

# Medical Imaging



FULL BODY  
X-RAY PHANTOM  
with real human bones

UNIQUE IN  
the world 

Made in  Germany

View product  
video here:







## Full Body X-Ray Phantom

This model is unique in the world and provides excellent training opportunities for positioning and alignment techniques in projection radiography. It should be part of the basic equipment of any radiographic school. The phantom contains a real human skeleton as well as outlines of larynx, lung, heart and kidneys (organs will create a shadow on the image), which allows taking real X-ray images like in a patient. Using a real skeleton provides even smallest guiding structures which is impossible with a plastic skeleton. During assembly of this phantom we pay special attention to the correct size of joint spaces. All joints are moveably mounted allow positioning in all normal x-ray positions (e.g. frog position, pro- and supination of lower arm). The arms can be moved upwards which makes the phantom suitable for use in all kinds of osseous examinations under CT. Each phantom is hand-made one of a kind; it may differ in size and appearance. Depending on the individual phantom it may have some pathologies, outer shape may differ depending on size of the skeleton. The new version was re-designed in co-operation with a well-known German school for radiographers and fits all needs for education in radiography. This phantom is only sold against proof of medical use. Life size.



Also Partial  
phantoms  
available!

Ref.no. 7200

Details:



All phantoms including  
transport cases



## Radiographic positioning doll, plastic skeleton

This model offers all features of model 7200 but includes a plastic skeleton and is due to this only suitable for positioning training. Including a transport and storage case.

Ref.no. 7201  
(ohne Abb.)

Details:



Got a broken phantom? Have it repaired at our premises in 4 easy steps:

### 1. Pick-Up Service

The forwarder comes with an empty transport case and collects your phantom.



### 2. Repair Cost Estimate

We will provide you with a cost estimate. You decide about a repair then.



### 3. Repair

The phantom will be repaired fast and reasonable priced at our factory. Result: as NEW!



### 4. Delivery

The "new" phantom will be delivered by the forwarder.



## X-Ray thorax

Thorax X-ray phantom, consisting of spine (C6 to L3), thoracic cage, shoulder blades and collar bones, embedded in soft materials. Mounted without metal parts. Organs (lung, heart, kidneys) are present as outlines to create a shadow on the x-ray image. The natural bones used may have, depending on availability, individual pathological changes, minor structural defects or mounting holes.



Ref.no. 7400

Details:



## X-Ray Phantom Pelvis, flexible

This flexible X-Ray phantom Pelvis contains real human bones and offers the unique opportunity to take real x-ray images. This Phantom consist of a complete pelvis including coccyx, two lumbar vertebrae (L4+L5) and femur stumps. The soft material makes this product ideal for palpation. The natural bone used may have, depending on availability, individual pathological changes, minor structural defects or mounting holes. Delivered with strong transport case.



Ref.no. 7410

Details:



## X-ray phantom head

Human skull, safely embedded in plastic for easy use. The jaws are slightly open to allow dental panoramic images of the teeth. The neck includes some cervical vertebrae depending on the ordered type. An embedded tread allows the use with a tripod. The jaw may have dental gaps, dental repairs, broken teeth, replaced teeth or other individual features. For detailed information about the available phantoms please contact our sales team.



**X-ray phantom head with cervical vertebrae, transparent**

Ref.no. 7300

Details:



**X-ray phantom head with cervical vertebrae, opaque**

Ref.no. 7310

Details:



**X-ray phantom head, transparent**

Ref.no. 7320

Details:



**X-ray phantom head, opaque**

Ref.no. 7330

Details:



## Tripod for X-Ray Phantom head

Very strong tripod for use with the x-ray phantom head. Foldable but stable, holding the head safely in place. With rotatable head for precise positioning of the phantom in the x-ray machine

Ref.no. 7350

Details:



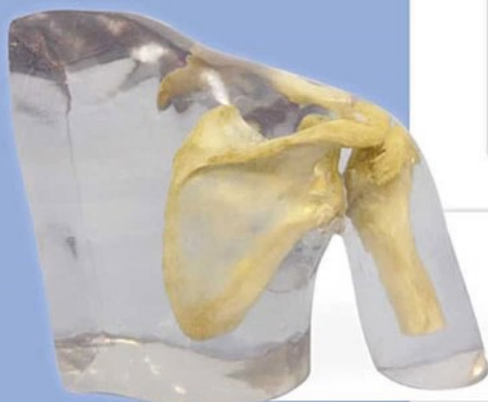
## X-RAY PART PHANTOMS

All phantoms including transport cases



Our X-Ray part phantoms give the unique opportunity to take x-ray images of single body parts again and again. The Phantoms include real human bones and allow to take real x-ray images. The models are perfect for schools and education, but also for medical technicians since the same bones can be x-rayed again and again in different settings without the danger of harming a patient.

The bones are embedded in transparent plastic. If requested the phantoms can be coated with opaque color to hide the inner structures. All phantoms are handmade and unique. They may differ in size and shape. Due to production technology there may be discoloring and cracks inside the phantom. This is related to production and is no lack of quality. These phantoms are only sold against a proof of medical use.



### X-ray Phantom hand

Hand with wrist.

**Transparent**

Ref.no. 7210

Details:



**Opaque**

Ref.no. 7215

Details:



### X-ray Phantom foot

Foot Skeleton with start of lower leg.

**Transparent**

Ref.no. 7230

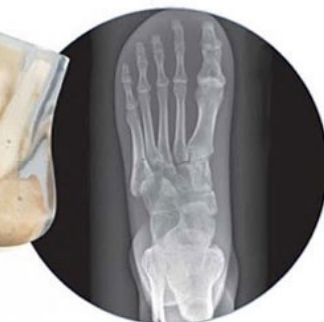
Details:



**Opaque**

Ref.no. 7235

Details:



### X-ray Phantom knee

Part of upper- and lower leg and patella.

**Transparent**

Ref.no. 7250

Details:



**Opaque**

Ref.no. 7255

Details:



### X-ray Phantom lower arm

Hand with forearm and elbow.

**Transparent**

Ref.no. 7220

Details:



**Opaque**

Ref.no. 7225

Details:



### X-ray Phantom elbow

Part of upper and lower arm.

**Transparent**

Ref.no. 7260

Details:



**Opaque**

Ref.no. 7265

Details:



**Transparent**

Ref.no. 7340

Details:



**Opaque**

Ref.no. 7345

Details:



### X-ray Phantom shoulder

Humerus with shoulder girdle.

# X-RAY PHANTOMS

with artificial bones

This series of sectional phantoms offers x-ray imaging with always identical images without anatomical differences between two models. This means you can use several identical phantoms or replace a broken or lost phantom by exactly the same. This is especially useful in case for example several technicians shall make identical images on different machines or an educational institute wants to make their own complex teaching papers. The phantoms are available in transparent or opaque versions, allowing to choose the suitable version. You may for example use the transparent phantom for teaching since it is easier to position and then change to the opaque phantom for examination purposes.

## Head phantom

### Transparent

Ref.no. R16700

Details:



### Opaque

Ref.no. R16701

Details:



## Dental Radiography Head Phantom

This radiography phantom has removable jaws and tongue allowing for a variety of applications for training and research.

### Features:

- ✓ Each tooth is individually 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. Sensors, simulated lesions, or residue can be set in these cavities.
- ✓ Carotid arteries are prepared as lumens to accommodate simulated calcifications.

### Anatomy:

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



### Head with closed mouth

Ref.no. R16525

Details:



### Head with open mouth

Ref.no. R16526

Details:





## Thorax

Includes a thoracic skeleton with embedded heart and lungs to provide realistic imaging. The scapulae are rotated outside of the lung fields for proper PA chest imaging.

**Transparent**

Ref.no. R16702

Details:



**Opaque**

Ref.no. R16703

Details:



## Pelvis

Includes lumbar / sacral spine, pelvic bony anatomy and proximal femurs.

**Opaque**

Ref.no. R16704

Details:



## Right Elbow

Movable. Normal flexion range allows for AP/lateral and partial flexion views with one phantom.

**Transparent**

Ref.no. R16705

Details:



**Opaque**

Ref.no. R16706

Details:



## Right Knee

Freely movable patella and joint allows for realistic positioning of the knee for AAP/lateral, oblique, sunrise and tunnel views.

**Transparent**

Ref.no. R16711

Details:



**Opaque**

Ref.no. R16712

Details:







## Right foot

Normal position.

**Transparent**

Ref.no. R16713

Details:



**Opaque**

Ref.no. R16714

Details:



## Left Hand

Grasping position.

**Transparent**

Ref.no. R16709

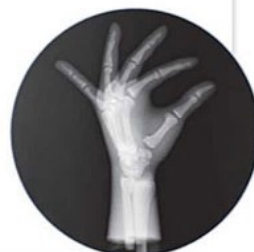
Details:



**Opaque**

Ref.no. R16710

Details:



## Left foot

Oblique position.

**Transparent**

Ref.no. R16715

Details:



**Opaque**

Ref.no. R16716

Details:



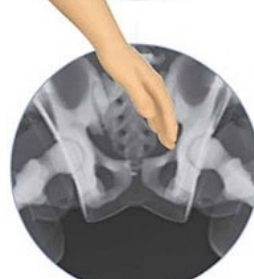
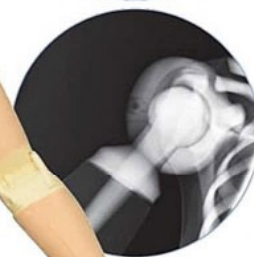
## X-Ray Training Phantom

This lightweight phantom (19kg) is designed with an emphasis on positioning training. The tissue is made from urethane foam, creating a realistic and soft feel upon touch. This phantom retains clear image quality at a lower energy level, reducing strain on equipment and potential of exposure to technician. Each joint has the same range of motion as its corresponding point on the human body and can be positioned according to the anatomical location. The Phantom has landmarks for positioning training and can be placed in a wheelchair.



Ref.no. R16850

Details:





## Modular full body x-ray phantom

The whole body phantom is a life-size, full body anthropomorphic phantom with a state-of-the-art synthetic skeleton, lungs, liver, mediastinum and kidneys embedded in soft tissue substitute. Movable joints allow basic positioning for plain X-ray and training/research applications can be enriched by disassembling the phantom into 10 individual parts (head, limbs and trunk). There are no metal parts or liquid structures.

### Patient positioning:

- ✓ Right shoulder rotates sideways, abducting to a horizontal position.
- ✓ Left shoulder rotates forward, up to a horizontal position.
- ✓ Elbows bend inward to approx. 90 degrees.
- ✓ Hip joints rotate forward up to 90 degrees, then rotate outward up to 45 degrees, respectively.
- ✓ Knees bend to approx. 90 degrees.
- ✓ The phantom can be held in the supine frog leg position.
- ✓ The limbs and head are detachable at joints and neck for wider applications.
- ✓ The head supporter facilitates various head positions.

### Anatomy:

- ✓ Life size synthetic skeleton
- ✓ Hands and feet with bone trabeculae
- ✓ Lungs with pulmonary vessels
- ✓ Mediastinal space
- ✓ Liver
- ✓ Kidneys

### Phantom materials:

- ✓ Radiology absorption and Hounsfield number approximate to human body.
- ✓ Phantom size: approx. 165 cm height
- Phantom weight: approx. 50 kg

Ref.no. R16900

Details:



## Fractured hand with forearm for R16900

Hand with forearm showing bone fractures for radiography. Can be replaced against the original hand with forearm of R16900. Of course this phantom can also be used as stand-alone type too.

Ref.no. R16900-1

Details:



## Pediatric whole body phantom

The new pediatric whole body phantom is molded after a 5-year-old child of 105 cm height. This phantom is a life-size, full body anthropomorphic phantom with a state-of-the-art synthetic skeleton, lungs, liver, mediastinum and kidneys embedded in soft tissue substitute.

### Training skills:

- ✓ Plain X-ray photography and basic CT scanning.
- ✓ Basic patient positioning for X-ray and CT.

### Features:

- ✓ Movable joints allow basic positioning for plain X-ray.
- ✓ Training and research applications can be enriched by disassembling the phantom into 10 individual parts (head, limbs and trunk).
- ✓ The phantom has no metal parts or liquid structures.
- ✓ Main joints have life-like articulation, allowing various positioning for training.
- ✓ Life size synthetic skeleton
- ✓ Hands and feet with bone trabeculae
- ✓ Lungs with pulmonary vessels
- ✓ Mediastinal space
- ✓ Liver
- ✓ Kidneys

### Separates into:

- ✓ head
- ✓ trunk
- ✓ right upper arm
- ✓ right forearm with hand
- ✓ left upper arm
- ✓ left forearm with hand
- ✓ right thigh
- ✓ right lower leg with foot
- ✓ left thigh
- ✓ left lower leg with foot

Ref.no. R16970

Details:



## Pediatric full body phantom

Full body phantom as R16970, but additionally with fractures that are typical for child abuse. All fractures are prepared on the left side and show for example a spiral fracture of the distal tibia or a forearm shaft fracture.

Ref.no. R16975

Details:





## Body plates for adult X-Ray phantoms

Body Plates for R16900 or R16950 to simulate a person with a BMI 30 or 40.

**BMI 30**  
Ref.no. R16900-2  
Details:



**BMI 40**  
Ref.no. R16900-3  
Details:



## Newborn Whole Body x-ray phantom

This Newborn whole body phantom is the world's first full body phantom for neonatal radiography with correct anatomical structure and movable limbs. Neonatal radiography is an important tool in NICU (Neonatal Intensive Care Unit). Patient positioning and immobilization are essential features. This phantom provides opportunities for hands-on training and experiments to minimize radiation exposure to newborn babies.

### Features:

- ✓ Limbs rotate 360 degrees at shoulders and hip joints.
- ✓ Left hand is clenched and right hand is open.
- ✓ Life size whole body newborn baby.
- ✓ Original human tissue substitute.
- ✓ No metal parts or liquid structures.
- ✓ Meconium aspiration syndrome can be made per custom order.

### Anatomy:

Skull, spine, ribs, pelvis, scapulae, clavicles, humeri, radius, ulnae, bones of hands, femora, fibulae, tibiae and bones of feet, lungs and mediastinum.

### Training Skills

- ✓ Manual immobilization
- ✓ Immobilization with fixtures
- ✓ Autopsy imaging

### Radiography

- ✓ Supine AP
- ✓ Upright lateral
- ✓ Supine lateral



Ref.no. R16980

Details:



### Specifications:

Set Includes: 1 newborn whole body phantom, 1 storage case, 1 set of sample X-ray images, 1 instruction manual. Size: 42 cm (representing a baby of 50 cm height) weight: 2.8 kg.



## Whole body CT phantom

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. The phantom can also be used for plain X-ray, showing life-like images. No metal parts or liquid structure are used. Main joints have close-to human articulation, allowing various positioning for training. The phantom can be disassembled into 10 parts. Improved shoulder joint system enables the phantom to take arm-up position. Organs are anatomically correct and have appropriate HU numbers.

### Patient positioning:

- ✓ Shoulders: rotate through a full 360 degrees in the sagittal plane, approx. 180 degrees to side-ways.
- ✓ Hip joints: rotate forward up to approx. 90 degrees, then abduct up to 45 degrees each.
- ✓ Knees: bend up to approx. 90 degrees.
- ✓ Elbows: bend up to approx. 90 degrees.
- ✓ The phantom can be held in the supine frog leg position.
- ✓ The limbs and head are detachable at joints and neck for wider applications.
- ✓ The head supporter facilitates various head positions.

### Phantom materials:

Radiology absorption and Hounsfield number approximate to human body.

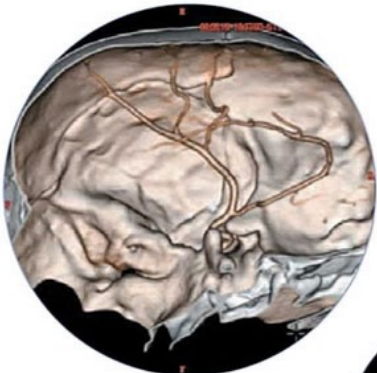
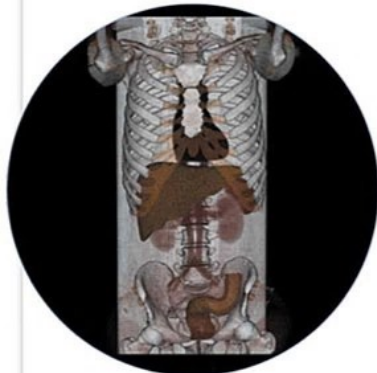
### Internal Organs:

- |                                |                                       |
|--------------------------------|---------------------------------------|
| ✓ Head and Trunk               | ✓ Trachea                             |
| ✓ Synthetic skull              | ✓ Liver with portal and hepatic veins |
| ✓ Cervical vertebrae           | ✓ Pancreas                            |
| ✓ Brain                        | ✓ Kidneys                             |
| ✓ Vertebrae                    | ✓ Gallbladder                         |
| ✓ Clavicles                    | ✓ Spleen                              |
| ✓ Ribs                         | ✓ Aorta                               |
| ✓ Sternum                      | ✓ Vena Cava                           |
| ✓ Scapula                      | ✓ Ureter                              |
| ✓ Coxal bones                  | ✓ Urinary bladder                     |
| ✓ Femurs                       | ✓ Prostate                            |
| ✓ Lungs with pulmonary vessels | ✓ Rectum                              |
|                                | ✓ Sigmoid Colon                       |



Ref.no. R16950

Details:



## CT Whole Body Phantom with Pathologies

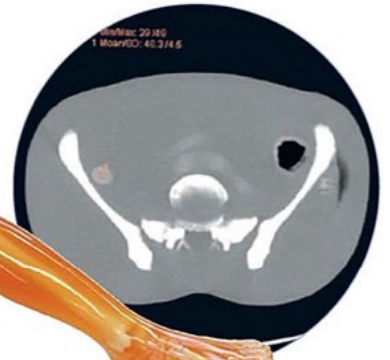
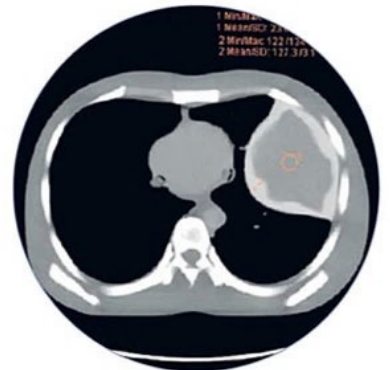
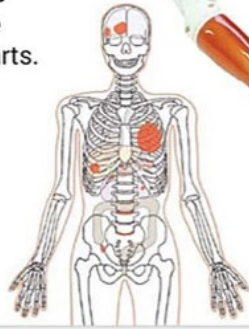
Combine theory with practice with pathological findings in this hands-on training phantom. Based on the CT Whole Body Phantom R16950 this phantom offers a variation of pathologies:

- ✓ Brain tumor
- ✓ Subarachnoid hemorrhage
- ✓ Pulmonary tumor
- ✓ Hepatic tumor
- ✓ Pancreatitis
- ✓ Gall stone
- ✓ Kidney stone
- ✓ Appendicitis
- ✓ Spondylolisthesis

The phantom can be separated into 10 parts.

Ref.no. R16955

Details:

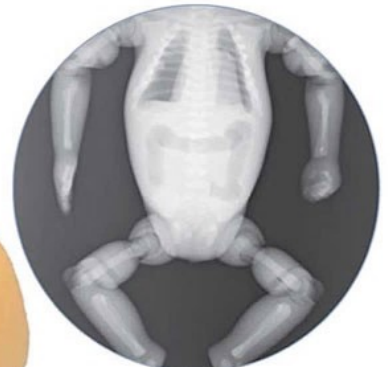


## CT Newborn Whole Body Phantom

A brand new neonate for CT training has come into the world. It can be used for CT and plain X-ray, Dosimetry, Autopsy imaging and positioning. It has the HU of an average newborn, a hole for an ion chamber, a clenched left hand an open right hand. The limbs rotate 360°. The anatomy includes skull, spine, clavicles, scapulae, ribs, humerus, radius, ulnae, hand bones, femora, tibiae, fibulae, foot bones, pelvis, lungs, mediastinum and colon. Size: 53 cm.

Ref.no. R16988

Details:



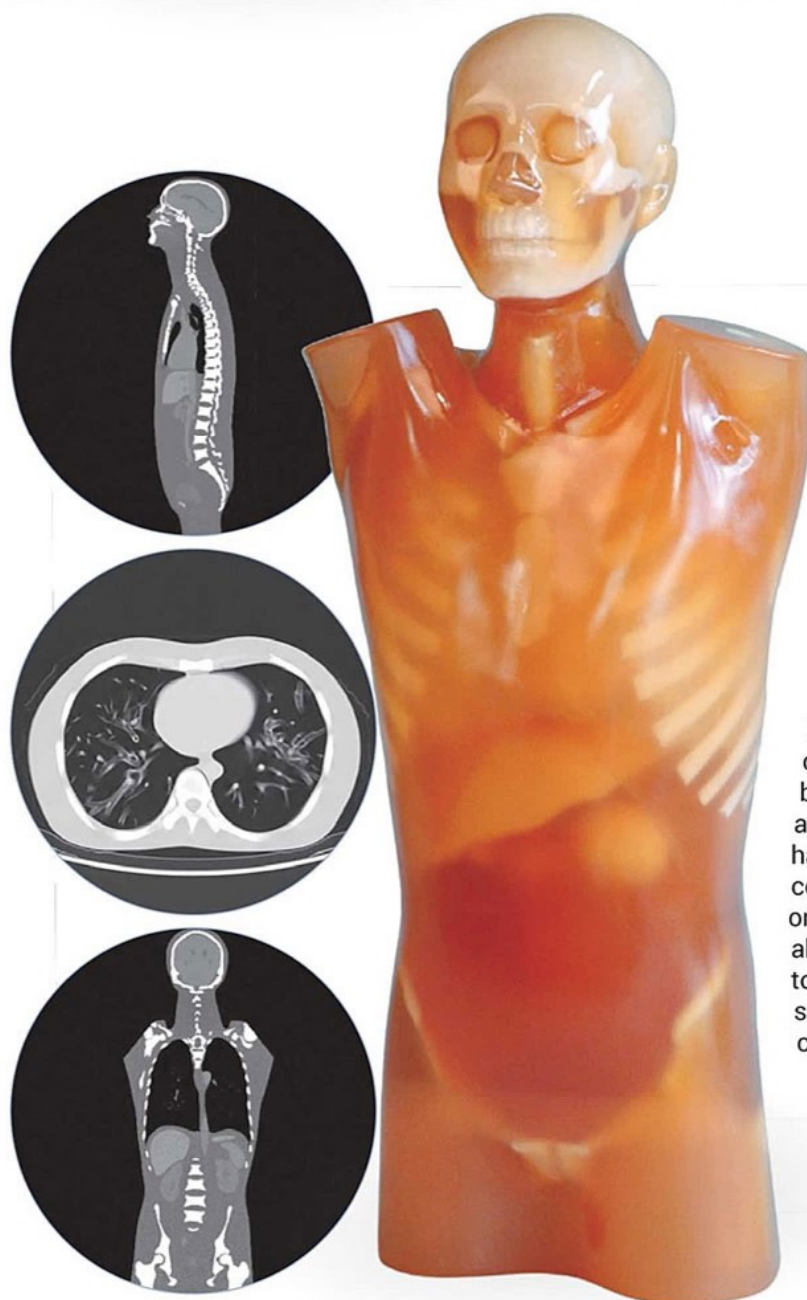


## CT abdomen phantom

This unique anthropomorphic upper abdomen phantom allows obtaining CT images approximate to clinical data. The elaborate anatomy of organs allows a multi-dimensional approach. Liver, portal vein, bile duct, hepatic vein, hepatic artery, kidneys, pancreas spleen and IVC are embedded along with synthetic bones. Each individual organ has a particular Hounsfield number close to human organ. Embedded anatomical structures are Lungs (no internal structure), Heart (no internal structure), liver, portal vein, bile duct, hepatic vein, hepatic artery, kidneys, pancreas, spleen, IVC, spinal column, ribs. Vessels and organs with a contrast agent can be included as a special order.

Ref.no. R16513

Details:



## CT torso phantom

A one-piece anthropomorphic torso phantom with anatomical structures allows various CT approaches including helical scanning. Along with state-of-the-art synthetic bones, brain with cerebral ventricles, eye balls, lungs with three dimensional pulmonary vessels, trachea, liver with portal and hepatic veins, kidneys, gallbladder, pancreas, spleen, aorta, cava, ureter, urinary bladder, prostate, rectum, sigmoid colon are embedded. Each individual organ has particular Hounsfield number which corresponds that of human body. The original phantom material with radiation absorption approximate to human tissue allows scanning under actual clinical setting.

Ref.no. R16512

Details:





## Chest phantom for X-ray and CT

This multipurpose training model can be used for training in x-ray and Computer tomography. It is suitable for training of making radiographs as well as for image interpretation training. Additionally it can be used for assessment of x-ray and CT systems. All model structures are made of materials that have x-ray absorption rates close to human tissue. The model can be opened and artificial tumors can be inserted into the lung. 15 different tumors are supplied with the model.

Ref.no. R16511

Details:



## Chest plates for R16511

For simulation of an over weighted patient.

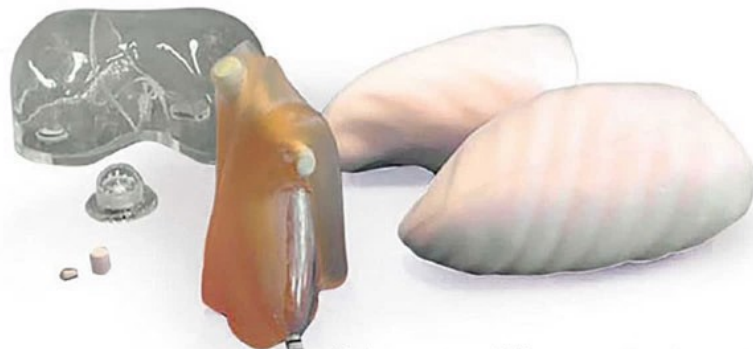
Ref.no. R16510-1

Details:



## Components for Radioisotope

The set of RI container inserts can be set in the chest phantom in place of the standard inserts allowing wider research applications including PET/CT fusion evaluation.



Lungs of urethane

Ref.no. R16511-1

Details:



Liver RI container

Ref.no. R16511-2

Details:



Gallbladder RI container

Ref.no. R16511-3

Details:



Pulmonary nodule RI container

Ref.no. R16511-4

Details:



Mediastinum with left myocardium RI container

Ref.no. R16511-5

Details:





## Subsolid Nodules Simulation Set

The Subsolid Nodules Simulation Set is a set of simulated nodules designed for study and training in Ground-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 3D GGO modelled on clinical CT data. The simulated nodules can be attached to the pulmonary vessels on the chest phantom R16511.

3D GGO  
Ref.no. R16511-10  
Details:  




No. 1-7, Concentric  
Ref.no. R16511-6  
Details:  





No. 11-12, Eccentric  
Ref.no. R16511-8  
Details:  




No. 8-10, Eccentric  
Ref.no. R16511-7  
Details:  




No. A - h, Pure GGO  
Ref.no. R16511-9  
Details:  


## Pediatric chest phantom

Imaging and dosimetry for radiosensitive 5-year-old. Chest X-ray is one of the most common examinations in pediatric radiography. This Pediatric Chest Phantom is designed to find out optimal parameter and protocols to minimize radiation exposure to children. The phantom has two kinds of interchangeable lung inserts. The lung vascular insert can be used to study image quality in relation to CT / X-ray protocols. The lung density insert allows users to evaluate dosage distribution in the lung field.

### Features:

- ✓ Two types of interchangeable lung inserts are available. 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.
- ✓ Lung vascular inserts with pulmonary vessels provide life-like radiographs.
- ✓ Detachable internal structure allows insertion of variety of pathologies and targets.
- ✓ Simulates a life-size chest of 5-year-old.



Ref.no. R16515  
Details:  


### Anatomy:

Rib, clavicle, spine, mediastinum, scapula, sternum and pulmonary vessel (lung vascular insert only)

### Applications:

- ✓ Pediatric Chest X-ray
- ✓ Pediatric Chest CT
- ✓ Dosimetry

### Das Set beinhaltet:

- ✓ 1 five-year-old chest torso
- ✓ main body: synthetic bones are embedded
- ✓ thyroid block
- ✓ diaphragm block
- ✓ 1 lung density insert: mediastinum, lung fields (L+R)
- ✓ 1 set of sample images
- ✓ 1 instruction manual
- ✓ Size: 32 x 17 x 38 cm, weight: 6 kg



## Lung cancer screening model

This Phantom is a CT phantom developed to facilitate optimizing the radiation dose and other scanning conditions for lung cancer screening CT examination with Helical CT or MDCT, which is aiming at early detection of lung cancers. As the screening is usually done on healthy people, the necessity of minimizing the exposure while maximizing the image quality is considered to be particularly high. The phantom is designed to set conditions for detection of small early lung cancers such as GGA, which are difficult to be found by plain X-ray. Anthropologic structure of the phantom provides life-like images allowing operators visual evaluation, while quantitative evaluation on radiation dose and density curve of the image can be done stimulatory with a single scanning.

**The model consists of a life size torso with arm up position and has the following internal structures:**

- ✓ Bones
- ✓ Simulated tumors on sections of three lung area:
- ✓ Apical portion of the lungs
- ✓ Bifurcation of the trachea
- ✓ Base of lungs
- ✓ Dose meter hole (13 mm dia., on the central axis of the phantom)
- ✓ 1 8-step linearity phantom
- ✓ 8 steps of 30mm dia. density samples are embedded



Ref.no. R16532

Details:



## PET / SPECT Thorax Phantom

The PET/SPECT Thorax Phantom is an optimal tool for study in nuclear medicine. It allows examination of myocardial density through SPECT imaging:

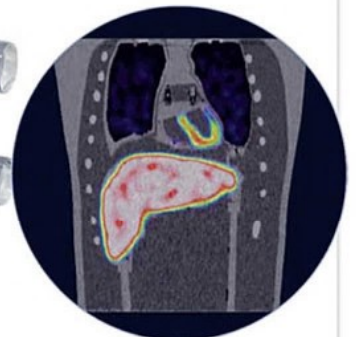
- ✓ Verification of myocardial imaging with the use of various RI solution densities
- ✓ Ability to capture defects of the myocardial region
- ✓ Can reproduce image variations of the heart by injecting RI solutions in the liver, kidney and lungs.

It also can be used for 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

Ref.no. R16535

Details:



## Radiation therapy phantom

This phantom is developed for the treatment planning and machine adjustment in the radiation therapy. The body consists of 3 cm slices with a 3 x 3 cm hole matrix for inserting glass dosimeters. The model material has a natural radiopacity allowing the correct adjustment of the machines. This makes it ideal for planning and machine adjustment. The phantom has a holding and fixation frame which allows to position the phantom exactly.

Ref.no. R16531

Details:

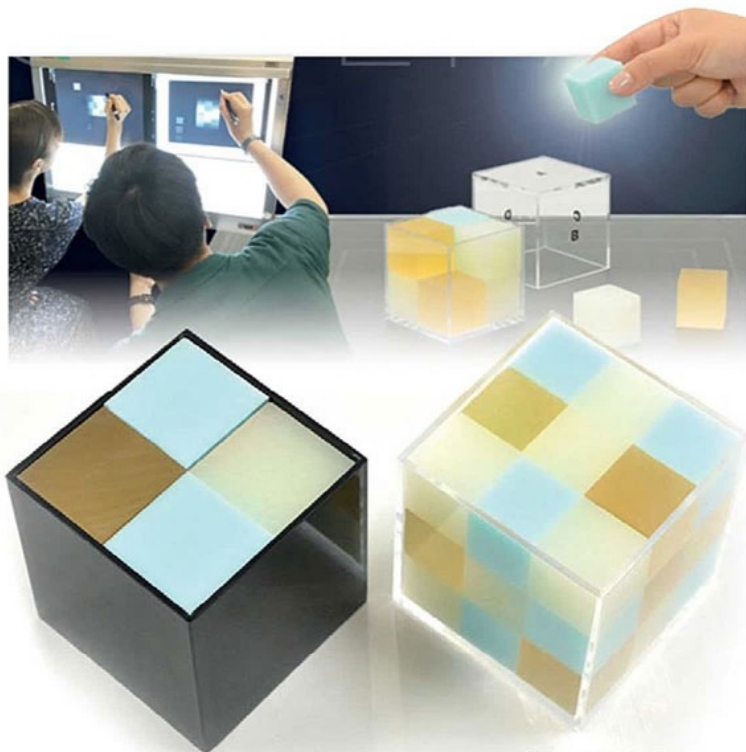


## Radiation therapy phantom child

This child phantom has different lifelike densities for tissue, bones and lungs. It is cut into slices and has holes for dosimeters. The size is 60cm. Delivery with holding and fixation frame.

Ref.no. R16533

Details:



## XCUBEFAN Radiology Cube Phantom

Designed for beginners to provide better understanding of the special characteristics seen in radiology imaging. The XCUBEFAN is a compact yet practical tool to educate learners on usage of x-ray equipment and its impact on the interpretation of diagnostics images. Learners can experience a large range of practice by stacking and repositioning different blocks with varied radiodensities. The black box is designed for practice, whilst the clear box facilitates visual explanation for instructors. There are three types of cubes, orange with CT value appr. 0 and density 1,06, yellow with CT value appr. 1000 and density 1,21 and blue with CT value appr. 500 and density 1,4.

Ref.no. R16945

Details:



**30 mm Cube Set**  
(2x2x2 cubes, three types,  
total 15 cubes, two boxes)

Ref.no. R16946

Details:



**20 mm Cube Set**  
(3x3x3 cubes, three types,  
total 30 cubes, two boxes)

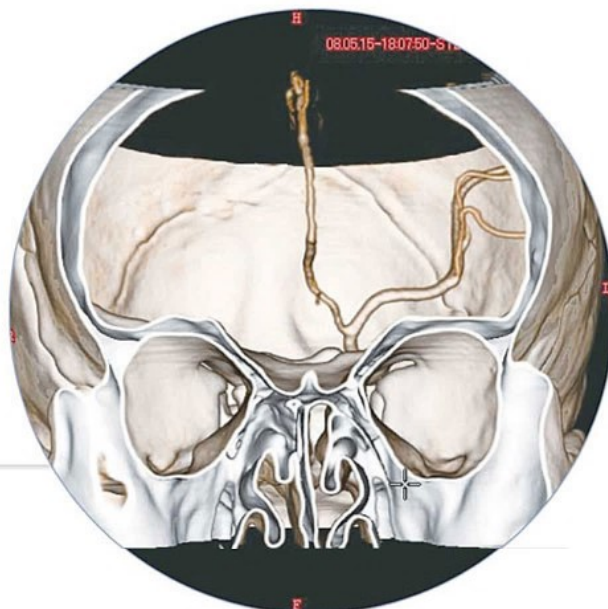
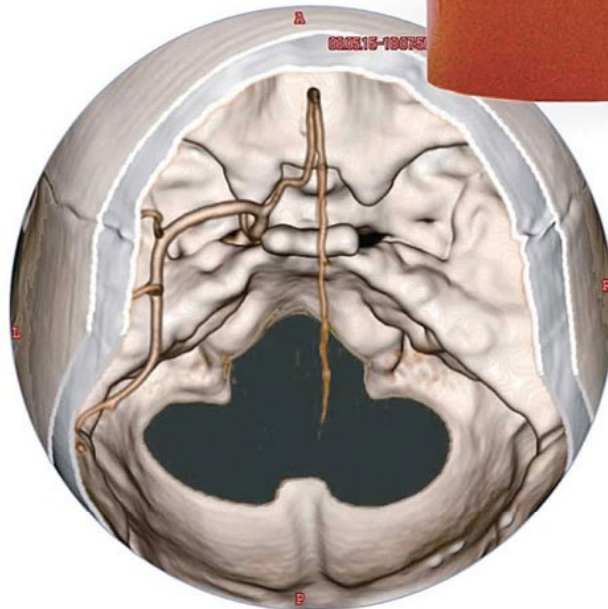
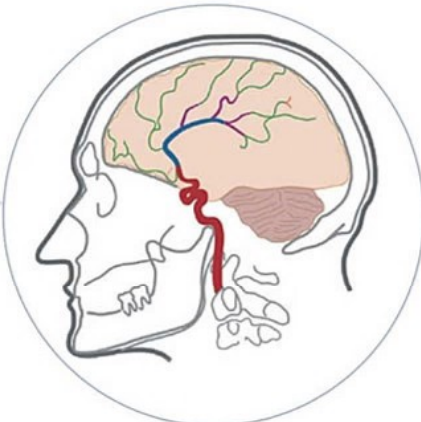
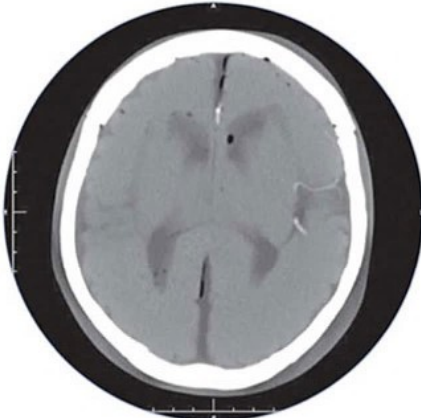
## Angiographic head model

This model consists of a synthetic human skull which is embedded in a plastic head. In the left half of the skull the anterior and middle cerebral artery are represented and filled with contrast medium. The diameter of the arteries range from 0.5 mm to 4 mm.



Ref.no. R16520

Details:





## CT prostate phantom

Resourceful model for therapy planning for prostate cancer.

**Anatomy:** Organs: prostate, urinal bladder with simulated internal fluid, seminal vesicles and rectum. Bones: L4, L5, pelvis and femurs (partial).

**Specifications:** Set Includes: 1 prostate phantom Size: 35 cm.

Ref.no. R16592

Details:



## CT Knee Ligament Phantom

Detailed Knee anatomy with HU of each bone, cartilage and ligament. This anthropomorphic knee phantom allows the visualization of ligaments and cartilage. Close-to-human radiation absorption and HU for each anatomical structure as well as realistic artifacts. It shows femur, tibia, fibula, articular cartilage of patella, meniscus, cruciate ligament, medial collateral ligament, fibular collateral ligament and articular cartilage. Can be used for CT and plain X-ray.

Ref.no. R16593

Details:



# NATURE LINE CT PHANTOMS

**NEW**  
PRODUCT

EXCLUSIVELY

Are created from real human patient data and are manufactured with latest technology. Bone and soft tissues are accurately represented with realistic Hounsfield units for all tissues at 120 kVp tube voltage CT imaging. If the phantom is primarily required for CT imaging at different tube voltages (e.g., 100 kVp), the calibration of Hounsfield units can be adapted accordingly upon request. The phantom also yields realistic tissue contrast in X-ray imaging. Air voids are filled with a cellulose-polymer composite of approximately -80 Hounsfield units.

Custom  
made orders  
possible

## Head CTA-Phantom

The phantom provides a highly realistic simulation of a head and neck CT angiography (with arterial contrast medium enhancement) of a patient with an arteriovenous malformation on the right side. The phantom comes at the original patient size and includes the cervical spine until the baseplate of the fifth cervical vertebra.

Ref.no. NLP1000

Details:



## Hand-Phantom

The hand phantom provides an extremely realistic simulation of a hand. Pathologies (e.g. fractures, calcifications, bones and soft tissue tumors) can be integrated on request.

Ref.no. NLP1300

Details:



## Abdomen-Phantom

The phantom provides a highly realistic simulation of a contrast medium enhanced abdomen (late arterial phase) of a patient. The phantom covers the abdomen from the tenth thoracic to the fourth lumbar vertebra. The liver and both kidneys are fully included.

Ref.no. NLP1100

Details:

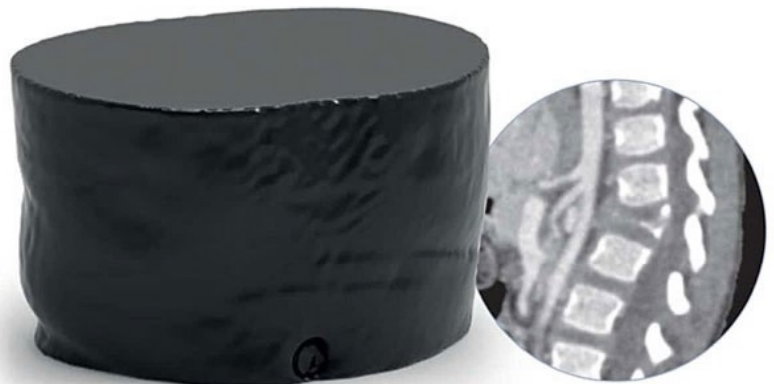


## Child Abdomen Phantom with a Vertebral Fracture

The phantom provides a highly realistic simulation of a contrast medium enhanced abdomen (portal venous phase) of a child with a vertebra plana (first lumbar vertebra). The phantom covers the abdomen from the tenth thoracic to the baseplate of the fourth lumbar vertebra. The liver and both kidneys are fully included.

Ref.no. NLP1110

Details:

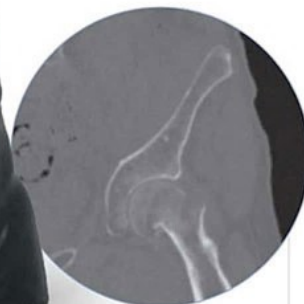


## Pelvis Phantom with Femoral Neck Fracture

The phantom provides a realistic simulation of a male pelvis without contrast medium enhancement and with a slightly dislocated femoral neck fracture on the left side. The phantom includes the entire pelvis and the fifth lumbar vertebra.

Ref.no. NLP1200

Details:

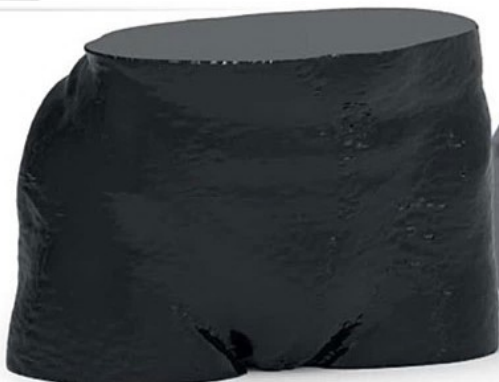


## Pelvis Phantom with Coxarthrosis

The phantom provides a realistic simulation of a female pelvis without contrast medium enhancement and with advanced hip osteoarthritis on the right side. The phantom includes the entire pelvis and the fifth lumbar vertebra.

Ref.no. NLP1210

Details:



## Foot-Phantom

The foot phantom provides an extremely realistic simulation of a foot. Pathologies (e.g. fractures, calcifications, bones and soft tissue tumors) can be integrated on request.

Ref.no. NLP1310

Details:

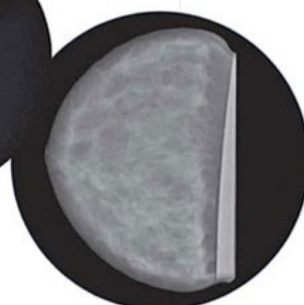


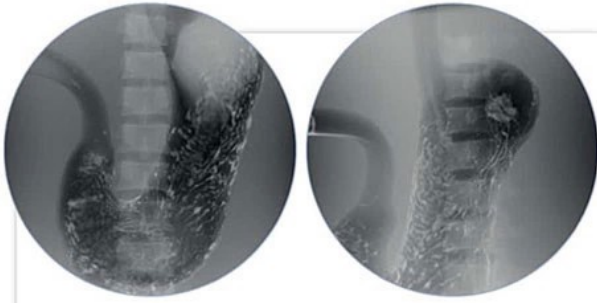
## Breast Phantom for Mammography and Breast Tomosynthesis

Breast phantom with adipose and glandular tissue. This breast phantom was designed to simulate breast imaging in mammography and breast tomosynthesis. It represents a compressed breast of 4 cm thickness that can be placed under the compression paddle. This phantom provides a realistic simulation of breast imaging. It was developed for testing and optimizing dose and image quality and for training of medical and technical staff. The phantom is manufactured from virtual data containing adipose and glandular tissue. The models are handmade unique piece, which can differ slightly in size and design. The phantom can be provided as one-piece anthropomorphic phantom or in a sectional design. Dosimeter openings and pathologic features can be included upon request.

Ref.no. NLP1400

Details:





## Stomach Phantom

Stomach phantom for double contrast gastrography. This life-size distended stomach with pathologies is modelled from real specimens. Barium can be filled into the stomach for imaging. Pathologies include early cancer and gastric ulcer.

Ref.no. R16901

Details:



## Rotational Stomach Phantom

Rotational Stomach Phantom to simulate double contrast gastrography. It includes a rotation system to simulate the movement of the patient as well as a distended stomach with pathologies that has been modelled after real specimen. Barium can be filled into the stomach for imaging. Pathologies include early cancer and gastric ulcer.

Ref.no. R16902

Details:

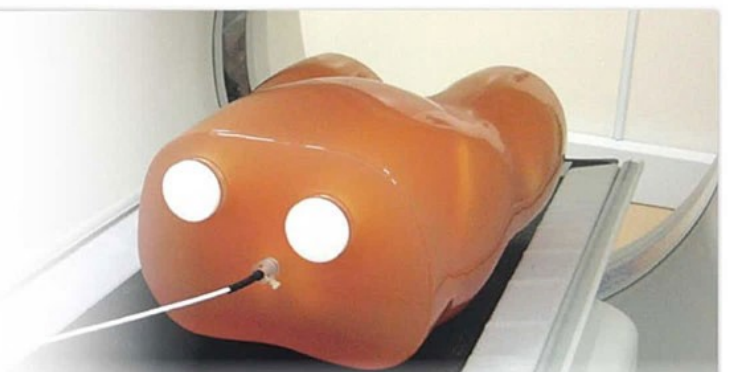


## CT Colonography Phantom

Innovative study tool for safe and effective CT colon screening. 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. The phantom includes four types of colon units for evaluation. Each unit has six targets lining in sequence on the inner wall of the unit. Contrast agent can be filled into the colon units for tagging. Pencil shaped ion chambers can be inserted in the center of the phantom for CTDI measurement. The phantom is suitable for virtual colonography, visualization and detection of targets, study on optimal dose for low dose CT colonography, evaluation of accuracy of measurement (size, volume) and for studying the optimal density of contrast media.

Ref.no. R16903

Details:

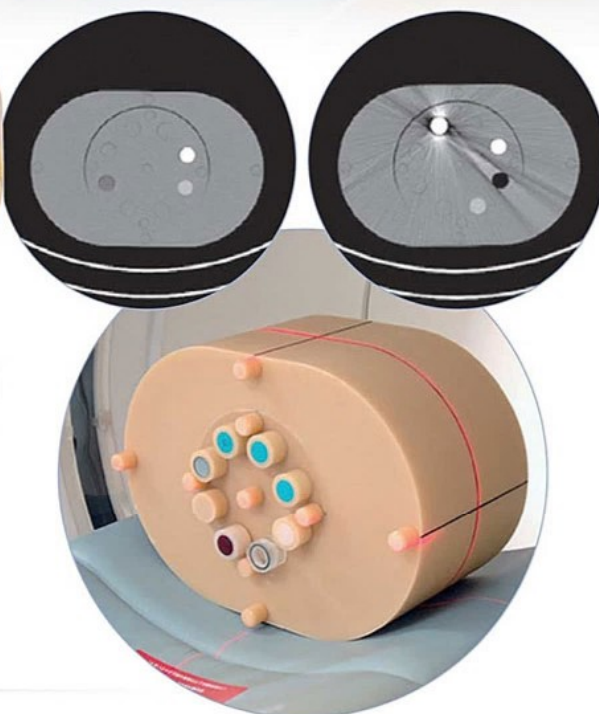
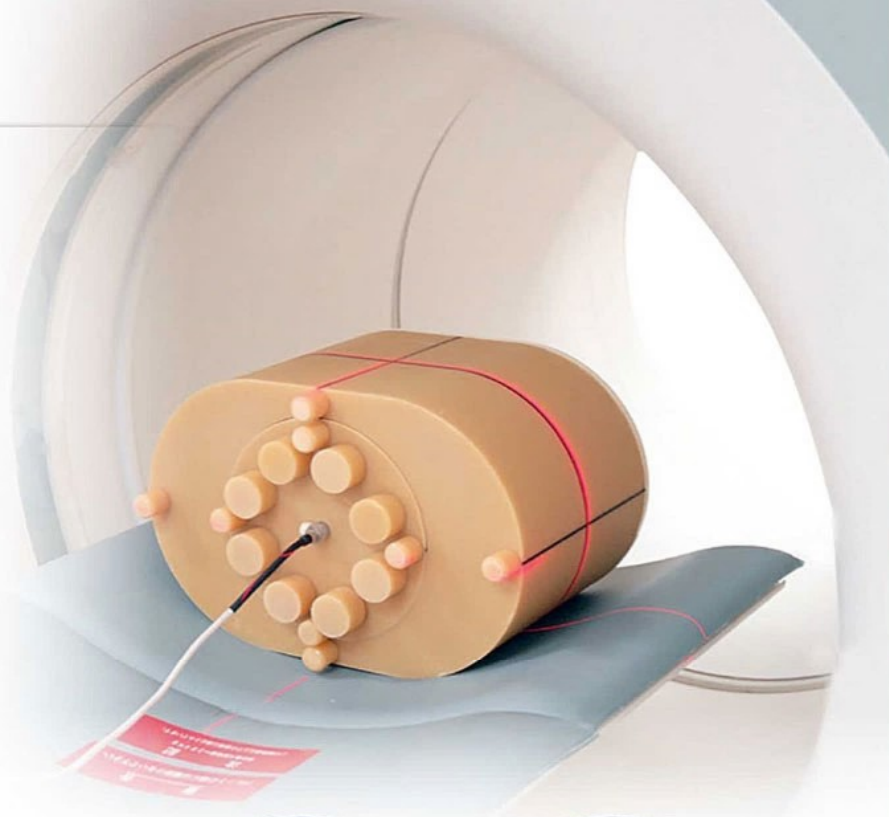




## Multi-Energy Ct Quality Assurance Phantom

Water Equivalent Material, various inserts and empty container enable to verify the appropriate Multi-Energy CT settings. Empty containers allow the insertion of various test items in Multi Energy CT. Save time and efforts to create custom-made water phantoms. Available in two different body sizes.

This phantom can be used for ME-CT image analysis protocol, metal artifact reduction and reduction of contrast media. With this phantom the following parameters can be evaluated: uniformity, signal-to-noise ratio (SNR), Image contrast and CT dose index (CTDI).



**Larger body size**  
(363 x 262 x 180 mm)  
Ref.no. R16904

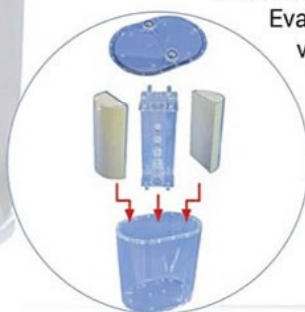


**Smaller body size**  
(300 x 200 x 180 mm)  
Ref.no. R16905



## Bone Scintigraphy Quality Assurance Phantom

An innovative QA phantom for Bone Scintigraphy, Bone SPECT/CT and NaF-PET. The phantom can represent either thoracic or lumbar region by changing the filling of side cavities. Visual evaluation includes tumor detectability, image distortion and artifact. Quantitative Evaluation such as 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). Additionally verification of scattering correction and attenuation correction is possible.

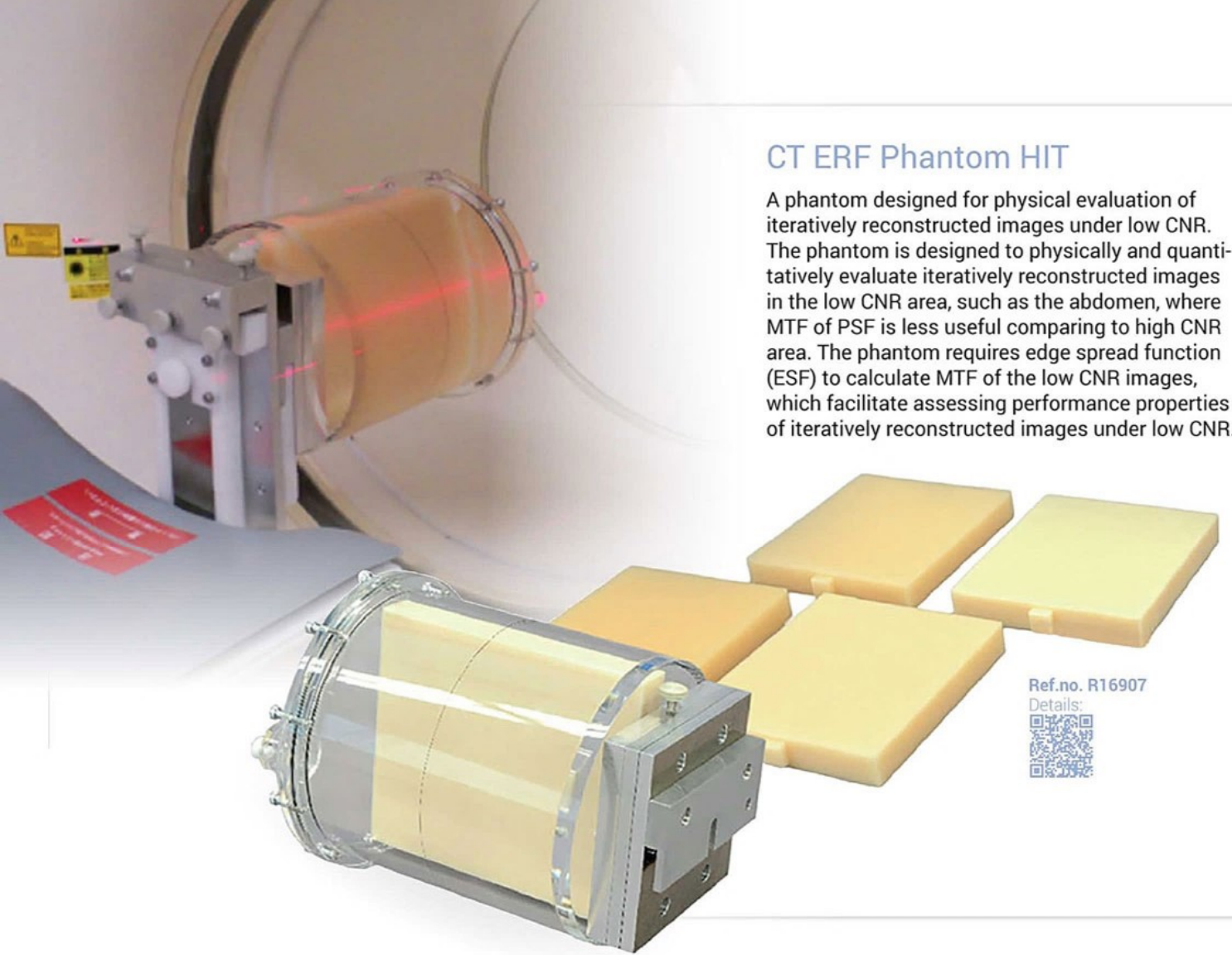


Ref.no. R16906



## CT ERF Phantom HIT

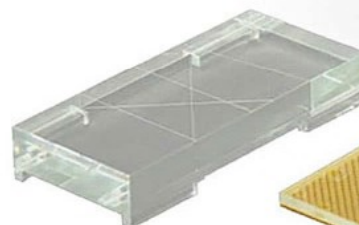
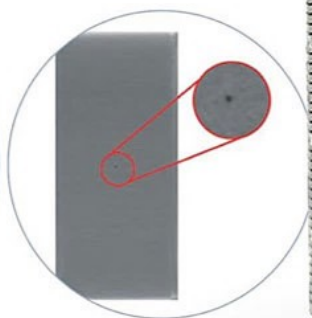
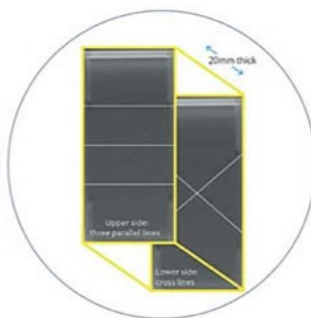
A phantom designed for physical evaluation of iteratively reconstructed images under low CNR. The phantom is designed to physically and quantitatively evaluate iteratively reconstructed images in the low CNR area, such as the abdomen, where MTF of PSF is less useful comparing to high CNR area. The phantom requires edge spread function (ESF) to calculate MTF of the low CNR images, which facilitate assessing performance properties of iteratively reconstructed images under low CNR.



## Tomosynthesis Phantom NS

Allowing evaluation of reconstruction slices and uniformity in the measurement of slice thickness through showing the images numerically and graphically. It comes with three units, one for verification of reconstruction interval, one for slice thickness and one for uniformity.

Ref.no. R16908



## CT-DI Phantom (Head and Body Phantom)

A set of phantoms for CTDI-100, conforming to requirements in 21CFR1020.33, IEC61223-3-5:2004, and IEC61223-2-6:2006 as consistency test. Represents an adult head and body as well as a paediatric body. The parameters that can be evaluated are the computed tomography dose Index (CTDI) and the dose profile.

Ref.no. R16910

Details:

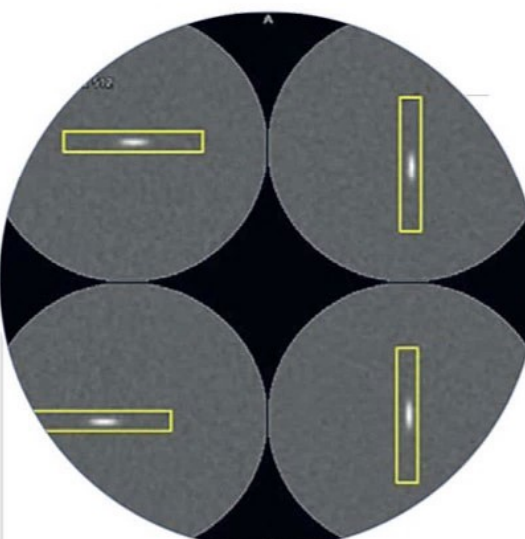
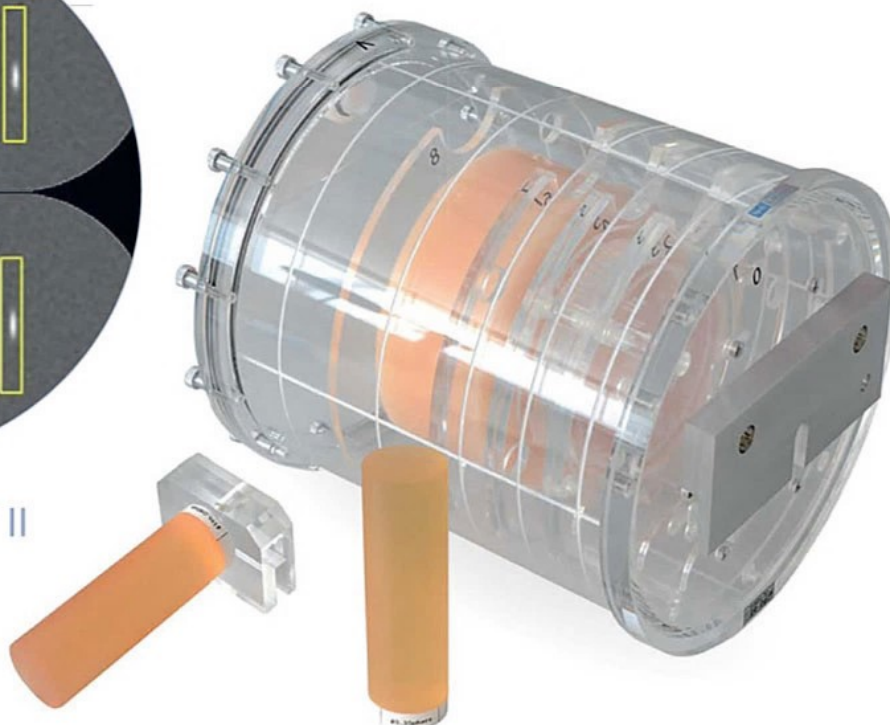


## CT QA Phantom JCT II

Improved CT QA phantom for initial test at the time of first commissioning, as well as for follow-up periodical quality check of CT scanners. The phantom can be used for QA tests according to JIS Z 4752-3-5:2008 (IEC61223-3-5) and Z 4752-2-6:2012 (IEC61223-2-6:2006). It offers the following evaluation parameters: Slice thickness, spatial resolution, low contrast resolution, noise, mean.

Ref.no. R16911

Details:



## Multi Slice CT Phantom MHT

This phantom can be used for features of CT evaluation such as high and low contrast resolution, feed direction and CTDI. The non-aqueous/easy setup allows a liquid-free evaluation session. This phantom is designed to allow evaluation in volume scanning. The evaluation parameters are: CTDI, contrast resolution, sensitivity profile, CNR, effective slice thickness and SSPz.

Ref.no. R16912

Details:



## Ladder Phantom

Evaluation of spatial resolution if simulated contrast enhanced vessels in CT. In each of the 5mm thick plates of this phantom there are 5 slits of 5mm length to represent vessels. Nine variations of vessel width are included and can be used in the phantom. The phantom can be used for evaluation of spatial resolution of simulated contrast enhanced vessels in CT.

Ref.no. R16914

Details:



## CT-AEC Phantoms

Four types of phantoms designed for evaluation of CT-AEC performance.

- ✓ The image quality can be evaluated by noise and standard deviation on the phantom section images.
- ✓ 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

The four phantoms can also be ordered individually:



**Stepped Phantom**  
Ref.no. R16915-4



**Variable-XY Phantom**  
Ref.no. R16915-3



**Elliptical Cone Phantom**  
Ref.no. R16915-2



**Cone Phantom**  
Ref.no. R16915-1



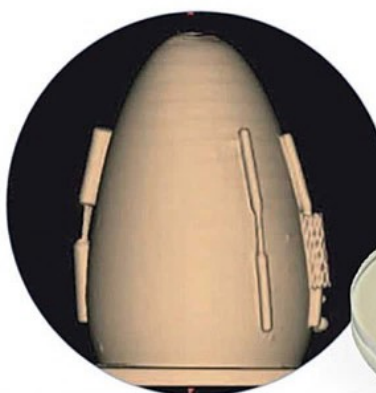
**Complete Set**  
Ref.no. R16915



## Dynamic Cardiac CT Phantom MD-CT

For evaluation and research in ECG gating cardiac and thoracic CT. The heart model is made of human tissue substitute. Simulated coronary arteries including stenosis can be attached to the wall of the phantom heart. The phantom generates pulses that are synchronized with the cardiac movement for ECG gating. The controllable parameters include the pulse rate, ejection volume and ejection fraction. The phantom is controlled by a touch panel.

Ref.no. R16916



## Dynamic Thorax Phantom

Anthropomorphic chest phantom for respiratory gating. This phantom can also be used for dosimetry and radiation therapy. Thermoluminescent dosimeters can be inserted in nodules position for radiation therapy. Simulated nodules can also be inserted. Six preset respiratory patterns are included, respiratory patterns can be modified and saved. Up to three respiratory patterns can be run in sequence. The controllable parameters are:

- ✓ Respiratory Rate (6-24 cycles/min.)
- ✓ Movement of diaphragm (0-38mm)
- ✓ Linear movement of nodule unit (38-64mm)
- ✓ Rotation of nodule unit (50-70 degrees)

Ref.no. R16917

Details:

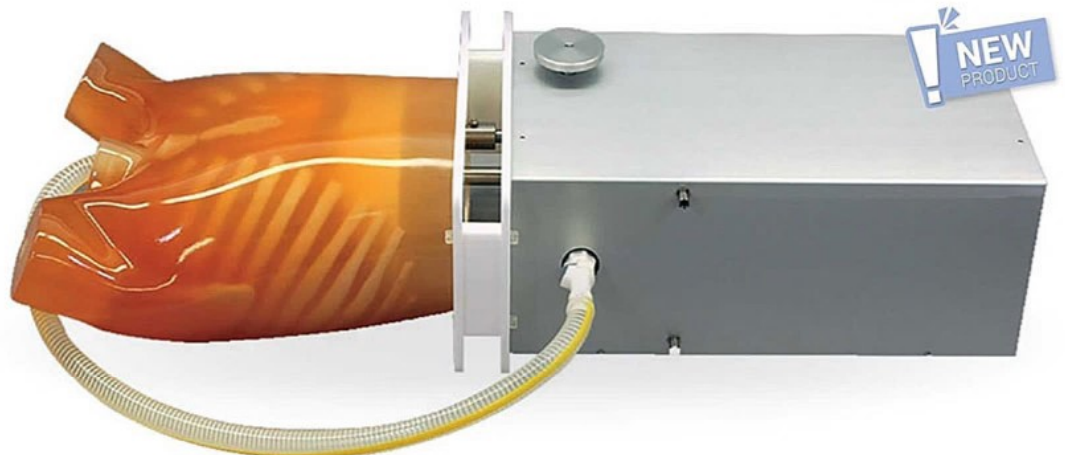


## Dynamic Heart and Lung Phantom

This phantom represents movement of the heart, lungs and pulmonary nodule. The pulmonary nodule and the diaphragm move independently with the respiratory cycle. A three dimensional movement of the pulmonary nodule (linearly and rotationally) can be simulated. The respiratory movement of the abdomen is simulated as well as systolic and diastolic movement of the heart. Coronary arteries including stenotic examples are shown. The phantom can be connected to an ECG for ECG gating. The phantom can be used for respiratory gated chest CT, tumor tracking in radiotherapy and ECG gated cardiac CT.

Ref.no. R16918

Details:





Ref.no. R16919



## Digital Mammographic Phantom NCCE (fall)

This phantom is designed to evaluate CT-AEC performance. Image quality can be evaluated by noise and standard deviation on the phantom section images. The outer shape of the phantom simulates a compressed breast with D cup size. Targets include simulated microcalcifications, nylon fibrils, acrylic disks, an aluminium ring, Teflon disks, a Teflon ruler (slope) and a resolution test chart with 21 steps with different hydroxyapatite content. Steps range from 0 to 400 mg/cm, with 20mg/cm difference each.

## BMD Chart Phantom UHA

Bone Mineral Density chart for microdensitometry (MD). 21 steps with different hydroxyapatite content. The steps range from 0 to 400 mg/cm, with 20mg/cm difference each.

Ref.no. R16920



## Tough Water Phantom

Human tissue substitute phantoms with water equivalent physical properties.



Ref.no. R16921



- 300x300x2 mm Ref.no. R16921A
- 300x300x3 mm Ref.no. R16921B
- 300x300x5 mm Ref.no. R16921C
- 300x300x10 mm Ref.no. R16921D
- 300x300x15 mm Ref.no. R16921E
- 300x300x20 mm Ref.no. R16921F
- 300x300x25 mm Ref.no. R16921G
- 300x300x30 mm Ref.no. R16921H
- 300x300x40 mm Ref.no. R16921I
- 300x300x50 mm Ref.no. R16921J

- 400x400x2 mm Ref.no. R16921K
- 400x400x3 mm Ref.no. R16921L
- 400x400x5 mm Ref.no. R16921M
- 400x400x10 mm Ref.no. R16921N
- 400x400x15 mm Ref.no. R16921O
- 400x400x20 mm Ref.no. R16921P
- 400x400x25 mm Ref.no. R16921Q
- 400x400x30 mm Ref.no. R16921R
- 400x400x40 mm Ref.no. R16921S
- 400x400x50 mm Ref.no. R16921T

## Tough Bone Phantom

Human bone substitute phantoms to simulate body structure in combination with R16921 and R16923.



Ref.no. R16922



### Compact bone

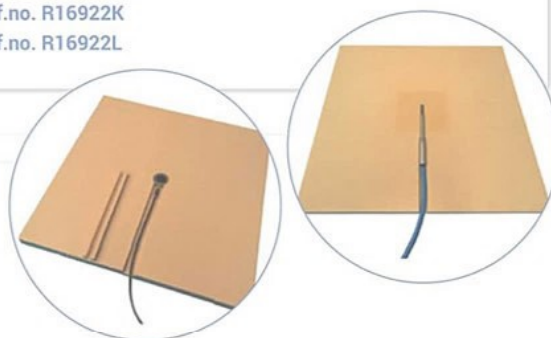
- 200x200x5 mm Ref.no. R16922A
- 200x200x10 mm Ref.no. R16922B
- 200x200x20 mm Ref.no. R16922C

### Cortical bone

- 200x200x5 mm Ref.no. R16922D
- 200x200x10 mm Ref.no. R16922E
- 200x200x20 mm Ref.no. R16922F
- 300x300x5 mm Ref.no. R16922J
- 300x300x10 mm Ref.no. R16922K
- 300x300x20 mm Ref.no. R16922L

### Inner Bone

- 200x200x5 mm Ref.no. R16922G
- 200x200x10 mm Ref.no. R16922H
- 200x200x20 mm Ref.no. R16922I
- 300x300x5 mm Ref.no. R16922M
- 300x300x10 mm Ref.no. R16922N
- 300x300x20 mm Ref.no. R16922O



## Tough Lung Phantom

Human lung substitute phantoms to simulate body structure in combination with R16921 and R16922.



Ref.no. R16923



- 300x300x10mm Ref.no. R16923A
- 300x300x20mm Ref.no. R16923B
- 300x300x30mm Ref.no. R16923C
- 300x300x50mm Ref.no. R16923D



## Water Body Phantom WAC

The water body phantom represents a human chest or abdomen to serve as radiation absorber and scatterer.

Ref.no. R16924

Details:



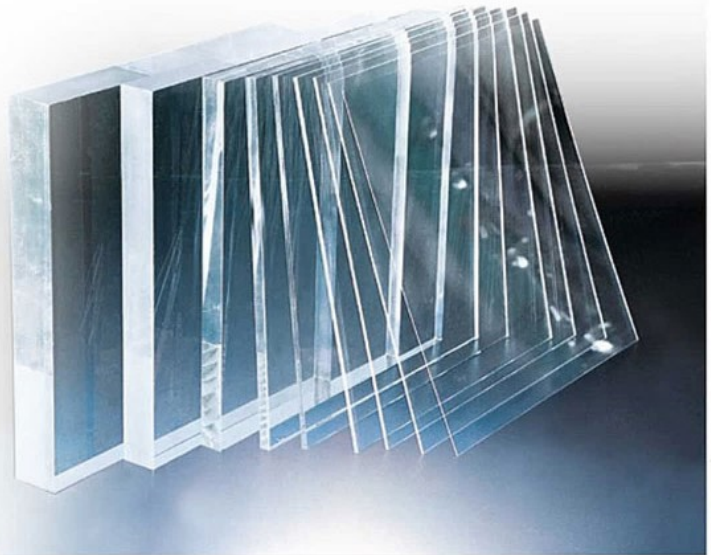
## Acrylic Phantom XAC

Slab phantoms for radiation absorption and scattering measurement.

- 300 x 300 x 1 mm Ref.no. R16925A
- 300 x 300 x 2 mm Ref.no. R16925B
- 300 x 300 x 3 mm Ref.no. R16925C
- 300 x 300 x 4 mm Ref.no. R16925D
- 300 x 300 x 5 mm Ref.no. R16925E
- 300 x 300 x 8 mm Ref.no. R16925F
- 300 x 300 x 10 mm Ref.no. R16925G
- 300 x 300 x 20 mm Ref.no. R16925H
- 300 x 300 x 30 mm Ref.no. R16925I
- 300 x 300 x 40 mm Ref.no. R16925J
- 300 x 300 x 50 mm Ref.no. R16925K
- 300 x 300 x 80 mm Ref.no. R16925L
- 300 x 300 x 100 mm Ref.no. R16925M

Ref.no. R16925

Details:



## Contrast Detail Phantom

This phantom is used for image evaluation in plain x-ray. There are four types with different sizes and target types:

Ref.no. R16926

Details:

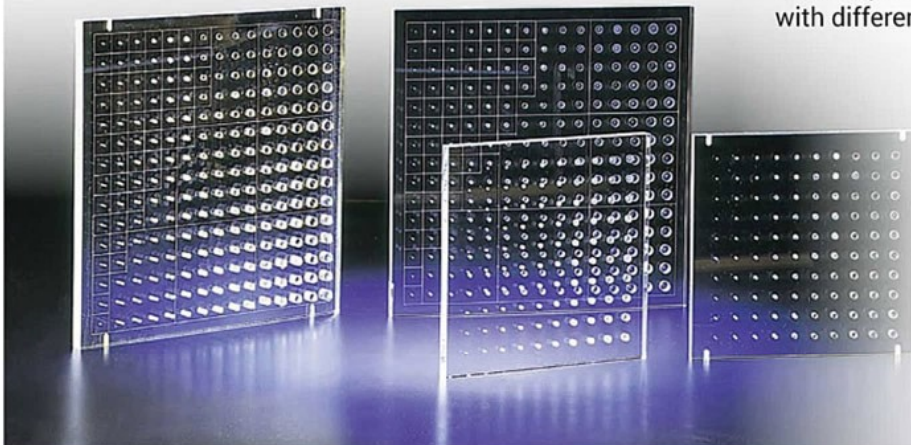


15 x 15 holes of depth range  
1,0 bis 8,0 mm Ref.no. R16926A

10 x 10 holes of depth range  
1,0 bis 5,5 mm Ref.no. R16926B

15 x 15 rods of height range  
1,0 bis 8,0 mm Ref.no. R16926C

10 x 10 rods of height range  
1,0 bis 5,5 mm Ref.no. R16926D





## MRI Quality Assurance Phantom MHR/JMR II

This QA phantom for MRI allows to evaluate the slice thickness, spatial resolution, uniformity and geometric distortion as well as contrast. The Uniformity is maintained under the high magnetic field of 3.0 Tesla. The Uniformity provides high precision evaluation for other parameters. There are two types of this phantom.

### The first phantom offers the following evaluation parameter

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

MHR  
Ref.no. R16927



### The second phantom offers the following evaluation parameters:

- ✓ Signal to Noise ratio (SNR)
- ✓ Image Uniformity
- ✓ Slice Thickness
- ✓ Spatial resolution
- ✓ Geometric distortion
- ✓ Ghost artifact
- ✓ Image contrast

JMR II  
Ref.no. R16928



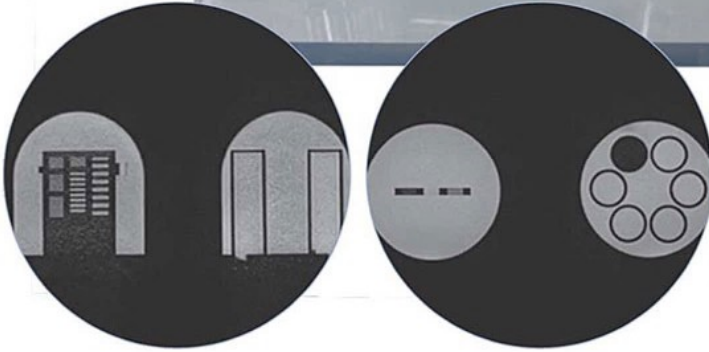


## MRI Breast QA Phantom

An innovative phantom with the shape of breasts for detailed QA in Breast MRI. It allows quantitative evaluation of breast MRI with breast coils. It has an adjustable height of the phantoms in the range of 10cm to fit the depth of the coils. The horizontal position of the phantoms can be set arbitrarily on the 30cm long slit. The test parameters are spatial resolution and quantitative evaluation of ADC on test pieces of tissue substitute.

Ref.no. R16929

Details:



## MRI Head Phantom NH

This life-size head phantom can be used to assess uniformity. It can be used for MRI, SPECT/CT and CT. Comes with nickel chloride solution. Complies with JIS Z 4924.

Ref.no. R16930

Details:

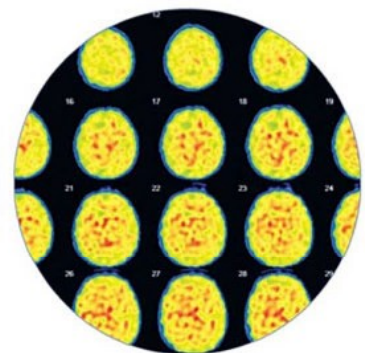


## MRI / NM Head Phantom BHC

Simulates life-size head images in MRI and NM. Can be used in MRI, SPECT/CT and CT. Comes with Nickel Chloride Solution.

Ref.no. R16931

Details:





### PET / SPECT Brain Phantom

This Phantom offers the nucleus and caudate nucleus for I-123 DaTSCAN. The anthropomorphic head phantom simulates the absorption and scatter characteristics of head and skull. RI solution can be injected to striatum and putamen. Can be used for SPECT and DaTSCAN. It shows Brain ventricle, striatum, putamen, cerebrum, caudate nucleus and skull.

Ref.no. R16932

Details:



### Brain Phantom IB-20 advanced

This brain phantom of the striatal region with replicated skull densities of an adult male (equivalent HU750) and an elderly female (equivalent HU530) is useful for uptake ratio calibrations and studying the I-123 DaTSCAN scatter correction techniques. The Phantom can be used in SPECT and PET.



Ref.no. R16933

Details:



### Brain Phantom Set IB-10

This set consists of 4 parts, a simulated skull unit, a brain unit comprising artificial grey and white matter, ventricular cavities and orbits. The set also includes a Jaszczak phantom and a sectional phantom. Radioactive solutions may be added to the phantoms components. It can be used for the following evaluation parameters in SPECT and PET: Homogeneity evaluation, detectivity of grey matter and white matter, cross calibration, spatial resolution of negative images, Gamma ray absorption rate by skull and radioactive concentration and linearity of SPECT value.

Ref.no. R16934

Details:





## PET / SPECT Thyroid Phantom AT

The anthropomorphic thyroid phantom simulates the absorption and scatter characteristics of the human neck area that surrounds the thyroid gland. It can be used for quality assurance of a system for iodine uptake ratio test, scatter, attenuation and sensitivity. It is suitable for SPECT and PET. The anatomy includes the cervical spine C3 to C7, the thoracic spine Th1, clavicle, breastbone (half) and Thyroid (5 variations).

Ref.no. R16935

Details:

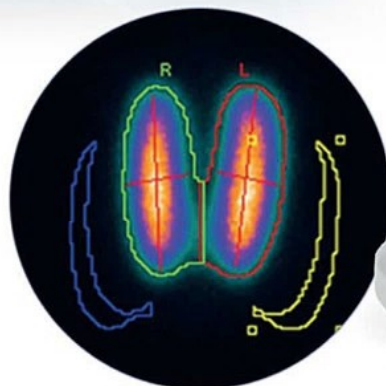
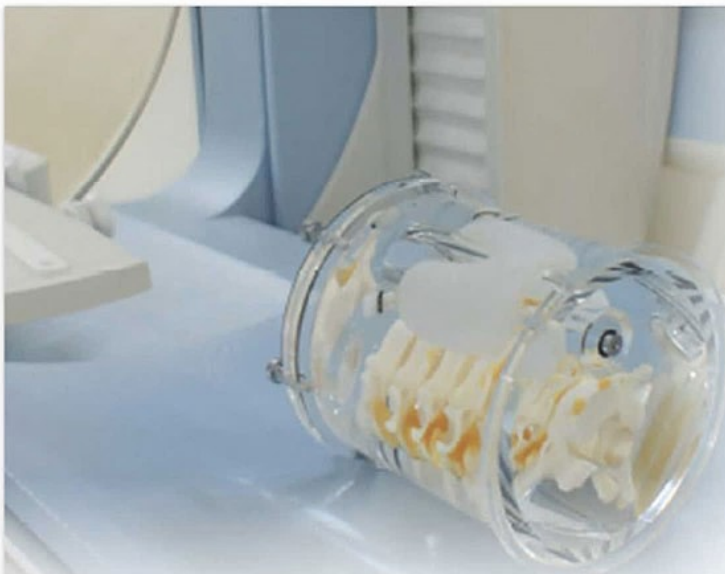


## Thyroid Phantom UN

This phantom includes 5 types of thyroid glands (40, 30, 21, 17, 15cc) for measurement purposes and cervical vertebrae from C3 to C7 for scatteration. Radiopharmaceuticals can be filled into the thyroid glands to be visible by SPECT and PET.

Ref.no. R16936

Details:

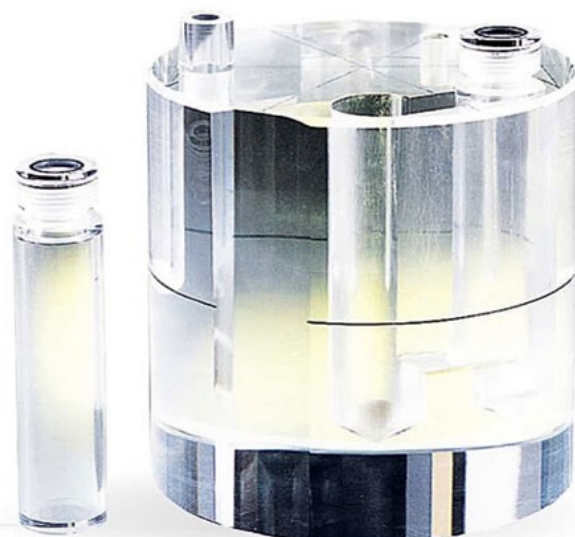
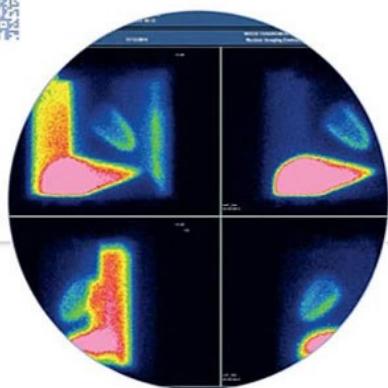


## ORINS Thyroid Phantom IST

Oak Ridge Institute for Nuclear Studies  
Type phantom for measurement of thyroid radionuclide uptake. The neck phantom has cavities for iodine-131.

Ref.no. R16937

Details:



## Myocardial Phantom HL

This phantom is designed for the study of high radio accumulation interference in the liver with the myocardial SPECT images. It allows the study of RI liver intake and its effect on the myocardial SPECT. A cold defect can be set in the left cardiac muscle. The background can be set individually in the lung field, mediastinum and right ventricle.

Ref.no. R16938

Details:



## ECT HotCold Phantom SP-6

Volumetric measurement phantom for PET/SPECT. Five sphere containers with different sizes can be filled with RI solution. Volume of sphere phantoms are: 50 mm (100%), 80%, 60%, 40% and 20%. Can be used for SPECT, PET.

Ref.no. R16939

Details:



## SPECT QA Phantom Set

A set of test units for daily QA of SPECT/PET. It consists of:

- ✓ Outer phantom
- ✓ Line source phantom
- ✓ Cold spot phantom
- ✓ Hot spot phantom
- ✓ Dose linearity phantom
- ✓ Geometric distortion phantom

The evaluation parameters are uniformity, dose linearity, spatial resolution and image distortion.

Ref.no. R16940

Details:



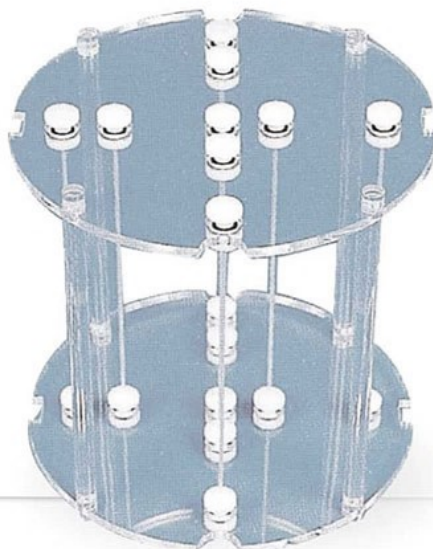
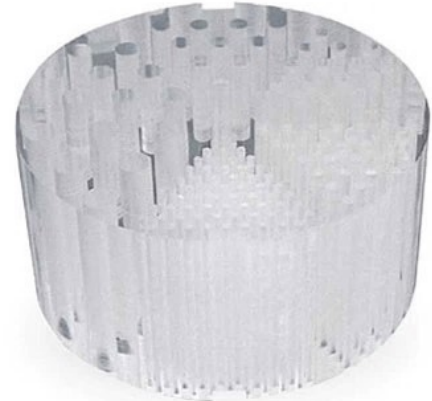
## Holder and accessories

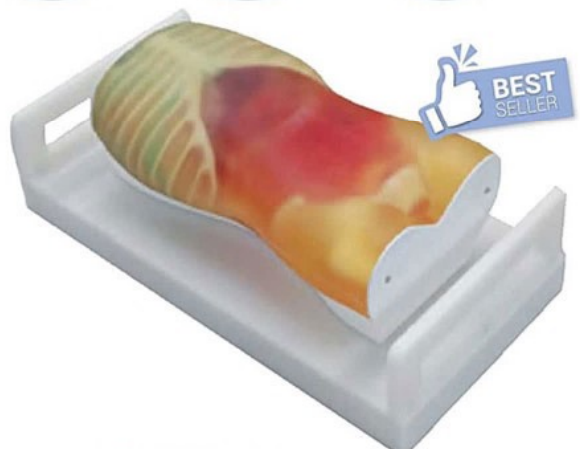
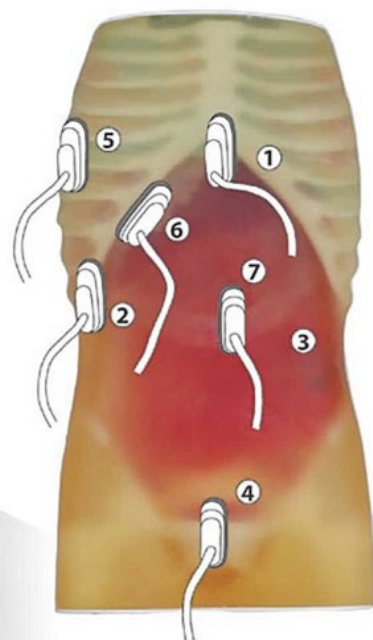
Makes the phantom suitable for your specific scanner.



Ref.no. R16940A

Details:





### FAST ultrasound training model

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. The phantom offers the following training opportunities:

**FAST-Procedures:**

Internal hemorrhage at perihepatic, perisplenic, pelvis and pericardium area.

**Sonography for acute patients:**

Internal hemorrhage at pericardial, bilateral chambers as well as intraabdominal hemorrhage around the liver, the spleen and the urinary bladder. Pathologies including cholecystitis, an aortic aneurysm, a lesion on the colon.

**The images show the following ultrasound images:**

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

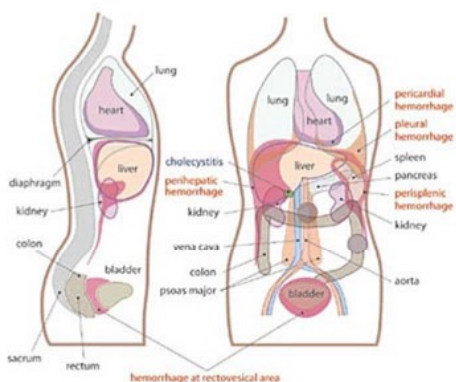
Ref.no. R16590

Details:



The model is supplied with carry case and tutorial DVD. Size: 61 x 30 x 30 cm. Weight: about 31 kg.

- pericardial hemorrhage
  - pleural hemorrhage
  - intra-abdominal hemorrhage
  - Tumor
- \*The small intestine is also embedded.



## Pediatric FAST/ acute abdomen phantom

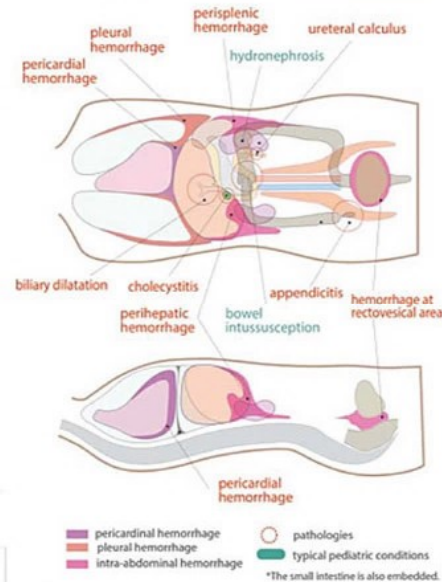
The world's first pediatric ultrasound torso phantom. Pediatric FAST/Acute Abdomen Phantom provides opportunities of hands on training in ultrasound that is a crucial modality for radiosensitive children. **Features:** The phantom includes life-size 2-year-old thoracoabdominal organs, a bone structure, free fluid to learn FAST procedures and pathologies that are commonly seen in pediatrics. With this phantom trainees can acquire skills in basics of pediatric abdominal ultrasound.

### Pathologies:

- ✓ Internal hemorrhage at perihepatic, perisplenic, pelvis, and pericardium area
- ✓ Bowel intussusception, appendicitis and biliary dilatation

### Specifications:

Set Includes: 1 ultrasound phantom,  
1 storage case, 1 tutorial manual (DVD)



Ref.no. R16591



## Abdominal intraoperative & laparoscopic ultrasound phantom

### Features:

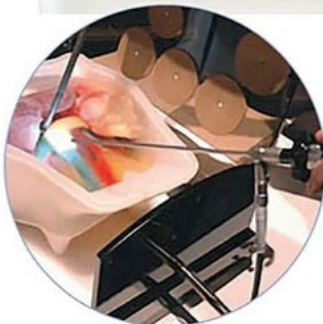
- ✓ Inanimate tool for training of a novice to demonstration by an expert.
- ✓ Detailed hepatobiliary, pancreatic and other abdominal anatomy meeting requirement for excellent training: open intraoperative scanning of the liver, biliary tract, pancreas; laparoscopic examination of the biliary system for screening of stones and evaluation of hepatic and pancreatic lesions, etc.
- ✓ Soft phantom materials allowing realistic probe manipulation.
- ✓ Various simulated lesions including biliary stones and cysts, solid tumors (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.
- ✓ Container with phantom fits in the laparoscopic trainer box so that laparoscopic ultrasound of organs is possible under direct laparoscopic view.
- ✓ Durable long-life phantom materials.

### The phantom includes:

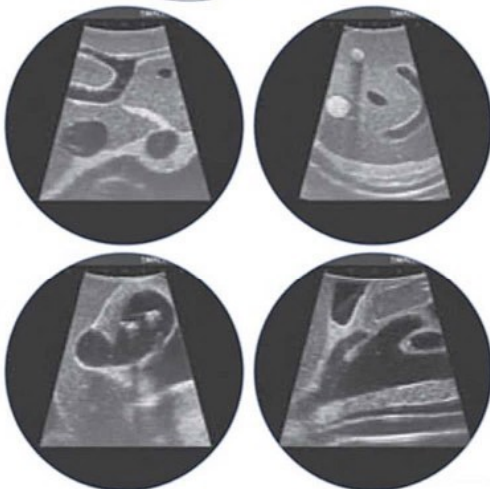
the liver (segmental anatomy, portal and hepatic venous systems, ligamentum teres and ligamentum venosum), biliary tract (gallbladder, cystic duct, intrahepatic and extrahepatic bile ducts), pancreas (pancreatic duct), spleen, kidneys, detailed vascular structures (aorta, vena cava, celiac artery and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

### Pathology includes:

hepatic lesions (cystic and solid), gallbladder and bile duct stones, pancreatic tumors (one invading the portal vein), splenic lesions, both kidney lesions, and left adrenal tumor.



Ref.no. R16550







## Ultrasound training model anatomy/pathology

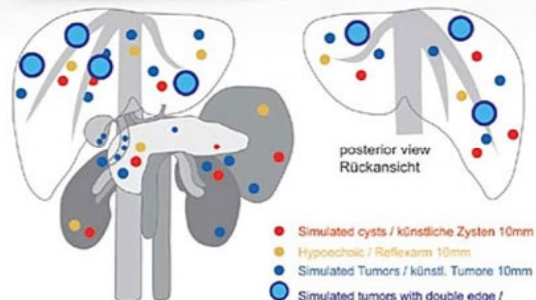


This high fidelity training model allows practice of ultrasound with existing ultrasound – machines. It includes the anatomy of the abdomen as well as many pathologies. The model includes the liver (Couinaud's segments are visible), biliary tract, pancreas, spleen, kidneys, detailed vascular structures like aorta, vena cava, celiac artery and its branches, portal vein and its branches, superior mesenteric vessels, renal vessels etc. Multiple cysts and tumors in this model give various training opportunities for advanced examination. The phantom can be scanned from all sides like a real patient. Size: 28 x 25 x 18 cm, weight 12 kg.

### Ultrasound model

Ref.no. R16560

Details:



- Simulated cysts / künstliche Zysten 10mm
- Hypochoic / Reflexarm 10mm
- Simulated Tumors / künstl. Tumore 10mm
- Simulated tumors with double edge / künstl. Tumore mit dopplierter Schicht 20mm

### Set ultrasound model and anatomical model

Ref.no. R16560-1

Details:



## Ultrasound training model anatomy

This model is perfect for the first education in ultrasound examination. It is a great tool for learning how to orientate in the upper abdomen and gives perfect images of all relevant organs and structures. In addition to liver, gallbladder, pancreas, spleen and vessels the lungs and ribs are represented in the model. The location of the organs and the thickness of the surrounding tissue are like in a real patient. Size: 28 x 25 x 18 cm, weight 12 kg.

### Ultrasound model

Ref.no. R16570

Details:



### Set ultrasound model and anatomical model

Ref.no. R16570-1

Details:



## Anatomical model for ultrasound education

This 20 part model of the upper abdominal organs represents exactly the anatomy that is inside the training models R16560 and R16570. This allows you to see the structures and organs three dimensional in front of you while you are scanning them in the training model. The single parts are: liver (can be separated into 8 segments), gall bladder, spleen, left kidney, vena cava, spine, large and small intestine, portal vein, bile duct and hepatic artery, pancreas, right kidney, abdominal aorta, hepatic vein and stomach. Size: 20 x 23 x 16 cm.



Ref.no. R16580

Details:



## Lung Ultrasound Training Phantom

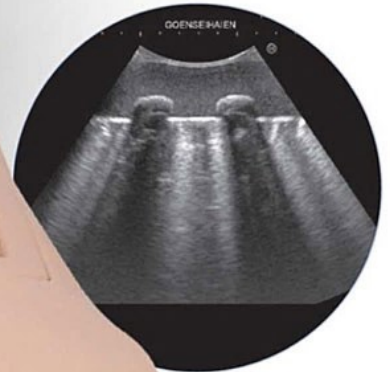
Because of the rapid increase of patient numbers from the COVID-19 pandemic, CT and X-ray machines are increasingly difficult to access for diagnostic purposes. As such, lung ultrasound is one solution to minimize exposure for medical professionals, and this new phantom was developed to practice the basics of this procedure.

The Phantom comes with four kinds of units: A-LINE, B-LINE(few), B-LINE (many), pneumonia and pleural effusion for training in the basics of lung ultrasound.

**The Anatomy of the phantom includes:**  
lung, chest wall and ribs

The phantom does not need special storage and is suitable for training in large groups. The materials are highly durable. A special lung slide module and COVID-19 module are under development.

Ref.no. R16055





## Fetus ultrasound examination phantom

The phantom 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.

Ref.no. R16595

Details:



## Female pelvic ultrasound phantom

Female pelvic ultrasound examination phantom facilitates teaching and learning how to practice both transvaginal and transabdominal ultrasound procedures using one's own device. Typical female pelvic pathologies are prepared for various training.

### Training Skills:

- ✓ Female pelvic ultrasound screening both with transvaginal and transabdominal scanning
- ✓ Visualization of pathologies
- ✓ 3D ultrasound imaging restructuring

### Features:

- ✓ Realistic pathology for transvaginal ultrasound training as well as transabdominal procedure.
- ✓ Excellent ultrasound image quality.
- ✓ Anatomically correct and life-like images.
- ✓ Universally compatible to any ultrasound machine.
- ✓ 2 types of interchangeable phantoms with various pathologies

### Includes 2 phantoms:

- Pathological Phantom
  - ✓ Endometrial cancer, uterine fibroid
  - ✓ dermoid cyst of ovary
  - ✓ bleeding at douglas cavum

### Ectopic pregnancy phantom

- ✓ Ectopic pregnancy in a fallopian tube

Ref.no. R16017

Details:



## Ultrasound Neonatal Head Phantom

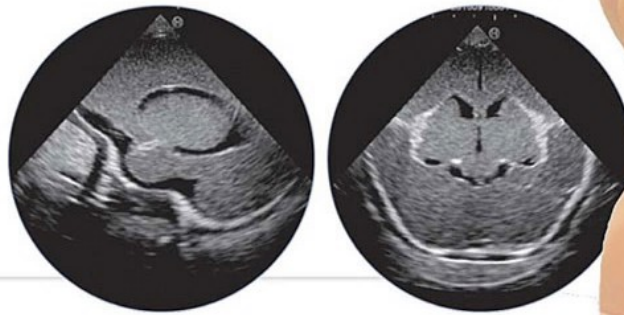
Head ultrasound is one of the most difficult scanning skills and trainees have few opportunities for training. This head model features an accurate depiction of a newborn's cerebral anatomy, and facilitates a realistic user experience with its life-like soft touch. Training skills: Scanning of brain anatomy in Sagittal (Angled Parasagittal), Coronal and transverse planes via any fontanel.

### Anatomy:

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

Ref.no. R16800

Details:



## Ultrasound Neonatal Head Phantom with Hydrocephalus

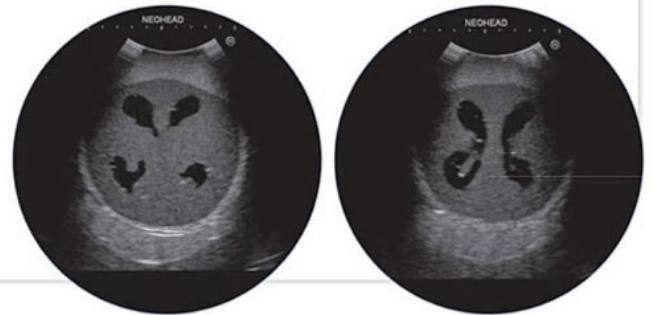
This head phantom is designed to demonstrate abnormal anatomy, such as Hydrocephalus in which the shape of the skull is altered due to intercranial pressure. Training skills: Scanning of brain anatomy in Sagittal (Angled Parasagittal), Coronal und Transverse planes via any fontanel.

### Anatomy:

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

Ref.no. R16810

Details:



More ultrasonic phantoms can be found on the pages:

Hip Sonography: Page 129  
Breast Biopsy: Page 147  
Testical Ultrasound: Page 148  
Lumbar Puncture: from Page 186  
CVC: from Page 201  
Vascular Access: Page 205  
Pericardicentesis/Thoracocentesis: Page 208  
Ultrasound Bronchoscopy: Page 269

## Intravesical Urine Volume Measurement Training Simulator

Pocket-sized ultrasound is becoming popular and start to be utilized in adult day care to check intravesical urine volume instead of catheterization which may cause urinary infection.

**The following Skills can be trained:**

- ✓ Handling and manipulation of transducers on bladder ultrasound.
- ✓ Scanning the bladder to measure urine volume and findings.

**Includes 4 variations of interchangeable inserts feature different patient scenarios:**

- ✓ 50 ml urine
  - ✓ 150 ml urine
  - ✓ 300 ml urine
  - ✓ Urinary retention/balloon catheter
- Size: 30 x 26 x 18 cm, Weight: approx. 3,2 kg

Ref.no. R16820

Details:



## Rheumatoid Finger Phantom

Ultrasound examination is a key skill for early diagnosis on rheumatoid arthritis. For skills training in ultrasound examination on rheumatoid arthritis. Synovial thickening and increased synovial fluid are simulated on middle and ring finger. Size: 17 x 5 x 21 cm, weight: 0.6 kg.

Ref.no. R16830

Details:



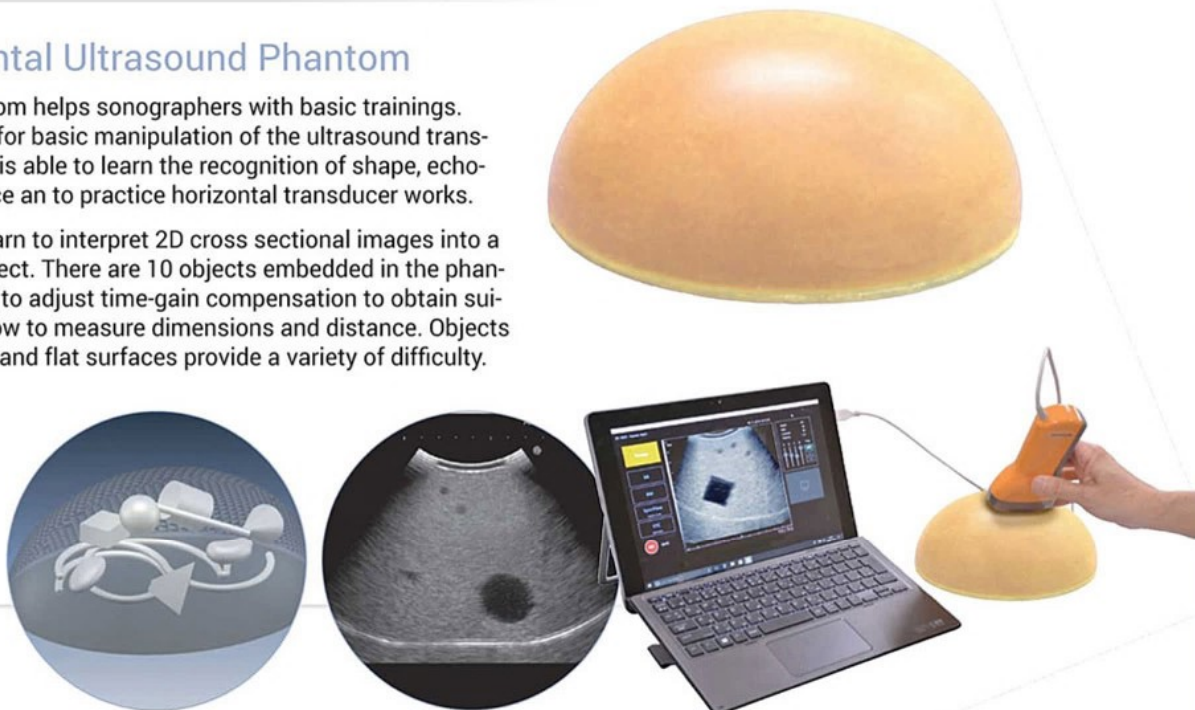
## Fundamental Ultrasound Phantom

This oval phantom helps sonographers with basic trainings. It is a phantom for basic manipulation of the ultrasound transducer. The user is able to learn the recognition of shape, echogenicity, distance and to practice horizontal transducer works.

The user can learn to interpret 2D cross sectional images into a shape of 3D object. There are 10 objects embedded in the phantom. Learn how to adjust time-gain compensation to obtain suitable density, how to measure dimensions and distance. Objects with spheroidal and flat surfaces provide a variety of difficulty.

Ref.no. R16056

Details:

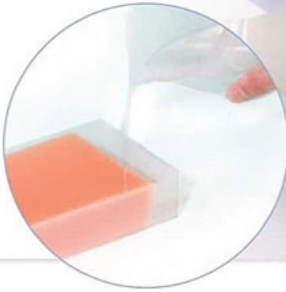


### Introductory Ultrasound Puncture Block

This training block facilitates training in basics of ultrasound-guided punctures, before moving on to trainings with the anatomical type ultrasound pad. The pad has two vessels, one straight, the other one curved. Both vessels start on a shallow level and descend deep into the block. The vessel walls yield under the pressure of a needle tip. Set of 2pcs.

Ref.no. R16051-1

Details:

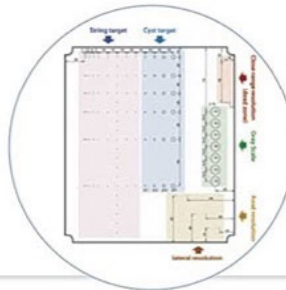
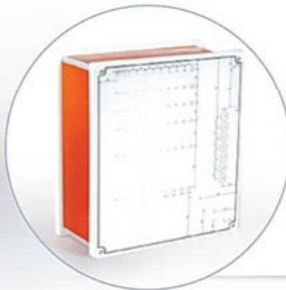


### Multipurpose-phantom

is applicable for both daily assessment and further research. It contains 10 line targets, four non-echogenic cylindrical targets and 7 kinds of gray scale targets. Size: 19 x 22 x 7 cm.

Ref.no. R16543

Details:



### Breast phantom

Specialized phantom for high frequency sonography – around 10 MHz required in breast examination. The phantom includes four kinds of targets, gray scale, cyst, dot and 45° line targets. The Phantom includes two training blocks.

Ref.no. R16546

Details:

