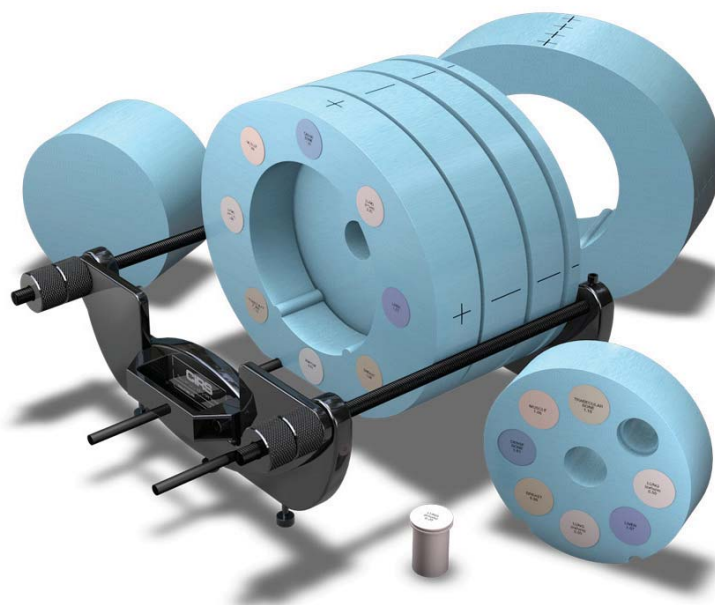


# CBCT Electron Density Phantom

Model 062MA



## *INCREASE HU VALUE CONFIDENCE FOR ADAPTIVE RT*

The Cone Beam (CBCT) Electron Density Phantom is an extended version of the CIRS Model 062M Electron Density Phantom specifically designed for Cone Beam CT Imaging systems. Preliminary data shows that there may be differences between the HU readings for Diagnostic CT and Cone Beam CT. The geometry of the Cone Beam CT requires additional material and suggests that off central axis measurements should be taken.

The phantom is a valuable tool for CT number to electron density calibration in volumetric imaging. Reliable CT calibration curves help enable treatment plan adaptation directly from Cone Beam CT data. Additionally, the phantom can accommodate any ion chamber for dose measurements and validation of tissue heterogeneity correction based on the corrected CT calibration curve.

The Model 062MA CBCT Electron Density Phantom's size covers geometries for imagers with dimensions up to 40 cm x 40 cm. It is made of Plastic Water®-LR and contains the same set of tissue equivalent electron density inserts as the

standard Model 062M. Additional interchangeable slabs allow for repositioning of the electron density section off axis.

The 062MA is just one of three configurations available as a part of the Cone Beam CT Electron Density & Image Quality Phantom System.

### **Features**

- Evaluate CT scan data
- Correct for inhomogeneities
- Document relationship between CT number and tissue electron density
- Simulate indicated tissue within the diagnostic and therapeutic energy range
- Quick assessment of distance registration (optional)

OVERALL DIMENSIONS:	330 mm x 270 mm x 50 mm (W x H x D)
WEIGHT:	≈ 18 kg (40 lb)
MATERIALS:	Water and Tissue Equivalent Epoxy Resins

## MODEL 062MA INCLUDES

QTY	PART NO.	DESCRIPTION	PHYSICAL DENSITY, g/cc	ELECTRON DENSITY, x 10 <sup>23</sup> electrons/cc	RED (RELATIVE TO H <sub>2</sub> O)
1	062MA-01	Electron Density Head Insert	1.029	3.333	0.998
1	062MA-02	Electron Density Body without Head Insert	1.029	3.333	0.998
2	062A-04	Lung (Inhale) Equivalent Electron Density Plug	0.20	0.634	0.190
2	062A-05	Lung (Exhale) Equivalent Electron Density Plug	0.50	1.632	0.489
2	062A-06	Breast (50% Gland / 50% Adipose) Equivalent Electron Density Plug	0.99	3.261	0.976
2	062A-08	Solid Trabecular Bone (200 mg/cc HA) Equivalent Electron Density Plug	1.16	3.730	1.117
2	062A-09	Liver Equivalent Electron Density Plug	1.07	3.516	1.052
2	062A-10	Muscle Equivalent Electron Density Plug	1.06	3.483	1.043
2	062A-11	Adipose Equivalent Electron Density Plug	0.96	3.171	0.949
2	062A-15	Solid Dense Bone (800 mg/cc HA) Equivalent Electron Density Plug	1.53	4.862	1.456
1	062A-27	Solid Dense Bone (1250 mg/cc HA) Equivalent Electron Density Plug	1.82	5.663	1.695
1	062MA-39	Water Equivalent Material Surrounding Removable Ø 1" Vial for Real Water Electron Density Plug	1.00	3.340	1.000
1	062M-30	Set of 2 Feet for Model 062M			
1	062M-40	Soft Carry Case for Model 062M			
1	062MA-24	50 mm Thick Bolus Slab	1.029	3.333	0.998
2	062MA-32	100 mm L x Ø 30 mm Background Equivalent Plug	1.029	3.333	0.998
1	062MA-33	12.5 mm Thick Bolus Slab	1.029	3.333	0.998
1	062MA-34	37.5 mm Thick Bolus Slab	1.029	3.333	0.998
1	062MA-36	CBCT Electron Density Phantom - Annulus (100 mm Thick)	1.029	3.32	0.998
1	062MA-37	CBCT Electron Density - Annulus Solid insert (100 mm Thick)	1.029	3.333	0.998
1	062MA-30	Holder/Support set for Model 062MA & 062MQA			
1	062MA-40	Soft Carry Case for Model 062MA			
1		User Guide			
-		48 Month Warranty			

## INSERT OPTIONS

\*Customers are encouraged to complete their order with the purchase of the insert option listed below. Refer to separate CIRS cavity and plug code list for available chamber cavities. If the ion chamber cavity is not specified by customer, phantom is supplied with Part No. 062MA-14-CV50-1 that accommodates a Farmer type ion chamber. TLDs and Film available upon special request.

QTY	PART NO.	DESCRIPTION	PHYSICAL DENSITY, g/cc	ELECTRON DENSITY, x 10 <sup>23</sup> electrons/cc	RED (RELATIVE TO H <sub>2</sub> O)
1	062MA-14-CV†	Water Equivalent Chamber Rod with Cavity for Ion Chamber	1.029	3.333	0.998

Optional inserts are available for purchase. Visit [www.cirsinc.com](http://www.cirsinc.com) for more information.

