



# APOLLON™ MIS Retractor Surgical technique

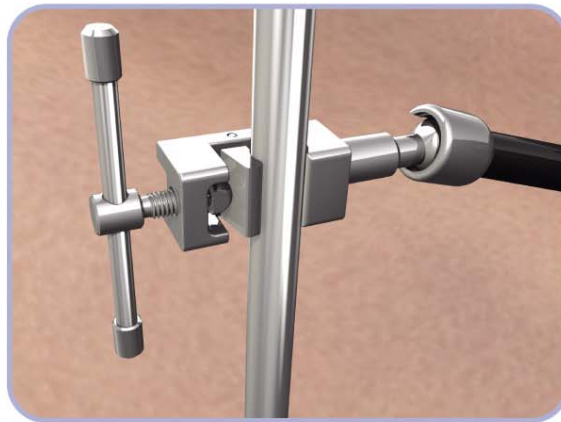


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# MIS Retractor Placement

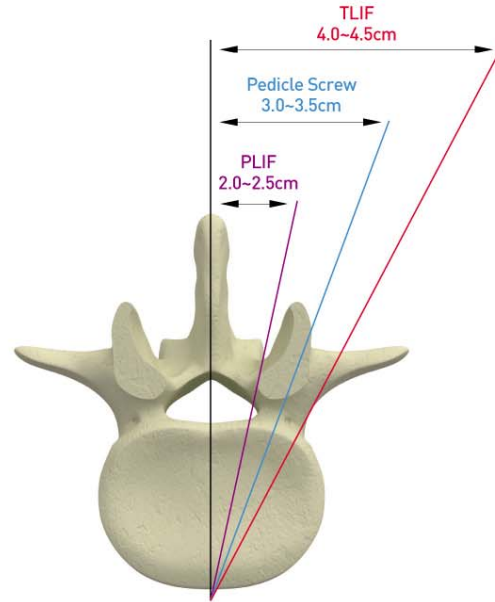
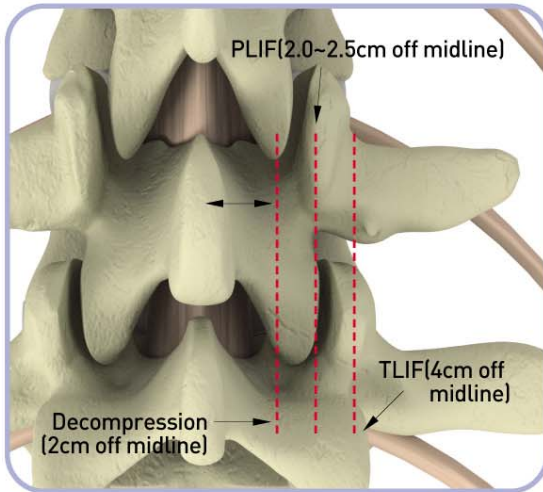


After positioning the patient appropriately for the procedure (most commonly in the prone or lateral position) and mount the sterile Rail Clamp on the bed rail contra-lateral to the planned incision .  
(Note : Sterilization prior to use is necessary)



Insert the Flexible Arm into the mount of the Rail Clamp. Position the Flexible Arm on the rigid extension and lock into place.  
(Note: The Flexible Arm should be positioned to lie across the patient until it attaches to the Retractor.)

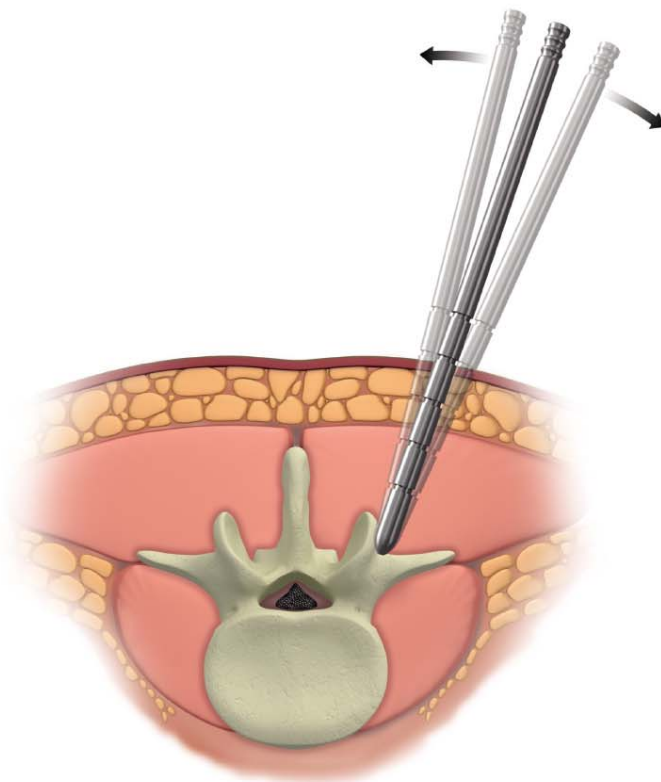
# Incision point Placement



By using fluoroscopic guidance determine the appropriate entry point and incision length for the retractor surgery.

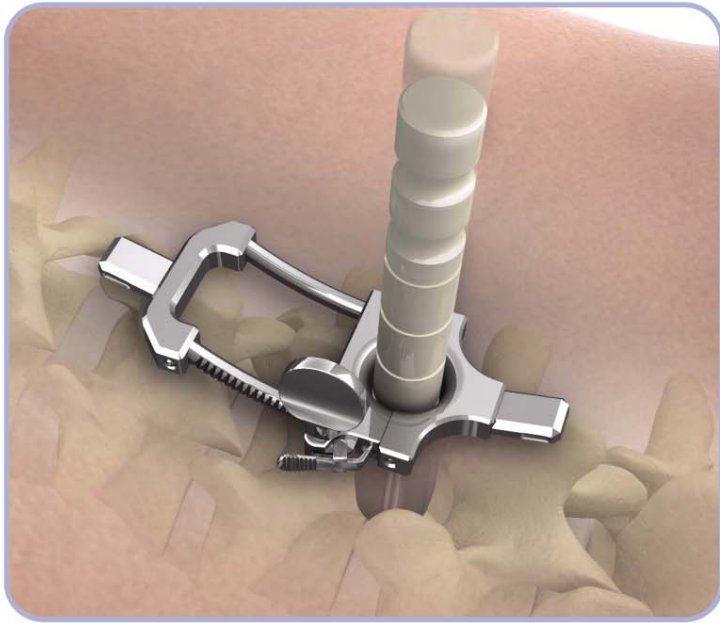
## Note:

- For decompression, the incision is approximately 2cm off midline.
- For PLIF, the incision is approximately 2.0~2.5cm off midline.
- For TLIF and pedicle screw insertion, the incision is approximately 4~6cm off of midline.

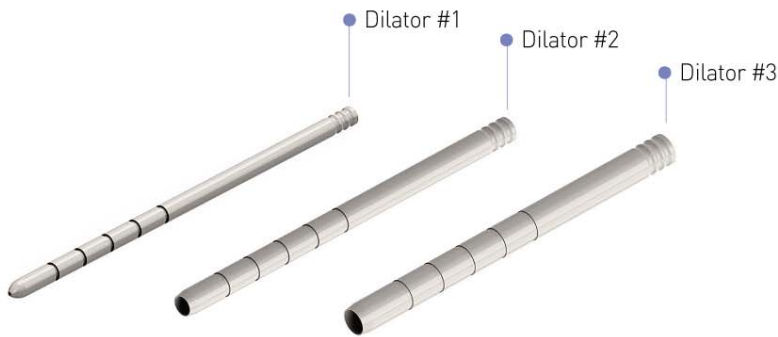


Make the skin incision after determining the appropriate position and length. It is recommended that the fascia be undermined to facilitate insertion and expansion of the Retractor Blade.

Insert a VP-Needle at the marked point and remove inner VP-Needle. After the removal of inner VP-Needle, insert a Guide Wire through inside VP-Needle then remove the VP-Needle. With the guide wire as a central location, incise lengthwise and expand the muscle by using a Dilator #1.



Expand muscle properly by using Dilator #1,2, and #3, then insert the Obturator into the expanded muscle. After inserting Obturator slide the Retractor Blade down the Obturator and seat firmly on the anatomy. After confirming placement with fluoroscopy, remove the Retractor Guide and the Obturator simultaneously by pulling up on the Retractor Guide while holding the Retractor firmly in place.



Select the appropriate Retractor Blade length.

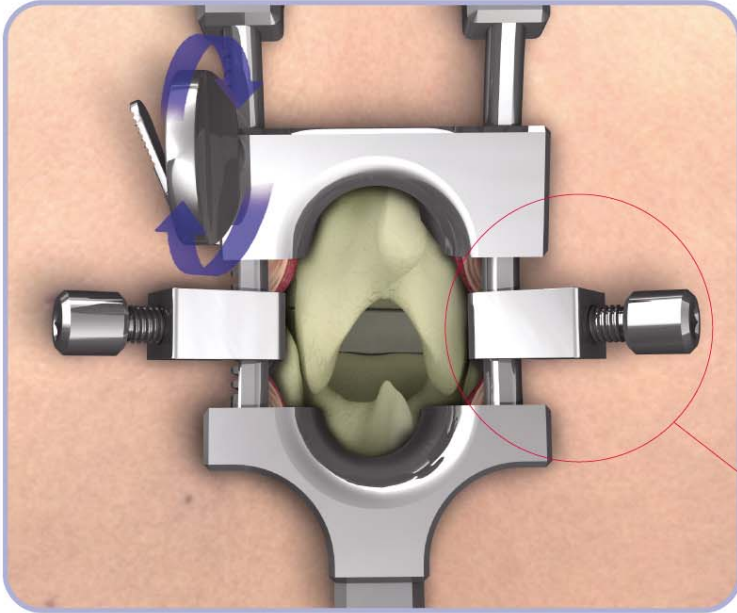


● Apollon Retractor Blade



● Tubular Retractor Blade

# MIS Retractor Placement



By rotating the side handle clockwise the Retractor can be expand.

In case additional expansion is needed a pair of side-blade may be used to prevent a soft tissue from incoming.



● Apollon Retractor Blade



● Side Blade

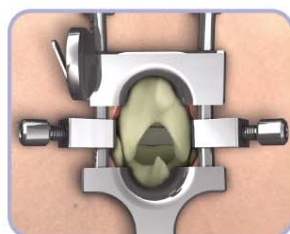
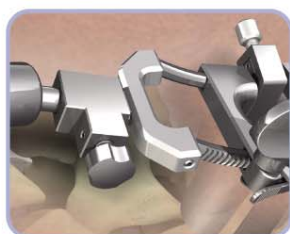


MIS Retractor

# MIS Retractor Placement



Prepare a Flexible Arm and connect a Retractor Blade with Flexible Arm connected to the table adaptor as shown above. After all instruments are assembled together as shown the surgeon may conduct a surgery.



# APOLLON MIS Retractor Set System

Picture	APOLLON MIS Retractor Syste		Size	
	Table Adaptor #1	4903-3101	Ø13	700mm
	Flexible Arm	4903-3102	-	450mm
	T-Wrench	4903-3701	5.0 HEX Driver	120mm
	Spanner	4903-3702	16 HEX Driver	140mm
	Apollon Retractor Blade	4903-3252	20mm	50mm
		4903-3262		60mm
		4903-3272		70mm
		4903-3282		80mm
		4903-3202	25mm	100mm
		4903-3255		50mm
		4903-3265		60mm
		4903-3275		70mm
		4903-3285		80mm
		4903-3205		100mm
	Tubular Retractor Blade	4903-3349	19mm	40mm
		4903-3359		50mm
		4903-3369		60mm
		4903-3379		70mm
		4903-3389		80mm
		4903-3399		90mm
		4903-3309		100mm
	Side Blade	4903-3459	19mm	50mm
		4903-3469		60mm
		4903-3479		70mm
		4903-3489		80mm
		4903-3409		100mm
	Dilator #1	4903-3510	Ø7.9	260mm
	Dilator #2	4903-3513	Ø11.8	235mm
	Dilator #3	4903-3516	Ø16	210mm
	Obturator	4903-3622	Ø20	170mm
		4903-3625	Ø25	170mm
	Container	9901-4105		



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