



Kyoto Kagaku Phantoms

Imaging Solutions' Training and QA Phantoms are designed to help healthcare professionals maintain high-quality imaging standards by providing a realistic and consistent environment for training and quality assurance testing. Our phantoms allow for the regular monitoring and evaluation of imaging equipment to ensure accurate and consistent results.



About Kyoto Kagaku

For optimal application of ultrasound in medicine

Kyoto Kagaku started preparing for coming age of medical ultrasound as early as turning of the century. At the beginning, there was two streams to pursuit: development of material for ultrasound phantom that is not only close to human tissue under ultrasound but also stable and long-life, construction of three-dimensional anatomical representation that facilitate improving interpretation skills of trainees. With the passage of time, application of ultrasound in medicine has developed and also the phantoms. Now Kyoto Kagaku phantoms cover the field of QA, training in examination and ultrasound guided procedures, and serving the range of health care specialties. Kyoto Kagaku ultrasound phantoms are presented at exhibitions such as RSNA, ECR, AIUM, SDMS and IMSH.

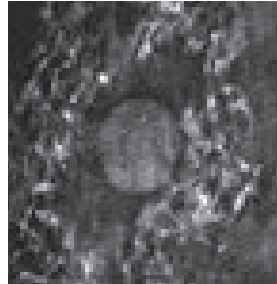


KYOTO KAGAKU co.,LTD

Manufacturer and developer of educational models

Compressible Mammography Phantom Comp-AY

Allows for thorough visual evaluation under a variety of scanning conditions and image comparison of different modalities.



Features

- Soft and resilient material of the phantom allows breast compression for imaging.
- Three-dimensional structure of simulated mammary gland fibers and tumors to visualize realistic medical images.
- Allows for visual evaluation under different scanning conditions and locations of tumors
- Allows for image comparison of different modalities

Applications

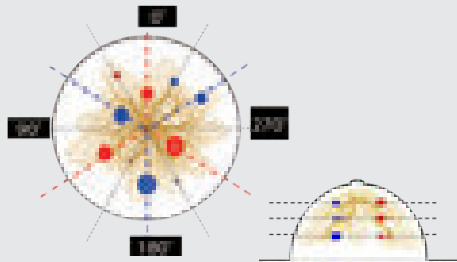
- Tomosynthesis
- Mammography
- Evaluation and study of effect of breast compression on image quality
- Patient Positioning

Anatomy and Pathologies

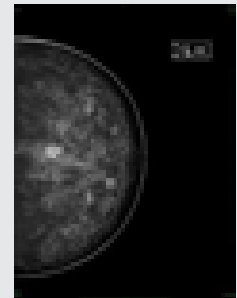
Simulated targets: 2, 4, 6, 8, 10mm dia.
Calcifications: 0.3mm dia. x 5 in each 10mm dia. target

- high density
- low density
- target with calcifications
- mammary gland

Angle gauge on the back of the phantom for reproducible setting as well as to simulate a variety of patient cases.



tomosynthesis (DBT)



mammography(2D)

Set Includes

- | | |
|-------------------------------------|---------------------------------|
| 1 newborn whole body phantom | 1 insert for the dosimeter hole |
| 1 set of sample CT/X-ray data (DVD) | 1 manual |
| 1 storage case | |

Materials

polyurethane

Dimensions

Phantom size:

base: 26 dia. x H3 cm,
10.2 dia. x H1.2 in
mamma: 14 dia. x H9 cm,
5.5 dia. x H3.5 in

Phantom weight: 2.5kg, 5.5lb

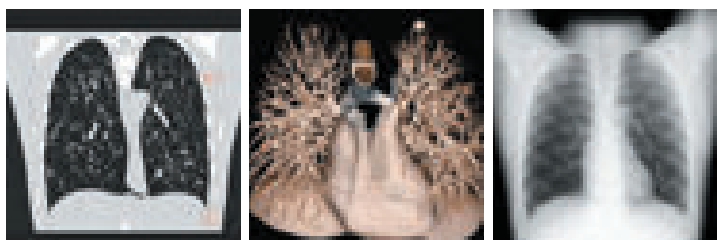
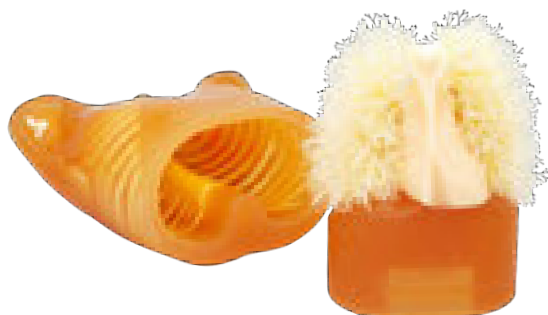
Product Code

Compressible Mammography Phantom Comp-AY

KKG-PH-83-41956-000

Multipurpose Chest Phantom N1 “LUNGMAN”

PH-1 is used in a study by the FDA to create a database of CT scans with different scanners and protocols, as a resource for assessment of lung nodule size estimation method



Features

- Detailed three-dimensional pulmonary vessels including capillaries permits radiographs and CT of every plane
- Radiation absorption and HU number approximate to human body
- Simulated tumors and other targets can be attached in the lung fields
- Wide variety of uses in interpretation training, anatomical education, evaluation and assessment of devices and other research
- Arms-abducted position of the torso suits the CT

Applications

- CT
- Plain X-ray
- Radiographic interpretation

Anatomy

Chest includes:

- main body:
 - » synthetic bones are embedded
- mediastinum:
 - » heart, trachea
 - » pulmonary vessels
- abdomen (diaphragm) block:
 - » no internal structure

Simulated tumors



Simulated tumors in five-size and three-HU-number variations can be attached to arbitrary positions in the lung field.



Set Includes

- 1 chest torso
- 15 simulated tumors (15 variations 1 piece each)

- 1 set of sample X-ray data (DVD)
- 1 manual

Materials

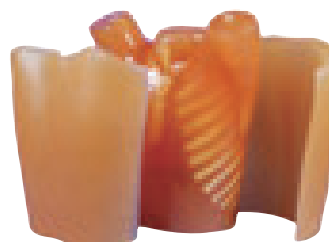
Soft tissue: urethane based resin (density: 1.06)
 Synthetic bone: epoxy resin (density: 1.31)
 *Phantom has no metal parts or liquid structure

Dimensions

Phantom size	Phantom weight	Packing size	Packing weight
W43×D20×H48 cm, chest girth 94 cm W17×D8×H18 in, chest girth 37 in	18 kg / 39.6 lb	W63×D50×H29 cm W24.8×D19.7×H11.4 in	25 kg / 55.1 lb

Product Codes

Multipurpose Chest Phantom N1	KKG-PH-1-41337-000
Chest plates	KKG-PH-1-41337-010
Storage case	KKG-PH-1-41363-020
Simulated tumors	KKG-PH-1-41337-070



Breast Plate for Chest Phantom N-1

Simulates the absorption rate of breasts during female chest X-ray and demonstrates the influence of the nipple on image quality



Features

- This plate can be attached to PH-1 to study radiation absorption of the breasts and its effect on image quality.

Applications

- CT
- Plain X-ray

Set Includes

1 breast plate

Materials

urethane based resin
(density: 1.06)

Dimensions

Phantom size:
base: 26 dia. × H3 cm,
10.2 dia. × H1.2 in

mamma:
14 dia. × H9 cm,
5.5 dia. × H3.5 in

Phantom weight: 2.5kg, 5.5lb

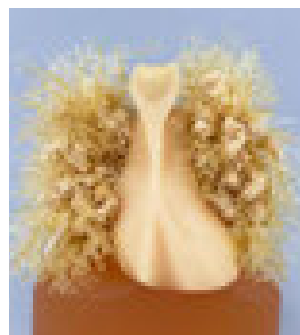
Product Code

Breast Plate for Chest Phantom N-1

KKG-PH-1-41337-090

Pneumonia Kit for N-1

Attachment for N-1 chest phantom to create true-to-life medical images of pneumonia



*The mediastinum and the pulmonary vessels are not included.

Product Code

Pneumonia Kit for N-1

KKG-PH-1-41337-080

Set Includes

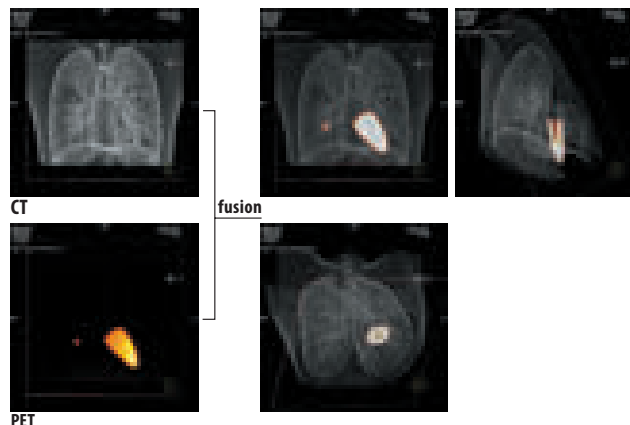
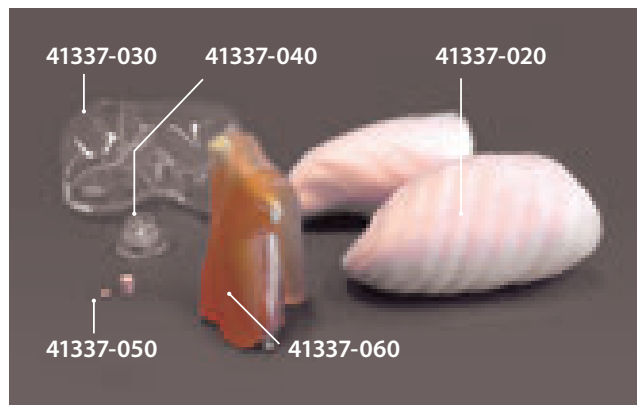
1 set of pneumonia attachments

Materials

polyurethane (density:0.92)

Components for Radioisotope

The set of RI container inserts can be set in the chest phantom in place of standard inserts, allowing for wider research applications such as PET/CT fusion evaluation



Product Codes

Lungs of urethane	KKG-PH-1-41337-020
Liver RI container	KKG-PH-1-41337-030
Gallbladder RI container	KKG-PH-1-41337-040
Pulmonary nodule RI container	KKG-PH-1-41337-050
Mediastinum with left myocardium RI cont.	KKG-PH-1-41337-060

Materials

Container: acrylic resin
Liver: acrylic resin
Heart: urethane based resin
Lung and pulmonary nodule: urethane based resin

Subsolid Nodules Phantom

Both mixed and pure GGO are provided in a variety of sizes and HU numbers

Subsolid Nodules Phantom is a set of simulated lesions designed for study and training in Grand-Glass Opacity (GGO) detection and interpretation. Both mixed and pure GGO are provided in a variety of sizes and HU numbers. The set also includes 3-D GGO modeled on clinical CT data. The simulated lesions can be attached to the pulmonary vessels of the Chest Phantom N1 "LUNGMAN" or in the CT Lung Phantom.

41923-000 No.1-7 Concentric

	ItemNo.	GGO field		Solid field		Type
		Diameter	HU	Diameter	HU	
	1	1.5 cm 0.59 in	-650	0.5 cm/0.20 in	-50	 Concentric
	2				0	
	3				50	
	4	2.0 cm 0.79 in		0.3 cm/0.12 in	0	
	5			0.5 cm/0.20 in		
	6			0.7 cm/0.28 in		
	7			0.9 cm/0.35 in		

41923-100 No.8-10 Eccentric

ItemNo.	GGO field		Solid field		Type
	Diameter	HU	Diameter	HU	
8	1.5 cm 0.59 in	-650	0.5 cm/0.20 in	-50	Eccentric
9				0	
10				50	

41923-200 No.11-12 Eccentric

ItemNo.	GGO field		Solid field		Type
	Diameter	HU	Diameter	HU	
11	2.0 cm 0.79 in	-650	0.3 cm/0.12 in	0	Eccentric
12			0.5 cm/0.20 in		

41923-300 No. a-h Pure GGO

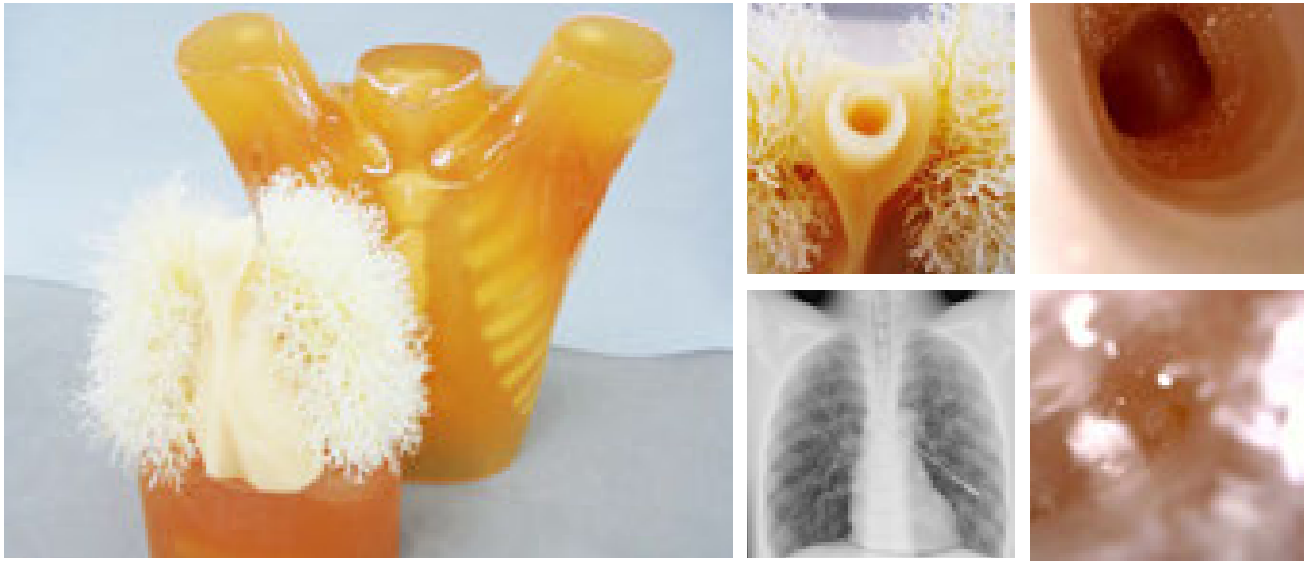
ItemNo.	GGO field		Solid field		Type
	Diameter	HU	Diameter	HU	
a	1.5 cm 0.59 in	-750	-	-	Pure GG
b		-650	-	-	
c		-550	-	-	
d		-450	-	-	
e		-350	-	-	
f		-250	-	-	
g		-150	-	-	
h		-50	-	-	

41923-400 3D GGO

ItemNo.	GGO field		Solid field		Type
	Diameter	HU	Diameter	HU	
3D-GGO	1.5x1.5 cm 0.59x0.59 in	-550	-	-	-

Bronchoscopy-compatible N-1 Lungman with Pulmonary Vessels

Lungman phantom with an open bronchus for bronchoscope



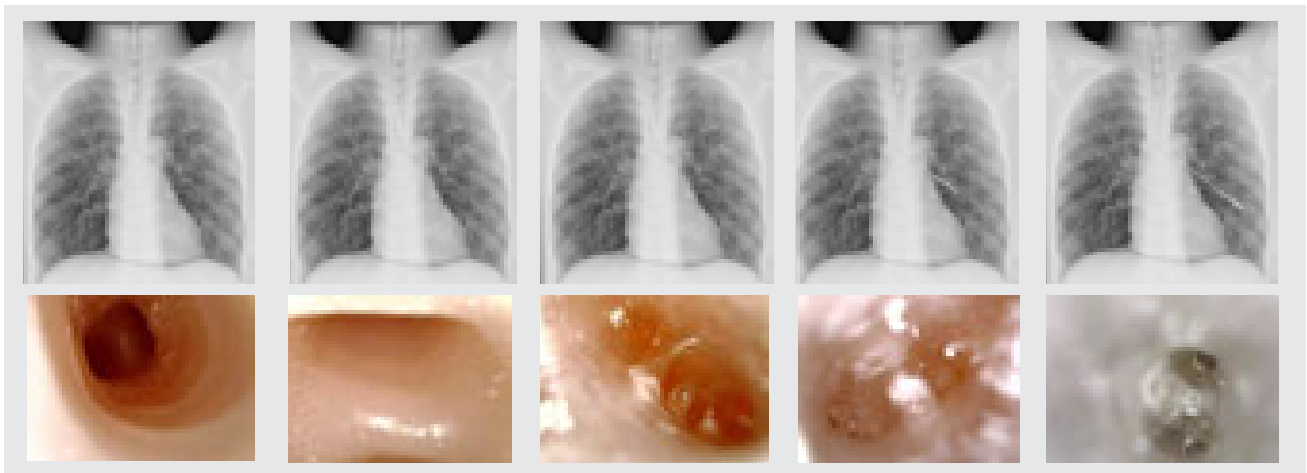
Features

- Close to human medical images under X-ray, CT, and fluoroscopy
- The trachea and bronchi are hollow so that the bronchoscope can be passed into the airway up to the 4th~5th branches.
- Optional chest plates to simulate X-ray absorption of a larger body type.

Applications

- CT
- Plain X-ray
- Fluoroscopy

Radiograph and Bronchoscopic View



Dimensions

Phantom size:
W43×D20×H48 cm,
chest girth 94 cm
W17×D8×H18 in,
chest girth 37 in

Phantom weight:
18 kg / 39.6 lb

Phantom size:
W63×D50×H29 cm
W24.8×D19.7×H11.4 in

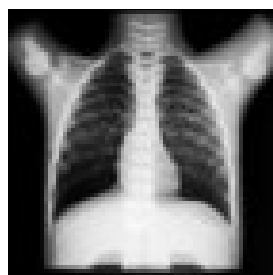
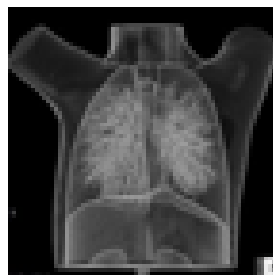
Packing weight:
25 kg / 55.1 lb

Materials

Soft tissue: urethane based resin (density: 1.06)
Synthetic bone: epoxy resin (density: 1.31)
*Phantom has no metal parts or liquid structure

Pediatric Chest Phantom

A phantom representing a five-year-old for practicing and performing imaging and dosimetry



Features

- Two types of interchangeable lung inserts are included - lung vascular insert and lung density insert
- Pencil-shaped ion chamber for CTDI can be set in the mediastinum
- TLD or RPL dosimeters can be set in the thyroid block and the lung density insert
- Detachable internal structure allows insertion of variety of pathologies and targets

Applications

- CT
- Plain X-ray
- Dosimetry
- Radiographic interpretation

Anatomy

Rib, clavicle, spine, mediastinum, scapula, sternum and *pulmonary vessel

*lung vascular insert only



TLD or RPL dosimeters can be set in the thyroid block

Set Includes

- | | |
|---|------------------------|
| 1 five-year-old chest torso | 1 set of sample images |
| 1 lung vasculature insert: mediastinum with pulmonary vessels | 1 storage case |
| 1 lung density insert: mediastinum, lung fields (L-R)** | manual |

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

*Phantom has no metal parts or liquid structure

Dimensions

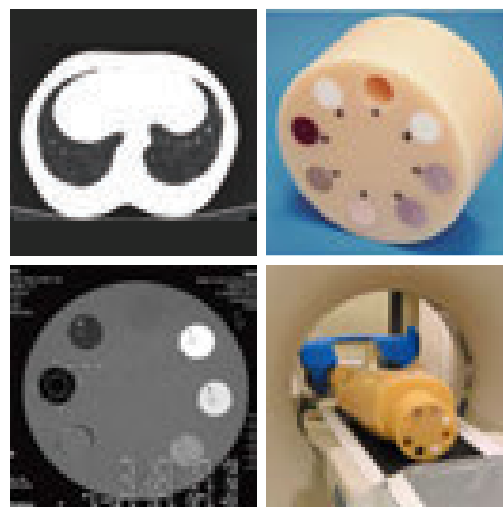
Product Codes

Pediatric Chest Phantom - With Insert**	KKG-PH-1C-41337-300
Pediatric Chest Phantom	KKG-PH-1C-41337-400

Phantom size	Packing size
W32×D17×H38 cm	W51×D43×H45 cm
W12.6×D6.7×H15 in	W20×D17×17.7 in
Phantom weight	Packing weight
6 kg / 13.3 lb	14 kg / 30 lb

Lung Cancer Screening CT Phantom

Chest phantom for standardization studies in low dose lung cancer CT screening Anthropomorphic structure provides life-like images



Features

- Simulated GGO type tumors with different sizes and HU numbers are prepared in the vicinity of three main sections of bilateral lungs
- Dosimeter holder on the central axis of the phantom allows housing a pencil-type ion chamber. 8-step cylindrical linearity phantom to control density curve as a scale can be attached to the chest phantom base

Applications

- CT image quality evaluation
- Dosimetry
- Evaluation of density curve

Anatomy

- Bones
- Lungs
- Mediastinum
- Simulated tumors at three lung areas:
 - » Apical portion of the lungs
 - » Bifurcation of the trachea
 - » Base of lungs

Simulated tumors

	HU contrast with the lung back ground	Size	Materials
tumors in the right lung	HU=100	4, 6, 8, 10, 12 mm dia. 0.16, 0.24, 0.32, 0.39, 0.47 in dia.	urethane resin
tumors in the left lung	HU=270	2, 4, 6, 8, 10 mm dia. 0.08, 0.16, 0.24, 0.32, 0.39 in dia.	urethane resin

Linearity phantom targets

	HU contrast with the lung back ground	Materials		HU contrast with the lung back ground	Materials
A	-1000	air	E	-200	polyurethane
B	-850	polyurethane	F	100	polyurethane
C	-600	polyurethane	G	250	Bakelite
D	-400	polyurethane	H	350	polyacetal resin

Set Includes

- | | |
|----------------------------|-------------------------------|
| 1 chest phantom | 1 adjustment base |
| 1 8 step linearity phantom | 1 set of sample images manual |
| 1 urethane cylinder | |

Dimensions

Phantom size:
W44×H69.4 cm
W17.3×H27.3 in

Materials

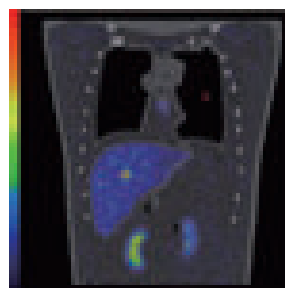
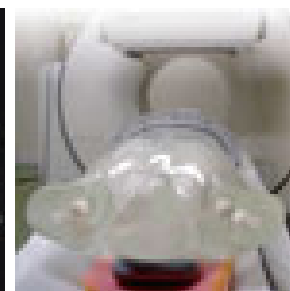
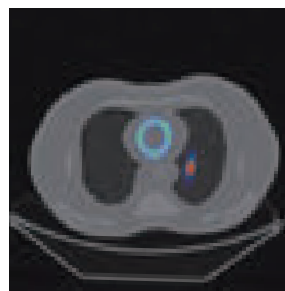
Chest wall: human tissue substitute
Bones: synthetic bones
Alveoli: styrene foam and urethane foam

Product Codes

Lung Cancer Screening CT Phantom KKG-PH-8-41507-000

Thorax Phantom for RI

Thorax Phantom for RI is an optimal tool for study in nuclear medicine



Features

Examination of myocardial density through SPECT imaging

- Verification of myocardial imaging with the use of various RI solution densities
- Myocardial infarction can be depicted
- By filling RI solution into the lungs, liver and kidneys, the effect of these organs on the heart can be recreated.

Examination of RI solution density for simulated tumors

- The simulated tumors can be inserted into lung, liver and breast
- Tumors can be filled with FDG/RI solution into the spheres for evaluation of density, size and placement

Applications

- PET
- Quality management of NM equipment
- RI solution density for tumor imaging

Anatomy

- Liver
- Lung (right/left)
- Kidney (right/left)
- Hot spots (liver, lungs and breast)

* Hot spot for PET can be set in liver, lungs and breast.

- Heart
 - Anatomical type: right ventricle, left ventricle and myocardium

- Geometric type: left ventricle and myocardium

- Bone: 370HU
- Lung: -900HU
- Organ shell material: 100HU, and 1.16g/cm³ in density

Set Includes

1 thorax body

2 lungs (left and right)

4 hearts

1 liver

2 kidneys (left and right)

1 rib cage and spine

2 breasts (left and right)

3 hot spots

2 aorta

1 beaker

1 base

6 plastic pins

6 supporting bars

4 matel frame

1 silicon sealing gasket

3 tubes

1 syringe

12 nuts and bolts

1 water tank

1 Vaseline

manual

Materials

Soft tissue: transparent polyurethane

Lungs: materials with density 0.4 g/cm³

Bone materials: Calcium-infused material to provide proper attenuation with use of RI solutions

Dimensions

Phantom size:
W44×H69.4 cm
W17.3×H27.3 in

Phantom weight:
phantom itself: 21 kg / 46.2 lb
when filled with liquid: 37.5 kg / 82.6 lb

Product Codes

Thorax Phantom for RI

KKG-PH-63-41927-000

Anthropomorphic Phantoms

Anthropomorphic phantoms provide life like images and attenuation. Ideal for educational training applications and help to determine and evaluate optimal scanning parameters.



	NEWBORN		CHILD (5-year-old)		ADULT	
	Standard	Variations	Standard	Variations	Standard	Variations
Plain X-ray	PH-50B: P.5	PH-50: P.5 PH-50 : P.5 Meconium aspiration syndrome* *Option	PH-2C : P.6 PBU-70	PH-2D : P.7 Bone fracture	PH-2B: P.8 PH-2: P.10 PH-60: P.11	PH-2E : P.9 with pathologies
CT						
Dosimetry						

The above matrix chart indicates the most recommended application/modality for use of each phantom and not necessarily means the phantom should exclusively be used with marked modalities.

All above phantoms can be imaged via both plain radiography (X-ray) and CT.

Differences in included organs or tissue substitute material provide some phantoms wider use in CT study/training than others.

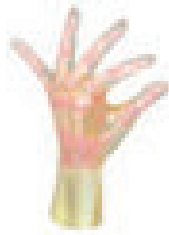
Body size variations



Body Plates

41350-200-16 (BMI 32)/ 41350-200-17 (BMI 40)

For separate anatomy...



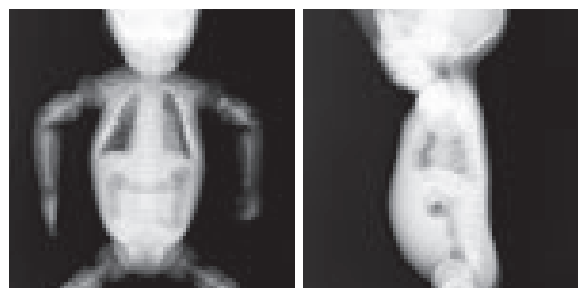
Sectional Phantom Series

PH-61 41926-000-



Newborn Whole Body Phantom “PBU-80”

Limbs with articulation for natural positioning



Features

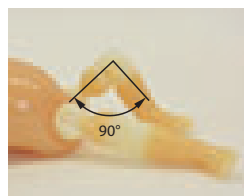
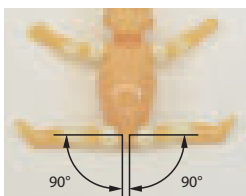
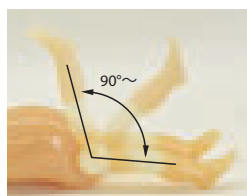
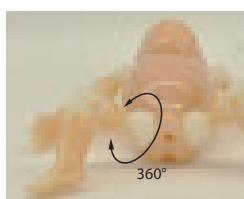
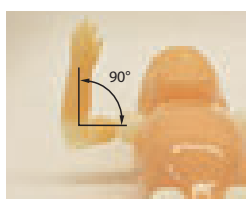
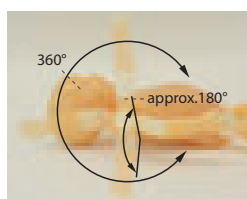
- Limbs rotate 360 degrees at shoulders and hip joints
- Left hand is clenched and right hand is open
- Kyoto Kagaku original human tissue substitute material
- A hole for an ion chamber
- HU of average newborn (HU 30)

Applications

- CT and plain X-ray
- Dosimetry
- Autopsy imaging
- Positioning: with / without a poser / upright AP / supine AP / upright lateral / supine lateral

Anatomy

skull / spine/ clavicles / scapulae / ribs / humerus / radius / ulnae / bones of hands / femora / tibiae / fibula /bones of foot / pelvis / lungs / mediastinum / colon



Set Includes

- | | |
|-------------------------------------|---------------------------------|
| 1 newborn whole body phantom | 1 insert for the dosimeter hole |
| 1 set of sample CT/X-ray data (DVD) | 1 manual |
| 1 storage case | |

Materials

Soft tissue: urethane based resin (density: 1.07)

Synthetic bone: epoxy resin (density: 1.31)

*Phantom has no metal parts or liquid structure

Dimensions

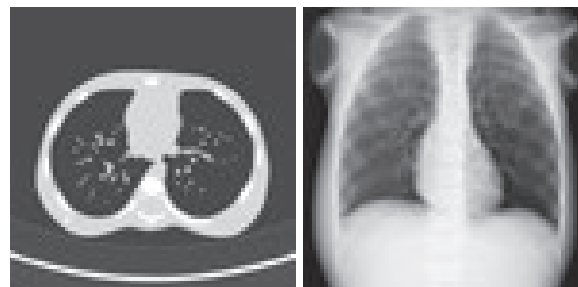
Phantom size	Phantom weight	Packing size	Packing weight
53 cm/ 20.8 in	3.5 kg / 7.7 lb	W57×D44×H29 cm / W22.4×D17.3×H11.4 in	8 kg / 17.6 lb

Product Code

Newborn Whole Body Phantom KKG-PH-50B-41912-100

Pediatric Whole Body Phantom “PBU-70”

This phantom representing a five-year-old child is easy to position, and provides complete bone images for every joint



Features

- Radiology absorption and HU number approximate to human body
- Main joints have close-to-human articulation
- Phantom can be disassembled into 10 individual parts

Applications

- Plain X-ray
- CT
- Basic patient positioning

Anatomy

Bony Structure

skull / spine/ clavicles / scapulae / ribs / sternum / coxal bones / humerus / antebrachial bone / bones of hand / femur / patella / lower leg bone / bones of foot

HU numbers of each organ:

liver 70
kidney 30

Internal organs

lung with pulmonary vessels / trachea (up to primary bronchi) / heart / liver with portal and hepatic veins

Position of Hands and feet

left foot : plantar flexion
right foot : dorsiflexion
left hand : aligned fingers
right hand : spread fingers

Set Includes

1 pediatric whole body phantom	1 screwdriver
1 head supporter	1 set of sample X-ray data (DVD)
1 hand fixture belt	1 manual

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

Skull: epoxy resin (density: 1.11)

*Phantom has no metal parts or liquid structure

Dimensions

Phantom height	Phantom weight	Packing size	Packing weight
110 cm / 43.3 in	20 kg / 44 lb	W86×D60×H32 cm / W33.8×D23.6×H12.6 in	8 kg / 17.6 lb

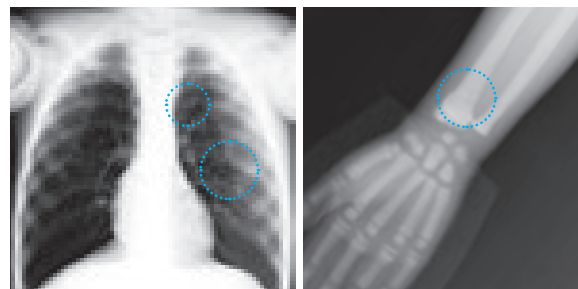
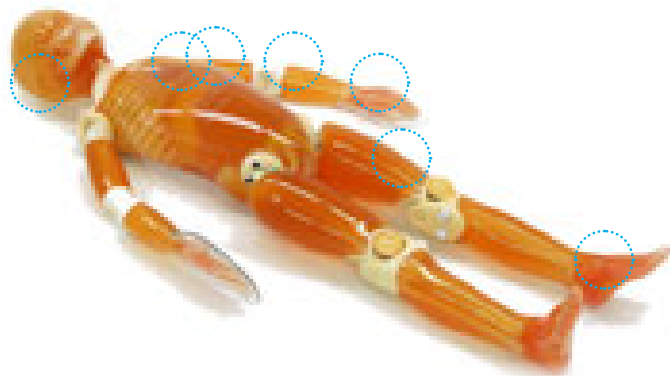
Product Code

Pediatric Whole Body Phantom

KKG-PH-2C-41350-300

Bone Fracture Pediatric Phantom “PBU-70B”

Improve skills in detecting bone fractures in children and cultivate awareness of child maltreatment



Features

- Training in pediatric radiography can be enriched with clear and subtle bone fractures
- Typical fractures resulting from child abuse are also included
- Radiology absorption and HU number approx to human body
- Main joints have close-to-human articulation
- Phantom can be disassembled into 10 individual parts

Applications

- Plain X-ray
- CT
- Basic patient positioning
- Radiographic interpretation

Concept and Anatomy

Child maltreatment

Children around the world are victims to domestic violence and abuse, yet the problem is often overlooked. Noticing the signs of an abusive fracture of a child is the first step to putting an end to these maltreatments.

Signs of callus	A number of callus examples can be a result of abusive treatment. This particular model contains calluses in the wound healing phase 5.
Supracondylar humerus fracture	A supracondylar humerus fracture on the distal humerus above the epicondyles and is a fracture commonly observed in children, accounting for approximately 20%.
Spiral fracture	Certain causes of non-accidental pediatric injuries, such as spiral fractures, include maltreatment stimulated by anger or distress.
Back, scapula and rib fractures	Rib fractures close to the vertebrae may be potential indicators of the child being thrown.
Skull fractures	A linear skull fracture may be another indication of child maltreatment. At times, fractures display better on x-ray scans than CT imaging.

Set Includes

1 pediatric whole body phantom	1 screwdriver
1 head supporter	1 set of sample X-ray data (DVD)
1 hand fixture belt	1 manual

Product Code

Pediatric Whole Body Phantom

KKG-PH-2D-41350-500

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

Skull: epoxy resin (density: 1.11)

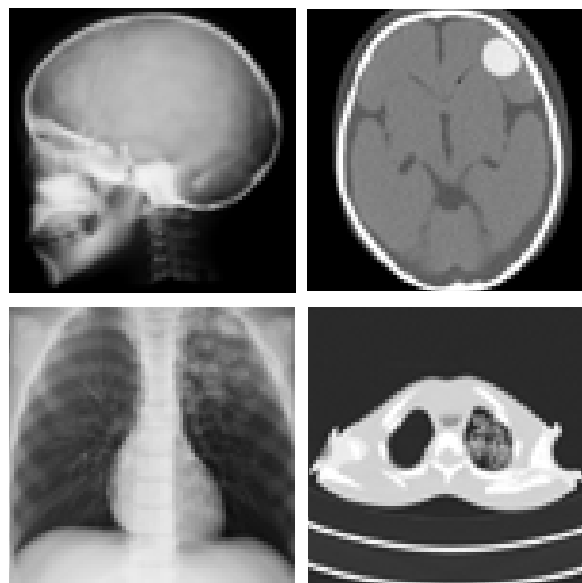
*Phantom has no metal parts or liquid structure

Dimensions

Phantom height	Phantom weight
110 cm / 43.3 in	20 kg / 44 lb
Packing size	Packing weight
W86×D60×H32 cm / W33.8×D23.6×H12.6 in	8 kg / 17.6 lb

CT Pediatric Whole Body with Pathologies

Whole body phantom including key pathologies for pediatrics such as pneumonia



Features

- Includes organs and key pathologies for pediatric patients
- Radiology absorption and HU number approximate to human body
- Main joints have close-to-human articulation
- Phantom can be disassembled into 10 individual parts

Applications

- Plain X-ray
- CT
- Basic patient positioning

Anatomy

Bony Structure

skull / spine / clavicles / scapulae / ribs / sternum / coxal bones / humerus / antebrachial bone / bones of hand / femur / patella / lower leg bone / bones of foot

HU numbers of each organ:

liver 70
kidney 30

Internal organs

lung with pulmonary vessels / trachea (up to primary bronchi) / heart / liver with portal and hepatic veins

Position of Hands and feet

left foot : plantar flexion
right foot : dorsiflexion
left hand : aligned fingers
right hand : spread fingers

Set Includes

1 pediatric whole body phantom	1 screwdriver
1 head supporter	1 set of sample X-ray data (DVD)
1 hand fixture belt	1 manual

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

Skull: epoxy resin (density: 1.11)

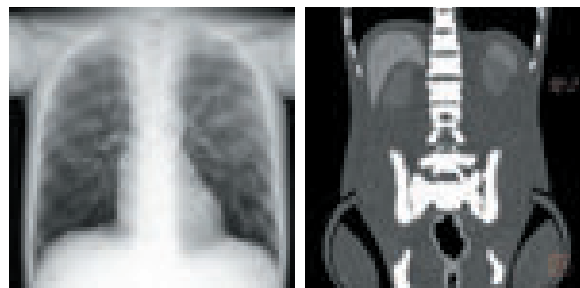
*Phantom has no metal parts or liquid structure

Dimensions

Phantom height	Phantom weight
110 cm / 43.3 in	20 kg / 44 lb
Packing size	Packing weight
W86×D60×H32 cm / W33.8×D23.6×H12.6 in	8 kg / 17.6 lb

CT Whole Body Phantom “PBU-60”

A unique, life size whole body phantom for CT provides a variety of educational application as well as visual evaluation in finding out optimal scanning conditions



Features

- Includes full internal organs with close-to-human HU for each.
- Radiology absorption and HU number approx. to human body
- Main joints have close-to human articulation
- Phantom can be disassembled into 10 individual parts

Applications

- Plain X-ray
- CT
- Basic patient positioning

Anatomy

Full internal organs	Internal organs	HU number at 80KeV	Internal organs	HU number at 80KeV
Bony Structure	Brain		Portal and hepatic veins	40
	Cerebrum	40	Pancreas	30
	Mesencephalon	40	Kidneys	30
	Cerebellum	40	Gallbladder	20
	Cerebral ventricles	10	Spleen	50
	Eye balls	20	Seminal vesicle	25
	Arteries with contrast medium (left half only)	250	Aorta	40
	Lungs	-1000	Cava	70
	Pulmonary vessels	8	Ureter	ureteral wall: 30 / inside: 10
	Trachea	trachea wall: 8 / inside: -1000	Urinary bladder	10
	Heart	PBU-50: 8 / PBU-60: 40	Prostate	50
	Liver	70	Rectum	rectum wall: 70 / inside: -800
			Sigmoid Colon	colon wall: 70 / inside: -800

Set Includes

- | | |
|-------------------------|----------------------------------|
| 1 whole body phantom | 1 hand-fixture belt |
| 1 head supporter | 1 set of sample X-ray data (DVD) |
| 1 flat head screwdriver | 1 manual |

Dimensions

Phantom height

165 cm / 65 in

Phantom weight

50 kg / 110 lb

Packing weight

80 kg / 176 lb

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

Skull: epoxy resin (density: 1.11)

*Phantom has no metal parts or liquid structure

Packing size

W92×D57×H38 cm / W36×D22×H15 in
W90×D63×H22 cm / W35×D25×H8.7 in
W89×D57×H16 cm / W35×D22×H6.3 in

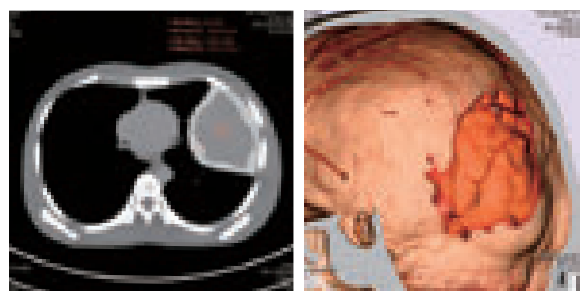
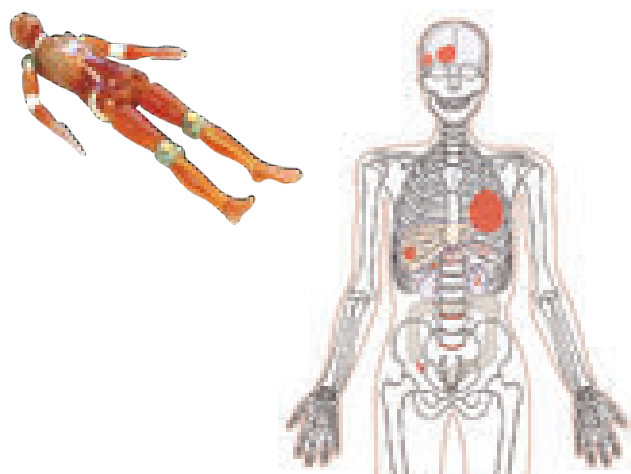
Product Code

Pediatric Whole Body Phantom

KKG-PH-2B-41350-200

CT Whole Body Phantom with Pathologies

Implement theory with practice with pathological findings in this hands-on training phantom



Features

- Pathological findings added to detailed anatomy of PBU-60
- Radiology absorption and HU number approximate to human body
- Main joints have close-to-human articulation
- Phantom can be disassembled into 10 individual parts

Applications

- Plain X-ray
- CT
- Basic patient positioning

Anatomy

Cases	HU number at 80KeV	Cases	HU number at 80KeV	Cases	HU number at 80KeV
Brain tumor	130	Hepatic tumor	10	Kidney stone	170
Subarachnoid hemorrhage	90	Pancreatitis	30	Appendicitis	inside: 30 / outside: 40
Pulmonary tumor	inside: 30 / outside: 130	Gall stone	170	Spondylolisthesis	-

Full internal organs	Internal organs	HU number at 80KeV	Internal organs	HU number at 80KeV
Bony Structure	Brain		Portal and hepatic veins	40
	Cerebrum	40	Pancreas	30
	Mesencephalon	40	Kidneys	30
	Cerebellum	40	Gallbladder	20
	Cerebral ventricles	10	Spleen	50
	Eye balls	20	Seminal vesicle	25
	Arteries with contrast medium (left half only)	250	Aorta	40
	Lungs	-1000	Cava	70
	Pulmonary vessels	8	Ureter	ureteral wall: 30 / inside: 10
	Trachea	trachea wall: 8 / inside: -1000	Urinary bladder	10
	Heart	PBU-50: 8 / PBU-60: 40	Prostate	50
	Liver	70	Rectum	rectum wall: 70 / inside: -800
			Sigmoid Colon	colon wall: 70 / inside: -800

Set Includes

1 whole body phantom	1 hand-fixture belt
1 head supporter	1 set of sample X-ray data (DVD)
1 flat head screwdriver	1 manual

Dimensions

Phantom height

165 cm / 65 in

Packing weight

80 kg / 176 lb

Phantom weight

50 kg / 110 lb

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

Skull: epoxy resin (density: 1.11)

*Phantom has no metal parts or liquid structure

Packing size

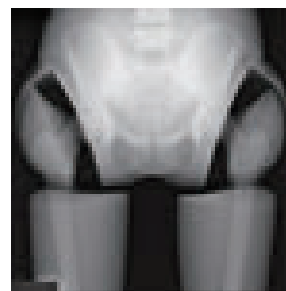
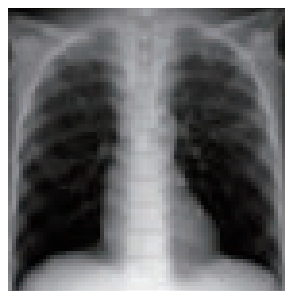
W92×D57×H38 cm / W36×D22×H15 in
W90×D63×H22 cm / W35×D25×H8.7 in
W89×D57×H16 cm / W35×D22×H6.3 in

Pediatric Whole Body Phantom

KKG-PH-2E-41350-700

Whole Body Phantom “PBU-50”

An essential asset for every radiography program



Features

- Radiology absorption and HU number approx. to human body.
- Main joints have close-to-human articulation
- Phantom can be disassembled into 10 individual parts

Applications

- Plain X-ray
- CT
- Basic patient positioning

skull / spine / clavicles / scapulae / ribs / sternum / coxal bones / lungs with pulmonary vessels / trachea (up to primary bronchi) / heart / liver with portal and hepatic veins / kidneys / humerus / antebrachial bone / bones of hand / femur / patella / lower leg bone / bones of foot

Position of Hands and feet

left foot : plantar flexion

right foot : dorsiflexion

left hand : aligned fingers

right hand : spread fingers

Set Includes

1 whole body phantom

1 head supporter

1 flat head screwdriver

1 hand-fixtured belt

1 set of sample X-ray data (DVD)

1 manual

Dimensions

Phantom height

165 cm / 65 in

Phantom weight

50 kg / 110 lb

Packing weight

80 kg / 176 lb

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

Skull: epoxy resin (density: 1.11)

*Phantom has no metal parts or liquid structure

Packing size

W92×D57×H38 cm / W36×D22×H15 in
W90×D63×H22 cm / W35×D25×H8.7 in
W89×D57×H16 cm / W35×D22×H6.3 in

Product Code

Pediatric Whole Body Phantom

KKG-PH-2-41350-000

Tough Whole Body Phantom “PBU-90 RUGGED”

Designed for rough handling, improved durability and less maintenance



Features

- Radiology absorption and HU number approx. to human body.
- Main joints have close-to-human articulation
- Phantom can be disassembled into 10 individual parts

Applications

- Plain X-ray
- CT
- Basic patient positioning

skull / spine / clavicles / scapulae / ribs / sternum / coxal bones / lungs with pulmonary vessels / trachea (up to primary bronchi) / heart / liver with portal and hepatic veins / kidneys / humerus / antebrachial bone / bones of hand / femur / patella / lower leg bone / bones of foot

Position of Hands and feet

left foot : plantar flexion
right foot : dorsiflexion
left hand : aligned fingers
right hand : spread fingers

Set Includes

1 whole body phantom	1 hand-fixtured belt
1 head supporter	1 set of sample X-ray data (DVD)
1 flat head screwdriver	1 manual

Dimensions

Phantom height

165 cm / 65 in

Phantom weight

50 kg / 110 lb

Packing weight

80 kg / 176 lb

Materials

Soft tissue: urethane based resin (density: 1.12)

*Phantom has no metal parts or liquid structure

Packing size

W92×D57×H38 cm / W36×D22×H15 in
W90×D63×H22 cm / W35×D25×H8.7 in
W89×D57×H16 cm / W35×D22×H6.3 in

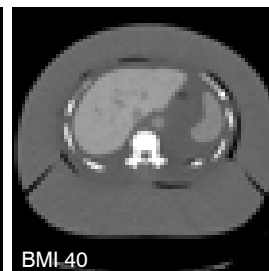
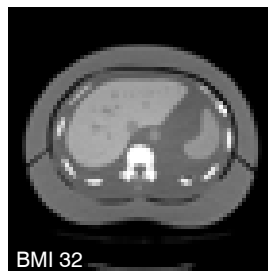
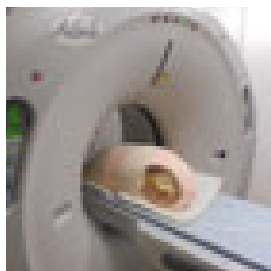
Product Code

Pediatric Whole Body Phantom

KKG-PH-60-41925-000

Body plates

Body plates to simulate a patient of BMI 32 / BMI 40



Features

For studying the effect of patient size on radiation dose and image quality.

Product Code

Body Plate BMI 32	KKG-41350-200-16
Body Plate BMI 40	KKG-41350-200-17

Set Includes

- 1 body plate (front)
- 1 body plate (back)
- 1 belts

Phantom size with plates

Circumference

Chest : 100cm (BMI 32) , 117cm (BMI 40) / 25.5cm (BMI 32) , 35.5cm (BMI 40)
 Waist : 99cm (BMI 32) , 118cm (BMI 40) / 31.5cm (BMI 32) , 36 cm (BMI 40)
 Abdomen : 105cm (BMI 32) , 120cm (BMI 40) / 34.5cm (BMI 32) , 39.5cm (BMI 40)

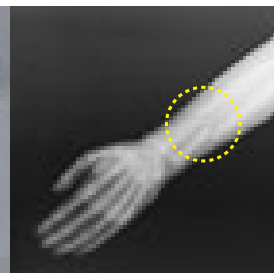
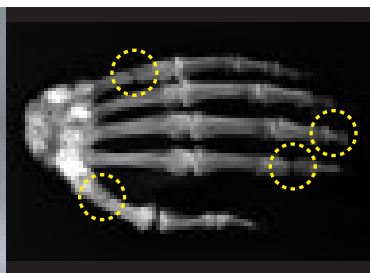
Thickness

Dimensions

Phantom size	Packing size	Packing size
front : W67×D37×H26cm(BMI32) W67×D43×H27cm(BMI40)	back : W66×D36×H12cm(BMI32) W67×D36×H11cm(BMI40)	W77×D48×H40 cm × 2 boxes W30.3×D18.9×H15.7 in × 2 boxes
		41350-200-16(BMI 32): 21 kg / 46.3 lb 41350-200-17(BMI 40): 34.5 kg / 76 lb

Fractured Hand/Forearm Phantom PH-2/2B

X-ray phantom for trauma evaluation



Bone Fractures

ulna, radius, first metacarpal, middle phalanx of the index finger, distal phalanx of the first finger (compressed fracture), fifth metacarpal.

Set Includes

- 1 fractured hand / forearm phantom

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

*Phantom has no metal parts or liquid structure

Product Code

Fractured Hand/Forearm Phantom	KKG-41350-000-11
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X-Ray Training Phantom PBU-POSE

For patient-friendly and accurate positioning learning

Supports scenario based trainings including communication skills

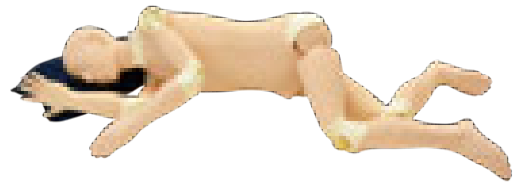


Features

- Light weight and close-to-human articulation as well as anatomical landmarks for positioning and patient handling.
- Soft touch of phantom's skin facilitates realistic simulation training scenario including communication skills.
- Radiography with a lower irradiation reducing risk for trainees and stress on the device.
- Enables training free from privacy concerns and inconveniences associated with use of standardized patients.

Applications

- Patient positioning
- Patient transportation
- Plain radiography



Anatomy

Skeletal system

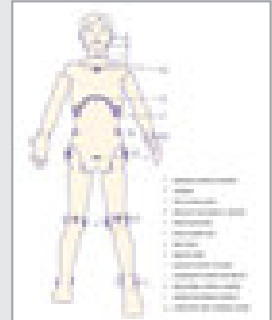
skull, cervical spine, vertebrae, clavicles, scapulae, sternum, pelvis, lungs (no vessels), heart, kidneys, upper and lower arm bones, carpal, metacarpal, femur, kneecaps, lower leg bones, tarsi, metatarsals, phalanges

Internal organs

trachea (up to 1st bifurcation), lungs (diaphragm only), heart, kidneys

Landmarks

external acoustic foramen, mastoid, seventh cervical vertebra, manubrium, xiphisternum, styloid process of radius, superior margin of the symphysis pubis, medial epicondyle of femur/epicondylus lateralis, patella, malleolus (internal condyle /external condyle), subcostal area, landmark on the body surface, trochanter, processus styloideus, ulnae



Set Includes

- 1 whole body phantom
- 1 head supporter
- 1 pajamas

- 1 set of assembly tools
- 1 set of sample X-ray data (DVD)
- 1 manual

Materials

Soft tissue: polyurethane foam (density 0.2)

Skeleton: epoxy resin (density 1.31)

Skull: urethane resin (density 1.12)

Dimensions

Height	Chest Girth	Thickness	Packing Size
165 cm / 64.9 in	85cm / 33.5in	20cm / 7.9in	W113×D59×H37 cm
Weight	Waist Girth	Thickness	W44.5×D23.2×H14.6 in
18 kg / 39.69 lb	75cm / 29.5in	19cm / 7.5in	

Product Code

X-Ray Training Phantom

KKG-PH-79

CT Torso Phantom CTU-41

A one-piece anthropomorphic torso phantom with anatomical structures

Allows various CT approaches including helical scanning



Features

- One-piece structure of the phantom facilitate study in volume CT scan including helical scan.
- The phantom can be used for alignment in Image Guided Radiation Therapy (IGRT)

Applications

- CT

Anatomy

Synthetic bones with cartilage -artificial skull, vertebrae, clavicles, ribs, sternum, scapula, coxal bones, femurs

Internal organs		Hounsfield Number	Internal organs		Hounsfield Number
Soft tissue around each organ		8	Liver		70
Brain	Brain	40	Gallbladder	Whole	40
	Ventricles	10		Vein	20
Eye balls		20	Pancreas		30
Aorta		40	Spleen		50
Vena Cava		40	Kidney	Whole	30
Trachea	Up to the first branch	-800		Vein	40
	The second the third branch	8		Urethra	10
Heart		40	Urethra		10
Pulmonary Blood Vassal		8	Urinary Bladder		10
Cartilage in Costae		90			

Set Includes

1 CT torso phantom	1 storage case
1 set of sample X-ray data (DVD)	1 manual

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

Dimensions

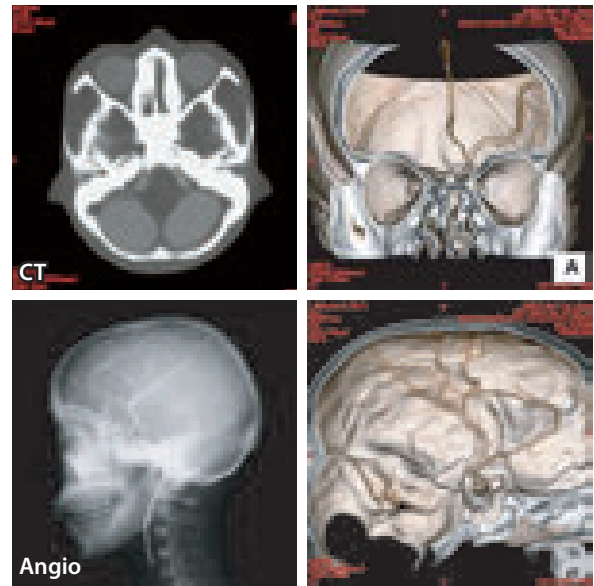
Height	Weight	Packing Size	Packing weight
100 cm / 39.4 in	45kg / 99lb	W119×D53×H48 cm W46.9×D20.9×H18.9 in	59 kg / 130lb

Product Code

CT Torso Phantom KKG-PH-4-41324-040

Angiographic CT Head Phantom ACS

With new variation: Head Phantom for MECT, which contains arteries of innovative water equivalent material.



Features

- Three variations of head phantoms with different features for arteries to meet your requirements:
- CT / Angiography / Multi Energy CT
- Contrast-enhanced left cerebral arteries are three-dimensionally embedded in the brain
- Vessels with 13mgI/ml iodine (MECT type)

Applications

- CT (41309-100)
- Angiography (41309-200)
- Multi-energy CT (41309-300)

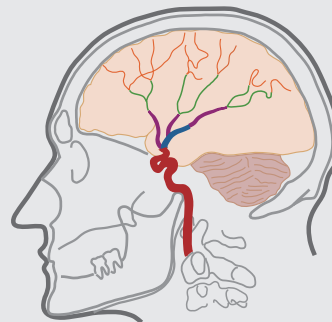
Anatomy

- A synthetic skull
 - Soft tissue
 - Simulated arteries with contrast medium
 - Left anterior cerebral arteries
 - Left middle cerebral arteries
 - Internal carotid artery
 - Diameters of simulated 0.5-4.0 mm
- *Arrangement of arteries are the same for all three types.

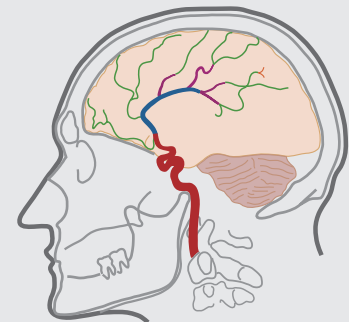
HU

Soft tissue	0	Cerebellum	40
Cerebrum	40	Cerebral ventricles	10
Mesencephalon	40	Eye balls	20

**calculated value at 80 keV



Middle cerebral artery



Anterior cerebral artery

Set Includes

1 head phantom	1 storage case
1 set of sample X-ray data (DVD)	1 manual

Materials

Soft tissue: urethane based resin
Cervical vertebrae (C1-C7): epoxy resin

Dimensions

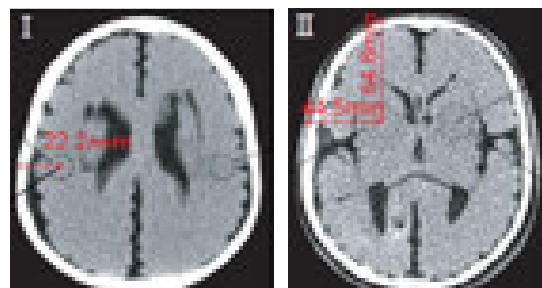
Height	Weight	Packing Size	Packing weight
33 cm / 13 in	5.25kg / 11.57lb	W46×D31×H32 cm W18.1×D12.2×H12.6 in	8 kg / 17.6 lb

Product Code

Angiographic CT Head	KKG-PH-3-41309-100
Angiographic Angio	KKG-PH-3-41309-200
Angiographic MECT	KKG-PH-3-41309-300

CT Stroke Head

Study and training for early detection of acute cerebral stroke



Features

- Sphere shaped simulated lesions (acute stroke) are embedded in the brain.
- This phantom support study and training in visualizing low-contrast lesions in low energy range

Applications

- CT

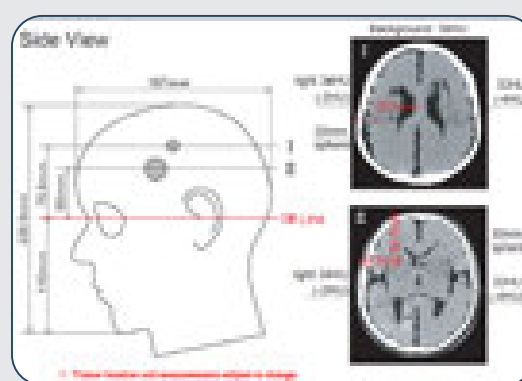
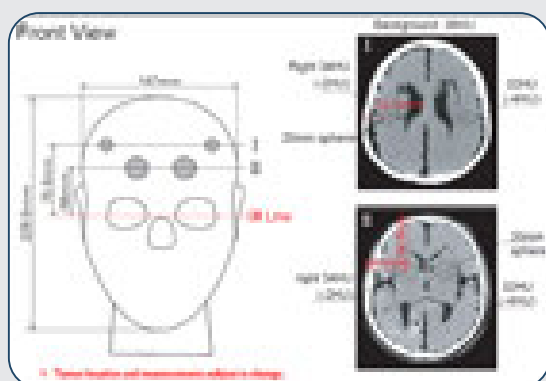
Anatomy and Pathology

- Anatomy
- A synthetic skull
- Soft tissue
- Brain
- Pathology
- Acute stroke (20mm dia. x2, 30mm dia. x 2)

HU (at 60keV)

Soft tissue	0
Cerebrum	40
Mesencephalon	40
simulated lesions (acute stroke)	32
	34

Cerebellum	40
Cerebral ventricles	10
Eye balls	20



Set Includes

- | | |
|----------------------------------|----------------|
| 1 head phantom | 1 storage case |
| 1 set of sample X-ray data (DVD) | 1 manual |

Materials

Soft tissue: urethane based resin (density 1.06)
Skull: urethane based resin (density 1.11)
 Cervical vertebrae (C1-C7): epoxy resin (density 1.31)

Dimensions

Height	Weight	Packing Size	Packing weight
33 cm / 13 in	5.25kg / 11.57lb	W46×D31×H32 cm W18.1×D12.2×H12.6 in	8 kg / 17.6 lb

Product Code

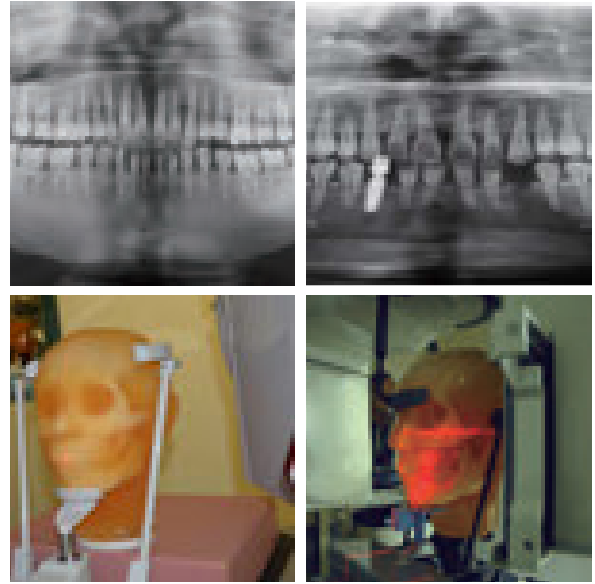
CT Stroke Head KKG-PH-77-41943-000

Dental Radiography Head Phantom

Open / closed mouth options and removable tongue allow a variety of application for training and research



Product supervision:
Akitoshi Katsumata, D.D.S., Ph.D. Professor
Asahi University, School of Dentistry



Features

- Each tooth is separately modeled and has a three-layer structure of enamel, dentin and pulp cavity
- Each hard tissue (enamel, dentin, cortical bone and cancellous bone) has a particular HU number and X-ray absorption rate
- Jaws and tongue are detachable to allow access to the oral cavity, pharyngeal cavity and maxillary sinus. Censors, simulated lesions, or residue can be set in these cavities
- Carotid arteries are prepared as lumens to accommodate simulated calcifications

Applications

- Dental radiography
panoramic (41301-500)
intra-oral (41301-400)

Anatomy and Pathology

- Synthetic skull with
 - » nasal cavity, maxillary sinus, mandible alveolar, maxillary alveolar, cervical vertebrae and hyoid bone, teeth with enamel, dentin and pulp cavity.
 - » Tongue, oral cavity, pharyngeal cavity and carotid arteries

Set Includes

1 main head unit	1 tripod
1 upper jaw (alveolar bone)	1 set of sample X-ray data (DVD)
1 lower jaw (alveolar bone)	1 storage case
1 tongue	1 manual
1 fixation base (including screws)	

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

Dimensions

Phantom size

W20×D21×H29 cm
W7.8×D8.2×H11.4 in

Packing size

W66×D54×H34 cm
W44×D21×H13.3 in

Phantom weight

4.8 kg / 10.6 lb

Packing weight

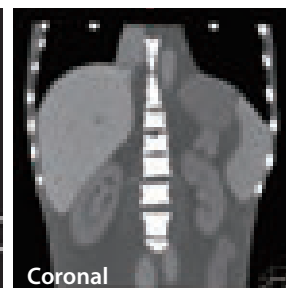
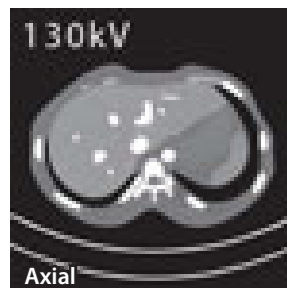
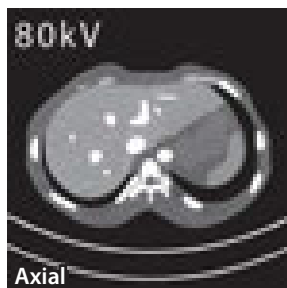
12 kg / 26.4 lb

Product Code

Two-way set	KKG-PH-76-41301-300
Mouth closed	KKG-PH-76-41301-500
Open mouth	KKG-PH-76-41301-400

CT Abdomen Phantom

The phantom facilitates study of image fusion between CT and ultrasound in combination with US-1 Echozy*. New variation for MECT has been added



Features

- Two variation to meet your requirements:
- CT type (no contrast enhancement),
- MECT type (vessels with 13mg/ml** iodine and the liver of multi-energy CT compatible material)

**Concentration of iodine can be custom-ordered.

Applications

- CT
- Multi energy CT

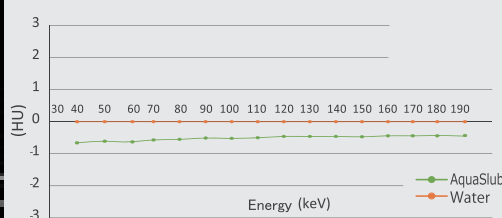
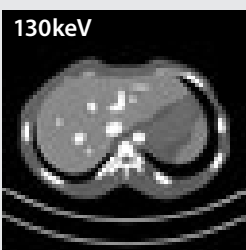
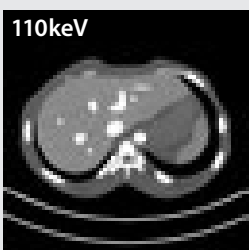
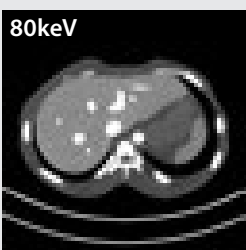
Anatomy

- lungs (no internal structure)
- heart (no internal structure)
- liver
- portal vein
- gallbladder
- hepatic vein
- hepatic artery
- kidneys
- pancreas
- spleen
- aorta
- IVC
- spinal column
- ribs

*Vessels and organs with a contrast agent can be included as a special order.

Images of Multi-Energy CT

Liver and contrast enhanced vessels are of multi-energy compatible AquaSlab. The below right graph shows WEM's high water-equivalency through wide energy range.



Set Includes

- 1 abdomen phantom
- 1 set of sample X-ray data (DVD)

- 1 storage case
- 1 manual

Materials

Soft tissue: urethane based resin (density: 1.06)
Synthetic bone: epoxy resin (density: 1.31)

Dimensions

Phantom Size	Weight	Packing Size	Packing weight
W27×D16×H30 cm W10.6×D16×H11.8 in	12kg / 26.4lb	W46×D31×H32 cm W18.1×D12.2×H12.6 in	19 kg / 42 lb

Product Code

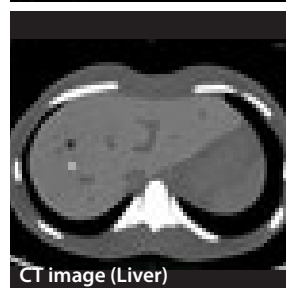
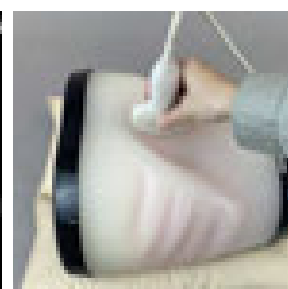
CT	KKG-PH-5-41360-000
MECT	KKG-PH-5-41360-100

Dual Modality Human Abdomen Phantom (CT, Ultrasound)

This Dual-Modality Phantom is a suitable item to conduct studies and training of fusion imaging for a wide range of clinical applications



Ultrasound Images (Liver)



CT image (Liver)



Features

- Fusion image generation training
- Mapping for biopsy (invasive procedures are not possible with this phantom)
- Surgical planning
- Radiation therapy planning
- Training for imaging skills in Ultrasound and CT

Applications

- CT
- Ultrasound



Anatomy

Liver

- (segmental anatomy, portal and hepatic venous systems, ligament, teres and ligamentum venosum)

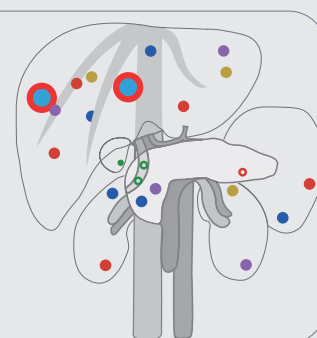
Biliary tract

- (gallbladder, cystic duct, intrahepatic and extrahepatic bile ducts)
- Spleen / kidneys

Detailed vascular structures

- (aorta, vena cava, celiac artery and its branches, portal vein and its branches, superior mesenteric vessels, renal vessels, and more)

	Liver HU70	Gall bladder HU20	Pancreas HU30	Spleen HU50	Kidney (r) HU30	Kidney (l) HU30
anechoic [●] ϕ 10mm	3 HU50		1 HU10	1 HU10	1 HU10	
hypoechoic [●] ϕ 10mm	2 HU50					1 HU10
isoechoic [●] ϕ 10mm	2 HU90		1 HU10			1 HU10
hyperechoic [●] ϕ 10mm	2 HU90		1 HU10		1 HU10	
double edge [●] ϕ 20mm	2 HU90					
stone [●] ϕ 5mm		1 HU170				
[●] ϕ 3mm			2 HU170			



Set Includes

- | | |
|----------------------|----------------|
| 1 abdomen phantom | 1 storage case |
| 1 positioning pillow | 1 manual |
| 1 talcum powder | |

Materials

polyurethane

Dimensions

Phantom Size	Weight
W29×D19×H31 cm	12 kg / 26.5 lbs
W11.4×7.5×12.2 inch	

Product Code

CT KKG-PH-5-41360-000

Stomach Phantom BMU-1

Stomach phantom for double contrast gastrography



Features

- Life-size distended stomach with lesions modeled from real specimens
- Barium can be poured in the stomach for imaging
- Pathologies include early cancer and gastric ulcer

Set Includes

- 1 stomach phantom
- 1 storage case

Dimensions

Phantom Size	Weight	Packing Size	Packing weight
W30×D20×H33 cm W11.8×D7.9×H13 in	16 kg / 35.3 lb	W51×D39×H51 cm W20×D15.3×H20 in	20 kg / 44 lb

Applications

- Double contrast gastrography

Materials

Soft tissue: urethane based resin (density: 1.31)

Product Code

Stomach Phantom KKG-PH-18-41311-000

Rotation Stomach Phantom TMP-R

Rotatable phantom to simulate double contrast gastrography



Features

- Rotation system to simulate the movement of patient
- Life-size distended stomach with lesions modeled from real specimens
- Barium can be poured in the stomach for imaging
- Pathologies include early cancer and gastric ulcer

Set Includes

- 1 stomach phantom
- 1 rotation unit
- 1 controller
- 1 supporting pole
- phantom holder
- model of lesions
- storage case

Applications

- Double contrast gastrography

Dimensions

Phantom Size
W25×D18×H28 cm
W9.8×D7.1×H11 in

Materials

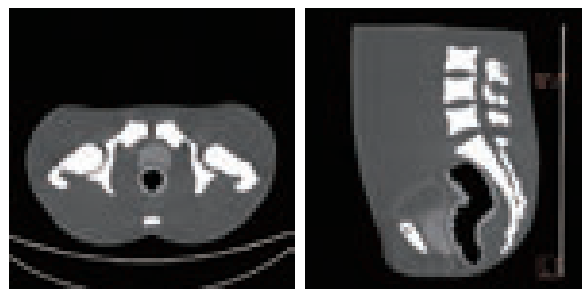
Urethane based resin /
epoxy resin

Product Code

Rotation Stomach Phantom KKG-PH-19-41312-010

CT Prostate Phantom

Excellent phantom for therapy planning of prostate cancer



Features

- For alignment in Image Guided Radiation Therapy (IGRT)
- Organs with close-to-human HU facilitate training in CT scanning

Anatomy

- Prostate, urinal bladder with simulated internal fluid, seminal vesicles and rectum
- Bones: L3, L4 and L5, pelvis and femurs (partial)

Dimensions

Packing Size	Phantom Height	Packing weight
W44×D39×H42 cm W17.3×D15.3×H16.5 in	35 cm / 13.7 in	27 kg / 59.5 lb

Applications

- CT and Cone beam CT

Organs	HU at 80KeV	Organs	HU at 80KeV
Prostate	50	Bladder inside	10
Seminal vesicles	25	Rectal surface	70
Bladder surface	30	Rectal inner cavity	-800

Materials

Soft tissue: urethane based resin (density: 1.31)

Set Includes

- 1 stomach phantom
- 1 storage case

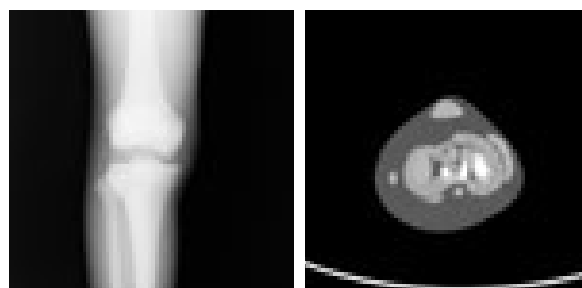
Product Code

CT Prostate Phantom

KKG-PH-46-41362-000

Knee Ligament Phantom

Detailed knee anatomy with HU of each bone, cartilage including meniscus and ligament



Features

- Anthropomorphic knee phantom that allows visualization of ligaments and cartilage
- Close-to-human radiation absorption and HU for each respective anatomical structure as well as realistic artifacts

Anatomy

femur / tibia / fibula / patella / articular cartilage of patella / meniscus / cruciate ligament / medial collateral ligament / fibular collateral ligament / articular cartilage

Dimensions

Packing Size	Phantom Weight
14 dia.×45(H) cm 5.5 dia.×17.7(H) in	4.5 kg / 10 lb

Applications

- Plain X-ray
- CT

Set Includes

- 1 knee phantom
- 1 storage case
- 1 manual

Materials

Soft tissue: urethane based resin (density: 1.31)

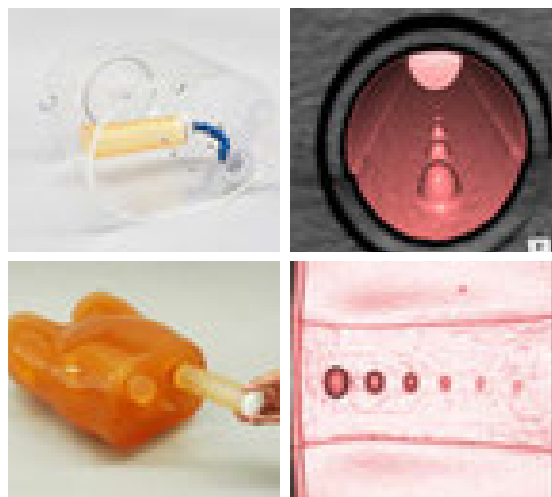
Product Code

Knee Ligament Phantom

KKG-PH-71-41935-000

CT Colonography Phantom NCCS

Innovative study tool for safe and effective CT Colon screening



Features

- Cylindrical colon units with targets that represent polyps can be set at the position of ascending colon, descending colon and rectum in the life-size lower torso phantom
- Four types of colon units are included for evaluation. Each unit has six targets lining in sequence on the inner wall of the unit
- Contrast agent can be poured into the colon units for tagging
- Pencil shaped ion chambers can be inserted in the center of the phantom for CTDI measurement

Applications

- Virtual colonography
- Visualization and detection of targets
- Study on optimal dose for low dose CT colonography
- Evaluation of accuracy of measurement (size, volume)
- Study on optimal density of contrast media

Variation of Simulated Tumors

Depressed
type 2
variations

Virtual Endoscope View

Depressed I: fixed diameter

a: Outer diameter	b: Inner diameter	c: Height
0.7 cm/ 0.27 in	0.35 cm/ 0.13 in	0.2 cm/0.07 in
		0.15 cm/0.06 in
		0.1 cm/0.03 in
		0.05 cm/0.02 in
		0.025 cm/0.01 in
		0.015 cm/0.005 in

Depressed I: fixed diameter

a: Outer diameter	b: Inner diameter	c: Height
0.7 cm/ 0.27 in	0.35 cm/ 0.13 in	0.2 cm/0.07 in
		0.15 cm/0.06 in
		0.1 cm/0.03 in
		0.05 cm/0.02 in
		0.025 cm/0.01 in
		0.015 cm/0.005 in

Projection
type 2
variations

Virtual Endoscope View

Projection I: fixed diameter

a: Diameter	b: Height
1.0 cm/ 0.4 in	0.7 cm/0.27 in
	0.5 cm/0.20 in
	0.3 cm/0.11 in
	0.2 cm/0.07 in
	0.1 cm/0.03 in
	0.05 cm/0.02 in

Projection II: fixed ratio

a: Diameter	b: Height
1 cm/0.4 in	1.0 cm/0.39 in
0.7 cm/0.27 in	0.7 cm/0.27 in
0.5 cm/0.2 in	0.5 cm/0.20 in
0.3 cm/0.11 in	0.3 cm/0.11 in
0.2 cm/0.07 in	0.2 cm/0.07 in
0.1 cm/0.03 in	0.1 cm/0.03 in

Set Includes

1 lower torso phantom	1 plug for ion chamber hole
1 acrylic container	1 holder for colon unit
1 types of colon units	1 base holder
1 plugs for colon unit hole	1 storage case
1 plug with ion chamber hole	manual

Product Code

CT Colonography Phantom

KKG-PH-49-41910-000

Materials

Soft tissue: urethane based resin (density: 1.06)

Synthetic bone: epoxy resin (density: 1.31)

Dimensions

Packing size	Packing weight
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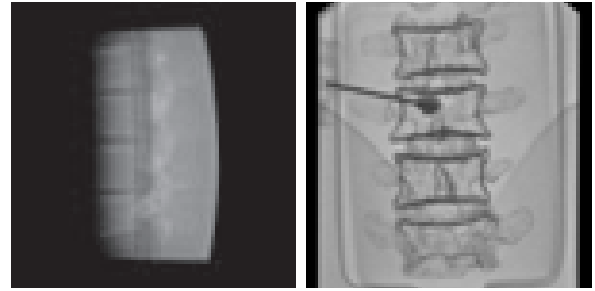
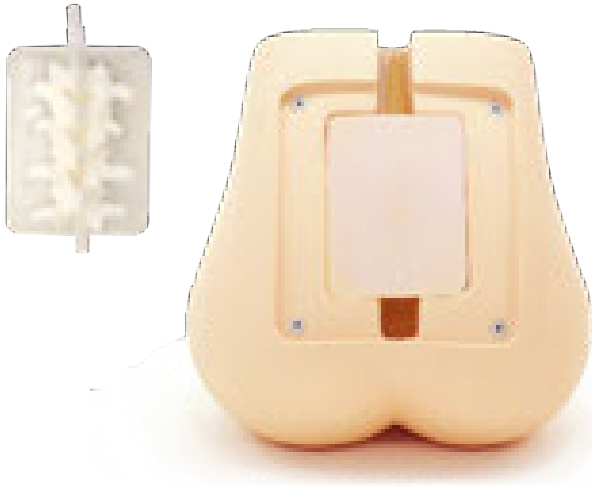
W63×D50×H29 cm
W24.8×D19.6×H11.4 in

32 kg / 70.5 lb

Lumbar Spine Fluoroscopy Training Phantom

Ideal training tool for hands-on workshop of vertebroplasty

The phantom has two types of interchangeable and replaceable inserts with radio-opaque lumbar spine



"I have tested the final product with various different manufacturing kits and would have no hesitation in recommending these phantoms to clinicians who wish to teach any of the technical vertebroplasty procedures."

Dr David J Wilson MBBS BSc MFSEM FRCP FRCR
Consultant Musculoskeletal Interventional Radiologist

Features

- Two types of replaceable training block vertebroplasty block and anesthesia block
- Lumbar spine from L2-L5 can be visualized under X-ray.
- Realistic sensation when penetrating tissue and bones

Anatomy

- Lumbar spine (L2-L5)
- Spinal canal
- Epidural space (anesthesia block only)

Set Includes

1 lumbar torso	1 syringe
1 vertebroplasty block	1 irrigation bag
1 anesthesia block	1 storage case
1 skin cover	1 manual

Product Code

Lumbar Spine Fluoroscopy

KKG-PH-51-41913-000

Training Skills

- Recognition of fluoroscopic anatomy and landmarks
- Vertebroplasty
- Fluoroscopy guided epidural anesthesia:
needle placement in facet joint injection, root block and discogram.

Materials

Soft tissue: urethane based resin (vertebroplasty block) silicone (anesthesia block)

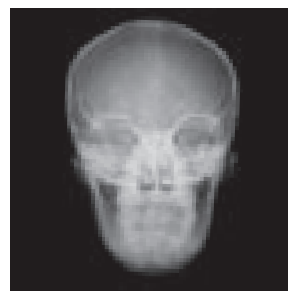
Synthetic bone: epoxy resin

Dimensions

Phantom size	Packing size
W33×D21×H30 cm	W52×D44×H30 cm
W13×D8.2×H11.8 in	W20.4×D17.3×H11.8 in

Sectional Phantom Series

Sectional phantoms allow for imaging of individual anatomy as needed



Features

- Opaque and transparent types for a diverse training possibility
 - » Opaque: advanced version with close-to-reality challenges in imaging
 - » Transparent: visible bones facilitate understanding in keys for positioning
- Movable joints of the knee and the elbow for realistic positioning

Applications

- Plain X-ray

Items

Region	Code	Product Name	Note
	41926-000	Head (Opaque)	Stand-alone design can be used with the adjustable head positioning stand to demonstrate accurate skull positioning
	41926-010	Head (Transparent)	
	41926-060	Thorax (Opaque)	Includes thoracic skeletal system with embedded mediastinal space and bronchus to provide realistic imaging. The scapulae are rotated outside of the lung fields for PA chest imaging. *Capillaries are not included
	41926-070	Thorax (Transparent)	
	41926-080	Pelvic (Opaque)	
	41926-140	Right Elbow (Opaque)	Natural flexion range allows for AP/lateral and partial flexion views with one phantom
	41926-150	Right Elbow (Transparent)	
	41926-020	Right Hand (Opaque)	Spread finders for PA projection
	41926-030	Right Hand (Transparent)	
	41926-040	Left Hand (Opaque)	Oblique position AP oblique projection
	41926-050	Left Hand (Transparent)	
	41926-180	Right Knee (Opaque)	Movable patella and joint with flexion allow for realistic positioning of the knee for AP, lateral, oblique, sunrise and tunnel views
	41926-190	Right Knee (Transparent)	
	41926-100	Right Foot (Opaque)	Dorsiflexion
	41926-110	Right Foot (Transparent)	
	41926-120	Left Foot (Opaque)	Plantar flexion
	41926-130	Left Foot (Transparent)	

Set Includes

- 1 phantom
- 1 set of sample X-ray data (DVD)
- manual

*41926-000/010 comes with an adjustable head supporter

Materials

Soft tissue: urethane based resin

Synthetic bone: epoxy resin (density: 1.31)

Skull: epoxy resin (density: 1.2)

*Phantom has no metal parts or liquid structure

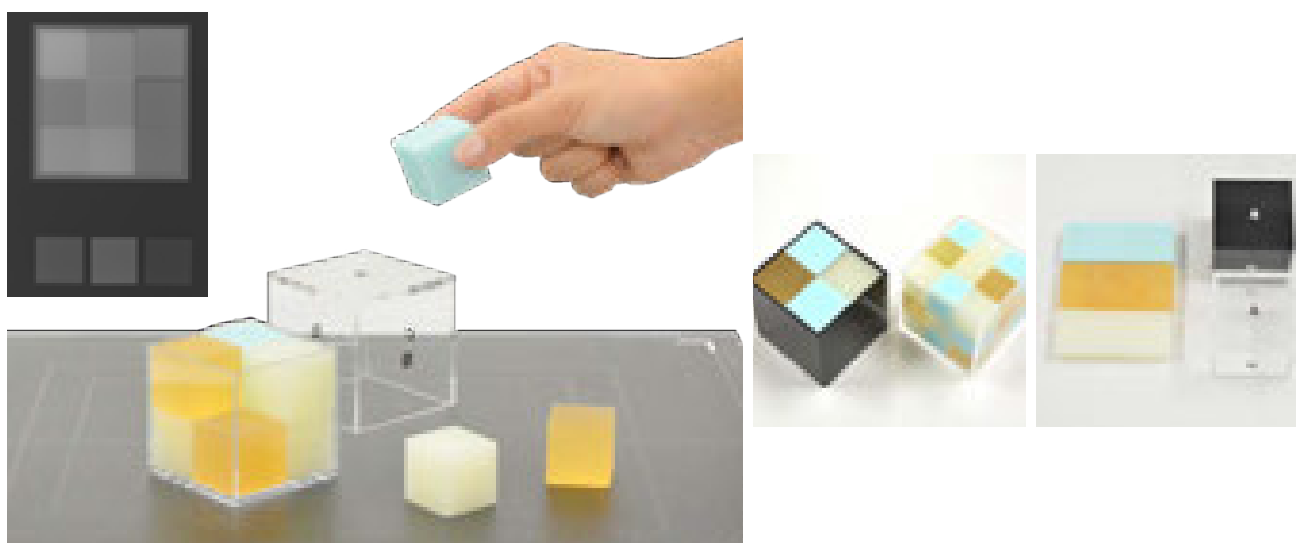
Product Code

CT Colonography Phantom

KKG-PH-61-41926-000

Radiology Cube Phantom XCUBEFAN

Designed for beginners to provide better understanding of the special characteristics seen in radiology imaging



Features

- Compact yet practical education tool on usage of x-ray equipment and the interpretation of diagnostic images
- Provides a large range of practice by stacking and repositioning different blocks with varied radiodensities
- Includes black and clear container boxes for practice and visual explanation

Applications

- Plain X-ray
- Interpretation

Anatomy

Active learning through FAN (fun) of competition and game



Photo by courtesy of Komozawa University, Japan

1. Arrange the cubes

Arrange cubes in the black case and hand it to the challengers.

2. Select parameters and acquire images

The challengers radiograph the black case.

3. Analyze the images

The challengers reason and infer to find out the three dimensional arrangement of cubes in the black case.

Three kinds of cubes with different HU

	HU	Density	Material
Orange	0	1.06	Polyurethane
Blue	500	1.4	Epoxy
Yellow	1000	1.21	Epoxy

Set Includes

- 1 XCUBEFAN case (clear)
- 1 XCUBEFAN case(black)
- 5 orange cube (30mm)
- 5 blue cube (30mm)
- 5 yellow cube (30mm)
- instruction manual

- 1 XCUBEFAN case (clear)
- 1 XCUBEFAN case(black)
- 10 orange cube (20mm)
- 10 blue cube (20mm)
- 10 yellow cube (20mm)
- instruction manual

Dimensions

Phantom size

30mm cube:
3×3×3 cm each
1.18×1.18×1.18 in each

20mm cube:
2×2×2 cm each
0.78×0.78×0.78 in each

Packing size

W36×D25×H19 cm
W14.2×D 9.8×H 7.5 in

Materials

Phantom cube: epoxy, polyurethane

Case: acrylic

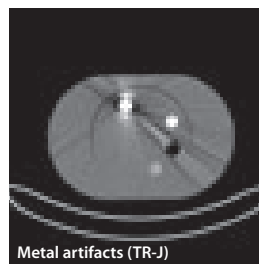
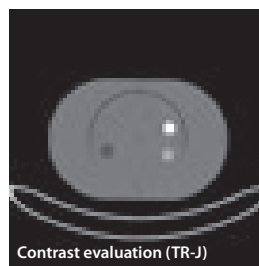
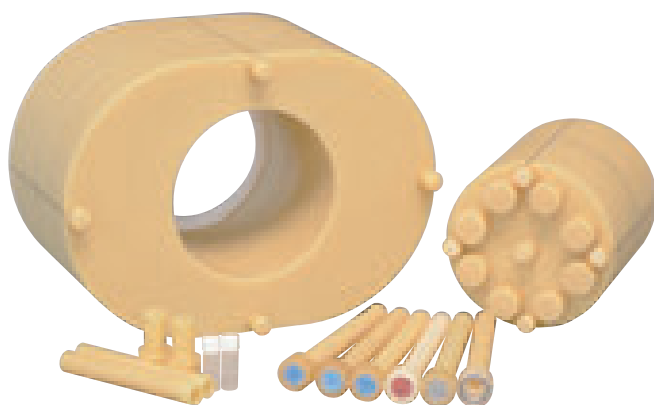
Product Code

Radiology Cube Phantom XCUBEFAN

KKG-PH-78-41944-000

Multi Energy CT Quality Assurance Phantom

Water Equivalent Material "Aqua Slab", various inserts and empty bottles enable to verify the appropriate Multi-Energy CT settings



Features

- Phantom made of innovative water equivalent material "Aqua Slab"
- Empty bottles allow for the insertion of various research samples and observation under Multi-Energy CT
- Help to save time and costs of preparing custom-made phantoms
- Two different sizes of truck (body) phantom. (TR-I, TR-J)

Inserts

Color	Name	Size	Qty
Silver	Water Equivalent Material Inserts	dia.20mm	8
Red	Titanium Insert	dia.12mm	1
Blue	Soft tissue (equivalent to liver)	dia.20mm	1
Blue	Iodine concentration 4mgI/mL	dia.20mm	1
Blue	Iodine concentration 8mgI/mL	dia.20mm	1
Transparent	Iodine concentration 12mgI/mL	dia.20mm	1
	Water container	dia.20mm	1
	Empty bottle with spacer *for experiment		20

Applications

Study for:

- ME-CT image analysis protocol
- Metal artifact reduction
- Reduction of contrast media

Evaluation Parameters

- Uniformity
- Signal-to-noise ratio (SNR)
- Image contrast
- CT dose index (CTDI)

Set Includes

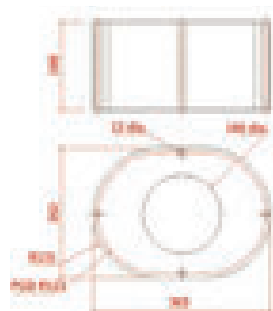
1 truck phantom	1 soft tissue insert
1 internal cylindrical phantom	1 water container inserts
9 filling inserts for dosimeter holes	20 empty bottles
8 "Aqua Slab" inserts	8 spacers for empty bottles
3 iodine inserts (4, 8, 12mgI/mL)	manual
1 titanium insert	

Product Code

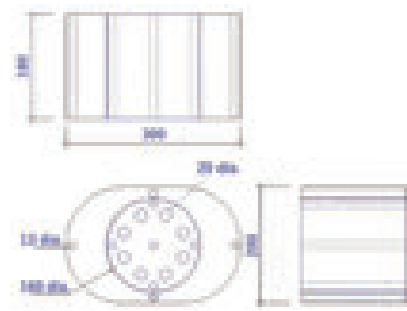
Multi Energy CT QA (TR-I)	KKG-PH-75B-41941-000
Multi Energy CT QA (TR-J)	KKG-PH-75A-41941-000

Dimensions

Phantom size (TR-I):



Phantom size (TR-J):



Multi Energy CT Quality Assurance Phantom-TR-A type

“Aqua Slab” CTQA phantom with equidistance placement of inserts, meeting international recommendation



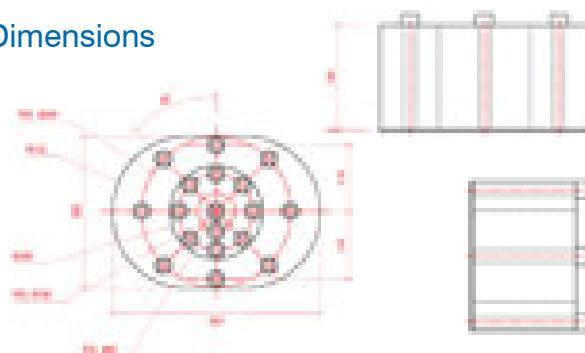
Features

- The sectional areas of the assembled phantom with the truck phantom and the independently used inner phantoms are equal to those of the CTDI body and the head phantom respectively
- The holes to accommodate sample inserts and dosimeters for evaluation are placed concentrically at equidistance from the isocenter, along with the one placed off the center, meeting international recommendation for CTQA

Applications

Study for ME-CT image analysis, artifact reduction, contrast media

Dimensions



Product Code

Multi Energy CT QA (TR-A)

KKG-PH-75C

Daily QA Phantom WEM “Aqua Slab”

Water Equivalent Material “Aqua Slab” updates tasks of daily QA



Features

- Phantom made of water equivalent material “Aqua Slab”
- Help to save time and costs of preparing water phantoms for researchers

Dimensions

Dimensions [41948-000] 20×D20×H20 cm
[41948-100] 20×D20×H21.5 cm
Weight 41948-000 / 6.4Kg
41948-100 / 6.5Kg

Applications

Daily QA of CT

Materials

Polyurethane

Product Code

Daily QA Phantom WEM

KKG-PH-80

Set Includes

1 aqua slab phantom

"Aqua Slab" Multi-Energy CT Compatible Material

For Quality Assurance and Research

Overview

Multi-Energy CT (MECT) or Dual Energy CT (DECT) represents a new frontier in rapidly advancing medical imaging and is now being integrated into clinical practices in hospitals.

This technology enables material differentiation, elemental decomposition, and material quantification.

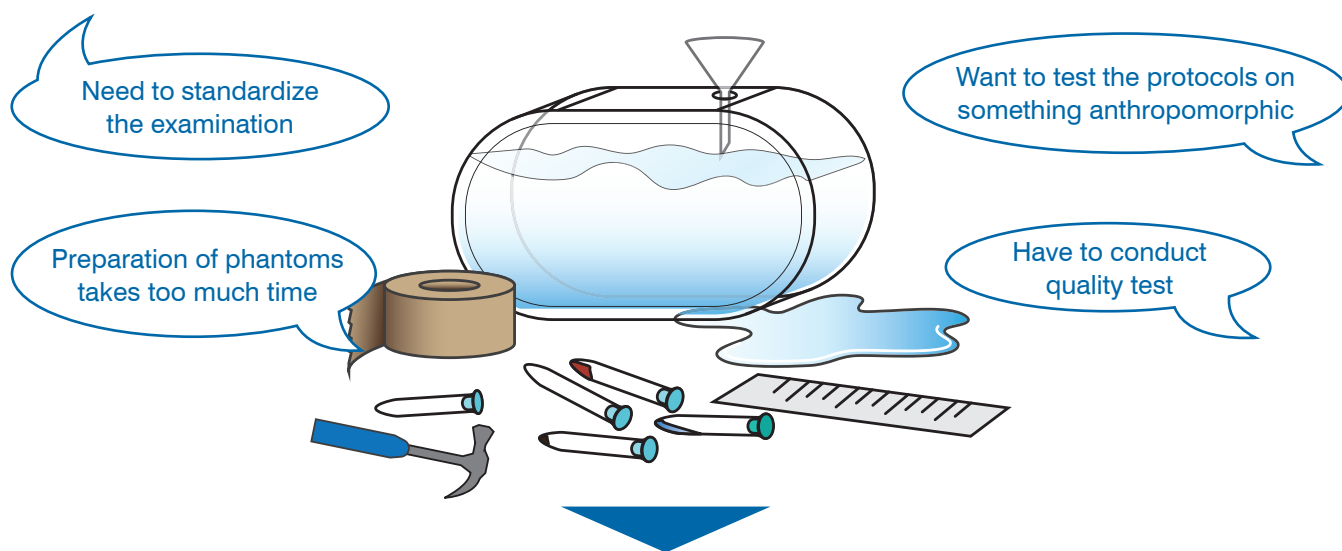
Such capabilities are expected to enhance diagnosis, improve image quality, reduce radiation exposure, minimize contrast agent volume, and pave the way for functional imaging. Nevertheless, further studies are needed across various fields, including CT equipment quality management, protocol verification, and expansion of clinical applications, to fully realize the benefits of this technology.

Kyoto Kagaku supports researchers and clinicians with state-of-the-art innovative phantoms.

Background

In numerous MECT/DECT studies, water phantoms have been utilized. However, employing real water can entail significant effort in preparation and handling. Meanwhile, the use of acrylic containers restricts the design of phantoms.

Kyoto Kagaku supports researchers and clinicians with state-of-the-art innovative phantoms.



Kyoto Kagaku Multi-Energy CT phantom series assists you promptly, saving your time and energy

Phantoms can be made in complex and detailed shapes including anatomical structures

Product Lineup

Iodine concentrations can be custom-ordered
Contact us!



Angiographic CT Head Phantom ACS
Head with MECT compatible arteries

CT Abdomen Phantom
Abdomen with MECT compatible vessels and liver



Gout Foot Phantom
Reference product



Multi Energy CT Quality Assurance Phantom
Phantom for quality assurance.
A variety of research samples can be inserted.

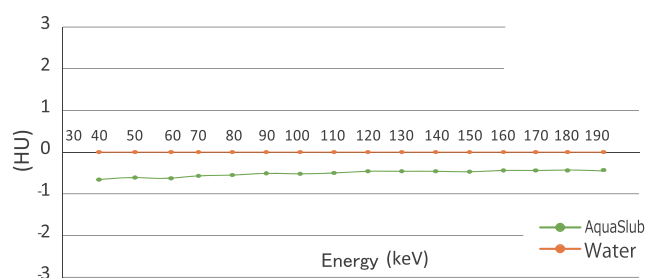


Significant Features of “Aqua Slab”

About “Aqua Slab” Water Equivalent Material

Aqua Slab has high equivalency to water in diagnostic energy ranges (40-190KeV)

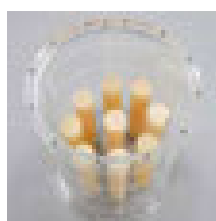
Co-developed with; ICHIKAWA Katsuhiro, Ph.D., Professor, Faculty of Health Sciences, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University, Japan



Experiment

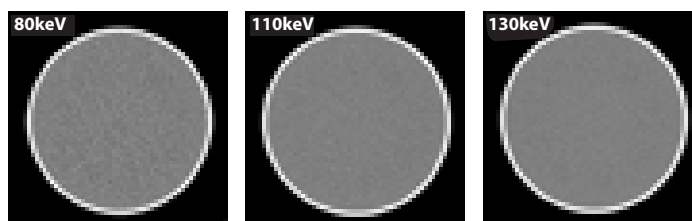
Scan different material inserts (rods) in a water tank

Rods are not shown in the CT images!!



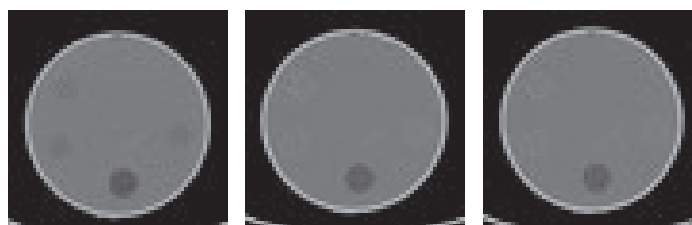
Aqua Slab

Nine rods of AquaSlab are “invisible” under CT



conventional materials

Two rods of Aqua Slab and four rods of conventional materials

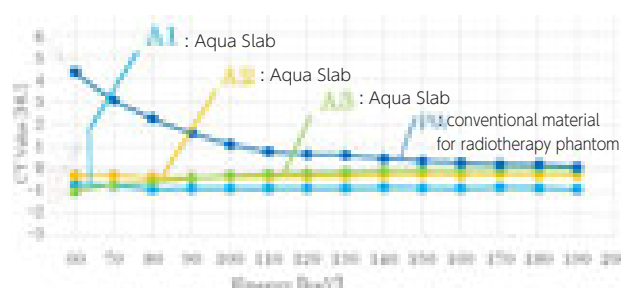


Supports iodine quantification and material-decomposition

Unlike conventional ‘water substitute’ materials, the Aqua Slab maintains water equivalency under low energy ranges. This feature supports studies that involve iodine quantification.

Saves time and effort for research and explore new possibilities.

Helps to save time, costs, and effort instead of designing and producing custom-made acrylic water phantoms. Unlike phantoms that use real water, solid material (Aqua Slab) phantoms eliminate the cumbersome process of changing water and internal rods.



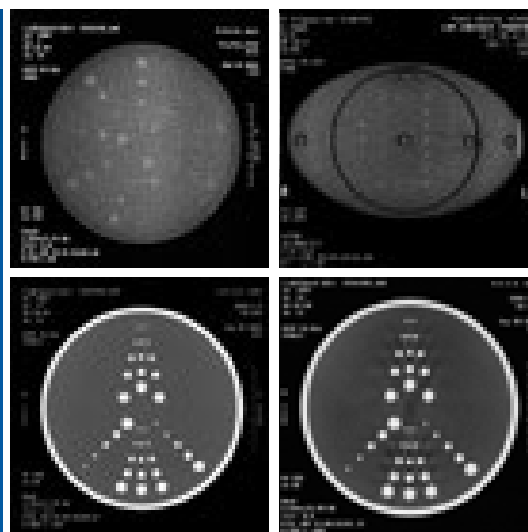
Ryota Matsui, Ishikawa Katsuhiro, Hiroki Kawashima, "Development of highly precise Water Equivalent phantom for CT machine" Ichikawa Lab, Kanazawa Univ. <http://ichiken.w3.kanazawa-u.ac.jp/img/file2.pdf> (cited 2019-05-20)

Conclusion

1. Kyoto Kagaku Multi-Energy CT phantoms can save time and costs rather than preparing custom-made phantoms for researchers.
2. The water equivalent material “Aqua Slab” allows for the creation of phantoms with innovative designs while ensuring the credibility of water phantoms.

Multi Slice CT Phantom MHT

The phantom can be used to evaluate CT features such as high and low contrast resolutions, slice direction, and CTDI.



Features

- Non-aqueous/Easy Set-up enables liquid-free evaluation session
- The phantom is designed to allow evaluation in volume scanning

Evaluation Parameters

- CTDI
- Contrast resolution
- Contrast-to-Noise Ratio (CNR) evaluation
- Evaluation of effective slice thickness
- Sensitivity profile
- SSPz evaluation

Applications

- CT

Set Includes

- | | |
|---|--------------------------------|
| 1 | low contrast phantom |
| 1 | high contrast phantom |
| 1 | elliptical absorber |
| 1 | low contrast phantom with CTDI |

Materials

Acrylic resin, polyurethane

- | | |
|---|-------------------------|
| 1 | micro disc phantom |
| 1 | angle adjustment holder |
| 1 | storage case |
| | manual |

Product Code

Multi Slice CT Phantom MHT

KKG-PH-9-41334-100

Ladder Phantom

Designed for measuring spatial resolution in CT, assuming contrast-enhanced blood vessels



Set Includes

- | | |
|---|-------------------------|
| 1 | outer phantom |
| 1 | ladder phantoms |
| 1 | storage case |
| 1 | angle adjustment holder |

Materials

Measurement region: epoxy resin, hydroxyapatite

Base: acrylic resin

Dimensions

Vessel width:

0.3, 0.4, 0.6, 0.7, 0.8, 1.0, 1.2, 1.5 mm
0.012, 0.016, 0.024, 0.028, 0.032, 0.039, 0.047, 0.059 in

Vessel length: 5 mm / 0.19 in:

(5 mm thick, with 5 lines of vessels each)

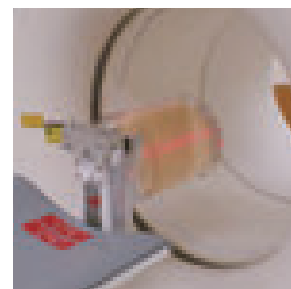
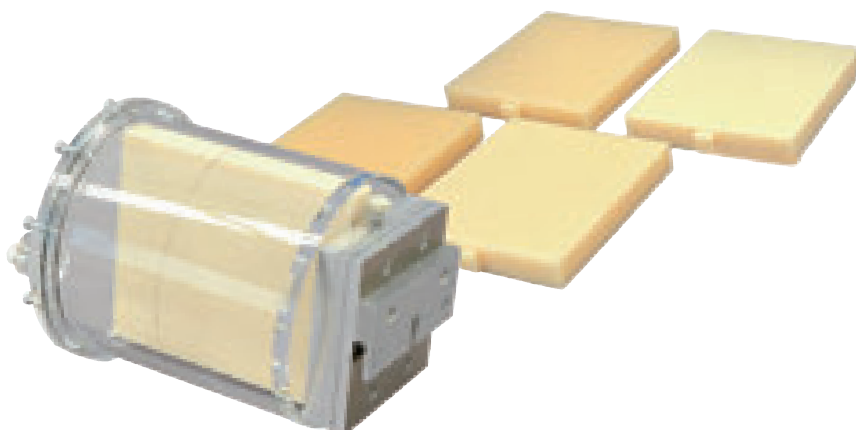
Product Code

Ladder Phantom

KKG-PH-9-2-41334-130

CT ERF Phantom HIT

A phantom designed for physical evaluation of iteratively reconstructed images under low CNR

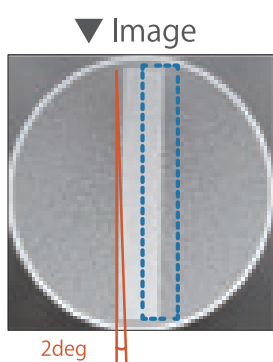


Features

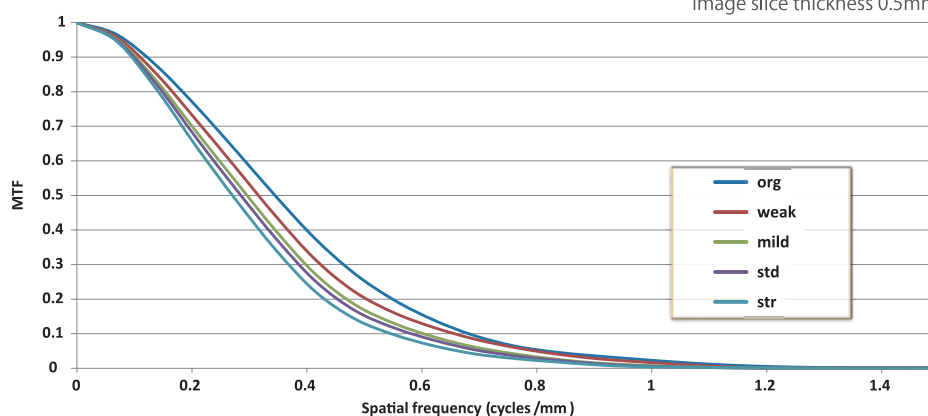
- This phantom designed to physically evaluate the performance of successive approximation reconstruction images under low CNR conditions when MTF evaluation by PSF is not very appropriate without deviating from clinical practice.
- This phantom is used to evaluate MTF from low-CNR images using the ESF method, which measures the blurring of block edges, so that performance characteristics in reconstructed images applying successive approximation under low-CNR conditions can be determined.

Applications

- CT



▼ Modulation Transfer Function
image slice thickness 0.5mm



Set Includes

- 1 cylindrical container (200 mm dia.)
- 5 measurement plates
- 1 rotation holder
- 1 petroleum jelly
- 1 angle adjustment holder

- 1 fixture for the cylindrical container
- 1 philips screw driver
- extra screws
- 1 storage case
- manual

Dimensions

Phantom size:
20 dia. × 25 cm
7.8 dia. × 9.8 in
Phantom weight:
4.5 kg / 10 lb

Materials

Acrylic resin, polyurethane

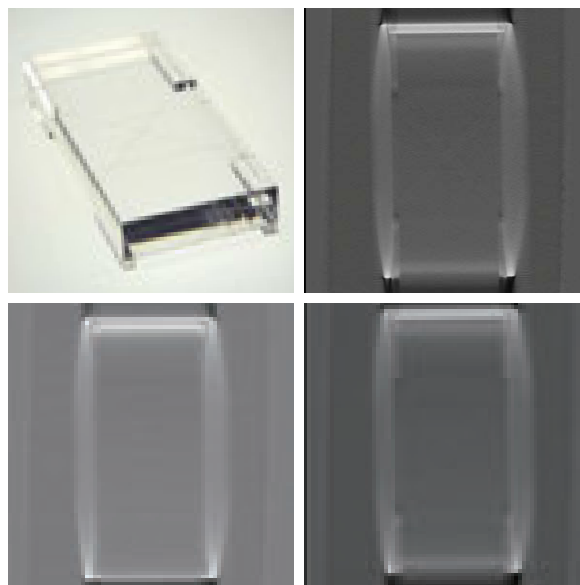
Product Code

CT ERF Phantom HIT

KKG-PH-55-41920-100

Tomosynthesis Phantom NS

Allowing evaluation of reconstruction slices and uniformity in the measurement of slice thickness through showing the images numerically and graphically



Applications

- Tomosynthesis

Evaluation Parameters

- Verification of reconstruction interval
- Slice thickness
- Uniformity

Reconstruction interval unit	Slice thickness unit	Uniformity unit	Height setting rack
20mm thick Upper side: three parallel lines Lower side: cross lines For verification of the spatial interval in reconstruction Stainless steel line: 0.1 mm/0.004 in dia.	For calculation of slice thickness using FWHM Hole: 1.0 mm/0.04 in dia. Aluminum plate: 0.5mm/0.02 in thick Acrylic plate 5mm/0.2 in thick. *the aluminum plate is sandwiched between layers of Acrylic 70×150 mm/2.8×5.9 in	For evaluation of uniformity and tilting of the examination table 70×150 mm/2.8×5.9 in	Test units can be set in the aluminum supporting box at 10, 15 or 20 mm (0.4,0.6 or 0.79 in) height

Set Includes

- 1 reconstruction positioning unit
- 1 slice thickness unit
- 1 uniformity unit
- height setting rack
- manual

Materials

Acrylic resin, Bakelite, aluminum, copper, stainless

Dimensions

Phantom size: W7×D15×H25 cm / W2.7×D6×H9.8 in
Packing size: W46×D31×H17 cm / W18.1×D12.2×H6.7 in
Packing weight: 2 kg / 4.4 lb

Product Code

Ladder Phantom

KKG-PH-9-2-41334-130

CT-DI Phantom (Head and Body Phantom)

A set of phantoms for CTDI-100, conforming to requirements described in 21 CFR 1020.33, IEC 61223-3-5: 2004, and IEC 61223-2-6: 2006 as consistency test



A set with different type of tissue substitute can be custom-ordered

Features

- Represent adult head and body as well as pediatric body
- Can be used for initial and follow-up QA tests

Set Includes

- | | |
|---|--------------|
| 1 | head phantom |
| 1 | body phantom |
| 1 | filling rods |
| | manual |

Materials

Acrylic resin

Evaluation Parameters

- Computed Tomography Dose Index (CTDI)
- Dose profile

Dimensions

Body phantom: 32 dia. × 15 cm / 12.6 dia. × 5.9 in

Head phantom: 16 dia. × 15 cm / 6.3 dia. × 5.9 in

Phantom weight: 15kg / 33lb, 4kg / 8.8lb

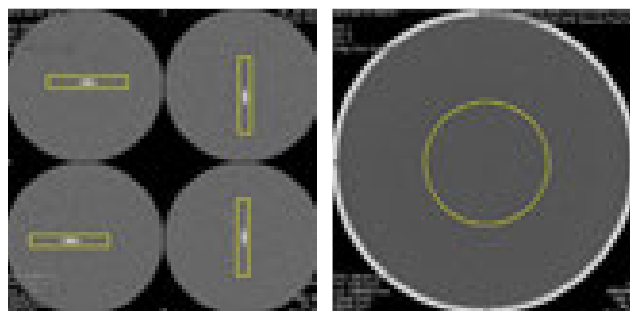
Product Code

Ladder Phantom

KKG-PH-59-41924-000

CT QA Phantom JCT II

CT QA phantom for acceptance test as well as daily QC



Features

- The phantom can be used for initial and follow-up QA tests listed below, described in JIS Z 4752-3-5: 2008 (IEC 61223-3-5: 2004) and Z 4752-2-6: 2012 (IEC 61223-2-6: 2006)
- Conforming to JIS Z 4923:2015

Set Includes

- | | | | |
|---|--------------------------------|---|---------------------------------------|
| 1 | cylindrical container | 1 | fixture for the slice thickness unit |
| 1 | slice thickness unit (axial) | 1 | fixture for the cylindrical container |
| 1 | spatial resolution unit | 1 | Vaseline |
| 1 | repeated pattern unit | 1 | set of screws (spare) |
| 1 | low contrast resolution unit | 1 | angle adjustment holder |
| 2 | slice thickness unit (helical) | | manual |

Materials

Acrylic resin, polyurethane, stainless

Evaluation Parameters

- Axial scan: Slice thickness / spatial resolution / low contrast resolution / noise / mean HU number / uniformity
- Helical scan: Slice thickness

Dimensions

Phantom size: 20 dia. × 20 cm / 7.9 dia. × 7.9 in

Phantom weight: 3 kg / 6.6 lb

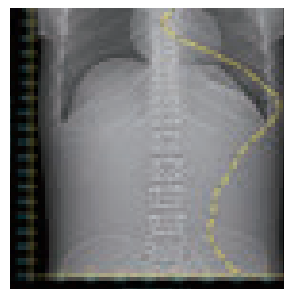
Product Code

CT QA Phantom JCT II

KKG-PH-54-41919-000

CT-AEC Phantoms

Four types of phantoms designed to evaluate CT-AEC performance



example of CT-AEC with an anthropomorphic phantom

Features

- Image quality can be evaluated by noise and S.D. on the phantom section images

Applications

- CT-AEC

Variations



Cone Phantom:

evaluates performance of AEC for different patient sizes and gradual size changes in size along the axis



Elliptical Cone Phantom:

in combination with the Cone phantom facilitates evaluation of XY AEC



Variable-XY Phantom:

evaluates performance of XY AEC as cross section changes from circular to elliptical



Stepped Phantom:

evaluates the performance of the AEC to sudden changes in patient's cross section

Set Includes

- phantom with an attachment bracket

Materials

Acrylic resin

Dimensions

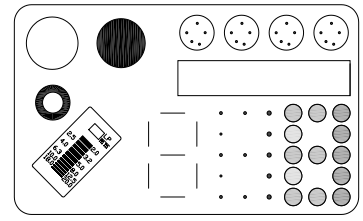
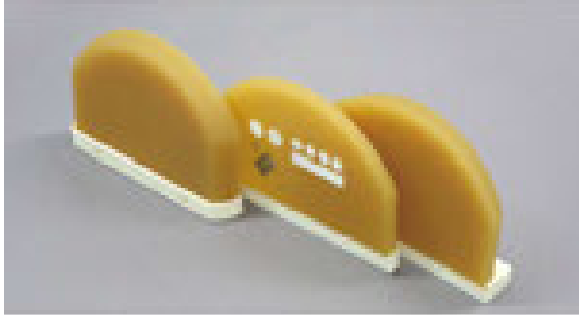
Phantom size: W7×D15×H25 cm / W2.7×D6×H9.8 in
Packing size: W46×D31×H17 cm / W18.1×D12.2×H6.7 in
Packing weight: 2 kg / 4.4 lb

Product Codes

Cone (Apollo Phantom)	KKG-PH-7-41339-010
Elliptical Cone Phantom	KKG-PH-7-41339-020
Stepped Cylinder Phantom	KKG-PH-7-41339-030
Variable XY Phantom	KKG-PH-7-41339-040

Digital Mammographic Phantom NCCE

An integrated QA phantom for digital mammography systems



Features

- Outer shape of the phantom simulates a compressed breast of D shape
- Targets includes simulated microcalcifications, nylon fibrils, acrylic disks, an aluminum ring, Teflon disks, a Teflon ruler (slope) and a resolution test chart

Set Includes

- 1 phantom
- 1 storage case

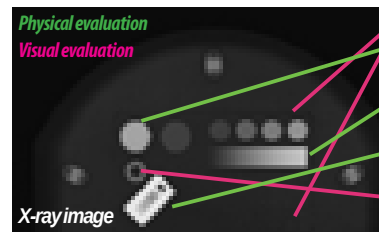
Product Code

Digital Mammographic Phantom NCCE KKG-PH-13-41329-010

Evaluation Parameters

- Contrast resolution
- Frequency enhancement
- Noise and contrast transfer function

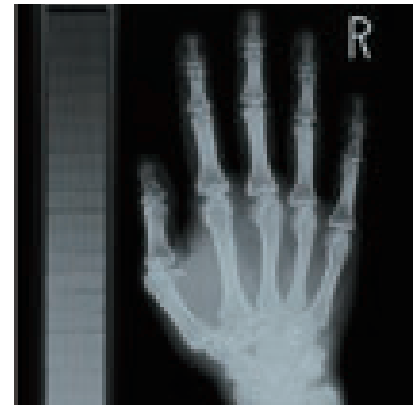
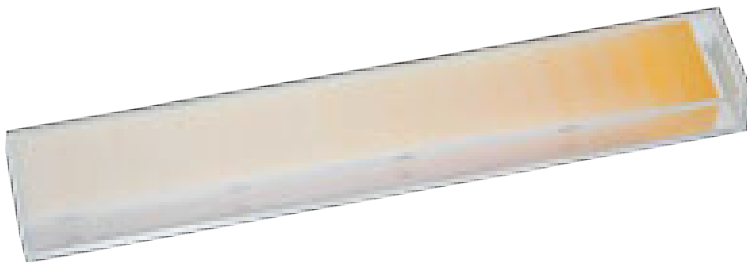
Targets and Evaluation



- ①②③⑧ Visual evaluation
- ④⑤ Noise check disk
- ⑥ Contrast evaluation (characteristic curve)
- ⑦ 20Lp/mm Chart
- ⑨ Frequency enhancement check

BMD Chart Phantom UHA

Bone Mineral Density chart for microdensitometry (MD) method



Features

- 21 steps with different hydroxyapatite content
- Steps range from 0 to 400 mg/cm², with 20mg/cm² difference each

Set Includes

- 1 phantom
- 1 storage case

Applications

- microdensitometry

Product Code

BMD Chart Phantom UHA

KKG-PH-10-41322-000

Water Body Phantom WAC

Chest and abdomen phantom to help measure surface dose



Features

- Water body phantom represents human chest and abdomen to serve as radiation absorber and scatterer.
- The phantom is a double walled cylindrical container with track shaped cross section.
- For chest, fill water between two walls.
- For abdomen, fill the both spaces.

Set Includes

- | | |
|---|--------------|
| 1 | phantom |
| 1 | storage case |

Dimensions

Phantom Size:
W30×D20×H45 cm
W11.8×D7.9×H17.7 in

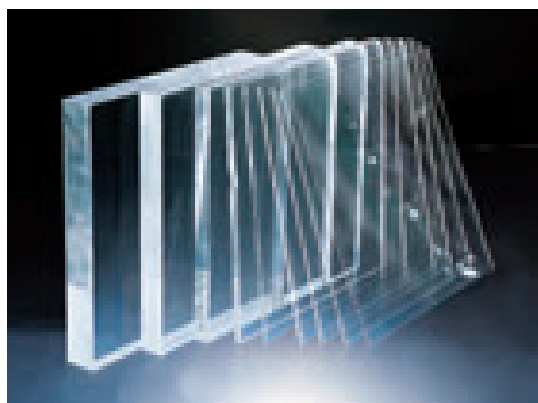
Product Code

Water Body Phantom WAC

KKG-PH-17-41317-000

Acrylic Phantom XAC

Slab phantoms for radiation absorption and scattering measurement



Variations

30 × 30 × 0.1 cm/11.8 × 11.8 × 0.04 in	XAC-01-41430-000
30 × 30 × 0.2 cm/11.8 × 11.8 × 0.08 in	XAC-02-41431-000
30 × 30 × 0.3 cm/11.8 × 11.8 × 0.12 in	XAC-03-41432-000
30 × 30 × 0.4 cm/11.8 × 11.8 × 0.16 in	XAC-04-41433-000
30 × 30 × 0.5 cm/11.8 × 11.8 × 0.2 in	XAC-05-41434-000
30 × 30 × 0.8 cm/11.8 × 11.8 × 0.3 in	XAC-08-41435-000
30 × 30 × 1 cm/11.8 × 11.8 × 0.4 in	XAC-1-41436-000
30 × 30 × 2 cm/11.8 × 11.8 × 0.8 in	XAC-2-41437-000
30 × 30 × 3 cm/11.8 × 11.8 × 1.2 in	XAC-3-41438-000
30 × 30 × 4 cm/11.8 × 11.8 × 1.6 in	XAC-4-41439-000
30 × 30 × 5 cm/11.8 × 11.8 × 2.0 in	XAC-5-41440-000
30 × 30 × 8 cm/11.8 × 11.8 × 3.1 in	XAC-8-41441-000
30 × 30 × 10 cm/11.8 × 11.8 × 3.9 in	XAC-10-41442-000

Contrast Detail Phantom

Concentration resolution evaluation from two directions in plain X-ray



Dimensions

Hole 15: 15 × 15 holes of depth range from 1.0 to 8.0 mm (0.4 to 3.1 in)
Rod 15: 15 × 15 rods of height range from 1.0 to 8.0 mm (0.4 to 3.1 in)
Hole 10: 10 × 10 holes of depth range from 1.0 to 5.5 mm (0.4 to 2.2 in)
Rod 10: 10 × 10 rods of height range from 1.0 to 5.5 mm (0.4 to 2.2 in)

Set Includes

- | | |
|---|---------------|
| 1 | chart phantom |
| | storage case |

Product Code

Contrast Detail Phantom - Hole 15	KKG-PH-16-41318-000
Contrast Detail Phantom - Hole 10	KKG-PH-16-41318-010
Contrast Detail Phantom - Rod 15	KKG-PH-16-41319-000
Contrast Detail Phantom - Rod 10	KKG-PH-16-41319-010

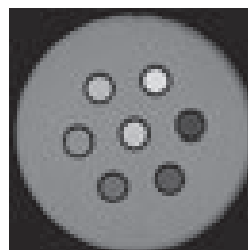
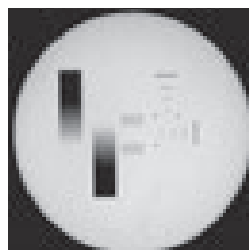
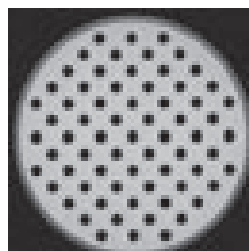
MRI Quality Assurance Phantom MHR / JMR II

Available to high magnetic fields up to 3T, allows the evaluations of slice thickness, spatial resolution, uniformity, and geometric distortion as well as contrast

PH-31 MHR: compiled with NEMA standards



PH-32B JMR 2



Features

- Uniformity is maintained under the high magnetic field of 3.0 Tesla
- Uniformity provides high precision evaluation for other parameters

Applications

- MRI

PH-31 MHR

Evaluation Parameters

- Signal-to-noise ratio (SNR)
- Image uniformity
- RF uniformity
- Spatial resolution
- Spatial linearity
- Slice thickness
- Slice position / separation
- Image contrast
- Image artifact

Set Includes

1	phantom unit A
1	phantom unit B
1	liquid paraffin
1	spout
5	NiCl 50ml (5, 10, 15, 20, 25 mmol)
7	sample bottle (13.5ml)

1	funnel
1	petroleum jelly
1	screwdriver
1	extra screws
1	storage case
	manual

Materials

acrylic resin, MRI contrast solution: nickel dichloride (NiCl)

Dimensions

Dimensions: 22 dia. × 14(H) cm × 2 types 8.7 dia. × 5.5 in

Product Code

MRI Quality Assurance Phantom MHR KKG-PH-31-41330-000

PH-32B JMR 2

Evaluation Parameters

- Signal noise ratio (SNR)
- Image uniformity
- Slice thickness
- Spatial resolution
- Geometric distortion
- Ghost
- Image contrast

Set Includes

1	phantom unit A
1	phantom unit B
1	liquid paraffin
1	spout
3	NiCl 50ml (5, 10, 15 mmol)
3	sample bottle (9ml)

1	funnel
1	petroleum jelly
1	screwdriver
1	extra screws
1	storage case
	manual

Materials

Acrylic resin, MRI solution:

Dimensions

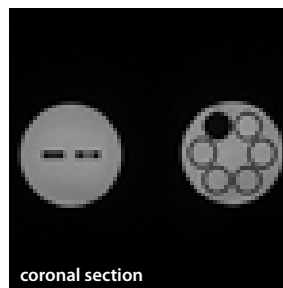
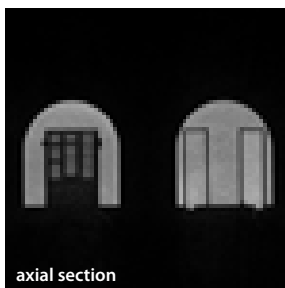
Dimensions: 18 dia. × 16(H) cm 7.1dia. × 6.3 in

Product Code

MRI Quality Assurance Phantom JMR 2 KKG-PH-32B-41330-030

MRI Breast QA phantom

An innovative phantom in the shape of breasts for detailed QA in Breast MRI



Features

- Quantitative evaluation of Breast MRI with breast coils
- Adjustable height of the phantoms in the range of 10cm to fit the depth of the coils
- Horizontal position of the phantoms can be set arbitrarily on the 30cm length slit

Test Summary

- Spatial resolution
- Quantitative evaluation of ADC on test pieces of tissue substitute

Product Code

MRI Breast QA phantom

KKG-PH-72-41936-000

Applications

- MRI

Set Includes

- | | |
|---|---|
| 1 | breast MRI evaluation unit
(2 types, 1 each) |
| 1 | adjustment bolt |
| 1 | supporting plate |
| 1 | storage case |

Materials

Acrylic resin

Dimensions

30×40×26 cm, 5kg
11.8×15.7×10.2 in, 11 lb

MRI Head Phantom NH

Life-size head phantom to assess uniformity



Applications

- MRI
- SPECT/CT
- CT

Dimensions

Phantom size:
W17×D22×H30 cm
W6.7×D8.6×H11.8 in

Set Includes

- | | |
|---|--------------------------|
| 1 | head phantom |
| 1 | nickel chloride solution |
| 1 | spout |
| 1 | storage case |
| | manual |

Materials

- Acrylic resin

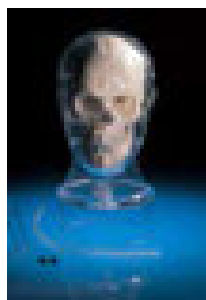
Product Code

MRI Head Phantom NH

KKG-PH-33-41330-010

MRI/NM Head Phantom BHC

Simulate life-size head images in MRI and NM



Applications

- MRI
- SPECT/CT
- CT

Dimensions

Phantom height:
33 cm / 12.9 in

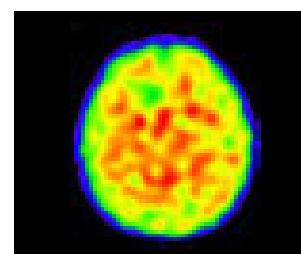
Set Includes

- | | |
|---|--------------------------|
| 1 | head phantom |
| 2 | simulated tumors |
| 1 | nickel chloride solution |
| 1 | storage case |

Product Code

MRI/NM Head Phantom BHC

KKG-PH-34-41501-000



MRI Breast QA phantom

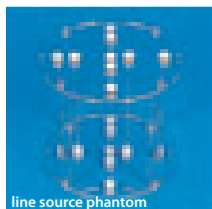
An innovative phantom in the shape of breasts for detailed QA in Breast MRI



Optional parts: holder



outer phantom



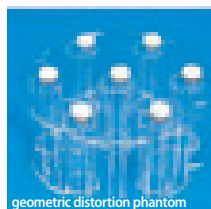
line source phantom



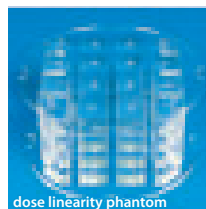
cold spot phantom



hot spot phantom



geometric distortion phantom



dose linearity phantom

Features

- A set of test units for daily QA of SPECT/PET

Evaluation Parameters

- Uniformity
- Spatial resolution
- Dose linearity
- Image distortion

Set Includes

1 outer phantom	1 petroleum jelly
1 line source phantom	1 screwdriver
1 cold spot phantom	3 kinds of extra screw
1 hot spot phantom	1 Injection needle
1 dose linearity phantom	1 storage case
1 geometric distortion phantom	1 manual
1 angle adjustment holder (table-top type)	

Applications

- SPECT and PET

Materials

Acrylic resin

Holder and Accessories

Specify the manufacturer and type of the scanner

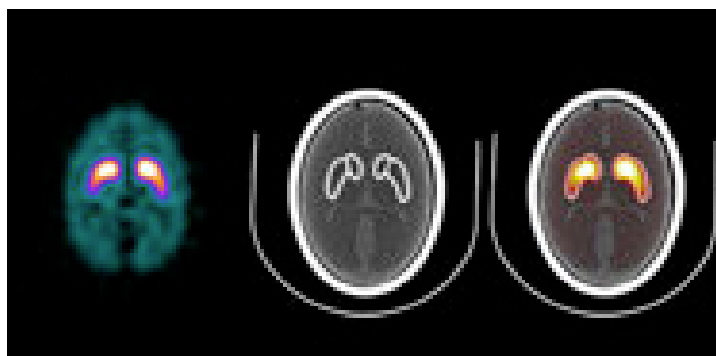


Product Code

SPECT QA Phantom JSP	KKG-PH-28-41535-100
Holder and Accessories	KKG-PH-28-41535-110

Brain Phantom IB-20 advanced

For uptake ratio calibrations and studying the L-123DaTSCAN scatter correction techniques



Features

- This brain phantom of the striatal region with replicated skull densities of a male and female is useful for uptake ratio calibrations and studying the L-123 DaTSCAN scatter correction techniques

Set Includes

- | | |
|--|-------------------|
| 2 bone scatterer cases:
adult male:
equivalent HU750 | 1 Velcro tape |
| elderly female:
equivalent HU530 | 1 petroleum jelly |
| 1 brain striatum phantom | 1 storage case |
| 1 screwdriver | manual |

Product Code

Brain Phantom IB-20 advanced

KKG-PH-53-41918-000

Applications

- SPECT, PET

Materials

- Brain striatum: epoxy resin
- Brain striatum container: urethane resin
- Cerebral ventricle: urethane resin
- Brain stratum phantom cover: acrylic
- Bone scatterer case: epoxy resin

Dimensions

Phantom size:
W21×D15×H8 cm
W8.2×D5.9×H3.1 in

Brain Phantom IB-10

Dual- fluid system to vary the absorption rate, and 5 cm thickness for the vertical setting of the camera



Applications

- SPECT, PET

Evaluation Parameters

- | | |
|--|---|
| <ul style="list-style-type: none"> Homogeneity evaluation Cross calibration Gamma ray absorption rate by a skull Detectivity of gray matter and white matter | <ul style="list-style-type: none"> Spatial resolution of negative images Radioactive concentration and linearity of SPECT value |
|--|---|

Materials

- Acrylic resin/ urethane resin

Set Includes

- | |
|------------------------|
| 1 brain unit |
| 1 skull container unit |
| 1 J-Jack unit |
| 1 sectioned unit |

Dimensions

Phantom size:
W21×D15×H8 cm /
W8.2×D5.9×H3.1 in

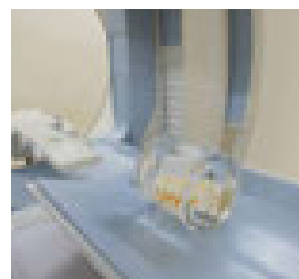
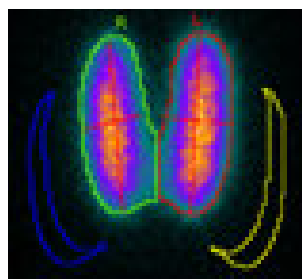
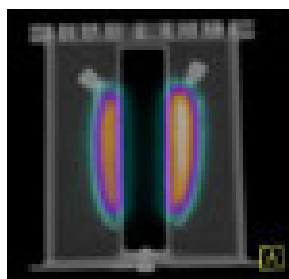
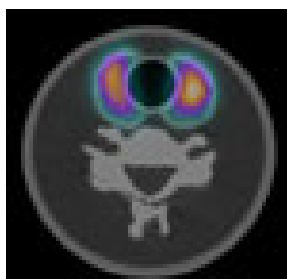
Product Code

Brain Phantom IB-20

KKG-PH-27-41530-000

Thyroid Phantom UN

Five varying volumes of precision containers allow for various cases of measurement



Features

- The set of the phantoms facilitate evaluation of the RI uptake of the thyroid and the assessment of its function. The phantom also serves for dosimetry study in internal exposure.
- 5 kinds of thyroid grand (40,30,21,17,15 cc)
- Synthetic cervical vertebrae as a scatteration
- Infusing radiopharmaceuticals

Applications

- SPECT, PET

Anatomy

Cervical spine C3 to C7

Thyroid 1	14.7 ml
Thyroid 2	16.7 ml
Thyroid 3	20.7 ml
Thyroid 4	30.2 ml
Thyroid 5	39.0 ml

Materials

Container: acrylic resin
Synthetic bone: epoxy resin
Thyroid: acrylic resin

Set Includes

- 1 outer phantom
- 1 thyroid containers
- 1 thyroid (cold spot)
- 1 cervical spine

- 1 trachea tube
- 1 storage case
- 1 manual

Dimensions

Phantom size:
13 dia. × H11.6 cm
5.1 dia. × H4.6 in

Phantom weight:
0.85 kg
1.87 lb

Product Code

Thyroid Phantom UN

KKG-PH-69-41930-000

ORINS Thyroid Phantom ITS

A phantom by the ORINS standards



Features

- Oak Ridge Institute for Nuclear Studies type phantom for measurement of thyroid radionuclide uptake
- Cavities for iodine-131 are prepared in the neck phantom

Materials

- Acrylic resin

Dimensions

Phantom size:
12.5 dia. × 12.5 (H) cm /
4.9 dia. × 4.9 (H) in

Applications

- SPECT

Set Includes

- | | |
|---|-----------------|
| 1 | petroleum jelly |
| 1 | screwdriver |
| 1 | storage case |
| 1 | manual |

Product Code

ORINS Thyroid Phantom ITS

KKG-PH-26-41503-000

ECT Hot Cold Phantom SP-6

Experience an innovative phantom with five crafted sphere containers, tailored for optimal dosimetry in PET/SPECT



Features

- Five sphere containers with different sizes can be filled with RI solution
- Volume of sphere phantoms are:
- 50 mm/2 in (100%), 80%, 60%, 40% and 20%

Materials

- Acrylic resin

Applications

- SPECT, PET

Dimensions

Phantom size:
21 dia. × 16 (H) cm /
8.2 dia. × 6.2 (H) in

Set Includes

- | | |
|---|--------------|
| 1 | phantom |
| 1 | storage case |

Product Code

ECT Hot Cold Phantom SP-6

KKG-PH-29-41540-030

PET Body Phantom (NEMA-IEC)

Basic phantom for whole body PET image quality and quantification accuracy of source ACTIVITY concentrations and PET/CT registration accuracy



Features

- Complies with IEC 61675-1 and NEMA NU 2-2018
- Six sphere shaped fillable targets
- A column in the center of the phantom to simulated the lung



Applications

- Evaluation of PET image
- Evaluation of radioisotope
- Accuracy of specific activity of radioisotopes

Set Includes

- | | |
|---|-------------------------------|
| 1 | body phantom with lung column |
| 1 | funnel |
| 1 | syringe |
| 1 | petroleum jelly |
| 1 | set of screws |
| 1 | carrying case |

Dimensions

W30×D20×H23 cm
W11.8×D7.9×H9.1 cm

Weight: 2.6 Kg/ 5 lb

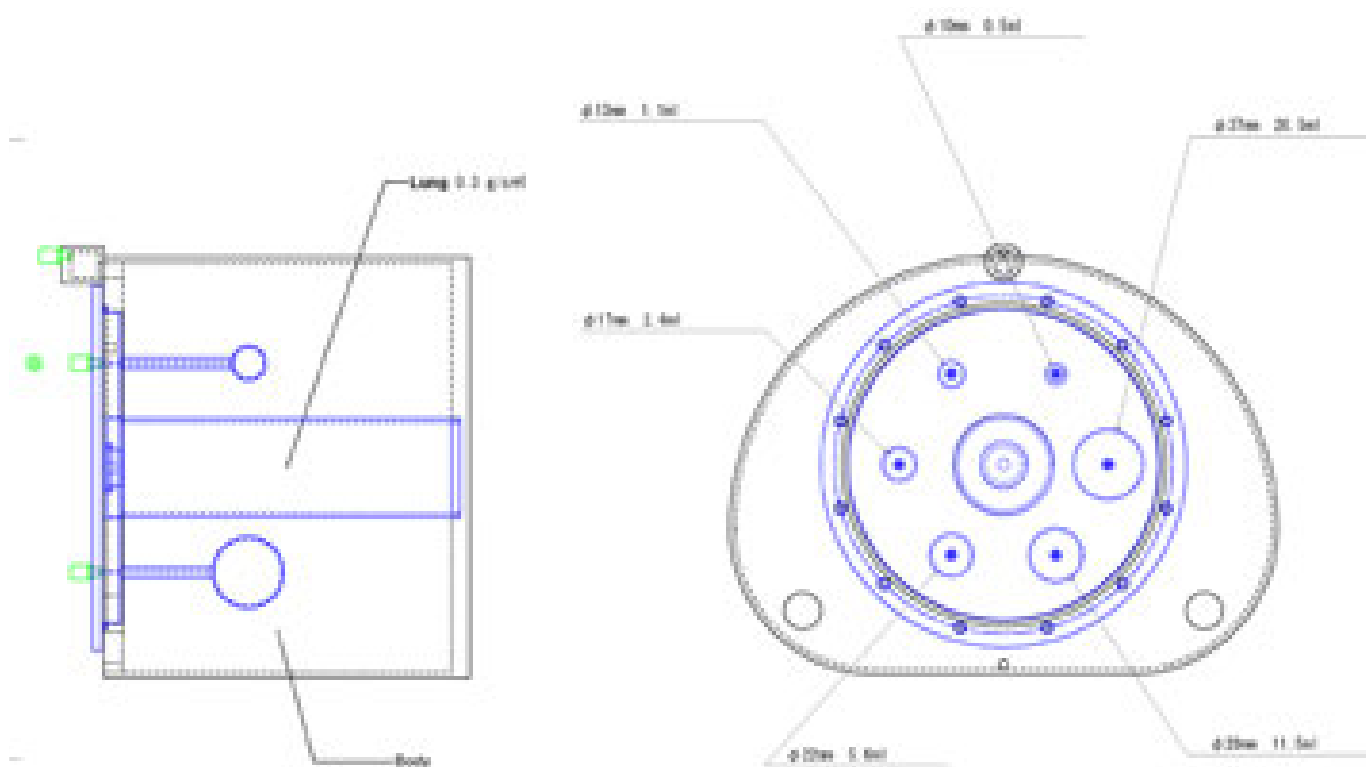
Product Code

ORINS Thyroid Phantom ITS

KKG-PH-26-41503-000

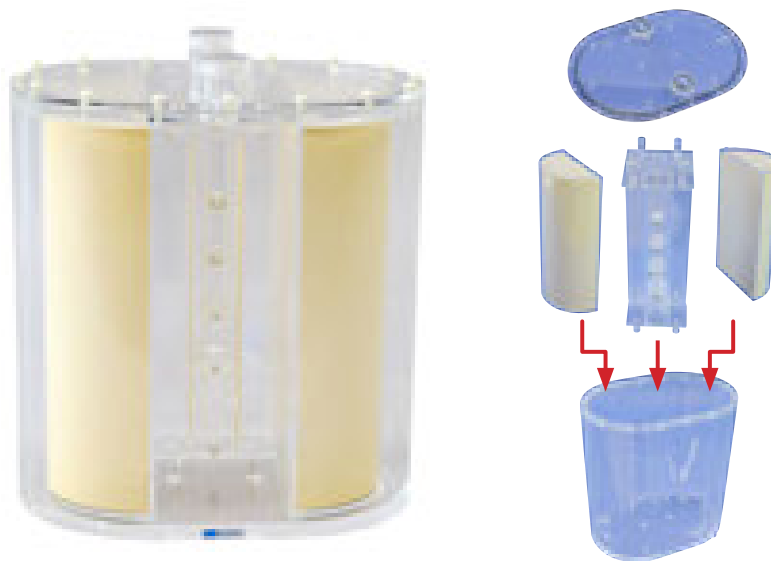
Materials

- Acrylic resin



Bone Scintigraphy Quality Assurance Phantom

The world first standard QA phantom for Bone Scintigraphy, Bone SPECT/CT and NaF-PET



Features

- The phantom can represent either thoracic or lumbar region by changing the filling of side cavities

Applications

- Bone scintigraphy
- Bone SPECT/CT
- NaF-PET

Visual Evaluation

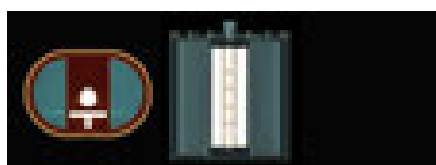
- Tumor detectability
- Image distortion
- Artifact

Quantitative Evaluation

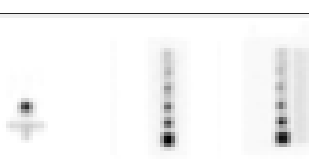
- Contrast and count ratio between vertebral body and tumor
- Concentration linearity and recovery coefficient in the tumor
- Statistical noise
- FWHM at the spinous process (relative index of resolution)

Other

- Verification of scattering correction and attenuation correction



CT



SPECT



SPECT/CT

Set Includes

- 1 phantom
- 1 screwdriver
- 1 funnel

- 1 petroleum jelly
- 1 needle manual

Materials

- Acrylic resin
- Tough lung (PVA acetal compound)

Dimensions

Phantom size:

OD: W310×D210×H355 mm
W12.2×D8.2×H14 in

ID: W290×D190×H300mm
W11.4×D7.5×H11.8 in

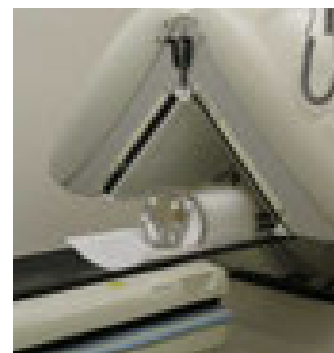
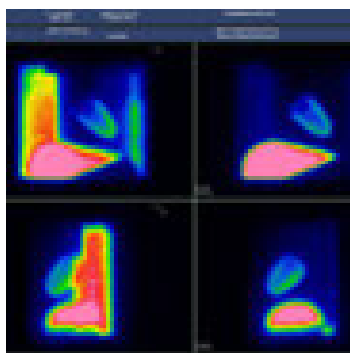
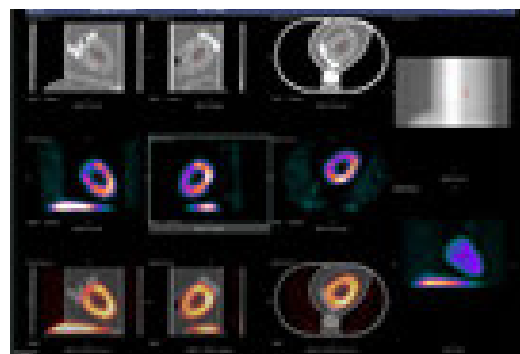
Product Code

Bone Scintigraphy QA Phantom

KKG-PH-74-41938-000

Myocardial Phantom HL

For researches of the impact of elevated radio accumulation in the liver on myocardial SPECT images for in-depth analysis



Features

- Allows the study of RI liver intake and its effect on the myocardial SPECT
- Cold defect can be set in the left cardiac muscle
- Background can be set individually in lung field, mediastinum and right ventricle

Applications

- SPECT

Visual Evaluation

- Tumor detectability
- Image distortion
- Artifact

Quantitative Evaluation

- Contrast and count ratio between vertebral body and tumor
- Concentration linearity and recovery coefficient in the tumor
- Statistical noise
- FWHM at the spinous process (relative index of resolution)

Other

- Verification of scattering correction and attenuation correction

Set Includes

- 1 main phantom body
- 1 right lung
- 1 left lung
- 1 mediastinum
- 1 liver

- 1 stomach
- 1 heart
- 1 work base
- 1 screwdriver
- 1 petroleum jelly
- 1 storage case

Materials

- Main Container: Acrylic Resin
- Spine: Epoxy Resin (similar to human in HU)
- Heart: Acrylic Resin, Acrylic resin
- Lung: Foamed Resin, Water
- Screw: Polyacetal Resin

Dimensions

Phantom size:
W32×D22×H31 cm /
W12.5×D8.6×H12.2 in

Phantom weight:
7.1 kg / 15.6 lb

Packing size:
W44×D39×H42 cm
W17.3×D15.3×H16.5 in

Packing weight:
12.5 kg / 27.5 lb

Product Code

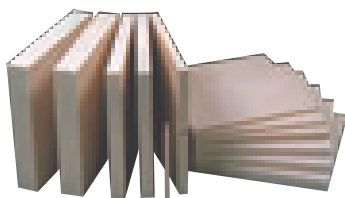
Myocardial Phantom HL

KKG-PH-24-41333-000

Tough Phantom Series

An enduring, superior-quality phantom that remains stable and shatter-free, designed to elevate precision in the realm of radiotherapy planning

Tough Water Phantom WD



Human tissue substitute phantoms with water equivalent physical properties

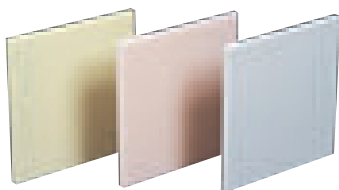
WD-3002	300×300×2 mm/ 12×12×0.08 in	WD-4003	400×400×3 mm/ 16×16×0.12 in
WD-3003	300×300×3 mm/ 12×12×0.12 in	WD-4005	400×400×5 mm/ 16×16×0.2 in
WD-3005	300×300×5 mm/ 12×12×0.2 in	WD-4010	400×400×10 mm/ 16×16×0.4 in
WD-3010	300×300×10 mm/ 12×12×0.4 in	WD-4015	400×400×15 mm/ 16×16×0.6 in
WD-3015	300×300×15 mm/ 12×12×0.6 in	WD-4020	400×400×20 mm/ 16×16×0.8 in
WD-3020	300×300×20 mm/ 12×12×0.8 in	WD-4025	400×400×25 mm/ 16×16×1.0 in
WD-3025	300×300×25 mm/ 12×12×1.0 in	WD-4030	400×400×30 mm/ 16×16×1.2 in
WD-3030	300×300×30 mm/ 12×12×1.2 in	WD-4040	400×400×40 mm/ 16×16×1.6 in
WD-3040	300×300×40 mm/ 12×12×1.6 in	WD-4050	400×400×50 mm/ 16×16×2.0 in
WD-3050	300×300×50 mm/ 12×12×2.0 in		
WD-4002	400×400×2 mm/ 16×16×0.08 in		

Material: Epoxy resin

Tough Water Phantom WD

KKG-PH-40

Tough Bone Phantom BE-T, BE-H, BE-NWD



Human bone substitute phantoms to simulate body structure in combination with PH-40 and PH-42

BE-T-2005	Compact Bone 200×200×5mm/ 8×8×0.2 in	BE-N-2020	Inner Bone 200×200×20 mm/ 8×8×0.8 in
BE-T-2010	Compact Bone 200×200×10mm/ 8×8×0.4 in	BE-H-3005	Cortical Bone 300×300×5 mm/ 12×12×0.2 in
BE-T-2020	Compact Bone 200×200×20mm/ 8×8×0.8 in	BE-H-3010	Cortical Bone 300×300×10mm/ 12×12×0.4 in
BE-H-2005	Cortical Bone 200×200×5 mm/ 8×8×0.2 in	BE-H-3020	Cortical Bone 300×300×20 mm/ 12×12×0.8 in
BE-H-2010	Cortical Bone 200×200×10mm/ 8×8×0.4 in	BE-N-3005	Inner Bone 300×300×5 mm / 12×12×0.2 in
BE-H-2020	Cortical Bone 200×200×20mm / 8×8×0.8 in	BE-N-3010	Inner Bone 300×300×10 mm / 12×12×0.4 in
BE-N-2005	Inner Bone 200×200×5 mm/ 8×8×0.2 in	BE-N-3020	Inner Bone 300×300×20 mm / 12×12×0.8 in
BE-N-2010	Inner Bone 200×200×10 mm/ 8×8×0.4 in		

Material: Epoxy resin

Tough Bone Phantom BE-T, BE-H, BE-NWD

KKG-PH-41

Tough Lung Phantom LP



Human lung substitute phantoms to simulate body structure in combination with PH-40 and PH-41

LP-3010	300×300×10 mm / 12×12×0.4 in
LP-3020	300×300×20 mm / 12×12×0.8 in
LP-3030	300×300×30 mm / 12×12×1.2 in
LP-3050	300×300×50 mm / 12×12×2.0 in

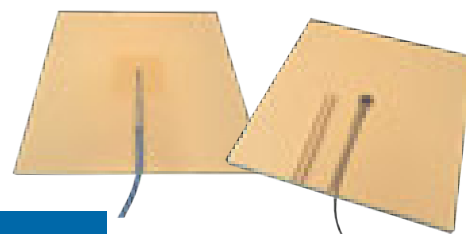
Material: Phenolic resin

Tough Lung Phantom LP

KKG-PH-42

Dosimetry cavities

Tough series phantoms can be ordered with cavities and plugs. Specify your chamber's manufacturer and model number. Let us have dimensional drawings of the chambers you are using to estimate cost.



Specify the type of processing

1. Sandwich type (for pencil type)
2. Cylinder hole type (for pencil type)
3. Shallow type (for plain parallel type)

Specify your chamber's manufacturer and model number

Phantoms for therapeutic energy range

Comparison of Physical Properties

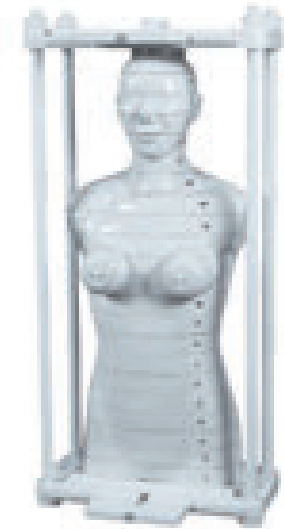
	Human soft tissue	muscle	fat	air (lungs)	lung
electron density (g/cm ³)	1.04	1.01	0.94	0.0012	0.51
effective atomic number	7.64	7.45	6.51	7.66	7.46
specific gravity	1.00	1.00	0.94	1.00	0.51

	water	bone	Tough Water Phantom WE-211	Tough Bone Phantom BE-303	Tough Lung Phantom LP-430
electron density (g/cm ³)	1.000	1.850	1.040	1.850	0.510
effective atomic number	7.64	13.0	7.64	13.0	7.46
specific gravity	1.000	1.850	1.040	1.850	0.510

	Tough Water Phantom WE-211	Tough Bone Phantom BE-303	Tough Lung Phantom LP-430	Tough Water Phantom WE-211	Tough Bone Phantom BE-303	Tough Lung Phantom LP-430
H	6.63	1.85	0.51	6.63	1.85	0.51
C	66.85	28.23	42.45	66.85	28.23	42.45
O	2.18	1.18	1.19	2.18	1.18	1.19
N	1.146	1.146	1.146	1.146	1.146	1.146
P	—	10.34	7.88	—	10.34	7.88
S	10.13	10.13	10.13	10.13	10.13	10.13
Cl	2.77	22.82	19.98	2.77	22.82	19.98
K	—	—	—	—	—	—
Fe	—	—	—	—	—	—

Therapy Body Phantom THRA-1

THRA-1 is an anthropomorphic, cross sectional dosimetry phantom for therapeutic energy range



Features

- This phantom is a therapy planning phantom made of Tough Phantom Series human tissue substitutes
- Sizes and spacing of dosimeter cavities and slice thickness may be custom ordered

Dimensions

Phantom height:
80 cm / 31.6 in

Phantom weight:
33 kg / 72.7 lb

Slice thickness:
3 cm / 1.2 in

Dosimeter holes:
in lattice-like pattern of 3×3 cm
/ 1.2×1.2 in

Product Code

Therapy Body Phantom THRA-1

KKG-PH-37-41480-000

Materials

- Body: Tough Water WE-211 (epoxy resin)
- Bone: Tough Bone BE-303
- Lung: Tough Lung LP-430

Set Includes

- 1 phantom
- 1 supporting frame
- insert rods for dosimeter holes
- 1 storage case
- manual

Pediatric Therapy Body Phantom THRA-2

THRA-1 is an anthropomorphic, cross sectional dosimetry phantom for therapeutic energy range



Features

- Unlike conventional radiotherapy phantoms, synthetic bones with unified size are used so that there are no differences of size by using human bones
- Easy to compare data between facilities
- Tumor targets can be attached as options

Dimensions

Phantom height:
60 cm / 23.6 in

Product Code

Pediatric Therapy Body Phantom THRA-2 KKG-PH-38-41480-010

Materials

- Body: Tough Water WE-211 (epoxy resin)
- Bone: Tough Bone BE-303
- Lung: Tough Lung LP-430

Set Includes

- 1 phantom
- 1 supporting frame
- insert rods for dosimeter holes
- 1 storage case
- manual

Ultrasound Examination Training Model 'ABDFAN'



Unique high-fidelity ultrasound phantom facilitates effective training in abdominal ultrasound scanning with your own clinical devices. Simulated lesions embedded as targets provide wider educational opportunities.



KKG-US-1B

Features

- Inanimate tool for training of a novice to demonstration by an expert.

Any ultrasound device with a convex probe can be used.

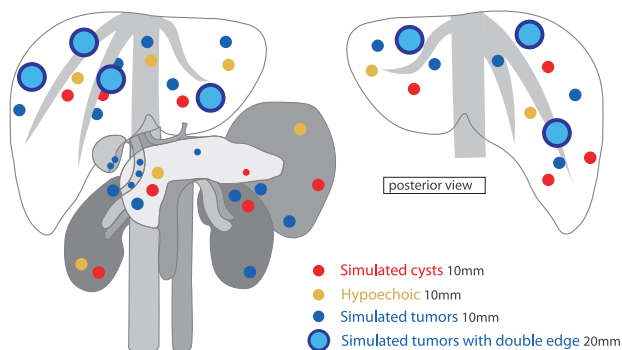
Detailed hepatobiliary, pancreatic and other abdominal anatomy meeting requirement for excellent training; eight Couinaud's hepatic segments can be localized.

Various simulated lesions including biliary stones and cysts, solid tumours (hypoechoic, hyperechoic and target appearance) in the liver, pancreas, spleen and kidneys.

Near real-size organs, structures and abnormal lesions.

Durable long-life phantom materials.

- Four variations of simulated lesions enrich training application.



Simulated lesions in liver, pancreas, kidney, spleen and gallbladder.



Tutorial Manual



DVD

Specifications

Phantom Inclusions

- Liver (segmental anatomy, portal and hepatic venous systems, ligamentum teres and ligamentum venosum), biliary tract (gallbladder, cystic duct, intrahepatic and extrahepatic bile ducts)
- Pancreas (pancreatic duct), spleen, kidneys, detailed vascular structures (aorta, vena cava, celiac artery and its branches, portal vein and its branches)
- Superior mesenteric vessels, renal vessels, etc)

Pathology Inclusions

- Hepatic lesions (cystic and solid), gallbladder and bile duct stones
- Pancreatic tumours (one invading the portal vein)
- Splenic lesions, both kidney lesions, and left adrenal tumour

Set Inclusions

- 1 ultrasound phantom "ABDFAN"
- 1 set of positioning pillow
- 1 carrying case

Size, Weight and Materials

- 18 x 25 x 28 cm
- 12 kg
- Urethane elastomer

*Full set: added 1 Anatomical model "ECHO-ZOU".



Repetitive Training With Actual Clinical Devices

- Ready-to-use simplicity provides more training opportunities to larger numbers of trainees.
- Stable and long-life phantoms material brings reproducible results.
- The phantom can be scanned at any body part of its surface.

Training Items

- Instrumentation and probe manipulation
- Basics of abdominal sonography:

Cross sections and sonography anatomy

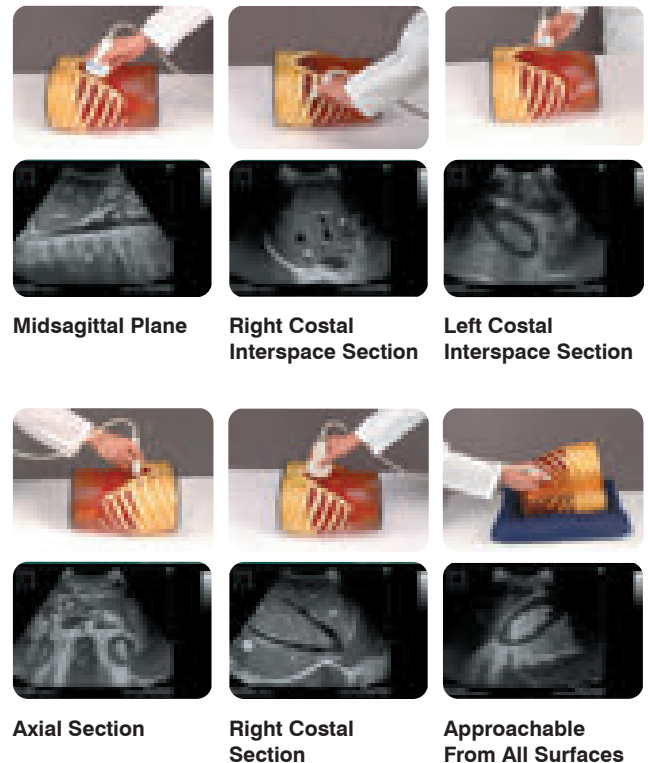
Sonographic demonstration of each individual organ

Localisation of hepatic Couinaud's segments

Lesion detection training

Ultrasound Examination Training Model

KKG-US-1B



Fully Three Dimensional Approach

- Detailed anatomy with approximate-to-human echogenicities.
- Organs are based on cadaver mold and then modeled to realise right anatomy under ultrasound scanning.
- The phantom posture is designed to make the depth of the organs from the probe close to clinical setting.
- 'Echo-Zou', a disassemblable anatomical model for relevant organs facilitates three dimensional understanding of sectional images.

Ultrasound Examination Training Model 'ECHOZY'

To grasp the relationship between the anatomical structure and probe manipulation is one of the most challenging problems for novice operators. In actual situations, speedy examination will be required as well. This training set facilitates the acquisition of fundamental skills, providing a clear understanding of complex anatomy around the porta hepatis.

From basic knowledge of ultrasound screening to hands-on training in clinical procedures and screening of individual organ systems.

- Effective combination of the phantom and anatomical model ECHO-ZOU
- Repetitive standardized training is possible using actual clinical devices
- State of art anatomy of upper abdomen organs
- The phantom posture is designed to make the depth of the organs form the probe approximate to actual clinical scanning
- Eight Couinaud's segments of the liver can be recognized
- Sturdy and stable phantom material
- Ideal education tool for interns, residents and technologists

Ultrasound Examination Training Model 'ECHOZY' KKG-US-1

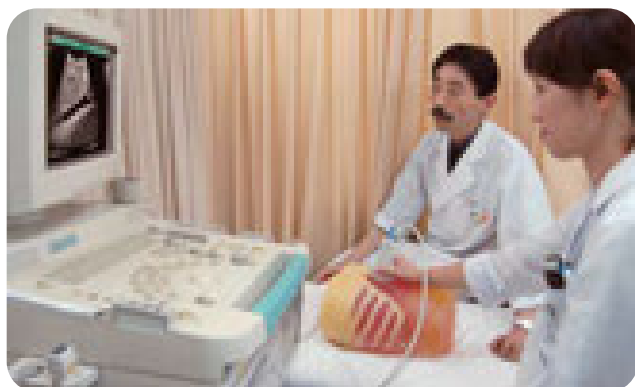
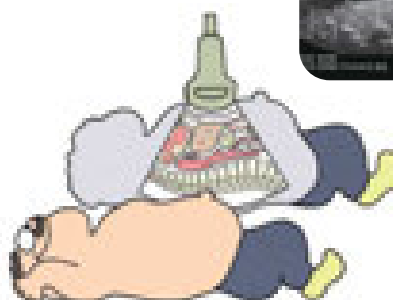
Features

- Upper abdomen organs with approximate-to-human echogenicities
- State-of-art anatomy fulfils medical sonographers' high requirements
- Unique long-life phantom materials
- Advanced version with targets (pathologies) is available

"ECHOZY" abdominal set includes an ultrasound abdomen phantom and a life-size anatomical model 'ECHO-ZOU', which make an effective combination as educational tool in ultrasound scanning, as well as time-saving approach for anatomy teaching.



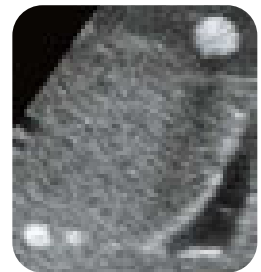
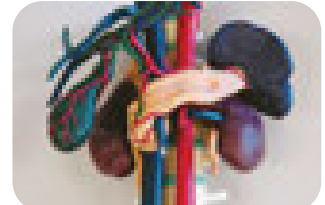
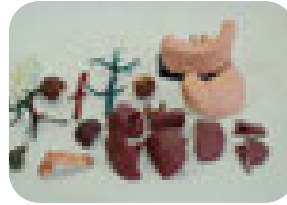
KKG-US-1



Internal organ anatomical model ECHO-ZOU

Separates into 20 parts:

- 1) Hepatic segment S1: caudate lobe
- 2) Hepatic segment S2: upper left lateral segment
- 3) Hepatic segment S3: lower left lateral segment
- 4) Hepatic segment S4: left medial segment
- 5) Hepatic segment S5: lower right anterior segment
- 6) Hepatic segment S6: lower right posterior segment
- 7) Hepatic segment S7: upper right posterior segment
- 8) Hepatic segment S8: upper right anterior segment
- 9) Portal vein, bile duct and hepatic vein
- 10) Gallbladder
- 11) Pancreas
- 12) Spleen
- 13) Right kidney
- 14) Left kidney
- 15) Abdominal aorta
- 16) Inferior vena cava
- 17) Hepatic veins
- 18) Spinal column
- 19) Stomach
- 20) Large intestine, small intestine



'ECHOZY' Abdomen II:
Cysts and simulated
tumour targets are
embedded

Specifications

Inclusions

- US-1 Ultrasound Examination Training Model "ECHOZY" abdominal set
- 1 ultrasound abdominal phantom

Embedded organs: chest bones, lungs (no internal structure), heart (no internal structure), liver, portal vein, bile duct, hepatic artery, gallbladder, pancreas, spleen, kidneys, abdominal aorta, inferior vena cava, hepatic veins, spinal column and stomach

- 1 internal organ anatomical model ECHO-ZOU
- 2 silicon sheets
- 1 set of positioning pillows
- 1 talcum powder
- 1 carrying case

Size

- Phantom size: 18 x 25 x 28H cm, 12 kg
- ECHO-ZOU size: 16 x 23 x 16H cm, 2.9 kg
- Packing size: 30 x 70 x 50H cm, 20 kg

Materials

- Ultrasound phantom: Urethane elastomer
- ECHO-ZOU model: Urethane



Normal Accurate Cerebral Anatomy



US-14a

Accurate depiction of anatomy facilitates a realistic user experience with its life-like soft touch

US-14a

- Skull
- Anterior fontanel
- Posterior fontanel
- Cerebrum
- Cerebellum
- Brain-stem
- Lateral ventricle
- Ventricle
- Third cerebroventricle
- Fourth ventricle
- Septum lucidum

Normal Accurate Cerebral Anatomy

KKG-US-14a

Abnormal Hydrocephalus



US-14b

With hydrocephalus, the shape of the skull is altered due to intracranial pressure.

S-14b

- Skull
- Anterior fontanel
- Posterior fontanel
- Hypertrophied lateral ventricle

Abnormal Hydrocephalus

KKG-US-14b



Breast Ultrasound Examination Phantom “Breast Fan”

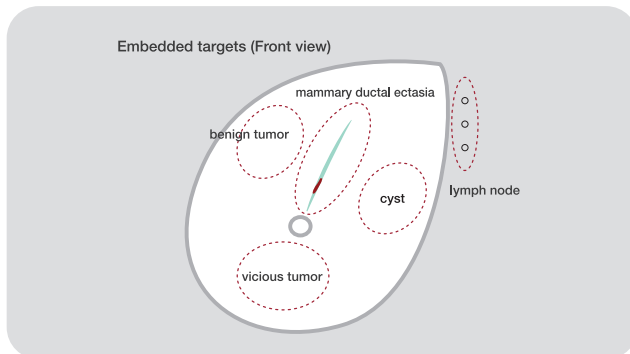
A unique phantom for training in basic breast ultrasound examination. Simulated targets with different echogenicities are embedded in the mammary gland. In this phantom you may visualise the following: the subcutaneous adipose, the mammary gland, the galactophore, Cooper’s ligament, the retromammary adipose, the costae, the clavicle, the pectoralis major, the lung, and the lymph nodes at axilla.

Breast Ultrasound Examination Phantom

KKG-US-6



KKG-US-6



Set includes:

- 1 Breast Phantom
- 1 carrying case
- 1 tutorial manual (DVD)

Phantom Size:

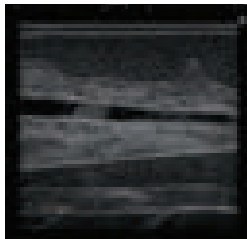
approx, 19x22x7H cm, 3.6kg

Packing Size:

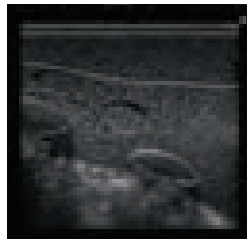
approx, 35x36x24H cm, 6kg



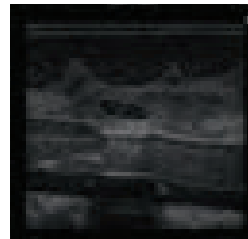
Vicious Tumor



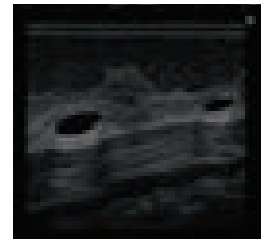
Mammary Ductal Ectasia



Lymph Nodes



Benign Tumor



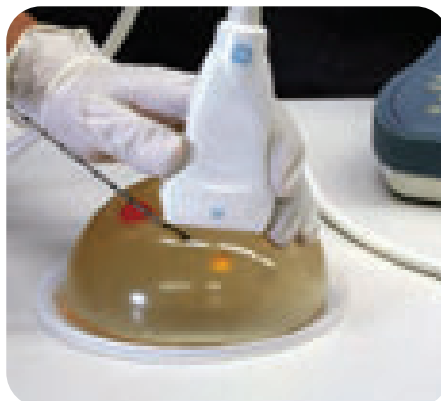
Cyst

Biopsy Training Model

We would like to introduce to you the new training phantom for ultrasound guided breast biopsy. Simulated lumps with different echogenicities can be aspirated by biopsy needles. This model provides a combination of hands-on and visual training. This phantom is fantastic training for the usage of the scanner and needle. The image is excellent quality.

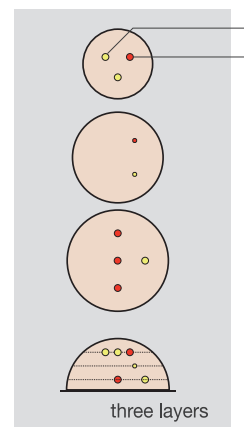
Biopsy Training Model

KKG-US-9



High-echo target

Anechoic target



Fast/Acute Abdomen Phantom 'FAST/ER FAN'

Focused Assessment with Sonography or Trauma

This innovative phantom facilitates repetitive training of FAST as an adjunct to the ATLS primary survey.

Fast/Acute Abdomen Phantom

KKG-US-5

Features

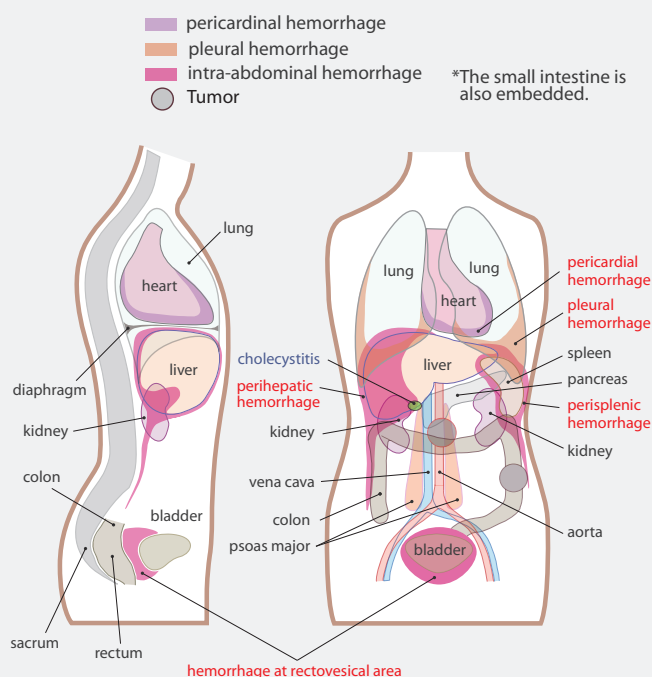
This phantom has been developed to provide simulated training in FAST (Focused Assessment with Sonography for Trauma); an ultrasound examination directed at identifying the presence of free intraperitoneal or pericardial fluid in the traumatic patients, which allows detecting the possible cause of shocks such as mass hemothorax, intraperitoneal hemorrhage or cardiac tamponade.

Training Items

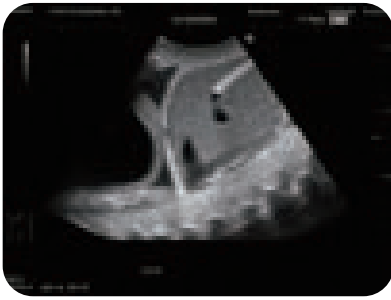
- **FAST procedures:** Internal hemorrhage at perihepatic, perisplenic, pelvis and pericardium area.
- **Sonography for acute patients:** Internal hemorrhage at pericardial, bilateral chambers as well as intra-abdominal hemorrhage around the liver, the spleen and the urinary bladder. Pathologies including cholecystitis, an aortic aneurysm, a lesion on the colon.



KKG-US-5



Fast and Acute Abdomen Pathology



1. Cardiac Tamponade



2. Right Upper Abdominal Bleeding



3. Left Upper Abdominal Bleeding



4. Pelvic Bleeding



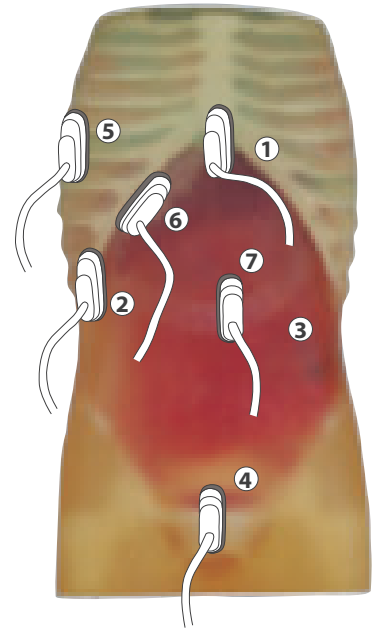
5. Pleural Bleeding



6. Peri-hepatic Bleeding



7. Abdominal Aortic Aneurysm



Specifications

Inclusions

- 1 ultrasound phantom with carrying case

Materials

- Soft tissue and organs: Urethane base resin
- Synthetic bones: Epoxy base resin

Size

- Phantom size: Approximately 40 x 80 x 31cm
- Phantom weight: Approximately 35 kg



Fetus Ultrasound Examination Phantom “SPACE FAN-ST”

The SPACEFAN-ST provides high quality training for routine second trimester screening. This phantom contains a 23 week fetus with full anatomy placed in the uterus that can be scanned with 2D and 3D transducers. The oval shape phantom abdomen can be set in four different positions to enrich the training variation. Included life-size fetus model facilitates demonstration and three dimensional understanding.



KKG-US-7



BDP

AC

FL



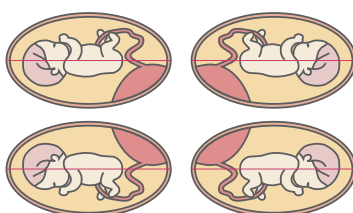
Heart with Four Chambers

UV

Umbilical Cord



Breech Position



Fetus Ultrasound Examination

KKG-US-7

Training Items:

Fetal size assessment: BDP, AD, AC and FL
Confirmation of normal fetus situs Fetal anatomy assessment: head and brain, heart and lung, abdominal organs, spine and bones.

Placental localisation

Evaluation of amniotic fluid volume.

Anatomy

Uterus: amniotic fluid, placenta, umbilical cord, and a 23 week fetus (26cm).

Fetus: skeletal structure, brain with septum lucidum, heart with four chambers, lungs, spleen, kidneys, aorta, UV, UA, and the external genital.

Fetus Ultrasound Examination Phantom

Set Includes:

- 1 mother body torso
- 1 ultrasound pregnant uterus phantom
- 1 fetus demonstration model
- 1 carrying bag

Specifications

Phantom Size: approx, 40 x 29 x 22 cm

Weight: approx. 6kg.



Female Pelvic Ultrasound Phantom

Two interchangeable inserts to cover basic gyn ultrasound.

The pelvic phantom is unique in that it allows for transabdominal and transvaginal scanning. Though transvaginal scanning is the gold standard for gyn and 1st trimester pregnancy, it is still important to recognize the anatomy from the transabdominal aspect, as patients may present with anatomy and /or pathology that is outside the transvaginal field of view. The transabdominal technique is still a valuable part of assessing the female pelvis. This phantom also provides imaging of normal and abnormal anatomy so that normal protocol can be practiced while still learning to recognize life threatening pathology, such as an ectopic pregnancy. Other pathology such as endometrial cancer and ovarian cysts can also be identified. In a learning environment, this phantom provides a balance of normal and abnormal that will assist in developing the critical thinking skills necessary to successfully evaluate the female pelvis.

Features

1. Both transvaginal and transabdominal scanning are possible.
2. Two types of interchangeable phantom inserts with different pathologies
3. Realistic view of female external genital
4. Excellent ultrasound image quality

Training Skills

- Handling and manipulation of transvaginal and transabdominal transducers
- Interpretation of sonogram
- Visualization and localization of anatomies and pathologies

Set Includes

- 1 lower torso manikin
- 1 ultrasound pathology unit
- 1 ultrasound ectopic pregnancy unit
- 1 storage case
- Instruction manual

Specifications

Phantom Size: approx. W34xD33xH24cm

Weight: approx. 6.5kg

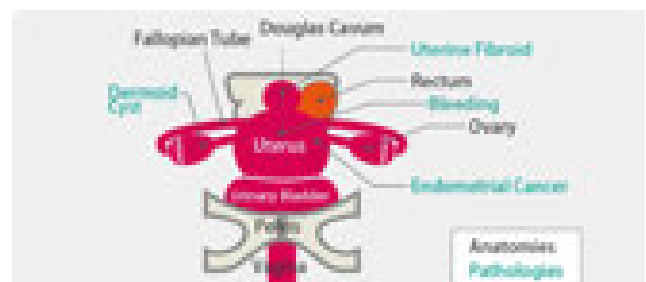
Female Pelvic Ultrasound Phantom

KKG-US-10

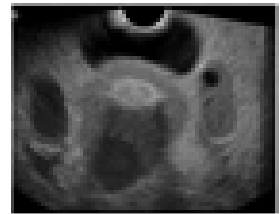


Pathological phantom

Endometrial cancer, uterine fibroid, dermoid cyst of ovary, bleeding at Douglas Cavum



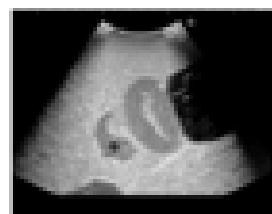
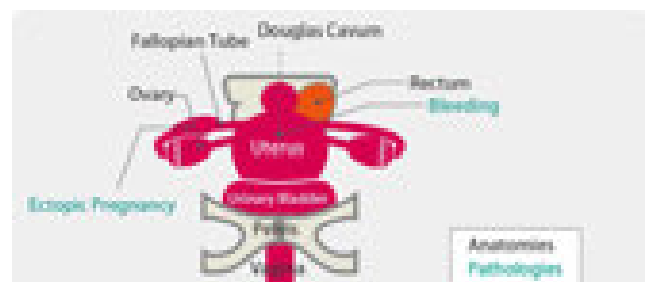
Transabdominal



Transvaginal

Ectopic pregnancy phantom

Ectopic pregnancy in a fallopian tube, bleeding at Douglas Cavum



Transabdominal



Transvaginal

Scrotal Ultrasound Phantom

Repeated training to acquire skills in safe and painless examination.

Ultrasound evaluation of the scrotum is an effective, safe, and painless imaging method to assess male reproductive organs for tumors, inflammation, and trauma, as well as potential causes of infertility. The ultrasound phantom provides sonographers, residents in training, and physicians, with the opportunity for hands-on training with a scrotal phantom using an ultrasound scanner. Interchangeable normal and cancerous phantom inserts provide examples of anatomy and pathology of the male genitalia to simulate a real-time experience.

Features

1. Two types of interchangeable scrotums: normal and pathology
2. Excellent ultrasound image quality
3. Compatible with any ultrasound system

Training Skills

1. Patient positioning and preparation for examination
2. Scrotal ultrasound screening
3. Visualization of testicular cancer

Set Includes

- 1 pelvic body
- 1 normal scrotum
- 1 pathological scrotum
- 1 storage care
- Instruction manual

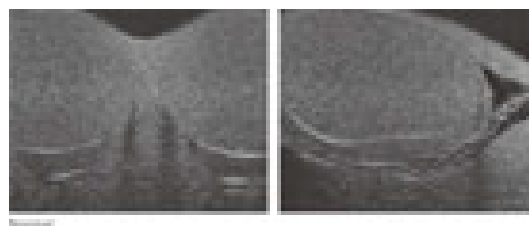
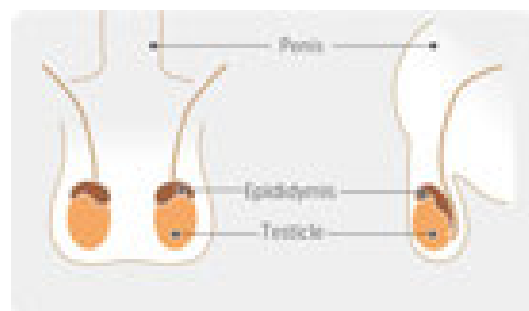
Specifications

Phantom size:	approx. W34xD33xH24 cm
Weight:	approx. 6.5kg, 14.3lb



Normal Phantom

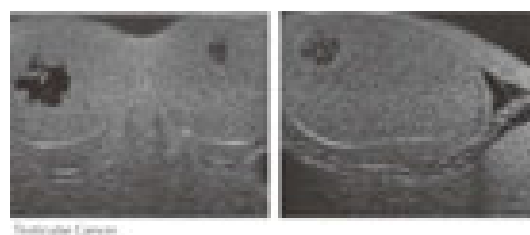
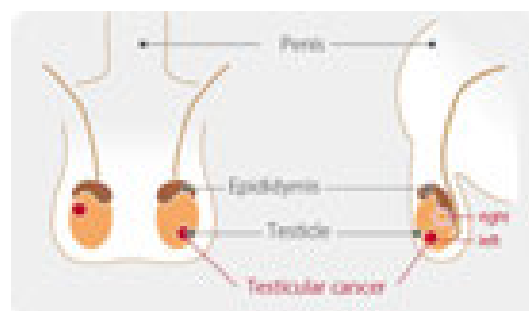
Scrotum, testicle, epididymis and penis



Pathological Phantom

Scrotum, testicle, epididymis and penis

Testicular cancer(each one in left and right testis, 10mm dia.)



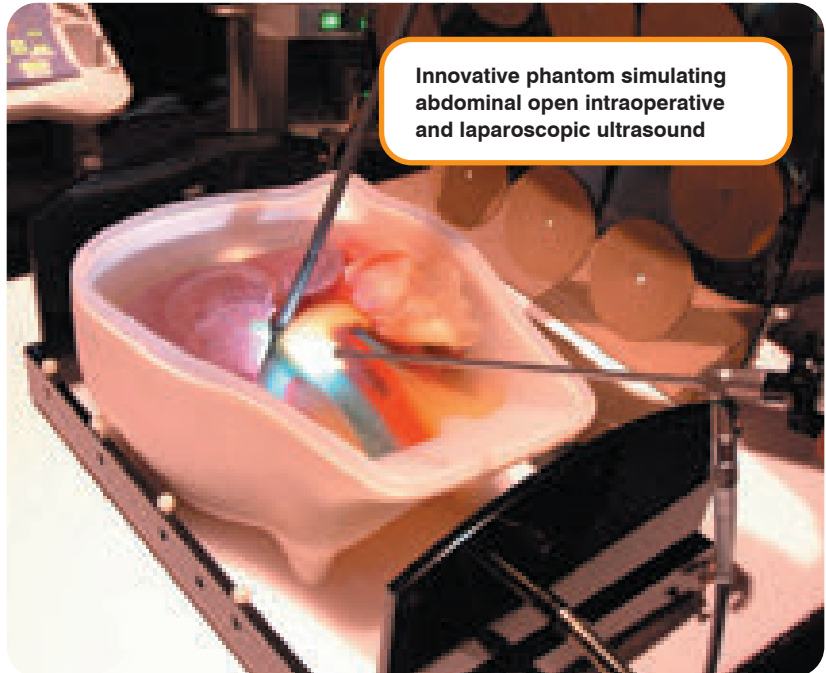
Abdominal Intraoperative and Laparoscopic Ultrasound Phantom “IOUSFAN”



Intraoperative Ultrasound (Open Surgery)



Laparoscopic Ultrasound



KKG-US-3

Features

- Inanimate tool for training of novice to demonstration by an expert.
- Detailed abdominal anatomy meeting requirements for training: open intraoperative scanning of liver, biliary tract, pancreas; laparoscopic examination of biliary system for screening of stones and evaluation of hepatic and pancreatic lesions.
- Soft phantom materials allowing realistic probe manipulation.
- Various simulated lesions including biliary stones and cysts, solid tumours (hypoechoic, hyperechoic and target-appearance) in the liver, pancreas, spleen and kidneys.
- Detachable stomach and duodenum allowing various scanning methods of the bile duct and pancreas.
- Container allowing water-immersion scanning for both contact and stand-off techniques, simulating real abdominal intraoperative and laparoscopic scanning (no ultrasound gel required).
- Near real-size organs, structures and abnormal lesions.
- Phantom fits in the laparoscopic trainer box so that laparoscopic ultrasound of organs is possible under direct laparoscopic view.
- Durable long-life phantom materials.

Abdominal Intraoperative and Laparoscopic Phantom KKG-US-3

Specifications

Phantom Inclusions

The liver (segmental anatomy, portal and hepatic venous systems, ligamentum teres and ligamentum venosum), biliary tract (gallbladder, cystic duct, intrahepatic and extrahepatic bile ducts), pancreas (pancreatic duct), spleen, kidneys and detailed vascular structures (aorta, vena cava, celiac artery and its branches, portal vein and its branches, superior mesenteric vessels, renal vessels, etc).

Pathology Inclusions

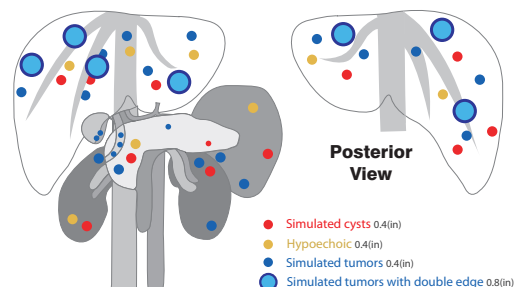
Hepatic lesions (cystic and solid), gallbladder and bile duct stones, pancreatic tumours (one invading the portal vein), splenic lesions, both kidney lesions and left adrenal tumour.

Simulated lesions in liver, pancreas, kidney, spleen, gallbladder



Set includes:

- 1 x upper abdomen ultrasound phantom
- 1 x phantom container



Ultrasound Guided Tube Feeding Phantom

Anatomically correct neck model
for Ultrasound Guided Tube
Feeding Training

Features

1. Anatomically correct neck model:
 - » Thyroid Gland
 - » Trachea
 - » Esophagus
 - » Sternum
 - » Collarbone
 - » Carotid Artery
 - » Jugular Vein
2. Realistic neck ultrasound images
3. Usable with real ultrasound diagnostic devices
4. Allows the confirmation of the proper Nasogastric Tube Placement with ultrasound
5. Inner switch for tube insertion direction: trachea/esophagus for tube location image recognition tests (recognition by ultrasound of proper esophagus insertion or wrong tracheal insertion)

Training skills / Applications

- Proper handling and manipulation of probe on neck ultrasound
- Feeding tube insertion
- Confirmation of tube placement by ultrasound
- Neck scan to evaluate the tube position.

Set includes

- Main Body
- Ultrasound neck block
- Nasogastric Tube
- Syringe
- Talcum powder
- Storage case

Size (approx.)

- W29 x D18 x H17cm(Body)
- W17 x D10 x H10cm(cube)
- W11.4 x H6.7 x D7.1inch

Weight (approx.)

1.8kg(body) / 1.1kg(cube)



Ultrasound Guided Tube Feeding Phantom

KKG-US-20

DVT (Deep Vein Thrombosis) Phantom

For ultrasound screening of DVT (Deep Vein Thrombosis)

Features

1. Faithfull reproduction of blood vessel meandering, branching, and thrombus.
2. The built-in blood vessels allows for milking method as well as observation of compression of the vessels by applying pressure with a transducer.
3. Familiarize with assessment of venous thrombosis in the lower limbs.

Training skills / Applications

- Screening for deep venous thrombosis in the lower limbs
- Observation of blood flow by milking method

Set includes

- 1 lower limb manikin
- 1 ultrasound calf phantom (incorporated)
- 1 storage case
- 1 instruction manual

Size (approx.)

- W27 x D17 x H47 cm

Weight (approx.)

- 3.0kg



DVT (Deep Vein Thrombosis) Phantom

KKG-US-21

Lung Ultrasound Training Phantom (ECHOLUNG)

With advancements in medical imaging and the growing demand for accessible diagnostic tools, lung ultrasound has become an essential solution for assessing respiratory conditions. Kyoto Kagaku has developed a phantom specifically designed to help medical professionals practice the basics of this procedure, supporting skill development in a safe and effective manner.

Features

- Four kinds of units: A-LINE, B-LINE(few), B-LINE(many), pneumonia and pleural effusion for training in the basics of lung ultrasound.
- Anatomy includes: lung, chest wall, ribs
- No special storage needed
- Suitable for training in large groups
- High durability

Case / Pathology

- A-LINE
- B-LINE(few/many)
- Pneumonia and pleural effusion

Set includes

- Main Body
- Four kinds of lung modules
- Instruction manual
- Talcum powder
- Storage case



Size (approx.)

- **Body:** 32 x 25 x 12.5cm/13 x 10 x 4.9 inch
- **Module:** 14.8 x 11.8 x 11cm/5.8 x 4.6 x 4.3 inch

Weight (approx.)

Body: 1.9kg/ A-LINE/B-LINE/B-LINE
(many): 0.9kg /Pneumonia and pleural effusion : 1.4kg

Lung Ultrasound Training Phantom ECHOLUNG

KKG-US-19

Pediatric FAST/Acute Abdomen Phantom

Ultrasound training for pediatric FAST procedures

Features

- Thoracoabdominal organs, bone structure and free-fluid for practicing FAST examination procedures. /
- Commonly seen pathologies in pediatrics. / 3. Acquire fundamental pediatric abdominal ultrasound skills, as well as FAST/Acute sonography skills.

Training skills / Applications

- FAST procedures: Internal hemorrhage at perihepatic, perisplenic, pelvis, and pericardium area / Sonography for acute pediatric patient: Bowel intussusception, appendicitis and biliary dilatation

Set includes

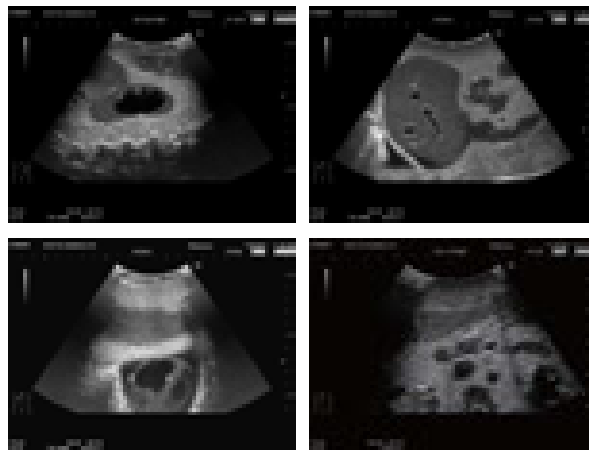
- 1 ultrasound phantom
- 1 talcum powder
- 1 storage case
- 1 tutorial manual (DVD)
- 1 instructor manual

Size (approx.)

- W41 x D17 x H15cm/W16.1 x D6.7 x H5.9in

Weight (approx.)

7kg / 15.4lb



Pediatric FAST/Acute Abdomen Phantom

KKG-US-8

FAST/Acute Abdomen Phantom “FAST/ER FAN”

Features

- An innovative phantom for repetitive training of FAST as an adjunct to the ATLS primary survey/
- Pathologies include cholecystitis, an aortic aneurysm and a lesion on the colon.

Training skills / Applications

- Internal hemorrhage at perihepatic, perisplenic, pelvis and pericardium area/ Sonography for acute patients

Case / Pathology

- FAST/ Cardiac Tamponade, Right Upper Abdominal Bleeding, Perisplenic Hemorrhage, emorrhage at Rectovesical Area/
- Acute abdomen/Inflammation of the Gallbladder, Aneurysm, Appendicitis, Diverticulitis

Set Includes

- 1 ultrasound phantom with carrying base/ 1 tutorial manual (DVD)

Size (approx.)

W62 x D30 x H24 cm (W24.4 x D11.8 x H9.4 in)

Packing size (approx.)

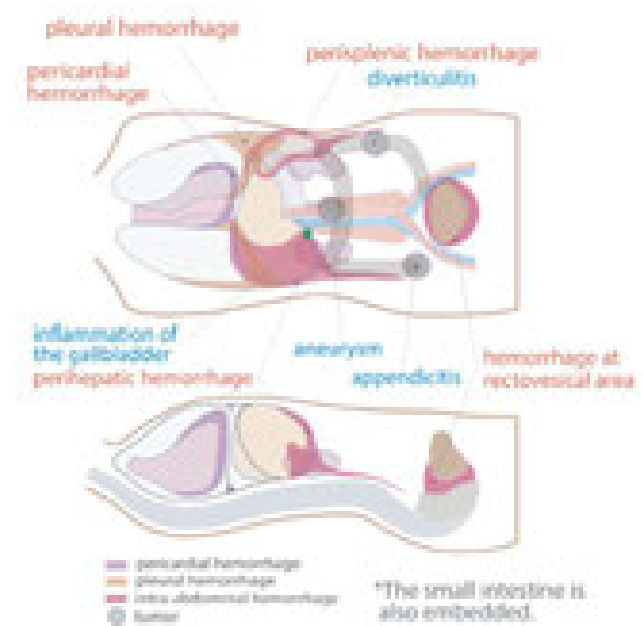
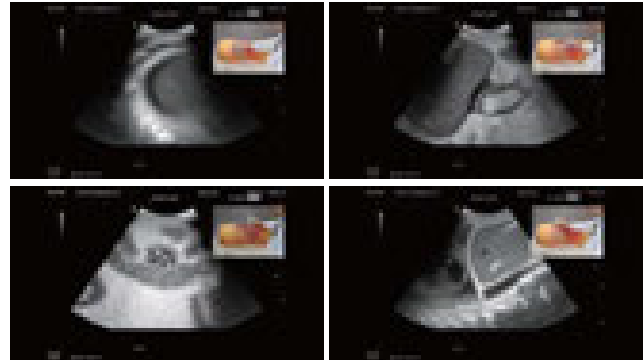
W81x D47x H35cm/W32x D18.5x H14in

Weight (approx.)

30kg / 66lb

Pediatric FAST/Acute Abdomen Phantom

KKG-US-5



Rectal and Bladder Ultrasound Phantom

Ultrasound training cubes for assessment of residual urine and excretion

Features

- Variation of residue excretion in the rectum for ultrasound assessment: hard, soft, combination and empty
- Three types of urinal bladder for assessment and urine volume measurement: small, middle, large with a balloon catheter

Training skills / Applications

- Ultrasound assessment of residue excretion in the rectum
- Measurement of urine volume
- Ultrasound assessment of the urinal bladder and the prostate
- Assessment of indwelling bladder catheter

Set includes

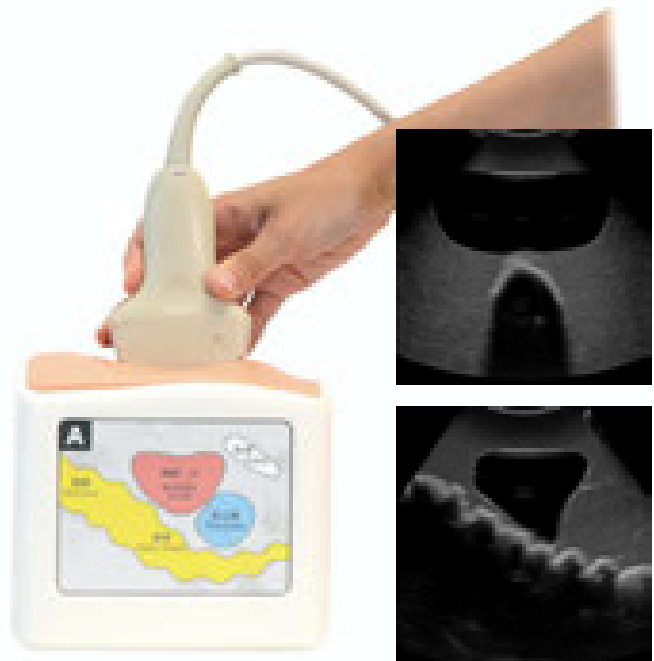
- 3 types of ultrasound phantom cube
- 1 talcum powder
- 1 storage case
- 1 instruction manual

Size (approx.)

- W15 x D15 x H20 cm

Weight (approx.)

- 2.0 kg (each)



Rectal and Bladder Ultrasound Phantom

KKG-US-23

Elementary Cubic Phantom BLACKCUBE

Acquire skills to envision three-dimensional shapes from two-dimensional sections (echo images). For the first step hands-on learning of ultrasound scanning.

Features

- Each cube contains a geometrical three dimensional object, which is externally invisible.
- All six surfaces of the cube allow for scanning.
- Facilitates learning basics in grasping three-dimensional shapes with a ultrasound scanner.
- Combinations of different cubes allow for skills assessment as well as practical trainings.

Training skills / Applications

- Visualization and measurement of geographical objects with a ultrasound scanner.
- Infer three dimensional shape based of 2-D ultrasound images from sic surfaces.

Set includes

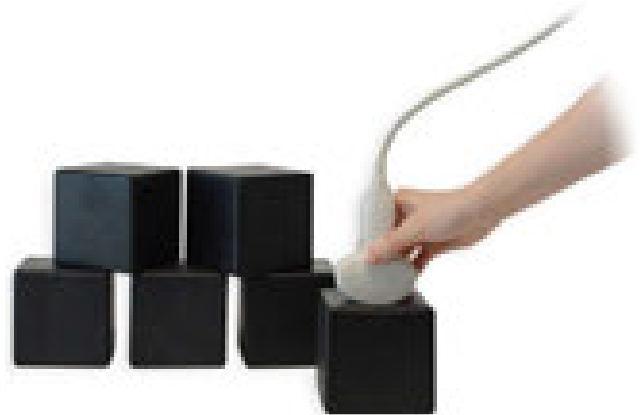
- cube phantoms (6 for basic set, 8 for full set)
- 1 talcum powder
- 1 storage case
- 1 work book
- 1 instruction manual

Size (approx.)

- W10 x D10 x H10 cm
- W3.9 x D3.9 x H3.9 cm

Weight (approx.)

- 1.0 kg each



Elementary Cubic Phantom BLACKCUBE

KKG-US-24

Fundamental Ultrasound Phantom

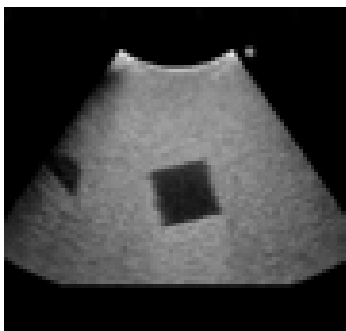
This oval phantom helps sonographers with basic trainings

Features

- Phantom for basic manipulation of ultrasound transducer
- Recognition of shape, echogenicity, distance, and practice of horizontal transducer works, which are all you are able to learn through this oval phantom

Training skills / Applications

Interpret 2-D cross sectional images into the shape of 3-D dimensional objects / 10 objects are embedded/ Adjusting Time-Gain Compensation to obtain suitable density /Measuring dimensions and distance / Transducer handling to obtain accurate 2-D cross-section image / | Flat and spheroidal surfaces provide a variety of difficulty.



Size (approx.)

W24 x D16 x H11 cm (W9.5 x D6.3 x H4.3 in)

Weight (approx.)

2.3kg / 5lb

Rectal and Bladder Ultrasound Phantom

KKG-US-18



Explore Our Range

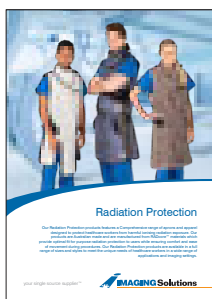
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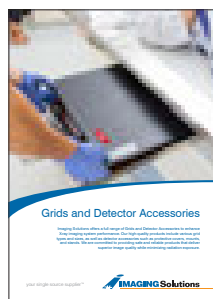
Effectively on completion of our initial growth phase, in building the accessories range offering, Imaging Solution set about the task of identifying the worlds market leading brand, in every functional specialisation existing in the imaging market.



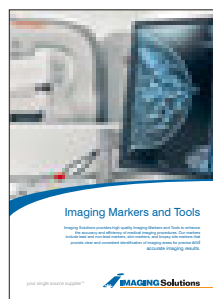
Radiation Protection



MRI Equipment and Accessories



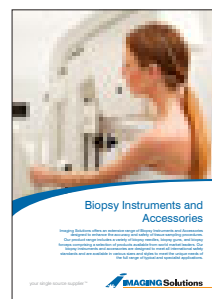
Grids and Detector Accessories



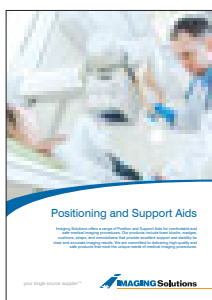
Imaging Markers and Tools



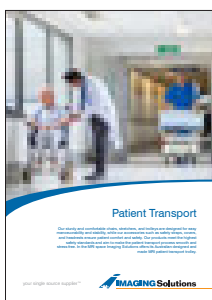
Gels, Contrast and Warmers



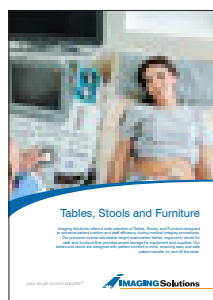
Biopsy Instruments and Accessories



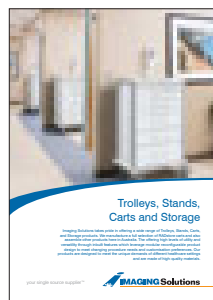
Positioning and Support Aids



Patient Transport



Tables, Stools and Furniture



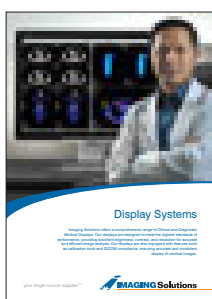
Trolleys, Stands, Carts and Storage



Phantoms



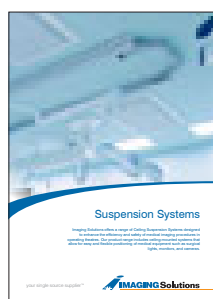
Data Management



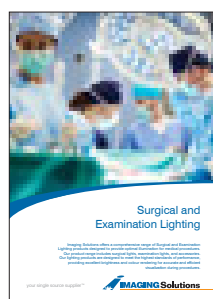
Display Systems



Healthcare IT



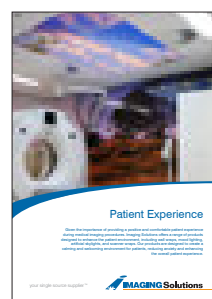
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