



Midline Location & Orientation Using the Retaining Pins as a guide



Align Pin to Midline



Insert Pin parallel to endplate

Identifying and marking the midline in cervical arthroplasty is an important step toward obtaining great post-operative outcomes. Even though the M6-C inherently has an instantaneous axis of rotation (IAR), and not a fixed center of rotation as do many competitive devices, the goal of every surgeon should be to place the disc prosthesis as close to the anatomical midline as possible. Using the Retainer Pins as a fixed reference point is one way to help reach this goal.

The use of the C-Arm during Pin placement will actually save time, steps and most likely additional X-Ray exposure later in the procedure. A few minutes at the beginning of the case can save many minutes and several unnecessary fluoro shots later.

The midline is first determined by locating the *longus colli* muscles that lay along either side of the vertebral bodies. This general external reference is used as a guide when initially placing the Pins. The surgeon will place the Pin loaded into the Pin Driver centrally between the *l. colli* and take a quick A/P fluoroscopic shot. Fine tuning the exact midline is done. Before placing this Pin, the surgeon can make an indentation to mark the midline location and move to the next vertebral

level. The Pin Driver & Pin is again placed centrally and confirmed with A/P fluoroscope. Then, prior to inserting the Pin, the C-Arm is relocated in lateral, and while watching on fluoro the Pin is placed at an angle that perfectly matches the endplate angle. Next the Pin is inserted in the same way in the first vertebral body. At this point the Pins have been confirmed by X-Ray to be in the midline and the angle of the Pins to match the disc space angle. (Once the discectomy is complete, an additional verification of the midline can be re-assessed by visualizing a point centrally between the uncinates).

During all instrumentation and final implantation steps, these perfectly placed Pins can then be used as a fixed reference for not only the midline, but also for the correct disc space angle. The surgeon will now have good references where to aim for midline orientation of the Trial and Chisel and by using the angle of the Pins, the correct angle to hold the Chisel and Inserter handles during those steps. Also, the Pin angle can be used to guide the C-Arm into position in A/P orientation. Just tilt the C-Arm camera to be on the same plane, or angle, as the Pins. This will put the camera onto the same angle as the disc space very quickly and can save unnecessary X-Ray exposure.