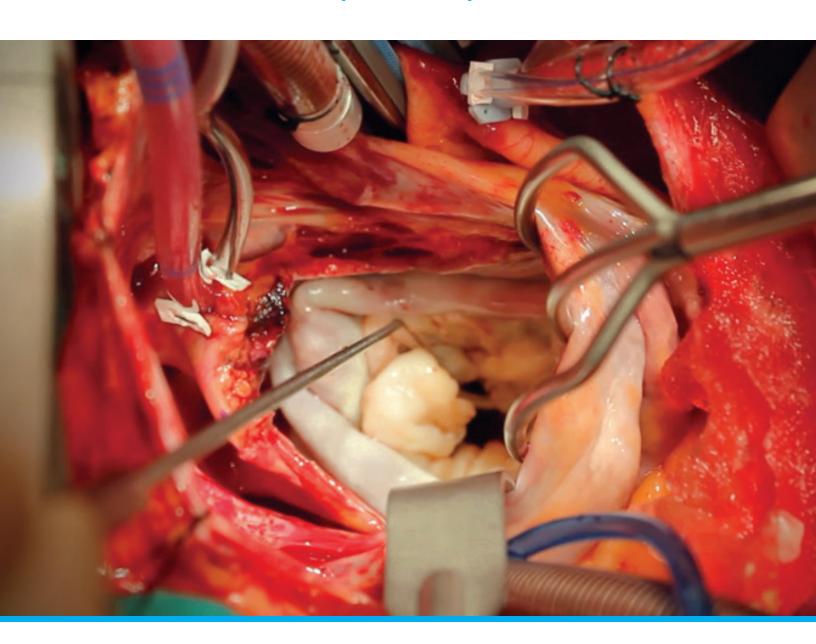


Uncompromised Exposure[™]



Thompson Techniques + User Manual:

LEFT ATRIAL APPROACH TO THE MITRAL VALVE · BOLLING RETRACTOR SYSTEM

Set it and Forget it™

"The three most important aspects of mitral valve surgery are: EXPOSURE, EXPOSURE, EXPOSURE."



Steven F. Bolling, MD

University of Michigan

Dr. Bolling is an expert surgeon in mitral valve repair and reconstruction as well as a professor and research leader in his own NIH-funded laboratory. He has received worldwide acclamation for his brilliant ability to repair the most challenging mitral valve abnormalities and his innovative surgical approaches to the mitral valve, especially in patients with end stage left ventricular failure. Dr. Bolling chose to work with Thompson Surgical to develop a retractor that would provide him with the Uncompromised Exposure he needs to perform these techniques.

Mitral valve procedures, especially repairs, require Uncompromised Exposure. Exposure is essential for making critical decisions regarding the patient's repair, reconstruction, or replacement as well as performing these techniques without compromise. The mitral valve is vertically oriented from the sternum to the thoracic spine and its fibers run in the direction of the aortic valve. One of the biggest exposure challenges is bringing the vertical position of the mitral valve in the view of the surgeon. This can be accomplished with incisional techniques, patient positioning, and retraction.



NOTICE

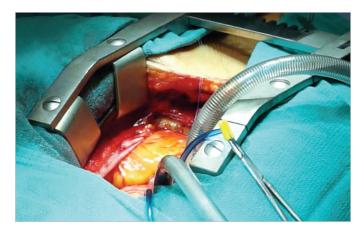
Refer to the Thompson Retractor IFU for a full list of warnings and precautions.



NOTICE

The Thompson Retractor is provided in a non-sterile condition. Refer to Thompson Retractor IFU for cleaning, sterilization, and care instructions.

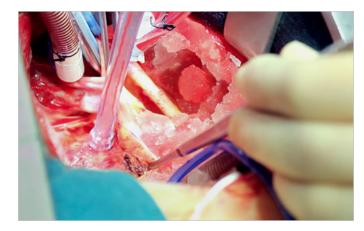
Left Atrial Approach



Step 1

A median sternotomy utilizing a spreader, such as the Morse Retractor, provides the initial path to the left atrial approach. After sternotomy, the pericardium should be incised longitudinally with the right side suspended. This technique will elevate the heart and rotate the apex of the heart posteriorly to improve the view of the mitral valve.

Cardiopulmonary bypass is performed next.



Step 2

When cardioplegic arrest has been achieved, a left atriotomy is then performed by "rolling" Sondergaard's groove and incising the atrium. The right atria should be viewed as anterior and the left atria viewed as posterior with respect to the groove. Table rotation to the left and raising the head of the table, at this point, will aid in better mitral valve exposure.

Bolling Retractor Set Up



Step 1

Attach the Mini L-Bar to the toothed rack portion of the Morse Spreader, oriented to the patient's right.



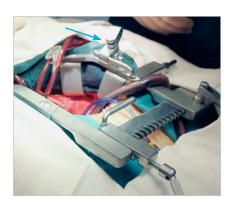
Step 2

Attach a second Mini L-Bar to the arm portion of the Morse Retractor, on the patient's left, inferior to the Morse Spreader blades.



Step 3

Select the appropriate sized basket retractor to retract the atrial wall then choose the handle length best suited to the patient's chest depth to maintain a low profile working area. There are three sizes available.



Step 4

Slide a Universal Joint on to the Mini L-Bar on the patient's left utilizing the hole next to the tightening knob. The tightening knob should go below the Mini L-Bar and the open joint for the retractor handle should go above the Mini L-Bar.



Step 5

Slide the retractor handle in to the open joint and position the basket end in the operative site to retract the atrium. When in position, tighten the Universal Joint to secure the exposure.



Step 6

Add a second joint to the other Mini L-Bar and select a malleable paddle retractor with the appropriate handle length. Slide this handle in to the joint and position the paddle end in the operative site to retract the septum. Tighten joint to secure. Note that the joint orientation on the L-Bar is versatile.



SYSTEM ORDERING INFORMATION

Bolling Mitral Valve Retractor System (#91072CV)





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EC REP Emergo Europe

Westervoortsedijk 60 6827 AT Arnhem THE NETHERLANDS

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Other patents pending.

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