Viewline Retractor System

The Viewline Retractor System and Posterior MIS Instrument Set facilitate exposure, retraction, decompression and disc preparation for MIS TLIF/PLIF/PLF and microdiscectomy procedures. The Viewline Retractor System offers state-of-the-art design with bright, white LED light delivered through dual light ports for increased visualization and a rotating accessory arm to maximize working space. In addition, the Viewline System’s comprehensive range of radiolucent blade options help streamline your MIS procedures.

The Viewline family of retractors and MIS instruments is part of a complete, customizable posterior MIS solution including the PathFinder NXT® Minimally Invasive Pedicle Screw System, Ardis® Interbody System, TM Ardis® Interbody System, CopiOs® Bone Void Filler and Puros® Demineralized Bone Matrix.
Step 1
Mount the sterile Rotating Table Clamp to the bed rail. The Rotating Table Clamp will directly attach to most standard operating tables.

Slide the Articulating Accessory Arm into Rotating Table Clamp and fully tighten at desired height and angle. (Fig. 1)
Targeting

Step 2
Identify the appropriate entry point and incision length for the Retractor:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>General Incision Guidance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decompression</td>
<td>2cm off midline</td>
</tr>
<tr>
<td>PLIF</td>
<td>3–5cm off midline</td>
</tr>
<tr>
<td>TLIF, Pedicle Screw Placement</td>
<td>4–6cm off midline</td>
</tr>
</tbody>
</table>

*Note: Will vary based on patient anatomy.

After incision has been made, place K-wire (if desired) to identify location and initial entry point.

NOTE: Use of fluoroscopic imaging may be used to aid in K-wire placement.

Place Dilator #1 (Silver, 8mm) over K-wire and remove K-wire (if applicable). (Fig.2)

NOTE: Dilator #1 can be used to target the entry point.

K-Wire
ZS-0300

Instruments

Dilation

Step 3
Slide Dilator #2 (Silver, 13mm) over Dilator #1.
Slide Dilator #3 (Turquoise, 18mm) over Dilator #2.
Slide Dilator #4 (Blue, 22mm) over Dilator #3. (Fig.3)

NOTE: Blades come in 18mm and 22mm diameters. If using 18mm diameter blades, stop dilating after Dilator #3 (Turquoise, 18mm). If using 22mm diameter blades, use Dilator #4 (Blue, 22mm).

Blade-only Insertion

Step 4 Option 1a
BLADE INSERTION
Use length markings on Dilator to determine appropriate Blade length.
Slide Blade pair down appropriate Dilator until fully seated. (Fig.4)

Fig. 2 ▲

Step 2
Identify the appropriate entry point and incision length for the Retractor:

Fig. 3 ▲

Step 3
Slide Dilator #2 (Silver, 13mm) over Dilator #1.
Slide Dilator #3 (Turquoise, 18mm) over Dilator #2.
Slide Dilator #4 (Blue, 22mm) over Dilator #3. (Fig.3)

NOTE: Blades come in 18mm and 22mm diameters. If using 18mm diameter blades, stop dilating after Dilator #3 (Turquoise, 18mm). If using 22mm diameter blades, use Dilator #4 (Blue, 22mm).

Fig. 4 ▲
**Step 4 Option 1b**

**RETRACTOR INSERTION**
Attach Base Retractor with Pivoting Arms to the Blades by lowering it over the ball snaps onto the Blade.

Push Pivoting Arms down to assure Retractor Assembly is fully seated.

Fluoroscopic imaging may be used to confirm appropriate Blade depth. (Fig.5)

**NOTE:** Retractor Assembly: All Racks include “Right” and “Left” markings to assist in lining up the right and left arms for proper blade placement.

**Pivoting Arms should be “flush” to the Retractor Body to allow for attachment to Blades.**

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**Obturator and Blade Insertion**
Attach selected Blades to the appropriate Obturator.
Insert Obturator with attached Blades until Blades are fully seated.
Set Pivoting Arms of Base Retractor on the parallel lines, to allow for easy Blade attachment, and attach Base Retractor Assembly to the Blades. (Fig.7)

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**Retractor Assembly/Retractor Blade Insertion**

Use length markings on Dilator to determine appropriate Blade length.
Attach selected Blades to Pivoting Arms of Retractor Assembly.
Slide Blades with Retractor Assembly over Dilators and fully seat into position. (Fig.6)

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**Instruments**

- **Base Retractor with Pivoting Arms**
  - ZS-0200

- **Obturator**
  - ZS-0320: 18mm
  - ZS-0322: 22mm
Instruments

**Obturator Removal**
To remove the Obturator, lift up on the Obturator, expand the Retractor approximately 6mm, and lift up on the Obturator. (Fig.8)

**Step 5**
Loosen Accessory Arm by rotating black “knob” counterclockwise.
Attach Accessory Arm to Base Retractor assembly and tighten arm on to rack.
Turn black “knob” clockwise to fully tighten arm. (Fig.9)

**Step 6**
Once Retractor is positioned and Flexible Arm is fully tightened, remove Dilators. (Fig.10)

**Dilator Removal**

**Fig. 8 ▲**

**Fig. 9 ▲**

**Fig. 10 ▲**

**Base Retractor with Pivoting Arms**
ZS-0200
**Light Source Attachment**

**Step 7**
Attach bifurcated light cable to Retractor Blades. (Fig.11)

![Fig. 11 ▲](image)

**Blade Retraction**

**Step 8**

**BASE RETRACTOR**
To retract the Blade attached to the Pivoting Arm positioned on the “Right-hand side” of the rack, turn the Ratcheting Key on the Pivoting Arm clockwise. To retract the Blade attached to the Pivoting Arm positioned on the “Left-hand side” of the rack, turn the Ratcheting Key on the Pivoting Arm counter-clockwise. (Fig.12)

To collapse the blades, press the tab located behind the Pivoting Arm and turn the Ratcheting Key counter-clockwise for the blade attached to the Pivoting Arm positioned on the “Right-hand side” of the rack. Turn the Ratcheting Key clockwise for the blade positioned on the “Left-hand side” of the rack.

**COUNTER RETRACTOR**
Turn the Ratcheting Key on the Pivoting Arm clockwise if the Counter Retractor is attached to the “Right-hand side” of the Base Retractor.

To collapse the blades, press the tab located behind the Pivoting Arm and turn the Ratcheting Key counter-clockwise if the Counter Retractor is attached to the “Right-hand side” of the Base Retractor. Press the tab located behind the Pivoting Arm and turn the Ratcheting Key clockwise if the Counter Retractor is attached to the “Left-hand side” of the Base Retractor.

**CENTER BLADE HOLDER**
Turn the distal knob on the Center Blade Holder clockwise.

To collapse the blade, press the tab located on the side of the Center Blade Holder and turn the distal knob counter-clockwise.

**Instruments**

- LED Light Cable
  ZS-0045

- LED Light Source
  ZS-0051
**Blade Pivoting**

**Step 9**
To pivot Blades, attach T-Handle to "silver" knob on Pivoting Arm and turn clockwise (Fig.13)

**NOTE:** Each Blade allows for up to 30 degrees of pivoting.

**Step 10**
Attach Counter Retractor Blade or Fan Blade to Pivoting Center Blade Arm. (Fig.14)
Attach Pivoting Center Blade Arm with attached Counter Retractor Blade or Fan Blade to Base Retractor Assembly. Use ratcheting feature to position Blade in desired location.

Adding the center blade allows for medial or lateral retraction, depending on the orientation of the Retractor.

**NOTE:** Center Blade Arm allows for 30 degrees of pivoting.

**NOTE:** Refer to Step 8 for Pivoting Center Arm blade retraction.

**Side Blade Attachment (3-Way Retraction)**

**Side Blade Attachment (4-Way Retraction)**

**Step 11**
Attach a Rack Connector to preferred end of Base Retractor.
Select the Counter Retractor with Pivoting Arms. Select the appropriate Pivoting Arm based on orientation of Counter Retractor and remove the second Pivoting Arm.
Attach the Counter Retractor with Pivoting Arm to the Rack Connector and fully tighten by turning the silver “knob” on the Rack Connector clockwise. (Fig.15)

Once counter Retractor is in position, add a Counter Retractor Blade or Fan Blade by using the Retractor Blade Handle. Position the Blade in the wound, open the side-loading Pivoting Arm and connect to selected Blade. Remove the Retractor Blade Handle.

**NOTE:** Refer to Step 8 for Counter Retractor blade retraction.

**Instruments**

- **T-Handle** ZS-0451
- **Hex Tool** ZS-0110
- **Pivoting Center Blade Arm** ZS-0203
- **Counter Retractor Blades**
  - ZS-0270-ZS-0283
  - 40–120mm lengths
  - Fan Blades
  - ZS-0290–ZS-0297
  - 70–120mm lengths
- **Rack Connector** ZS-0201
- **Counter Retractor with Pivoting Arms** ZS-0204
- **Retractor Blade Handle** ZS-0105
## Tray Layouts

### Viewline Retractor System

**Catalog Number | Description | Kit Quantity**
--- | --- | ---
ZS-0105 | Side-Loading Retractor Blade Handle | 2
ZS-0451 | T-Handle for Retractor with Pivoting Arms | 1
ZS-0110 | T-Handle Hex Tool | 1
ZS-0021 | Rotating Table Clamp for Articulating Arm | 1
ZS-0060 | Articulating Accessory Arm Angled Column w/Rack Clamp | 1
ZS-0045 | Light Cable | 1
ZS-0051 | LED Light Source | 1
ZS-0200 | Base Retractor with Pivoting Arms | 1
ZS-0201 | Rack Connector for ML Retractors | 1
ZS-0211 | Base Retractor Rack, 200mm | 1
ZS-0203 | Pivoting Center Blade | 1
ZS-0204 | Counter Retractor with Pivoting Arms | 1
ZS-0221 | Retractor Blades (L&R), 18mm Diameter X 50mm | 1
ZS-0222 | Retractor Blades (L&R), 18mm Diameter X 60mm | 1
ZS-0223 | Retractor Blades (L&R), 18mm Diameter X 70mm | 1
ZS-0224 | Retractor Blades (L&R), 18mm Diameter X 80mm | 1
ZS-0225 | Retractor Blades (L&R), 18mm Diameter X 90mm | 1
ZS-0226 | Retractor Blades (L&R), 18mm Diameter X 100mm | 1
ZS-0227 | Retractor Blades (L&R), 18mm Diameter X 110mm | 1
ZS-0228 | Retractor Blades (L&R), 18mm Diameter X 120mm | 1
ZS-0251 | Retractor Blades (L&R), 22mm Diameter X 50mm | 1
ZS-0252 | Retractor Blades (L&R), 22mm Diameter X 60mm | 1
ZS-0253 | Retractor Blades (L&R), 22mm Diameter X 70mm | 1
ZS-0254 | Retractor Blades (L&R), 22mm Diameter X 80mm | 1
ZS-0255 | Retractor Blades (L&R), 22mm Diameter X 90mm | 1
ZS-0256 | Retractor Blades (L&R), 22mm Diameter X 100mm | 1
ZS-0257 | Retractor Blades (L&R), 22mm Diameter X 110mm | 1
ZS-0258 | Retractor Blades (L&R), 22mm Diameter X 120mm | 1
ZS-0270 | Counter Retractor Blades 40mm Titanium | 2
ZS-0272 | Counter Retractor Blades 50mm Titanium | 2
ZS-0274 | Counter Retractor Blades 60mm Titanium | 2
ZS-0276 | Counter Retractor Blades 70mm Titanium | 2
ZS-0278 | Counter Retractor Blades 80mm Titanium | 2
ZS-0280 | Counter Retractor Blades 90mm Titanium | 2
ZS-0281 | Counter Retractor Blades 100mm Titanium | 2
ZS-0282 | Counter Retractor Blades 110mm Titanium | 2
### Viewline Retractor System, Continued

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<th>Description</th>
<th>Kit Quantity</th>
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<td>ZS-0283</td>
<td>Counter Retractor Blades 120mm Titanium</td>
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<tr>
<td>ZS-0290</td>
<td>Fan Blades 50mm Titanium</td>
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<td>ZS-0291</td>
<td>Fan Blades 60mm Titanium</td>
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<tr>
<td>ZS-0292</td>
<td>Fan Blades 70mm Titanium</td>
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<td>ZS-0293</td>
<td>Fan Blades 80mm Titanium</td>
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<td>Fan Blades 120mm Titanium</td>
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<td>ZS-0300</td>
<td>K-wire, 1.4mm X 9&quot;, Disposable (6/pack)</td>
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<td>ZS-0310</td>
<td>Dilator #1, 8mm Silver</td>
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<td>ZS-0312</td>
<td>Dilator #2, 13mm</td>
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<td>ZS-0314</td>
<td>Dilator #3, 18mm</td>
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<td>ZS-0316</td>
<td>Dilator #4, 22mm</td>
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<td>ZS-0320</td>
<td>Obturator, 18mm</td>
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<tr>
<td>ZS-0322</td>
<td>Obturator, 22mm</td>
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<tr>
<td>ZS-0700-01</td>
<td>Sterilization Tray – Blades</td>
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<tr>
<td>ZS-0700-02</td>
<td>Sterilization Tray – Accessories</td>
<td>1</td>
</tr>
</tbody>
</table>
## Viewline Posterior Instrument Set

**Catalog Number** | **Description** | **Kit Quantity**
--- | --- | ---
ZS-0731 | Kerrison, Micro HDL, Bayonetted, 9" (230mm) X 2mm, up, 40°, 155mm wrk/lngth | 1
ZS-0732 | Kerrison, Micro HDL, Bayonetted, 9" (230mm) X 3mm, up, 40°, 155mm wrk/lngth | 1
ZS-0733 | Kerrison, Micro HDL, Bayonetted, 9" (230mm) X 4mm, up, 40°, 155mm wrk/lngth | 1
ZS-0734 | Kerrison, Micro HDL, Bayonetted, 9" (230mm) X 5mm, up, 40°, 155mm wrk/lngth | 1
ZS-0005 | Pituitary Rongeur, Bayonetted, straight, 9" (230mm) 2mm x 10mm, 155mm wrk/lngth | 1
ZS-0006 | Pituitary Rongeur, Bayonetted, straight, 9" (230mm) 3mm x 10mm, 155mm wrk/lngth | 1
ZS-0007 | Pituitary Rongeur, Bayonetted, straight, 9" (230mm) 4mm x 10mm, 155mm wrk/lngth | 1
ZS-0008 | Pituitary Rongeur, Bayonetted, up, 9" (230mm) 2mm x 10mm, 155mm wrk/lngth | 1
ZS-0009 | Pituitary Rongeur, Bayonetted, up, 9" (230mm) 3mm x 10mm, 155mm wrk/lngth | 1
ZS-0016 | Pituitary Rongeur, Bayonetted, up, 9" (230mm) 2mm x 6mm, 155mm wrk/lngth | 1
ZS-0017 | Pituitary Rongeur, Bayonetted, up, 9" (230mm) 3mm x 6mm, 155mm wrk/lngth | 1
ZS-0013 | Pituitary Rongeur w/ tooth, 7" (175mm) 3mm x 10mm, 150mm wrk/lngth | 1
ZS-0014 | Pituitary Rongeur, Micro, straight, 7" (175mm) 2mm x 6mm, 150mm wrk/lngth | 1
ZS-0900 | Kerrison Rongeur Sterilization Tray | 1
ZS-0026 | Epstein Curette, Bayonetted, 3.6mm, fwd angled cup | 1
ZS-0028 | Curette, Bayonetted, 3.6mm, fwd straight cup | 1
ZS-0030 | Curette, Bayonetted, 3.6mm, rev angled cup | 1
ZS-0032 | Epstein Curette, Bayonetted, 5.2mm, fwd angled cup | 1
ZS-0034 | Curette, Bayonetted, 5.2mm, fwd straight cup | 1
ZS-0036 | Curette, Bayonetted, 5.2mm, rev angled cup | 1
ZS-0039 | Epstein Curette, Bayonetted, 7.5mm, fwd angled cup | 1
ZS-0040 | Curette, Bayonetted, 7.5mm, fwd straight cup | 1
ZS-0041 | Curette, Bayonetted, 7.5mm, rev angled cup | 1
ZS-0038 | Ring Curette, Bayonetted, angled, 8mm | 1
ZS-0050 | Dissector, Straight, Bayonetted, 150mm | 1
ZS-0052 | Woodson Probe, Bayonetted, 150mm | 1
ZS-0054 | Nerve Hook, Micro, Bayonetted, 150mm, 1mm, 2.5 offset | 1
ZS-0056 | Nerve Hook, Straight, Bayonetted, 150mm, 2.5mm, 4.0mm offset | 1
ZS-0058 | Short Ball Probe, Bayonetted, Straight 7mm, 150mm | 1
ZS-0061 | Short Ball Probe, Bayonetted, Angled 7mm, 150mm | 1
ZS-0062 | Annulotomy Knife Handle, Bayonetted | 1
ZS-0070 | Penfield # 2, Bayonetted, Push/Pull, 2mm, 150mm | 1
ZS-0072 | Penfield # 4, Push/Pull, Bayonetted, 4mm, 150mm | 1
ZS-0080 | Osteotome, Straight, 1/4in. (6mm) width, 300mm length | 1
ZS-0082 | Osteotome, Straight, 3/8in. (10mm) width, 300mm length | 1
ZS-0090 | Sucker, 8 French, 150mm working length | 1
ZS-0092 | Sucker, 10 French, 150mm working length | 1
ZS-0096 | Retractor Sucker, 150mm working length, 7mm, wide blade | 1
ZS-0091 | Sucker Cleaning Wires, 165mm length | 2
ZS-0099 | Nerve Root Retractor, Bayonetted, Straight, 3mm | 1
ZS-0100 | Nerve Root Retractor, Bayonetted, Straight, 5mm | 1
ZS-0102 | Nerve Root Retractor, 45° angle, 5mm, 150mm working length | 1
ZS-0104 | Nerve Root Retractor, Bayonetted, Straight, 9mm | 1
ZS-0106 | Nerve Root Retractor, 45° angle, 9mm, 150mm working length | 1
ZS-0910 | Tray for Ancillary Instruments | 1
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