

# ***BR3D Breast Imaging Phantom***

Model 020



USER GUIDE

**CIRS**

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## ***OBJECTIVE***

The CIRS Model 020 BR3D Breast Imaging Phantom assesses detectability of lesions of various sizes within a tissue-equivalent, heterogeneous background.

## ***DESCRIPTION OF THE PHANTOM***

Model 020 contains six heterogeneous, breast-equivalent slabs, which accurately demonstrate how underlying targets can be obscured by varying glandularity. Each slab consists of two tissue-equivalent materials mimicking 100% adipose and gland tissues “swirled” together in an approximate 50/50 ratio by weight. Because each slab has a unique swirl pattern, the phantom can be arranged to create multiple backgrounds. One slab contains an assortment of micro-calcifications, fibrils and masses and can be positioned at varying depths. All semicircular-shaped slabs measure 100 x 180 x 10 mm.

## ***BENEFITS OF THE PHANTOM***

In traditional 2D mammography, cancerous masses may be camouflaged by superposition of dense breast tissue. Tomosynthesis can help to eliminate this overlap by capturing multiple image “slices” of the breast that can be combined to create 3D reconstruction. As this new technology gains momentum in the breast-imaging field, CIRS identified a need for a more realistic phantom to allow complex system checks. The Model 020 is more representative than standard homogeneous phantoms and the complex background provides a greater challenge for target detection. Slab configurations of the Model 020 provide a range of thicknesses with or without targets.

# PHANTOM SPECIFICATIONS

## MODEL 020 SET INCLUDES:

| QTY | ITEM NO. | COMPONENT DESCRIPTION                |
|-----|----------|--------------------------------------|
| 1   | 020-1    | BR3D Breast Imaging Target Slab      |
| 5   | 020-2    | BR3D Breast Imaging Background Slabs |
| 1   | -        | User Guide                           |
| -   | -        | 60-Month Warranty                    |

## SLABS

Epoxy resin: swirled to approximate 50% glandular / 50% adipose tissue by weight  
Size: 100 x 180 x 10 mm, semicircular shape

## LESIONS (CaCO3 specks)

Grain size: 0.130, 0.165, 0.196, 0.230, 0.290 & 0.400 mm

## SPHEROIDAL MASSES

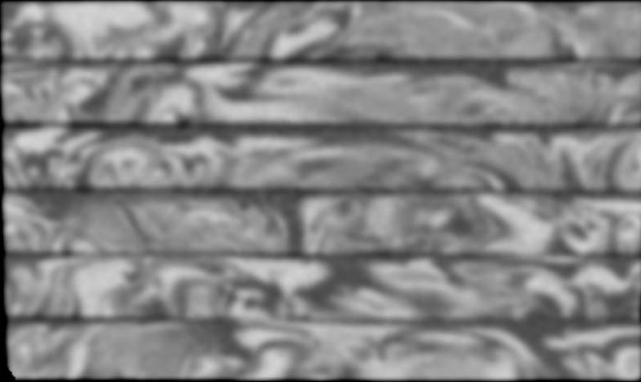
Epoxy resin: equivalent to breast carcinoma  
Diameters: 1.80, 2.38, 3.18, 3.96, 4.76 & 6.32 mm

## FIBERS

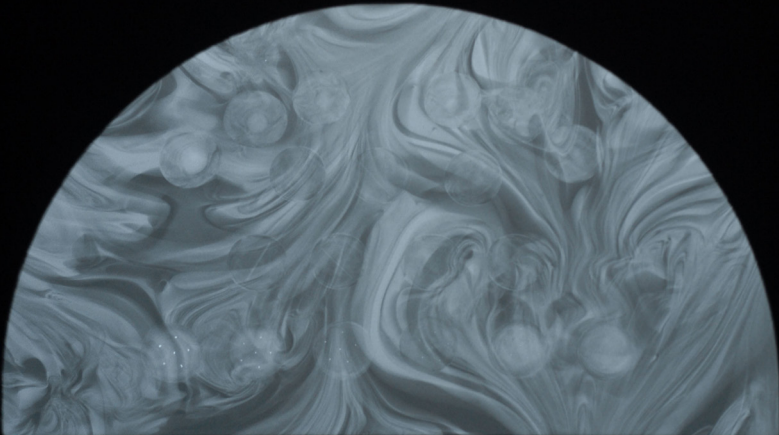
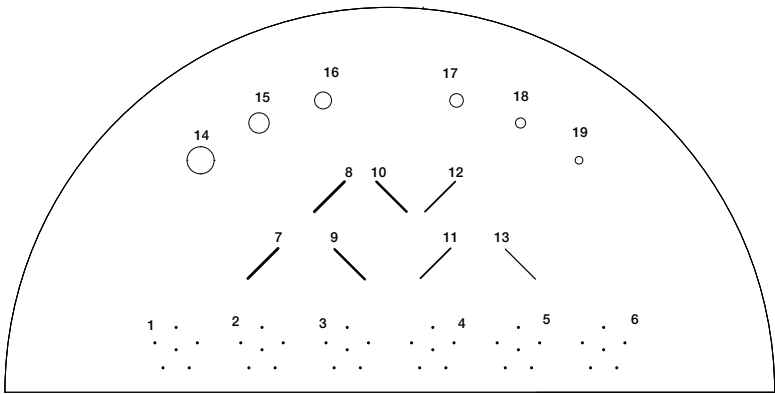
10 mm length  
Diameters: 0.15, 0.18, 0.23, 0.28, 0.38, 0.41, & 0.60 mm

## CARE AND HANDLING

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



Coronal CT image of the Phantom Set



## 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](mailto: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 020 - BR3D Breast Imaging Phantom | 60 Months       |



# CIRS

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