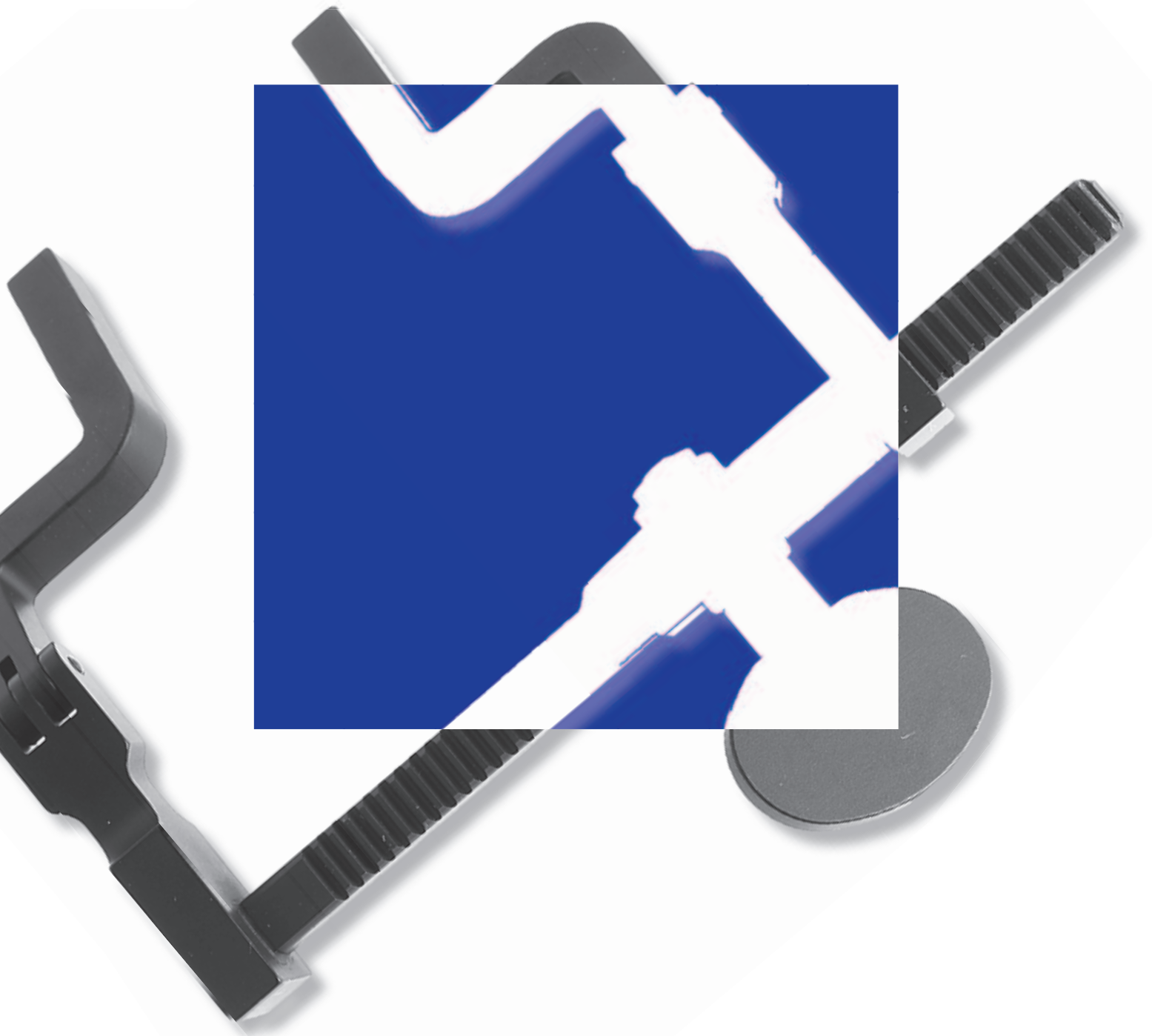




TW SURGICAL

**Spine  
Spine McCulloch  
Spine RCS**



**Spine**

**Retractors 3**

**Tubes 18**

**Spine McCulloch**

**Retractor / Blades titanium 19**

**Retractors 20**

**Blades 21**

**Container / Tubes 22**

**Elevators 23**

**Spine RCS**

**Retractors 24**

**Blades 27**

**SL-Retractors 30**

**SL-Blades 31**

**Speculum 32**

**Drill Guides 34**



**Karmody**  
**spring wire retractor** with 2 blades  
 TWS-1000/1 - 89mm  
 TWS-1000/2 - 134mm



**Spring wire retractor**  
 TWS-1000/3 - 76mm



**Thompson** lamina spreader single  
 pronged  
 TWS-1000/4 - 210mm, tip depth 20mm  
 TWS-1000/5 - 210mm, tip depth 40mm  
 TWS-1000/6 - 210mm, tip depth 60mm  
 TWS-1000/7 - 210mm, tip depth 100mm



**Thompson**  
 lamina spreader  
 spinal process spreader  
 mod. bayonet shaped  
 TWS-1000/8 - 200mm

Allows exposure far laterally. Four different sizes allow the use over the whole range of the spine from the cervical to the lumbar region, and also in patients of all ages.



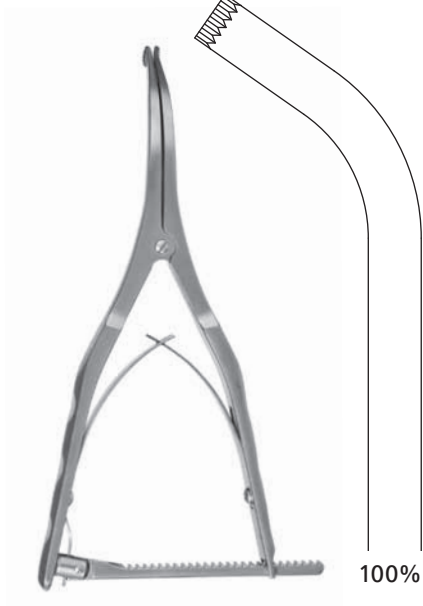
**Vertebra spreader**  
with ring handles  
TWS-1000/9  
- 5 / 150mm



**Vertebra spreader**  
with speedlock  
TWS-1000/10  
- 5 / 150mm



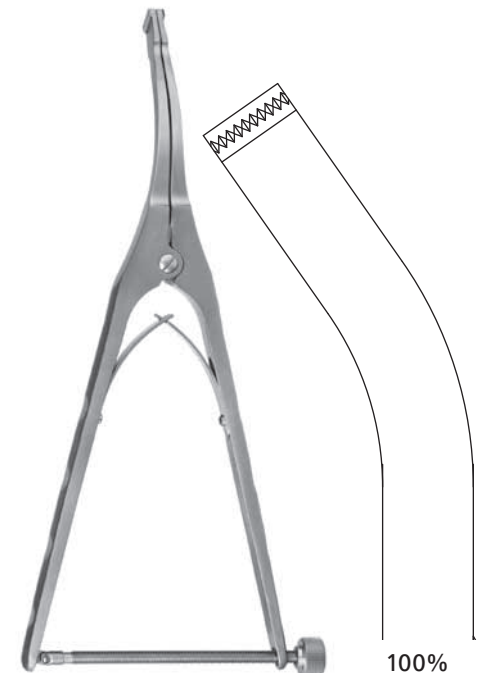
**Vertebra spreader**  
with rack  
TWS-1000/11  
- 5 / 150mm



**Inge**  
lamina spreader  
curved jaw, with rack  
TWS-1000/12  
- 7 / 180mm, spread 34mm



**Inge**  
lamina spreader  
curved with speedlock, short jaws  
TWS-1000/13  
- 8 / 280mm, spread 30mm



**Inge**  
lamina spreader,  
curved jaw, speedlock type  
TWS-1000/14  
- 12 / 280mm, spread 30mm  
TWS-1000/15  
- 12 / 280mm, spread 65mm



TW SURGICAL

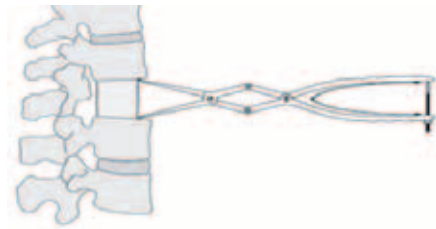
**retractors**



### **vertebra spreader**

TWS-1000/16 - 430mm

extra-strong, double action with speedlock





**Ducker / Feler-Ducker blade left**

overall length 170mm

Feler-Ducker:

TWS-1000/17 - blade 40x10mm

TWS-1000/18 - blade 50x10mm

TWS-1000/19 - blade 60x10mm

TWS-1000/20 - blade 70x10mm

Ducker:

TWS-1000/21 - blade 50x20mm

TWS-1000/22 - blade 60x20mm

TWS-1000/23 - blade 70x20mm



**Ducker / Feler-Ducker blade right**

overall length 170mm Feler-

Ducker:

TWS-1000/24 - blade 40x10mm

TWS-1000/25 - blade 50x10mm

TWS-1000/26 - blade 60x10mm

TWS-1000/27 - blade 70x10mm

Ducker:

TWS-1000/28 - blade 50x20mm

TWS-1000/29 - blade 60x20mm

TWS-1000/30 - blade 70x20mm



**Ducker / Feler Ducker blade both sides**

overall length

170mm Feler-Ducker:

TWS-1000/31 - blade 60x10mm

TWS-1000/32 - blade 70x10mm

Ducker:

TWS-1000/33 - blade 90x20mm

Feler-Ducker = 10mm blade width  
Ducker = 20mm blade width



TW SURGICAL

retractors



**Adson-Baby**

3x4 prongs (15mm) hinged arms

TWS-1000/34 - 160mm,

TWS-1000/35 - 160mm, blunt

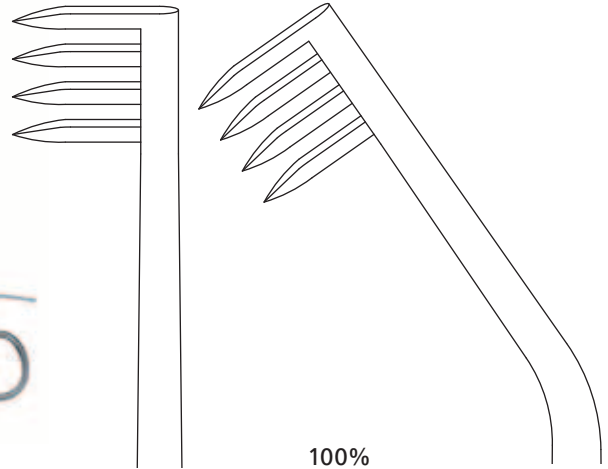


**Adson**

4x4 prongs (24mm)

TWS-1000/36 - 200mm, sharp, arms straight

TWS-1000/37 - 188mm, sharp, arms curved



100%



**Adson**

3x4 prongs (30mm) curved arms

TWS-1000/38 - 265mm, sharp

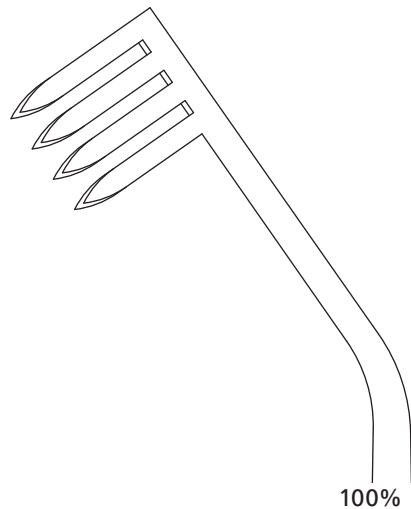


**Anderson-Adson**

4x4 prongs (20mm), curved arms

TWS-1000/39 - 190mm, sharp

TWS-1000/40 - 190mm, blunt



100%

# Spine



**Weitlaner**  
2x3 prongs  
TWS-1000/41 - 110mm, sharp  
TWS-1000/42 - 110mm, semi-sharp  
TWS-1000/43 - 110mm, blunt



**Weitlaner**  
3x4 prongs  
TWS-1000/44 - 130mm, sharp  
TWS-1000/45 - 130mm, semi-sharp  
TWS-1000/46 - 130mm, blunt

**Weitlaner**  
3x4 prongs  
TWS-1000/47 - 165mm, sharp  
TWS-1000/48 - 165mm, semi-sharp  
TWS-1000/49 - 165mm, blunt



**Weitlaner**  
4x4 prongs  
TWS-1000/50 - 160mm, semi-sharp



**Weitlaner**  
6x7 prongs  
TWS-1000/51 - 200mm, sharp  
TWS-1000/52 - 200mm, blunt



**Weitlaner**  
3x4 prongs  
TWS-1000/53 - 240mm, sharp  
TWS-1000/54 - 240mm, semi-sharp  
TWS-1000/55 - 240mm, blunt



TW SURGICAL  
retractors



**Cone**

3x4 prongs (27mm), hinged arms  
TWS-1000/56 - 250mm, sharp  
TWS-1000/57 - 250mm, semi-sharp  
TWS-1000/58 - 250mm, blunt



**Beckman-Adson**

4x4 prongs (18mm), hinged arms  
TWS-1000/59 - 310mm, semi-sharp  
TWS-1000/60 - 310mm, blunt



**Beckman-Adson**

4x4 prongs (18mm) hinged  
arms, heavy pattern  
TWS-1000/61 - 310mm, sharp



**Beckman-Eaton**

7x7 prongs (47mm) hinged arms, heavy pattern  
TWS-1000/62 - 320mm, blunt  
TWS-1000/63 - 320mm, sharp

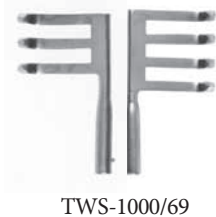
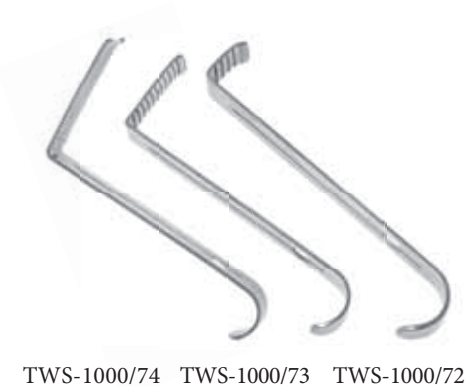


**Henly with rigid jaws**

TWS-1000/64 - retractor  
 TWS-1000/65 - center blade 15x18mm  
 TWS-1000/66 - center blade 15x31mm

**Henly set**

incl. retractor and all 2 center blades  
 TWS-1000/67 SET



**Henly with interchangeable jaws**

TWS-1000/68 - retractor  
 TWS-1000/69 - blade pair 20mm  
 TWS-1000/70 - blade pair 40mm  
 TWS-1000/71 - blade pair 60mm  
 TWS-1000/72 - center blade 20mm  
 TWS-1000/73 - center blade 40mm  
 TWS-1000/74 - center blade 60mm

**Henly set**

incl. retractor, all 3 center blades and all 3 blade pairs  
 TWS-1000/75 SET

## Scoville STANDARD

style without blade setting system:

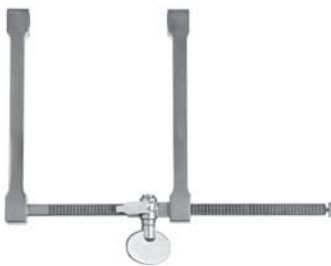
blades swivable



## Scoville MODIFIED

style with internal tothing:

blades non-swivable



### Scoville standard

TWS-1000/76  
- rigid retractor



### Scoville-Haver ield standard

TWS-1000/78  
- adjustable retractor



### Scoville-Haver ield standard set

TWS-1000/77 - Scoville-Haver ield set standard  
TWS-1000/78 - Scoville-Haver ield retractor adjustable  
TWS-1000/79 - Scoville blade 58mm, hook shaped, broad  
TWS-1000/80 - Scoville blade 60x25mm, 4 teeth

### Scoville modi ied

TWS-1000/81  
- rigid retractor

### Scoville-Haver ield modi ied

TWS-1000/83  
- adjustable retractor

### Scoville-Haver ield modi ied set

TWS-1000/82 - Scoville-Haver ield set modi ied  
TWS-1000/83 - Scoville-Haver ield retractor adjustable  
TWS-1000/84 - Scoville blade 58mm, hook shaped, broad  
TWS-1000/85 - Scoville blade 60x25mm, 4 teeth

## Scoville STANDARD

style without blade setting system:

blades swivable



### Scoville blade pointy

TWS-1000/86 - 57mm  
TWS-1000/87 - 77mm



### Scoville blade wide

TWS-1000/88 - 57mm  
TWS-1000/89 - 83mm



### Scoville blade wide with crossbar

TWS-1000/90 - 48mm  
TWS-1000/91 - 58mm  
TWS-1000/92 - 78mm



### Scoville blade with teeth

TWS-1000/93 - 50x35mm, 3 teeth  
TWS-1000/94 - 45x39mm, 3 teeth  
TWS-1000/95 - 50x50mm, 4 teeth  
TWS-1000/96 - 62x57mm, 4 teeth  
TWS-1000/97 - 70x46mm, 4 teeth  
TWS-1000/98 - 80x57mm, 4 teeth



### Scoville blade with teeth

TWS-1000/99 - 60x25mm, 4 teeth  
TWS-1000/100 - 78x29mm, 4 teeth  
TWS-1000/101 - 78x51mm, 8 teeth  
TWS-1000/102 - 91x26mm, 4 teeth



### Epstein blade fenestrated

TWS-1000/103  
- 57x26mm



## Scoville MODIFIED

style with internal toothing:

blades non-swivable



### Scoville blade pointy

TWS-1000/104 - 57mm  
TWS-1000/105 - 77mm

### Scoville blade wide

TWS-1000/106 - 57mm  
TWS-1000/107 - 83mm

### Scoville blade wide with crossbar

TWS-1000/108 - 48mm  
TWS-1000/109 - 58mm  
TWS-1000/110 - 78mm

### Scoville blade with teeth

TWS-1000/111 - 50x35mm, 3 teeth  
TWS-1000/112 - 45x39mm, 3 teeth  
TWS-1000/113 - 50x50mm, 4 teeth  
TWS-1000/114 - 62x57mm, 4 teeth  
TWS-1000/115 - 70x46mm, 4 teeth  
TWS-1000/116 - 80x57mm, 4 teeth

### Scoville blade with teeth

TWS-1000/117 - 60x25mm, 4 teeth  
TWS-1000/118 - 78x29mm, 4 teeth  
TWS-1000/119 - 78x51mm, 8 teeth  
TWS-1000/120 - 91x26mm, 4 teeth

**Scoville STANDARD**

style without blade setting system:

blades swivable



**Meyerding blade  
 8 teeth**

- TWS-1000/121 - 48x25mm
- TWS-1000/122 - 62x25mm
- TWS-1000/123 - 70x25mm
- TWS-1000/124 - 78x25mm
- TWS-1000/125 - 81x25mm
- TWS-1000/126 - 92x50mm



**Hibbs blade with teeth**

- TWS-1000/127 - 48x19mm, 3 teeth
- TWS-1000/128 - 58x51mm, 8 teeth
- TWS-1000/129 - 51x26mm, 4 teeth
- TWS-1000/130 - 60x38mm, 6 teeth
- TWS-1000/131 - 65x26mm, 4 teeth
- TWS-1000/132 - 74x38mm, 6 teeth
- TWS-1000/133 - 74x64mm, 10 teeth
- TWS-1000/134 - 78x50mm, 8 teeth
- TWS-1000/135 - 80x26mm, 4 teeth
- TWS-1000/136 - 89x26mm, 4 teeth
- TWS-1000/137 - 92x39mm, 6 teeth
- TWS-1000/138 - 104x51mm, 8 teeth
- TWS-1000/139 - 105x26mm, 4 teeth



**Scoville MODIFIED**

style with internal toothing:

blades non-swivable



**Meyerding blade  
 8 teeth**

- TWS-1000/140 - 48x25mm
- TWS-1000/141 - 62x25mm
- TWS-1000/142 - 70x25mm
- TWS-1000/143 - 78x25mm
- TWS-1000/144 - 81x25mm
- TWS-1000/145 - 92x50mm

**Hibbs blade with teeth**

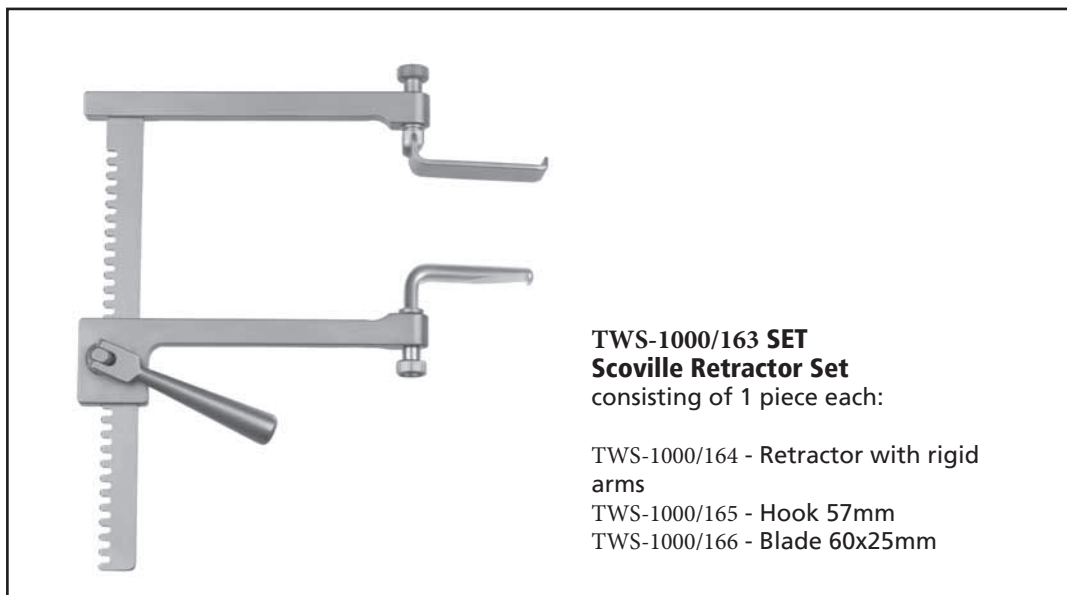
- TWS-1000/146 - 48x19mm, 3 teeth
- TWS-1000/147 - 58x51mm, 8 teeth
- TWS-1000/148 - 51x26mm, 4 teeth
- TWS-1000/149 - 60x38mm, 6 teeth
- TWS-1000/150 - 65x26mm, 4 teeth
- TWS-1000/151 - 74x38mm, 6 teeth
- TWS-1000/152 - 74x64mm, 10 teeth
- TWS-1000/153 - 78x51mm, 8 teeth
- TWS-1000/154 - 80x26mm, 4 teeth
- TWS-1000/155 - 89x26mm, 4 teeth
- TWS-1000/156 - 92x39mm, 6 teeth
- TWS-1000/157 - 104x51mm, 8 teeth
- TWS-1000/158 - 105x26mm, 4 teeth

**Taylor special blade**

- TWS-1000/159 - 80x31mm
- TWS-1000/160 - 105x42mm

**Schmidt blade wide with  
 pointed tip**

- TWS-1000/161 - 60mm
- TWS-1000/162 - 70mm



### French blunt blades

#### blunt blade 12mm

TWS-1000/167 - 12x30mm  
TWS-1000/168 - 12x40mm  
TWS-1000/169 - 12x50mm  
TWS-1000/170 - 12x60mm  
TWS-1000/171 - 12x65mm  
TWS-1000/172 - 12x75mm  
TWS-1000/173 - 12x85mm  
TWS-1000/174 - 12x100mm

#### blunt blade 20mm

TWS-1000/175 - 20x30mm  
TWS-1000/176 - 20x40mm  
TWS-1000/177 - 20x50mm  
TWS-1000/178 - 20x65mm  
TWS-1000/179 - 20x75mm  
TWS-1000/180 - 20x85mm  
TWS-1000/181 - 20x110mm

#### blunt blade 4mm super narrow

TWS-1000/182 - 4x40mm  
TWS-1000/183 - 4x50mm  
TWS-1000/184 - 4x70mm



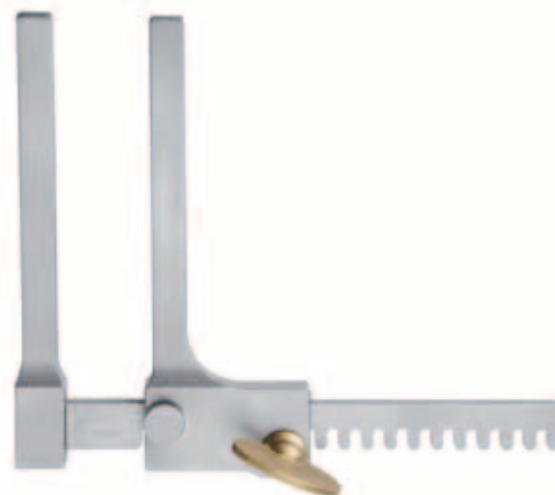
### French sharp blades with prongs

#### sharp blade 12mm

TWS-1000/185 - 12x30mm  
TWS-1000/186 - 12x40mm  
TWS-1000/187 - 12x50mm  
TWS-1000/188 - 12x60mm

#### sharp blade 20mm

TWS-1000/189 - 20x30mm  
TWS-1000/190 - 20x40mm  
TWS-1000/191 - 20x50mm



### French laminectomy retractor

TWS-1000/192



### French semi-sharp blade

#### semi-sharp blade 12mm

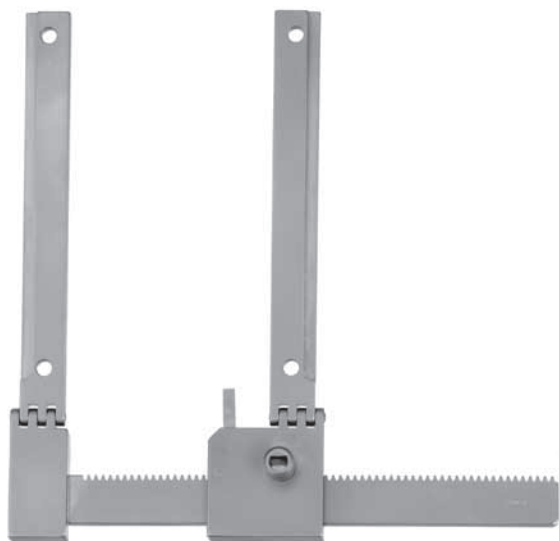
TWS-1000/193 - 12x65mm



### French Taylor type blade

#### Taylor type blade 12mm

TWS-1000/194 - 12x75mm



**Karlin retractor**  
TWS-1000/195  
- spread 140mm



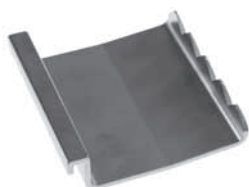
**Karlin ratchet**  
TWS-1000/196



**Karlin standard blades**  
TWS-1000/197 - 31x38mm, L  
TWS-1000/198 - 31x38mm, R



**Karlin standard blades**  
TWS-1000/199 - 61x44mm, L  
TWS-1000/200 - 61x44mm, R

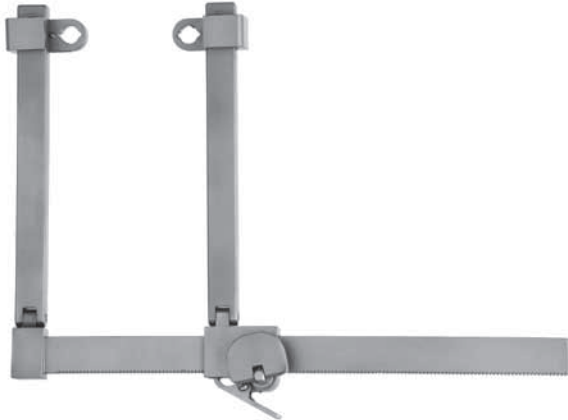


**Karlin universal blade**  
TWS-1000/201 - 76x64mm  
**Karlin universal other**  
TWS-1000/202 - 51x102mm  
TWS-1000/203 - 51x63mm  
TWS-1000/204 - 51x76mm  
TWS-1000/205 - 76x76mm  
TWS-1000/206 - 76x102mm



**Karlin special offset blades**

L	R	
TWS-1000/207	TWS-1000/208	19x31mm
TWS-1000/209	TWS-1000/210	19x44mm
TWS-1000/211	TWS-1000/212	19x57mm
TWS-1000/213	TWS-1000/214	19x76mm
TWS-1000/215	TWS-1000/216	19x83mm
TWS-1000/217	TWS-1000/218	19x102mm



**Spredy lumbar spreader**  
single hinged including blade connectors  
TWS-1000/218  
- 240mm



**Spredy simple blade holder** for retractor  
TWS-1000/220  
TWS-1000/221



**Spredy adjustable blade holder** for retractor  
TWS-1000/222  
TWS-1000/223



**Spredy transverse / cervical lumbar spreader**  
double hinged  
TWS-1000/219  
- 125mm max. spread



### Spredy lumbar hooks

TWS-1000/224 - 6x42mm  
TWS-1000/225 - 6x52mm  
TWS-1000/226 - 6x62mm  
TWS-1000/227 - 6x72mm



### Spredy lumbar blades blunt

TWS-1000/228 - 15x30mm  
TWS-1000/229 - 15x40mm  
TWS-1000/230 - 15x50mm  
TWS-1000/231 - 15x60mm  
TWS-1000/232 - 15x70mm



### Spredy lumbar blades 3 teeth

TWS-1000/233 - 20x30mm  
TWS-1000/234 - 20x35mm  
TWS-1000/235 - 20x40mm  
TWS-1000/236 - 20x50mm  
TWS-1000/237 - 20x60mm  
TWS-1000/238 - 20x70mm  
TWS-1000/239 - 20x80mm  
TWS-1000/240 - 20x90mm  
TWS-1000/241 - 20x100mm  
TWS-1000/242 - 20x110mm



### Spredy lumbar blades 5 teeth

TWS-1000/243 - 45x46mm  
TWS-1000/244 - 45x56mm  
TWS-1000/245 - 45x66mm  
TWS-1000/246 - 45x76mm



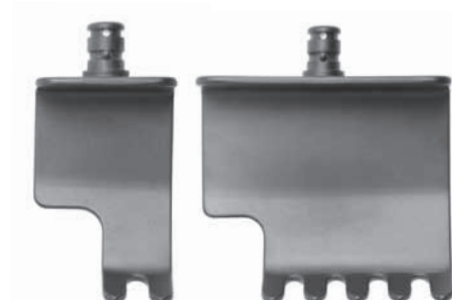
### Spredy lumbar blades 6 teeth

TWS-1000/247 - 60x46mm  
TWS-1000/248 - 60x56mm  
TWS-1000/249 - 60x66mm  
TWS-1000/250 - 60x76mm



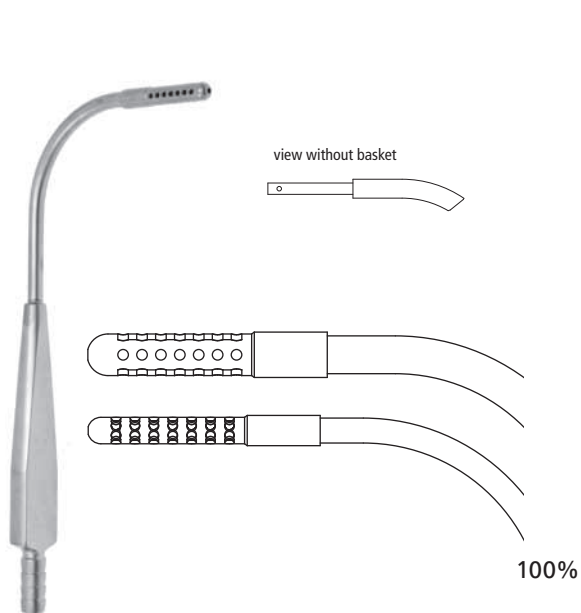
### Spredy sacral lumbar retractor blades V1

TWS-1000/251 - 30x36mm  
TWS-1000/252 - 60x41mm



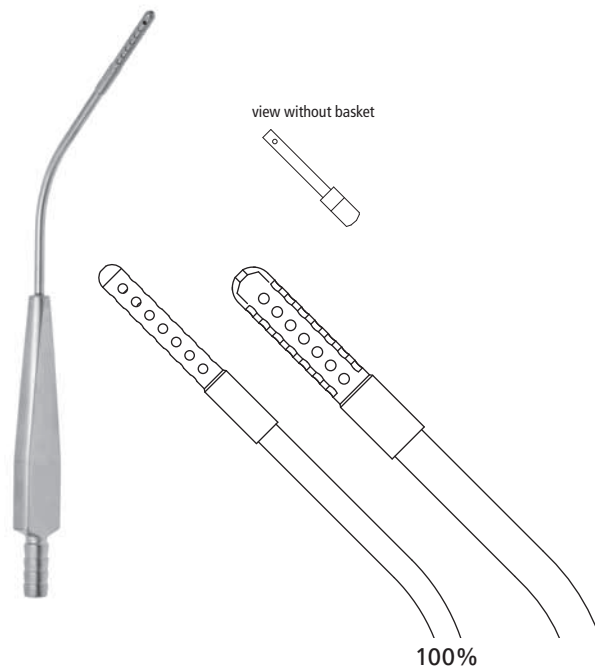
### Spredy sacral lumbar retractor blades V2

TWS-1000/253 - 30x36mm  
TWS-1000/254 - 60x41mm



### Greco suction tube

TWS-1000/255 - Ø 3,3mm, ang. 90°, 160mm  
 TWS-1000/256 - Ø 5,0mm, ang. 90°, 160mm



### Greco suction tube

TWS-1000/257  
 - Ø 3,3mm, ang. 45°, 180mm  
 TWS-1000/258  
 - Ø 5,0mm, ang. 45°, 180mm



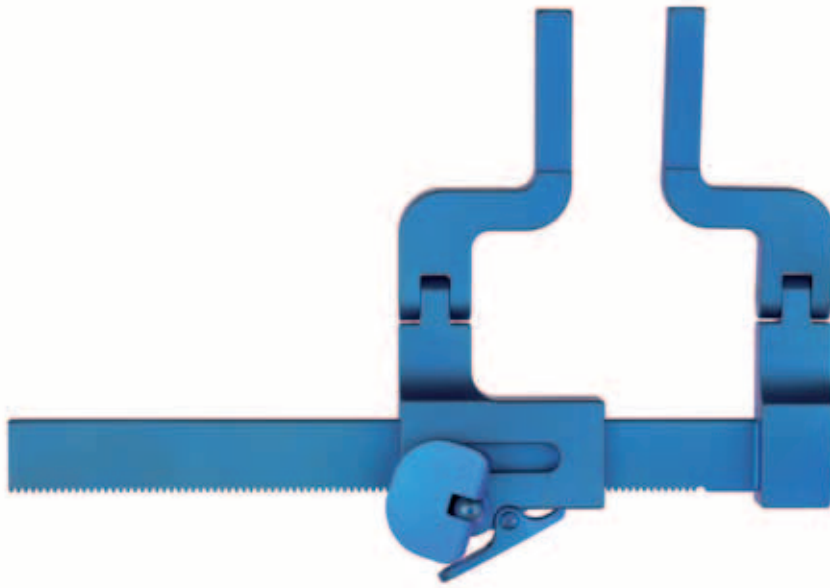
### Greco suction tube without basket

TWS-1000/259 - Ø 3,3mm, ang. 60°, 180mm



### Greco suction tube without basket

TWS-1000/260 - Ø 3,3mm, ang. 45°, 210mm  
 TWS-1000/261 - Ø 5,0mm, ang. 45°, 210mm



**McCulloch Titanium Retractor**  
 with hinged arms, adjustable  
 single hinge:  
 TWS-1000/262  
 - max. spread about 110mm



EACHES	SINGLE BLADE	SINGLE BLADE	SINGLE BLADE	SINGLE BLADE
blade length / depth	<b>wide muscle blade Titanium (27mm)</b>	<b>narrow muscle blade Titanium (20mm)</b>	<b>hook blade Titanium</b>	<b>multiple toothed blade Titanium</b>
20mm			TWS-1000/275	TWS-1000/281
30mm	TWS-1000/263	TWS-1000/269	TWS-1000/276	TWS-1000/282
40mm	TWS-1000/264	TWS-1000/270	TWS-1000/277	TWS-1000/283
50mm	TWS-1000/265	TWS-1000/271	TWS-1000/278	TWS-1000/284
60mm	TWS-1000/266	TWS-1000/272	TWS-1000/279	TWS-1000/285
70mm	TWS-1000/267	TWS-1000/273	TWS-1000/280	TWS-1000/286
80mm	TWS-1000/268	TWS-1000/274		



## **McCulloch**

retractor frame, jointed arms:

TWS-1000/287 - max. spread ~ 70mm

TWS-1000/288 - max. spread ~ 90mm

TWS-1000/289 - max. spread ~ 150mm



## **McCulloch**

retractor frame, rigid arms:

TWS-1000/290 - max. spread ~ 70mm

TWS-1000/291 - max. spread ~ 90mm



EACHES	SINGLE BLADE	SINGLE BLADE	SINGLE BLADE	SINGLE BLADE	SINGLE BLADE
blade length / depth	<b>wide muscle blade</b> (27mm) 6 teeth	<b>narrow muscle blade</b> (20mm) 4 teeth	<b>thin muscle blade</b> (17mm) 2 teeth	<b>special thin blade</b> (10mm)	<b>cervical blade</b> (20mm)
30mm	TWS-1000/292	TWS-1000/302	TWS-1000/312	TWS-1000/319	
40mm	TWS-1000/293	TWS-1000/303	TWS-1000/313	TWS-1000/320	TWS-1000/325
50mm	TWS-1000/294	TWS-1000/304	TWS-1000/314	TWS-1000/321	TWS-1000/326
60mm	TWS-1000/295	TWS-1000/305	TWS-1000/315	TWS-1000/322	TWS-1000/327
70mm	TWS-1000/296	TWS-1000/306	TWS-1000/316	TWS-1000/323	TWS-1000/328
80mm	TWS-1000/297	TWS-1000/307	TWS-1000/317	TWS-1000/324	
90mm	TWS-1000/298	TWS-1000/308	TWS-1000/318		
100mm	TWS-1000/299	TWS-1000/309			
110mm	TWS-1000/300	TWS-1000/310			
120mm	TWS-1000/301	TWS-1000/311			



EACHES	SINGLE BLADE	SINGLE BLADE
blade length / depth	<b>hook blade</b>	<b>toothed hook</b>
20mm	TWS-1000/329	TWS-1000/337
30mm	TWS-1000/330	TWS-1000/338
40mm	TWS-1000/331	TWS-1000/339
50mm	TWS-1000/332	TWS-1000/340
60mm	TWS-1000/333	TWS-1000/341
70mm	TWS-1000/334	TWS-1000/342
80mm	TWS-1000/335	TWS-1000/343
90mm	TWS-1000/336	TWS-1000/344
100mm	TWS-1000/337	TWS-1000/345



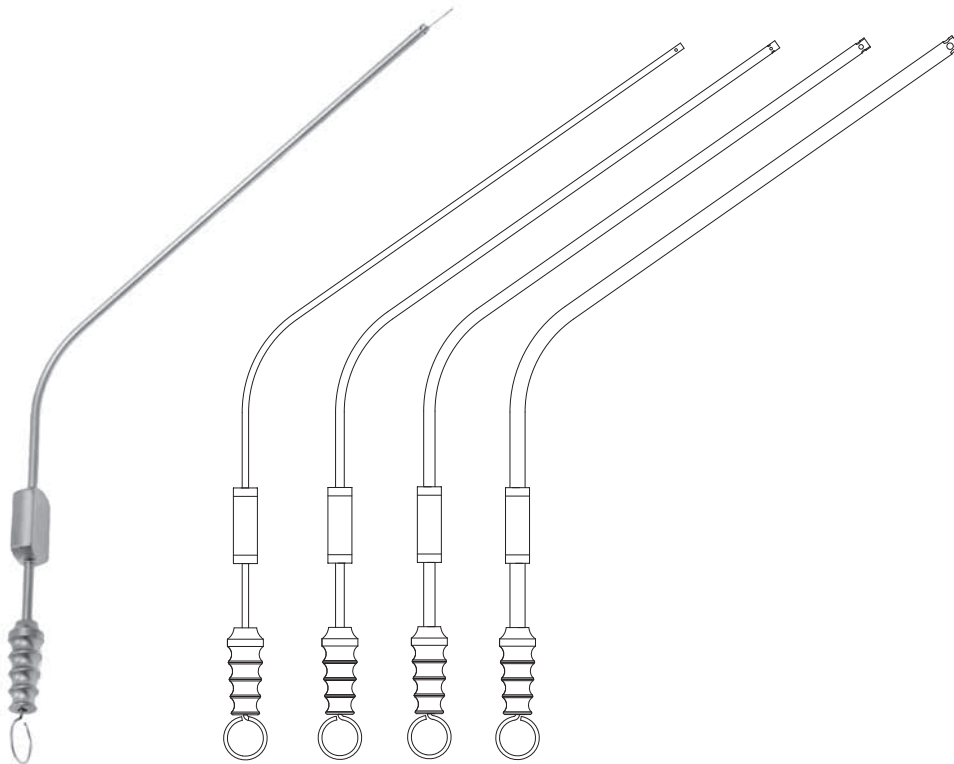
PAIRS	PAIR	PAIR
blade length / depth	<b>wide muscle blade</b> (27mm)	<b>narrow muscle blade</b> (20mm)
30mm	TWS-1000/346	TWS-1000/356
40mm	TWS-1000/347	TWS-1000/357
50mm	TWS-1000/348	TWS-1000/358
60mm	TWS-1000/349	TWS-1000/359
70mm	TWS-1000/350	TWS-1000/360
80mm	TWS-1000/351	TWS-1000/361
90mm	TWS-1000/352	TWS-1000/362
100mm	TWS-1000/353	TWS-1000/363
110mm	TWS-1000/354	TWS-1000/364
120mm	TWS-1000/355	TWS-1000/365



**McCulloch container**  
285x285x55mm  
TWS-1000/366

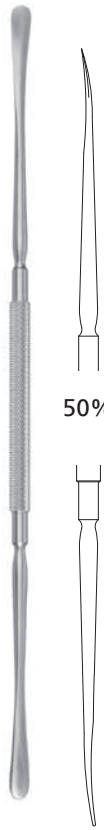


**McCulloch rack**  
without instruments  
265x265mm  
TWS-1000/367



50%

**McCulloch**  
suction tubes, working length 125mm, 55°  
TWS-1000/368 - 1,7 mm = 5 FR  
TWS-1000/369 - 2,3mm = 7 FR  
TWS-1000/370 - 3,0mm = 9 FR  
TWS-1000/371 - 4,0mm = 12FR



50%

**blunt elevator**  
 double-ended  
 TWS-1000/372  
 - 242mm



100%

**ball-tipped probe**  
 241mm  
 TWS-1000/373  
 - tip 4mm



100%

**ball-tipped probe**  
 241mm  
 TWS-1000/374 - tip 7mm  
 TWS-1000/375 - tip 8mm



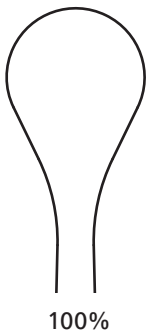
100%

**foramon probe**  
 241mm  
 TWS-1000/376  
 - tip 17mm



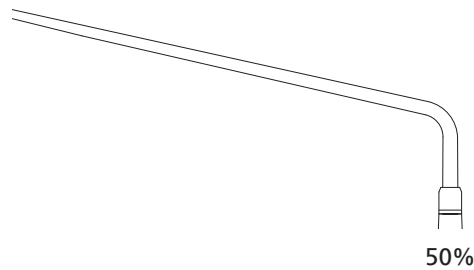
100%

**manipulation hook**  
 238mm  
 TWS-1000/377  
 - tip 5mm



100%

**Cobb elevator** 267mm  
 TWS-1000/378 - Ø 13mm  
 TWS-1000/379 - Ø 19mm



50%

**nerve root retractor**  
 80° angled  
 TWS-1000/380 - working length 125mm  
 TWS-1000/381 - working length 145mm



## Caspar laminectomy spreader

spreader with adjustable, movable arms 130mm  
TWS-1000/382 - 165mm, max. spread about 140mm



### hook blade

TWS-1000/383 - 90mm  
TWS-1000/384 - 38mm  
TWS-1000/385 - 58mm



### 2 teeth

(22mm wide)  
TWS-1000/386 - 22x32mm  
TWS-1000/387 - 22x37mm  
TWS-1000/388 - 22x42mm  
TWS-1000/389 - 22x47mm  
TWS-1000/390 - 22x52mm  
TWS-1000/391 - 22x57mm  
TWS-1000/392 - 22x62mm  
TWS-1000/393 - 22x67mm  
TWS-1000/394 - 22x85mm



### 3 teeth

(37mm wide)  
TWS-1000/395 - 37x32mm  
TWS-1000/396 - 37x37mm  
TWS-1000/397 - 37x42mm  
TWS-1000/398 - 37x47mm  
TWS-1000/399 - 37x52mm  
TWS-1000/400 - 37x57mm  
TWS-1000/401 - 37x62mm  
TWS-1000/402 - 37x67mm  
TWS-1000/403 - 37x75mm  
TWS-1000/404 - 37x85mm



### 4 teeth

(52mm wide)  
TWS-1000/405 - 52x32mm  
TWS-1000/406 - 52x37mm  
TWS-1000/407 - 52x42mm  
TWS-1000/408 - 52x47mm  
TWS-1000/409 - 52x52mm  
TWS-1000/410 - 52x57mm  
TWS-1000/411 - 52x62mm  
TWS-1000/412 - 52x67mm  
TWS-1000/413 - 52x75mm



## Caspar Set

retractor set for laminectomy and  
hemi-laminectomy  
TWS-1000/415 SET

### TWS-1000/415 Set: Caspar laminectomy spreader set

consisting of 1 piece each:  
TWS-1000/416 - retractor 165mm,  
max. spread about 140mm  
TWS-1000/417 - 38mm hook  
TWS-1000/418 - 22x37mm  
TWS-1000/419 - 22x42mm  
TWS-1000/420 - 22x47mm  
TWS-1000/421 - 22x52mm  
TWS-1000/422 - 22x57mm



TW SURGICAL

RCS STANDARD



RCS retractors single hinge arms	Stainless Steel	Stainless Steel with Peek arms	Titanium
ring handle	TWS-1000/423	TWS-1000/424	TWS-1000/425



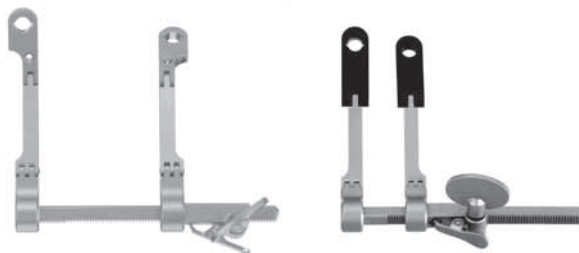
RCS retractors double hinged arms	Stainless Steel	Stainless Steel with peek arms
ring handle	TWS-1000/426	TWS-1000/427



RCS retractors	Stainless Steel	Stainless Steel with Peek arms
V-handle	TWS-1000/428	TWS-1000/429



RCS retractors single hinge arms	Stainless Steel	Stainless Steel with Peek arms	Titanium
rack	TWS-1000/430	TWS-1000/432	TWS-1000/434
elongated rack	TWS-1000/431	TWS-1000/433	–



RCS retractors double hinged arms	Stainless Steel	Stainless Steel with peek arms
rack	TWS-1000/435	TWS-1000/436
elongated rack	–	TWS-1000/437



TW SURGICAL

RCS STANDARD



**SS MEDIAL**

(23mm wide)

- TWS-1000/438 - 23x35mm
- TWS-1000/439 - 23x40mm
- TWS-1000/440 - 23x45mm
- TWS-1000/441 - 23x50mm
- TWS-1000/442 - 23x55mm
- TWS-1000/443 - 23x60mm
- TWS-1000/444 - 23x65mm
- TWS-1000/445 - 23x70mm
- TWS-1000/446 - 23x75mm
- TWS-1000/447 - 23x80mm
- TWS-1000/448 - 23x85mm
- TWS-1000/449 - 23x90mm
- TWS-1000/450 - 23x95mm
- TWS-1000/451 - 23x100mm



**SS LATERAL**

(23mm wide)

- TWS-1000/452 - 23x40mm
- TWS-1000/453 - 23x45mm
- TWS-1000/454 - 23x50mm
- TWS-1000/455 - 23x55mm
- TWS-1000/456 - 23x60mm
- TWS-1000/457 - 23x65mm
- TWS-1000/458 - 23x70mm



**SS BLUNT**

(23mm wide)

- TWS-1000/464 - 23x35mm
- TWS-1000/465 - 23x40mm
- TWS-1000/466 - 23x45mm
- TWS-1000/467 - 23x50mm
- TWS-1000/468 - 23x55mm
- TWS-1000/469 - 23x60mm
- TWS-1000/470 - 23x65mm
- TWS-1000/471 - 23x70mm
- TWS-1000/472 - 23x75mm



**Peek handle (hand held retractor)**

for peek blades

TWS-1000/473



**Peek MEDIAL**

(23mm wide)

- TWS-1000/474 - 23x40mm
- TWS-1000/475 - 23x45mm
- TWS-1000/476 - 23x50mm
- TWS-1000/477 - 23x55mm
- TWS-1000/478 - 23x60mm
- TWS-1000/479 - 23x65mm
- TWS-1000/480 - 23x75mm



**Peek LATERAL**

(12mm wide)

- TWS-1000/481 - 12x40mm
- TWS-1000/482 - 12x45mm
- TWS-1000/483 - 12x50mm
- TWS-1000/484 - 12x55mm
- TWS-1000/485 - 12x60mm



**Peek LATERAL**

(23mm wide)

- TWS-1000/486 - 23x40mm
- TWS-1000/487 - 23x45mm
- TWS-1000/488 - 23x50mm
- TWS-1000/489 - 23x55mm
- TWS-1000/490 - 23x60mm
- TWS-1000/491 - 23x65mm
- TWS-1000/492 - 23x75mm



**Peek BLUNT**

(23mm wide)

- TWS-1000/493 - 23x40mm
- TWS-1000/494 - 23x45mm
- TWS-1000/495 - 23x50mm
- TWS-1000/496 - 23x55mm
- TWS-1000/497 - 23x60mm
- TWS-1000/498 - 23x65mm
- TWS-1000/499 - 23x75mm

## Laminectomy blades titanium



### titanium MEDIAL

(20mm wide)

- TWS-1000/500 - 20x40mm
- TWS-1000/501 - 20x45mm
- TWS-1000/502 - 20x50mm
- TWS-1000/503 - 20x55mm
- TWS-1000/504 - 20x60mm
- TWS-1000/505 - 20x65mm
- TWS-1000/506 - 20x70mm
- TWS-1000/507 - 20x75mm



### titanium LATERAL

(20mm wide)

- TWS-1000/508 - 20x25mm
- TWS-1000/509 - 20x30mm
- TWS-1000/510 - 20x35mm
- TWS-1000/511 - 20x40mm
- TWS-1000/512 - 20x45mm
- TWS-1000/513 - 20x50mm
- TWS-1000/514 - 20x55mm
- TWS-1000/515 - 20x60mm
- TWS-1000/516 - 20x65mm
- TWS-1000/517 - 20x70mm
- TWS-1000/518 - 20x75mm



### titanium BLUNT

(20mm wide)

- TWS-1000/519 - 20x30mm
- TWS-1000/520 - 20x35mm
- TWS-1000/521 - 20x40mm
- TWS-1000/522 - 20x45mm
- TWS-1000/523 - 20x50mm
- TWS-1000/524 - 20x55mm
- TWS-1000/525 - 20x60mm
- TWS-1000/526 - 20x65mm
- TWS-1000/527 - 20x70mm
- TWS-1000/528 - 20x75mm



### titanium MEDIAL

- TWS-1000/529 - 20x25mm
- TWS-1000/530 - 20x30mm
- TWS-1000/531 - 20x35mm
- TWS-1000/532 - 20x40mm
- TWS-1000/533 - 20x45mm
- TWS-1000/534 - 20x50mm
- TWS-1000/535 - 20x55mm
- TWS-1000/536 - 20x60mm
- TWS-1000/537 - 20x65mm
- TWS-1000/538 - 20x70mm



### titanium LATERAL fenestrated (20mm wide)

- TWS-1000/539 - 20x25mm
- TWS-1000/540 - 20x30mm
- TWS-1000/541 - 20x35mm
- TWS-1000/542 - 20x40mm
- TWS-1000/543 - 20x45mm
- TWS-1000/544 - 20x50mm
- TWS-1000/545 - 20x55mm
- TWS-1000/546 - 20x60mm
- TWS-1000/547 - 20x65mm
- TWS-1000/548 - 20x70mm



### titanium BLUNT fenestrated (20mm wide)

- TWS-1000/549 - 20x35mm
- TWS-1000/550 - 20x40mm
- TWS-1000/551 - 20x45mm
- TWS-1000/552 - 20x50mm
- TWS-1000/553 - 20x55mm
- TWS-1000/554 - 20x60mm
- TWS-1000/555 - 20x65mm
- TWS-1000/556 - 20x70mm
- TWS-1000/557 - 20x75mm



TW SURGICAL

RCS STANDARD

# Spine



**medial blades**



**lateral blades**

### TWS-1000/558 SET

#### RCS Basic Set

consisting of 1 piece each:

TWS-1000/559 - retractor frame

max. spread about 65mm

TWS-1000/560 - 23x40mm medial blade

TWS-1000/561 - 23x45mm medial blade

TWS-1000/562 - 23x50mm medial blade

TWS-1000/563 - 23x55mm medial blade

TWS-1000/564 - 23x60mm medial blade

TWS-1000/565 - 23x40mm lateral blade

TWS-1000/566 - 23x45mm lateral blade

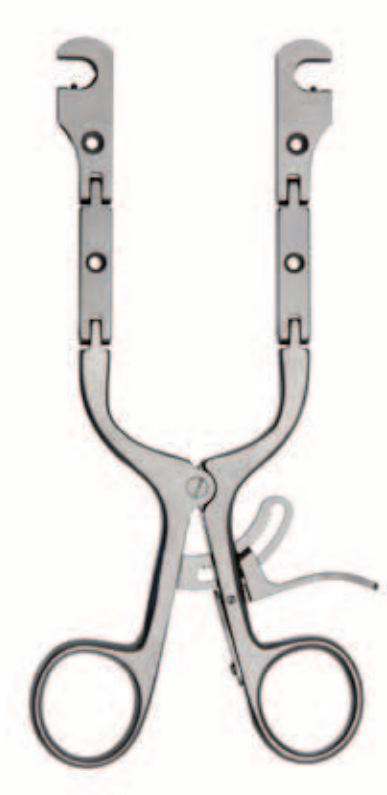
TWS-1000/567 - 23x55mm lateral blade

TWS-1000/568 - 23x60mm lateral blade



**retractor frame**

max. spread about 65mm



**„SL“ QUICK**  
double hinge  
TWS-1000/569 - ring handle retractor



**„SL“ QUICK**  
simple style  
TWS-1000/570 - V handle retractor



**„SL“ QUICK**  
double hinge  
TWS-1000/571 - rack retractor



TW SURGICAL

RCS SL-STYLE



**SL-connect titanium blades**  
for retractors RS 4800-SL, RS 4802-SL and RS 4808-SL



**MEDIAL / LATERAL**

(19mm wide)

- TWS-1000/572 - 19x25mm
- TWS-1000/573 - 19x30mm
- TWS-1000/574 - 19x35mm
- TWS-1000/575 - 19x40mm
- TWS-1000/576 - 19x45mm
- TWS-1000/577 - 19x50mm
- TWS-1000/578 - 19x55mm
- TWS-1000/579 - 19x60mm



**BLUNT (longitudinal) (19mm wide)**

- TWS-1000/580 - 19x25mm
- TWS-1000/581 - 19x30mm
- TWS-1000/582 - 19x35mm
- TWS-1000/583 - 19x40mm
- TWS-1000/584 - 19x45mm
- TWS-1000/585 - 19x50mm
- TWS-1000/586 - 19x55mm
- TWS-1000/587 - 19x60mm



**MEDIAL**

(24mm wide)

- TWS-1000/588 - 24x30mm
- TWS-1000/589 - 24x35mm
- TWS-1000/590 - 24x40mm
- TWS-1000/591 - 24x45mm
- TWS-1000/592 - 24x50mm
- TWS-1000/593 - 24x55mm
- TWS-1000/594 - 24x60mm
- TWS-1000/595 - 24x65mm
- TWS-1000/596 - 24x70mm



**LATERAL**

(24mm wide)

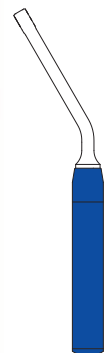
- TWS-1000/597 - 24x30mm
- TWS-1000/598 - 24x35mm
- TWS-1000/599 - 24x40mm
- TWS-1000/600 - 24x45mm
- TWS-1000/601 - 24x50mm
- TWS-1000/602 - 24x55mm
- TWS-1000/603 - 24x60mm
- TWS-1000/604 - 24x65mm
- TWS-1000/605 - 24x70mm



**BLUNT (longitudinal)**

(24mm wide)

- TWS-1000/606 - 24x35mm
- TWS-1000/607 - 24x40mm
- TWS-1000/608 - 24x45mm
- TWS-1000/609 - 24x50mm
- TWS-1000/610 - 24x55mm
- TWS-1000/611 - 24x60mm
- TWS-1000/612 - 24x65mm
- TWS-1000/613 - 24x70mm
- TWS-1000/614 - 24x75mm



**blade insert instrument**

for blades with SL-attachment  
TWS-1000/615 - 185mm



**counter retractor**  
max. spread about 45mm  
TWS-1000/616 - for speculum, adjustable

### lateral blade

for counter retractor  
TWS-1000/617 - 35mm  
TWS-1000/618 - 40mm  
TWS-1000/619 - 45mm  
TWS-1000/620 - 50mm  
TWS-1000/621 - 55mm  
TWS-1000/622 - 60mm  
TWS-1000/623 - 65mm  
TWS-1000/624 - 70mm  
TWS-1000/625 - 75mm  
TWS-1000/626 - 80mm  
TWS-1000/627 - 85mm  
TWS-1000/628 - 100mm



### paraspinal blade for counter retractor

TWS-1000/629 - 35mm  
TWS-1000/630 - 40mm  
TWS-1000/631 - 45mm  
TWS-1000/632 - 50mm  
TWS-1000/633 - 55mm  
TWS-1000/634 - 60mm  
TWS-1000/635 - 65mm  
TWS-1000/636 - 70mm  
TWS-1000/637 - 75mm



**lumbar speculum**  
fenestrated  
TWS-1000/638 - 40mm  
TWS-1000/639 - 45mm  
TWS-1000/640 - 50mm  
TWS-1000/641 - 55mm  
TWS-1000/642 - 60mm  
TWS-1000/643 - 65mm  
TWS-1000/644 - 70mm  
TWS-1000/645 - 75mm  
TWS-1000/646 - 80mm  
TWS-1000/647 - 85mm  
TWS-1000/648 - 100mm



**lumbar speculum**  
fenestrated with light source carrier  
TWS-1000/649 - 70mm  
TWS-1000/650 - 75mm  
TWS-1000/651 - 85mm  
TWS-1000/652 - 80mm



TW SURGICAL

RCS



### vertebral distractor left

TWS-1000/653 - standard toothed bar, spread approx. 60mm  
TWS-1000/654 - elongated toothed bar, spread approx. 80mm



### vertebral distractor right

TWS-1000/655 - standard toothed, spread approx. 60mm  
TWS-1000/656 - elongated toothed bar, spread approx. 80mm



### blade changing forceps

TWS-1000/657 - 115mm



drill guide  
for distractors



**drill guide  
left**  
TWS-1000/658



**drill guide  
right**  
TWS-1000/659



**drill guide left**  
TWS-1000/660



**drill guide right**  
TWS-1000/661



TWS-1000/662

TWS-1000/668  
 TWS-1000/669  
 TWS-1000/670

TWS-1000/671  
 TWS-1000/672

TWS-1000/663

TWS-1000/664  
 TWS-1000/665  
 TWS-1000/666  
 TWS-1000/667

TWS-1000/673

**R-CS supplies**

for usage with other R-CS instruments

- TWS-1000/662 - screw driver, 200mm
- TWS-1000/663 - twist drill - 133mm, Ø 1,7mm
- TWS-1000/664 - distraction screw 66mm, tip 12mm
- TWS-1000/665 - distraction screw 68mm, tip 14mm
- TWS-1000/666 - distraction screw 70mm, tip 16mm
- TWS-1000/667 - distraction screw 72mm, tip 18mm
- TWS-1000/668 - Ø 3mm tappet-fusion bone tamp, 200mm
- TWS-1000/669 - Ø 5mm tappet-fusion bone tamp, 200mm
- TWS-1000/670 - Ø 8mm tappet-fusion bone tamp, 200mm
- TWS-1000/671 - bone graft holder - impactor, 218x6x15mm
- TWS-1000/672 - bone graft holder - impactor, 218x6x12mm
- TWS-1000/673 - measuring caliper

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 Karmody **3**  
 Scoville-Haverfield modified Retractor **11**  
 Scoville-Haverfield Retractor **11**  
 Scoville modified Retractor **11**  
 Scoville Retractor **11**  
 Spring Wire Retractor **3**  
 Titan Sprey Transverse / Cervical Lumbar Spreader **16**  
 Weitlaner Retractor **8**

### Retractors

Counter Retractor, blackened **32**  
 Laminectomy Spreader **24**  
 McCulloch Retractor with hinged arms **20**  
 McCulloch Retractor with rigid arms **20, 22**  
 McCulloch Ring Handle Retractor **20**  
 SL Retractors **30**  
 Standard Retractors **25, 26**

### S

Schmidt Blade **13**  
 Scoville Blades **12**  
 Scoville-Haverfield modified Retractor **11**  
 Scoville-Haverfield Retractor **11**  
 Scoville modified Retractor **11**  
 Scoville Retractor **11**  
 Screw Driver **35**  
 „SL“ QUICK Ring Handle Retractor **30**  
 „SL“ QUICK Ring Handle Retractor **30**  
 Speculum, lumbar **32**  
 Speculum, Lumbar **32**  
 Sprey Lumbar Retractor Hooks **17**  
 Sprey Sacral Lumbar Retractor Blades **17**  
 Sprey Transverse / Cervical Lumbar Spreader **16**  
 Spring Wire Retractor **3**  
 Standard Retractors **25, 26**  
 Suction Tube Greco **18**  
 Suction Tubes, McCulloch **22**

### T

Tappet-Fusion Bone Tamp **35**  
 Taylor Blade **13**  
 Thin Muscle Blade (17mm) **19, 21**  
 Thompson Lamina Spreader **3**  
 Titanium Standard Retractors **25, 26**  
 Titan Sprey Transverse / Cervical Lumbar Spreader **16**  
 Twist Drill **35**

### V

Vertebral Distractor **33**  
 Vertebra Spreader **4**  
 Vertebra Spreader Double Action **5**  
 V-Handle „SL“ QUICK Retractor **30**  
 V-Handle Standard Retractor **25**

### W

Weitlaner Retractor **8**  
 Wide Muscle blade (27mm) **19, 21**  
   Titanium (27mm) **19**