

## JOSEPH LAMELAS® Intercostal Retractor System

The Joseph Lamelas Intercostal Retractor System product is a reusable thoracotomy retractor system. The individual accessory components include a retractor rack, 4 different sized paired blade set options, 2 different sized double swivel blade options and a custom sterilization tray.

The parallel retractor arms are double-hinged and are permanently fixed to the rack housing (Figure 1).

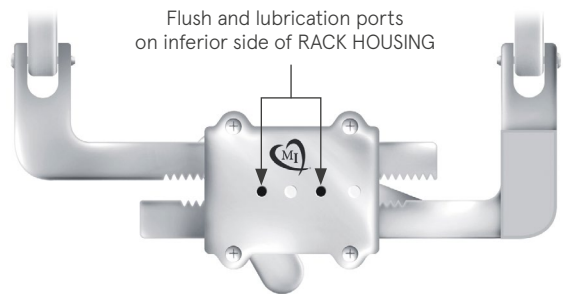
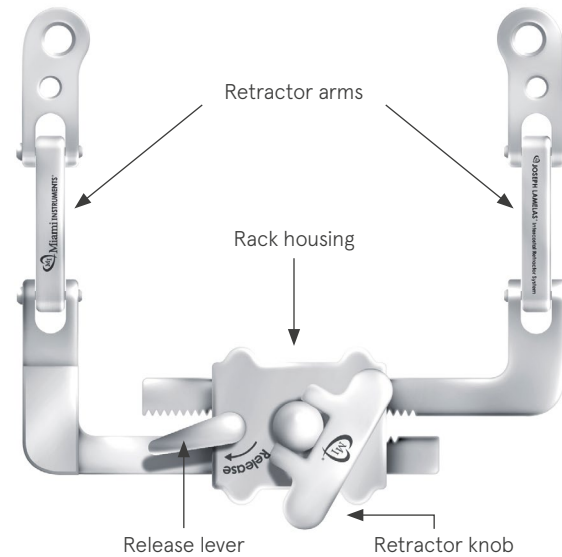


Figure 1



Each paired blade set (Figure 2) consists of 1 Solid and 1 Cut-out blade body configuration. The 2 different sized double-swivel blades (Figure 3) consist of 1 individual size option per package.

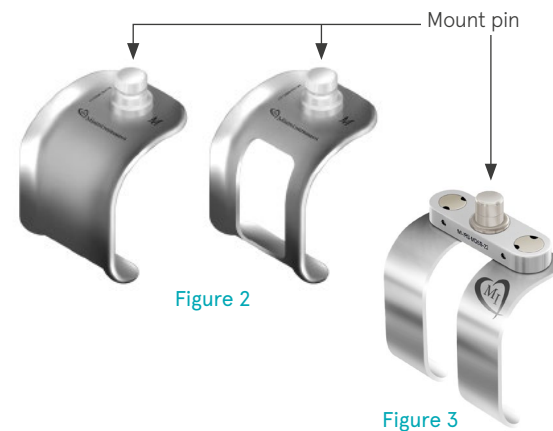


Figure 2

Figure 3

Incorporated within the distal segment of the retractor arms (Figure 4) are engagement sockets for attaching: (A) retractor blade mount pins, and (B) accessory mount pins (such as the Suture Belt device).



The sterilization tray (Figure 5) is comprised of a lid and a base component. The sterilization tray base has been preconfigured with receiving slots for the rack and blade components.

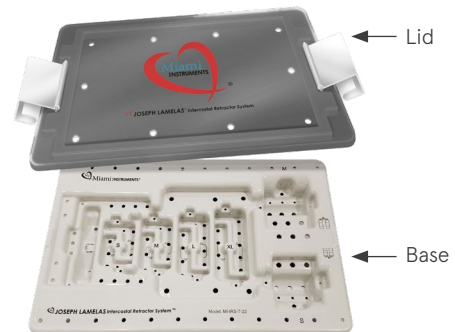


Figure 5

## RETRACTOR ARM HINGE ADJUSTMENT

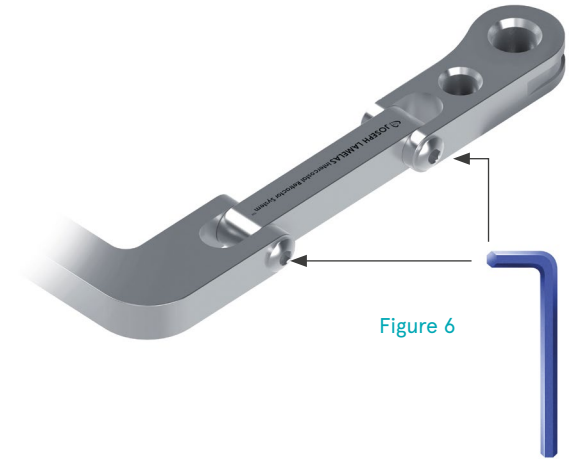
The arm segment hinge screws are preset in the most pliable setting. Arm segment joint pliability can be adjusted to a more rigid setting by tightening the hinge screws to the desired rigidity as determined by the user. Use the 2mm Hex Key to rotate the hinge screws to adjust the desired joint pliability setting (Figure 6).

### To tighten:

Rotate the hinge screw clockwise for more rigid joint setting.

### To loosen:

Rotate the hinge screw counterclockwise for more pliable joint setting.

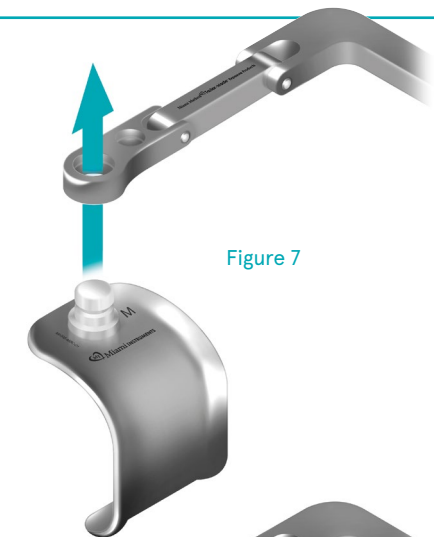


Make hinge adjustments prior to cleaning and sterilization. The 2mm Hex Key is not intended for use on the sterile field. Do not store the 2mm Hex Key in sterilization tray. Do not sterilize the 2mm Hex Key.

## BLADE ATTACHMENT AND DETACHMENT

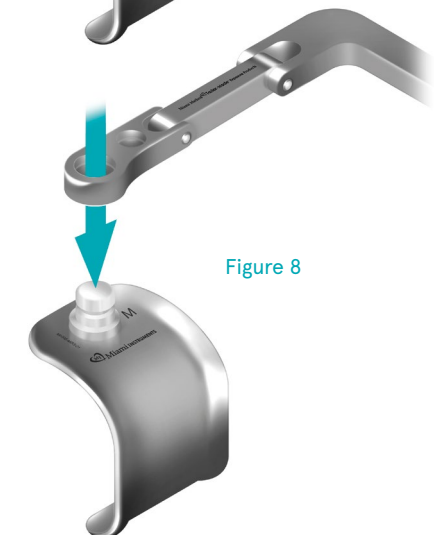
### Blade Attachment

Attach the blades to the retractor rack by sliding the blade mount pin into the retractor rack arm (Figure 7).



### Blade Detachment

Remove the blades from the retractor rack by sliding the blade mount pin out of the retractor rack arm (Figure 8).



# GENERAL THORACOTOMY RETRACTION

Insert the appropriately sized retractor blades, one at a time, into the thoracotomy and engage the ribs (Figure 9).

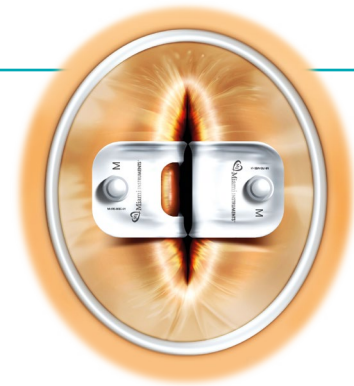


Figure 9

With the blades touching each other and the retractor arms in the completely closed position, attach the retractor rack to the blades (Figure 10).

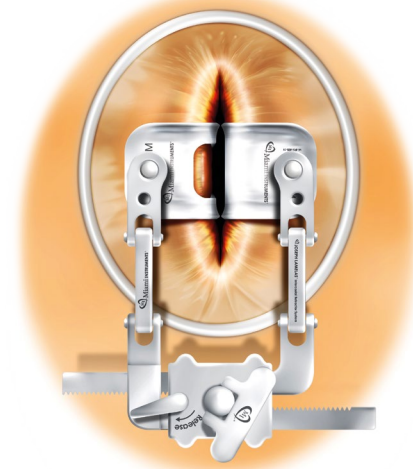


Figure 10

Turn the retractor knob clockwise to open the retractor and spread the thoracotomy (Figure 11).

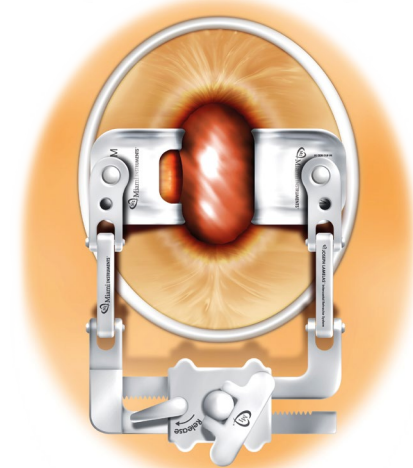
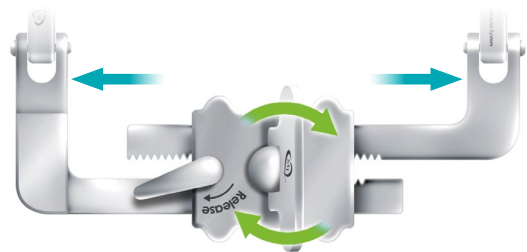


Figure 11

Upon completion of procedure, depress the release lever to close the retractor (Figure 12).

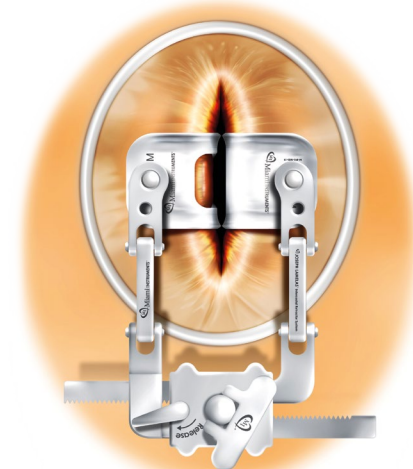
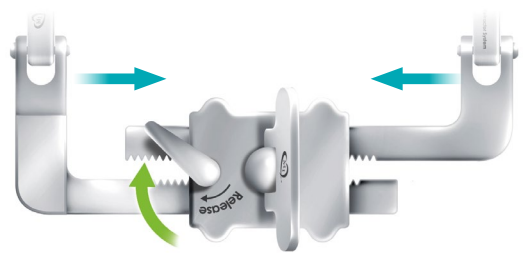


Figure 12

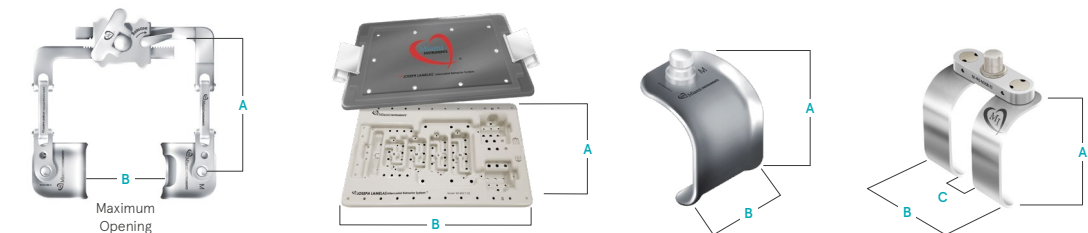
Remove the retractor blades from within the thoracotomy.

## Kit Ordering Information

Order #	Description
MI-IRS-222	JOSEPH LAMELAS INTERCOSTAL RETRACTOR SYSTEM (1 System Kit per Box - System Kit includes all components)

## Accessory Component Ordering Information and Device Specifications

Catalog #	Component part #	Description	A (cm)	B (cm)	C (cm)
MI-IRS-R-001	MI-IRS-R-001 HEX-2M	Retractor Rack 2mm Hex Key	6.9	13.5	-
MI-IRS-SB-P01	MI-IRS-SBS-01 MI-IRS-SBC-01	Small Blade Pair (Solid) (Cut Out)	4 4	3.5 3.5	- -
MI-IRS-MB-P01	MI-IRS-MBS-01 MI-IRS-MBC-01	Medium Blade Pair (Solid) (Cut Out)	5 5	3.8 3.8	- -
MI-IRS-LB-P01	MI-IRS-LBS-01 MI-IRS-LBC-01	Large Blade Pair (Solid) (Cut Out)	6.5 6.5	3.9 3.9	- -
MI-IRS-XLB-P01	MI-IRS-XLBS-01 MI-IRS-XLBC-01	Extra Large Blade Pair (Solid) (Cut Out)	8 8	4.1 4.1	- -
MI-IRS-SDSB-22	MI-IRS-SDSB-22	Small Double Swivel Blade	4	4.6	1
MI-IRS-MDSB-22	MI-IRS-MDSB-22	Medium Double Swivel Blade	5	5.1	1.5
MI-IRS-T-22	MI-IRS-T-22	Sterilization Tray	24	37.5	-



**INDICATIONS:** The Joseph LameLas INTERCOSTAL RETRACTOR SYSTEM product is intended to provide surgical access for minimally invasive cardiothoracic procedures by retraction of soft and bony tissue.

**CONTRAINDICATIONS:** This device is not intended to be used in sternotomy applications.

**WARNINGS AND PRECAUTIONS:** Proper surgical procedures and techniques are the responsibility of the medical professional. Each surgeon must evaluate the appropriateness of any procedure based on their own medical training and experience, and the type of surgical procedure. Refer to the product Instructions for Use manual (IFU) for cleaning, sterilization and maintenance information.

For additional information please refer to the Instructions for Use provided with the product.

**NOTE:** This device is not intended to be used in either full or mini sternotomy applications. **CAUTION:** Federal law (USA) restricts this device to sale by or on the order of a physician.