

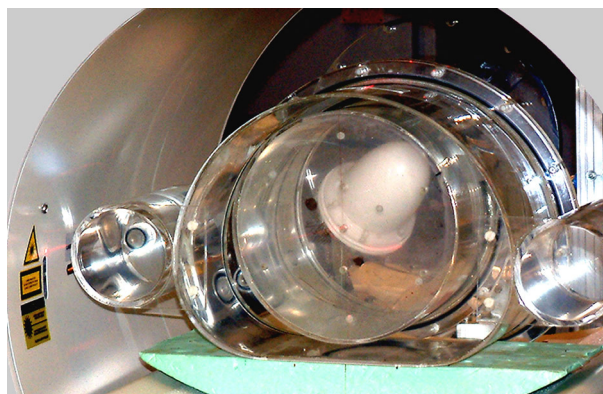


Dynamic Heart Phantom

Art.-No. 590.01.07

Field of Application

The Dynamic Heart Phantom anatomically simulates the left ventricle of the heart, aiming at validation and optimization of methods in diagnostic imaging, primarily for Nuclear Medicine but also for CT and NMR.



Product Specifications

- New:** Precision display of the left ventricle's contraction course by the use of a **new drive and optimised hydraulic system**
- New:** Operation via panel with only 4 function-keys and text based menu navigation
- New:** Ejection fraction selectable in 5 steps
- New:** Contraction frequencies selectable up to 80 beats per minute
- True cardiac display by trigger signal generation
- Application with a standard thorax phantom
- Suitable for Nuclear Medicine, CT and NMR

Advantages

With a Dynamic Heart Phantom procedures, influencing true display, can be controlled (e.g. algorithms for attenuation correction).

Specifications

ESV volume:	approx. 33.5 ml
Volume Membrane space:	approx. 125 ml
EF:	selectable in 5 steps from 45 to 70
Pump cycle:	selectable up to 80/ minute
Curve course:	sinusoidal
System fluid:	distilled water
Flexible pressure tubing:	150 cm
Line voltage:	100 - 240 V AC
Dimension (L x W x H):	approx. 890 x 370 x 410 [mm]
Weight:	approx. 35 kg

Trigger

Connection sockets:	BNC for ES and ED
Signal:	TTL (0-5 V)
Load:	max. 35 mA

Integrated Filling Unit

Unit for automatically, bubble-free filling of the membrane space (myocard) from a holding tank with an electronic controlled peristaltic pump.

Technical specifications are subject to change

Product Description

The Dynamic Heart Phantom is including a membrane unit as well as a pump- and control unit.

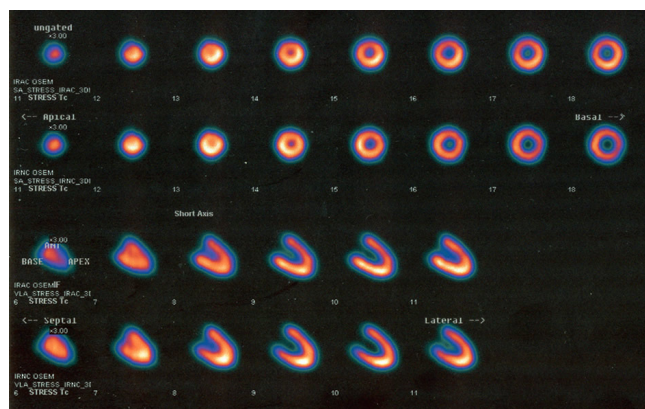
Membrane unit

A double-chamber membrane, exclusively developed for this application, is used for anatomical simulation of the left ventricle. Due to the position of the two membrane elements two compartments are generated, representing the interior heart and the heart wall. The membrane space can be filled according to the type of examination.

Pump- and control unit

This unit is assuring controlled compression and decompression of the interior membrane. Pumping capacity is adjustable up to 80 cycles/minute, the EF is selectable in 5 steps. The pumping event simulates anatomic conditions.

A trigger signal is generated at the time of the end systolis and end diastolis.



Results of an attenuation correction study
(Herz- und Diabeteszentrum Bad Oeynhausen)