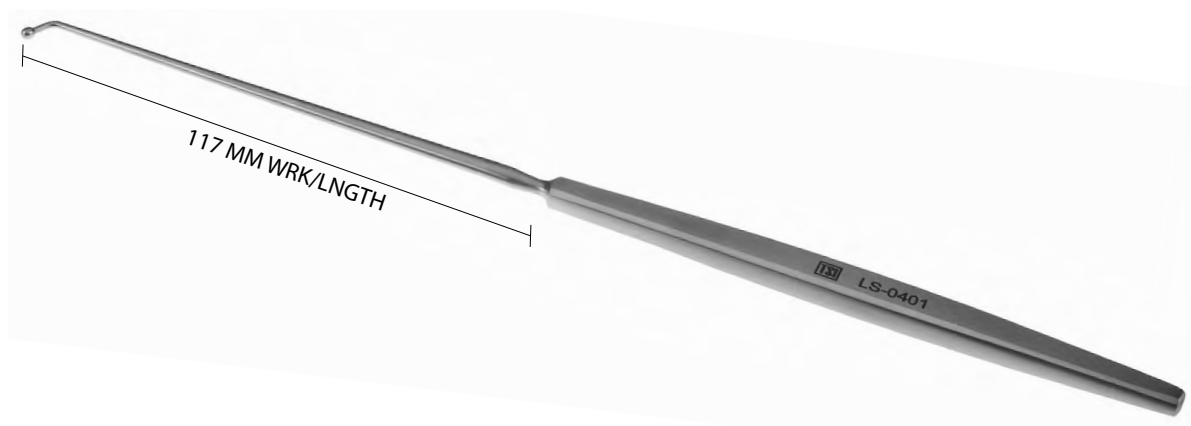
4 MM ANGLED BALL TIP PROBE



LS-0400

LS-0400 PHANTOM MC 9.4" (24 CM) ANGLED BALL TIP PROBE, 4 MM

7 MM ANGLED BALL TIP PROBE



LS-0401

LS-0401 PHANTOM MC 9.4" (24 CM) ANGLED BALL TIP PROBE, 7 MM

## EXTENSION BARS



LS-0398

LS-0398 PHANTOM MC EXTENSION BARS FOR MULTI LEVEL PROCEDURES

## COLOR-CODED DEPTH GAUGE



CS-0106

CS-0106 PHANTOM CS COLOR-CODED DEPTH GAUGE

## LED LIGHT SOURCE



ML-0051

ML-0051 ML LED LIGHT SOURCE, 52 WATTS, ONLY COMPATIBLE W/TSI LIGHT CABLES

## LIGHT CABLE W/TEDAN CONNECTOR



ML-0046

- ML-0045 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
- ML-0046 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, - (5 PER BOX), 10 FT LENGTH, PRE-PACKAGED STERILE, SINGLE USE
- ML-0047 PHANTOM ML LIGHT CABLE, SINGLE ENDED W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
- ML-0048 PHANTOM ML LIGHT CABLE, STRONG CURVE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE



### LS-1800 , LS-1801, LS-1802 & LS-1800L LUMBAR INSTRUMENT CASE



LS-0800

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LS-0800	PHANTOM MC LS-1800 - LS-1801 - LS-1802 LUMBAR INSTRUMENT CASE
LS-0800L	PHANTOM MC LS-1800L INSTRUMENT CASE
LS-0800-05	PHANTOM MC LIGHTED BLADE TRAY INSERT



PHANTOM ML MINIMALLY INVASIVE RETRACTOR SETS ML-2000 - ML-2003

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PHANTOM ML SETS  
ML-2000 & ML-2003

INSTRUMENT SPECIFICATIONS

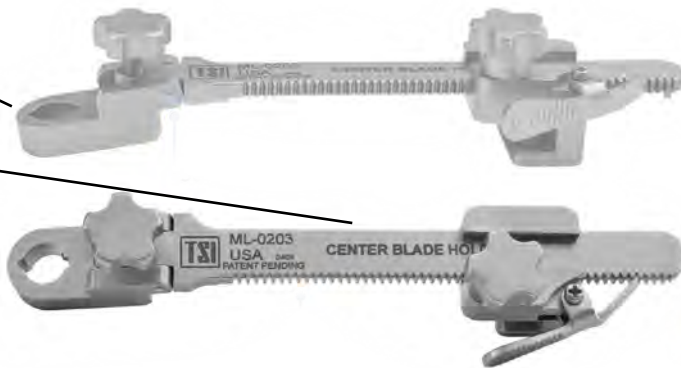
# Phantom ML



ML-0204  
PHANTOM ML™  
SURE-LOCK™  
COUNTER  
SIDE LOADING  
RETRACTOR with  
double hinge arms

ML-0203  
Pivoting up to 30°  
for better wound  
exposure

Center blade  
provides three way  
retraction



## ML RETRACTOR SET



ML-2000

### ML-2000 PHANTOM ML RETRACTOR SET

		ea.			ea.
CS-0105	CS SIDE-LOADING RETRACTOR BLADE HANDLE	2	ML-0258	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 120 MM, PURPLE SPLASH	1
LS-0086	LS HOOK STRAIGHT, 40 MM	1	ML-0270	ML COUNTER RETRACTOR BLADES 40 MM TITANIUM	2
LS-0087	LS HOOK STRAIGHT, 50 MM	1	ML-0272	ML COUNTER RETRACTOR BLADES 50 MM TITANIUM	2
LS-0088	LS HOOK STRAIGHT, 60 MM	1	ML-0274	ML COUNTER RETRACTOR BLADES 60 MM TITANIUM	2
LS-0089	LS HOOK STRAIGHT, 70 MM	1	ML-0276	ML COUNTER RETRACTOR BLADES 70 MM TITANIUM	2
LS-0090	LS HOOK STRAIGHT, 80 MM	1	ML-0278	ML COUNTER RETRACTOR BLADES 80 MM TITANIUM	2
LS-0091	LS HOOK STRAIGHT, 90 MM	1	ML-0280	ML COUNTER RETRACTOR BLADES 90 MM TITANIUM	2
LS-0092	LS HOOK STRAIGHT, 100 MM	1	ML-0281	ML COUNTER RETRACTOR BLADES 100 MM TITANIUM	2
LS-0451	T-HANDLE FOR RETRACTOR WITH PIVOTING ARMS	2	ML-0282	ML COUNTER RETRACTOR BLADES 110 MM TITANIUM	2
ML-0040	ML ARTICULATING ACCESSORY ARM ANGLED COL. W/QUICK CONNECT	1	ML-0283	ML COUNTER RETRACTOR BLADES 120 MM TITANIUM	2
ML-0041	ML TABLE CLAMP F/ARTICULATING ARM	1	ML-0290	ML FAN BLADES 50 MM TITANIUM	2
ML-0044	ML RACK CLAMP W/QUICK CONNECT F/ARTICULATING ARM	1	ML-0291	ML FAN BLADES 60 MM TITANIUM	2
ML-0045	ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH	1	ML-0292	ML FAN BLADES 70 MM TITANIUM	2
ML-0051	ML LED LIGHT SOURCE	1	ML-0293	ML FAN BLADES 80 MM TITANIUM	2
ML-0200	ML BASE RETRACTOR W/PIVOTING ARMS	1	ML-0294	ML FAN BLADES 90 MM TITANIUM	2
ML-0201	ML RACK CONNECTOR	1	ML-0295	ML FAN BLADES 100 MM TITANIUM	2
ML-0203	ML PIVOTING CENTER BLADE	1	ML-0296	ML FAN BLADES 110 MM TITANIUM	2
ML-0204	ML COUNTER RETRACTOR W/PIVOTING ARMS	1	ML-0297	ML FAN BLADES 120 MM TITANIUM	2
ML-0221	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 50 MM, VIOLET	1	ML-0300	ML K-WIRE, SHARP 1.4 MM X 230 MM (9"), SINGLE USE (6 PER PK.)	1
ML-0222	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 60 MM, GOLD	1	ML-0310	ML DILATOR #1, 8 MM, SILVER	1
ML-0223	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 70 MM, LIGHT GREEN	1	ML-0312	ML DILATOR #2, 13 MM, GREEN	1
ML-0224	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 80 MM, TURQUOISE	1	ML-0314	ML DILATOR #3, 18 MM, BLUE	1
ML-0225	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 90 MM, FUCHSIA	1	ML-0316	ML DILATOR #4, 22 MM, RED	1
ML-0226	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 100 MM, CHOCOLATE	1	ML-0320	ML OBTURATOR, 18 MM, BLUE	1
ML-0227	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 110 MM, TURQ. SPLASH	1	ML-0322	ML OBTURATOR, 22 MM, RED	1
ML-0228	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 120 MM, PURPLE SPLASH	1	ML-0700-01	ML STERILIZATION TRAY - BLADES (FOR ML-2000 SET)	1
ML-0251	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 50 MM, VIOLET	1	ML-0700-02	ML/XL STERILIZATION TRAY - ACCESSORIES	1
ML-0252	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 60 MM, GOLD	1			
ML-0253	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 70 MM, LIGHT GREEN	1			
ML-0254	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 80 MM, TURQUOISE	1			
ML-0255	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 90 MM, FUCHSIA	1			
ML-0256	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 100 MM, CHOCOLATE	1			
ML-0257	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 110 MM, TURQ. SPLASH	1			

## ML RING RETRACTOR SET

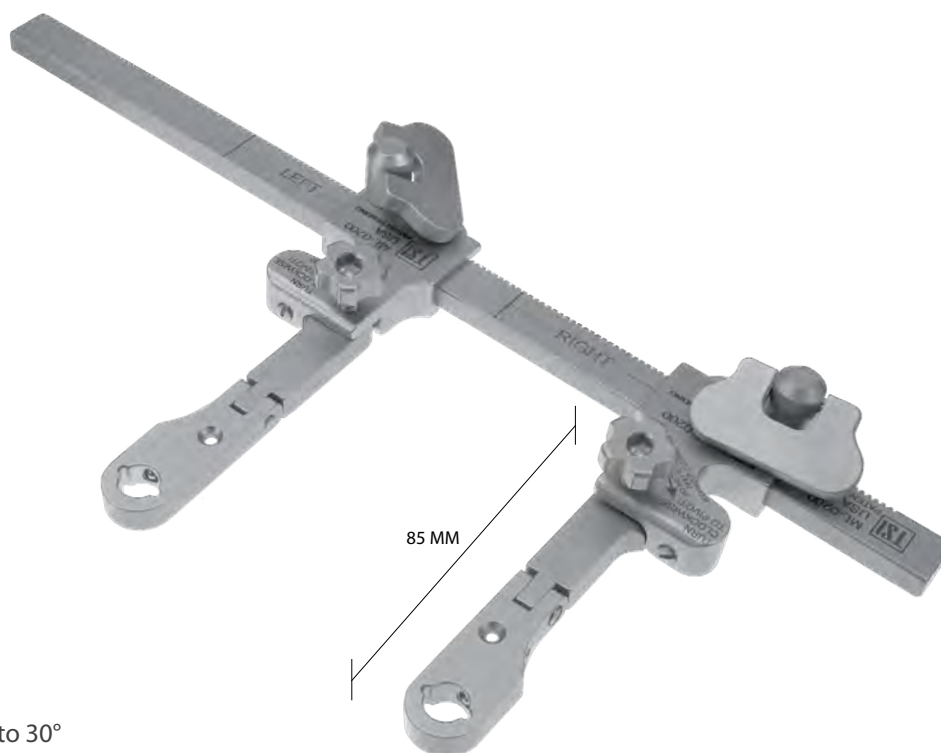


ML-2003

## ML-2003 PHANTOM ML RING RETRACTOR SET

LS-0451	T-HANDLE FOR RETRACTOR W/PIVOTING ARMS	1	ML-0580	ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 80 MM TI	2
ML-0041	ML TABLE CLAMP F/ARTICULATING ARM	1	ML-0581	ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 90 MM TI	2
ML-0045	ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH	1	ML-0582	ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 100 MM TI	2
ML-0051	ML LED LIGHT SOURCE	1	ML-0583	ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 110 MM TI	2
ML-0060	ARTICULATING ACCESSORY ARM ANGLED COLUMN W/RACK CLAMP	1	ML-0584	ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 20 MM TI	2
ML-0221	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 50 MM, VIOLET	1	ML-0591	ML FAN BLADES, REVERSE BALL SNAP, 50 MM TITANIUM	2
ML-0222	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 60 MM, GOLD	1	ML-0592	ML FAN BLADES, REVERSE BALL SNAP, 60 MM TITANIUM	2
ML-0223	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 70 MM, LIGHT GREEN	1	ML-0593	ML FAN BLADES, REVERSE BALL SNAP, 70 MM TITANIUM	2
ML-0224	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 80 MM, TURQUOISE	1	ML-0594	ML FAN BLADES, REVERSE BALL SNAP, 80 MM TITANIUM	2
ML-0225	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 90 MM, FUCHSIA	1	ML-0595	ML FAN BLADES, REVERSE BALL SNAP, 90 MM TITANIUM	2
ML-0226	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 100 MM, CHOCOLATE	1	ML-0596	ML FAN BLADES, REVERSE BALL SNAP, 100 MM TITANIUM	2
ML-0227	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 110 MM, TURQ. SPLASH	1	ML-0597	ML FAN BLADES, REVERSE BALL SNAP, 110 MM TITANIUM	2
ML-0228	ML RETRACTOR BLADES (L&R), 18 MM DIA. X 120 MM, PURPLE SPLASH	1	ML-0598	ML FAN BLADES, REVERSE BALL SNAP, 120 MM TITANIUM	2
ML-0251	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 50 MM, VIOLET	1	ML-0703	ML STERILIZATION TRAY (FOR ML-2003 SET)	1
ML-0252	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 60 MM, GOLD	1			
ML-0253	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 70 MM, LIGHT GREEN	1			
ML-0254	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 80 MM, TURQUOISE	1			
ML-0255	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 90 MM, FUCHSIA	1			
ML-0256	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 100 MM, CHOCOLATE	1			
ML-0257	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 110 MM, TURQ. SPLASH	1			
ML-0258	ML RETRACTOR BLADES (L&R), 22 MM DIA. X 120 MM, PURPLE SPLASH	1			
ML-0300	ML K-WIRE, SHARP 1.4 MM X 230 MM (9"), SINGLE USE (6 PER PACK)	1			
ML-0310	ML DILATOR #1, 8 MM, SILVER	1			
ML-0312	ML DILATOR #2, 13 MM, GREEN	1			
ML-0314	ML DILATOR #3, 18 MM, BLUE	1			
ML-0316	ML DILATOR #4, 22 MM, RED	1			
ML-0502	ML 4 WAY PIVOTING RING RETRACTOR	1			
ML-0505	XL HEX DRIVER TOOL	1			
ML-0572	ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 40 MM TI	2			
ML-0574	ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 50 MM TI	2			
ML-0576	ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 60 MM TI	2			
ML-0578	ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 70 MM TI	2			

### BASE RETRACTOR W/ PIVOTING ARMS



- Pivoting up to 30°

ML-0200

- ML-0200 PHANTOM ML BASE RETRACTOR W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 250 MM RACK
- ML-0207 PHANTOM ML BASE RETRACTOR W/PIVOTING ARMS, SIDE LOADING, W/ T-HANDLE LS-0451 - 225 MM RACK

### COUNTER RETRACTOR W/ PIVOTING ARMS



- Pivoting up to 30°

ML-0204

- ML-0204 PHANTOM ML COUNTER RETRACTOR W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 225 MM RACK

## RACK CONNECTOR



ML-0201

ML-0201 PHANTOM ML RACK CONNECTOR FOR RETRACTORS

## PIVOTING CENTER BLADE



- Pivoting up to 30°

ML-0203

ML-0203 ML PIVOTING CENTER BLADE - 130 MM RACK



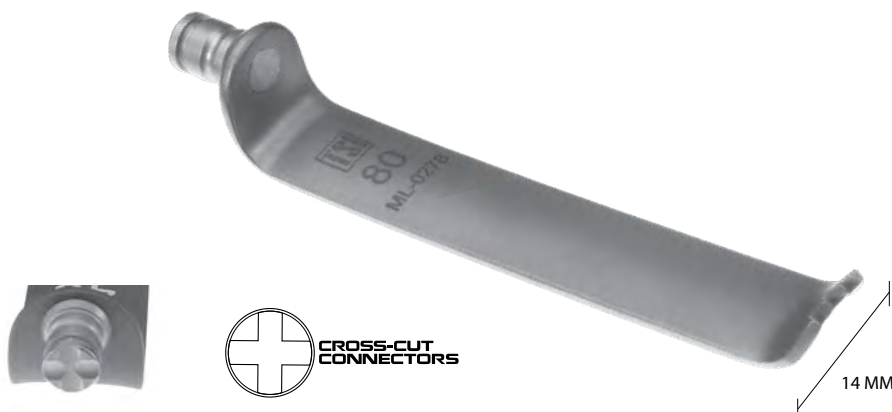
## GELPI HOOK - STRAIGHT



LS-0090

- LS-0095 PHANTOM LS HOOK STRAIGHT, 25 MM
- LS-0096 PHANTOM LS HOOK STRAIGHT, 30 MM
- LS-0097 PHANTOM LS HOOK STRAIGHT, 45 MM
- LS-0086 PHANTOM LS HOOK STRAIGHT, 40 MM
- LS-0087 PHANTOM LS HOOK STRAIGHT, 50 MM
- LS-0088 PHANTOM LS HOOK STRAIGHT, 60 MM
- LS-0089 PHANTOM LS HOOK STRAIGHT, 70 MM
- LS-0090 PHANTOM LS HOOK STRAIGHT, 80 MM**
- LS-0091 PHANTOM LS HOOK STRAIGHT, 90 MM
- LS-0092 PHANTOM LS HOOK STRAIGHT, 100 MM
- LS-0093 PHANTOM LS HOOK STRAIGHT, 120 MM

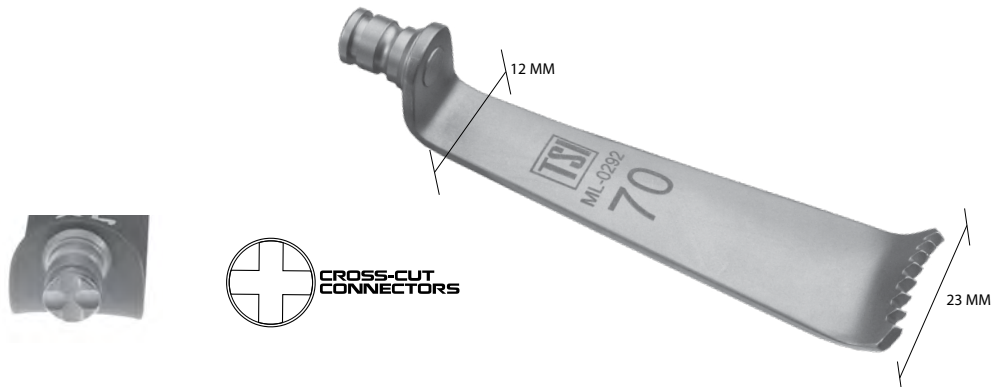
## COUNTER RETRACTOR BLADES - (TITANIUM)



ML-0278

- ML-0242 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 25 MM
- ML-0244 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 30 MM
- ML-0246 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 35 MM
- ML-0270 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 40 MM
- ML-0271 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 45 MM
- ML-0272 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 50 MM
- ML-0274 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 60 MM
- ML-0276 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 70 MM
- ML-0278 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 80 MM**
- ML-0280 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 90 MM
- ML-0281 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 100 MM
- ML-0282 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 110 MM
- ML-0283 PHANTOM ML COUNTER RETRACTOR BLADES 14 MM X 120 MM

## FAN RETRACTOR BLADES - (TITANIUM)



ML-0292

ML-0285	PHANTOM ML FAN BLADES 23 MM X 25 MM
ML-0286	PHANTOM ML FAN BLADES 23 MM X 30 MM
ML-0287	PHANTOM ML FAN BLADES 23 MM X 35 MM
ML-0288	PHANTOM ML FAN BLADES 23 MM X 40 MM
ML-0289	PHANTOM ML FAN BLADES 23 MM X 45 MM
ML-0290	PHANTOM ML FAN BLADES 23 MM X 50 MM
ML-0291	PHANTOM ML FAN BLADES 23 MM X 60 MM
ML-0292	PHANTOM ML FAN BLADES 23 MM X 70 MM
ML-0293	PHANTOM ML FAN BLADES 23 MM X 80 MM
ML-0294	PHANTOM ML FAN BLADES 23 MM X 90 MM
ML-0295	PHANTOM ML FAN BLADES 23 MM X 100 MM
ML-0296	PHANTOM ML FAN BLADES 23 MM X 110 MM
ML-0297	PHANTOM ML FAN BLADES 23 MM X 120 MM
ML-0298	PHANTOM ML FAN BLADES 23 MM X 55 MM
ML-0299	PHANTOM ML FAN BLADES 23 MM X 65 MM

## RETRACTOR BLADES - (L&amp;R) 18 MM DIA - (ALUMINUM)



ML-0221 - ML-0228

CROSS-CUT  
CONNECTORS

ML-0219	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 30 MM, SILVER
ML-0220	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 40 MM, RED
ML-0221	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 50 MM, VIOLET
ML-0222	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 60 MM, GOLD
ML-0223	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 70 MM, LIGHT GREEN
ML-0224	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 80 MM, TURQUOISE
ML-0225	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 90 MM, FUCHSIA
ML-0226	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 100 MM, CHOCOLATE
ML-0227	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 110 MM, TURQUOISE SPLASH
ML-0228	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 120 MM, PURPLE SPLASH

### RETRACTOR BLADES - (L&R) 22 MM DIA - (ALUMINUM)



ML-0251 - ML-0258



CROSS-CUT CONNECTORS

ML-0249	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 30 MM, SILVER
ML-0250	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 40 MM, RED
ML-0251	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 50 MM, VIOLET
ML-0252	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 60 MM, GOLD
ML-0253	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 70 MM, GREEN
ML-0254	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 80 MM, TURQUOISE
ML-0255	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 90 MM, FUCHSIA
ML-0256	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 100 MM, CHOCOLATE
ML-0257	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 110 MM, TURQUOISE SPLASH
ML-0258	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 120 MM, PURPLE SPLASH

### RETRACTOR BLADES - (L&R) 18 MM DIA - FLAT BOTTOM - (ALUMINUM)



ML-0231 - ML-0238



CROSS-CUT CONNECTORS

ML-0230	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 40 MM, RED
ML-0231	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 50 MM, VIOLET
ML-0232	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 60 MM, GOLD
ML-0233	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 70 MM, LIGHT GREEN
ML-0234	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 80 MM, TURQUOISE
ML-0235	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 90 MM, FUCHSIA
ML-0236	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 100 MM, CHOCOLATE
ML-0237	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 110 MM, TURQUOISE SPLASH
ML-0238	PHANTOM ML RETRACTOR BLADES (L&R), 18 MM DIA. X 120 MM, PURPLE SPLASH

## RETRACTOR BLADES - (L&amp;R) 22 MM DIA - FLAT BOTTOM - (ALUMINUM)



ML-0261 - ML-0268

CROSS-CUT  
CONNECTORS

ML-0260	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 40 MM, RED
ML-0261	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 50 MM, VIOLET
ML-0262	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 60 MM, GOLD
ML-0263	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 70 MM, LIGHT GREEN
ML-0264	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 80 MM, TURQUOISE SPLASH
ML-0265	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 90 MM, FUCHSIA
ML-0266	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 100 MM, CHOCOLATE
ML-0267	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 110 MM, TURQUOISE SPLASH
ML-0268	PHANTOM ML RETRACTOR BLADES (L&R), 22 MM DIA. X 120 MM, PURPLE SPLASH

## FAN RETRACTOR BLADES - (TITANIUM)

CROSS-CUT  
CONNECTORS

- Use with the ML-0502 retractor (p. 135)

ML-0593

ML-0590	ML FAN BLADES, REVERSE BALL SNAP, 23 X 40 MM TITANIUM
ML-0591	ML FAN BLADES, REVERSE BALL SNAP, 23 X 50 MM TITANIUM
ML-0592	ML FAN BLADES, REVERSE BALL SNAP, 23 X 60 MM TITANIUM
ML-0593	ML FAN BLADES, REVERSE BALL SNAP, 23 X 70 MM TITANIUM
ML-0594	ML FAN BLADES, REVERSE BALL SNAP, 23 X 80 MM TITANIUM
ML-0595	ML FAN BLADES, REVERSE BALL SNAP, 23 X 90 MM TITANIUM
ML-0596	ML FAN BLADES, REVERSE BALL SNAP, 23 X 100 MM TITANIUM
ML-0597	ML FAN BLADES, REVERSE BALL SNAP, 23 X 110 MM TITANIUM
ML-0598	ML FAN BLADES, REVERSE BALL SNAP, 23 X 120 MM TITANIUM

## COUNTER RETRACTOR BLADES - (TITANIUM)



- Use with the ML-0502 retractor (p. 133)

ML-0570 - ML-0583

ML-0570	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 14 MM X 30 MM
ML-0572	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 14 MM X 40 MM
ML-0574	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 14 MM X 50 MM
ML-0576	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 14 MM X 60 MM
ML-0578	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 14 MM X 70 MM
ML-0580	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 14 MM X 80 MM
ML-0581	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 14 MM X 90 MM
ML-0582	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 14 MM X 100 MM
ML-0583	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 14 MM X 110 MM
ML-0584	PHANTOM ML COUNTER RETRACTOR BLADES, REVERSE BALL SNAP, 120 MM

4 WAY PIVOTING RING RETRACTOR



ML-0502

ML-0502 4 WAY PIVOTING RING RETRACTOR

T-HANDLE FOR RETRACTOR W/PIVOTING ARMS



LS-0451

LS-0451 PHANTOM T-HANDLE FOR RETRACTOR W/PIVOTING ARMS

### RETRACTOR BLADE HANDLE



CS-0105

CS-0105 PHANTOM CS SIDE-LOADING RETRACTOR BLADE HANDLE

### LOCKING RETRACTOR BLADE HANDLE

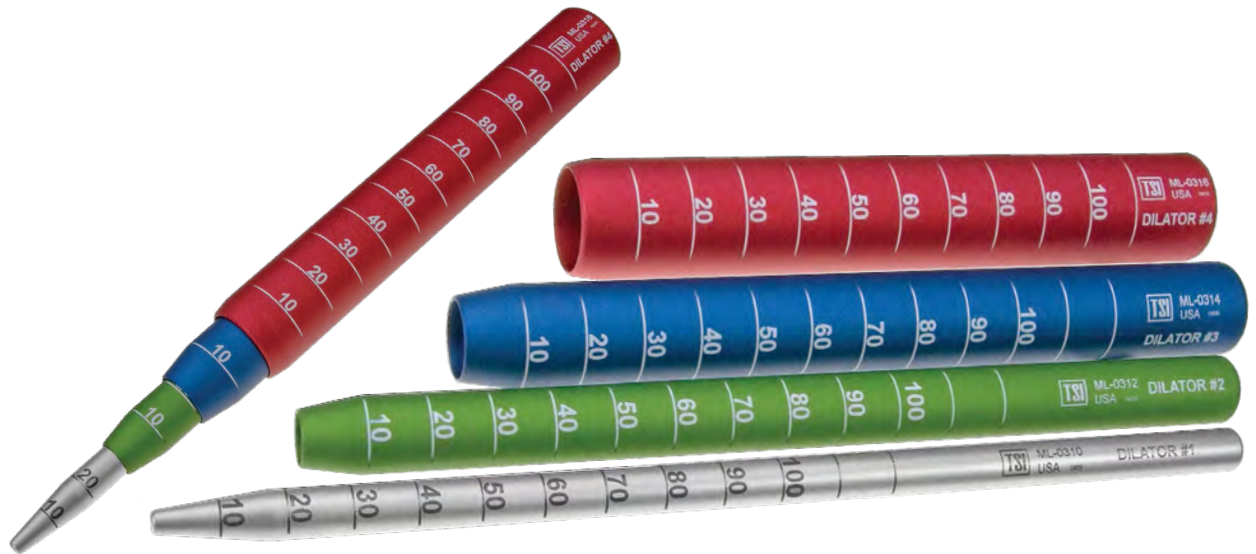


CS-0126

- Only works with Cross Cut Blades

CS-0126 PHANTOM CS SIDE-LOADING LOCKING RETRACTOR BLADE HANDLE

## DILATORS



ML-0310 - ML-0316

- ML-0310 PHANTOM ML DILATOR #1, 8 MM, (SILVER - RADIOPAQUE) - STAINLESS STEEL  
 ML-0312 PHANTOM ML DILATOR #2, 13 MM, (GREEN - RADIOLUCENT) - ALUMINUM  
 ML-0314 PHANTOM ML DILATOR #3, 18 MM, (BLUE - RADIOLUCENT) - ALUMINUM  
 ML-0316 PHANTOM ML DILATOR #4, 22 MM, (RED - RADIOLUCENT) - ALUMINUM

## OBTURATORS

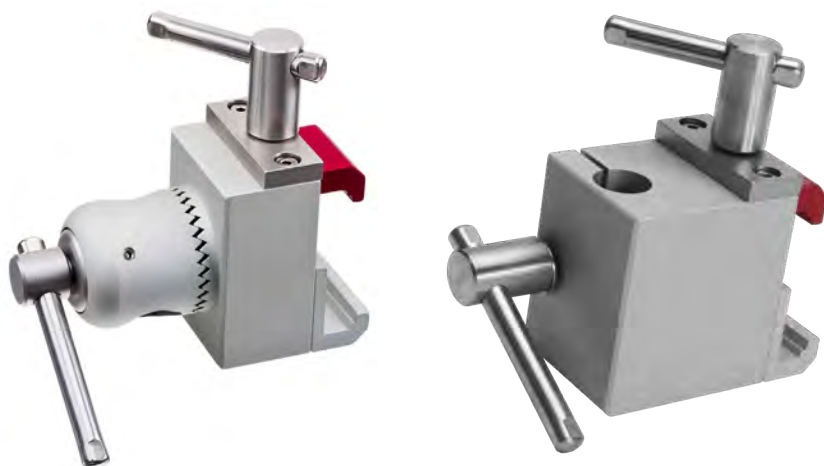


ML-0320 - ML-0322

- ML-0320 PHANTOM ML OBTURATOR, 18 MM, BLUE  
 ML-0322 PHANTOM ML OBTURATOR, 22 MM, RED



### TABLE CLAMPS



ML-0021 - ML-0041

- ML-0021 PHANTOM ML ROTATING TABLE CLAMP FOR ARTICULATING ARM
- ML-0041 PHANTOM ML TABLE CLAMP FOR ARTICULATING ARM

### ARTICULATING ACCESSORY ARMS



Available w/ Quick Connect



ML-0040, ML-0060

- ML-0020 PHANTOM ML ARTICULATING HEAVY-DUTY ACCESSORY ARM ANGLED COLUMN W/QUICK CONNECTOR
- ML-0040 PHANTOM ML ARTICULATING ACCESSORY ARM W/ QUICK CONNECT RACK CLAMP
- ML-0060 PHANTOM ML ARTICULATING ACCESSORY ARM ANGLED COLUMN W/ RACK CLAMP

## RACK CLAMP



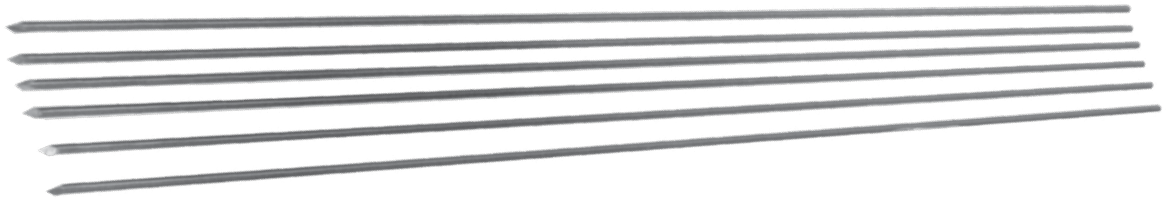
- Use w/ ML-0040 Articulating Arm

ML-0044

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ML-0044 PHANTOM ML RACK CLAMP W/QUICK CONNECT F/ARTICULATING ARM

## K-WIRE

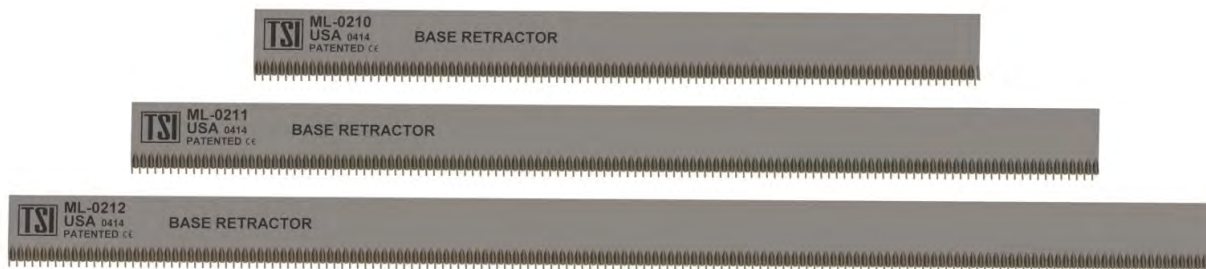


ML-0300

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ML-0300 PHANTOM ML K-WIRE, SHARP, BLUNT 1.4 MM X 9"; SINGLE USE (6 PER PACK)

## RACKS



ML-0210 - ML-0212

- |         |  |
|---------|--|
| ML-0210 | PHANTOM ML BASE RETRACTOR RACK 150 MM RACK |
| ML-0211 | PHANTOM ML BASE RETRACTOR RACK 200 MM RACK |
| ML-0212 | PHANTOM ML BASE RETRACTOR RACK 250 MM RACK |

## HEX DRIVER TOOL



ML-0505

ML-0505 PHANTOM XL HEX DRIVER TOOL

## LED LIGHT SOURCE



ML-0051

ML-0051 ML LED LIGHT SOURCE, 52 WATTS, ONLY COMPATIBLE W/ TSI LIGHT CABLES

## LIGHT CABLE W/ TEDAN CONNECTOR



ML-0046

- ML-0045 PHANTOM ML LIGHT CABLE, W/ TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
- ML-0046 PHANTOM ML LIGHT CABLE, W/ TEDAN CONNECTOR, - (5 PER BOX), 10 FT LENGTH, PRE-PACKAGED STERILE, SINGLE USE
- ML-0047 PHANTOM ML LIGHT CABLE, SINGLE ENDED W/ TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
- ML-0048 PHANTOM ML LIGHT CABLE, STRONG CURVE, W/ TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE

### ML-2000 & ML-2001 INSTRUMENT CASE



ML-0700-02

ML-0700-01 PHANTOM ML-2000 INSTRUMENT CASE - BLADES

ML-0700-02 PHANTOM ML-2000, ML-2005, & ML-2012 INSTRUMENT CASE - ACCESSORIES



PHANTOM ML MINIMALLY INVASIVE TUBE & DILATORS SETS ML-2008 & ML-2018

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PHANTOM ML SETS

ML-2008 &amp; ML-2018

## INSTRUMENT SPECIFICATIONS

# Phantom

# ML

ML RETRACTOR TUBES  
 PHANTOM ML™  
 RETRACTOR TUBES for  
 the ML-2008 retractor set





## ML RETRACTOR TUBE SET



ML-2008

### ML-2008 PHANTOM ML RETRACTOR TUBES SET

ML-0400	ML RETRACTOR TUBES, 13 MM DIA. X 50 MM, VIOLET	1	ML-0434	ML RETRACTOR TUBES, 26 MM DIA. X 90 MM, FUCHSIA	1
ML-0401	ML RETRACTOR TUBES, 13 MM DIA. X 60 MM, GOLD	1	ML-0435	ML RETRACTOR TUBES, 26 MM DIA. X 100 MM, CHOCOLATE	1
ML-0402	ML RETRACTOR TUBES, 13 MM DIA. X 70 MM, LIGHT GREEN	1	ML-0436	ML RETRACTOR TUBES, 26 MM DIA. X 110 MM, TURQUOISE SPLASH	1
ML-0403	ML RETRACTOR TUBES, 13 MM DIA. X 80 MM, TURQUOISE	1	ML-0437	ML RETRACTOR TUBES, 26 MM DIA. X 120 MM, PURPLE SPLASH	1
ML-0404	ML RETRACTOR TUBES, 13 MM DIA. X 90 MM, FUCHSIA	1	ML-0021	ML ROTATING TABLE CLAMP FOR ARTICULATING ARM	1
ML-0405	ML RETRACTOR TUBES, 13 MM DIA. X 100 MM, CHOCOLATE	1	ML-0041	ML TABLE CLAMP F/ARTICULATING ARM	1
ML-0406	ML RETRACTOR TUBES, 13 MM DIA. X 110 MM, TURQUOISE SPLASH	1	ML-0048	ML LIGHT CABLE, STRONG CURVE, W/TEDAN CONNECTOR	1
ML-0407	ML RETRACTOR TUBES, 13 MM DIA. X 120 MM, PURPLE SPLASH	1	ML-0051	ML LED LIGHT SOURCE	1
ML-0409	ML RETRACTOR TUBES, 18MM DIA. X 40MM, RED	1	ML-0060	ML ARTICULATING ACCESSRY ARM ANG. COLUMN W/RACK CLAMP	1
ML-0410	ML RETRACTOR TUBES, 18 MM DIA. X 50 MM, VIOLET	1	ML-0300	ML K-WIRE, 1.4 MM X 9", SINGLE USE (6 PER PACK)	1
ML-0411	ML RETRACTOR TUBES, 18 MM DIA. X 60 MM, GOLD	1	ML-0310	ML DILATOR #1, 8 MM SILVER	1
ML-0412	ML RETRACTOR TUBES, 18 MM DIA. X 70 MM, LIGHT GREEN	1	ML-0312	ML DILATOR #2, 13 MM GREEN	1
ML-0413	ML RETRACTOR TUBES, 18 MM DIA. X 80 MM, TURQUOISE	1	ML-0314	ML DILATOR #3, 18 MM BLUE	1
ML-0414	ML RETRACTOR TUBES, 18 MM DIA. X 90 MM, FUCHSIA	1	ML-0316	ML DILATOR #4, 22 MM RED	1
ML-0415	ML RETRACTOR TUBES, 18 MM DIA. X 100 MM, CHOCOLATE	1	ML-0318	ML DILATOR #5, 26 MM VIOLET	1
ML-0416	ML RETRACTOR TUBES, 18 MM DIA. X 110 MM, TURQUOISE SPLASH	1	ML-0708-01	ML STERILIZATION TRAY-ACCESSORIES	1
ML-0417	ML RETRACTOR TUBES, 18 MM DIA. X 120 MM, PURPLE SPLASH	1	ML-0708-02	ML STERILIZATION TRAY-TUBES	1
ML-0419	ML RETRACTOR TUBES, 22MM DIA. X 40MM, RED	1			
ML-0420	ML RETRACTOR TUBES, 22 MM DIA. X 50 MM, VIOLET	1			
ML-0421	ML RETRACTOR TUBES, 22 MM DIA. X 60 MM, GOLD	1			
ML-0422	ML RETRACTOR TUBES, 22 MM DIA. X 70 MM, LIGHT GREEN	1			
ML-0423	ML RETRACTOR TUBES, 22 MM DIA. X 80 MM, TURQUOISE	1			
ML-0424	ML RETRACTOR TUBES, 22 MM DIA. X 90 MM, FUCHSIA	1			
ML-0425	ML RETRACTOR TUBES, 22 MM DIA. X 100 MM, CHOCOLATE	1			
ML-0426	ML RETRACTOR TUBES, 22 MM DIA. X 110 MM, TURQUOISE SPLASH	1			
ML-0427	ML RETRACTOR TUBES, 22 MM DIA. X 120 MM, PURPLE SPLASH	1			
ML-0429	ML RETRACTOR TUBES, 26MM DIA. X 40MM, RED	1			
ML-0430	ML RETRACTOR TUBES, 26 MM DIA. X 50 MM, VIOLET	1			
ML-0431	ML RETRACTOR TUBES, 26 MM DIA. X 60 MM, GOLD	1			
ML-0432	ML RETRACTOR TUBES, 26 MM DIA. X 70 MM, LIGHT GREEN	1			
ML-0433	ML RETRACTOR TUBES, 26 MM DIA. X 80 MM, TURQUOISE	1			

## ML BEVELED RETRACTOR TUBE SET



ML-2018

## ML-2018 PHANTOM ML BEVELED TUBES SET

ML-0600	ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 50 MM, VIOLET	1	ML-0634	ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 90 MM, FUCHSIA	1
ML-0601	ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 60 MM, GOLD	1	ML-0635	ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 100 MM, CHOCOLATE	1
ML-0602	ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 70 MM, LIGHT GREEN	1	ML-0636	ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 110 MM, TURQ. SPLASH	1
ML-0603	ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 80 MM, TURQUOISE	1	ML-0637	ML RETRACTOR TUBES, BVLD, 26 MM DIA. X 120 MM, PURPLE SPLASH	1
ML-0604	ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 90 MM, FUCHSIA	1	ML-0021	ML ROTATING TABLE CLAMP FOR ARTICULATING ARM	1
ML-0605	ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 100 MM, CHOCOLATE	1	ML-0041	ML TABLE CLAMP F/ARTICULATING ARM	1
ML-0606	ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 110 MM, TURQ. SPLASH	1	ML-0048	ML LIGHT CABLE, STRONG CURVE, W/TEDAN CONNECTOR	1
ML-0607	ML RETRACTOR TUBES, BVLD, 13 MM DIA. X 120 MM, PURPLE SPLASH	1	ML-0051	ML LED LIGHT SOURCE	1
ML-0609	ML RETRACTOR TUBES, BEVELED, 18MM DIA. X 40MM, RED	1	ML-0060	ML ARTICULATING ACCSSRY ARM ANG. COLUMN W/RACK CLAMP	1
ML-0610	ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 50 MM, VIOLET	1	ML-0300	ML K-WIRE, 1.4 MM X 9"; SINGLE USE (6 PER PACK)	1
ML-0611	ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 60 MM, GOLD	1	ML-0310	ML DILATOR #1, 8 MM SILVER	1
ML-0612	ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 70 MM, LIGHT GREEN	1	ML-0312	ML DILATOR #2, 13 MM GREEN	1
ML-0613	ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 80 MM, TURQUOISE	1	ML-0314	ML DILATOR #3, 18 MM BLUE	1
ML-0614	ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 90 MM, FUCHSIA	1	ML-0316	ML DILATOR #4, 22 MM RED	1
ML-0615	ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 100 MM, CHOCOLATE	1	ML-0318	ML DILATOR #5, 26 MM VIOLET	1
ML-0616	ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 110 MM, TURQ. SPLASH	1	ML-0708-01	ML STERILIZATION TRAY-ACCESSORIES	1
ML-0617	ML RETRACTOR TUBES, BVLD, 18 MM DIA. X 120 MM, PURPLE SPLASH	1	ML-0708-02	ML STERILIZATION TRAY-TUBES	1
ML-0619	ML RETRACTOR TUBES, BEVELED, 22MM DIA. X 40MM, RED	1			
ML-0620	ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 50 MM, VIOLET	1			
ML-0621	ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 60 MM, GOLD	1			
ML-0622	ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 70 MM, LIGHT GREEN	1			
ML-0623	ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 80 MM, TURQUOISE	1			
ML-0624	ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 90 MM, FUCHSIA	1			
ML-0625	ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 100 MM, CHOCOLATE	1			
ML-0626	ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 110 MM, TURQ. SPLASH	1			
ML-0627	ML RETRACTOR TUBES, BVLD, 22 MM DIA. X 120 MM, PURPLE SPLASH	1			
ML-0629	ML RETRACTOR TUBES, BEVELED, 26MM DIA. X 40MM, RED	1			
ML-0630	ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 50 MM, VIOLET	1			
ML-0631	ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 60 MM, GOLD	1			
ML-0632	ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 70 MM, LIGHT GREEN	1			
ML-0633	ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 80 MM, TURQUOISE	1			

## RETRACTOR TUBES - 13 MM - (ALUMINUM)



ML-0400 - ML-0407

- ML-0400 PHANTOM ML RETRACTOR TUBES, 13 MM DIA. X 50 MM, VIOLET
- ML-0401 PHANTOM ML RETRACTOR TUBES, 13 MM DIA. X 60 MM, GOLD
- ML-0402 PHANTOM ML RETRACTOR TUBES, 13 MM DIA. X 70 MM, LIGHT GREEN
- ML-0403 PHANTOM ML RETRACTOR TUBES, 13 MM DIA. X 80 MM, TURQUOISE
- ML-0404 PHANTOM ML RETRACTOR TUBES, 13 MM DIA. X 90 MM, FUCHSIA
- ML-0405 PHANTOM ML RETRACTOR TUBES, 13 MM DIA. X 100 MM, CHOCOLATE
- ML-0406 PHANTOM ML RETRACTOR TUBES, 13 MM DIA. X 110 MM, TURQUOISE SPLASH
- ML-0407 PHANTOM ML RETRACTOR TUBES, 13 MM DIA. X 120 MM, PURPLE SPLASH

## RETRACTOR TUBES - 18 MM - (ALUMINUM)



ML-0410 - ML-0417

- ML-0409 PHANTOM ML RETRACTOR TUBES, 18 MM DIA. X 40 MM, RED
- ML-0410 PHANTOM ML RETRACTOR TUBES, 18 MM DIA. X 50 MM, VIOLET
- ML-0411 PHANTOM ML RETRACTOR TUBES, 18 MM DIA. X 60 MM, GOLD
- ML-0412 PHANTOM ML RETRACTOR TUBES, 18 MM DIA. X 70 MM, LIGHT GREEN
- ML-0413 PHANTOM ML RETRACTOR TUBES, 18 MM DIA. X 80 MM, TURQUOISE
- ML-0414 PHANTOM ML RETRACTOR TUBES, 18 MM DIA. X 90 MM, FUCHSIA
- ML-0415 PHANTOM ML RETRACTOR TUBES, 18 MM DIA. X 100 MM, CHOCOLATE
- ML-0416 PHANTOM ML RETRACTOR TUBES, 18 MM DIA. X 110 MM, TURQUOISE SPLASH
- ML-0417 PHANTOM ML RETRACTOR TUBES, 18 MM DIA. X 120 MM, PURPLE SPLASH

## RETRACTOR TUBES - 22 MM - (ALUMINUM)



ML-0420 - ML-0427

- ML-0419 PHANTOM ML RETRACTOR TUBES, 22 MM DIA. X 40 MM, RED  
 ML-0420 PHANTOM ML RETRACTOR TUBES, 22 MM DIA. X 50 MM, VIOLET  
 ML-0421 PHANTOM ML RETRACTOR TUBES, 22 MM DIA. X 60 MM, GOLD  
 ML-0422 PHANTOM ML RETRACTOR TUBES, 22 MM DIA. X 70 MM, LIGHT GREEN  
 ML-0423 PHANTOM ML RETRACTOR TUBES, 22 MM DIA. X 80 MM, TURQUOISE  
 ML-0424 PHANTOM ML RETRACTOR TUBES, 22 MM DIA. X 90 MM, FUCHSIA  
 ML-0425 PHANTOM ML RETRACTOR TUBES, 22 MM DIA. X 100 MM, CHOCOLATE  
 ML-0426 PHANTOM ML RETRACTOR TUBES, 22 MM DIA. X 110 MM, TURQUOISE SPLASH  
 ML-0427 PHANTOM ML RETRACTOR TUBES, 22 MM DIA. X 120 MM, PURPLE SPLASH

## RETRACTOR TUBES - 26 MM - (ALUMINUM)



ML-0430 - ML-0437

- ML-0429 PHANTOM ML RETRACTOR TUBES, 26 MM DIA. X 40 MM, RED  
 ML-0430 PHANTOM ML RETRACTOR TUBES, 26 MM DIA. X 50 MM, VIOLET  
 ML-0431 PHANTOM ML RETRACTOR TUBES, 26 MM DIA. X 60 MM, GOLD  
 ML-0432 PHANTOM ML RETRACTOR TUBES, 26 MM DIA. X 70 MM, LIGHT GREEN  
 ML-0433 PHANTOM ML RETRACTOR TUBES, 26 MM DIA. X 80 MM, TURQUOISE  
 ML-0434 PHANTOM ML RETRACTOR TUBES, 26 MM DIA. X 90 MM, FUCHSIA  
 ML-0435 PHANTOM ML RETRACTOR TUBES, 26 MM DIA. X 100 MM, CHOCOLATE  
 ML-0436 PHANTOM ML RETRACTOR TUBES, 26 MM DIA. X 110 MM, TURQUOISE SPLASH  
 ML-0437 PHANTOM ML RETRACTOR TUBES, 26 MM DIA. X 120 MM, PURPLE SPLASH

## BEVELED TUBES - 13 MM - (ALUMINUM)



ML-0600 - ML-0607

- ML-0600 PHANTOM ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 50 MM, VIOLET
- ML-0601 PHANTOM ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 60 MM, GOLD
- ML-0602 PHANTOM ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 70 MM, LIGHT GREEN
- ML-0603 PHANTOM ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 80 MM, TURQUOISE
- ML-0604 PHANTOM ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 90 MM, FUCHSIA
- ML-0605 PHANTOM ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 100 MM, CHOCOLATE
- ML-0606 PHANTOM ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 110 MM, TURQUOISE SPLASH
- ML-0607 PHANTOM ML RETRACTOR TUBES, BEVELED, 13 MM DIA. X 120 MM, PURPLE SPLASH

## BEVELED TUBES - 18 MM - (ALUMINUM)



ML-0610 - ML-0617

- ML-0609 PHANTOM ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 40 MM, RED
- ML-0610 PHANTOM ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 50 MM, VIOLET
- ML-0611 PHANTOM ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 60 MM, GOLD
- ML-0612 PHANTOM ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 70 MM, LIGHT GREEN
- ML-0613 PHANTOM ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 80 MM, TURQUOISE
- ML-0614 PHANTOM ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 90 MM, FUCHSIA
- ML-0615 PHANTOM ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 100 MM, CHOCOLATE
- ML-0616 PHANTOM ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 110 MM, TURQUOISE SPLASH
- ML-0617 PHANTOM ML RETRACTOR TUBES, BEVELED, 18 MM DIA. X 120 MM, PURPLE SPLASH

## BEVELED TUBES - 22 MM - (ALUMINUM)



ML-0619 - ML-0627

- ML-0619 PHANTOM ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 40 MM, RED
- ML-0620 PHANTOM ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 50 MM, VIOLET
- ML-0621 PHANTOM ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 60 MM, GOLD
- ML-0622 PHANTOM ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 70 MM, LIGHT GREEN
- ML-0623 PHANTOM ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 80 MM, TURQUOISE
- ML-0624 PHANTOM ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 90 MM, FUCHSIA
- ML-0625 PHANTOM ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 100 MM, CHOCOLATE
- ML-0626 PHANTOM ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 110 MM, TURQUOISE SPLASH
- ML-0627 PHANTOM ML RETRACTOR TUBES, BEVELED, 22 MM DIA. X 120 MM, PURPLE SPLASH

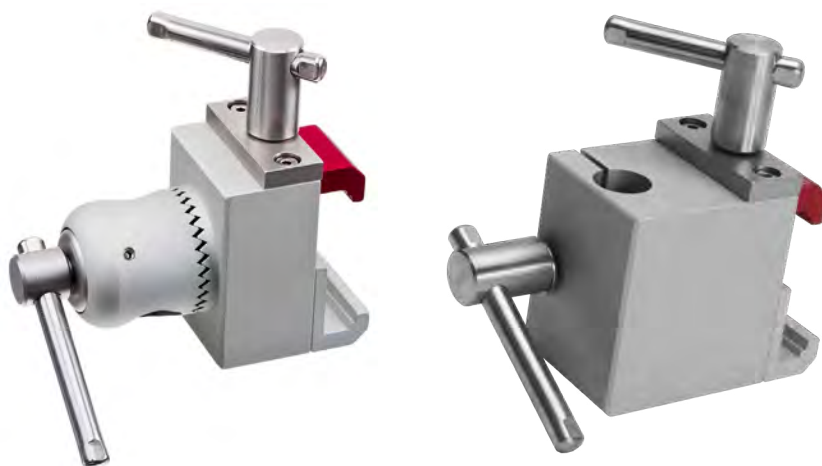
## BEVELED TUBES - 26 MM - (ALUMINUM)



ML-0629 - ML-0637

- ML-0629 PHANTOM ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 40 MM, RED
- ML-0630 PHANTOM ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 50 MM, VIOLET
- ML-0631 PHANTOM ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 60 MM, GOLD
- ML-0632 PHANTOM ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 70 MM, LIGHT GREEN
- ML-0633 PHANTOM ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 80 MM, TURQUOISE
- ML-0634 PHANTOM ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 90 MM, FUCHSIA
- ML-0635 PHANTOM ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 100 MM, CHOCOLATE
- ML-0636 PHANTOM ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 110 MM, TURQUOISE SPLASH
- ML-0637 PHANTOM ML RETRACTOR TUBES, BEVELED, 26 MM DIA. X 120 MM, PURPLE SPLASH

### TABLE CLAMPS



ML-0021 - ML-0041

- ML-0021 PHANTOM ML ROTATING TABLE CLAMP FOR ARTICULATING ARM
- ML-0041 PHANTOM ML TABLE CLAMP FOR ARTICULATING ARM

### ARTICULATING ACCESSORY ARMS



Available w/ Quick Connect



ML-0040, ML-0060

- ML-0020 PHANTOM ML ARTICULATING HEAVY-DUTY ACCESSORY ARM ANGLED COLUMN W/QUICK CONNECTOR
- ML-0040 PHANTOM ML ARTICULATING ACCESSORY ARM W/ QUICK CONNECT RACK CLAMP
- ML-0060 PHANTOM ML ARTICULATING ACCESSORY ARM ANGLED COLUMN W/ RACK CLAMP

## RACK CLAMP



- Use w/ ML-0040 Articulating Arm

ML-0044

ML-0044 PHANTOM ML RACK CLAMP W/QUICK CONNECT F/ARTICULATING ARM

## DILATORS

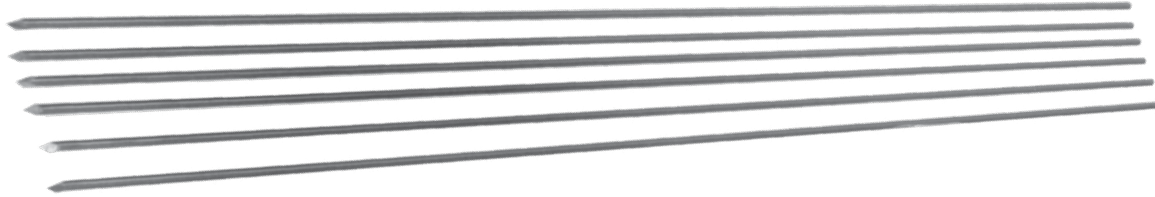


ML-0310 - ML-0318

ML-0310	PHANTOM ML DILATOR #1, 8 MM, (SILVER - RADIOPAQUE) - STAINLESS STEEL
ML-0312	PHANTOM ML DILATOR #2, 13 MM, (GREEN - RADIOLUCENT) - ALUMINUM
ML-0314	PHANTOM ML DILATOR #3, 18 MM, (BLUE - RADIOLUCENT) - ALUMINUM
ML-0316	PHANTOM ML DILATOR #4, 22 MM, (RED - RADIOLUCENT) - ALUMINUM
ML-0318	PHANTOM ML DILATOR #5, 26 MM, (VIOLET - RADIOLUCENT) - ALUMINUM



### K-WIRE



ML-0300

ML-0300 PHANTOM ML K-WIRE, SHARP, BLUNT 1.4 MM X 9" 350 MM, SINGLE USE (6 PER PACK)

### LED LIGHT SOURCE



ML-0051

ML-0051 ML LED LIGHT SOURCE, 52 WATTS, ONLY COMPATIBLE W/ TSI LIGHT CABLES

## LIGHT CABLE W/TEDAN CONNECTOR



ML-0046

- ML-0046 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, - (5 PER BOX), 10 FT LENGTH, PRE-PACKAGED STERILE, SINGLE USE  
 ML-0048 PHANTOM ML LIGHT CABLE, STRONG CURVE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE

## ML-2008 INSTRUMENT CASE



ML-0708-02

- ML-0708-01 PHANTOM ML-2008 INSTRUMENT CASE - ACCESSORIES  
 ML-0708-02 PHANTOM ML-2008 INSTRUMENT CASE - TUBES

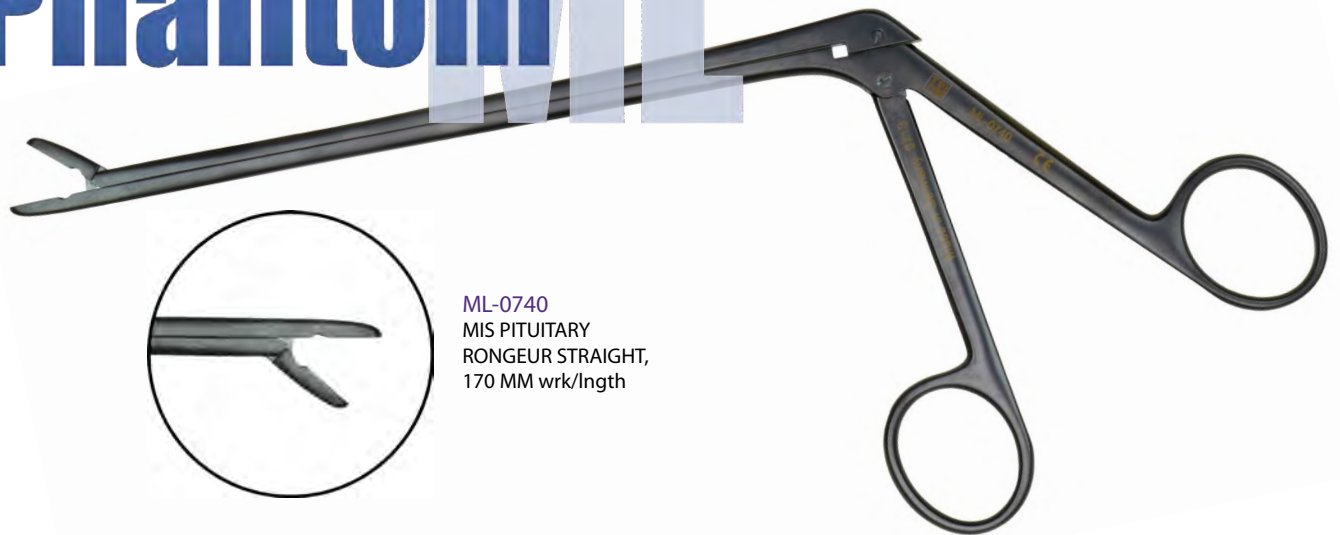
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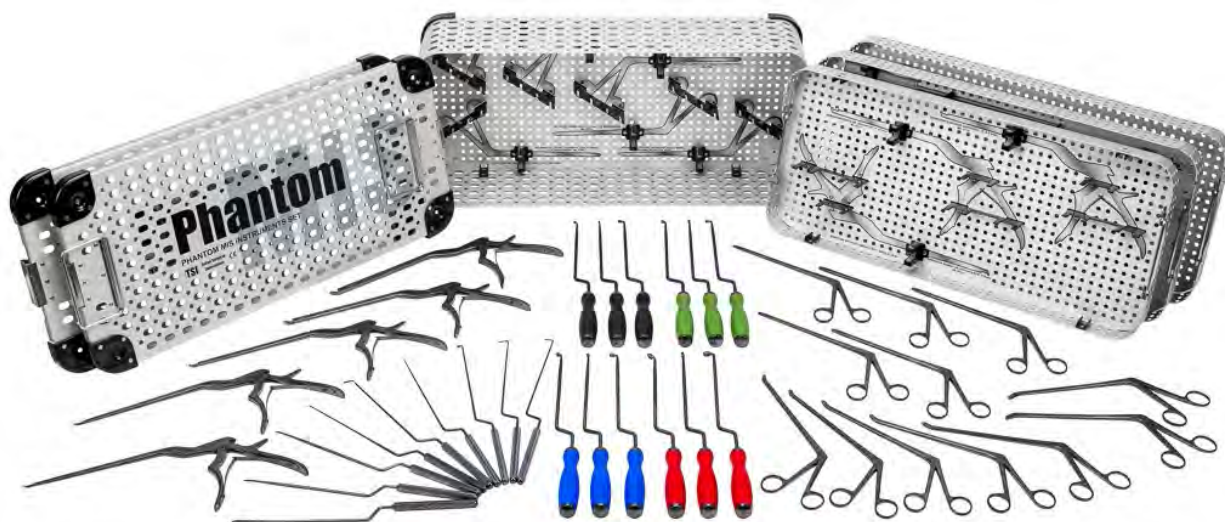
## MICRODISCECTOMY INSTRUMENTS

## Phantom



- Bayoneted shafts provide greater visibility
- Non-reflective matte coating reduces glare
- Instrument set facilitates PLIF, TLIF, Microdiscectomies and Spinal Decompressions
- Compatible with TSI or competitor retractor systems

## PHANTOM MIS INSTRUMENT SET



ML-2013

### ML-2013 PHANTOM MIS INSTRUMENT SET

	ea.		ea.
ML-0730	1	MIS KERRISON, MIC. HDL, BAY., 9" X 1.5 MM, UP, 40°, THIN FTPLT, BL DIA	1
ML-0731	1	MIS KERRISON, MICRO HDL, BAYONETED, 9" X 2 MM, UP, 40°, THIN FTPLT, BL DIA	1
ML-0732	1	MIS KERRISON, MICRO HDL, BAYONETED, 9" X 3 MM, UP, 40°, THIN FTPLT, BL DIA	1
ML-0733	1	MIS KERRISON, MICRO HDL, BAYONETED, 9" X 4 MM, UP, 40°, THIN FTPLT, BL DIA	1
ML-0734	1	MIS KERRISON, MICRO HDL, BAYONETED, 9" X 5 MM, UP, 40°, THIN FTPLT, BL DIA	1
ML-0740	1	MIS IVD PIT. RNGR, STR, 2 MM X 10 MM, 170 WRK/LNGTH	1
ML-0741	1	MIS IVD PIT. RNGR, STR, 3 MM X 10 MM, 170 WRK/LNGTH	1
ML-0742	1	MIS IVD PIT. RNGR, STR, 4 MM X 10 MM, 170 WRK/LNGTH	1
ML-0745	1	MIS IVD PIT. RNGR, UP, 2 MM X 6 MM, 170 WRK/LNGTH	1
ML-0746	1	MIS IVD PIT. RNGR, UP, 2 MM X 10 MM, 170 WRK/LNGTH	1
ML-0747	1	MIS IVD PIT. RNGR, UP, 3 MM X 6 MM, 170 WRK/LNGTH	1
ML-0748	1	MIS IVD PIT. RNGR, UP, 3 MM X 10 MM, 170 WRK/LNGTH	1
ML-0749	1	MIS IVD PIT. RNGR, UP, 4 MM X 10 MM, 170 WRK/LNGTH	1
ML-0752	1	MIS IVD PIT. RNGR, DOWN 2 MM X 10 MM, 170 WRK/LNGTH	1
ML-0753	1	MIS IVD PIT. RNGR, DOWN 3 MM X 10 MM, 170 WRK/LNGTH	1
ML-0756	1	MIS IVD PIT. RNGR W/ TOOTH, STRAIGHT 2 MM X 10 MM, 170 WRK/LNGTH	1
ML-0757	1	MIS IVD PIT. RNGR W/ TOOTH, STRAIGHT 3 MM X 10 MM, 170 MM WRK/LNGTH	1
ML-0760	1	MIS CURETTE, BAYONETED, 3.6 MM, FWD, ANG CUP, 150 MM WRK/LNGTH	1
ML-0761	1	MIS CURETTE, BAYONETED, 3.6 MM, FWD STRA.. CUP, 150 MM WRK/LNGTH	1
ML-0762	1	MIS CURETTE, BAYONETED, 3.6 MM, REV, ANG UP, 150 MM WRK/LNGTH	1
ML-0763	1	MIS CURETTE, BAYONETED, 4.4, FWD ANG CUP, 150 MM WRK/LNGTH	1
ML-0764	1	MIS CURETTE, BAYONETED, 4.4, FWD STRA. CUP, 150 MM WRK/LNGTH	1
ML-0765	1	MIS CURETTE, BAYONETED, 4.4, REV ANG CUP, 150 MM WRK/LNGTH	1
ML-0766	1	MIS CURETTE, BAYONETED, 5.2 MM, FWD ANG CUP, 150 MM WRK/LNGTH	1
ML-0767	1	MIS CURETTE, BAYONETED, 5.2 MM, FWD STRA. CUP, 150 MM WRK/LNGTH	1
ML-0768	1	MIS CURETTE, BAYONETED, 5.2 MM, REV ANG CUP, 150 MM WRK/LNGTH	1
ML-0769	1	MIS CURETTE, BAYONETED, 7.5, MM FWD ANG CUP, 150 MM WRK/LNGTH	1
ML-0770	1	MIS CURETTE, BAYONETED, 7.5 MM, FWD STRA. CUP, 150 MM WRK/LNGTH	1
ML-0771	1	MIS CURETTE, BAYONETED, 7.5 MM, REV ANG CUP, 150 MM WRK/LNGTH	1
ML-0780	1	MIS DISSECTOR, BAY, 150 MM WRK/LNGTH	1
ML-0782	1	MIS NERVE HOOK, MICRO, BAY, 150 MM WRK/LNGTH	1
ML-0784	1	MIS NERVE HOOK, BAY, 150 MM WRK/LNGTH	1
ML-0786	1	MIS PENFIELD # 2, PUSH/PULL, 2 MM, 150 MM WRK/LNGTH	1
ML-0788	1	MIS PENFIELD # 4, PUSH/PULL, BAY, 4 MM, 150 MM WRK/LNGTH	1
ML-0790	1	MIS PENFIELD # 7, PUSH/PULL, BAY, 7 MM, 150 MM WRK/LNGTH	1
ML-0792	1	MIS SHORT BALL PROBE, BAY, 7 MM, 150 MM WRK/LNGTH	1
ML-0794	1	MIS WOODSON PROBE, BAY, 150 MM WRK/LNGTH	1
ML-0796	1	MIS LONG BALL PROBE, BAY, 11 MM, 150 MM WRK/LNGTH	1
ML-0713-01	1	ML STERILIZATION TRAY - KERRISONS & CURETTES (FOR ML-2013 SET)	1
ML-0713-02	1	ML STERILIZATION TRAY-PITUITARIES (FOR ML-2013 SET)	1

## MIS BAYONETED KERRISON



ML-0730

- ML-0730 PHANTOM MIS KERRISON, 9" X 1.5 MM, UP, 40°, 155 MM WRK/LENGTH, 230 MM TOTAL LENGTH  
 ML-0731 PHANTOM MIS KERRISON, 9" X 2 MM, UP, 40°, 155 MM WRK/LENGTH, 230 MM TOTAL LENGTH  
 ML-0732 PHANTOM MIS KERRISON, 9" X 3 MM, UP, 40°, 155 MM WRK/LENGTH, 230 MM TOTAL LENGTH  
 ML-0733 PHANTOM MIS KERRISON, 9" X 4 MM, UP, 40°, 155 MM WRK/LENGTH, 230 MM TOTAL LENGTH  
 ML-0734 PHANTOM MIS KERRISON, 9" X 5 MM, UP, 40°, 155 MM WRK/LENGTH, 230 MM TOTAL LENGTH

## MIS IVD PITUITARY RONGEUR - STRAIGHT



ML-0740

- ML-0740 PHANTOM MIS IVD PITUITARY RNGR, STR, 2 MM X 10 MM, 170 MM WRK/LNGTH  
 ML-0741 PHANTOM MIS IVD PITUITARY RNGR, STR, 3 MM X 10 MM, 170 MM WRK/LNGTH  
 ML-0742 PHANTOM MIS IVD PITUITARY RNGR, STR, 4 MM X 10 MM, 170 MM WRK/LNGTH

## MIS IVD PITUITARY RONGEUR - UP



ML-0745

- ML-0745 PHANTOM MIS IVD PITUITARY RNGR, UP, 2 MM X 6 MM, 170 MM WRK/LNGTH  
 ML-0746 PHANTOM MIS IVD PITUITARY RNGR, UP, 2 MM X 10 MM, 170 MM WRK/LNGTH  
 ML-0747 PHANTOM MIS IVD PITUITARY RNGR, UP, 3 MM X 6 MM, 170 MM WRK/LNGTH  
 ML-0748 PHANTOM MIS IVD PITUITARY RNGR, UP, 3 MM X 10 MM, 170 MM WRK/LNGTH  
 ML-0749 PHANTOM MIS IVD PITUITARY RNGR, UP, 4 MM X 10 MM, 170 MM WRK/LNGTH

## MIS IVD PITUITARY RONGEUR - DOWN



ML-0752

- ML-0752 PHANTOM MIS IVD PITUITARY RNGR, DOWN, 2 MM X 10 MM, 170 MM WRK/LNGTH  
 ML-0753 PHANTOM MIS IVD PITUITARY RNGR, DOWN, 3 MM X 10 MM, 170 MM WRK/LNGTH

## MIS IVD PITUITARY RONGEUR - W/TOOTH



ML-0756

- ML-0756 PHANTOM MIS IVD PITUITARY RNGR W/TOOTH, 2 MM X 10 MM, 170 MM WRK/LNGTH  
 ML-0757 PHANTOM MIS IVD PITUITARY RNGR W/TOOTH, 3 MM X 10 MM, 170 MM WRK/LNGTH

## MIS BAYONETED CURETTE - 3.6 MM



ML-0760

- ML-0760 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 3.6 MM, FWD ANG CUP, 150 MM WRK/LNGTH  
 ML-0761 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 3.6 MM, FWD STRAIGHT CUP, 150 MM WRK/LNGTH  
 ML-0762 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 3.6 MM, REV ANG CUP, 150 MM WRK/LNGTH



### MIS BAYONETED CURETTE - 4.4 MM



ML-0763

- ML-0763 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 4.4 MM, FWD ANG CUP, 150 MM WRK/LNGTH
- ML-0764 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 4.4 MM, FWD STRAIGHT CUP, 150 MM WRK/LNGTH
- ML-0765 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 4.4 MM, REV ANG CUP, 150 MM WRK/LNGTH

### MIS BAYONETED CURETTE - 5.2 MM



ML-0766

- ML-0766 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 5.2 MM, FWD ANG CUP, 150 MM WRK/LNGTH
- ML-0767 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 5.2 MM, FWD STRAIGHT CUP, 150 MM WRK/LNGTH
- ML-0768 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 5.2 MM, REV ANG CUP, 150 MM WRK/LNGTH

## MIS BAYONETED CURETTE - 7.5 MM



ML-0769

- ML-0769 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 7.5 MM, FWD ANG CUP, 150 MM WRK/LNGTH  
 ML-0770 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 7.5 MM, FWD STRAIGHT CUP, 150 MM WRK/LNGTH  
 ML-0771 PHANTOM MIS CURETTE W/ SILICON HANDLE, BAYONETED, 7.5 MM, REV ANG CUP, 150 MM WRK/LNGTH

## MIS DISSECTOR



ML-0780

- ML-0780 PHANTOM MIS DISSECTOR, STRAIGHT, BAYONETED, 150 MM WRK/LNGTH, 8.5 MM

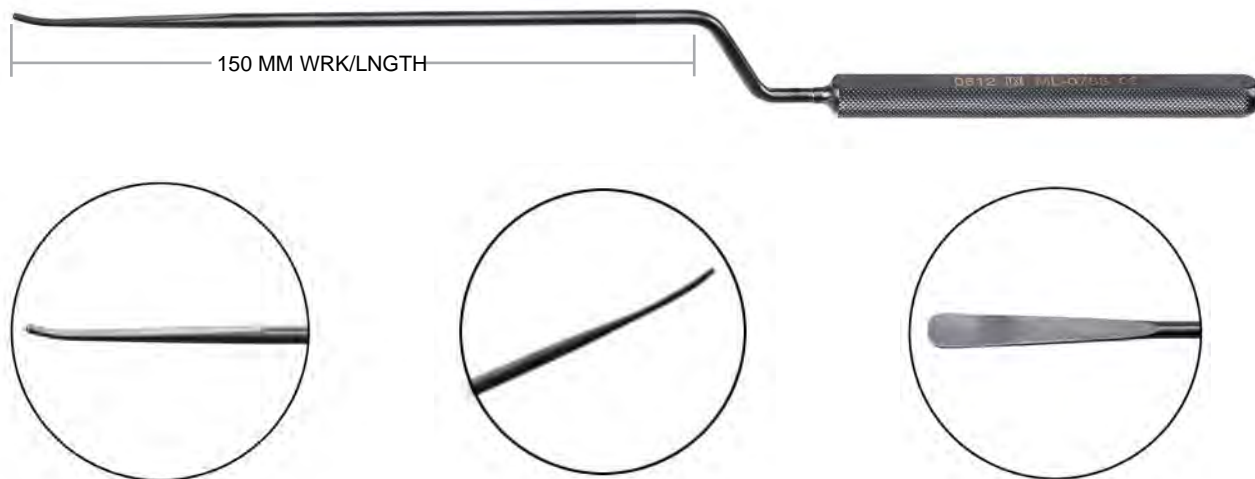
### MIS NERVE HOOK



ML-0782

- ML-0782 PHANTOM MIS NERVE HOOK, MICRO, BAYONETED, 150 MM WRK/LNGTH 2.5 MM
- ML-0784 PHANTOM MIS NERVE HOOK, STRAIGHT, BAYONETED, 150 MM WRK/LNGTH 4.5 MM

### MIS PENFIELD



ML-0786

- ML-0786 PHANTOM MIS PENFIELD #2, PUSH/PULL, 2 MM, 150 MM WRK/LNGTH
- ML-0788 PHANTOM MIS PENFIELD #4, PUSH/PULL, BAYONETED, 4 MM, 150 MM WRK/LNGTH
- ML-0790 PHANTOM MIS PENFIELD #7, PUSH/ PULL, 7 MM, 150 MM WRK/LNGTH



**PHANTOM XL INSTRUMENTS SET ML-2011  
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**COBB ELEVATORS..... 168 -169**

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**KERRISON RONGEUR BAYONET ..... 173 -174**

**PENFIELD ..... 170**

**NERVE ROOT RETRACTOR ..... 171**

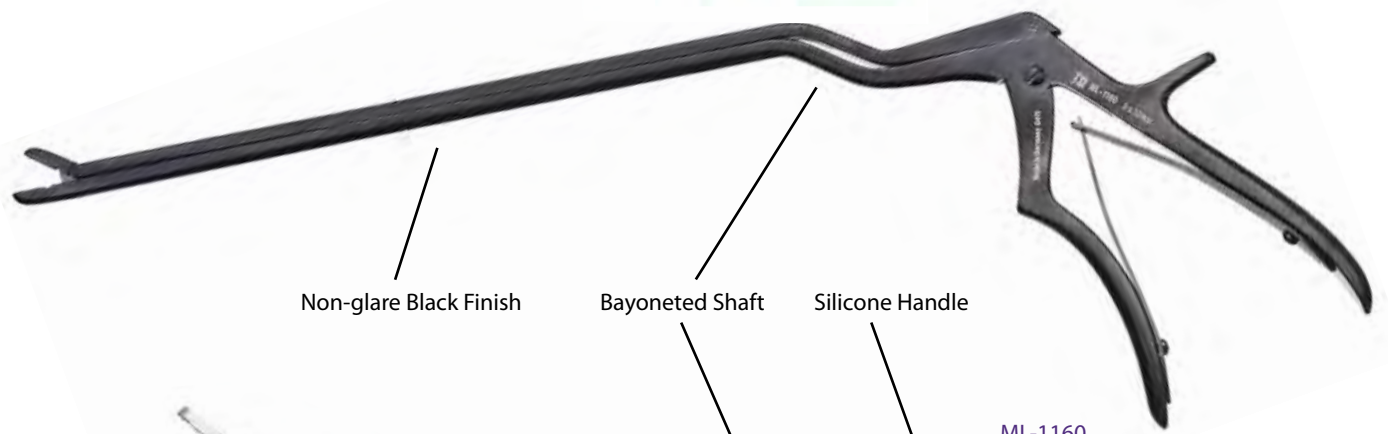
**SUCTION TUBE ..... 172**



PHANTOM ML SETS  
**ML-2011**

**MICRODISCECTOMY INSTRUMENTS**

# Phantom XL

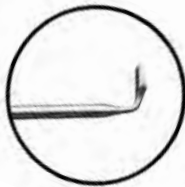


Non-glare Black Finish

Bayoneted Shaft

Silicone Handle

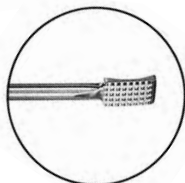
ML-1160  
PHANTOM XL  
IVD PITUITARY  
RONGEUR,  
BAYONETED



ML-1100  
PHANTOM XL  
EPSTEIN  
CURETTE,  
BAYONETED



ML-1160  
PHANTOM XL  
IVD PITUITARY  
RONGEUR,  
BAYONETED



ML-1140  
PHANTOM XL  
RASP

ML-1110  
PHANTOM XL  
RING CURETTE

## XL INSTRUMENTS

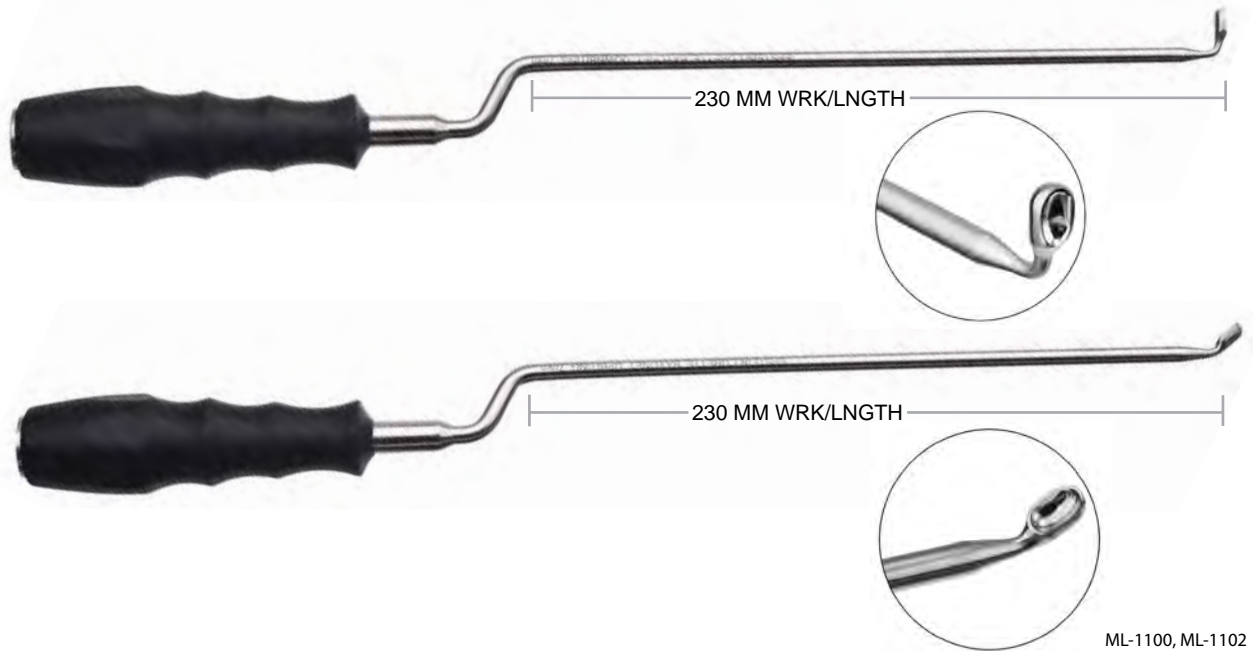


ML-2011

## ML-2011 PHANTOM XL INSTRUMENTS

		ea.
ML-1100	XL EPSTEIN CURETTE, BAY, DOWNBITING 7 MM, 230 MM WRK/LNGTH	1
ML-1102	XL EPSTEIN CURETTE, BAY, UPBITING 7 MM, 230 MM WRK/LNGTH	1
ML-1110	XL RING CURETTE, BAY, ANGLED 10 MM, 230 MM WRK/LNGTH	1
ML-1112	XL RING CURETTE, STRGHT SHAFT, ANG. 10 MM, 240 MM WRK/LNGTH	1
ML-1120	XL CUP CURETTE, BAY, ANGLED TIP, 8 MM, 230 MM WRK/LNGTH	1
ML-1122	XL CUP CURETTE, STRGHT SHAFT, ANG. TIP, 8 MM, 240 MM WRK/LNGTH	1
ML-1126	XL COBB ELEVATOR, 16 MM, ANGLED TIP, 250 MM WRK/LNGTH	1
ML-1128	XL COBB ELEVATOR, 16 MM, STRAIGHT TIP, 250 MM WRK/LNGTH	1
ML-1130	XL COBB ELEVATOR, 20 MM, ANGLED TIP, 250 MM WRK/LNGTH	1
ML-1132	XL COBB ELEVATOR, 20 MM, STRAIGHT TIP, 250 MM WRK/LNGTH	1
ML-1138	XL RASP, DUAL SIDED, 240 MM WRK/LNGTH	1
ML-1140	XL RASP / SCRAPER, 240 MM WRK/LNGTH	1
ML-1144	XL OSTEOTOME, STRAIGHT, 10 MM, 240 MM WRK/LNGTH	1
ML-1146	XL OSTEOTOME, EDGE CUTTING, 230 MM WRK/LNGTH	1
ML-1150	XL PENFIELD, PULL, 190 MM WRK/LNGTH	1
ML-1152	XL NERVE ROOT RETRACTOR, BAY, 7 X 3 MM, 190 MM WRK/LNGTH	1
ML-1156	XL NERVE HOOK W/BALL TIP, 190 MM WRK/LNGTH	1
ML-1158	XL FRAZIER SUCTION TUBE, 220 MM WRK/LNGTH, 10 Fr	1
ML-1160	XL IVD PIT. RONGEUR BAY, STRGHT, 5 X 10 MM, 200 MM WRK/LNGTH	1
ML-1164	XL IVD PIT. RONGEUR BAY, ANG. 30 DEG, 5 X 6 MM, 200 MM WRK/LNGTH	1
ML-1170	XL KERRISON RONGEUR BAY, 40 DEG X 4 MM, 230 MM WRK/LNGTH	1
ML-1180	XL KERRISON RONGEUR BAY, 90 DEG X 4 MM, 230 MM WRK/LNGTH	1
ML-0711	XL STERILIZATION TRAY (FOR ML-2011 SET)	1

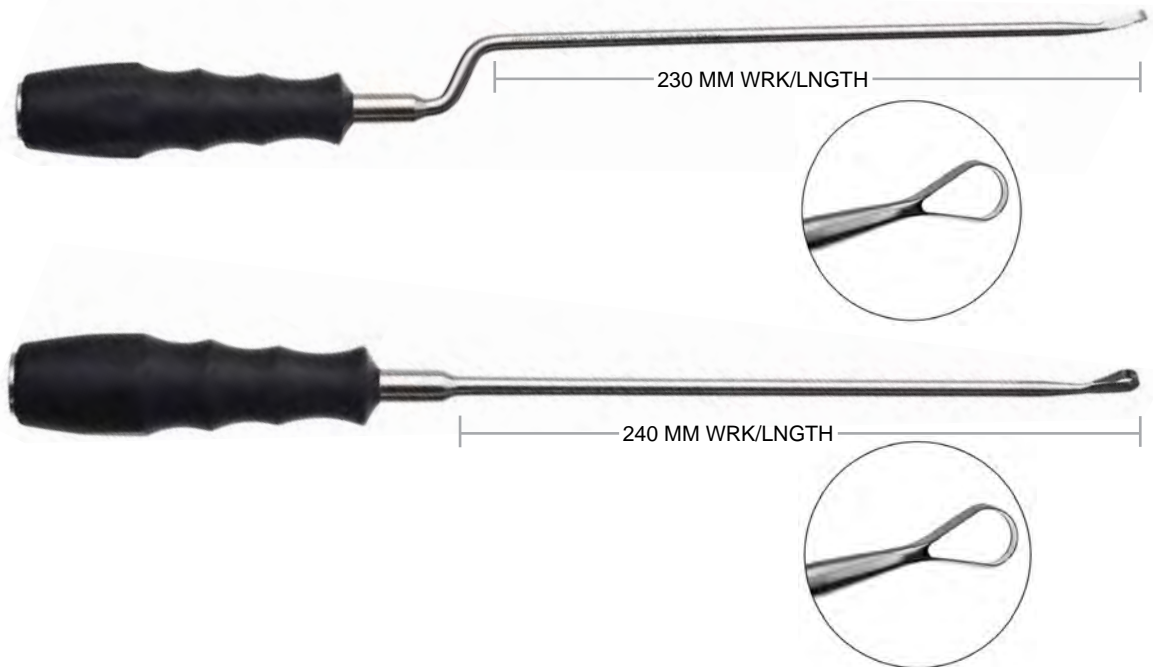
**BAYONETED CURETTE**



ML-1100, ML-1102

ML-1100 PHANTOM XL EPSTEIN CURETTE, BAYONETED, DOWNBITING 7 MM  
 ML-1102 PHANTOM XL ANGLED CURETTE, BAYONETED, UPBITING 7 MM

**RING CURETTE**

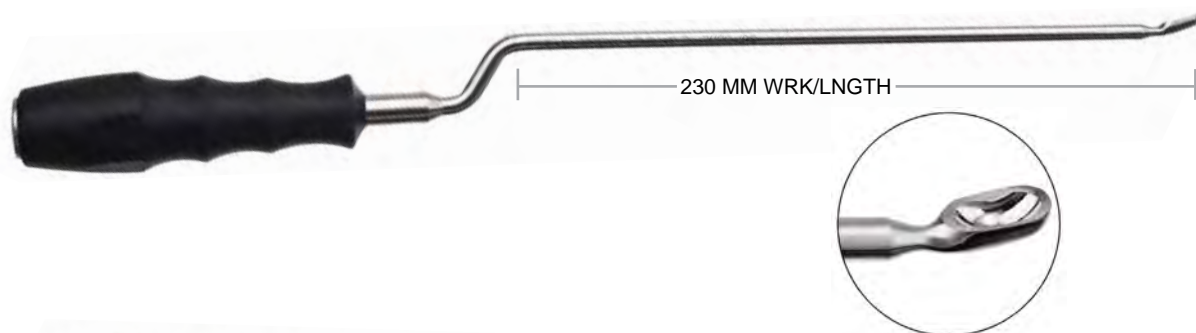


ML-1110, ML-1112

ML-1110 PHANTOM XL RING CURETTE, BAYONETED, ANGLED 10 MM  
 ML-1112 PHANTOM XL RING CURETTE, STRAIGHT SHAFT, ANGLED 10 MM



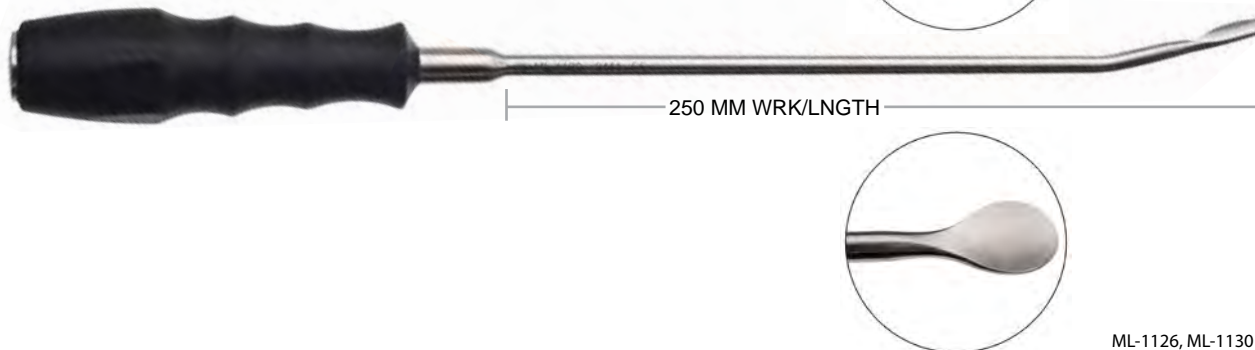
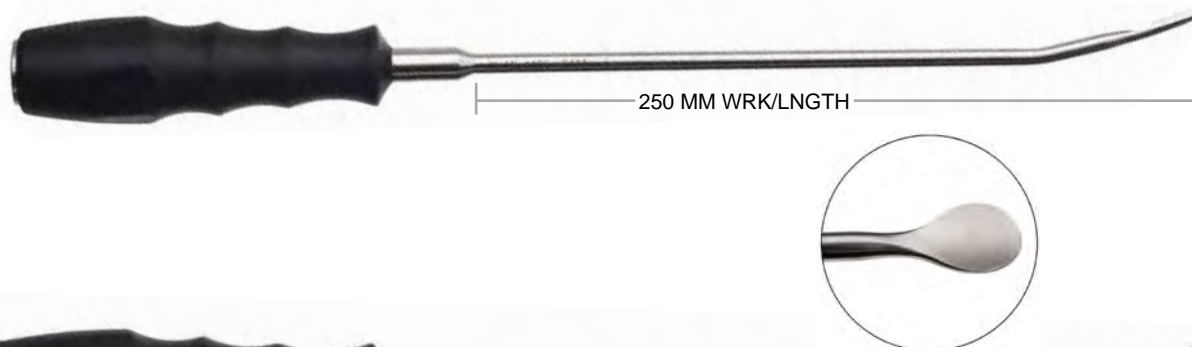
### CUP CURETTE



ML-1120, ML-1122

- ML-1120 PHANTOM XL CUP CURETTE, BAYONETED, ANGLED TIP, 8 MM
- ML-1122 PHANTOM XL CUP CURETTE, STRAIGHT SHAFT, ANGLED TIP, 8 MM

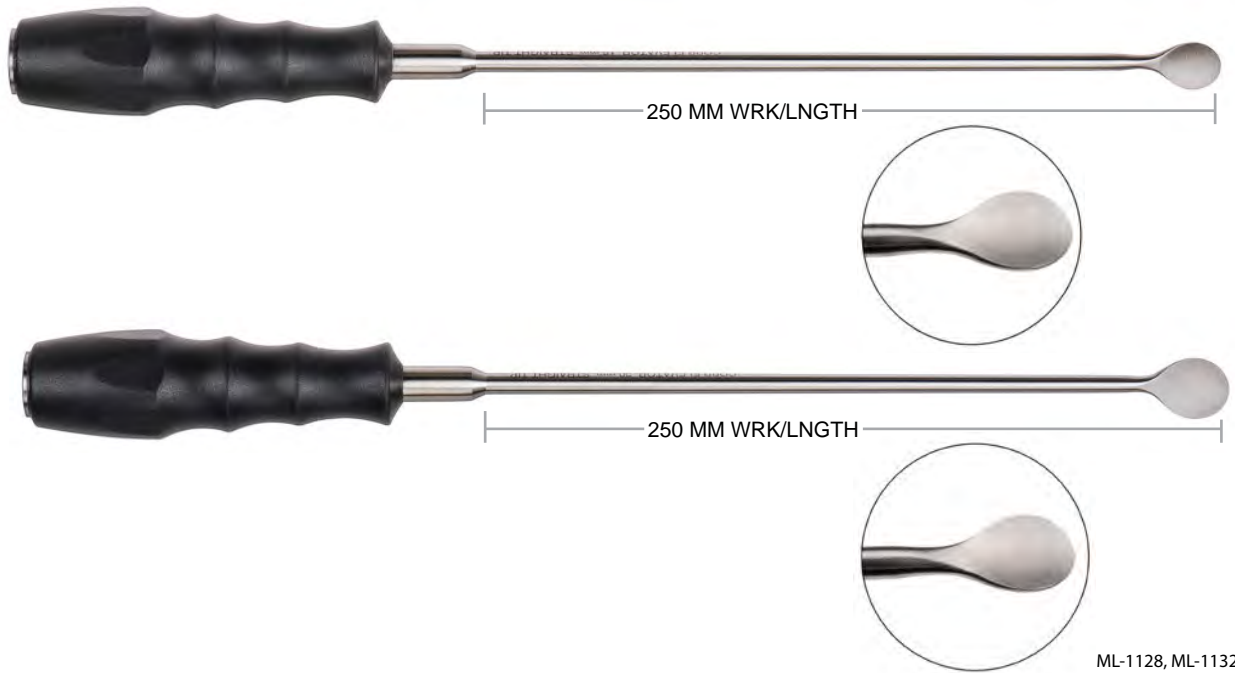
### COBB ELEVATOR - ANGLED TIP



ML-1126, ML-1130

- ML-1126 PHANTOM XL COBB ELEVATOR, 16 MM, ANGLED TIP
- ML-1130 PHANTOM XL COBB ELEVATOR, 20 MM, ANGLED TIP

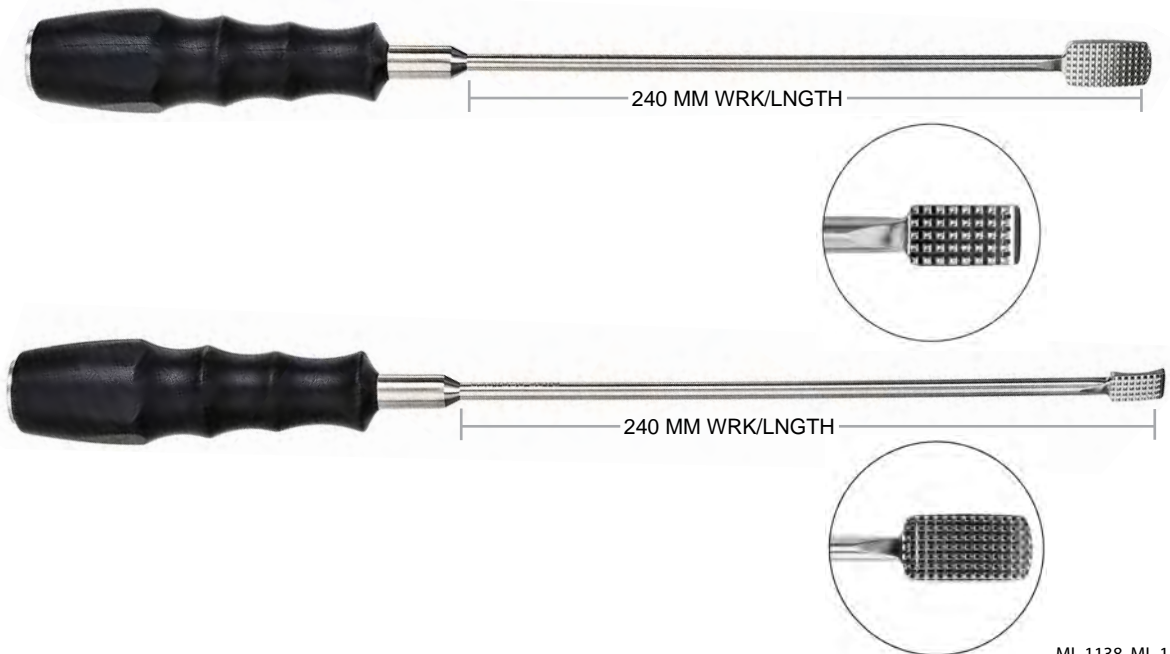
**COBB ELEVATOR - STRAIGHT TIP**



ML-1128, ML-1132

ML-1128 PHANTOM XL COBB ELEVATOR, 16 MM, STRAIGHT TIP  
ML-1132 PHANTOM XL COBB ELEVATOR, 20 MM, STRAIGHT TIP

**RASP**



ML-1138, ML-1140

ML-1138 PHANTOM XL RASP, DUAL SIDED  
ML-1140 PHANTOM XL RASP/SCRAPER

### OSTEOTOME



ML-1144, ML-1146

ML-1144 PHANTOM XL OSTEOTOME, STRAIGHT, 10 MM

ML-1146 PHANTOM XL OSTEOTOME, EDGE CUTTING

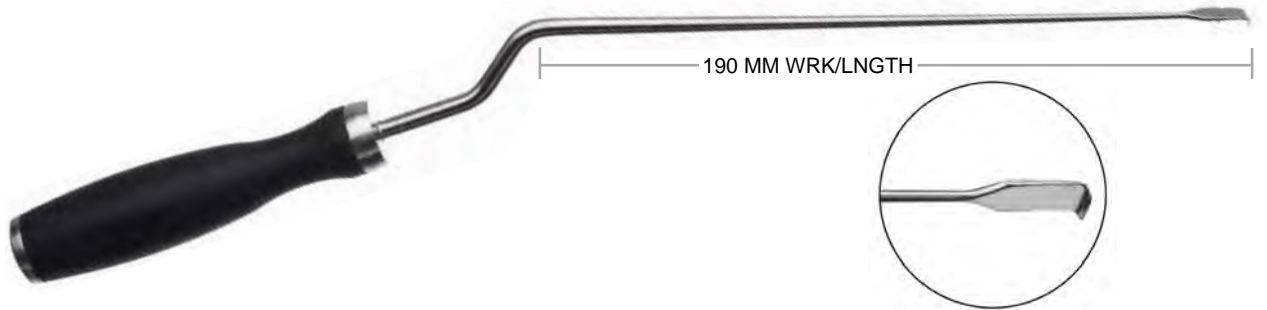
### PENFIELD



ML-1150

ML-1150 PHANTOM XL PENFIELD, PULL

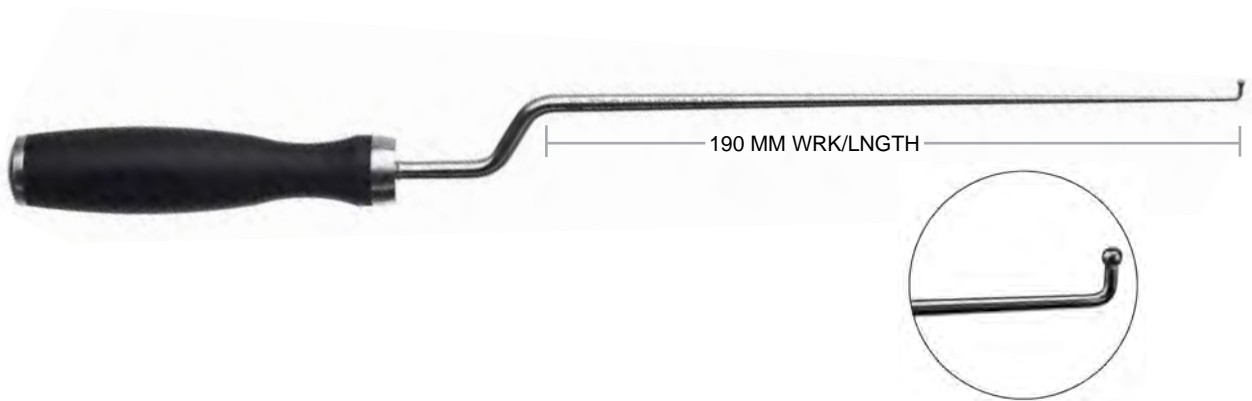
NERVE ROOT RETRACTOR



ML-1152

ML-1152 PHANTOM XL NERVE ROOT RETRACTOR, BAYONETED 7 X 3 MM

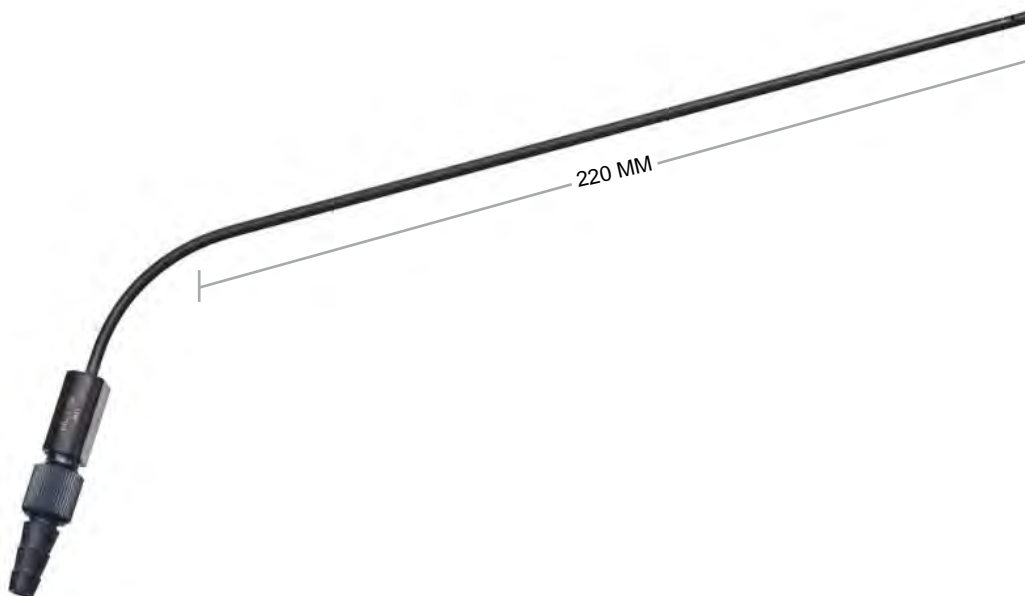
NERVE HOOK



ML-1156

ML-1156 PHANTOM XL NERVE HOOK WITH BALL TIP

SUCTION TUBE



ML-1158

ML-1158 PHANTOM XL FRAZIER SUCTION TUBE, 10 Fr

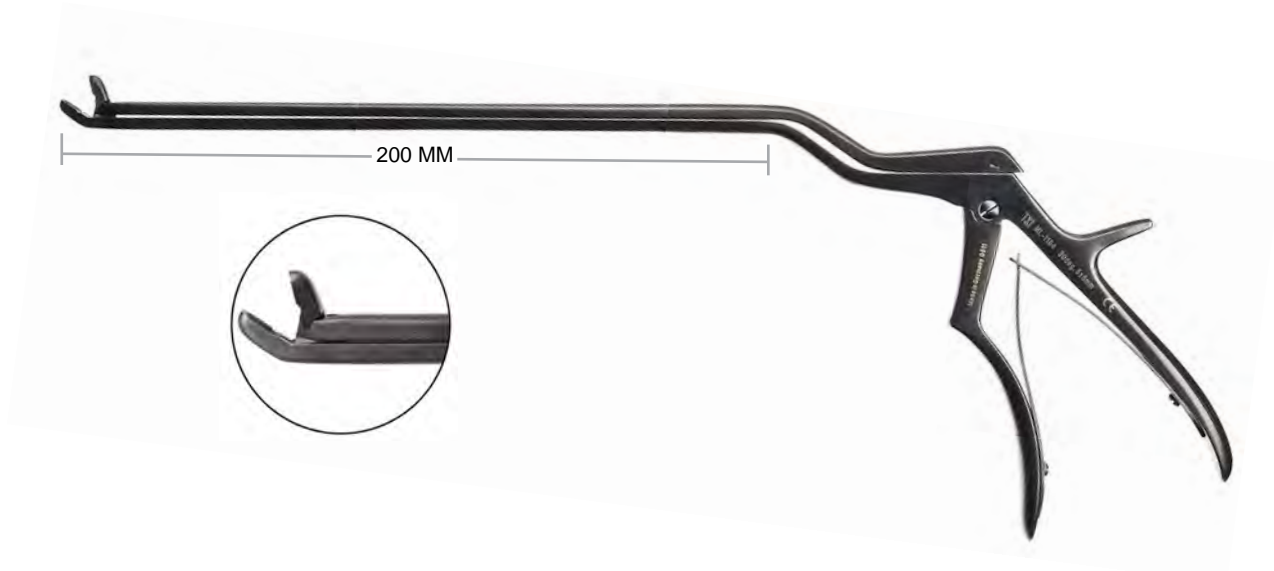
IVD PITUITARY RONGEUR - STRAIGHT



ML-1160

ML-1160 PHANTOM XL IVD PITUITARY RONGEUR, BAYONETED, STRAIGHT, 5 X 10 MM

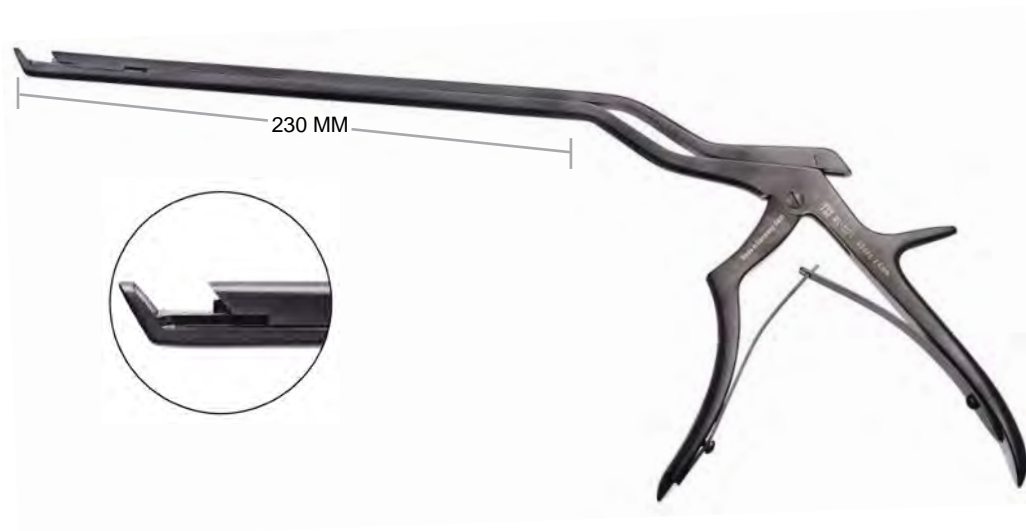
IVD PITUITARY RONGEUR - ANGLED



ML-1164

ML-1164 PHANTOM XL IVD PITUITARY RONGEUR, BAYONETED, ANGLED 30°, 5 X 6 MM

KERRISON RONGEUR



ML-1170

ML-1170 PHANTOM XL KERRISON RONGEUR BAYONET, 40° X 4 MM

## KERRISON RONGEUR



ML-1180

ML-1180 PHANTOM XL KERRISON RONGEUR, BAYONETED, 90° X 4 MM

## ML-2011 INSTRUMENT CASE



ML-0711

ML-0711 PHANTOM ML-2011 INSTRUMENT CASE

NOTES

Lined area for notes, consisting of multiple horizontal lines.





PHANTOM XL MINIMALLY INVASIVE RETRACTOR SETS ML-2005 & ML-2012

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XL BLADE SCREWS..... 191

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INSTRUMENT SPECIFICATIONS

# Phantom XL



Insertion of lateral blade fixation screws

ML-0202  
PHANTOM XL BASE RETRACTOR  
W/PIVOTING ARMS - 225 MM  
RACK

ML-0056  
XL DILATOR HOLDER

ML-0346 - ML-0349  
XL COATED  
DILATORS



## MIS XL LATERAL APPROACH RETRACTOR SET



ML-2005

### ML-2005 PHANTOM MIS XL, LATERAL APPROACH RETRACTOR SET

	ea.		ea.		
LS-0451	T-HANDLE FOR RETRACTOR WITH PIVOTING ARMS	2	ML-0390	XL COUNTER RETRACTOR FAN BLADE 14 MM X 90 MM	2
ML-0040	ML ARTCLTING ACC. ARM ANG. COLUMN W/QUICK CONNECT	1	ML-0391	XL COUNTER RETRACTOR FAN BLADE 14 MM X 100 MM	2
ML-0041	ML TABLE CLAMP F/ARTICULATING ARM	1	ML-0392	XL COUNTER RETRACTOR FAN BLADE 14 MM X 110 MM	2
ML-0044	ML RACK CLAMP W/QUICK CONNECT F/ARTICULATING ARM	1	ML-0393	XL COUNTER RETRACTOR FAN BLADE 14 MM X 120 MM	2
ML-0045	ML LIGHT CABLE, W/TEDAN CONNECTOR	1	ML-0394	XL COUNTER RETRACTOR FAN BLADE 14 MM X 130 MM	2
ML-0051	ML LED LIGHT SOURCE	1	ML-0395	XL COUNTER RETRACTOR FAN BLADE 14 MM X 140 MM	2
ML-0055	XL LATERAL SCREW DRIVER FOR BLADE SCREWS	1	ML-0396	XL COUNTER RETRACTOR FAN BLADE 14 MM X 150 MM	2
ML-0056	XL DILATOR HOLDER	1	ML-0705-01	XL STERILIZATION TRAY - BLADES (FOR ML-2005 SET)	1
ML-0201	RACK CONNECTOR FOR ML RETRACTORS	1	ML-0700-02	ML/XL STERILIZATION TRAY - ACCESSORIES (FOR ML-2000, ML-2005, & ML-2012 SETS)	1
ML-0202	XL BASE RETRACTOR WITH PIVOTING ARMS	1			
ML-0203	ML PIVOTING CENTER BLADE	1			
ML-0204	ML COUNTER RETRACTOR WITH PIVOTING ARMS	1			
ML-0301	XL K-WIRE, BLNT 1.5 MM X 350 MM (14"), SIN. USE (6 PER PACK)	1	ML-0046	ML LIGHT CABLE, W/TEDAN CONNECTOR, SINGLE USE (5/BOX)	1
ML-0350	XL LATERAL BLDS CANULTD (L&R) 18 MM X 90 MM, FUCHSIA	1	ML-0341	XL COAT. DILATORS, SET OF 3 (8, 13 & 18 MM), STER., SIN. USE	1
ML-0351	XL LATERAL BLDS CANULTD (L&R) 18 MM X 100 MM, CHOC.	1	ML-0342	XL PEDICLE SCREW PROBE, 10/BOX, STERILE, SINGLE USE	1
ML-0352	XL LAT. BLDS CANULTD (L&R) 18 MM X 110 MM, TURQ. SPLASH	1	ML-0345	XL MULTI-STAGE LEAD-WIRE, STERILE, SINGLE USE	1
ML-0353	XL LAT. BLDS CANULTD (L&R) 18 MM X 120 MM, PURP. SPLASH	1	ML-0349S	XL COATED DILATOR 22 MM, STERILE, SINGLE USE	1
ML-0354	XL LATERAL BLDS CANNULATED (L&R) 18 MM X 130 MM, GRN	1	ML-0370	SCREW FOR XL BLADE 90 MM, NON-STERILE	1
ML-0355	XL LATERAL BLDS CANNULATED (L&R) 18 MM X 140 MM, BLCK	1	ML-0371	SCREW FOR XL BLADE 100 MM, NON-STERILE	1
ML-0356	XL LATERAL BLDS CANNULATED (L&R) 18 MM X 150 MM, BLUE	1	ML-0372	SCREW FOR XL BLADE 110 MM, NON-STERILE	1
ML-0360	XL LATERAL BLDS CANULTD (L&R) 22 MM X 90 MM, FUCHSIA	1	ML-0373	SCREW FOR XL BLADE 120 MM, NON-STERILE	1
ML-0361	XL LATERAL BLDS CANULTD (L&R) 22 MM X 100 MM, CHOC.	1	ML-0374	SCREW FOR XL BLADE 130 MM, NON-STERILE	1
ML-0362	XL LAT. BLDS CANULTD (L&R) 22 MM X 110 MM, TURQ. SPLASH	1	ML-0375	SCREW FOR XL BLADE 140 MM, NON-STERILE	1
ML-0363	XL LAT. BLDS CANULTD (L&R) 22 MM X 120 MM, PURP. SPLASH	1	ML-0376	SCREW FOR XL BLADE 150 MM, NON-STERILE	1
ML-0364	XL LATERAL BLDS CANNULATED (L&R) 22 MM X 130 MM, GRN	1	ML-0710	XL CADDY FOR LATERAL FIXATION SCREWS	1
ML-0365	XL LATERAL BLDS CANNULATED (L&R) 22 MM X 140 MM, BLCK	1			
ML-0366	XL LATERAL BLDS CANNULATED (L&R) 22 MM X 150 MM, BLUE	1			
ML-0380	XL COUNTER RETRACTOR BLADE 14 MM X 90 MM	2			
ML-0381	XL COUNTER RETRACTOR BLADE 14 MM X 100 MM	2			
ML-0382	XL COUNTER RETRACTOR BLADE 14 MM X 110 MM	2			
ML-0383	XL COUNTER RETRACTOR BLADE 14 MM X 120 MM	2			
ML-0384	XL COUNTER RETRACTOR BLADE 14 MM X 130 MM	2			
ML-0385	XL COUNTER RETRACTOR BLADE 14 MM X 140 MM	2			
ML-0386	XL COUNTER RETRACTOR BLADE 14 MM X 150 MM	2			

### SINGLE USE PRODUCTS



### RETRACTOR BLADES - 18 MM - (ALUMINUM)



ML-0350 - ML-0356

#### CANNULATED BLADES

ML-0350	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	18 MM X 90 MM - FUCHSIA
ML-0351	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	18 MM X 100 MM - CHOCOLATE
ML-0352	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	18 MM X 110 MM - TURQUOISE SPLASH
ML-0353	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	18 MM X 120 MM - PURPLE SPLASH
ML-0354	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	18 MM X 130 MM - GREEN
ML-0355	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	18 MM X 140 MM - BLACK
ML-0356	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	18 MM X 150 MM - BLUE

### RETRACTOR BLADES - 22 MM - (ALUMINUM)



ML-0360 - ML-0366

#### CANNULATED BLADES

ML-0360	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	22 MM X 90 MM - FUCHSIA
ML-0361	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	22 MM X 100 MM - CHOCOLATE
ML-0362	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	22 MM X 110 MM - TURQUOISE SPLASH
ML-0363	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	22 MM X 120 MM - PURPLE SPLASH
ML-0364	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	22 MM X 130 MM - GREEN
ML-0365	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	22 MM X 140 MM - BLACK
ML-0366	PHANTOM XL LATERAL BLADES CANNULATED (L&R)	22 MM X 150 MM - BLUE

RETRACTOR BLADES - ANGLED CANNULATED - (ALUMINUM)



• Use w/ ML-0343

ML-0460 - ML-0466

<b>CANNULATED BLADES</b>	ML-0460 PHANTOM XL LATERAL BLADES ANGLED CANNULATED (L&R) 22 MM X 90 MM, FUCHSIA
	ML-0461 PHANTOM XL LATERAL BLADES ANGLED CANNULATED (L&R) 22 MM X 100 MM, CHOCOLATE
	ML-0462 PHANTOM XL LATERAL BLADES ANGLED CANNULATED (L&R) 22 MM X 110 MM, TURQUOISE SPLASH
	ML-0463 PHANTOM XL LATERAL BLADES ANGLED CANNULATED (L&R) 22 MM X 120 MM, PURPLE SPLASH
	ML-0464 PHANTOM XL LATERAL BLADES ANGLED CANNULATED (L&R) 22 MM X 130 MM, GREEN
	ML-0465 PHANTOM XL LATERAL BLADES ANGLED CANNULATED (L&R) 22 MM X 140 MM, BLACK
	ML-0466 PHANTOM XL LATERAL BLADES ANGLED CANNULATED (L&R) 22 MM X 150 MM, BLUE

### COUNTER RETRACTOR BLADES - 14 MM - (TITANIUM)



ML-0380 - ML-0386

#### RETRACTOR BLADES

ML-0380	PHANTOM XL COUNTER RETRACTOR BLADE 14 MM X 90 MM
ML-0381	PHANTOM XL COUNTER RETRACTOR BLADE 14 MM X 100 MM
ML-0382	PHANTOM XL COUNTER RETRACTOR BLADE 14 MM X 110 MM
ML-0383	PHANTOM XL COUNTER RETRACTOR BLADE 14 MM X 120 MM
ML-0384	PHANTOM XL COUNTER RETRACTOR BLADE 14 MM X 130 MM
ML-0385	PHANTOM XL COUNTER RETRACTOR BLADE 14 MM X 140 MM
ML-0386	PHANTOM XL COUNTER RETRACTOR BLADE 14 MM X 150 MM

### FAN RETRACTOR BLADES - 23 MM - (TITANIUM)



ML-0390 - ML-0396

#### RETRACTOR FAN BLADES

ML-0390	PHANTOM XL COUNTER RETRACTOR FAN BLADE 23 MM X 90 MM
ML-0391	PHANTOM XL COUNTER RETRACTOR FAN BLADE 23 MM X 100 MM
ML-0392	PHANTOM XL COUNTER RETRACTOR FAN BLADE 23 MM X 110 MM
ML-0393	PHANTOM XL COUNTER RETRACTOR FAN BLADE 23 MM X 120 MM
ML-0394	PHANTOM XL COUNTER RETRACTOR FAN BLADE 23 MM X 130 MM
ML-0395	PHANTOM XL COUNTER RETRACTOR FAN BLADE 23 MM X 140 MM
ML-0396	PHANTOM XL COUNTER RETRACTOR FAN BLADE 23 MM X 150 MM

## RETRACTOR BLADE HANDLE



CS-0105

CS-0105 PHANTOM CS SIDE-LOADING RETRACTOR BLADE HANDLE

## LOCKING RETRACTOR BLADE HANDLE



- Only compatible with TSI Cross Cut Blades

CS-0126

CS-0126 PHANTOM CS SIDE-LOADING LOCKING RETRACTOR BLADE HANDLE



### BASE RETRACTOR W/PIVOTING ARMS



- Pivoting up to 30°

ML-0202

ML-0202 PHANTOM XL BASE RETRACTOR W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 225 MM RACK

ML-0208 PHANTOM XL BASE RETRACTOR W/PIVOTING ARMS, SIDE LOADING, W/ T-HANDLE LS-0451 - 225 MM RACK

### COUNTER RETRACTOR W/ PIVOTING ARMS

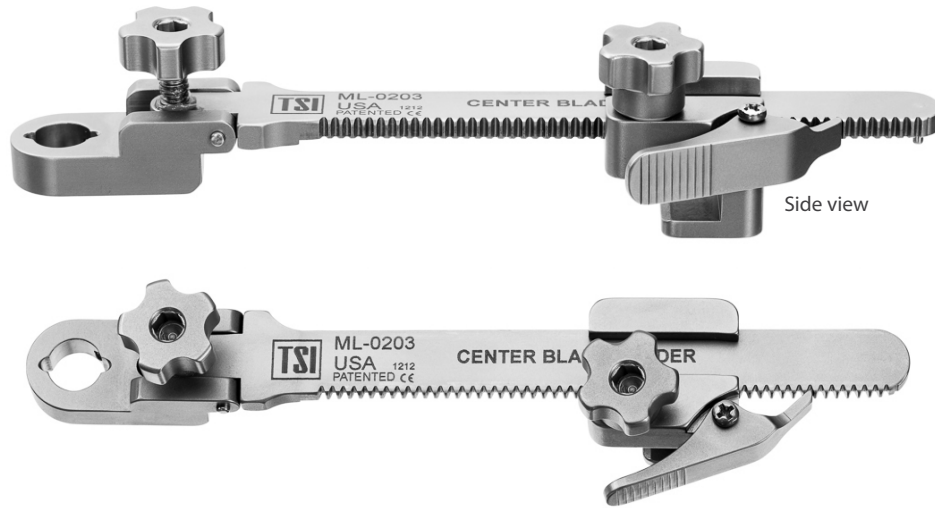


- Pivoting up to 30°

ML-0204

ML-0204 PHANTOM ML COUNTER RETRACTOR W/PIVOTING ARMS, W/ T-HANDLE LS-0451 - 225 MM RACK

**PIVOTING CENTER BLADE**



- Pivoting up to 30°

ML-0203

ML-0203 PHANTOM ML PIVOTING CENTER BLADE - 130 MM RACK

**RACK CONNECTOR**



ML-0201

ML-0201 PHANTOM ML RACK CONNECTOR FOR RETRACTORS

T-HANDLE FOR RETRACTOR W/PIVOTING ARMS



LS-0451

LS-0451 PHANTOM T-HANDLE FOR RETRACTOR W/PIVOTING ARMS

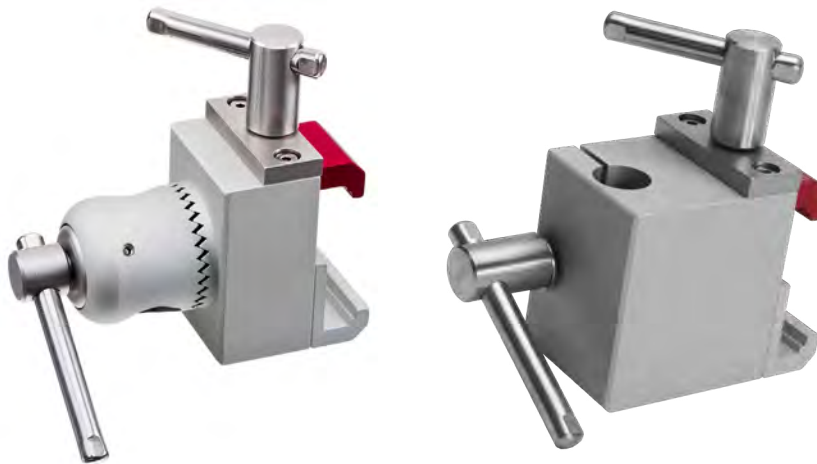
HEX DRIVER TOOL



ML-0505

ML-0505 PHANTOM XL HEX DRIVER TOOL

**TABLE CLAMPS**



ML-0021 - ML-0041

- ML-0021 PHANTOM ML ROTATING TABLE CLAMP FOR ARTICULATING ARM
- ML-0041 PHANTOM ML TABLE CLAMP FOR ARTICULATING ARM

**ARTICULATING ACCESSORY ARMS**



Available w/ Quick Connect



ML-0040, ML-0060

- ML-0020 PHANTOM ML ARTICULATING HEAVY-DUTY ACCESSORY ARM ANGLED COLUMN W/QUICK CONNECTOR
- ML-0040 PHANTOM ML ARTICULATING ACCESSORY ARM W/ QUICK CONNECT RACK CLAMP
- ML-0060 PHANTOM ML ARTICULATING ACCESSORY ARM ANGLED COLUMN W/ RACK CLAMP

## RACK CLAMP



- Use w/ ML-0040 Articulating Arm

ML-0044

ML-0044 PHANTOM ML RACK CLAMP W/QUICK CONNECT F/ARTICULATING ARM

## LIGHT CABLE W/TEDAN CONNECTOR



ML-0046

- ML-0045 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
- ML-0046 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, - (5 PER BOX), 10 FT LENGTH, PRE-PACKAGED STERILE, SINGLE USE
- ML-0047 PHANTOM ML LIGHT CABLE, SINGLE ENDED W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
- ML-0048 PHANTOM ML LIGHT CABLE, STRONG CURVE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE

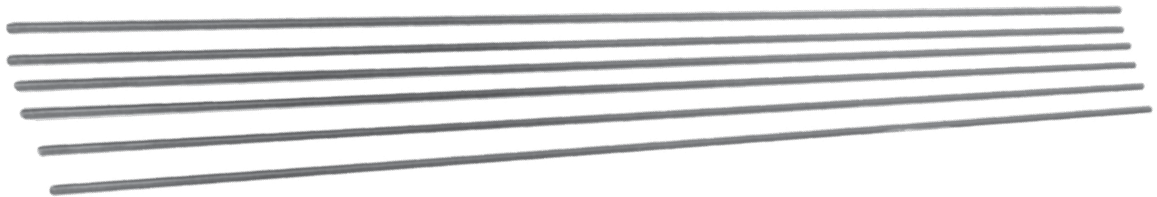
## LED LIGHT SOURCE



ML-0051

ML-0051 ML LED LIGHT SOURCE, 52 WATTS, ONLY COMPATIBLE W/TSI LIGHT CABLES

## K-WIRE



ML-0301

ML-0301 PHANTOM XL K-WIRE, BLUNT, 1.5 MM X 350 MM, (14") SINGLE USE (6 PER PACK)

### LEAD WIRE



ML-0302

ML-0302 PHANTOM XL EXTENSION LEAD WIRE 4'

### LATERAL SCREW DRIVER



ML-0055

ML-0055 XL LATERAL SCREW DRIVER FOR BLADE SCREWS

SCREWS FOR XL BLADES



ML-0370 - ML-0374

- ML-0370 PHANTOM SCREW FOR XL BLADE 90 MM, NON-STERILE, SINGLE USE
- ML-0371 PHANTOM SCREW FOR XL BLADE 100 MM, NON-STERILE, SINGLE USE
- ML-0372 PHANTOM SCREW FOR XL BLADE 110 MM, NON-STERILE, SINGLE USE
- ML-0373 PHANTOM SCREW FOR XL BLADE 120 MM, NON-STERILE, SINGLE USE
- ML-0374 PHANTOM SCREW FOR XL BLADE 130 MM, NON-STERILE, SINGLE USE
- ML-0375 PHANTOM SCREW FOR XL BLADE 140 MM, NON-STERILE, SINGLE USE
- ML-0376 PHANTOM SCREW FOR XL BLADE 150 MM, NON-STERILE, SINGLE USE

COATED DILATORS



- Compatible w/ ML-0350 - ML-0356, ML-0360 - ML-0366

ML-0341

- ML-0341 PHANTOM XL COATED DILATORS, SET OF 3 (8, 13 & 18 MM), PRE-PACKAGED STERILE, SINGLE USE
- ML-0343 PHANTOM XL COATED DILATORS, SET OF 3 (8, 13, & 22 MM GROOVED), PRE-PACKAGED STERILE, SINGLE USE



### COATED DILATOR, SINGLE USE ONLY



ML-0349S

ML-0349S PHANTOM XL COATED DILATOR 22 MM, PRE-PACKAGED STERILE, SINGLE USE

### CLAMP FOR DILATORS



ML-0056

ML-0056 PHANTOM XL DILATOR HOLDER - (ALUMINUM)

## MULTI-STAGE LEAD-WIRE, SINGLE USE ONLY



ML-0345

ML-0345 PHANTOM XL MULTI-STAGE LEAD-WIRE, PRE-PACKAGED STERILE, SINGLE USE

## PEDICLE SCREW PROBE, SINGLE USE ONLY



ML-0342

ML-0342 PHANTOM XL PEDICLE SCREW PROBE, 160 MM SHAFT, 2.3 MM, BALL TIP, PRE-PACKAGED STERILE, SINGLE USE, 10 PER BOX  
 ML-0342/100 PHANTOM XL PEDICLE SCREW PROBE, 160 MM SHAFT, 2.3 MM, BALL TIP, PRE-PACKAGED STERILE, SINGLE USE, INDIVIDUAL

CADDY FOR LATERAL BLADES FIXATION SCREWS



ML-0710

ML-0710 PHANTOM XL CADDY FOR LATERAL BLADE FIXATION SCREWS

ML-2005 & ML-2012 INSTRUMENT CASE



ML-0705-01

ML-0705-01 PHANTOM ML-2005 & ML-2012 INSTRUMENT CASE - BLADES  
 ML-0700-02 PHANTOM ML-2000, ML-2005, & ML-2012 INSTRUMENT CASE - ACCESSORIES



PHANTOM XL RING RETRACTOR COMPLETE SET ML-2020

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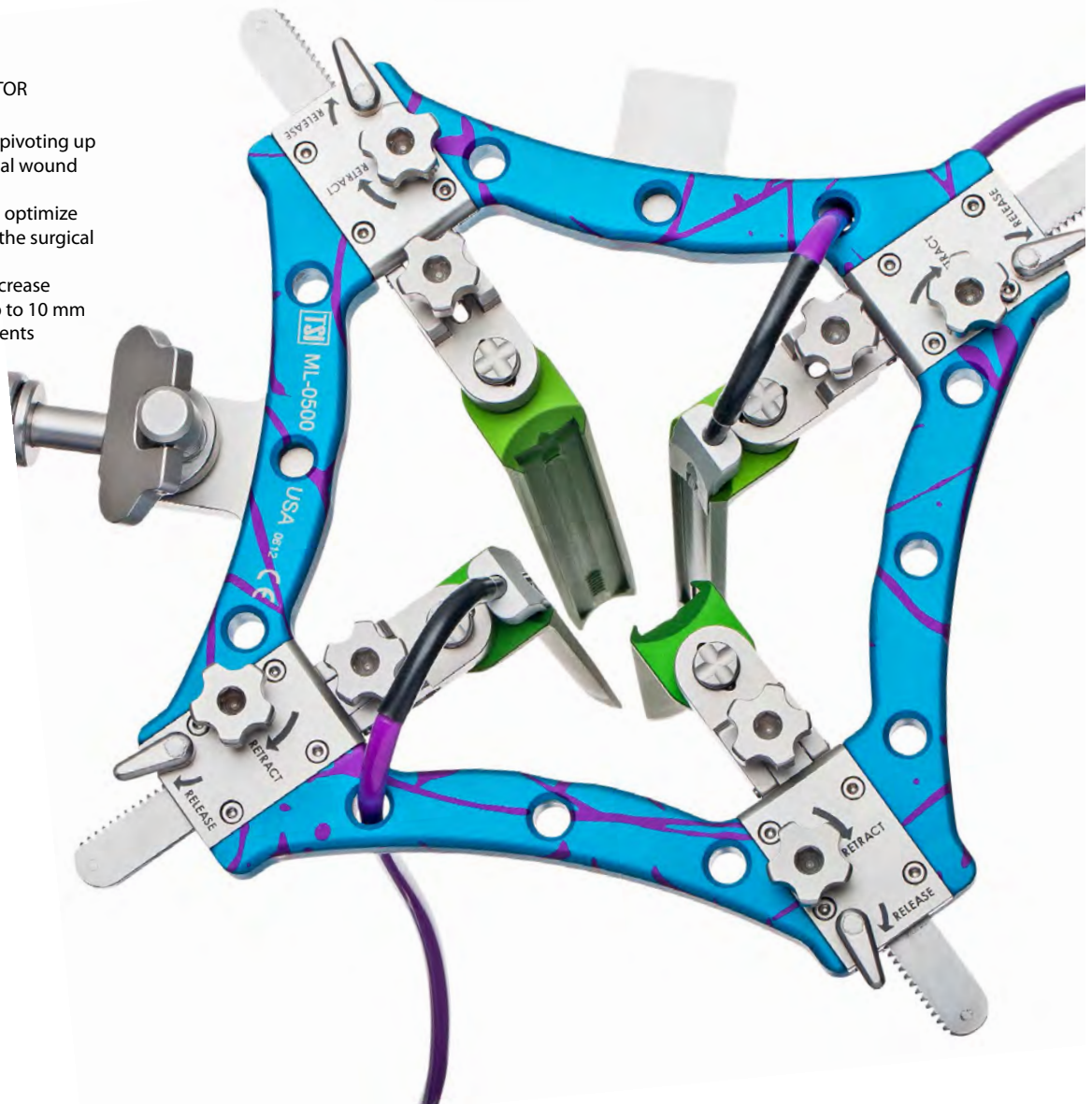


## INSTRUMENT SPECIFICATIONS

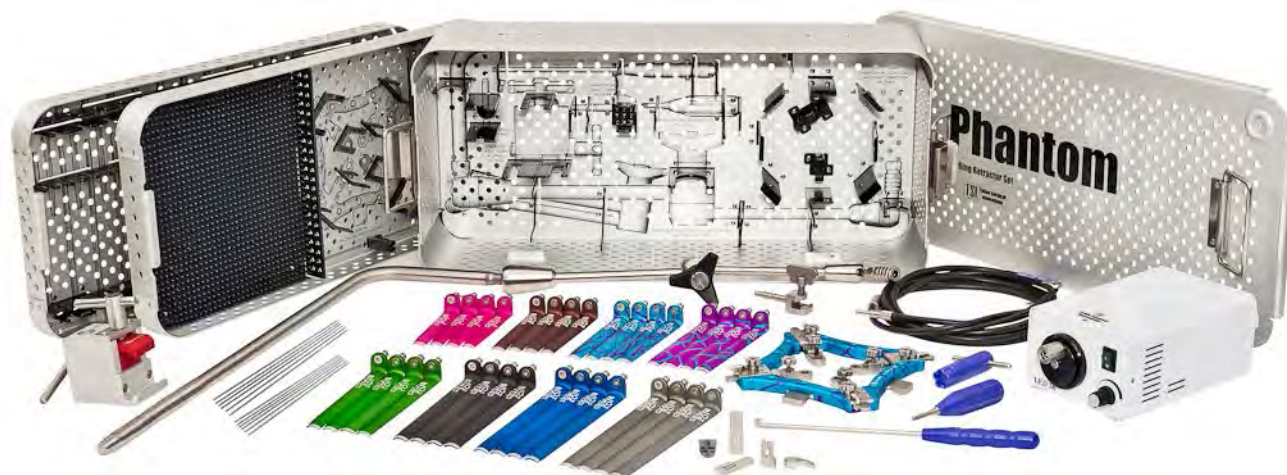
# Phantom XL

## ML-0500 XL RING RETRACTOR

- Blades retract independently, pivoting up to 30° for optimal wound exposure
- TSI Light Cables optimize visualization of the surgical site
- K-Wire Shims increase blade length up to 10 mm in 1 mm increments



## XL RING RETRACTOR SET



ML-2020

### ML-2020 PHANTOM XL RING RETRACTOR SET

LS-0451	T-HANDLE FOR RETRACTOR WITH PIVOTING ARMS	1	ea.			
ML-0041	ML TABLE CLAMP F/ARTICULATING ARM	1		ML-0509	XL K-WIRE F/RING RETRACTOR, 1.6 MM X 9", SIN. USE (6 PER PACK)	1
ML-0045	ML LIGHT CABLE, W/TEDAN CONNECTOR	1		ML-0510	XL K-WIRE SHIM, SINGLE USE	1
ML-0051	ML LED LIGHT SOURCE	1		ML-0516	XL SPIKE SHIM, SINGLE USE	1
ML-0060	ML ARTCLTING ACC. ARM ANG. COL. W/RACK CLAMP	1				
ML-0301	XL K-WIRE, BLNT 1.5 MM X 350 MM (14"), SIN. USE (6 PER PACK)	1				
ML-0500	XL RING RETRACTOR	1				
ML-0505	XL HEX DRIVER TOOL	1				
ML-0506	XL LOCKING CAP FOR BLADES	4				
ML-0509	XL K-WIRE F/RING RETRACTOR, 1.6 MM X 9", SIN. USE (6 PER PACK)	1				
ML-0510	XL K-WIRE SHIM, SINGLE USE	2				
ML-0511	XL SHIM REMOVAL TOOL	1				
ML-0512	XL LIGHT GUIDE	2				
ML-0516	XL SPIKE SHIM, SINGLE USE	1				
ML-0520	XL LATERAL BLADES SECT. 18 MM X 90 MM, FUCHSIA	4				
ML-0521	XL LATERAL BLADES SECT. 18 MM X 100 MM, CHOC.	4				
ML-0522	XL LAT. BLADES SECT. 18 MM X 110 MM, TURQ. SPLSH	4				
ML-0523	XL LAT. BLADES SECT. 18 MM X 120 MM, PURP. SPLSH	4				
ML-0524	XL LAT. BLADES SECT. 18 MM X 130 MM, GRN	4				
ML-0525	XL LAT. BLADES SECT. 18 MM X 140 MM, BLCK	4				
ML-0526	XL LAT. BLADES SECT. 18 MM X 150 MM, BLUE	4				
ML-0527	XL LAT. BLADES SECT. 18 MM X 160 MM, GRAY	4				
ML-0712	XL RING STERILIZATION TRAY (FOR ML-2020)	1				
<b>SINGLE USE PRODUCTS</b>						
ML-0046	ML LGHT CBLE, W/TEDAN CONNCTR, SIN. USE (5/BOX)	1				
ML-0301	XL K-WIRE, BLNT 1.5 MM X 350 MM (14"), SIN. USE (6 PER PACK)	1				
ML-0341	XL COAT. DILTRS, SET 3 (8, 13 & 18 MM), STER., SIN. USE	1				
ML-0342	XL PEDICLE SCREW PROBE, 10/BOX, STER., SIN. USE	1				

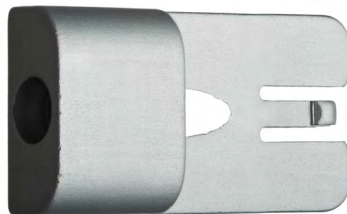
**RING RETRACTOR**



ML-0500

ML-0500 PHANTOM XL RING RETRACTOR

**LIGHT GUIDE**



ML-0512

ML-0512 PHANTOM XL LIGHT GUIDE



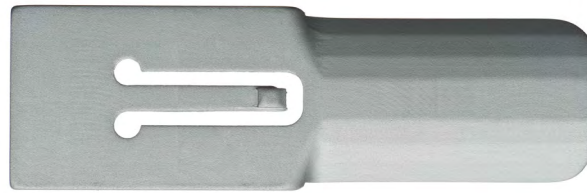
## RETRACTOR BLADES - (ALUMINUM)



ML-0520 - ML-0527

- ML-0520 PHANTOM XL LATERAL BLADE, FUCHSIA, 18 MM X 90 MM
- ML-0521 PHANTOM XL LATERAL BLADE, CHOCOLATE, 18 MM X 100 MM
- ML-0522 PHANTOM XL LATERAL BLADE, TURQUOISE SPLASH, 18 MM X 120 MM
- ML-0523 PHANTOM XL LATERAL BLADE, PURPLE SPLASH, 18 MM X 120 MM
- ML-0524 PHANTOM XL LATERAL BLADE, GREEN, 18 MM X 130 MM
- ML-0525 PHANTOM XL LATERAL BLADE, BLACK, 18 MM X 140 MM
- ML-0526 PHANTOM XL LATERAL BLADE, BLUE, 18 MM X 150 MM
- ML-0527 PHANTOM XL LATERAL BLADE, GRAY, 18 MM X 160 MM

**SHIMS, SINGLE USE**



ML-0510, ML-0516

ML-0510 PHANTOM XL K-WIRE SHIM, SINGLE USE  
ML-0516 PHANTOM XL SPIKE SHIM, SINGLE USE

**SHIM REMOVAL TOOL**



ML-0511

ML-0511 SHIM REMOVAL TOOL

T-HANDLE FOR RETRACTOR W/PIVOTING ARMS



LS-0451

LS-0451 PHANTOM T-HANDLE FOR RETRACTOR W/PIVOTING ARMS

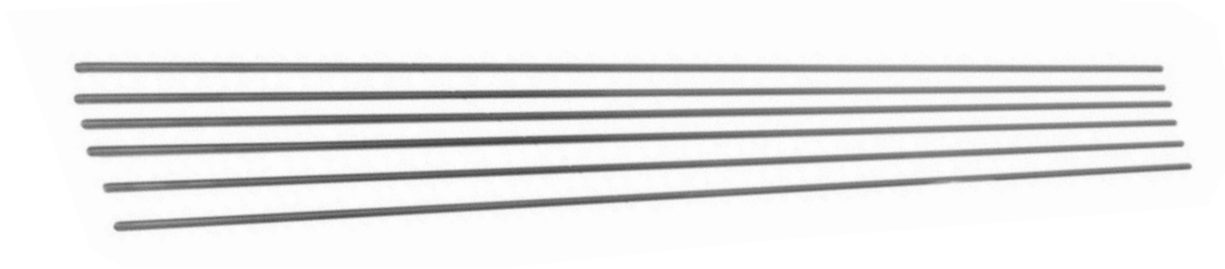
HEX DRIVER TOOL



ML-0505

ML-0505 PHANTOM XL HEX DRIVER TOOL

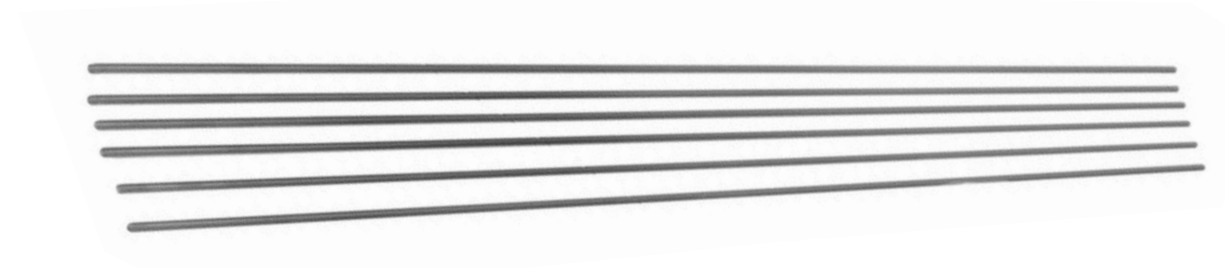
**BLUNT DISPOSABLE K-WIRE**



ML-0301

ML-0301 PHANTOM XL BLUNT K-WIRE, 1.5 X 350 MM, (14"), SINGLE USE

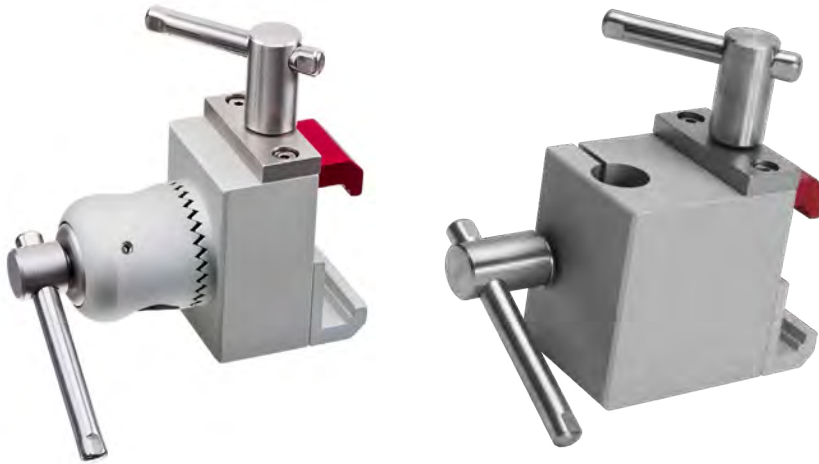
**K-WIRE FOR RING RETRACTOR**



ML-0509

ML-0509 PHANTOM XL SHARP K-WIRE FOR RING RETRACTOR, 1.6 MM X 9", (6 PER PACK), SINGLE USE

## TABLE CLAMPS



ML-0021 - ML-0041

- ML-0021 PHANTOM ML ROTATING TABLE CLAMP FOR ARTICULATING ARM
- ML-0041 PHANTOM ML TABLE CLAMP FOR ARTICULATING ARM

## ARTICULATING ACCESSORY ARMS



Available w/ Quick Connect



ML-0040, ML-0060

- ML-0040 PHANTOM ML ARTICULATING ACCESSORY ARM W/ QUICK CONNECT RACK CLAMP
- ML-0060 PHANTOM ML ARTICULATING ACCESSORY ARM ANGLED COLUMN W/ RACK CLAMP

**RACK CLAMP**



- Use w/ ML-0040 Articulating Arm

ML-0044

ML-0044 PHANTOM ML RACK CLAMP W/QUICK CONNECT F/ARTICULATING ARM

**LOCKING CAP**



ML-0506

ML-0506 PHANTOM XL LOCKING CAP FOR BLADES

## LED LIGHT SOURCE



ML-0051

ML-0051 ML LED LIGHT SOURCE, 52 WATTS, ONLY COMPATIBLE W/TSI LIGHT CABLES

## LIGHT CABLE W/TEDAN CONNECTOR



ML-0046

- ML-0045 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
- ML-0046 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, - (5 PER BOX), 10 FT LENGTH, PRE-PACKAGED STERILE, SINGLE USE
- ML-0047 PHANTOM ML LIGHT CABLE, SINGLE ENDED W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE
- ML-0048 PHANTOM ML LIGHT CABLE, STRONG CURVE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE





**PHANTOM ARTICULATING ARM W/ ANGLED COLUMN SET ML-2009**

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PHANTOM ARM

INSTRUMENT SPECIFICATIONS

# Phantom ARM



**ML-0040**  
 PHANTOM ML  
 ARTICULATING ACCESSORY  
 ARM

Arm easily connects to  
 instrument holder



**ML-0041**  
 PHANTOM ML TABLE CLAMP  
 Provides secure connection  
 to operation table



**ML-0021**  
 ROTATING TABLE CLAMP  
 FOR ARTICULATING ARM

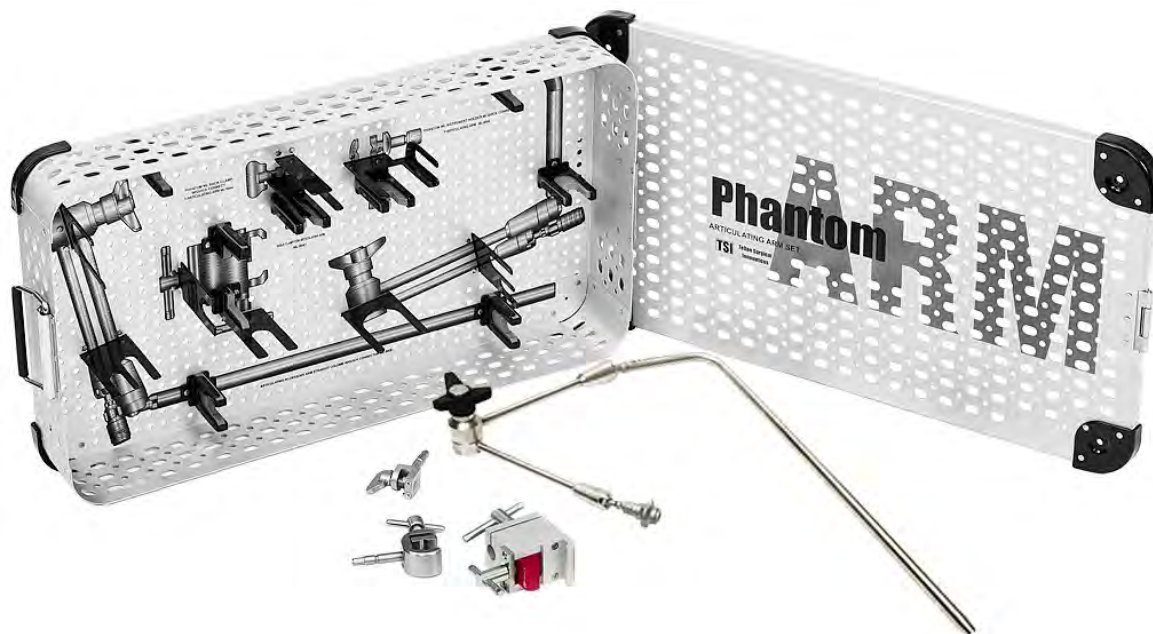


**ML-0044**  
 PHANTOM ML RACK CLAMP  
 Easily connects to the arm



**ML-0043**  
 PHANTOM ML INSTRUMENT  
 HOLDER  
 Easily connects to the arm

## PHANTOM ARTICULATING ARM WITH ANGLED COLUMN SET



ML-2009

### ML-2009 PHANTOM ARTICULATING ARM WITH ANGLED COLUMN SET

ea.

ML-0040	ML ARTCLTING ACC. ARM ANGLED COLUMN W/QUICK CONNECT	1
ML-0041	ML TABLE CLAMP F/ARTICULATING ARM	1
ML-0043	ML INSTRUMENT HLDR W/QUICK CONNECT F/ARTICULATING ARM	1
ML-0044	ML RACK CLAMP W/QUICK CONNECT F/ARTICULATING ARM	1
ML-0709	ML STERILIZATION TRAY (FOR ML-2009 SET)	1

ARTICULATING ACCESSORY ARMS



Available w/ Quick Connect



ML-0040, ML-0060

- ML-0020 PHANTOM ML ARTICULATING HEAVY-DUTY ACCESSORY ARM ANGLED COLUMN W/QUICK CONNECTOR
- ML-0040 PHANTOM ML ARTICULATING ACCESSORY ARM W/ QUICK CONNECT RACK CLAMP
- ML-0060 PHANTOM ML ARTICULATING ACCESSORY ARM ANGLED COLUMN W/ RACK CLAMP

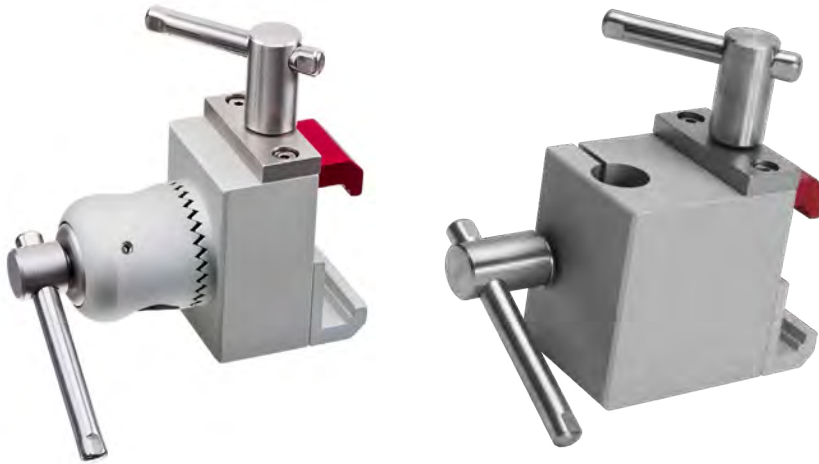
ARTICULATING ACCESSORY ARM (STRAIGHT)



ML-0038

- ML-0038 PHANTOM ML ARTICULATING ACCESSORY ARM STRAIGHT COLUMN W/INSTRUMENT HOLDER
- ML-0039 PHANTOM ML ARTICULATING ACCESSORY ARM STRAIGHT COLUMN W/QUICK CONNECTOR

### TABLE CLAMPS



ML-0021 - ML-0041

- ML-0021 PHANTOM ML ROTATING TABLE CLAMP FOR ARTICULATING ARM
- ML-0041 PHANTOM ML TABLE CLAMP FOR ARTICULATING ARM

### RACK CLAMP



- Use w/ ML-0040 Articulating Arm

ML-0044

- ML-0022 PHANTOM ML RACK CLAMP W/HEX CONNECT F/FLEX ACCESSORY ARM
- ML-0044 PHANTOM ML RACK CLAMP W/QUICK CONNECT F/ARTICULATING ARM

**INSTRUMENT HOLDER**

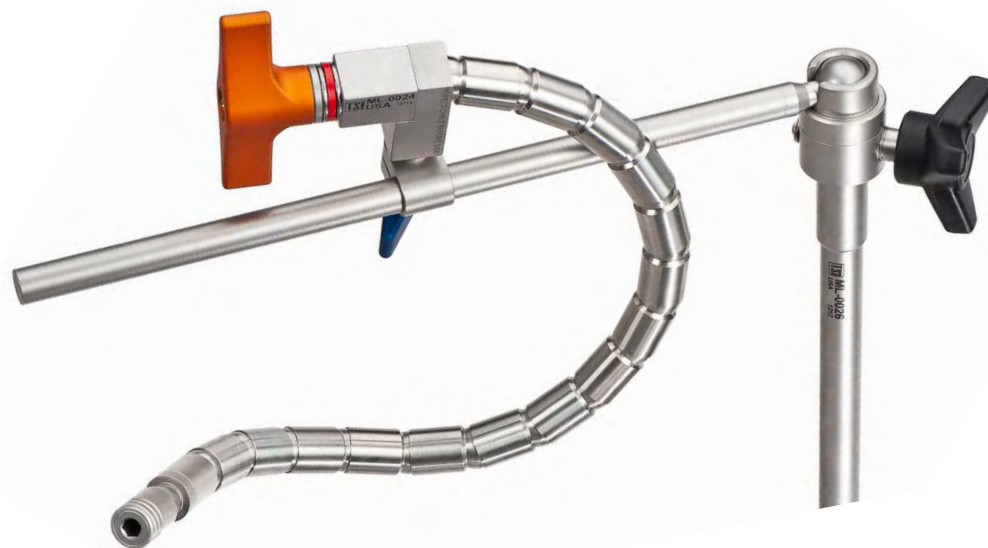


- Use w/ ML-0040 Articulating Arm

ML-0043

ML-0023 PHANTOM ML INSTRUMENT HOLDER W/HEX CONNECT FOR FLEX ACCESSORY ARM  
 ML-0043 PHANTOM ML INSTRUMENT HOLDER W/QUICK CONNECT FOR ARTICULATING ARM

**FLEX ACCESSORY ARM & POST**



- Use w/ ML-0022 Rack Clamp and ML-0023 Instrument Holder

ML-0024, ML-0026

ML-0024 ML FLEX ACCESSORY ARM W/HEX CONNECTOR  
 ML-0026 PHANTOM ML FLEX ACCESSORY ARM POST 3/4"

ML-2009 INSTRUMENT CASE



ML-0709

---

ML-0709 PHANTOM ML-2009 INSTRUMENT CASE





**PHANTOM BW ANTERIOR LUMBAR RETRACTOR SET BW-3000**

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**INSTRUMENT SPECIFICATIONS**

# Phantom BW

**BW-0312**  
 BW RING SEGMENTS,  
 MEDIUM HALF CIRCLE  
 10.5"

Facilitates access to  
 anterior lumbar spine



**BW-0404**  
 BW HORIZONTAL  
 FLEXIBLE HOLDER

Easy assembly table  
 mount

**BW-0126, BW-0128,  
 BW-0134**  
 Assortment of malleable  
 blades

## PHANTOM BW ANTERIOR LUMBAR RETRACTOR SYSTEM



BW-3000

**BW-3000 BW ANTERIOR LUMBAR RETRACTOR SYSTEM**

		ea.
BW-0002	BW BLADE, BALFOUR 2 5/8" X 3"	2
BW-0004	BW BLADE, BALFOUR 3 1/2" X 2 3/4"	2
BW-0015	TABLE CLAMP W/ POST, 450 MM	1
BW-0025	BW 1" POST CLAMP	1
BW-0064	BW BLADE, HARRINGTON 2.5" X 5 5/8" X 3.5"	2
BW-0094	BW BLADE, KELLY 2" X 4"	2
BW-0098	BW BLADE, KELLY 2" X 6"	2
BW-0100	BW BLADE, KELLY 2" X 8"	2
BW-0126	BW BLADE, MALLEABLE 1 1/2" X 6"	2
BW-0128	BW BLADE, MALLEABLE 2" X 6"	2
BW-0134	BW BLADE, MALLEABLE 3" X 6"	2
BW-0180	BW BLADE, RENAL, WILEY 1" X 7"	2
BW-0304	BW RING SEGMENTS, LARGE STRAIGHT, 8"	2
BW-0312	BW RING SEGMENTS, MEDIUM HALF CIRCLE 10.5"	2
BW-0404	BW HORIZONTAL FLEXIBLE HOLDER	1
BW-0420	BW STRAIGHT RACK ATTACHMENT	4
BW-0422	BW TILT RACK ATTACHMENT	6
BW-0700-01	BW STERILIZATION TRAY, BASE	1
BW-0700-02	BW STERILIZATION TRAY, BLADES	1

TABLE CLAMP W/POST



BW-0015

BW-0015

PHANTOM BW TABLE CLAMP W/POST

POST CLAMP



BW-0025

BW-0025

PHANTOM BW 1" POST CLAMP

STRAIGHT RACK ATTACHMENT



BW-0420

BW-0420 PHANTOM BW STRAIGHT RACK ATTACHMENT

TILT RACK ATTACHMENT



BW-0422

BW-0422 PHANTOM BW TILT RACK ATTACHMENT

RING SEGMENTS



BW-0312

BW-0312 PHANTOM BW RING SEGMENTS, MEDIUM HALF CIRCLE 10.5"

RING SEGMENTS



BW-0304

BW-0304 PHANTOM BW RING SEGMENTS, LARGE STRAIGHT, 8"

## KELLY BLADES



BW-0094, BW-0098, BW-0100

BW-0094	PHANTOM BW KELLY BLADE 2" X 4"
BW-0098	PHANTOM BW KELLY BLADE 2" X 6"
BW-0100	PHANTOM BW KELLY BLADE 2" X 8"

## HARRINGTON BLADE



BW-0064

BW-0064	PHANTOM BW HARRINGTON BLADE 2.5" X 5 5/8" X 3.5"
---------	--

MALLEABLE BLADES



BW-0126, BW-0128, BW-0134

- |         |  |
|---------|--|
| BW-0126 | PHANTOM BW MALLEABLE BLADE 1 1/2" X 6" |
| BW-0128 | PHANTOM BW MALLEABLE BLADE 2" X 6"     |
| BW-0134 | PHANTOM BW MALLEABLE BLADE 3" X 6"     |

RENAL WILEY BLADE



BW-0304

- |         |                                      |
|---------|--------------------------------------|
| BW-0180 | PHANTOM BW RENAL WILEY BLADE 1" X 7" |
|---------|--------------------------------------|



## BALFOUR BLADES



BW-0004

- 
- BW-0002 PHANTOM BW BALFOUR BLADE 2 5/8" X 3"
  - BW-0004 PHANTOM BW BALFOUR BLADE 3 1/2" X 2 3/4"

## HORIZONTAL HOLDER



BW-0404

- 
- BW-0404 PHANTOM BW HORIZONTAL FLEXIBLE HOLDER



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# CLEAN WAVE KERRISONS

CLEAN WAVE KERRISONS

## CLEAN WAVE KERRISONS



KR-1313B  
CLEAN WAVE  
KERRISON



Distinctive wave design minimizes cross-patient contamination and infection due to its permeability



KR-1313  
CLEAN WAVE  
KERRISON

Unique 15 mm bite is exclusive to TSI



CLEAN WAVE KERRISON - BLACK COATED



KR-1313B

- KR-1311B CLEAN WAVE KERR, 1 MM, 8", 15 MM OPN, 40° UP, THIN FTPLT, BLACK COATED
- KR-1312B CLEAN WAVE KERR, 2 MM, 8", 15 MM OPN, 40° UP, THIN FTPLT, BLACK COATED
- KR-1313B CLEAN WAVE KERR, 3 MM, 8", 15 MM OPN, 40° UP, THIN FTPLT, BLACK COATED**
- KR-1314B CLEAN WAVE KERR, 4 MM, 8", 15 MM OPN, 40° UP, THIN FTPLT, BLACK COATED
- KR-1315B CLEAN WAVE KERR, 5 MM, 8", 15 MM OPN, 40° UP, THIN FTPLT, BLACK COATED

CLEAN WAVE KERRISON



KR-1313

- KR-1311 CLEAN WAVE KERR, 1 MM, 8", 15 MM OPN, 40° UP, THIN FTPLT
- KR-1312 CLEAN WAVE KERR, 2 MM, 8", 15 MM OPN, 40° UP, W/ EJEC, THIN FTPLT
- KR-1313 CLEAN WAVE KERR, 3 MM, 8", 15 MM OPN, 40° UP, W/ EJEC, THIN FTPLT**
- KR-1314 CLEAN WAVE KERR, 4 MM, 8", 15 MM OPN, 40° UP, W/ EJEC, THIN FTPLT
- KR-1315 CLEAN WAVE KERR, 5 MM, 8", 15 MM OPN, 40° UP, W/ EJEC, THIN FTPLT



**PHANTOM MIS HIP ACETABULAR COMPLETE RETRACTOR SET HS-1000**

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PHANTOM MIS HIP ACETABULAR COMPLETE RETRACTOR SYSTEM  
**HS-1000**

**INSTRUMENT SPECIFICATIONS**

Phantom **HS**  
Maintain operative independence



HS-0024  
PHANTOM HS  
TRIDENT W/ QUICK  
CONNECTS



HS-0015  
PHANTOM HS TABLE  
CLAMP W/POST



HS-0200 - HS-0210  
HOHMANN  
RETRACTORS



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## PHANTOM MIS ACETABULAR ANTERIOR HIP RETRACTOR SYSTEM



HS-1000

**HS-1000 PHANTOM MIS ACETABULAR ANTERIOR HIP RETRACTOR SYSTEM**

		ea.
HS-0015	HS TABLE CLAMP W/ POST, 450 MM, YELLOW	1
HS-0024	HS TRIDENT W/ QUICK CONNECTS AND POST CLAMP	1
HS-0030	HS ACCESSORY ARM, MED. W/ QUICK CONNECT, BLUE	1
HS-0035	HS ACCSSRY ARM, SHRT W/ QUICK CONNECT, YELLOW	1
HS-0040	HS ACCESSORY ARM, LONG W/ QUICK CONNECT, RED	1
HS-0060	HS ELBOW, SHORT, BLUE	1
HS-0062	HS ELBOW, LONG, RED	1
HS-0110	HS QUICK CONNECT WRENCH	1
HS-0115	HS SUTURE CLAMP	1
HS-0200	HS HOHMANN RETRACTOR, 20°, GREEN	2
HS-0205	HS HOHMANN RETRACTOR, 70°, GREEN	2
HS-0210	HS HOHMANN RETRACTOR, 90°, GREEN	2
HS-0700-01	HS STERILIZATION TRAY, ACETABULAR	1

TABLE CLAMP W/POST



HS-0015

HS-0015 PHANTOM HS TABLE CLAMP W/POST

TRIDENT W/ QUICK CONNECT & POST CLAMP



HS-0024

HS-0024 PHANTOM HS TRIDENT W/QUICK CONNECTS

## ACCESSORY ARM



HS-0030 - HS-0040

- HS-0030 PHANTOM HS ACCESSORY ARM, MEDIUM W/QUICK CONNECTS, BLUE  
HS-0035 PHANTOM HS ACCESSORY ARM, SHORT W/QUICK CONNECTS, YELLOW  
HS-0040 PHANTOM HS ACCESSORY ARM, LONG W/QUICK CONNECTS, RED

## QUICK CONNECT WRENCH



HS-0110

HS-0110 PHANTOM HS QUICK CONNECT WRENCH

ELBOW



HS-0060

HS-0060 PHANTOM HS ELBOW, SHORT, BLUE

ELBOW



HS-0062

HS-0062 PHANTOM HS ELBOW, LONG, RED

SUTURE CLAMP



HS-0115

HS-0115 PHANTOM HS SUTURE CLAMP

HOHMANN RETRACTOR - (TITANIUM)



HS-0200

HS-0200 PHANTOM HS HOHMANN RETRACTOR, 20°, GREEN

**HOHMANN RETRACTOR - (TITANIUM)**



HS-0205

HS-0205 PHANTOM HS HOHMANN RETRACTOR, 70°, GREEN

**HOHMANN RETRACTOR - (TITANIUM)**



HS-0210

HS-0210 PHANTOM HS HOHMANN RETRACTOR, 90°, GREEN

## LIGHT CABLE W/TEDAN CONNECTOR



ML-0046

- ML-0045 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE  
 ML-0046 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, - (5 PER BOX), 10 FT LENGTH, PRE-PACKAGED STERILE, SINGLE USE  
 ML-0048 PHANTOM ML LIGHT CABLE, STRONG CURVE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE

## LED LIGHT SOURCE



ML-0051

- ML-0051 ML LED LIGHT SOURCE, 52 WATTS, ONLY COMPATIBLE W/ TSI LIGHT CABLES

FLEX ARM WITH LIGHT CABLE HOLDER



HS-0305

HS-0305 PHANTOM FLEX ARM W/LIGHT CABLE HOLDER

UNIVERSAL INSTRUMENT HOOK



HS-0215

HS-0215 PHANTOM HS UNIVERSAL INSTRUMENT HOOK



## UNIVERSAL EXTENSION SIDE RAIL BAR



- Use w/ Mizuho OSI hana® table

HS-0005

HS-0005 PHANTOM HS UNIVERSAL EXTENSION SIDE RAIL, 36"

## HS-1000 INSTRUMENT CASE



HS-0700-01

HS-0700-01

PHANTOM HS-1000 INSTRUMENT CASE



PHANTOM MIS HIP FEMORAL COMPLETE RETRACTOR SET HS-1001

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PHANTOM MIS HIP FEMORAL LIFT COMPLETE RETRACTOR SYSTEM  
**HS-1001**

**INSTRUMENT SPECIFICATIONS**

# Phantom HS

Maintain operative independence



HS-0240 - HS-0242  
COBRA RETRACTORS



HS-0045  
Accessory Arm



HS-0222  
LARGE RETRACTOR,  
POINTED



HS-0131  
FEMUR HOOK

Standard Operating Room Table



## PHANTOM MIS FEMORAL ANTERIOR HIP RETRACTOR SYSTEM

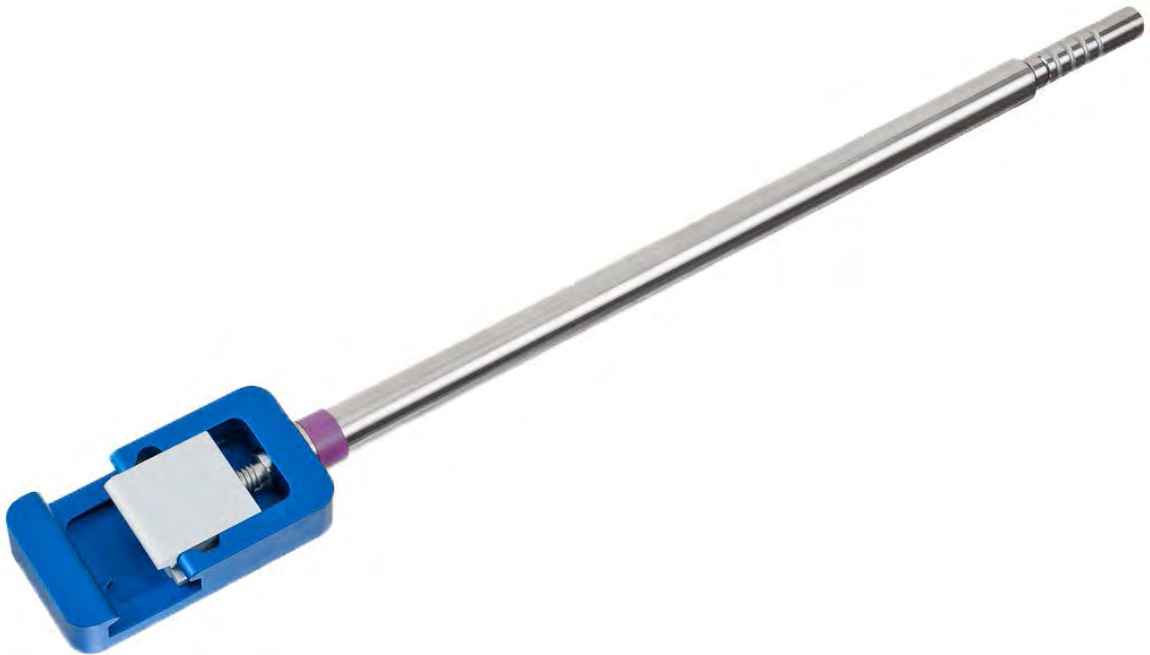


HS-1001

**HS-1001 PHANTOM MIS FEMORAL ANTERIOR HIP RETRACTOR SYSTEM**

		ea.
HS-0016	HS TABLE CLAMP W/ POST, 450 MM, PURPLE	1
HS-0019	HS EXTNSN BAR FOR FEMORAL LIFT W/ POST CLAMP	1
HS-0045	HS ACC. ARM, SHORT W/ QUICK CONNECT, PURPLE	1
HS-0050	HS BALL JOINT ANGLE ARM WITH POST CLAMP	1
HS-0100	HS FEMORAL LIFT, PURPLE	1
HS-0110	HS QUICK CONNECT WRENCH	1
HS-0130	HS FEMUR HOOK - 1" W/ HS-0100	1
HS-0131	HS FEMUR HOOK - 1/4" W/ HS-0100	1
HS-0155	HS BONE HOLDING FORCEPS	1
HS-0220	HS LARGE RETRACTOR, POINTED, 35°, PURPLE	1
HS-0222	HS LARGE RETRACTOR, POINTED, 70° BEND, PURPLE	1
HS-0230	HS LARGE RETRACTOR, BLUNT, PURPLE	1
HS-0240	HS SERRATED COBRA RETRACTOR, PURPLE	1
HS-0242	HS SMOOTH COBRA RETRACTOR, PURPLE	1
ML-0043	ML INSTRUMENT HOLDER W/QUICK CONNECT W/ARTICULATING ARM	1
HS-0700-02	HS STERILIZATION TRAY, FEMORAL	1

TABLE CLAMP W/POST



HS-0016

HS-0016 PHANTOM HS TABLE CLAMP W/POST, 450 MM, PURPLE

EXTENSION BAR - POST CLAMP



HS-0019

HS-0019 PHANTOM HS EXTENSION BAR FOR FEMORAL LIFT WITH POST CLAMP, PURPLE

### ACCESSORY ARM



HS-0045

HS-0045 PHANTOM HS ACCESSORY ARM, SHORT W/QUICK CONNECTS, PURPLE

### BALL JOINT ANGLE ARM



HS-0050

HS-0050 PHANTOM HS BALL JOINT ANGLE ARM, PURPLE

FEMORAL LIFT



- Use w/ HS-0130, HS-0131

HS-0100

HS-0100 PHANTOM HS FEMORAL LIFT, PURPLE

QUICK CONNECT WRENCH



HS-0110

HS-0110 PHANTOM HS QUICK CONNECT WRENCH



### FEMUR HOOK



HS-0130

HS-0130 PHANTOM HS FEMUR HOOK, 1" W/HS-0100

### FEMUR HOOK



HS-0131

HS-0131 PHANTOM HS FEMUR HOOK, 1/4" W/HS-0100

LARGE POINTED RETRACTOR - (TITANIUM)



HS-0220 - HS-0222

HS-0220 PHANTOM HS LARGE RETRACTOR, POINTED, 35°, PURPLE  
 HS-0222 PHANTOM HS LARGE RETRACTOR, POINTED, 70°, PURPLE

LARGE BLUNT RETRACTOR - (TITANIUM)



HS-0230

HS-0230 PHANTOM HS LARGE RETRACTOR, BLUNT, PURPLE

### COBRA RETRACTOR - (TITANIUM)



HS-0240 - HS-0242

HS-0240 PHANTOM HS SERRATED COBRA RETRACTOR, PURPLE  
HS-0242 PHANTOM HS SMOOTH COBRA RETRACTOR, PURPLE

### INSTRUMENT HOLDER



ML-0043

ML-0043 PHANTOM HS INSTRUMENT HOLDER W/QUICK CONNECT FOR ARTICULATING ARM

FLEX ARM WITH LIGHT CABLE HOLDER



HS-0305

HS-0305 PHANTOM FLEX ARM W/LIGHT CABLE HOLDER

UNIVERSAL INSTRUMENT HOOK



HS-0215

HS-0215 PHANTOM HS UNIVERSAL INSTRUMENT HOOK

## LIGHT CABLE W/TEDAN CONNECTOR



ML-0046

- ML-0045 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE  
 ML-0046 PHANTOM ML LIGHT CABLE, W/TEDAN CONNECTOR, - (5 PER BOX), 10 FT LENGTH, PRE-PACKAGED STERILE, SINGLE USE  
 ML-0047 PHANTOM ML LIGHT CABLE, SINGLE ENDED W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE  
 ML-0048 PHANTOM ML LIGHT CABLE, STRONG CURVE, W/TEDAN CONNECTOR, 10 FT LENGTH, REUSABLE

## LED LIGHT SOURCE



ML-0051

- ML-0051 ML LED LIGHT SOURCE, 52 WATTS, ONLY COMPATIBLE W/TSI LIGHT CABLES

HS-1001 INSTRUMENT CASE



HS-0700-02

HS-0700-02 PHANTOM HS-1001 INSTRUMENT CASE

NOTES

A series of horizontal lines provided for taking notes.

**PHANTOM FUKUSHIMA SET TK-5000 - TK-5001**

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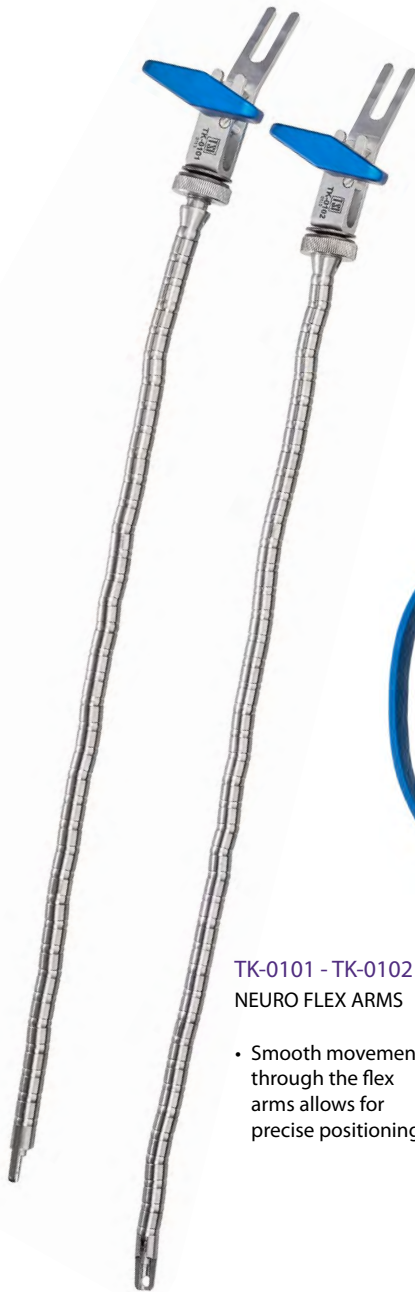
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FUKUSHIMA  
TK-5000 & TK-5001, SUCTION TUBES

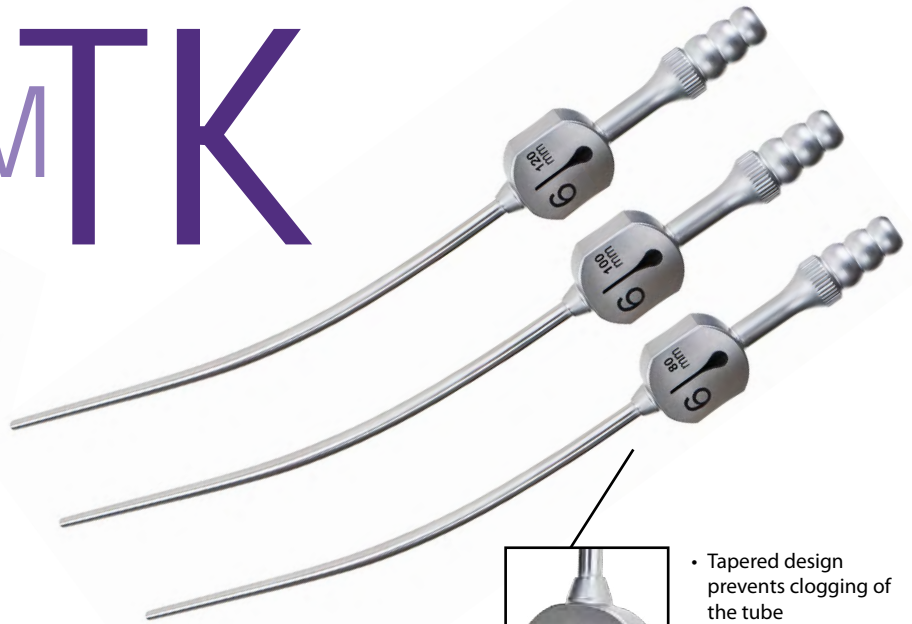
INSTRUMENT SPECIFICATIONS

PHANTOM TK



TK-0101 - TK-0102  
NEURO FLEX ARMS

- Smooth movement through the flex arms allows for precise positioning



- Tapered design prevents clogging of the tube
- Teardrop thumb control allows precise suction regulation
- Malleable, stainless steel shaft
- Available in 6 lengths: SS, S, M, L, LL, LLL
- Available in French sizes 3 through 12



TK-0400 - TK-0408  
FUKUSHIMA BLUNT SCALP HOOKS

- Hooks provide superior fixation of the scalp flap
- Each hook includes three polyisoprene bands
- Available in four sizes: X-Small, Small, Medium, Large



## PHANTOM FUKUSHIMA NEUROLOGICAL HOLDING SET

## TK- 5000 PHANTOM FUKUSHIMA NEUROLOGICAL HOLDING SYSTEM SET

	ea.		ea.
HS-0305 FLEX ARM HOLDER WITH DUAL FIBER OPTIC LGHT GDE HLDR	1	<b>SINGLE USE PRODUCTS</b>	
ML-0051 ML LED LIGHT SOURCE	1	TK-0400 BLNT SCLP HK, X-SM, NON-STER., 1/PKG, W/3 POLYISOPRENE BNDS	1
ML-0045 ML FIBER OPTIC CBLE, 10 FT, (305 CM) W/TEDAN CONNECTOR	1	TK-0402 BLNT SCLP HK, SM, NON-STER., 1/PKG, W/3 POLYISOPRENE BNDS	1
TK-0101 NEURO FLEX ARM, 14.5" (38 CM) 30 DEG BASE	3	TK-0404 BLNT SCLP HK, MED, NON-STER., 1/PKG, W/3 POLYISOPRENE BNDS	1
TK-0102 NEURO FLEX ARM, 16.5" (42 CM) 30 DEG BASE	2	TK-0408 BLNT SCLP HK, LRG, NON-STER., 1/PKG, W/3 POLYISOPRENE BNDS	1
TK-0103 NEURO FLEX ARM, 6.5" (16.5 CM) 30 DEG BASE	1	TK-0420 NIT. MLLBLE TAP. SPTLA, 210 MM (8.3") LGTH X 2.2 MM (.09") TIP	1
TK-0105 PATTIE TRAY, TEFLON	1	TK-0421 NIT. MLLBLE TAP. SPTLA, 210 MM (8.3") LGTH X 3.8 MM (.15") TIP	1
TK-0150 SPATULA HOLDER	6	TK-0422 NIT. MLLBLE TAP. SPTLA, 210 MM (8.3") LGTH X 5.5 MM (.22") TIP	1
TK-0200 C-CLAMP F/ CRVD U-BAR, SIN. STRBRST, HLDS ONE FLEX ARM	5	TK-0152 DUAL SPATULA HOLDER	1
TK-0210 C-CLAMP F/ SKULL CLMP, HLDS TWO FLEX ARMS	1		
TK-0300 TABLE CLAMP W/ DUAL STARBURST	2		
TK-0308 VERT. POST BCK, F/REAR SRGN U-BAR, 15" (38 CM)	2		
TK-0310 VERT. POST, F/FRNTL SRGN U-BAR, 12" (30 CM), W/10° BEND	2		
TK-0312 CRVD SIDE U-BAR ,15" (38 CM)	2		
TK-0314 CRVD FRONTAL SURGEON U-BAR, 17" (43 CM)	2		
TK-0316 CRVD REAR SURGEON U-BAR, 17" (43 CM)	2		
TK-0410 MLLBLE TAPRD SPTLA, 210 MM (8.3") LGTH X 2.2 MM (.09) TIP	1		
TK-0411 MLLBLE TAPRD SPTLA, 210 MM (8.3") LGTH X 3.8 MM (.15") TIP	1		
TK-0412 MLLBLE TAPRD SPTLA, 210 MM (8.3") LGTH X 5.5 MM (.22") TIP	1		
TK-1300 SUCTION W/IRRIGATOR, 12 FR, 100 MM (4") WKNG LGTH	1		
TK-1302 SUCTION W/IRRIGATOR, 14 FR, 100 MM (4") WKNG LGTH	1		
TK-1310 SUCTION W/IRRIGATOR, 8 FR, 120 MM (4.7") WKNG LGTH	1		
TK-1312 SUCTION W IRRIGATOR, 10 FR, 120 MM (4.7") WKNG LGTH	1		
TK-0700-01 NEURO HOLDING SET, STERILIZATION TRAY	1		
TK-0700-02 NEURO HOLDING SET, STERILIZATION TRAY	1		

## PHANTOM FUKUSHIMA NEUROLOGICAL HOLDING BASIC SET

## TK- 5001 PHANTOM FUKUSHIMA NEUROLOGICAL HOLDING SYSTEM BASIC SET

	ea.
TK-0101 NEURO FLEX ARM, 14.5" (38 CM) 30 DEG BASE	2
TK-0102 NEURO FLEX ARM, 16.5" (42 CM) 30 DEG BASE	1
TK-0150 SPATULA HOLDER	3
TK-0200 C-CLAMP F/ CRVD U-BAR, SIN. STRBRST, HLDS ONE FLEX ARM	3
TK-0300 TABLE CLAMP W/ DUAL STARBURST	1
TK-0308 VERT. POST BACK, F/REAR SURGEON U-BAR, 15" (38 CM)	1
TK-0310 VERT. POST, F/FRONTAL SRGN U-BAR, 12" (30 CM), W/10° BND	1
TK-0312 CRVD SIDE U-BAR ,15" (38 CM)	1
TK-0314 CRVD FRONTAL SURGEON U-BAR, 17" (43 CM)	1
TK-0410 MLLBLE TAP. SPATULA, 210 MM (8.3") LGTH X 2.2 MM (.09) TIP	1
TK-0411 MLLBLE TAP. SPATULA, 210 MM (8.3") LGTH X 3.8 MM (.15") TIP	1
TK-0412 MLLBLE TAP. SPATULA, 210 MM (8.3") LGTH X 5.5 MM (.22") TIP	1
TK-0700-01 NEURO HOLDING SET, STERILIZATION TRAY	1
TK-0700-02 NEURO HOLDING SET, STERILIZATION TRAY	1

MALLEABLE TAPERED SUCTION TUBES - 80 MM



French Sizes									
•	•	•	•	•	•	•	•	•	•
3 Fr	4 Fr	5 Fr	6 Fr	7 Fr	8 Fr	9 Fr	10 Fr	11 Fr	12 Fr
1mm	1.35mm	1.67mm	2mm	2.3mm	2.7mm	3mm	3.3mm	3.7mm	4mm

TK-1056

- TK-1050 FUKUSHIMA 3 FR, 80 MM WKNG LNGTH, SS
- TK-1052 FUKUSHIMA 4 FR, 80 MM WKNG LNGTH, SS
- TK-1054 FUKUSHIMA 5 FR, 80 MM WKNG LNGTH, SS
- TK-1056 FUKUSHIMA 6 FR, 80 MM WKNG LNGTH, SS
- TK-1058 FUKUSHIMA 7 FR, 80 MM WKNG LNGTH, SS
- TK-1060 FUKUSHIMA 8 FR, 80 MM WKNG LNGTH, SS
- TK-1062 FUKUSHIMA 9 FR, 80 MM WKNG LNGTH, SS
- TK-1064 FUKUSHIMA 10 FR, 80 MM WKNG LNGTH, SS
- TK-1066 FUKUSHIMA 11 FR, 80 MM WKNG LNGTH, SS
- TK-1068 FUKUSHIMA 12 FR, 80 MM WKNG LNGTH, SS

MALLEABLE TAPERED SUCTION TUBES - 100 MM



French Sizes									
•	•	•	•	•	•	•	•	•	•
3 Fr	4 Fr	5 Fr	6 Fr	7 Fr	8 Fr	9 Fr	10 Fr	11 Fr	12 Fr
1mm	1.35mm	1.67mm	2mm	2.3mm	2.7mm	3mm	3.3mm	3.7mm	4mm

TK-1076

- TK-1070 FUKUSHIMA 3 FR, 100 MM WKNG LNGTH, S
- TK-1072 FUKUSHIMA 4 FR, 100 MM WKNG LNGTH, S
- TK-1074 FUKUSHIMA 5 FR, 100 MM WKNG LNGTH, S
- TK-1076 FUKUSHIMA 6 FR, 100 MM WKNG LNGTH, S
- TK-1078 FUKUSHIMA 7 FR, 100 MM WKNG LNGTH, S
- TK-1080 FUKUSHIMA 8 FR, 100 MM WKNG LNGTH, S
- TK-1082 FUKUSHIMA 9 FR, 100 MM WKNG LNGTH, S
- TK-1084 FUKUSHIMA 10 FR, 100 MM WKNG LNGTH, S
- TK-1086 FUKUSHIMA 11 FR, 100 MM WKNG LNGTH, S
- TK-1088 FUKUSHIMA 12 FR, 100 MM WKNG LNGTH, S



## MALLEABLE TAPERED SUCTION TUBES - 120 MM



French Sizes									
•	•	•	•	•	•	•	•	•	•
3 Fr	4 Fr	5 Fr	6 Fr	7 Fr	8 Fr	9 Fr	10 Fr	11 Fr	12 Fr
1mm	1.35mm	1.67mm	2mm	2.3mm	2.7mm	3mm	3.3mm	3.7mm	4mm

TK-1096

- TK-1090 FUKUSHIMA 3 FR, 120 MM WKNG LNGTH, M
- TK-1092 FUKUSHIMA 4 FR, 120 MM WKNG LNGTH, M
- TK-1094 FUKUSHIMA 5 FR, 120 MM WKNG LNGTH, M
- TK-1096 FUKUSHIMA 6 FR, 120 MM WKNG LNGTH, M
- TK-1098 FUKUSHIMA 7 FR, 120 MM WKNG LNGTH, M
- TK-1100 FUKUSHIMA 8 FR, 120 MM WKNG LNGTH, M
- TK-1102 FUKUSHIMA 9 FR, 120 MM WKNG LNGTH, M
- TK-1104 FUKUSHIMA 10 FR, 120 MM WKNG LNGTH, M
- TK-1106 FUKUSHIMA 11 FR, 120 MM WKNG LNGTH, M
- TK-1108 FUKUSHIMA 12 FR, 120 MM WKNG LNGTH, M

## MALLEABLE TAPERED SUCTION TUBES - 145 MM



French Sizes									
•	•	•	•	•	•	•	•	•	•
3 Fr	4 Fr	5 Fr	6 Fr	7 Fr	8 Fr	9 Fr	10 Fr	11 Fr	12 Fr
1mm	1.35mm	1.67mm	2mm	2.3mm	2.7mm	3mm	3.3mm	3.7mm	4mm

TK-1116

- TK-1110 FUKUSHIMA 3 FR, 145 MM WKNG LNGTH, L
- TK-1112 FUKUSHIMA 4 FR, 145 MM WKNG LNGTH, L
- TK-1114 FUKUSHIMA 5 FR, 145 MM WKNG LNGTH, L
- TK-1116 FUKUSHIMA 6 FR, 145 MM WKNG LNGTH, L
- TK-1118 FUKUSHIMA 7 FR, 145 MM WKNG LNGTH, L
- TK-1120 FUKUSHIMA 8 FR, 145 MM WKNG LNGTH, L
- TK-1122 FUKUSHIMA 9 FR, 145 MM WKNG LNGTH, L
- TK-1124 FUKUSHIMA 10 FR, 145 MM WKNG LNGTH, L
- TK-1126 FUKUSHIMA 11 FR, 145 MM WKNG LNGTH, L
- TK-1128 FUKUSHIMA 12 FR, 145 MM WKNG LNGTH, L

**MALLEABLE TAPERED SUCTION TUBES - 160 MM**



French Sizes									
3 Fr	4 Fr	5 Fr	6 Fr	7 Fr	8 Fr	9 Fr	10 Fr	11 Fr	12 Fr
1mm	1.35mm	1.67mm	2mm	2.3mm	2.7mm	3mm	3.3mm	3.7mm	4mm

TK-1136

- TK-1130 FUKUSHIMA 3 FR, 160 MM WKNG LNGTH, LL
- TK-1132 FUKUSHIMA 4 FR, 160 MM WKNG LNGTH, LL
- TK-1134 FUKUSHIMA 5 FR, 160 MM WKNG LNGTH, LL
- TK-1136 FUKUSHIMA 6 FR, 160 MM WKNG LNGTH, LL
- TK-1138 FUKUSHIMA 7 FR, 160 MM WKNG LNGTH, LL
- TK-1140 FUKUSHIMA 8 FR, 160 MM WKNG LNGTH, LL
- TK-1142 FUKUSHIMA 9 FR, 160 MM WKNG LNGTH, LL
- TK-1144 FUKUSHIMA 10 FR, 160 MM WKNG LNGTH, LL
- TK-1146 FUKUSHIMA 11 FR, 160 MM WKNG LNGTH, LL
- TK-1148 FUKUSHIMA 12 FR, 160 MM WKNG LNGTH, LL

**MALLEABLE TAPERED SUCTION TUBES - 175 MM**



French Sizes									
3 Fr	4 Fr	5 Fr	6 Fr	7 Fr	8 Fr	9 Fr	10 Fr	11 Fr	12 Fr
1mm	1.35mm	1.67mm	2mm	2.3mm	2.7mm	3mm	3.3mm	3.7mm	4mm

TK-1156

- TK-1150 FUKUSHIMA 3 FR, 175 MM WKNG LNGTH, LLL
- TK-1152 FUKUSHIMA 4 FR, 175 MM WKNG LNGTH, LLL
- TK-1154 FUKUSHIMA 5 FR, 175 MM WKNG LNGTH, LLL
- TK-1156 FUKUSHIMA 6 FR, 175 MM WKNG LNGTH, LLL
- TK-1158 FUKUSHIMA 7 FR, 175 MM WKNG LNGTH, LLL
- TK-1160 FUKUSHIMA 8 FR, 175 MM WKNG LNGTH, LLL
- TK-1162 FUKUSHIMA 9 FR, 175 MM WKNG LNGTH, LLL
- TK-1164 FUKUSHIMA 10 FR, 175 MM WKNG LNGTH, LLL
- TK-1166 FUKUSHIMA 11 FR, 175 MM WKNG LNGTH, LLL
- TK-1168 FUKUSHIMA 12 FR, 175 MM WKNG LNGTH, LLL

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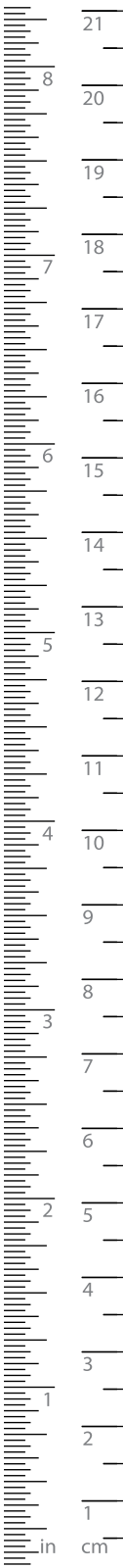
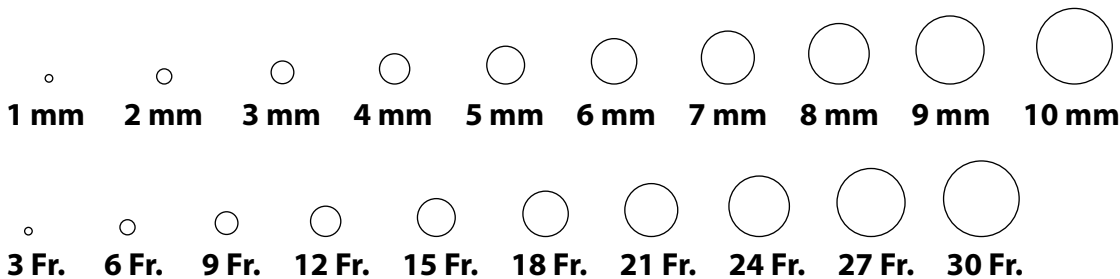
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French Gauge	Diameter (mm)	Diameter (inches)
3	1	0.039
4	1.33	0.053
5	1.67	0.066
6	2	0.079
7	2.3	0.092
8	2.7	0.105
9	3	0.118
10	3.3	0.131
11	3.7	0.144
12	4	0.158
13	4.3	0.170
14	4.7	0.184
15	5	0.197
16	5.3	0.210
17	5.7	0.223
18	6	0.236
19	6.3	0.249
20	6.7	0.263
22	7.3	0.288
24	8	0.315
26	8.7	0.341
30	10	0.393
32	10.7	0.419
34	11.3	0.445

Multiply	By	To Obtain
Milimeters	0.1	Centimeters
Milimeters	0.039	Inches
Milimeters	3	French Size
Centimeters	0.39	Inches
Centimeters	0.01	Meters
Centimeters	10	Milimeters
Inches	2.54	Centimeters

**METRIC CONVERSION CHART**

- 1/8" = 3.18 MILLIMETERS
- 1/4" = 6.35 MILLIMETERS
- 3/8" = 9.50 MILLIMETERS
- 1/2" = 12.70 MILLIMETERS
- 1" = 25.40 MILLIMETERS
- 2" = 50.80 MILLIMETERS
- 3" = 76.20 MILLIMETERS
- 4" = 101.60 MILLIMETERS
- 5" = 127.00 MILLIMETERS
- 6" = 152.40 MILLIMETERS
- 7" = 177.80 MILLIMETERS
- 8" = 203.20 MILLIMETERS
- 9" = 228.60 MILLIMETERS
- 10" = 254.00 MILLIMETERS
- 11" = 279.40 MILLIMETERS
- 12" = 304.80 MILLIMETERS







## TEDAN SURGICAL INNOVATIONS

12615 W. Airport Blvd.  
suite # 200  
Sugar Land, Texas 77478  
Tel: 713.726.0886  
Tel: 877.726.0886  
Fax: 713.726.0846  
sales@tedansurgical.com  
www.tedansurgical.com

