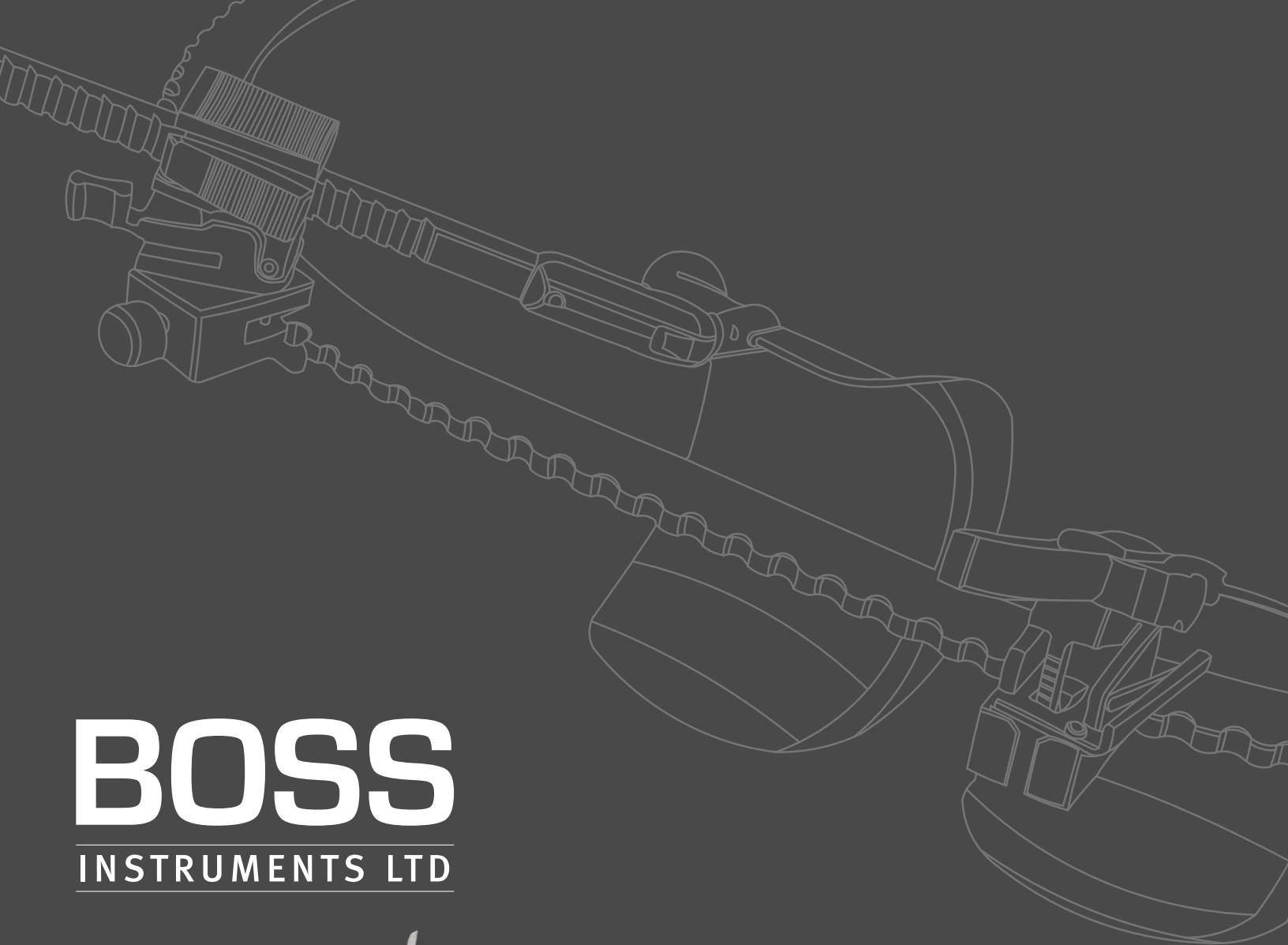
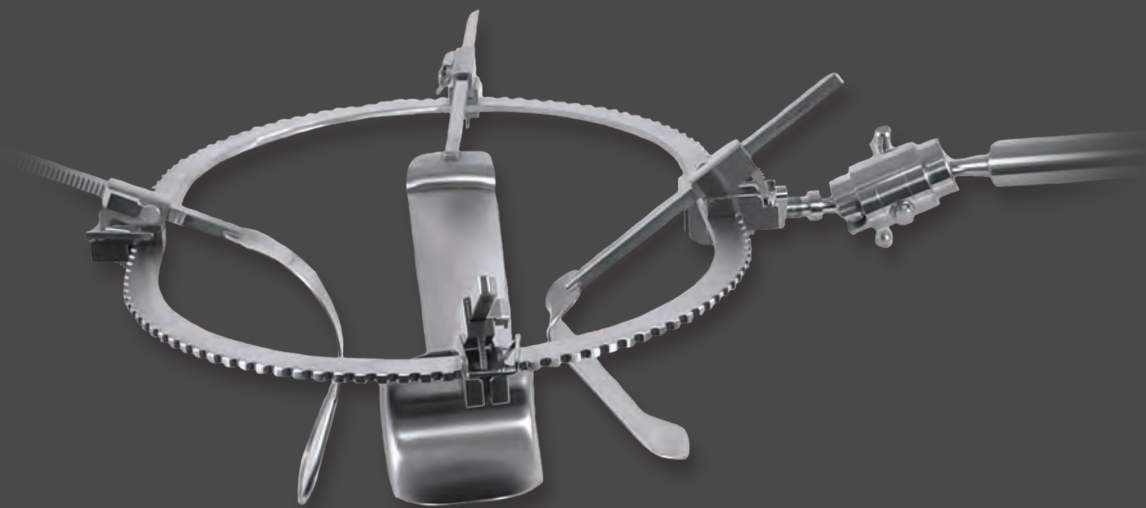




BOSS
INSTRUMENTS LTD



WORKHORSETM

RETRACTOR SYSTEM

SIMPLICITY AND MULTI-DIRECTIONAL RETRACTION FOR A
BROAD RANGE OF ABDOMINAL PROCEDURES

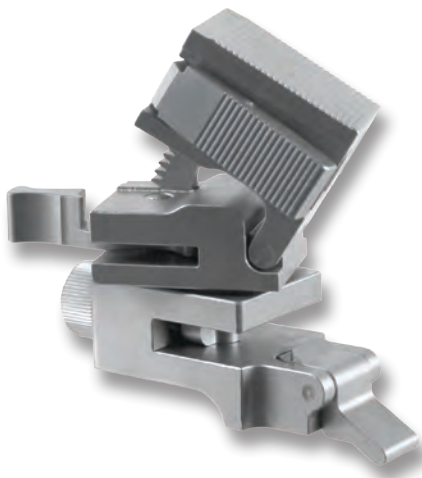
THE UNIQUE, PATENTED SWIVEL-EASE™ RETRACTION SYSTEM... IT SETS THE WORKHORSE™ APART FROM ALL THE OTHERS!

SWIVEL-EASE™ CLAMP

- Clamp swivels & tilts for optimum positioning & locks securely to ring
- More space to operate, less discomfort
- Never again suffer a retractor shaft in the stomach!

Swivel-Ease™ clamp swivels and tilts

Traditional tilt-clamp, no swivel motion



Swivel-Ease™ clamps are designed to be used with Swivel-Ease™ retractors that self-center and NOT with non-swivel fixed blades.

Available for your body wall retractor needs are:

- 18-4051** - Swivel-Ease™ Clamp
- 18-4065S** - Kelly Retractor, 2 x 3" (5 x 7.5cm)
- 18-4080S** - Balfour/Mayo Retractor, 3 x 2" (7.6 x 5cm)

Bariatric & numerous other styles are available as "special order" items.

1. Use Swivel-Ease™ clamps & retractors for body wall retraction and eliminate shaft interference and discomfort
2. Unique Swivel-Ease™ retractor blades self-center, minimizing the chance of tissue necrosis
3. Some handling and placement as existing WORKHORSE™ and BOOKWALTER® style clamps
4. Also fits all BOOKWALTER® type retractor rings

Bookwalter® is a registered trademark of Symmetry Surgical

STANDARD CLAMPS



18-4048 - Non-tilting Blade Clamp



18-4049 - Tilting Blade Clamp

WORKHORSE™ COMPONENTS

The WORKHORSE™ offers a variety of abdominal retractor rings for all your retraction needs.

OVAL RINGS

Small: **18-4020**, 8 1/2" x 12" (20.3cm x 30.5cm)
Medium: **18-4021**, 10 1/2" x 15" (26.7cm x 38.1cm)
Large: **18-4022**, 12" x 18 1/2" (30.5cm x 47.0cm)

ROUND RINGS

Small: **18-4023**, 8 1/2" (21.6cm)
Medium: **18-4024**, 10 1/2" (26.7cm)
Large: **18-4025**, 12 1/2" (31.8cm)

OVAL SEGMENTED RINGS

Small: **18-4027**, 8 1/2" x 15" (20.3cm x 38.1cm)
Medium: **18-4028**, 10 1/2" x 19 1/2" (26.7cm x 49.5cm)
Large: **18-4029**, 12 1/2" x 19 1/2" (31.8cm x 49.5cm)

TABLE POST, STANDARD AND BARIATRIC

18-4035C, Standard Table Post, 1" diameter, working length 13"

18-4036C, Bariatric Table Post, 1" diameter, working length 18 1/2"



STANDARD HORIZONTAL BARS

18-4038C, Horizontal Flex Bar, 1" diameter, working length 19"

18-4045C, Horizontal Non-Flex Bar, 1" diameter, working length 14 1/2"



WORKHORSE™ HORIZONTAL FLEX BARS

18-4039C, Horizontal Flex Bar, bariatric, 1" diameter, working length 22"

18-4038C, Horizontal Flex Bar, standard, 1" diameter, working length 19"

18-4045C, Horizontal Non-Flex Bar, standard, 1" diameter, working length 14 1/2"

18-4045CL, Horizontal Non-Flex Bar, bariatric, 1" diameter, working length 21"



WORKHORSE™ EXTENSION BAR

18-4040, Solid Extension Bar, 13 1/2"

18-4041, Solid Extension Bar, 12"

18-4042, Vertical Extension Bar Clamp used with bars



WORKHORSE™ RETRACTOR BLADES

Kelly Blades



SIZE	STAINLESS STEEL	ALUMINUM	SWIVEL
1 x 1½" (2.5 x 3.8cm)	18-4077		
1 x 2½" (2.5 x 6.4cm)	18-4078		
2 x 1½" (5 x 3.8cm)	18-4079		
2 x 2½" (5 x 6.4cm)	18-4064	18-4064A	
2 x 3" (5 x 7.5cm)	18-4065	18-4065A	18-4065S
2 x 4" (5 x 10cm)	18-4066	18-4066A	18-4066S
2 x 5" (5 x 12.5cm)	18-4067	18-4067A	18-4067S
2 x 6" (5 x 15cm)	18-4068	18-4068A	18-4068S
2 x 8" (5 x 20cm)	18-4069	18-4069A	18-4069S

Balfour Blades



SIZE	LATERAL	STAINLESS STEEL	ALUMINUM	SWIVEL
1½ x 3¼", (2.8 x 8cm)	18-4090			
3 x 2½" (7.5 x 6.4cm)		18-4080	18-4080A	18-4080S
3 x 3¼" (7.5 x 8.2cm)		18-4081		18-4081S
3½ x 2¾" (9 x 7cm)		18-4082		18-4082S

Malleable Blades



SIZE	90° STAINLESS STEEL	FLAT STAINLESS STEEL	FLAT ALUMINUM	FLAT SWIVEL
1½ x 6" (3.8 x 15cm)	18-4070	18-4070M	18-4070A	18-4070SM
1½ x 8" (3.8 x 20cm)	18-4072	18-4072M		18-4072SM
2 x 6" (5 x 15cm)	18-4073	18-4073M	18-4073A	18-4073SM
2 x 8" (5 x 20cm)	18-4074	18-4074M	18-4074A	18-4074SM
2 x 10" (5 x 25.5cm)	18-4126	18-4126M	18-4126A	18-4126SM
2 x 12" (5 x 30.5cm)	18-4145	18-4145M		18-4145SM
3 x 6" (7.5 x 15cm)	18-4075	18-4075M	18-4075A	18-4075SM
3 x 8" (7.5 x 20cm)	18-4076	18-4076M	18-4076A	18-4076SM
3 x 10" (7.5 x 25.5cm)	18-4127	18-4127M	18-4127A	18-4127SM
3 x 12" (7.5 x 30.5cm)	18-4146	18-4146M		18-4146SM
4 x 8" (10 x 20cm)	18-4123	18-4123M		18-4123SM
4 x 10" (10 x 25.5cm)	18-4128	18-4128M		18-4128SM
4 x 12" (10 x 30.5cm)	18-4147	18-4147M		18-4147SM
5 x 10" (12.5 x 25.5cm)	18-4129	18-4129M		18-4129SM

Yu-Holtgrewe Blades



SIZE	90° STAINLESS STEEL	90° SWIVEL
2½ x 7" (6.4 x 18cm)	18-4093	18-4093S

WORKHORSE™ RETRACTOR BLADES

Deaver Blades

SIZE	STAINLESS STEEL	SWIVEL
1 x 4½" (2.5 x 11.5cm)	18-4085	18-4085S
1½ x 4½" (3.8 x 11.5cm)	18-4086	18-4086S
2 x 4½" (5 x 11.5cm)	18-4087	18-4087S

Harrington Blades

SIZE	STAINLESS STEEL	ALUMINUM	SWIVEL
1½ x 5" (3.8 x 12.5cm)	18-4095		
2½ x 5" (6.3 x 12.5cm)	18-4096	18-4096A	18-4096S
3½ x 8" (9 x 20cm)		18-4240A	
3½ x 10" (9 x 25.5cm)	18-4098	18-4098A	18-4098S
4½ x 10" (11.4 x 25.5cm)	18-4099		18-4099S

Scoville Hooks

SIZE	SMALL	LARGE
2" (5cm) length	18-4113	
3¼" (8.3cm) length		18-4116

Meyerding Blades

SIZE	SMALL	MEDIUM	LARGE
¾ x 2⅓" (1.7 x 6cm)	18-4120		
1 x 3½" (2.5 x 9cm)		18-4121	
2 x 3¾" (5 x 9.5cm)			18-4122

Richardson Blades

SIZE	STAINLESS STEEL	BLADE SET, SET OF 3
		18-4130
¾ x 1" (1.9 x 2.5cm)	18-4131	
¾ x 2" (1.9 x 5cm)	18-4132	
1 x 1¼" (2.5 x 3.2cm)	18-4133	

Rake Blades

SIZE	3 PRONG	4 PRONG	6 PRONG
¾ x ⅔" (1.9 x 1.7cm)	18-4160		
⅓ x ¾" (0.8 x 1.9cm)		18-4161	
⅓ x 1" (0.8 x 2.5cm)			18-4162

Rectal Blades

SIZE	SMALL STAINLESS STEEL	LARGE STAINLESS STEEL
⅞ x 2⅞" (2.2 x 7.3cm)	18-4170	
⅞ x 3⅞" (2.2 x 9.8cm)		18-4172

WORKHORSE™ RETRACTOR BLADES

Renal Blades



SIZE	STEEL	ALUMINUM	STEEL, SWIVEL	ALUMINUM, SWIVEL
1 x 4½" (2.5 x 11.5cm)	18-4181	18-4181A	18-4181S	18-4181AS
1 x 6" (2.5 x 15cm)	18-4183	18-4183A	18-4183S	18-4183AS
1 x 8" (2.5 x 20cm)	18-4185	18-4185A	18-4185S	18-4185AS
1 x 10" (2.5 x 25.5cm)	18-4187	18-4187A	18-4187S	18-4187AS

Vaginal Blades



SIZE	20° RING	LATERAL	POSTERIOR	DEAVER
1 x 3" (2.5 x 7.5cm)		18-4206		
1 x 4½" (2.5 x 11.5cm)			18-4208	
1 x 3½" (2.5 x 9cm)				18-4210
1 x 5" (2.5 x 12.5cm)				18-4211
8 x 10½" (20 x 26.6cm)	18-4205			

Splanchnic Blades



SIZE	ALUMINUM
2 x 8" (5 x 20cm)	18-4295A
2 x 10" (5 x 25.5cm)	18-4296A

Miscellaneous Blades

ITEM	DESCRIPTION
18-4083	Mayo Blade, 2¾ x 2" (7 x 5cm)
18-4083A	Mayo Blade, aluminum, 2¾ x 2" (7 x 5cm)
18-4088	Malleable Perforated 90° Blade, 2 x 10" (5 x 25.5cm)
18-4089	Malleable Perforated 90° Blade, 3 x 10" (7.5 x 25.5cm)
18-4094	St. Marks Blade, 2⅞ x 7⅞" (6 x 18.1cm)
18-4100	Hand Retractor
18-4110	Gelpi Blade

LOBSTER-WORKHORSE ADJUSTABLE FRAME - 18-4055

WORKHORSE™ style notched arms allow for the use of traditional WORKHORSE™ ratchet clamps with arms that provide the placement flexibility of a Lobster frame.

SPECIAL ORDER ONLY



PEDIATRIC WORKHORSE™ RETRACTOR BLADES

Pediatric Malleable 90° Blades



SIZE	STAINLESS STEEL	SWIVEL
½ x 1" (1.3 x 2.5cm)	18-4251	18-4251S
¾ x 2" (1.9 x 5cm)	18-4253	18-4253S
¾ x 3" (1.9 x 7.5cm)	18-4254	18-4254S
1 x 1" (2.5 x 2.5cm)	18-4260	18-4260S
1 x 4" (2.5 x 10cm)	18-4263	18-4263S
1 x 5" (2.5 x 12.5cm)	18-4264	18-4264S
1 x 6" (2.5 x 15cm)	18-4265	18-4265S
1½ x 3" (3.8 x 7.5cm)	18-4268	18-4268S
1½ x 3½" (3.8 x 9cm)	18-4275	18-4275S
1½ x 4" (3.8 x 10cm)	18-4269	18-4269S
1½ x 5" (3.8 x 12.5cm)	18-4270	18-4270S
1½ x 6" (3.8 x 15cm)	18-4271	18-4271S

Pediatric Mayo Blades



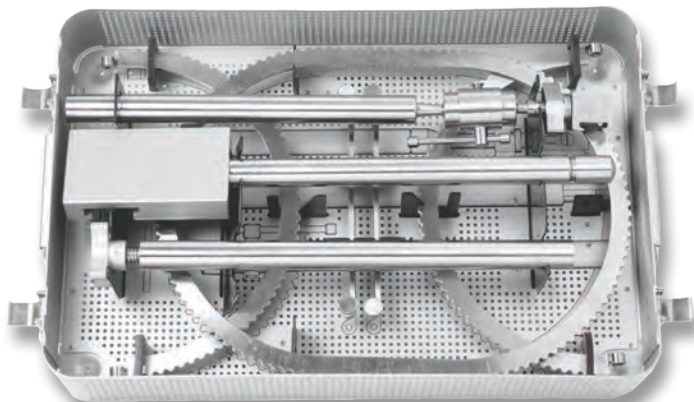
SIZE	STAINLESS STEEL	SWIVEL
1¼ x 1¼" (3.2 x 3.2cm)	18-4280	18-4280S
2 x 2" (5 x 5cm)	18-4282	18-4282S
2¾ x 2" (7 x 5cm)	18-4284	18-4284S

Pediatric Rake Blades

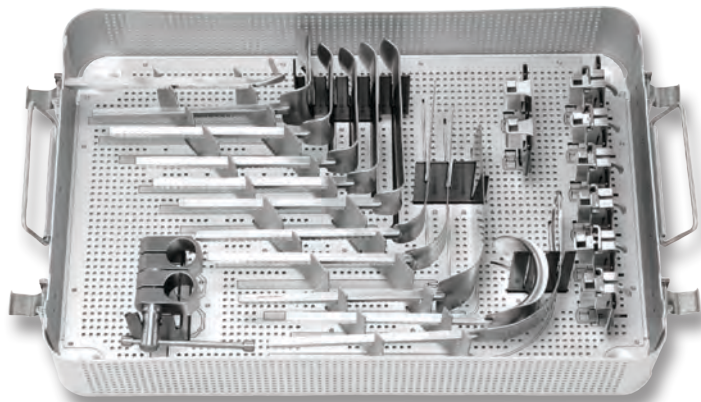


SIZE	STAINLESS STEEL NON-SWIVEL
1 x ½" (2.5 x 1.2cm)	18-4290
1 x 1" (2.5 x 2.5cm)	18-4291

OPTIONAL CUSTOM CASES



18-4011: CUSTOM CASE FOR TABLE
FIXATION COMPONENTS



18-4012: CUSTOM CASE FOR BLADES,
CLAMPS & ACCESSORIES



VERSATILITY, EASE OF USE, UNPARALLELED WOUND SITE VISUALIZATION...

The WORKHORSE™ offers quick retractor blade positioning, readjustment and replacement to achieve your retraction objectives. The standard retractor blade package provides optimal wound exposure for your procedure applications. The versatility of retractor frames and adjustment capabilities provides the surgeon with a wide range of options to accommodate a variety of patient sizes and procedures.



THE WORKHORSE™ 18-4002C

THE WORKHORSE™ 18-4002C		
ITEM	DESCRIPTION	QTY
18-4035C	Table Clamp with vertical post	1
18-4045C	Horizontal Bar, non-flex	1
18-4038C	Horizontal Flex Bar	1
18-4028	Oval Ring, Segmented, medium, 10 1/2 x 19 1/2" (26.5 x 49.5cm)	1
18-4021	Oval Ring, medium, 10 1/2 x 15" (26.5 x 38.1cm)	1
18-4047	Vertical Post coupling clamp	1
18-4049	Tilting Blade Clamp	6
18-4048	Non-tilting Blade Clamp	2
18-4070M	Malleable Retractor Blade, 1 1/2 x 6" (3.8 x 15cm)	1
18-4073M	Malleable Retractor Blade, 2 x 6" (5 x 15cm)	2
18-4075M	Malleable Retractor Blade, 3 x 6" (7.5 x 15cm)	1
18-4080	Balfour/Mayo Retractor Blade, 3 x 2 1/2" (7.5 x 6.4cm)	1
18-4096	Harrington Retractor Blade, 2 1/2 x 5" (6.4 x 12.5cm)	1
18-4065	Kelly Retractor Blade, 2 x 3" (5 x 7.5cm)	2
18-4066	Kelly Retractor Blade, 2 x 4" (5 x 10cm)	1
18-4067	Kelly Retractor Blade, 2 x 5" (5 x 12.5cm)	1
18-4068	Kelly Retractor Blade, 2 x 6" (5 x 15cm)	1
18-4110	Gelpi Retractor Blade	1

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