

Vascular Access Training Phantom Kit

Model 072B



USER GUIDE

CIRS

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OBJECTIVE

The CIRS Model 072B Vascular Access Training Phantom Kit was designed to provide a realistic training medium for needle insertion. The material has been designed to provide some self sealing response after retraction of the needles allowing for extended use of the phantom (see 'Phantom Lifetime'). This material has realistic acoustic properties allowing imaging of the simulated vessels under ultrasound. The phantom can be scanned and punctured from the top or bottom surface.

“Dynamic and static US guidance during central venous catheter insertion was associated with improved in-hospital first cannulation rates and overall success rates of insertions by junior residents.

Dodge, Kelly L., et al.
“Use of Ultrasound Guidance Improves Central Venous...”
Journal of Ultrasound in Medicine

DESCRIPTION OF THE PHANTOM

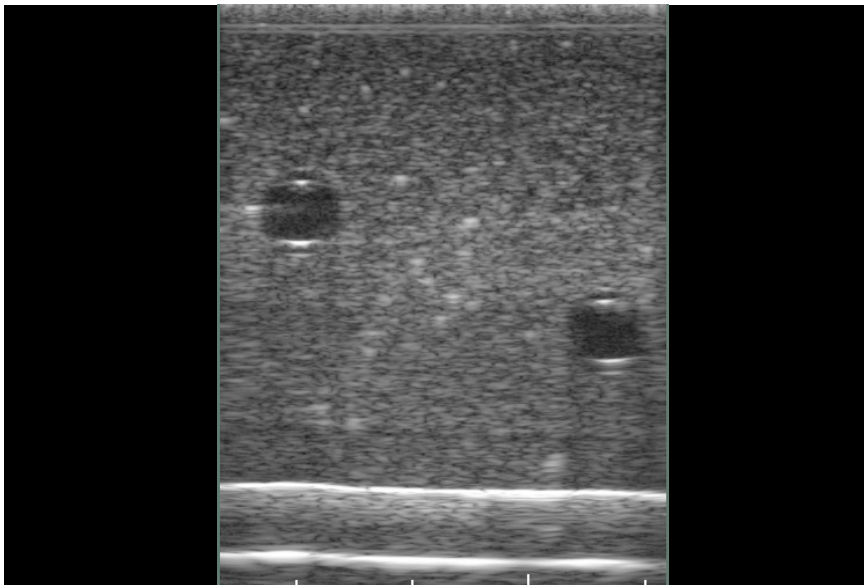
The phantom includes three simulated vessels at various depths and diameters to simulate a range of vessels encountered in the clinical environment. The simulated vessels can be punctured and refilled with blood mimicking fluid. The vessels are terminated with luer-lock fittings to allow easy refilling. The phantom measures approximately:

- Model 072B: 150mm (L) x 100mm (W) x 40mm (H)

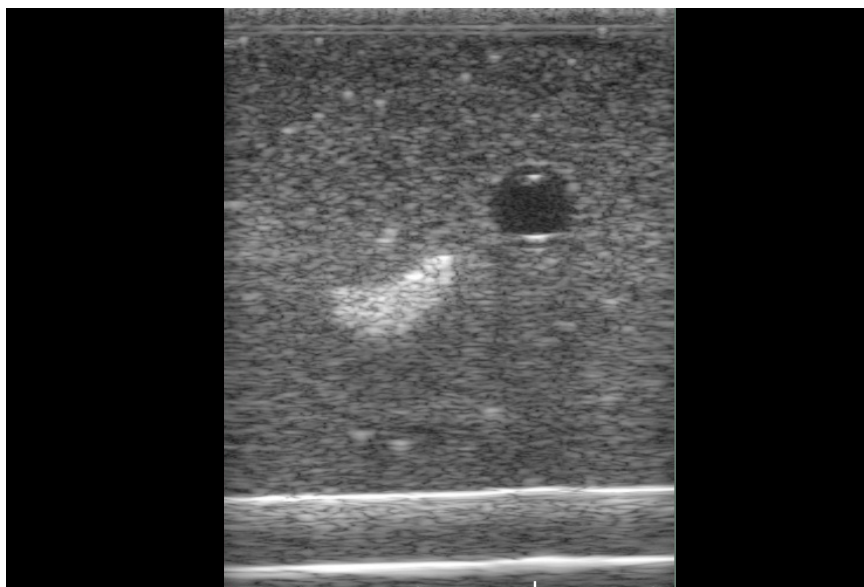
The phantom also includes several hyperechoic lesions with a random shape and position, which may be used for targeting the injection of nerve blocks.

The phantom is made from a non-toxic, durable elastomeric compound mimicking the tactile feel and puncture resistance of soft tissue. The phantom will not dry out; it is unnecessary to protect the phantom from desiccation. It contains a non-hazardous, food-grade mineral oil which is used to soften its texture.

Note: An oily residue may remain after handling, thus phantom should only be placed on surfaces that are easily cleaned. The phantom and affected surfaces can be washed with warm soapy water. The phantom should then be dried and a talc powder should be applied to condition the surface.



Ultrasound image showing the cross-section of two vessels



Ultrasound image showing a simulated hyperechoic lesion & one vessel

MODEL 072B INCLUDES

QTY	COMPONENT DESCRIPTION
1	Vascular Access Training Phantom
1	Bottle Simulated Blood (125 ml)
1	Surface Conditioner (powder)
1	Syringe
1	Needles
1	Cardboard shipping container
1	User Guide
-	12 Month Warranty*

*Please note: once any device has been inserted into the phantom (such as biopsy needles, localization wires, etc.) the 12 month warranty will not cover claims related to material desiccation or needle tracking.

USE OF THE PHANTOM

- The phantom vessels are pre-filled with simulated blood. The phantom is ready to use upon receipt. Over time, the user may notice a reduced amount of simulated blood within the phantom vessels even if the phantom has not been used. If this occurs, follow the instructions in the "To Refill and Adjust Pressure In Vessel" section of this user guide.
- Apply coupling gel and scan as you would using standard patient procedure.
- Using ultrasonic imaging guidance, vessels in the phantom may be accessed and punctured from the top or bottom surface, following normal procedures.
- Surface of phantom can be reconditioned by sprinkling the surface conditioner provided with the phantom.

PHANTOM LIFETIME

The Model 072B is designed to be stiff enough to provide realistic needle resistance but soft enough to slowly seal up over needle tracks after a needle is removed. However, needle tracks may still be visible after the needle is removed; the brightness will depend on the size of the needle and the biopsy technique employed. (For example, do not change needle direction while the needle is in the phantom. Remove and re-insert to change direction).

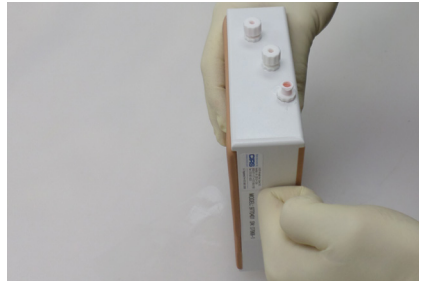
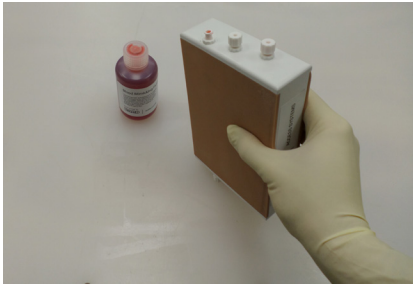
The number of needle sticks that the phantom can withstand will vary from user to user, based primarily on an aesthetic decision of what constitutes an unusable phantom. If the only criteria is whether the veins are still visible under ultrasound, the number of needle sticks may exceed 100, assuming that the punctures are evenly distributed throughout the phantom (multiple punctures in the same location may create "leaks"). However, the outer Z-skin fat layer may start to look worn and there will be visible track marks within the gel sooner than that.

TO REFILL AND ADJUST PRESSURE IN VESSEL

1. Fill syringe with blood mimicking fluid.
2. Access end of vessel by removing the luer-lock cap (leave cap on opposite end on).



Filling the phantom



Purging air in vessel

3. Attach syringe to luer fitting and fill vessel with fluid.
4. If necessary, air in the phantom can be purged by tapping the phantom to displace the air pocket towards the needle for aspiration.
5. Replace luer cap.

CARE AND HANDLING

Phantom can be cleaned with mild soap and water. Avoid solvent based or abrasive cleaning agents.

For longest life, the phantom should be stored at room temperature. The phantom SHOULD NOT be subjected to freezing or boiling conditions. For best imaging results, use the phantom at temperatures ranging from $22^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($70^{\circ}\text{F} - 73^{\circ}\text{F}$).

WARRANTY

All standard CIRS products and accessories are warranted by CIRS against defects in material and workmanship for a period as specified below. During the warranty period, the manufacturer will repair or, at its option, replace, at no charge, a product containing such defect provided it is returned, transportation prepaid, to the manufacturer. Products repaired in warranty will be returned transportation prepaid.

There are no warranties, expressed or implied, including without limitation any implied warranty of merchantability or fitness, which extend beyond the description on the face hereof. This expressed warranty excludes coverage of, and does not provide relief for, incidental or consequential damages of any kind or nature, including but not limited to loss of use, loss of sales or inconvenience. The exclusive remedy of the purchaser is limited to repair, recalibration, or replacement of the product at manufacturer's option.

This warranty does not apply if the product, as determined by the manufacturer, is defective because of normal wear, accident, misuse, or modification.

NON-WARRANTY SERVICE

If repairs or replacement not covered by this warranty are required, a repair estimate will be submitted for approval before proceeding with said repair or replacement.

RETURNS

If you are not satisfied with your purchase for any reason, please contact your local distributor prior to returning the product. Visit <https://www.cirsinc.com/distributors/> to find your local distributor. If you purchased your product direct through CIRS, call Customer Service at 800-617-1177, email rma@cirsinc.com, or fax an RMA request form to 757-857-0523. CIRS staff will attempt to remedy the issue via phone or email as soon as possible. If unable to correct the problem, a return material authorization (RMA) number will be issued. Non-standard or "customized" products may not be returned for refund or exchange unless such product is deemed by CIRS not to comply with documented order specifications. You must return the product to CIRS within 30 calendar days of the issuance of the RMA. All returns should be packed in the original cases and or packaging and must include any accessories, manuals and documentation that shipped with the product. The RMA number must be clearly indicated on the outside of each returned package. CIRS recommends that you use a carrier that offers shipment tracking for all returns and insure the full value of your package so that you are completely protected if the shipment is lost or damaged in transit. If you choose not to use a carrier that offers tracking or insure the product, you will be responsible for any loss or damage to the product during shipping. CIRS will not be responsible for lost or damaged return shipments. Return freight and insurance is to be pre-paid.

WITH RMA NUMBER, ITEMS MAY BE RETURNED TO:

CIRS
Receiving
900 Asbury Ave,
Norfolk, Virginia, 23513 USA

PRODUCT	WARRANTY PERIOD
Model 072B - Vascular Access Training Phantom Kit	12 Months*

*Please note: once any device has been inserted into the phantom (such as biopsy needles, localization wires, etc.) the 12 month warranty will not cover claims related to material desiccation or needle tracking.

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