

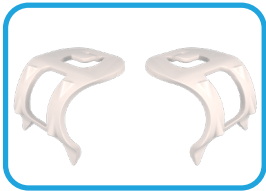


RetractOrtho User Guide:

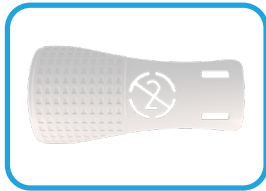
Radial Shaft Fracture ORIF

The RetractOrtho Retractor System is a radiolucent, self-retaining surgical retractor that enables efficient reduction and repair of diaphyseal bone fractures. The system is delivered sterile and ready for single patient use.

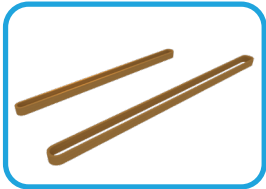
Diaphyseal Retractor System Components



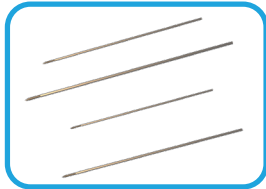
Symmetric Double Pin Retractors (2)



Textured Backing Plate



4" and 6" Elastic Bands (1 ea)



Four (4) Custom Threaded K-Wires

Ordering Information

Manufacturer Product Code	Qty	Description
R3-DIA-M-01	1	Retractor kit for diaphyseal surgical procedures. Single unit.
R3-DIA-M-05	5	Retractor kit for diaphyseal surgical procedures. Five pack.

To order, contact Vital Hospital Systems:
 Phone: (314) 394-0242
 Fax: (314) 394-1543
 Email: customer@vitalhospital.com

Step-by-Step Guide

Use standard approach to identify fracture site and ensure the fracture can be properly reduced by removing any soft tissue blocks.

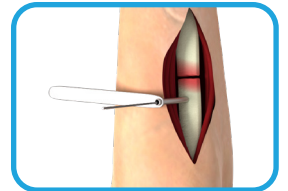
Precautions:

- Do not over-retract. Only use as much retraction as necessary to provide adequate exposure and access while avoiding tissue damage.
- The included K-wires are sharp. Use universal precautions to avoid inadvertent puncture.
- Ensure threaded K-wires are outside of the zone of bone injury to minimize risk of fracture line propagation.

RETRACT

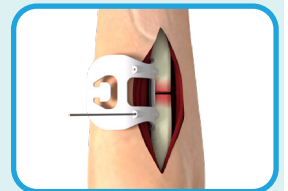
STEP 1

Start by placing one of the provided 1.4 mm threaded K-wires on the one aspect of the diaphyseal shaft approximately 2 to 3 centimeters from the fracture site at a 45 degree angle. Use a drill guide and drill only the proximal cortex. Ensure the K-wire is not interfering with implant placement and positioning.



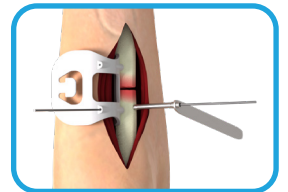
STEP 2

Slide the initial retractor over the threaded K-wire with the tip of the retractor engaging the side of the cortex.



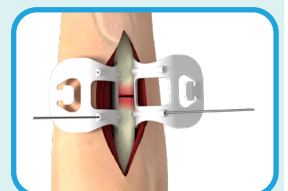
STEP 3

In a similar fashion, place another provided threaded K-wire on the opposite cortex at a 45 degree angle to the diaphyseal shaft. Drill only one cortex and do not interfere with the first K-wire. Ensure the threaded K-wire does not interfere with implant positioning.



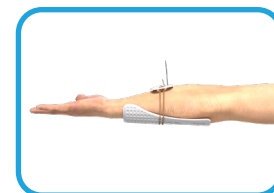
STEP 4

Slide the second retractor on the opposite side of the exposure at approximately the same level as the first retractor.



STEP 5

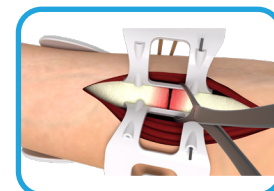
Proceed with positioning the Textured Backing Plate on the dorsal surface of the soft tissue envelope. The wider texture part of the backing plate is positioned on the wider part of the soft tissue envelope. Secure the Textured Backing Plate using one or two of the provided elastic bands. The elastic band is secured to the hook tabs on the Symmetric Double Pin retractors one side at a time. Forceps may be needed to pull the elastic band into the tabs. Ensure rubber bands and backing plates do not create pressure points on skin. If necessary, use a sterile towel between the backing plate and patient to protect the skin.

**REDUCE****STEP 6**

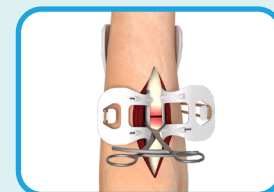
After inserting the retractors, cut the K-wires short with a pin cutter so they do not interfere with the surgical field. Leave one centimeter of the pin if you want to remove a K-wire during the procedure to allow compression across the fracture site.

**STEP 7**

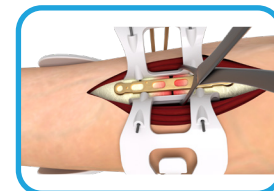
Proceed to reduce the fracture using appropriate clamps across the fracture site through the reduction window provided in the retractors and with the use of the Textured Backing Plate.

**STEP 8**

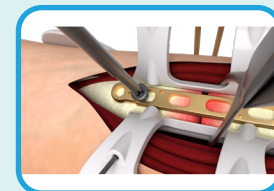
Place a third threaded K-wire across the fracture site to temporarily hold the fracture reduction. At this point the reduction clamp can be removed as the fracture is now temporarily reduced by the Symmetric reduction guide. If additional stability is needed, place a fourth threaded K-wire in the second retractor.

**STEP 9**

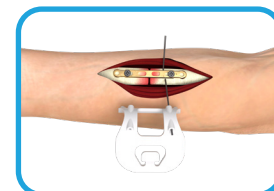
With the fracture now reduced and the implant positioned, proceed with the fixation of the fracture and screw insertion. Check the position of fracture, reduction, implant and screw trajectory under fluoroscopy and direct surgical site visualization with the retractors in place.

**REPAIR****STEP 10**

To allow for compression, ensure there is only one K-wire in each retractor and the appropriate standard fracture compression technique is used.

**STEP 11**

Once satisfied with stability and implant placement, remove the elastic band and backing plate. Retractors can be removed by sliding over the K-wires. K-wires must be removed with drill in reverse direction. Final count of Retractor System components should be completed prior to closure of incision to confirm all components have been removed from the patient. Proceed with standard irrigation and closure techniques.

**NOTE**

All tools provided in the Retractor Systems are single-use, non-reusable. After use, dispose of the device and packaging in accordance with clinic, hospital, administrative and/or local government policy.