



SUN NUCLEAR

A MIRION MEDICAL COMPANY

Single Exposure High Contrast Resolution Phantom

016A-BR12

- Supports mammography system exposure QC
- Assess resolution perpendicular and parallel to the anode-cathode axis in one exposure
- Supports American College of Radiology (ACR) and Mammography Quality Standards Act (MQSA) test requirements



The Single Exposure High Contrast Resolution Phantom evaluates spatial resolution in mammographic imaging using a single exposure. The phantom incorporates two 17.5-micron thick gold-nickel alloy bar patterns oriented at 90 degrees, enabling assessment of resolution both perpendicular and parallel to the anode-cathode axis in one exposure. Each target includes 17 bar segments ranging from 5- to 20-line pairs per millimeter (lp/mm) and is equivalent to 25 microns of lead or 2.6 mm of aluminum at 20 keV.

The bar patterns are permanently embedded in a thin acrylic wafer to protect the targets and ensure long-term stability. The phantom body is constructed from breast-equivalent materials and includes a dedicated cavity to securely position the wafer.

This design supports consistent and reproducible placement of the bar patterns in accordance with ACR recommendations: 4.5 cm above the breast support plate, 1 cm from the chest wall, and centered laterally.

Key Benefits

- Perpendicular bar pattern design for system resolution assessment using a single exposure
- Supports reproducible positioning
- Acrylic wafer protects line pairs from wear and damage
- Breast-equivalent phantom materials

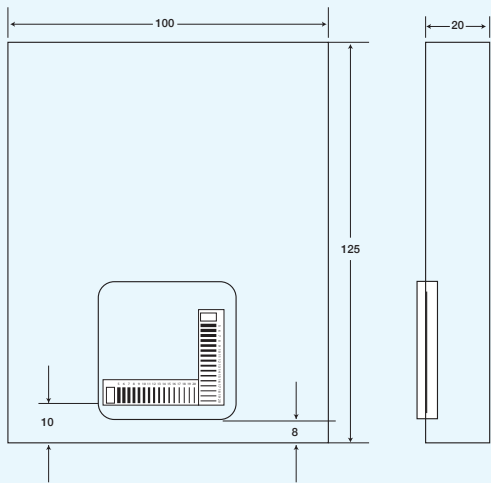
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Single Exposure High Contrast Resolution Phantom

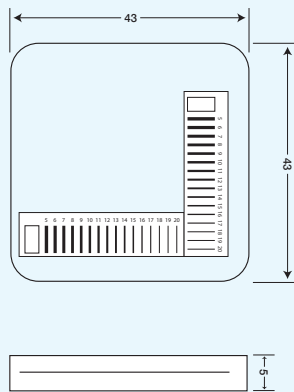
Evaluates spatial resolution in mammographic imaging using a single exposure

Specifications

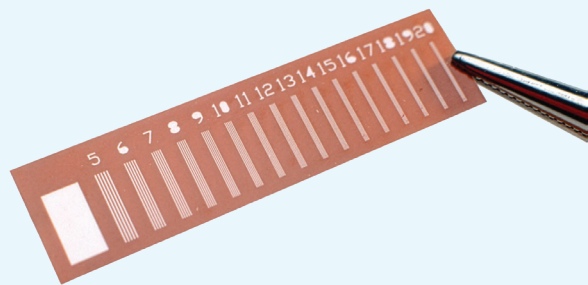
Dimensions	12.5 x 10 x 4.5 cm (4.9" x 3.9" x 1.7")
Weight	0.7 kg (1.5 lbs)
Materials	Epoxy resin BR12 slabs Target: Gold nickel construction, equivalent to 25 microns of lead or 2.6 mm of aluminum, embedded in acrylic
Slabs	Set of 3 slabs: 12.5 x 10 x 2 cm with pocket for line pair wafer 12.5 x 10 x 2 cm solid 12.5 x 10 x 0.5 cm solid



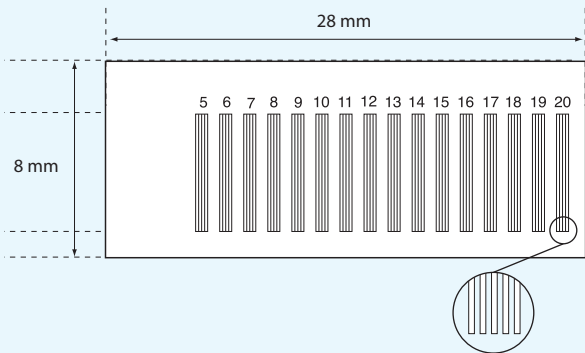
Slab Layout with Acrylic Target



Acrylic Target (016AW)



Line Pair Test embedded in 016AW



20 Line Pair per Millimeter Bar Phantom